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口头交流

精准医学研究协作组

基于机器学习识别未出现躁狂或轻躁狂症状的双相情感障碍：一项静息态功能磁共振研究

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目的 重性抑郁障碍(Major depressive disorder, MDD)和双相情感障碍(Bipolar disorder, BD)的鉴别诊断一直是临床上的难点问题。由于两者存在重叠的抑郁症状,且BD处于抑郁期的时间较长,如果临床医生缺乏明确的躁狂或轻躁狂的诊断证据,往往会发生误诊。误诊则可能导致错误的治疗,进而引起治疗效果不佳,临床症状迁延不愈等不良后果。因此,对两种情感障碍的鉴别诊断不论从临床角度还是科研角度都尤为重要。

方法 本研究共纳入121名被试,所有被试均在基线采集磁共振影像数据,之后对MDD患者进行了平均每半年一次的电话随访或面对面访谈。在随访中出现躁狂或轻躁狂症状的患者纳入转躁患者组(BD组),维持MDD诊断的患者纳入MDD组。其中,MDD组平均随访了42.53个月,BD组平均随访了33.98个月。最终,40名患者纳入MDD组,41名患者纳入BD组,同时纳入年龄、性别、教育年限匹配的健康对照40名。使用度中心度(Voxel-based degree centrality, DC)衡量大脑功能变化。基于BD和MDD间存在差异脑区的DC特征,采用随机森林的算法构建分类器。采用10折交叉验证来验证算法的稳定性,同时计算每折中模型的曲线下面积(Area under the receiver operating characteristic curve, AUC)、准确度、敏感度和特异度来评估分类器性能。

结果 三组被试在额叶脑区和顶叶脑区存在DC差异。事后分析结果显示MDD患者存在特异性的左侧大脑的中央前回,中央前回,顶下小叶,额中回,缘上回,额下回(岛盖部),额下回(三角部)DC值增高,BD患者存在特异性的右侧大脑的中央

前回,中央前回,顶下小叶,额中回,缘上回,额下回(岛盖部),额下回(三角部)DC值减低。BD组和MDD组分类准确率=75.3%,敏感度=75%,特异度=75%,AUC=74.3%。

结论 额叶和顶叶的功能改变可能是MDD和BD早期鉴别诊断的影像学标志。

关键词: 重性抑郁障碍,双相情感障碍,随访,静息态功能磁共振,度中心度,随机森林

利用临床心理特征、遗传变量构建抗抑郁药效预测模型

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目的 抑郁症是一种常见的精神疾病,对患者身心健康造成了严重影响。现有的抗抑郁药物在治疗效果上存在很大差异,因此如何预测抗抑郁药物的治疗反应具有重要的临床价值。抗抑郁药效受遗传因素影响,抑郁症患者的临床和心理特征被认为是预测治疗反应的可能因素。本研究将进行靶向外显子基因测序,利用机器学习方法将基因单核苷酸多态性(SNPs)、临床特征和心理特征结合生成预测模型,提高预测抗抑郁药效的准确度,为临床治疗提供一定的参考。

方法 本研究共招募了1000名首发或未服药大于2周的抑郁症患者,接受单一抗抑郁药治疗8周。在基线期和治疗后第2、4周时采用17项汉密尔顿抑郁量表(HAMD-17)评估患者抑郁症状严重程度及其变化。观察患者4周时的治疗效果,标准为HAMD-17减分率<50%为无效,HAMD-17减分率≥50%为有效。在基线期收集患者的一般人口学资料、临床特征(包括Beck自杀意念量表、快感缺失量表、多伦多述情障碍量表)和心理特征(社会支持量表、家庭环境量表、童年创伤经历量表,生活事件量表),基于KEGG通路数据库,围绕MDD病因假说和发病机制以及抗抑郁作用相关通路共筛选1309个候选基因,通过Illumina MiSeq平台完成测序,使用PLINK软件筛选高质量SNP,剔除缺失率大于20%、最小基因频率低于5%的SNP标记。最终纳入845名患者、65个特征变量构建数据集。将数据集划分为训练集(N=591)和测试集(N=254),对训练

集做数据预处理,递归消除法筛选出 59 个特征,基于随机森林算法构建 4 周抗抑郁药效预测模型。利用网格搜索进行超参数优化,比较纳入不同特征变量组合后模型的预测效果,记录测试集的准确率、召回率和 F1 值等评估指标。

结果 对于接受 4 周抗抑郁药治疗的患者,仅纳入一般人口学资料和临床特征的疗效预测模型训练集和测试集的准确率为 79.9%、54.4%,增加心理变量后模型准确率为 79.9%、56.1%,增加遗传变量后模型准确率为 80.4%、58%,同时纳入心理、遗传变量后模型准确率为 99.7%、76.8%。

结论 通过对比不同特征变量组合下模型的预测性能,发现将遗传因素、心理特征和临床特征组合起来能够进一步提高模型的预测能力,为临床用药决策的制定提供了一定的参考价值。

关键词: 抗抑郁药,疗效预测,机器学习,遗传,临床心理

Genome-wide Association Study of Antipsychotic-induced Movement Disorder in Patients with Schizophrenia

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Objective Antipsychotics are the first-line choice for the management of schizophrenia. Although there are many kinds of antipsychotics applied for patients with schizophrenia, roughly 75% patients with schizophrenia discontinue the treatment result from the poor efficacy and side-effects, which prolongs the optimum treatment time and influences the prognosis. One of the most common side effects is extrapyramidal syndrome (EPS). There is very limited understanding on the genetic factors that associated with antipsychotic-induced EPS

Methods We conducted a genome-wide association study (GWAS) of antipsychotic-induced EPS in patients with schizophrenia. The data was from the Chinese Antipsychotics Pharmacogenomics Consortium (CAPOC). This study was compliant with the Declara-

tion of Helsinki. The protocol was approved by the Clinical Research Ethics Committee at each site, and written informed consent was obtained. All the participants in this cohort were randomly assigned to six groups (olanzapine, risperidone, quetiapine, aripiprazole, ziprasidone, and first-generation antipsychotics; first-generation antipsychotics including haloperidol or perphenazine were also assigned randomly) and received 6-week antipsychotic treatment. A total of 2014 patients was included in this study

The Simpson-Angus Scale (SAS), the Barnes Akathisia Rating Scale (BARS), and the Abnormal Involuntary Movement Scale (AIMS, only used the first seven items) were evaluated to assess EPS. BARS was applied to assess the akathisia. AIMS was applied to assess the involuntary movement. The changes of three scale scores at 6th week were set as phenotypes.

We did the linear regression in PLINK (version 1.9) to assess the associations between allele and antipsychotic-induced EPS symptoms separately. Sex, age, type of antipsychotics, dosage of antipsychotics at endpoint (chlorpromazine equivalent dose equivalence), course of schizophrenia, center and the first five principal components of population structure were set as covariates. The accepted genome-wide significance threshold of a P value of less than 5×10^{-8} were adopted, and the associations with a P less than 1×10^{-5} were set as findings of interest. Furthermore, multiple several secondary analyses were carried out on the genome-wide association results, such as expression patterns of certain genes in human tissues, and enrichment analyses.

Results We identified 26 novel SNPs associated with antipsychotic-induced involuntary movement (assessed by AIMS) at a genome-wide significance level. The top SNP (rs11769191) is located in CNTNAP2 gene ($p = 5.65E-13$), namely contactin associated protein 2. CNTNAP2 gene encodes a member of the neurexin family which functions in the vertebrate nervous system as cell adhesion molecules and receptors, which is involved in interactions between neurons and glia during nervous system development and is also involved in localization of potassium channels within differentiating axons. This gene is highly expressed in the brain tissue,

and has been implicated in multiple neurodevelopmental disorders, including Gilles de la Tourette syndrome, schizophrenia, epilepsy, autism, ADHD and intellectual disability. The other SNPs at a genome-wide significance level were mapped in the ZNF638 (rs13032033, $p = 9.88E-11$), LUZP2 (rs149137825, $p = 3.91E-09$), FAM83B (rs16886072, $p = 5.27E-09$), GLO1 (rs117588402, $p = 5.55E-09$), ARHGEF4 (rs10196377, $p = 6.52E-09$), DYNC2H1 (rs146993202, $p = 1.57E-08$), UMOD (rs4238595, $p = 3.59E-08$), and MYH6 (rs76202841, $p = 4.00E-08$). Then we conducted the enrichment analyses by using 154 SNPs with P value less than 1×10^{-5} and found that these genes were associated with nervous system development. Moreover, we identified one novel SNP associated with antipsychotic-induced EPS (assessed by SAS) at a genome-wide significance level, namely rs116249243 which is located in the RAB44 gene ($p = 8.36E-09$). RAB44, Ras Related Protein Rab 44, is predicted to enable GTP binding activity and calcium ion binding activity, which is associated with innate immune system. Additionally, we one novel SNP related to the akathisia (assessed by BARS) at a genome-wide significance level ($p = 5.69E-09$), while this SNP is not located in gene. The enrichment analyses of SNPs related to akathisia with P value less than 1×10^{-5} showed that these SNPs were involved in severe intellectual disability, sleep disorders and spasticity

Conclusion This study is the largest GWAS on antipsychotic-induced EPS. We have identified CNTNAP2 (related to nervous system development and localization of potassium channels within differentiating axons) and other nine genes, which were associated with antipsychotic-induced involuntary movement. We also found RAB44 gene related to innate immune system which were associated with antipsychotic-induced EPS, as well as one novel SNP associated with antipsychotic-induced akathisia. These findings improve the understanding of the mechanisms underlying antipsychotic-induced EPS

关键词: Genome-wide association study, Antipsychotics, extrapyramidal syndrome, involuntary movement, akathisia

An Investigation on Genetic Mechanisms under Clinical Subgroups in Schizophrenia

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Background Clinical heterogeneity in schizophrenia (SZ) poses a significant challenge to genetic research, as varying symptoms may be linked to different genetic susceptibilities. Previous studies had identified various subgroups of SZ using cluster analysis based on phenotypes. However, the genetic mechanisms underlying these subgroups remain unclear. This study aims to investigate the genetic risk of SZ subgroups derived from clinical symptoms through polygenic scores (PGSs) analysis and Genome-Wide Association Studies (GWAS).

Methods In 2974 SZ patients and 720 healthy controls (HC), K-means cluster analysis using Positive and Negative Syndrome Scale (PANSS) was applied to classify the patients into subgroups with different clinical symptoms profiles. Then we compared the genetic liability of different SZ-related phenotypes among different subgroups using logistic regression model. Genetic liability was represented by PGSs for 191 brain functional networks assessed using resting-state functional magnetic resonance imaging (rsfMRI) and pathway specific PGS (pPGS) for four neurotransmitters systems (dopamine, serotonin, glutamate, GABA) and 24 pathways that showed enrichment in the PGC3 GWAS for SZ. Additionally, cluster-based GWAS analyses were performed for each cluster and HC, with sex, age, and microarray types as covariates.

Results We identified four subgroups of patients with schizophrenia, each with distinct symptom profiles: low symptoms (cluster-L), predominant affective and excited symptoms (cluster-AE), predominant negative symptoms (cluster-N), and predominant positive symptoms (cluster-P). Patients in cluster-N had the poorest social functioning, whereas those in cluster-P showed the least impairment.

After Bonferroni correction, six rsfMRI phenotypes showed differing genetic risks between patients and HC. Specifically, patients in cluster-L and cluster-AE exhibited decreased PGS for the motor network compared to HC. Patients in cluster-N showed changes three phenotypes related to default mode network, central executive network and saline network, while patients in cluster-P exhibited changes in two phenotypes related to visual network, default mode network and central executive network.

Furthermore, patients in cluster-L had as higher dopamine pPGS compared to HC. Glutamate pPGS were elevated in both cluster-AE and cluster-N, while GABA pPGS were higher only in cluster-N. Regarding the 24 pathways enriched in PGC3 GWAS for SZ, pPGS of synapse and transporter complex were higher in all four subgroups compared to HC, while pPGS of ion channels and voltage-gated channels had elevated levels only in cluster-N. Additionally, pPGS of axon and regulation of cation channel activity pathways were higher in cluster-AE.

For cluster-based GWAS analyses, we did not find genome-wide significance at the variants level and genes level in cluster-based GWAS analyses. Pathway analysis revealed enrichment of four immunology-related pathways from GO database in the GWAS results for cluster-N. No positive result was found in other subgroups.

Conclusion Our results suggest that SZ patients with distinct symptom profiles displayed varying genetic liability of brain functional networks and biological pathways. Notably, patients in cluster-N exhibited a higher genetic burden on immune-related pathways compared to other patients.

关键词: Schizophrenia, Genetics, Heterogeneity, GWAS

Risk of Cardiovascular Disease Hospitalization after Common Psychiatric Disorders: Analyses of Disease Susceptibility and Progression Trajectory in The UK Biobank

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Objective Both psychiatric disorders and cardiovascular diseases (CVDs) are leading causes of disability, morbidity, and mortality worldwide according to the World Health Organization (WHO). In recent decades, accumulating evidence has indicated a link between psychiatric disorders and CVD. Whether associations between psychiatric disorders and hospitalization for cardiovascular diseases (CVDs) can be modified by disease susceptibility and the temporal pattern of these associated CVDs remain unknown. In the present study, taking advantage of enriched phenotypic information, almost complete follow-up, and individual-level genotyping data in the UK Biobank, we aimed to clarify whether disease susceptibility to CVD (i.e., indicated by genetic predisposition and familial history) modifies the association of common psychiatric disorders with subsequent risk of hospitalization for CVDs, and identify the key CVDs directly associated with a prior diagnosis of common psychiatric disorders

Methods In our study, we conducted a matched cohort study of the UK Biobank including 44,430 patients with common psychiatric disorders (anxiety, depression, and stress-related disorders) between 1997 and 2019, together with 222,150 sex-, Townsend deprivation index-, and birth year- individually matched unexposed individuals. We used a stratified Cox model (Holt and Prentice 1974) to estimate hazard ratios (HRs) with 95% CIs of any CVD hospitalization, in relation to a previous diagnosis of common psychiatric disorders, using time since the index date as the underlying time scale. The models were stratified by matched identifiers (unique ID for each exposed patient and their individually matched unexposed individuals), and partially or fully adjusted for sex, birth year, TDI, educational levels, ethnicity, smoking status, BMI, history of other psychiatric disorders, family history of CVD, and CCI. To determine the impact of disease susceptibility to CVD on the association between common psychiatric disorders and CVD, we conducted stratified analyses by family history of CVD (yes or no, for any CVD) and by level of CVD polygenic risk score (high, moderate, or low by

tertile distribution, for six subtypes of CVD). The CVD PRS was calculated by using LDpred2, based on a combination of summary statistics and a matrix of correlations between genetic variants. The temporal progression of CVD subsequent to a diagnosis of psychiatric disorders was explored using disease trajectory analysis, which is an approach that has been successfully applied for detecting directional networks of comorbidities after a diagnosis of depression and breast cancer.

Results During a mean follow-up of 12.28 years, we observed an elevated risk of CVD hospitalization among patients with psychiatric disorders, compared with matched unexposed individuals (hazard ratios [HRs] = 1.20, 95% confidence interval [CI]: 1.18-1.23), especially during the first six months of follow-up (1.72 [1.55-1.91]). We observed similar associations among individuals with and without a family history of CVD (1.73 [1.50-2.00] vs 1.88 [1.49-2.37], p for difference = 0.5506 within six months of follow-up, and 1.20 [1.16-1.23] vs 1.19 [1.14-1.24], p for difference = 0.7490 beyond six months follow-up). Likewise, comparable risk elevations were observed among individuals with different levels of CVD PRS within six months of follow-up (e.g., for ischemic heart disease, 3.33 [1.13-9.79] and 1.73 [1.03-2.92] for low and high PRS, p for difference = 0.2843) and beyond (1.31 [1.14-1.51] and 1.21 [1.12-1.32] for low and high PRS, p for difference = 0.3391). We conducted trajectory analysis to visualize the temporal pattern of CVDs after common psychiatric disorders, identifying primary hypertension, acute myocardial infarction, and stroke as three main intermediate steps leading to further increased risk of other CVDs

Conclusion In conclusion, the association between common psychiatric disorders and subsequent CVD hospitalization is not modified by predisposition to CVD. Hypertension, acute myocardial infarction, and stroke are three initial CVDs linking psychiatric disorders to other CVD sequelae, highlighting a need of timely intervention on these targets to prevent further CVD sequelae among all individuals with common psychiatric disorders

关键词: Psychiatric disorders, Cardiovascular disease, Disease susceptibility, Disease trajectory

Dose Adjustment of Paroxetine Based on CYP2D6 Activity Score Inferred Metabolizer Status in Chinese Han Patients with Depressive Or Anxiety Disorders: A Prospective Study and Cross-ethnic Meta-analysis

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Objective Understanding the impact of CYP2D6 metabolism on paroxetine, a widely used antidepressant, is essential for precision dosing and remains unclear.

Methods We conducted an 8-week, multi-center, single-drug, prospective cohort study in 921 Chinese Han patients with depressive or anxiety disorders. We performed CYP2D6 genotyping (single nucleotide variant and copy number variant) to derive the CYP2D6 activity score and evaluated paroxetine treatment outcomes including steady-state concentration (C_{ss}), treatment efficacy, and adverse reaction. CYP2D6 metabolizer status was categorized into poor metabolizers (PMs), intermediate metabolizers (IMs), extensive metabolizers (EMs) and ultrarapid metabolizers (UMs). The influence of CYP2D6 metabolic phenotype on paroxetine treatment outcomes was examined using multiple regression analysis and cross-ethnic meta-analysis. We also explored how copy number variant (CNV) of CYP2D6 gene affect paroxetine treatment outcomes. The therapeutic reference range of paroxetine in Chinese Han patients was estimated by receiver operating characteristic analyses

Results After adjusting for demographic factors, the paroxetine C_{ss} in PMs, IMs, and UMs were 2.50, 1.12, and 0.39 times that of EMs, with PM and UM effects being statistically significant (multiple linear regression, exponentiated $\beta = 2.50$, 95%CI: 1.08-5.76, $P = 0.03$; exponentiated $\beta = 0.39$, 95%CI: 0.15-0.97, $P = 0.04$, respectively). Sex and ethnicity influenced the

comparison between IMs and EMs. Poor efficacy of paroxetine was associated with UM, and a higher risk of developing adverse reactions was associated with the lower activity score. Moreover, after adjusting for demographic factors, the paroxetine C_{ss} of CYP2D6-CNV deletion carrier and CYP2D6-CNV duplication carrier were 1.53 and 0.64 times that of CYP2D6-CNV non-carriers (multiple linear regression, exponentiated $\beta = 1.53$, 95%CI: 1.26-1.85, $P < 0.001$; exponentiated $\beta = 0.64$, 95%CI: 0.36-1.12, $P = 0.12$, respectively). Regarding efficacy, pooled analysis showed that CYP2D6-CNV-deletion carriers had significantly greater symptom improvement after 8-week paroxetine treatment compared to non-carriers (pooled standardized $\beta = 0.21$, 95%CI: 0.01-0.41, $P = 0.04$, $I^2 < 0.01$). The paroxetine therapeutic reference range was found to be 31.95-79.65ng/ml for depressive or anxiety disorders, and 31.55-52.5 ng/ml for major depressive disorder. Lastly, cross-ethnic meta-analysis suggesting dose adjustments for PMs, IMs, EMs, and UMs in the East Asian population to be 35%, 40%, 143%, and 241% of the manufacturer's recommended dose, and 62%, 68%, 131%, and 159% in the non-East Asian population

Conclusion Our findings advocate for precision dosing based on the CYP2D6 metabolic phenotype, with sex and ethnicity being crucial considerations in this approach. We recommend greater dose adjustment for CYP2D6 metabolizer status in East Asians and cautious adjustments for Chinese Han male patients

关键词: CYP2D6, copy number variant, metabolizer status, paroxetine, dose adjustment, precision medicine

磁休克治疗对重性抑郁障碍症状及脑血流变化的研究

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目的 探讨磁休克(MST)治疗对重性抑郁障碍患者症状、脑血流的影响。

方法 收集2023年6月至2024年2月于河北医科大学第一医院精神卫生中心住院的18-50岁患者,符合DSM-5重性抑郁障碍的诊断标准,且HAMD-17评分 ≥ 25 分,共纳入患者14例,在药物治疗的基础上,给予患者8次磁休克治疗。分别在基线和治疗3周末采集fNIRS在言语流畅性任务下双侧颞叶和前额叶区域的HbO的积分值的变化。收集患者一般人口学资料,并在治疗前后评估受试者情况。使用17项汉密尔顿抑郁量表(Hamilton Depression Rating Scale, HAMD-17)、汉密尔顿焦虑量表(Hamilton Anxiety Rating Scale, HAMA)、匹兹堡睡眠质量指数量表(Pittsburgh sleep quality index, PSQI)、连线测验(Trail Making Test, TMT)、数字符号、数字广度测验及不良反应量表评估患者治疗前后症状变化。采用SPSS 27软件、MATLAB软件对数据进行分析研究。

结果 与磁休克治疗前相比,治疗后患者HAMD、HAMA、PSQI得分显著下降,差异具有统计学意义($t = -4.405$, $P = 0.000$; $t = 4.322$, $P = 0.000$; $t = 3.087$, $P = 0.005$)。治疗后患者连线测验(Trail Making Test, TMT)任务1、2,数字符号,数字广度测验顺背、倒背评分无明显变化,差异无统计学意义($Z = -0.590$, $P = 0.555$; $Z = -1.050$, $P = 0.294$; $Z = -0.508$, $P = 0.611$; $Z = -0.107$, $P = 0.915$; $Z = -0.482$, $P = 0.630$)。MST治疗后左、右颞叶、前额叶HbO积分值增加,差异具有统计学差异($T = -2.30$; $P = 0.029$; $T = -2.10$; $P = 0.044$; $T = -3.50$; $P = 0.0015$)。相关性分析使用线性回归以HAMD、HAMA、PSQI总分为因变量,前额叶、两侧颞叶HbO值为自变量进行分析,HbO值可以解释量表总分的35.7%,没有显著相关性($P = 0.342$)。其中有2名患者第一次治疗后存在头痛,不排除患者本身所存在的躯体症状,1名患者存在头晕不适,余未报告明显不良反应。

结论 磁休克疗法治疗对重性抑郁障碍患者的焦虑、抑郁情绪及睡眠症状有显著改善作用,治疗后左颞叶、右颞叶、前额叶脑血流较治疗前增加,与量表评分变化无明显相关性,还需进一步扩大样本量来验证。

关键词: 重性抑郁障碍; 磁休克; 功能性近红外光谱技术; 认知功能

继续教育协作组

Relationship between Anxiety and Internet Addiction: A Network Analysis of Large-Population Chinese Adolescent Students

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Objective Anxiety is the most common mental disorder globally, with a significant impact on Chinese adolescents at a rate of 4.7%. It often appears alongside other mental health issues, such as Internet addiction (IA), characterized by losing control of internet use or functional impairments. Although the relationship between anxiety and IA has been previously studied, network analysis enables us to estimate relationships even further at the symptom level. The general network analysis considers all symptoms and symptom interactions. Bridge network analysis focuses on the symptom interaction across different disorders without considering the internal relationships within diseases. Additionally, Bayesian network analysis can provide the potential direction of these relationships. However, previous studies have rarely examined anxiety-IA comorbidity using all of these analyses simultaneously. Thus, this study aims to use general, bridge, and Bayesian network analyses to identify the most influential symptoms in anxiety-IA comorbid networks among Chinese adolescents.

Methods This cross-sectional study was conducted among adolescent students in Sichuan Province, China, from December 2022 to February 2023. A total of 122 middle schools and high schools participated in the survey. This study utilized the 7-item Generalized Anxiety Disorder Scale (GAD-7) and the modified 17-item Internet Addiction Test (IAT-17) for assessing anxiety and IA, respectively. Given the debate on the optimal network modeling approach beyond a binary classification, this study simplified all of the items into binary categories, representing the absence or presence of symptoms. Our main approaches included setting up

network models, analyzing the most influential symptoms, and accessing the accuracy and stability of our models. To preserve the positive and negative values, we opted for the Expected Influence (EI) measure to identify the most influential nodes.

Results The study included 60,268 adolescents (mean age = 15.90 ± 1.65 years; age range 12–19 years; 45.56% boys and 54.44% girls; 40.08% junior high and 59.92% senior high school). “Nervousness” and “complaints about prolonged internet usage” emerged as the most common in the GAD-7 and the IAT-17 separately. The total score for the dichotomized GAD-7 and IAT-17 was 2.47 ± 2.98 and 11.17 ± 5.48 , respectively. In the general network, “uncontrollable worry,” “irritability,” and “the web makes you feel better” were the most important symptoms in the model. In the bridge network, “restlessness,” “irritability,” “feeling afraid,” “defensive or secretive about being on the web,” and “using the web to escape from emotion” connected anxiety and IA sub-networks. Both network models revealed acceptable stability. In the Bayesian analysis, “losing sleep” had the highest latent predictive power. “Restlessness,” “irritability,” and “the web makes you feel better” activated multiple downstream symptom connections. Besides, Bayesian analysis pointed to a potential direct impact of IA on anxiety.

Conclusion Our findings provide a novel examination of the anxiety-IA comorbidity network in Chinese adolescents through multiple integrative network analyses, offering insights into the onset, development, and interactions of anxiety and IA at the symptom level. Our study emphasizes the need for future longitudinal studies to explore causality and develop tailored interventions for the comorbidity of anxiety and IA.

关键词: Anxiety, Internet Addiction Disorder, Comorbidity, Network, Adolescents

抑郁症患者脑电微状态时间动力学特征与皮层内抑制功能的研究

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目的 通过评估抑郁症患者脑电微状态时间动力学特征,从动态的视角去探索抑郁症的神经机制。同时评估抑郁症患者的皮层内抑制功能,进一步探索大脑神经网络时间动力学改变与其皮层内抑制功能的关系。

方法 纳入 2022 年 9 月至 2023 年 12 月就诊于昆明医科大学第一附属医院的抑郁症(符合 DSM-V 诊断标准)患者 45 名,以及年龄、性别、受教育年限相匹配的健康对照 29 名。使用汉密尔顿抑郁量表-17 项(HAMD-17)、神经心理状态评定量表(RBANS)评估抑郁症状及认知功能。采集所有被试的静息态脑电数据,使用 CARTOOL 进行微状态分析,提取微状态(A、B、C、D)的时间动力学参数包括平均持续时间、出现频率、覆盖率、相互转换概率。采用成对脉冲经颅磁刺激联合肌电描记技术(ppTMS-EMG)测量皮层内抑制功能:短时程皮层内抑制(SICI)和长时程皮层内抑制(LICI),SICI、LICI 测量值越高皮层内抑制功能越差。最后使用 SPSS26 进行统计分析。

结果 1.抑郁组微状态 A 出现频率($P=0.002$)、时间覆盖率($P=0.005$)及微状态 D 出现频率($P=0.006$)高于健康对照组,微状态 C 平均持续时间($P=0.001$)、出现频率($P=0.038$)、时间覆盖率($P=0.001$)低于健康对照组。与健康对照组相比,抑郁组微状态 A→D($P<0.001$)、D→A($P<0.001$)转换概率增加, B→C($P=0.028$)、A→C($P<0.001$)、C→D($P=0.001$)、D→B($P=0.019$)转换概率减少。在相关性分析中,抑郁组 HAMD 因子分焦虑/躯体化与微状态 A 出现频率($r=0.330$, $P=0.033$)与呈正相关, HAMD 因子分认识障碍与微状态 D 出现频率($r=0.389$, $P=0.011$)、D→B 转换概率($r=0.381$, $P=0.013$)呈正相关。2.抑郁组 SICI($P<0.001$)、LICI($P=0.008$)较健康对照组增高。3.抑郁组 SICI 与微状态 A→B 转换概率($r=-0.308$, $P=0.047$)、B→A 转换概率($r=-0.322$, $P=0.038$)呈负相关。抑郁组 LICI 与 B→A 转换概率($r=-0.334$, $P=0.031$)呈负相关。

结论 1.抑郁症存在多个脑电微状态时间动力学的异常,从动态的视角说明抑郁症存在大尺度神经网络的紊乱以及不同神经网络之间的异常交流。此外,抑郁症脑电微状态的时间动力学的异常可能是不同症状的基础。2.抑郁症患者的短时程及长时程皮层内抑制功能均受损,其皮层内抑制受损可能

是其网络动态交流障碍的机制之一。

关键词: 抑郁症; 脑电微状态; 皮层内抑制

Virtual Reality Working Memory Training Improves Working Memory of Patients with Major Depressive Disorder: A Functional Near-infrared Spectroscopy Study

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Objective Most patients with major depressive disorder (MDD) have working memory (WM) impairment, which can be improved by virtual reality working memory (VR-WM) training, but the specific neural mechanisms are still unclear. In this study, VR-WM training was conducted in patients with MDD to verify how it improves WM and further explore the role of the frontotemporal lobe in its related neural mechanisms

Methods Fifty-seven MDD patients were included. Among them, 29 MDD patients received VR-WM training, while 28 did not. Stroop color and word test, 2-back task, digit task switching, and digit span test were used to evaluate the inhibition, updating and switching function of WM, and working memory span. Functional near-infrared spectroscopy (fNIRS) was used to detect the functional features of the frontotemporal lobe in MDD patients at rest before and after training

Results After the VR-WM training, MDD patients exhibited significant improvements in the accuracy of the Stroop color and word test ($p = 0.013$) and 2-back task ($p = 0.002$), the scores of digit span test ($p = 0.030$) and HDRS score ($p = 0.006$). Significant group-by-time interactions of local efficiency ($p = 0.005$) and clustering coefficient ($p = 0.004$) of the frontotemporal lobe were observed between the two groups. After VR-WM training, the improvement of the scores of digit span test in MDD patients was positively correlated with the increase of clustering coefficient in frontotemporal lobe

Conclusion VR-WM training effectively improved the inhibition function, updating function and memory span in WM of patients with MDD. Besides, VR-WM training improves WM performance in patients with MDD by enhancing functional connectivity in the frontotemporal lobe

关键词：Major depressive disorder; Working memory; Virtual reality; Functional near-infrared spectroscopy; Frontotemporal lobe.

抑郁障碍研究协作组

中国单相抑郁症的药物联合/增效治疗现状

肖乐

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目的 尽管抑郁障碍的治疗指南一直强调单一用药的治疗原则，然而单一用药治疗的有效率低，因此在临床实际中药物增效/联合治疗非常普遍，对于疗效不佳的患者，增加当前抗抑郁药的剂量，换用另一种抗抑郁药，添加心境稳定剂或抗精神病药物（增效治疗），或联合另一种抗抑郁药（联合治疗）。很多尚未服药的单相抑郁症患者在初始用药阶段也用到了增效/联合治疗，但很少有相关研究。本研究旨在（1）对中国未用药的单相抑郁患者增效/联合治疗的现状进行初步分析；（2）探讨联合/增效治疗相关的影响因素。

方法 本研究为全国多中心的纵向随访观察，在 23 家中心入组抑郁发作尚未服药的患者。基线时收集社会人口统计学、临床特征和治疗药物，并进行抑郁症状、生活质量和社会功能的评估。我们采用单因素分析和多元 Logistic 回归分析联合/增效用药的相关因素。

结果 共有 1330 例患者纳入本研究分析，361 例（27.14%）患者接受了联合/增效治疗，其中 236 例（17.74%）接受了抗精神病药物治疗，50 例（3.76%）接受了锂盐治疗，37 例（2.78%）接受了丙戊酸钠治疗，105 例（7.89%）接受了两种及以上的抗抑郁药治疗。相比单药治疗，SNRIs、NaSSAs、安非他酮和曲唑酮在联合/增效治疗中更常见。接受联合/增效治疗的患者男性居多，年龄较大，受教育程度较低，月收入较低，在抑郁症状（IDS-SR30 评分）、社会功能损害（SDS 评分）中的得分更高。多因素分析显示精神运动性迟缓、躯体不适、躯体化焦虑症状、灌铅样麻痹是联合/增效治疗的相关因素。

结论 在真实世界的临床实践中，联合/增效治疗非常普遍。接受强化/联合治疗的患者更有可能是年龄较大的男性，伴有更严重的抑郁症状和功能损害。

关键词：单相抑郁；联合治疗；增效治疗；真实世界研究

基于个体临床动态数据监测的混合电抽搐治疗 (i-HECT) 对青年抑郁患者的疗效和自杀意念研究

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目的 自杀是青少年死亡的第二大因素。重度抑郁是导致残疾和自杀死亡的主要原因。青年抑郁患者得到快速、有效的治疗,有助于缩短他们在学业、工作和社会活动中受损的时间。既往改良的无抽搐电休克疗法(modified-ECT, MECT 或 ECT)常因其副作用而被青年患者排斥,我们团队已发表了一项改良的策略混合 ECT (Hybrid-ECT, HECT) 在取得良好效果的同时尽量降低了认知副作用。本研究,我们进一步改良该方案,探索这种 i-HECT 对青年抑郁患者的疗效和自杀意念的影响。

方法 46 名青年抑郁患者(16-25 岁)在基线和 i-HECT 结束后接受了临床疗效和自杀意念评估。采用临床疗效总评量表-疾病严重程度分量表(CGI_S)评估当前抑郁的严重程度,哥伦比亚自杀严重程度评定量表(C-SSRS)意念强度分量表评估被试的自杀严重程度。i-HECT 方案为:在每次 ECT 治疗后对被试进行症状检测,达到预先设定条件即由常规 ECT 转变为低电量 LCE(电量为常规 ECT 的一半)治疗。

结果 配对样本 T 检验结果显示,被试经过 i-HECT 治疗后,自杀意念强度总分[(16.35±4.18)分]显著降低为[(8.54±6.48)分],差异显著($P < 0.01$)。其中分量表结果显示,自杀的频率、持续时间、可控性、阻碍因素和产生自杀的原因均显著降低($P < 0.05$),且疾病严重程度 CGI_S 得分[(1.93±0.98)分]也较基线水平[(5.65±0.71)分]下降显著($P < 0.05$)。

【局限性】缺乏常规 ECT 研究作为对照;无法控制年龄、性别和药物干预等影响。

结论 i-HECT 在青年抑郁患者中有良好的疗效表现和降低自杀意念的效果。该研究提示我们,针对有严重自杀风险的青年抑郁患者,在接受 ECT 治疗时可以根据患者的症状改善情况考虑更个性化的电量设置方案,在达到预期临床收益的同时降低其自杀意念的强度。我们也需要进一步考虑电量设

置、抽搐与否在降低抑郁患者自杀风险中的作用与必要性。

关键词:抑郁;自杀意念;无抽搐电休克治疗; i-HECT

Alterations of Structure- Function Coupling in The Temporal Lobe and Thalamus in Major Depressive Disorder Patients with and without Anhedonia

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Objective Major depressive disorder (MDD) patients with anhedonia are generally considered to be characterized by severe social impairment, poor treatment outcomes, poor prognosis, and longer course of disease. In recent years, many magnetic resonance studies have shown that MDD with anhedonia may have unique brain structural and functional alterations. However, the effect of anhedonia on synchronized changes in the structure and function of individual brain regions in MDD is unclear

Methods A total of 88 individuals, including 29 MDD patients with anhedonia, 29 MDD patients without anhedonia, and 30 healthy controls (HCs) were enrolled in this study. All subjects underwent structural and resting-state functional magnetic resonance imaging scans. Using the obtained structural and functional data, the regional structure-function coupling of cortical and subcortical regions was constructed by quantifying the distribution similarity of gray matter volume (GMV) and the amplitude of low-frequency fluctuations (ALFF). Further, we investigated the alterations in structural and functional coupling in MDD with and without anhedonia. Finally, the partial correlation between structure-function coupling and clinical features of the temporal lobe and thalamus in MDD patients was further analyzed

Results The ANCOVA revealed significant structure-function coupling differences among three

groups in the precentral gyrus (PrG), middle temporal gyrus (MTG), insular gyrus (INS), and thalamus (Tha). When compared with HC, structure-function coupling decreased in the right INS, right PrG, and left PrG. When anhedonia was taken into account, the structure-function coupling of MDD with anhedonia was reduced in left MTG and right Tha compared with the other two groups. In addition, partial correlation analysis found that the structure-function coupling in the left MTG was positively correlated with the age of first onset but negatively correlated with the total course of disease

Conclusion Our findings highlight that reduced structure-function synchronicity in the temporal cortex and thalamus may be associated with the development of anhedonia symptoms in MDD patients

关键词: Structure-Function Coupling; Anhedonia; Major Depressive Disorder; Temporal Lobe; Thalamus

Associations between Specific Dietary Patterns, Gut Microbiome Composition, and Incident Subthreshold Depression in Chinese Young Adults

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Objective Subthreshold depression (SD) characterizes a mood disorder where individuals experience 2-4 depressive symptoms persisting for at least 2 weeks. The interplay between influential factors and the incidence of SD in young adults remains poorly understood. This study sought to understand the dietary habits, gut microbiota composition, etc. among individuals with SD in young adults and to investigate their association with SD occurrence.

Methods Employing a cross-sectional approach, 178 individuals with SD, aged 18-32 years, were matched with 114 healthy counterparts. SD status was evaluated using the Zung Self-rating Depression Scale (SDS), Zung Self-rating Anxiety Scale (SAS), Beck Depression Inventory 2nd version (BDI-II), the 17-item Hamilton Rating Scales of Depression (HAMD-17), and

Pittsburgh Sleep Quality Index (PSQI). Metagenomic sequencing was utilized to identify fecal microbial profiles. Dietary patterns were discerned via factor analysis of a 25-item food frequency questionnaire (FFQ). Logistic regression analysis and mediation analysis were performed to explore the potential links between gut microbiota, dietary patterns, and incident SD

Results Data on dietary habits were available for 292 participants (mean [SD] age, 22.1 [2.9] years; 216 [73.9%] female). Logistic regression analysis revealed that dietary patterns I (odds ratio [OR], 0.34; 95% CI, 0.15-0.75) and IV (OR, 0.39; 95% CI, 0.17-0.86 and OR, 0.39; 95% CI, 0.18-0.84) were associated with reduced risk of SD. Distinct microbial profiles were observed in young adults with SD, marked by increased microbial diversity and taxonomic alterations. Moreover, mediation analysis suggested *Veillonella atypica* as a potential mediator linking SDS or BDI-II scores with a healthy dietary pattern rich in bean products, coarse grains, nuts, fruits, mushrooms, and potatoes ($\beta = 0.25$, 95% CI: 0.02-0.78 and $\beta = 0.18$, 95% CI: 0.01-0.54)

Conclusion The results imply a link between specific dietary patterns and the onset of SD. Individuals with SD tend to exhibit higher levels of gut microbiota, a correlation that aligns with certain dietary habits. This points to the gut microbiota potentially acting as a mediator between dietary patterns and SD, shedding light on a plausible mechanism underlying how dietary choices impact the severity of SD symptoms. To this end, dietary patterns or microbiota may be a promising therapeutic target for the prevention and treatment of SD

关键词: Subthreshold depression; Dietary patterns; Gut microbiota; Metagenomic shotgun sequencing; Mediation analysis; Chinese young adults.

基于机器学习算法和生物信息学识别自噬相关抑郁症诊断生物标志物和基因调控网络

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目的 抑郁症作为世界第二大负担疾病, 给家

庭和社会造成了巨大的负担,由于发病机制不明确、患者个体差异大,抑郁症尚缺乏客观的诊断标准,本研究旨在采用多重机器学习算法和生物信息学方法筛选客观、可靠、高效的抑郁症诊断生物标志物,并进一步探究抑郁症的潜在发病机制和基因靶向药物,为临床精准治疗和实验研究提供思路,为抑郁症的早期诊断提供科学基础。

方法 1.收集和预处理 198 例抑郁患者及 139 例健康对照的外周血转录组数据,构建输入数据集;2.执行差异基因分析和 WGCNA 分析,获得与抑郁密切相关的基因序列,通过蛋白互作可视化基因间的相关性,采用 GO 和 KEGG 功能富集分析探索上述基因的功能及机制;3.执行最大团中心性拓扑分析算法,选取序前 30 位基因作为候选生物标志物;4.执行 LASSO 和 SVM-RFE 机器学习算法,过滤和识别抑郁症诊断生物标志物;5.使用外部数据集,以一致性指数、AUC、拟合优度检验和准确率等作为性能度量标准,验证生物标志物的诊断有效性;6.构建转录因子基因调控网络,并预测基因靶向的药物,为临床精准治疗和实验研究提供思路,并进一步进行了抑郁症与其他疾病的关联性分析,为进一步研究疾病的潜在发病机制提供了转录组基础。

结果 经差异基因分析和加权共表达网络分析,筛选出 302 个与抑郁密切相关的基因,功能富集发现上述基因在自噬体组装,细胞多糖分解代谢等生物过程中显著富集,主要通路为 AMPK、IL-17 信号通路。构建蛋白互作网络后采用 LASSO 和 SVM-RFE 算法构建最佳的诊断模型,并与自噬相关基因取交集,得到 4 个抑郁症关键基因: GABARAPL2, RB1CC1, ULK1, FOS, 经过外部数据集验证,均表现出良好的单基因诊断能力,基因联合诊断效率为 AUC=0.756。经验证模型的准确率最高达 85%,一致性指数 0.94,拟合优度检验 $P=0.15$,具有较强的准确性和稳定性。四个生物标志物受到 25 个转录因子的调控,其中 FOXC1 是共有的转录因子;原蚕蛾,蚕砂两种中药可能是治疗抑郁症的潜在药物,乳腺癌、大脑中动脉堵塞被确定为抑郁症的潜在合并症。

结论 本研究以大样本数据多维筛选和机器学习算法在基因表达水平上筛选了用于抑郁症辅助诊断的生物标志物,并探索了潜在的分子机制和药物靶点,经验证模型能够有效地区分抑郁患者与健康人,具有较强的准确性和稳定性,为抑郁症的早期诊断提供新的思路和方案。

关键词: 抑郁症,机器学习,生物信息学,生物标志物

一项基于真实世界数据对青少年抑郁与双相障碍住院患者临床特征的比较研究

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目的 由于处在成长特殊时期,青少年抑郁(MDD)和双相障碍(BD)患者临床表现均复杂和多元化,导致发病早期误诊率高,治疗效果不理想。本研究拟基于真实世界数据开展针对我院住院青少年抑郁和双相情感障碍患者的临床特征分析比较,为疾病风险预测和临床诊疗提供一定参考价值。

方法 本研究为一项回顾性、队列对照研究,基于我院大数据平台收集 2013 年 1 月 1 日至 2021 年 12 月 31 日青少年住院 MDD 和 BD 患者。入选 12-17 周岁性别不限,符合 ICD-10 BD 或 MDD 诊断标准,并排除精神分裂症、分裂情感性障碍;器质性精神障碍;酒精或药物滥用。SPSS26.0 软件进行数据统计分析。

结果 1. 共 3631 例次患者入选,青少年 MDD 组 2094 例次,青少年 BD 组 1537 例次。MDD 组男女比例为 1: 2.56, BD 组男女比例为 1: 1.06。MDD 组 12-14 岁患者比例(36.29%)高于 BD 组(19.32%),且 MDD 组女性患者占比(78.95%)高于 BD 组(51.18%)。BD 组平均住院时间长于 MDD 组(27.08 天 vs 23.57 天)。

2. 2013-2019 年青少年 MDD 和 BD 总体住院患者数量均呈现逐年递增趋势,增长率分别在 20-85% 和 12%-53% 之间且 MDD 组高于 BD 组。MDD 组 12-14 岁住院总数在 2018 年后高于 15-17 岁组;在 2020-2021 年 MDD 组住院人数先降低 13.92% 后增加 35.53% 而 BD 组住院人数降低 61.89% 后增加 14.53%;

3. MDD 组伴发精神病性症状更多见(MDD 组 34.29% vs. BD 组 16.92%) 且女性为主(75.91% vs 53.46%)。BD 组 15-17 岁合并精神病性症状的比例更高(86.15% vs 50.28%)。

4. 青少年 MDD 组伴有自伤/自杀意念和行为的比例高于青少年 BD 组(43.02% vs 15.55%),女性的

发生率 (MDD 组 78.98%, BD 组 74.48%) 在两组均明显大于男性。

结论 1. 2013-2019 年 12-17 岁青少年 MDD 和青少年 BD 患者的住院人数均呈现逐年递增的趋势, 青少年 MDD 住院人数递增速率明显大于 BD 组并呈现女性、低龄化的趋势;

2. 在 2020-2021 年新冠疫情期间, 青少年 MDD 的住院认识在刚开始略有下降外, 在 2021 年例数继续增加明显维持上升趋势, 这可能是由于 MDD 本身受外界因素影响大并多体现自杀自伤行为更易引起家长、社会关注而就诊;

3. 12-14 岁的女性青少年群体为住院 MDD 高发群体, 并伴有更大自杀自伤风险, 需要重点关注, 建议采取措施早期预防、筛查评估、心理干预和及时就医治疗。

关键词: 青少年; 抑郁障碍 (MDD); 双相情感障碍 (BD); 真实世界数据 (RWD)

Eight-week Antidepressant Treatment Changes Connectome Gradient in First-episode Drug-naïve Major Depressive Disorder Patients

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Objective Current treatment modalities for Major depressive disorder (MDD) relies on empirical methodologies, lacking comprehensive understanding of the pathogenesis underlying depression and the specific targets of antidepressant medications. Neuroimaging techniques, such as magnetic resonance imaging (MRI), offer a more in-depth view of the brain's structure and function as opposed to gross brain pathology. It also provides clues for identifying potential targets for the treatment of depression. Recently, a novel method utilizing

gradients has been proposed to establish nonlinear decomposition of high-dimensional resting-state functional connectivity. Unlike regional analyses, this approach can decompose functional brain networks into different gradient components to capture the topography of connectomes, where voxels with similar connectivity patterns are located close to one another along a given connectivity gradient. It comprehensively detects cortical functional hierarchies by representing brain connectivity in a continuous, low-dimensional space. Furthermore, functional gradients have been demonstrated to be associated with the neurodevelopment of brain, thereby offering novel insights into the functional alterations in individuals with depression. Previous studies utilizing connectome gradient methods have revealed disruptions of the principal gradient in MDD patients. However, the semiological meaning of brain gradient and the effect of antidepressants are unknown. We employed a longitudinal cohort collecting neuroimaging and clinical data before and after antidepressant treatment in first-episode drug-naïve (FEDN) MDD patients, and investigated the modifications in functional connectome gradients, their associations with clinical syndromes, and the effects of antidepressant treatment

Methods We recruited 159 MDD patients and 152 healthy controls. For all patients, clinical data including medication information and 17-item Hamilton Rating Scale for Depression were collected at baseline and after 8 weeks of treatment. The MRI data also collected at baseline and after 8 weeks of treatment and investigated MDD-related alterations in the principal connectome gradient. Altered gradient map regions were compared to gradient parameters after treatment. The interaction effects of change in gradient scores and treatment outcomes (remission and non-remission groups), as well as antidepressant types (single and multi-target target) were explored in MDD patients

Results Compared to controls, MDD patients exhibited gradient score alterations in default and visual networks. After antidepressant treatment, the gradient scores for the left ventromedial prefrontal cortex (VMPFC) declined in patients who responded to therapy. After antidepressant treatment, the gradient scores for VMPFC region and antidepressant type (single target or

multi-target) showed a significant group-by-time interaction. Post hoc analyses revealed that single-target antidepressants exhibited greater improvement in gradient scores for VMPFC compared to multi-target antidepressants. The correlation analysis with HRSD score also demonstrated that the baseline gradient score for VMPFC correlated negatively with the factor scores of core symptom

Conclusion Using a longitudinal sample, the present study demonstrated alterations in the connectome gradient of left VMPFC following antidepressant treatment in MDD patients, along with its association with the core syndrome and types of antidepressants. These findings advance our understanding of the neurobiological mechanisms of depression and the precise targets of antidepressants while providing potential biomarkers for medical treatment of MDD

关键词: Magnetic resonance imaging, Gradient scores, Antidepressant types, Functional connectome, Left ventromedial prefrontal cortex

The Efficacy and Safety of Pharmacological Treatment for Major Depressive Episode with Mixed Features Specifier: A Systematic Review and Meta-analysis

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Objective With the increased prevalence of major depressive episodes with mixed features specifier (MDE-MFS), the pharmacological treatment for MDE-MFS has garnered significant clinical attention. This study is a systematic review and meta-analysis to investigate the efficacy and safety of medication use for MDE-MFS

Methods Commonly used databases were searched for the meta-analysis. Primary efficacy outcomes included response rate and the change in the Young Mania Rating Scale (YMRS) score from baseline, and the primary safety outcome was the rate of treatment-emergent hypomania/mania

Results The overall results showed that antipsychotics were superior to placebo in improving depressive and manic symptoms without increasing the risk of switching to mania. However, subgroup analysis on bipolar depression with MFS revealed a non-significant effect on improving manic symptoms. Mood stabilizers, especially short-term valproate treatment, were found to be effective in managing MDE-MFS in patients with bipolar disorder (BD) by alleviating depressive and manic symptoms. For MDE-MFS in major depressive disorder (MDD), trazodone was shown to be effective, while the use of antidepressants for MDE-MFS in BD lacked evidence

Conclusion This study presented findings on the efficacy and safety of pharmacological treatment for MDE-MFS, which provided preliminary evidence in this area. While antipsychotic therapy is a viable option for MDE-MFS, its effect in improving manic symptoms is still unclear. Mood stabilizers may also be considered for treatment, and the use of antidepressants remains a topic of controversy. It is imperative to conduct further research to produce more conclusive evidence on the treatment of MDE-MFS

关键词: Major depressive episode, mixed features specifier, antipsychotics, antidepressants, mood stabilizers, systematic review

Representational Similarity Analysis of Brain Functional Patterns Across Resting-state, Rumination, and Distraction States in Depressed Patients

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Objective Rumination is a critical factor in the core pathological processes of Major Depressive Disorder (MDD), characterized by the persistent and repetitive self-focused rumination on depressive emotions and their potential causes and consequences. Previous

studies have revealed that the brain activity characteristics of MDD when engaging in rumination differ markedly from those of healthy individuals, but the neurological activity patterns of MDD in rumination states, and the differences in activity patterns between their states, remain to be understood intimately. This study applied Representational Similarity Analysis (RSA) to elucidate the similarity patterns of brain activity across resting-state, rumination, and distraction states in MDD patients, and compared with healthy control subjects

Methods In this study, we recruited 63 adult MDD patients and 57 healthy control subjects, who underwent MRI scanning and clinical assessment. For each participant, we collected functional MRI (fMRI) data during resting-state, rumination-state, and distraction-state. The data were preprocessed using standard procedures. We extracted brain representation features such as Functional Connectivity (FC), Amplitude of Low-Frequency Fluctuations (ALFF), and Fractional ALFF (fALFF) from different states. We constructed two conceptual matrices to describe the hypothesized relationships between different cognitive states. The first matrix was based on the hypothesis that both resting-state and rumination-state involve intrinsic thinking processes, making them most similar, while resting-state and distraction-state are dissimilar. The second matrix hypothesized that resting-state and distraction-state are most similar, as both involve states with low external interference, and are dissimilar to rumination-state. We constructed Representational Dissimilarity Matrices (RDM) to assess the correlation between brain representation patterns and conceptual matrices across different states. Significant group differences in brain region representations across different states were determined using two-sample permutation tests

Results There were no significant differences between the two groups in terms of age ($t = -1.725$, $p = 0.088$), gender ($X^2 = 0.091$, $p = 0.763$), and education level ($t = -1.009$, $p = 0.316$). Representational Similarity Analysis revealed that in MDD patients, the similarity of whole-brain functional connectivity patterns between states was significantly lower than that of healthy controls ($p < 0.05$) in the following regions: left somatosensory motor cortex (SMA), left dorsolateral prefrontal

cortex (dlPFC), left frontal eye field (FEF), left parietal cortex (PCC), right somatosensory motor cortex (M1), right dorsolateral prefrontal cortex (dlPFC), right frontal eye field (FEF), and right prefrontal cortex (PFC). Conversely, in the caudate nucleus, left inferior parietal lobule (IPL), and left temporoparietal junction (TPJ), the similarity of whole-brain functional connectivity patterns between states was significantly higher in MDD patients compared to healthy controls ($p < 0.05$)

Conclusion The RSA results indicate that, compared to MDD patients, healthy individuals exhibit significantly higher brain representational similarity between resting-state and rumination-state in the dorsal attention network and the default mode network. This suggests that healthy individuals may demonstrate greater flexibility in brain networks, effectively adjusting functional connectivity patterns across different tasks or states to maintain stable functional connectivity. In contrast, MDD patients exhibit lower adaptability and consistency in their brain networks, potentially indicating difficulties in adjusting connectivity across different states, leading to altered functional connectivity patterns during rumination

In conclusion, this study explored the patterns of neurological functional connectivity in MDD patients under different states of brain activity through the representational similarity analysis method. The results reveal specific changes in functional connectivity patterns in certain brain regions during rumination, which are associated with self-referential thinking, emotion regulation, and memory. These findings not only deepen our understanding of the neurobiological basis of MDD but also provide a theoretical foundation for developing individualized neuromodulation and treatment strategies. Future research should further explore the functional significance of these changes in neural connectivity patterns and their potential applications in long-term treatment, aiming to enhance recovery and improve the quality of life for MDD patients.

关键词: Representational Similarity Analysis, Major Depressive Disorder, fMRI, Rumination, Functional Connectivity

Non-invasive Temporal Interference Stimulation for Neural Circuit in Depression: A Proof-of-Concept Study

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Objective Given the heterogeneity of major depressive disorder (MDD), current first-line treatment methods including neuromodulation therapies provide convincing but limited effectiveness. Temporal interference stimulation (TIS) as a novel non-invasive brain stimulation technique being able to target deep brain regions, may have the ability to handle the heterogeneous pathological mechanism of MDD. In this proof-of-concept study, we investigated the safety and efficacy of TIS to reveal its potential in MDD treatment

Methods A complementary stereo electroencephalography in two epilepsy patients was performed to validate the accuracy and consistency of TIS. The intracranial electroencephalography signals were recorded from the surgically implanted SEEG depth electrodes when conducting TIS on four targeted brain regions of the participants to measure the accuracy and consistency of the expected electric field frequency and intensity

A within-subject design targeting multiple regions within the emotional neural circuit was adopted. Over a five-week period, 15 patients with MDD received weekly TIS targeting the left dorsolateral prefrontal cortex (DLPFC), left subgenual anterior cingulate cortex (sgACC), right ventral striatum (VS), and right amygdala, plus a control sham session, each target a week.

Clinical symptoms and neuroimaging outcomes were assessed weekly using clinician-rated scales and resting-state functional MRI respectively. Severity and characteristics of adverse events were assessed using self-reported measures.

Results Recorded intracranial EEG signals verifies an overall accuracy and stability of envelope frequency (DLPFC: 10.01 ± 0.03 Hz, sgACC: 100.08 ± 0.11 Hz, Amg: 100.01 ± 0.09 Hz, VS: 100.01 ± 0.02 Hz) and electric field power (DLPFC: 0.59 ± 0.07 V/m, sgACC: 0.63 ± 0.01 V/m, Amg: 0.15 ± 0.00 V/m, VS: 0.13 ± 0.01 V/m) during TIS on target areas. Significant improvement in depression was found after DLPFC ($P = 0.0047$), amygdala ($P = 0.003$) and VS ($P = 0.0074$) stimulations, while significant improvement in anxiety was found after DLPFC ($P = 0.0099$) and amygdala ($P = 0.0031$) stimulations. Significant increase in amplitude of low-frequency fluctuations (ALFF) was found in DLPFC after sgACC ($P = 0.021$) and VS ($P = 0.047$) stimulation. Amygdala stimulation induced improvement in depression was positively correlated with pre-stimulation DLPFC-sgACC connectivity ($P = 0.018$, $\rho = 0.600$). Patients were divided into hyper and hypo groups based on the median of their pre-treatment DLPFC-sgACC connectivity, showing differences in degree of improvement after amygdala or DLPFC stimulation. No severe adverse events were reported by the participants during the study. The most frequent adverse events were sleepiness and dizziness

Conclusion SEEG results provide evidence for the feasibility of TIS in modulating specific brain regions at a desired frequency, demonstrating that TIS could induce electric field with specified and consistent frequency at target sites. The improvement of depression and anxiety after single stimulation session indicated the efficacy of TIS as a tunable brain stimulation technique for MDD. Notably, amygdala, not stimulated in previous MDD studies, was proved to be an effective and accessible target for MDD treatment, which could be an alternative to traditional DLPFC transcranial magnetic stimulation (TMS) for individualized therapy. These findings combined, TIS was suggested to represent a promising non-invasive approach modulating neural circuit for depression therapy with individualized

therapeutic potential

关键词: Temporal Interference Stimulation, Major Depressive Disorder, fMRI, Brain Stimulation, Neuro-modulation Therapy

艾司氯胺酮激活 Nrf2 抑制炎症反应发挥快速抗抑郁作用

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目的 探讨艾司氯胺酮 (Es-Ket) 对 LPS 所诱导的抑郁样行为的影响及可能机制。

方法 LPS 腹腔注射的方法构建诱导抑郁样行为。实验一将 30 只 C57BL/6J 小鼠随机分为 Control、LPS+Sal 和 LPS+Es-Ket 组, 每组 10 只; 实验二将 40 只 C57BL/6J 小鼠随机分为 Control、LPS+Sal、LPS+Es-Ket 和 LPS+Es-Ket+ML385 组, 每组 10 只。实验中 LPS+Sal、LPS+Es-Ket 和 LPS+Es-Ket+ML385 均连续 5 天腹腔注射 LPS (1 mg/kg), Control 组仅注射生理盐水。造模结束后, Control 组和 LPS+Sal 组小鼠均接受 10 μ L/g 生理盐水, LPS+Es-Ket 组和 LPS+Es-Ket+ML385 组接受 10 mg/kg 艾司氯胺酮腹腔注射, 随后 LPS+Es-Ket+ML385 组立即接受 30 mg/kg ML385 腹腔注射, 24 h 后进行旷场实验、新奇抑制摄食实验、悬尾实验以检测各组小鼠的抑郁样行为。24 h 后, 处死小鼠分离出前额叶皮层和海马组织, 通过 Western Blot 检测小鼠前额叶皮层和海马组织中 Nrf2、IL-1 β 、TNF- α 和 iNOS、血浆中 TNF- α 、IL-1 β 、iNOS、CD206、YM-1/2、Arg-1 的表达情况。

结果 1. 较 Control 组, LPS+Sal 组和 LPS+Es-Ket+ML385 组旷场中心区运动距离比、中心区停留时间比均显著降低、进食潜伏期延长、悬尾不动时间均显著增加(均 $P < 0.05$); 较 LPS+Sal 组, LPS+Es-Ket 组旷场中心区运动距离比、中心区停留时间比均显著增加、进食潜伏期降低、悬尾不动时间减少(均 $P < 0.05$)。2. 与 Control 组相比, LPS+Sal 组前额叶皮层、海马组织和血浆中 Nrf2 分子表达下降, IL-1 β 、TNF- α 和 iNOS 分子表达上调(均 $P < 0.05$), 而 LPS+Es-Ket 组前额叶皮层、海马组织中 Nrf2 表达较 LPS+Saline 组增加, IL-1 β 、TNF- α 和 iNOS 分

子表达下降, 血浆中 IL-1 β 、TNF- α 和 iNOS 表达下降、CD206、YM-1/2、Arg-1 表达下降(均 $P < 0.05$); 较 Control 组, LPS+Es-Ket+ML385 组前额叶皮层、海马组织和血浆中上述分子表达水平同 LPS+Sal 组一致; LPS+Es-Ket 组逆转了该趋势。

结论 艾司氯胺酮可快速改善 LPS 所导致的小鼠抑郁样行为及炎症水平, 其抗抑郁作用会受到 Nrf2 通路抑制剂的影响。

关键词: 抑郁症; 核因子 E2 相关因子 2; 炎症; 艾司氯胺酮

个体化精准重复经颅磁刺激治疗难治性抑郁的网络机制研究: 一项随机对照试验

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目的 重复经颅磁刺激 (repetitive transcranial magnetic stimulation, rTMS) 刺激抑郁症患者不论刺激背外侧前额叶 (dorsolateral prefrontal cortex, DLPFC) 还是背内侧前额叶 (dorsomedial prefrontal cortex, DMPFC) 都能改善抑郁和焦虑症状, 而默认网络 (default mode network, DMN) 和额顶网络 (frontal-parietal network, FPN) 是抑郁症病因和治疗改善的核心网络, 因此本研究想探讨刺激不同靶点时抑郁/焦虑症状的改善是否与激活不同的网络有关。

方法 64 名难治性抑郁症患者, 根据刺激靶点不同 (即个体化 DLPFC 靶点和个体化 DMPFC 靶点) 被随机分至 DLPFC-rTMS 组 (36 人) 和 DMPFC-rTMS 组 (28 人), 分别接受 21 天干预。研究对比了两组分别在治疗前后个体化靶点与 DMN 和 FPN 网络的个体化 FC (individualized FC, iFC) 变化, 及其与抑郁/焦虑症状改善的相关性。同时验证了固定刺激靶点 (DLPFC 靶点和 DMPFC 靶点) 与这些网络的 FC 变化及其与抑郁/焦虑症状改善的相关性。

结果 两组治疗均可缓解抑郁/焦虑症状, 但刺激不同靶点引起的 iFC 变化不同。DLPFC-rTMS 组中 DLPFC 与 DMN (如楔前叶 ($t = -2.39, p = 0.022$)) 和 FPN (上内侧前额回 $t = -2.35, p = 0.024$), 左下顶叶 ($t = 2.3, p = 0.028$)) 的 iFC 显著改变。在 DMPFC-rTMS 组中, 也发现 DMPFC 与 DMN 里楔前叶 (t

= -2.78, $p = 0.01$, FDR 校正后 $p = 0.034$), 后扣带皮层 ($t = -3.15$, $p = 0.004$, FDR 校正后 $p = 0.028$) 的 iFC 显著改变。与 FPN 里的额下回 ($t = -3.65$, $p = 0.001$, FDR 校正后 $p = 0.019$), 辅助运动区 ($t = -2.24$, $p = 0.033$), 后扣带皮层 ($t = 2.27$, $p = 0.032$) 的 iFC 显著改变。此外, 特定基线 iFC 值与抑郁和焦虑评分的下降正相关。但使用固定刺激靶点而非个体化靶点时, 仅在 DLPFC-rTMS 组发现 DLPFC 与 FPN 部分区域的 FC 显著降低, 但未发现其与症状改善的相关性。

结论 刺激 DLPFC 和 DMPFC 这两个靶点均能缓解抑郁和焦虑症状, 但其激活的潜在神经环路并不相同。同时在未来研究中, 我们推荐采用个体化功能连接 (iFC) 来更好的探索 rTMS 治疗机制。

关键词: 难治性抑郁症, 重复经颅磁刺激, 个体化靶点, 个体化功能连接

Consistency Analysis of Different Depressive Symptom Assessment Scales

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Objective Meaningful and time-efficient measurements based on quantitative rating scales of symptoms is critical to accurately capture depression symptoms. However, using different scales to measure depression is common, if different scales markedly differ in monitoring treatment outcomes, it would pose a problem in comparisons and be of great significance for guidelines and policy development. So, the present study had two goals. First, we wanted to analyze the consistency of the extensively used instruments based on the national cohort study, including 17-item Hamilton Rating Scale for Depression (HAMD-17), 6-item Hamilton Rating Scale for Depression (HAMD-6), 16-item Quick Inventory of Depressive Symptoms-Self-Report (QIDS-SR16), and Patient Health Questionnaire-9 (PHQ-9). Second, equipercentile equating

method will be applied to provide the conversion table of these scales

Methods The participants diagnosed with MDD and aged 18 to 65 years were recruited from 12 sites. All patients were administered either escitalopram or duloxetine. The depressive symptoms were measured using HAMD-17, HAMD-6, PHQ-9 and QIDS-SR6. Spearman correlations were computed between the raw score and change in scores on each of the measures. In addition, equipercentile equating method was used to examine the linkage of the QIDS-SR16, PHQ-9, HAMD-6 and the HAMD-17

Results A total of 1418 patients were included for the study. The median age of the overall sample was 31.00(24.00-44.00) years. On each scale, the patients showed significant levels of improvement from baseline to follow-up. The assessment scores for all scales demonstrated a downward trend with treatment, indicating a reduction in symptom severity over time. Notably, the convergence of the trajectories of these scales was observed, with the curves for the PHQ-9 and QIDS-SR16, in particular, showing significant alignment. All correlations between the scales in scores at different visits were significant. The correlations amongst the self-report scales (i.e. QIDS-SR16 and PHQ-9, $r = 0.65$) and amongst the clinician rated scales (i.e. HAMD-17 and HAMD-6, $r = 0.73$) were higher than the correlations between the self-report and clinician rated scales. All correlations between the scales in score reduction and reduction rate from baseline to different visits were significant. The conversion table from the QIDS-SR16, PHQ-9, and HAMD-6 to HAMD-17 is computed

Conclusion The correlation of score between different scales at different severity. The magnitude of change in depressive symptoms is as great on self-report scales as on clinician rating scales. QIDS-SR16, PHQ-9, and HAMD-6 to HAMD-17 are convertible

关键词: Depression, Consistency analysis, Scale, equipercentile equating

阈下抑郁症状发展轨迹对自杀意念的影响研究

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目的 阈下抑郁症状常被视为抑郁症前期, 缺乏早期干预易发展为抑郁症。阈下抑郁症状同样可产生自杀意念最终引发自杀, 但不同的阈下抑郁症状发展轨迹对自杀意念可产生不同程度的影响。有效识别阈下抑郁症状的发展轨迹及严重程度, 是为受影响的个体提供及时有效干预措施的基础。

方法 本研究基于 DCC 队列人群 (Depression Cohort of China) 开展队列研究。基线 (T1) 调查后, 于 6 月 (T2) 及 12 月 (T3) 开展随访, 通过抑郁症状评分的实际变化识别阈下抑郁症状异质性发展轨迹, 应用无序多分类 Logistic 回归发现异质性轨迹的危险因素。采用生存分析方法探索阈下抑郁症状异质性发展轨迹对自杀意念的影响。

结果 阈下抑郁症状人群研究中纳入完成 T1-T3 期随访共计 993 人, 异质性发展轨迹包括持续型 239 人 (24.07%), 间断型 338 人 (34.04%) 和缓解型 416 人 (41.89%)。采用无序多分类 Logistic 回归分析, 以缓解型为参照, 儿童期创伤的情感虐待 (AOR = 1.16, 95% CI = 1.08-1.25) 以及失眠症状可增加持续型阈下抑郁症状的风险; 儿童期创伤的情感虐待 (AOR = 1.07, 95% CI = 1.00-1.15) 以及中度以上失眠症状为间断型阈下抑郁症状的危险因素。基线无自杀意念阈下抑郁症状 896 人, 异质性轨迹中持续型及间断型是缓解型自杀意念风险的 13.41 倍 (95% CI = 5.01-35.844) 及 7.39 倍 (95% CI = 2.78-19.64), 持续型是间断型的 1.77 倍 (95% CI = 1.17-2.69), 此外每月 10 天及以上的吸烟行为 (AHR = 1.99, 95% CI = 1.09-3.63) 以及儿童期创伤 (AHR = 1.02, 95% CI = 1.01-1.04) 为阈下抑郁症状自杀意念的危险因素。

结论 在社区防治及临床诊疗中, 阈下抑郁症状与抑郁症的防治同等重要, 识别迁延不愈的阈下抑郁症状是自杀预防的关键。开展抑郁症状的随访监测, 发现影响症状发展的危险因素, 有针对性地开展预防措施, 对抑郁症的预防及治疗具有重要意义。

关键词: 阈下抑郁症状, 发展轨迹, 自杀意念

Association between Electroencephalographic Microstates Abnormalities and Cognitive Dysfunction in Drug-naive MDD

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Objective Major depressive disorder (MDD) is often accompanied by cognitive dysfunctions, such as impaired executive function and memory, which are both prevalent and persistent. Electroencephalography (EEG) microstates, which reflect brain network activity, have been employed in psychiatric research. Although prior studies have identified four microstate classes in resting-state EEG, the connection between microstates, cognitive function, and depression warrants further exploration. This study aims to investigate the link between EEG microstate anomalies and cognitive impairments in individuals with drug-naive MDD.

Methods We recruited 29 patients with drug-naive MDD and 30 healthy controls. The Hamilton Depression Rating Scale (HDRS-17) measured symptom severity, the MATRICS Consensus Cognitive Battery (MCCB) assessed neurocognitive function, and resting-state EEG data were collected using 64 scalp electrodes. Analysis of EEG microstates was conducted via the Mi-

crostate Analysis plugin for EEGLAB, and Pearson correlation analysis was employed to discern the relationships between microstate parameters, symptom severity, and neurocognitive scores, with Bonferroni correction for multiple comparisons.

Results Compared to healthy controls, the MDD group displayed significantly lower MCCB domain-specific scores. Notably, the proportion and occurrence of microstate D and the duration of microstate C differed between groups. Significant negative correlations were found between HDRS-17 scores and the Speed of processing (SOP) score ($r = -0.463$, $df=26$, $P = 0.013$) and Visual learning score ($r = -0.511$, $df=26$, $P = 0.005$) in the MDD group respectively. Additionally, the proportion of microstate D was found positively correlated with SOP score ($r = 0.499$, $df = 26$, $P = 0.007$) and Working memory(WM) score ($r = 0.451$, $df = 26$, $P = 0.016$). The Occurrence of microstate D was found positively correlated with SOP score ($r = 0.383$, $df = 26$, $P = 0.044$) and WM score ($r = 0.389$, $df = 26$, $P = 0.041$).

Conclusion MDD patients show alterations in sub-second brain dynamics, characterized by a decreased proportion and occurrence of microstate D and shorter duration of microstate C, and significant shifts in microstate transition probabilities. These changes correlate with cognitive deficits across several domains, including processing speed and working memory

关键词: Major depressive disorder;Electroencephalographic microstates;Cognitive dysfunction

Prescription Pattern and Network Pharmacology Prediction-based Strategy To Explore The Potential Anti-depressive Effect of Daying Tablets

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Objective Daying tablets are a Traditional Chinese medicine (TCM) formula (ingredients: Rhei Radix

Et Rhizome, Paeoniae Radix Rubra, and Zedoray Turmeric Oil) that has been empirically used for the treatment of psychotic or affective symptoms in mental disorders. Despite their historical usage, the application of Daying tablets in depression and the pharmacological mechanisms have not been studied. The components within the Daying formula are known to possess pharmacological effects such as antioxidant and anti-inflammatory activity with neurobiology closely related to the potential therapeutic targets in depression. This study aimed to explore the anti-depressive effect of Daying tablets based on human use experience and network pharmacology.

Methods Prescription data for Daying tablets from 2011 to 2021 was obtained from a hospital information system and pattern analysis was performed for depressed patients. The targets of Daying tablets and depression-related genes were derived from various databases. Following the herbs-compounds-disease-targets (H-C-D-T) and the protein-protein interaction (PPI) network, the hub targets for Daying tablets against depression were predicted by a network pharmacology approach. In order to improve the quality of the data, those active compounds were excluded from the literature filtering because they lacked experimental data support. Furthermore, enrichment analysis was used to analyze the hub targets in biofunction and process. The hub targets and compounds were verified through molecular docking.

Results In the past 11 years, Daying tablets were frequently prescribed as an adjunct to antidepressants for 665 patients with depression in a hospital. The patient population primarily consisted of young and middle-aged patients, predominantly females. Selective serotonin reuptake inhibitors (SSRIs) were the most common antidepressants used along with Daying tablets. Ultimately, we identified 7 hub targets (AKT1, TNF, IL6, IL1B, CASP3, PTGS2, and MMP9) closely associated with inflammation or oxidative stress pathways (such as TNF signaling, IL-17, Pathway of neurodegeneration) from 149 potential targets in the network. Molecular docking results showed that the main active compounds had good binding activity with the hub targets, along with the representative targets from antidepressants like

HTR2A and SLC6A4.

Conclusion The results showed that Daying tablets being the adjunction to antidepressants may exert an anti-depressive effect by regulating inflammation-associated targets. However, further research is required to validate these results. The underlying mechanisms should provide future pharmacological research directions for Daying tablets

关键词: Depression, Daying tablets, Traditional Chinese Medicine (TCM), Prescription patterns, Network pharmacology, Neuroinflammation

生物精神病学组

The Synergistic Effects of Depressive Symptoms and Mild Cognitive Impairment on Evaluated Risks of Incident Dementia: A Prospective Study From Three Elderly Cohorts

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Background Depression and mild cognitive impairment (MCI) are considered as risk factors or prodromal syndrome of dementia. However, heterogeneity limits the ability of these two factors to independently predict incident dementia

Methods The analysis was conducted across three large prospective cohorts of Health and Retirement Study, English Longitudinal Study of Ageing, and Survey of health, Ageing and Retirement in Europe. Depressive symptoms were assessed by epidemiologic depression scale, while MCI was evaluated by several subjective cognitive tests. Dementia was ascertained by self-reported physician-diagnosed conditions. Cox proportional hazard models were employed to determine the hazard ratio (HR) and 95% confidence interval (95% CI), with adjustments made for potential confounding variables

Results A total of 64,706 participants were included at baseline (mean age: 63.9, female: 55.2%), where 4,197 (6.5%) individuals have only depressive symptoms, 28,175 (43.5%) individuals have only cognitive impairments, 11,564 (17.9%) individuals have both, and 20,770 (32.1%) individuals have neither. Compared with the Depression(-) MCI(-) group, all three groups had higher risks of subsequent dementia after adjusting for potential covariates (Depression(+) MCI(-): HR 1.65, 95% CI 1.26–2.17; Depression(-) MCI(+): HR 2.71, 95% CI 2.33–3.14; Depression(+) MCI(+): HR 3.51, 95% CI 2.95–4.17). The impact of MCI on dementia had a larger effect size compared to the impact of depression on dementia (HR 1.64, 95% CI 1.27–2.11)

Conclusions Depression and MCI exhibit a synergistic effect in augmenting the risk of incident dementia. Depression with cognitive impairment or MCI with depressive symptoms were better predictors of memory-related disorders

关键词: Depression, Dementia, Mild Cognitive Impairment

Aberrant Prefrontal-hippocampal Connectivity of Cross-modal Associative Memory Impairment in Schizophrenia

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Objective Schizophrenia is a chronic and disabling psychiatric disorder causing substantial global burden of disease. Associative memory (AM) impairment is considered as a core cognitive dysfunction in schizophrenia and is indicative of poor functional outcomes. Prevailing hypothesis posits that the hippocampus (Hipp) and its interactivity with distributed cortical regions is crucial for the formation of AM. Despite the robust findings of abnormalities in prefrontal-hippocampal network in AM impairment, yet the specific regions and definitive patterns in schizophrenia have remained elusive. Our previous work has illustrated the disparities in AM capacity between schizophrenia and HCs, with specific attention paid to the extent of impairment in same- and cross-modality association tasks. Here, the present fMRI study was to further disentangle the contributions of the prefrontal-hippocampal networks to AM deficits in schizophrenia. For this purpose, we adopted an innovative AM task paradigm in which easy-to-verbalize materials were avoided to minimize the potential influence on the outcome. The specific

aims of the study were to (i) evaluate whether schizophrenia patients differed in AM performance and prefrontal-hippocampal connectivity, in comparison with HCs, and (ii) determine whether patient group exhibited differential relationships between prefrontal-hippocampal connectivity and AM performance, compared with HCs, and (iii) identified the specific prefrontal brain regions involved in AM which towards identifying potential underlying mechanisms or treatment targets for deficits in AM

Methods Sixty right-handed participants (aged 18-45; SCZ-n=30; HC=30) were recruited in this study. All participants were scheduled for an MRI session comprising structural and resting-state scans on a 3.0T Siemens, and completed clinical evaluations. To examine the neural substrate of AM impairment between SCZ and HCs, we adopted an innovative task paradigm previously used in the published work. Participants were guided to learn and later retrieve stimulus pairs, which identified capacity in the processing and memorization of information that integrates multiple sensory modalities. Brain regions were demarcated by the automated anatomical labeling (AAL) atlas. We performed seed-based FC analyses and selected the bilateral hippocampus derived from the AAL template provided by the MNI as the seed ROIs in the FC analysis. Further, Fisher's Z-transformed full correlation coefficients were calculated for each pair of regions to determine functional connectivity. As such, seed-to-voxel (S-V) thresholds was utilized (cluster threshold, $P < 0.05$ cluster-size false discovery rate (FDR) corrected; voxel threshold, $P < 0.001$ uncorrected). Pearson's correlation analyses were conducted between FC values and the associative memory performance. One HC participant with a history of head injuries was excluded from the study. Two additional schizophrenia participants were excluded due to anomalies in visual perception (n=1) and excessive head motion (n=1). The final sample included 28 SCZ and 29 HCs

Results The results of the independent sample t-tests and chi-square test revealed no significant differences between groups in terms of age, gender, and education. The d' scores of SCZ compared to HCs were significantly lower across tasks, suggesting general poorer

performance in associative memory for each condition ($F=15.211$, $P<0.0001$). Compared to HCs, the left hippocampus exhibited decreased FC in the clusters from medial and orbital parts of superior frontal gyrus (SFG) bilaterally (cluster size=385, $p\text{-FDR} < 0.001$). Conversely, FC values between the left Hippocampus and clusters from bilateral inferior frontal gyrus (IFG), pars opercularis and triangularis, were significantly higher (cluster size=59 and 70, $p\text{-FDR} < 0.01$) in the SCZ patients relative to HCs. More specifically, decreased left hippocampus-related FC values in bilateral medial orbital SFG were moderately positively correlated with AM performance in HCs ($P=0.009$, $r=0.474$) but not in the SCZ group. Furthermore, a significant positive correlation was found between left hippocampus-bilateral IFG FC values and AM capacities ($P=0.013$, $r=0.466$) in SCZ patients

Conclusion The current study demonstrated the disparities in AM impairment and substantiate fMRI correlative evidence for prefrontal-hippocampal network involvement in AM. These findings provide evidence for neuropathological mechanisms of AM impairment in schizophrenia, which potentially guiding relevant interventions and treatments

关键词: Schizophrenia, resting-state functional connectivity, associative memory, cognitive impairment, hippocampus

Altered Multivariate Brain Morphological Patterns and Neurocognitive Markers Associated with Suicidal Ideation and Behaviors in Major Depressive Disorder

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Objective Brain structural abnormalities and cognitive dysfunction have been linked to suicidal ideation and behaviors (SIB) in individuals with major depressive disorder (MDD). However, the specific multimodal neuroimaging patterns and their association with cognitive functions remain poorly understood

Methods Neuroimaging maps of different structure features and cognitive markers were collected from 61 MDD patients with SIB (MDD-SIB), 38 MDD without SIB (MDD-nSIB), and 142 healthy controls (HC). Data-driven linked independent component analysis (LICA) and ANCOVA analysis were applied to identify differences in neuroimaging patterns across modalities (including gray matter volume, cortical thickness, cortical area, and white matter integrity) among three groups. Mediation analysis was further applied to explore the relationship between multimodal neuroimaging patterns, cognitive functions, and depressive symptoms

Results LICA identified four multimodal neuroimaging patterns that differed among three groups, three imaging patterns (IC1, IC9, IC14) differed between MDD-SIB and HC groups, one imaging pattern (IC12) differed between MDD-SIB and MDD-nSIB groups, two imaging patterns (IC12, IC14) differed between MDD-nSIB and HC groups. IC1 reflects PA (87% weight), FA (5% weight), and GMV (4% weight) with the MDD-SIB group showing significantly lower loading than the HC group ($p = 0.007$). IC9 showed a multimodal component mainly driven by FA (9%) and GMV (87% weight) with a distribution of positive weights in VMPFC, DMPFC, ACC, posterior cingulate cortex (PCC), insular cortex, superior temporal gyrus, precuneus cortex, as well as negative weights in OFC, occipital gyrus, lingual gyrus. MDD-SIB group exhibited significantly lower subject loading compared to HC groups ($p < 0.001$). IC12 revealed a distinct gradient in FA (93%weight), implicating an increase in ATR, inferior longitudinal fasciculus, corticospinal tract, inferior frontal-occipital fasciculus, cingulum, and decreased superior longitudinal fasciculus (temporal part). The MDD-nSIB group showed significantly lower loading in IC12 compared to the HC group ($p = 0.018$) and the MDD-SIB group ($p = 0.013$). IC14 is a multimodal component mainly driven by GMV (60% weight), FA (22% weight), and TH (12% weight), implicating increased GMV in ACC, PCC, precuneus, DLPFC, superior parietal lobule, supramarginal gyrus, angular gyrus, and decreased in superior temporal gyrus, insula cortex, and DMPFC. And increased anterior thalamic radiation,

superior longitudinal fasciculus, and decreased cortico-spinal tract, inferior longitudinal fasciculus, inferior fronto-occipital fasciculus in FA. As well as increased thickness in DMPFC, precuneus, ACC, and PCC, and decreased thickness in DLPFC, superior temporal gyrus, Heschl's gyrus, opercular cortex, and lingual gyrus. Compared to the HC group, MDD-SIB ($p = 0.007$) and MDD-nSIB ($p = 0.040$) showed significantly lower loading in IC14. In terms of cognitive function comparisons, it was revealed that MDD-SIB had cognitive impairment in attention, visual memory, and working memory. The lower of loadings of the brain network IC1 was correlated with the more severe depressive symptoms ($r = -0.279$, $p = 0.034$), more total missing and lower percent of hit in the RVP task (RVP_TM: $r = -0.27$, $p = 0.039$; RVP_PH: $r = 0.27$, $p = 0.044$), the more between errors, total errors, and poorer strategy in SWM task separately (SWM_BE: $r = -0.27$, $p = 0.039$; SWM_TE: $r = -0.28$, $p = 0.033$; SWM_Stra: $r = -0.29$, $p = 0.026$). The more severe the depressive symptom was correlated with more errors and lower percent of correct in DMS task, and poorer strategy in SWM task (DMS_PEGC: $r = 0.34$, $p = 0.0091$; DMS_PC: $r = -0.32$, $p = 0.013$). These significant correlations were mainly in MDD-SIB group. In addition, the mediation model confirmed the significant association between SWM_Stra and IC1 was observed in the mediation model (coefficient -0.0817 , SE 0.0247 , 95% CI -0.131 to -0.0323 , $t = -3.396$, $p = 0.0016$). Likewise, a significant association between HAMD and IC1 (coefficient -1.2164 , SE 0.583 , 95% CI -2.3841 to -0.0486 , $t = -2.0851$, $p = 0.041$). The mediation model yielded a significant positive indirect mediated effect of SWM_Stra on HAMD total scores through IC1 (indirect effect: coefficient 0.0993 , SE 0.0558 , 95% CI 0.0092 to 0.229 , $p = 0.0122$), whereas no significant direct effect of SWM_Stra on HAMD total scores could be detected (direct effect: coefficient 0.1521 , SE 0.1204 , 95% CI -0.089 to 0.0393 , $t = 1.2636$, $p = 0.2114$), indicating a significant mediation effect of SWM_Stra on HAMD total scores through IC1

Conclusion These findings have revealed altered multivariate brain morphological patterns and neu-

rocognitive associated with suicidality and demonstrated multimodal brain structural components that mediate working memory and depressive symptom severity. These results provide novel insights into the neurobiological mechanisms underlying suicide in patients with MDD

关键词: Suicide, Multimodal neuroimaging, Cognitive function, Major depressive disorder, Linked independent component analysis

中枢神经系统发育过程中 GNA13 基因过表达 对皮层功能的影响及其分子机制

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目的 既往研究提示 GNA13 基因在人中枢神经系统发育过程中可能具有重要的作用, 但发育早期 GNA13 表达异常对大脑的影响仍不清楚。本研究拟通过在人脑类器官 (hCO) 中过表达 GNA13 的方法, 进一步探索其对成熟后 hCO 的影响, 并通过将 hCO 移植入免疫缺陷的小鼠观察其在小鼠社交行为中作用。

方法 人来源的诱导多能干细胞 (hiPSC) 诱导分化为 hCO。在 hCO 成熟前 (诱导分化的第 30 天), 通过慢病毒注射的方法过表达 GNA13 基因。然后通过免疫荧光染色检测 hCO 成熟后 TBR1 表达量及神经元活动, 用 RNA 测序的方法探索 GNA13 过表达对基因表达的影响。在培养的第 42 天、第 46 天和第 50 天分别进行了非靶向代谢组学检测。在 hCO 成熟后 (培养的第 50 天), 分别将过表达 GNA13 和非过表达 GNA13 的移植入重度联合免疫缺陷 (SCID) 小鼠。在移植手术六周后, 用旷场实验和三箱社交实验检测小鼠行为学变化。

结果 1) 随着 hCO 的分化成熟, 干细胞特异性标志物 SOX2 表达量下降, 而神经元标记物 TUJ1 表达量增加, 表明皮层类器官的成功诱导。

2) 过将慢病毒注射入 hCO, 成功的过表达了 GNA13, 且在 hCO 中过表达 GNA13 可导致皮层特异性标记物 TBR1 表达量上调以及皮层活动增强。

3) 过表达 GNA13 后, 发现 hCO 中 135 个基因表达下调, 224 个基因表达量上调。下调的基因富集

于对刺激的反应、免疫系统过程及发育过程等通路。而上调基因富集于多个神经发育和形态相关的通路,包括:突触后结构的组织、GPCR 信号转导通路、感觉器官发育、神经元投射形态发生、突触膜粘附、促进细胞迁移以及中枢神经系统细胞分化等通路。

4) 成熟前(D42) 差异代谢物主要富集于 D-氨基酸代谢、精氨酸生物合成、矿物质吸收及苯丙氨酸-酪氨酸-色氨酸生物合成等代谢通路。随着 hCO 逐渐倾向于成熟(D46), 差异代谢产物更多富集于氨基酸代谢相关通路及神经活性配体-受体相互作用。hCO 成熟后, 差异代谢产物不仅富集于氨基酸代谢相关通路, 也参与了多个兴奋性和抑制性突触的功能。

5) 移植过表达 GNA13 的皮层类器官至 SCID 小鼠内侧前额叶皮层 (medial prefrontal cortex, mPFC), 结果发现小鼠社交功能表现出显著退缩。但三组小鼠在焦虑行为及运动能力无差异。

结论 GNA13 过表达 hCO 移植入小鼠 mPFC 可导致小鼠社交退缩, 将特定处理的脑类器官植入免疫缺陷小鼠或可作为神经精神系统疾病模型建立的新手段, 为神经精神系统疾病机制的探索和药物筛选提供有效的工具。

关键词: GNA13 基因; 人脑类器官; RNA 测序; 代谢组学; 行为学

Intranasal Delivered Tetrahedral Framework Nucleic Acid Loaded with MicroRNA-134 Antisense Oligonucleotides (tFNAs@miR-134ASO) To Improve Depressive Mood and Cognitive Impairment in Chronic Stress Mice

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Objective Depression patients often experience cognitive impairments that significantly affect their ac-

ademic and occupational performance, making it difficult for individuals to return to normal life trajectories. miR-134, as a brain-specific microRNA, significantly increases under chronic stress and can inhibit the target genes *Limk1* and *Creb*, leading to decreased neuronal synaptic plasticity, resulting in depressive mood and cognitive impairments. This study proposes using nano-material tetrahedral framework nucleic acids (tFNAs) loaded with microRNA-134 antisense oligonucleotides (tFNAs@miR-134ASO), administered intranasally, to effectively improve depressive mood and cognitive impairments in chronic stress mice

Methods In this research, we used sticky ends to conjugate miR-134ASO with the four vertices of tFNAs, and characterized the successful synthesis of materials and the morphology of complexes using polyacrylamide gel electrophoresis, capillary electrophoresis, transmission electron microscopy, atomic force microscopy, dynamic light scattering, and other characterization experiments. In vitro, transwell devices and bEND.3 cell-based blood-brain barrier models were used to explore the uptake rate of Cy5-labeled tFNAs@miR-134ASO in HT-22 neurons. SH-SY5Y cells treated with corticosterone were used to simulate an in vitro depression model, analyzing the promotion of synaptic plasticity among groups CON-saline, CORT-saline, CORT-tFNAs, CORT-miR-134ASO, and CORT-tFNAs@miR-134ASO treatments. An in vitro model of depression induced by 5 weeks of chronic restraint stress in mice was used with grouped interventions, evaluating post-treatment depression, anxiety, and cognitive function among 5 groups that CON-saline, CRS-saline, CRS-tFNAs, CRS-miR-134ASO, and CRS-tFNAs@miR-134ASO using sucrose preference test (SPT), tail suspension test (TST), open field test (OFT), elevated plus maze (EPM), novel object recognition test (NORT), and Y-maze test (YMT). Further, mouse brain tissue slices were isolated for Nissl staining and immunofluorescence labeling (LIMK1, PSD-95), and qPCR and WB were performed on both in vitro cells and mouse brain tissue to assess changes in synaptic plasticity-related genes and proteins such as miR-134, *Limk1*, *Cofilin*, *Creb*, *Bdnf*, *Psd-95*

Results Multidimensional materials characterization confirms the successful synthesis of tFNAs@miR-134ASO, with the complex exhibiting good serum stability, storage stability, and nuclease stability. Brain tissue transparency experiments demonstrate that the complex can enter important brain regions such as the olfactory bulb, frontal lobe, and hippocampus via the nasal cavity. In vitro blood-brain barrier cell models show that tFNA@miR-134ASO effectively crosses the blood-brain barrier, with fluorescence uptake rates significantly higher than those of pure miR-134ASO ($p < 0.05$). Furthermore, cell immunofluorescence reveals that the fluorescence intensity of complexed Limk1 and PSD-95 is significantly higher than that of the CRS-CORT group ($p < 0.05$). In vitro CRS model treatment demonstrates that tFNAs@miR-134ASO complexes effectively alleviate anhedonia and improve survival behavior in depressive mice, reduce anxiety, and repair cognitive impairments such as spatial and short-term memory (all $p < 0.05$). Additionally, Nissl staining and Golgi staining of frontal lobe and hippocampal brain tissues confirm that tFNAs@miR-134ASO complexes improve neuronal apoptosis and promote increased dendritic spine density in mice. TEM shows reduced neuronal damage, increased synaptic numbers, and significantly increased postsynaptic densities. qPCR and WB experiments on in vitro cells and in vivo brain tissues further confirm that chronic stress leads to increased miR-134 levels, while tFNAs@miR134ASO effectively reduces miR-134 and promotes the expression of Limk1, Creb, Bdnf, and PSD95, thereby enhancing synaptic plasticity changes.

Conclusion Intranasal administration of nanomaterial complexes tFNAs@miR-134ASO effectively crosses the blood-brain barrier, significantly inhibits miR-134 and its suppression of target genes Limk-1 and Creb, promotes synaptic plasticity changes in vitro SH-SY5Y cells and in vivo prefrontal cortex and hippocampus regions of mice, reduces neuronal damage induced by chronic stress, and exhibits therapeutic effects in improving depressive mood and promoting cognitive function recovery.

关键词: Intranasal, Tetrahedral framework nucleic

acids, MiR-134ASO, Depression, Cognitive impairment, Synaptic plasticity

Deep Brain Stimulation of Nucleus Accumbens and Anterior Limb of Internal Capsule (NAc-ALIC) for Treatment-resistant Schizophrenia

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Objective Schizophrenia is a brain disease with a high rate of relapse and disability. About 10% of patients are not responsive to any antipsychotic treatment including clozapine. In schizophrenia, reduced dopaminergic signals from VTA projecting to the prefrontal cortex (PFC) promote negative symptoms; increased signals projecting to the dorsal striatum underlie the pathology of positive symptoms. DBS intervention of nucleus accumbens and anterior limb of internal capsule (NAc-ALIC) may have a synergistic effect in modulating neuronal and alleviating psychotic symptoms. This pilot study is to explore the efficacy and safety of NAc-ALIC DBS for patients with treatment-resistant schizophrenia (TRS).

Methods The study was approved by the Shanghai Mental Health Centre Ethics Committee and all participants provided written informed consent before bilateral stereotactic neurosurgery of DBS implantation

(IPG; SR1181, SceneRay). Each electrode had four contacts covering NAc and ALIC. Researchers evaluated the clinical symptoms (PANSS/CRDPS/CGI-S) at preoperative baseline, and 1-, 2-, 4-, 8-, 12- and 24-week follow-ups after stimulation. Neurocognition (MCCB) was assessed at preoperative baseline and 12-week, 24-week follow-ups after stimulation. Adverse events (SAS/AIMS/BARS/C-SSRS) were assessed throughout the trial

Results Outcomes of the first subject who finished 24-week follow-up

(1) Symptom: After 24 weeks of stimulation, response rate was 62.1% in PANSS total, 60.0% in PANSS positive, 57.1% in PANSS negative, 68.2% in PANSS general. Remission was observed in both positive symptoms (delusions, conceptual disorganization) and negative symptoms (emotional withdrawal, poor rapport, apathy).

(2) Neurocognition: Compared with pre-surgery baseline, the neurocognitive composites in MCCB improved, with T-score rising from -4 to 17. Significant improvement was observed in “speed of processing” (from 2 to 29) and “attention/vigilance” (from 6 to 35).

(3) Side effects and stimulation parameters: After the first 2-week stimulation (electrode contacts in NAc 0,4, ALIC 2, 6: 210us, 145Hz, 4.5V 7:30-22:00 and 0V 22:00-7:30), the patient reported increased involuntary movements in upper and lower limbs (AIMS rating: “2=mild”). After switching off intranuclear stimulation contacts and adjusting parameters (bilateral electrode contacts in ALIC 2, 3, 6, 7: 210us, 145Hz, 6V 7:30-22:00 and 4V 22:00-7:30), the adverse effect disappeared till 4-week follow-up. By the end of this trial, the optimized stimulation parameters are bilateral electrode contacts in ALIC 2, 3, 6, 7: 210us, 130Hz, 6V (7:30-22:00) and 4V (22:00-7:30), unilateral electrode contact in NAc 1: 180us, 130Hz, 6V (7:30-22:00) and off (22:00-7:30). No other AEs were reported.

Conclusion DBS of NAc-ALIC can be safely applied to reduce symptoms and improve cognitive performance in TRS patients. Close monitoring of adverse effects is required to minimize the risk of DBS. Further studies are required to investigate electrophysiological

biomarkers and initiate personalized close-loop modulation

关键词: Deep brain stimulation (DBS), nucleus accumbens (NAc), anterior limb of internal capsule (ALIC), treatment-resistant schizophrenia (TRS)

经颅磁刺激个体化精准靶点与传统非精准靶点治疗抑郁症的疗效比较：一项随机对照临床试验

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目的 由抑郁症 (major depressive disorder, MDD) 个体水平的左侧背外侧前额叶 (dorsolateral prefrontal cortex, DLPFC) 与膝下前扣带回 (subgenual anterior cingulate cortex, sgACC) 功能连接引导, 确定个体化、精准经颅磁刺激 (transcranial magnetic stimulation, TMS) 干预靶点是备受瞩目的抗抑郁疗效提高策略之一。本研究开展随机对照临床试验, 直接比较个体 DLPFC-sgACC 功能连接精准定位与传统非精准定位 (脑电 F3 导联) TMS 治疗 MDD 的疗效。

方法 本研究在上海市精神卫生中心和苏州市广济医院招募符合 DSM-5 抑郁症诊断的患者 150 名, 按 1:1 随机分入 DLPFC-sgACC 功能连接精准定位组 (个体精准靶点组, N=75) 和传统非精准定位组 (F3 组, N=75)。两组均接受 20 次 TMS 治疗, 在基线、5 次、10 次和 20 次治疗后接受汉密尔顿抑郁量表 (17-item Hamilton Depression Scale, HAMD-17) 等临床评估。20 次 TMS 治疗后 HAMD-17 减分为主要结局指标, 有效率为次要评估指标。采用线性混合效应模型比较两组的疗效差异。

结果 个体精准靶点组和 F3 组分别有 53 例和 60 例完成 20 次 TMS 治疗。基线时两组人口学特征和临床症状严重程度均无统计学差异 ($p>0.05$)。F3 组接受 5 次、10 次和 20 次 TMS 治疗后 HAMD-17 平均减分分别为 6.1、10.1 和 13.1, 个体精准靶点组

为 8.1、10.8 和 13.3。HAMD-17 减分的时间主效应显著 ($p < 0.001$)，时间×组别交互作用在完成 5 次 TMS 治疗后显著 ($\beta = 1.96, SE = 0.10, p = 0.050$)，完成 10 次和 20 次 TMS 治疗后不显著 ($p > 0.05$)。简单效应分析，个体精准靶点组在完成 5 次治疗后 HAMD-17 评分显著低于 F3 组 ($\beta = -2.81, SE = 0.94, p = 0.003$)；其余时点无统计学差异 ($p > 0.05$)。在接受 5 次、10 次和 20 次 TMS 治疗后，F3 组有效率分别为 14.8%、39.1% 和 75.6%，个体精准靶点组有效率为 35.2%、50.7% 和 74.6%；个体精准靶点组在 5 次 TMS 治疗后有效率显著高于 F3 组 ($\chi^2 = 6.984, p = 0.008$)。

结论 本研究结果提示，在 20 次 TMS 治疗后个体精准定位组和常规非精准定位组未表现出显著的抗抑郁疗效差异，但个体 DLPFC-sgACC 功能连接精准靶点组治疗可能更快起效，在 5 次治疗后具有更高的有效率。

关键词：重复经颅磁刺激，抑郁症，个体精准靶点，功能连接

Long-term Characteristics of Antipsychotics Induced Changes in Weight and Feeding Behavior

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Objective This study aimed to assess long-term changes in body weight and feeding behavior following antipsychotic treatment in first-episode schizophrenia (FES) patients and make a comparison of olanzapine, risperidone, amisulpride, aripiprazole and perphenazine

Methods We recruited participants with first-episode schizophrenia (FES, $N = 156$) during their first psychiatric hospitalization. Enrolled patients who met the inclusion criteria were randomly assigned to five commonly used antipsychotics (olanzapine, risperidone,

amisulpride, aripiprazole, perphenazine) in a 1:1:1:1:1 ratio. We prospectively collected weight, body mass index, waist circumference at admission and during the 12-months follow-up. The Three-Factor Eating Questionnaire (TFEQ-R21) was also used at each follow-up site to assess feeding behavior, including uncontrolled eating (UE), cognitive restraint (CR), and emotional eating (EE)

Results Individuals with FES in each drug group had a significant increase in body weight, waist circumference and BMI ($p < 0.05$). After 8-week treatment of the acute stage, 33.3% of the patients had a significant weight gain (weight increased by $\geq 7\%$ from baseline), and 80.8% of the patients had a significant weight gain after 12 months of maintenance treatment. During the acute management, participants from risperidone group showed significantly higher weight gain than other groups. Olanzapine group showed significantly higher weight gain after the 12-months maintenance treatment, while aripiprazole group had the minimum change. There were significant between-group differences in weight gain over time between the olanzapine and aripiprazole groups ($p = 0.01$). Waist circumference increased most in risperidone group, followed by olanzapine, and the least in perphenazine. Emotional eating was significantly correlated with weight gain in the long-term maintenance phase. The risperidone group with the most significant increase in waist circumference during long-term maintenance treatment showed an upward trend in both UE and EE. Contrary to the trend of weight change, the olanzapine group showed a downward trend in UE and EE and a significant increase in CR score during the long-term maintenance treatment

Conclusion Antipsychotics are associated with a clinically significant weight gain in FES patients, which is long-term and sustained. At the early stage of antipsychotic treatment, risperidone effect on the weight of the most significant, characterized by increased abdominal circumference. In the long-term maintenance treatment, the significant weight gain by olanzapine should not be neglected. Early and long-term metabolic monitoring should accompany antipsychotic prescription. Despite the increased CR and decreased UE and EE, weight gain

was still significant in olanzapine group, which may indicate that olanzapine induced weight gain was mediated by other mechanisms besides the increase of appetite

关键词: Schizophrenia, antipsychotic, weight gain

双相障碍研究协作组

Gut Microbiota Modulates Glutamate Receptor Activity Via The IL-1 β Pathway in Bipolar Depression

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Objective Neuroinflammation is involved in the pathogenesis of bipolar disorder (BD), but whether gut dysbiosis contributes to the neuroinflammatory underpinnings in BD remains unclear. Herein, we investigated the relationship between gut microbiota and neuroinflammation in bipolar depression, by focusing on its regulatory effects on glutamate receptors, N-methyl-D-aspartate receptor (NMDAR) and α -amino-3-hydroxy-5-methyl-4 isoxazole receptor (AMPA)

Methods Antibiotic-treated C57 BL/J male mice were transplanted with gut microbiota derived from individuals with bipolar depression or healthy controls. Gut microbiota characterization, peripheral and prefrontal lobe levels of inflammatory factors, microglial activation, and transcription levels of NMDAR and AMPAR genes were measured in the “BD” mice and control mice. Furthermore, IL-1 receptor antagonist was used to further explore its effects on the glutamate pathways

Results Compared with control mice, “BD” mice displayed depression-like behaviors, with a higher diversity of bacteria and an increased abundance of specific bacterial species. “BD” mice also had increased levels of inflammatory factors (e.g., IL-1 β) in the serum and prefrontal cortex, along with the activation of microglia and changes in the mRNA levels of NMDAR and AMPAR. Treatment with IL-1 receptor antagonist partially reversed the behavior patterns, neuroinflammation and transcription levels of glutamate receptors in “BD” mice

Conclusion Our results provide preliminary evidence that gut microbiota may contribute to the neuroinflammation of bipolar depression via modulating the IL-

1 β effects on the brain glutamate receptors

关键词: bipolar disorder; gut microbiota; neuroinflammation; glutamate receptors; interleukin 1

基于数字孪生脑的双相情感障碍病人躁狂相-缓解相转相的静息态功能连接分析

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目的 数字孪生脑(Digital twin brain, DTB)是基于计算神经科学理论和多模态神经图像数据集成的全脑尺度动态脑功能计算模拟平台。它将弥散磁共振成像获得的内部结构连接信息作为确定内部连接模型的基础,利用功能磁共振成像和脑电磁成像获得的功能信息对模型参数进行优化。最终的模型在结构和功能上都与大脑相似,因此可以被称为数字孪生脑。我们利用 DTB 模拟双相情感障碍患者躁狂发作期间进行的经颅直流电刺激治疗,模拟患者从躁狂发作到缓解的过程,寻找情绪转化的“扳机”。既往研究发现,双相情感障碍患者缓解状态下默认网络部分脑区静息状态功能连接高于躁狂状态。在本实验中,我们以这种上升作为区分躁狂状态和缓解状态的标准。

方法 收集深圳康宁医院两例双相情感障碍患者躁狂状态和缓解状态的纵向静息状态 MRI 数据,由类脑智能科学与技术研究院进行预处理,在全脑计算平台上进行 1 亿神经元、100 度、体素级别的 DTB 生成、同化和静息状态模拟。最后分别在既往研究确定的可以使躁狂增强(左侧 DLPFC, MNI-20、2、64, 促躁狂脑区)和使躁狂缓解的脑区(右侧 DLPFC, MNI 20、36、52, 降躁狂脑区)进行了刺激模拟,并将刺激模拟结果与静息状态模拟结果进行比较。

结果 从整体水平来看,缓解期的真实全脑功能连接均值为 0.364 (95% CI: 0.362, 0.365),躁狂期为 0.341 (95% CI: 0.340, 0.342),低于缓解期。对躁狂期的孪生脑进行刺激,在降躁狂脑区进行刺激后的全脑功能连接均值为 0.346 (95% CI: 0.344, 0.347),对比躁狂期略有上升。在促躁狂脑区进行刺激后为 0.337 (95% CI: 0.335, 0.338),对比躁狂期

略有下降,在四组数据中最低。从脑区水平来看,我们发现在默认网络的部分脑区(HCP 2016),如 Frontal_Opercular_Area_2_R、IntraParietal_Sulcus_Area_1_R、Perirhinal_Ectorhinal_Cortex_L 等,可以观察到预期的功能连接改变。

结论 初步模拟取得了预期的结果,即静息状态功能连接在降躁狂脑区进行刺激后上升,促躁狂脑区进行刺激后下降。实验刺激的促躁狂脑区和降躁狂脑区很有可能是情绪转化的“扳机”。然而,这些功能连接改变的绝对值很小,分析原始数据发现,刺激的传递范围非常有限,这可能是由于 100 度模型的传导效率较低。未来的研究计划是进行 20 亿神经元、1000 度的 DTB 模拟,并进行进一步的分析。

关键词: 数字孪生脑, 静息状态功能连接, 经颅直流电刺激

双相障碍遗传高危人群伴有阈下症状的脑神经发育特征: 一项队列纵向研究

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目的 既往证据表明双相障碍 (BD) 的发病风险在有家族史或表现出阈下症状的个体中会大幅度提升。揭示与 BD 遗传和阈下症状高危相关的神经机制对疾病的早期预防和干预有重要临床意义。既往研究表明 BD 的发病高峰年龄从青春期开始,但 BD 高危的大脑发育特征尚不明确。本随访队列研究调查了与 BD 遗传风险和症状风险相关的纵向大脑结构特征,以及这些特征是否能够前瞻性预测个体的功能水平变化和未来心境病发作。

方法 我们招募了 26 名已出现阈下症状的 BD 病人子代(年龄 14.9±2.9 岁, 14 名女性), 35 名无症状的 BD 病人子代(年龄 15.3±2.7 岁, 19 名女性), 49 名具有阈下症状的健康人子代(年龄 14.5±2.2 岁, 30 名女性)和 68 名健康对照(年龄 5.0±2.3 岁, 37 名女性),于基线和随访时间点(平均间隔 2.63 年)测量被试的临床指标、功能水平和大脑结构(灰质体积)。我们运用组间方差分析和独立样本曼-惠特尼检验揭示了 BD 遗传风险和症状风险的横断面和纵向大脑结构特征,并计算了大脑结构特征与被试

的功能水平变化间的斯皮尔曼关联系数。我们的前瞻性分析检验了被试基线的脑结构是否预测了被试随访后的功能水平变化和心境病发作与否。

结果 在基线时, 具有遗传风险和症状风险的个体在与情感和认知功能相关的关键脑区域中表现出较大的灰质体积(所有 $p_{FWE} < 0.04$)。在随访中, 具有遗传风险的个体表现出海马和前扣带回皮层灰质体积的加速减少 ($p_{FDR} = 0.045$); 与之相反, 具有阈下症状风险的个体则表现出腹内侧前额皮质灰质体积更慢速的减少 ($p_{FDR} = 0.045$)。关联分析结果显示个体于基线时较大的灰质体积及后续更快速的灰质减少预测了其更好的基线功能水平及随访后的功能水平改善。并且, 随访后心境病发作的被试较随访后未发病被试的基线功能水平和枕叶皮质体积皆较低。

结论 本研究结果为 BD 遗传和阈下高危风险特异性的脑神经发育特征提供了新的证据。在较早脑发育期, BD 遗传和阈下高危风险人群皆展示出更大的关键脑区灰质体积, 可能代表其对抗 BD 高危的适应机制。在随后的脑发育中, BD 遗传高危个体展现出更高层次的神经修剪(灰质下降), 而其与功能水平改善的关联提示该特征为对抗基因高危的适应性机制。相反, BD 阈下症状高危个体的神经修剪程度较低, 可能导致其功能水平衰退和将来心境障碍疾病发作。

关键词: 双相障碍, 高危人群, 神经影像, 疾病预防, 遗传度

Cognitive Enhancement in Bipolar Disorder: A Double-Blind, Randomized Controlled Trial Utilizing A Novel DTI-Guided Multi-modal Neuro-stimulation Protocol

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Objective Traditional neuromodulation strategies for enhancing cognitive abilities in patients with bipolar disorder (BD) have shown preliminary promise, yet there remains a need for novel intervention modalities

to improve therapeutic outcomes. This study introduces a novel multi-modal neuromodulation protocol (MNS protocol) that leverages personalized DTI data to identify fiber tracts between the DLPFC and dACC. The highest point of structural connectivity strength is selected as the individualized stimulation target, which is then targeted using a combination of optimized tACS and robot-assisted navigated rTMS for multi-modal intervention. A double-blind randomized controlled trial was conducted to investigate the clinical efficacy of this innovative neuromodulation approach on cognitive abilities in BD patients

Methods A total of 116 participants were initially recruited, with 100 BD patients ultimately included and randomly assigned to four treatment groups: Group A (Active tACS-Active rTMS (MNS Protocol), $n=25$), Group B (Sham tACS-Active rTMS, $n=25$), Group C (Active tACS-Sham rTMS, $n=25$), and Group D (Sham tACS-Sham rTMS, $n=25$). Participants underwent 15 sessions over three weeks. Cognitive assessments were conducted at baseline (Week 0), post-treatment (Week 3), and follow-up (Week 8)

Results Of the 100 participants, 66 completed all 15 sessions. The factorial ANOVA revealed significant interaction effects between tACS and rTMS on TMT and DSST scores ($P < 0.00001$). Group A (MNS Protocol) showed superior improvements in Spotter CRT, TMT, and DSST scores compared to other groups at Week 3, with sustained cognitive enhancement in Spotter CRT at Week 8 ($P < 0.01$). fMRI data indicated that only Group A exhibited significant activation in the left Frontal_Inf_Oper_L region after the MNS intervention. However, correlation analysis between induced electric fields and cognitive improvements yielded no significant associations ($R^2 < 0.2$)

Conclusion Our results indicate that MNS Protocol significantly improve cognitive indicators in bipolar disorder. The safety and efficacy were systematically evaluated, supporting the potential of personalized neurostimulation approaches for treating cognitive dysfunction in bipolar disorder. The study contributes valuable insights into the burgeoning field of targeted transcranial stimulation and highlights the importance of individualized interventions in psychiatric research

关键词: Diffusion Tensor Imaging; Transcranial Alternating Current Stimulation; Transcranial Magnetic Stimulation; Electric Field; Individualization

单双相抑郁患者在识别正性情绪面孔时前额叶—纹状体通路 low-gamma 频段效能连接差异

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目的 双相障碍是一种严重影响患者生活质量、社会功能, 并增加自杀风险的疾病, 表现为抑郁和躁狂或轻躁狂的反复发作。双相抑郁患者与抑郁症患者临床症状相似, 尤其是首次情绪发作表现为抑郁发作的双相患者, 这导致未发生躁狂的双相障碍患者与抑郁症患者难以鉴别, 从而导致误诊率高、家庭负担加重。在寻求治疗的第一年内, 接近 60% 的双相患者被误诊为抑郁症。虽然某些流行病学和症状特征有助于区分抑郁症和双相障碍, 但是区分有效性不足。因此, 更早地寻找出转相和单相潜在病理生理学差异是非常有必要的。Gamma 神经震荡参与注意、情绪等高级认知功能处理, 且既往研究表明双相抑郁患者与单相抑郁患者在处理正性情绪时存在不同激活模式, 尤其在前额叶-纹状体环路存在差异。但目前关于前额叶-纹状体环路是否有助于早期识别双相障碍仍有待进一步研究。

方法 对 75 例单相抑郁症患者 (unipolar disorder, UD)、39 名健康对照者 (health Control, HC) 进行脑磁图扫描, 选取正性情绪面孔刺激下的脑磁信号。经过 5 年以上随访, 75 例单相抑郁症患者中 23 例抑郁症患者转为双相障碍 (converted to Bipolar disorder, ctBD)。其中 ctBD 脑磁图像选择未发生过躁狂时的入组基线脑磁图像。基于 matlab 平台利用 fieldtrip 工具包对数据进行去公频、滤波, 去除伪迹处理。并基于个体化磁共振数据进行溯源分析, 选取眶额回、前扣带回、腹侧纹状体、杏仁核作为感兴

趣脑区, 以 30~50 Hz gamma 频段为感兴趣频段, 利用格兰杰因果模型计算各感兴趣脑区之间的效能连接值。对脑区间效能连接值采用非参数检验进行统计分析, 检验水准 $\alpha=0.05$ 。Bonferroni 矫正。

结果 ctBD、UD 两组患者在识别正性情绪面孔时, 前额叶—纹状体通路 gamma 频段均在左腹侧纹状体到左眶额回之间的效能连接减弱。ctBD 与 UD 右杏仁核到左眶额回、右杏仁核到左纹状体之间的效能连接在 low-gamma 频段差异具有统计学意义 ($p<0.05$), 且效能连接强度 ctBD 较 UD 增强。

结论 单相、未经历躁狂打击的双相患者在识别正性情绪面孔时前额叶-纹状体环路活动部异常, 抑郁症转相患者在该环路 low-gamma 频段存在特异性的改变, 是区分两者的潜在电生理学标志, 为早期识别双相情感障碍患者奠定基础。

关键词: 双相情感障碍; 正性情绪; 脑磁图;

Spatial Correspondence Across Molecular, Cellular, and Cortical Structural Axis Underlying Suicide Attempt in Bipolar Disorder

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Objective Suicide in bipolar disorder (BD) has been shown to be clearly heritable and associated with neuroanatomical disruptions among brain regions. However, it remains unclear how genetic risks might spatially correspond to the neuroanatomical disruptions in suicide

Methods Morphometric similarity network

(MSN) of structural MRI was established as a marker of inter-regional connectivity in two independent BD cohorts: totally, 83 patients with suicide attempt (SA), 94 without SA (NSA) and 96 healthy controls. We utilized normative brain gene expression data and partial least squares analysis to find the intrinsic expression gradients enriched for gene list of SA-related changes in MSN (SRM). Its spatial correspondence was further validated by additional paired measures of 14 SNPs in SRM genes (in 38 SA and 38 NSA patients). Then specific cell-type was identified by its capability of being rooted in above spatial correspondence

Results MSN analysis demonstrated replicable neuroanatomical disruptions of SA effects. Significantly increased MSNs in entorhinal part 1 and left lateral occipital part 7 were observed in SA group (FDR corrected $p < 0.05$). Spatial correspondence between SRM gene expressions and MSN alternations was supported by a partial mediation of MSN in left lateral occipital part 7 between genetic risks and suicide risk carried by patients (indirect effect = 0.0006, 95% CI = [6.67e-07, 0.01], $p < 0.05$). Furthermore, under-expression of negatively weighted SRM genes in excitatory neuron was suggested to account for the increased MSN in left lateral occipital part 7, especially for genes involved in glutamatergic synaptic plasticity

Conclusion Abnormal glutamatergic synaptic plasticity in excitatory neurons resulted from under-expression of SRM- genes could contribute to dysconnectivity between visual cortex and the other areas. Difficulty in top-down emotional regulation caused by above spatial correspondence would make patients more vulnerable to emotional states, accumulating suicide risks

关键词: BD, suicide, morphometric similarity network, imaging-transcriptomics, cell-type-specific signature genes, genetics

CRMP2 in The Hippocampal CA1 Region Improves Chronic Stress-induced Depression-like Behaviour in Mice by Affecting Synaptic Plasticity

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Background Major depressive disorder (MDD) is a prevalent psychiatric illness and a significant contributor to the global burden of disease. Previous studies have demonstrated that collapsin response mediator protein 2 (CRMP2) in the hippocampal CA1 region plays a pivotal role in regulating depression pathogenesis. The present study aimed to elucidate the underlying mechanism through which CRMP2 modulates synaptic plasticity, thereby mediating the development of depression.

Methods We stereotactically injected adeno-associated virus into the mouse brain to manipulate the expression of CRMP2 and subjected the mice to chronic unpredictable mild stress (CUMS) to induce a depression-like phenotype. The sucrose preference test, open field test, elevated plus maze test, forced swimming test and tail suspension test were used to detect behavioural changes. Western blotting, real-time PCR, immunofluorescence, coimmunoprecipitation and IP-MS were combined to explore the CRMP2-mediated synaptic plasticity phenotype

Results The expression of CRMP2 in the hippocampal CA1 region was observed to decreased following CUMS. Knockdown of CRMP2 in the hippocampal CA1 region resulted in impaired synaptic structure and plasticity, accompanied by increased anhedonia and hopelessness. Conversely, overexpression of CRMP2 in the hippocampal CA1 region has the potential to restore the compromised synaptic structure, plasticity, and associated behavioural deficits associated with depression. Furthermore, CRMP2 directly interacted with postsynaptic density protein 95 (PSD95), thereby influencing its expression.

Conclusions Our findings suggest that CRMP2 plays a crucial role in the regulation of synaptic plasticity and depression-like behaviour, indicating that CRMP2 may enhance synaptic plasticity by interacting with PSD95 and modulating the upregulation of PSD95 expression.

关键词: CRMP2, major depressive disorder, synaptic plasticity, PSD95

伴自杀未遂双相抑郁患者“前额叶-扣带-纹状体”环路功能连接两种损伤模式

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目的 双相障碍抑郁发作 (bipolar depression, BD) 是自杀风险最高的精神疾病, 其自杀风险是普通人的 30-60 倍。自杀未遂史是患者再次实施自杀行为的独立风险因素, 然而部分患者或家属会刻意隐瞒其自杀意图和自杀未遂史, 寻找自杀未遂行为的客观标记, 早期识别伴自杀未遂患者对指导临床防治具有重要意义。前人研究表明“前额叶-扣带-纹状体”神经环路是 BD 伴自杀未遂的重要神经基础。本研究将探究该神经环路功能连接下降对患者自杀行为的识别价值, 以期精准识别伴自杀未遂史的 BD 患者, 便于临床管理和防治。

方法 入组南京医科大学附属脑科医院住院汉族 BD 患者 176 例, 依据此次抑郁发作是否有自杀未遂行为 (定义为至少有过一次自我伤害行为, 并且是直接想死或暗示想死及符合 HAMD-17 第三项自杀评分 ≥ 2 分者) 将患者分为伴自杀未遂组 (SA 组, $n=75$) 和不伴自杀未遂组 (NSA 组, $n=101$)。所有受试者完临床信息采集及静息态 7min 功能磁共振扫描。提取背外侧前额叶、腹内侧前额叶、前扣带、前脑岛、尾状核、壳核、苍白球、杏仁核、海马等脑区时间序列计算 Person 相关性表示功能连接强度。异质性判别分析 (heterogeneity through discriminative analysis, HYDRA) 分类器和十折交叉法验证分类器效能以及对自杀未遂患者的聚类效果。

结果 根据聚类个数 $k=2$ 时 HYDRA 模型的校正后 Rand 指数最高, 提示 $k=2$ 是最佳聚类方案, 此时, 对自杀未遂行为患者的识别率为 89%。最佳方案下, 48 名伴自杀未遂的患者被分配到亚型 1, 27 名受试者分配到亚型 2。亚型 1 患者表现出广泛的前额叶-纹状体、海马和杏仁核功能连接下降。亚型 2 患者表现出少量的前额叶内部脑区之间功能连接下降。

结论 课题组前期研究表明低频振幅动态特性能敏感地反映 BD 患者自杀风险, 对自杀未遂行为识别率较高。本研究融合 HYDRA 分类器, 发现伴自杀未遂的 BD 患者功能连接存在两种损伤模式, 纳入两种损伤模式后, 对自杀未遂行为的识别率更高。本研究结果提示将磁共振数据与人工智能技术融合, 对个体化识别伴自杀未遂史 BD 患者的临床应用前景。值得注意的是, 伴自杀未遂 BD 患者神经环路损伤模式可能存在个体异质性, 可能会给个体化识别自杀未遂造成困扰。

关键词: 双相抑郁; 功能连接; 自杀未遂; 人工智能

儿童精神病学组

Csnk2A1 基因 DNA 甲基化在青少年抑郁症外周血的表达研究

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目的 本研究将对 50 例青少年 MDD 患者与 50 例匹配的健康对照外周血进行 MethylTarget 目标区域甲基化测序, 验证 Csnk2A1 (cg19702314)、MED13L (cg09370496)、STK3 (cg16089678) DNA 甲基化水平在青少年 MDD 患者外周血的表达是否与发现队列一致, 为早期识别青少年 MDD 和临床诊断提供一个新的方向。

方法 收集青少年 MDD 患者 50 例, 招募健康对照 50 例。收集一般信息, 采用 CDRS-R、HAMD-17 项、HAMA 量表进行临床评估, 采集外周血提取 DNA。

结果 (1)MDD 组患者的 CDRS-R、HAMD-17 项、HAMA 量表得分水平均显著高于健康对照组 ($P<0.001$), 两组之间的性别、年龄、BMI、吸烟史、饮酒史相比无明显差异 ($P>0.05$)。

(2) 与健康对照组相比, MDD 组患者外周血的 Csnk2A1 基因的 cg19702314_17 95 DNA 甲基化水平显著升高 ($P<0.05$), 而两组间 cg19702314_17、cg19702314_17 83、cg19702314_17 123、cg19702314_17 132、cg09370496_10、cg09370496_10 38、cg09370496_10 98、cg09370496_10 110、cg16089678_17、cg16089678_17 98、cg16089678_17 168 DNA 甲基化水平相比无明显差异 ($P>0.05$)。

(3) Spearman 相关性分析结果显示, cg19702314_17 95 DNA 甲基化水平与 CDRS-R ($r=0.275, P=0.006$)、HAMD-17 项($r=0.204, P=0.041$) 量表得分存在正相关, cg19702314_17 95 DNA 甲基化水平与性别、年龄、BMI、吸烟史、饮酒史、HAMA 量表得分无明显相关性 ($P>0.05$)。

(4) 以 cg19702314_17 95 DNA 甲基化水平作为青少年 MDD 患者的评价指标, ROC 曲线下面积为 0.661, 灵敏度为 68.0%, 特异性为 62.0%。

结论 (1) cg19702314_17 95 DNA 甲基化水平

在青少年 MDD 患者的外周血中表达升高, 与前期发现队列高甲基化结果表达方向一致。

(2) cg19702314_17 95 DNA 甲基化水平与 CDRS-R、HAMD-17 项量表得分呈正相关, 表明可能与青少年 MDD 的临床症状、抑郁症的严重程度相关。

(3) cg19702314_17 95 DNA 甲基化水平可能对预测青少年 MDD 有一定临床价值。

关键词: 青少年抑郁症, DNA 甲基化, Csnk2A1 基因

Predictors of Conversion From Major Depressive Disorder To Bipolar Disorder in Adolescents: A Prospective Study

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Objective In adolescents, many individuals with bipolar disorder (BD) are initially misdiagnosed with major depressive disorder (MDD), thereby delaying timely treatment. However, due to the similarity of early symptoms, it is difficult to differentiate between MDD and BD at an early stage. The present study aimed to investigate the rate as well as the clinical predictors of conversion from adolescents with MDD to BD in China through a prospective cohort design

Methods From January 2021 to March 2024, we conducted this cohort study and included 202 adolescents with MDD at baseline. All patients were followed up for more than 1 year and were categorized into a conversion to BD group ($n=38$) and a remained MDD group ($n=164$) based on follow-up diagnosis. We measured patients' depression, excessive daytime sleepiness, insomnia, internet addiction (IA), suicidal ideation (SI), history of suicide attempt, and non-suicidal self-injury (NSSI) based on clinical interviews and scale assessments. Statistical analyses were conducted using SPSS 23.0. Logistic regression was applied to analyze the independent influences on the conversion from MDD to

BD. The predictive value of each independent risk factor for conversion was evaluated by receiver operating characteristic (ROC) curve

Results In this study, the rate of conversion from MDD to BD was 18.81%. At baseline, patients who conversion to BD had a younger age at onset, were more likely to have comorbid use of mood-stabilizers or anti-psychotics, histories of suicide attempt, NSSI, and psychotic symptoms, higher severity of depression, insomnia, and SI, and lower levels of IA (all $P < 0.05$). Logistic regression analyses revealed that independent predictors of conversion from MDD to BD included age at onset (OR = 0.742, 95% CI = 0.576~0.955, $P = 0.021$), use of mood-stabilizers (OR = 5.253, 95% CI = 1.502~18.372, $P = 0.009$), suicide attempt (OR = 3.783, 95% CI = 1.165~12.282, $P = 0.027$), NSSI (OR = 3.830, 95% CI = 1.419~10.337, $P = 0.008$), and IA (OR = 0.959, 95% CI = 0.932~0.985, $P = 0.003$). And ROC curve analysis revealed that the combination of age at onset, suicide attempt, NSSI and IA had a better predictive value for the conversion of adolescent MDD to BD (AUC = 0.772, 95% CI = 0.693~0.852, $P < 0.001$)

Conclusion Adolescents with MDD had a higher overall risk of experiencing conversion to BD in China. This study initially identified risk factors for the conversion from adolescent MDD to BD and developed a predictive model. The model will enable early identification of risk groups and the application of more targeted interventions to improve clinical prognosis

关键词: adolescents, major depressive disorder, conversion, bipolar disorder, predictive model

Silent Suffering: Multidimensional Stressors Leading To High Self-Harm Behavior Levels in Chinese Preadolescents

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Background Limited research has been conducted on self-harm among preadolescents in China.

This study investigated the influence of multidimensional stress on high self-harm behavior levels in preadolescents

Method This large-scale cross-sectional study of 7-14-year-old primary school students in grades 3-6 was conducted in Southwest China from November 2020–June 2021. Data on sociodemographic characteristics and multidimensional stressors were collected and analyzed

Results A total of 48,117 students (23,075 girls and 25,042 boys; mean age 10.45 years) completed this survey. 13.6% (6,561) reported self-harm behaviors. Chi-square and binary logistic regression analyses were employed. The most important risk factors for self-harm were ranked as follows: high academic pressure (OR=2.00, 95% CI 1.90-2.09), poor parental relationships (OR=1.89, 95% CI 1.78-2.00), frequently being bullied (OR=1.53, 95% CI 1.47-1.60), early-onset menstruation (OR=1.33, 95% CI 1.22-1.46), frequent smartphone use (OR=1.31, 95% CI 1.26-1.37), poor classmate relationships (OR=1.31, 95% CI 1.24-1.38), poor relationship between parents (OR=1.11, 95% CI 1.08-1.14), poor family financial situation (OR=1.11, 95% CI 1.05-1.17), and being bullied within the past 1 month (OR=1.05, 95% CI 1.02-1.07)

Limitations: The sample size of this study was relatively large. As only participants from Chongqing were included, the data obtained may not be representative of all of China. Therefore, further research investigating and confirming whether similar circumstances exist in various centers across the nation are needed.

Conclusion Preadolescents in China exhibited high rates of self-harm behaviors. It is necessary to establish a “School-Family-Hospital” trinity psychological intervention collaboration model to prevent self-harm among primary school students

关键词: Preadolescents; Self-harm; Multidimensional stress; School-Family-Hospital

双靶点加速重复经颅磁刺激对青少年重度抑郁症患者疗效及脑功能机制研究

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目的 据世界卫生组织调查报告,重度抑郁症已被列为全球疾病负担最重的三大疾病之一,青少年抑郁的患病率逐年增长,目前青少年群体抑郁问题已非常严峻。对于重度抑郁症患者,现有药物治疗虽有效但伴随着需要使用多种不同药物、起效时间长、存在副作用等问题。且整体疗效有限,尤其是青少年的治疗有效率相对更低,需要更有效的治疗方法。传统重复经颅磁刺激(repetitive transcranial magnetic stimulation, rTMS)治疗方案存在治疗周期长、起效慢等缺点,提出一种为高效的 rTMS 治疗模式——加速型经颅磁刺激。突破传统每日一次的治疗方案,使得患者治疗周期缩短的同时改善抑郁状况,并验证替代靶点右侧眶额叶(Orbitofrontal Cortex, OFC)的治疗效果,分析涉及脑区在双靶点加速型重复经颅磁刺激治疗前后脑功能变化,为青少年抑郁症治疗及其神经机制提供更多实证依据。

方法 将符合诊断标准的 66 例青少年重症抑郁症患者作为研究对象,分为单靶点组、双靶点组,伪治疗组,每组各 22 例,分别在治疗前、治疗 5 天后受试者进行磁共振扫描、HAMD17 量表评估。治疗结束 1 周后,再次对患者进行量表随访评估。TMS 的刺激方案为:双靶点组先对右侧 OFC 区进行连续 θ 爆发式刺激 600 脉冲,在左侧背外侧前额叶皮层(dorsolateral prefrontal cortex, DLPFC)区进行 20Hz 高频重复经颅磁刺激,进行每天 4 次,连续 5 天的加速 TMS;单靶组仅对左侧 DLPFC 区进行刺激;伪刺激组使用伪线圈刺激。对治疗前后磁共振成像进行 ALFF、ReHo 分析,以差异脑区为种子点进行 FC 分析。GRF 矫正取单位体素 $p < 0.001$,团块体素 $p < 0.01$,进行双尾检验,取连续体素大小 > 30 的脑区为结果脑区。

结果 三组治疗前在 HAMD17 量表上得分无显著差异,治疗后得分显著降低且有差异。治疗结束后及结束一周后减分率,两个治疗组显著高于伪刺激组,且双靶点组减分率较另外两组下降速度更快,幅度更大。治疗前后发现右侧小脑 6 区 ALFF 值显著升高;右侧小脑 8 区,右侧舌回、左侧颞中回 ALFF 值显著降低。双靶点组左侧角回、右侧中央后回 ReHo 值显著升高;右侧三角部额下回、中央沟盖 ReHo 值显著降低。以左侧角回为种子点发现与

左右侧颞下回、左侧枕中回 FC 显著升高,以左侧三角部额下回为种子点发现与右侧中央沟盖、左侧脑岛 FC 升高。

结论 双靶点加速经颅磁治疗青少年重度抑郁症患者在应答速度及症状改善程度优于单靶点组及伪刺激组且具有良好安全性。相关差异脑区及 FC 变化可能为双靶点治疗的脑功能机制。

关键词: 加速重复经颅磁刺激,重度抑郁症,青少年,静息态功能磁共振

“医校家社”心理健康服务模式在重庆市中小 学生中的应用

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目的 儿童和青少年时期是心理发展的关键阶段,也是精神健康问题的易感期。本研究旨在构建一种集医院、学校、家庭和社区为一体的综合性学生心理健康服务模式,通过跨学科合作,共同促进青少年的心理健康。

方法 为确保学生心理服务工作切实做到科学、安全、规范,由重庆区政府与重庆市内拥有附属医院的医学院校(重庆医科大学)牵头,由具有多年儿童青少年情绪障碍研究基础,包括精神科医生、心理治疗师、社工师的专家团队领衔,整合社会资源合作开展面向 2 个行政辖区,共计 20 余万学生人群,开展为期四年的从“小学-初中-高中”全覆盖的学生心理健康服务。基于心理健康素养理论,通过早期识别、分诊和证据支持的心理健康干预措施,促进适当和及时地获得心理健康护理;通过提高学生、教育者和家长的心理健康素养,促进心理健康和减少污名化;让家长和社区参与解决青少年的心理健康需求。

结果 自 2020 年 9 月以来,已对超过 330,000 名学生进行了筛查,包括 165,302 名小学生、94,984 名初中生和 72,163 名高中生。37,580 名学生接受了

精神科医生/心理治疗师的面对面访谈。超过 300 名可能存在心理健康问题的学生，如高自杀风险、抑郁症、焦虑症和注意力缺陷多动障碍，被转介到重庆医科大学第一附属医院接受门诊/住院治疗或心理治疗。超过 85% 的学生接受了精神症状评估，并进行了药物治疗。6% 表现出精神病性症状、自伤倾向和自杀意念及行为的学生，建议立即住院接受治疗。9% 的学生接受心理辅导，并定期随访。经过治疗，约 12% 的学生复学。

结论 “医校家社”心理服务模式已在重庆成功实施多年，并得到了参与的学生、家长、教师以及学校的认可。通过早期识别存在潜在心理障碍的学生，将其转诊到卫生系统给予适当的治疗，促进青少年心理健康；通过一般筛查、访谈、不同级别的干预方法提供持续支持；促进和培训学生、教育者和家长的心理健康；整合教育和卫生系统中的资源，并在各个阶段明确学校、家庭、医院和社区的角色。

关键词：干预,青少年,心理健康

Efficacy Verification of Potential Neuroregulation Targets for Social Impairments in Children with Autism Spectrum Disorder: A Randomized, Double-Blind, Controlled Trial

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Objective This study aims to explore the impact of high definition 5-channel transcranial Direct Current Stimulation (HD-tDCS) over the vertex (Cz) (10-20 electroencephalogram system) on the social impairments of Autism Spectrum Disorder (ASD) children, as well as the differences in therapeutic effects on social impairments in ASD children with or without sensory integration dysfunction

Methods This study is a randomized, double-blind, controlled trial conducted in two parts. Based on the results of brain network analysis from the functional magnetic resonance data of the Autism Specialty Cohort at Nanjing Medical University, the Cz is located in the social-related abnormal brain area of children with ASD,

covering the paracenter lobule, auxiliary motor area, and part of precentral gyrus and postcentral gyrus. Part one: A total of 118 ASD children aged 4-12 from the same cohort were enrolled. They were randomly assigned to receive true HD-tDCS with the anode centered over the Cz, true HD-tDCS with the anode centered over the left dorsolateral prefrontal cortex (F3), and sham HD-tDCS with the anode centered over Cz. The treatment involved 14 sessions over three weeks. Social function was assessed using the Social Responsiveness Scale (SRS) before and after treatment. Therapeutic effects were evaluated using the Autism Treatment Evaluation Scale (ATEC), and sleep changes were measured with the Children's Sleep Habits Questionnaire (CSHQ). Part two: This part included 72 ASD children aged 4-12 from the same cohort, divided based on the Children Sensory Integration Rating Scale (CSIRS) into typical sensory integration, sensory integration dysfunction, and sham stimulation groups. They received either true or sham HD-tDCS with the anode centered over Cz, using the same parameters as part one. Social function was assessed using the SRS. Additionally, a post-hoc analysis of 51 ASD children aged 4-8 was conducted. These children were divided into hypo-tactile response, hyper-tactile response, and typical tactile sensitivity groups based on the Sensory Processing and Self-Regulation Checklist (SPSRC), and differences in therapeutic efficacy were compared among these groups

Results At the end of the intervention, the true stimulation group with the anode over Cz showed significant improvements in SRS total score (-13.06%), social cognition (-18.53%), social communication (-15.26%), and autistic mannerism (-18.07%), especially in younger children and those with moderate to low functioning levels. The sham stimulation group showed no significant changes. The true stimulation group with the anode over F3 also showed significant improvements in SRS total score (-12.93%), social cognition (-19.78%), social communication (-11.97%), and autistic mannerism (-17.72%). Also improvements in CSHQ were observed, especially in the dimensions of sleep habits ($F=13.285, p<0.01$), nighttime awakenings ($F=11.308, p<0.01$), and daytime sleepiness ($F=9.731, p<0.01$), along with significant reductions in

ATEC scores. HD-tDCS was well-tolerated with no severe adverse reactions. Compared to the sensory integration dysfunction group, the typical sensory integration group showed significant changes in social awareness ($t=5.032$, $p < 0.001$) and autistic mannerisms ($t=3.085$, $p=0.004$). The hypo-tactile and typical tactile sensitivity groups showed significant improvements in all SRS domains, while the hyper-tactile group only showed significant improvement in social communication ($t=2.385$, $p=0.022$)

Conclusion HD-tDCS with the anode centered over Cz may be an effective treatment for improving social interaction and sleep disorders in children with ASD, and it shows greater potential in children with typical sensory integration and typical or hypo-sensitive touch responses. Further large-scale scientific research from mechanisms to manifestations is needed to verify the precise therapeutic effect of this target area

关键词: autism spectrum disorder (ASD), high definition 5-channel transcranial direct current stimulation(HD-tDCS), social impairments, vertex (Cz), sensory integration dysfunction

Network Analysis of Anxiety and Depression Symptoms in Elementary School Children: Identifying Central and Bridging Symptoms

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Objective While the co-occurrence of anxiety and depressive symptoms is well-documented in the general population, there is a lack of research specifically examining this phenomenon in children. Furthermore, previous studies have treated these symptoms as

distinct dimensions of latent variables, often overlooking their interactions. This approach misses the complex interplay between symptoms, which is crucial for a more effective understanding and treatment of this condition. Network analysis represents an effective method for investigating the complex relationships between psychiatric symptoms. The objective of this study was to examine the symptom-level relationships between depression and anxiety symptoms in a large-scale cross-sectional sample of children using network analysis. Additionally, the study aimed to identify the most central symptoms within the depression-anxiety symptom network and to investigate potential differences in network structure between genders

Methods We employed a cluster sampling method to collect psychological data from all third, fourth, and fifth-grade students in the Shapingba district of Chongqing, totaling 19,896 elementary school students. To evaluate depressive and anxiety symptoms among children, the Children's Depression Inventory and the General Anxiety Disorder-7 scales were utilized. We computed "Expected Influence" and "Bridge Expected Influence" as network centrality indices to characterize the structure of the symptom networks. Network stability was assessed through a case-dropping bootstrap approach. The Network Comparison Test (NCT) was also applied to examine potential differences in network characteristics across gender and grade groups

Results 19,514 children aged 10.98 ± 1.29 were included in the study. A total of 5,259 participants (26.95%) exhibited significant depressive symptoms, 4,885 (25.03%) showed significant anxiety symptoms, and 3,475 (17.81%) presented with both significant anxiety and depressive symptoms. Network analysis revealed that "Anhedonia," "Negative mood," and "Nervousness" were the most central symptoms in the network structure of anxiety and depression symptoms in children. Additionally, the most significant bridging symptoms connecting the anxiety-depression network were "Negative mood," "Anhedonia", and "Irritability" The NCT demonstrated that gender and grade did not significantly influence the network structure of anxiety and depression symptoms in children

Conclusion The central symptoms (anhedonia, negative mood, nervousness) and key bridging symptoms (negative mood, anhedonia, irritability) within the network of anxiety and depressive symptoms in children represent potential targets for interventions aimed at improving these conditions. These findings highlight the significance of focusing on these specific symptoms in future treatment strategies

关键词: network analysis, children, depression, anxiety

数字医疗在 ADHD 治疗中的应用: 一项基于全面认知评估的靶向认知训练的多中心随机对照研究

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目的 注意缺陷多动障碍 (ADHD) 是一种常见的神经发育障碍, 目前一线治疗方式为药物治疗。既往研究提示药物对 ADHD 患者认知损伤改善有限, 而认知训练可辅助药物进一步改善认知功能。数字医疗具有便捷、灵活的优势, 但其疗效仍有争议。本研究开展基于全面认知评估的靶向认知训练的多中心随机对照研究, 探索靶向数字化认知训练联合药物对 ADHD 患者的治疗效果。

方法 北大六院及儿研所两个中心共有 160 名 ADHD 患儿符合入组要求, 将其随机分为数字化靶向认知训练联合药物治疗组及单纯药物治疗组。两组药物治疗选择哌甲酯或托莫西汀, 滴定至最佳剂量后维持用药。数字化靶向认知训练包括 5 个认知维度共 10 种训练任务, 目标频次为每周 5 次, 每次 40 分钟。每次训练内容基于患者之前的认知评估得分动态调整, 个性化推送靶向任务。入组患者经 8 周治疗后来院复诊, 前后测均完成临床症状评估及静息脑电采集。

结果 124 名 ADHD 患儿经 8 周治疗后完成后

测, 其中联合组 60 人, 单纯药物组 64 人。认知训练+托莫西汀联合组 ADHD 患儿与单纯托莫西汀组相比, 注意缺陷和多动/冲动症状减分率显著更低 ($p < 0.05$)、执行功能改善显著更高 ($p < 0.05$); 与单纯哌甲酯组相比, ADHD 核心症状及执行功能改善无显著差异 ($p > 0.05$), 认知训练联合托莫西汀可达到哌甲酯的疗效。在认知训练+托莫西汀联合组中, ADHD 患儿工作记忆改善与核心症状改善显著正相关 ($r \geq 0.288, p < 0.05$)。干预后认知训练+托莫西汀联合组 ADHD 患儿静息脑电 theta 频段能量显著升高, 而单纯托莫西汀组患儿脑电指标在干预前后变化不显著。对于哌甲酯治疗的患者, 联合组与单纯药物组之间的症状改善及脑电指标变化没有显著差异, 认知训练对哌甲酯疗效没有提升效果。

结论 认知训练联合托莫西汀治疗在症状改善方面更为显著, 可能是由于增加靶向认知训练后, 生态执行功能显著改善所致, 其潜在神经机制可能是 theta 频段能量的增大。本研究提供了将认知训练与托莫西汀联合使用比单纯药物治疗具有增强疗效的有力证据, 可推动 ADHD 靶向干预应用于实现个体化精准医疗, 同时为数字医疗对 ADHD 治疗的有效性提供了循证依据。(本研究在中国临床试验注册中心的预注册编号为 ChiCTR2100043525)

关键词: 注意缺陷多动障碍, 靶向认知训练, 数字医疗, 多中心随机对照研究

Dissecting Biological Heterogeneity in Major Depressive Disorder Based on Neuroimaging Subtypes with Multi-omics Data

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Objective The heterogeneity of Major Depressive Disorder (MDD) has been increasingly recognized, challenging traditional symptom-based diagnostics and the development of mechanism-targeted therapies. Neuroimaging-based subtypes offer promise in addressing

these challenges, but their biological underpinnings remain largely unexplored. This study aims to identify neuroimaging-based MDD subtypes and dissect their predominant biological characteristics using multi-omics data

Methods A total of 807 participants were included in this study, comprising 327 individuals with MDD and 480 matched healthy controls (HC). Functional neuroimaging features, specifically the amplitude of low-frequency fluctuations (ALFF), were extracted for each participant. These features were used to identify MDD subtypes through machine learning clustering. Multi-omics data, including profiles of pro-inflammatory cytokines, epigenetics, metabolomics, and genetics, were obtained for a subset of participants. Comparative analyses of these multi-omics data were conducted between each MDD subtype and HC to explore the molecular underpinnings involved in each subtype

Results We identified three neuroimaging-based MDD subtypes, each characterized by unique ALFF pattern alterations compared to HC. Subtype 1 features an imbalance of increased ALFF in the limbic system and decreased ALFF in primary cortices. Multi-omics analysis showed a strong genetic predisposition, with a significant Polygenic Risk Score (PRS) for MDD, primarily enriched in neuronal development and synaptic regulation pathways. This subtype also exhibited the most severe depressive symptoms and cognitive decline compared to the other subtypes. Subtype 2 displays increased ALFF in the prefrontal cortex and decreased ALFF in the primary cortices. This subtype is characterized by immuno-inflammation dysregulation, supported by elevated IL-1 β levels, altered epigenetic inflammatory measures, and differential metabolites correlated with IL-1 β levels. Subtype 3 presents decreased ALFF in the prefrontal cortex and increased ALFF in the primary cortices. No significant biological markers were identified for this subtype

Conclusion Our results identify neuroimaging-based MDD subtypes and delineate the distinct biological features of each subtype. This provides a proof of concept for mechanism-targeted therapy in MDD, highlighting the importance of personalized treatment ap-

proaches based on neurobiological and molecular profiles

关键词: Major Depressive Disorder; Neuroimaging-based subtypes; Biological heterogeneity; Multi-Omics; Inflammation dysregulation

青少年非自杀性自伤阈上与阈下亚型大脑结构-功能耦合性差异研究

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目的 本文旨在融合大脑磁共振结构连接与功能连接特征,探索伴有阈上非自杀性自伤(Nonsuicidal self-injury, NSSI)行为与伴有阈下NSSI行为青少年大脑结构-功能耦合特征的差异,并进一步探索大脑差异特征与各组抑郁程度、焦虑程度、自伤成瘾属性以及情绪调节功能之间的临床关联性。

方法 纳入30名阈上NSSI青少年和18名阈下NSSI青少年被试,采用儿童抑郁量表和儿童焦虑量表分别评估被试当前抑郁和焦虑情绪严重程度,采用渥太华自伤量表(Ottawa Self-injury Inventory, OSI)与情绪调节问卷(Emotion Regulation Questionnaire, ERQ)分别评估被试的自伤行为成瘾程度和情绪调节功能。采用3.0T MRI扫描仪获取被试大脑T1相、DTI相与静息态BOLD相三个序列的数据。基于结构连接与功能时间序列构建每个被试的全脑结构连接-功能序列耦合的拟合度矩阵,比较阈上组与阈下组全脑结构-功能耦合度差异并计算两组差异脑区耦合度与临床特征的线性相关性。

结果 相比于阈下组,阈上组大脑左侧额中回、双侧颞上回与左侧楔前叶的结构-功能耦合度显著升高(FDR-corrected, $p < 0.05$)。进一步相关性分析发现,在阈上组,左侧楔前叶的结构-功能耦合度与抑郁程度呈负相关($r = -0.42$, $p < 0.05$);在阈下组,左侧额中回、双侧颞上回与左侧楔前叶的结构-功能耦合度与自伤行为的主观成瘾性呈显著正相关($r = 0.47 \sim 0.72$, $p < 0.05$),且左侧楔前叶与自伤被试的情绪调节能力呈显著负相关($r = -0.71$, $p < 0.001$)。

结论 阈上NSSI和阈下NSSI青少年大脑注意

网络、听觉网络和默认网络的核心节点存在显著的结构-功能耦合性差异,提示两类人群存在不同的大脑拓扑属性。研究初步提示两类人群差异脑区的结构-功能耦合度与临床特征的线性相关性呈现出不同的映射特征。未来需进一步探究两类人群自伤行为的神经病理与心理机制,探索差异化的干预手段。

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关键词:非自杀性自伤,结构-功能耦合,情绪调节,自伤成瘾

青春期重复经颅磁刺激对精神分裂症动物模型大脑网络模块控制力的影响

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目的 精神分裂症发病年龄较早,通常在青春早期阶段发病。既往研究发现,精神分裂症患者存在大脑初级皮层和高级皮层的脑功能损害。另外,在青春期的神经发育过程中,初级皮层的发育尤为重要。因此,基于初级皮层的重复经颅磁治疗(repetitive Transcranial Magnetic Stimulation, rTMS)可能是精神分裂症一种潜在的早期干预方式。大脑的功能网络可以被划分为几种行使相似功能的网络模块,通过探究不同模块之间的关系,有助于理解疾病状态及干预过程中大脑的功能变化。本研究在精神分裂症神经发育异常动物模型——MAM(Methylazoxymethanol Acetate)模型的青春期阶段,通过重复经颅磁刺激(rTMS)干预模型动物的初级皮层后,探讨大脑功能网络不同模块之间控制力的变化,以评估神经调控治疗精神分裂症的有效性。

方法 本研究设计了三个实验组:模型真治疗组(N=8),模型伪治疗组(N=9)以及对照伪治疗组(N=10)。所有组别的动物在青春早期阶段接受频率为10Hz的rTMS治疗或伪治疗,治疗靶点为初级皮层,共持续两周。采集三组动物的大脑功能磁共振数据,依据动物大脑模版的解剖结构将全脑划分为13个模块:前额叶,扣带和岛叶,运动皮层,躯体

感觉皮层,顶叶皮层,视皮层,听皮层,颞叶皮层,嗅皮层,海马,杏仁核,纹状体和苍白球,以及丘脑。应用图渗流方法构建大脑功能网络,计算不同模块之间控制力,并使用单因素方差分析评估三组动物的网络模块控制力差异。

结果 单因素方差分析共发现4对有向连边在三组间有差异,嗅皮层-前额叶皮层($p=0.0081$),顶叶皮层-前额叶皮层($p=0.0301$),躯体感觉皮层-顶叶皮层($p=0.0369$)和听皮层-顶叶皮层($p=0.0477$)。进一步的两两比较后发现,与对照伪治疗组相比,模型伪治疗组表现为嗅皮层-前额叶皮层($p=0.0110$),顶叶皮层-前额叶皮层($p=0.0411$)和躯体感觉皮层-顶叶皮层($p=0.0361$)控制力升高;与模型伪治疗组相比,模型治疗组表现为嗅皮层-前额叶的控制力下降($p=0.0410$),听皮层-顶叶皮层的控制力升高($p=0.0447$)。

结论 本研究首次通过大脑网络模块间控制力的变化,证实了MAM模型中初级皮层对高级皮层控制力的异常增强,尤其是嗅皮层对前额叶的影响。rTMS治疗有效逆转了这一异常控制力,显示了其作为精神分裂症早期干预手段的潜在价值。同时,治疗引发的听皮层与顶叶皮层间控制力的非预期变化提示了潜在的副作用,未来的治疗策略应考虑这一点。

关键词:精神分裂症, MAM模型, 功能磁共振成像, 重复经颅磁刺激, 模块控制力, 早期干预

催产素鼻喷雾剂治疗成年早期 Asperger 综合征社交障碍的随机对照研究

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目的 Asperger 综合征(AS)是一种广泛性发育障碍(pervasive developmental disorder, PDD),近年来的流行病学调查数据显示其患病率逐年上升。相比于儿童期,成年 AS 患者面临更大的生存需求及挑战。目前 AS 治疗方法缺乏,至今为止没有特效药物。催产素(Oxytocin, OT)在社会交往中发挥着重要的调节作用,既往研究发现 AS 患者血液中的 OT 浓度低于正常发育人群,外源性补充 OT 可能改变 AS 患者的社交行为,因此 OT 是 AS 药物治疗研

研究的热点。本研究聚焦于探索 OT 鼻喷雾剂治疗成年早期 AS 患者社会交往障碍的有效性和安全性。

方法 本研究为随机、双盲、安慰剂对照研究,所有受试者来自于北京安定医院门诊,符合国际精神疾病诊断与分类第 10 版(ICD-10) AS 诊断,年龄在 18 到 35 岁之间且近三个月使用精神科药物稳定者参加此项研究。经筛选合格的受试者将以 1:1 的比例随机分配到 OT 组和安慰剂组,分别接受 OT (48IU/日)鼻喷剂或安慰剂治疗 6 周。在基线、2 周末、4 周末、6 周末使用社会性反应量表(SRS)、成人自闭症量表(AQ)、成人重复性行为量表(RBQ-2A)、成人同理心量表(EQ)、成人系统化量表(SQ)、Liebowitz 社交焦虑量表(LSAS)评估 OT 鼻喷剂的疗效。在基线及 6 周末进行血常规、尿常规、生化、心电图等检查评估 OT 鼻喷剂的安全性。用 SPSS 26.0 完成统计分析,计量资料的组间比较根据数据分布情况选择参数/非参数检验,两组间各量表得分变化情况使用重复测量方差分析比较。

结果 一共纳入 44 例 AS 受试者,实际完成研究共 41 例,其中 OT 组 21 例,安慰剂组 20 例,2 例失访,1 例因其他身体疾病退出研究。两组受试者在年龄、韦氏智力、身高、基线各量表分数等方面,组间差异均无统计学意义;两组受试者体重在基线时组间差异有统计学意义($p=0.014$),在纠正基线差异后未发现主要结局指标发生显著变化,两组受试者具有可比性。在基线、2 周末、4 周末、6 周末,SRS 总分 OT 组与安慰剂组均有降低,但两组差异无统计学意义,OT 组 SRS 总分较基线减分值在各访视点与安慰剂组减分值比较,差异无统计学意义。在各随访点 AQ、SQ、RBQ、LSAS 量表总分 OT 组与安慰剂组均有降低,组内变化有统计学差异,但两组差异无统计学意义。EQ 量表组内及组间变化均无统计学差异。治疗后两组间不良事件出现频率比较,差异无统计学意义。

结论 连续鼻喷 OT 治疗成年早期 AS 的不良反应小、耐受性好,安全性高。但相对于安慰剂而言,OT 对改善孤独症患者的社交障碍的作用有待进一步研究。

关键词: Asperger 综合征;催产素鼻喷雾剂;社交障碍

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目的 既往研究发现,心境障碍是一种高度异质性的疾病,根据影像学特征可以将心境障碍划分为不同的亚型。中央执行网络(Central Executive Network, CEN)和默认模式网络(Default Mode Network, DMN)是大脑最为活跃的网络。目前,尚未有研究从脑网络动态的角度,逐帧解析 CEN 和 DMN 在心境障碍不同亚型中活动情况。通过解析不同亚型的神经影像学机制,可能对未来基于疾病亚型实施的精准治疗提供依据。

方法 本研究使用了一个预训练的精神疾病分类模型将心境障碍患者分成两种亚型,同时使用共激活模式(Coactive patterns, CAPs)计算大脑的瞬时活动状态和状态间转换情况。首先,利用 142 例健康被试的大脑静息态数据识别出四种大脑基本的活动状态,然后计算疾病人群中与这四种基本状态相似的活动情况。接着,在第一个研究中心比较了两种心境障碍亚型($N_{\text{subtype1}}=58$, $N_{\text{subtype2}}=54$)共激活模式特征的差异。在第二个研究中心,对两种心境障碍亚型($N_{\text{subtype1}}=235$, $N_{\text{subtype2}}=188$)进行纵向数据分析,进一步探究了住院治疗一周后共激活模式特征的变化。

结果 本研究发现,从健康被试中提取的四种 CAP 分别代表 CEN 和 DMN 的不同活动时期,即 CEN+、CEN-、DMN+、DMN-。亚型 1 患者表现出更多的 DMN 相关状态活动和较少的 CEN 相关状态活动,而亚型 2 患者表现出更多的 CEN 相关状态活动,这种差异在状态占比、持续时间及状态间转移概率上显著,并在两个中心的数据集中均得到确认。此外,一周的住院治疗显著改善了亚型 1 过高的 DMN 活动和过低的 CEN 活动,而对于亚型 2,则是增强了 DMN 活动并抑制了过高的 CEN 活动。

结论 中央执行网络和默认模式网络与大脑的注意力控制、决策、自动思维等能力存在着紧密联系。通过逐帧分析,本研究揭示了 CEN 和 DMN 这两大网络在心境障碍不同亚型中的动态特征及对治疗的响应,为理解这些疾病亚型的成因及治疗反应提供了新的视角。这些发现将有助于改进心境障碍的诊断和治疗策略选择。

关键词: 心境障碍、中央执行网络、默认模式网络、共激活模式

心境障碍疾病亚型的脑时空动态特征解析

Early Screening for Autism Spectrum Disorder in Young Children: Cross-Cultural Adaptation and Validation of The Behavior Development Screening for Toddlers(BeDevel) in China

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Objective Autism spectrum disorder(ASD) is a complex and heterogeneous neuro-developmental disorder characterized by persistent deficits in social communication and restricted and repetitive patterns of behavior, interests, or activities. Early screening tools for ASD have made great strides in recent years, but they still exist in a single format and are mostly developed in European countries leading to a lack of cross-cultural adaptation. The Behavior Development Screening for Toddlers (BeDevel) is a comprehensive and precise screening tool for ages 9-42 months. It was developed in South Korea and consists of semi-structured behavioral observation(BeDevel-Play) and structured interview (BeDevel-Interview), addressing many of the shortcomings found in other screening instruments. Therefore, we further localized and validated the BeDevel for screening autism in Chinese children

Methods We worked with the original development team to perform multiple translations and back-translations of the BeDevel into Chinese. With the guidance of a consultative committee, we made semantic and cultural modifications to the BeDevel to assess its cross-cultural adaptability. We gathered validation data from 498 participants (9-11 months, n=23; 12-17

months, n=50; 18-23 months, n=124; 24-35 months, n=210; 36-42 months, n=91), and the study included 177 individuals with ASD, 92 with developmental delay, and 206 with typical development. We conducted item analysis and calculated concurrent validity, screening accuracy (sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV)), cutoff scores, and consistency with existing assessment Tools

Results The mean Cronbach's α coefficients of the Chinese version of BeDevel-I/P were all above 0.9 (ranging from 0.875-0.939), with correlation coefficients greater than 0.3 ($r = 0.315-0.856$). The k values of BeDevel-I and BeDevel-P were 0.083-0.756 and 0.229-0.81, respectively. Sensitivity(BeDevel-I: 0.906-1; BeDevel-P: 0.844-0.937), specificity(BeDevel-I: 0.563-0.988; BeDevel-P: 0.688-0.941), PPV(BeDevel-I: 0.667-0.967; BeDevel-P: 0.826-0.978) and NPV(BeDevel-I: 0.87-1; BeDevel-P: 0.611-0.969) showed satisfactory results. Moreover, the K values between BeDevel and the ADOS-2, ADI-R, CARS, and M-CHAT ranged from 0.486-0.879, with consistency exceeding 70%

Conclusion BeDevel is one of the few ASD screening tools developed in Asian cultures. The Chinese version of BeDevel is further culturally adapted to the Chinese environment and has high reliability and validity in screening for autism. As a result, it can be utilized as a early screening tool for ASD in both clinical and community settings in China

关键词: Autism spectrum disorder, Early screening, BeDevel, Cross-Cultural, Chinese, Validity

基于 PET 对伴有自杀特征的青幼期抑郁样小鼠神经炎症变化的研究

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目的 抑郁症是青少年中普遍的、严重的、危及生命的精神障碍，且自杀与抑郁症状的严重程度高度相关。为了更好的了解疾病的机制，在抑郁症的背景下开发伴有自杀特征青幼期动物模型，以了

解在青幼期阶段抑郁症的发病机制。本研究利用 [18F]DPA-714 PET-CT、免疫荧光、分子生物学等多模态评估具有自杀特征的抑郁模型小鼠的炎症改变, 评估抑郁症以及自杀和神经炎症之间的关联。

方法 习得性无助实验筛选 60 只 C57BL/6J 小鼠, 分为习得性无助敏感 (LHS) 的小鼠和习得性无助抵抗 (LHR) 的小鼠。将所有 LHS 小鼠和半数 LHR 小鼠暴露于 CSDS 下 10 天, 其余半数 LHR 小鼠作为对照处理。LHS+CSDS 组和 LHR+CSDS 组小鼠每天会被 CD-1 鼠攻击 10min, 使小鼠每日被不同的 CD-1 鼠进行攻击。造模结束后行为学测试, 以评估小鼠抑郁程度。每组随机抽取 3 只小鼠进行 PET-CT 扫描并对 PET 图像进行定量分析; 随机抽取 4~6 只小鼠安乐死后, 收集脑组织样本进行免疫荧光染色, 采用 ImageJ 对海马区域 Iba-1+、TSPO+ 进行统计; 试剂盒检测 TNF- α 、IL-1 β 、IL-18 和 IL-4 含量。

结果 与对照组相比, 接受 CSDS 范式的小鼠不动时间延长、蔗糖偏好率降低、总移动距离缩短、中央区探索时间减少、社会交互比下降和攻击入侵小鼠的潜伏期缩短、攻击次数增加, SUV 值增加。与 LHR+CSDS 组小鼠相比, LHS+CSDS 小鼠表现出更多与自杀相关的特征有关的行为, 具体表现在 RIT 中攻击入侵动物的潜伏期更短、攻击次数增加, 在 TST 中不动的时间更长。

与 LHR+CSDS 组相比, LHS+CSDS 组的 SUV 有所增加。

与对照组相比, CSDS 范式后海马中 Iba-1+、TSPO+ 明显增多。LHS+CSDS 组的 Iba-1+ 和 TSPO+ 在海马区域中与 LHR+CSDS 组相比也有增加。

与对照组相比, LHR+CSDS 组和 LHS+CSDS 组促炎细胞因子 TNF- α 和 IL-1 β 都有升高。与 LHR+CSDS 组相比, LHS+CSDS 组中的 IL-1 β 的表达水平也增加。

结论 CSDS 诱导了青幼期 C57BL/6J 小鼠表现出抑郁样行为, 成功构建了青幼期抑郁样小鼠模型。且 CSDS 导致了个体易感性更高的青幼期小鼠表现出更多与自杀相关的特征, 成功构建了伴有自杀特征的青幼期抑郁样小鼠模型。

PET-CT 研究证实了 CSDS 诱导海马 [18F]DPA-714 摄取值升高, 提示青幼期抑郁样小鼠海马区域神经胶质细胞活化。海马区域 Iba-1+、TSPO+ 和部分炎症细胞因子的增加, 再次验证了海马区域的神经炎症可能与青幼期抑郁以及自杀相关。

关键词: 习得性无助, 慢性社交挫败, 自杀, 抑

郁症, 青幼期

电休克对抑郁样小鼠海马区小胶质细胞激活极化的影响及机制研究

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目的 使用 [18F]DPA-714 PET 技术, 深入探索电休克治疗对慢性不可预测性应激 (Chronic Unpredictable Stress, CUMS) 抑郁样小鼠海马神经胶质细胞和免疫炎症的作用。

方法 使用慢性不可预测性应激方法建立抑郁样小鼠模型。将模型小鼠随机分成不同组, 包括电休克组和抑郁样行为电休克组。对抑郁样行为电休克组进行每天 1 次连续 10 天的电休克刺激, 以模拟电休克治疗。进行体重测量、糖水偏好实验、旷场实验和悬尾实验, 分别评估小鼠的生理和行为表现。将四个小组的小鼠在各项行为学测试中的数据进行统计学分析, 比较电休克组和抑郁样行为电休克组的行为学差异。在各组小鼠进行电休克干预前和干预后分别选取 5 只小鼠进行 PET/CT 扫描和炎症生物标记物的检测。以评估电休克刺激对小鼠各脑区活性和结构的影响 (主要探究海马区)。通过 PET 示踪剂 [18F]DPA-714, 监测神经胶质细胞的激活情况。炎症生物标记物的检测: 收集小鼠脑组织样本, 使用免疫学技术, 如 ELISA、免疫印迹等, 检测与炎症反应相关的生物标记物, 如白细胞介素-6 (IL-6)、肿瘤坏死因子 α (TNF- α) 等。对 PET/CT 影像学数据进行定量分析, 比较实验组和对照组的脑区活性差异。同时, 对炎症生物标记物的检测结果进行统计学分析, 比较不同组间的差异。前两部分研究的基础上我们将分析炎症介质的变化, 并结合已知的炎症信号通路, 探究电休克是否能够影响这些信号通路的活性。

结果 电休克治疗改善了抑郁样小鼠的行为学, 各项炎症指标。

结论 电休克有可能通过抑制 NF-KB 通路发挥其抗炎作用, 进一步改善抑郁行为。

关键词: 电休克; CUMS; 炎症因子; PET

综合医院精神心理研究协作组

精神疾病患者发生肺血栓栓塞的危险因素分析及风险预测

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目的 近年来有研究报道精神疾病患者发生肺血栓栓塞（pulmonary thromboembolism embolism, PTE）的风险比一般人群更高。然而，由于 PTE 的临床表现复杂多样，个体差异大，且精神疾病患者由于沟通困难或将症状归因于精神疾病症状的一部分，很容易造成疾病诊治的延误。因此，本研究将分析住院精神疾病患者并发 PTE 的独立危险因素，并构建发生 PTE 风险预测模型，以便为患者的及时诊断和治疗提供指导。

方法 选取 2022 年 8 月至 2023 年 8 月在广东省精神卫生中心住院治疗并诊断 PTE 的 26 名精神疾病患者以及同期住院的 104 名不存在 PTE 的患者为研究对象。基于文献回顾分析确定包括一般人口学资料、既往史、药物使用和血液学因素等 4 类 PTE 潜在风险指标。对于既往史，重点关注高血压、糖尿病、血栓形成、冠心病和房颤疾病史。对于用药史，着重评估患者入院前是否使用抗精神病药物、是否存在抗精神病药物联合用药以及是否使用 SSRI 或 SNRI 药物。血液学因素分析包括血常规、血脂、肝肾功能、D-二聚体、凝血指标等入院常规检查指标。对患者并发 PTE 的影响因素进行 Logistic 回归分析，建立住院精神疾病患者发生肺血栓栓塞的风险预测模型。

结果 Logistic 回归分析显示高龄（ ≥ 60 岁）、高 D-二聚体（ > 500 mg/L）、高甘油三酯水平（ > 1.7 mmol/L）和高血压病史是住院精神疾病患者发生肺血栓栓塞的独立危险因素。通过以上因素构建列线图模型，Hosmer-Lemeshow 拟合优度检验结果（ $\chi^2=0.431$, $p=0.934$ ）显示曲线拟合良好，模型曲线下面积为 0.951（0.912-0.991），表明该模型具有良好的诊断效力。

结论 高龄（ ≥ 60 岁）、高 D-二聚体（ > 500 mg/L）、高甘油三酯水平（ > 1.7 mmol/L）和高血压病史是住院精神疾病患者并发肺血栓栓塞的独立危险因素。基于上述因素构建列线图模型对住院精神疾病患者

并发肺血栓栓塞具有良好的预测价值,可用于临床对精神疾病住院患者发生肺血栓栓塞风险的评估提供指导。

关键词:肺血栓栓塞,精神疾病,危险因素,预测模型

基于调控 GABAergic 系统探究改善抑郁模型大鼠认知功能障碍的潜在机制

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目的 基于调控 GABAergic 中间神经元生物合成信号通路,探究 SSRIs 类药物氟西汀改善抑郁模型大鼠认知功能障碍的作用机制。

方法 45 只 SPF 级别 SD 雄性大鼠,适应性喂养 7 天,按照随机数字法分为正常对照组 (CON)、抑郁模型组 (DD) 及氟西汀组 (DD+F), $n=15$ 。CON 组正常饲养,DD 与 DD+F 组采用慢性不可预知温和应激方法(CUMS)联合孤养造模 28 天构建抑郁模型,造模成功后 DD 组予生理盐水 10ml/(kg·d)灌胃,DD+F 组予以氟西汀 10mg/(kg·d)灌胃,药物干预 14 天。在基线、造模后及药物干预结束后进行神经行为学评估。采用蛋白质印迹 (Western blot) 法、实时荧光定量 PCR (Quantitative Real-time PCR) 法检测大鼠前额叶区谷氨酸脱羧酶 65 (GAD65)、谷氨酸脱羧酶 67 (GAD67)、 γ -氨基丁酸 (GABA)、囊泡型 γ -氨基丁酸转运体(VGAT)、 γ -氨基丁酸 A 型受体(GABAAR)、 γ -氨基丁酸 B 型受(GABABR)的相对蛋白表达量及 mRNA 表达水平;HE 染色、尼氏染色及 Hoechst 染色观察前额叶区病理变化及神经元凋亡情况;高尔基染色观察大鼠前额叶神经元树突棘密度,进一步观察氟西汀干预效应;将 γ -氨基丁酸(GABA)生物合成通路蛋白的相对表达量与神经行为学指标进行相关性分析。

结果 在神经行为学评定方面,基线时各组大鼠在行为学指标上统计学未有明显差异;造模后,抑郁模型大鼠出现情绪、认知功能、学习能力及社交能力的损害;氟西汀干预后,抑郁模型大鼠的情感、认知、学习及社交都有不同程度的改善。与 CON 组相比,DD 组大鼠前额叶区 GAD65、GAD67、

GABA、VGAT、GABAAR、GABABR 蛋白的相对表达量及其 mRNA 表达均下降 ($p<0.05$),氟西汀干预后信号通路的相关蛋白表达水平显著升高;GAD65、GABA、VGAT、GABAAR 及 GABABR 的 mRNA 表达水平升高。组织学病理染色可观察到抑郁模型大鼠前额区出现病理损伤、神经元细胞凋亡及神经可塑性下降,氟西汀干预后有不同程度恢复。通路蛋白的相对表达量与神经行为学指标有显著相关性。随着抑郁模型大鼠绝望情绪、认知障碍及社交障碍的加重,通路蛋白相对表达量下降。

结论 CUMS 联合孤养造模 28 天后大鼠出现情绪、认知、学习及社交能力的受损,抑制性神经通路的生物合成信号出现障碍,前额叶区神经元出现病理损伤,药物动态调控该信号通路相关蛋白的表达,能不同程度上改善抑郁模型大鼠的抑郁样行为,恢复认知及社交能力,促进前额叶区神经元病理损伤的修复,发挥神经保护作用。

关键词:抑郁症;CUMS;GABAergic;认知障碍;神经损伤;氟西汀

Prevalence and Correlates of Short and Long Sleep Duration Among Schizophrenia Patients: A Large-scale Cross-sectional Survey

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Objective Sleep disturbance is pervasive in schizophrenia with a prevalence ranging from 30-80%. Either homeostatic or circadian processes of sleep regulation are disturbed in schizophrenia patients. The objective of this study is to examine risk factors in the correlates of short and long sleep duration in schizophrenia, and investigate if the risk of long sleep duration differed among inpatients and outpatients

Methods This study was conducted in 24 mental health institute of Guangdong Province. A multistage-stratified and random sampling method were used in the recruitment of participants. Patients' socio-demographic and clinical characteristics were recorded using self-designed questionnaire. The associations between sleep duration and sociodemographic and clinical factors

were investigated using multinomial logistic regressions and stratified across source of patients

Results A total of 6078 schizophrenia patients included in this study, with 8.7% (n=527) reported short sleep duration and 47.4% (n=2879) had long sleep duration, respectively. There were 45.2% (n=2717) of the participants were inpatients. The participants under the age of 18 (OR=3.27, 95% CI:1.21-8.84), female (OR=1.36, 95% CI: 1.07-1.71), current smoker (OR=1.41, 95% CI: 1.08-1.83), outpatients (OR=1.55, 95% CI: 1.22-1.95), reporting side effects (OR=1.61, 95% CI: 1.29-2.00), reporting comorbidities (OR=1.25, 95% CI: 1.00-1.57), age of onset (OR=1.01, 95% CI: 1.002-1.03), illness duration (OR=1.002, 95% CI: 1.000-1.003) were positively associated with short sleep duration. Having first-generation antipsychotics (FGAs) (OR=1.48, 95% CI: 1.30-1.68) and side effects (OR=1.42, 95% CI: -1.25-1.62) were positively associated with long sleep duration. Outpatients-specific factors for long sleep duration were BMI \geq 25 (OR=1.22, 95% CI: 1.03-1.44) and ex-drinker (OR=0.65, 95% CI:0.45-0.95)

Conclusion Given the harmful consequences of short and long sleep duration in schizophrenia patients coupled with the high rate of long sleep duration identified in this study, the prevention of the spectrum of sleep disturbances is necessary, including inpatients and outpatients

关键词: schizophrenia, sleep duration, outpatients

焦虑、抑郁障碍在言语流畅性任务中的前额叶激活及功能连接差异——基于 fNIRS 的研究

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目的 本研究旨在比较焦虑、抑郁障碍患者在言语流畅性任务中前额叶激活特点和功能连接差异,深入理解焦虑和抑郁患者任务中的神经生物学特征,为精准诊断、个体化干预和治疗策略的制定提供科学依据。

方法 共纳入 18-60 岁的抑郁障碍 (MDD) 患者 21 名、焦虑障碍 (AD) 患者 21 名及健康受试 (HC)28 名,采用 17 项汉密尔顿抑郁量表(HAMD-17)、汉密尔顿焦虑量表评估受试的焦虑、抑郁水平;受试完成 2min 的言语流畅性任务 (VFT) (图 1);通过日立 ETG-4100 (22 通道)近红外脑功能成像系统同步记录受试在任务状态下前额叶的血流动力学信号。

结果 1. 对 VFT 期间激活水平的两两间比较发现, AD 在额极区 (Ch2、3、7) 的激活显著弱于 HC ($t < 0$, PCh2=0.007, PCh3=0.040, PCh7= 0.049), AD 在额极区、眶额叶 (Ch2、3、7、21) 激活显著弱于 MDD ($t < 0$, PCh2=0.006, PCh3=0.023, PCh7= 0.009, PCh21=0.020); MDD 在前额叶激活非显著弱于 HC ($t < 0$, $P > 0.05$)。

2. 组内水平比较任务基线和 VFT 期间的功能连接改变, HC 在左侧额叶内部 (Ch4-18、Ch4-22) 及左右额叶间 (Ch10-17、Ch1-21) 数个通道对间功能连接 (FC) 减弱 ($P < 0.05$); AD、MDD 在左右额叶间及内部 (Ch10-1、2、5; Ch11-5, Ch12-1、5) 更广泛的 FC 减弱。

3. 组间水平比较 VFT 期间的功能连接差异, AD 相比 HC 在右侧前额叶内(右侧额极区-背外侧前额叶; Ch2-5、6、10、11、14) 及左右额叶间 (右额极区-左侧背外侧前额叶; Ch2-9、13、18; Ch22-5、6、10、11、14、15) 的 FC 减弱 ($P < 0.05$); 而 MDD 相比 HC 在左侧前额叶内部 (Ch3-9、22) 及左右额叶间 (Ch1-17; Ch14-3、4、22) FC 显著减弱 ($P < 0.05$); MDD 相比 AD 在左右额叶间 (右额极区-左背外侧前额叶; Ch15-18) FC 显著增强 ($P < 0.05$)。

结论 1. 言语流畅性任务下, AD 在额极区的存在特征性激活减弱,可能与焦虑水平相关。

2. AD、MDD 任务导更广泛脑区的 FC 改变,提示 AD、MDD 在言语性认知任务下的前额叶功能连接反应模式存在异常表现。

3. AD 在任务期间的 FC 改变主要在右前额叶内部及左右额叶间,右额极区与其他脑区的 FC 强度可能与焦虑水平相关; MDD 的 FC 改变主要在左前额叶内部及左右额叶间,左侧背外侧前额叶及额极区与其他脑区的 FC 强度可能与抑郁水平相关。

关键词: 焦虑,抑郁,言语流畅性,fNIRS,功能连接

Nod2 受体在脂多糖诱导的抑郁样行为中的作用研究

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目的 抑郁症是一种常见的精神心理疾病，主要表现为持久且反复的情绪低落、思维迟缓和意志活动减退。众多研究证据表明免疫平衡异常和抑郁症之间的联系越来越显著。Nod2 是一种细胞质内模式识别感受器，辨识细菌肽多糖中的细胞壁酰二肽（MDP）。Nod2 被 MDP 激活后，招募细胞内的 RIPK2 激活 NF- κ B 和 MAPKs 信号通路，引发炎症反应。革兰氏阴性细菌细胞壁中存在一种名为脂多糖（LPS）的成分，作为一种经典的促炎反应诱导剂，常用于建立抑郁症动物模型，但是 Nod2 在 LPS 诱导的抑郁样行为中的作用尚未得到证实。本研究对 Nod2^{-/-}小鼠在 LPS 诱导抑郁症模型中的行为改变进行系统检测，关注外周和中枢神经系统的免疫变化，试图初步揭示 Nod2 受体在炎症诱导的抑郁样行为中的作用以及潜在机制。

方法 采用基因背景为 C57BL/6N 的 8 周龄雄性 Nod2^{-/-}小鼠和野生型（WT）小鼠，通过腹腔注射生理盐水（Saline）或 0.5 mg/kg 的 LPS，分为 WT+Saline 组、WT+LPS 组、Nod2^{-/-}+Saline 组和 Nod2^{-/-}+LPS 组，持续干预 21 天。采用旷场实验、糖水偏好实验、悬尾实验、新奇抑制摄食实验评估小鼠自发活动能力和抑郁样行为。采用 ELISA 检测血清中炎症因子 TNF- α 、IL-1 β 和 IL-10 水平，评估外周炎症激活状态；通过 qRT-PCR 检测前额叶皮质血脑屏障连接蛋白 Occludin 和 ZO-1 的 mRNA 表达水平，评估血脑屏障损伤；应用前额叶皮质转录组测序分析筛选脑内关键信号通路改变。

结果 1) 与 WT+Saline 组小鼠相比，Nod2^{-/-}+Saline 小鼠的运动功能、焦虑及抑郁样行为无显著差异，接受慢性低剂量 LPS 干预后，WT 小鼠出现典型的抑郁样行为，与 WT+LPS 组相比，Nod2^{-/-}+LPS 组小鼠抑郁样行为的各项指标显著降低。

2) LPS 干预 Nod2^{-/-}小鼠和 WT 小鼠后，血清中 TNF- α 、IL-1 β 和 IL-10 水平增加，Occludin 和 ZO-1 蛋白表达下降。

3) 前额叶皮质的 RNA-seq 分析表明，接受 LPS 干预后，Nod2^{-/-}小鼠比 WT 小鼠上调基因 295 个，下调基因 63 个。KEGG 通路富集分析结果发现，差

异基因主要富集在凋亡信号通路和炎症激活信号通路，并且内源性凋亡信号通路的基因表达与行为学表型具有显著相关性。

结论 Nod2^{-/-}小鼠无自发活动能力和抑郁样行为改变。慢性炎症可诱导小鼠出现显著的抑郁样行为、外周炎症激活和血脑屏障损伤。Nod2 缺失可缓解慢性炎症诱导的抑郁样行为，其作用机制可能与 LPS 干预 Nod2^{-/-}小鼠后内源性凋亡信号通路有关。

关键词： Nod2,脂多糖,抑郁样行为,内源性凋亡通路

Altered Functional Connectivity Networks and Cytokines on Schizophrenia with Hallucinations

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Objective Previous studies on schizophrenia have detected elevated cytokines and abnormal functional networks analysis in both blood and brain, suggesting neuroinflammation and brain imaging may contribute to the pathophysiology in some cases. However, we still do not know whether there are inflammatory cytokines and imaging differences in the subtypes of schizophrenia, ie, schizophrenia with or without hallucination. Here we used Seed-based functional connectivity analysis to explore the mechanism of brain function in unmedicated patients with schizophrenia. The purpose of this study was to investigate the relationship between functional connectivity networks, inflammatory cytokines and cognitive function in patients with schizophrenia with hallucinations

Methods 37 drug-naive patients of schizophrenia with hallucinations (SH), 29 drug-naive patients of schizophrenia without hallucinations (NSH) and 51 healthy controls (HC) were recruited in this study. All the subjects underwent Magnetic Resonance Imaging (MRI) scanning and performed the cognitive scales, all the patients with schizophrenia finished the Positive and Negative Syndrome Scale (PANSS). Hallucinations of

the PANSS will be the classification standard. Seed-based FC analysis was conducted using Conn toolbox version18 with SPM12, in MATLAB 20b version (MathWorks, Sherborn, MA) among the three groups. A Pearson correlation model was used to analyze associations of functional networks changes with clinical symptoms and cognitive tests. Spearman correlations between cytokines, brain regions and cognitive tests were calculated using R 3.5.1, and visual presentations of multiple omics correlations were performed using the ggplot2 and heatmap packages

Results Compared with HC, SH and NSH group had significant higher values in TNF- α , CCL2, IL-4 and TL-6 apparently. For the seed-based in default mode network (DMN), SH group exhibited reduced FC between the Superior Frontal Gyrus Right (SFG) and the medial prefrontal cortex (MPFC), compared to NSH. A higher cold detection threshold was found in the SH and NSH patients compared to the HCs. The SH and NSH patients had higher FC between the frontoparietal attentional networks compared to the HCs. As to cognitive aspect, we found IL4\BACS was associated with FC in DMN between two groups

Conclusion Levels of inflammatory cytokines in SC were significantly higher than those in healthy subjects. SH group is associated with reduced FC in networks known to be disrupted in cognition. Dysfunction of attentional processing detected by the conn is found in the SH and NSH patients. Altered functional connectivity in frontoparietal attentional networks, may indicate the possibility of pathophysiology in two groups. These findings raise the possibility that targeted anti-inflammatory treatments may ameliorate cognitive and brain functional abnormalities in some people with schizophrenia

关键词：schizophrenia, Inflammatory cytokines, functional connectivity

精神分裂症研究协作组

Sensitivity and Clinical Application of New Neurocognitive Battery for Schizophrenia in China (NBSC) in First-episode Patients

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Objective Neuropsychological assessment is the primary tool for assessing cognitive deficits in schizophrenia. The MATRICS Consensus Cognitive Battery (MCCB) is the "gold standard" widely used to assess cognitive functioning in schizophrenia. However, cultural differences may result in different cognitive patterns, and the New Neurocognitive Battery for Schizophrenia in China (NBSC) was found to have better sensitivity than the MCCB in a study of chronic schizophrenic patients. Cognitive deficits in schizophrenia are widespread and persistent and are closely related to efficacy and functional prognosis. The objective of our study was to assess the sensitivity of NBSC in first-episode schizophrenia and constructed a predictive model of drug efficacy centered on cognitive function

Methods Patients with first-episode schizophrenia were randomly into five group, including perphenazine, olanzapine, risperidone, amisulpride, and aripiprazole for 8 weeks. Assessment was performed at baseline and after 8 weeks of treatment. All patients received the MCCB and NBSC additional tests: Grooved pegboard, Colour Connections I, Colour Connections II, Auditory Sequential Addition in Constant Pace, Hopkins Word Learning-Delayed Recall. Psychotic symptoms and emotional symptoms were evaluated with Positive and Negative Syndrome Scale (PANSS) and Calgary Schizophrenia Depression Scale (CDSS). Social function was assessed by The University of California, San Diego Performance-based Skills Assessment- Brief (UPSA-B).

Quality of life was assessed by Heinrich-quality of life Scale (HRQOL). T-tests and chi-square tests were used to compare MCCB and NBSC scores. Logistic regression was used to predict acute phase treatment outcomes

Results Of all patients included in the SMART-CAT cohort from Shanghai Mental Health Center, 161 patients were enrolled in the study, 147 completed all neurocognitive assessments at baseline, and 88 were followed up after treatment. (1) Cognitive impairment was assessed according to the Global Deficit Score (GDS) ≥ 0.50 . The rate of cognitive impairment in first-episode schizophrenia was 77.56% with NBSC and 55.10% with MCCB, which was statistically significantly different ($F=16.59$, $p < 0.001$). (2) The subdomain T scores of information processing speed ($p=0.037$), word learning ($p < 0.001$) and executive function ($p < 0.001$) of NBSC were significantly lower in patients with schizophrenia than were corresponding subdomains of MCCB. (3) Information processing speed, verbal learning, fine motor function, executive function, attention, QLS, CDSS, PANSS-N, PANSS-G along with age and education, predicted the treatment outcome at 8 weeks with an overall accuracy of 77%, the area under the curve of 0.761

Conclusion NBSC could be more sensitive than MCCB in recognizing cognitive deficit in patients with first-episode schizophrenia. Cognitive function is a good predictor of antipsychotic efficacy, so the assessment of patients' cognitive function should be emphasized in the treatment of schizophrenia. Early identification of cognitive deficits can help to improve disease prognosis through early intervention (e.g., using cognitive remediation training). At the same time, interventions can be more targeted when assessing the efficacy on neurocognitive functioning in Chinese patients

关键词: New Neurocognitive Battery for Schizophrenia in China, first-episode schizophrenia, neurocognition, prediction of antipsychotic efficacy

Unraveling The PFC-BLA Pathway's Role on Schizophrenia's Cognitive Impairments: A Multi-Modal Study in Patients and Mouse

Models

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Background and Hypothesis This study investigated the role of the medial prefrontal cortex (mPFC)-basolateral amygdala (BLA) pathway in schizophrenia (SCZ)-related cognitive impairments using various techniques.

Study Design This study utilized clinical scales, MRI, single-cell RNA sequencing, and optogenetics to investigate the mPFC-BLA pathway in SCZ patients. In the mouse model, 6-week-old MAM-induced mice demonstrated significant cognitive deficits, which were addressed through stereotaxic injections of an adeno-associated viral vector to unveil the neural connection between the mPFC and BLA.

Study Results Significant disparities in brain volume and neural activity, particularly in the DLPFC and BLA regions, were found between SCZ patients and HCs. Additionally, we observed correlations indicating that reduced volumes of the DLPFC and BLA were associated with lower cognitive function scores. Activation of the mPFC-BLA pathway notably improved cognitive performance in the SCZ model mice, with targeting of excitatory or inhibitory neurons alone failing to replicate this effect. Single-cell transcriptomic profiling revealed gene expression differences in excitatory and inhibitory neurons in the BLA of SCZ model mice. Notably, genes differentially expressed in the BLA of these model mice were also found in the blood exosomes of SCZ patients.

Conclusions Our research provides a comprehensive understanding of the role of the PFC-BLA pathway in SCZ, underscoring its significance in cognitive impairment and offering novel diagnostic and therapeutic avenues. Additionally, our research highlights the potential of blood exosomal mRNAs as noninvasive biomarkers for SCZ diagnosis, underscoring the clinical feasibility and utility of this method.

关键词: Schizophrenia; Medial prefrontal cortex; Basolateral amygdala; Optogenetics; Exosome; Magnetic resonance imaging

Machine Learning-Based Prediction of Antipsychotic Efficacy From Brain Gray Matter Structure in Drug-naïve First-Episode Schizophrenia

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Objective Schizophrenia's treatment outcomes vary significantly among individuals, challenging the prediction of responses to antipsychotic medications, especially for drug-naïve patients. Brain gray matter structure is closely associated with treatment outcomes in patients with schizophrenia. However, to date, there is a lack of research using comprehensive gray matter indices to predict both short-term and long-term therapeutic effects. Hence, this study proposed using machine learning techniques to combine various indicators, including gray matter volume (GMV), cortical thickness (Ct), and gyrification index (GI), to predict the treatment efficacy of acute stage at three months, and the maintenance phase at one year for drug-naïve patients with first-episode schizophrenia (FES)

Methods A cohort of 104 drug-naïve patients with FES was recruited, with T1-weighted anatomical images were obtained on a GE Signa 3.0T scanner before initiating treatment. The Positive and Negative Syndrome Scale (PANSS) and the Personal and Social Performance Scale (PSP) were used to assess clinical symptoms and social functions at baseline, three-month and one-year follow-up. At the three-month follow-up, patients were categorized into remission and non-remission group according to whether meeting the criterion for scores of 3 or less on eight main symptom items. Furthermore, patients were categorized into rehabilitation and non-rehabilitation group at the one-year follow-up based on the criteria for 'clinical remission with good social functioning.' For scores of PANSS and PSP, a series of 2 (Treatment: Baseline vs. three-month follow-

up) \times 2 (Remission vs. Non-remission OR Rehabilitation vs. Non-rehabilitation) repeated-measure analyses of variance (ANOVAs) were performed. Machine learning algorithms were applied to predict treatment outcomes based on gray matter volume, cortical thickness, and gyrification index, and the model performance was evaluated

Results 1) The results indicated that patients with less severe negative and general symptoms at baseline were more likely to achieve remission after 3 months of acute-phase treatment, whereas patients with better social functions at the baseline were more likely to rehabilitate following 1 year of maintenance therapy

2) More importantly, among machine learning algorithms, logistic regression emerged as the most effective model. Specifically, the posterior central gyrus, anterior cingulate gyrus, and parahippocampal gyrus showed substantial predictive value for 3-month treatment efficacy (74.32% accuracy). The inferior frontal gyrus, anterior cingulate gyrus, and inferior occipital gyrus demonstrated significant predictive power for treatment outcome at 1-year follow-up (70.31% accuracy).

Conclusion We developed a machine learning model to predict individual responses to antipsychotic treatments, which could positively impact clinical treatment protocols for schizophrenia

关键词 : Schizophrenia, Drug-naïve, Machine learning, Gray matter volume, Efficacy Prediction

Anterior Cingulate GABA Associations on Functional Connectivity in First Episode Schizophrenia

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Objective The neurobiological mechanisms re-

sponsible for the abnormal functional connectivity observed in schizophrenia remain incompletely elucidated. Notably, there are significant disparities in the influence of brain metabolites on resting-state functionality between individuals with schizophrenia and healthy controls. This study aims to explore whether glutamate and GABA, metabolites that support excitatory and inhibitory functions respectively, exert differential impacts on functional connectivity in first-episode schizophrenia (FES) patients with varying responses to antipsychotics

Methods Ninety-one FES patients in the study were recruited from Sequential Multiple-Assignment Randomized Trials to Compare Antipsychotic Treatments (SMART-CAT). Each patient underwent resting-state functional magnetic resonance imaging and proton magnetic resonance spectroscopy (MRS) using a 3.0T Siemens system, and completed symptom evaluations based on the Positive and Negative Syndrome Scale (PANSS). Subsequently, patients were randomly assigned to one of five oral treatments: olanzapine, risperidone, amisulpride, aripiprazole, or perphenazine, for a duration of eight weeks. After this period, patients demonstrating less than or equal to 40% reduction in PANSS scores were classified as First Treatment Resistant (FTR) group, while those with greater than 40% reduction were classified as First Treatment Effective (FTE) group. Seed-based connectivity maps were generated to analyze the relationship between the anterior cingulate cortex (ACC) and all other brain voxels. The MRS spectra were processed to quantify levels of glutamate and GABA. Regression analysis was used to investigate the associations between functional connectivity and the levels of these metabolites

Results After the 8-weeks of treatment period, 37 FES patients were classified into FTR, while remaining 54 were classified as FTE. Increased functional connectivity was observed in bilateral lingual gyrus and the left calcarine in FTR compared to FTE. Additionally, the GABA levels in the ACC of the FTR were significantly lower than that of the FTE. In the FTR, positive correlations were found between GABA and functional connectivity in bilateral Lingual gyrus ($r = 0.45$, $p < 0.01$). A similar positive correlation was noted between GABA and left calcarine functional connectivity ($r =$

0.43 , $p = 0.0085$). Interaction analysis also showed that the effect of GABA on the functional connectivity with was significantly different between two groups ($p < 0.05$). These same relationships were not statistically significant in FTE

Conclusion This "This study constitutes one of the preliminary inquiries into the association between functional connectivity and GABA concentrations within the FES, stratified by the efficacy of drug response. The results indicate that FTR exhibit significantly enhanced functional connectivity strength compared to FTE, indicating a possible compensatory mechanism linked to reduced GABA levels. This variation in functional connectivity among FTR could be explicated by a neurochemical- functional connectivity coupling hypothesis. Furthermore, the observed aberrant metabolic- functional connectivity correlations across different groups may represent a differential mechanism influencing treatment outcomes

关键词: schizophrenia, resting-state functional connectivity, magnetic resonance spectroscopy/

Prediction of Antipsychotics-therapeutic Response in First-episode Schizophrenia Based on Machine Learning

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Objective Schizophrenia's treatment trajectory vary significantly among different individuals, making it a challenge to predict patients' response to antipsychotic medications, especially for drug-naive patients. Cognitive function and clinical features are closely associated with acute response in group of schizophrenia. And there is a lack of research using comprehensive clinical factors and cognitive function to predict short-term therapeutic effects. Hence, this study, based on machine learning techniques, combines Positive and Negative Syndrome Scale (PANSS) five-factors scores

and MATRICS Consensus Cognitive Battery scores, to predict the treatment response of acute stage at eight weeks for drug-naive patients with first-episode schizophrenia (FES)

Methods A cohort of 453 drug-naive patients with FES was recruited. PANSS five-factors model was used to assess clinical symptoms and MCCB score for cognitive function. The Personal and Social Performance Scale (PSP) score was included to assess social functions at baseline. At the eight-week follow-up, patients were categorized into olanzapine, risperidone and aripiprazole group and maintained monotherapy. A higher reduction rate than 50% of PANSS was defined as good response individuals. Machine learning algorithm was used to fit the predictive model. Then we compared the contribution of different features in model. Finally, feature groups with different predictive abilities were divided and high related clinical features to outcome were recommended for clinical efficacy prediction

Results 1) 18 features which contribute to the model effectively were selected for model training, which purified the model and improved its accuracy. F scores were used to evaluate the recognition ability provided by each feature for the model

2) Machine learning algorithm showed better accuracy and interpretability than traditional statistical model. The average auc of predictive model was 62.09%(confidence interval: [56.86%,67.32%], permutation test $P=0.002$), and spec was 83.7%(confidence interval:[75.6%,91.8%], permutation test $P=0.002$).

3) Feature dependency graph displays the relationship between each feature. 10 features were positive predictors when predicting good response to antipsychotics treatment in acute-phase, including the score of negative factors, positive factors, excitement factors, cognitive factors, grooved pegboard test-dominant hand, paced auditory serial addition test, color trail test-1, category fluency test, stroop color test and hopkins verbal learning test. While PSP score, trail making test-Part A, stroop word test were negative predictors. Grooved pegboard test non-dominant hand, brief visual-spatial memory test(BVMT), color trail test-2 and Spatial Span Test t had no significant correlation with outcome.

Conclusion The psychotherapeutic response after eight-weeks' treatment in FES patients can be predicted in baseline. Machine learning algorithm Xgboost provided the most accessible predictive effects whose average accuracy is 62.09%, higher than traditional regression algorithms. We recommended excitement factors, cognitive factors, grooved pegboard test dominant hand, color trail test-1, Hopkins verbal learning test(HVLT) and paced auditory serial addition test as high-predictive factors with positive correlation in predicting treatment response. While trail making test-Part A and stroop word test are high-predictive factors with negative correlation. In addition, nonlinear factors have important potential roles in clinical subtypes and treatment response prediction classification

关键词: First-episode schizophrenia, Machine learning, Baseline clinical features, antipsychotics treatment response

Cognitive Deficits in First-episode Schizophrenia: Baseline Characteristics and 1-year Trajectory.

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Objective Cognitive deficit is a core characteristic of schizophrenia, and is strongly associated with

long-term functional outcomes. Sequential multiple-assignment randomized trials to compare antipsychotic treatments (SMART-CAT) was a registered clinical trial aimed to discover best treatment strategy for first-episode schizophrenia (FES) patients. The current study is deemed to report baseline and follow-up cognition results of the SMART-CAT cohort

Methods In the SMART-CAT trial, patients were firstly randomly allocated into 5 treatment groups (Olanzapine, Risperidone, Amisulpride, Aripiprazole and Perphenazine); after 8-week phase 1 treatment, non-responders will be further allocated into 3 treatment groups (Olanzapine, Amisulpride and Clozapine, not same with phase 1). Diagnosis included first-episode schizophrenia, schizophreniform and schizoaffective disorder, according to Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Detailed study design is published elsewhere. In order to evaluate cognitive deficit, all patients were scheduled for MATRICS consensus cognitive battery (MCCB) and other clinical evaluations at baseline, 2-month, 4-month, 6-month and 1-year. MCCB results were normalized into T-score according to age, sex and education. Cognitive deficit was defined as global deficit score (GDS) ≥ 0.5 . Comparison among groups were performed using paired t-test was used for continuous variables and chi-square or Fisher's exact test for categorical variables. Linear regression was applied to describe trend of cognitive function. Statistical significance was defined as two-tailed P value < 0.05

Results Of all patients included in the SMART-CAT cohort from Shanghai Mental Health Center, 188 had complete baseline MCCB evaluation (age: mean 27.1y, range 15y-46y, male sex 61.7%), 44 had both baseline and 1-year follow-up, 21 had all time-point (baseline, 2-, 4-, 6-month and 1-year) follow-up. At baseline, an estimated 55% of FES patients had cognitive deficit in this cohort, with similar performances in seven tested cognitive domains. In patients with both baseline and 1-year follow-up, the rate of cognitive deficit decreased from 56.8% at baseline to 31.8% at 1-year (chi-square $P=0.03$). In patients with baseline, 2-month, 6-month and 1-year evaluation, the rate cognitive deficit was 66.7%, 61.9%, 38.1%, 33.3% and 33.3% at each

time-point, and mean T-score for each time point was 38.8, 40.7, 42.7, 43.9 and 47.96, showing a trend of slight increase in cognitive function (linear $r^2=0.99$, $P=0.0005$). In post-hoc analysis, the responders of phase 1 (acute-phase) treatment had less patients with baseline cognitive deficit compared with non-responders (48.1% vs. 70.9%, $P=0.004$, $n=188$) and showed a more solid decrease in rate of cognitive deficit ($n=30$, 50% to 23.3%, chi-square $P=0.03$) compared with non-responders ($n=14$, 64.3% to 50%, chi-square $P=0.45$) from baseline to 1-year

Conclusion The estimated rate of baseline cognitive deficit in FEP patients was about 55% in this cohort. The 1-year trajectory of cognitive function follows the trend of a slight increase. Patients with better treatment acute-phase response were less likely to have cognitive deficit in baseline, and were more likely to recover from cognitive deficit. This study illustrated that baseline cognitive function is a potential indicator of treatment response

关键词: SMART-CAT, first-episode schizophrenia, cognitive deficits, follow-up, functional recovery

Abnormal Multilayer Network Configuration and Correlation with Cognitive Dysfunction, Clinical Symptoms in Schizophrenia

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Objective Schizophrenia has been identified to exhibit significant abnormalities in brain functional networks, which are likely to underpin the cognitive and functional impairments observed in patients. Graph theoretical analysis revealed the disrupted modularity in schizophrenia, however, the dynamic network reconfiguration in schizophrenia remains unclear. Therefore, we aim to explore the potential correlations within these network dynamic properties, cognitive function and clinical symptoms in schizophrenia, hypothesizing that disruptions in brain network dynamics may underlie the

cognitive impairments commonly observed in schizophrenia.

Methods We collected the resting-state functional magnetic resonance imaging data from 82 first-episode schizophrenia (FES) patients and 55 healthy control (HC) subjects. We utilized Positive and Negative Syndrome Scale (PANSS) to evaluate clinical symptoms and the cognitive function were evaluated for all schizophrenia patients and a subset of health individuals using MATRICS Consensus Cognitive Battery (MCCB). RESTplus toolbox was employed for preprocessing resting-state functional MRI data, dynamic functional connectivity matrices were constructed and a multilayer network model was employed to run our dynamic modularity analysis. We also performed correlation analyses to investigate the relationship between flexibility and cognitive function and clinical symptoms. Independent sample t-tests and chi-square tests were used to analyze differences in demographic statistics and cognitive scores between FES and HC groups. Differences in dynamic brain network configuration indicators were statistically tested using a general linear model with gender, age, and years of education as covariates. The results of multiple comparisons were corrected for the false discovery rate (FDR), with a significance level set at 0.05 after correction. All data analyses were conducted using the R statistical software, version 4.2.

Results There were no significant differences in gender or age between our FEP group and the HC group. However, the HC group exhibited a higher level of education than the FEP group. A comparison of the global modularity value (Q) between FEP and HC groups revealed a statistically significant difference ($p=0.0058$), with FEP patients exhibiting a higher global modularity than the HC group. Subsequently, we further compared node flexibility between the two groups, and the results showed that significant differences in the flexibility of 13 nodes existed between the FEP and HC groups (all $p<0.05$, FDR corrected). And for all these nodes, the node flexibility of FEP group was significantly higher than that of the HC group. Analysis of the correlations between cognitive function and modularity Q was conducted and showed no significance. In node flexibility,

the results indicated that in the patient group, the node flexibility of the right anterior cingulate and paracingulate gyri (ACG.R) was negatively correlated with the scores in reasoning and problem-solving ($r=-0.26$, $p=0.029$). A significant negative correlation was observed between the node flexibility of the left parahippocampal gyrus (PHG.L) and scores in the attention vigilance dimension ($r=-0.25$, $p=0.036$). Meanwhile, the node flexibility of the left superior parietal gyrus (SPG.L) was positively correlated with scores in the working memory dimension ($r=0.26$, $p=0.025$). The correlation between node flexibility and clinical symptoms showed that left cuneus (CUN.L) was significantly associated with negative symptoms ($r=0.24$, $p=0.044$), and right lingual gyrus (LING.R) was also positively associated with negative symptoms ($r=0.27$, $p=0.022$). It's worth noting that right lingual gyrus was negatively associated with GAF scores ($r=-0.29$, $p=0.013$), indicating a potential relevance to overall functioning.

Conclusion The investigation in our study utilized a multilayer network model to provide novel insights into the dynamic network modularity configuration changes observed in FEP patients. The study revealed an increase in global dynamic modularity and node flexibility in several brain regions, which suggests a malfunctioning topological organization in FEP patients during the resting state. These abnormalities were found to correlate with cognitive scores, negative symptoms, and overall function. They may therefore be an underlying factor of the cognitive and functional deficits observed in schizophrenia

关键词: schizophrenia, fMRI, multilayer network, cognition, negative symptoms

Imbalance of Thalamocortical Anatomical Connectivity in Adolescents with Early-onset Schizophrenia

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Objective Thalamocortical circuit imbalance,

characterized by decreased thalamic connectivity with the prefrontal cortex and increased thalamic connectivity with the sensory/motor cortex, has been consistently reported in functional magnetic resonance imaging (fMRI) studies, particularly in adult-onset schizophrenia (AOS). Previous research has identified white matter deficits of the thalamocortical circuit in AOS, serving as the structural basis for functional dysconnectivity. However, this thalamocortical imbalance has not been examined in early-onset schizophrenia (EOS), limiting our understanding of its role in the development defects of schizophrenia

Methods A total of 145 adolescents with EOS (69 from Henan as the discovery sample and 76 from Xiangya as the replication sample) and 67 matched healthy controls (HC) were recruited and underwent T1-weighted structural scans and diffusion tensor imaging scans. Fourteen bilateral cortical regions of interest (ROIs) and the left/right thalamus were used as targets and seeds for probabilistic tractography to quantify anatomical connectivity of the thalamocortical circuit. We firstly compared the thalamic anatomical connectivity with target ROIs between EOS and HCs, and further performed a voxel-wise analysis to localize the exact thalamic subregions with abnormal anatomical connectivity. Finally, the association between the thalamocortical structural connectivity and the severity of clinical symptoms was examined in patients

Results In EOS, anatomical connectivity between the thalamus and the dorsolateral prefrontal cortex (dlPFC) was decreased, while connectivity with the sensory/motor cortex was increased, consistent with the prior findings in adult patient. Notably, out of our expectation, the medial prefrontal cortex (mPFC) exhibited increased anatomical connectivity with thalamus, possibly serving as a unique biomarker in EOS. These findings were replicated in the other independent sample. In addition, the correlation analysis revealed that both decreased dlPFC-thalamic anatomical connectivity and increased mPFC-thalamic anatomical connectivity were associated with psychiatric symptoms in patients. Finally, the voxel-wise analysis showed that the abnormal connectivity of thalamus with the prefrontal cortex was primarily located in the medial dorsal nucleus of the

thalamus (MD), while the connectivity deficits with the primary sensory/motor cortex were predominantly in the lateral and ventral nuclei

Conclusion Our findings address the gap in neuroimaging studies focusing on structural network aberrations in EOS. From the perspective of white matter structure, we verified the stable existence of thalamocortical circuit impairments in schizophrenia, independent of age of onset. The specific thalamocortical dysconnectivity involving the mPFC may underlie the distinctive features of emotional processing and social function disorders in EOS

关键词: early-onset schizophrenia, thalamocortical circuit, anatomical connectivity, DTI, neurodevelopment

难治性精神分裂症 NMDAR 抗体与胼胝体膝部微结构异常

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目的 约 30%的精神分裂症患者对抗精神病药物反应欠佳是精神病学领域的一大挑战。N-甲基-D-天冬氨酸谷氨酸受体 (NMDAR) 抗体作为靶向 NMDAR 的自身免疫的产物, 可引发 NMDAR 交联内化致其功能减退, 而 NMDAR 功能低下和白质微结构完整性受损可能与精神分裂症的治疗应答有关, 但 NMDAR 对白质的作用往往被忽视。本研究旨在探索 NMDAR 抗体与精神分裂症治疗应答的关联, 以及探究白质完整性受损在 NMDAR 抗体与精神分裂症治疗抵抗的关系中所起的作用。

方法 本研究纳入难治性精神分裂症 (TRS) 患者 50 例、非难治性精神分裂症 (NTRS) 患者 45 例。使用酶联免疫吸附实验检测血清 NMDAR 抗体水平, 使用弥散张量成像技术 (DTI) 对白质纤维束进行成像, 采用增强神经影像遗传学荟萃分析 (ENIGMA) -DTI 分析通道计算白质各向异性分数 (FA), 依据 ENIGMA-DTI 图谱生成 21 个主要白质束的区域白质 FA。使用阳性和阴性症状量表 (PANSS) 评估患者的精神病理症状。校正性别、年龄后, 比较两组间 NMDAR 抗体水平和白质 FA 水平, 并进一步分析区

域白质束 FA 和 NMDAR 抗体水平之间的关系。

结果 TRS 组与 NTRS 组在性别、年龄、受教育年限上均无显著差异。临床特征方面, TRS 组和 NTRS 组在病程和发病年龄上无显著性差异,但 TRS 组的 PANSS 评分和抗精神病药物剂量显著高于 NTRS 组。校正性别、年龄后, TRS 组的血清 NMDAR 抗体水平显著高于 NTRS 组, $[(11.10 \pm 4.72) \text{ ng/ml vs. } (8.89 \pm 5.36) \text{ ng/ml}]$, TRS 组在穹窿、胼胝体膝部和后丘脑辐射的 FA 值显著低于 NTRS 组。偏相关结果显示, 仅在 TRS 组, 四个白质束, 分别为胼胝体膝部、后放射冠、放射冠和前放射冠, 与 NMDAR 抗体水平显著负相关, 但经过 Bonferroni 多重比较校正后只有胼胝体膝部与 NMDAR 抗体水平显著相关 ($P < 0.05/21$)。

结论 本研究提示针对 NMDAR 的自身免疫是 TRS 的潜在机制之一, 而白质微结构完整性受损可能介导了 NMDAR 抗体在治疗抵抗中的作用。其中, 胼胝体膝部可能是 TRS 患者中 NMDAR 抗体作用的关键白质区域。膝部连接前额叶皮层和前扣带回, 其前部包含了密度最高的有髓鞘轴突, 连接着前额叶皮层和更高层次的感觉区域。我们推测, 在精神分裂症的发生发展中, 白质, 尤其是胼胝体膝部, 可能更容易受到较高 NMDAR 抗体水平的影响, 表现出对治疗抵抗的更高脆弱性。

关键词: 难治性精神分裂症, NMDAR 抗体, 白质, 胼胝体膝, 各向异性分数

Trajectory Analysis of BMI Increase Induced by Second-generation Antipsychotics in First-episode Schizophrenia: A Secondary Analysis Based on CNFEST

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Objective The prevalent concerns of weight gain and an elevated body mass index (BMI) induced by antipsychotics often hinder patients' treatment adherence and quality of life. Our objective was to identify and delineate the BMI trajectory patterns among patients with first-episode schizophrenia treated with second-generation antipsychotics, with a particular focus on elucidating latent classes and influential factors

Methods Leveraging data from the Chinese First-Episode Schizophrenia Trial (CNFEST), we gathered demographic characteristics, clinical and functional characteristics, which were assessed by the Positive and Negative Syndrome Scale (PANSS) and the Personal and Social Performance Scale (PSP), and regular BMI measurements at baseline and 1, 2, 3, 6, 9, 12-month follow-ups, from 363 patients with first-episode schizophrenia. Trajectory analysis was conducted in R (4.3.2) and logistic regression analysis was performed in SPSS

Results Our analysis uncovered a four-trajectory model outlining the temporal progression of antipsychotic-induced BMI increase. Specifically, these trajectories encompassed: a low and stable BMI, a high and stable BMI, a gently ascending BMI trajectory, and a sharply ascending BMI trajectory subsequently followed by a descent. Further, multiple logistic regression analysis revealed that duration of untreated psychosis (DUP), baseline PSP scores, baseline BMI, and medication group exerted a significant effect on the BMI trajectory groups. Patients who are taking olanzapine, have a lower baseline BMI, a lower baseline PSP score and a shorter DUP are more prone to experiencing significant BMI increase within a year

Conclusion Our research revealed that the dynamic changes in BMI among patients with schizophrenia following antipsychotic treatment can be classified into distinct subtypes. Furthermore, multiple baseline factors have potential impacts on BMI changes. Consequently, early intervention for patients with specific baseline factors is imperative

关键词: schizophrenia, trajectory analysis, BMI

Effects of Parietal Intermittent Theta Burst Stimulation on Resting-state Effective Connectivity within The Frontoparietal Network in Patients with Schizophrenia: A Pilot fMRI Study

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Objective Although intermittent theta burst stimulation (iTBS) has shown effectiveness in addressing working memory (WM) deficits in individuals with schizophrenia (SZ), the current body of evidence is limited and the specific mechanisms involved remain unclear. Therefore, this pilot fMRI study aimed to examine the efficacy of parietal iTBS in ameliorating WM impairments and explore its influence on the resting-state effective connectivity within the frontoparietal network in patients with SZ.

Methods A total of 48 patients diagnosed with SZ were randomly assigned to an active or sham iTBS group and underwent 20 sessions of active or sham iTBS over 4 weeks. Subsequently, all patients underwent cognitive tests, clinical symptom assessments, and resting-state functional MRI (rs-fMRI) scans. The effective connectivity between the frontal and parietal brain regions during the rs-fMRI scans was analyzed using a spectral dynamic causal modeling approach. In addition, this study was approved by the ethics committees of Hebei Provincial Mental Health Center and Beijing An Ding Hospital, Capital Medical University. This trial was registered at the Chinese Clinical Trial Registry in November 2022 (registry number: ChiCTR2200057286).

Results The study results revealed that iTBS treatment improved the positive symptoms, general psychopathology, and WM deficits. After treatment, the active group exhibited significantly enhanced connectivity strengths from the right middle frontal gyrus (MFG)

to the right superior parietal lobule (SPL) and from the left SPL to the left MFG compared to the pre-treatment levels. Furthermore, greater connectivity strength from the right MFG to the right SPL was demonstrated in the active group than in the sham group following iTBS treatment

Conclusion All these findings suggest that iTBS targeting the parietal region may influence the resting-state effective connectivity within the frontoparietal network, thereby offering promising therapeutic implications for alleviating the cognitive deficits in SZ

关键词: Working memory, intermittent theta burst stimulation, resting-state effective connectivity, frontoparietal network, fMRI, schizophrenia

Altered Dynamic Functional Connectivity of Thalamocortical Circuit in Schizophrenia—based on Multi-site and Multi-machine Cross-validation Data

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Objective Previous neuroimaging studies consistently documented decreased prefronto-thalamic connectivity and increased sensorimotor-thalamic connectivity using stationary functional connectivity (sFC) in schizophrenia (SCZ). Recently, the multilayer dynamic network model has been proposed as an effective method to understand the brain functional architecture, which raises a critical question of whether the thalamocortical imbalanced pattern exhibited at dynamic functional connectivity (dFC) in SCZ. In this study, we aimed firstly to investigate the dFC of the thalamocortical circuit in SCZ and examined its relationship between the severity of psychiatric symptoms; and secondly to cross-validate the discovery findings by using another independent sample and data from different MRI machines

Methods We recruited 1007 participants (508 patients) using 4 MRI scanners from 3 sites (Xiangya,

Hong Kong, Henan). Participants from Xiangya and Hong Kong comprised the discovery sample, while those from Henan constituted the replication sample. Sixteen thalamic subdivisions were employed as seeds for the dFC analysis with the whole brain. The sliding window approach was used to estimate dFC, with a window length of 22 TRs and an increment of 1 TR. Initially, validations were conducted in the discovery sample using a window size of 26 TRs. Subsequently, utilizing the significant regions identified in the discovery sample as masks, we validated our findings across different machines (Philips and Siemens scanners). Spearman's correlation analysis was performed to examine the associations of the thalamo-cortical hyper-/hypo-connectivity circuit with the severity of clinical symptoms in patients

Results Compared with healthy controls (HCs), the dFC of the thalamocortical circuit in SCZ exhibited thalamic hyperconnectivity with sensorimotor cortices but hypoconnectivity with prefrontal-cerebellar regions. This imbalanced pattern of dFC within the thalamocortical circuit was consistently observed in the discovery sample across different window lengths and MRI machines. Moreover, this dynamic thalamocortical imbalance was also replicated in another independent sample. Notably, both sensorimotor-thalamic hyperconnectivity and thalamo-prefronto-cerebellar hypoconnectivity were associated with clinical symptoms in patients. Finally, the prefronto-thalamic hypoconnectivity and sensorimotor-thalamic hyperconnectivity were anti-correlated in both SCZ and HCs

Conclusion The present study revealed that the thalamocortical dFC of SCZ was also characterized by prefronto-thalamic hypoconnectivity and sensorimotor-thalamic hyperconnectivity, coinciding with prior sFC findings. Importantly, this dynamic thalamocortical imbalance was consistently replicated across different window lengths, sites, and MRI machines, underscoring the robustness of our findings. Moreover, the thalamocortical hyper- and hypo-dFC was involved in the pathology of schizophrenia evidenced by their significant relationship with psychiatric symptoms in patients. These findings provide novel insights into the thalamocortical imbalance pattern in schizophrenia from static to dynamic brain network

关键词: thalamocortical connectivity, dynamic functional connectivity, resting-state fMRI

CBT 研究协作组

跨诊断认知行为团体治疗对情绪障碍患者负性情绪、认知情绪调节策略及正念水平的影响

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目的 评估跨诊断认知行为团体治疗对情绪障碍患者负性情绪、认知调节策略及正念水平的干预效果,探讨其主要治疗性因素,为方案的临床应用提供理论依据。

方法 1. 2023年7月1日-2024年3月31日,将天津市安定医院心理门诊招募的52名存在焦虑、抑郁情绪困扰的患者(包括符合精神障碍诊断与统计手册第5版诊断标准的精神障碍患者)作为被试。所有纳入患者均签署知情同意并接受入组前评估。

2. 采用对照设计,患者均为存在焦虑抑郁困扰的患者,按照患者编号分为治疗组和对照组。

3. 团体治疗设置:对照组进行常规的药物治,干预组在药物治疗的基础上进行为期8周的跨诊断认知行为团体治疗。治疗为封闭式团体,每期团体成员数为6-8人,治疗疗程共8次,每周1次,每次1.5小时,2名团体带领者共同实施跨诊断认知团体治疗。在团体开始之前,治疗师对每个成员进行一对一的个体评估。在治疗过程中设有督导与质量监控。

4. 评估工具:在治疗前和治疗后分别对患者采用总体焦虑水平与损害程度量表、总体抑郁水平与损害程度量表、认知情绪调节量表(CERQ)以及正念五因素量表(FFMQ)进行疗效评估。

结果 纳入的52名患者,分为干预组(26例)与对照组(26例)。两组在基本人口统计资料上均无统计学意义;干预前,干预组与对照组在总体焦虑水平与损害程度量表、总体抑郁水平与损害程度量表、认知情绪调节量表、正念五要素量表得分上无显著差异($p>0.05$)。经过8周为团体干预后,干预组总体焦虑水平和总体抑郁水平评分显著低于对照组($t=3.167,4.024;p<0.01$)。干预组认知情绪调节量表中自我责难、沉思、灾难化、责难他人维度得分显著低于对照组($t=2.112,2.207,2.032,0.045;p<0.05$);

认知情绪调节量表中接受、重新计划、重新评价维度得分显著高于对照组($t=-2.796,-2.032,-2.069;p<0.05$);正念五因素量表中,观察、描述、不反应维度得分显著高于对照组($t=-2.351,-2.738,-2.027,p<0.05$)。干预组,干预前后总体焦虑水平与损害程度量表、总体抑郁水平与损害程度量表、认知情绪调节量表中(沉思,重新评价,灾难化)维度得分、正念五要素量表中不反应维度得分存在显著差异($t=9.098,8.183,5.641,-2.922,3.889,-3.267;p<0.05$)。

结论 跨诊断认知行为团体治疗可以有效缓解情绪障碍患者焦虑、抑郁情绪,本治疗方案通过5大核心技巧训练提升了情绪障碍患者的情绪调节策略及正念水平。

关键词: 情绪障碍,跨诊断认知行为团体治疗,认知情绪调节策略,正念水平

VR 注意力训练干预伴注意损伤抑郁症患者的脑生化代谢研究

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目的 基于虚拟现实(Virtual Reality, VR)的注意力训练系统已被验证可有效改善抑郁患者的注意力表现,但其对于伴注意损伤抑郁症患者的疗效研究存在局限性,且该训练系统作用的脑机制尚未明确。本研究将验证VR注意力训练系统干预伴注意损伤抑郁症患者注意网络的疗效作用,随后探索VR注意力训练系统的脑生化代谢机制。

方法 本文分为两个研究。研究一根据DSM-5及CAARS纳入伴注意损伤抑郁症患者70例,招募健康对照30例;将患者随机分配到训练组与对照组。训练组每周训练3次,每次训练30min,共进行20次训练,对照组则不安排注意力相关训练。患者组训练前后均完成注意网络测试范式任务及HAMD24。以研究一为基础,研究二进一步对VR注意力训练系统的疗效作用进行脑生化代谢机制的探索。患者组在训练前后均接受1H-MRS扫描前额叶白质、豆状核、丘脑、小脑及前扣带回皮质,并计算比较NAA/Cr、Cho/Cr比值。

结果 研究一

干预后,在警觉网络中,训练组与对照组在组

别主效应有显著统计学意义 ($F=5.244, p=0.026$), 时点与组别的交互作用具有显著统计学意义 ($F=5.116, p=0.028$); 在定向网络中, 训练组与对照组在时点主效应作用显著 ($F=45.167, p<0.001$), 在时点与组别的交互作用具有显著统计学意义 ($F=11.701, p=0.001$); 在执行控制网络中, 训练组与对照组在在时点与组别的交互作用具有显著统计学意义 ($F=4.267, p=0.044$)。

研究二:

(1) 患者右侧豆状核 NAA/Cr 在时点主效应显著 ($F=16.399, p=0.035$), 时点与组别的交互作用显著 ($F=4.742, p<0.001$), 简单效应分析发现, 训练组后测 NAA/Cr 比值显著上升 ($p=0.011$);

(2) 患者右侧丘脑 NAA/Cr 在时点与组别的交互作用呈边缘显著 ($F=3.797, p=0.057$), 简单效应分析发现, 训练组后测 NAA/Cr 与前测相比有显著下降 ($p=0.007$);

定向网络效率值的变化与右侧豆状核 NAA/Cr 的变化呈显著正相关 ($r=0.346, p=0.016$)。

结论 (1) 伴注意损伤 MDD 患者存在注意网络功能受损;

(2) VR 注意力训练系统可改善伴注意损伤 MDD 患者的警觉网络、定向网络及执行控制网络功能;

(3) 伴注意损伤 MDD 患者右侧丘脑可能存在过度活跃情况, 通过 VR 注意力训练通过改善右侧丘脑的异常活跃以改善注意损;

(4) VR 注意力训练系统通过促进右侧豆状核神经元恢复或增长以改善注意损伤。

关键词: 抑郁症, VR 注意力训练系统, 注意网络测试, 氢质子磁共振波谱

认知行为治疗不同技术成分在中国失眠患者中的应用评价与疗效对比

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目的 失眠是一种常见的睡眠障碍, 严重影响患者的生活质量。失眠的认知行为治疗 (Cognitive behavioral therapy of insomnia, CBT-I) 作为一种非药物治疗手段, 已被证实能有效改善失眠症状, 是国

内外多部指南推荐的失眠的一线治疗方法。尽管 CBT-I 已被广泛研究和应用, 但不同技术成分在实际应用中的有效性和适用性可能存在差异。因此, 对 CBT-I 不同技术进行系统的评价和比较, 以确定其在患者群体中的适用性和疗效, 对于优化失眠治疗策略具有重要意义。本研究旨在评估 CBT-I 中不同技术成分在失眠治疗中的使用频率和效果, 并进行疗效对比。

方法 研究采用随机对照试验设计, 选取了 120 名符合失眠诊断标准且用药稳定的成年患者。将患者随机分配到四个组: 认知行为治疗组 (CBT, $n=30$)、认知治疗组 (CT, $n=30$)、行为治疗组 (BT, $n=30$) 以及常规药物治疗组 (TAU, $n=30$)。CBT 组、BT 组和 CT 组患者接受每周一次, 持续 8 周的干预, 在基线、24 周末测量患者的睡眠质量指数 (PSQI) 以及对不同技术的使用频率及有效程度。使用相关系数探究技术使用频率与疗效的关系。治疗师在治疗结束后根据治疗过程对不同技术使用频率进行打分, 根据加权平均对不同技术使用频率排序。

结果 三组患者治疗后, PSQI 显著下降, 从三组整体技术成分的细化层面来看, 技术“避免服用含有咖啡因或尼古丁的物质”、“减少在床上的时间”、“减少有关睡眠的负性想法看到其他可能”、“记录担忧日记”、“接受目前的睡眠状态顺其自然”的使用频率与疗效呈显著正相关; CBT 组“睡前做放松训练”的使用频率与疗效呈显著正相关; BT 组“减少在床上的时间”和“坚持到应该上床的时间再睡觉”与疗效呈显著正相关, 而“合理安排夜间活动, 享受清醒时间”的使用频率与疗效呈负相关; CT 组“在困了的时间再睡觉”、“睡前做放松训练”、“合理安排夜间活动, 享受清醒时间”和“记录担忧日记”的使用频率与疗效呈显著正相关。患者和治疗师普遍认为, 睡眠卫生教育和认知技术在改善失眠状况方面发挥着积极作用

结论 认知行为治疗 (CBT) 包含多种技术成分, 在不同治疗组别中的运用频率及其产生的效果存在一定差异, 将睡眠卫生教育作为持续的支持手段, 有助于患者更好地理解睡眠的基本原理, 更易接受认知行为治疗技术, 并在治疗过程中保持动力和参与度。综合应用多种技术成分可能为失眠患者提供更全面的治疗效果。未来的研究应进一步探讨不同技术成分的最优组合以及个性化治疗方案的开发。

关键词: 认知行为治疗; 失眠; 疗效对比; 技术成分

辩证行为治疗对抑郁障碍伴非自杀性自伤人群的肠道微生物作用

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目的 探讨辩证行为治疗后抑郁障碍伴非自杀性自伤人群的肠道微生物改变。

方法 招募抑郁障碍伴有非自杀性自伤行为患者进行为期 13 周的辩证行为治疗,同时纳入无非自杀性自伤行为的抑郁障碍患者作为疾病对照。在基线期采取患者以及疾病对照的 10g 以上粪便样本,治疗结束后再次采取患者粪便样本。继而提取肠道微生物 DNA 进行 16s rRNA 测序,获取粪便中的肠道微生物的物种分类信息,在此基础上治疗前后以及疾病对照进行三组比较,对样本进行 α 多样性、 β 多样性、物种差异分析。

结果 共收集到治疗前粪便样本 27 例,治疗后粪便样本 9 例,疾病对照 29 例。在 α 多样性上,三组 Sobs 指数、Shannon 指数和 Simpson 指数均未见统计学差异。在 β 多样性上,治疗前后肠道微生物群分布存在明显差异。物种差异分析显示,在门水平上,三组比较并未发现具有统计学差异的菌门,但能观察到治疗后放线菌门相对丰度存在下降趋势,拟杆菌门相对丰度存在上升趋势。而在属水平上,治疗后霍氏真杆菌的相对丰度显著下降。

结论 辩证行为治疗后,抑郁障碍伴非自杀性自伤人群的肠道微生物分布及菌属水平改变。这提示心理治疗可能也具有一定的生物学作用,辩证行为治疗可能通过脑肠轴机制发挥治疗效果。

关键词: 辩证行为治疗,非自杀性自伤行为,肠道微生物

Evaluating The Effectiveness of Multimodal Psychotherapy Training Program for Medical Students in China: A Randomized Controlled Trial

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Objective The delivery of psychosocial and psychotherapeutic interventions remains central to the treatment of many patients with psychiatric disorders (e.g., obsessive-compulsive disorder, panic disorder, major depression, eating disorders, and addictive behaviors) and psychosomatic disorders (e.g., hypertension, bronchial asthma, and rheumatoid arthritis). For evaluating the effectiveness of the multimodal psychotherapy training program for medical students in China, well-designed, randomized controlled trials of psychotherapy teaching programs are urgently needed. The primary aim of this proposed project is to assess the effectiveness of a new multimodal psychotherapy teaching program for medical students and residents in China to improve their psychotherapeutic skills and ensure better work performance in entry-level clinical settings

Methods This study is a two-arm randomized controlled trial (RCT). The intervention group received a two-day multimodal-based intensive educational intervention with 8 weeks follow-up (supervision based online teaching). The wait-list control group did not receive the intervention until the end of the study. Both groups were followed up for 8 weeks. This trial was conducted at the Sir Run Run Shaw Hospital. The primary outcome measure is the changes of the Facilitative Interpersonal Skills task (FIS) scores. Secondary outcome measures include: training program acceptability; trainees' psychotherapy knowledge; utilization of psychotherapy; and self-reported self-efficacy and self-reported motivation for psychotherapy. Paired T-test was performed to compare the difference pre- and post-receiving intervention training. Independent T-test and χ^2 test (for categorical variables) has been applied to compare differences between the two study groups. Any participant with missing information on the follow-up was excluded. All tests will be 2-tailed. A two-sided $P < 0.05$ will be used to determine statistical significance

Results This study recruited 160 medical students, residents, and other health providers (HCPs, e.g., doctors and nurses). However, only 113 participated throughout the study, with 57 in the intervention group ($M = 26.02$, $SD = 4.31$, 68.4% female) and 56 in the control group ($M = 25.88$, $SD = 3.96$, 66.1% female). However, there were different numbers of participants filled out each survey measure. Participants' overall evaluation was excellent ($M = 4.78$, $SD = 0.50$, out of point 5) with great willingness on application ($M = 4.07$, $SD = 0.52$) and recommendation ($M = 4.41$, $SD = 0.70$). The intervention group ($M = 57.90$, $SD = 44.10$) revealed more improvement in psychotherapy knowledge than the control group ($M = 11.42$, $SD = 51.15$) by comparing their scores at baseline and 8-week follow-up, $t(92) = 4.73$, $p < .001$. Both groups' post-intervention scores were significantly higher than their pre-intervention scores. There was no significant difference between two groups' improvement, $t(99) = -0.58$, $p = 0.564$. However, the intervention group's pre-intervention FIS scores ($M = 3.53$, $SD = 0.77$) were higher than scores at 8-week follow-up, $t(49) = 9.40$, $p < .001$. No significant differences were found in two groups' changes over 8 weeks in utilization of psychotherapy, negative attitudes towards CBT, or attitudes towards counseling and intervention in primary care (APIC-PC). Still, the intervention group showed a significant improvement in utilization of psychotherapy after 8 weeks, $t(48) = -8.58$, $p < .001$; the control group also showed a significant improvement in self-reported self-motivation and self-efficacy after receiving intervention training, $t(50) = -2.98$, $p = 0.004$.

Conclusion To our knowledge, this is the first RCT to evaluate the efficacy of a multimodal psychotherapy training program for medical students in China. This CBT-based brief and short-term psychotherapy skill training program has been proven effective, the health impact of its expansion nationwide could be enormous. It provides evidence-based psychotherapy (mainly CBT) training programs for medical students needed, and its dissemination would help healthcare providers manage any mental problems, like stress and depression

关键词：Multimodal teaching, psychotherapy

training, Chinese medical students, randomized controlled trial

焦虑障碍研究协作组

催产素通路影响焦虑易感性的神经机制研究

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目的 明确早期应激对 mPFC 脑区的 OXTR-Ca²⁺通路的影响,及 OXTR-Ca²⁺对神经信号传递的影响,阐明 mPFC 下游脑区 BLA 的神经活动对动物焦虑易感性和应激耐受性的影响。

方法 基于前期“two-hit”应激模型的建立,通过免疫荧光技术和流式细胞技术分析 mPFC 脑区催产素受体主要在哪类细胞中发挥抗焦虑作用。利用 AAV shRNA 病毒特异性敲低催产素受体在该类细胞中的表达,验证催产素通路在早期应激影响成年后应激易感性和耐受性中的作用。利用光纤记录技术,观察 OXTR 敲低对 Ca²⁺活动的影响,AAV shRNA 结合转录组测序分析 OXTR 敲低对下游分子通路的影响。进一步利用药理学实验观察 OXTR 结合下游分子操纵对神经传递功能的影响。利用顺行标记病毒确定 mPFC 脑区 OXTR 类神经元的下游脑区 BLA,并结合化学遗传学和光遗传技术验证该神经环路的作用。利用药理学实验操纵 mPFC 脑区 Ca²⁺相关通路,观察动物行为学及 BLA 脑区的神经活动。

结果 建立了稳定的“two-hit”大鼠模型,并且发现重复可预见性母婴分离增加成年后的应激耐受性,而不可预期母婴分离增加成年后个体的应激易感性。而该行为学的变化与催产素及其受体的变化有关。在可预期母婴分离动物中发现,催产素受体的表达显著高于对照组,而在不可预期母婴分离的动物中,催产素受体的表达则显著低于对照组。敲低催产素受体的表达,增加大鼠束缚应激后的焦虑样行为;过表达催产素受体在 mPFC 脑区的表达,缓解大鼠束缚应激后的焦虑样行为。在 mPFC 脑区注射 AAV-CMV-betaglobin-cre-P2A-GFP,在 PVN 注射 AAV-OXT-DIO-Hm4di-mCherry,特异性的标记 PVN-mPFC 的催产素能神经元,通过注射 CNO,特异性的阻断 PVN-mPFC 的投射,发现可预期母婴分离的大鼠在成年束缚应激后也表现出明显的焦虑样行为。而正常饲养的对照动物在阻断了 PVN-mPFC 的催产素能神经元投射后,也表现出明显的应激易

感性,变现为束缚应激后的焦虑样行为增加。化学遗传学操纵 mPFC-BLA 脑区同样影响应激导致的焦虑样行为。利用 AAV-OXTR-shRNA 病毒注射在 mPFC 脑区,发现在敲低催产素受体后,mPFC 脑区的线粒体形态和功能均收到损害。

结论 我们发现可预期母婴分离可增加成年应激后焦虑样行为的耐受性,不可预期母婴分离增加了成年应激后焦虑抑郁的敏感性,主要影响了 OXTR 通路。OXTR 的敲低会严重影响神经元 Ca²⁺活动和线粒体 ATP 的产生。

关键词: 早期应激、焦虑易感性、前额叶皮层、线粒体、下丘脑、杏仁核

Disruption of Late Consolidation in The Medial Prefrontal Cortex Attenuates Remote Fear Memory in Humans

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Objective Alleviating fear memory effectively is of great significance for the treatment of fear-related disorders. Following fear memory acquisition, the memory enters a labile stage called memory consolidation, which contributes to the transition from unstable recent memory to stable remote memory. Previous studies suggested that the hippocampus plays a crucial role in recent memory, while the medial prefrontal cortex (mPFC) contributes to the remote memory. The latest research shows that there is still a late consolidation process of fear memory 12 to 24 hours following memory acquisition, which is crucial for maintaining remote memory. However, it is still unclear whether there is also a late consolidation process in mPFC in human fear memory

Methods In our study, we explored the late consolidation process of human fear memory in healthy participants through fear memory training. 223 participants were included. They acquired the fear memory during fMRI scanning. Then resting state scanning was performed 0.5, 9, 18, or 36 hours after fear memory acquisition, then participants received cTBS or sham

stimulation over mPFC, resting state scanning was performed again within 15 minutes. Finally, 3 and 15 days after fear memory acquisition, we tested the expression of recent and remote fear memory and explored the brain activity of mPFC at different stages after the formation of fear memory and its impact on the fear memory performance

Results In the present study, we found that delayed activation of the mPFC during the late consolidation phase of fear memory in humans. Deep transcranial magnetic stimulation of the mPFC during the memory consolidation phase reduced fear responses in a recent recall test in humans, whereas intervening during the late consolidation phase attenuated remote fear memory. Using functional brain imaging, we found that in the late consolidation phase after the conditioned fear memory was formed, mPFC exhibited increased spontaneous activation. Within fear circuits, mPFC exhibited higher information transmission rate and the degree of clusterization in network connections, serving as an information hub. Functional network connectivity analysis indicated that subcortical regions (including the hippocampus, amygdala, thalamus, and ventral tegmental area), the central executive network (including the mPFC and cingulate cortex), and the attention network (including the dorsolateral prefrontal cortex and frontal eye field) showed increased connectivity during the late consolidation phase. Following intervening mPFC in the late consolidation phase, the inhibition of fear-circuit connectivity predicted remote fear attenuation

Conclusion These findings provide evidence that late consolidation is a critical time window for remote memory storage and bring a new perspective of intervention during the late consolidation phase in clinical practice

关键词: Fear memory, Late consolidation, Remote memory, TMS, fMRI

Low-frequency rTMS Enhance The Early and Long Effect of CBT in Unmedicated Outpatients with Panic Disorder with Or without Agoraphobia: A Randomized Double-blind

Controlled Trial

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Objective Cognitive behavioural therapy (CBT) is the first-line treatment for panic disorder (PD). However, some patients still have poor response to CBT, especially in the early stage of treatment. Thus, to find a new method to enhance the early effect of CBT is necessary. Current research aimed to verify whether low-frequency repetitive transcranial magnetic stimulation (l-rTMS) may enhancement the effect of CBT for PD patients in the early stage

Methods PD patients were recruited and randomly assigned to the experimental group and the control group using a random number table. The patient of experimental group received CBT combined with true l-rTMS, and the control group received CBT combined with pseudo l-rTMS. Both groups received 12 sessions of CBT and 20 times of l-rTMS intervention in the first month of CBT. The target of l-rTMS stimulation was the left dorsolateralprefrontal cortex, the stimulation time was 30 minutes, and the frequency was five times once week. The patients' panic symptoms and anxiety were assessed with the Panic Disorder Severity Scale (PDSS) and HAMA at 7 timepoints. The reduction rate of PDSS total score before and after treatment was the main therapeutic index

Results A total of 50 patients with panic disorder were recruited and randomly assigned to the experimental group and the control group with 25 cases each. A total of 10 cases fell out of the two groups. The IPP analysis method was used to analyse the general demographic data and clinical characteristics of 40 patients who completed the treatment. It was found that there were no statistically significant differences between the two groups in terms of age, sex, course of disease, education, severity of panic disorder, anxiety, depression, personal and social functions ($P>0.05$). The PDSS and HAMA scores significantly reduced after intervention in both groups. The difference of PDSS and HAMA

scores between the two groups at different time points (0,2, 4, 6, 8, 10 and 12 weekends) was compared by repeated measurement analysis of variance. It was found that there were statistical differences on PSSS and HAMA between groups, time points and interaction effects ($p<0.05$). Further post-mortem analysis: inter-group univariate analysis of variance found that there was a statistically significant difference in the total PDSS score and HAMA score between the two groups at the end of the 2nd, 4th, 6th and 12th weeks, and the PDSS score of the study group was lower than that of the control group; Intra-group paired t-test showed that the scores of PDSS in the two groups at the end of 2, 4, 6, 8 and 12 weeks were lower than the baseline

Conclusion The effect of l-rTMS real stimulation combined with CBT in the treatment of panic disorder is better than that of l-rTMS false stimulation combined with CBT, which can significantly improve panic symptoms, especially has the advantage of early stage. L-rTMS treatment has good safety and compliance, and can be further used in the clinic

关键词: Low-frequency rTMS, Cognitive behavioural therapy, panic disorder, A randomized double-blind controlled trial

“北小六”人工智能心理治疗机器人对住院患者焦虑和抑郁症状的效果

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目的 随着经济和社会的发展,我国民众心理健康问题日益凸显,而心理健康服务捉襟见肘、质量良莠不齐,需要更高效实用、利于低成本大规模应用的心理治疗服务,人工智能心理治疗机器人的出现是关键突破口,但其对心理障碍患者的有效性还有待验证。本研究旨验证一款人工智能心理治疗机器人对改善临床心理科住院患者焦虑和抑郁症状的有效性。

方法 研究时间为2023年2月至2024年1月,在精神专科医院的临床心理科病房滚动招募患者40人,患者分别独立完成“北小六”人工智能心理治疗

机器人内嵌的“针对焦虑的认知行为治疗”,治疗内容包括心理教育视频、认知行为练习等,治疗全程持续8天,每天20分钟。在治疗前和治疗完成后分别测试患者的焦虑(采用7项广泛性焦虑障碍量表)和抑郁(采用病人健康问卷抑郁量表)水平,并采用配对样本T检验进行差异性分析。

结果 本研究纳入的40位患者中,42.5%为焦虑障碍,37.5%为抑郁障碍,10%为心境障碍,7.5%为躯体化障碍,2.5%为药物依赖综合症。结果发现,经过8天的治疗,患者的焦虑水平($p<0.01$)和抑郁水平($p<0.01$)有显著下降,对改善焦虑(Cohen's $d=0.688$)和抑郁(Cohen's $d=0.756$)均有中等效应。

结论 人工智能心理治疗机器人的临床效果显著,能够改善患者的焦虑、抑郁水平;且“北小六”人工智能心理治疗机器人有标准化、数字化、循证化、本土化特点,能够降低临床成本,提高治疗效果,对改善群众心理健康具有重要意义。

关键词: 人工智能心理治疗机器人,心理治疗,焦虑,抑郁

孕期焦虑症状的轨迹、预测因素及其与产妇结局的关系

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目的 孕期焦虑症状较为常见,可能长期影响女性产后结局。本研究旨在探索女性孕期焦虑症状的纵向变化轨迹、预测因素及其与产后结局的关系。

方法 本研究的数据来自深圳市宝安区妇幼保健院2020年1月至2024年1月就诊的孕产妇数据。孕妇在孕早、中、晚期及产后1月、2月五个时点通过扫描二维码完成在线数据采集。使用爱丁堡产后抑郁量表(Edinburgh Postnatal Depression Scale, EPDS)及广泛性焦虑障碍量表(Generalized Anxiety Disorder 7-Item, GAD-7)进行情绪症状自评,孕早期EPDS ≥ 13 分被定义为有严重抑郁症状。采用基于群体的轨迹建模方法将孕期焦虑症状模式相似的妇女进行分组($n=5035$);多元多项式逻辑回归分析用于探索不同轨迹组的预测因素($n=4293$);方差分析、卡方检验及非参数检验用于比较各轨迹组产后结局的差异($n=4504$)。

结果 共识别出 4 个孕期焦虑症状的轨迹模式, 分别是: 孕期无焦虑症状组 (No anxious symptom, NAS; 78.7%)、孕期持续焦虑症状组 (Persistent anxious symptoms, PAS; 1.4%)、孕晚期新发焦虑症状组 (Emergent anxious symptoms, EAS; 7.3%) 及孕晚期焦虑症状缓解组 (Resolving anxious symptoms, RAS; 12.6%)。PAS、EAS、RAS 与既往精神疾病史、孕早期抑郁有关; PAS、RAS 与吸烟史有关; RAS 与人工受孕、初次生产和既往躯体疾病史有关。相比 NAS 组, PAS、EAS、RAS 组分娩 1 月后 EPDS 总分和焦虑分量表分明显增长 ($P<.05$), 但三组之间增长幅度无明显差异 ($P>0.05$)。

结论 孕期焦虑症状呈现 NAS、PAS、EAS 及 RAS 四种不同的轨迹模式, 不同轨迹模式的预测因素既有相似也有差异, 既往精神疾病史、孕早期抑郁均能增加孕期持续/新发焦虑症状的风险。EAS 和 RAS 组分娩 1 月后抑郁、焦虑症状明显增加且升高幅度与 PAS 组无明显差异。既往研究围产期焦虑女性时多关注于焦虑症状持续存在的个体, 本研究呼吁临床上应加强关注孕晚期新发焦虑症状甚至焦虑症状已经缓解的女性群体, 特别需要注重对其分娩 1 月以后的情绪症状筛查。

关键词: 孕期, 焦虑, 轨迹, 预测因素, 产后结局

Transcranial Alternating Current Stimulation for Treating Generalized Anxiety Disorder: A Randomized Controlled Trial

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Objective Generalized anxiety disorder (GAD) is a common mental health condition while treatment options are relatively limited. Non-invasive brain stimulation techniques might be considered a new treatment approach for GAD. Transcranial alternating current stimulation (tACS) has shown promising efficacy and tolerability for major depression but has not been investigated for GAD yet. Thus, we aim to investigate the clinical efficacy of tACS for treating patients with GAD

Methods This was a double-blinded, randomised, sham-controlled trial. Patients who met the diagnosis of GAD based on the Structured Clinical Interview for DSM-V (SCID) are considered eligible participants for the current study. Eligible participants were randomly divided into either active treatment group or sham treatment group. A 40-minute transcranial alternating current stimulation treatment was performed twice a day and lasting for 10 days, while participants maintaining their medication treatment as usual. The primary outcome was the score on Hamilton Anxiety Scale (HAMA14) at the trial end. A mixed linear model was applied in the statistical analysis for the severity level of anxiety at Day 5 and Day 10 in the treatment process, and Chi-Square analysis was used to compare the treatment efficacy between active and sham treatment conditions

Results A total of 56 participants were included in the study, of which 31 were randomised into the active treatment group and 26 were randomised into the sham treatment group. After 5 days of treatment, the between-group efficacy ($p=0.245$) and change of scores on HAMA14 ($p=0.171$) did not significantly differ between active and sham treatment groups. After 10 days of treatment, treatment efficacy of the active condition is significantly higher than the sham condition ($\chi^2=9.810$, $p=0.002$). In particular, 24 participants from the active treatment group experienced improvement in their anxiety symptoms (77.42%), while only 9 participants from the sham treatment group have improved in terms of their anxiety symptoms (36.00%). Meanwhile, the difference on HAMA14 scores between two treatment conditions were statistically significant ($p=0.048$)

Conclusion Transcranial alternating current stimulation could improve patients' anxiety symptoms within a short period. Nevertheless, the long-term efficacy of this treatment approach for general anxiety disorder needs to be further investigated with a long-term follow-up

关键词: Transcranial alternating current stimulation; Generalized anxiety disorder; Randomized Controlled Trial

焦虑障碍不同亚型脑功能活动异同研究

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目的 不同焦虑障碍脑功能活动的相似性和异质性尚不明确,本研究运用静息态功能磁共振方法,探索广泛性焦虑障碍(GAD)、惊恐障碍(PD)及社交焦虑障碍(SAD)共同及独特的脑功能活动改变,为了解不同焦虑障碍的神经病理机制及特异性治疗靶点提供参考。

方法 纳入33例未用药GAD患者、26例PD患者、36例SAD患者及32例健康对照(HC)。所有患者接受静息态磁共振扫描及量表评估。运用方差分析比较四组受试低频振幅(ALFF)差异,将有差异的结果脑区作为种子点进行功能连接(FC)分析,并运用方差分析比较四组功能连接差异。分别在焦虑障碍患者组、GAD组、PD组、SAD组内将组间比较有差异的脑区的ALFF值及FC值与量表评分进行皮尔逊相关分析。

结果 1. 低频振幅变化

(1) 共同变化: SAD和PD患者左侧角回、左侧额下回眶部的ALFF值高于健康对照组和GAD患者。(2) 特异性变化: SAD患者: 左侧楔前叶、左侧枕下回、左侧颞下回及双侧梭状回的ALFF值显著增加。PD患者: 右侧颞上回和右侧壳核的ALFF值显著增加。特别是PD患者的右侧壳核活动增加,而SAD患者在这一脑区的ALFF值却降低。

2. 功能连接变化:

SAD患者双侧梭状回与双侧舌回的功能连接显著增加,右侧壳核与右侧缘上回功能连接增加; PD患者右侧梭状回与右侧舌回的功能连接显著降低,右侧壳核与右侧缘上回的功能连接显著降低; GAD患者左侧楔前叶与前扣带回的功能连接显著降低; PD患者的左侧楔前叶与前扣带回的功能连接显著低于SAD患者。

3. 相关分析:

在影像指标与相关临床量表的相关分析中, PD患者的左角回ALFF值与躯体症状量表评分呈正相关($r=0.572, p=0.004$)。

结论 本研究发现不同焦虑障碍亚型患者在脑功能活动上既有共同的异常,也有各自的特异性变

化。SAD和PD患者均表现出左侧角回和左侧额下回眶部的ALFF值增加,反映了共同的脑功能活动异常。特异性方面, SAD患者在左侧楔前叶、左侧枕下回、左侧颞下回及双侧梭状回的ALFF值显著增加,表明其在视觉信息处理和社会情绪处理相关脑区的活动增强。PD患者则在右侧颞上回和右侧壳核的ALFF值显著增加,同时在视觉网络内的功能连接减少。GAD患者表现出前扣带回与楔前叶之间的功能连接障碍。这些发现为理解不同焦虑障碍的神经病理机制提供了重要线索,并可能为开发特异性治疗靶点提供依据。

关键词: 焦虑障碍, 静息态功能磁共振, 低频振幅, 功能连接

广泛性焦虑障碍患者症状水平与无法忍受不确定性及情绪调节策略的相关研究

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目的 探索广泛性焦虑障碍患者无法忍受不确定性(intolerance of uncertainty, IU)水平及情绪调节策略与焦虑症状严重程度的关系。

方法 募集符合《国际疾病分类第10版》(ICD-10)中广泛性焦虑障碍(generalized anxiety disorder, GAD)诊断标准的患者108例,同期募集健康对照(health control, HC)115例。采用无法忍受不确定性量表(intolerance of uncertainty scale, IUS)评价被试无法忍受不确定性水平,采用情绪调节量表(emotion regulation questionnaire, ERQ)评价被试情绪调节策略偏好,采用汉密尔顿焦虑量表(Hamilton Anxiety Scale, HAMA)评估焦虑症状程度,并进行Spearman相关性分析与线性回归分析。

结果 GAD组IUS各分量表、ERQ各分量表、HAMA得分均与HC组有显著差异($p \leq 0.001$)。IUS各分量表与ERQ各分量表之间均具有相关性,抑制性IU与表达抑制策略显著相关($p < 0.01$); IUS与HAMA得分呈正相关($p < 0.01$); ERQ与HAMA具有相关性($p < 0.05$)。IUS与ERQ在一定程度上可以解释焦虑症状程度($R^2 = 32.2\%$)。

结论 无法忍受不确定性及情绪调节策略与焦

虑症状严重程度水平存在关联。其中,无法忍受不确定性及表达抑制策略与焦虑症状程度呈正相关,认知重评策略与焦虑水平具有负向相关。

关键词:焦虑障碍,无法忍受不确定性,情绪调节,相关性分析

焦虑障碍患者在情绪冲突处理中的前额功能连通性:一项基于fNIRS的研究

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目的 本研究旨在探索焦虑障碍患者(惊恐障碍和广泛性焦虑障碍患者)在处理情绪冲突任务时左右额叶的功能连接特点;从功能连接的角度理解焦虑障碍患者在冲突处理中的神经机制,为焦虑障碍的亚型鉴别和临床诊疗提供影像学依据。

方法 共纳入焦虑障碍患者23名(惊恐障碍患者12名、广泛性焦虑患者11名)、健康受试10名。从中国化面孔情绪图片系统(CAFPS)、现代汉语情感词系统(CAWS)中选取情绪面孔及情绪词,通过Eprime3.0软件构建面孔-词 Stroop 范式,包括四种条件:cI(在一致试次之后的不一致试次)、iI(在不一致试次之后的不一致试次)、iC(在不一致试次之后的一致试次)、cC(在一致试次之后的一致试次),按照伪随机顺序排列。受试需对面孔情绪价做出正确反应(高兴/愤怒)。通过22通道近红外脑功能成像系统(日立ETG-4100)同步记录受试在任务状态下前额叶的血流动力学信号;基于任务相关的血流动力学信号计算时间序列相关性指标。

结果 1. 三组受试对不一致试次(iI、cI)的反应时间均显著慢于一致试次(cC、iC);GAD在各条件下的反应时间均显著慢于PD、HC。

2.GAD相比HC在右侧额叶内部通道(Ch20-5、10、11、15;Ch19-5、11)和左右额叶间(Ch3-5、10;Ch4-15)的功能连接增强($P<0.05$);左侧前额叶内部通道(Ch4-Ch17)功能连接减弱($P<0.05$)。

3.PD相比HC未发现左右额叶内部通道的功能连接差异;PD在左右额叶间通道(Ch4-5、15)的功能连接相比HC显著增强($P<0.05$)。

4.GAD相比PD在任务期间的功能连接模式差异显著,相比PD,GAD在右侧前额叶内部通道

(Ch20-5、10、12;Ch15-5;Ch11-6、10)和左右额叶间(Ch5-3、8、9、12、13、17;Ch10-3、8、12;Ch14-3、8、12、13、Ch20-3、4)的功能连接显著增强($P<0.05$);而在左侧前额叶内部的通道功能连接减弱(Ch4-17、22、13、9)($P<0.05$)。

结论 1. 面孔-词 Stroop 范式下GAD、PD和HC均存在情绪冲突效应,GAD处理情绪冲突信息的速度显著慢于HC和PD;GAD、PD对情绪冲突信息的控制能力受损,更易受到冲突信息的干扰导致判断失误。

2.PD、GAD在处理情绪冲突期间呈现不同的功能连接模式,主要体现在左右额叶间及内部的交互同步差异;GAD在右侧前额叶内部及左右额叶间的存在显著的功能连接改变;而PD在左侧额叶内部的存在显著的功能连接改变。

关键词:焦虑,情绪冲突,情绪面孔-词 Stroop,fNIRS,功能连接

老年精神病学组

Association of Gamma-glutamyl Transferase To High-density Lipoprotein Ratio with Cognitive Function in Older Adults: The NHANES 2011-2014

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Objective The prevalence of cognitive impairment is increasing, posing a significant public health concern globally. The Gamma-glutamyltransferase (GGT) to high-density lipoprotein (HDL) ratio, which is associated with nonalcoholic fatty liver disease and insulin resistance, has an unclear relationship with cognitive function. This study investigated the relationship between the GGT/HDL ratio and cognitive function in older Americans

Methods Data from the National Health and Nutrition Examination Survey (NHANES) from 2011 to 2014 were analyzed. Cognitive function was assessed using the Consortium for the Establishment of an Alzheimer's Disease Registry (CERAD), the Animal Fluency Test (AFT) and the Digit Symbol Substitution Test (DSST), and the mean cognitive Z-score. Weighted post-hoc multiple linear regression and multiple logistic regression analyses were used to calculate odds ratios (ORs) and 95% confidence intervals (CIs) to explore the relationship between GGT/HDL ratios and cognitive functioning, and measure-response relationships were described for statistically significant cognitive scales. Finally, subgroup analyses of covariates were also performed

Results A total of 2452 participants were included in the study. After adjusting for covariates, the GGT/HDL ratio was significantly associated with the highest quartile of the AFT and the third quartile of the DSST compared to the lowest quartile group (AFT: $\beta = 0.478$, 95% CI 0.075 to 0.880, $P < 0.05$; DSST: $\beta = 0.509$, 95% CI -0.987 to -0.031, $P < 0.05$). In addition, we investigated the dose-response relationship between

GGT/HDL ratios and cognitive function scores using restricted cubic spline modeling. There was a linear relationship between the GGT/HDL ratio and the AFT ($P = 0.0344$) scores, whereas the relationship with the DSST score was nonlinear ($P = 0.0226$)

Conclusion A correlation exists between the GGT/HDL ratio and cognitive function in individuals over 60 years of age. Notably, this correlation appears to differ across various cognitive domains. Our findings may provide support for further large-scale prospective studies to elucidate the exact causal relationship

关键词: cognition function, NHANES, Ratio of gamma-glutamyltransferase to high-density lipoprotein cholesterol

基于结构磁共振构建轻度认知损害进展为阿尔茨海默病的综合预测模型

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目的 构建结构磁共振成像 (Structural Magnetic Resonance Imaging, sMRI) 预测轻度认知损害 (mild cognitive impairment, MCI) 进展为阿尔茨海默病 (Alzheimer's disease, AD) 的综合模型。

方法 影像组学 (Radiomics) 是医学和计算机交叉融合的新兴产物, 通过图像定量特征高通量提取过程, 将图像转换为可挖掘数据特征, 并对这些数据进行分析来反映疾病的异质性, 影像组学已经应用于 MCI 和 AD 的诊断和分类评估。神经影像学的研究表明, 灰质和白质的结构性改变与 AD 的发病机制具有相关性, 并且其神经变性对主观认知下降具有交互作用, 而基于全脑评估的影像组学方法可能比单个感兴趣脑区分析提供更全面的信息。神经心理学测量可以改善 MCI 的诊断效能, 将影像组学与临床数据结合, 建立疾病预测模型可提高预测精度。本研究从阿尔茨海默病神经影像学计划 (Alzheimer's Disease Neuroimaging Initiative, ADNI) 数据库选取了 343 例 MCI 作为研究对象, 其中 154 例在 48 个月的随访期内进展为 AD。按照入组时间将所有受试者分为训练集 ($n=240$) 和验证集 ($n=103$)。基于训练集数据对每个病例的基线磁共振 T1WI 结

构像自动分割为全脑 3D 白质图像和灰质图像,并提取每个组织图像的影像组学特征,构建影像组学标志物,结合基线神经心理学评分,通过机器学习构建初步预测模型;使用工作特性曲线(ROC 曲线)和验证集数据确定模型的诊断精度和可靠性。

结果 采用 logistic 逐步回归法构建了影像组学标志物。标志物计算在训练集和验证集中的 MCI 进展和稳定亚组之间均有显著差异,两组的预测效果较好,AUC 分别为 0.796 和 0.784,特异性分别为 0.636 和 0.676,敏感性分别为 0.865 和 0.863。逐步 logistic 回归分析显示,临床痴呆评定量表(CDR)、阿尔茨海默病评定量表(ADAS-cog)和影像组学标志物是 MCI 进展为 AD 的独立预测因子。ROC 曲线显示,以 CDR、ADAS-cog 和影像组学标志物组成的综合模型在训练集和验证集的 AUC 值分别为 0.895 和 0.882;敏感性分别为 0.933 和 0.977,特异性分别为 0.669 和 0.661;Delong 检验显示综合模型的诊断效能与独立预测因子有显著性差异($P=0.023$)。

结论 磁共振结构影像组学联合 CDR、ADAS-cog 可预测 MCI 进展为 AD 的高风险人群。

关键词:轻度认知损害;阿尔茨海默病;结构磁共振;影像组学;机器学习

The Correlation between Gene Differential Expression and Symptoms in Patients with Alzheimer's Disease and Mild Cognitive Impairment

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Objective Alzheimer's disease (AD) is a cognitive degenerative disorder with a poor prognosis, and its pathogenesis remains unknown. Utilizing bioinformatics analysis of peripheral blood samples with differentially expressed genes (DEGs), we aimed to investigate distinctions between AD and mild cognitive impairment (MCI) in comparison to healthy controls (HC), as well as to explore the correlation between differential genes and clinical symptoms

Methods AD patients aged over 60 undergoing

outpatient and inpatient treatment for the first time at the Affiliated Psychological Hospital of Anhui Medical University, were selected as the study cohort and categorized into the AD group ($n=40$ cases). Similarly, patients with mild cognitive impairment aged over 60 were chosen and classified into the MCI group ($n=40$ cases). Healthy volunteers were recruited into the healthy control group ($n=42$ cases) during the same period. The Mini-Mental State Examination (MMSE) and The Montreal Cognitive Assessment (MoCA) were utilized to assess the cognitive function and mental behavior of the two groups. Transcriptome technology was employed for the expression analysis of peripheral blood, and the relationship between transcription gene content and the total score of the scale was explored through Spearman rank correlation analysis

Results Bioinformatics analysis revealed significant differences in the expression of a large number of DEGs among the three groups. GO and KEGG analyses indicated that these genes are associated with multiple signaling pathways, lipid metabolism, and axons. Correlation analysis demonstrated that the top 20 DEGs were generally correlated with clinical symptoms when compared with the HC group. Specifically, only FP671120 and FP236383 were positively correlated with the MMSE total score, while SLC7A5 showed a negative correlation with the MMSE total score

Conclusion Variations in peripheral blood transcription genes exist between AD and MCI patients, potentially contributing to the cognitive and psychiatric symptoms observed in these individuals. Some of these genes may serve as key predictors for the ultimate outcome of MCI, offering new avenues for the treatment and understanding of AD etiology

关键词: Alzheimer's disease; MCI; DEGs; neurological disorders; cognition; data correlation

Transcranial Electric Stimulation over The Frontopolar Region Improves Risky Decision-making in Age-related Cognitive Decline

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Objective Aging is often accompanied by declined cognitive function, leading to a high risk of neurodegenerative diseases such as dementia. Compared with young adults, older adults often have difficulty in making decisions under risk, which is closely related to the connections between the frontal and subcortical regions (e.g., amygdala). However, the extent to which cognitive decline influences risky decision-making is still unclear, and early intervention for cognitive impairment is scarce. The current study investigated the fronto-amygdala pathway in abnormal risky decision-making in older adults with different severity of cognitive decline. Furthermore, transcranial direct current stimulation (tDCS) were delivered over the frontopolar region to examine the effect of anodal current in modulating risk-taking behaviors

Methods The current study applied a risky decision-making task (Iowa gambling task, IGT) and resting-state fMRI. In Experiment 1, 38 young adults (aged 20–27 years) and 60 older adults (aged 56–80) were recruited, and underwent cognitive assessment, IGT test and fMRI. By comparing young and cognitive normal/impaired older adults, we examined the role of cognitive integrity in decision-making and underlying neural substrates. In Experiment 2, 46 older adults (aged 55–88 years) were randomly assigned into control (sham stimulation, $n = 23$) and intervention (anode stimulation, $n = 23$) groups, and assessed before and after tDCS intervention. Then we examined whether the frontopolar tDCS would improve risky decision-making and corresponding brain networks

Results In Experiment 1, the results showed significant changes in behaviors and the fronto-amygdala network in older adults relative to young adults. More importantly, age-effect on risk-taking behaviors was remarkably different in cognitively normal and impaired older adults ($b = 0.004$, $p = 0.004$, 95% CI [0.001, 0.01]). In the resting-state analysis, task performance was pos-

itively correlated with the ventral fronto-amygdala connectivity ($b = 0.39$, $p < 0.001$, 95% CI [0.17, 0.61]) and negatively correlated with the dorsal fronto-amygdala connectivity ($b = -0.24$, $p = 0.048$, 95% CI [-0.47, -0.002]) in cognitively impaired individuals. Based on these findings, in Experiment 2, the anodal tDCS over the frontopolar region (ventral frontal cortex) showed better capability of processing risky/safe information in older adults, compared with control group. Additionally, the fronto-subcortical connectivity was closely associated with enhanced decision-making performance after tDCS intervention

Conclusion These findings indicate that the fronto-amygdala network is crucial for understanding altered risky decision-making in aging. Moreover, non-invasive brain stimulation could be an effective interventional approach at the early stage of dementia. Our study would be helpful for understanding the neural mechanism of brain degeneration, and developing novel interventions for financial exploitation in aging

关键词: risky decision-making; cognitive decline; aging; tDCS; fMRI; financial exploitation

Digital Mindfulness Intervention for Mild Late-Life Depression Using The FocusZen System: A Randomized Controlled Trial

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Objective The increasing prevalence of Late-Life Depression (LLD) due to an aging population presents significant challenges to mental health care, particularly with low patient engagement and suboptimal treatment outcomes. Against this backdrop, digital mindfulness training has emerged as a promising approach due to its convenience and accessibility. This study aimed to assess the effectiveness of a novel digital intervention using the FocusZen Mindfulness Stress Relief System, a platform designed to deliver mindfulness-based therapy to individuals with mild LLD. A second-

ary objective was to explore whether changes in depressive symptoms following mindfulness intervention are associated with changes in brain electrical activity

Methods The study was conducted from March 2023 to January 2024, enrolling 200 elderly individuals from the outpatient department of Beijing Anding Hospital, affiliated with Capital Medical University, and the Yisayuan Community in Chaoyang District, Beijing. After screening, 54 individuals meeting the criteria for mild LLD were randomly assigned to either the intervention group (n=27) or the control group (n=27). This randomized controlled trial included a 6-week intervention period where the intervention group engaged in mindfulness exercises through a mobile application, while the control group received standard psychological health education. Clinical outcomes were assessed at baseline, 2 weeks, 4 weeks, and 6 weeks post-intervention using a series of standardized assessment tools, including the Hamilton Depression Scale-17 items (HAMD-17), Hamilton Anxiety Scale (HAMA), Montgomery Depression Rating Scale (MADRS), Geriatric Depression Scale (GDS), Pittsburgh Sleep Quality Index (PSQI), Mini-Mental State Examination (MMSE), and Montreal Cognitive Assessment (MOCA), to compare clinical efficacy between the two groups. Brain electrical activity was measured and compared using a wearable device provided by the FocusZen system

Results After 6 weeks, the intervention group showed significantly greater reductions in HAMD-17, HAMA, GDS, and MADRS total scores compared to the control group ($P<0.05$), and a significant increase in MOCA total scores ($P<0.05$). The difference in MMSE total score changes between the groups was not statistically significant ($P>0.05$). The intervention group also had higher efficacy rates (81.5% vs. 48.1%, $P=0.010$) and remission rates (59.3% vs. 11.1%, $P<0.001$). At the end of the intervention, the theta and alpha wave power values in the intervention group had significantly increased ($P<0.05$), and there was a negative correlation between alpha wave power and corresponding HAMD-17 total scores at all assessment points ($P<0.05$)

Conclusion This study indicates that the digital mindfulness intervention based on the FocusZen Mindfulness Stress Relief System can significantly improve

anxiety, depression, and sleep symptoms in patients with mild LLD and may have a positive impact on cognitive function. The mechanism by which mindfulness training improves depressive symptoms may be related to the increased power of alpha and theta waves, although further research is needed to confirm this

关键词: Late-Life Depression, EEG, Mindfulness-Based Intervention, Cognition, Anxiety, Depression

Olfactory Dynamic Functional Dysconnectivity Mediates Cognitive Impairment in Late-Life Depression

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Background Late-life depression (LLD) and odor identification (OI) dysfunction are risk factors for dementia. However, the neural mechanisms linking olfactory dysfunction to cognitive impairment in LLD remain unclear. This study investigated dynamic functional connectivity (dFC) of olfactory brain regions in LLD patients with and without OI dysfunction

Methods Resting-state functional MRI data were acquired from LLD patients with OI deficits (LLD-OID) (n=51), LLD patients without OI deficits (LLD-NOID) (n=59), and healthy controls (HC) (n=51). A sliding window approach was used to compute dFC variability between regions of interest in the primary and secondary olfactory regions. Correlation and mediation analyses were conducted to explore the relationships among abnormal olfactory dFC, OI dysfunction, and cognitive impairment in LLD patients

Results Compared to LLD-NOID and HC, LLD-OID exhibited decreased dFC variability between the right orbitofrontal cortex (OFC) and left inferior frontal gyrus (IFG), while increased variability between the right OFC and right middle frontal gyrus (MFG). No significant difference in dFC of primary olfactory regions was found between groups. LLD-NOID showed increased OFC-IFG dFC variability compared with HC.

Increased OFC-MFG dFC variability was associated with poorer performance of OI, global cognition, memory and language in LLD. Importantly, OFC-MFG dFC variability partially mediated the relationship between OI dysfunction and cognitive impairment (global cognition, memory and language)

Conclusion LLD patients with OI dysfunction exhibited more disrupted dFC in secondary olfactory regions compared with those without OI dysfunction. Dynamic OFC-MFG dysconnectivity may underlie accelerated cognitive decline and dementia risk in LLD patients

关键词: Late-life depression, Alzheimer's disease, Odor identification, Cognitive impairment, Dynamic functional connectivity

Effects of Seasonal and Meteorological Variations on Sleep in Late-onset Depression Patients

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Objective To investigate the seasonal distribution characteristics of sleep in late-onset depression (LOD) patients and to explore the effects of different meteorological parameters on their sleep, in order to provide a theoretical basis for interventions to improve the sleep of LOD patients

Method We retrospectively analyzed polysomnography(PSG) data (sleep duration, sleep efficiency, sleep latency, REM latency, N1/N2/N3/REM sleep period duration & percentage, mean oxygen saturation, minimum oxygen saturation, and oxygen saturation < 90% percentage) from 243 LOD patients hospitalized in Anhui Mental Health Center from 2019-2023 and the meteorological data (sunlight intensity, temperature, frost, humidity, wind speed, precipitation, barometric pressure, etc.) of the day were obtained at the U.S. National Centers for Environmental Information (<https://www.ncei.noaa.gov/global-summary-of-the->

[day/archive.](#)). According to the meteorological seasonal method in the northern hemisphere, we divided the patients into 66 patients in the spring group (March to May), 78 patients in the summer group (June to August), 56 patients in the autumn group (September to November), and 43 patients in the winter group (December to February); We also grouped LOD patients according to the characteristics of each meteorological parameter. Finally, we performed intergroup comparisons, correlation analyses, and generalized linear model analyses of the LOD patients' sleep data and the meteorological parameters.

Results There were no significant group differences in clinical and sleep data between the four season groups of LOD patients. Compared to winter-spring group, total sleep time ($Z = -2.284$, $P = 0.022$), sleep efficiency ($Z = -2.773$, $P = 0.006$), REM latency ($Z = -2.052$, $P = 0.040$), and N3 duration ($Z = -2.185$, $P = 0.029$) were significantly higher in the summer-autumn group, and wake time ($Z = 2.170$, $P = 0.030$) was significantly lower. There were significant differences in sleep efficiency ($H = 6.676$, $P = 0.036$), N3 ($H = 8.520$, $P = 0.014$) and N3% ($H = 9.226$, $P = 0.010$) between the high, medium and low temperature groups, there were significant intergroup differences in sleep efficiency ($H = -3.608$, $P = 0.002$) and awakening time ($H = 9.342$, $P = 0.006$) for different precipitation levels. The presence or absence of N3 stage was significantly different on minimum temperature ($Z = -2.102$, $P = 0.036$), relative humidity ($Z = -2.071$, $P = 0.038$), specific humidity ($Z = -2.520$, $P = 0.012$) and barometric pressure ($Z = -2.110$, $P = 0.035$). Sleep efficiency was positively correlated with temperature ($R = 0.132$, $P = 0.039$), specific humidity ($R = 0.147$, $P = 0.022$) and minimum wind speed ($R = 0.138$, $P = 0.032$). N1 ($R = -0.134$, $P = 0.037$) and N1% ($R = -0.129$, $P = 0.044$) were negatively correlated with relative humidity, N3 ($R = 0.133$, $P = 0.038$) and N3% ($R = 0.138$, $P = 0.032$) were positively correlated with specific humidity, and awakening time was negatively correlated with temperature ($R = -0.137$, $P = 0.033$), humidity ($R = -0.138$, $P = 0.032$) and wind speed ($R = -0.152$, $P = 0.018$). The N3 period was influenced by precipitation [$B = -0.26$, 95%CI (-0.50, -0.01), $P = 0.042$]

Conclusion Seasonal fluctuations in sleep characteristics of LOD patients are small, and summer sleep is more susceptible to meteorological factors. LOD patients' sleep quality is higher in warm and humid environments. The higher the temperature, humidity and wind speed, the higher the sleep efficiency of LOD patients and the shorter the awakening period; when humidity increases, patients' sleep transition period decreases and deep sleep time is prolonged. The length of deep sleep in LOD patients is affected by the amount of precipitation, and for every decrease of 0.26 mm in precipitation, the length of N3 sleep increases by 1 min. Therefore, it is necessary to pay attention to the possible sleep problems of LOD patients in cold and dry weather conditions and make targeted interventions

关键词: late-onset depression, season, meteorology, sleep, polysomnography

社区抑郁症状轨迹及其对认知功能的影响： 基于中国社区队列

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目的 老年抑郁症(Late life Depression, LLD)或抑郁症状的转归异质性高, 而发展为痴呆是 LLD 区别于其他年龄抑郁症的特征性转归。多时间节点评估抑郁症状变化轨迹是特征之一, 可能对认知功能的影响存在差异。探索抑郁症状不同变化轨迹是否对认知功能的影响存在差异。

方法 在上海市 SHAPE 社区队列 546 人中进行 3 年, 至少 3 次以上的随访评估, 调查采用老年抑郁量表(GDS-30)评估情绪, 蒙特利尔认知测评(MoCA)及全套神经心理测试(NTB)评估情绪。据多次访视节点, 分析抑郁量表的波动性, 采用潜变量分类法, 将抑郁症状严重程度进行轨迹分类, 采用线性混合模型探索不同抑郁轨迹对随访的认知功能的影响。模型对性别、年龄、受教育年限、吸烟、饮酒等生活方式, 高血压、糖尿病等慢性疾病, 及基线认知功能进行校正。在中国健康与养老追踪调查(CHARLS)队列 8454 人中进行验证, 采用简版流调中心抑郁量表(CESD-10)评估抑郁情绪, 采用电

话认知功能问卷(TICS)调查认知功能。采用相同统计方式进行验证。

结果 在 SHAPE 队列和 CHARLS 两个队列中, 抑郁症状均分为四种轨迹。SHAPE 队列中分为: 无抑郁组(82.9%), 抑郁恢复组(4.2%), 高抑郁组(3.1%), 阈下抑郁组(9.8%)。CHARLS 队列中分为: 无抑郁组(64%), 抑郁恢复组(14%), 抑郁升高组(15%), 高抑郁水平组(7%)。SHAPE 队列中高抑郁水平组对随访中语言流畅度下降有影响($p=0.034$)。其他轨迹对随访的认知影响差异不显著。CHARLS 队列中抑郁升高组在随访中认知功能下降显著, 包括整体认知、词语回忆、计算力及定向力($p=0.001\sim 0.008$)。持续高抑郁水平组对认知功能的影响与抑郁升高组结果一致($p=0.001\sim 0.025$)。在校正其他协变量后, 结果保持一致。而抑郁恢复组在随访中认知功能未见显著影响, 尤其在词语回忆方面($p=0.782$)。

结论 本研究发现社区队列中多节点抑郁评估有助于划分抑郁症状轨迹, 对认知功能下降提供预警。

关键词: 老年抑郁症; 认知功能; 队列; 轨迹

Double-strand-break Repair Protein Rad21 Homolog/Synaptotagmin-7 Alleviates Alzheimer's Disease in Mice by Promoting M2 Polarization of Microglia

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Objective This study aimed to explore the potential therapeutic role of Synaptotagmin-7 (SYT7) in Alzheimer's disease (AD) by investigating its impact on cognitive impairment. Specifically, we focused on assessing whether targeting SYT7 could be a viable treatment strategy for AD

Methods Using APP/PS1 mice as an AD model, we conducted RNA-sequencing analysis to compare gene expression in the brains of AD mice and control mice. SYT7, identified as a significantly differentially expressed gene, was then investigated further. Through overexpression of SYT7 in AD mice, we evaluated its effects on cognitive function, neuroinflammation, and neuronal loss. Additionally, we studied the regulation of SYT7 by the transcription factor RAD21 and examined microglia polarization to understand the roles of SYT7 and RAD21 in microglial function

Results Our study revealed a notable decrease in SYT7 expression in AD-like mice compared to controls. Overexpressing SYT7 in AD mice led to improvements in cognitive function, reduction of neuroinflammation, and prevention of neuronal loss in the hippocampus. We also uncovered that RAD21 binds to the SYT7 promoter, activating its transcription. Both SYT7 and RAD21 were expressed in microglia and promoted M2 polarization of these cells. Conversely, silencing SYT7 hindered M2 polarization of microglia, even with RAD21 overexpression

Conclusion To summarize, RAD21's role in activating SYT7 transcription enhances M2 polarization of microglia, offering potential benefits for alleviating AD-like symptoms in mice. These findings suggest promising avenues for developing therapies to address cognitive impairment and disease progression in AD. Further research is essential to fully understand the mechanisms underlying the protective effects of SYT7 and RAD21 and to translate these insights into clinical applications

关键词：Alzheimer's disease, SYT7, RAD21, Neuronal loss, Microglia

Discovery of A Novel Tau PET Tracer 18F-HXT-05: Synthesis, Radio-labeling, and Pre-clinical Evaluations

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Objective Alzheimer's Disease is the major cause of dementia and usually affects people aged over 65, and brings a more and more serious medical and social burden worldwide for decades. Highly specific PET tracers are powerful tools to research brain disorders such as AD, which is found to be associated with misfolded tau aggregates in the brain. Tau PET tracers have shown its powerful capacity in clinical for early diagnosis of AD, as well as evaluations of AD therapies. However, the off-target issues for the first-generation tau tracers and the choroid plexus accumulation for the second-generation tau tracers hindered the clinical applications of these tracers. In recent years, tau PET tracer related studies have been focused on the optimization imidazo[1,2-a]pyridine scaffold, which showed promising properties in previous structure-relationship studies with tau aggregates. The aim of this study is to develop an optimized PET tracer with high affinity against tau aggregates, low off-target binding and more sensitive to early tau lesion in the brain of AD patients

Methods A series of imidazo[1,2-a]pyridine analogues were synthesized with the introduction of fluorine atom, and the binding with tau protein were tested by in vitro competition binding experiments. The subsequent radio-labeling experiments were then performed with the most active compound, HXT-05, and the radio-labeled compounds (18F-HXT-05) were then evaluated for in vitro stability and autoradiography binding profiles with brain slices of AD patients. In addition, PET imaging studies were also performed in health mice and rhesus macaques for biodistribution studies and evaluation of brain penetration of the 18F-HXT-05. Furthermore, PET imaging on AD mice (P301L transgenic mouse) were also performed to evaluate the in vivo binding properties of 18F-HXT-05

Results All compounds, including the radio-labeling precursors, were successfully synthesized, and characterized. In vitro screen led to the discovery of compound HXT-05, which showed potent binding to aggregated tau and hence was evaluated in the subsequent experiments. 18F-HXT-05 was produced in about 40% radiochemical yield ($n = 5$, decay uncorrected), greater than 99% radiochemical purity, and with 12.5 ± 3.1 ($n = 3$) GBq/ μmol of molar activity at the end of synthesis,

respectively. The log P value of 18F-HXT-05 was 2.07 ± 0.10 , and it displayed high stability in PBS saline and rat serum. According to the biodistribution profiles from tissue harvest and PET images (health mice and rhesus macaques), 18F-HXT-05 showed comparable initial brain uptake. However, a fast clearance of tracer from brain was also observed, and almost 60% of total activity from brain was washed out at 5 min post-injection. Compared with normal mice, tracer uptake in P301L transgenic mouse is higher in PET imaging studies for 1 hour post injection. A similar accumulation of radio signal and tau-positive area was found in autoradiography images and immunohistochemistry slices, which confirmed the selective binding of 18F-HXT-05 to tau protein

Conclusion 18F-HXT-05 was successfully synthesized, and it exhibited high stability in rat serum and selective binding to aggregated tau protein in vitro. Compared with normal mice, P301L transgenic mice displayed higher brain uptake of 18F-HXT-05 for 1 hour post injection. The selective binding of 18F-HXT-05 to tau protein was confirmed by autoradiography. Further optimizations of 18F-HXT-05 analogues to evaluate/strength its capacity to detect early tau lesion in the brain of AD patients are currently under investigations

关键词: AD, Tau, PET, Tracer

进食障碍研究协作组

基于氧化应激和炎症反应探讨铜代谢紊乱影响女性抑郁症的机制

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目的 既往研究发现铜代谢紊乱与抑郁症(MDD)的关系密切。在雌激素的影响下,机体对铜代谢紊乱表现出性别差异,可能是导致女性MDD高发的重要原因。因此,本研究拟结合临床研究与动物实验,探索MDD患者与抑郁样小鼠的铜代谢、氧化应激及炎症反应特征,并分析其性别差异。

方法 研究纳入85例首诊未服药的成人MDD患者(男性35例,女性50例)与72例健康对照(HC)(男性38例,女性34例)。所有受试者需进行临床症状量表评估和外周血采集,检测受试者的血清雌二醇(Estradiol, E2)、铜代谢、氧化应激以及炎症因子水平。然后通过慢性不可预知温和刺激(CUMS)构建抑郁模型小鼠,运用比色法、酶联免疫吸附测定、实时荧光定量聚合酶链反应、免疫荧光、RNA-Seq等分子生物学手段,验证雌性抑郁样小鼠的铜代谢紊乱、氧化应激及炎症反应特征。最后通过铜抑制剂四硫代钼酸盐(TTM)干预,观察对雌性小鼠抑郁样行为的影响及其病理生理变化。

结果 (1)与HC组相比,MDD组的血清铜离子和铜蓝蛋白(Cp)、丙二醛(MDA)、白介素6(IL-6)和肿瘤坏死因子 α (TNF- α)水平显著升高,血清铜离子转运ATP酶 α 肽(Atp7a)、E2、还原型谷胱甘肽(GSH)水平则显著降低。与男性相比,女性MDD患者表现出降低的抗氧化能力和增强的促炎反应,且观察到女性MDD患者的血清E2水平与Atp7a蛋白和MDA的相关性。

(2)与对照小鼠对比,两性CUMS小鼠均表现出铜代谢紊乱。雌性CUMS小鼠的血清GSH水平较雌性对照小鼠显著下降,且雌性CUMS小鼠的前额叶和海马小胶质细胞数量较雌性对照小鼠增多,而在雄性鼠中未发现类似差异。RNA-Seq和生物信息学分析结果显示,雌性抑郁样小鼠的炎症反应和活性氧代谢通路被激活。

(3)与雌性CUMS小鼠相比,CUMS+TTM处理的雌性小鼠的抑郁样行为改善,且使雌性CUMS

小鼠高铜代谢水平回落至正常,使上调的 Atp7a 和 Cp mRNA 表达回落至对照水平。TTM 处理能够使雌性 CUMS 小鼠升高的血清 MDA 和降低的血清 GSH 水平以及超氧化物歧化酶活性恢复至正常水平。同时,TTM 干预能够使雌性 CUMS 小鼠升高的血清 IL-6 和 TNF- α 水平以及前额叶和海马区域激活增多的小胶质细胞回落至正常水平。此外,我们观察到小鼠 E2 水平在铜代谢调节过程中发生变化。

结论 铜代谢紊乱与抑郁表型关系密切,且铜代谢紊乱介导的氧化应激损伤和炎症反应可能是导致 MDD 发生的重要机制。因雌激素水平波动,女性在面对铜代谢紊乱及其氧化应激和炎症反应时表现出脆弱性,这可能是女性高发 MDD 的重要原因。

关键词: 抑郁症,女性,铜代谢,氧化应激,炎症反应

神经性厌食患者肠道菌群特征初探

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目的 1. 探索神经性厌食患者的肠道菌群结构(多样性、菌属组成等)与健康对照的差异。2. 探索神经性厌食患者及健康对照的肠道菌群结构与临床参数(如体质量指数(Body mass index,BMI)、进食障碍症状、情绪症状、功能性消化道症状等疾病相关病理学症状等)的关系。

方法 本研究于 2022 年 2 月至 2023 年 2 月期间,从上海市精神卫生中心临床心理科住院部招募神经性厌食患者 41 人,并招募性别、年龄匹配的健康对照 46 人。使用 16S rRNA 基因测序检测患者及健康对照的肠道菌群多样性及种属分布情况,通过进食障碍检查自评问卷 6.0 (EDE-Q 6.0)量表评估被试的进食障碍症状,通过胃肠道症状分级评分量表(GSRS)评估被试的功能性消化道症状,探索肠道菌群与各临床参数的关系。

结果 1. 对于 alpha 多样性,患者组的 Shannon 指数显著高于对照组;对于 beta 多样性,两组在菌群组成方面存在明显差异($p < 0.001$)。在门的水平上,厚壁菌门、变形菌门等在患者组中显著富集;在属的水平上, Bacteroides、Blautia、Alistipes 和 Parabacterioides 等菌属在患者组中显著富集。未发

现限制型 AN ($n=30$) 和暴食清除型 AN ($n=11$) 组间菌群存在显著差异($p > 0.05$)。未发现用药的 AN 患者 ($n=19$) 和不用药的 AN 患者 ($n=22$) 组间的肠道菌群差异($p > 0.05$)。

2. 基于 Spearman 相关性分析,拟杆菌门与 BMI 正相关($r=0.367, p < 0.001$),与饮食限制负相关($r=-0.304, P=0.004$);变形菌门、厚壁菌门则与 BMI 呈负相关(分别为 $r=-0.221, P=0.040$; $r=-0.248, P=0.021$)。螺旋体门与胃肠道症状正相关($r=0.250, P=0.020$),拟杆菌门与胃肠道症状负相关($r=-0.235, P=0.028$)。Prevotella 与进食障碍症状($P < 0.05$)和病程($r=-0.299, P=0.005$)负相关,与 BMI ($r=0.446, p < 0.001$)正相关;Blautia 与进食障碍症状($P < 0.01$)和病程($r=0.281, P=0.008$)正相关,与 BMI 负相关($r = -0.407, p < 0.001$)。

结论 神经性厌食患者的肠道微生物多样性显著升高,与健康对照的菌群结构差异明显,主要表现为厚壁菌门、变形菌门的显著富集,和拟杆菌门含量降低。部分菌群与进食障碍相关病理学症状存在显著相关性。

关键词: 神经性厌食;进食障碍;肠道菌群;16S rRNA 基因测序

默认模式网络静息态功能连接预测强迫症药物治疗与心理治疗疗效

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目的 强迫症是一种以反复出现的侵入性思维或重复行为为特征的精神疾病,一线治疗方案为选择性 5-羟色胺再摄取抑制剂(selective serotonin reuptake inhibitors, SSRIs)和认知行为疗法(cognitive behavioral therapy, CBT)。然而,这两种疗法的疗效存在较大的个体差异,亟需客观的疗效预测指标来预测疗效,辅助临床治疗方案的选择。默认模式网络(Default mode network, DMN)静息态功能连

接在以往研究中得到了广泛关注,被认为是一种有潜力的疗效预测指标。本研究旨在探索使用 DMN 静息态功能连接预测强迫症两种一线治疗方案的疗效。

方法 共 80 名未用药强迫症患者在治疗前接受了磁共振扫描,然后被随机分配到 SSRI 组或 CBT 组接受 12 周的治疗。耶鲁布朗强迫量表得分变化率作为主要疗效指标。我们探索了 DMN 静息态功能连接与疗效的关系,并提取出可以显著预测疗效的指标,结合线性支持向量机算法,探索整体的预测效果。

结果 (1) DMN 静息态功能连接中存在可同时预测两种疗法疗效的指标(疗法一般性疗效预测指标),也存在预测两种疗法存在显著差异的指标(疗法特异性疗效预测指标)。(2) 通过支持向量机算法,使用疗法一般性疗效预测指标可有效预测整体疗效($r=0.608$);而使用疗法特异性疗效预测指标可分别正向预测自身(SSRI: $r=0.552$; CBT: $r=0.703$),并负向预测另一种治疗方案的疗效(SSRI 预测 CBT: $r=-0.438$; CBT 预测 SSRI: $r=-0.504$)。

结论 默认模式网络静息态功能连接可有效预测强迫症两种一线治疗方案的疗效,在辅助临床治疗方案的选择上具有一定的潜力。

关键词: 强迫症;默认模式网络;静息态功能连接;疗效预测

精神康复协作组

我国三级公立精神专科医院康复科建设现状与对策研究

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目的 了解我国一级行政区卫生健康委直属的三级公立精神专科医院康复科的设施配置、从业人员、康复评定技术、康复服务项目、科研及教学情况,为卫生管理部门制定精神专科医院康复科建设标准和精神卫生服务政策提供科学依据。

方法 研究对象是我国现行除香港特别行政区、澳门特别行政区、台湾省,31 家一级行政区卫生健康委直属的三级公立精神专科医院康复科,由于个别医院未设置康复科,以及拒绝配合调查等,最终调查 24 家医院的康复科,经多次核对后问卷有效率 100%。通过初录、核实的方法录入数据,再通过 Excel 办公软件建立数据库,运用 Spss25.0 统计软件对调查数据进行统计分析。调查方法是普查,所选择的调查对象即为研究的总体,故对总体数据只需进行描述性统计即可,无需进行统计学推断。

结果 1.康复科设施配置情况。各医院康复科门诊和治疗室建筑面积占建筑总面积的比例范围是 0.3%~21.4%。8 家医院康复科配置实际开放床位,床位使用率的范围是 15%~110%,床位周转次数的范围是 0.3~13.1 次,2021 年出院者平均住院日的范围是 14.4~76 天。23 家医院配置了万元以上康复设备,医院西 04、中 05 分别配置了 66 台和 65 台万元以上康复设备,其中 9 家医院配置了国外进口康复设备,18 家医院配置了认知矫正治疗设备,14 家医院配置了心理 CT 测评系统和运动治疗设备。

2.康复从业人员情况。24 家医院康复科共有从业人员 691 名,其中康复医师共 112 名,构成比是 16.2%,康复治疗师共 117 名,构成比是 16.9%,心理治疗师共 89 名,构成比是 12.9%,护理人员共 304 名,构成比是 44.0%,其他人员共 69 名,构成比是 10.0%。

3.康复评定技术及服务项目配置情况。22 家医

院配置日常生活能力评定技术, 17家医院开展相关临床疾病早期介入康复服务。配置作业治疗、音乐治疗、特殊工娱治疗、生物反馈治疗康复服务项目的医院比例超过70%。

结论 面对床位管理和康复设备的优化需求, 医院可以采用基于病例特点和需求的科学方法, 以提升床位使用效率和资源的合理配置。相关部门须积极应对从业人员选择该领域的职业障碍, 包括社会偏见和职业发展的限制, 并加快建立康复治疗师规范化培训制度与准入标准, 以及开展继续教育和转岗技能培训, 来提高从业人员的岗位胜任力, 满足精神卫生领域的康复医疗需求。医院应通过精细化的康复评定、及时的早期介入服务和多样化的康复服务项目, 为患者提供全面、个性化的康复支持。教学与科研应紧密结合, 通过早期临床接触和跨学科合作的教学模式, 培养具有创新能力的康复专业人才, 以提高精神康复服务的整体质量和效率。

关键词: 医院管理;精神卫生;精神康复

Exploratory Study on The Relationship Between Negative Symptoms and Self-Stigma in Schizophrenia and Its Impact on Quality of Life

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Objective To explore the relationships among negative symptoms, self-stigma, and quality of life in patients with schizophrenia, and to examine how self-stigma impacts quality of life in groups with high and low negative symptoms.

Methods A cross-sectional study was conducted involving 403 inpatients with schizophrenia at Beijing Huilongguan Hospital from May to October 2023. Participants were assessed using various scales including the Positive and Negative Syndrome Scale (PANSS),

Self-Esteem Inventory (SEI), Connor-Davidson Resilience Scale (CD-RISC), Internalized Stigma of Mental Illness (ISMI) Scale, Schizophrenia Quality of Life Scale (SQLS), Coping Questionnaire for Schizophrenic Patients (CQSP), and Social Support Rating Scale (SSRS). Statistical analyses included descriptive statistics, correlation analysis, and regression.

Results This study found significant correlations between negative symptoms and self-stigma, as well as its subfactors. In the group with high negative symptoms, Objective support from the Social Skills Rating Scale ($T = -3.409, p = 0.001$), and coping style 2 (Avoidance) ($T = 5.631, p < 0.001$) showed a significant influence on self-stigma, while in the group with low negative symptoms, only the avoidance coping style 2 ($T = 4.704, p < 0.001$). The influence of self-stigma on quality of life differed between groups, in the group with low negative symptoms, Internalized Stigma of Mental Illness (Stereotype Endorsement) ($T = 2.095, p < 0.037$) and Internalized Stigma of Mental Illness (Stigma Resistance) ($T = 2.027, p = 0.044$) significantly influenced the quality of life. However, in the group with high negative symptoms, there was no significant impact on the quality of life.

Conclusion Negative symptoms of schizophrenia are closely related to self-stigma, which in turn affects the quality of life. The impact of self-stigma on quality of life differs between groups with high and low negative symptoms. Clinically, interventions targeting coping strategies and social support systems can improve self-stigma

关键词: Schizophrenia, Negative Symptoms, Self-Stigma, Quality of Life

抑郁症患者长期药物治疗后功能恢复状况及相关预测因素的探讨

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目的 探究长期的药物治疗过程中抑郁症患者社会功能及生活质量的变化规律, 并探索能预测急

性期及远期功能恢复情况的影响因素。

方法 本研究采用纵向设计,在基线以及药物治疗后1、2、3、6、9和12个月使用汉密尔顿抑量表(HAMD-17)、抑郁症状快速自评量表(QIDS-SR16)、席汉残疾量表(SDS)、生活质量与满意度程度问卷(Q-LES-Q-SF)对抑郁症状和社会功能进行评估,根据SDS各项评分定义社会功能是否恢复正常,采用多因素Logistics回归分析早期指标对急性期、远期功能恢复的影响。

结果 54例抑郁症患者中,有27例完成了为期12月的随访,其中2例在12月末时复发。社会功能和生活质量在1年内持续升高,前2个月缓解最明显。治疗1年后92%(23/25)的患者实现了症状缓解,64%(16/25)的患者达到功能缓解,两者均缓解的患者占60%(15/27)。1月末QIDS-SR16总分可以预测急性期(3月末)治疗后的功能水平($B=0.585, P=0.002$),急性期治疗后工作/学业水平还与1月末HAMA评分有关($B=0.105, P=0.03$)。3月末的功能水平、抑郁症状严重程度、残留核心情绪症状、体重/食欲改变可能影响12月末功能恢复情况,其中自评抑郁症状严重程度(QIDS-SR16总分)可以独立预测12月末的功能恢复($OR=0.674, P=0.009$)。

结论 长期、规律的药物可持续改善患者的功能障碍,早期的抑郁症状严重程度可以预测远期的社会功能恢复状况。

关键词: 抑郁症; 药物治疗; 随访; 社会功能; 生活质量

精神运动康复对住院精神分裂症康复期患者的治疗效应

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目的 本研究旨在评估精神运动康复对康复期精神分裂症患者的临床疗效,特别是对其精神症状、认知功能及生理指标的影响。

方法 将64例来自上海市民政第一精神卫生中心的康复期精神分裂症患者随机分为干预组和对

照组各32例,干预组在常规治疗基础上进行20次精神运动康复训练,对照组仅接受常规治疗。干预周期为10周,分别在治疗前、治疗5周时、治疗10周时对两组患者使用以下量表进行评估:阳性和阴性症状量表(PANSS)、自知力与治疗态度问卷(ITAQ)、个人和社会功能量表(PSP)、卡尔加里精神分裂症抑郁量表(CDSS)、总体幸福感量表(GWB)、自尊量表(SES)和简易智力状况检查法(MMSE)。此外,使用重复性成套神经心理状态测验(RBANS)对患者的认知功能进行评估,并在干预组治疗前后检测其外周血中的白介素6(IL-6)、肿瘤坏死因子(TNF- α)和人脑源性神经营养因子(BDNF)水平。

结果 干预组在10周后阳性和阴性症状量表(PANSS)得分显著降低($P<0.05$),表明精神症状得到明显改善。自知力与治疗态度问卷(ITAQ)得分提高($P<0.05$),患者对疾病的认识和治疗态度有所改善。个人和社会功能量表(PSP)评分显著提高($P<0.05$),患者的日常生活功能和社会交往能力增强。卡尔加里精神分裂症抑郁量表(CDSS)得分降低($P<0.05$),抑郁症状有所缓解。总体幸福感量表(GWB)和自尊量表(SES)得分显著提高($P<0.05$),患者的主观幸福感和自尊水平有所提升。简易智力状况检查法(MMSE)和重复性成套神经心理状态测验(RBANS)结果显示,干预组患者的认知功能有所改善($P<0.05$)。生理指标方面,干预组IL-6和TNF- α 水平显著降低($P<0.05$),表明炎症反应减弱;BDNF水平显著升高($P<0.05$),神经营养支持增强。

结论 精神运动康复在改善康复期精神分裂症患者的精神症状、认知功能及社会功能方面具有显著疗效,同时对降低炎症指标和提高神经营养因子水平有积极作用。这一康复方法可作为精神分裂症康复期患者的有效辅助治疗手段。

关键词: 精神分裂症,精神运动康复,疗效,社会功能

HD-tDCS对慢性精神分裂症患者小脑后叶功能连接及其认知功能相关性研究

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目的 慢性精神分裂症患者大多存在认知功能损伤。本研究主要研究高精度经颅电刺激(HD-tDCS)对认知缺陷精分患者的作用,利用静息态功能磁共振成像(rs-fMRI)数据分析小脑后叶 ALFF 值、全脑功能连接及其与认知功能的相关性,探索 tDCS 治疗精神分裂症患者的神经作用机制。

方法 选取符合 DSM-IV 诊断标准的 71 名慢性精神分裂症患者,采用随机、双盲、伪刺激对照的实验方法,将 71 名被试分为 tDCS 治疗组和 tDCS 伪刺激组。所有被试使用 HD-tDCS 装置(Soterix Medical Inc., USA)进行 tDCS 或伪 tDCS 连续 10 天的干预(20min/day)。干预前、后 10 天,被试均完成了完整的临床评估、神经心理学评估和 MRI 数据采集,使用 PANSS 量表评估临床症状、神经心理状态评估量表(RBANS)评估其认知功能。治疗前后这些患者均采集 T1 BROVA、BOLD 数据,使用 DPABI 工具包分别计算两组被试治疗前后 ALFF 值并进行统计分析,以显著性差异的脑区作为感兴趣区(ROI),做全脑功能连接,并对治疗前后 FC 值做配对 T 检验,提取显著性差异脑区的 FC 值,将两组治疗前后 FC 值与 PANSS、RBANS 量表做偏相关分析。

结果 tDCS 治疗组与 tDCS 伪刺激组 ALFF 值统计分析的结果显示:与治疗前相比,tDCS 治疗组,治疗后 ALFF 显著增强的脑区为小脑后叶(双侧)($p < 0.01$, GRFcorrected);而 tDCS 伪刺激组,未发现 ALFF 值治疗前后存在显著性差异的脑区。小脑后叶全脑 FC 的结果显示,tDCS 治疗组小脑后叶 FC 显著增强的脑区有左侧海马、左侧小脑后叶和右侧海马。在 tDCS 治疗组,小脑后叶与右侧海马的 FC 值治疗前后变化率与 PANSS 总分变化率呈显著正相关($R=0.492$, $p=0.015$)、与 RBANS-词汇再识总分变化率呈显著正相关($R=0.598$, $p=0.002$)、与 RBANS-延时记忆变化率呈显著正相关($R=0.438$, $p=0.032$)。tDCS 伪刺激组,小脑后叶与右侧海马 FC 值治疗前后与 PANSS、RBANS 各指标均无相关性。

结论 tDCS 治疗组与 tDCS 伪刺激组比较,ALFF 值在 tDCS 组治疗前后小脑后叶出现显著性增强,说明 tDCS 对慢性精分患者脑功能活动有一定的改善,尤其是小脑后叶的自主脑神经活动有所增强。小脑后叶与右侧海马在 tDCS 治疗后功能连接增强,而且,其 FC 值治疗变化率与 PANSS、RBANS 变化率呈显著相关,这可能部分揭示了 tDCS 改善

脑功能的神经作用机制。同时,对小脑后叶在认知和情绪调控方面的作用有了更深入的认识。

关键词: HD-tDCS, 慢性精神分裂症, 小脑, 功能连接, 认知功能

民族心理与精神医学学组

Gender Difference in Correlation between Mental Symptoms and 10-year Cardiovascular Risk in Schizophrenia

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Objective People with Schizophrenia have a shorter life expectancy than the general population, Cardiovascular disease (CVD) is the leading cause of death. The Framingham risk score (FRS) is a gender-specific multivariate risk factor algorithm that can be used in the clinical setting to estimate the 10-year risk of CVD and individual cardiovascular events. However, the current consensus on the correlation between psychiatric symptoms and cognitive function with FRS remains inconclusive, and there has been a lack of research addressing gender differences in this association. This study is focused on investigating the relationship between clinical characteristics and 10-year cardiovascular risk in individuals of different genders with Schizophrenia

Methods 802 patients with a diagnosis of Schizophrenia were included in the sample of this study. The Positive and Negative Syndrome Scale (PANSS) was administered to each patient to assess symptom severity of schizophrenia. To evaluate the patient's cognitive function, the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) was utilized. The Framingham risk score (FRS) was employed to estimate the participant's 10-year CVD risk

Results The patients had a 10-year CVD risk of $11.76\pm 8.99\%$ and an estimated vascular age of 58.18 ± 15.46 years. The average total score of the PANSS scale for the 802 patients was 75.49 ± 17.35 points, with an average positive score of 16.08 ± 5.68 points, which was higher in women than in men. In the RBANS scale, the total score was 67.68 ± 14.78 points, with the average visual breadth at 80.17 ± 19.17 points and speech function at 81.49 ± 15.04 points, where the

male score was higher than the female score. The attention score for women was 84.35 ± 16.47 points, significantly surpassing that of men ($P=0.007$). Notably, 36.3% of patients exhibited a high-risk 10-year cardiovascular disease level, while 16.5% of patients had intermediate risk. Furthermore, The FRS for male patients was 14.85 ± 9.38 , significantly exceeding the score for female patients (6.91 ± 5.60). The study found that there was a significant correlation between gender and FRS. FRS was significantly associated with age, age at first onset, years of education, WHR, SBP, GLU, HDL, diabetes, and hypertension in both males and females. Interestingly, we found that FRS was significantly associated with Positive and Negative scores, total RBANS scores, immediate memory, speech function and attention in males only. Multivariate linear regression analysis showed that FRS increased with the increase of BMI, Blood Pressure, Glucose, Total Cholesterol and Triglyceride levels, the relationship with HDL was inverse. The general psychopathological scale score was negatively associated with FRS (male: $B=-0.086$, $P=0.013$; female: $B=-0.056$, $P=0.039$). Negative scale score (male: $B=-0.088$, $P=-0.024$; female: $B=-0.022$, $P=0.499$) and total PANSS score (male: $B=-0.042$, $P=-0.013$; female: $B=-0.023$, $P=0.100$) showed a negative association with FRS only in males. No correlation has been found between the total RBANS score and its sub-scores with FRS. In addition, only in patients over 60 years old, general psychopathology ($B=-0.168$, $P=0.001$) and PANSS total score ($B=-0.057$, $P=0.041$) may reduce FRS, and immediate memory ($B=0.073$, $P=0.025$) may be associated with higher FRS

Conclusion A significant correlation was observed between the 10-year cardiovascular risk and general psychopathological symptoms in this study. Notably, we found that there was a negative correlation between negative symptoms and FRS only in males. Suggesting that we should take differentiated interventions to reduce the risk of CVD in patients of different genders in clinical practice

关键词: Framingham risk score, Cardiovascular disease, Schizophrenia, Gender

后疫情时代四川省青少年及青年学生的心理健康：基于 2022 年和 2023 年两次大规模调查的研究

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目的 本研究基于 2022 年和 2023 年四川省青少年及青年学生心理健康的两次大规模调查数据进行分析，旨在揭示新冠疫情之后，青少年和青年学生的心理健康问题（如抑郁、焦虑、创伤后应激障碍、睡眠障碍、网络成瘾）和不良行为（如校园霸凌和网络霸凌）的现状，为相关政策和干预服务的制定提供实证支持。

方法 本研究基于在中国四川省初中、高中和大学进行的 2 次大样本、横断面的在线调查。第一次调查时点为 2022 年 12 月 16 日，有效样本为 64624 人；第二次调查时点为 2023 年 12 月 16 日，有效样本为 55773 人。研究采用“问卷星”的方式进行线上问卷自评。问卷分为三大部分，第一部分包括基本信息；第二部分包括心理健康相关问卷；第三部分包括不良行为相关问卷。参与者在第一次调查为第一组，参与第二次调查为第二组。本研究使用方差分析的方法对两次调查的参与者的人口资料和量表资料进行了比较分析，并采用卡方检验。

结果 组一中女性参与者比例为 58.3%，组二中这一比例为 62.1% ($p < 0.001$)。组一的少数民族参与者比例为 10.6%，组二中这一比例为 7.8% ($p < 0.001$)。在年级方面，组一的初中生和高中生比例分别为 29.7% 和 42.2%，组二中这两个比例分别为 19.7% 和 29% ($p < 0.001$)。权威式教养方式占 55.1% 和 56.1% ($p < 0.001$)。不同时间点的青少年心理健康和行为问题如网络成瘾症状，睡眠问题，焦虑症状，校园霸凌和网络霸凌存在显著差异：网络成瘾 ($IAT \geq 40$) 在组一中占 59.8%，在组二中占 58.6% ($p < 0.001$)。睡眠问题 ($ISI \geq 8$) 在组一中占 33.5%，在组二中占 35.3% ($p < 0.001$)。焦虑症状 ($GAD-7 \geq 5$) 在组一中占 31.1%，在组二中占 31.9% ($p = 0.004$)。创伤后应激障碍 ($PTSD, PCL-5 \geq 33$) 在组一中占 11.4%，在组二中占 9.4% ($p < 0.001$)。校园霸凌在组一中占 22.4%，在组二中占 18.4% ($p < 0.001$)。网络霸凌在组一中占 16.9%，在组二中占 17.3% ($p = 0.047$)。但是抑郁症状 ($PHQ-9 \geq 5$) 在两组间无

显著差异 ($p = 0.349$)。

结论 研究结果显示，在后疫情时代的不同时间点，青少年和青年学生在心理健康和行为方面存在显著差异。其中，网络成瘾、PTSD 和校园霸凌比例下降，但睡眠问题、焦虑症状和网络霸凌比例上升。应重点关注青少年和青年学生的心理健康和行为问题，特别是抑郁、睡眠、焦虑和网络霸凌问题，发展有针对性的学生心理健康政策和心理社会干预服务，推动家-校-医-社合作，持续促进青少年和青年学生的心理健康。

关键词：青少年，青年学生，心理健康，行为问题，后疫情时代

Effect of Dynamic Interpersonal Therapy on The Improvement of Mentalizing in Patients with Major Depressive Disorder and Its Association with Changes in Depressive Symptoms

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Objective Dynamic Interpersonal Therapy (DIT) is a short-term psychodynamic psychotherapy that has been shown to effectively reduce depressive symptoms in patients with major depressive disorder (MDD). In DIT, the presenting symptoms of depression are formulated as a response to impaired mentalization. DIT aims to alleviate depressive symptoms by improving mentalizing. This study aimed to address the effect of DIT on the improvement of mentalizing and its association with changes in depressive symptoms

Methods Outpatients received either DIT combined with antidepressant medication treatment (DIT group, $n = 128$) or only antidepressant medication treatment (ADM group, $n = 102$) for 16 weeks. The Hamilton Depression Rating Scale (HAMD), Patient Health Questionnaire (PHQ), and Reflective Functioning Questionnaire (RFQ) were used. The intention-to-treat principle, mixed linear models, multiple imputation, Pearson correlation analysis, and mediation analysis were conducted. The per-protocol principle was used as

sensitivity analysis

Results The DIT group had significantly lower HAMD, PHQ, RFQ-U, and higher RFQ-C scores than the ADM group at posttreatment ($p < 0.05$). Only the DIT group showed RFQ-C ($p < 0.001$) and RFQ-U improvements from pre- to post-treatment ($p < 0.001$). The change in RFQ-C was significantly correlated with the change in HAMD ($r = -0.218, p = 0.015$). The change in RFQ-U was significantly correlated with the change in HAMD ($r = 0.269, p = 0.004$) and the change in PHQ ($r = 0.343, p < 0.001$). When using RFQ-U as the mediating variable and PHQ as the dependent variable, a significant mediating effect was found [$p = 0.043, 95\% CI = (0.024, 1.453)$]

Conclusion DIT group yielded a better outcome than ADM alone in reducing depressive symptoms and improving mentalizing. The changes in mentalizing covaried with the reduction of depressive symptoms. Mentalizing may be a factor producing therapeutic changes in DIT for MDD

关键词: major depressive disorder; mentalizing; Dynamic Interpersonal Therapy

未服药强迫症患者边缘与三重网络的静息态网络功能与SSRIs的疗效相关研究

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目的 强迫症 (Obsessive-compulsive disorder, OCD) 是一种常见的慢性精神疾病, 选择性 5-羟色胺再摄取抑制剂 (Selective Serotonin Reuptake Inhibitors, SSRIs) 是目前治疗 OCD 的一线药物。SSRIs 治疗 OCD 有效的神经机制并不明确, 有可能是作用于额-边缘环路, 但传统的额-边缘环路没有充分考虑大脑高级皮层的作用。“三重网络”——默认模式网络 (Default mode network, DMN)、突显网络 (Salience network, SN) 和额顶网络 (Fronto-parietal network, FPN) 是认知控制最核心的皮质网络。对于 OCD 边缘网络 (Limbic network, LIM) 与“三重网络”之间交互作用的研究尚不充分。

方法 共招募了 84 名未服药 OCD 患者与 90 名健康受试者 (Health controls, HCs), 其中 40 名 OCD 患者接受了 12 周的 SSRIs 治疗, 并根据 8 周时的耶鲁-布朗强迫量表 (Yale-Brown Obsessive Compulsive Scale, Y-BOCS) 减分率是否大于等于 35% 将这部分患者分为两个疗效亚组。比较 OCD 组与 HC 组以及 OCD 疗效亚组间的网络指标差异, 提取存在显著组间差异的网络指标, 采用重复测量线性混合效应模型对 SSRIs 进行疗效预测。

结果 与 HCs 相比, 治疗前未服药 OCD 患者的 LIM 与三重网络之间在 ROI 级别上的功能连接普遍减弱, OCD 患者 LIM 与 SN 的网络间平均功能连接强度显著降低。图论分析提示 OCD 患者 LIM 与 FPN 的全局效率更低, DMN 的局部效率更低。在 OCD 亚组间, 治疗有效组 LIM 的模块内交互作用以及 LIM 与 FPN、DMN 的模块间交互作用比治疗无效组更强。SSRIs 的疗效预测模型显示, 在有效组中, FPN 右侧颞叶的节点效率越低、LIM 与 DMN 的模块间交互作用越强, 强迫症状改善越明显, 在无效组中则相反。另外, 在所有 OCD 患者中, 更强的 LIM 与 SN、FPN、DMN 的基线网络间功能连接, 更强的 LIM 模块内交互作用预示着 SSRIs 治疗后的症状改善。

结论 未服药 OCD 患者 LIM 与 SN、FPN 及 DMN 之间的信息交流存在障碍, 可能提示了 OCD 患者皮层认知控制网络对边缘的调节能力减弱。OCD 患者异常的网络指标对 SSRIs 的疗效可能具有一定的预测作用, 更低的右侧颞叶节点效率以及更强的 LIM 与 DMN 模块间交互作用可以特异性地预测 SSRIs 治疗有效, 而 LIM 内部的功能交互可以预测 SSRIs 治疗后强迫症状的改善。

关键词: 强迫症, SSRIs, 静息态功能磁共振, 功能脑网络, 疗效预测

社会精神医学学组

A Longitudinal Network of Psychotic-like Experiences, Depressive and Anxiety Symptoms, and Adverse Life Events: A Cohort Study of 3,358 College Students

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Objective Psychotic-like experiences (PLEs), especially for persistent PLEs, are highly predictive of subsequent mental health problems. Hence, it is crucial to explore the psychopathological mechanisms underlying the occurrence and persistence of PLEs. This study aimed to explore the above issues through a longitudinal dynamic network approach among PLEs and psychological and psychosocial factors

Methods A total of 3,358 college students completed two waves of online survey (from Oct 2021 to Oct 2022). Socio-demographic information was collected at baseline, and PLEs, depressive and anxiety symptoms, and adverse life events were assessed in both waves. Cross-lagged panel network analyses were used to establish networks among individuals with baseline PLEs as well as those without

Results At baseline, 455(13.5%) students were screened positive for PLEs. Distinct dynamic network structures were revealed among participants with baseline PLEs and those without. While “psychomotor disturbance” had the strongest connection with PLEs in participants with baseline PLEs, “suicide/self-harm” was most associated with PLEs in those without. Among all three subtypes of PLEs, BEs and PI were the most affected nodes by other constructs in participants

with baseline PLEs and those without, respectively. Additionally, wide interconnections within the PLEs construct existed only among participants without baseline PLEs

Conclusion The study provides time-variant associations between PLEs and depressive symptoms, anxiety symptoms, and adverse life events using network structures. These findings help to elucidate the mechanisms underlying the occurrence and persistence of PLEs, and shed high light on future intervention targeting at individuals with PLEs

关键词: high-risk population; psychological factors; psychosocial factors;cross-lagged panel network

Clinical Risk Factors for All-cause Mortality in People with Schizophrenia: A Nine-year Retrospective Cohort Study

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Objective Schizophrenia is a severe mental illness associated with significantly elevated mortality rates. However, mortality risk factors among people with schizophrenia in low- and middle-income countries remain examined. This study aimed to explore the clinical risk factors due to all-cause mortality in people with schizophrenia

Methods We conducted a retrospective cohort study among people with schizophrenia in Guangzhou, China between January 1, 2013, and December 31, 2021. Sociodemographic, clinical, and mortality data were collected. Cox proportional hazards regression was used to identify clinical and illness-related factors associated with all-cause mortality risk

Results A total of 33080 participants were enrolled and 4,164 (12.59%) died over a mean follow-up of 69.73 (SD: 39.62) months. The overall standardized mortality rates in people with schizophrenia between 2013 and 2021 was 1606.04 (95% CI: 1583.01-1629.06). We found longer illness length (adjusted hazard ratio,

aHR: 1.27 [95% CI: 1.17-1.36]), relative stable illness (aHR: 1.18 [95% CI: 1.01-1.38] vs. stable illness) and unstable illness (aHR: 2.65 [95% CI: 1.90-3.68], vs. stable illness), and non-medical insurance payment (aHR: 2.49 [95% CI: 2.21-2.82]) were associated with higher all-cause mortality risk. Frequency of hospital stays (once: aHR: 0.46 [95% CI: 0.42-0.50], more than once: aHR: 0.23 [95% CI: 0.21-0.26], vs. no history of hospitalization) and family history of mental disorders (aHR: 0.50 [95% CI: 0.40-0.64]) were associated with lower mortality risks

Conclusion Cardiovascular and cerebrovascular diseases were the leading causes of death in this cohort of people with schizophrenia. Clinical high-risk groups should be considered to develop targeted interventions to reduce mortality in people with schizophrenia

关键词: Risk factors, All-cause mortality, Schizophrenia, Retrospective cohort study

The Prevalence and The Correlates of Mental Disorders Among The Elderly Population: Results From China Mental Health Survey

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Objective The world is entering an ageing society and China with the world's largest population has entered. Mental disorders with high prevalence used to lead impairment among the elderly. The previous study about influence factor of mental disorders dispersed in specific mental disorder or largely localized, and the results vary widely. Although higher rates of GDP per capital growth are associated with a deterioration of mental health entering the 21st century, a population-based study focusing on mental disorders in the elderly population is lacking. In this study, we used data for diagnoses based on CIDI by trained lay interviewers to explore the 12-month and lifetime prevalence

of mental disorders among the 55 years old and above in China

Methods Data for this study was derived from the China Mental Health Survey (CMHS). Participants were diagnosed using CIDI, and epidemiological information and risk factors were collected. A total of 12667 adults aged 55 and above were surveyed, of which 10840 (85.6%) completed the study

Results The lifetime and 12-month prevalence of mental disorders were 15.2% and 8.0% among Chinese population. The most prevalent mental disorder were any anxiety disorder, any mood disorder and substance use disorder, with the lifetime prevalence of 9.1%, 8.2% and 4.2% respectively, with the 12-month prevalence of any anxiety disorder and mood disorder were 6.0% and 4.4%, respectively. Having ≥ 3 physical diseases, having chronic pain and having sleep disturbances were associated with higher odds of any disorders. Being ≥ 70 years old was associated with lower odds of any disorders

Conclusion The prevalence of mental disorders were high in the population aged 55 and above, among which anxiety disorders, mood disorders, substance-use disorders were prevalent. Although different mental disorders were associated with different demographic factors, chronic disease, pain and sleep disturbances played an important role in the prevalence of overall mental disorders

关键词: Mood disorder, Anxiety disorder, Chinese population, the elderly

Preventing Post-discharge Suicides Using Brief Contact Interventions (BCIs) in Psychiatric Patients: Results From An Implementation Study of A Sequential Multiple Assignment Randomized Trial (SMART)

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Objective Suicide is an acknowledged global public health concern. The post-discharge suicide risk among psychiatric patients is significantly higher than it is among patients with other diseases and general population. There is no specific mental health policy in China with respect to psychiatric patients at risk of post-discharge suicide. The brief contact interventions (BCIs) are evidence based and have been recommended to decrease postdischarge suicide risk in areas of limited mental health resources like China. WHO reported BCIs could decrease the postdischarge suicide risk among psychiatric patients effectively (OR 0.20, 95%CI 0.09 to 0.42), and recommended integrating BCIs in the suicide intervention framework. This study aims to develop a post-discharge suicide intervention strategy based on BCIs and evaluate its implementability under the implementation outcome framework

Methods This study established a brief contact intervention platform that sent greetings and encouraging messages to patients, and provides psychological crisis relief and related health services. This dynamic Sequential Multiple Assignment Randomized Trial (SMART) was conducted at Shenzhen Kangning Hospital in Shenzhen, China, involving adult post-discharge psychiatric patients. The study employed an adaptive strategy. After recruitment and a baseline survey, participants were randomized into group 1 and group 2, receiving BCIs monthly and weekly, respectively. Given the highest suicide risk within the first three months post-discharge, a checkpoint was set at three months to assess suicide risk in both groups. At this checkpoint, participants in group 1 with increased suicide risk were rerandomized into group 1a (weekly BCIs) and group 1b (biweekly BCIs); those with decreased or unchanged risk continued receiving monthly BCIs as group 1c. Participants in group 2 with increased or unchanged suicide risk continued receiving weekly BCIs as group 2a; those with decreased risk were rerandomized into group 2b (monthly BCIs) and group 2c (biweekly BCIs). After rerandomization, participants continued receiving BCIs until 12 months post-discharge, with suicide risk evaluated at 1, 3, 6, and 12 months. The primary outcome was change on suicide risk at 1, 3, 6, and 12 months, while secondary outcomes included change on social support

and social connectedness at 1, 3, 6, and 12 months. Outcomes were assessed independently at baseline and at 1, 3, 6, and 12 months post-discharge. An intention-to-treat (ITT) approach and generalized estimating equation (GEE) were utilized to determine the optimal BCIs frequency. The study also conducted a stratified analysis by gender and type of mental disorder to identify differences in intervention effects. Additionally, the study collected qualitative and quantitative information on implementation and service outcomes from a community team comprising psychiatric patients, family members, and clinical and community mental health service providers

Results From June 2022 to the present, 400 eligible participants were included. The mean age of the participants was 30.4 ± 8.9 years. Among them, 173 (43.3%) were male, and 271 (67.8%) had serious mental disorders, including schizophrenia, schizoaffective disorder, paranoid psychosis, bipolar disorder, mental disorders caused by epilepsy, and mental retardation accompanied by mental disorders. At baseline, suicide risk scores were 2.0 (0.0, 15.0), social connectedness scores were 83.4 ± 16.9 , and social support scores were 45.6 ± 6.0 . A total of 257 participants completed the one-month questionnaires, 310 completed the three-month questionnaires, and 200 completed the six-month questionnaires

Compared to baseline, the average reduction in suicide risk was 4.2 points ($p < 0.05$) at the end of the first month and 1.3 points ($p > 0.05$) at the end of the third month. By the end of the sixth month after discharge, the suicide risk for all participants increased by an average of 0.5 points ($p > 0.05$). Specifically, group 1c (monthly + monthly, $n=62$) and group 2c (weekly + bi-weekly, $n=67$) showed a statistically significant decrease in suicide risk by the end of the sixth month. Group 1a (monthly + weekly, $n=22$) and group 2b (weekly + monthly, $n=27$) exhibited a decrease in suicide risk by the end of the sixth month, but it was not statistically significant. Group 1b (monthly + bi-weekly, $n=16$) and group 2a (weekly + weekly, $n=33$) showed a statistically significant increase in suicide risk by the end of the sixth month. Compared to baseline, the average reduction in social connectedness was 2.6 points

($p < 0.05$) at the end of the first month, 4.6 points ($p < 0.05$) at the end of the third month, and 4.3 points ($p > 0.05$) by the end of the sixth month. Specifically, group 2b showed an increase in social connectedness by the end of the sixth month, though not statistically significant. Group 1b, 1c, and 2c exhibited a statistically significant decrease in social connectedness by the end of the sixth month. Group 1a and Group 2a showed a decrease in social connectedness by the end of the sixth month, but it was not statistically significant. Compared to baseline, the average reduction in social support was 0.4 points ($p > 0.05$) at the end of the first and third months, and 0.6 points ($p > 0.05$) by the end of the sixth month. At all time points, there was no statistical difference in the average reduction in social support between groups.

After adjusting for confounding factors, there was no difference in suicide risk, social connectedness, and social support between Group A (monthly) and Group B (weekly) at the end of the first and third months. By the end of the sixth month, there was a difference in the change in suicide risk among different groups: taking Group 2a as the reference, the effect of reducing suicide risk compared with baseline was $2c > 1c > 2b > 1a > 2a = 1b$. There was no statistical difference between groups in changes in social connectedness and social support. There was no statistical difference in the optimal frequency of intervention for patients of different genders and types of mental disorders. This study is conducting qualitative research to identify the promoting and hindering factors in the implementation process to optimize intervention strategies.

Conclusion This pioneering study in China utilizes adaptive strategies to investigate BCI intervention approaches to mitigate suicide risk among post-discharge patients with mental disorders. The study identified the optimal frequency of intervention to reduce post-discharge suicide risk. Given its low resource consumption, BCIs can be adopted as a routine intervention. Future research should further examine the specific content and frequency of BCIs needed for patients with varying types and severities of mental disorders

关键词: Suicide risk, Brief contact interventions, Patients discharged from psychiatric hospitals, Sequen-

tial multiple assignment randomized trial, Implementation science

Exploring The Effect of Romantic Relationships on NSSI Behavior in Depressed Adolescents: Based on The Causal Forest Double Machine Learning Model

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Objective Romantic relationships are often regarded as a positive social connection and an important source of social support. However, for adolescents with depression, the impact of romantic relationships may be more complex. In fact, the relationship between romantic relationships and their non-suicidal self-injury (NSSI) behavior is not yet clear. To prevent NSSI behavior in depressed adolescents and protect their physical and mental health, it is particularly important to understand the causal relationship between romantic relationships and NSSI behavior. This study explored the impact of romantic relationships on NSSI behavior in depressed adolescents and analyzed the key factors influencing NSSI behavior

Methods A multicenter survey was conducted in the psychiatric departments of 14 tertiary hospitals in 9 provinces in China. A total of 2,343 adolescents aged 12-18 with depression were recruited through convenience sampling. We used a double machine learning model embedded with causal forest to examine the causal effect between romantic relationships and NSSI behavior, and employed SHAP analysis to identify the key factors. The study included 21 covariates covering demographic characteristics, psychological traits, traumatic experiences, and social relationships

Results Among the 2,343 participants, individu-

als with suicidal ideation during self-injury were excluded, leaving 1,204 depressed adolescents as the subjects of the study. Of these, 418 (34.7%; NSSI: 311) had romantic relationships, while 786 (65.3%; NSSI: 479) did not. The model showed good generalization performance, with an average treatment effect (ATE) of 0.111 (confidence interval [0.054, 0.168], $P=0.0$) on the training set and an ATE of 0.108 (confidence interval [0.018, 0.198], $P=0.019$) on the test set. Psychological resilience, rumination, and anxiety were the top three key characteristics affecting NSSI behavior in depressed adolescents. Low psychological resilience and moderate frequency of social media use had a positive impact on NSSI, while high rumination, high stress, and high educational attainment had a negative impact on NSSI

Conclusion Romantic relationships in depressed adolescents have a significant positive effect on their externalizing behavior of depression—NSSI. High psychological resilience and low rumination play important roles in reducing NSSI behavior, while high anxiety, stress, and a sense of despair significantly increase the risk of NSSI behavior

关键词: Adolescent Romantic Relationships, Non-Suicidal Self-Injury, Causal Forest, Double Machine Learning, SHAP

精神分裂症患者子女的精神健康调查：一项多中心横断面研究的初步结果

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目的 精神分裂症是一种慢性衰退性精神疾病，常导致严重的功能损害和精神残疾。精神分裂症患者子女出现精神心理问题的风险较一般人群超出 4-14 倍，这一现象可能与不同精神疾病间存在部分共同的遗传基础以及不良环境因素的代际传递相关。本研究拟对精神分裂症患者进行家庭调查，旨在描述我国精神分裂症患者子女的精神健康状况，从而为这一弱势群体的预防和干预政策制定提供可靠的研究基础。

方法 对国内多个地区参与重性精神疾病管理

的 18-60 岁精神分裂症患者进行问卷调查，通过纳入生育子女的患者家庭，用描述性流行病学方法分析数据，并统计精神分裂症患者后代的精神健康状况及精神障碍患病率。

结果 本研究调查了全国 10 个地区管理的精神分裂症患者共 75,616 例；70,500 人参与调查，5,116 人拒绝调查，访到率 77.7%。数据显示，27,315 名 (38.7%) 精神分裂症患者共生育了 35,722 名后代，其中女性患者 (65.9%) 占比更高，而母亲患精神分裂症的子女也报告了更高的精神分裂症患病率 (1.58% vs. 1.12%, $p < 0.01$)。精神分裂症患者的成年子女中报告精神分裂症、精神发育迟滞及心境障碍的患病率分别为 1.88%、0.42% 及 0.31%。后代是否存在精神心理问题与患病父母的性别、父母患病与子女出生的时间关系以及家庭收入具有相关性。

结论 研究探索了国内多个中心在管的精神分裂症患者生育信息及其后代的精神健康状况。考虑到我国仍有大量精神分裂症患者在重性精神疾病管理项目中登记，如何改善其后代的心理健康水平、预防精神障碍的代际传递仍是一个巨大的挑战。

关键词: 精神分裂症、生育状况、代际传递、横断面研究

Neurological, Mental Disorders and Injuries Attributable for DALYs To Tobacco, Alcohol and Drug Use in China, Findings From The Global Burden of Disease Study 2021

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Objective Neurological and psychiatric disorders and injuries are important factors affecting the quality of life in the general population, and smoking, alcohol consumption and substance use are important risk factors for these diseases. In this study, we analysed the burden of disease of smoking, alcohol consumption and substance use in mainland China in 2021, which was included in the Global Burden of Disease (GBD) database, to analyse the burden of disease caused by the above diseases in the general population and the regional differences

Methods We selected data from 33 provinces in China from the burden of disease data collected by the Chinese Centre for Disease Control. The main diseases studied included neurological disorders: including Parkinson's disease and Alzheimer's disease, among others, mood disorders, mainly substance use disorders, and injuries, mainly unintentional injuries and suicidal self-inflicted injuries. The study used the Disability Adjusted Life Year (DALY) indicator to describe the severity of the burden of disease

Results Tobacco-induced DALYs include neurological disorders (288,089.33 person-years), traffic injuries (245,819.49 person-years), unintentional injuries (314,617.41 person-years), and self-inflicted injuries and interpersonal violence (4334.25 person-years). Alcohol-induced DALYs include neurological disorders (132,975.48 person-years), substance use disorders (2674,872.7 person-years) suicide and interpersonal violence (463,859.86 person-years). DALYs due to drug use include substance use disorders (1660891.34 person-years) suicide and interpersonal violence (42546.06 person-years). As a result of the enactment of anti-drug laws and regulations restricting the intake of tobacco and alcohol, among others, the burden of disease caused by these substances declined rapidly from 2000 to 2021. As a result of the enactment of anti-drug laws and regulations restricting the intake of tobacco and alcohol, among others, the burden of disease caused by these substances declined rapidly from 2000 to 2021. The DALY for traffic injuries due to smoking has declined by 35.6 %, and the DALY for substance use disorders

due to drugs has declined by 58.7%

Conclusion Tobacco, alcohol and drug use continue to cause a relatively serious burden of disease in mainland China. Of these, tobacco is a major controllable risk factor for a wide range of diseases and requires stronger means of control

关键词: Neurological disorder, Mental disorder, injuries, disease burden, risk factor

网络精神病学组

Differences in Dynamic Brain Functional Network Characteristics of Non-Suicidal Self-Injurious Behavior and Suicidal Ideation in First Episode Depression

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Objective Non-suicidal self-injury (NSSI) behavior and suicidal ideation (SI) are severe comorbid behaviors of depression, increasing the risk of suicide and affecting disease prognosis. Currently, the pathological mechanisms of both are unclear, and few studies have compared them within the same cohort. Using dynamic connectivity and graph theory methods can effectively quantify brain network characteristics

Methods This study included 71 first-episode depression patients divided into three groups: NSSI, SI, and Non (neither NSSI nor SI). Demographic data, Hamilton Depression Rating Scale-17 items (HAM-D-17), Young Mania Rating Scale (YMRS), Beck Scale for Suicide Ideation (BSI), and NSSI behavior assessment questionnaires were collected. Resting-state fMRI data were acquired, and dynamic functional networks were constructed based on the Brainnetome Atlas 246 (BNA246) and dynamic sliding window method. K-means clustering analysis was used to obtain various connectivity patterns and dynamic characteristics. Graph theory was employed to calculate the variability of topological properties, including small-world properties, global efficiency, assortativity, synchrony, hierarchy, degree centrality (DC), nodal efficiency (NE), betweenness centrality (BC), and nodal local efficiency (NLE). Subsequently, the connectivity patterns, dynamic characteristics, and variability of topological properties among the three groups were compared. Finally, partial correlation analysis was performed between dynamic brain functional network indicators and clinical characteristics

Results (1) The SI group more frequently exhibited the "DMN-VAN strong connectivity" state, which correlated with the severity of SI, suggesting that this state may be a characteristic connectivity pattern of first-episode depression with SI. (2) The variability in functional connectivity between the left superior frontal gyrus (SFG) and the right lateral orbital gyrus (LOG) differed between the NSSI and SI groups, correlating with the severity of SI. This may indicate a key neural circuit differentiating NSSI and SI in depression. (3) The brain dynamic functional network of depression with SI showed "low assortativity variability," indicating poorer resilience of the functional network in depression with SI

Conclusion This study explores the dynamic functional connectivity patterns and differences in dynamic topological properties of brain networks in first-episode depression with NSSI and SI based on rs-fMRI. It provides a theoretical basis for the early prediction and intervention of suicidal behaviors in depression

关键词: Depression, non-suicidal self-injury behaviour, suicidal ideation, resting-state functional magnetic resonance imaging, dynamic functional connectivity, graph theory analysis

Effect of MiR-218 Polygenic Risk on Cognition and Its Relation To Neurometabolism in Patients with Major Depressive Disorder

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Objective Cognitive dysfunction is a core symptom of major depressive disorder (MDD) with an unclear pathogenesis. This study investigates the role of microRNA-218 (miR-218) in cognitive impairment in MDD and its relationship with neurobiochemical metabolism

Methods A total of 104 patients with MDD and 59 healthy controls (HCs) were recruited for this cross-

sectional study. All subjects were aged 18-55 years. Patients with MDD were in a major depressive episode with a score ≥ 20 on the 24-item Hamilton Depression Rating Scale (HDRS-24). Peripheral blood samples were collected from all subjects for miR-218 testing and then the miR-218 polygenic risk score (miR-218 PRS) was calculated. Proton magnetic resonance spectroscopy (1H-MRS) was also used to obtain ratios of N-acetylaspartate (NAA) /creatine (Cr) and choline (Cho) /Cr ratios in the prefrontal cortex (PFC), anterior cingulate cortex (ACC), putamen, thalamus and cerebellum. Cognitive function was assessed using the Chinese version of the Measurement and Treatment Research to Improve Cognition in Schizophrenia (MATRICS) Consensus Cognitive Battery (MCCB). The miR-218 PRS were classified into quartiles based on their quartile values (Q1: < 25 th percentile, Q2: ≥ 25 th to 50th percentile, Q3: ≥ 50 th to 75th percentile, Q4: ≥ 75 th percentile). Then, we assessed the association between miR-218 PRS and cognition using univariate and multivariate logistic regression: Crude Model was adjusted for none covariate; Model 1 was adjusted for age, sex, and education; Model 2 was adjusted for age, sex, education, number of episodes, current duration, total duration, and HDRS-24 score. The variance inflation factors (VIF) were used to quantify multicollinearity between variables (VIF >10 indicated excessive correlation)

Results After controlling for age, sex and education, MDD patients had lower scores on the MCCB composite and its seven cognitive domains (all $p<0.05$) and miR-218 PRS ($F=49.762$, $p<0.001$) compared to HCs. In MDD, miR-218 PRS was negatively associated with speed of processing (SOP), attention/vigilance (ATT) and composite (COS) in Q1 compared to Q4 in all three models (all $p<0.05$), the same association was also observed with ATT in Q3 compared to Q4 in all three models (all $p<0.05$). However, other cognitive domains of the MCCB were not associated with miR-218 PRS (all $p>0.05$). In MDD patients with miR-218 PRS in Q1, both SOP ($r=0.495$, $p=0.010$) and COS ($r=0.419$, $p=0.033$) were positively related to left ACC Cho/Cr, with no other relationships found regarding cognition and neurobiochemical metabolism. In contrast, there was no association of cognition with neurometabolism

in MDD patients with miR-218 PRS during Q2 to Q4 (all $p>0.05$)

Conclusion Patients with MDD tend to be impaired in cognition, as well as having reduced miR-218 PRS. Metabolites in the left ACC may be involved in the effect of low miR-218 PRS on cognitive deficits in MDD patients

关键词: cognition, depression, microRNA, neurometabolism, polygenic risk

网络游戏成瘾严重程度及渴求相关脑电预测模型

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目的 网络游戏成瘾 (IGD) 是青少年主要的精神心理疾病, 患病率逐年上升, 相关神经机制还未明确, 缺乏有效神经标志物和特异性干预方法。本研究通过分析游戏线索下网络游戏成瘾者的脑电活动, 明确能够预测成瘾严重程度以及渴求的脑电指标并构建机器学习模型, 并比较 IGD 与物质成瘾的共特异脑电指标。

方法 纳入网络游戏成瘾者 (IGD, $n=25$)、娱乐性使用者 (RGU, $n=22$)、健康对照 (HC, $n=28$) 以及海洛因成瘾者 (HUD, $n=27$), 采集成瘾相关线索暴露任务下的脑电, 用 DSM-5 和 IGDS9-SF 评估严重程度, QGU-B 量表进行渴求, 半年后进行随访。使用 32 导脑电设备, 在 MATLAB 中预处理并提取事件相关电位和时频指标。通过与健康对照组和物质成瘾组对比明确 IGD 特征性脑电指标, 构建识别 IGD 严重状态和预测渴求程度的机器学习模型, 采用留一交叉验证法, 应用支持向量机算法并进行超参数寻优。

结果 IGD 组每天游戏时间、渴求评分及成瘾严重程度均显著高于 RGU 和 HC 组。游戏线索反映任务中, 积极游戏线索能够显著增加 IGD 的渴求。在积极游戏线索呈现时, 顶枕叶区 P300 成分在三组之间存在显著差异, IGD 组的平均振幅高于另外两组。应用支持向量机模型发现 P300 成分 delta 频段区分 IGD 成瘾严重程度的准确性最高 (IGD vs HC

准确率 86.8%；RGU vs HC 准确率 70.2%）。经过多重校正分析发现 POz 电极点的 delta 频段与 IGD 组渴求程度显著正相关。此外，在奖赏游戏线索下前额和中央区的 N400 成分在三组间存在显著差异，IGD 组的 N400 成分（CP2 电极）的平均振幅与半年后的渴求呈显著负相关，进一步发现 N400 成分中 alpha 频段是与半年后渴求相关的关键频谱。将显著关联指标放入弹性网络模型，结果显示模型预测的渴求评分与实际评分显著正相关。在与 HUD 的比较中发现，两组在相应成瘾线索诱发条件下顶叶和枕叶区域均存在 P300 脑电成分，IGD 特异性脑电指标为前额和中央区的 N400 成分，海洛因成瘾的特异性脑电指标为中央区及顶叶的晚期 LPP 成分。

结论 游戏线索任务中脑电 P300 成分的 delta 频段能量能够有效识别网络游戏成瘾严重程度以及即时游戏渴求程度，而 N400 成分的 alpha 频段能够有效预测半年后的游戏渴求程度。N400 成分是网络游戏成瘾区别于海洛因成瘾的特异性脑电特征。

关键词：网络游戏成瘾 脑电标志物 渴求 预测模型

慢波睡眠中暴露游戏声音线索对网络游戏成瘾的干预研究

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目的 网络游戏成瘾(IGD)是以持续、无节制的参与游戏活动为特征，从而导致严重的心理问题和社会功能障碍的一类行为成瘾所致障碍。目前网络游戏成瘾仍缺乏有效的治疗方法。线索暴露疗法是通过干预成瘾记忆再巩固的行为学治疗方法。已有研究提示，睡眠状态下（特别是慢波睡眠期）可以接受声音线索刺激，并对记忆和认知功能产生显著影响。本研究拟探索慢波睡眠中暴露游戏相关声音线索来干预游戏渴求的有效性，且与清醒状态中的线索暴露疗法进行比较，并进一步探索慢波睡眠状态下游戏声音线索暴露治疗的脑电机制。

方法 采用 RCT 设计，将符合 DSM-5 的网络游戏成瘾者随机分成 4 组，第 1 组为睡眠干预组（SIG），通过闭环操控设备（Digitimer 360）在慢波睡眠中的 up-state 阶段暴露游戏相关的声音线索（大

约播放 300 次，声强约 45dB，持续时间约 1s，间隔约 7s）。第 2 组为睡眠对照组（SCG），采用相同的方法暴露游戏无关的声音线索。睡眠组的所有被试均佩戴脑电帽进行两晚的试验干预。另外 2 组分别为清醒干预组（AIG）和清醒对照组（ACG）。所有清醒组的被试连续 2 天在清醒条件下进行线索暴露干预。其中清醒干预组暴露与睡眠干预组一样的游戏相关声音 300 次，暴露时长约 50 分钟。清醒对照组则暴露与睡眠对照组一样的游戏无关声音。四组被试均在干预前（基线）测量游戏渴求量表、采集人口学资料和量表信息，并在干预后以及第一周、二周、三周、一个月后测量游戏渴求问卷。

结果 1) 在经过两晚的干预后，与基线相比，睡眠干预组在干预后、一周后、二周后、三周后、一个月后的游戏渴求程度显著降低，且显著低于睡眠对照组。清醒干预组的渴求虽然在干预后有下降的趋势，但是在干预一周后、二周后、三周后、一个月后的游戏渴求程度持续回升。2) 通过对睡眠中声音线索诱发的脑电时频成分进行分析，发现睡眠干预组由声音诱发的低频能量和早期 spindle 波的能量显著高于睡眠对照组。并且早期低频能量及 spindle 波能量与干预 3 周和 4 周后游戏渴求降低呈显著负相关，而线索暴露后晚期 spindle 波能量与干预后及 1 周后游戏渴求的降低呈显著正相关。

结论 本研究发现睡眠中慢波的 UP-state 状态下暴露游戏相关的声音线索可以有效降低网络游戏成瘾者的渴求，且存在长期效应。这种渴求的降低与睡眠中游戏声音线索引起大脑低频能量和 spindle 波能量的变化有关。

关键词：网络游戏成瘾；线索暴露；睡眠；闭环干预

社会心理服务研究协作组

Global, Regional and National Depressive and Anxiety Disorders From 1990 To 2021: Findings for The Global Burden of Disease Study 2021

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Objective To understand the prevalence and burden of depressive and anxiety disorders, and to develop effective interventions to improve the burden of major mental disorders

Methods Using data from the 2021 Global Burden of Disease Study, Data on prevalence, disability-adjusted life years (DALYs), and years of living with disabilities (YLDs) of depressive disorders and anxiety disorders were collected from 204 countries and territories between 1990 and 2021. Incidence per 100,000 people, percentage change from 1990 to 2021, 95% uncertainty interval (UIs), and correlation with socio-demographic index (SDI) were estimated

Results In 2021, there were an estimated 332.4(95% UI 297.7-376.1) million prevalent cases of depressive disorders and 338.2(95% UI) 307.2-420.0) million prevalent cases of anxiety disorders, accounting for 9.1% of all cases. DALY in depressive disorders (56.3million, 36.2%) and anxiety disorders (42.5million, 27.4%) accounted for 63.6% of mental disorders. Depressive and anxiety disorders are consistently the top two causes of the prevalence and DALY age-standardized rate of mental disorders. In the period 1990-2021, the prevalence age-standardized rate of depressive disorders increased from 3.6% in 1990 to 4.0% in 2021, and anxiety disorders increased from 3.7% in 1990 to 4.4% in 2021. In 2021, 66.9% of the global depressive disorders and 65.2% of anxiety disorders cases from

low-SDI and middle-SDI countries. Globally, 67.2% of depressive disorders and 65.5% of anxiety disorders DALYs are from low-SDI and middle-SDI countries. In global countries, the prevalent age standardized rate of COVID-19 is positively correlated with depressive disorders ($r=0.137$, $p<0.001$) and anxiety disorders ($r=0.085$, $p<0.001$), and the DALY age standardized rate of COVID-19 is also positively correlated with depressive disorders ($r=0.150$, $p<0.001$) and anxiety disorders ($r=0.070$, $p<0.001$) under considering time changes. Female have higher depressive and anxiety disorders burden than male. The cases of depressive and anxiety disorders in 5-24 years old accounted for 6.8% of all disease cases, and young adults accounted for 10.1% of all disease cases

Conclusion Depressive and anxiety disorders are the leading cause of all mental disorders worldwide, especially after the COVID-19. With the increasing influence of age on the population, future policies should strengthen the prevention and care services for depressive and anxiety disorders, adopt a mental health promotion approach, and implement effective interventions targeting the determinants of poor mental health

关键词: Depressive disorders; anxiety disorders; mental disorders; prevalence; burden

农村初级卫生专业人员对精神疾病相关病耻感及其影响因素研究

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目的 在中国农村, 初级卫生专业人员是社区精神卫生服务的重要力量。由于种种原因导致他们对于精神疾病相关的病耻感尤为突出, 这会影响到他们对精神疾病患者及家属的服务态度和服务质量, 不利于患者的治疗和康复。至今, 相对缺乏对该群体精神疾病相关病耻感及其影响因素的研究。本研究旨在探讨农村初级卫生专业人员精神疾病相关病耻感及其影响因素, 以期提高农村社区精神卫生服务水平。

方法 本研究于2023年11月到12月对中国四

四川省成都市新津区 10 所社区服务中心 256 名初级卫生专业人员（包括医生、护士及医技人员）进行调查，最终获得 247 份有效数据。使用一般情况调查量表、精神疾病态度量表(MICA)、精神卫生知识量表(MAKS)、报告和预期行为量表(RIB)、社交距离量表(SDS)、接触数量量表(CQTS)、接触质量量表(CQLS)、患者健康问卷(PHQ-9)和广泛性焦虑自评量表(GAD-7)来评估参与者的社会人口学特征和病耻感相关的心理学特征。采用 T 检验和单因素方差分析来检验病耻感是否因参与者的社会人口学特征而不同。对相关因素进行了相关性分析。最后，以病耻感为因变量，其他相关因素为自变量，进行了多元线性回归分析。

结果 研究结果显示初级卫生专业人员的 MICA 平均分为 50.68 ± 8.084 ；40-65 岁组的 MICA 明显高于 18-39 岁组 ($p < 0.001$)，工作年限 ≥ 15 年组的 MICA 明显高于 < 15 年组 ($p = 0.001$)，已婚组的 MICA 明显高于未婚组 ($p = 0.041$)；相关性分析结果显示 MICA 与年龄 ($\beta = 0.292$, $p < 0.01$)、工作时长 ($\beta = 0.0287$, $p < 0.01$)、SDS ($\beta = 0.433$, $p < 0.01$) 呈现正向相关性，与 MAKs ($\beta = -0.210$, $p < 0.01$)、RIBS ($\beta = -0.400$, $p < 0.01$)、和 CQLS ($\beta = -0.351$, $p < 0.01$) 呈现负向相关性；多元线性回归分析结果显示自变量 RIBS、CQLS、SDS 均对 MICA 有显著影响，其中 RIBS ($\beta = -0.162$, $p = 0.018$) 和 CQLS ($\beta = -0.128$, $p = 0.045$) 对 MICA 呈负向影响，SDS ($\beta = 0.246$, $p < 0.001$) 对 MICA 呈正向影响。

结论 我国农村初级卫生专业人员对精神疾病相关的病耻感较重，影响因素包括对精神疾病患者的行为歧视、与患者的社交距离、和接触质量。为减少初级卫生专业人员精神疾病相关病耻感，应综合考虑我国的社会文化、加强精神卫生知识的培训、提升精神卫生专业水平、建立健全社区精神卫生服务体系等措施，以期提高农村社区精神卫生服务的整体质量，促进精神疾病患者的社区精神卫生服务和康复。

关键词：初级卫生专业人员,精神疾病,病耻感,影响因素

以学校为基础的中学生危机干预的有效性评估

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目的 自杀是危害青少年身心健康的危险行为，以学校为基础的自杀预防计划是解决这一问题的关键工具。本研究旨在评估以学校为基础的危机干预——“医教协同”项目的有效性。

方法 “医教协同”项目主要包括筛查、分级管理、教师培训和双向转诊等。“医教协同”项目组自主编写了《危机学生风险管控操作手册》。筛查分为三级，第一级初筛为全体学生问卷筛查，第二级为心理老师针对初筛阳性的学生进行访谈，在访谈中会询问学生的自杀企图、自杀意念和自杀计划，第三级为必要时由医方对学生进行访谈。根据筛查中自杀风险进行危机等级分级，共分为 4 级，校方根据危机等级对学生进行不同的风险管控，同时建议具有自杀风险的学生转介至南京市雨花台区赛虹桥社区卫生服务中心进行危机干预咨询。危机干预咨询每周进行 1 次，每次约 1 小时，重点在于提供心理支持，减轻负面情绪，并制定计划。赛虹桥社区卫生服务中心定期开展针对全区心理老师的系列培训，如进行培训讲座、开展角色扮演课程、提供日常工作督导和发放《危机学生风险管控操作手册》等。此外，南京医科大学附属脑科医院开通了与赛虹桥社区卫生服务中心的双向转诊通道，并定期组织医方和校方开展相关培训和督导。在南京市雨花台区中随机选择 6 所初中的全体初一年级学生及其家长和教师进行相关内容评估。

结果 共有 858 名初一学生、2192 名学生家长和 48 名教师参与本研究。抑郁情绪的初筛阳性率为 11.31%，焦虑情绪的初筛阳性率为 14.80%。共有 86 名学生转介至南京市雨花台区赛虹桥社区卫生服务中心，接受危机干预的原因主要是学习压力、人际关系和亲子关系等，危机干预后学生的抑郁情绪、焦虑情绪、自杀行为、自杀意念和自杀计划较前明显减轻 ($t = 2.828 \sim 6.000$, $P < 0.05$)。在进行“医教协同”干预后，学生的一般自我效能感较前提高 ($t = 2.459$, $P < 0.05$)，学生对于“医教协同”项目的知晓率、认可度和寻求帮助意图较前增加 ($\chi^2 = 10.639 \sim 57.629$, $P < 0.001$)。教师对于帮助学生的信心和效能较前增加 ($t = -3.207 \sim -4.382$, $P < 0.01$)，教师对于青少年情绪问题相关知识的了解程度较前加强 ($t = -3.411$, $P < 0.01$)，但学生和教师对于青少年

年情绪问题相关知识的了解程度并无显著差异 ($P > 0.05$)。

结论 “医教协同”项目在减轻学生自杀风险、增强学生的自我效能和求助意识、增加教师关于青少年情绪问题相关知识的了解以及强化教师对于帮助学生的技能和信心等方面均具有显著作用,并打通了青少年就诊通道,能够有效预防青少年自杀。

关键词: 青少年,危机干预,学校

大学生阈下抑郁的光疗干预效果评价研究

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目的 对阈下抑郁大学生进行光照干预,评估光照疗法对其抑郁、焦虑、失眠症状的干预效果,同时探索不同光照强度的疗效差异,并比较其面部微表情特征变化。

方法 于2021年9月13日至2022年1月4日在武汉某高校招募符合阈下抑郁标准的大学生,随机分为亮光干预组、暗光干预组和等待对照组。亮光、暗光干预组光照强度分别为10000Lux和200Lux,受试者每天接受30分钟光照干预,持续2周,等待对照组不进行任何干预。在基线和第2周试验结束时,使用PHQ-9、BDI-II、GAD-7、ISI和PSQI评估受试者情况。PHQ-9得分用于衡量光疗有效率和缓解率,干预后减分率达到50%为有效,得分低于5分为缓解。通过Logistic回归分析比较各组有效率和缓解率差异。同时,受试者在基线和试验结束时接受正性、中性及负性视频刺激,获取面部运动单元AU并提取运动历史直方图MHH特征。采用重复测量方差分析比较三组干预前后各指标差异。

结果 共纳入135名受试者,随机分为亮光干预组54人、暗光干预组54人、等待对照组27人,

其中亮光干预组和暗光干预组分别有6和8人退出,共121人完成试验。结果显示,BDI-II及PSQI得分的时间主效应($F(1,118)=55.903, P < 0.001; F(1,118)=50.122, P < 0.001$)及时间 \times 组别交互效应($F(2,118)=4.083, P = 0.019; F(2,118)=9.271, P < 0.001$)有统计学意义。两两比较得出,亮光干预组与暗光干预组的BDI-II和PSQI得分在干预后显著低于基线($P < 0.001$),等待对照组无显著差异。三组ISI和GAD-7得分在试验后相对基线均显著降低,无组间差异。亮光干预组、暗光干预组和等待对照组的有效率分别为33.0%、37.0%、11.1%,亮光干预组($OR, 4.50; 95\%CI, 1.11-18.27; P = 0.035$)与暗光干预组($OR, 4.17; 95\%CI, 1.04-16.79; P = 0.045$)的有效率均高于等待对照组;缓解率分别为43.8%、45.7%、29.6%,三组无显著差异。表情方面,暗光干预组干预后AU14(收紧嘴角,提示恶心、高兴、伤心)特征值在正性、负性刺激下较基线显著上升,AU26(嘴巴小张口,提示惊讶、高兴)特征值在负性刺激下较基线显著上升;亮光干预组的AU20(嘴唇侧向拉伸,提示恐惧)特征值在负性刺激下较基线显著下降($P < 0.001$)。

结论 光照干预能有效改善阈下抑郁受试者的抑郁症状与睡眠质量。通过分析试验前后AU14、AU20和AU26特征值,可辅证光疗能改善被试的抑郁情况。

关键词: 阈下抑郁,大学生,光照治疗,面部表情

大学生脑健康队列建设概况

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目的 1.使用多模态数据描绘大学生精神心理疾病的特征 2.大学生心理健康问题的脑-肠轴机制探索 3.基因型在脑-肠轴中发挥的潜在作用以及基因-环境(暴露)交互作用

方法 对山东第一医科大学和华北理工大学2023级大一新生进行为期四年的调查。收集受试者基本情况、行为习惯、精神心理、认知评估多方面问卷信息,以及血液、脑电、核磁、近红外、体动记录

仪、肠道菌群、体成分等多模态数据,辅以专业的精神科诊断,形成多模态互联,以脑影像和肠道菌群为特色的大学生脑健康队列研究。

结果 山东第一医科大学分中心共收集问卷4930份,应答率为94.7%。抑郁症状检出率为9.6%,焦虑症状检出率为6%。在失眠、焦虑、抑郁及自杀中,任意一种症状严重程度达到中度及以上(有过自杀行为均视为中度及以上)的学生703人,任意一种症状达到阈下/轻度的学生为1578人;26.3%的学生睡眠存在不同程度的失眠问题;过去一年有4.46%的学生至少发生过一次非自杀性自伤,过去一年至少发生五次以上NSSI行为的比例达到1.13%;3.5%的学生存在睡眠-觉醒时相延迟症状,当去除社会工作因素对睡眠的影响后,3265人中有389人(11.9%)存在睡眠-觉醒时相延迟。

结论 大学生心理精神问题以情绪症状为主,睡眠、非自杀性自伤等问题发生率不容忽视,亟需采用多模态数据对大学生心理精神问题进行监测、干预和管理

关键词: 队列研究,心理健康,基线特征

物质依赖医学学组

甲基苯丙胺成瘾者线索反应性及抑制控制的闭环经颅交流电刺激研究

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目的 甲基苯丙胺(Methamphetamine, MA)成瘾是严重的社会公共卫生问题。甲基苯丙胺成瘾者在面对与成瘾相关的线索时会出现强烈的渴求和生理反应,这被称为线索反应性。线索反应性是成瘾发展和维持的关键因素,传统的药物和物理干预手段存在一定局限性。闭环物理干预是一种根据大脑状态实时调整刺激参数的新型干预方法,具有提高干预精确性和效率的潜力。基于tACS的闭环物理干预有望成为治疗甲基苯丙胺成瘾的新方法,但仍需进一步研究。

方法 本研究旨在探讨闭环经颅交流电刺激(tACS)对重度甲基苯丙胺(MA)成瘾者线索反应性的影响。研究步骤如下:首先对重度MA成瘾者进行筛查评估,然后使用线索诱发任务结合EEG数据采集确认线索反应性神经特征,之后构建闭环tACS干预系统,并通过比较不同刺激频率(6 Hz、10 Hz、40 Hz)下的干预效果确定最佳刺激频率,最后将最佳频率闭环tACS干预与随机刺激和连续刺激进行比较,验证其效应特异性和优劣性。主要结局指标包括抑制控制能力(SSRT)、线索反应性和静息态EEG功能连接。

结果 选取了符合标准的34名MA成瘾者。通过对这些成瘾者进行线索诱发任务的EEG信号分析发现,在面对毒品刺激时,重度MA成瘾者在特定电极上出现了Theta频段(3~8 Hz)显著升高的能量。基于这一特征,建立了闭环tACS干预系统。经过对不同频率(6 Hz、10 Hz、40 Hz)的干预进行比较,发现只有40 Hz的闭环tACS刺激能够显著降低对毒品线索的神经反应性($t = -3.620, P = 0.007$),同时提高抑制控制功能($t = -2.688, P = 0.031$),因此确定40 Hz为最佳刺激频率。进一步比较了40 Hz闭环tACS刺激与随机刺激、连续刺激的效果,结果显示40 Hz闭环tACS刺激在降低毒品线索的神经反应性和提高抑制控制能力方面表现出显著效果。

结论 本研究对重度MA成瘾者进行了线索反

应性神经特征研究,并构建了闭环 tACS 干预系统进行干预。结果发现,重度 MA 成瘾者对毒品线索具有异常的神经反应特征,表现为顶枕叶 theta 频段活动增强。闭环 tACS 干预能够有效降低 MA 成瘾者的线索反应性,同时提高其抑制控制功能。40Hz 的闭环 tACS 干预比随机刺激和连续刺激更有效,说明闭环干预方式更加高效和精准。该研究提示了闭环 tACS 干预是一种有效且高效的干预方法,能够改善重度 MA 成瘾者的线索反应性和抑制控制功能,为 MA 成瘾的精准干预提供了新的思路和方法。

关键词:甲基苯丙胺,成瘾,tACS,闭环干预

Predicting Drug Craving Among Ketamine-Dependent Users Through Machine Learning Based on Brain Structural Measures

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Objective Craving is a core factor driving drug-seeking and -taking, representing a significant risk factor for relapse. This study aims to identify neuroanatomical biomarkers for quantifying and predicting craving

Methods The study enrolled 94 ketamine-dependent users and 103 healthy controls (HC). Utilizing support vector regression (SVR) with 10-fold cross-validated framework, we developed a neuroanatomical craving model based on measures of regional cortical thickness (CT), surface area (SA), and subcortical volume (SV) derived from T1 images. The generalizability of neuroanatomical craving model was examined in an independent set. Spatial correlation analysis was employed to assess the relationship between the regional contribution to craving and density maps of receptors/transporters from previous molecular imaging studies

Results The neuroanatomical craving model identified neuroanatomical biomarkers that predicted self-report craving ($r = 0.635$). The most importance of predictors of craving included the SA of the left medial

orbitofrontal cortex and the left supramarginal gyrus, CT in the left caudal anterior cingulate, the left cuneus, the right lateral occipital cortex and the right lingual gyrus, as well as the left amygdala GMV. Importantly, these predictors were generalized to an independent sample. Moreover, nodal contribution to predicted craving scores were associated with DA2, 5-HT_a, 5-HT_b receptor and serotonin reuptake transporter densities

Conclusion The results offer a key perspective on craving prediction among ketamine-dependent users, and identify neuroanatomical areas associated with craving in the frontal and parietal regions. Additionally, the underlying neuroanatomical structures involved in the craving process may be linked to the dopaminergic and serotonergic systems

关键词: Cortical thickness; ketamine; craving; addiction; dependence; machine learning

Unraveling The Gut-Brain Axis: Mendelian Randomization Reveals Causal Links Between Specific Gut Microbiota and Alcohol Use Disorder

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Alcohol use disorder (AUD) is a prevalent condition associated with significant health implications. While genetic, neurobiological, and environmental factors contribute to AUD, the role of gut microbiota remains unclear. The purpose of this study was to utilize Mendelian randomization (MR) to investigate potential causal associations between gut microbiota and AUD.

A two-sample MR design was employed, using genetic variants associated with gut microbiota and AUD from Genome-Wide Association Studies (GWAS). The primary analysis used the inverse-variance weighted (IVW) approach, with sensitivity analyses, including MR-Egger, weighted median, and MR Pleiotropy Residual Sum and Outlier (PRESSO). Genetic data on gut

microbiota were sourced from the MiBioGen consortium's meta-analysis involving 24 cohorts and 18,340 individuals. AUD GWAS summary data came from the FinnGen study, including 15,715 cases and 361,562 controls. Instrumental variables underwent quality control, and analyses employed the IVW approach and several sensitivity analyses.

The MR analysis revealed a positive causal association between the Genus *Bifidobacterium* and AUD (OR 1.10, 95% CI: 1.01-1.19; p-value = 0.030). The Genus *Hungatella* exhibited a potential positive causal effect on AUD risk (OR 1.11, 95% CI: 1.01-1.23; p-value = 0.039). Conversely, the Genus *Butyrivibrio* showed a potential protective effect against AUD (OR 0.95, 95% CI: 0.90-1.00; p-value = 0.036), as did the Genus *Olsenella* (OR 0.90, 95% CI: 0.83-0.98; p-value = 0.011). Unlike *Bifidobacterium*, not all sensitivity analyses supported the other findings.

This MR analysis unveils novel insights into the intricate relationship between gut microbiota and AUD. Positive associations of the Genus *Bifidobacterium* and the Genus *Hungatella*, along with potential protective effects of the Genus *Butyrivibrio* and *Olsenella*, highlight the significance of gut microbiota in AUD pathogenesis. Our study lays the foundation for future research and potential therapeutic interventions in understanding and managing AUD.

关键词: Alcohol use disorder, Mendelian randomization, Gut microbiota, Genetic association, Causality

The Mediating Role of Social Connectedness and Negative Cognitive Emotion Regulation in Association of Problematic Internet Use and Depression Among Adolescents

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Objective While the relationship between adolescent problematic internet use (PIU) and depression has been extensively researched, few studies have investigated the role and mechanisms of social connectedness in this context

Methods This study aimed to investigate the mediating effect of social connectedness (SC) and cognitive emotion regulation, in the relationship between PIU and depression. We conducted a cross-sectional study among 9,407 adolescents aged 12-18 years in China from September 2022 to March 2023. We employed Young's 20-item internet addiction test (IAT-20), Social Connectedness Scale-Revised (SCS-R), Cognitive Emotion Regulation Scale (CER), and DSM5-level 2 Depression Scale to collect mental health outcomes. Logistic regression was performed to examine the independent association between measured variables and depression. Mediation analysis was performed to estimate the mediating role of social connectedness and cognitive emotion regulation, in the relationship between PIU and depression

Results We found the rate of PIU was 21.8%. The offline SC (indirect effect: 0.112, 95% CI: 0.104-0.121) and nCER (indirect effect: 0.140, 95% CI: 0.129-0.152) mainly played parallel mediating role in the relation between PIU and depression, as well as on_SC (indirect effect: 0.007, 95% CI: 0.005-0.010)

Conclusion Our study represents the pioneering investigation into the potential mediating role of social connectedness and cognitive emotion regulation strategies, unveiling an important mechanism for explaining why adolescents suffered from problematic internet use got higher risk at depressive symptoms. Targeted interventions and strategies in clinical practice, aiming at enhancing offline social connectedness of adolescents and promoting the adoption of positive coping strategies towards stressors, could help improve the comprehensive mental well-being of adolescents in clinical practice

关键词: Problematic Internet Use; Depression; Adolescents; Social Connectedness; Cognitive Emotion Regulation; Mediation model

应激-消退行为范式对可卡因成瘾消退学习的影响及其机制

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目的 药物成瘾是一种慢性易复发的脑疾病。成瘾性物质可以使奖赏、动机、记忆相关大脑环路发生改变,进而影响机体健康水平。药物成瘾包括不同的阶段,从娱乐性使用发展到强迫性使用药物,最后进入戒断与复吸的循环阶段。成瘾复吸行为指在戒除成瘾行为后,个体重新陷入原有的成瘾行为之中,这种复吸行为是动态且持续的,可以发生在治疗过程中的任何阶段。对于这种慢性复发性脑疾病,临床上常采用记忆消退原理抑制成瘾记忆,但疗效有限,且针对如何增强成瘾消退记忆的研究尚不充分。但已有研究表明应激能够潜在地影响与记忆功能有关的所有认知阶段,如记忆存储、提取或/和巩固的过程。在消退学习前给予应激不仅会加强恐惧消退记忆的巩固,而且还会减少消退效果对环境的依赖。因此本研究旨在明确应激对可卡因成瘾消退学习的影响,并探究该过程中的神经生物学机制。

方法 本研究采用大鼠可卡因自身给药训练作为成瘾记忆动物模型,建立应激-消退训练行为范式,结合免疫荧光、脑片膜片钳和化学遗传等技术探索应激-消退训练范式对可卡因成瘾消退学习的影响及其潜在神经机制。

结果 (1)可卡因自身给药训练后的消退训练和复吸测试的行为学结果表明,应激后进行消退训练(应激-消退范式)能够加快觅药行为的消退,从而抑制小剂量药物诱导的复吸,且应激-消退范式并不增加焦虑样行为;(2)免疫荧光结果显示,与消退组相比,应激-消退组的外侧缰核(Lateral habenula, LHb)脑区 c-Fos 蛋白表达水平显著增加,其中大部分为兴奋性神经元,说明应激-消退范式可增加 LHb 脑区的活性;(3)化学遗传学激活 LHb 神经元后进行消退训练能够模拟应激-消退范式的作用,即加速消退训练,抑制小剂量药物诱导的复吸行为;(4)在应激前给予化学遗传学抑制 LHb 神经元能够逆转应激-消退范式对消退学习及对可卡因复吸行为的作用,以及逆转应激-消退范式对 LHb 脑区神经元兴奋性的影响;(5) LHb 与吻内侧被盖核(Rostromedial

tegmental nucleus, RMTg)之间存在投射关系,化学遗传学激活 LHb-RMTg 环路能够促进消退学习,抑制可卡因复吸行为的发生。

结论 本研究表明,应激-消退行为范式通过 LHb-RMTg 环路的活动促进成瘾记忆的消退,从而抑制可卡因复吸行为的发生。

关键词: 应激,成瘾,消退,复吸,记忆

Alteration in Brain Gray Matter Volume and Relationship with Motor Impulsivity and Drug Use Characteristics Among Abstinent Patients with Methamphetamine Use Disorder

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Objective Methamphetamine is a highly addictive psychostimulant drug globally abused, resulting in a serious worldwide health problem. However, the neurobiological basis of METH addiction remains poorly understood. Therefore, this study aimed to use magnetic resonance imaging (MRI) to investigate changes in brain structure and their connection to impulsivity and drug use parameters in abstinent individuals with METH use disorder (MUDs)

Methods A total of 91 MUDs and 51 age- and gender-matched healthy controls (HCs) underwent T1-weighted imaging scans, and completed impulsivity and drug use characteristics measurements. We applied voxel-based morphometry (VBM) to investigate changes in the gray matter volume (GMV) of the whole brain. After controlling for age, educational level, smoking and drinking status, partial analyses and mediation analyses were respectively used to explore the relation between brain regions with altered gray matter volume, impulsivity, and drug use parameters

Results Compared with HCs, MUDs showed reduced GMV in the left thalamus ($p < 0.0001$, FWE corrected, voxel size = 1771). In addition, after controlling for age, educational level, current smoking and ever

drinking status, results of partial correlation analysis showed that GMV of thalamus was significantly associated with motor impulsivity ($r=-0.264$, $p<0.05$). Motor impulsivity played a completely mediating role between GMV of thalamus and METH use duration (indirect effect: 40.00%, $p<0.05$), and GMV of thalamus and MUD severity (indirect effect: 52.83%, $p<0.05$) in MUDs

Conclusion These findings suggest alterations in GMV underlying METH dependence, with thalamus potentially acting as a core neural substrate for impulse control disorders

关键词: Methamphetamine use disorder; structural magnetic resonance imaging; voxel-based morphometry; thalamus; motor impulsivity

靶向调控伏隔核脑区 Anks1b 表达对长时程可卡因自身给药的影响及机制研究

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目的 可卡因成瘾是一种慢性复发性脑疾病,其形成过程是从最初娱乐性的偶然使用逐渐发展为强迫性用药,其中强迫性用药的核心特征为不计负性后果的强迫性觅药行为。目前,研究对于从可卡因娱乐性摄入到强迫性使用转变的分子机制知之甚少。伏隔核是大脑奖赏环路中关键的脑区,与药物强迫性使用密切相关。Anks1b 编码活性依赖的突触后效应蛋白,主要表达于大脑伏隔核脑区,目前临床研究与动物研究均提示其基因表达与多种物质成瘾行为显著关联。然而,Anks1b 是否参与可卡因成瘾行为及其具体机制尚缺乏研究。本研究采用大鼠自身给药模型,靶向调控伏隔核脑区 Anks1b 表达,探究 Anks1b 在可卡因娱乐性摄入到强迫性使用中的作用及其机制。

方法 (1) 通过大鼠脑立体定位注射技术,构建伏隔核脑区 Anks1b 过表达/敲低大鼠。建立可卡因静脉自身给药模型,比较对照组与 Anks1b 过表达/敲低组在可卡因自身给药范式中的差异。(2) 在长时程可卡因自身给药后,在戒断第 1 天和第 28 天,评估 Anks1b 对线索诱导的可卡因寻求的影响。(3) 通过原位杂交,探究伏隔核中 D1-MSN, D2-MSN

的表达。(4) 通过大鼠脑立体定位注射技术,构建伏隔核脑区 Anks1b 条件性敲低大鼠。建立可卡因静脉自身给药模型,比较对照组与条件性敲低组在可卡因自身给药范式中的差异。

结果 目前已有的结果表明,大鼠在接受 7 天短时程可卡因自我给药 (2h/day) 训练中,未发现干预组与对照组之间存在差异。在长时程自给药后的第 8 天到第 17 天,与对照组相比,Anks1b 过表达组显著减少了可卡因摄入;大鼠长时程可卡因自身给药后,在戒断第 1 天和第 28 天,Anks1b 过表达组对可卡因线索诱发的鼻触数显著低于对照组;与对照组相比,Anks1b 敲低组显著增加了可卡因摄入;在戒断第 1 天和第 28 天,Anks1b 敲低组对可卡因线索诱发的鼻触数显著低于对照组;与对照组相比,D1-MSN 和 D2-MSN 中 Anks1b 敲低显著增加了可卡因摄入。在戒断第 1 天和第 28 天,D1-MSN 和 D2-MSN 中 Anks1b 敲低增加对可卡因线索诱发的鼻触数。

结论 研究结果提示,伏隔核脑区的 Anks1b 可能特异性调节长时程 (6 h/day) 可卡因自身给药,而不影响短时程 (2 h/day) 给药行为的习得和维持。后续我们将通过多种神经生物学技术继续深入探索 Anks1b 对可卡因成瘾行为

关键词: Anks1b; 可卡因; 伏隔核; 自我给药

妇女精神医学学组

类惊恐发作大鼠模型的肠道菌群和肠道内代谢物动态变化的多组学研究

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目的 惊恐障碍是焦虑障碍的一个亚型,给个人、家庭、社会带来沉重的负担。惊恐障碍患者常出现消化系统症状,已有研究表明惊恐障碍患者的肠道菌群出现显著改变。这提示肠道微生物可能与惊恐障碍的病理生理特点密切相关。本研究采用电刺激背侧导水管周围灰质诱发的惊恐发作大鼠动物模型,应用宏基因组学和代谢组学技术,探究惊恐发作对肠道菌群的影响及其动态变化。从而进一步明确惊恐发作与肠道菌群变化之间的因果关系,增进我们对惊恐障碍中肠道菌群与宿主之间相互作用的整体认识。

方法 本研究对 40 只大鼠中脑背侧导水管周围灰质行电极植入手术,将大鼠随机分为电刺激后 24 小时组、电刺激后 72 小时组、电刺激后 168 小时组,和对照组,每组各 10 只。造模后在各自分组设计的时间点进行行为学实验用于评估焦虑样行为,并采集各组大鼠脑组织、盲肠内容物。脑组织检测电极尖端定位,盲肠内容物进行宏基因组测序、非靶向代谢组学检测。

结果 (1) 尼氏染色结果显示电极尖端位置均处于 dPAG,电刺激后均出现逃逸行为,且电流阈值小于 120 μ A,建模成功。(2) 行为学分析结果表明,类惊恐发作大鼠出现焦虑样行为。实验组旷场实验中心区域时间百分比和中心区域移动距离百分比减少($P < 0.05$),高架十字迷宫实验中开放臂移动距离百分比和开放臂移动时间百分比减少($P < 0.05$)。(3) 宏基因组结果:电刺激后各时间点在不同水平物种组成,属水平物种组成存在差异。 α 多样性分析显示,门水平上 ES-24h 组、ES-72h 组 α 多样性升高($P < 0.05$)。在差异物种分析中,我们发现 5 个差异菌种分别是 Rikenellaceae_bacterium、Corynebacterium_lowii、Firmicutes_bacterium、Bifidobacterium_animalis、Bacterium_1XD42_1。(4) 非靶向代谢组结果:OPLS-DA 分析显示,四组样本明显分离。进行差异代谢物筛选,我们发现 47 种

代谢物具有统计学意义。(5) 关联分析:我们发现 Rikenellaceae_bacterium 与开放臂活动时间呈负相关($P = 0.0292$)。宏基因组与代谢组关联分析:我们共发现 45 个具有统计学意义的关联对。

结论 (1) 类惊恐发作后大鼠存在肠道菌群和肠道内代谢物紊乱 (2) 类惊恐发作与肠道微生物、代谢物的改变之间存在因果关系。(3) 发现肠道内 Rikenellaceae_bacterium 菌株可能是惊恐发作后的关键菌,鞘氨醇、5-氨基戊酸可能是关键代谢物。

关键词: 惊恐发作,肠道菌群,肠道代谢物,脑-肠轴

Studies on The Effects of Schizophrenia and Bipolar Disorder Or Psychotropic Medications on Reproductive Function in Female Patients

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Objective The peak age of onset of mental diseases such as schizophrenia and bipolar disorder is mostly between 20 and 30 years old, which is the childbearing age of women. The influence of mental illness, antipsychotics and mood stabilizers on female reproductive function of different degree of adverse effects, leads to significant decline in the reproductive function of female patients with some mental disorders, which is also one of the main reasons for poor compliance of patients with drug therapy. This study explores the mental illness and antipsychotic drugs influence on women's reproductive function, hope to provide more reference for clinical diagnosis and treatment

Methods Using the Mann-Whitney test, a non-parametric rank sum test, the general indicators (body weight, body mass index, blood pressure, thyroid function) and fertility function-related indicators (a full range of sexual hormone, endometrial thickness and volume of uterus and ovary size and number of follicles,

anti-Müllerian hormone) were compared between case group (including schizophrenia and bipolar disorder) and control group, first-episode group and recurrence group of mental disorder, single and combination group of antipsychotic drugs, and different types of antipsychotic drugs. And multiple linear regression was used to analyze the possible risk factors affecting the reproductive function of female patients with mental disorders

Results (1) The case group of prolactin, estradiol, progesterone, polycystic ovary syndrome were higher than control group, and the difference is statistically significant ($P < 0.05$); The uterine volume is smaller than the control group, and the difference is statistically significant ($P < 0.05$); Multiple linear regression analysis showed that anti-Müllerian hormone in the case group was 0.469 ng/dl lower than that in the control group, and the difference was statistically significant ($P < 0.05$)

(2) The levels of prolactin in risperidone, paliperidone and amisulpride group were significantly higher than those in olanzapine, quetiapine, clozapine, valproate and lithium groups ($P < 0.05$); Recurrence of body weight and insulin is higher than the first episode group, and the difference is statistically significant ($P < 0.05$).

(3) The level of free triiodothyronine in patients using lithium carbonate is lower than that in patients using valproic acid salt, and the difference is statistically significant ($P < 0.05$); The level of free triiodothyronine in the combination group was lower than that in the single group, while the level of thyroid stimulating hormone was higher than that in the single group, and the difference was statistically significant ($P < 0.05$).

Conclusions The levels of prolactin, estradiol, progesterone and polycystic ovary syndrome in the case group were higher than those in the control group, while the uterine volume was smaller and anti-Müllerian hormone was lower, suggesting that the reproductive function of the case group may be affected. Different types of antipsychotic drugs to the influence of prolactin were different; The use of lithium carbonate or drug combination has an effect on thyroid function, with a tendency to hypothyroidism

关键词: female; reproductive function; schizophrenia; bipolar disorder; psychotropic drugs; thyroid

function

The Impact of Hearing Impairment on Cognitive Decline and Brain Morphology in Older Adults: Insights From Network Analysis and Mendelian Randomization

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Objective To investigate the relationship between hearing impairment (HI) and cognitive decline, and to explore the causal impact of HI on brain morphology in older adults using network analysis and Mendelian randomization (MR)

Methods This study comprised two parts. Part 1 was an observational study utilizing data from the 2018 wave of the China Health and Retirement Longitudinal Study (CHARLS). Cognitive function across 12 domains was assessed and analyzed in relation to HI using logistic regression and network analysis. Part 2 involved a two-sample MR analysis using genetic data from large-scale genome-wide association studies (GWAS) to determine the causal effect of HI on brain structure

Results The observational study found that HI is significantly associated with cognitive impairment, particularly impacting immediate memory, attention, and executive functions. Network analysis revealed complex interactions between HI and various cognitive domains. The MR analysis indicated a causal relationship between HI and structural changes in brain regions involved in auditory processing and cognitive functions, such as reduced cortical thickness and gray matter volume

Conclusion HI is linked to cognitive decline and structural brain changes in older adults. Addressing HI through targeted interventions and early detection strategies may help mitigate cognitive decline and promote healthy brain aging, improving quality of life for older adults

关键词: hearing impairment, cognitive decline,

brain morphology, network analysis, Mendelian randomization, CHARLS

围产期睡眠剥夺降低肾清除认知损伤相关蛋白影响大鼠认知能力的研究

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目的 探讨围产期睡眠剥夺 (SD) 对围产期大鼠认知能力的影响、和对肾清除 $A\beta$ 、tau 等认知损伤相关蛋白的影响及其作用机制。

方法 (1) 通过旷场实验、水迷宫分析围产期大鼠 SD 后焦虑抑郁水平、认知能力的改变。(2) 检测血浆 IL10、IL17、IL18, 中性粒细胞明胶酶相关脂质运载蛋白 (NGAL)、 $\beta 2$ 微球蛋白 ($\beta 2MG$)、N-乙酰- β -D-葡萄糖苷酶 (NAG) 及认知损伤相关蛋白 $A\beta 40$ 、 $A\beta 42$ 、pTau181、pTau217、神经纤维丝轻链 (NEFL)、脊椎蛋白 1 (SPON1) 水平。(3) 检测肾脏 NADPH 氧化酶 4 (NOX4) 及脑组织 6E10、pTau181、pTau217 含量。(4) 染色观察脑组织内淀粉样蛋白、6E10、pTau181、pTau217、pTau231 含量变化。(5) 免疫荧光共染 NeuN、MAP-2。

结果 (1) SD 组出现更长静止时间、外围停留时间, 更少站立次数与更短中心区域停留时间 ($P < 0.05$)。(2) 组别、时间对逃逸潜伏期主效应显著, 组别分别对逃逸平台运动距离、有效区域运动时间、有效区域进入次数、目标象限滞留时间百分比和目标象限进入次数百分比主效应显著, 时间对目标象限滞留时间主效应显著 (均 $P < 0.05$)。SD 组第一天、第二天均表现更少逃逸平台运动距离、有效区域运动时间; SD 组第一天表现更低目标象限滞留时间百分比。与 CG 组相比, SD 组表现更少有效区域进入次数、目标象限进入次数及更低目标象限进入次数百分比 (均 $P < 0.05$)。(3) IL17 水平随时间显著变化; SD 组孕中期 IL17 水平高于 CG 组 (均 $P < 0.05$)。

(4) 组别对 NGAL 主效应显著, 时间对 NGAL 主效应显著, 组别与时间对 NGAL 存在交互效应; SD 组孕中期和晚期 NGAL 水平均高于 CG 组。SD 组孕中期 $\beta 2MG$ 水平比 CG 组明显增加 (均 $P < 0.05$)。

(5) 组别分别对 pTau181、NEFL 主效应显著; SD 组孕中期 $A\beta 42/A\beta 40$ 显著高于 CG 组; SD 组孕晚

期具有更高水平 pTau181、NEFL 和 SPON1; 产褥期 SD 组具有更高水平 pTau217、pTau181 (均 $P < 0.05$)。

(6) 产后 pTau181 水平和第 3 象限进入次数百分比存在负相关 ($P = 0.032$, $r = -0.619$)。

结论 围产期睡眠剥夺鼠表现更多焦虑样行为; 通过促进炎症诱导肾功能下降, 增加外周与中枢认知损伤相关蛋白水平, 导致学习及空间记忆等认知损害。

关键词: 睡眠剥夺, 围产期, 炎症反应, pTau181, 肾功能

首发未用药重性抑郁患者的多层时序脑网络的模块化特点与切换次数的研究

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背景 人脑网络由许多不同的节点连接起来, 它们分布在大脑中不同的模块内。脑动力学的特点是不断重新配置节点之间的时空连接模式, 节点的模块转换是大脑功能动态变化的基础。目前我们对重性抑郁症 (major depressive disorder, MDD) 患者的脑网络模块转换特点知之甚少, 并且这些转换对于患者的临床症状是否重要也很少有研究。

方法 本研究纳入 18~45 岁的首发未用药 MDD 患者与年龄、性别与之匹配的健康人 (healthy control, HC) 各 78 名。基于静息态功能磁共振数据, 以 AAL 模版的前 90 个脑区为节点, 采用划窗法, 计算各时间窗内节点间的皮尔逊相关系数。在此基础上构建超邻接矩阵, 使用多层时序网络方法对两组人群大脑网络模块之间的转换进行建模, 比较两组模型参数的差异, 并分析患者组转换次数和临床症状之间的关联。

结果 模块化度量值 (Q) 在两组间存在显著差异 ($t = -2.1485$, $p = 0.0332$, Cohen's $d = -0.3440$)。MDD 组在左侧额上回、双侧杏仁核、左侧楔叶、左侧枕中回、右侧顶上回、左侧颞上回、左侧颞极、双侧颞下回 (差异显著性前 10 的脑区) 等 26 个脑区的模块切换次数显著高于 HC, 而在左侧中扣带回和扣带旁回、右侧楔叶、右侧中央后回、左侧缘上回、左侧壳核、右侧额中回、双侧直回、左侧眶部额下回、右侧三角部额下回 (差异显著性前 10 的脑区)

等 22 个脑区则显著低于 HC 组(FDR 校正, $q < 0.05$)。此外, MDD 组所有节点的平均模块切换次数与 HAMD 量表总分 ($R = -0.2923$, $p = 0.0094$, $95\%CI = [-0.4697, -0.1008]$)和 HAMA 量表总分($R = -0.3436$, $p = 0.0021$, $95\%CI = [-0.5029, -0.1641]$)均显著相关。但各脑区间功能连接值的跨时间窗标准差(变异程度)在两组之间没有显著差异(FDR 校正, $q > 0.05$), 且整体中位数(0~0.3018)和四分位数间距(0~0.1692)范围均较小。并且两组在模块切换($t = 1.9646$, $p = 0.0513$, Cohen's $d = 0.3146$)和未切换($t = 1.9334$, $p = 0.0550$, Cohen's $d = 0.3096$)期间的绝对功能连接值的均值也没有显著差异。

结论 首发未用药 MDD 患者在动态脑功能连接的强度和稳定性上与 HC 相当, 患者脑网络的动态异常可能更多地体现在模块结构和切换特点, 即脑网络功能的动态整合和分离上。这一发现提示我们脑网络模块的跨时空构成及转换特点在 MDD 的疾病演变过程中发挥着重要作用。

关键词: 重性抑郁障碍; 静息态功能磁共振; 多层脑网络; 模块化

阿普唑仑对小鼠类惊恐发作行为及脑神经元激活特征的影响研究

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目的 本研究旨在探讨阿普唑仑(alprazolam)对小鼠类惊恐发作(panic attack, PA)行为及脑神经元激活特征的影响, 以探索其在惊恐障碍治疗中的潜在机制。

方法 将 c57 小鼠随机分为空白盐水对照组、模型盐水组、空白阿普唑仑对照组和模型阿普唑仑治疗组, 每组各 6 只。通过诱导类惊恐发作模型建立惊恐状态, 给予阿普唑仑进行治疗。采用旷场实验记录和分析小鼠的行为学指标, 评估小鼠类惊恐发作行为变化。采用免疫荧光标记技术检测各组小鼠脑区神经元激活情况, 特别是背侧导水管周围灰质、海马和杏仁核区域的 c-Fos 表达水平。

结果 行为学指标显示, 与空白盐水对照组相比, 模型盐水组小鼠在旷场实验中的活动水平显著下降, 移动总距离减少, 进出中心区域次数减少, 冻

结时间增加($P < 0.05$); 阿普唑仑干预后, 这些行为学异常得到明显改善($P < 0.05$)。与模型盐水组相比, 模型阿普唑仑治疗组小鼠在旷场实验中表现显著减少的类惊恐发作行为($P < 0.05$)。c-Fos 染色结果显示, 模型盐水组小鼠的背侧导水管周围灰质及杏仁核的 c-Fos 表达水平显著高于空白盐水对照组($P < 0.05$)。阿普唑仑治疗后小鼠的上述脑区神经元激活显著减少($P < 0.05$)。

结论 阿普唑仑可显著减少小鼠类惊恐发作为表现, 并能够有效抑制类惊恐发作小鼠脑神经元的过度激活, 特别是在背侧导水管周围灰质和杏仁核区域, 提示阿普唑仑可能通过调节这些脑区的神经活动来发挥其抗惊恐发作作用, 表明阿普唑仑在治疗惊恐障碍方面具有潜在的应用价值。

关键词: 阿普唑仑; 类惊恐发作; 冻结行为; c-Fos; 背侧导水管周围灰质; 杏仁核

White Matter Integrity Upon Progesterone Antagonism in Individuals with Premenstrual Syndrome: A Placebo-controlled DTI Study

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Objective Premenstrual syndrome (PMS) is a recurrent, varying degree of emotional, somatic and behavioral disorders in the premenstrual period, triggered by fluctuations of progesterone and estradiol during the luteal phase of the menstrual cycle. Selective progesterone receptor modulation (SPRM), while exerting an antagonistic effect on progesterone and maintaining the estradiol on moderate levels, has shown beneficial effects on the mental symptoms of PMS. Progesterone is also known for its neuroprotective effects, while synthetic progestins have been suggested to promote myelination. However, the impact of this treatment on white matter integrity is unclear

Methods 46 PMS patients and 42 healthy controls (HCs) were enrolled. Diffusion tensor imaging (DTI) was used to collect data on white matter integrity in patients with PMS and HCs. PMS patients were checked before and after treatment with ulipristal acetate (an SPRM) or placebo, as part of a double-blind randomized controlled-trial. Tract based spatial statistics were performed to investigate SPRM treatment vs. placebo longitudinal effects on fractional anisotropy (FA), mean diffusivity (MD), radial diffusivity (RD), and axial diffusivity (AD) on the whole-brain white matter skeleton

Results Relative to HCs, PMS patients showed increased FA and AD in left anterior thalamic radiation tract and significantly increased FA in the cingulum tract. Voxel-wise analyses indicated no change over time in any white matter microstructure metrics in individuals treated with SPRM versus placebo. Improvement in PMS symptoms did not correlate with changes in white matter microstructure. In secondary, cross-sectional comparisons during treatment, the SPRM group displayed lower FA and higher MD, RD, and AD in several tracts

Conclusion Although we found impaired white matter integrity in the PMS group, SPRM treatment did not impact white matter microstructure. However, the between-group differences after treatment call for further investigation on the tracts potentially impacted by progesterone antagonism

关键词: Premenstrual syndrome; diffusion tensor imaging; fractional anisotropy; mean diffusivity; ovarian hormones; progesterone; white matter

司法精神病学组

Predictive Analysis of Criminal Crimes in Patients with Mental Illness by Partial Differential Equation Model in Climate Change ---- Inspired by Academician Xuesen Qian's Book Engineering Cybernetics

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Objective By combining Xuesen Qian's engineering cybernetics with the construction and application of partial differential equation model, we can more systematically understand the relationship between the types and nature of crimes caused by changes in symptoms or incidence of mental illness caused by climate change, and provide strong scientific support for the solution of practical problems

Methods The engineering cybernetics of Academician Xuesen Qian, the father of China's missile and aerospace, is a discipline that studies system engineering and control technology. It uses various mathematical and engineering methods to model, analyze, and design complex systems, aiming at realizing effective control and regulation of the system. A brief introduction to Academician Xuesen Qian's engineering cybernetics: Xuesen Qian's engineering cybernetics has been widely used in many fields, especially in missile technology and aerospace engineering. For example, in modern control systems, more and more attention is paid to applying multi-intelligent technologies, such as artificial neural networks, genetic algorithms, and fuzzy control. These models can be linear, non-linear, time-varying, or random according to different characteristics and requirements of the system. Based on model establishment, the system is analyzed and optimized by mathematical method and simulation experiment, and the characteristics and performance of the system are understood. The current characteristics of global climate change can be summarized as follows: continuous rise

in temperature, frequent and extensive droughts, increasing extreme climate events, precipitation changes, and significant regional climate differences. Second, The causes of global climate change can be summarized into two main aspects: human activities and natural factors. (1) Human activities: Due to the rapid increase in population and the acceleration of industrialization, the large amount of greenhouse gas emissions caused by human activities is one of the main reasons for global climate change. These greenhouse gases have a greenhouse-like effect in the atmosphere, causing the Earth's surface temperature to rise. (2) Natural factors: El Nino affects the global climate by changing the temperature of the water in the equatorial Pacific Ocean

Use engineering cybernetics to explain the link between climate change and mental illness

Although climate change and mental illness change seem to be two distinct areas, we can try to explore the connection between them from the perspective of control systems.

1. Observation from a system perspective:

Overall analysis: Engineering cybernetics emphasizes the integrity of the system, that is, the problem as an interconnected whole. Climate change and mental illness, though seemingly different, are part of a complex system. 2. Dynamic system and feedback mechanism:

Climate change is a complex dynamic system, which is influenced by many factors, including natural factors and human factors. Climate change is a continuous process of change, the speed and extent of which can affect people's psychological state.

(1) The impact of climate change on mental illness

Environmental factors: Extreme weather events brought about by climate change, such as heavy rains, droughts, heat waves, etc., may have a negative impact on people's mental health.

Changes in neurotransmitter levels: Weather changes, especially rainy days or lack of sunlight in winter, may affect neurotransmitter levels in the body.

(2) How can people with mental illness cope with climate change

Patients with mental illness in rainy days or winter, try to increase the indoor light time to make up for the lack of sunshine. This can be achieved by using bright

lighting or placing reflectors in the room, for example. Stability is an important concept in engineering cybernetics. For the climate change system, stability means that the climate system can resist a certain degree of external disturbance and maintain a relatively stable state. Similarly, there is some stability in the mental state of people with mental illness. When faced with external pressures or stimuli, if it exceeds the individual's ability to cope, it may lead to the onset or deterioration of mental illness.

4. Control and regulation:

Engineering cybernetics emphasizes the effective control and regulation of the system. For mental illness, control and adjustment are reflected in alleviating symptoms and improving the psychological state of patients through psychological therapy, drug therapy and social support network.

5. Prediction and Prevention:

Using the method of engineering cybernetics, climate change can be predicted and simulated.

To sum up, although climate change and mental illness change seem unrelated on the surface, we can use Xuesen Qian's engineering cybernetics to explore the internal connection between them.

Forth, the relationship between climate Change and mental illness Change (Analysis and calculation of Partial differential Equation Construction)

The relationship between climate change and mental illness is a complex and multifaceted topic. Using the partial differential equation mathematical model of Xuesen Qian's engineering cybernetics to explain the connection between climate change and changes in mental illness:

Here are the steps:

(1) Identify key variables and parameters of climate change; (2) Construct partial differential equation model; (3) Data integration and analysis; (4) Model coupling and validation: Coupling climate models with mental illness models to explore how climate change affects the incidence and symptoms of mental illness. (5) Prediction and simulation: Simulate different climate change scenarios by adjusting parameters in climate models and observe how these changes affect variables in models of mental illness. Based on current climate

trends, coupling models are used to predict the likely future trends in the incidence or symptoms of mental illness. (6) Develop response strategies: based on simulation and prediction results, provide policy recommendations to governments and relevant agencies to mitigate the adverse effects of climate change on people with mental illness.

Fifth, the impact of climate on the crime of people with mental illness is mainly reflected in the emotional, medical and social aspects. To reduce the risk of crime for people with mental illness, attention needs to be paid to the impact of climate change on patients and the necessary psychological support and treatment is provided. Meanwhile, all sectors of society should also work together to create a more inclusive and understanding social environment for people with mental illness.

Sixth, analysis of the incidence of mental illness and criminal crime (using partial differential equation analysis and calculation):

Using partial differential equations to understand the relationship between changes in mental illness and crime patterns, we need to take a series of logical and methodical steps. The clear goal of the study is to explore the relationship between changes in mental illness and specific types of crime. Identify key variables, such as the incidence of mental illness, severity of symptoms, etc. Collect and integrate data on people with mental illness, including incidence rates, types of diagnosis, changes in symptoms, etc., and collect data on crime, especially crimes related to people with mental illness. Selection equation: Based on the relevant data of mental illness and crime, choose the appropriate partial differential equation form to model the relationship between the two. Historical data is used to build and train models to ensure they accurately reflect the dynamic relationship between changes in mental illness and crime patterns. When choosing Pdes, we need to consider what factors can influence changes in mental illness and how these changes relate to crime types. For example, we can choose a convective diffusion equation to describe the spread and diffusion of information, which can be analogous to how changes in mental illness symptoms spread through a population and may affect crime rates. Alternatively, we can use the wave equation to describe

cyclical changes in a certain social phenomenon, which may be related to seasonal changes in mental illness and its relationship to types of crime.

Throughout the process, it is necessary to ensure the accuracy and integrity of the data, as well as the rationality and validity of the model.

At the same time, because both mental illness and crime are complex social and psychological phenomena, the findings need to be interpreted carefully and applied in context.

Through the above steps, we can use partial differential equations to explore the relationship between changes in mental illness and crime types, and provide scientific basis for the formulation of relevant policies and practical operations.

Results Climate change and criminal crime rate of patients with mental illness are two sets of equations which are interrelated and influence each other. Coupling is a complex and important concept, which has been widely used in many fields such as physics, engineering and biology. Coupled partial differential equations can be divided into linear and nonlinear types

The expression of linear coupled partial differential equation is linear combination of each variable.

The nonlinear coupled partial differential equation contains nonlinear terms such as product and power function, and its solution is usually more complicated.

Finite difference method and moment method can be used to solve the problem.

Conclusion Engineering cybernetics is an interdisciplinary theoretical framework that can be applied to many fields. When exploring the relationship between mental illness and crime types, we draw on the ideas of cybernetics and integrate the knowledge of medicine, psychology, sociology and other disciplines to form a comprehensive analytical framework

The ultimate goal of PDE models is to predict and control the behavior of systems. In the study of the relationship between mental illness and crime, this means that we want to use models to predict future trends and develop effective intervention strategies to control the system (i.e. reduce mental illness related crime).

In summary, Although it is difficult to learn relevant knowledge for doctors, natural climate scholars

and police officers, the model theory and method will be put into practical application in the near future, which can solve most scientific and humanistic philosophical problems that need to break through the bottleneck.

关键词: Xuesen Qian's engineering cybernetics, Partial Differential Equations Climate Change, The Incidence of Mental Illness and Criminal Crime, Coupling

高特质愤怒男性精神分裂症患者激惹情景下的反应及脑机制

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目的 高特质愤怒男性精神分裂症患者是攻击行为的高风险人群,了解该人群攻击行为的发生机制具有重要的意义。本研究旨在探索高特质愤怒男性精神分裂患者在激惹情景下的行为反应模式及相应的神经基础,了解该人群发生攻击行为的过程及机制。

方法 采用病例对照研究设计。从 503 名男性精神分裂症患者中筛选出高、低特质愤怒的受试者(分别为 37 名和 35 名),并招募与之匹配的高、低特质愤怒的健康受试者(每组 34 名)。共 140 名受试者完成了 Taylor 攻击范式下的近红外脑功能成像检测。采用 2(特质愤怒:高、低)×2(受试者类型:精神分裂症患者、健康受试者)×2(情景类型:激惹、非激惹)的重复测量方差分析比较四组受试者在攻击行为上的差异以及在攻击任务不同阶段的脑区激活程度差异。

结果 Taylor 攻击范式的结果显示:高特质愤怒精神分裂患者在激惹情景下的攻击行为显著高于其他三组($M \pm SD = 3.103 \pm 0.492$, $F = 9.766$, $P < 0.001$)。激活分析的结果显示:①精神分裂症患者在执行 Taylor 攻击范式的决策阶段,双侧额极、左侧前运动和辅助皮层、左侧 Broca 区、左侧背外侧前额叶等区域的激活程度显著低于健康受试者。②Taylor 攻击范式的决策阶段,高特质愤怒个体在激惹情景下,左侧前运动和辅助皮层、双侧 Broca 区、双侧额极、

双侧背外侧前额叶的激活程度高于非激惹情景下;低特质愤怒个体在激惹情景下,左侧 Broca 区、双侧背外侧前额叶、左侧额极的激活程度高于非激惹情景下。③Taylor 攻击范式的决策阶段,在非激惹情景下,高、低特质愤怒个体所有区域的激活程度均无显著差异;激惹情景下,高特质愤怒个体在左侧前运动和辅助皮层、双侧 Broca 区的激活程度高于低特质愤怒个体。④对于高特质愤怒个体,额极(通道 15)和眶额皮层(通道 21)在激惹情景下的激活程度与攻击行为呈显著负相关(通道 15: $r = -0.417$, $P < 0.001$, 通道 21: $r = -0.382$, $P = 0.001$)

结论 ①高特质愤怒精神分裂症患者在实验室攻击任务中表现出更高水平的攻击行为。②高特质愤怒精神分裂症患者的 Broca 区、内侧前额叶等区域的功能可能受损,而难以动员资源调控情绪,这可能是其容易发生攻击行为的机制。

关键词: 特质愤怒; 精神分裂症; 攻击; 激惹情景; 功能近红外

睡眠障碍研究协作组

Different Roles of Homocysteine Metabolism in Hypertension Among Normal-weight and Obese Patients with Obstructive Sleep Apnea

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Objective Obstructive sleep apnea (OSA) is causally associated with hypertension. Although obesity, highly prevalent in OSA, may mediate the development of hypertension, it has been reported that cardiovascular outcomes may be more benign in obese patients than normal weight. This seemingly paradoxical phenomenon has not been explored in terms of differential basic/molecular pathways that may provide useful information in terms of prognosis and specific treatment of cardiovascular problems in obese and normal-weight patients with OSA

Methods We studied 92 patients with OSA and 24 patients with continuous positive airway pressure (CPAP) treatment. Blood pressure (BP) was measured twice during awake and continuously monitored during sleep. Obesity was defined as body mass index ≥ 28 kg/m². Serum metabolite levels were assessed by metabolomics

Results Among 59 normal-weight and 33 obese patients, 651 and 167 metabolites showed differences between hypertension and normotension or were associated with systolic and diastolic BP (SBP, DBP) after controlling confounders. These metabolites involved 16 and 12 Kyoto Encyclopedia of Genes and Genomes enrichment pathways in normal-weight and obese patients respectively, whereas 6 pathways overlapped. Among these 6 overlapping pathways, 4 were related to homocysteine metabolism and 2 were non-specific pathways. In homocysteine metabolism pathway, 13 metabolites were identified. Interestingly, the change trends of 7 metabolites associated with SBP (all interaction- $p \leq 0.083$) and 8 metabolites associated with DBP (all interaction- $p \leq 0.033$) were opposite between normal-weight and

obese patients. Specifically, increased BP was associated with down-regulated folate-dependent remethylation and accelerated transsulfuration in normal-weight patients, whereas associated with enhanced betaine-dependent remethylation and reduced transsulfuration in obese patients. Similar findings were observed in ambulatory BP during sleep. After CPAP treatment, baseline low homocysteine levels predicted greater decrease in DBP among normal-weight but not obese patients

Conclusion Mechanisms in OSA-related hypertension differ between normal-weight and obese patients, which are explained by different changes in homocysteine metabolism

关键词: Obstructive sleep apnea, Hypertension, Homocysteine, Weight, Obesity

A Randomized, Double-Blind Study Evaluating The Effectiveness of Concurrent Transcranial Direct Current and Repetitive Transcranial Magnetic Stimulation Versus Individual Treatments for Chronic Insomnia

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Objective Chronic insomnia is a prevalent sleep disorder affecting an individual's normal life and work, increasing the risk of various health problems and mental illness. Although pharmacological and non-pharmacological treatments exist, limitations include dependence, side effects, and potentially limited efficacy for some approaches. Existing research suggests promise for both transcranial direct current stimulation (tDCS) and repetitive transcranial magnetic stimulation (rTMS) in treating chronic insomnia individually. However, the combined effects of tDCS and rTMS on this condition remain unclear. There is an urgent need for research investigating safe and efficient treatment methods that

may offer superior efficacy compared to single-modal-ity therapies. This study aimed to verify the efficacy and safety of tDCS combined with rTMS for the treatment of adult patients with chronic insomnia

Methods Overall, 157 participants with chronic primary insomnia were randomly assigned to one of three physical therapy regimens: tDCS+rTMS, sham tDCS+rTMS, or tDCS+sham rTMS. All groups received 20 treatment sessions over 4 consecutive weeks. The primary outcomes, measured using the Pittsburgh Sleep Quality Index, were the insomnia response and remission rates assessed at the end of both the 2nd week and 4th week of treatment

Results Out of 161 randomized patients, 157 completed the trial. After 2 weeks of intervention, the tDCS+rTMS treatment group had the highest response rate (53.57%, 30/56), with significant differences among the three groups. Similarly, after 4 weeks of intervention, the tDCS+rTMS treatment group showed the highest remission rate (46.43%, 26/56) and response rate (64.29%, 36/56), with a significant difference among the three groups. Notably, no adverse events or serious adverse reactions were observed during the study period

Conclusion Combining tDCS with rTMS effectively relieved chronic insomnia symptoms, achieving a significant therapeutic effect after just 2 weeks of intervention, demonstrating the rapid and effective augmentation of combination therapy. These benefits appeared to be maintained and potentially enhanced by the end of the 4-week intervention. This combined therapy may serve as a safe and effective treatment for adults with chronic insomnia

关键词: chronic insomnia, transcranial direct current stimulation, repetitive transcranial magnetic stimulation, combined therapy, clinical trial

Sleep and Cortisol Changes in Crews with Irregular Shifts During A 42-day Isolated, Confined and Extreme Environment Mission

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Objective Humans often face physical and psychological challenges, when carrying out missions in isolated, confined and extreme (ICE) environments such as aerospace, submarines, and arctic conditions. A third-quarter phenomenon was discovered in the long-term ICE environment, where mood levels dropped after the midpoint of the mission and somewhat recovered before the end of the mission. We explore cortisol, sleep and mood changes in ICE environment involving numerous stressors, as well as whether the third-quarter phenomenon exist in the short-term

Methods Three males participated in 42 days of confined isolation, during which time was delayed by four hours for the first four days (D1-D4) to establish and adapt to new circadian rhythm under experimental conditions. This was followed by 38 consecutive days of irregular shift work(D5-D42). Throughout the study, we measured salivary cortisol and visual analog scales (VAS) on mood at adaptation stage (AS, D3-D4), early stage (ES, D12-D13), mid-stage (MS, D19-20), and late stage (LS, D33-D34). The data were collected every 4 hours, except during sleep time. Polysomnography (PSG) was used to record sleep on the night before entering the closed environment, during the mid-stage, and during the late stage. Crews maintained sleep diaries throughout the period of confined isolation. The Friedman test was used to detect differences across multiple stages. The area under the curve (AUC) was used to compare cortisol levels at each stage

Results The Area under the curve with respect to ground (AUCg) of cortisol was significantly higher at MS than at LS ($\chi^2=2.846$ $p=0.027$). There were no significant differences in mood between different stages at the same time point or within the same stage at different

time points. PSG indicated that the percentage of N2 sleep stage and the number of micro-arousals were significantly higher at the mid-stage compared to before the onset of irregular shifts in the ICE environment ($\chi^2=6.000$ $p=0.05$, $\chi^2=6.000$ $p=0.05$). No significant differences were found in sleep diaries at each stage

Conclusion There is a pattern of objective sleep and hormone level changes in the ICE environment with multiple stressors. Therefore, these biomarkers could be valuable for assessing the effectiveness of biomedical countermeasures for astronauts, as well as having potential applications in terrestrial research and treatment

关键词: isolated, confined and extreme environment, multiple stressors, sleep, mood, cortisol

Sleep Quality In Adolescents With Depression: Psychological Mechanisms And Networked ACT Combined With ITBS Intervention

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Objective Adolescents face multiple pressures such as academic and interpersonal stress, and the quality of sleep is closely related to their physical health, especially psychological health issues such as depression. At present, the treatment methods for improving the sleep quality of adolescent depression patients mainly focus on psychological therapy, drug therapy, and physical therapy. However, traditional psychological therapy is expensive, and drug therapy may have side effects. Only physical therapy has high safety and minimal side effects. Although in clinical practice, medical experts may adopt a comprehensive treatment that combines traditional psychotherapy with medication and physical therapy, it is a huge economic burden for many families. As a result, Internet based Acceptance and Commitment Therapy (iACT) is being increasingly promoted by researchers and practitioners due to its unique advantages. Based on this, this study focuses on the sleep quality of adolescent depression patients and develops a net-

worked self-help intervention program based on acceptance commitment therapy, combined with intermittent transcranial magnetic stimulation. The Intermittent Theta Burst Stimulation (iTBS) mode was used to design three different intervention plans to test which intervention plan has the best therapeutic effect on the sleep quality of adolescent depression patients, better helping them improve sleep quality, enhance psychological flexibility, and alleviate depressive symptoms.

Methods Recruit 120 adolescent depression patients from a certain tertiary psychiatric hospital and randomly divide them into three intervention groups and one control group, with 30 people in each group for a duration of 12 days. Before randomization, 30 days after intervention, and 30 days after intervention, all participants were subjected to offline evaluation using a scale. HAMD-14, MPFI-24, and PSQI were used to measure depressive symptoms, psychological flexibility, and sleep quality, respectively.

Results For adolescent depression patients, the sleep quality, depressive symptoms, and psychological flexibility of the three intervention groups showed improvement compared to the control group after intervention and one month of follow-up. The combined group had the largest intervention effect and the best intervention effect.

Conclusion Networked self-help psychological intervention provides patients with an autonomous and participatory psychotherapy method, which has the potential to serve as a new therapeutic approach. At the same time, combining networked self-help psychological intervention with iTBS can improve treatment effectiveness, reduce treatment time and cost, enhance treatment sustainability and long-term effectiveness, and produce better intervention effects. This study not only helps to deepen our understanding of adolescent depression, but also provides new directions and possibilities for future treatment

关键词: Adolescents with Depression; Sleep Quality; Psychological flexibility; Internet-based Acceptance and Commitment Therapy(iACT); Intermittent Theta Burst Stimulation(iTBS)

精神创伤研究协作组

Altered Dynamic Functional Connectivity of Nucleus Accumbens Subregions in Major Depressive Disorder: The Interactive of Childhood Trauma and Diagnosis

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Objective Childhood trauma is a grave and enduring chronic stressor, encompassing physical abuse (PA), emotional abuse (EA), sexual abuse (SA), physical neglect (PN), and emotional neglect (EN)¹. Major depressive disorder (MDD) with childhood trauma represents a heterogeneous clinical subtype of depression². Previous research has observed alterations in the reward circuitry centered around the nucleus accumbens (NAc) in MDD patients³⁻⁵. However, limited investigations have focused on aberrant functional connectivity (FC) within NAc subregions among MDD with childhood trauma. It remains unclear whether there are abnormalities in the reward circuitry of MDD patients with childhood trauma and whether such abnormalities are influenced by experiences of maltreatment. Thus, this study adopts analyses of both static FC (sFC) and dynamic FC (dFC), to examine functional abnormalities in NAc-centered reward circuits in MDD with childhood trauma. We hypothesize that: (i) MDD patients with childhood trauma exhibit abnormal sFC and dFC patterns in the subregions of the NAc compared to those without childhood trauma; (ii) abnormal sFC and dFC are associated with childhood trauma

Methods The study obtained approval from the Ethics Committee of the Affiliated Brain Hospital of Guangzhou Medical University, and all participants provided written informed consent. A total of 181 participants were included in baseline data from a registered clinical trial (ChiCTR2300078193), including 78 MDD patients and 103 healthy controls (HCs). Neuroimaging data were acquired utilizing a 3.0 Tesla Philips magnetic

resonance scanner. Depression severity was assessed by the Hamilton Depressive Rating Scale (HAMD)6, Childhood traumatic experiences were measured by childhood trauma questionnaire (CTQ)7. The research consisted of four groups: MDD with childhood trauma ($n = 48$), MDD without childhood trauma ($n = 30$), HCs with childhood trauma ($n = 57$), or HCs without childhood trauma ($n = 46$). Focusing on four NAc subregions as seeds to examine the differences in sFC and dFC between groups

Demographic and clinical differences among the four groups were assessed using one-way ANOVA, two-sample t-tests, and χ^2 tests in SPSS 25.0 software. Then, we employed a two-way ANOVA to explore the interactions, followed by t-tests to investigate the trauma effect (comparing groups with and without trauma experiences) and the depression effect (comparing depression and healthy control groups), as well as post-hoc analyses adjusted for the Benjamini-Hochberg (B-H) correction. Correlation analyses were used to assess the association between abnormal FC and the severity of childhood trauma. Finally, moderation analyses were then employed to investigate the moderating role of abnormal FC in the relationship between childhood trauma and depression severity.

Results 3.1 Demographic and clinical characteristics

No significant between-group differences were observed in age, gender, or mean FD among the MDD with and without childhood trauma, as well as the HCs with and without childhood trauma (all $p > 0.05$). There were also no significant differences in HAMD scores between MDD patients with and without childhood trauma ($p > 0.05$). However, significant group differences were noted in CTQ total scores, as well as EA, PA, EN, and PN subscale scores across the four groups (all $p < 0.05$).

3.2 Abnormal sFC of the NAc subregions

In sFC analysis, an abnormal sFC was observed between the right NAc-core and the left anterior cingulate cortex (ACC). In addition, the aberrant sFC was negatively correlated with the severity of childhood trauma. Regarding traumatic subtypes, correlation analyses showed that the abnormal sFC was mainly associated with PA and EN.

3.3 Abnormal dFC of the NAc subregions

Within the dFC analysis, dFC abnormalities influenced by the interaction effect of childhood trauma and depression were found in the following regions: left NAc-shell and right middle occipital gyrus; right NAc-shell and right opercular part of the inferior frontal gyrus; right NAc-core and left ACC. In addition, abnormal dFC affected by etiological effects of depression were observed between right NAc-shell and right triangular part of the inferior frontal gyrus. No significant difference was detected in the dFC analysis with the left NAc-core selected as ROIs. Furthermore, in moderation analysis, the pattern of dFC abnormalities played a moderating role in the relationship between sexual abuse and depression severity. Our findings elucidate the neurobiological foundations of childhood trauma and provide new evidence for our understanding of susceptibility to depression.

Conclusion In summary, this study investigated aberrant FC patterns within the NAc subregions in MDD patients with childhood trauma, with a approach utilizing combined dFC and sFC analyses. Compared to MDD without childhood trauma, abnormal connectivity patterns in different NAc subregions were found in MDD patients with childhood trauma, including the left NAc-shell, right NAc-shell, and right NAc-core. These findings suggest an intrinsic link between aberrant FC patterns and childhood trauma, which not only contributing to a deeper understanding of the neurobiological underpinnings of MDD patients with a history of childhood trauma, but providing potential diagnostic markers and therapeutic targets for MDD patients who have experienced childhood trauma. Our findings support NAc subregions dysfunction as neurobiological features of childhood maltreatment as well as vulnerability to MDD

关键词: Nucleus accumbens; Childhood trauma, Major depressive disorder, Static functional connectivity, Dynamic functional connectivity

千金藤啶碱干预早期社会隔离引起的精神分裂样行为 及其潜在机制研究

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目的 我国精神分裂症的患病率逐年升高,目前约为7%,临床治疗主要为对症治疗,但效果有限,且副作用较大。左旋千金藤啶碱(L-stepholidine, L-SPD)同时具有D1R激动和D2R抑制的双重药理作用,这与精神分裂症的中脑皮质边缘系统即腹侧被盖区/内侧前额叶皮质/伏隔核神经环路的紊乱相契合,使L-SPD具有治疗精神分裂症的潜在优势。

方法 本研究通过建立母婴分离(maternal separation, MS)模型以及早期社会隔离(social isolation, SI)模型,探究建立精神分裂症动物模型;L-SPD干预SI小鼠,对前额叶皮质和伏隔核中突触可塑性相关蛋白N-甲基-D-天冬氨酸受体(N-methyl-D-aspartate acid receptor, NMDAR)亚基1, NR1和突触后致密蛋白95(postsynaptic density protein 95, PSD95),以及蛋白激酶A(protein kinase A, PKA)和蛋白激酶B(protein kinase B, PKB);同时使用选取PC12类神经元细胞研究L-SPD是如何通过受体发挥作用。

结果 1)C57BL/6雌性MS小鼠自发活动能力、抗抑郁行为增加($P<0.05$)。

2)BALB/c雄性MS小鼠表现抑郁行为、逃避和攻击增加、筑巢能力下降和感觉运动门控障碍($P<0.05$)。雌性小鼠只表现出前脉冲抑制(prepulse inhibition, PPI)缺陷($P<0.05$)。

3)C57BL/6雄性SI小鼠表现出抑郁行为、焦虑行为、筑巢能力下降、社会交往行为减少、认知下降以及PPI受损($P<0.05$)。

4)L-SPD能够缓解SI诱导的抑郁行为、社会退缩、社会交往减少、认知功能改变,对PPI损害的干预效果优于利培酮;同时L-SPD使SI小鼠前额叶皮质中NR1、PSD95和磷酸化PKA/CREB增加,伏隔核中PSD95、磷酸化PKA/CREB和磷酸化Akt/GSK3 β 增加($P<0.05$)。

5)L-SPD干预NGF诱导分化PC12细胞后,D1R抑制剂和PKA抑制剂能够阻断L-SPD对NR1的促进作用,D2R激动剂能够阻断L-SPD对Akt/GSK3 β 的激活作用($P<0.05$)。

结论 1)早期SI能够稳定全面地诱导C57BL/6小鼠出现精神分裂样行为,更适合作为精神分裂症模型。

2)L-SPD对早期SI诱导的精神分裂样行为具

有干预作用,在前额叶皮质中通过激活D1R/PKA/CREB/NR1通路,在伏隔核中通过激活D2R/Akt/GSK3 β 通路发挥抗精神病作用。

关键词: 左旋千金藤啶碱;生命早期应激;精神分裂症;蛋白激酶A;蛋白激酶B

Study on The Sleep Sensitivity of Overweight Patients with Bipolar Disorder and The Correlation with Bmal1 Gene Methylation

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Objective Bipolar disorder is one of the leading causes of disability among young people worldwide. There is a close relationship between obesity and overweight and the development of mental disorders. There is a connection between BMI increase and sleep changes in bipolar disorder. There is an association between disrupted circadian rhythms and metabolic changes in patients with bipolar disorder. This study aims to investigate the correlation and interaction between the sleep characteristics of overweight bipolar disorder patients and the methylation levels of the Bmal1 gene by detecting the methylation levels of the Bmal1 gene in overweight bipolar disorder patients

Methods This study selected 30 patients with bipolar depression (including 34 healthy controls) and divided them into four groups (groups of bipolar overweight, pure bipolar, pure overweight, and healthy control) for polysomnography. At the same time, the methylation levels of 7 CpG sites with a length of 494bp in the promoter region of the Bmal1 gene were detected using Massray time-of-flight mass spectrometry

Results After comparison, there were statistically significant differences in sleep efficiency among the groups of bipolar overweight, pure bipolar, pure overweight, and healthy control. Comparing the methylation levels of GPG (1-7) genes in the four groups, the results showed that the differences in methylation levels

of genes CpG2, CpG3, and CpG6 were statistically significant ($P < 0.05$). Further pairwise comparisons revealed that compared to the other three groups, the methylation level of gene CpG2 decreased in the healthy control group ($P < 0.05$); compared to the overweight bipolar group, the methylation level of gene CpG3 decreased in the healthy control group ($P = 0.023$); and the methylation level of gene CpG6 increased in the overweight bipolar group compared to the other three groups ($P < 0.05$). The correlation analysis results of sleep indicators and gene methylation show that sleep efficiency is negatively correlated with CpG2 and CpG3 methylation levels ($r = -0.271$, $P = 0.030$); sleep latency is positively correlated with CpG2 methylation levels ($r = 0.328$, $P = 0.008$), and with CpG7 methylation levels ($r = 0.290$, $P = 0.020$); the proportion of N1 total sleep is positively correlated with CpG3 methylation levels ($r = 0.259$, $P = 0.039$); the proportion of N2 total sleep is positively correlated with CpG6 methylation levels ($r = 0.323$, $P = 0.009$); the proportion of N3 total sleep is negatively correlated with CpG6 methylation levels ($r = -0.317$, $P = 0.011$); there is no correlation between other sleep indicators and Bmal1 gene CpG island methylation ($P > 0.05$). Multivariate logistic regression analysis revealed that being female is a protective factor for decreased sleep efficiency.

Conclusion The sleep efficiency of overweight patients with comorbid bipolar disorder is lower than that of patients with pure bipolar disorder and pure overweight, and the methylation levels of CpG2 and CpG3 on the Bmal1 gene site are negatively correlated with the decrease in sleep efficiency.

关键词: Bipolar disorder; Sleep sensitivity; Overweight; Bmal1

壁报交流

精准医学研究协作组

Efficacy of Intermittent Theta Burst Stimulation (iTBS) on Depressive Symptoms of Adolescents with and without Antidepressants: A Preliminary Study

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Objective A wide range of affective disorders affects people of all age groups globally, playing a significant role in the overall burden of disease worldwide. Among all emotional disorders, major depressive disorder (MDD) and bipolar disorder (BD) are the most common. The first nationwide survey on the prevalence of affective disorders (3.21%), including MDD (2.00%) and BP (0.86%), among children and adolescent in China. Adolescent Major Depression Disorder is a common chronic mental illness with an estimated lifetime prevalence of 11.0%. Limited treatment options exist for adolescents, leading to ongoing concerns and debates regarding the safety of using antidepressants. Intermittent theta burst stimulation (iTBS) is a newer form of repetitive transcranial magnetic stimulation for depressive symptoms. However, the effectiveness of accelerated iTBS (aiTBS) and 4 weeks of maintenance treatment in adolescents with affective disorders, especially the comparison between the efficacy of this treatment approach in affective disorders adolescents who with and with not antidepressants have not been well studied. The aim of our study was to explore and compare the effectiveness of aiTBS and 4 weeks of maintenance treatment in alleviating depressive symptoms in adolescents with and with not antidepressants

Methods All participants enrolled in this study between August 2023 and January 2024, patients with unipolar MDD and depressive episodes of bipolar II disorder were recruited from the outpatient ward of Tianjin Anding Hospital. The Aim Magnetic Stimulation Robot (AIM-III), and Mag TD (Yiruide Medical Equipment

New Technology Co., Ltd., Wuhan, China) with an active, 70-mm figure-of-eight, air-cooled coil was used to applied the iTBS stimulation. T1 anatomical sequence was required. Various segments were utilized for the purpose of anatomical landmarking, alignment to the standardized Talairach coordinate system. The DLPFC target location was identified through cortical coregistration using each participant's MRI, the coordinates for targeting the left DLPFC were identified at the location (-41, 16, 54). The iTBS triplet 50-Hz bursts repeated at 5 Hz, 2 seconds on, 8 seconds off, totaling 1800 pulses per session at 70% RMT for each iTBS session. In a single day, participants underwent a schedule of five iTBS sessions, each consisting of 1800 pulses with intervals of 50 minutes between them. During 4 weeks of maintenance treatment, two sessions of 1800 pulses were administered weekly. The MADRS which is widely recognized as the primary and traditional method for assessing the severity of depression, was assessed at baseline, after aiTBS treatment, 1 to 4 weeks of iTBS maintenance treatment by well-trained psychiatrists. In addition, the evaluation of overall illness severity through the Clinical Global Impression severity subscale (CGI-S) was conducted at various time points. Participants self-reported any adverse events following each treatment, with special attention given to serious adverse events and factors leading to treatment discontinuation. Statistical analysis used independent samples t test, Mann-Whitney U test, Fischer's exact test and linear mixed model

Results A total of 30 participants were effectively included in our research project. 18 had taken one or more antidepressant medicine in the past month, and 12 was no antidepressant used. Among all the individuals in the study group, 73.3% were female, and the mean age was 15.75±1.78 years. All participants were right handed and Han nationality. Of the 30 youth, 3.3% reported a family history of mental illness. Median MADRS total scores and CGI-S scores were 27 and 4 at baseline. There were no statistically significant variations in sociodemographic and baseline clinical characteristics among the subgroups of individuals taking antidepressants versus those who were not. The variations in MADRS total score, MADRS score reduction, and

CGI-S score were showed significant differences over time. Rates of remission were 21.4% for antidepressant used and 75.0% for no antidepressant used group in third week, showing a significant difference between the two groups as determined by Fisher's exact test (OR: 0.091; 95% CI: 0.012 to 0.704; $p=0.026$). The results of linear mixed model indicated a significant decrease in MADRS scores and CGI-S score at the 4-week follow-up appointment. It also showed a notable variance in the mean MADRS total and reduced scores for decreased sleep, difficulty concentrating, lack of feelings and pessimistic thinking factors across different groups over time

Conclusion The combination of aiTBS and 4 weeks of iTBS maintenance guided by neuronavigation is both safe and well-tolerated, demonstrating a notable enhancement in depressive symptoms among adolescents. This treatment approach may offer greater benefits compared to adolescents not utilizing medicinal intervention. In general, there is a rapid advancement in the field of noninvasive neuromodulation techniques. Nevertheless, there is a noticeable absence of parametric approaches and extensively researched dosage schedules tailored specifically for adolescent. While this is a preliminary exploratory study and there is still need enhancement in many aspects, the findings of this research offer insights and guidance for optimizing treatment approaches for iTBS in adolescents, particularly with regards to the use or non-use of antidepressants.

关键词: iTBS, DLPFC, Adolescent, Depression, Antidepressant

Subtyping Schizophrenia with Neurotransmitter-specific Individual Cortical Thickness Deviations

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Objective Aberrations in diverse neurotransmitter systems are the primary etiology of schizophrenia and the main treatment targets. The heterogeneity of neurotransmitters disruptions in schizophrenia remains unclear. To construct individual profiles of neurotransmitter disruptions in schizophrenia patients through correlating normative model-derived individual cortical thickness (CTh) deviations with publicly accessible molecular images of neurotransmitter receptors/transporters and identify neurotransmitter-related biological subtypes of schizophrenia

Methods This study included structural brain imaging data from healthy controls across 6 datasets (2910 subjects, 1668 females and 1242 males) and first-episode treatment-naïve schizophrenia patients from 2 datasets (dataset 1: 205 subjects, 122 females and 83 males; dataset 2: 169 subjects, 106 females and 63 males). All healthy subjects were used to construct normative models of CTh. Clinical and genetic data were used to describe the identified subtypes. Data analysis was conducted between June 1, 2023, and April 1, 2024. For each brain region, a z score indexing the CTh deviating from the normative range from a reference population was evaluated using the hierarchical Bayesian regression. Spearman correlation coefficients were calculated for each schizophrenia patients to represent the similarity between CTh deviation map and molecular images of 21 neurotransmitter receptors/transporters distributed in dopamine, serotonin, cannabinoid, opioid, glutamate, γ -aminobutyric acid, histamine, norepinephrine, or choline systems. Consensus clustering was employed to identify subtypes within the 2 datasets separately. Partial least squares correlation was used to assess differences of clinical manifestations and neurotransmitter-specific polygenetic risk scores among subtypes

Results we identified 3 reproducible biological subtypes of schizophrenia across 2 independent datasets. These subtypes are characterized by unique profiles of CTh deviations and their associations with neurotransmitter systems. The burden of clinical symptom was found to correlate with the profiles of CTh deviations in all 3 subtypes in different manners. Genetic burdens also varied among subtypes. Additionally, analysis of

human brain gene expression data revealed that the CTh deviations of these subtypes are rooted in different brain cell types and neurodevelopmental stages

Conclusion Our findings indicate that although schizophrenia involves multiple neurotransmitter systems, the degree and pattern of involvement differ across individuals. This study provides a new perspective on the heterogeneity of brain structural anomalies in schizophrenia within the framework of neurotransmitter systems, which is crucial for the precise pharmacotherapy of the disorder.

关键词: schizophrenia, cortical thickness, normative model, subtypes, neurotransmitter, poly genetic risk

基于心率变异性对于青少年抑郁障碍患者非自杀性自伤影响因素的探究

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目的 探讨青少年抑郁障碍患者非自杀性自伤 (Non-suicidal self-injury, NSSI) 的影响因素, 并分析心率变异性与其非自杀性自伤的关系, 探究 NSSI 可能的生物标志物。

方法 本研究于 2023 年 11 月至 2024 年 5 月入组于河北医科大学第一医院门诊就诊的青少年患者, 用一般情况调查表收集患者姓名、年龄、长期居住地、是否独生子女、生物钟紊乱等社会人口学资料, 采用渥太华自伤调查表中文修订版、汉密尔顿抑郁量表 24、中学生心理健康调查量表、中学生应对方式、儿童期创伤问卷简版、自杀风险因素评估表评估入组患者是否存在自伤行为、心理健康状态、问题及情绪的应对方法、童年期创伤、自杀风险因素等情况, 采用心率变异性检查评估自主神经功能。计数资料间比较采用卡方检验、计量资料间比较采用两独立样本 t 检验或非参数检验, NSSI 的影响因素分析采用二元 logistic 回归分析, $P < 0.05$ 表示差异有统计学意义。

结果 本研究共入组 130 例门诊就诊的青少年患者, 筛选出 101 例抑郁障碍患者, 结果发现过去一年内心率变异的检出率为 80.2%。其中女生 (85.3%) 高于男生 (65.4%) ($\chi^2=4.838$, $P=0.028$)。NSSI 组

和无 NSSI 组在目前状态、父亲文化程度、家庭是否和睦、规律运动、生物钟紊乱之间的差异均有统计学意义 ($P < 0.05$)。在年龄、母亲文化程度、长期居住地、是否独生子女、目前治疗方式等方面差异无统计学意义。NSSI 组和无 NSSI 组在偏执、人际关系紧张与敏感、抑郁、焦虑、学习压力、适应不良、情绪不平衡、心理不平衡、情绪应对方式、情感忽视、自杀风险因素等因子评分差异均具有统计学意义 ($P < 0.05$) 且两组在高频心率变异性 (HF HRV)、心率等方面差异均具有统计学意义 ($P < 0.05$)。规律运动、生物钟紊乱、偏执、人际关系紧张与敏感、抑郁、学习压力、适应不良、情绪不平衡、心理不平衡、情绪应对方式、情感忽视、高自杀风险是 NSSI 的独立危险因素 (OR=3.225、3.394、1.086、1.130、1.101、1.075、1.145、1.123、1.118、1.083、1.137、1.168)。

结论 青少年抑郁障碍患者 NSSI 发生率较高, 规律运动、生物钟紊乱、偏执、人际关系紧张与敏感、抑郁、学习压力、适应不良、情绪不平衡、心理不平衡、情绪应对方式、情感忽视、较高的自杀风险与青少年抑郁障碍患者 NSSI 相关。高频心率变异性 (HF HRV) 的降低以及心率的增加可能是 NSSI 的生物标志物。

关键词: 心率变异性; 生物标志物; 青少年; 抑郁障碍; 非自杀性自伤; 影响因素

Paliperidone Plasma Concentrations, and Its Correlation with Clinical Outcomes and Genetic Polymorphism

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Objective Paliperidone (PAL) is the active metabolite of the second-generation antipsychotic risperidone, commonly used to treat schizophrenia. This study aims to explore the correlation between PAL plasma concentration and clinical outcomes, identify clinical and genetic factors affecting PAL plasma levels, and evaluate whether these factors can predict PAL plasma levels

Methods Two hundred sixty-eight patients receiving PAL were recruited and followed up for 6 weeks. Clinical effectiveness was assessed at baseline, and at weeks 2, 4, and 6 using the Positive and Negative Symptom Scale (PANSS). Extrapyramidal symptoms (EPS) were assessed using the Barnes Akathisia Scale (BAS) and the Extrapyramidal Symptom Rating Scale (ESRS). Other safety outcomes, including laboratory tests, were also monitored. Plasma steady-state PAL concentrations were measured at week 4 using high-performance liquid chromatography (HPLC). Single-nucleotide polymorphisms (SNPs) were tested for their association with PAL concentration levels

Results A total of 172 participants (median [IQR] age, 31 [25-40] years) were included in the analysis. By the end of week 6, 64.6% of the patients achieved a clinical response ($\geq 50\%$ reduction in PANSS score). No significant correlation was found between PAL plasma concentration and symptom improvement. However, higher plasma concentrations were associated with an increased risk of EPS, particularly akathisia. Oral dosage, sex, and renal function (measured by eGFR) were significantly associated with PAL plasma concentration, explaining 27.46% of the individual variability. The CNTNAP2 gene region (rs2141512, $P = 3.98 \times 10^{-8}$) showed the most significant association with PAL levels after controlling for eGFR, age, sex, and the first five principal components of population structure. Logistic regression using oral dosage, eGFR, age, sex, and rs2141512 to predict whether an individual's plasma concentration exceeds the therapeutic reference range demonstrated good predictive capability ($AUC = 0.822$), significantly higher than the model without rs2141512 ($AUC = 0.762$)

Conclusion Paliperidone was effective in significantly improving the symptoms of schizophrenia. The plasma levels of PAL were influenced by both clinical and genetic factors, and are associated with the risk of adverse effects. Incorporating clinical and genetic factors into clinical practice may improve personalized treatment strategies for individuals receiving PAL.

关键词: Schizophrenia, paliperidone, therapeutic drug monitoring, pharmacogenomics

Integration of Multi-omics Summary Data Reveals The Role of N6-methyladenosine Methylation in Neuropsychiatric Disorders

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Objective Neurodevelopmental and neurodegenerative disorders are highly heritable, with numerous single nucleotide polymorphisms (SNPs) identified through genome-wide association study (GWAS). Nonetheless, GWAS have limitations in addressing the intricate relationships among genetic variants, DNA functional elements (e.g., gene expression/protein levels) and complex diseases. The impacts of SNP on disorders may be mediated through numerous regulatory mechanisms, one of which is mRNA N6-methyladenosine (m6A) modification. m6A is a dynamic reversible methylation modification of the adenosine N6 position and is the most common chemical epigenetic modification among mRNA post-transcriptional modifications. In addition, m6A is deposited both co-transcriptionally and post-transcriptionally. It may regulate the gene expression or be regulated after transcription by functional genes. Exploration of the interaction between various molecular phenotypes would facilitate the elucidation of the relationship among m6A, gene expression, protein abundance, and neuropsychiatric diseases

Methods We performed m6A-wide association studies (m6A-WAS) and Summary-data-based Mendelian Randomization (SMR) analyses for seven kinds of neuropsychiatric disorders including schizophrenia (SCZ), bipolar disorder (BP), attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), major depressive disorder (MDD), Alzheimer's disease (AD) and Parkinson disease (PD) by integrating large-scale GWAS and human m6A-QTL datasets. We then integrated additional datasets for eQTL and protein QTL (pQTL) to investigate the intricate interactions among these molecular phenotypes

Results We first identified 86 m6A sites associ-

ated with seven neuropsychiatric diseases and subsequently uncovered 7881 associations between m6A sites and gene expression. Furthermore, we extracted 916 associations representing the relationships between the 82 disease-related m6A sites and 606 genes. We subsequently conducted a TWAS analysis based on the 606 genes and identified 58 risk genes related to these diseases. By integrating these results, we obtained 81 associations that suggest potential pathogenic mechanisms through which m6A may influence disease via the regulation of gene expression. Especially, we found the m6A regulated genes in these seven diseases were involved in the “response to stimulus” pathway, and analyzed the interaction among the m6A regulated genes and nearby genes from PPI network. Additionally, we analyzed the impact of gene expression on m6A and identified four gene - m6A - disease associations, and also examined the post-transcriptional effect of m6A on protein expression

Conclusion The analysis encompassed the impact of m6A on gene expression, the influence of gene expression on m6A modification, and the post-transcriptional effect of m6A on protein levels. Our study provided new insights into the genetic component of m6A in neuropsychiatric disorders and unveiled potential pathogenic mechanisms where m6A exerts influences on disease through gene expression/protein regulation

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关键词: m6A, neuropsychiatric disorders, multi-omics

伴焦虑症状的抑郁症患者心率变异性及压力水平特征的研究

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目的 探讨伴焦虑症状的抑郁症患者心率变异性特征及压力水平、睡眠质量和免疫炎症水平的差异, 并分析焦虑症状与心率变异性的相关性。

方法 纳入抑郁症患者 80 例。根据汉密尔顿焦虑量表 (HAMA) 评分分为伴焦虑抑郁组 (n=50) 和不伴焦虑抑郁组 (n=30)。测量心率变异性 (HRV): 低频 (LF)、高频 (HF)、高频/低频 (LF/HF)、心搏中 RR 间期的标准差 (SDNN)、相邻 RR 间期差值均方根 (RMSSD), 采用匹兹堡睡眠质量指数量表 (PSQI)、压力知觉量表 (CPSS) 评估睡眠质量及压力水平, 检测血清 C 反应蛋白 (CRP) 和白介素-6 (IL-6) 水平。比较伴焦虑抑郁组与不伴焦虑抑郁组汉密尔顿抑郁量表 (HAMD) 评分及各项因子分、CPSS 评分、PSQI 评分、HRV 指标及 CRP 和 IL-6 的差异。探索抑郁症患者 HAMA 分值及 CPSS 分值与 HRV 指标间相关性。

结果 1、伴焦虑抑郁组的 CPSS 总分 ($t=3.230$, $P<0.05$) 及紧张感 ($t=2.352$, $P<0.05$) 及失控感 ($t=2.826$, $P<0.05$) 两项因子分、PSQI 量表中的睡眠节律紊乱因子 ($t=2.156$, $P<0.05$)、日间功能障碍因子 ($t=2.434$, $P<0.05$) 及 HAMD 总分 ($t=5.452$, $P<0.05$) 和因子分中焦虑躯体化因子 ($t=2.982$, $P<0.05$)、认知障碍因子 ($t=2.664$, $P<0.05$)、迟滞因子 ($t=4.225$, $P<0.05$)、睡眠障碍因子 ($t=2.240$, $P<0.05$)、IL-6 水平 ($t=2.002$, $P<0.05$) 及 CRP 水平 ($t=3.886$, $P<0.001$) 均显著高于不伴焦虑抑郁组, 差异具有统计学意义 ($P>0.05$)。2、不伴焦虑抑郁组 LF 均显著高于伴焦虑抑郁组, HF ($t=-4.996$, $P<0.05$)、RMSSD ($t=-2.308$, $P<0.05$) 显著低于不伴焦虑抑郁组。3、HF 与 HAMA 分值 ($r=-0.239$, $P=0.035$)、CPSS 分值 ($r=-0.234$, $P=0.039$) 呈负相关关系。

结论 伴有焦虑症状的抑郁症患者抑郁程度更严重, 睡眠质量更差、压力水平更高及血清 IL-6、CRP 水平更高, 且伴焦虑的抑郁症患者 HF 与 HAMA 分值及 CPSS 分值呈负相关, 提示抑郁症患者伴有焦虑症状时会加重自主神经紊乱。

关键词: 抑郁症, 焦虑症状, 心率变异性, 白介素-6, C 反应蛋白

MTORC1/SREBP 通路在奥氮平所致脂代谢异常和二甲双胍治疗作用中的机制研究

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目的 本研究拟通过体外细胞实验探讨 mTORC1/SREBP 通路在奥氮平引起脂代谢异常中的作用以及 mTORC1/SREBP 通路在二甲双胍干预奥氮平所致脂代谢异常中的潜在机制

方法 使用 HepG2 肝细胞系,进行 Western Blot 试验研究,探究奥氮平对 mTORC1、SREBP 表达水平的影响;通过 mTORC1 相应的抑制剂(雷帕霉素、二甲双胍)观察抑制相关调控功能后奥氮平及二甲双胍所产生的相应生物效能改变

结果 HepG2 细胞 Western Blot 结果显示,在 mTORC1 相关蛋白(p-4ebp1、4ebp1、p-p70s6、p70s6、p-mTor、mTor)及 SREBP 相关蛋白(srebp-1、srebp-2)中,奥氮平组的 p-4ebp1、p-p70s6、mTor 及 srebp-2 蛋白表达水平较对照组(培养基组)增高;奥氮平+二甲双胍组的 p-4ebp1、p-p70s6、mTor 及 srebp-2 蛋白表达水平较奥氮平组虽然没有显著降低,但有降低的趋势。雷帕霉素作为 mTORC1 抑制剂,在此实验中充当二甲双胍的阳性对照作用,奥氮平+雷帕霉素组的 p-4ebp1、mTor 及 srebp-2 蛋白表达水平较奥氮平组也存在降低的趋势。而四组在 4ebp1、p70s6、p-mTor 及 srebp-1 蛋白表达水平中无明显变化。

结论 mTor 信号分子或是奥氮平潜在作用靶点,为奥氮平上调 SREBP 表达的上游目标因子;二甲双胍可能通过抑制 mTor 活性、抑制 srebp-2 表达,进而一定程度上改善奥氮平引起的脂代谢异常。

关键词: 脂代谢 mTORC1/SREBP 通路 二甲双胍

多基因风险评分联合临床特征与抗抑郁药疗效间的相关性研究

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目的 全球有数百万人正饱受抑郁症的折磨,但在治疗过程中发现:抗抑郁药物治疗在个体间疗效存在明显差异,遗传因素、疾病临床特点、环境因素以及基因环境相互作用被认为是造成个体间差异的重要原因。本研究旨在探寻多基因风险评分、临床特征、环境因素与抗抑郁药疗效间的相关关系。

方法 本研究共纳入 999 名抑郁症患者,以日本生物银行数据集为参考集计算本研究受试对象精神分裂症表型及抑郁症表型下的多基因风险评分(polygenic risk score, PRS)。根据中位值将多基因风险评分分为高风险组和低风险组。采用 Mann-Whitney 检验评估两组间差异, Spearman 相关性分析用于寻找多基因风险评分与治疗反应的相关关系。接着,以 2 周抗抑郁治疗疗效作为结局变量,纳入不同表型下 PRS、疾病临床特点、环境因素为自变量,采用多元逐步线性回归分析构建模型。最后,我们通过评估 PRS 和负性生活事件间是否存在交互作用探究了遗传与环境的交互作用对 2 周治疗结局的影响。

结果 研究发现在抑郁症表型下,高 PRS 遗传风险组与低 PRS 遗传风险组间两周减分率存在统计学差异($P=0.009$),并且遗传风险得分与 2 周减分率之间存在负相关关系($r=-0.075$, $P=0.024$)。0.05 阈值下 MDD-PRS($\beta=-4.086$, $P=0.039$)、快感缺失量表总分($\beta=-0.009$, $P=0.005$)、是否为首次发作($\beta=-0.039$, $P<0.001$)均为抗抑郁疗效的影响因素,能解释抗抑郁疗效的部分变异。交互作用分析结果不显著。

结论 研究结果表明,抑郁症高遗传风险与低遗传风险患者的抗抑郁疗效存在差异。遗传风险越高,抗抑郁疗效越差。此外, MDD-PRS 结合临床特征(首次发作和快感缺失)能部分解释抗抑郁疗效的个体间差异。

关键词: 多基因风险评分,抗抑郁药效,遗传,环境

The Causal Relationship between Toll-Like Receptor 4 Protein Levels and Major Depressive Disorder: A Two-Sample Mendelian Randomization Study

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Objective This study aimed to explore the causal relationship between Toll-like receptor 4 (TLR4) protein levels and major depressive disorder (MDD) using two-sample Mendelian randomization (MR) study

Methods Data were collected from the Genome-

wide Association Study (GWAS). Genetic loci that were associated with TLR4 protein from African American and European ancestry were selected as instrumental variables and MDD as outcome variables, meanwhile weight change during the worst depressive episode (gained weight, lost weight or stayed about the same) were also considered as outcome variables in the European ancestry. The inverse variance weighting (IVW), weighted median methods and MR-Egger of MR analysis were employed to analysis the causality between TLR4 protein levels and MDD, and heterogeneity and pleiotropy were evaluated using a sensitivity analysis

Results In African American and European ancestry, the IVW analysis indicated no association between TLR4 protein levels and the risk of MDD (OR=1.022, 95%CI: 0.966-1.082, $P>0.05$; OR= 1.008, 95%CI: 0.994-1.021, $P>0.05$). However, TLR4 protein levels were found to be causally associated with weight stability during the worst depressive episode (OR=0.993, 95% CI: 0.985-0.999, $P<0.05$). Sensitivity analysis confirmed the robustness of these results

Conclusion There were no significant associations between TLR 4 protein levels and the risk of MDD. However, a causal association was found between TLR4 protein levels and weight change during worst episode of depression(which stayed about the same), suggesting that TLR4 protein levels are intricately link to certain depressive symptoms.

关键词: causal relationship, genome-wide association study, Mendelian randomization, TLR4 protein, major depression

A Controlled Study of The Regulation of Bio-rhythms and Physiological Markers of Depression by Light Room Therapy and Its Efficacy

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Objective To investigate the efficacy of light room therapy on depression and sleep disorder and the potential effects on physiological indices related to circadian rhythms

Methods A total of 54 patients with acute-phase depression who were hospitalized in the Mental Health Center of the First Hospital of Hebei Medical University from October 2021 to July 2023 were recruited and assigned to 36 patients of bright light combined with medication (bright light group) and 18 patients of dim light combined with medication (dim light group). Both groups received light therapy for 2 weeks, with a light intensity of 10,000 lx in the high light group and 300 lx in the low light group, and 30 minutes of light therapy every morning from 7:30 am to 8:00 am. The Hamilton Depression Rating Scale (HAMD17) was used to assess patients' depressive symptoms and the Pittsburgh sleep quality index (PSQI) to assess patients' sleep quality at baseline, the end of every week. The 32-Item Hypomania Checklist (HCL-32) was used at the end of week 2 to assess the risk of mania after treatment. The temperature, heart rate and blood pressure of patients before and after the light therapy were measured and recorded every day during the light treatment period, and adverse events related to light therapy were assessed and recorded. Paired t-tests were used to compare the changes in body temperature, heart rate and blood pressure before and after treatment. Repeated measures ANOVA analysis were used to compare the differences in changes in clinical symptoms between the two groups

Results Thirty-one and Fifteen patients completed this study in the bright light and dim light groups, respectively, and the difference in shedding rates between the two groups was not statistically significant ($P>0.05$). There was an interaction between the time point and the group in HAMD17 and PSQI total score ($F=5.512, 4.113, \text{ all } P<0.05$). HAMD17 and PSQI scores at the end of the 1st, 2nd, and 3rd decreased sequentially and reached significant levels in both groups ($P<0.001$). Body temperatures in the bright light group were elevated compared to the pre-treatment period, and the differences in body temperatures before and after treatment were statistically significant on days 1-4, 7, and 12 ($P < 0.05$). Heart rate was elevated in the bright

light group on day 5 compared to pre-treatment, and the difference was statistically significant ($P < 0.05$). Systolic blood pressure in the bright light group decreased on days 4, 5, 11 and 12 compared to pre-treatment, with statistically significant differences ($P < 0.05$), while systolic blood pressure in the dim light group increased on day 11 compared to pre-treatment, with statistically significant differences ($P < 0.05$). The diastolic blood pressure of the subjects in the bright light group decreased on days 1, 5 and 6 compared with the pre-treatment period, and the difference was statistically significant ($P < 0.05$). There were no serious adverse events in both group, no vision loss or ocular structural changes, and the difference in the rates of adverse events between the two groups was not statistically significant ($P > 0.05$), and there was no occurrence of mania

Conclusion Medication combined with indoor bright light was more effective in treating depressive symptoms and sleep Symptoms than combined with low light therapy, and the bright light group was accompanied by a decrease in body temperature, a faster heart rate, and a decrease in blood pressure after light therapy.

关键词: Depression; Light Room; Light therapy; Biorhythms; Physical signs

Molecular Mechanism of The Tnik Gene Affecting The Action of Antipsychotic Drugs Through The Glutamate Pathway

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Objective Schizophrenia (SCZ) is a complex psychiatric disorder primarily treated with antipsychotic drugs (APDs), yet the response to these treatments shows significant individual variability. Between 40% and 80% of patients exhibit minimal or no response to these medications, and some experience severe adverse effects. Genetic factors play a crucial role in these individual differences

Previous research revealed that three SNPs within

the intronic regions of the TNIK gene, rs2088885, rs7627954, and rs6444970, are significantly associated with the efficacy of APDs. However, the specific mechanisms of how TNIK affects the efficacy of antipsychotic drugs remain unknown. TNIK is a susceptibility gene for schizophrenia and is closely related to glutamate metabolism, which may play a crucial role in the response to antipsychotic drugs. Hence, this study investigates the impact of the TNIK on changes in the glutamate pathway induced by antipsychotic drugs. However, the specific mechanisms of how TNIK affects the efficacy of antipsychotic drugs remain unknown. TNIK is a susceptibility gene for schizophrenia and is closely related to glutamate metabolism, which may play a crucial role in the response to antipsychotic drugs. Hence, this study investigates the impact of the TNIK on changes in the glutamate pathway induced by antipsychotic drugs.

Methods The regulatory functions of rs2088885, rs7627954, and rs6444970 were studied using a dual-luciferase reporter gene assay. Subsequently, a TNIK knockdown SH-SY5Y cell model was established using siRNA interference techniques. Morpholino technology was used to knockdown the zebrafish homolog of TNIK (tnika). Post-treatment with risperidone in zebrafish, RT-qPCR analysis was used to evaluate expression of glutamate pathway genes

Results The regulatory functions of rs2088885, rs7627954, and rs6444970 were studied using a dual-luciferase reporter gene assay. The results revealed that the genomic regions of rs2088885 and rs7627954 exhibit promoter activity that diminishes upon mutation, while the genomic region of rs7627954 also exhibited enhancer activity. The wild-type region of rs6444970 did not show any apparent regulatory effect, however, mutation in this region demonstrated significant enhancer activity. These findings suggest that the three polymorphic sites, rs2088885, rs7627954, and rs6444970, may have a substantial impact on the expression of the TNIK gene

Subsequently, a TNIK knockdown SH-SY5Y cell model was established using siRNA interference techniques. RT-qPCR analysis post-treatment with antipsy-

chotic drugs risperidone and clozapine revealed significant increases in the expression of key enzymes in the glutamate pathway, GLS, GLUL, and GLUD. Knockdown of TNIK further elevated the expression of these enzymes, suggesting that TNIK may play a crucial role in maintaining glutamate homeostasis.

Morpholino technology was used to knockdown the zebrafish homolog of TNIK (tnika). Phenotypic observations revealed developmental anomalies such as axial curvature, cardiac edema, increased mortality, and reductions in head area and eye diameter, suggesting that tnika affects early head development and neurodevelopment in zebrafish. Post-treatment with risperidone in zebrafish, RT-qPCR results indicated that tnika knockdown further increased the expression of glutamate pathway genes (glula, glulb, glsa, glsb, and glud1), consistent with cellular findings, suggesting that tnika might play a role in maintaining glutamate metabolic homeostasis. Its deficiency leads to glutamate metabolism disorder, impacting the efficacy of APDs.

Conclusion In conclusion, this study aims to elucidate the function of TNIK in the action of antipsychotic drugs, particularly its effect on the glutamate pathway. The findings suggest that TNIK may influence APDs efficacy through its impact on glutamate metabolism. Further investigation into its molecular mechanisms will help understand how TNIK affects antipsychotic drug efficacy, providing insights for personalized treatment of schizophrenia and discovering new drug targets.

关键词: schizophrenia, TNIK, antipsychotic drugs, glutamate pathway, single nucleotide polymorphism

伴和不伴忧郁特征的抑郁症患者的双侧伏隔核功能连接差异分析

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目的 伴忧郁特征的抑郁症 (MD) 患者与不伴忧郁特征的抑郁症 (NMD) 患者和健康对照组 (HC) 相比, 双侧伏隔核体积 (NAc) 表现出差异, 且 MD

患者的 NAc 灰质体积比 HC 显著降低。然而, MD 组和 NMD 组中的 NAc 功能连接 (FC) 是否存在差异, 且这种差异是否与 MD 的发病机制有关, 还有待进一步探索。

方法 根据性别、年龄和教育程度, 共计招募了 60 名 MD 患者、58 名 NMD 患者和 80 名健康对照组。研究以双侧 NAc 为感兴趣区域 (ROI), 计算并比较各组之间双侧 NAc 与全脑 FC 的差异, 并探索与临床特征的相关性。

结果 与 HC 组相比, 在 MD 组中左侧 NAc 与左侧前扣带回皮层和右侧额叶中回之间的 FC 值降低, 右侧 NAc 与左侧颞下回和右侧额叶中回之间的 FC 也有所降低。相比之下, NMD 组在与 HC 组的比较中仅显示出左侧 NAc 与左侧扣带回后皮层之间的 FC 值降低, 右侧 NAc 的功能连接与 HC 相比无显著差异。与 NMD 组不同的是, MD 组右侧 NAc 和左侧额叶中回之间的 FC 增加。两组患者左侧额叶中回的平均 FC 与 HDRS 评分、快感缺失评分和病程的相关性无显著统计学差异 ($p>0.05$)。MD 组和 NMD 组在左侧 NAc 的 FC 上没有发现明显差异。

结论 MD 患者显示出与 NMD 患者和健康对照组不同的 NAc 功能连接模式, 尤其是与默认模式网络 (DMN) 和额中回的连接。与默认模式网络 (DMN) 的 FC 降低以及与右侧前额叶区域的连接增强可能表明, MD 患者的奖赏神经环路相互作用不典型, 而右侧 NAc 与左侧前额叶回的连接差异可能区分 MD 与 NMD 的神经机制。

关键词: 忧郁特征; 抑郁症; 功能磁共振; 伏隔核; 功能连接

血清可溶性 TREM2 在识别轻度认知障碍中的价值

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目的 尽管目前有研究显示可溶性髓样细胞触发受体 2 (soluble triggering receptor expressed on myeloid cells 2, sTREM2) 与阿尔茨海默病 (Alzheimer's disease, AD) 的发生发展存在相关, 但在疾病的不同阶段 sTREM2 的水平也有所不同, 在外周血中

sTREM2 能否作为早期识别轻度认知障碍 (MCI) 的生物学指标结果尚不一致。因此,本研究分析了 MCI 和认知正常老年人之间血清 sTREM2 的差异,以及认知功能、血清 A β 、p-tau 与 sTREM2 水平的相关性,探讨血清 sTREM2 在识别 MCI 中的价值。

方法 纳入河北省石家庄及邢台市社区老年人 216 人,其中 MCI 组 106 人,认知功能正常 (NC) 组 110 人,采用蒙特利尔认知评估量表 (MoCA)、简易智能状态检查 (MMSE)、波士顿命名测验 (BNT)、数字广度测验 (DST) 评估两组的认知功能,空腹采集静脉血液,采用酶联免疫吸附试验的方式检测血清中 A β 42、A β 40、p-tau217、p-tau231、TREM2、sTREM2 浓度。

结果 1.MCI 组血清 sTREM2 水平高于 NC 组,差异存在统计学意义 ($H=4312.0, P=0.001$),其余血液学指标组间差异无统计学意义 ($P>0.05$)。2.相关性分析显示,sTREM2 与 p-tau217、文化程度、MMSE、MoCA、BNT、DST 呈负相关 ($P<0.05$); TREM2 与 p-tau217、A β 42 呈正相关 ($P<0.05$)。3.将是否为 MCI 作为因变量,性别、年龄、文化程度、居住方式、上述血液指标作为自变量纳入二元 Logistic 回归分析,结果表明,sTREM2 为 MCI 的危险因素 ($OR=1.009, 95\%CI=1.002-1.016, P=0.015$),初中及以上文化程度为 MCI 的保护因素 ($OR=0.163, 95\%CI=0.070-0.377, P<0.001$)。4.sTREM2 识别是否 MCI 的 ROC 曲线下面积为 0.630 (敏感度 0.472, 特异度 0.782), sTREM2 联合 MMSE 的 ROC 曲线下面积最佳为 0.849 (敏感度 0.679, 特异度 0.873)。

结论 血清 sTREM2 在 MCI 人群中明显升高,这与 MCI 认知功能下降呈弱相关。sTREM2 联合神经心理学测验 (主要为 MMSE) 能提高识别 MCI 的敏感性和特异性,有成为识别 MCI 的潜在应用价值。

关键词: 可溶性 TREM2, 轻度认知障碍, 血液生物学标志物, 认知功能

青少年抑郁症患者血清中高迁移率族蛋白 1(HMGB1)与快感缺失相关脑区功能影像学研究

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目的 青少年抑郁症是一种严重的、高发病率的精神疾病,罹患抑郁伴快感缺失的青少年病情更严重、自杀率更高。既往大量研究已表明 CRP、IL-6 及 TNF- α 等急性炎症因子损伤奖赏系统的功能活动,而慢性炎症因子是否能影响脑区的功能还未明确,本研究欲分析青少年抑郁症患者血清中高迁移率族蛋白 1(HMGB1)与快感缺失的相关性,并探索 HMGB1 与奖赏脑区自发神经活动之间的关系。

方法 选取 2023 年 2 月至 2023 年 8 月在河北医科大学第一医院精神卫生中心住院的 13-17 岁抑郁症患者 50 例和同时期年龄、性别与之相匹配的社区健康对照者 50 例进行 Snaith-Hamilton 快乐量表(SHAPS)评估、HMGB1 检测及静息态功能磁共振成像(functional magnetic resonance imaging, fMRI)检查,基于 BOLD 像分析 2 组分数低频振荡振幅(fractional amplitude of low-frequency fluctuation, fALFF)、局域一致性(regional homogeneity, ReHo)的差异脑区、并以差异脑区为感兴趣区域(Region of Interest, ROI)进行功能连接(functional connectivity, FC)分析,组间比较采用 t 检验。采用 Spearman 相关分析,分析快感缺失、HMGB1 与大脑自发神经活动的相关性。

结果 与对照组相比,MDD 组独生子女比例高 ($p=0.024$),亲子关系更差 ($p<0.001$),汉密尔顿抑郁量表 17 项 (HAMD-17) ($p<0.001$)、汉密尔顿焦虑量表 (HAMA) ($p<0.001$) 及 Snaith-Hamilton 快乐量表 (SHAPS) 评分 ($p<0.001$) 均显著升高, HMGB1 浓度显著升高 ($p<0.001$),中央前回 fALFF 值减少 (团块水平 FDR 校正,峰值 $P<0.01$,团块水平 $P<0.01$)。HMGB1 分别与 HAMA 评分 ($r=0.350, p=0.022$)、HAMD-17 评分 ($r=0.371, p=0.014$)、SHAPS 评分 ($r=0.365, p=0.016$) 呈正相关, HMGB1 与中央前回 fALFF 值呈负相关 ($r=-0.622, p=0.031$),中央前回 fALFF 值与 SHAPS 评分呈负相关 ($r=-0.756, p=0.004$)。

结论 HMGB1 可能通过影响中央前回自发性活动从而影响快感缺失,这为炎症作为伴快感缺失抑郁症患者的额外治疗目标奠定理论基础。

关键词: 青少年抑郁症; 高迁移率族蛋白 1; 快感缺失; 静息态功能磁共振; 中央前回

生命不同阶段多重应激对焦虑抑郁症状检出

率的调查研究

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目的 探讨生命不同阶段（胎儿期、童年期和成年期）多重应激对焦虑抑郁症状的影响。

方法 在 2013-2014 年间调查开滦矿业集团工人，以胎儿期是否暴露于地震作为胎儿期创伤性事件，采用儿童期创伤问卷（Childhood Trauma Questionnaire, CTQ）和生活事件量表（life event scale, LES）分别评估儿童期创伤和成年期生活事件。收集所有受试者一般人口学资料，如性别、年龄、出生日期、家庭收入、受教育情况、吸烟及饮酒史等。胎儿期地震暴露组为 1976 年 7 月 29 日至 1977 年 4 月 28 日出生，在胎儿期经历地震；胎儿期非暴露组为 1977 年 7 月 29 日至 1978 年 4 月 28 日出生，地震至少 1 年后出生，胎儿期未遭受地震应激。将受试者的 CTQ 中满足以下任一项定义为存在童年期创伤：情感虐待 ≥ 13 分，躯体虐待 ≥ 10 分，性虐待 ≥ 8 分，情感忽视 ≥ 15 分，或躯体忽视 ≥ 10 分。将 LES > 32 分定义为存在成年期生活事件。采用 17 项汉密尔顿抑郁量表和 14 项汉密尔顿焦虑量表评估所有受试者的抑郁和焦虑症状。将这两个量表 ≥ 7 分定义为存在焦虑抑郁症状。将所有受试者根据生命不同阶段遭受创伤性事件的情况分为 4 组：无暴露组、暴露组 1、暴露组 2 和暴露组 3，比较四组焦虑抑郁症状的检出率。计量资料均数和标准差表示，多组间比较采用单因素方差分析；计数资料用百分率表示，采用 χ^2 检验进行组间比较；采用多因素 logistcs 回归分析进行抑郁症状的影响因素分析。

结果 最终有 626 人纳入统计分析，其中无暴露组 29 人、暴露组 1 为 249 人、暴露组 2 为 275 人和暴露组 3 为 73 人。随着遭受创伤时期数量增加抑郁症状检出率增加，分别是无暴露组为 0.5%，暴露组 1 为 1.5%，暴露组 2 为 2.7%，暴露组 3 为 9.7%，差异有统计学意义（ $\chi^2=12.715$, $P=0.006$ ）。多因素 logistcs 回归分析显示，在胎儿期、童年期和成年期均遭受创伤性事件是抑郁症状的独立风险因素（ $P<0.001$, $OR=24.527$, $95\%CI=2.193, 274.359$ ）。受教育年限小于 12 年是抑郁症状的保护性因素（ $P=0.004$, $OR=0.034$, $95\%CI=0.003, 0.337$ ）。

结论 生命不同阶段遭受多重创伤性事件会增加抑郁症状风险。

关键词：多重应激；抑郁症状；胎儿期；童年期；成年期

基于结构方程模型对河北大学生抑郁情绪影响因素的分析

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目的 本研究的目的是探索河北大学生抑郁情绪检出率及影响因素，并构建抑郁情绪影响因素的结构方程模型，为我省高校人才培养的良性发展提供方向。

方法 本研究是基于互联网自评的横断面研究，于 2021 年 10 月至 2023 年 12 月随机选取河北省内三所院校（河北医科大学、河北科技大学以及石家庄铁道大学）本科生 23384 名，其中 2094 名同学不同意参与筛查，最终回收问卷 21290 份，评估资料回收率为 91.0%。采用患者健康问卷抑郁量表（PHQ-9）评估受试者抑郁情绪严重程度，并根据 PHQ-9 得分分组：得分大于等于 5 分为有抑郁情绪组，得分小于 5 分为无抑郁情绪组。资料回收整理后使用 SPSS 26.0 软件进行统计分析。连续性计量资料以平均值 \pm 标准偏差（Mean \pm SD）表示，计数资料以例数（百分比）来表示。采用 AMOS 20.0 软件包实现结构方程模型的拟合与分析。资料不全的受访者数据不纳入统计分析，双侧 P 值小于 0.05 认为差异具有统计学意义。

结果 以抑郁情绪的严重程度为内生观测变量，以心理弹性及压力感知作为中介变量，以儿童创伤和生活事件作为外源潜变量建立了一个全模型，经过多次调整，并且删除不显著的路径，以渐进残差均方和平方根（RMSEA）小于 0.08，GFI、IFI、NFI 大于 0.90 为标准确定最终结构方程模型，且本模型信度效度检验良好。结构方程模型提示：童年期创伤对抑郁情绪的直接效应（ $\beta=0.239$, $P<0.05$ ）及间接效应（ $\beta=0.063$, $P<0.05$ ）均存在统计学意义。童年期创伤对抑郁情绪的间接影响不仅是通过心理弹性（ $\beta=0.037$, $P<0.05$ ），还通过心理弹性和压力感知（ $\beta=0.026$, $P<0.05$ ）的影响，表明心理弹性和压力感知在童年期创伤与抑郁情绪之间存在连锁的中介作用（效应大小=41.3%）。生活事件影响抑郁情绪

主要以直接效应为主 ($\beta=0.052$, $P<0.05$), 效应大小为 89.7%, 生活事件对抑郁情绪的间接影响是以心理弹性为主 ($\beta=0.007$, $P<0.001$), 压力感知与心理弹性的联合中介效应微乎其微。

结论 童年期创伤、生活事件、心理弹性、压力感知与抑郁情绪之间存在显著的关联, 加强个体的心理弹性, 减少对压力的过度感知可能是预防抑郁情绪的有效干预措施。

关键词: 河北大学生; 抑郁情绪影响因素; 早年创伤; 结构方程模型

Associations between Body Mass Index, High-Sensitivity C-Reactive Protein Levels and Depressive Symptoms: NHANES 2015-2016

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Objective Many studies have shown an association between Body Mass Index (BMI), High-Sensitivity C-reactive protein (HSCRP), and depressive symptoms (DP). However, the complex relationship between BMI, HSCRP and DP remains uncertain. The objective of this research is to examine the correlation between BMI, HSCRP levels, and DP in a substantial sample that is representative of the national level

Methods Our analysis was based on the 2015-2016 National Health and Nutrition Examination Survey (NHANES). BMI was used to assess obesity, and DP was measured by the Patient Health Questionnaire-9 (PHQ-9). Physical activity (PA) was assessed based on self-reported duration and frequency of various activities. Using multivariable logistic regression analysis and stratified analysis, we examined the relationship between BMI, HSCRP levels, and DP. In addition, we applied generalized additive models to explore the non-linear relationships among variables

Results This study included a total of 4834 participants. The results revealed that BMI ($P=0.029$) and HSCRP levels ($P=0.018$) were risk factors for DP. Moreover, our study revealed the relationship between BMI and DP ($P=0.013$), HSCRP levels and DP ($P=$

0.038), as well as BMI and HSCRP levels were non-linear ($P=0$). The nonlinear association between HSCRP and DP is significant in women when stratified by gender ($P=0.006$). Similarly, stratifying by gender, a nonlinear association between BMI and DP was found to be significant only in women ($P=5e-04$). No nonlinear association was found between BMI and DP ($P=0.979$), as well as between HSCRP and DP ($P=0.644$) in men

Conclusion Research have found links between increased risk of DP and elevated levels of both BMI and HSCRP and the relationship between them were non-linear. Furthermore, the nonlinear associations between BMI and DP, as well as between HSCRP and DP, are gender-dependent.

关键词: BMI; PHQ-9; HSCRP; DP; Obesity

Genome-wide Association Study in Patients with Schizophrenia Revealed Associations of Copy Number Variants and Antipsychotic Treatment Response

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Objective Response to antipsychotic drugs (APD) varies greatly among individuals and is affected by genetic factors. While contribution of common single nucleotide variant (SNV) has been extensively explored, little is known about the copy number variant (CNV) associated with treatment response. This study aims to demonstrate genome-wide associations between copy number variants (CNV) and response to APD in patients with schizophrenia

Methods A total of 3,030 patients of Han Chinese ethnicity randomly received APD (aripiprazole, olanzapine, quetiapine, risperidone, ziprasidone, haloperidol and perphenazine) treatment for six weeks. Percentage change on the Positive and Negative Syndrome Scale (PANSS) reduction was used to assess APD efficacy, and more than 50% change was considered as APD response. CNVs were identified across the

whole genome and associations between CNV burden, gene set, CNV loci and CNV break-point and APD response were reported. Associations between APD response and schizophrenia-associated CNVs and CNVs intersected with antipsychotic target genes were also tested

Results Higher CNV losses burden decreased the odds of 6-week APD response (OR=0.66 [0.44, 0.98]). CNV losses in synaptic pathway involved in neurotransmitters were associated with 2-week PANSS reduction rate. CNV involved in sialylation (1p31.1 losses) and cellular metabolism (19q13.32 gains) associated with 6-week PANSS reduction rate at genome-wide significant level. Additional 36 CNVs associated with PANSS factors improvement. The OR of protective CNVs for 6-week APD response was 3.10 (95%CI: 1.33~7.19) and risk CNVs was 8.47 (95%CI: 1.92~37.43). CNV interacted with genetic risk score on APD efficacy (Beta=-1.53, SE=0.66, P=0.021). The area under curve to differ 6-week APD response attained 80.45% (95%CI: 78.07%~82.82%)

Conclusion Copy number variants contributed to poor efficacy of antipsychotic treatment and synaptic pathway involved in neurotransmitter was highlighted. Novel CNV loci associated with APD response provides potential innovative genetic therapeutics for schizophrenia.

关键词: schizophrenia, antipsychotic treatment response, copy number variants, genome-wide association study, drug target

Analysis of Mitochondrial Gene Expression Related To Schizophrenia Patients

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Objective To explore the expression characteristics of mitochondrial functional genes in first-episode schizophrenia patients and the correlation between dif-

ferentially expressed genes and clinical metabolic indicators

Methods Twenty first-episode schizophrenia patients who had not taken antipsychotic drugs (patient group) and 20 healthy controls (control group) were included. Real-time quantitative PCR (qPCR) technology was used to detect the expression levels of mitochondrial quality control and oxidative phosphorylation-related genes in peripheral blood leukocytes, and metabolic indicators such as blood biochemistry, blood glucose, and uric acid were collected. The inter-group differences in gene expression levels and demographic information were compared using the Mann-Whitney U test or independent sample t-test, and the correlation analysis between differentially expressed genes and clinical metabolic indicators was conducted using Spearman correlation analysis

Results The gene expression levels of key genes related to mitochondrial function, PGC-1a, PARK2, and LC3B, in the patient group were significantly lower than those in the control group ($P < 0.05$). The gene expression levels of NRF2, SIRT1, NRF1, TFAM, P62, PINK1, PHB2, MFN1, MFN2, YME1L, OPA1, MFF, DRP1, FIS1, MTATP8, AIF, NDUFA2, and MTCO2 related to mitochondrial function and oxidative phosphorylation in the patient group showed no significant differences compared to the control group ($P > 0.05$), but exhibited a decreasing trend. The correlation analysis revealed a negative correlation between the expression level of the PGC-1a gene in the patient group and the levels of very low-density lipoprotein ($r = -0.451$) and a negative correlation between the expression level of the PARK2 gene in the patient group and uric acid levels ($r = -0.447$)

Conclusion The expression levels of several key genes involved in mitochondrial quality control and oxidative phosphorylation processes in first-episode schizophrenia patients show a downward trend. The differentially expressed genes are correlated with metabolic abnormalities in patients, suggesting that mitochondrial dysfunction may be associated with the high incidence of metabolic disorders in schizophrenia patients

关键词: mitochondrial quality control schizophrenia Lipid metabolism

生活事件对经深部经颅磁刺激辅助治疗的抑郁症患者血浆 IL-10 和过氧化物酶体增殖物激活受体 γ 的影响

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目的 探究深部经颅磁刺激 (dTMS) 联合药物治疗伴应激的抑郁症患者的疗效, 以及治疗前后受试者外周血 IL-10 和过氧化物酶体增殖物激活受体 γ (PPAR γ) 水平的相关性。

方法 自 2022 年 9 月至 2023 年 12 月, 在河北医科大学第一医院精神卫生中心门诊就诊或住院的抑郁障碍患者为本研究主要的入组对象。根据抑郁障碍患者的生活事件量表评分, 将患者分为应激组和非应激组, 使用 dTMS 系统及 H1 线圈, 以左侧背外侧前额叶皮层作为刺激靶点, 强度为 120% 静息运动阈值, 频率为 18Hz。受试者连续两周接受 5 天的 dTMS 治疗, 共治疗 10 次。所有患者在治疗前后做两次访视, 基线时评估患者的一般人口学信息、生活事件量表 (LES)、汉密尔顿焦虑量表 (HAMA)、汉密尔顿抑郁量表 (HAMD) 并检测血浆 IL-10 和 PPAR γ 的水平。在 dTMS 治疗 2 周后, 再评估患者 HAMA、HAMD 及 IL-10 和 PPAR γ 水平。分析应激和抑郁症状的治疗效果与 IL-10 和 PPAR γ 变化的相关性。使用配对样本 t 检验, 分析治疗前后患者症状及炎症因子的变化。

结果 1. 应激组和非应激组患者在基线时 HAMA ($P=0.616$) 和 HAMD ($P=0.222$) 评分没有显著差异。应激组患者在治疗后 HAMA ($P<0.001$) 和 HAMD ($P<0.001$) 评分均显著下降, 非应激组患者在治疗后 HAMA ($P<0.001$) 和 HAMD ($P<0.001$) 评分也均显著下降。应激组的患者比非应激组的患者 HAMA ($P=0.006$)、HAMD ($P<0.001$) 评分下降显著; 2. 应激组受试者基线 IL-10 水平高于非应激组 ($P=0.041$), 且与 HAMD 量表评分呈负相关 ($R=-0.362$, $P<0.001$), 治疗后应激组 IL-10 水平明显升高 ($P=0.013$); 应激组的受试者基线 PPAR γ 水平比非应激组高 ($P<0.001$), 且与 LES 水平呈正相关 ($R=0.303$, $P<0.001$), 治疗后两组 PPAR γ 均明显升高, 但应激组升高更明显 ($P=0.030$)。

结论 1. dTMS 联合药物治疗对伴应激的抑郁

症的疗效优于对非应激的抑郁症的疗效;

2. 应激会诱导抑郁症患者抗炎细胞因子 IL-10 及 PPAR γ 水平升高, 经历应激之后患者 IL-10 水平越低, 抑郁情绪越严重。经过 dTMS 联合药物治疗 IL-10 和 PPAR γ 水平升高, 抑郁情绪好转, 表明 dTMS 联合药物治疗可以改善炎症因子水平, 并达到治疗伴应激抑郁症的效应。

关键词: 应激, 抑郁症, dTMS, IL-10, PPAR γ

Theta 脉冲刺激治疗抑郁症疗效及安全性的探索性随机对照研究

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目的 为寻求快速起效与缓解的治疗方案, 缩短治疗周期, 为抑郁症患者寻求有效的辅助治疗方案, 探讨 Theta 脉冲刺激 (theta burst stimulation, TBS) 辅助治疗抑郁症的疗效及安全性。

方法 招募 2024 年 3 月 7 日至 2024 年 6 月 8 日河北医科大学第一医院精神卫生中心

18-65 岁, 符合国际疾病分类第 10 版 (International Classification of Diseases, ICD-10) 抑郁症诊断标准的患者 60 例, 按随机数字表法分为 TBS 联合药物治疗组 (TBS 组, 30 例) 和伪 TBS 刺激联合药物治疗组 (伪 TBS 组, 30 例)。2 组均在药物治疗基础上使用 TBS 或伪 TBS, 每天 2 次, 每周 5 天, 共治疗 2 周。在基线及治疗第 2 周末, 采用 17 项汉密尔顿抑郁量表 (Hamilton Depression Rating Scale, HAMD17) 及汉密尔顿焦虑量表 (Hamilton Anxiety Rating Scale, HAMA) 评估患者的抑郁、焦虑症状, 采用 32 项轻躁狂症状清单 (32-Item Hypomania Checklist, HCL-32) 评估治疗后的转躁风险。以 HAMD17 及 HAMA 的减分及减分率为主要评估指标, HAMD17 反应率、不良事件及转躁风险为次要评估指标。使用独立样本 t 检验、卡方检验等比较疗效差异。

结果 2 组基线 HAMD17 和 HAMA 评分差异无统计学意义 ($P>0.05$)。治疗第 2 周末, TBS 组 HAMD17 减分及减分率高于伪 TBS 组, 差异有统计学意义 ($t=3.16$, $P=0.02$; $t=2.23$, $P=0.04$), TBS 组 HAMA 减分及减分率有高于伪 TBS 组趋势, 但差异

无统计学意义 ($t=1.06$, $P=0.37$; $t=0.62$, $P=0.45$)。TBS 组和伪 TBS 组 HAMD17 反应率分别为 60.0% (18/30) 和 36.7% (11/30), 差异无统计学意义 ($\chi^2=0.96$, $P=0.28$)。TBS 不良事件发生率为 14.3% (4/30), 伪 TBS 组为 3.3% (1/30), 2 组不良事件发生率差异无统计学意义 ($\chi^2=0.19$, $P=0.67$), 治疗过程中发生的主观不适在治疗结束 3d 内均可自行缓解, 且无轻躁狂或躁狂发生。

结论 TBS 是一种有效、快速、安全且耐受性好的抗抑郁疗法, 由于本研究样本量较小, 未来需要进行更多双盲假对照试验来确认我们的结论。

关键词: 加速 θ 爆发式磁刺激 (TBS); 抑郁症; 有效性研究; 安全性

Efficacy of Bright Light Therapy for Perinatal Depression: A Meta-analysis of A Randomized Controlled Trial

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Objective Although traditional pharmacological therapies are widely used in patients with perinatal depression (PPD), the reproductive safety of antidepressants remains controversial. A large number of pregnant women discontinue medication due to fear of adverse effects on the fetus, and antidepressant medications are often slow and inefficient, preventing patients with PPD from achieving rapid and desirable outcomes. Bright light therapy has been increasingly applied to patients with PPD recently. Nevertheless, the evidence from clinical trials is inconsistent

Methods We performed a meta-analysis of randomized controlled trials of PPD patients who were treated with bright light therapy versus placebo group according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA). We searched for randomized controlled studies in PubMed, Embase, Cochrane Library and Web of Science up to December 2023. The results were evaluated using the standardized mean difference (SMD) of improvement in depression score and the odds ratio (OR) for remission

rate, response rate, and drop-outs rate

Results The bright light therapy group had the higher PPD response rate (50.68% vs. 33.08%; OR = 2.05; 95% CI: [1.25, 3.35]; $P = 0.004$; $I^2 = 35\%$) and remission rate (54.10% vs. 18.52%; OR = 5.00; 95% CI: [2.09, 11.99]; $P = 0.0003$; $I^2 = 0\%$) than the placebo group. The improvement in depression score showed the bright light therapy group was superior to the placebo group in overall efficacy for treating PPD (SMD = -0.47; 95% CI: [-0.80, -0.13]; $P = 0.007$). Additionally, there was no statistical difference between the two groups in drop-outs (21.84% vs 29.63%; OR = 0.63; 95% CI, [0.31, 1.29]; $P = 0.21$; $I^2 = 0\%$)

Conclusion Bright light therapy holds great potential in treatment of PPD. Better results are available. It has been shown to be effective and safe, and it will likely further expand the therapeutic options available to psychiatrists in PPD.

关键词: Bright light therapy; Randomized controlled trial; Perinatal depression

精神分裂症患者血浆外泌体的功能研究

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浙江大学医学院附属邵逸夫医院

目的 本研究利用精神分裂症患者的外泌体 (SCZ EXO) 在细胞和动物模型层面探讨: 1、SCZ EXO 对神经元以及胶质细胞的影响; 2、SCZ EXO 对小鼠行为的影响; 3、利用蛋白组学技术挖掘外泌体中蛋白变化, 并分析其作为临床诊断标志物的可靠性, 以及与患者的临床指标的相关性, 以探究外泌体在精神分裂症发病机制中的作用。

方法 通过 qEV 柱提取难治性精神分裂症患者血浆外泌体 (TRS EXO) 和非难治性精神分裂症患者血浆外泌体 (NTRS EXO) 以及健康对照血浆外泌体 (HC EXO), 并进行质检。之后, 对原代神经元、星形胶质细胞和小胶质细胞分别进行 TRS EXO、NTRS EXO 和 HC EXO 处理, 以检测外泌体对神经元以及胶质细胞的影响。其次, 利用 TRS EXO 和 NTRS EXO 尾静脉注射, 观察对小鼠行为学表型的影响, 以及检测 HC EXO 对 MK801 精神分裂症模

型小鼠行为学表型的影响。进一步,利用蛋白组学技术研究 TRS EXO、NTRS EXO 和 HC EXO 中的蛋白质水平差异,并对差异表达蛋白(DEPs)进行 GO 分析和蛋白质相互作用分析,发掘 SCZ 潜在机制。最后,用 ELISA 验证组学分析得到的 DEPs,用 ROC 曲线分析其作为 SCZ 生物学标志物的可能性,并与患者的临床症状进行相关性分析。

结果 本研究成功提取 SCZ EXO 和 HC EXO。细胞实验证实,SCZ EXO 可引起原代神经元树突数量明显减少,引起原代星形胶质细胞增殖,但不引起原代小胶质细胞的激活。行为学结果显示,SCZ EXO 能够引起小鼠前脉冲抑制受损、运动亢进以及社交功能减退等精神分裂症样行为;而 HC EXO 可改善 MK801 导致的精神分裂症样行为。蛋白质谱分析发现,TRS EXO 和 NTRS EXO 的 DEPs 有较高的可信度且显著区别于 HC EXO,生信分析表明,富集到的蛋白集中在与氧化应激相关的蛋白网络中,包含过氧化物还原酶2(PRX2)、过氧化氢酶(CAT)和载脂蛋白4(APOA4)等,其中 PRDX2 起到枢纽作用。TRS EXO 和 NTRS EXO 中的 PRDX2 均显著低于 HC EXO,ROC 的曲线下面积(AUC)为 95.93%,但与各自的临床症状评分无相关性。

结论 SCZ EXO 可引起神经元及胶质细胞形态及增殖变化,引起正常小鼠精神分裂症样行为,且与 HC EXO 存在显著的差异。PRDX2 有潜力作为精神分裂症外周标志物,提示外泌体中的 PRDX2 及其相关的氧化应激和神经炎症通路可能与精神分裂症的发生相关。

关键词:精神分裂症,外泌体,蛋白组学,PRDX2

Social Functioning Mediated The Relationship Between Childhood Emotional Neglect and Cognitive Deficits in Patients with Schizophrenia

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Objective Childhood maltreatment is frequently

reported to be associated with cognitive deficits in patients with schizophrenia, but research on the childhood neglect subtype in childhood maltreatment is limited. This study sets out from the impact of childhood neglect on cognitive impairment in schizophrenia, and explores the interrelationship of childhood neglect, social functioning, resilience, and cognitive functioning

Methods Two-hundred and thirty-two patients who met the DSM-IV criteria for schizophrenia were recruited at the Second Xiangya Hospital of Central South University. The Childhood Trauma Questionnaire (CTQ), Social and Occupational Functioning Assessment Scale (SOFAS), Connor-Davidson Resilience Scale (CD-RISC), and Digit Symbol Substitution Test (DSST) were used to assess childhood emotional and physical neglect, social functioning, resilience, and cognitive functioning respectively

Results The results indicate that (1) both emotional neglect (Spearman's $r=-0.167$, $p=0.015$) and physical neglect (Spearman's $r=-0.263$, $p<0.001$) are associated with cognitive deficits in patients with schizophrenia; (2) social functioning partially mediated the cognitive impairment in schizophrenia that related to emotional neglect ($\beta_{total}=-0.15$, $SE=0.07$, 95% CI: $LL=-0.31$ ~ $UL=-0.03$); (3) resilience is associated with emotional neglect (Spearman's $r=-0.244$, $p=0.002$) and appears to be independent of cognitive impairment (Spearman's $r=-0.006$, $p=0.942$)

Conclusion Through the mediating role of social functioning, some of the cognitive impairments caused by childhood emotional neglect can be alleviated. This suggests that interventions aimed at improving social functioning may help ameliorate cognitive deficits in patients with schizophrenia who have high levels of emotional neglect scores.

关键词: emotional neglect, cognitive functioning, social functioning, resilience

Artificial Intelligence for Voice-Based Depression Detection: Bipolar Depression and Unipolar Depression

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Objective Depression remains a significant global health issue, characterized by its heterogeneity and the absence of reliable, objective biomarkers for its diagnosis. The advent of artificial intelligence (AI) in assisting the identification of depressive disorders is emerging rapidly. While predominant research focuses on differentiating between depressed patients and healthy subjects, there is limited investigation into distinguishing between bipolar and unipolar depression, as well as comparisons involving individuals recovering from depression

Methods This study utilized a portion of data not included in the external validation set, comprising 32 individuals with bipolar depression, and 12 in remission from unipolar depression (remission duration exceeding two months). The analysis involved manual speech feature extraction and deep learning outputs, aiming to evaluate their efficacy in diagnosing different depressive conditions. The deep learning model was constructed using data from 1656 participants, who were classified into healthy and depressed groups by psychiatrists based on DSM-IV criteria. The dataset comprised 811 patients diagnosed with depression and 845 healthy individuals. This large-scale data acquisition allowed for a robust training and validation of the model, ensuring a comprehensive assessment of its diagnostic capabilities across diverse acoustic features and participant demographics

Results The AI model developed using deep learning techniques exhibited greater robustness compared to traditional machine learning models, demonstrating enhanced stability in distinguishing between depressed and healthy subjects. The average prediction scores for bipolar depression and unipolar depression were 0.769 and 0.690 respectively, which means for individuals with bipolar depression, the model tended to classify them within the depressive episode group, exhibiting higher prediction scores (p -value=0.152). Further analysis of vocal features indicated potential differences between bipolar and unipolar depression in specific acoustic features such as MFCC2, MFCC12, and

LSP2 (u test $p < 0.05$). For subjects in remission from depression, whose average prediction score is 0.401, the model tended to classify them closer to the healthy group (p -value=0.142), providing prediction scores that lay between those of healthy individuals, average prediction score is 0.302, and those of depressed patients. This suggests a nuanced capability of the model to reflect transitional states of mental health, which is crucial for monitoring recovery paths and adjusting therapeutic interventions accordingly

Conclusion Preliminary findings indicate significant potential in using vocal biomarkers for differentiating various states of depression. The model showcased a promising ability to discern between active bipolar and unipolar depressive states as well as varying stages of remission. Sensitivity to changes in depression status over time was noted, suggesting the model's utility in ongoing patient monitoring. This investigation into voice-based AI diagnostics for depression represents a significant stride towards establishing a non-invasive, efficient tool for early detection and differentiation of depressive disorders, promising to revolutionize treatment paradigms and patient outcomes in mental health care.

关键词： Depression, Artificial Intelligence, Speech Analysis, Screening Tools, Bipolar Depression, Unipolar Depression

Mediation Effect of Sleep Disturbance between Psychotic-like Experiences and Depression Among Chinese Adolescents

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Background Psychotic-like experiences (PLEs) have been associated with sleep disturbances and depression. However, the association between PLEs, sleep disturbances and depression has not been thoroughly investigated in prior studies. In this study, we aimed to explore as to whether sleep disturbances moderate the association between PLEs and depression

Methods Secondary school students were recruited using cluster sampling. The Prodromal Questionnaire (PQ-16), the Patient Health Questionnaire 9-item (PHQ-9), and The Pittsburgh Sleep Quality Index (PSQI) were used. Descriptive statistic was used to describe the sociodemographic characteristics of participants. Multicollinearity of the regression model and a hierarchical multiple regression analysis was firstly conducted. Next, we conducted a mediation analysis using SPSS PROCESS v4.1 model 4

Results (1) A total of 63,205 participants were involved, in which the weighted prevalence of depression in all subjects was 23.0% (95% CI: 19.6- 27.0%). (2) Depressive symptoms was independently associated with sex, family type, single-child status, residence sleep disturbances and PLEs, while in bivariate analysis, the PHQ-9 scores was not associated single-child status; (3) According to results of mediation analyses, the association, which was partially mediated by sleep disturbances was indicated between PLEs and depressive symptoms in both direct and indirect ways

Conclusion Depressive were prevalent among secondary school students in Western China. Our results demonstrated a positive relationship between PLEs and depressive symptoms. As a partial mediator role of sleep disturbances in the cross-sectional association between PLEs and depression was preliminarily confirmed in this study, clinical practitioners would benefit from reducing depression by screening for and treating sleep disturbances in individuals who self-report both PLEs and depression.

关键词: Mediation Effect; Sleep Disturbance ;Psychotic-like Experiences; Depression

Integrative Analysis of The Dysregulation of Long Non-coding RNAs and MRNAs and Key CeRNA Regulatory Network Associated with Major Depressive Disorder

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Introductio Major depressive disorder (MDD) is a complex psychiatric disorder with high prevalence and multiple symptoms. MDD-associated genetic mutations have been demonstrated to be affected by both coding and non-coding parts of the genome. Long non-coding RNAs (lncRNAs) have emerged as an important class of regulatory RNA that are involved in several biological functions by regulating gene transcription. Although accumulating evidence suggests that dysregulation of multiple RNA species in MDD may influence the pathophysiology of MDD, the molecular mechanisms and interaction between different types of RNAs are not fully understood. In the present study, the integration of different RNA species in transcriptome analysis was used to explore the potential lncRNAs and mRNAs associated with MDD disease mechanisms. A competitive endogenous RNA (ceRNA) network was identified as a key regulatory network associated with MDD. A diagnostic prediction model for MDD was then constructed using RNAs derived from the ceRNA network and validated in an independent dataset

Methods Subject data were derived from the Towards Neurobiology-based Diagnosis and Treatment of Affective Disorders (TNDTAD). It is a naturalistic prospective study of mood disorders (trial registration number: NCT03294525). Whole transcriptome sequencing was performed on the peripheral blood of 31 Han Chinese patients with MDD and 20 matched healthy controls (HCs). The differential expression of lncRNAs and mRNAs was identified using limma. Weighted gene co-expression network analysis (WGCNA) was employed to correlate the expression status of protein-coding transcripts with lncRNAs and screen the disease-associated co-expression modules. The microRNAs (miRNAs) that interacted with lncRNAs and mRNAs were respectively identified using the LncBase V3 database and miRTarBase, miRDB, TarBase, miRanda, TargetScan and Diana-micro T databases. A competitive endogenous RNA (ceRNA) network was constructed to interpret interactions between different RNA species. The biological functions of differentially expressed RNAs, associated co-expression modules and hub genes in ceRNA network were further

analyzed using functional enrichment analysis. Subsequently, a combination of four types of machine learning algorithms (Boruta, lasso regression, K-Nearest Neighbors - recursive feature elimination and random forest) retrieved the marker genes for MDD in the ceRNA network. Diagnostic prediction models were created based on the overlapping genes generated by four algorithms. The prefrontal cortex RNA-seq data from 15 patients with MDD and 15 normal samples in the GSE54568 dataset (expression microarray) was obtained from the NCBI Gene Expression Omnibus (GEO) database as an independent validation dataset. The diagnostic nomograms and receiver operating characteristic (ROC) curves were derived from the validation dataset

Results A total of 194 lncRNAs (107 up-regulated and 87 down-regulated) and 177 mRNAs (120 up-regulated and 57 down-regulated) were determined as significantly differentially expressed RNAs in MDD compared to HCs. Based on the criterion of approximate scale-free topology, 5 was selected as the soft threshold power. 24 co-expression modules of RNAs were identified, among which the darkorange ($r = -0.36$, $P = 0.009$) and the magenta ($r = -0.36$, $P = 0.009$) co-expression modules were significantly correlated with MDD, enriched with MDD susceptibility transcripts. A preliminary ceRNA regulatory network was constructed by integrating differential lncRNAs and mRNAs with significant co-expression modules which exhibited a significant correlation between the expression of lncRNAs and mRNAs. Afterwards, a total of 36 MDD-associated DE miRNAs, reported from at least two previous case-control studies were selected for the construction of hub ceRNA network. A hub lncRNA-miRNA-mRNA regulatory network consisting of 2 DE lncRNAs, 2 DE miRNAs and 16 DE mRNAs showed relevant to cell energy metabolism and inflammation molecular functions, which may provide new insights for the investigation of diagnostic biomarkers of MDD. Finally, 4 MDD-associated diagnostic marker genes obtained by four machine learning algorithms, ARMC8, UBE2V2, AASDHPPT and SELENOT, were utilized to construct logistic regression and lasso regression diagnostic prediction models. The AUCs of the diagnostic nomograms

for prefrontal cortex samples were 0.711 and 0.698 separately. The analyses of the AUC revealed that these 4 genes hold potential as diagnostic biomarkers

Conclusion Altogether, the results of our study provide evidence that lncRNA associated complex trait-specific networks may play a critical role in the pathophysiology of MDD by potentially regulating the process of energy metabolism and inflammation. This study provides new valuable information to explore the molecular mechanism of MDD and suggests that bioinformatics analysis studies could contribute to identifying epigenetic diagnostic biomarkers.

关键词: Major Depressive Disorder, whole transcriptome analysis, WGCNA, ceRNA network

Post-Marketing Safety Concerns with Lulmateperone: A Disproportionality Analysis of Spontaneous Reports Submitted To The FDA Adverse Event Reporting System

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Objective Schizophrenia and bipolar disorder are common psychiatric disorders which bring huge burden for patients and their family. The clinical manifestations of these patients are often specific, and the therapeutic effects of these diseases are often not significant. Therefore, identifying drugs that are effective, safe, and have fewer side effects is very important. Current major drug treatment strategy for schizophrenia is using antipsychotic drugs which could block the D2 family of postsynaptic dopamine receptors. One typical representative drug is olanzapine. For bipolar disorder, lithium is one kind of the first-line therapeutic drugs due to its anti-manic agent and it is also capable of attenuating depressive symptoms. However, due to the strong heterogeneity of these diseases, some patients may experience some serious or non-serious adverse reactions,

such as weight gain, extrapyramidal symptoms of parkinsonism, cognitive impairment and tardive dyskinesia. It is obvious that with these adverse reactions, it undoubtedly increases the treatment burden of schizophrenia and bipolar disorder. Recently, a mechanistically novel drug named lumateperone was investigated for its anti-schizophrenic and anti-emotional symptoms effect [12]. This drug can selectively and simultaneously regulate the neurotransmitter pathways of serotonin, dopamine, and glutamate, which are related to schizophrenia and bipolar disorder. Based on some clinical evidence, lumateperone has received approval as adjunctive treatment for schizophrenia in adults by the US Food and Drug Administration (FDA) in March 2019 and for bipolar disorder in 2021. However, its marketing authorization still triggered some concerns, mainly because of the lack of more evidence on its efficacy and safety. Most of the current safety evaluations of it mainly came from clinical trials. During the experiment, there may be potential issues such as incomplete medical history and inaccurate self-reporting during screening, and the sample size remains small. Additionally, the current evidence on safety is almost entirely based on short-term approval trials with a follow-up period of only 5 days to 8 weeks. Therefore, it is difficult to predict potential long-term adverse reactions of lumateperone. We need a larger sample of real-world data to confirm its safety. On these grounds, the aim of this study was to analyze post-marketing safety data of lumateperone through the largest publicly available worldwide pharmacovigilance database, the FDA Adverse Event Reporting System (FAERS), and to investigate the comparative reporting risks of lithium or olanzapine

Methods We conducted pharmacovigilance study on adverse events (AEs) related to lumateperone from January 1 2020 to December 31 2023 based on the FAERS database. To assess the disproportionality of lumateperone as compared to other drugs, two common methods, namely, the reporting odds ratio (ROR) and Bayesian information component (IC) were used. Significant threshold of ROR was defined as following: the lower limit of its 95% confidence interval (95%CI) should be higher than 1 and there should be at least four

adverse event records. For IC, the threshold was 0. Positive reaction signal was defined when two disproportionality measures for the adverse event met the aforementioned criteria. The combination of these two different methods for signal detection can increase the robustness of these findings and reduce the possibility of false positives. There may be bias in the disproportionality analysis compared to other drugs. To test the potential use of this drug, we further compared lumateperone with first-line treatment drugs such as lithium and olanzapine. In addition, we performed time-to-onset analysis in exploring time window for occurrence of adverse reactions and comparison analysis of serious clinical outcomes and non-serious clinical outcomes in exploring potential indicators which would affect clinical outcomes

Results During the study period, a total of 6,216,914 adverse event reports were obtained from the FAERS database after exclusion of duplicates, containing 5,074 lumateperone-related adverse events in 1,762 patients. Females accounted for a larger proportion than males (979 vs. 576). AEs tended to occur on middle-aged patients (18-65 years old) and individuals with 50-100kg. Bipolar disorder was the most reported indication. Lamictal and seroquel were the top 2 combination drugs for lumateperone-associated adverse events. Safety signals were detected for a large number of adverse events, such as dizziness ($n = 225$, ROR = 6.77, 95% CI = [5.92, 7.73]), nausea ($n = 164$, ROR = 2.97, 95% CI = [2.54, 3.47]), headache ($n = 144$, ROR = 3.16, 95% CI = [2.68, 3.73]), somnolence ($n = 125$, ROR = 8.95, 95% CI = [7.49, 10.69]), feeling abnormal ($n = 108$, ROR = 6.36, 95% CI = [5.25, 7.69]), sedation ($n = 76$, ROR = 42.72, 95% CI = [34.02, 53.65]), insomnia ($n = 71$, ROR = 4.05, 95% CI = [3.20, 5.12]) and burning sensation ($n = 71$, ROR = 15.35, 95% CI = [12.14, 19.41]). There are 4 SOCs with more than 200 cases related to the use of lumateperone in bipolar disorder, and the highest SOC is nervous system disorder, with exceeding 600 cases. Following is the psychiatric disorder with more than 400 cases. The third and fourth are general disorder and administration site condition, and gastrointestinal disorder, respectively. For schizophrenia,

there are a total of 3 SOC's which cumulative cases exceeded 200. They are psychiatric disorders, nervous system disorders, and general disorder and administration site conditions. When comparing with to first-line recommended drugs, 35 adverse reactions remain significant in bipolar disorder, such as dizziness ($n = 225$, $ROR = 9.97$, $95\% CI = [6.36, 15.62]$), and headache ($n = 144$, $ROR = 11.00$, $95\% CI = [6.10, 19.85]$). A total of 83 adverse reactions were not observed with significant signals (lower limit of $95\% CI < 1$), such as extrapyramidal diseases, loss of consciousness, and pruritus. For schizophrenia, 108 adverse reactions remain significant, such as burning sensation ($n = 71$, $ROR = 45.81$, $95\% CI = [25.80, 81.32]$) and migraine ($n = 33$, $ROR = 32.87$, $95\% CI = [15.72, 68.74]$). A total of 101 adverse reactions were not observed with significant signals (lower limit of $95\% CI < 1$), such as amnesia, orthostatic hypotension, and neuralgia. The only significant difference about gender observed is dizziness ($n = 94/18$, $ROR = 1.99$, $95\% CI = [1.19, 3.32]$) in bipolar disorder and falling ($n = 13/4$, $ROR = 3.86$, $95\% CI = [1.25, 11.87]$) in schizophrenia. The median TTO of AEs associated with lumateperone for bipolar disorder and schizophrenia was 7.00 (3.22-11.99) days, and 17.00 (6.01-21.71) days, respectively. Drug using in these two disease were all early failure type. Additionally, there were statistically significant differences in age (40 vs. 38 years; $p = 0.0498$) and men and women proportions ($n = 197$ vs. 363; $p = 0.016$) between serious and non-serious cases of patients receiving lumateperone. Five adverse events were more likely to be reported as serious outcomes with $p < 0.05$, such as tardive dyskinesia ($\chi^2 = 28.885$, $p < 0.001$), hallucination, auditory ($\chi^2 = 9.726$, $p = 0.002$), loss of consciousness ($\chi^2 = 10.458$, $p = 0.001$), hallucination ($\chi^2 = 4.655$, $p = 0.031$), and dystonia ($p = 0.039$)

Conclusion This work provides the most updated findings linking lumateperone with the safety based on the real-world data from FAERS. Firstly, we found its growth trend in line with the Weber effect. We propose the hypothesis that lumateperone reports may gradually stabilize after 2023 and estimate that it will maintain a certain level in the coming years. However, this increase raises questions for future reporting, and

strongly underlines the need for constant epidemiological surveillance. Secondly, current analysis suggests that lumateperone is most commonly prescribed in combination with lamotrigine or quetiapine. It has been approved as an adjuvant therapy for schizophrenia and bipolar disorder. Meanwhile, the screened data has other indications, including anxiety disorders, drug dependent insomnia, etc. Thirdly, dizziness, nausea, headache, abnormal sensation are the most common adverse reactions in bipolar disorder, and headache, dizziness, nausea, drowsiness are the most common adverse reactions for schizophrenia. All the common adverse reactions mentioned above may be related to the mechanism of action of lumateperone, so adverse reactions are mainly concentrated in psychiatric disorders and nervous system disorders. Fourthly, no matter compared with other drugs or first-line treatment drugs, most of the existing adverse reactions were not observed to be significant. these adverse reactions are common, mild and appear early, which can be intervened in time, and have little impact on patients' lives. Significant differences in adverse reactions observed between the serious and non-serious groups were tardive dyskinesia, hallucinations, loss of consciousness, and dystonia. Age and gender are potential influential factor as well. This study suggests that the safety of lumateperone in real-world populations may differ slightly from what is described in regulatory trials, therefore further clinical practice data is needed to better understand its safety and provide evidence-based medicine evidence. There is an urgent need for more real-world research, including practical clinical trials, observational studies, and meta-analysis of individual participants with rare and unexpected adverse reactions. Considering the lack of reports on efficacy in the FAERS database, the prescription of lumateperone should be extremely cautious and closely monitored during medication, only used as an adjuvant therapy for treatment. Clinicians also need to remember that if treatment does not take immediate effect, patients who have received more experimental treatment are more likely to feel hopeless. At the same time, attention should also be paid to the possibility of abuse. Further prospective studies are necessary to optimize the risk benefit assessment of this novel drug in the treatment of mental illness

and reduce the likelihood of severe clinical outcomes.

关键词: Lumateperone, Schizophrenia, Bipolar Disorder, Disproportionality analysis, FAERS

肠道微生物-血清蛋白质组整合分析对单、双相抑郁的鉴别价值

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目的 利用肠道微生物和血清蛋白质进行组学联合分析,对单、双相抑郁障碍进行鉴别,寻找疾病的客观生物标记物。

方法 1. 受试者来源于2021年5月至2022年11月在河北医科大学第一医院就诊的患者,其中单相抑郁患者(MDD组)15例、双相抑郁组患者(BDD组)15例。收集一般人口学资料,完成汉密尔顿抑郁量表(HAMD-24)、汉密尔顿焦虑量表(HAMA)等临床量表评估,采集患者的粪便及血液样本;2. 对肠道菌群进行16S rRNA测序,采用线性判别分析(LefSe)筛选差异菌群。利用ROC曲线分析评估所筛选差异菌的诊断效能。应用4D-Lable free技术检测血清中的蛋白质,分析组间有显著差异的蛋白质;利用ROC评估所筛选差异蛋白质的诊断效能;3. 将所筛差异菌属与差异蛋白质进行Spearman相关性分析。

结果 1. MDD组和BDD组一般情况比较,除起病年龄及病程($P < 0.05$)外,差异均无统计学意义(均 $P > 0.05$);2. 微生物组学分析:两组间有关 α 多样性、 β 多样性差异有统计学意义(均 $P < 0.05$)。BDD组和MDD组之间存在27个显著差异菌群($P < 0.05$; $LDA > 3$)。对属水平差异菌群进行ROC曲线分析,发现 *g_Bifidobacterium*、*g_un_f_Enterobacteriaceae*、*g_Clostridium_sensu_stricto_1*对BD患者预测的曲线下面积分别为0.777、0.814、0.721;3. 蛋白质组学分析:本研究共筛选出两组间差异表达蛋白质(DEPs, differentially express proteins)93个。对差异蛋白质进行ROC曲线分析,发现13个蛋白质具有良好的BDD鉴别诊断价值($AUC > 0.7$, $P > 0.05$)。对差异表达蛋白进行GO功能注释显示,在生物过程中参与蛋白数目最多的是生物学调节。KEGG信号通路注释

及富集分析,显示差异蛋白信号通路主要富集在病毒蛋白与细胞因子和细胞因子受体的相互作用抗病毒相关通路、细胞因子-细胞因子受体互作通路、趋化因子信号通路和补体与凝血级联信号通路;4. 微生物组学与血清代谢组学相关性分析:巨单胞菌属、毛螺菌属、罕见小球菌属、韦荣氏球菌属、*g_Dialister*菌与多种蛋白质呈负相关。双歧杆菌属与多种蛋白呈正相关。

结论 本研究发现肠道微生物及血清蛋白质能够有效的区分单、双相抑郁患者,找出了两组间显著不同的27种肠道菌群及93种内源性血清蛋白质;此外发现,8个菌属及13个血清蛋白质具有鉴别诊断单、双相抑郁的潜在作用,且肠道微生物与血清蛋白质之间可能存在互相影响。

关键词: 肠道微生物, 蛋白质组学, 单相抑郁, 双相抑郁

Hippocampal Subregional Structure and Function Alterations in Major Depressive Disorder Patients with and without Mixed Features

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Objective Major depressive disorder with mixed features (MDDMF) is a type of mood disorder characterized by symptoms of mania/hypomania during the episode of depressive disorder. MDDMF exhibits higher illness severity and worse prognosis. Therefore, it's of great importance to elucidate the pathophysiological mechanism of MDDMF, which could contribute to the diagnosis and treatments of the disease. As a vital part of the limbic system and the hypothalamic-pituitary-adrenal axis, the hippocampus is associated with the pathogenesis of major depressive disorder. Consequently, the goal of this study was to examine the hippocampal subregional structure and function features in

patients with MDDMF by calculating the volume of hippocampus and its subregions, as well as exploring the RSFC of the subregions with the whole brain among MDDMF, MDDnonMF and HC groups

Methods A total of 84 individuals including 20 patients with MDDMF, 33 patients with MDDnonMF and 31 healthy controls (HCs) were recruited for this study. All subjects underwent 3.0-T magnetic resonance imaging (MRI) scan. Utilize the Freesurfer software to segment the 3D-T1 MRI data and calculate the volume of the hippocampus and its subregions in both hemispheres. Subsequently, the resting-state functional connectivity (RSFC) of the hippocampus and its subregions was calculated separately. We performed analysis of variance (ANOVA) method to compare structural and functional alterations of hippocampus and its subregions among MDDMF, MDDnonMF and HC groups. Finally, we utilized spearman analysis to investigate the correlation between structural and functional changes and clinical indicators

Results No significant differences were observed among the three groups in age, gender, or years of education. There were significant volume differences among three groups in the left hippocampal fissure, right cornu ammonis 1(CA1) body and right cornu ammonis 3(CA3) body ($p < 0.05$, FDR corrected). MDDMF group exhibited decreased left hippocampal fissure, right CA1 body and right CA3 body volumes compared with MDDnonMF ($p < 0.05$). MDDnonMF group exhibited increased left hippocampal fissure, right CA1 body and right CA3 body volumes compared with HC ($p < 0.05$). Using l_hippocampal fissure, r_CA1body, and r_CA3body as ROIs seeds, we calculated voxel-wise functional connectivity of the whole brain. The ANOVA revealed significant differences in RSFC between l_hippocampal fissure and r_Pallidum, between r_CA1body and r_Inferior Temporal gyrus and between r_CA3body and r_Lingual gyrus among three groups. Compared with HC, MDDMF showed increased RSFC between l_hippocampal fissure and r_Pallidum, as well as decreased RSFC between r_CA1body and r_Inferior Temporal gyru and between r_CA3body and r_Lingual gyrus; MDDnonMF showed decreased RSFC between r_CA3body and r_Lingual

gyrus. Relative to MDDnonMF, MDDMF showed increased RSFC between l_hippocampal fissure and r_Pallidum, as well as decreased RSFC between r_CA1body and r_Inferior Temporal gyrus. Besides, there were positive correlations between the Clinically Useful Depression Outcome Scale supplemented with questions for the DSM-5 mixed features specifier (CUDOS-M) scores and RSFC between left hippocampal fissure and right pallidum, and negative correlations between CUDOS-M scores and RSFC between left CA1 body and right inferior temporal gyrus

Conclusion The current results demonstrated that mixed features in Major Depressive Disorder are linked to both structural and functional brain abnormalities in hippocampal subregions and limbic-cortical-striatal-pallidal-thalamic circuits. These alterations may form the pathological basis for the more severe symptoms observed in MDD patients with mixed features. Hopefully, these findings could potentially serve as a biomarker to differentiate between MDD with mixed features and MDD without mixed features, as well as HCs in the future, thereby aiding in the diagnosis and treatment of the condition.

关键词: major depressive disorder, mixed feature, hippocampus, magnetic resonance imaging, resting-stage functional connectivity

Predicting Treatment Remission and Plasma Concentration of Paroxetine in Patients with Major Depressive Disorder

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Objective We aimed at developing prediction models for treatment remission and steady-state concentration (C_{ss}) in plasma of paroxetine among patients with major depressive disorder (MDD)

Methods This post-hoc analysis originated from an 8-week multi-center prospective cohort study within the Precision Medicine to Enhance Depression and Anxiety Outcome (PMEDA) consortium, involving 530

Chinese Han MDD patients. Logistic regression models were developed using 10-fold cross-validation, with outcomes being treatment remission at the eighth week and C_{ss} defined as a binary variable by a therapeutic reference range (TRR) of 20-65 ng/ml (within/outside TRR). Model performance was assessed using ROC analysis, Hosmer-Lemeshow tests, and decision curve analysis (DCA)

Results The model for predicting treatment remission achieved a mean accuracy, balanced accuracy, and area under the curve (AUC) of 0.723 ± 0.057 , 0.719 ± 0.041 , and 0.707 ± 0.063 , respectively. The model for predicting C_{ss} had a mean accuracy, balanced accuracy, and AUC of 0.627 ± 0.056 , 0.629 ± 0.054 , and 0.615 ± 0.069 , respectively. Both models performed equally well in first-onset and relapse patients. C_{ss} (within/outside TRR) were associated with treatment remission, while CYP2D6 activity score were associated with C_{ss}

Conclusion We developed two prediction models for treatment remission and C_{ss} of paroxetine in MDD patients, demonstrating satisfying performance. Although future validation in independent samples is required, these models provide insight into improving the precision of paroxetine treatment

关键词: paroxetine, major depressive disorder, treatment remission, steady-state concentration, prediction model

双相 I 型抑郁反刍思维与默认网络 alpha 频段功能连接的特定关联

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目的 反刍思维在双相障碍中被证实是常见的临床现象。默认网络 (default mode network, DMN) 及其子网络的活动在健康个体和抑郁症的反刍思维形成中起重要作用, 但对双相障碍反刍思维的影响并无定论, 尤其反刍思维相关的神经电生理活动模式尚不明确。既往研究认为默认网络主要活动频率

范围为 alpha 频段, 本研究旨在探讨双相障碍 DMN 子网络 alpha 频段的功能连接异常与反刍思维的关联。

方法 招募 44 名双相情感障碍 I 型抑郁发作患者和 46 名健康对照者进行脑磁图 (Magnetoencephalography, MEG) 静息态扫描。选取默认网络的两个核心节点, 即后扣带皮层 (Posterior Cingulate Cortex, PCC) 和前内侧前额叶皮层 (Anterior Medial Prefrontal Cortex, amPFC), 以及背内侧前额叶 (Dorsal Medial Prefrontal Cortex, dmPFC) 子网络和内侧颞叶 (Medial Temporal Lobe, MTL) 子网络为感兴趣区域, 采用能量包络算法计算 alpha 频段 DMN 各子网络间的功能连接。比较两组之间反刍思维水平和 DMN 网络内功能连接强度, 以 Spearman 偏相关分析来评估双相抑郁患者异常的功能连接与反刍思维总分和因子分之间的相关性。

结果 双相障碍患者的整体反刍以及强迫深思 (Brooding) 和反省深思 (Reflection) 因子分均显著高于健康对照组。双相抑郁患者组 alpha 频段 PCC-dmPFC 和 dmPFC-MTL 子网络的功能连接均显著增强。PCC-dmPFC 子网络功能连接与反省深思显著相关, 而 dmPFC-MTL 子网络功能连接则与强迫思考显著相关。

结论 默认网络 alpha 频段的网络内功能连接增强反映了双相 I 型抑郁患者过度的自我参照加工。反刍思维的两个子成分—反省深思和强迫思考, 分别与 PCC-dmPFC 和 dmPFC-MTL 子网络的功能连接表现出选择性相关。这些关联突显了默认网络在双相障碍患者反刍思维过程中的关键作用, 为制定针对反刍思维的干预策略提供了潜在的神经生物学靶点, 具有重要的临床指导意义。

关键词: 反刍思维; 双相障碍; 默认网络; 功能连接; alpha 频段

The Frontoparietal Network Mediates The Antidepressant Effects of Accelerated Intermittent and Continuous Theta Burst Stimulation: A Randomised Controlled Trial and TMS-EEG Study

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Objective Treatment-resistant depression (TRD) is a severe condition affecting 44% of depression patients who do not respond to two antidepressant therapies. Repetitive transcranial magnetic stimulation (rTMS) targeting the left dorsolateral prefrontal cortex (DLPFC) is effective for TRD. Stanford neuromodulation therapy (SNT) is an accelerated rTMS protocol with a 64% response rate after 4 weeks. This involves 10 daily intermittent theta burst stimulation (iTBS) sessions. Building on this, our group has recently demonstrated an equivalent antidepressant efficacy of accelerated continuous TBS (a-cTBS) by targeting the right DLPFC. These novel paradigms highlight the need to investigate neural circuitry changes, particularly involving the DLPFC and subgenual cingulate cortex (SGC). Studies also indicate the potential of frontoparietal networks in antidepressant effects. Thus, the neural circuitries underlying the antidepressant effects remain to be identified, and may inform optimisation strategies. In the current study, TMS-EEG was initially used to characterise local and network activity in TRD compared to healthy controls. We hypothesised that TRD individuals would demonstrate abnormal local and frontoparietal network activities. In an SNT course of left DLPFC (a-iTBS group) or right DLPFC (a-cTBS group) treatment, we further aimed to reduce depression symptoms and induce local and network changes in individuals with TRD. We hypothesised that a-iTBS and a-cTBS would normalise local and frontoparietal network activities and that these network changes would predict the antidepressant effects

Methods Totally, 40 TRD patients were randomised to receive a-cTBS or a-iTBS treatment. Each treatment involves 10 TBS sessions per day (1800 pulses/session), spaced at 50-minute intervals across 5 consecutive days. Single-pulse TMS and electroencephalogram co-registration (TME-EEG) was used to quantify neurophysiological changes from Pre- to Post-treatment. Healthy controls were recruited to match the TRD patients (20 for each arm). Both TBS and single pulses were delivered to the same hemisphere for consistency (right: a-cTBS and its controls; left: a-iTBS and its controls)

Results Compared to HC, TRD individuals demonstrated abnormal frontoparietal network properties, characterized by left hypoconnectivity and right hyperconnectivity. In the left DLPFC, TRD individuals had a significantly less positive P180 amplitude compared to healthy controls ($t_{38} = -2.26$, $p = 0.030$, Cohen's $d = 0.71$), which increased after a-iTBS treatment to levels comparable with healthy controls ($t_{19} = 2.64$, $p = 0.016$, Cohen's $d = 0.59$). In the a-iTBS group, current propagation from the left DLPFC to the left inferior parietal lobule (IPL) was significantly lower in TRD patients at baseline ($t_{38} = -2.08$, $p = 0.044$, Cohen's $d = 0.68$), but increased after treatment to levels comparable with healthy controls ($t_{19} = 2.46$, $p = 0.024$, Cohen's $d = 0.55$). In network analyses, a-iTBS increased current propagation to the left IPL ($t_{19} = 2.52$, $p = 0.021$, Cohen's $d = 0.56$), whereby increased current density in the left IPL was associated with a better antidepressant effect ($r = -0.47$, $p = 0.036$). In contrast to a-iTBS, a-cTBS decreased local N100 amplitude ($t_{19} = -3.07$, $p = 0.006$, Cohen's $d = 0.69$). In the a-cTBS group, current propagation from the right DLPFC to the left IPL was higher in TRD patients at baseline ($t_{38} = 2.06$, $p = 0.046$, Cohen's $d = 0.62$), but decreased after treatment to levels comparable with healthy controls ($t_{19} = 3.01$, $p = 0.007$, Cohen's $d = 0.67$). There was also a widespread inhibition over parietal cortices, with the left IPL being most prominent and correlated with a better antidepressant effect ($r = 0.47$, $p = 0.035$)

Conclusion These novel findings outline the frontoparietal circuitry in TMS antidepressant effects and provide insights for optimising treatment efficacy.

关键词: Treatment-resistant depression, TMS-EEG, Frontoparietal network, Theta-burst stimulation

Age-Dependent Corpus Callosum Thickness Abnormalities and Clinical Implications in Schizophrenia

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Objective Previous studies on schizophrenia have reported morphological abnormalities in the corpus callosum (CC) in the midsagittal plane, but the results have been inconsistent, and it is unclear whether these abnormalities are modulated by age. We compared the thickness of the CC in schizophrenia patients and a control group and analyzed the moderating effect of age. We also explored the relationship between clinical symptoms and imaging measurements

Methods The study included 151 schizophrenia patients and 278 healthy controls. Using individual T1-weighted brain images, we segmented the CC on the midsagittal plane of T1-weighted images and applied a well-validated surface-based mesh-modeling approach to compare callosal thickness at 100 equidistant points between groups. The Johnson-Neyman technique was used to test if the schizophrenia-related CC structural abnormalities were moderated by age. The age moderation effect of CC thickness and its relationship with clinical symptoms were tested by partial least-squares correlation

Results Abnormal CC thickness in schizophrenia patients was primarily observed in the splenium, isthmus, anterior midbody, and rostral body regions of the CC. These regions were thinner in younger schizophrenia patients compared to healthy controls, but thicker in older patients. Thicker CC in older patients related to more severe clinical symptoms, while this correlation was not present in younger patients

Conclusion Our results demonstrate abnormal

CC thickness in schizophrenia patients, which is modulated by age. CC thickness affects the symptom burden in schizophrenia patients, with the effect conditional upon age. These findings suggest that the CC might be a key biological target for therapeutic interventions in schizophrenia

关键词: schizophrenia, corpus callosum, structural MRI, age moderation

Effect of Propranolol on Reconsolidation of Alcohol Reward Memory

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Objective Explore the effect of propranolol on the process of reconsolidation of alcohol reward memory retrieved by conditioned stimulus

Methods One hundred male alcohol-dependent patients completed the experiment and included for statistical analysis: 20 in each group (retrieval/propranolol group, retrieval/placebo group, no retrieval/propranolol group, no retrieval/placebo group, and retrieval/6 hours/propranolol group). Collect their general demographic data, assess drinking status, psychological thirst, emotional response and cognitive function. All subjects studied alcohol-related conditioned stimulus and were given placebo or propranolol 20mg immediately after retrieval. Blood pressure and heart rate were monitored during the retrieval and test process, and the degree of craving was assessed by visual analogue scores

Results 1. Demographic data and all scales score. Groups did not differ significantly in age ($P=0.34$), alcohol use years ($P=0.41$), education ($P=0.69$), FTND ($P=0.31$), AUDIT ($P=0.90$), AWS ($P=0.94$), OCDS ($P=0.92$), PSQI ($P=0.12$), MMSE ($P=0.31$), SAS ($P=0.28$) and SDS ($P=0.93$)

2. Learning phase. After alcohol-related learning, the heart rate, systolic blood pressure, diastolic blood pressure, and craving degree were increased in within-

five groups compared with learning before, and the differences were statistically significant ($P < 0.05$). The heart rate difference ($F_{4,95}=1.34$, $P=0.26$), systolic blood pressure ($F_{4,95}=0.80$, $P=0.52$), diastolic blood pressure difference ($F_{4,95}=0.38$, $P=0.82$), craving difference ($F_{4,95}=2.18$, $P=0.07$) were not statistically significant in between-five groups; after learning without alcohol, the heart rate, systolic blood pressure, diastolic blood pressure, and craving degree were not statistically significant differences in within-five groups compared with learning before. The heart rate difference ($F_{4,95}=1.07$, $P=0.37$), systolic blood pressure ($F_{4,95}=2.28$, $P=0.06$), diastolic blood pressure difference ($F_{4,95}=0.36$, $P=0.83$), craving difference ($F_{4,95}=0.55$, $P=0.69$) were not statistically significant in between-five groups.

3. Retrieval phase. After CS retrieval, the heart rate, systolic blood pressure, diastolic blood pressure, and craving degree were increased in within-retrieval groups, and the differences were statistically significant ($P < 0.05$). The heart rate difference ($F_{4,95}=3.07$, $P=0.05$), systolic blood pressure ($F_{4,95}=0.77$, $P=0.46$), diastolic blood pressure difference ($F_{4,95}=0.26$, $P=0.77$), craving difference ($F_{4,95}=0.39$, $P=0.67$) were not statistically significant in between-retrieval groups.

4. Test phase. After test, the heart rate, systolic blood pressure, diastolic blood pressure, and craving degree were reduced retrieval/propranolol group with test before, and the differences were statistically significant ($P < 0.05$). The heart rate, systolic blood pressure, diastolic blood pressure, and craving degree were still increased in other within-four groups. The heart rate difference ($F_{4,95}=25.25$, $P < 0.05$), systolic blood pressure ($F_{4,95}=22.17$, $P < 0.05$), diastolic blood pressure difference ($F_{4,95}=20.44$, $P < 0.05$), craving difference ($F_{4,95}=22.08$, $P < 0.05$) were statistically significant in between-five groups. But the heart rate difference ($F_{3,76}=1.71$, $P=0.17$), systolic blood pressure ($F_{3,76}=0.80$, $P=0.48$), diastolic blood pressure difference ($F_{3,76}=0.38$, $P=0.72$), craving difference ($F_{3,76}=0.47$, $P=0.69$) were not statistically significant in between group of retrieval/placebo group, no retrieval/propranolol group, no retrieval/placebo group, and retrieval/6 hours/propranolol group.

Conclusion Propranolol interfere with the process of reconsolidation of alcohol reward memory retrieved by conditioned stimulus, which may be an effective way to reduce alcohol craving

关键词: Propranolol; Alcohol dependence; Reward memory; Retrieval; Memory reconsolidation

Functional Connectivity and Gene Expression in Major Depressive Disorder with Anxiety Symptoms

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Objective Nearly two-thirds of individuals diagnosed with major depressive disorder (MDD) also experiencing clinical anxiety. Those with significant anxiety symptoms tend to show greater disease severity, an earlier onset, increased suicidal tendencies, prolonged duration of illness, comorbid substance abuse, and heightened resistance to existing therapeutic interventions. Considering that behavioral symptoms, functional and treatment outcomes differ between depression with and without significant anxiety, it is reasonable to hypothesize that these two subtypes of MDD are biologically distinct, particularly in terms of functional connectivity (FC) and gene expression patterns. Yet, the specific FC and gene expression profiles in MDD patients with significant anxiety symptoms (MDD/ANX+) are still to be determined. We aim to investigate the differences in FC and gene expression features between MDD/ANX+ patients and those without significant anxiety symptoms (MDD/ANX-) and hypothesize that variations in specific gene expressions could influence functional connectivity in patients with MDD, potentially conferring a risk for anxiety in MDD

Methods Using resting-state functional MRI from 512 individuals with MDD, we compared differences in FC between MDD/ANX+ and MDD/ANX-, both at the edge-based and network levels. Subsequently,

employing the Allen Human Brain Atlas dataset, we performed partial least squares regression analyses to identify genes associated with the observed FC disparities. Follow-up analysis included functional enrichment, which provided insights into the functions of the identified genes. Additionally, a validation analysis was performed to account for potential confounding variables. This involved narrowing the age range to 18 to 30 years and only including participants between 18 to 65 years old who were experiencing their first episode of depression, aiming to verify the reliability of the findings

Results The results from both edge-based and network-level FC analyses were generally consistent, indicating significantly increased FC between the subcortical network (SC) and visual network (VN), as well as between the SC and the dorsal attention network (DAN), in MDD/ANX+ compared to MDD/ANX-. Additionally, transcriptome-neuroimaging correlation analysis revealed that the expression of 1,066 genes was spatially correlated with the FC differences between MDD/ANX+ and MDD/ANX-. These genes were enriched in molecular functions, biological processes, and cellular components related to translation at synapses and ATP generation. They were also associated with common mental disorders, including depressive disorders and bipolar disorder. In the validation analysis, after controlling for potential confounding factors (including limiting the age to 18 to 30 years old and restricting participants to those aged 18 to 65 who experienced their first episode of depression), the pattern of FC differences between the main analysis and the validation analysis remained essentially consistent

Conclusion Our findings reveal that the differences in FC between MDD/ANX+ and MDD/ANX- patients may be modulated by the differential expression of specific genes related to synaptic translation and ATP generation. These expression differences may increase the risk of depressive disorder patients with anxiety symptoms and may be associated with poorer functional status and treatment outcomes

关键词: Major Depressive Disorder, Anxiety, Functional Connectivity, Gene Expression.

辅助运动区功能活动及有向连接预测抗抑郁药物疗效研究

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目的 经颅磁刺激(TMS)是治疗抑郁症(MDD)的常见方法,但迄今为止主要靶点选择依旧围绕背外侧前额叶,寻找不同皮层靶点是推动 TMS 治疗 MDD 研究的重要过程。除了背外侧前额叶,辅助运动区(SMA)功能异常也是 MDD 最常见的影像学特征,与 MDD 核心特征精神运动迟滞(PMR)相关。研究 SMA 功能活动及其有向连接对抗抑郁药物疗效的预测性有助于为建立基于 SMA 的精准 TMS 治疗范式提供基础。

方法 本研究回溯性地分析了 110 名 MDD 患者及 111 名年龄、性别匹配的健康对照(HC)静息态 fMRI 数据(rs-fMRI),采用低频振幅 ALFF 作为功能活动指标,采用格兰杰因果关系 GCA 作为 SMA 有向连接计算方法。MDD 患者进行 rs-fMRI 扫描时至少停药 14 天,扫描结束后开始服用 SSRI 与 SNRI 类抗抑郁药物,并于 rs-fMRI 扫描结束后第 12 周进行临床随访。采用汉密尔顿抑郁量表(HAMD-17)评分。ALFF、GCA 图像组统计均采用 FDR 矫正,PFDR<0.05 为显著。

结果 双样本 T 检验表明,MDD 患者 SMA 区域 ALFF 值较 HC 显著下降(PFDR<0.05)。此外,组间 ANOVA 分析表明,SMA 区域 ALFF 值随 HAMD 第 8 项 PMR 评分呈线性下降,呈现出 HC>MDD(PMR=0)>MDD(PMR=1)>MDD(PMR≥2)的组间差异,团簇峰值 MNI 坐标点为[3,12,69]。以该点作为种子点计算 GCA,结果表明 HC 组与 MDD 组均表现出 SMA 对默认网络的异质性有向连接(PFDR<0.05),但两组无显著差异。MDD 组 SMA 至内侧前额叶的有向连接与 HAMD 总分存在显著负相关($r = 0.19, p = 0.048$)。SMA 的 ALFF 值与 SMA 至内侧前额叶的有向连接的交互作用可以显著预测 12 周的抗抑郁药物疗效($F = 5.17, P = 0.026$)。

结论 SMA 的静息态功能活动降低是 MDD 的神经影像特征,不受抗抑郁药物影响,且与 PMR 有关。SMA 对内侧前额叶的抑制作用不仅可以反映 MDD 患者严重程度,且其与 SMA 的功能活动可以共同预测 12 周的抗抑郁药物疗效。本研究结果提示

SMA[3,12,69]坐标点有望成为精准 TMS 干预治疗精神运动迟滞型抑郁症的新靶点。

关键词：抑郁症；TMS 靶点；辅助运动区；精神运动迟滞；抗抑郁药物治疗

MECT 治疗中锂盐对抑郁障碍患者疗效及认知功能的影响研究

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目的 目前为止关于无抽搐电休克(MECT)治疗中服用锂盐对抑郁障碍的疗效及对认知功能的影响尚无定论,本研究旨在探讨 MECT 联合锂盐对伴自杀意念的抑郁障碍重度发作患者治疗疗效及认知功能的影响。

方法 纳入 2023 年 12 月至 2024 年 5 月在张家口市精神卫生中心住院的 20-50 岁,诊断符合 ICD-10 重度抑郁发作(HAMD \geq 35 分),且伴有自杀意念或行为(Beck 自杀意念量表 $>$ 10 分)的女性患者 36 例,分为 MECT+锂盐组(20 例)和单纯 MECT 组(16 例)。采集患者社会人口学资料,包括年龄、病程、药物使用情况等。所有患者进行 MECT 治疗 12 次,共 4 周。在基线和治疗 2 周末、4 周末时、6 周末采用 HAMD、HAMA、PSQI、Beck 自杀意念量表、电休克认知评估量表(ECCA)分别评估患者的症状严重程度及 MECT 相关认知功能变化;在基线和治疗 2 周末、4 周末时、6 周末和 8 周末使用成套神经心理状态评估工具(RBANS)评估患者神经认知功能变化,同时静脉采血检测血锂浓度。采用 Pearson 或 Spearman 进行相关性分析、Logistic 回归分析探讨 MECT 治疗中使用锂盐与症状及认知功能的相关性及影响因素分析。

结果 基线时所有患者人口学资料、HAMD、HAMA、PSQI 及 ECCA 总分无统计学差异。单纯 MECT 组与 MECT+锂盐组的 HAMA、HAMD、PSQI、Beck 自杀量表总分在基线和治疗第 4 周末均显著下降($P<0.001$),ECCA 量表 3 次评估总分在治疗 4 周末、6 周末显著下降($P=0.000$),RBANS 总分在治疗 4 周末显著下降,而在治疗 6 周末、8 周末则出现升高($P=0.000$)。与单纯 MECT 组比较,治疗 4 周

末 MECT+锂盐组的 HAMD、HAMA、PSQI 总分均降低($t=15.781, P=0.000$; $t=3.706, P=0.001$; $t=4.448, P=0.000$), Beck 自杀量表在治疗 4 周末未出现显著差异($t=1.815, P=0.089$);ECCA 量表 3 次总分治疗 4 周末、6 周末出现降低($t=-6.639, P=0.000$; $t=-7.467, P=0.000$),差异具有统计学意义。RBANS 总分在治疗 4 周末出现降低、6 周末开始升高、8 周末显著升高($t=2.044, P=0.049$; $t=-3.782, P=0.001$; $t=-8.252, P=0.000$)。

结论 MECT 联合锂盐治疗伴有自杀意念的抑郁障碍患者疗效优于单纯 MECT 组,对患者长期认知功能的影响更小。下一步需排除血锂浓度等混杂因素的影响,进一步随访两组患者认知功能变化。

关键词：抑郁障碍；MECT；锂盐；认知功能；临床疗效

Obesity-related Brain Structural Asymmetry in Major Depressive Disorder

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Objective MDD presents significant challenges in psychiatric care due to its profound impact on individual well-being and socioeconomic burden. Structural brain alterations are prevalent among MDD patients, yet variability in findings underscores the need to investigate contributing factors, including comorbid medical conditions such as obesity

Obesity, highly prevalent in MDD, involves complex bidirectional influences driven by shared genetic factors, hypothalamic-pituitary-adrenal axis dysregulation, immune-inflammatory responses, neuroendocrine disruptions, microbiome alterations, and behavioral factors. Notably, obesity may exacerbate brain structural changes in MDD, complicating treatment outcomes.

Studies on brain asymmetry in psychiatric disorders show conflicting results. While the ENIGMA consortium found no significant alterations in MDD, obesity has been linked to frontal lobe asymmetry, supporting the 'right brain hypothesis'.

This study aims to investigate prompts investigation into whether obesity-related structural changes extend to individuals with MDD and potentially impact treatment outcomes.

Methods Participants included MDD patients recruited from Beijing An Ding Hospital, Capital Medical University, and healthy controls recruited via advertisement. Diagnosis was based on DSM-IV criteria using the Mini International Neuropsychiatric Interview (MINI) 5.0. Inclusion criteria included age 20-60 years, absence of systemic antidepressant treatment during the current episode or recent intake, and a Chinese version of the 17-item Hamilton Depression Rating Scale (HAMD-17) score ≥ 14 . All participants provided informed consent, and the study was approved by the Ethics Committee of Beijing An Ding Hospital, Capital Medical University. Follow-up measure? Symptom severity was assessed at baseline, and weeks 12 by independent raters using HAMD-17

MRI Acquisition and Preprocessing

All images were acquired using a 3.0 T Siemens MAGNETOM Prisma MRI scanner (Siemens Medical Solutions, Erlangen, Germany) with a 64-channel phased-array head coil. T1-weighted structural images were acquired with a sagittal magnetization-prepared rapid acquisition gradient-echo sequence. 1-weighted structural images were preprocessed using FreeSurfer and Advanced Normalization Tools (ANTs).

Statistical Analysis

Linear mixed models were employed using nlme in R, with BMI, age, sex, and total intracranial volume (ICV) as predictors. Models included a random effect for data collection site. Model residuals were checked for normality, and multicollinearity was assessed using variance inflation factors (VIF). False discovery rate (FDR) correction was applied for multiple comparisons. Associations between BMI and clinical variables were also tested, controlling for age, sex, and data collection site.

Mediation Analysis

Mediation analysis assessed the direct impact of BMI on percent change in HAMD total score from baseline to Visit 2, mediated through cortical thickness asymmetry in the rostral middle frontal region. Models

adjusted for age, sex, and data collection site, using 5000 bootstrap samples for robustness.

Results Regional Asymmetry Differences by BMI

Higher BMI correlated with increased leftward cortical thickness asymmetry in the rostral middle frontal region and decreased rightward cortical thickness in the parstriangularis region. No significant associations were found for surface area asymmetry, gray matter volume asymmetry, and subcortical volume asymmetry.

Correlations of BMI and Asymmetries with Clinical Variables

BMI was associated with the percent change in HAMD total score from baseline to Visit 2 weeks 12, suggesting an indirect effect on treatment outcomes. Cortical thickness asymmetry in the rostral middle frontal region showed a marginal association with the percent change in HAMD total score.

Mediating Effect of BMI

Mediation analysis indicated that cortical thickness asymmetry in the rostral middle frontal region partially mediated the association between BMI and percent change in HAMD total score.

Conclusion This study provides insights into the complex interplay between obesity, MDD, and brain structure, contributing to a deeper understanding of MDD heterogeneity. Such knowledge may inform personalized treatment strategies, improving clinical outcomes for individuals affected by this challenging psychiatric disorder

关键词: Major depressive disorder, obesity, cortical asymmetry, MRI, treatment outcomes

Peer Bullying and Suicide Attempt Among Depressed Adolescents with Suicidal Ideation: A Double Machine Learning-based Causal Inference

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Objective Suicide has been recognized by the World Health Organization as a major global public health issue, and peer bullying has consistently been associated with higher levels of suicidal ideation and suicide attempt. But as far as we know, the causal relationship between peer bullying and suicide attempt among depressed adolescents with suicidal ideation has not been studied. The aim of this study is to reveal the causal and heterogeneous effects of peer bullying on suicide attempt among depressed adolescents with suicidal ideation

Methods 2336 depressed adolescents with suicidal ideation aged 12-18 from 9 provinces/cities in China participated in this cross-sectional study. We utilized Double machine learning, incorporating 37 confounding variables, all of which were divided into demographic variables, adverse childhood experiences, family related factors, social factors, lifestyle factors, and psychological factors

Results Peer bullying increases the risk of suicide attempt among depressed adolescents with suicidal ideation ($\theta=0.000$, 95%CI[0.001, 0.004]). Further exploration of the types of peer bullying reveals that only physical bullying increases the risk of suicide attempt among depressed adolescents with suicidal ideation ($\theta=0.008$, 95% CI[0.014, 0.095]) (no association was found between social bullying, verbal abuse, and assault on property). Heterogeneous causal effects were found in variables such as gender, education level, only child status, academic stress, mobile phone addiction, and sleep disorders

Conclusion Peer bullying, especially physical bullying, increases the risk of suicide attempt among depressed adolescents with suicidal ideation, and there is heterogeneity in gender and other variables. The findings of this study provide new perspectives and insights into the relationship between peer bullying and suicide attempt among depressed adolescents with suicidal ideation, as well as new evidence for the application of machine learning techniques in causal inference

关键词: Peer bullying; Physical bullying; Causal effect; Double machine learning; Heterogeneity analysis

Association between Physical Activity, Depression, and CRP: A Non-linear Regression and Mediation Model Analysis

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Objective This study aims to investigate the association between physical activity (PA), depressive symptoms, and C-reactive protein (CRP). The analysis utilizes non-linear regression and mediation models to elucidate the potential mediating effects of CRP on the relationship between PA and depression

Methods Data was extracted from the National Health and Nutrition Examination Survey (NHANES) from 2013 to 2020. The following variables were included in this study: depressive symptoms were assessed using the Patient Health Questionnaire-9 (PHQ-9), and high sensitivity CRP (Hs-CRP), recreational physical activity (RPA), including vigorous RPA (VRPA) and moderate RPA (MRPA). Covariates such as age, gender, race, education, income, marital status, body mass index (BMI), and smoking status were also considered. Statistical analyses were performed in R version 4.4.0 using non-linear regression models and mediation analyses

Results The study included 9796 participants (4749 males, 5047 females) with a mean age of 42.10 years. Depressed individuals had significantly lower VRPA and MRPA times compared to non-depressed individuals. Hs-CRP levels were significantly higher in depressed patients (5.82 ± 12.93 mg/L) compared to

non-depressed patients (3.96 ± 7.32 mg/L) ($F=44.45$; $p < 0.01$). Non-linear regression revealed that RPA was negatively correlated with depression, whereas CRP was positively correlated with depression. The OR for VRPA and MRPA in relation to depression were 0.64 (95% CI: 0.57-0.71) and 0.55 (95% CI: 0.47-0.65), respectively. After adjusting for covariates, these associations remained significant [VRPA: OR = 0.57, 95% CI: 0.37-0.89; MRPA: OR = 0.73, 95% CI: 0.58-0.9]. However, the association between Hs-CRP and depression was not significant [OR = 1.02, 95% CI: 0.82-1.26]. Non-linear regression plots illustrated a curve relationship between MET-RPA, CRP levels, and depression probability. Mediation analysis indicated significant mediation effects of CRP on the relationship between PA and depression

Conclusion This study demonstrates that higher levels of recreational physical activity are associated with lower probabilities of depression, and this relationship is partially mediated by CRP levels. The findings underscore the importance of PA in mental health interventions and suggest that reducing inflammation could be a potential pathway through which PA exerts its beneficial effects on depression. Further longitudinal studies are needed to confirm these findings and elucidate the underlying mechanisms

关键词: Depression, hs-CRP, Recreational Physical Activity, Non-linear Regression, Mediation Model.

Daily Dosing Frequency As A Determinant of Clozapine Concentration-to-dose Ratio: Data From A Therapeutic Drug Monitoring Service (2019–2022)

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Objective Clozapine plasma concentration is closely related to clinical efficacy and adverse reactions, and which is affected by many factors, among which daily dosing frequency is one of the important factor influencing the plasma concentration of clozapine. The

first objective was to investigate pharmacokinetic parameters in different daily dosing frequency regimens of clozapine in a naturalistic therapeutic drug monitoring (TDM) sample. The second objective was to establish the necessary clozapine dosage to achieve plasma levels of 350–600 ng/mL in the Chinese population

Methods A single-center, retrospective, cross-sectional study was conducted at Xi'an Mental Health Center in China, where data on clozapine-treated patients between 2019 and 2022 were collected. The clozapine concentration-to-dose (C/D) ratios were compared between subgroups receiving different dosing regimens (once, twice, or three times per day) using Kruskal–Wallis H and Mann–Whitney U-tests

Results The multiple linear regression analysis revealed that daily dosing frequency of clozapine had significant effects on the C/D ratio of clozapine (Table 1). And the C/D ratio of clozapine negatively correlated with the daily dosing frequency. The Kruskal–Wallis H test indicated significant variations in the C/D ratios among the three groups ($p < 0.001$, Figure 1). These findings were also consistent with the sex and age subgroup analyses. The receiver operating characteristic (ROC) analysis revealed that the twice-daily group required a daily clozapine dose of 125–225 mg to achieve the expected therapeutic reference concentration (Figure 2), with a corresponding clozapine C/D ratio of 1.6–2.8. In addition, the ROC analysis revealed that male patients needed a daily clozapine dose between 175 and 275 mg/day to reach plasma concentrations of 350–600 ng/mL, whereas female patients required a slightly lower daily dose of 125–225 mg/day. The daily dose required to achieve the therapeutic reference concentration range of clozapine for middle-aged and older patients was slightly lower than that for young patients, with the daily dose range of 100–175 and 150–225 mg/day, respectively

Conclusion The daily clozapine dosing frequency is an important factor influencing the pharmacokinetic profile of clozapine. Large-scale, multicenter, prospective studies are needed to validate the clinically significant results of this study by administering the same total daily dose at different daily dosing frequencies

关键词: Clozapine/Daily dosing frequency, Therapeutic drug monitoring, Clozapine concentration-to-dose, Receiver operating characteristic

抑郁症患者的 SSRI 药物治疗响应轨迹亚型分析

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背景 抑郁症患者对抗抑郁药物治疗的响应存在很大异质性。通过分析抑郁症患者在接受抗抑郁药物(如 SSRI)单药治疗后的治疗轨迹及其相关因素,有助于在治疗初期就识别出哪些患者可能对特定药物有良好的反应,从而及时调整治疗方案。目前很难成功地为个体患者选择正确类型的抗抑郁药。通过研究响应轨迹,可以发现患者特征、治疗选择和结果的模式,从而实现更个性化的治疗方案。

目的 分析抑郁症抗抑郁药物治疗的纵向症状轨迹,识别不同的疗效亚型,为早期优化与调整治疗方案提供方向,以期提升个性化治疗效果。

方法 本研究纳入 449 例抗抑郁药物治疗的重度抑郁症患者,在基线、治疗的第 4 周末、第 8 周末、和第 12 周末进行抑郁症状评估。采用基于组的潜变量增长轨迹模型(Group-based latent growth trajectory model)对 4 次访视的 HAMD 评分进行分析,识别抑郁症状变化轨迹的异质性亚型,分析不同因素对治疗轨迹的影响。具体地,本研究逐步建立 1 至 7 个亚型的轨迹模型,并对各模型的分析结果和评价指标进行比较,以确定抑郁症状动态变化异质性的最优拟合模型。模型评估标准主要有:(1)贝叶斯信息准则,绝对值越低表明模型拟合越好;(2)赤池信息量准则,绝对值越低表明模型拟合越好;(3)隶属度,即每类数目占总数的比例,应不小于 5%;(4)平均后验概率,即将个体分配到组的平均后验概率,应大于 70%,分类更准确。此外,本研究在排除了站点、药物种类因素影响的数据子集中对模型的稳定性进行了测试,并进一步考察了多种影响因素对不同患者亚型的治疗轨迹的影响。

结果 本研究所纳入的 449 名患者样本,平均年龄 29.8 ± 9.05 岁,男性占 26.5%,根据基于组的潜

变量增长轨迹最优模型分析结果,可分为 5 个抑郁症状轨迹亚型:早期快速恢复亚型($n=87, 19\%$),早期快速恢复后期稳定恢复亚型($n=175, 39\%$),早期快速恢复后期出现反弹性亚型($n=57, 13\%$),稳定缓慢恢复亚型($n=104, 23\%$),快速抗药后难治性亚型($n=26, 6\%$)。本研究在对 5 个亚型患者的基线临床特征进行分析时发现,QIDS 评分、PHQ9 评分和 SDS 评分、家族史情况等存在显著的亚型组间差异。在对同一站点、仅使用 SSRI 类抗抑郁药物治疗的数据子集进行验证分析时发现,5 类亚型的抑郁症状轨迹保持稳定,可排除这些因素对亚型治疗轨迹的影响。

结论 重度抑郁症患者对抗抑郁药物治疗响应存在人群异质性,临床治疗可以根据不同亚型抑郁症状的轨迹变化特征开展精准干预。

关键词: 重度抑郁,抗抑郁药物治疗,潜变量增长纵向轨迹,亚型分析

基于抑郁症患者与慢性应激小鼠模型转录组学数据的联合分析探索潜在的抑郁症生物标记与治疗靶点

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目的 抑郁症(major depressive disorder, MDD)是一种严重危害人类身心健康的精神障碍,发病机制尚不明确。研究表明,免疫炎症失调参与了 MDD 病理生理过程。外周血单个核细胞(Peripheral blood mononuclear cell, PBMC)与脑组织基因的表达模式具有高度相关性,其状态和功能能够在一定程度上反映机体包括大脑的免疫炎症水平。本研究通过联合分析抑郁症患者和慢性应激小鼠 PBMC 的基因表达谱和行为特征,旨在探究抑郁症的潜在生物标记物和治疗新靶点。

方法 本研究纳入首发未用药 MDD 患者和健康对照各 15 例,通过 17 项汉密尔顿抑郁量表(HAMD-17)和汉密尔顿焦虑量表(HAMA)对被试进行临床症状评估。此外,构建慢性应激小鼠模型,并评估动物的焦虑样和抑郁样行为。收集人和小鼠的外周血 PBMC 分别进行 RNA-seq 测序。我们系统比较了 MDD 患者和慢性应激小鼠外周血

PBMC 的 RNA 测序数据,通过维恩分析筛选共同差异基因。随后结合 MDD 患者临床量表评分和差异基因的相关性分析结果,寻找潜在的靶点基因,对这些基因表达的蛋白进行蛋白互作分析,探究参与抑郁症免疫调节的分子机制。

结果 临床评估结果显示抑郁症患者存在显著的焦虑和抑郁情绪,动物行为学检测显示应激小鼠存在显著的焦虑样和抑郁样行为表型。通过比较 MDD 患者和慢性应激小鼠 PBMC 的差异基因,本研究筛选出 28 个共同改变的显著差异基因 (Different genes, DGs),其主要涉及免疫反应、细胞信号传导、代谢和组织重塑等生物学过程。在这些 DGs 中,有 7 个基因在 MDD 患者和应激小鼠中的改变呈现相同趋势,其中 ATRNL1 和 PROM1 基因表达显著增加,CCR3、MEX3A、AKAP12、IL4 和 NTRK1 基因表达显著下降。其中 IL4 表达水平与 MDD 患者 HAMD 和 HAMA 评分均呈显著负相关,进一步蛋白互作分析显示 IL4 和 CCR3 存在互作关系。

结论 本研究通过联合分析 MDD 患者和慢性应激小鼠 PBMC 的基因表达谱,识别出多个潜在的生物标记和治疗靶点,其中 IL4 基因表达与抑郁症严重程度呈显著负相关。这为进一步探索抑郁症的分子机制和治疗新靶点提供了重要线索。

关键词: 抑郁症,外周血单个核细胞,慢性应激,免疫系统,转录组

Unraveling The Role of De Novo Structural Variants in Schizophrenia Through Comprehensive Whole Genome Sequencing with Long-Read and Short-Read Technologies

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Objective Genetic liability to schizophrenia involves various types of mutations from across the allele frequency spectrum and distributed across the genome.

Findings from studies focusing on different types of mutations in schizophrenia converge partially on the same biological processes, while also providing complementary insights. This underscores the importance of studying the full spectrum of mutation. However, currently widely used genotyping technologies, microarrays and short read sequencing (SRS), have limited ability in detecting medium-sized structural variations (SVs) (e.g. 50-2000bp) compared to long-read sequencing (LRS), which is relatively new and has been rarely applied to genetic studies of schizophrenia so far, suggesting an opportunity to leverage this more comprehensive approach to uncover additional sources of genetic variation that may contribute to the disorder

Methods Utilizing both 20X LRS and 30X SRS, we performed comprehensive whole-genome analysis on 40 Han Chinese parent-offspring trios. We called single nucleotide variants (SNVs), insertions and deletions (indels), and SVs utilizing multiple algorithms. Our primary focus was on the detection and validation of de novo mutations (DNMs). Comparative analysis between LRS and SRS was conducted to assess their respective abilities in detecting SVs and de novo SVs. Subsequently, we annotated the de novo mutations and delved into their potential mechanisms in schizophrenia through mining public databases and conducting functional experiments. Finally, we compared the diagnostic yield of our approach to previous studies employing whole exome sequencing or whole genome sequencing using SRS

Results Our analysis identified an average of 71.55 DNMs per proband, including 12 de novo SVs. Notably, four of these de novo SVs were detected by more than three out of four algorithms employed for LRS, whereas none were detected by any of the four algorithms utilized for SRS. In addition, our analysis revealed a 2.8Mb region exclusively accessible via by LRS and not SRS. LRS demonstrated exceptional performance in phasing, while the call sets derived from both LRS and SRS exhibited comparable levels of Mendelian consistency. Of particular interest in our study is a de novo 11kb deletion encompassing the last intron, last exon, and 3' UTR of PPP3CA. Through experi-

mental investigations, we discovered a significant reduction in PPP3CA protein levels in blood cells from the schizophrenia patient harboring this DNM. Similar reductions in PPP3CA protein levels were also observed in HEK293T cell lines carrying a comparable mutation, indicating that the down-regulation of PPP3CA results from the identified de novo SV. Subsequently, in mice model with targeted knockdown of PPP3CA in excitatory neurons within the hippocampus, we observed alterations indicative of schizophrenia-like behavior and impaired cognitive function. Furthermore, our study revealed a slight enhancement in diagnostic yield when employing identical diagnostic criteria, as demonstrated in two comparative analyses

Conclusion Our findings underscore the superior performance of LRS over SRS in identifying risk mutations associated with schizophrenia. Moreover, our study implicates PPP3CA in the pathogenesis of schizophrenia, demonstrating reduced expression in excitatory neurons within the hippocampus, which correlates with schizophrenia-like behavior and impaired cognitive function

关键词: schizophrenia, Long-Read sequencing, whole genome sequencing, De Novo Structural Variants

继续教育协作组

大学新生网络成瘾与抑郁、焦虑情绪的网络分析研究

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目的 网络成瘾是对互联网过度使用的成瘾行为,与不良预后相关。然而,尚缺乏探索大学生网络成瘾与抑郁、焦虑情绪间相互作用的研究。因此,本研究旨在通过网络分析方法,探索大学新生群体中网络成瘾与抑郁、焦虑情绪间的相互作用及其影响因素,并识别网络成瘾在其中的核心和桥梁症状。

方法 本研究通过网络及社群平台招募了8244名在校大学新生完成匿名在线测评问卷,对一般人口学特征、抑郁情绪(9项患者健康问卷)、焦虑情绪(7项广泛性焦虑障碍量表)、网络成瘾(Young网络成瘾量表)、睡眠质量(匹兹堡睡眠质量指数量表)、儿童期创伤(童年期创伤问卷)、生活事件(青少年生活事件量表)进行了调查。对提交的问卷进行筛选后,最终分析纳入了5316名参与者。采用网络分析方法构建了网络成瘾与抑郁、焦虑情绪的相关性网络,并使用R软件4.1.3的“qgraph”程序包和“bootnet”程序包评估网络结构、症状中心性和结果稳健性。最后,研究以Young网络成瘾量表得分中位数为分界点,将受试者分为网络成瘾组和非网络成瘾组,比较了网络属性的组间差异。

结果 1、大学新生中的网络成瘾检出率为6.79%,抑郁情绪检出率为21.85%,焦虑情绪检出率为18.67%。

2、在网络成瘾和抑郁、焦虑情绪的网络结构中,强度、接近中心性和预期影响最强的是“抑郁的躯体化因子”节点;强度、中介中心性和预期影响最强的是“对互联网的显著关注并过度依赖”节点、其次是“互联网使用时间过长”节点;除此之外,生活事件中的“人际关系”节点、睡眠质量中的“日间功能障碍”节点是网络成瘾与抑郁、焦虑情绪之间的桥梁症状。同时,网络成瘾与抑郁、焦虑情绪的网络分析模型表现出高度稳定性。

3、网络成瘾组和非网络成瘾组的网络属性组间差异分析结果显示:网络成瘾组的核心症状是“学业压力”、“焦虑的认知因子”和“对互联网的显著关注

并过度依赖”，而非网络成瘾组的核心症状是“主观睡眠质量”和“健康适应”。不同网络成瘾症状严重程度的大学新生的抑郁、焦虑情绪网络结构、网络连接强度、核心症状存在显著差异。

结论 “对互联网的显著关注并过度依赖”、“互联网使用时间过长”症状是网络成瘾与抑郁、焦虑情绪网络中最重要的核心症状；“人际关系”和“日间功能障碍”是其网络结构中最关键的桥梁症状。研究结果提示，以网络成瘾的“对互联网的显著关注并过度依赖”和“互联网使用时间过长”症状为主要的干预靶点，能有助于对大学生抑郁、焦虑情绪进行预防和干预。

关键词：网络分析；大学生心理健康；抑郁情绪；焦虑情绪；网络成瘾

原位模拟教学法在精神科住培教学中的应用探索

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目的 探究原位模拟教学法在精神科住院医师规范化培训教学中应用效果。

方法 选择上海市精神卫生中心 147 名住培医师为研究对象，第一年期住培医师 46 人，原位模拟的项目为：询问病史和口头交接班；第二年期住培医师 51 人，原位模拟的项目为：协商、知情同意和传达坏消息；第三年期住培医师 50 人，原位模拟的项目为：告知医疗差错和临终谈话。采用置信职业行为评价法对住培医师进行胜任力评估，记录原位模拟教学前后置信职业行为评价得分，对比前后得分情况。

结果 较之原位模拟教学开展前，第一年期住培医师原位模拟教学（询问病史及口头交接班）后得分显著高于原位模拟教学前得分，且优良率有显著差异（ $P<0.05$ ）。第二年期住培医师原位模拟教学包含的协商、知情同意及传达坏消息三个项目，在开展原位模拟教学之后得分也是显著高于原位模拟教学前得分的，且优良率有显著差异（ $P<0.05$ ）。第三年期住培医师原位模拟教学包含告知医疗差错及临终谈话两个项目，在开展原位模拟教学之后得分也是显著高于原位模拟教学前得分的，且优良率有

显著差异（ $P<0.05$ ）。参与研究住培医师 147 人，其中对原位模拟教学表示很不满意仅有 2 人，占比 1.36%、不满意 8 人，占比 5.44%、表示满意 58 人占比 39.46%、表示非常满意 78 人，占比 53%，总体表示满意为 138 人，占比 93.88。从调查情况来看，原位模拟教学住培医师接受度较高，且住培医师参与积极性较高。

结论 经过原位模拟教学法的培训，住院医师在置信职业行为评价上取得了显著的提高。这意味着他们在特定的职业行为方面展现出了更高的胜任能力，使得他们能够被信任并独立执行特定的医学任务。原位模拟教学法能够显著提高学员的综合能力。这可能涉及临床技能、临床思维、团队合作、沟通能力等方面，这些都是医学专业人员必备的素质。原位模拟教学法通过增强师生之间的互动和学员的积极性，促进了教学过程的有效进行。相较于传统的被动知识传授，互动和参与式的教学方法可以更好地激发学员的学习兴趣和动力。其特点在于将真实情境和互动结合，让学员在实际操作中运用所学知识。这种实践与理论相结合有助于学员更好地理解和应用医学知识，同时培养临床思维能力。通过实际操作和情境模拟，学员被鼓励主动学习、拓展阅读，同时要学会总结和归纳。这培养了学员的学习自主性和知识整合能力，使他们能够更深入地理解和应用所学内容。

关键词：原位模拟教学；置信职业行为评价法；住院医师规范化培训；精神科

青少年抑郁障碍患者皮层内抑制和易化功能及磁共振波谱研究

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目的 通过评估青少年抑郁障碍患者皮层抑制及兴奋功能及磁共振波谱的改变，多维度地了解青少年抑郁障碍患者皮层功能的改变情况。

方法 纳入 2022 年 11 月至 2023 年 11 月就诊于昆明医科大学第一附属医院精神科住院部及门诊部就诊的青少年抑郁障碍（符合 DSM-V 标准）患者 41 名和年龄、性别相匹配的健康对照 22 名，使用双脉冲经颅磁刺激联合肌电描记技术(ppTMS-EMG)

进行皮层抑制及兴奋性的测量,共有 41 名患者和 22 名健康对照完成测量。以前额叶为感兴趣区,使用飞利浦 3.0T 磁共振扫描仪 MEGA-PRESS 序列进行磁共振波谱数据采集,共有 22 名患者和 14 名健康对照完成磁共振波谱数据采集。使用 Gannet 软件进行磁共振波谱数据的数据后处理。使用汉密尔顿抑郁量表 (HAMD-17) 和成套神经心理状态评定量表 (RBANS) 进行抑郁症状严重程度和认知功能的评定,然后将患者的皮层兴奋性和磁共振波谱结果与抑郁症状和认知功能进行相关分析。

结果 (1) 皮层兴奋性及抑制性分析发现,相比于健康对照,青少年抑郁障碍患者在间隔为 4ms ($Z=-3.151, P=0.002$)、5ms ($Z=-2.360, P=0.018$) 时测得的短间隔皮质内抑制(SICI)值和间隔为 150ms ($Z=-3.010, P=0.003$) 及 200ms ($Z=-1.976, P=0.048$) 时测得的长间隔皮质内抑制(LICI)值高于 HC 组。(2) 青少年抑郁障碍患者与健康对照前额叶 γ -氨基丁酸 (GABA) 及谷氨酸 (Glu) 浓度水平无显著差异($P>0.05$)。相关分析发现, aMDD 组认知功能中的视空间结构得分与前额叶 GABA 浓度 ($r=-0.516, P=0.028$) 和 Glu 浓度 ($r=-0.665, P=0.003$) 呈负相关。

结论 青少年抑郁障碍患者存在皮层 GABA 能受体功能的缺陷。未发现患者前额叶 GABA 和 Glu 水平的显著改变,猜测青少年抑郁障碍患者前额叶的功能变化可能是因相关神经递质受体的功能改变引起的。

关键词: 青少年抑郁障碍,皮层兴奋性,磁共振波谱

Influence of Parental Rearing Style on Suicide in Chinese Transgender Women

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Objective Deficient parental bonding are associated with adverse health outcomes in transgender women, leading to an increased risk of suicide in transgender women. The impact of parental rearing

style on individual psychology may be lifelong, and parental rearing style in China are unique compared with western family. This study aimed to explore the impact of parenting style on suicide in Chinese transgender women (TW)

Methods A total of 106 TW and 52 cisgender males (CM) were recruited from March 12, 2023 to June 3, 2024. The primary outcomes were self-reported suicidal ideation, suicide attempt and self-perceived parental rearing style. Logistic regression analysis characterized influencing factors for suicidal ideation and suicide attempt

Results Of 106 transgender women recruited in our survey, 59 (55.7%) respondents reported suicidal ideation in the past 12 months and 38 (35.8%) respondents reported attempted suicide. Compared with CM, TW reported having suffered more adverse childhood experiences and received less perceived social support from family and friends. Stepwise multivariate logistic regression model found that paternal excess interference was significantly associated with both suicidal ideation and suicide attempt among Chinese TW when controlling for other factors (OR:1.19, 95% CI: 1.06 to 1.34, $P=0.002$; OR:1.13, 95% CI: 1.03 to 1.23, $P=0.010$), and maternal emotional warmth was associated with suicide attempt (OR:0.96, 95% CI: 0.92 to 1.00, $P=0.049$)

Conclusion Being minority group determines that the mental health status of TW faces more severe challenges, resulting in high risk of suicide. The present study emphasizes the importance of active parental rearing style to prevent adverse psychological outcomes in Chinese TW. However, it may be necessary to break the shackles of traditional Chinese concepts to solve the pressure on TW from families.

关键词: transgender women, parental rearing style, suicide

左甲状腺素及三碘甲状腺原氨酸在抑郁发作患者中治疗的研究进展

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目的 抑郁发作既可出现在抑郁障碍, 也可见于双相障碍, 导致痛苦体验、自杀风险、焦虑体验等后果。部分患者对常规的抗抑郁剂治疗应答不佳, 损害患者社会功能的恢复。既往有研究发现抑郁发作与下丘脑-垂体-甲状腺轴相关, 也有研究探索左甲状腺素 (Levothyroxine, T4)、三碘甲状腺原氨酸 (triiodothyronine, T3) 对抑郁发作的疗效, 但是研究结果不一。本文主要针对抑郁障碍及双相障碍抑郁发作患者使用 T4、T3 干预的实验进行综述, 探索 T4 及 T3 对抑郁发作转归的影响, 以期进一步指导临床。

方法 对中国知网、PubMed 和 Web of Science 中自建库以来至 2024 年 3 月 10 日之前发表的相关研究进行系统检索。纳入研究需满足: 研究对象符合《国际疾病分类 (第 9、10 或 11 版)》、《精神障碍诊断与统计手册 (第 III、IV 或 5 版)》双相障碍或者抑郁障碍的诊断标准, 排除有甲状腺手术史患者的研究。研究内容包括使用 T4 或 T3 治疗至少达 2 周; 研究结局指标的评价工具使用汉密尔顿抑郁量表、蒙哥马利抑郁量表或临床疗效总评量表的研究; 结局指标为: 应答率、缓解率、治疗前后量表评分差异。

结果 初步检索获取文献 4569 篇, 最终纳入 18 篇。研究结果发现甲状腺功能正常的抑郁症患者在三环类抗抑郁药 (TCA) 或选择性 5-羟色胺再摄取抑制剂 (SSRIs) 基础上加用 T3 治疗未发现一致性的有效证据, 但难治性抑郁症患者在原有药物基础上使用 T3 有约 50% 以上的应答率; 抑郁症患者使用 T4 治疗证据不足, 但女性、存在抑郁残留症状的患者可能获益。另外抑郁症共病亚临床甲减患者使用左甲状腺素辅助抗抑郁药的效果优于单用抗抑郁药, 且其应答良好与治疗前的甲状腺功能水平相关。抑郁症患者行电休克治疗 (ECT) 同时合并使用 T3 可以减少 ECT 次数并增强其发作效果, 且改善 ECT 带来的认知损害。双相障碍抑郁发作患者使用 T3 没有发现符合纳入标准的研究, 仅有回顾性研究提示治疗前后抑郁症状有改善。双相障碍抑郁发作患者使用大剂量 T4 ($\geq 300\mu\text{g}/\text{天}$) 对抑郁症状有改善, 特别是难治性及快速循环的双相障碍患者可能获益更多。

结论 难治性抑郁障碍及双相障碍抑郁发作患者更可能从 T4 或 T3 作为辅助治疗的方案中获益。对于抑郁障碍患者共病甲功异常的患者, 抗抑郁药

与 T4 联合疗效更佳。未来需要更多大规模、更同质的临床人群和随机盲法对照或真实世界的研究去进一步明确 T4 和 (或) T3 治疗抑郁发作的疗效, 并探索抑郁发作的患者使用 T4 或 T3 的最佳时机、剂量、疗程或发挥其最大抗抑郁疗效目标的甲状腺功能水平, 为未来使用甲状腺激素治疗抑郁发作提供更有价值的参考。

关键词: 双相障碍, 抑郁障碍, 左甲状腺素, 三碘甲状腺原氨酸

双相障碍共病焦虑障碍的神经影像多模态机制研究

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目的 双相障碍 (Bipolar Disorder, BD) 是一种复杂的精神疾病, 通常表现为情绪低落和高涨交替发作, 其特征是情绪不稳和社会功能障碍。焦虑障碍 (Anxiety Disorder, AD) 是一组以过度担心、害怕及相关行为紊乱为特征的精神疾病。46-75% 的 BD 至少有一次终生焦虑障碍诊断, 现患率约为 30%。伴焦虑的 BD 常常具有更严重的临床症状、更差的社会功能和更高的自杀风险, 导致疾病治疗难度增大。本文拟通过对 BD 共病 AD 患者、BD 患者及健康对照三者的大脑功能及结构磁共振成像进行研究, 探索共病患者与未共病患者大脑结构及功能异常脑区的异同, 并在此基础上探讨这些异常脑区与其临床特征之间的关系。

方法 本研究共纳入 109 名被试者, 其中包括 30 名 A-BD 患者, 28 名 BD 患者以及 51 名 HC, 所有患者均处于抑郁发作期。在 Matlab、SPM12、DPARSFA 等软件对三组受试者的脑影像数据进行预处理, 获得各组受试者的灰质体积、度中心以及分数低频振幅, 在 SPM12 中以性别、年龄、受教育年限以及颅内总体积为协变量, 对三组间上述指标的组间差异进行探索。提取患者组异常灰质体积及脑功能脑区的灰质体积、度中心以及分数低频振幅, 在 SPSS29.0 中与汉密尔顿焦虑量表、汉密尔顿抑郁量表、总病程以及本次病程进行偏相关分析。

结果 与健康对照相比, 两组患者存在共同异常的大脑灰质体积及大脑功能, 主要表现为左侧海

马旁回、右侧小脑后叶、左侧额下回、左侧眶额下回等脑区的灰质体积降低, 双侧丘脑、双侧尾状核等脑区度中心下降。然而共病组患者还存在独特的灰质体积及脑功能异常脑区, 主要表现为左侧梭状回、左侧舌回、左侧颞下回和左侧小脑后叶的灰质体积下降, 右侧小脑的低频振幅下降以及枕中下回、舌回、距状沟、梭状回、左侧颞中下回等枕叶和颞叶皮层的低频振幅升高。与未共病的双相障碍组相比, 双相障碍共病焦虑障碍患者大脑灰质体积与静息态脑功能活动及连接存在更广泛的损害, 主要位于枕中下回、颞中回和舌回。

结论 本研究探索了三组间大脑结构与局部大脑功能活动的差异。研究发现, 双相障碍两个亚组在神经影像学机制上存在异同, 两患者组均表现出前额叶-边缘系统(海马旁回、丘脑)-小脑的异常结构和功能变化, 但共病焦虑障碍双相障碍患者存在更为广泛的损害, 主要发生在枕叶、颞中下回和梭状回等区域, 这些脑区主要与不确定信息的识别处理及各类事物的视觉识别等相关, 其功能活动异常增高或减低可能通过识别和解读偏差引发焦虑情绪以及认知障碍。同时双相障碍患者脑灰质体积及脑功能与临床特征相关, 病程越长, 部分脑区灰质体积和功能的异常改变越显著, 症状也越重。

关键词: 双相障碍, 焦虑障碍, 磁共振成像, 灰质体积, 大脑功能, 临床特征

Study on Intestinal Flora Characteristics and Metabolomic Analysis in Children and Adolescents with First Untreated Obsessive-compulsive Disorder

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Objective Numbers of adult patients with obsessive-compulsive disorder (OCD) start from children or adolescents, so early identification and intervention become the key to control the disease. However, its etiology has not been fully clarified. This study sought to explore the relationship between the pathogenesis and

gut microbiota in children and adolescents with OCD

Methods Multi-omics combined analysis of the gut microbiota in first-episode children and adolescents with OCD was performed. Stool samples were collected from 49 first-episode untreated children and adolescents with OCD and 42 age- and sex-matched healthy controls (HC), and all subjects were evaluated for clinical parameters. A total of 91 samples were analyzed by 16S rRNA sequencing and metabolomic based on UHPLS-MS. Correlation analysis was conducted between metagenomic sequencing results and clinical parameters to explore the relationship between intestinal flora and OCD symptoms and the possible functional pathways involved in the pathogenesis. Fecal samples from 19 OCD and 18 HC subjects were analyzed by Illumina HiSeq sequencing platform using metagenomic high-throughput sequencing method. Association analysis was performed on metagenomic and metabolomics analysis data to clarify the association between differential flora and differential metabolites

Results 1. The diversity index of intestinal flora in patients with OCD was significantly decreased (obs, $P < 0.001$; chao1, $P < 0.001$; ACE, $P < 0.001$; shannon, $P < 0.001$; simpson, $P < 0.05$; good, $P < 0.001$), and the microbial interaction network was significantly weaker than that in HC group. 2. The relative abundance ratio (F/B) of Firmicutes /Bacteroidetes in OCD group was significantly lower ($P < 0.001$). 3. The abundance of butyrate-producing bacteria such as Romboutsia ($q < 0.01$), Mitsukella ($q < 0.01$), and Terrasporobacter ($q < 0.01$) in the intestine of patients with OCD decreased significantly. 4. The random forest model identified 30 specific bacteria as markers, and the AUC between OCD patients and HC was 0.9011. 5. There is a correlation between the changes of clinical parameters in OCD group and the abundance of specific bacteria in intestinal flora. 6. A total of 43 endogenous differential metabolites were screened out in OCD-HC group, and there was a correlation between the differential metabolites and the differential flora ($P < 0.05$). 7. The relative contents of Neopterin and Sepiapterin, the intermediate products of folate biosynthesis, were significantly higher in OCD group ($P < 0.05$); Glucocorticoids and

corticosterones significantly decreased in regulating lipolysis in adipocytes and prion diseases ($P < 0.05$)

Conclusion Gut microbiota of children and adolescents with OCD were disordered at phylum, genus and species level, and the diversity of flora was significantly reduced. The OCD and HC groups had distinctive intestinal flora. Several gene functional and metabolic pathways of intestinal flora in OCD patients are destroyed

关键词: Obsessive-compulsive disorder; gut microbiota; children and adolescents;

伴或不伴轻躁狂倾向的单相抑郁和双相抑郁青少年患者的大尺度脑网络功能连接及其分类研究

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目的 青少年抑郁患者中很多伴随情绪不稳定以及阈下或阈上轻躁狂症状, 这些临床特征差异背后的神经机制仍待阐释。因此, 本研究旨在寻找青少年单相抑郁(Unipolar depression, UD)、单相抑郁伴轻躁狂倾向(Unipolar depression with hypomanic tendency, UD-Hm)和双相抑郁(bipolar disorder depression, BDD)患者在脑网络水平的静息态功能连接(FC)差异, 以及探索组水平的 FC 差异在个体水平是否具有分类能力。

方法 研究招募了 12 至 19 岁的 43 名 UD、33 名 UD-Hm、23 名 BDD 患者和 28 名健康对照(HC)。根据轻躁狂症状清单(HCL-32)评分, 将 UD 组定义为 $HCL-32 < 14$ 分, UD-Hm 为 $HCL-32 \geq 14$ 分。所有参与者完成静息态功能磁共振和 3D-T1 加权扫描, 预处理后提取感兴趣区(ROI)的神经信号构建脑网络, 并使用 Combat 算法去除站点效应。分别在 ROI 和大尺度脑网络水平比较 4 组间的 FC 差异, 然后与临床特征的进行相关性分析, 最后, 采用线性判别分析(LDA)方法对患者组进行分类。

结果 ① ROI 分析显示, 与 HC 相比, BDD 组的右侧中央前回(感觉运动网络)和右侧楔前叶(默认模式网络)之间的 FC 下降。② 大尺度脑网络分析显示, 3 个临床组均较 HC 的 FC 下降。具体而言,

UD 组感觉运动网络(SMN)内部连通性降低, UD-Hm 组 SMN 网络内、感觉运动网络-默认模式网络(SMN-DMN)和额顶网络-腹侧注意网络(FPN-VAN)间 FC 下降, BDD 组 SMN-DMN 网络间 FC 呈下降趋势, 但未通过 FDR 校正 ($p < 0.0025$)。③ 相关性分析发现, UD-Hm 患者的 FPN-VAN 网络间 FC 与汉密尔顿焦虑量表(HAMA)评分呈正相关($r = 0.507, p = 0.048, FDR$ 校正)。④ LDA 基于上述功能连接差异能够区分 UD 和 BDD 患者 (MeanAccuracy: 72.14%, Specificity: 70.83%, Sensitivity: 74.17%, AUC: 0.79, $p < 0.05$)。但是, 对于 UD-Hm 和 BDD、伴或不伴轻躁狂倾向的单相抑郁两对患者组分类准确性较低, 且 5000 次排列检验后分类准确性的 p 值不显著。

结论 青少年单、双相抑郁患者表现出一致的脑网络 FC 下降, 尤其 UD-Hm 患者受到更广泛的影响, 而且下降的 FC 只能将 UD 和 BDD 患者进行区分。因此我们推测, 在早发性情绪障碍患者中, 单相抑郁伴轻躁狂倾向可能是一个独立表型, 在临床诊疗过程中, 应密切关注和随访。

关键词: 单相抑郁; 单相抑郁伴轻躁狂倾向; 双相抑郁; 脑网络; 线性判别分析;

抑郁症功能连接梯度的偏侧化改变及其与长期治疗结局的关联

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目的 探索抑郁症(MDD)是否影响大脑功能梯度的半球不对称性

方法 我们通过 DIDA-MDD 联盟的来自 9 个中心的 2227 名参与者 (1148 名抑郁症患者和 1079 名健康对照)的大型静息态 fMRI 数据集进行分析, 研究了与抑郁症相关的功能连接组梯度的偏侧化改变, 并采用留一站点交叉验证的方法验证结果的鲁棒性。采用偏最小二乘相关分析的方法探索抑郁症患者功能连接梯度的偏侧化模式与临床量表评分之

间的关联。此外，我们还分析了来自真实世界的随访时间大于2年的52名MDD患者的数据，通过支持向量回归的方法探索与MDD梯度偏侧化模式与长期治疗结局的关系。

结果 与健康对照组相比，MDD患者在感觉运动网络区域、默认网络区域、额顶控制网路区域、注意网络区域、边缘网络区域均存在功能连接梯度的偏侧化改变，而且这些异常沿着多个功能梯度呈现异质性的改变。我们还发现抑郁症患者功能连接梯度的偏侧化模式与临床h汉密尔顿抑郁量表(HRDS)评分之间显著关联。此外，通过支持向量模型，我们发现抑郁症患者基线时的第一梯度的半球内梯度不对性特征可以显著预测患者远期(>2年)HDRS评分的变化。

结论 MDD的连接组梯度偏侧化存在异常，并且可能和长期预后相关，该研究为这种疾病的潜在治疗评估生物标志物提供了依据。

关键词：抑郁症 功能连接梯度 偏侧化 预后

瑞替加滨通过调节内质网应激介导的凋亡改善慢性束缚小鼠的抑郁样及认知症状

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目的 研究瑞替加滨(retigabine, RTG)对慢性束缚应激诱导的小鼠抑郁样症状及认知症状的改善作用，并初步探究其与内质网应激介导的细胞凋亡的相关机制。

方法 将7周龄的48只C57BL/6小鼠随机分为正常组、模型组(同等体积的药物溶剂:0.3%二甲亚砜+0.9%生理盐水)、RTG组(剂量:10mg/kg)和RTG+XE991【Kv7(KCNQ)通道阻滞剂】，每组12只。采用慢性束缚应激建立小鼠抑郁样及认知功能损害模型。给予相应的药物干预后，进行①行为学实验:旷场实验 检测小鼠中央区运动距离和停留时间;糖水偏好实验 检测小鼠糖水偏好度;悬尾实验 检测小鼠悬尾不动的时间;水迷宫实验统计小鼠到达隐藏平台的时间及穿越平台的次数，以检测小鼠的学习及记忆认知功能。②免疫荧光法检测各组小鼠海马组织中C/EBP同源蛋白和葡萄糖

调节蛋白78阳性表达强度。③Western blotting法检测各组小鼠脑海马组织中GRP78、CHOP、Bcl-2、Bax以及BNDF、ERK1/2、p-ERK1/2蛋白表达。

结果 与对照组比较，模型组小鼠OFT中央区运动距离和停留时间、糖水偏好百分率、WMW中穿越平台次数明显降低($P<0.05$)，而FST中悬尾不动时间、WMW中到达平台时间明显延长($P<0.05$)；IF染色可见CA3区的GRP78、CHOP表达明显增强($P<0.05$)；WB法可见CHOP、GRP78、Bax蛋白表达水平均明显升高($P<0.05$)，而Bcl-2、BNDF、p-ERK1/2与ERK1/2比值明显下降($P<0.05$)；与模型组对比，RTG组小鼠在OFT中央区运动距离和停留时间、糖水偏好百分率、WMW中穿越平台次数明显降低明显增加($P<0.05$)，IF染色可见CA3区的GRP78、CHOP表达减弱($P<0.05$)，WB法可见CHOP、GRP78、Bax蛋白表达水平均降低、p-ERK1/2与ERK1/2比值明显升高($P<0.05$)；与RTG组比较，RTG+XE991组小鼠FST中悬尾不动时间、WMW中到达平台时间明显延长($P<0.05$)，IF染色可见CA3区的GRP78、CHOP表达增强；WB法可见CHOP、GRP78、Bax蛋白表达水平均升高($P<0.05$)，BNDF、p-ERK1/2与ERK1/2比值下降($P<0.05$)。

结论 瑞替加滨能减轻CRS引起的小鼠抑郁样行为、改善认知损害，其可通过Kv7钾离子通道发挥主要作用，作用机制可能与抑制内质网应激介导的凋亡有关。

关键词：瑞替加滨；抑郁症；认知损害；内质网应激；XE991

Sex Differences in Brain Metabolites in Un-medicated Depressed Adolescents with Non-suicidal Self-injury

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Objective Sex differences in the clinical characteristics of non-suicidal self-injury (NSSI) and biochemical metabolism alterations of NSSI can be found in adolescents with a current major depressive episode (MDE). However, the relationship between gender and biochemical metabolism in MDE adolescents with NSSI remains unclear

Methods 171 unmedicated MDE adolescent patients with NSSI (NSSI group), 71 unmedicated MDE adolescent patients without NSSI (non-NSSI group) and 32 healthy controls (HC) were included. The 24-item Hamilton Depression Rating Scale (24-HDRS) was used to assess depressive symptoms. Bilateral metabolic ratios of N-acetyl aspartate (NAA) and choline-containing compounds (Cho) to creatine (Cr) in the prefrontal cortex (PFC), anterior cingulate cortex (ACC), lenticular nucleus (LN), and thalamus were obtained by 1H-MRS at 3.0 T

Results In MDE male adolescents, the NSSI group had higher NAA/Cr ratios than the non-NSSI group of the left PFC ($p=0.013$). A significant group × sex interaction effect ($F=9.150$, $p=0.003$) for the Cho/Cr ratios was found in the right thalamus. In MDE male adolescents, the non-NSSI group had higher Cho/Cr ratios than the NSSI group ($p=0.004$) in the right thalamus. In non-NSSI group, male adolescents had higher Cho/Cr ratios than females ($p=0.002$) in the right thalamus. The binary logistic regression showed that there was a significant negative relationship between Cho/Cr ratios of right thalamus and NSSI in MDE male adolescents

Conclusion MDE male adolescents with NSSI demonstrated different biochemical metabolism compared with females in the left PFC. Furthermore, the low Cho/Cr ratios of the right thalamus can be a specific predictor for NSSI in MDE male adolescents.

关键词: non-suicidal self-injury, adolescents, major depressive episode, H protons magnetic resonance spectroscopy

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目的 本文采用孟德尔随机化分析及临床验证对于抑郁、创伤史、神经质、睡眠、吸烟、饮酒、BMI、教育程度、体育锻炼与认知表现的关系进行探讨,并探讨其间的中介关系。

方法 首先选取抑郁、创伤史、神经质、失眠、睡眠时长、吸烟史、每日吸烟量、每周饮酒、BMI、教育程度、体育锻炼作为暴露因素,选取来自两个数据库的认知表现作为结局,进行孟德尔随机化分析及中介分析。其次选取年龄60岁以上的共407人的受试人群收集身高、体重、教育程度、体育锻炼情况、吸烟史、每日吸烟量、饮酒频率信息及HAMD、GDSLESE、CTQ-SF、EPQ-RSC、PSQI、MoCA量表评定结果进行相关性分析及中介分析来对于孟德尔随机化分析得出的结果进行临床验证。

结果 在孟德尔随机化分析中发现抑郁、创伤史、神经质分数、吸烟史、BMI分数与认知表现呈负相关,教育程度与认知表现分数呈正相关。失眠、睡眠时长、每周饮酒、每日吸烟量、体育锻炼与认知表现的关系在两个数据库中也均不显著。在中介孟德尔随机化分析中我们得出抑郁、神经质、吸烟史均在创伤史(暴露)到认知表现(结局)具有中介效应,中介效应平均值分别为16%、25%、15%;抑郁、创伤史均在神经质分数(暴露)到认知表现(结局)中具有中介效应,中介效应平均值分别为16%、13%。

在临床验证中发现抑郁、晚期创伤史(负性生活事件)、神经质与认知表现呈负相关;

失眠、睡眠时长、日吸烟量、饮酒频率、BMI、锻炼强度、锻炼时长与认知表现无明显的相关性;教育程度、吸烟史与认知表现呈正相关。

而在中介关系临床验证中抑郁、神经质均在创伤史到认知表现具有中介效应(GDS:完全中介,HAMD:33.3%中介效应,神经质:48.6%中介效应),抑郁、创伤史均在神经质分数到认知表现中具有中介效应(GDS:完全中介效应,HAMD:26.2%中介效应,LESE:19.4%中介效应),但吸烟史在创伤史与认知表现之间中介效应95%置信区间为(-0.003898479,0.014739276),包含0,认为中介效应不显著,因此认为吸烟史不是创伤史-认知表现的中介因素。

结论 我们的孟德尔随机化分析及临床验证均

认知表现的影响因素分析及验证研究

发现抑郁、神经质、创伤史均与认知表现负相关,教育程度与认知表现正相关,睡眠、饮酒、体育锻炼均与认知表现无关。在创伤史与认知表现的关系中,相比于早期创伤史,晚期创伤史对于认知表现的影响更为显著。且对于具有创伤史的人群而言,患有抑郁、神经质分数越高均会导致认知表现更差。而对于神经质分数较高的人群而言,患有抑郁、有创伤史均会导致认知表现更差。

关键词: 认知表现; 衰老; 孟德尔随机化

TAAR1 参与的线粒体功能调节在慢性应激所致认知功能损害中的作用

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目的 痕量胺相关受体 1 (Trace amine-associated receptor 1, TAAR1) 是 2001 年被发现的 G 蛋白偶联受体, 现已被证实是治疗精神疾病非常有前景的新靶点。本研究旨在探究 TAAR1 在慢性应激导致小鼠海马相关认知功能损害中的调控作用和分子机制, 为抑郁症等应激相关精神疾病的新药研发提供新的靶标和实验依据。

方法 首先, 本研究通过构建 TAAR1 全敲小鼠, 利用行为学检测和 RNA 测序等方法探索 TAAR1 敲除对小鼠行为和生物学功能的影响。随后, 通过荧光定量 PCR、免疫蛋白印迹和流式细胞术等方法对特定生物学过程和差异分子进行深入探索, 以解析 TAAR1 作用效应的下游分子通路。最后, 本研究分别通过慢性应激小鼠和应激细胞模型, 伴随应激给予选择性 TAAR1 部分激动剂 RO5263397 进行干预, 进一步证实 TAAR1 及其下游信号分子在慢性应激所致海马神经元线粒体功能障碍中的调节作用。

结果 TAAR1 基因敲除导致成年小鼠的空间参考记忆和工作记忆出现损害。进一步研究发现, TAAR1 敲除引起了小鼠海马脑区神经元线粒体功能和形态受损, CaMKII 和调控线粒体裂变的主要分子-磷酸化动力蛋白相关蛋白 1 (p-Drp1ser616) 等表达水平下调, 并且电镜观察结果提示突触后致密区厚度显著下降。此外, 慢性社会挫败应激也导致小鼠海马神经元线粒体结构和功能受损, CaMKII 和 p-Drp1ser616 等蛋白显著下调, 突触超微结构受损。

TAAR1 部分激动剂-RO5263397 改善了慢性应激致小鼠认知功能、海马神经元线粒体、突触结构、调控线粒体裂变与突触可塑性等蛋白表达的变化。

结论 TAAR1 在慢性应激所致海马相关认知功能损害中发挥重要调节作用, 这可能与 TAAR1 通过下游信号通路分子-CaMKII 调控线粒体功能, 从而引起突触可塑性改变有关。TAAR1 是治疗应激相关精神障碍引起的认知功能损害的潜在靶点。

关键词: 痕量胺相关受体 1; 慢性社会挫败应激; 认知功能; 线粒体功能; 海马

Effects of Exercise on Cognitive Function in Depressed Adults: Systematic Review and Network Meta-analysis

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Objective This review aimed to investigate the effectiveness of exercise on global cognitive, memory, and executive function in adult patients with depression, regardless of the presence of cognitive dysfunction. Additionally, we intend to evaluate the optimal exercise interventions further based on network meta-analysis

Methods Eleven relevant databases were searched (inception to May 2024) and ultimately included 35 studies. Primary outcome was global cognitive function, and secondary outcomes included memory and attention. Pooled standardized mean differences or odds ratios with 95% credible intervals were estimated using pairwise and network meta-analysis with random effects. Differences among trial findings were explored in subgroup and sensitivity analyses. The Cochrane Risk of Bias Tool assessed the risk of bias in the randomized controlled trials. Quasi-experimental studies were evaluated according to the JBI Health Care Center 2016 version of the evaluation tool

Results Ultimately, 36 studies were included in this network meta-analysis. The comprehensive pooled results indicate that exercise could significantly improve global cognitive function (SMD=0.74, 95%CI: 0.62 to 0.86) and other cognitive domains. Specifically,

mind-body exercises demonstrated the most incredible effects on global cognitive function with a SUCRA (Surface Under the Cumulative Ranking Curves, SUCRA) value of 84.0% and executive function (96.9%), while multicomponent exercise showed the most substantial impact on improving memory (70.9%)

Conclusion Despite some heterogeneity, this study's findings provide preliminary yet cautionary support that exercise is helpful for cognitive function in adults with depression. These findings can offer some information for clinical practice, but continued research is needed to position exercise training within evidence-based intervention approaches.

关键词: Depression, Cognitive dysfunction, Exercise, Interventions, Network meta-analysis

Analysis of Hotspots in Geriatric Comorbidity Research in The Past Decade Based on CiteSpace

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Objective To visually analyze the current status of research and hotspots related to geriatric comorbidities at home and abroad in the last decade, to understand the current research progress and future development trend of multimorbidity in the elderly

Methods Based on text mining technology and bibliometrics, the pieces of literature related to geriatric multi-morbidities published in China National Knowledge Infrastructure (CNKI) and Web of Science (WOS) from January 1, 2014, to April 27, 2024, were systematically retrieved. Cite Space 6.3 R1 was used to analyze and visualize authors, institutions, network software, keywords co-occurrence, clustering, dash forward show, timeline, and highly cited papers

Results A total of 196 Chinese literatures and 5534 English literatures were retrieved. This study found that the annual number of publications showed an overall upward trend. The Chinese core authors were Zhang Dan, Liu Xiaohong, and Xie Yanming, and the

foreign core authors were Singh Jasvinder A, Formiga Francesc, and Cleveland John D. Institutions at home and abroad to cooperate more frequently. Geriatric comorbidities research mainly concentrated on disease management and health outcomes, physical and social factors

Conclusion In the past decade, the research fever of geriatric comorbidities has been rising, and geriatric comorbidities with concomitant diseases and frailty have gradually become the mainstream research hotspots. Disease management health outcomes, and physical, and social factors may become the main direction of future research development

关键词: Comorbidity, Aged, Bibliometrics, Visualization, CiteSpace, Hotspots analysis

基于虚拟网络的新型教育模式探讨——以“精神课堂教学”为例

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目的 随着信息技术的迅猛发展,网络虚拟教学平台已经成为现代教育的重要组成部分。然而,传统的在线教育模式往往忽视了学生的临床诊疗技能培养,缺乏与学生的实践互动能力。本文旨在探讨如何利用网络虚拟教学平台创造具有人文关怀特质的精神课堂,以提升学生的学习体验和全面发展。

方法 1. 网络虚拟教学平台的优势与挑战

优势: 弹性学习时间、地域无关性、资源共享和互动性。

挑战: 缺乏面对面的情感表达、个性化学习方案、整体学习氛围的建立。

2. 精神课堂的特征与价值:

特征: 人文关怀、情感支持、诊疗技能的平衡。

价值: 提升学生的情感智力、社交技能和系统分析病案的能力。

3. 网络虚拟教学平台中实现精神课堂综合素质培养的策略

技术支持: 情感识别技术、虚拟社交互动工具、智能化学习管理系统。

教育实践: 培训师资、设计具体病例实践、促

进在线协作与团队项目。

4. 案例分析与实证研究

案例一： 我校《精神病学》课题组利用虚拟社区提升学生精神课堂体验的实践。

案例二：“思维训练”小程序在虚拟教学中应用交互技术的成效评估。

结果 本文探讨了网络虚拟教学平台在精神课堂中的应用，强调了临床知识掌握与精神诊疗实践的有机结合对医学学生全面发展的重要性。未来的研究可以进一步探索技术工具的优化和教育策略的创新，以提升在线教育的质量和影响力。

结论 在全球范围内，网络虚拟教学平台的广泛应用为教育带来了灵活性和便利性。然而，与传统课堂教学相比，这些平台通常缺乏面对面的情感交流和个性化支持，但这让教学团队对学生的课堂参与度多少、系统知识的实际掌握程度难以掌握。本文旨在探索如何通过网络虚拟教学平台实现精神病学课堂将理论知识与临床实践相结合的理念，为学生提供更为综合和全面的学习内容，帮助学生提升整体医学水平。

关键词：网络虚拟教学平台,精神课堂,教育技术,学生发展,在线教育

TNF- α MRNA 对经历慢性负性应激的抑郁症的识别作用：一项基于机器学习模型建立的研究

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目的 本研究通过机器学习建模方法，纳入海马结构和功能连接影像学指标、HPA 轴功能指标、免疫炎性指标等多维度数据，选择最优模型，并筛选有效的生物学标记物，对经历慢性负性应激的抑郁症进行早期识别。

方法 研究对象分为经历慢性负性应激的抑郁症组 (n=34) 和非经历慢性负性应激的抑郁症组 (n=30)。共纳入 21 个特征指标，其中海马影像指标 11 个 (海马体积：右侧海马颗粒细胞层-分子层-齿状回头部体积、右侧海马角 CA4 区头部体积、右侧海马角 CA3 区头部体积；海马与全脑体素的功能连接值：双侧海马与右侧颞中回、右侧楔前叶、右侧额

上回、右侧颞上回、左侧角回、右侧额下回三角部、右侧辅助运动区、左侧中央前回的 FC 值)；免疫炎性指标包括 IL-1 β 、IL-6、IL-8、TNF- α 及相应 mRNA；HPA 轴功能的指标包括血浆中 CORT、ACTH 的表达水平。使用 Python 3.11 和 scikit-learn 1.4.1 进行机器学习建模；鉴于样本量较小，采用了留一交叉验证，建立测试集和训练集；在模型选择上，使用了 3 种分类器：逻辑回归、支持向量分类、随机森林；为评估模型性能，计算准确率、精确率、敏感性、特异性、F1 分数、曲线下面积，并对分类模型进行了置换检验,共进行了 5000 次。通过综合这些指标，选择性能最佳模型，并探讨模型的可解释性来理解模型决策。

结果 (1) 使用随机森林时预测效果较好；在随机森林算法下：单独使用海马影像指标进行二分类，准确率为 64.2%，单独使用血液检测指标 (免疫炎性指标+HPA 轴功能指标) 进行二分类，准确率为 92.4%，结合海马影像和血液检测指标后预测效果准确率为 90.6%；提示结合海马影像指标对经历慢性负性应激的抑郁症组和非经历慢性负性应激的抑郁症组二分类帮助不大，可以聚焦在血液检测指标上。

(2) 通过特征权重图发现：TNF- α mRNA 权重值非常高，对二分类有较大影响。

结论 纳入免疫炎性指标和 HPA 轴功能指标的随机森林模型对经历慢性负性应激的抑郁症的预测效果最好，其中 TNF- α mRNA 特征权重最高，有望成为经历慢性负性应激的抑郁症的早期识别客观指标应用于临床。

关键词：抑郁症;慢性应激;HPA 轴功能;促炎性因子；海马

Compilation and Preliminary Application of The Awareness Questionnaire for Late Life Depression

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Objective To develop a awareness questionnaire for late life depression with good reliability and validity,

and to provide a tool for clinical and scientific research to evaluate depression awareness of elderly depression patients to lay scientific and theoretical foundation for the follow-up construction of psychosocial intervention program for senile depression; to apply initially the awareness questionnaire for late life depression in patients with senile depression, survey the preservation of depression diseases in elderly depression, and explore factors affecting the knowledge of old depression diseases

Methods (1) Taking Health Belief Theory and "knowledge, Attitude and Practice" theory as the theoretical framework, through a large number of searches and semi-structured interviews with medical staff, patients and their families, the item pool was established according to the results of retrieval and interviews. And compile the general condition questionnaire of patients. (2) After two rounds of expert consultation, the questionnaire was revised according to the opinions and suggestions of the experts. (3) 30 patients were selected for pre-survey in the outpatient clinic, and the words of the questionnaire were popularized to form the initial questionnaire. (4) Convenience sampling was used to investigate the elderly patients with depression in the outpatient department of psychology. (5) SPSS software was used to do t-test, correlation analysis and Cronbach's α coefficient to delete some unreasonable items, and Amos software was used to test the reliability and validity of the selected questionnaire. (6) Investigating elderly patients with depression using the awareness questionnaire for late life depression

Results (1) The result of expert letter inquiry: in the two rounds of expert letter inquiry, the expert accumulation was extremely 100%, and the questionnaire was adjusted more finely under the advice of experts. (2) After t-test, correlation analysis and Cronbach's α coefficient analysis, there were 4 dimensions and 26 items in the questionnaire. Exploratory factor analysis showed that three common factors were identified, and the contribution rate of cumulative variance was 52%. (3) The test results of reliability and validity: the total Cronbach's α coefficient of the questionnaire was 0.747, the Cronbach's α coefficient of the sub-dimension

was 0.593-0.894. The half-reliability of the questionnaire was 0.796, the split-half reliability of the sub-dimension was 0.559-0.771. The verification factor analysis shows $\chi^2/DF = 1.895$, GFI=0.948, AGFI=0.927, NFI=0.883, TLI=0.927, CFI=0.94, RMSEA=0.046. The questionnaire has a good structural validity. respectively, and the reliability was good. (4) The risk factor score is between 7-34, with a division of 19.313 ± 5.961 , and the drug treatment is 5-15, which is divided into 9.813 ± 3.373 , and the treatment of rehabilitation is 3-15. There are 8.173 ± 3.509 , and the psychotherapy score is between 3-15, with a score of 9.418 ± 3.434 , and the total questionnaire score is between 23-76 points, and it is divided into 46.716 ± 10.098 . (5) In the analysis of the impact of the questionnaire, the patient's children, the content, cultural level, the satisfaction of economic income, medical insurance, whether or not the common disease is different, etc. influence the total score of the questionnaire or various dimensions. The gender of the patient has an impact on questionnaire psychotherapy dimension

Conclusion (1) The awareness questionnaire for late life depression developed in this study contains 4 dimensions and 16 items. The reliability and validity of the questionnaire meet the requirements of the questionnaire and can be used in clinical investigation. (2) The score of the awareness questionnaire for late life depression is generally, and the score of rehabilitation treatment dimension is low. (3) The working nature, medical insurance situation, cultural level can reflect the general situation of patient life and economic level. (4) In gender, patients with elderly depression have differently differentiated. Female patients are more susceptible to psychotherapy. (5) Low awareness of depression affects the confidence of recovery, which in turn affects disease treatment. Elderly patients with depression need standardized scientific drug treatment and psychotherapy

关键词: Late life depression, Disease awareness, Reliability and validity

抑郁障碍研究协作组

Effects of Dual TAAR1/5-HT1A Receptor Agonist SEP-363856 on Attenuating Depression-like Behavior Through IGF-1R β /PI3K/AKT Pathway in CUMS Mice Model

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Background SEP-363856 (SEP-856) is a novel antipsychotic drug for the treatment of schizophrenia, and it also has antidepressant like effects. However, the role and mechanism of SEP-856 in improving behavioral symptoms of depression remain unclear

Purpose The aim of this study was to evaluate the effect and mechanism of SEP-856 on depression-like behavior induced by chronic unpredictable mild stress (CUMS) in mice

Methods The CUMS model was first established to test the antidepressant properties of SEP-856 through a series of behavioral tests, such as SPT, TST, FST, EPM and OFT. The number of Nissl bodies in DG region of hippocampus was determined by Nissl staining. The level of IGF-1 in mice hippocampus was determined by ELISA. The mRNA expression levels of BDNF, SYN and PSD95 were determined by qRT-PCR. The levels of IGF-1R β , PI3K, p-PI3K, AKT and p-AKT in hippocampus were detected by western blot

Results The results of CUMS model showed that SEP-856 had the same effect as fluoxetine, and could significantly shorten the immobile time of TST and FST in mice, increase the sucrose preference rate of SPT, improve the motor function, feeding behavior, and grooming behavior of OFT, and alleviate the anxiety behavior of EPM in mice, among which 10mg/kg SEP-856 had a more significant effect. Compared with CUMS model, SEP-856 up-regulated IGF-1 content in hippocampus. In addition, SEP-856 increased the number of Nissl bodies in hippocampus DG region, increased the activity of IGF-1R β , up-regulated the phosphorylation levels of p-PI3K and p-AKT, and promoted the mRNA expression of BDNF, SYN and PSD95 in hippocampus

Conclusion SEP-856 may increase the expression of IGF-1 in hippocampus, reverse the loss of hippocampal neurons, up-regulate the activity of IGF-1R β , activate PI3K/AKT signaling pathway, and further up-regulate the expression of mRNA levels of BDNF, SYN and PSD95 in hippocampus, thus promoting synaptic plasticity in hippocampus. Therefore, it has an antidepressant effect on depression-like behavior induced by CUMS in mice.

关键词: CUMS, SEP-363856, Depression-like behavior, Synaptic plasticity, IGF-1R β /PI3K/AKT

时域干涉刺激对抑郁症相关神经环路的调控作用

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目的 探索时域干涉刺激(TIS)在抑郁症治疗中的安全性与可行性, 为临床疗效验证试验提供证据支持; 探索时域干涉刺激不同抑郁症靶点对抑郁相关神经环路产生的影响。

方法 本研究共纳入 15 名抑郁症患者作为被试, 通过被试内设计对每名被试进行了每周一次 20 分钟共五周、每次随机不同靶点的 TIS 试验, 包括 10Hz 的左侧背外侧前额叶(DLPFC)刺激、100Hz 的左侧亚属前扣带回(sgACC)、右侧杏仁核(Amg)、右侧腹侧纹状体(VS)刺激共四个靶点刺激与一次靶点随机、包络频率为 0Hz 假刺激。每名被试在试验开始前均采集了 T1 与 8 分钟静息态功能核磁影像, 在每次刺激前后采集了 HAMD/HAMA 量表评分与 8 分钟静息态功能核磁影像, 在每次刺激后记录了患者的不良反应, 并在试验结束后一到两周内通过电话随访采集了 HAMD/HAMA 量表评分。本研究还另外纳入了两名癫痫患者, 通过 SEEG 电极记录 TIS 在上述四个靶点附近的电信号频率及强度。

结果 试验过程中没有观察到严重不良反应, 主要不良反应包括想睡觉与头晕; 相较于试验前, 五次刺激后 HAMD、HAMA 评分均显著降低; 针对单次单靶点刺激前与刺激后一周的量表评分分析发现, 在 DLPFC, Amg 和 VS 刺激后被试 HAMD 评

分显著降低,在 DLPFC 和 Amg 刺激后被试 HAMA 评分显著降低;神经影像分析显示,被试刺激前 DLPFC-sgACC 功能连接强度与 Amg 刺激后 HAMD 评分改善程度显著正相关;将患者按照试验开始前 DLPFC-sgACC 功能连接强度分为负连接组 (N = 8) 和正连接组 (N = 7) 发现, Amg 刺激后的 HAMD 改善程度均值在正连接组中更高, DLPFC 刺激后的 HAMD 改善程度均值在负连接组中更高,但两组间差异没有统计学显著性。SEEG 试验表明在四个靶点处 TIS 能够产生稳定强度与频率的电场。

结论 本研究结果表明 TIS 能够稳定有效刺激大脑深部抑郁症相关的四个靶点并改善抑郁症患者抑郁和焦虑症状,且不会引起严重的不良反应,初步证明了 TIS 治疗抑郁症的可行性与有效性。杏仁核作为一个尚未在抑郁症神经调控研究中得到验证的靶点,在试验中表现出了较好的抑郁与焦虑改善效果,为后续杏仁核调控抑郁症提供了证据。在既往 TMS 研究与 DLPFC 刺激疗效负相关的 DLPFC-sgACC 功能连接在本研究中被观察到与杏仁核刺激正相关,证明了抑郁症神经调控个体化靶点选择的可行性。

关键词: 抑郁症; 时域干涉刺激; 神经调控疗法

成年早期伴非自杀性自伤抑郁症与伴自杀未遂抑郁症脑局部一致性的特征

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目的 本研究旨在探讨成年早期伴非自杀性自伤 (Non-suicidal self-injury, NSSI) 抑郁症与伴自杀未遂 (suicide attempt, SA) 抑郁症脑活动特征。本研究生使用局部一致性 (regional homogeneity, ReHo) 的方法为寻找抑郁症 SA 和 NSSI 特征性影像学损害机制提供依据。

方法 招募来自南京医科大学附属脑科医院住院的抑郁症患者。根据 DSM5 推荐的 NSSI 标准诊断 NSSI。按照是否伴 SA 和 NSSI, 分为伴 SA 抑郁症 50 名, 伴 NSSI 抑郁症 54 名, 不伴 NSSI 的抑郁

症患者 68 名, 同时招募 66 名年龄、性别、受教育年限匹配的健康对照。将 4 组受试进行 3.0T 静息态功能磁共振扫描, 计算 ReHo, 对四组受试进行单因素方差分析, 高斯随机场法 (Gaussian random field, GRF) 校正, 在四组比较差异有统计学意义的基础上, 进行 hoc t 检验, 对每两组 GM 和 ALFF 进行两两比较, 继续使用 GRF 校正。

结果 四组被试在右颞下回、右颞中回、左颞上回、左罗兰氏岛盖部、左脑岛、右角回、左顶上回和左额中回/左额上回 ReHo 值差异存在统计学意义 (单因素 $p < 0.001$, 连续体素值 $K \geq 43$, GRF 校正后 $p < 0.05$)。在四组方差分析基础上事后独立样本 t 检验, 与 MDD/NSSI 组相比, MDD/SA 组左颞上回和左额上回 ReHo 值增高, 右颞中回和右颞下回 ReHo 值下降; 与 sMDD 组相比, MDD/SA 组右颞中回、左罗兰氏岛盖部、左顶上回和左额上回 ReHo 值增高, 右颞下回和右角回 ReHo 值下降; 与 HC 组相比, MDD/SA 组左颞上回、左罗兰氏岛盖部、右颞中回、左顶上回和左额中回 ReHo 值增高, 右颞下回 ReHo 值下降 (单因素 $p < 0.001$, 连续体素 K 值 ≥ 5 , GRF 校正, $p < 0.05$)。

结论 伴 SA 抑郁症较伴 NSSI 抑郁症患者表现为左颞上回和左额上回局部协调性增高, 右颞中回和右颞下回局部协调性下降, 存在不同的损害模式。

关键词: 抑郁症, 自杀未遂, 非自杀性自伤, 局部一致性

Multidimensional Assessment of Adverse Events of Bupropion: A Large-Scale Data Analysis From The FAERS Database

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Objective Bupropion, a monocyclic antidepressant, aids in smoking cessation, treats major depression, and prevents severe depression in seasonal affective disorder patients. Yet, its adverse reactions remain insufficiently studied

Methods All data from the ASCIID data packages for 78 quarters from the 1st quarter of 2004 to the 2nd quarter of 2023 were extracted and imported into the

SAS9.4 software for data cleaning and analysis. The ROR, PRR, BCPNN, and MGPS methods were used to analyze drug adverse events and assess their compliance with various screening criteria

Results The results showed a total of 36,862 reports related to Bupropion use, identifying 364 positive reaction terms (PT) covering 23 SOCs. In addition to known side effects, some new potential adverse reactions were found, such as Stool analysis abnormal, Oculocephalographic reflex absent, Suspected suicide, and so on. At the same time, reactions like Encephalopathy neonatal, Hyponatraemic coma, and Electrocardiogram QRS complex prolonged were prominently ranked. Notably, occurrences such as Urine amphetamine positive and Amphetamines positive were relatively high, suggesting extra caution for these potential adverse reactions during clinical use of Bupropion

Conclusion These findings highlight the potential health risks of long-term Bupropion use, especially concerning efficacy, positive drug tests, and suicidal tendencies. Therefore, it is recommended to monitor and assess patients using Bupropion more stringently to use this therapeutically potential drug more safely and effectively

关键词: Bupropion, adverse events, FAERS, data analysis, real-world

Interpretation of The Pathogenesis and Therapeutic Mechanisms of First-episode Major Depressive Disorder Based on Multiple Amino Acid Metabolic Pathways: A Metabolomics Study

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Objective Due to the uncertain mechanisms of

occurrence and treatment of depression, we aimed to reveal the metabolic differences between major depressive disorder (MDD) patients versus healthy controls (HC) and escitalopram (ESC) treatment

Methods Our study recruited 78 participants including HC (n=38) and first-episode drug-naïve MDD (DN-MDD) patients (n=40). Collected serum samples from subjects at baseline, followed by administering ESC to MDD patients for 4 weeks and collecting samples again. Serum samples were conducted to non-targeted metabolomics analyses by UPLC-MS/MS. Applied MetaboAnalyst 5.0 to identify differential metabolites and execute pathway enrichment

Results Compared to DN-MDD patients, 905 and 455 differentially expressed metabolites were identified in HC and after ESC treatment. Depressive state existed dysregulation of histidine metabolism, beta-alanine metabolism, and alanine, aspartate and glutamate metabolism pathways. ESC treatment produced physiological response that the pathways of arginine, aspartate, and sphingolipid underwent significant modulation

Conclusion Multiple functional amino acid pathways were adjusted in MDD patients. ESC regulated the level of aspartate, arginine and sphingolipids in MDD patients compared to pre-dose. This metabolomics study has brought about new insights of the biology and treatment of MDD from the perspective of the endogenous metabolites.

关键词: Major depressive disorder; metabolomics; escitalopram; amino acids; sphingolipids

抑郁症非自杀性自我伤害的疼痛行为学特征

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目的 研究表明抑郁症患者与非自杀性自我伤害 (Nonsuicidal self-injury, NSSI) 患者都具有疼痛行为学的异常,但在伴有 NSSI 的抑郁症患者中证据不足。本研究旨在探究伴有 NSSI 的抑郁症患者的疼痛行为学特征, 及与社会心理学因素的关联。

方法 根据精神障碍诊断与统计手册第 5 版

“重性抑郁障碍”与“非自杀性自我伤害”诊断标准，从2022年9月至2023年11月于上海市精神卫生中心门诊及心境障碍科病房顺序入组20例伴NSSI的抑郁症患者，23例从未有过自伤行为的抑郁症患者，及23例匹配的健康对照。所有被试均对疼痛试验知情同意。使用Stimul 1340钕钇铝钙钛矿激光器测量被试的感觉阈值（感受到热觉的最低能量）、疼痛阈值（感受到疼痛的最低能量）与疼痛耐受性（能忍受的最高能量）。使用0~10的数字评价量表（Numerical Rating Scale, NRS）测量被试在接受疼痛刺激时的主观疼痛评分与瞬时情绪评分。使用简明国际神经精神障碍访谈检查、33项轻躁狂症状自评量表、17项汉密尔顿抑郁量表、汉密尔顿焦虑量表、儿童期创伤问卷、渥太华自伤调查表中文修订版采集社会心理学数据。分析疼痛行为学与社会心理学数据的组间差异及关联。

结果 与不伴有NSSI的抑郁症患者相比，伴有NSSI的抑郁症患者具有更高的疼痛阈值（ $Z=2.42$, $P=0.016$ ）和疼痛耐受性（ $Z=3.02$, $P=0.003$ ）。对于主观疼痛强度的评分以及瞬时情绪的评分，仅发现伴有NSSI的抑郁症患者在接受耐受性水平的疼痛刺激时情绪比健康对照更愉快（ $Z=2.34$, $P=0.019$ ）。在社会心理因素方面，伴有NSSI的抑郁症患者具有比不伴有NSSI的抑郁症患者更高的自杀风险（ $Z=3.47$, $P=0.001$ ）和更严重的童年创伤经历（ $Z=2.97$, $P=0.002$ ），主要集中在情感虐待（ $Z=2.71$, $P=0.006$ ）、性虐待（ $Z=3.92$, $P=0.001$ ）、情感忽视（ $Z=2.13$, $P=0.034$ ）和躯体忽视（ $Z=2.65$, $P=0.008$ ）。相关分析发现，抑郁症患者的疼痛阈值与性虐待分量表评分（ $r=0.347$, $P=0.028$ ）、疼痛耐受性与情感虐待分量表评分（ $r=0.391$, $P=0.013$ ）存在显著正相关。

结论 伴有NSSI的抑郁症患者可能具有较高的疼痛阈值和疼痛耐受性，并与童年创伤的严重程度正相关。

关键词：非自杀性自我伤害,抑郁症,疼痛,童年创伤

Knowledge and Attitude of Depression Among Urban and Rural Residents in Beijing: A Cross-sectional Study

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Objective To compare the level of knowledge of depression, recognition ability, and attitudes toward depression among urban and rural residents in Beijing

Methods From October to December 2021, a total of 6,463 valid samples aged 18 and above who had lived for more than 6 months over the prior year in Beijing were selected by non-proportional stratified sampling method. The Depression Knowledge Questionnaire and Case Quiz Questionnaire was used to assess the awareness and recognition of depression and reflect the views of residents towards people with depression

Results A total of 2,554 urban and 2,043 rural residents completed the survey. Urban residents of Beijing exhibited a higher average total score on the Depression Knowledge Questionnaire [(20.4±3.3) vs. (18.7±3.5), $P<0.001$] and a higher rate of correctly identifying individuals with depression (47.9% vs. 36.6%, $P<0.001$) than their counterparts in rural areas. Residents who correctly identified people with depression had higher scores on the Depression Knowledge Questionnaire. Depression knowledge varied significantly among urban and rural residents. The multivariate linear regression analysis revealed that rural residents scored significantly lower on measures of depression knowledge compared to urban residents ($B=-0.83$, 95%CI=-1.03~-0.63, $P<0.001$). Older individuals (aged 50+) showed lower understanding compared to the 18-49 age group, with significant negative regression coefficients (Urban: $B=-1.06$, Rural: $B=-1.35$, both $P<0.001$). Higher education levels were positively associated with greater depression knowledge (Urban: $B=1.40$, Rural: $B=1.21$, both $P<0.001$). Employment was linked to higher knowledge levels than unemployment (Urban: $B=-0.60$, Rural: $B=-0.58$, both $P=0.00$). A monthly income of 8,000 yuan or more correlated with better depression understanding than lower incomes (Urban: $B=0.81$, Rural: $B=1.04$, both $P<0.001$). Additionally, in urban areas, unmarried residents scored higher in depression knowledge than those divorced ($B=-0.55$, $P=0.04$). Residents in urban areas had relatively positive attitudes towards individuals with depression

Conclusion Rural residents of Beijing had lower levels of knowledge and recognition of depression and more negative attitudes toward individuals with depression than those from urban areas. The health authority needs to focus on the weak level of knowledge and increase mental health resources in rural areas as a priority site for future psychological popularization efforts.

关键词: Beijing, Depression knowledge, Attitude, Survey

From Genes To Cells: Exploring The Role of Senescence in MDD Pathogenesis

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Objective Multiple pieces of data indicate that patients diagnosed with Major Depressive Disorder (MDD) have a senescence phenotype or an increased susceptibility to premature senescence. Nevertheless, there is a lack of research on the correlation between senescence related genes (SRGs) and MDD

Methods We used 144 MDD samples and 72 healthy reference samples from the GEO database to compare SRG expression. Five important genes identified by RF and SVM-RFE were used to build a logistic regression model. Based on SRG expression patterns, consensus cluster analysis was used to identify MDD patients, and WGCNA was utilized to find modules of strongly linked genes of each cluster. MDD SRG functions were analyzed using single-cell RNA sequencing

Results Five hub genes: ALOX15B, TNFSF13, MARCH15, UBTD1, and MAPK14 had altered expression between groups. Hub gene-based diagnostics were highly accurate. The five hub SRGs correlated positively with neutrophils and negatively with T lymphocytes. SRG expression patterns suggest two MDD subclusters. WGCNA found significantly linked gene modules in these two subclusters. Individual endothelial

cells with high senescence scores develop new interaction with astrocytes via the Notch signaling pathway, suggesting their different involvement in MDD pathogenesis

Conclusion Our comprehensive study of MDD reveals the significant role of SRGs. We highlighted the importance of Notch signaling in mediating the effects of senescence

关键词: Bulk RNA analysis, Major depressive disorder, Endothelial cells, Senescence, Single-cell RNA analysis.

The Impact of Accelerated Repetitive Transcranial Magnetic Stimulation on Major Depressive Disorder with Melancholic Features: An Rs-fMRI Study

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Objective This study aimed to investigate the effects of Accelerated Repetitive Transcranial Magnetic Stimulation (arTMS) on major depressive disorder with melancholic features, incorporating the assessment of brain functional imaging changes using resting-state functional magnetic resonance imaging (rs-fMRI) measures of Regional Homogeneity (ReHo) and Functional Connectivity (FC)

Methods A total of 40 patients with melancholic depression were enrolled and randomly assigned to either the research group or the sham stimulation group. Both groups received arTMS treatment on top of standard medication, with the research group receiving real arTMS treatment and the sham group receiving sham arTMS treatment. Patients in both groups underwent assessment using the 24-item Hamilton Depression Rating Scale (HAM-D24) and rs-fMRI scanning before and after treatment. Changes in HAM-D24 scores, ReHo values, and FC values were analyzed between pre- and post-treatment, and correlations between these rs-fMRI indices and the reduction rate in HAM-D24 scores were

further calculated

Results After arTMS treatment, significant reductions in HAMD24 scores were observed in both groups, with the research group showing significantly lower HAMD24 scores compared to the sham group. ReHo values in the right superior frontal gyrus significantly decreased in the research group, along with significantly reduced FC values between the right superior frontal gyrus and the right angular gyrus and right middle temporal gyrus after treatment. FC values between the right superior frontal gyrus and right middle temporal gyrus at baseline were significantly negatively correlated with the reduction rate in HAMD24 scores

Conclusion arTMS significantly improves depressive symptoms in patients with major depressive disorder. arTMS treatment may influence the functioning of the right superior frontal gyrus, and FC values between the right superior frontal gyrus and right middle temporal gyrus at baseline could serve as predictive indicators of arTMS treatment efficacy in major depressive disorder

关键词: Accelerated Repetitive Transcranial Magnetic Stimulation; Major depressive disorder with melancholic features; Resting-State Functional Magnetic Resonance Imaging; Regional Homogeneity; Functional Connectivity

CircFKBP8(5S,6)-encoded Protein As A Novel Endogenous Regulator in Major Depressive Disorder

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Objective Major depressive disorder (MDD) is a serious psychiatric disorder, but the role of circRNAs encoding proteins in MDD is not yet clear. Based on this, the present work attempts to explore the molecular mechanisms of circRNAs involved in the pathogenesis of MDD, and to provide experimental basis for the identification of diagnostic biomarkers for depression and targeted therapies

Methods 1. Identification of circRNA using qPCR, RNase R and actinomycin D assays; LC-MS to verify coding capacity. 2. Detection of circFKBP8(5S,6) levels in plasma neuron-derived exosomes from patients with MDD and in the stress SH-SY5Y cell line by qPCR. 3. Immunofluorescence (IF) staining was used to assess the expression of circFKBP8 (5S,6)-encoding protein (cFKBP8) in autopsy brain tissues from patients with MDD and in organoids induced to be established by peripheral blood cells from MDD patients with a history of suicide (sMDD). 4. Knockdown of circFKBP8(5S,6) levels in sMDD organoids using AAV-hSyn-shRNA and assessment of neuronal activity by calcium imaging. 5. Depression-like behavior of mice was assessed by sugar-water preference test (SPT), forced swimming test (FST), and tail-suspension test (TST) after bilateral Prelimbic cortex (Prl) overexpression of circFKBP8 (5S,6) and cFKBP8 in male mice. 6. Whole transcriptomics sequencing analysis was performed to screen differentially expressed genes (DEGs), and biological function annotation and KEGG analysis were performed. 7. RT-qPCR, western blot and IF staining were used to detect the expression of dopamine D3 receptor (DRD3). 8. Western blot was used to detect the expression of p-AMPK, AMPK, p-mTOR, mTOR, p-ULK1(ser555), p-ULK1(ser757), p-ULK1(ser317), ULK1, and autophagy-associated proteins LC3, p62, and Beclin; IF was used to detect the expression of LC3 in neurons. 9. After overexpression of circFKBP8(5S,6) and cFKBP8 in Prl, mice were injected intraperitoneally with DRD3 agonist or overexpression of DRD3 to assess mouse behavior, and protein expression of the DRD3/AMPK-autophagy-related pathway was detected by western blot and IF

Results 1. In the present study, we identified circFKBP8(5S,6) encoding a 127-amino acid protein, cFKBP8. In addition, circFKBP8(5S,6) was up-regulated in plasma neuron-derived exosomes from MDD patients and stressed SH-SY5Y cells. The level of cFKBP8 was increased in postmortem brain tissues of MDD patients and sMDD organoids, and the knockdown of circFKBP8(5S,6) in organoids elevated [Ca²⁺] amplitude. 2. Two weeks after chronic unpredictable mild stress (CUMS), mice with neurons overexpressing

circFKBP8(5S,6) and cFKBP8 in the Prl exhibited decreased sugar-water preference and prolonged immobilization time in the FST, indicating increased stress sensitivity. At the end of the 5-week CUMS, mice overexpressing circFKBP8(5S,6) and cFKBP8 showed more severe depression-like behaviors, including decreased sugar-water preference and prolonged immobilization time in the TST and FST. 3. Whole transcriptomics sequencing analysis showed 520 DEGs in the overexpression of circFKBP8(5S,6) (oe-circ) group and 537 DEGs in the overexpression of cFKBP8 group (oe-cFKBP8), with 117 DEGs common to the two groups, and KEGG enrichment analysis showed that the neuroactive ligand-receptor interaction pathway was the most enriched pathway in the oe-circ group and oe-cFKBP8 group with the most enriched genes, in which the expression of DRD3 was significantly down-regulated and enriched in this pathway. RT-qPCR, western blot and IF showed that the expression level of neuronal DRD3 was significantly reduced in the oe-circ group and oe-cFKBP8 group. 4. Western blot showed that the ratio of p-AMPK/AMPK and p-ULK1(ser555)/ULK1 was significantly decreased, the ratio of p-mTOR/mTOR and p-ULK1(ser757)/ULK1 was significantly increased in the oe-circ and oe-cFKBP8 groups, and the p-ULK1(ser317)/ULK1 were not statistically different, the ratio of LC3II/LC3I was decreased, p62 expression was up-regulated, and Beclin expression was down-regulated; IF results showed a significant reduction of LC3-labeled autophagosomes in neurons. 5. Both intraperitoneal injection of DRD3 activator and overexpression of DRD3 in Prl reversed the depressive-like behavior induced by overexpression of circFKBP8(5S,6) and cFKBP8, and reversed the expression of AMPK-autophagy signaling-related proteins

Conclusion In this study, we systematically screened and identified an MDD-associated circRNA capable of encoding a protein in conjunction with cross-species studies. Further, studies revealed that circFKBP8(5S,6) and its encoded proteins inhibit the level of neuronal autophagy to promote stress susceptibility in mice by down-regulating the expression of neuronal DRD3, which in turn down-regulates AMPK/mTOR/ULK1 autophagy signaling pathway.

This may provide new ideas for the diagnosis and targeted therapy of MDD.

关键词: circRNAs, Major depressive disorder, circRNA-encoded protein, DRD3, Neuronal autophagy

首发未治疗青少年抑郁症肠道菌群的代谢组学研究

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目的 本研究拟对首发未治疗青少年抑郁症的肠道菌群的代谢产物进行研究, 试图找到差异代谢产物与患者症状及心理特征的相关性。

方法 本研究纳入 30 例首发未治疗青少年抑郁症患者以及 26 例健康对照。采用了汉密尔顿抑郁量表 24 项 (HAMD)、儿童抑郁量表 (CDI)、青少年生活事件量表 (ASLEC)、神经心理状态评估可重复性系列测验 (RBANS) 分别评估被试者的抑郁症状、生活经历、以及认知功能。使用液相色谱质谱联用 (LC-MS) 分析方法对肠道粪便进行代谢产物检测。使用 R 软件包 ropls 进行主成分分析 (PCA) 与正交最小偏二乘判别分析 (OPLS-DA)。通 KEGG 数据库对这些差异代谢产物进行注解。使用皮尔逊相关分析差异代谢产物与被试者的抑郁症状、心理评估分数进行相关性分析。

结果 1、青少年抑郁症组在 HAMD、CDI 总分、ASLEC 总分上高于健康对照组, 差异有统计学意义 ($p < 0.001$); 青少年抑郁症组在 RBANS 总分、RBANS 延迟记忆得分低于健康对照组, 差异有统计学意义 ($p < 0.05$)。

2、一共鉴定到 2309 种代谢产物, 其中有 2175 种代谢产物属于两组共有代谢产物, 有 55 种代谢产物独属于青少年抑郁症组, 79 种代谢产物独属于健康对照组。

3、一共鉴定到 71 种在青少年抑郁症组和健康对照组之间差异显著的代谢产物。

4、差异显著的代谢产物在 20 条代谢通路之中显著富集。

5、组胺 (Histamine) 与 HAMD 得分 ($r = 0.43$, $p < 0.01$)、CDI ($r = 0.47$, $p < 0.001$) 总分之间呈正相关, 与 RBANS 总分 ($r = -0.27$, $p < 0.05$)、RBANS 言

语功能 ($r=-0.38, p<0.01$)、视觉广度得分 ($r=-0.30, p<0.05$) 呈负相关。磷脂酰乙醇胺与 HAMD 得分 ($r=-0.42, p<0.01$)、CDI 得分 ($r=-0.38, p<0.01$) 呈负相关, 与 RBANS 总分($r=0.34, p<0.05$)、言语功能得分($r=0.36, p<0.01$)、注意力得分 ($r=0.30, p<0.05$) 呈正相关。2-萘酚与 HAMD 得分 ($r=0.34, p<0.05$)、CDI 总分 ($r=0.34, p<0.05$) 呈正相关, 与 RBANS 总分 ($r=-0.29, p<0.05$)、延迟记忆得分 ($r=-0.39, p<0.01$)、即刻记忆得分 ($r=-0.31, p<0.05$)、视觉广度 ($r=-0.30, p<0.05$) 呈负相关。

结论 本研究发现一些组间显著差异代谢产物在成瘾、细胞自噬、脂类代谢等通路显著富集, 这提示肠道菌群可能是通过这些代谢通路对抑郁造成影响。

关键词: 青少年抑郁症; 代谢产物; 肠道菌群; 认知功能; 临床症状

Vocal Acoustic Features and A Classification/Prediction Model for Major Depressive Disorders

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Objective This study utilized deep learning methods to construct classification and prediction models for major depression and healthy control groups

Methods One-hundred-and-twenty-two participants aged 16–25 participated in this study, included 66 MDD group and 56 HC group. We used the Covarep open source algorithm to extract a total of 1200 high-level statistical functions for each sample. In addition, we used Python for correlation analysis, and neural network to establish the model to distinguish whether participants experienced depression, predict the total depression score, and evaluate the effectiveness of the classification and prediction model

Results The classification modelling of the major depression and the healthy control groups by relevant and significant vocal acoustic features was 0.90, and the Receiver Operating Characteristic (ROC)

curves analysis results showed that the classification accuracy was 84.16%, the sensitivity was 95.38%, and the specificity was 70.9%. The depression prediction model of speech characteristics showed that the predicted score was closely related to the total score of 17 items of the Hamilton Depression Scale(HAMD-17) ($r=0.687, P<0.01$); and the mean absolute error(MAE) between the model's predicted score and total HAMD-17 score was 4.51

Conclusion This research found 331 important vocal acoustic features associated with the severity of depressive disorders, including MCEP, MFCC_deltas, MFCC_delta_deltas, Formant, Peak2RMS, creak and others. These vocal acoustic features can accurately distinguish participants with MDD from those in the HC group. Furthermore, although the classification model performance showed a small decrease, the top 30 critical vocal acoustic features could discriminate between MDD and HC. Therefore, the classification model based on the vocal acoustic features could utilized to identify MDD and HC effectively and consistently

关键词: classification, prediction model, vocal acoustic features, major depressive disorders

Impaired Topology and Connectivity of Grey Matter Structural Networks in Major Depressive Disorder: Evidence From A Multi-site Neuroimaging Dataset

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Objective Major depressive disorder (MDD) has been increasingly understood as a disruption of brain connectome. Investigating grey matter structural networks with a large sample size can provide valuable insights into the structural basis of network-level neuropathological underpinnings of MDD. Using a multisite MRI data-set including nearly 2000 individuals, this study aimed to identify robust topology and connectivity abnormalities of grey matter structural network

linked to MDD and relevant clinical phenotypes

Methods A total of 955 MDD patients and 1009 healthy controls were included from 23 sites. Individualised structural covariance networks (SCN) were established based on grey matter volume maps. Following data harmonisation, network topological metrics and focal connectivity were examined for group-level comparisons, individual-level classification performance and association with clinical ratings. Various validation strategies were applied to confirm the reliability of findings

Results Compared with healthy controls, MDD individuals exhibited increased global efficiency, abnormal regional centralities (i.e. thalamus, precentral gyrus, middle cingulate cortex and default mode network) and altered circuit connectivity (i.e. ventral attention network and frontoparietal network). First-episode drug-naïve and recurrent patients exhibited different patterns of deficits in network topology and connectivity. In addition, the individual-level classification of topological metrics outperforms that of structural connectivity. The thalamus-insula connectivity was positively associated with the severity of depressive symptoms

Conclusion Based on this high-powered data-set, we identified reliable patterns of impaired topology and connectivity of individualised SCN in MDD and relevant subtypes, which adds to the current understanding of neuropathology of MDD and might guide future development of diagnostic and therapeutic markers.

关键词: Magnetic resonance imaging; Graph theory; Depression; Machine learning; Brain network

A Case-control Study of The Correlation between Social Cognition and Oxidative Stress in First-episode Drug-naïve Major Depressive Disorder

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Objective Social cognitive skills are often impaired in patients with major depressive disorder

(MDD), and facial expression recognition, narration and empathy are closely related to social cognitive skills. Previous studies have found that oxidative stress indicators are often abnormal in the blood with reduced social cognition performance. The aim of this study was to investigate the correlation between social cognitive ability and oxidative stress in patients with first-episode drug-naïve (FEDN) MDD

Methods 165 FEDN MDD outpatients and 86 healthy volunteers were recruited. A self-administered questionnaire was used to collect general information. The Hamilton Depression Scale (HAMD) and Hamilton Anxiety Scale (HAMA) were used to assess the clinical symptoms of patients. The Facial Emotion Recognition Task, Toronto Alexithymia Scale (TAS-20) and the Interpersonal Reactivity Index Scale (IRI) assessed social cognitive function and a blood test for indicators of oxidative stress was administered

Results Our study showed that MDD patients have lower levels of education, are more unmarried, and are associated with more alcohol use than healthy patients. MDD patients showed more intense emotional sadness and poorer empathy, and impaired social cognitive function in MDD patients may be associated with age, HAMD scores, HAMA scores, and CAT (all $p < 0.05$)

Conclusion Our study shows that impaired social cognitive function in patients with FEDN MDD is strongly correlated with age, education level and indicators of oxidative stress. This finding may be help to improve the identification of patients with MDD and provide better treatment.

关键词: major depressive disorder; social cognitive ability; oxidative stress;

The Association of Clinical Correlates and Metabolic Parameters with Subclinical Hypothyroidism in First-episode and Drug-naïve Patients with Major Depressive Disorder Comorbid with Glucose Disturbances: A Large Cross-sectional Study

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Objective The factors associated with subclinical hypothyroidism (SCH) in major depressive disorder (MDD) patients with comorbid glucose disturbances remains unclear. To the best of our knowledge, this is the first study with a large sample size to examine risk factors of SCH in first-episode drug-naïve (FEDN) MDD patients with comorbid glucose disturbances, including clinically relevant factors, metabolic parameters, and thyroid hormone levels

Methods A total of 1718 FEDN MDD patients were enrolled. The Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), and Positive and Negative Syndrome Scale (PANSS) were used to assess the clinical symptoms of patients. Fasting blood glucose, metabolic parameters and thyroid hormone levels were measured

Results The prevalence of SCH in MDD patients with comorbid glucose disturbances was 85.04%, which was 2.43 times higher than in MDD patients without glucose disturbances (56.94%). HAMD and HAMA scores, as well as TSH, TPOAb and PANSS positive symptoms scores were higher in patients with severe SCH compared to those with mild SCH in combination with glucose disturbances (all $p < 0.001$). TgAb, TC, Systolic and Diastolic blood pressure were all higher in patients with severe SCH than in those with mild SCH. In addition, HAMD score, HAMA score, Psychotic positive score, Diastolic BP, and TC were independently associated with the TSH levels in MDD patients with comorbid glucose disturbances

Conclusion Our results suggest a high prevalence of SCH in MDD patients with comorbid glucose disturbances. Several clinically relevant factors and metabolic parameters have an impact on SCH in MDD patients with comorbid glucose disturbances.

关键词: metabolic parameters; glucose disturbances; subclinical hypothyroidism; first-episode and drug-naïve major depressive disorder

Clinical Correlates, Lipid Metabolic Parameters and Thyroid Hormones Are Associated with Abnormal Glucose Metabolism in First-episode and Drug-naïve Major Depressive Disorder Patients with Suicide Attempts: A Large Cross-sectional Study

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Objective Those factors associated with glucose disturbances in major depressive disorder (MDD) patients with comorbid suicide attempts remains unclear. To the best of our knowledge, this is the first study with a large sample size to examine risk factors for glucose disturbances, including clinically relevant factors, lipid metabolic parameters, and thyroid hormone levels in first-episode drug-naïve (FEDN) MDD patients with comorbid suicide attempts

Methods A total of 1718 FEDN MDD patients were enrolled. The Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), and Positive and Negative Syndrome Scale (PANSS) were used to assess the clinical symptoms of the patients. Fasting blood glucose, metabolic parameters and thyroid hormone levels were measured

Results The prevalence of glucose disturbances was 24% in MDD patients with comorbid suicide attempts, which was 1.88 times higher than that in MDD patients without suicide attempts (11%). Among MDD patients with comorbid suicide attempters, those with comorbid glucose metabolism disorders had higher HAMA, HAMD and PANSS positive subscale scores, and higher levels of TC, TG, thyroid stimulating hormone (TSH), HDL-C, LDL-C, and thyroid peroxidases antibody (TPOAb) compared with those without glucose metabolism disorders. The combination of HAMA score, HAMD score, PANSS positive subscale score and TSH distinguished between patients with and without glucose disturbances

Conclusion Our findings suggest a high prevalence of glucose disturbances in FEDN MDD patients with comorbid suicide attempts. Several clinical correlates, lipid metabolism parameters, and thyroid hormone function are associated with glucose disturbances in MDD patients with comorbid suicide attempts.

关键词: suicide attempts; first-episode and drug-naïve; abnormal glucose metabolism; major depressive disorder;

Efficacy and Safety of Eight Enhanced Therapies for Treatment-Resistant Depression: A Systematic Review and Network Meta-Analysis of RCTs.

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Objective Treatment-Resistant Depression (TRD) remains a global challenge in psychiatric treatment. Current clinical guidelines only address a subset of augmentation strategies. To comprehensively assess the effectiveness and safety of these strategies in TRD patients, we conducted a network meta-analysis for comparison and ranking, thus providing evidence-based guidance for clinical practice and new TRD treatments

Methods This systematic review and network meta-analysis followed the PRISMA guidelines and searched eight databases: PubMed, The Cochrane Library, Web of Science, Embase, SCOPUS, PsycInfo, CINAHL Plus, and the WHO International Clinical Trials Registry Platform ClinicalTrials.gov, from their inception to January 28, 2024. The Cochrane Risk of Bias Tool was used for quality assessment, and the certainty of evidence was evaluated using the Network Meta-Analysis Framework (CINeMA). Primary outcomes were response rate (proportion of patients with a $\geq 50\%$ reduction on standardized depression observer rating scales), remission rate (MADRS score ≤ 10 or HAMD

score ≤ 8), tolerability (proportion of patients withdrawing due to any adverse event), and safety (proportion of patients experiencing at least one adverse event). Odds ratios (OR) were summarized using pairwise and random-effects network meta-analysis. This study was pre-registered on PROSPERO, registration number : CRD42024506909

Results We identified 6,824 studies, ultimately including 72 randomized controlled trials (RCTs) comprising 12,105 participants. In terms of response rate (66 RCTs with 11,663 patients), only Brexpiprazole (OR=1.2, 95%CI[0.6,2.41]) and Quetiapine (OR=1.7, 95%CI[0.92,3.14]) showed no significant difference compared to placebo. Other augmentation treatments ranged between Ketamine (OR=6.1, 95%CI[2.68,13.89]) and Psilocybin (OR=2.7, 95%CI[1.37,5.3]). For remission rate (49 RCTs with 9,902 patients), only Brexpiprazole, Quetiapine, and Ketamine showed no significant differences compared to placebo, with other treatments ranging between Psilocybin (OR=4.3, 95%CI[2.24,8.27]) and Esketamine (OR=2.0, 95%CI[1.44,2.78]). In terms of tolerability (64 RCTs with 11,320 patients), only Esketamine (OR=3.1, 95%CI[1.89,5.08]) and Psilocybin (OR=2.2, 95%CI[1.08,4.50]) showed significant differences compared to placebo, and were less tolerable than placebo. For safety (36 RCTs with 9,037 patients), all augmentation treatments showed no significant differences compared to placebo. The Cochrane risk assessment showed 81.9% low risk, 15.3% moderate risk, and 2.8% high risk. Details of the CINeMA network meta-analysis quality assessment are available in the appendix

Conclusion Considering treatment effectiveness (including response and remission rates), our results suggest using ECT, Ketamine, Esketamine, and Psilocybin as preferred first-line treatments for adult TRD patients, as these four drugs have the best balance between response rate, remission rate, tolerability, and safety. These findings should serve clinical practice and inform patients, physicians, guideline developers, and policymakers about the relative advantages of different augmentation strategies.

关键词: Treatment-Resistant Depression, Network Meta-Analysis, Enhanced Therapies, Efficacy and

Safety

青少年重性抑郁障碍及双相抑郁障碍的多巴胺合成异常: [18F]DOPA PET-MRI 成像研究

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目的 本研究旨在通过[18F]DOPA PET-MRI 多模态影像学技术,探索青少年重性抑郁障碍(MDD)和双相抑郁障碍(BDD)患者脑内感兴趣区域多巴胺合成能力及活性与健康对照者之间是否存在差异。期望通过患者的临床资料与PET-MRI多模态影像学结果进行相关性分析,为青少年MDD和BDD未来的临床诊断与鉴别策略制定提供初步科学依据。

方法 根据美国精神疾病诊断与统计手册第五版(DSM-5)中重性抑郁障碍和双相II型障碍(抑郁期,即BDD)的诊断标准,本研究共招募了12名青少年MDD患者、12名青少年BDD患者以及9名正常对照者。所有参与者均经过详细的精神病学评估,包括汉密尔顿抑郁量表(HAMD-17)、病人健康状况问卷(PHQ-9)等量表评估其情绪及其他临床症状严重程度。所有参与者均接受了[18F]DOPA PET-MRI多模态影像学扫描,且遵循标准化程序收集和

结果 1.与HC组相比,MDD组的HAMD-17和PHQ-9评分显著高于HC组($P<0.001$; $P<0.001$)。BDD组在HAMD-17、PHQ-9评分也明显高于HC组,具有统计学差异($P<0.001$; $P<0.001$)。

2.MDD组在GAD-7、HAMA-14、PSQI评分均高于HC组($P<0.001$; $P<0.001$; $P<0.001$)。BDD组的MDQ量表评分也显著高于HC组,显示统计学差异($P=0.002$)。此外,BDD组在GAD-7、HAMA-14、PSQI评分也均高于HC组($P<0.001$; $P<0.001$; $P<0.001$)。

3.BDD组与MDD组在右侧岛叶的SUVR以及中脑部分($p=0.015$, $p=0.018$)有显著差异。HC与MDD组在右侧岛叶和左侧黑质($p=0.048$, $p=0.013$)的SUVR值存在显著差异。

4.MDD组SUVR与HAMD-17、PHQ-9量表得分均未表现出显著相关性。左侧黑质的SUVR值与HAMA-14得分呈显著负相关($r=-0.619$, $P=0.032$),

且与MDQ得分呈显著正相关($r=0.600$, $P=0.039$)。

结论 1.青少年MDD及BDD患者的HAMD-17、PHQ-9、HAMA-14、GAD-7、PSQI评分显著高于健康对照组,BDD组的MDQ评分也显著高于健康对照组。BDD组在MDQ、GAD-7、HAMA-14量表上的得分显著高于MDD组。

2.青少年人群右侧岛叶及中脑部分的[18F]DOPA SUVR可作为区分MDD和BDD的生物标志物,同时,右侧岛叶及左侧黑质的SUVR用于辅助MDD有较高价值。

关键词: 重性抑郁障碍,双相抑郁障碍,青少年,多巴胺,PET-MRI

Contribution of Resting-state Functional Connectivity of The Subgenual Anterior Cingulate To Prediction of Antidepressant Efficacy in Patients with Major Depressive Disorder

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Objective This study aimed to investigate the role of the resting-state functional connectivity (rsFC) of subgenual anterior cingulate cortex (sgACC) in predicting antidepressant response among patients with MDD

Methods A total of 87 medication-free patients with MDD underwent baseline resting-state functional magnetic resonance imaging scans. After a 12-week treatment with escitalopram, patients were divided into remission depression (RD, $n=42$) and nonremission depression (NRD, $n=45$) groups. Two parallel analyses were conducted. First, a voxelwise rsFC analysis using sgACC as a seed was performed to identify group differences. Second, a prediction model was developed based on the voxelwise rsFC map of sgACC to predict treatment efficacy and Haufe transformation was utilized to explain the predictive rsFC features of this

model

Results The RD group showed significantly higher rsFC between sgACC and regions within the fronto-parietal network (FPN), specifically bilateral dorsolateral prefrontal cortex (DLPFC) and the bilateral inferior parietal lobule (IPL), compared to the NRD group. These sgACC rsFC measures were positively correlated with the reduction ratio of the depressive symptom scores. Importantly, baseline sgACC rsFC significantly predicted treatment response following 12 weeks of escitalopram treatment, achieving a mean accuracy of 72.64% ($p < 0.001$), mean area under the curve of 0.71 ($p < 0.001$), mean specificity of 0.82, and mean sensitivity of 0.70 in 10-fold cross-validation. The predicted voxels were predominantly located within the FPN

Conclusion This study highlighted the importance of rsFC between the sgACC and the FPN as a valuable predictor of treatment efficacy in patients with MDD receiving antidepressant medication. These findings provided insights into the neurobiological mechanisms underlying antidepressant response and have the potential to inform personalized treatment strategies for MDD.

关键词: Major depressive disorder, Antidepressant efficacy, Functional connectivity, Functional magnetic resonance imaging, Subgenual anterior cingulate cortex

血药浓度数据处理软件辅助判读抗抑郁药治疗药物监测结果的一致性及临床应用价值研究

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目的 评价血药浓度数据处理软件（以下简称“软件”）智能化判读抗抑郁药治疗药物监测（Therapeutic drug monitoring, TDM）结果与参考标准的一致性，并判断其在辅助初级精神科医师识别异常治疗药物监测结果的临床应用价值。

方法 研究纳入 226 例于 2024 年 3 月 1 日至 2024 年 3 月 31 日在首都医科大学附属北京安定医

院住院治疗的抑郁症患者，收集其当前服用抗抑郁药的 TDM 结果。首先验证“软件”在 TDM 结果判读与参考标准的一致性。随后，从 3 个临床中心招募 10 名通过考核且一致性良好的初级临床医师进行 TDM 结果判读。所有 TDM 结果随机平均分配，每名医师对同一病例的 TDM 结果进行先后 2 次判读，一次为单独医师判读，另一次为“软件”辅助医师（软件+医师）判读。

结果 纳入的 226 例患者的 TDM 结果中，有 109（48.23%）例异常。“软件”识别异常 TDM 结果与参考标准的一致率为 100%，原因分析的一致率为 71.56%。单独医师判读的准确率为 65.93%，在“软件”辅助下，准确率可提升至 99.12%。软件+医师联合判读异常 TDM 结果的敏感度（100% VS. 41.28%， $P < 0.0001$ ）及特异度（98.29% VS. 88.89%， $P < 0.0001$ ）均明显优于单独医师判读。软件+医师联合判读的曲线下面积(AUC)值相较于单独医师判读提高 34.50% (95%CI: 29.1%~39.9%)，差异具有统计学意义($Z = 12.514$, $P < 0.0001$)。

结论 血药浓度数据处理软件判读 TDM 结果与参考标准具有高度一致性，有助于提高初级精神科医生对异常 TDM 结果的识别与原因解析。

关键词: 抗抑郁药 治疗药物监测 软件 一致性

Targeting The ERK/NF- κ B Pathway with Maresin-1: Implications for Treating Depression Via Microglial Polarization

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Objective Neuroinflammation and microglial polarization constitute critical pathophysiological alterations implicated in the onset of depression. Maresin-1 (MaR1), an innovative lipid mediator synthesized from docosahexaenoic acid, exhibits potent anti-inflammatory properties, and facilitates the resolution of inflammation. Preliminary observations by our team suggest that a singular intraperitoneal administration of MaR1 (5 μ g/kg) ameliorates lipopolysaccharide (LPS)-induced depressive-like behaviors in mice through the

inhibition of microglial activation, though the precise molecular mechanisms underlying these effects have yet to be elucidated

Methods thereby alleviating neuroinflammation and its associated depressive symptoms. Based on the pre-constructed depressed mouse model and in vitro microglia model, this study aims to explore the role of MaR1 in microglia polarization and its antidepressant effect within the framework of the MAPK signaling pathway

Results Findings revealed that MaR1 suppressed the secretion of pro-inflammatory mediators such as IL-1 β , TNF- α , iNOS, and curtailed the expression of M1 microglial markers (CD11b/CD68), concurrently enhancing the release of the anti-inflammatory cytokine IL-10 and the expression of M2 microglial markers (CD206/Arg-1). This action may mainly relate to the inhibition of key molecules ERK and its downstream NF- κ b expression in the MAPK signaling pathway, and the ERK blocker had a similar effect in reducing the secretion of pro-inflammatory mediators and increasing the release of anti-inflammatory mediators; next, we further confirmed that intraperitoneal injection of MaR1 and ERK inhibitor significantly improved LPS-induced depressive-like behaviors in mice, manifested by increased sucrose preference, reduced immobility time in the TST, and increased movement distance in the open field test, moreover, we obtained consistent results in the animal model as in the cell model

Conclusion These findings suggest that MaR1 may exert its antidepressant effects by inhibiting the ERK/NF- κ b axis, promoting microglial polarization, and suppressing inflammatory responses

关键词: Neuroinflammation, Microglial Polarization, Maresin-1 (MaR1), ERK/NF- κ b Pathway, Depressive-like Behaviors

The Effect of Childhood Trauma on Depression in College Students: A Moderated Mediation Model

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Objective Childhood trauma is considered as a critical risk factor for depression. Although many studies have investigated the pathway of Childhood trauma to depression, especially the mediating or moderating effects of cognitive emotion regulation strategies or neuroticism or stress perception, the results were inconsistent and the underlying psychological mechanisms of depression remain unclear. This study aims to explore the influence and mechanism of childhood trauma on depression in college students, and establish a full model among these interactive factors

Methods 1272 college students were surveyed using the childhood trauma questionnaire(CTQ), short version of center for epidemiologic studies depression scale(CES-D), chinese perceived stress scale(CPSS), neuroticism extraversion openness five-factor inventory(NEO-FFI), and the Cognitive Emotion Regulation Questionnaire(CERQ)

Results (1) childhood trauma, neuroticism, stress perception, and maladaptive cognitive emotion regulation strategies were all significantly and positively correlated with depression among college students; (2) Stress perception and neuroticism act as a chain mediator between childhood trauma and depression in college students. (3) Maladaptive cognitive emotion regulation strategies play a moderating role in "childhood trauma-neuroticism-depression"

Conclusion Childhood trauma increases the risk of depression in college students by affecting neuroticism and stress perception, and high levels of maladaptive cognitive emotion regulation strategies link neuroticism and enhance the effect of childhood trauma on depression in college students.

关键词: childhood trauma; depression; neuroticism; stress perception; cognitive emotion regulation strategies

补益心脾法降低抑郁障碍患者自杀意念的队列研究

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目的 探究补益心脾法对伴自杀意念的抑郁障碍(MDD)患者的临床疗效。

方法 2017年1月—2018年4月招募全国13家中医、中西医结合及精神专科医院符合纳入标准的MDD患者366例作为研究对象,按治疗方案自然形成中医、西医与中西医结合治疗3个队列,并根据中药暴露时间(TCM-ET)分为高、中、低3个水平。间隔3个月随访,以蒙哥马利-艾森贝格抑郁评定量表(MARDS)评估患者抑郁症状变化及终点事件发生情况。

结果 中医、西医、中西医结合治疗队列的2年自杀意念发生率分别为39.0%、49.1%、29.0%。在自杀意念发生率的多因素比较上,以西医队列为参照,中医队列自杀意念发生率降低28.1%(HR=0.719,95%CI(0.476~1.087), $P>0.05$),差异无统计学意义。中西医队列自杀意念发生率降低42.1%(HR=0.579,95%CI(0.373~0.899), $P<0.01$)。中医队列中,以低水平TCM-ET为参照,中水平TCM-ET自杀意念发生率降低22.2%(HR=0.778,95%CI(0.404~1.500), $P>0.05$),差异无统计学意义,高水平TCM-ET自杀意念发生率降低66.6%(HR=0.394,95%CI(0.167~0.931), $P<0.05$)。中西医队列中,以低水平TCM-ET为参照,中水平TCM-ET自杀意念发生率降低70.3%(HR=0.419,95%CI(0.189~0.927), $P<0.05$),高水平TCM-ET自杀意念发生率降低83.1%(HR=0.217,95%CI(0.094~0.501), $P<0.01$)。

结论 补益心脾法中医治疗与西医治疗具有同等的疗效,中西医结合治疗可更好降低心脾两虚型MDD患者自杀意念发生率;中、高水平TCM-ET对降低心脾两虚型MDD患者自杀意念的临床疗效与低水平TCM-ET相比更为显著。

关键词: 中药;补益心脾法;心脾两虚;抑郁;多中心;前瞻性队列研究;临床疗效

天然生物碱类成分ELP改善慢性社会挫败应激(CSDS)小鼠抑郁样行为的蛋白组学研究

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重性抑郁障碍(Major Depressive Disorder)是一种常见且严重的精神障碍,我国成人抑郁障碍终生患病率高达6.8%,为社会和家庭带来极大的负担。目前对于抑郁障碍的发病机制尚不清楚,导致现有的治疗方法对三分之一的病人无效。探索抑郁障碍新的治疗靶点和寻找新的治疗药物是精神病学研究的重要课题。天然生物碱类成分ELP为喹诺里西定类生物碱成分,该种成分的抗炎和抗肿瘤作用曾有报道,其抗抑郁作用尚属未知。

目的 探究ELP的抗抑郁作用,并深入研究其通过调节线粒体功能发挥抗抑郁作用的分子生物学机制。

方法 C57小鼠经CSDS造模后糖水偏好实验筛选抑郁鼠,随机分为正常对照(CON)组、抑郁(CSDS)组、ELP组、丙咪嗪(IMI)组,分别在给药1h和4天进行悬尾实验和糖水偏好实验,第5天行强迫游泳实验,后处死取前额叶提取蛋白质通过非标记定量蛋白组学检测,运用生物信息学方法进行相关差异蛋白的GO富集分析、蛋白相互作用(PPI)的分析等,探究其抗抑郁分子机制。

结果 我们发现在慢性社交挫败应激(CSDS)抑郁模型中,ELP在悬尾($F=5.10, P<0.05$)、强迫游泳($F=5.32, P<0.01$)和蔗糖偏好实验($F=8.54, P<0.01$)中,显示出抗抑郁样功效。非标定量蛋白组学共检出6467个蛋白,获得CSDS与CON(CSDSCON)、丙咪嗪(IMI)治疗与CSDS(IMICSDS)、ELP治疗与CSDS(ELPCSDS)的差异蛋白序列,这些蛋白表达变化首先采用方差分析(ANOVA, $P<0.05$),蛋白质聚类3中蛋白质水平趋势与行为学趋势相似,在线粒体、内质网、核糖体和突触相关的功能和定位上富集。进一步对ELPCSDS-IMICSDS组和ELPCSDS-CSDSCON组的共同差异蛋白进行GO富集,支持方差分析结果。我们使用PPI分析了ELPCSDS-IMICSDS和ELPCSDS-CSDSCON的共同蛋白群,发现与线粒体和突触功能相关的蛋白富集。蛋白网络分析上下调

差异蛋白主要成簇在突触和线粒体功能。ELP 治疗改变了突触及线粒体功能相关蛋白合成,从而改善了抑郁样行为,说明突触及线粒体相关功能蛋白在抑郁治疗过程中发挥重要作用。再次对关键蛋白行平行反应监测,结果显示: Rab27a (与突触功能相关)、Mrpl17 等 (与线粒体功能相关)、Ubt2 (与内质网功能相关)、Rpl13a (与核糖体功能相关),在 CSDS 组与 ELP 组之间存在显著差异,支持质谱分析的结果。

结论 ELP 改善 CSDS 小鼠抑郁样行为是通过调节线粒体、内质网、核糖体和突触相关蛋白表达水平实现的。

关键词: 抑郁障碍; ELP; 蛋白组学; CSDS

中国精神障碍患者服用帕罗西汀的群体药代动力学研究及其临床应用

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目的 建立中国精神障碍患者服用帕罗西汀的群体药代动力学 (PPK) 模型,制定不同协变量影响下亚群体的合理用药方案,并通过模型仿真优化帕罗西汀的停药策略,降低帕罗西汀停药综合发生的风险。

方法 收集 188 例住院患者的帕罗西汀血清药物浓度数据,录入帕罗西汀 PPK 数据集,采用非线性混合效应模型 (NONMEM) 和交互作用的一阶条件评估 (FOCE-I) 对帕罗西汀血药浓度数据进行拟合并考察不同协变量对帕罗西汀群体药代动力学参数的影响。通过目标函数值 (OFV)、自举法 (bootstrap)、正态化预测分布误差 (NPDE) 和拟合优度图 (GOF) 评价模型拟合度,验证模型的稳定性和预测性能。基于最终模型的参数群体典型值仿真模拟不同停药场景下帕罗西汀的血药浓度,遴选合适的停药方案。

结果 剂量和性别是影响帕罗西汀表观清除率的协变量。采用固定剂量递减停药策略,以说明书停药建议为参考,40 mg 及 40 mg 以下剂量推荐使用说明书停药策略,如患者发生停药反应,可考虑每两周减量 10 mg 的停药策略,延长用药时间;60 mg 时,建议每次降低剂量后维持用药时间 1 周以上,或每周降低 5 mg,同时注意观察患者耐受情况,

如患者病情反复或者发生不适,应调回前一个剂量水平,再使用一段时间。

结论 本研究以该药物说明书的停药方案为参考依据,设计了理论可行不同间隔、不同剂量的停药策略,为制定帕罗西汀停药策略提供技术性支持。

关键词: 群体药代动力学;帕罗西汀;停药策略;非线性药代动力学

青少年非自杀性自伤患者额边缘系统多模态磁共振成像研究

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目的 探究青少年非自杀性自伤 (NSSI) 患者额边缘系统的多个脑区皮质结构及静息状态下自发神经活动的异常。探讨抑郁焦虑症状及 NSSI 严重程度与上述异常指标之间的相关性,为早期识别这一群体提供可能的客观生物学指标。

方法 根据 DSM-5 中 NSSI 的诊断标准共纳入的 23 例青少年 NSSI 患者 (NSSI 组),匹配 20 例青少年为健康对照组 (HC 组)。NSSI 的诊断由精神科副主任及以上职称医师判断,使用汉密尔顿抑郁量表 17 项 (HAMD-17)、汉密尔顿焦虑量表 (HAMA) 评估受试者抑郁焦虑症状,采用中文版渥太华自我伤害调查表 (OSI) 评估 NSSI 的严重程度。对所有受试者进行 MRI 数据采集,采用基于体素的形态学分析、低频振幅、比率低频振幅、局部一致性、静息态功能连接多模态方法分析两组额边缘系统 8 个感兴趣脑区的灰质体积和局部神经功能差异,并将临床症状与异常脑区的影像学结果进行皮尔逊相关性分析。采用 SPSS 25.0 进行统计学分析,计数资料采用卡方检验,计量资料采用两样本 t 检验。

结果 1. 两组在年龄、性别等一般资料上无显著的统计学差异 ($P > 0.05$), NSSI 组首次自伤年龄为 13.83 ± 1.61 岁,近一年自伤次数 96.00 ± 103.34 次。2. NSSI 组左侧背外侧额上回、左侧脑岛皮质体积减小,差异有统计学意义 ($P < 0.05$, FWE 校正)。NSSI 组双侧杏仁核、右侧前后扣带回的 ALFF 值降低,双侧辅助运动区的 ALFF 值增高,右侧前扣带回的 fALFF 值降低,差异有统计学意义 ($P < 0.05$, FWE 校正); 右侧直回 ReHo 值降低,而双侧背外侧额上回

ReHo 值增高, 差异有统计学意义($P < 0.05$, FWE 校正)。NSSI 组右侧海马-左侧海马、双侧眶回、左侧扣带回, 右侧眶回-右侧杏仁核的 FC 值减弱; 双侧额上回-双侧眶回, 左侧额上回-右侧岛回、右侧额中回 FC 值增强, 差异有统计学意义($P < 0.05$, FWE 校正)。3.NSSI 组 HAMA、HAMD 总分与右侧前扣带回的 ALFF 值存在正相关($r=0.56$, $P=0.02$; $r=0.58$, $P=0.01$), NSSI 频率与右侧杏仁核的 ALFF 值存在正相关($r=0.50$, $P=0.04$); NSSI 频率与左侧背外侧额上回的 ReHo 值存在负相关($r=-0.53$, $P=0.02$); NSSI 组双侧额上回-双侧眶回, 左侧额上回-右侧岛回、右侧额中回增强的 FC 均值与 NSSI 频率存在正相关($r=0.55$, $P=0.02$)。

结论 青少年 NSSI 患者额边缘系统存在结构及功能的异常, 并且与抑郁焦虑症状及 NSSI 的严重程度有关, 可能参与了 NSSI 神经生物学机制。

关键词: 非自杀性自伤; 额边缘系统; 多模态; 磁共振成像; 青少年

基于静息态脑电图特征的多变量模式分析: 抑郁障碍识别研究

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目的 抑郁障碍是一种常见精神健康疾病, 严重影响患者的生活质量, 抑郁障碍的诊断主要依赖于临床评估和症状报告, 目前尚缺乏特定的客观生物标记物。本部分旨在通过高密度脑电图 (EEG) 寻找与抑郁障碍相关的生物标记物, 以提高其诊断的客观性和精准性。

方法 本研究纳入于 2022 年 3 月至 2023 年 9 月在华中科技大学同济医学院附属同济医院神经内科就诊, 符合 DSM-V 抑郁障碍诊断标准的 115 名患者。同时, 本研究招募了 43 名年龄、性别和教育水平相匹配的健康对照者。收集所有受试者的临床资料, 包括一般人口学、心理测评及 EEG。使用独立两样本 t 检验、Mann-Whitney U 检验和基于 Rugu 软件的拓扑方差分析 (TANOVA) 比较脑电微状态和功能连接在抑郁障碍组和健康对照组之间的差异, 并且使用错误发现率 (FDR) 校正来控制多重比较问题。最后, 采用支持向量机 (SVM) 算法评估脑电

微状态特征和功能连接特征用于区分抑郁障碍患者和健康对照者的准确率。

结果 与健康对照组相比, 抑郁障碍组脑电微状态 D 向 B 的转换概率显著增加 (PFDR = 0.048)。此外, 抑郁障碍组默认网络 (DMN) 部分区域在 δ 频段、 θ 频段和 β 频段的功能连接 ($P < 0.05$), 以及 DMN 与突显网络 (SN) 部分区域在 θ 频段和 α 频段的功能连接 ($P < 0.05$) 均显著高于健康对照组, 但均未通过 FDR 校正 (PFDR > 0.05)。使用脑电微状态特征、功能连接特征、脑电微状态和功能连接特征, 在 SVM 分类器上区分抑郁障碍患者和健康对照者的准确率分别为 66.7%、76.2% 和 81.0%。

结论 抑郁障碍患者存在独特的脑电微状态和异常的脑网络连接改变, 结合脑电微状态和功能连接特征可以更好的进行疾病的诊断。

关键词: 抑郁障碍; 脑电微状态; 功能连接; 支持向量机

背外侧前额叶皮层活性和功能连接的早期变化作为重度抑郁障碍抗抑郁反应的潜在生物标志物

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目的 既往研究表明, 重度抑郁障碍 (MDD) 患者存在认知缺陷。功能核磁共振成像 (fMRI) 研究发现背外侧前额叶皮层 (DLPFC) 可能参与了 MDD 的发病及抗抑郁治疗相关的神经生物学过程, 但研究结果尚不一致。本研究旨在明确 DLPFC 的活性及其功能连接的早期治疗变化和疗效预测中的作用。

方法 本研究为前瞻性队列研究, 纳入于 2022 年 3 月至 2023 年 9 月在华中科技大学同济医学院附属同济医院神经内科就诊, 符合 DSM-V MDD 诊断标准的 115 名患者。同时, 本研究招募了 43 名年龄、性别和教育水平相匹配的健康对照者。收集所有受试者的一般人口学资料, 在基线及文拉法辛治疗 1 周后进行心理测评、脑电图 (EEG) 及事件相关电位 (ERP), 并且进行为期 3 个月的随访。采用独立两样本 t 检验和 Mann-Whitney U 检验来比较组间差异。线性混合效应模型和二元逻辑回归分析

被用于评估抗抑郁治疗后 DLPFC 活性及功能连接变化与抑郁症状改变和治疗预后的相关性。

结果 与健康对照组相比, MDD 组偏差刺激诱发的 N2 期间 DLPFC 的电流密度显著减低 ($P = 0.028$), 并且与治疗 1 周的 HAMD-21 分数呈显著负相关 ($P = 0.041$)。此外, 电流密度的早期增加预示着治疗 3 月后达到缓解的概率越大 ($OR = 5.235$, $95\%CI: 1.638-16.730$, $P = 0.005$)。再者, 左侧 DLPFC 与左侧后扣带回皮层 (PCC) ($P = 0.003$) 和右侧 PCC ($P = 0.004$) 在 β 频段较低的功能连接预示了治疗后 1 周较低的 HAMD-21 分数, 并且这些功能连接的早期减低也预示了治疗 3 月后的缓解 (左侧: $OR = 0.534$, $95\% CI: 0.297-0.972$, $P = 0.036$; 右侧: $OR = 0.533$, $95\% CI: 0.299-0.950$, $P = 0.033$)。

结论 DLPFC 活性和功能连接的早期变化可能作为监测抗抑郁治疗效果和预测临床结局的生物标志物, 从而为个性化治疗提供依据。

关键词: 重度抑郁障碍; 脑电图; 时间相关电位; 背外侧前额叶皮层; 电流密度; 功能连接

Predictive Models for Non-suicidal Self-injury (NSSI) in Mood Disorder: A Machine Learning Modeling Approach

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Objective Non-suicidal self-injury (NSSI) is a highly prevalent behavioral problem among people with mood disorder (MD) that can result in numerous adverse outcomes. This study aims to develop and validate a prediction model based on machine learning (ML) to assess the risk of NSSI in MD. Meanwhile, to understand the importance and contribution of different input characteristics to the models and classification tasks, we

added the locally explanatory technique Shapley Additive exPlanations (SHAP), which calculates the relative contribution of each characteristic and explains the ML models

Methods This retrospective cross-sectional analysis of the inpatient medical records was conducted on 1099 participants. All patients were randomly divided into a training set ($N=769$) and a testing set ($N=330$). Logistic LASSO Regression Analyses were used to identify the risk factors of NSSI. Ten algorithms of ML were employed to evaluate the performance and relative importance of the extracted characteristics in identifying MD patients with/without NSSI separately. The best-performing ML model was confirmed based on metrics such as AUC, F1-Score, and accuracy. The SHAP method was used to rank the importance of features and interpret the best model, analyzing the potential impact of each feature on suicidal behavior

Results Eleven features that influence NSSI were identified through LASSO regression. When comparing all prediction models with different ML, the model depending on Random Forest (RF) showed the best discriminant capacity (AUC of Testing=0.870, AUC of Training= 0.903) and acceptable application performance (Recall=0.7188, Accuracy=80.61%, F1-Score=0.4182, MCC=0.3721). According to SHAP analysis, the top five predictors in the Model for identifying NSSI were the level of blood thyroid hormone, past NSSI history, age, the level of blood ACTH, and progesterone

Conclusion The ML based on FR can better construct an NSSI prediction model for patients with MD. It is necessary to maintain a cautious and optimistic attitude toward the Predictive Models for MD with NSSI.

关键词: Machine learning; Predictive model; Mood Disorders; NSSI

不同阶段抑郁症的内感受障碍特征的研究

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目的 重度抑郁障碍 (major depressive disorder, MDD) 的复杂病理生理机制需要开发能够反映情感、身体和认知因素复杂相互作用的综合早期指标。尽管内感受在满足这些标准方面具有潜力,但在 MDD 中的研究仍不充分。本研究旨在通过评估不同 MDD 阶段的内感受缺陷及其与抑郁症状谱的复杂关联,探讨内感受在转变 MDD 临床实践中的潜力。

方法 本研究包括 431 名健康个体、206 名亚临床抑郁个体和 483 名 MDD 患者。采用 PHQ-9 和 MAIA-2 评估抑郁症状和内感受功能。协方差分析比较各阶段 MDD 内感受损伤的差异。典型相关分析探讨内感受和抑郁 9 大核心症状之间的关系。预测模型用于评估内感受在 MDD 临床实践中的应用潜力。

结果 内感受功能障碍在 MDD 的前临床阶段已经出现,并在临床阶段进一步扩大。抗抑郁治疗在改善内感受方面显示出有限的疗效,甚至可能损害某些维度。内感受维度可能预测抑郁症状,主要是通过增强负面思维模式。基于内感受的预测模型经过随机分割验证,表现出良好的区分和预测性能,能够识别 MDD。

结论 在前临床阶段的早期变化、与抑郁症状的多变量关联,以及良好的区分和预测性能,突显了内感受在 MDD 管理中的重要性,指出了诊断和治疗方法的范式转变。

关键词: 重度抑郁障碍,病理生理机制,内感受,抑郁前临床阶段,PHQ-9,MAIA-2

鲁拉西酮对比喹硫平单药治疗青少年和成年早期双相抑郁的疗效和安全性:一项随机对照研究

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目的 比较鲁拉西酮与喹硫平单药治疗青少年和成年早期双相障碍抑郁发作患者的疗效与安全性。

方法 本研究采用单中心、随机、阳性对照、非劣效试验的研究设计。于 2021 年 8 月至 2024 年 3 月期间在首都医科大学附属北京安定医院纳入 60 例现患双相障碍抑郁发作的门诊患者,使用区组随机的方法将受试者按 1:1 比例随机分配至鲁拉西酮

组和喹硫平组。鲁拉西酮单药治疗组接受鲁拉西酮 20-40mg/日单药治疗,喹硫平单药治疗组接受喹硫平 12.5-300mg/日单药治疗,2 组治疗均持续 8 周。采用蒙哥马利-艾斯伯格抑郁量表 (MADRS)、汉密尔顿焦虑量表 (HAMA)、杨氏躁狂评定量表 (YMRS) 评估疗效,采用静坐不能评定量表 (BARS) 和异常不自主运动评定量表 (AIMS) 评估不良反应;采用哥伦比亚自杀严重程度评定量表评估自杀风险。主要结局指标为治疗后第 8 周末时 MADRS 评分相较于基线的减分值。次要结局指标包括治疗后第 8 周末时 HAMA 与 YMRS 评分相较于基线期的减分值。安全性指标包括 BARS 与 AIMS 评分的变化以及不良反应和不良事件发生率。按照意向性分析原则 (ITT),对所有服用 1 次药物并至少进行 1 次疗效评价的全部病例进行疗效分析。采用限制线性混合效应模型对结果变量进行分析。对所有服用 1 次药物并进行安全性评价的全部病例进行安全性分析。

结果 2 组患者人口学信息学和临床特征均具有可比性。鲁拉西酮单药治疗组完成随访 25/29 (86.2%) 人;喹硫平单药治疗组完成随访 23/26 (88.5%) 人。鲁拉西酮单药治疗组平均剂量为 35.17±9.11mg/d,喹硫平单药治疗组平均剂量 101.60±70.15mg/d。两组基线 MADRS 总分 (31.48±6.78 vs 29.81±4.39, $P>0.05$) 及治疗后第 8 周末 MADRS 减分值无显著差异 (19.12±1.79 vs 14.74±1.87, $P>0.05$)。两组在治疗后 8 周末 HAMA 减分值无显著性差异 (13.64±1.77 vs 10.32±1.89, $P>0.05$),在基线 YMRS 总分以及治疗后 8 周末 YMRS 减分值均无显著性差异 (-0.2±0.77 vs -0.35±0.80, $P>0.05$)。鲁拉西酮单药治疗组最常见的不良反应为恶心、静坐不能,喹硫平单药治疗组最常见的不良反应是困倦、心动过速,鲁拉西酮单药治疗组不良反应发生率显著低于喹硫平单药治疗组。两组对 BMI 和代谢指标的影响均较小,组间无显著性差异。

结论 在 20-40mg/日剂量下,鲁拉西酮单药治疗可显著改善青少年及成年早期双相障碍抑郁发作患者的抑郁症状,其疗效与喹硫平单药治疗相当,且安全性更佳。

关键词: 鲁拉西酮;喹硫平;青少年;成年早期;双相抑郁;RCT

Effects of Subanesthetic Repeated Esketamine Infusions on Memory Function and NGF in Patients with Depression: An Open-label Study

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Objective Subanesthetic ketamine is a rapidly acting antidepressant, yet the effects of ketamine on cognitive function are inconsistent. The primary objective of this study was to explore the effects of subanesthetic repeated esketamine infusions on memory function and plasma levels of nerve growth factor (NGF) in patients with depression

Methods A total of 132 patients with depression completed six intravenous esketamine infusions (0.4 mg/kg over 40 min) over 11 days (days 1, 3, 5, 7, 9, and 11). Depressive symptoms and neurocognitive function were assessed using the Montgomery-Asberg Depression Rating Scale (MADRS) and Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) at baseline, 24 h after esketamine infusion. Plasma NGF levels were assayed by enzyme-linked immunosorbent assay (ELISA)

Results The mean MADRS score of depressed patients decreased from 32.11 ± 10.06 to 15.10 ± 8.62 after six infusions. Significant improvement in immediate memory, language, attention, and delayed memory were observed after the last esketamine infusion. NGF plasma levels increased from 226.13 ± 61.73 to 384.37 ± 56.89 . Pearson's correlation analysis showed a positive correlation between memory function and NGF levels at baseline ($r=0.346$, $p<0.001$). The baseline memory function was negatively associated with the changes in NGF levels ($r=-0.352$, $p<0.001$)

Conclusion Subanesthetic infusions of esketamine could improve depressive symptoms and neurocognitive function. Our study showed increased plasma NGF levels in depressed patients after treatment, suggesting that NGF may play a role in the improvement of memory function by esketamine.

关键词: Depression; Esketamine; Ketamine; Memory; Nerve growth factor

Phase Connectivity Dysfunction During The GO/NOGO Task Related To Suicide Attempt in Major Depressive Disorder

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Objective Major depressive disorder (MDD) is a main risk factor of suicide, emphasizing the urgent need for understanding the neurobiological mechanisms underlying suicide attempts (SAs) in depressive patients. We hypothesized that aberrant frequency-specific functional connectivity patterns underlying an executive and inhibition task might be associated with SA in depression

Methods The current study enrolled 143 subjects including 43 healthy controls and 87 patients with MDD (43 patients with SA and 44 without SA), who attended a GO/NOGO task during the magnetoencephalography recording. Time-frequency features in the whole-brain sensors and frequency-specific brain network connectivity patterns were estimated. Behavioral data was recorded during the tasks and neurocognitive assessments were conducted

Results The SA group exhibited poorest behavioral and neurocognitive assessments performances. Decreased alpha/beta oscillations of the GO condition and increased alpha/beta oscillations of NOGO condition were observed in the SA group. Hypo-activated frontal-limbic connectivity in the alpha band and frontal-occipital connectivity in the beta band were observed in the SA group during the GO trials, meanwhile, hyper-activated frontal-temporal connectivity in the alpha band and frontal-parietal connectivity in the beta band were associated with SA during the NOGO trials. Frequency-specific features were correlated with the severity of suicide risk, neurocognitive assessments, and could be used to predict potential SAs

Conclusion Neuroimaging and neurocognitive

evidences supported altered alpha/beta oscillations and connectivity patterns associated with SA in depression, suggesting that depressive patients with SA might exhibit impaired cognitive control functions

关键词: suicide attempt; phase connection; inhibition; execution; magnetoencephalography; beta;

Assessment of The Causal Relationship between Depression and Traits of Sarcopenia: A Bidirectional Two-sample Mendelian Randomization Study

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Objective A growing body of evidence indicates a significant association between depression and sarcopenia. However, the causal association between the two remains elusive. The objective of this study was to investigate the bidirectional relationship between depression and traits of sarcopenia

Methods We used genetic variants associated with depression (n=2,113,907), grip strength (n=256,523), appendicular lean mass (n=450,243), and walking pace (n=459,915) in bidirectional two-sample Mendelian randomization. The random-effects inverse-variance weighted method was adopted as the primary method

Results Mendelian randomization results revealed a causal relationship between depression and appendicular lean mass [β (95% confidence interval (CI)) = -0.051 (-0.086--(-0.016)), P=0.004], walking pace [OR (95% CI) = 0.973 (0.955--0.992), P=0.005]. Walking pace also revealed a causal relationship with depression [OR (95% CI) = 0.663 (0.507--0.864), P=0.002] in the reverse analysis. We observed no causal relationships between depression and grip strength. The leave-one-out sensitivity analysis verified our results

Conclusion This Mendelian randomization analysis verified the bidirectional relationship between depression and sarcopenia. Early diagnosis and prevention of either disease may enhance the management of another.

关键词: Depression, Sarcopenia, Mendelian randomization, Grip strength, Walking pace, Appendicular lean mass

Gait Patterns in Depression: A Bibliometric Analysis and Knowledge Mapping of Research Trends Over The Past 20 Years

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Objective Depression is a mental health disorder associated with a high risk of suicide, and patients with depression may conceal their symptoms, delaying treatment. Therefore, gait recognition is crucial for the early detection of depression. However, there is a lack of comprehensive and objective evaluations of the current research status on depression-related gait patterns. This study aims to visually analyze the research status and trends in depression-related gait using bibliometric and knowledge mapping methods

Methods We conducted a computer-based search of the Web of Science core collection to identify articles and reviews related to depression and gait. Bibliometric analysis was performed using Excel 365, CiteSpace, VOSViewer, and bibliometric software (R-Tool of R-Studio)

Results The bibliometric analysis included a total of 848 publications from 2005 to 2024. The results showed a phased increase in publication volume, peaking in 2020 with 102 publications, followed by a gradual decline. Citation frequency in this field showed a yearly increase, peaking in 2022 with 3920 citations before subsequently declining. The United States was identified as the most productive and influential country in this field, with the highest number of publications and

citations. They have the institutions with the highest number of publications and the highest citation frequencies. Leading authors in this field include Verghese, Joe; Shimada, Hiroyuki; and Rochester, Lynn. Key authoritative journals include BMC Geriatrics, Journals of Gerontology Series A: Biological Sciences and Medical Sciences, and Journal of the American Geriatrics Society. Frequently mentioned keywords in this field are depression, gait, people, gait speed, older adults, health, and dementia

Conclusion This study is the first to utilize bibliometric methods to visualize research in the field of depression-related gait. It reveals research trends and frontiers, providing valuable references for scholars seeking important research topics and potential collaborators.

关键词 : Depression, Gait, Bibliometric, VOSviewer, CiteSpace, visual analysis

间歇性 θ 脉冲刺激模式治疗抑郁障碍的脑电微状态特征分析

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目的 间歇性 θ 脉冲刺激(iTBS)属于新型经颅磁刺激(TMS)模式,治疗抑郁障碍有效。重性抑郁障碍(MDD)与异常的脑电活动有关。TMS可能诱导与抑郁症状相关的异常脑电变化。脑电微状态被假设为代表大脑静息状态网络,基于既往研究脑电微状态有望作为MDD的脑电衍生标志物来探索TMS抗抑郁背后的脑网络机制。

方法 本研究纳入共纳入65例被试,随机分为2组,1组给予iTBS和SSRIs联合治疗,另1组给予SSRIs治疗。基线、2周、4周分别进行评估,基线和4周治疗结束时采集静息态脑电数据。评估量表主要采用HAMD-24项量表。采集5分钟的睁闭眼静息态脑电数据,采用不区分极性k-means聚类将脑电图分割为成微状态,T检验比较了联合治疗组和药物组组内及组间的微状态特征差异。

结果 1、临床疗效分析:4周治疗结束后联合

干预组HAMD-24项量表得分(11.21±3.67)与药物组HAMD-24项量表得分(13.40±3.11)存在明显差异($p=0.024$)。4周治疗结束时两组间有效率存在差异(联合干预组75.00%,药物组48.00%, $p=0.043$)。

2. 组内脑电微状态特征分析:4周治疗结束时联合治疗组微状态D的持续时间高于治疗前($t=-3.490, p=0.020$)。微状态B的发生率低于治疗前($t=2.329, p=0.028$)。微状态D的发生率低于治疗前($t=5.503, p<0.001$)。微状态C的发生率高于治疗前($t=-2.984, p=0.006$)。微状态D的覆盖率高于治疗前($t=-5.302, p<0.001$)。4周时药物组微状态D的发生率低于治疗前($t=4.133, p<0.001$)。微状态C的覆盖率高于治疗前($t=-5.340, p<0.001$)。微状态D的覆盖率低于治疗前($t=2.828, p=0.009$)。

3. 组间脑电微状态特征分析:基线时联合干预组微状态C的覆盖率高于药物组($t=2.927, p=0.005$)。治疗后联合干预组微状态A的覆盖率低于药物组($t=-2.423, p=0.019$)。微状态C的覆盖率低于药物组($t=-4.180, p<0.001$)。微状态D的覆盖率高于药物组($t=8.144, p<0.001$)。

结论 两种治疗方案对部分微状态特征均有影响,联合治疗组对不同微状态特征的影响更广泛。iTBS治疗可以独立影响微状态A和D的特征从而反映其调节MDD的脑网络活动,涉及默认模式网络和中央执行网络。微状态D覆盖率的增加可能是iTBS抗抑郁的特异性脑电标志物。

关键词: 重性抑郁障碍; 间歇性 θ 脉冲刺激; 脑电图; 微状态分析; 脑网络

社会认知与互动训练(SCIT)对首发抑郁症患者社会功能及神经营养因子的影响

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目的 本研究旨在探讨社会认知和互动训练(SCIT)对首发抑郁症患者(FEDN)社会功能和外周神经营养因子的影响,探讨SCIT干预后社会功能的改善是否与抑郁症患者的生物标志物有关。

方法 这是一项随机对照试验(RCT),84例首

发抑郁患者随机分配到 SCIT 组 (n=45) 或认知行为干预 (CBT) 组 (n=39)。两组都接受每周 1 次, 共计 8 周的干预, 每次干预持续 2 小时。SCIT 组和 CBT 组在基线完成社会人口学信息评估, 此外, 两组均在基线和第 8 周完成汉密尔顿抑郁评定量表 17 项 (HDRS)、功能评估测试简版 (FAST) 以及血清脑源性神经营养因子 (BDNF) 和胶质细胞源性神经营养因子 (GDNF) 的检测。

结果 1、在基线水平, SCIT 组与 CBT 组一般人口学资料以及临床相关变量比较均无统计学差异 (均 $p > 0.05$); 2、重复测量方差分析结果显示, FEDN 患者 FAST 总分在 8 周干预前后有明显的改善 ($F = 120.44, df = 1, p < 0.001$), 且这种改善在 SCIT 组更显著 ($F = 10.67, df = 1, p = 0.002$)。组别*时间的交互作用显示, SCIT 组在职业功能 ($F = 5.53, df = 1, p = 0.021$)、认知功能 ($F = 4.75, df = 1, p = 0.032$)、人际关系 ($F = 5.73, df = 1, p = 0.019$) 三个社会功能子维度方面的改善比 CBT 组更有优势; 3、重复测量方差分析显示, SCIT 组和 CBT 组患者的 HDRS 总分 ($F = 112.30, df = 1, p < 0.001$), 血清 BDNF ($F = 38.19, df = 1, p < 0.001$) 和 GDNF ($F = 191.00, df = 1, p < 0.001$) 水平在 8 周内显著改善, 但组间 HDRS、BDNF 和 GDNF 的变化未发现统计学差异 (均 $p > 0.05$); 4、基于干预措施的相关性分析显示, 从基线到 8 周末血清 GDNF 水平的改善与 SCIT 组社会功能自主性 ($r = 0.32, df = 40, p = 0.038$)、财务问题 ($r = 0.44, df = 40, p = 0.004$) 两个子维度的改善显著正相关。而在 CBT 组中, FAST (包括其六个子维度) 和血清 BDNF、GDNF 水平在干预前后均未发现统计学相关性 (均 $p > 0.05$)。

结论 SCIT 干预对首发抑郁症患者总体社会功能以及职业功能、认知功能和人际关系子维度都有显著改善, 疗效优于 CBT 疗效。此外, 血清 GDNF 水平的升高与 SCIT 干预后抑郁症患者自主功能和财务功能的改善显著相关。

关键词: SCIT, CBT, 抑郁症, BDNF, GDNF

Abnormal Resting-state Functional Connectivity of Hippocampus and Amygdala in Major Depressive Disorder

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Objective The present study was designed to investigate the alterations of resting-state functional connectivity concerning the hippocampus and amygdala in patients with major depressive disorder, as well as their correlations with depression severity

Methods We included 58 first-episode, drug-naïve patients with major depressive disorder and 78 age-, sex-, and education level-matched healthy controls that underwent resting-state functional MRI measurement. The hippocampus and amygdala were used as priori regions of interest to calculate seed-to-voxel connectivity. The correlations between the abnormal connectivity and the score of 17-item Hamilton Depression Scale (HAMD-17) in the patients were estimated

Results Compared to healthy controls, the patients with major depressive disorder exhibited lower functional connectivity between the left hippocampus and right precuneus. The patients also showed decreased functional connectivity between the left amygdala and right inferior frontal gyrus and superior frontal gyrus, as well as decreased functional connectivity between the right amygdala and left middle temporal gyrus. The correlations between abnormal functional connectivity of the left hippocampus and the score of HAMD-17 in the patients were significantly negative

Conclusion The abnormal resting-state functional connectivity of hippocampus and amygdala may partially explain neurobiological mechanisms of major depressive disorder and has the potential to serve as a neuroimaging diagnostic biomarker.

关键词: major depressive disorder, functional connectivity, hippocampus, amygdala

Abnormal White Matter Integrity in Patients with Depression Revealed by Automated Fiber Quantification

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Objective This study aims to utilize diffusion tensor imaging (DTI)-based automatic fiber quantification (AFQ) technology to analyze changes in the integrity of white matter fibers in patients with major depressive disorder (MDD). Furthermore, the study seeks to employ machine learning methods, specifically support vector machines (SVM), to construct a classification model for identifying MDD from healthy controls (HC)

Methods In this study, we collected clinical and imaging data from 60 MDD patients and 52 HC. Using the AFQ method, we analyzed DTI data for all subjects, tracking 20 white matter fiber tracts and quantifying the differences in diffusion metrics across 100 nodes of each fiber tract between the groups. We then applied t-tests and the least absolute shrinkage and selection operator (LASSO) logistic regression algorithm to identify abnormal diffusion metrics. These selected metrics were further analyzed using an SVM model to identify the most significant features for distinguishing between MDD patients and HC, facilitating a machine learning classification study

Results The AFQ results indicated that, compared to the healthy control, the MDD patients exhibited reduced axial diffusivity (AD) and fractional anisotropy (FA) in the left cingulum bundle, as well as decreased AD values in the right cingulum bundle, splenium of the corpus callosum, right inferior fronto-occipital fasciculus, and left arcuate fasciculus. Based on fiber tract nodes with significant group differences as features, three types of SVM models constructed for FA, AD, and a combined FA+AD achieved satisfactory classification results. The FA+AD fusion model exhibited better predictive accuracy than the two individual metric models, with an Area Under the Curve (AUC) value of the Receiver Operating Characteristic (ROC) curve at 0.84, and the predictive accuracy reaching 0.85

Conclusion Using AFQ approach, the study identified specific regions of white matter fiber tract damage in the brains of MDD patients. The SVM method improved the accuracy of classification and prediction between MDD patients and HC, providing new

insights into the neuroimaging mechanisms of MDD and enhancing diagnostic accuracy.

关键词: Major Depressive Disorder, Diffusion Tensor Imaging, Automated Fiber Quantification, Support Vector Machine, Machine Learning

外周血氧化应激标志物在抑郁症中的诊断与疗效预测研究

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目的 近年来抑郁症的免疫炎症假说倍受关注,其机制尚未被阐明。核因子 E2 相关因子 (Nrf2) 作为抗氧化应激与免疫炎症反应的共同转录因子,参与着抗氧化应激、抗炎、抗凋亡、神经保护等功能,可能在抑郁症发生发展及抗抑郁作用机制中起关键作用。本研究拟探讨抑郁症和以 Nrf2 为代表的氧化应激标志物之间的关系。

方法 本研究共纳入抑郁症患者 104 例,以及性别、年龄、受教育年限匹配的健康志愿者 50 名。所有患者来源于上海交通大学医学院附属精神卫生中心门诊。采用 ELISA 技术检测外周血 Nrf2、血红素氧合酶-1 (HO-1)、磷脂酶 A2 (PLA2)、环氧合酶 (COX-2)、超氧化物歧化酶 (SOD) 的水平,比较抑郁症和健康对照的氧化应激水平差异。在基线及抗抑郁药物干预的 2、4、8、12 周分别用汉密尔顿抑郁量表-17 项 (HAMD-17)、汉密尔顿焦虑量表 (HAMA)、抑郁症状 30 项问卷 (IDS-30) 评估患者组的临床症状。最后,探索氧化应激指标对抗抑郁药物治疗疗效的预测作用。

结果 相比于健康对照,抑郁症患者血浆中 Nrf2、HO-1 和 SOD 水平显著降低,PLA2、COX-2 水平显著升高 ($P < 0.001$),相关分析显示,血浆 Nrf2 和 COX-2 水平呈显著负相关 ($r = -0.236, P = 0.016$),其余指标两两均无明显相关性。将外周血氧化应激指标联合检测用于区分抑郁症和健康对照的 ROC 曲线下面积 (AUC) 为 0.930 ($P < 0.05$),灵敏度和特异度分别达到 0.83 和 0.84,具有非常高的诊断价值。与基线期相比,抑郁症患者治疗后 4 个随访时点的 HAMD-17 以及 HAMA 总分显著下降 ($P < 0.05$)。

根据 HAMD-17 减分率, 治疗 12 周 (N=98 例) 的有效率达到 74.5%, 治愈率达到 52%, 无效率为 25.5%。在外周血氧化应激指标方面, 我们发现对治疗有效的抑郁患者组基线血的 COX-2 水平明显高于治疗无效组 ($t=-2.383$, $p=0.019$)。

结论 抑郁症患者存在氧化应激和免疫炎症改变, Nrf2、HO-1 和 SOD 水平下调和 PLA2、COX-2 水平上调, 存在此消彼长的关系。血浆 COX-2 水平可能有助于预测抑郁症患者对 12 周的常规抗抑郁药物的疗效。本研究为免疫炎症与氧化应激假说提供实验依据, 也为开发可靠的抑郁症诊断与疗效预测的外周生物标记物提供了方向。

关键词: 抑郁症, 核因子 E2 相关因子 2, 血红素氧合酶-1, 环氧化酶, 炎症

基于 CUMS 模型探讨短链脂肪酸的抗抑郁作用及对肠道菌群的影响

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目的 探究短链脂肪酸 (short-chain fatty acids, SCFAs) 对慢性不可预测温和应激 (chronic unpredictable mild stress, CUMS) 大鼠抑郁行为及肠道菌群的影响。

方法 76 只雄性成年 SD 大鼠随机分为对照组 (n=10)、CUMS 组 (n=13)、乙酸钠干预组 (Acetate, n=12)、丙酸钠干预组 (Propionate, n=15)、丁酸钠干预组 (Butyrate, n=14)、短链脂肪酸干预组 (SCFAs, n=12)。除了对照组, 其他组均进行 CUMS 造模, 且在每日造模前进行干预。CUMS 组按体重 1mL/100g 腹腔注射生理盐水; Acetate 组、Propionate 组、Butyrate 组分别腹腔注射 50mg/(kg·d) 乙酸钠溶液、100mg/(kg·d) 丙酸钠溶液、50mg/(kg·d) 丁酸钠溶液; SCFAs 组腹腔注射 1: 1: 1 的乙酸钠、丙酸钠、丁酸钠混合溶液, 连续 28 天。通过糖水偏好、强迫游泳及旷场实验比较组间行为差异; 采集盲肠粪便样本, 用 16S rRNA 测序分析肠道菌群组成。

结果 与 CUMS 组相比, Butyrate 组、SCFAs 组的糖水偏好系数显著增加 ($P<0.001$, $P<0.001$), 不动时间显著缩短 ($P<0.05$, $P<0.01$), 其他组的糖水偏好系数、不动时间均无显著差异; 旷场实验

中干预组大鼠在中心区域运动时间和距离均无显著差异。在 β 多样性分析中, Control 组与 CUMS 组、干预组之间均有统计学差异; 与 CUMS 组相比, Acetate 组 ($P=0.024$)、SCFAs 组 ($P=0.005$) 有统计学差异; 我们发现了在 CUMS 组中有害菌 E-变形菌 (Epsilonproteobacteria)、螺杆菌属 (Helicobacter)、肠球菌属 (Enterococcus) 等出现富集; 在 Propionate 组中有益菌双歧杆菌属 (Bifidobacterium) 的富集, SCFAs 组中柯林斯菌属 (Collinsella) 的富集。

结论 Butyrate 及 SCFAs 干预能改善大鼠的抑郁行为, 其机制可能与改变大鼠肠道菌群组成有关。

关键词: 抑郁; 慢性不可预知应激; 短链脂肪酸; 肠道菌群

Healthy Lifestyle and Risk of Incidence, Mortality and Life Expectancy of Mental Disorders

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Objective People who adopt a healthy lifestyle have many health benefits. However, whether and to what extent a healthy lifestyle impacts on new onset of mental disorders, as well as the effect and difference in mortality and life expectancy in people without and with mental disorders is still no clear. The first aim of this cohort study was to evaluate the association between lifestyle and risk of mental disorders from UK Biobank. Our study also explored those findings on specific-diagnosis mental disorders, such as depression, anxiety, and bipolar disorder. Then, we investigated the association of lifestyle with mortality and life expectancy in people without and with mental disorders

Methods Overall, 277,875 participants were included in mental disorders incidence analysis. 277,875 without mental disorders and 50,250 with mental disorders participants at baseline were included in the mortality and life expectancy analysis. We developed a comprehensive lifestyle score by combining seven healthy lifestyle behaviors: healthy diet, regularly phys-

ical activity, no smoking, light or moderate alcohol consumption, adequate sleep duration, active social connection, and less sedentary behavior. Multivariable Cox proportional hazard models and the life table method were used to investigate the associations of lifestyle with the mental disorders incidence, mortality, and life expectancy in people without and with mental disorders

Results Our results showed that participants with healthy lifestyle pattern had a 69% (HR, 0.31; 95% CI, 0.30-0.32) lower risks of new onset of mental disorders, and specifically lower of 55%, 47% and 61% for depression (HR, 0.45; 95% CI, 0.41-0.49), anxiety (HR, 0.53; 95% CI, 0.49-0.58), and bipolar disorder (HR, 0.39; 95% CI, 0.27-0.58) respectively. The healthy lifestyle pattern had a 54% and 60% lower risks of death in participants without mental disorders (HR, 0.46; 95% CI, 0.43-0.49) and with mental disorders (HR, 0.40; 95% CI, 0.36-0.65) respectively. In addition, the healthy lifestyle levels had a longer life expectancy than those with poor lifestyle (intermediate: 9.0, healthy: 14.4) at age 40 years in participants with mental disorders, which is higher than that in participants without mental disorder (intermediate: 8.0, healthy: 11.6). The further stratification analysis of chronic disease and sensitivity analysis of men and women get the similar and robust results

Conclusion Healthy lifestyle pattern, is strongly associated with lower risk of incidence of mental disorders, depression, anxiety and bipolar disorder, lower mortality, and longer life expectancy. Our findings could help health professionals and policy makers to plan future healthcare services and needs.

关键词: Healthy lifestyle; Mental disorders; Incidence; Mortality; Life expectancy

Prevalence and Risk Factors for Depression in Somatic Symptom Disorder: A Large-Scale Cross-Sectional Study

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Objective The co-morbidity of somatic symptom disorder (SSD) and depression is common, yet the demographic and clinical factors correlating with depression among SSD patients remains unclear. The purpose of this study was to explore the prevalence and risk factors for depression in Chinese Han patients with SSD

Methods In this cross-sectional study, 899 outpatients diagnosed with SSD were included. Demographic data were collected, and clinical assessments were conducted, which involved blood pressure measurements and laboratory tests for thyroid-stimulating hormone (TSH), thyroid peroxidase antibody (TPOAb), anti-thyroglobulin (TGAb), free triiodothyronine (FT3), free thyroxine (FT4), fasting blood glucose, and lipid profiles. Participants were evaluated using the Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), Insomnia Severity Index (ISI), and the Perceived Social Support Scale (PSSS). The data was analyzed using descriptive statistics, chi-square test, non-parametric test, logistic regression, and the area under the receiver operating characteristics (AUCROC), as appropriate

Results The prevalence of depression in SSD patients was 83.6%. Compared SSD patients without depression, depression was associated with age, age of onset, duration of illness, marital status, TSH, total cholesterol (TC), triglycerides (TG), high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein (LDL-C), fasting blood glucose (FBG), systolic blood pressure (SBP), diastolic blood pressure (DBP), anxiety symptoms, insomnia and levels of perceived social support (all $P < 0.05$). Further logistic regression showed that age, TC, insomnia and levels of perceived social support were correlates of depression in SSD patients (all $P < 0.01$). Insomnia had the highest AUC value of 0.908, while the combination of insomnia and levels of perceived social support had a higher AUC value of 0.926

Conclusion Our findings suggest a high prevalence of depression in SSD patients. Several factors are associated with depression in SSD patients. Insomnia is a robust predictor of depression in patients with SSD, and its predictive power is enhanced when combined with the assessment of perceived social support levels.

关键词: Somatic symptom disorder, Depression, Risk Factor, Insomnia, Perceived Social Support Scale

青少年抑郁障碍患者昼夜节律调控蛋白表达模式及其与临床症状的相关性分析

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目的 既往研究发现昼夜节律紊乱可能在抑郁障碍的病理学中发挥重要作用,然而两者之间的关联机制尚不清楚。本研究通过测定青少年重性抑郁障碍(Major depressive disorder, MDD)患者血浆中昼夜节律相关调控蛋白的水平,研究其与青少年MDD患者抑郁症状、睡眠状况、昼夜节律类型等临床特征之间的相关性,探讨昼夜节律相关调控蛋白在MDD诊治中的临床意义。

方法 依据纳入和排除标准,共入组192例青少年MDD患者。同时期招募103名健康青少年作为对照组。收集所有研究对象的一般人口学资料、汉密尔顿抑郁量表(HAMD24)、汉密尔顿焦虑量表(HAMA24)、匹兹堡睡眠质量指数量表(PSQI)及昼夜节律类型量表(CTI)评分,通过酶联免疫吸附法(ELISA)测定研究对象血浆样本中的9种昼夜节律相关调控蛋白水平,并于8周时进行随访。分析两组被试昼夜节律调控蛋白水平的差异,及其与临床特征之间的相关性。

结果 1.MDD组与对照组相比,性别、年龄、受教育年限和家族史比较差异有统计学意义($P<0.05$)。MDD组患者的HAMD、HAMA、PSQI、CTQ及CTI-LV得分高于对照组,CTI-FR得分较对照组低,CRY1、CRY2、ARNTL、PER1及PER2水平较低,差异有统计学意义($P<0.05$)。

2.采用受试者工作特征(ROC)曲线评估CRY1、CRY2、ARNTL、PER1、PER2联合检测在MDD中的诊断效能。结果显示ROC曲线下面积(AUC)为0.774,最佳临界值为0.31,敏感度为0.80,特异度为0.75。

3.MDD组患者的ARNTL、PER2水平与PSQI总分均呈正相关($P<0.05$),CLOCK水平与HAMA总分呈负相关($P<0.05$)。

4.多变量logistic回归分析提示血浆CRY1可能

是MDD的独立危险因素($OR=1.259$, 95%CI, 1.037-1.537; $P<0.05$),即CRY1每增加1ng/ml,个体患MDD的风险将变为原来的1.259倍。

5.MDD组患者经8周治疗后,HAMD、HAMA及PSQI总分显著下降,血浆中CLOCK、TIMELESS、ARNTL及PER1水平升高,CRY1、CRY2及CIART水平降低,差异有统计学意义($P<0.05$)。

结论 1.青少年MDD患者调整自身睡眠节律的能力下降,昼夜节律相关调控蛋白表达异常,CRY1可作为青少年MDD的重要评价指标。

2.青少年MDD患者治疗后部分昼夜节律相关调控蛋白水平升高,这一变化可能与抑郁症状及睡眠质量改善有关。未来研究可进一步探讨昼夜节律紊乱在青少年MDD中的病理机制。

关键词: 重性抑郁障碍; 昼夜节律; 昼夜节律调控蛋白; 青少年

首发青少年抑郁障碍患者童年创伤与精神病理及炎性细胞因子的相关性研究

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目的 探讨首发青少年抑郁障碍患者童年创伤与精神病理及炎性细胞因子的相关性。

方法 本研究于2021年1月至12月招募了75名首发青少年抑郁障碍(FED)患者和76名健康对照(HCs)。采用儿童期创伤问卷(CTQ)、流调用抑郁自评量表(CES-D)、青少年自杀意念量表(PANSI)和20项多伦多述情障碍量表(TAS-20)分别评估受试者的童年创伤、抑郁、自杀意念及述情障碍症状;并采用电化学发光技术检测血浆IL-17A、IL-1 β 、IL-6和TNF- α 水平。

结果 与HCs相比,FED患者CTQ总分和各因子分、CES-D总分、PANSI总分、TAS-20总分、IL-1 β 、IL-6及TNF- α 水平均更高(均 $P<0.05$)。相关性分析显示,FED患者CTQ总分与病程、CES-D总分、PANSI总分、TAS-20总分、IL-17A、IL-1 β 水平呈正相关;情感虐待与CES-D总分、PANSI总分、TAS-20总分呈正相关;躯体虐待与病程呈正相关;性虐待与血清IL-17A、IL-1 β 、TNF- α 水平呈正相关;情感忽视与CES-D总分、PANSI总分、TAS-20总

分、IL-17A、IL-1 β 、TNF- α 水平呈正相关；躯体忽视与CES-D总分、PANSI总分、TAS-20总分、IL-1 β 、IL-6、TNF- α 水平呈正相关。多因素线性逐步回归分析显示，CTQ总分与病程($\beta=0.216$, $t=2.299$, $P=0.024$)、PANSI总分($\beta=0.509$, $t=5.418$, $P<0.001$)、IL-17A($\beta=0.252$, $t=2.681$, $P=0.009$)独立正相关；情感虐待与PANSI总分($\beta=0.448$, $t=4.281$, $P<0.001$)独立正相关；躯体虐待与病程($\beta=0.256$, $t=2.264$, $P=0.027$)独立正相关；性虐待与IL-17A水平($\beta=0.289$, $t=2.576$, $P=0.012$)独立正相关；情感忽视与PANSI总分($\beta=0.470$, $t=4.755$, $P<0.001$)、IL-17A水平($\beta=0.267$, $t=2.707$, $P=0.008$)独立正相关；躯体忽视与PANSI总分($\beta=0.263$, $t=2.258$, $P=0.027$)、IL-6水平($\beta=0.235$, $t=2.258$, $P=0.027$)独立正相关。

结论 童年创伤经历在FED中很常见，并且可能与病程、抑郁、自杀意念、述情障碍症状和炎性细胞因子升高显著相关。在临床上，应当重视FED患者童年创伤现象，积极采取早期干预措施，以改善临床症状及降低炎症水平，进而改善预后。

关键词：童年创伤 炎性细胞因子 青少年 抑郁障碍 首发

Agomelatine As Adjunctive Therapy with SSRIs Or SNRIs for Major Depressive Disorder: A Multicentre, Double-blind, Randomized, Placebo-controlled Trial

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Objective Major depressive disorder is prevalent worldwide. Although antidepressant medications are the first choice for antidepressant treatment, patients often do not have adequate responses. agomelatine, as a novel antidepressant with a different mechanism of action compared to traditional antidepressants, it might have adjunctive effect when used in addition to patients' initial medication. This study aimed to investigate the

augmentation effect of agomelatine when used as adjunctive drug with selective serotonin reuptake inhibitors (SSRIs) and serotonin-noradrenaline reuptake inhibitors (SNRIs)

Methods Major depressive patients who did not demonstrate adequate response to SSRI or SNRI lasting at least 2 weeks were randomized into either agomelatine group or placebo group. Participants were instructed to take either one 25 mg capsule of agomelatine daily for two weeks followed by two 25 mg capsules of agomelatine for the subsequent six weeks (some participants remained one 25 mg capsule of agomelatine for the following six weeks), or to identical placebo. The primary outcomes were the HAMD-17 at 8 week, and secondary outcomes were HAMD-17 and HAMA at 2, 4, and 6 week, as well as the clinical remission and response. Linear mixed model for primary outcome and secondary outcome

Results A total of 123 eligible participants were involved, among which 60 participants were randomly divided into the agomelatine group, and 63 participants were randomized into the placebo group. The between group difference on HAMD-17 score reduction from baseline to Week 8 was not significant (difference -0.10, 95% CI -3.69 to 3.88, $P=0.92$; Cohen's $d=0.018$). In addition, we did not observe significant differences between two treatment conditions for response and remission rates. Adverse events in the agomelatine group did not differ from those in the placebo group

Conclusion This study did not obtain significant findings in favor of the augmentation effect of agomelatine for depression patients. As such, this remains an urgent need for evidence to support effective treatment options for depression

关键词：agomelatine; adjunctive therapy;

青少年重性抑郁发作患者非自杀性自伤及自杀与甲状腺功能和皮质醇水平的关系

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目的 我们已经发现青少年重性抑郁障碍患者 (Major depressive disorder, MDD) 中存在生物学指标的异常, 并且部分患者表现出非自杀性自伤行为 (non-suicidal self-injury, NSSI) 及自杀想法和行为 (suicidal thoughts and behaviors, STBs)。然而, NSSI 行为及 STBs 与下丘脑-垂体-甲状腺 (Hypothalamic-Pituitary-thyroid, HPT) 轴和下丘脑-垂体-肾上腺 (Hypothalamic-Pituitary-Adrenal, HPA) 轴之间的关系尚不十分明确。我们旨在探讨 NSSI 行为、STBs 与这两个生物轴之间的潜在联系。

方法 采用描述性研究的方法, 对符合入组标准的首诊患者进行汉密尔顿抑郁量与汉密尔顿焦虑量表的初步评估, 然后应用渥太华自伤调查表将抑郁症患者分为存在非自杀性自伤组和不存在非自杀性自伤组, 使用哥伦比亚自杀严重程度评定量表将青少年抑郁症患者分为有自杀意念和行为组和无自杀意念和行为组。对所有患者进行甲状腺功能和皮质醇功能的测定。探索处于抑郁发作期的青少年患者甲状腺功能和皮质醇水平与非自杀性自伤行为及自杀意念和行为的关系。

结果 研究共纳入 110 名首次重性抑郁发作的青少年患者, 其中 69 名患者存在非自杀性自伤行为 (NSSI) 67 名患者存在自杀意念和行为 (STBs), 切割是最常用的方式, 下臂或腕部是最常见的部位。生物学指标方面, 三碘甲状腺原氨酸 (T3) 在有无 NSSI 组间存在显著差异, 且与 NSSI 行为呈负相关。二元 logistic 分析显示: 男性及三碘甲状腺原氨酸 (T3) 是青少年重性抑郁发作患者 NSSI 行为的保护性因素。而对于 STBs 患者, 焦虑躯体化、认知障碍、自杀意念频率和持续时间等与其临床特征相关, 皮质醇水平与 STBs 的发生呈正相关。在自杀意念和行为的预测方面, 皮质醇水平是 STBs 的独立危险因素。抑郁、焦虑严重程度在皮质醇介导的 STBs 中起中介作用。皮质醇与抑郁程度呈正相关, 而 TSH 与抑郁程度呈负相关。焦虑严重程度与皮质醇水平呈正相关。

结论 我们观察到甲状腺功能和皮质醇水平与抑郁严重程度、NSSI 和 STBs 之间存在相关性。这些生物学指标不仅可以作为 NSSI 的保护性因素, 还可以作为 STBs 的独立危险因素发挥作用。

关键词: 重性抑郁发作, 非自杀性自伤, 自杀意念和行为, 青少年, 甲状腺功能, 皮质醇

个体化混合电休克疗法 (i-HECT) 对青年抑郁症患者的认知影响

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目的 电休克疗法 (ECT) 是快速缓解抑郁症状的最有效方法之一, 然而, 它常常伴随着急性认知副作用, 这给患者的日常生活和康复过程带来了挑战。尤其是青年抑郁症患者, 认知受损会给他们的学业和工作带来影响。为了应对这一问题, 我们团队设计了一种新的方法-混合策略 ECT (i-HECT) 疗法。该疗法结合了传统 ECT 与低电量疗法 (LCE) 以及个体化症状监测, 旨在减少认知损伤, 提高治疗的安全性。

方法 46 名青年抑郁患者 (16-25 岁) 在基线和 i-HECT 结束后接受了临床疗效和认知评估。采用蒙哥马利-阿斯伯格抑郁量表 (MADRS) 评估抑郁症状, 主观认知下降问卷 (SCD-Q) 评估主观认知, 可重复的成套神经心理状态测量 (RBANS)、和 Stroop 测试评估客观认知功能。i-HECT 疗法包含两种治疗方式: ECT 和 LCE。ECT 的电量设置为患者癫痫发作阈值 (ST) 的 1.5 倍, 而 LCE 的能量设置为 0.5 ST 以减少认知副作用。治疗前期采用传统 ECT 进行干预, 之后根据每次治疗后对患者的症状评估决定是否转换为 LCE 治疗。症状评估基于 MADRS 的总分, 标准为: MADRS 评分低于 22 分或者达到 50% 以上的减分率则转换为 LCE 治疗。

结果 接受 i-HECT 疗法的患者中, 80.4% 的患者对治疗有应答, 58.7% 的患者达到了临床缓解标准 (Hedges' $g = 3.29$)。值得注意的是, 疗程结束后以及 3 个月后的随访评估发现, 患者的主观和客观认知功能均显著改善。这表明 i-HECT 不仅能有效缓解青年抑郁症患者的抑郁症状, 也能显著改善患者的认知功能。

结论 i-HECT 疗法为青年抑郁症患者提供了一种新的治疗选择。该疗法结合了 ECT 的有效性和 LCE 的低认知副作用, 利用个体化症状监测来优化治疗过程, 从而提供了一种安全有效的抗抑郁治疗选择。通过这种创新性的治疗方法, 我们有望改善青年抑郁症患者的整体治疗体验, 减少认知损伤, 提高患者的生活质量。

关键词: i-HECT; 青年抑郁症; 认知

The Functional Connectivity of The Somatomotor Network Mediates The Relationship Between Alexithymia and Non-suicidal Self-injury in Depressive Adolescents

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Objective Background Non-suicidal self-injury (NSSI) manifests prevalently among adolescents with depression, posing significant public health concerns. While NSSI has been linked to heightened alexithymia—characterized by the inability to identify and describe emotions—the neurobiological underpinnings of these associations remain insufficiently understood. This study aims to elucidate the neural correlates of NSSI and alexithymia in adolescents with depression

Methods Methods This study included 233 adolescents diagnosed with major depressive disorder (MDD), from whom resting-state functional magnetic resonance images were collected. All participants completed the Toronto Alexithymia Scale (TAS) and the Functional Assessment of Self-Mutilation (FASM). We estimated functional connectivity (FC) within 17 brain sub-networks and assessed correlations between intra-network FC, TAS, and FASM. A mediation model was then developed to explore these relationships

Results TAS scores were positively correlated with the intra-network FC of somatomotor network B (SOM-B), while negatively correlated with the intra-network FC of salience network A (SAL-A), default mode network A (DMN-A), and default mode network B (DMN-B). Moreover, the presence of NSSI behavior was significantly positively correlated with intra-network FC of SOM-B, and negatively correlated with the intra-network FC of SAL-A and DMN-C. Importantly, the intra-network FC of SOM-B played a partial mediating role between alexithymia and NSSI

Conclusion Conclusion These findings

revealed that FC within the somatosensory areas influences the relationship between alexithymia and NSSI in depressed adolescents. The identified neural markers and pathways offer insights into potential therapeutic targets, emphasizing the importance of addressing emotion regulation deficits and alexithymia in the treatment of NSSI

关键词: Depressed adolescents, Alexithymia, Non-suicidal self-injury, Somatomotor network, Mediating effect

Network Analysis of Depression and Anxiety Symptoms During Pregnancy: A Longitudinal Study Across Three Trimesters

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Objective With major physiological and psychological changes, pregnancy is an important and difficult period in a women's life. In the past few years, perinatal depression and anxiety symptoms have received much attention. The purpose of this research is to investigate how the symptoms of depression and anxiety change dynamically during pregnancy across the three trimesters of the pregnancy

Methods Pregnant women receiving standard medical care from January 2020 to January 2024 at Bao'an Maternal and Child Health Hospital in Shenzhen,

China, were included in this study. For the first, second and third trimesters, 44,001, 41,656 and 40,319 participants were enrolled, respectively. Depression and anxiety symptoms were assessed by Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder-7 (GAD-7), respectively. Network analyses were conducted to investigate the structure of depression and anxiety symptoms and mixed-effects models were used to analyze the effect of trimesters on the symptom structure

Results In the first, second and third trimesters, the detection rates of depression were 31.5%, 11.7%, and 12.3%, respectively; for anxiety, the rates were 15.9%, 8.2%, and 9.1%, respectively. Across all network models, 'PHQ-4: tired' and 'GAD-1: tension' emerged as central symptoms. According to linear mixed-effects models, the PHQ-9 and GAD-7 scores were significantly lower in the second and third trimesters compared to the first trimester. Specifically, the second trimester showed reductions of $b = -1.91$ and $b = -0.79$ (both $p < 0.001$) for PHQ-9 and GAD-7 respectively, and the third trimester showed reductions of $b = -1.82$ and $b = -0.70$ (both $p < 0.001$) compared to the first trimester

Conclusion The prevalence of depression and anxiety in pregnant women is high, especially in the first trimester. It is essential to screen pregnancy women throughout the first trimester, identify high-risk expectant mothers early on, and implement the appropriate intervention strategies. Tired and tension are the central symptoms of the depression-anxiety network and may serve as the target symptoms for alleviating the depression and anxiety during pregnancy.

关键词: pregnancy, depression, anxiety, network analysis

Obstetric Risk Factors of Antenatal Depression: A Cross-sectional Study in China

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Objective Antenatal depression is a disabling mental disorder among pregnant women, which may induce adverse outcomes for both the mother and the offspring. Early identification and intervention of antenatal depression contribute to preventing adverse outcomes. However, few population-based studies focused on the association between social and obstetric risk factors and antenatal depression in China. The present study aimed to assess the sociodemographic and obstetric factors of antenatal depression in a large Chinese population

Methods The real-world cross-sectional survey was conducted in Shenzhen, China from 2020 to 2023. Antenatal depression was assessed using the Chinese version of the Edinburgh Postnatal Depression Scale (EPDS), with a score of ≥ 13 indicating the presence of antenatal depression. The Chi-square test and binary logistic regression were used to identify the associated factors of antenatal depression

Results Among 44220 pregnant women, the prevalence of antenatal depression was 4.4%. Age ≤ 24 years, low education levels (≤ 12 years), low or moderate economic status, with a history of mental disorders, the first trimester, primipara, unplanned pregnancy, and pregnancy without prenatal care are associated with antenatal depression among participants (all $p < 0.05$)

Conclusion This study suggested that the prevalence of antenatal depression was 4.4%. Several social

and obstetric factors were risk factors for antenatal depression. Identifying these high-risk groups early is crucial for implementing interventions and enhancing overall quality of life.

关键词: Antenatal depression, Pregnancy, EPDS, Social risk factors, Obstetric risk factors

Prevalence and Risk Factors of Postpartum Depression During Late Puerperium: A Real-world Cross-sectional Study in A Developed District of South China.

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Objective Postpartum depression (PPD) seriously affects the physical and mental health of the mother and child. Yet in China, various unclear risk factors and insufficient resources restricts the screening and intervention of PPD. This study aimed to evaluate the impact of perinatal-related factors and infant outcomes on late puerperium PPD in a large population in a developed district of South China

Methods We performed a real-world cross-sectional survey with 5-8 weeks postpartum mothers getting routine medical care at Bao'an Maternal and Child Health Hospital in Shenzhen, China, between January 2020 and January 2024. We gathered information on so-

ciodemographic traits, pregnancy-related factors, delivery-related factors, infant outcomes, and feeding ways using self-reported screening questionnaires. The Edinburgh Postnatal Depression Scale (EPDS) was used to measure depression, with a score of >9 indicated the presence of depressive symptoms. The Generalized Anxiety Disorder-7 (GAD-7) was used to measure anxiety, with a score of >4 indicated the presence of anxiety symptoms. We utilized a binary logistic regression model to ascertain the predictive factors for postpartum depression by converting self-reported factors into binary variables

Results A total of 18,772 postpartum women were enrolled in this survey, among which 1,553 (8.3%) had an EPDS score >9. Age ≥ 30 years (OR = 0.69, 95% CI = 0.62-0.77), extraversion (OR = 0.73, 95% CI = 0.62-0.86), depression symptoms during pregnancy (OR = 2.80, 95% CI = 2.12-3.70), anxiety symptoms during pregnancy (OR = 2.34, 95% CI = 1.95-2.82), milk powder feeding (OR = 1.26, 95% CI = 1.13-1.40), and abnormal infant outcomes (OR = 1.25, 95% CI = 1.01-1.54) were among the factors linked to PPD in the logistic model

Conclusion Our study revealed that the prevalence of PPD during late puerperium was 8.3%. Younger age, introverted personality, anxiety and depression symptoms during pregnancy, poor baby outcomes, and milk powder feeding were the risk variables for PPD. Having a better understanding of PPD's risk factors can help medical staff monitor and treat patients more effectively

关键词: postpartum depression, pregnancy, delivery, risk factors, EPDS

Group-based Trajectory Analysis of Antenatal Depression and Its Association with Polysocial Risk Score: A Retrospective Cohort Study

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Objective Antenatal depression, especially moderate-to-severe depression (MSD), is associated with adverse maternal and infant health outcomes and is affected by multiple psychosocial factors. However, studies comprehensively exploring the distinct trajectories of antenatal MSD and their associations with psychosocial factors are lacking. This study aimed to investigate the trajectories of antenatal MSD based on group-based trajectory modeling (GBTM) and constructed a risk prediction model based on polysocial risk score (PsRS)

Methods A retrospective cohort study was conducted among 18,401 pregnant women in Shenzhen, China, from 2020 to 2023. Antenatal depressive symptoms were assessed using the Patient Health Questionnaire-9 (PHQ-9) at the early, middle, and late stages of pregnancy. GBTM was employed to identify distinct trajectories of depressive symptoms. PsRS was constructed based on twelve factors to analyze the polysocial risks associated with MSD. Subsequently, a logistic predictive model based on PsRS was developed to predict the risk of MSD. The predictive performance of the models was evaluated using the Receiver Operating Characteristic (ROC) curve

Results GBTM identified four distinct trajectories of antenatal depression: persistent MSD group, mild depressive group, resolving MSD group, and asymptomatic group. We constructed a PsRS for persistent MSD based on twelve factors, including income, education,

smoking, alcohol use, lacking exercise, unplanned pregnancy, a history of abortion, marital dissatisfaction, low willingness to confide, a history of mental illness, living alone, and low residential satisfaction. Significant positive associations were observed between all twelve PsRS factors and persistent MSD. We further constructed a predictive model for persistent MSD, which demonstrated good discrimination and calibration, with an AUC of 0.7534 for the testing set

Conclusion This study revealed four distinct trajectories of antenatal depression and constructed a comprehensive PsRS and a predictive model for persistent MSD. The predictive model offers a promising tool for early identification of high-risk women to guide targeted interventions to improve maternal mental health. Future research should validate the model in diverse populations and explore causal relationships through interventional studies.

关键词: antenatal depression; moderate-to-severe depression (MSD); group-based trajectory modeling (GBTM); Polysocial Risk Score (PsRS); risk prediction model

抑郁症患者童年创伤类型对思维反刍维度的影响：一项纵向随访研究

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目的 童年创伤发生率高，是抑郁障碍、焦虑障碍等精神障碍的公认危险因素。思维反刍作为一种适应不良的思维风格策略，与多种精神病理相关。本研究目的是探究抑郁症（Major depressive disorder, MDD）患者的童年创伤类型对思维反刍维度的影响，为对伴童年创伤、思维反刍的 MDD 患者采取针对特定创伤类型及思维反刍症状更精准有效的干预提供依据。

方法 在中南大学湘雅二医院及社区纳入 MDD 患者共 173 例，健康对照（healthy controls, HCs）81 例，其中 86 例 MDD 患者和 43 例 HCs 完成了入组 8 周后的自然随访评估。基线时童年创伤问卷（Childhood Trauma Questionnaire, CTQ）用于

自评童年创伤情况。采用反刍思维量表 (Ruminative Response Scale, RRS) 评定 MDD 患者和 HCs 的思维反刍功能。使用独立样本 t 检验、卡方检验和 Mann-Whitney U 检验比较组间差异。采取重复测量方差分析比较各组内思维反刍的变化特征。通过 Pearson 和 Spearman 相关分析探索童年创伤与思维反刍之间的关系。

结果 (1) MDD 患者中伴虐待组的 RRS 总分 ($t = 2.006, P = 0.046$)、反思维度得分 ($t = 2.579, P = 0.011$) 显著高于不伴虐待组。(2) MDD 患者中伴情感虐待 (Emotional Abuse, EA) 组及伴躯体虐待 (Physical Abuse, PA) 组的 RRS 总分 ($t = 2.304, 2.478; P = 0.022, 0.013$)、反思维度得分 ($t = 2.263, 2.900; P = 0.025, 0.004$) 和抑郁维度得分 ($t = 2.382, 2.476; P = 0.018, 0.014$) 显著高于不伴组。(3) MDD 患者沉思维度得分与 EA ($r = 0.153, P = 0.045$) 正相关。反思维度得分与 CTQ 总分 ($r = 0.180, 0.242, 0.218; P = 0.019, 0.001, 0.004$)、EA、PA 正相关。(4) MDD 组治疗 8 周后 RRS 总分及各维度得分较治疗前低 ($P < 0.001$)，伴与不伴忽视组的这种变化有显著差异 ($F = 4.404, P = 0.039$)。

结论 童年虐待显著提高思维反刍总体、反思及抑郁维度的水平。MDD 患者治疗后思维反刍水平下降，伴忽视组的反思维度水平治疗前后变化更明显。临床上应重视 MDD 患者童年创伤和思维反刍的筛查和评估。本研究也为伴童年创伤的 MDD 患者针对特定创伤类型及思维反刍维度采取更精准的干预措施提供了一定的理论依据。

关键词：童年创伤；思维反刍；抑郁症

抑郁症患者伴童年创伤类型数量与思维反刍维度的关系

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目的 童年创伤发生率高，是抑郁障碍、焦虑障碍等精神障碍的公认危险因素。思维反刍作为一种适应不良的思维风格策略，与多种精神病理相关。本研究目的是探究抑郁症 (Major depressive disorder, MDD) 患者的伴童年创伤类型的数量与思维反刍维度的关系，为对伴童年创伤、思维反刍的 MDD 患

者采取针对特定创伤类型及思维反刍症状更精准有效的干预提供依据。

方法 在中南大学湘雅二医院及社区纳入 MDD 患者共 173 例，健康对照 (healthy controls, HCs) 81 例。童年创伤问卷 (Childhood Trauma Questionnaire, CTQ) 用于 MDD 患者和 HCs 自评童年创伤情况，采用反刍思维量表 (Ruminative Response Scale, RRS) 评定 MDD 患者和 HCs 的思维反刍功能。使用独立样本 t 检验、卡方检验和 Mann-Whitney U 检验比较组间差异。通过 Pearson 和 Spearman 相关分析探索童年创伤类型数量和思维反刍维度之间的关系。

结果 (1) 在 MDD 患者和 HCs 中，伴 2 种创伤组、伴 3 种创伤组及伴 4 种及以上组的家庭关系 ($F = 0.531, 0.716, 0.712; P = 0.025, 0.001, 0.001$) 较不伴创伤组更差。(2) MDD 患者中伴 4 种及以上创伤组较不伴创伤组、伴 1 种创伤组、伴 2 种创伤组、伴 3 种创伤组的 RRS 总分 ($F = 2.587, 2.752, 3.017$ 和 $3.046; P = 0.003, 0.010, 0.001$ 和 0.027) 更高。伴 4 种及以上组较伴 2 种创伤组的沉思维度得分更高 ($F = 0.881, P = 0.012$)。伴 4 种及以上组较不伴创伤组、伴 2 种创伤组的反思维度得分 ($F = 0.711, 0.829; P = 0.006, 0.039$) 更高。伴 4 种及以上组较不伴创伤组、伴 1 种创伤组、伴 2 种创伤组、伴 3 种创伤组的抑郁维度得分 ($F = 1.504, 1.600, 1.754$ 和 $1.771; P = 0.003, 0.007, 0.001$ 和 0.028) 更高。(3) MDD 患者伴童年创伤类型的数量 ($r = 0.173, 0.189$ 和 $0.168; P = 0.023, 0.013$ 和 0.027) 与 RRS 总分、反思维度和抑郁维度得分正相关。

结论 伴多种童年创伤类型的 MDD 患者具有更差的家庭关系及更高的思维反刍水平。伴童年创伤类型的数量与思维反刍的水平呈正相关关系。临床上应重视 MDD 患者童年创伤和思维反刍的筛查和评估。本研究也为伴童年创伤的 MDD 患者针对伴创伤类型数量及思维反刍维度采取更精准的干预措施提供了一定的理论依据。

关键词：童年创伤；思维反刍；抑郁症

Differences in The Effects of Electroconvulsive Therapy Combined with Antidepressants on Depression in Adolescents and Adults and Related Influencing Factors

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Objective Electroconvulsive therapy (ECT) is an effective and safe treatment for adult depression. However, evidence on the efficacy and cognitive effects of ECT in adolescent patients with depression is very limited. This study aims to compare the effects of the same ECT protocol on adolescent and adult patients with depression, and to analyze the related influencing factors

Methods This study included 206 patients with depression who received a combination of antidepressant medication and electroconvulsive therapy (ECT). A prospective cohort study was conducted to follow up on these patients. The severity of depressive symptoms was assessed using the Hamilton Depression Rating Scale (HAMD) both before and after ECT treatment. Cognitive function was evaluated using the Montreal Cognitive Assessment (MoCA). The effectiveness of the treatment was measured by the reduction rate in HAMD scores, while the impact on cognitive function was assessed by the reduction rate in MoCA scores. The study compared the therapeutic effectiveness and cognitive effects of ECT between adolescent and adult patients with depression. Chi-square tests and binary logistic regression were used to analyze the related influencing factors

Results A total of 130 adolescent patients and 76 adult patients were enrolled in the study. The overall effectiveness rate of ECT for treating depression was 74.8%. However, the response rate to ECT was significantly higher in adults compared to adolescents (adults: 66/76 [86.8%] vs. adolescents: 88/130 [67.7%]; $p < 0.01$). Regression analysis revealed that, among adolescents, factors such as the number of hospitalizations ($P < 0.01$), baseline psychotic symptoms ($P < 0.05$), and MoCA cognitive-language scores ($P < 0.01$) were key determinants of treatment efficacy. Specifically, the first hospitalization, absence of psychotic symptoms at baseline, and higher MoCA-language scores were associated with

better outcomes. In contrast, no significant factors affecting treatment efficacy were found in the adult group. Regarding cognitive function, ECT led to a significant overall decline, with an overall reduction rate of 3.15%. There was no significant difference in the cognitive function reduction rates between the two groups ($P > 0.05$). Additionally, ECT significantly improved attention scores, but the increase rates did not differ significantly between the two groups ($P > 0.05$)

Conclusion The combined use of antidepressants and acute phase ECT significantly improved depressive symptoms and attention, but led to overall cognitive impairment. Although ECT is more effective for adult depression than for adolescents, the cognitive side effects are similar in both groups. Future research should focus more on the individualized characteristics of adolescent depression to predict their response to ECT at an early stage.

关键词: Electroconvulsive therapy (ECT); Adolescents; Depression; Therapeutic effectiveness; Cognitive Function

抑郁症中情绪干扰效应的神经机制

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目的 注意缺陷和情绪障碍在抑郁症中是主要的临床表现, 其也是影响患者生活和社交的关键因素。注意和情绪在功能和神经基础上相互关联且相互影响, 本研究目的在于探究注意与情绪相互作用的神经机制, 及其与抑郁症状之间的关联。

方法 本研究结合 EEG 技术和情绪 stroop 任务, 设立抑郁症组(216人)和健康对照组(104人), 探究注意和情绪在不同认知加工阶段间的交互作用以及在抑郁症组和对照组间的差异。将各神经电生理指标与抑郁症实验组的汉密尔顿抑郁量表得分进行相关分析, 进一步验证所得到的神经机制结果与临床表现间的联系。

结果 在神经电生理数据中, P300 成分的波幅在健康对照组中存在显著的情绪一致性和情绪效价的交互作用, 在抑郁症组中仅发现了显著的情绪效价的主效应。此外, 抑郁症组在消极情绪的一致和不一致条件下 N400 成分的波幅差值与其汉密尔顿抑郁量表得分间存在显著的负相关。在 LPP 成分的波幅上, 无论抑郁症组还是对照组均存在显著的情绪效价主效应。

结论 相对于在健康群体中存在显著的情绪与注意的交互作用, 抑郁症群体在情绪刺激加工的晚期阶段, 情绪效价效应主导了认知加工过程, 对消极面孔有更深的认知加工, 而不受非注意情绪刺激的干扰, 即消极认知偏向。此外, 在消极条件下, 非注意情绪刺激的调节作用大小与抑郁症群体的严重程度成正相关。

关键词: 抑郁症, 情绪 stroop, EEG, P300, N400

Using Interpretable Machine-learning Methods To Unravel Sex Disparities in Factors Associated with Non-suicidal Self-injury Among Chinese Adolescents with Depressive Disorders

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Objective Non-suicidal self-injury (NSSI) among adolescents is a considerable and widespread concern in public health. However, whether sex differences exist in influencing NSSI remains largely unexplored, resulting in ambiguous and even contradictory findings. This study aims to identify the contributing factors and sex differences that impact NSSI in adolescents with Major Depressive Disorders (MDD)

Methods 2343 Chinese adolescents (22.1% male; mean age = 14.99, SD = 1.65) participated in this study

to complete self-report surveys. Cross-sectional data was evaluated with a random forest model and interpreted with the Shapley Additive Explanations method. The models exhibited strong performance (male accuracy=70%, female accuracy=69%)

Results The results indicate that factors related to depression, self-esteem, and family support were identified as crucial in predicting NSSI for both sexes. Sleep quality (male ranking=3, female ranking=14), emotional abuse (male ranking=6, female ranking=33), in a relationship (male ranking=7, female ranking=18) and residence (male ranking=11, female ranking=21) emerged as significantly more important for male adolescents in predicting NSSI. For female adolescents, age (female ranking=3, male ranking=17), attack on property (female ranking=5, male ranking=18), drink (female ranking=6, male ranking=21) and BMI (female ranking=10, male ranking=15) were found to be significant factors. Furthermore, the analysis revealed that more significant other support was positively associated with NSSI behavior in male

Conclusion These findings provide valuable insights into tailoring prevention strategies based on gender-specific risk factors for NSSI behavior. Our research can contribute to early detection, preventive intervention and intensive monitoring

关键词: Non-suicidal self-injury; Random forest; SHAP; Sex Differences

Cortical Features of Major Depressive Disorder in Emerging Adults: A Surface-Based Analysis Study

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Objective Extensive research, predominantly in adults, has highlighted structural brain variations among patients with major depressive disorder (MDD). However, emerging adults, who undergo significant cortical reshaping and are highly vulnerable to depression, receive relatively little attention, despite reporting a higher prevalence of childhood trauma experiences. This study examines cortical volume (CV) and surface area (SA) in emerging adults with first-episode, treatment-naïve MDD, with the objective of investigating their association with childhood trauma

Methods This study included eighty-six emerging adults, aged 18 to 25, experiencing their first episode of depression and who had not received prior treatment, along with eighty-one age- and gender-matched healthy controls (HCs), underwent T1-MRI scans. The data underwent preprocessing through FreeSurfer. Subsequently, individual subjects' data were mapped onto the standardized fsaverage brain template, characterized by 163,842 vertices. A 10-mm full-width at half-maximum (FWHM) Gaussian kernel was applied to smooth CV and SA. Differences in CV and SA between the groups were assessed at each vertex using generalized linear models (GLM), controlling for age, education, and intracranial volume as covariates unrelated to the primary investigation. To adjust for multiple comparisons, non-parametric permutation testing was utilized, setting a cluster-forming threshold at $p < 0.001$ with 1000 permutations. Clusters achieving a corrected cluster-wise p -value (CWP) < 0.05 were identified as exhibiting significant differences. For regions showing significant clusters, average measurements within each identified cluster were extracted to facilitate further analysis correlating these morphometric findings with clinical features and children trauma

Results This study revealed that 65.1% of emerging adults with MDD had experienced childhood trauma. Compared to healthy controls, individuals with MDD exhibited reduced surface area in the right caudal middle frontal region (cluster size = 528.12mm^2 , CWP = 0.0278). and decreased cortical volume in the right

precentral volume (cluster size = 411.13mm^2 , CWP = 0.0010). However, correlations between cortical measures and clinical features such as depressive and anxious symptoms or illness duration did not reach statistical significance. Notably, a negative correlation was observed between cortical area in the right caudal middle frontal region and experiences of sexual abuse ($p=0.025$, $r=-2.47$). However, this relationship did not survive correction for multiple comparisons

Conclusion The findings suggest that abnormal cortical development in emerging adults experiencing their first episode of depression may serve as a predisposing factor for depressive disorder, independent of clinical symptomatology. Moreover, these cortical abnormalities may be associated with experiences of childhood trauma.

关键词: Major depressive disorder; Emerging adults; Cortical Volume; Surface Area; Childhood Trauma

Optimizing SSRI Dose Adjustment in Major Depressive Disorder Treatment: Insights From Clinical Practice

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Objective This study aimed to explore the optimal time for dose adjustment of SSRI in antidepressive treatment, and to investigate which population were most likely to benefit from various dose-adjustment strategies

Methods This study included 490 patients diagnosed with MDD by the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5) and receiving citalopram or escitalopram for antidepressive treatment for at least 12 weeks. All participants were 16 years older, had a Hamilton Depression Scale 17 items (HAMD-17) score of 17 or greater at baseline and provided written informed consents. Participants were considered as remission if the HAMD-17 score reached 7

or lower after 12-week treatment. A decision tree on remission was established using age, sex, HAMD-17 score at baseline, initial dose, 2-week and 4-week doses as features. Of all the participants, 390 were randomly selected as the training set and the rest 100 were used as the test set

Results For patients older than 50, quickly titration of the dose higher than 12.5mg at week 2 and remaining the dose higher than 7.5 mg at week 4 could maximize the likelihood of achieving remission. For patients younger than 50, dose adjustment method did not have a significant impact on antidepressant efficacy, but sex and symptom severity at baseline had a greater impact on efficacy. For those with severer depressive symptoms at baseline, treatment outcomes were better for male than for women. The accuracy of prediction was 0.66 in test set

Conclusion Patients older than 50 were most likely to benefit from a quick dose titration at week 2 and remaining dose higher than 7.5mg at week 4. Larger sample size and more comprehensive considerations such as including body weight could help improve the predictive performance of this model.

关键词: depression, antidepressant, dose adjustment

青少年抑郁障碍患者产生持续性自杀意念的心理社会因素——一项前瞻性研究

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目的 青少年抑郁障碍的患病率不断上升,并伴随着高自杀率、高自残率等特征,已成为主要的公共卫生问题。自杀意念在抑郁障碍患者中很常见,是预测自杀行为的关键因素,但现有对持续性自杀意念的研究较少。本研究旨在评估自杀意念的纵向发展过程并确定持续性自杀意念的心理社会因素。

方法 本研究共纳入 150 名青少年抑郁障碍患者,在基线时收集一般资料,采用儿童期创伤问卷(Childhood Trauma Questionnaire, CTQ)、流调用抑

郁自评量表(the center for epidemiological study depression scale, CES-D)、多伦多述情障碍量表(Toronto Alexithymia Scale, TAS)评估童年创伤、抑郁症状和述情障碍,并进行自杀意念的评估。根据基线有无自杀意念将患者分为基线有自杀意念组和基线无自杀意念组,在一年后进行随访,再次评估有无自杀意念。使用 SPSS 26.0 对数据进行统计分析,应用二元逻辑回归(n=122)分析持续性自杀意念的独立危险因素。

结果 基线时,有 58 名患者存在自杀意念,一年后随访发现有 24 名患者存在持续性自杀意念(占基线有自杀意念组的 41.4%, 占总样本的 19.67%)。有持续性自杀意念的患者是独生子女比率($t=-2.426$, $P=0.015$)、伴有非自杀性自伤比率($t=-2.029$, $P=0.042$)、CES-D(人际关系)因子分($t=-2.102$, $P=0.04$)、TAS 总分($t=-2.339$, $P=0.023$)、TAS(情感辨别不能)因子分($t=-2.185$, $P=0.033$)高于无持续性自杀意念患者,其中独生子女[OR=3.969, 95%CI:1.227~12.839, $P=0.021$]、TAS 总分[OR=1.091, 95%CI:1.006~1.184, $P=0.035$]、TAS(情感辨别不能)[OR=1.134, 95%CI:1~1.287, $P=0.05$]是产生持续性自杀意念的心理社会因素。

结论 在有持续性自杀意念的青少年抑郁障碍患者中,独生子女、述情障碍以及情感辨别不能是产生持续性自杀意念的心理社会因素。因此,针对家庭结构和述情的干预措施对于预防青少年抑郁障碍患者的持续性自杀意念尤为重要。

关键词: 持续性自杀意念, 抑郁障碍, 青少年, 前瞻性研究

心率变异性的昼夜节律模式与抑郁障碍患者临床症状的相关性

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目的 抑郁障碍可引起心率变异性(Heart rate variability, HRV)水平的下降。本研究旨在探索抑郁障碍患者 HRV 的昼夜节律模式,以及抑郁症状与 HRV 昼夜节律的相关性。

方法 在同济医院焦虑抑郁专科门诊,纳入符合 DSM-V 抑郁障碍诊断标准且既往未曾服用抗抑

郁药或在近 6 个月内未曾服用抗抑郁药物的抑郁障碍患者 167 名,同时纳入健康对照受试者 60 名。收集受试者的一般人口学资料、24 小时长程动态心电图和心理学量表。使用 MATLAB 2023a 将每个受试者的每 5 分钟 RR 间期的 HRV 指数分别拟合成一个余弦周期回归模型,并从余弦曲线中提取出三个特征参数,包括中线平均值(Midline Estimating Statistic OF Rhythm, M)、振幅(Amplitude, A)和顶峰时间(Acrophase, θ)。采用 SPSS 25.0 进行 Mann-Whitney U 检验比较抑郁障碍与健康对照受试者的 HRV 昼夜节律,并进行多元线性回归分析分别评估抑郁、焦虑、躯体症状和失眠与 HRV 各指数(SDNN、SDANN、RMSSD、pNN50、LF、HF、LF/HF)昼夜节律特征(M、A、 θ)的相关性,以 $P < 0.05$ 认为差异具有统计学意义。

结果 162 名抑郁障碍患者和 58 名健康对照受试者的动态心电图数据被认为完整有效,纳入到研究分析中。1)抑郁障碍与健康对照受试者在 SDNN($z = -3.539, P < 0.001$)、RMSSD($z = -3.808, P < 0.001$)、pNN50($z = -3.921, P < 0.001$)、LF($z = -2.827, P = 0.005$)和 HF($z = -2.438, P = 0.015$)的参数 M, RMSSD($z = -2.245, P = 0.025$)、pNN50($z = -2.222, P = 0.026$)和 HF($z = -1.993, P = 0.046$)的参数 A 上存在显著性差异。2)在校正了性别、年龄、BMI、吸烟饮酒史和慢性疾病史等混杂因素后发现, RMSSD($\beta = 0.187, P = 0.028$)、pNN50($\beta = 0.173, P = 0.042$)、HF($\beta = 0.229, P = 0.006$)的参数 M 与抑郁严重程度呈正相关,SDANN 的参数 A 与抑郁严重程度呈负相关($\beta = -0.187, P = 0.024$)。3) pNN50 的参数 A 与抑郁障碍患者的躯体症状严重程度呈负相关($\beta = -0.187, P = 0.026$)。

结论 抑郁症状与抑郁障碍患者 HRV 昼夜节律的特征存在显著相关性,HRV 昼夜节律可在一定程度上反应抑郁的严重程度,可能是抑郁障碍患者长期自主神经功能波动变化的敏感生物标志物。

关键词:抑郁障碍,心率变异性,昼夜节律

光照辅助氟西汀治疗女性重性抑郁障碍的临床疗效

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目的 探究光照辅助氟西汀治疗重性抑郁障碍患者在情绪、睡眠及认知功能方面的临床疗效,为光照治疗在重性抑郁障碍患者中的应用提供研究数据。

方法 本研究纳入 2021 年 10 月至 2023 年 12 月在湖南省脑科医院(湖南省第二人民医院)门诊就医的女性重性抑郁障碍患者 57 例,对照组(单药氟西汀治疗)27 例,实验组(光照辅助氟西汀治疗)30 例。对患者进行持续 2 周的干预治疗,对照组服用单药氟西汀治疗(前 3 天 20mg/天,第 4 天起 40mg/天);实验组的药物治疗同对照组,并于每日清晨 7:00-9:00 进行光照治疗。基线期、1 周末、2 周末三个时间节点,使用病例报告表、汉密尔顿抑郁量表-24 项(Hamilton depression scale-24, HAMD-24)、匹兹堡睡眠质量指数量表(Pittsburgh sleep quality index, PSQI)、药物副作用量表(Treatment emergent symptom scale, TESS)收集患者的一般信息资料及评估抑郁症状、睡眠情况、治疗副作用,在基线期及 2 周末利用 THINC 成套工具(Thinc-integrated tool, THINC-IT)评估认知功能。

结果 1.基线期,两组的年龄、HAMD 评分、PSQI 评分、入睡时间、睡眠时长、THINC-IT 评分均无显著性差异($P > 0.05$)。

2.治疗 1 周后,实验组与对照组的抑郁症状均得到改善,且两者间差异具有显著性($t = -3.42, P < 0.001$);治疗 2 周末时,两组患者的 HAMD 评分较基线期均得到大幅度下降,差异具有显著性($P < 0.001$)。

3.实验组与对照组经过 2 周治疗后,PSQI 评分与基线期相比,其差异均有显著性差异($P < 0.001$);实验组的入睡时间及睡眠时长均优于对照组($P < 0.05$);并在 1 周末,实验组 PSQI 评分与对照组间具有统计学差异($t = -2.93, P < 0.05$)。

4.治疗 2 周后,实验组的数字符号替代测试、连线测试 B 与基线期相比,其差异均具有显著性差异($P < 0.05$),对照组的认知损害 5 项问卷及替代测试与基线期相比均具有显著性差异($P < 0.05$)。

结论 1.光照辅助氟西汀治疗可以加速缓解 MDD 患者的抑郁情绪、缩短入睡时间、延长睡眠总时长,在 1 周时即可显现出较好的治疗效果。

2.光照辅助氟西汀治疗可以有效改善警觉性、反应速度、工作记忆及执行功能等认知功能。

关键词:重性抑郁障碍;光照治疗;情绪;睡眠;

认知功能

基线期镜像体素同伦连接特征对 SSRI 类抗抑郁剂疗效预测作用的研究

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目的 既往关于神经脑影像学研究表明, 抑郁症的发生、发展与转归与大脑重要脑区的功能调节有关。基线期的脑功能特征可能与后期临床症状改善的神经病理学机制密切相关。本研究旨在比较不同疗效的抑郁症患者的基线期镜像同伦功能连接, 探索其在临床症状改善中的机制。基于基线期镜像体素同伦功能连接特征与药物疗效的相关性, 进一步探讨其对 SSRI 抗抑郁剂疗效的预测效能。

方法 采用纵向的随访研究设计。依据 DSM-IV 诊断标准入组首发抑郁症患者, 对所有受试者进行基线期静息态功能性磁共振成像扫描, 并于 8 周急性期 SSRI 抗抑郁药物治疗, 采用 17 项汉密尔顿抑郁量表 (HAMD-17) 进行疗效评估。基于药物治疗 8 周后的 HAMD-17 评分, 将研究对象分为临床治愈组 (HAMD-17 评分 \leq 7 分) 和临床未治愈组 (HAMD-17 评分 $>$ 7 分)。比较两组间的基线期镜像同伦功能连接, 分析其与后期临床症状改善之间的关系。基于基线期的镜像体素同伦功能连接特征对急性期治疗 8 周后的抗抑郁剂疗效进行预测研究。采用 ROC 分析, 检验基线期镜像同伦功能连接特征对抗抑郁剂疗效的预测效能。

结果 共纳入 56 例首发抑郁症患者。研究发现不同疗效的首发抑郁症患者存在基线期镜像同伦功能连接的差异 (GRF 校正, 体素水平 $P<0.01$, 团块水平 $P<0.05$); 与临床治愈组 ($n=29$) 相比, 临床未治愈组 ($n=27$) 在双侧后扣带回/舌回/距状皮层的基线期镜像体素同伦功能连接增强 ($t=4.83$)。ROC 分析提示后扣带回/舌回/距状皮层的镜像同伦功能连接特征区分临床治愈组与临床未治愈的预测效能曲线下面积 $=0.858$, $P<0.001$, 95% CI $=0.761-0.955$, 灵敏度为 81.5%, 特异性为 82.8%。

结论 1. 静息状态下, 不同疗效的首发抑郁症患者存在基线期的脑功能差异。与疗效好的患者相比, 疗效差的患者双侧大脑半球后扣带回/楔前叶/舌

回/距状皮层的镜像体素同伦功能连接增强, 基于基线期镜像体素同伦功能连接的脑功能特征可能成为对治疗结局具有预测作用的潜在工具。2. 首发抑郁症患者双侧后扣带回/楔前叶/舌回/距状皮层的基线期镜像同伦功能连接与 SSRI 抗抑郁剂疗效相关, 功能连接增强可能预示着 SSRI 抗抑郁剂疗效不佳, 提示可能是抑郁症急性期疗效预测的生物学指标。

关键词: 抑郁症, 镜像体素同伦连接, 疗效预测, 选择性 5-HT 再摄取抑制剂

Abnormal Microbiota-SCFAs-immune Network in Major Depressive Disorder: A Combined Cross-sectional and Longitudinal Study

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Objective Major depressive disorder (MDD) is a chronic mental illness that poses a serious threat to human health characterized by persistent low mood, with high morbidity and disability rates. Many theories have been developed to explain the pathogenesis of MDD, but none of these theories has been universally accepted. There is robust evidence that MDD is accompanied by activation of the immune-inflammatory response. However, the cause of long-term immune activation in MDD remains unclear. There is growing evidence indicating that the gut microbiota might affect systemic inflammation and central neuroimmune function, with short-chain fatty acids (SCFAs) being candidate mediators of these effects. The present study is to explore the possible role of gut microbiota in immune activation of MDD

Methods We performed an integrative analysis of intestinal microbiota, plasma SCFAs, and plasma inflammatory cytokines in 82 MDD patients and 91 healthy controls through combining a cross-sectional and longitudinal study. Moreover, we sought to identify a discriminative microbial, immune and metabolic panel that could distinguish MDD from HCs, then fur-

ther validate the diagnostic performance of this gut microbiome, plasma immune and metabolism signature using discovery and validation set samples, respectively

Results We demonstrated that significant differences in intestinal microbiota, SCFAs and inflammatory cytokine levels in MDD patients compared with HCs through combining a cross-sectional and longitudinal study. Moreover, pro-inflammatory cytokines (IL-6 and hs-CRP) were found to be increased, while anti-inflammatory cytokine (IL-10) was decreased in MDD. Pro-inflammatory cytokines (IL-1 β) decreased after antidepressant treatment. There were 22 bacteria taxa and 15 bacteria taxa significantly decreased and increased, respectively, in MDD. Genus Faecalibacterium and Oscillospira were increased after antidepressant treatment. Three major SCFAs (acetic acid, propionic acid and butyric acid) were found to be significantly decreased in MDD compared to healthy controls. The concentration of butyric acid was significantly increased after antidepressant treatment. We revealed that SCFAs were significantly correlated with altered gut microbiota and inflammatory cytokines, and intestinal microbiota may influence immune responses by regulating host metabolic processes. Furthermore, we identified and independently validated a combinatorial marker panel that could distinguish MDD from HC subjects with high accuracy

Conclusion Our results indicated aberrant gut-SCFAs-immune network in MDD and gut microbiota may influence immune responses by regulating the levels of SCFAs.

关键词: Major depressive disorder, gut microbiota, short-chain fatty acids, inflammatory cytokines, immune activation

基于语音特征和 LDA 主题模型联合分析的抑郁倾向言语模式研究

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目的 近年来, 抑郁症已成为全球范围内的重

大公共卫生问题, 影响了数百万人的生活质量。传统的抑郁症诊断主要依赖于临床访谈和自评量表, 但这些方法存在一定的主观性和局限性。因此, 寻找一种客观、有效的抑郁症识别方法显得尤为重要。语音作为一种自然且高频的交流方式, 包含了丰富的情感和心理状态信息, 成为近年来研究者关注的焦点。通过分析语音特征, 可以捕捉到情感变化和心理健康状态的细微差别, 从而为抑郁症的早期识别提供一种新的可能性。本研究旨在探索声学特征在抑郁症识别中的有效性, 揭示其声学特征与抑郁测评分数之间的关系, 应用 LDA 主题模型分析抑郁症患者的语言模式, 从而进一步理解抑郁倾向者的语言特征。

方法 本研究共收集了 122 名参与者在阅读词汇, 短文, 情绪面孔图片描述, 访谈时的语音数据, 同时收集了他们的抑郁测评分数。根据抑郁分数将参与者分为抑郁高分组 (36 人) 和低分组 (37 人)。基于 opensmile 工具包共提取了包括梅尔频谱, 梅尔倒谱系数 (MFCC) 基频在内的 6552 个语音特征, 并分析这些特征与抑郁测评分数的相关性, 然后对高低分组之间的语音特征进行了差异检验。基于这些差异特征, 进行了主成分分析 (PCA), 并与抑郁测评分数进行了线性回归分析, 最后, 将语音数据转换为文本数据, 基于 LDA 主题模型提取了 10 个主题, 并分析了各主题下的特征词汇, 揭示了抑郁高分组 and 低分组之间的独特语言模式。

结果 语音特征相关分析中, 发现抑郁高分组有 139 个语音特征存在显著相关性 ($p < 0.05$), 低分组有 242 个语音特征存在显著相关性 ($p < 0.05$); 语音特征差异分析中, 两组比较得到 205 个语音特征存在统计学差异显著 ($p < 0.05$); 主成分分析识别得出 33 个主成分, 其中主成分 1 ($r=0.326, p<0.01$), 主成分 11 ($r=0.198, p<0.05$), 主成分 12 ($r=-0.28, p<0.01$), 主成分 29 ($r=0.243, p<0.01$) 与抑郁倾向相关; 线性回归结果显示这些主成了解释了 57.78% 的抑郁测评分数的变异; 将语音数据转换为文本数据后, 基于 LDA 主题模型的词云, 词频分析共提取了 10 个主题, 每个主题下都有不同的特征词汇, 抑郁高分组和低分组之间的语言模式存在显著差异, 这些差异能够反映出抑郁症患者独特的语言表达方式。

结论 本研究通过对多任务情绪刺激下的语音特征进行系统分析, 验证了语音特征在抑郁症识别中的有效性。高低分组之间显著差异的语音特征以

及通过主成分分析得出的主成分能够有效解释抑郁测评分数的变异。此外, LDA 主题模型揭示了抑郁症患者独特的语言模式, 为抑郁症的识别和干预提供了新的视角和方法。

关键词: 语音特征, 文本分析, LDA 主题模型, 语言模式

A Network Analysis of Pregnancy Anxiety Symptoms in The Early Stages: A Comparison of Persistent Anxiety and Late Remission Groups

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Objective Pregnancy is a special time for women, when psychological problems like anxiety are prevalent. Early pregnancy is when anxiety symptoms are more common, but it's unclear if these symptoms will last into the middle or late stages of pregnancy. We aimed to retrospectively compare the differences in the network structure of anxiety symptoms during early pregnancy between mothers in the persistent anxiety group and those in the remission group. Identifying the structural and dynamic characteristics of the anxiety network can provide new theoretical perspectives and measurable indicators for predicting the occurrence and evolution of anxiety disorders

Methods We performed a real-world cross-sectional survey with mothers getting routine medical care

at Bao'an Maternal and Child Health Hospital in Shenzhen, China, between January 2020 and January 2024. We measured anxiety using the Generalized Anxiety Disorder-7 (GAD-7), with a score of >4 indicating the presence of anxiety symptoms. We investigated the central symptoms of anxiety using network analysis. A Network Comparison Test was employed to compare the global strength and network structure differences between two groups

Results A total of 23,212 mothers were enrolled in this survey, among which 1,689 (7.3%) had persistent GAD scores > 4 and 2,334 (10.1%) had anxiety symptoms only in the early stages. The network had excellent stability and accuracy. The central symptom in the persistent group was "GAD-4: Unable to relax," while in the remission group it was "GAD-2: Worry." In the early stages, there was no significant difference in scores or network structure between the two groups, but the global strength of the persistent group was higher than that of the remission group ($t = 0.27, P = 0.003$)

Conclusion The persistent group exhibited a more densely connected network at baseline than the remission group. More pronounced associations between symptoms may be an important determinant of persistence in anxiety

关键词: pregnancy, anxiety, GAD, network analysis

Psychosocial Functioning and Its Influencing Factors in Patients with Depression Post-Remission: Implications for Assessment and Interventions

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Objective Enhancing psychosocial functioning is crucial for reducing relapse in depression, but methods for monitoring and recovery remain unclear

Methods A one-year follow-up study assessed psychosocial functioning in 182 patients with remitted depression at baseline (T0) and at 1, 2, 6, 9, and 12

months post-remission (T1-T5). Using Generalized Estimating Equations (GEE) and Multiple Linear Regression (MLR), we analyzed the impact of psychosocial functioning changes on relapse/recurrence risk and assessed the influence of various factors

Results An increase in psychosocial functioning significantly lowered relapse/recurrence odds by 54.2%, averaging a 3.1% risk reduction. GEE indicated residual symptoms ($\beta=-0.315$) most significantly impacted psychosocial functioning, followed by social support ($\beta=0.236$), positive coping ($\beta=0.225$), and negative automatic thoughts ($\beta=-0.183$). Negative coping and expressed emotion had minimal effects. MLR revealed that while the impact of negative automatic thoughts was most significant at initial remission, the relative importance of residual symptoms, positive coping, and social support on psychosocial functioning remained stable over time

Conclusion Recovery of psychosocial functioning significantly reduces relapse risk in post-remission depression patients more than residual symptoms. The degree of influence of factors on psychosocial functioning can change with the length of remission time

关键词 : Depression; remission; psychosocial functioning; residual subjective depressive symptom; psychosocial factors;

Study of The Efficacy of Berberine Add-on Therapy on Depressive Symptoms in Depressed Patients: A Randomised, Double-blind, Placebo-controlled Clinical Trial

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Objective Berberine (BBR) is a pentacyclic isoquinoline alkaloid extracted from a variety of natural medicinal plants, including *Coptis chinensis*, *Phellodendron amurense* and *Rheum palmatum*. It has been demonstrated to be effective in improving depressive

behaviour in animals in animal studies. The objective of this study was to assess the potential of BBR to improve depressive symptoms and evaluate its safety in clinical application in depressed patients

Methods In a double-blind, randomised, placebo-controlled clinical trial, 78 patients with depression were randomly assigned to either the BBR group ($n=39$) or the placebo group ($n=39$) for an 8-week period of combined conventional antidepressant medication. The Hamilton Depression Scale (HAMD-17) was employed to assess the severity of depressive symptoms in patients at baseline, 2-week, 4-week, 6-week, and 8-week. Additionally, Treatment Emergent Symptom Scale (TESS) was utilised to evaluate the safety of the intervention at baseline, 4-week, and 8-week

Results A total of 68 patients completed the trial. Compared to the Placebo group, the BBR group showed significant changes in scores at all weeks relative to baseline (9.38 ± 5.13 vs 6.00 ± 3.44 , $P=0.009$; 12.71 ± 5.17 vs 9.50 ± 6.63 , $P=0.049$; 15.62 ± 5.05 vs 10.62 ± 7.25 , $P<0.001$; 16.29 ± 5.04 vs 11.65 ± 6.99 , $P=0.002$). The analysis showed a significant difference in HAMD-17 total score between the BBR and Placebo groups at 6 and 8 weeks scores ($P<0.05$). Relative to Placebo, there was a significant increase in response rate at 6 weeks with BBR (OR=5.78 95%CI 1.42-23.50, $P=0.014$); and a significant increase in remission rate at 2 and 8 weeks (OR=6.17 95%CI 1.14-33.56, $P=0.035$; OR=6.25 95%CI 1.65-23.66, $P=0.007$). Early remission rate was also significantly increased (OR=7.2 95%CI 1.15-44.95, $P=0.035$). Patients in the BBR group had a significantly shorter response time (3.82 ± 0.27 vs 4.82 ± 0.36 ; Long Rank $P=0.013$). In addition, there were no significant differences between the two groups in baseline demographic characteristics, medication use, or other side effects, except for BMI, dizziness, or syncope

Conclusion The use of BBR as an add-on therapy may be an effective and safe method of improving depressive symptoms in patients with depression, resulting in higher clinical benefits over a shorter treatment period for patients. However, further studies with larger sample sizes are required to confirm the reliability of these results

关键词: Berberine, depression, randomized controlled trial, Hamilton Rating Scale for Depression, immunity.

青少年抑郁症患者中非自杀性自伤行为及其成瘾性、不同功能相关的大尺度脑网络

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目的 非自杀性自伤(Non-suicidal self-injury, NSSI)是儿童和青少年中普遍存在的高危风险行为。它在学龄早期出现,青春期显著增长,并持续到成年早期。此外,它在多种精神疾病中均有发生。精神疾病涉及脑功能网络的广泛失调,包括额顶叶网络、边缘网络和基底神经节网络等。鉴于 NSSI 是各种精神疾病中普遍伴随的成瘾问题行为,那么有必要探索 NSSI 行为伴随的脑功能网络改变。此外, NSSI 行为具有内外部情绪调节等功能,因此有必要继续探索 NSSI 不同功能的独特脑网络改变。因此,本文从大尺度脑功能网络的视角,在抑郁症青少年群体中探究 NSSI 行为、NSSI 成瘾性及其不同功能相关的脑网络机制,进一步揭示 NSSI 行为关联的神经网络靶点。

方法 本研究共纳入来自山东省抑郁症青少年神经影像学项目的 156 名参与者。其中伴有 NSSI 的重度抑郁症(Major depressive disorder, MDD)患者 44 例(MDD+NSSI 组),无 NSSI 的重度抑郁症(MDD-NSSI 组)32 例,健康对照组 80 例。采用渥太华自伤量表对青少年 NSSI 行为进行测量。使用支持向量机递归特征消除模型分类以及回归模型来探究与 NSSI 相关的大尺度脑网络,并随后探究了与 NSSI 成瘾性及其四个功能(内部情绪调节、社交影响、外部情绪调节、寻求刺激)相关的脑网络。

结果 与 NSSI 行为相关的脑网络由 60 条边构成,主要是额顶叶网络与边缘系统网络、基底神经节网络、运动网络、视觉关联网络、视觉 I 区网络、小脑网络之间的网络间连接。NSSI 成瘾性、内部情绪调节、社交影响、外部情绪调节以及寻求刺激相关的脑网络由额顶叶、边缘系统、运动和基底神经节网络与其他网络之间特定的连接模式构成。这些结果在外部数据集中得到了两次验证,包含在主要

结果中的部分连接——额顶叶网络、基底神经节网络、运动网络和边缘网络与其他网络的网络间连接在跨诊断与 ADHD 队列中能显著预测 NSSI 的严重程度。

结论 额顶叶、边缘系统、运动和基底神经节网络之间特定的连接模式构成了相应 NSSI 行为以及其成瘾性、内部情绪调节、社交影响、外部情绪调节和寻求刺激相关的脑网络。表明了 NSSI 患者存在着执行控制、情绪调节以及奖赏功能的整体性失调。在 NSSI 成瘾性及其四个功能相关的脑网络中,额顶叶网络以及边缘系统网络表现出了一致的高度参与,表明了执行控制功能以及情绪调节功能的异常可能是 NSSI 患者的核心功能损伤。

关键词: 非自杀性自伤,大尺度脑网络,青少年抑郁症

SLC6A4、5-HTR2A 基因多态性对艾司西酞普兰疗效的影响及相关因素的研究

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背景 既往研究发现溶质载体家族 6 成员 4 (SLC6A4)、5-羟色胺 2A 受体 (5-HTR2A) 部分基因多态性与艾司西酞普兰疗效相关,如 SLC6A4 启动子区域 (5-HTTLPR) L 等位基因携带者、5-HTR2Ars9316233 C 等位基因携带者抗抑郁疗效可能较好,较多实验室在 PGx 报告中根据上述基因多态性预测艾司西酞普兰疗效,但临床中常发现实际疗效与基因预测结果不一致。

目的 探讨 5-HTTLPR、5-HTR2A 基因多态性对艾司西酞普兰疗效的影响及相关因素。

方法 采用前瞻性队列研究设计,纳入服用艾司西酞普兰的急性期抑郁症患者,基线期 PGx 检测获取 5-HTTLPR、5-HTR2A rs9316233 基因型信息,收集一般人口学资料及病史信息,在基线期及 8 周末进行访视,利用 HAMD-17 评估疗效,并进行 8 周末血药浓度监测(therapeutic drug monitoring, TDM)。8 周末 HAMD-17 总分较基线降低 $\geq 50\%$ 为有效。使用 SPSS 23 软件进行统计分析,采用 t 检验或 χ^2 检验进行单因素比较,采用多因素 Logistic 回归分析探索基因型对疗效的影响。

结果 (1) 纳入 88 例患者, 74 例完成随访。(2) 8 周末达有效患者 55 例 (74.3%), 无效 19 例 (25.7%), 有效组与无效组在性别、家族史、是否为首发、基线 HAMD-17 总分方面差异均无统计学意义 (均 $P > 0.05$), 有效组平均年龄较无效组大 (32.42 ± 7.71 岁 vs. 28.26 ± 5.31 岁), 差异有统计学意义 ($t = -2.179, P = 0.033$)。(3) 有效组与无效组间 5-HTTLPR L 等位基因携带者构成比、5-HTR2A C 等位基因携带者构成比均无统计学差异 (41.8% vs. 47.4%, $\chi^2 = 0.177, P = 0.674$; 90.9% vs. 89.5%, $\chi^2 = 0.034, P = 0.854$)。(4) 有效组和无效组分别收集 8 周稳态 TDM 46 例和 16 例, 有效组平均血药浓度为 21.13 ± 16.39 ng/mL, 无效组为 27.49 ± 14.45 ng/mL, 两组间 TDM 无统计学差异 ($t = 1.376, P = 0.174$)。(5) 多因素 Logistic 回归分析显示, 5-HTTLPR 及 5-HTR2A 基因型仍不是艾司西酞普兰抗抑郁疗效的独立影响因素 ($OR = 0.711, P = 0.613$; $OR = 1.070, P = 0.946$)。

结论 本研究尚不支持仅依据 5-HTTLPR、5-HTR2A 基因多态性对艾司西酞普兰进行疗效预测, 未来需扩大样本探讨可能的疗效影响因素。

关键词: 艾司西酞普兰; 基因型; 疗效

The Activity of DMN Mediates The Effect of Peripheral Plasma GDNF Level on Rumination in MDD Patients.

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Objective Rumination is a pivotal psychopathological process in major depressive disorder (MDD). The neurotrophic hypothesis suggests that glial cell line-derived neurotrophic factor (GDNF) might play a role in brain dysfunction and clinical symptoms of MDD. However, the relationship remains unclear

Methods Thirty-three individuals with MDD and thirty-three healthy controls (HCs) completed a rumination state task during a magnetic resonance imag-

ing (MRI) scan, in which they were induced into a continuous, active rumination state. A Ruminative Response Scale (RRS) was used to assess the rumination tendency of each participant. Fractional amplitude of low-frequency fluctuations (fALFF) and functional connectivity (FC) were calculated to characterize the brain activity of default mode network (DMN) subsystem during rumination. Serum levels of GDNF, IL6, IL8, CRP were measured in all participants. The relationship between fALFF values, GDNF levels, and RRS score in MDD was explored

Results Compared with the HCs, MDD patients showed significantly decreased levels of GDNF ($t = -3.204, p = .002$) and IL8 ($t = -3.239, p = .002$). Significant interaction effects ($F = 25.075, p < .001$) for the fALFF of DMN dorsal medial prefrontal cortex (DMPFC) and medial temporal lobe (MTL) subsystem ($F = 25.075, p < .001, F = 28.753, p < .001$) were observed. Further analyses indicated that the impact of GDNF on brooding was mediated by the activity of the DMN DMPFC subsystem in MDD patients

Conclusion MDD patients modulate the effects of GDNF on the activity of DMN DMPFC subsystems, thereby influencing the manifestation of rumination symptoms

关键词: major depressive disorder, rumination, fMRI, fALFF, GDNF

特质冲动对青少年抑郁症患者自杀行为的影响

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目的 目前许多研究发现冲动是自杀的危险因素, 但尚不知冲动是否可以预测自杀意念到自杀行为的转变。本研究旨在研究青少年抑郁症患者自杀意念及自杀行为与冲动特质之间的关系。

方法 在具有自杀意念的青少年抑郁症患者中进行横断面研究, 比较仅有自杀意念的患者与曾有自杀未遂的患者之间的焦虑、抑郁、冲动水平等差异, 并对特质冲动与自杀意念及自杀行为进行相关

性分析。本研究采用 PHQ-9、GAD-7、BIS-11、BSSI 量表评估抑郁、焦虑、特质冲动水平及自杀意念水平。

结果 本研究纳入 195 名具有自杀意念的青少年抑郁症患者, 其中 127 名患者仅有自杀意念, 68 名患者曾有自杀未遂。自杀意念组中女性患者占 67.72%, 自杀未遂组中女性患者占 86.76%。自杀意念组的年龄高于自杀未遂组 (15.66 ± 1.88 VS. 14.88 ± 1.64 , $P=0.004$), 抑郁水平 (19.02 ± 4.87 VS. 21.13 ± 4.30 , $P=0.003$), 冲动水平 (55.46 ± 14.65 VS. 61.17 ± 12.29 , $P=0.020$) 及自杀意念 (39.18 ± 23.06 VS. 58.37 ± 22.52 , $P<0.001$) 均明显低于自杀未遂组, 焦虑水平无明显差异 (14.27 ± 5.19 VS. 14.79 ± 5.26 , $P=0.514$)。在单因素回归中, 女性 ($OR=3.13$, $95\%CI: 1.41-6.91$, $P=0.004$)、较小的年龄 ($OR=0.78$, $95\%CI: 0.66-0.93$, $P=0.005$)、较长的病程 ($OR=1.02$, $95\%CI: 1.01-1.04$, $P=0.011$)、较高的冲动总分 ($OR=1.03$, $95\%CI: 1.00-1.06$, $P=0.022$)、非计划冲动 ($OR=1.02$, $95\%CI: 1.00-1.04$, $P=0.033$) 及认知冲动 ($OR=1.02$, $95\%CI: 1.00-1.05$, $P=0.033$) 与自杀未遂有关。将性别、年龄、病程、抑郁、焦虑、冲动纳入多因素回归中, 女性、年龄较小、病程较长、抑郁得分高是自杀行为的独立危险因素 (P 值均 <0.05), 而冲动与自杀未遂无关。以 BSSI 量化的自杀意念作为因变量, 年龄、性别、病程、抑郁、焦虑、冲动水平作为自变量, 进行多因素线性回归, 自杀意念与冲动水平、抑郁水平呈正相关, 与年龄呈负相关。

结论 冲动特质可以预测较高的自杀意念, 但不能预测自杀意念向行为的转变。因此, 青少年抑郁症患者的自杀行为并非冲动性的。

关键词: 青少年, 抑郁症, 自杀意念, 自杀行为, 冲动

同伴侵害经历对抑郁症临床特征的影响

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目的 比较有无同伴侵害经历的抑郁症患者临床特征之间的差异, 分析探讨同伴侵害经历对抑郁症临床特征的影响

方法 于 2021 年 3 月至 2022 年 10 月在××医院招募 377 例 18-60 岁的抑郁症患者 (男 97; 女 280), 根据同伴侵害问卷 (Peer Victimization Questionnaire, PVQ) 得分将患者分为无同伴侵害经历组 (≤ 27 分, $n=262$) 和有同伴侵害经历组 (> 27 分, $n=115$)。采集社会人口学资料、疾病症状特征、汉密尔顿焦虑量表 (Hamilton Anxiety Scale-14, HAMA-14)、汉密尔顿抑郁量表-17 项 (The Hamilton Depression Rating Scale-17, HAMD-17), 比较两组间临床特征的差异, 分别使用 logistic 回归及线性回归分析同伴侵害经历对抑郁症各临床特征产生的影响。

结果 抑郁症患者无同伴侵害经历与有同伴侵害经历占比分别为 69.50% 和 30.50%。与无同伴侵害经历相比, 有同伴侵害经历的患者更多见于发病年龄较小、低 BMI、未婚、低收入家庭、无精神疾病家族史的人群, 更多患者存在自杀行为和非自杀性自伤行为, 差异有统计学意义 ($t=8.663$ 、 2.41 , $\chi^2=29.53$ 、 3.76 、 6.45 、 9.86 、 7.18 , 均 $P<0.05$)。量表评分方面, 有同伴侵害经历患者 HAMA 中的焦虑心境因子、肌肉系统症状因子得分更低, HAMD 中自杀因子得分更高, 迟滞因子得分更低, 差异有统计学意义 ($t=2.02$ 、 2.51 、 -2.77 、 2.08 , 均 $P<0.05$)。Logistic 回归分析和线性回归分析显示, 有同伴侵害经历是抑郁症患者发病年龄早 ($b=-6.58$, $t=-7.41$, $P<0.05$)、未婚 ($OR=0.21$, $95\%CI: 0.12-0.38$)、BMI 偏低 ($b=-1.09$, $t=-2.41$, $P<0.001$)、症状特征表现为焦虑心境较轻 ($b=-0.21$, $t=-2.02$, $P<0.05$)、肌肉系统不适感较轻 ($b=-0.30$, $t=-2.51$, $P<0.05$) 的影响因素, 但更常见自杀行为 ($OR=3.06$, $95\%CI: 1.48-6.31$)、非自杀性自伤行为 ($OR=2.30$, $95\%CI: 1.23-4.18$)。

结论 本研究揭示了同伴侵害经历对抑郁症患者临床特征的多方面影响。有同伴侵害经历的抑郁症患者表现为起病早, BMI 较低, 未婚比例较高。尽管焦虑症状较轻, 但自杀意念更强, 更容易出现自杀行为和非自杀性自伤行为。这些发现为临床诊断和治疗提供了重要依据, 并提示在评估抑郁症患者时应特别关注其同伴侵害经历。

关键词: 抑郁症, 同伴侵害, 临床特征

抑郁患者工作记忆任务态 alpha 波脑磁频谱能量的改变

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目的 抑郁症作为一种常见的心境障碍，常伴认知功能损伤，其中以记忆损伤较明显，影响个体日常生活和工作。但目前关于抑郁症患者工作记忆加工受损的动态神经电生理机制不清，既往研究发现 alpha 神经振荡（8-13 Hz）参与记忆加工处理。本研究旨在揭示抑郁症患者工作记忆功能损伤的神经电生理机制。

方法 本实验共招募 91 例受试者，43 例健康对照组（Healthy Control, HC），2023-2024 年期间在我院就诊的单相抑郁症（Major Depressive Disorder, MDD）患者 48 人。两组受试者的年龄、性别、受教育年限均相匹配，所有入组受试者均通过脑磁图扫描过程中完成了 5 分钟 2-back 工作记忆任务。脑磁图数据基于 Fieldtrip 平台进行滤波、去除伪迹、溯源等处理，提取 2-back 工作记忆任务态 alpha 能量（8-12Hz）进行频谱分析，运用 Cluster-based permutations 非参数统计方法进行统计分析（cluster α =0.01， α =0.5）。

结果 通过对溯源结果进行分析，发现 HC、MDD 两组之间，前额叶（背外侧前额叶），边缘结构（海马、杏仁核），皮层下结构（丘脑），等多个脑区在 alpha 频段的能量，差异具有统计学意义，抑郁症患者较健康对照组在 alpha 频段能量减弱。

结论 本研究结果表明，抑郁症患者在执行工作记忆加任务时，全脑多个区域表现出加工异常，以前额叶-边缘-皮层下环路的 alpha 频段异常最为显著，该环路是构成了工作记忆功能关键神经基础。研究发现，其 alpha 频段的能量降低，可能是抑郁症患者工作记忆损害的核心机制，对患者的日常生活及工作能力造成了显著影响。本研究揭示了抑郁患者工作记忆功能损伤背后的神经电生理机制，为针对抑郁症患者认知功能恢复制定有效干预策略提供了科学依据。未来需进一步研究调控 alpha 波活动的方法，以改善抑郁症患者的认知功能。

关键词：抑郁症,脑磁图,工作记忆,alpha 振荡,前额叶

Associations between Rumination and The Incidence of First-episode Major Depressive Disorder in A Sample of Chinese University Students: From A 1-year Longitudinal Stud

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Objective Rumination is a negative cognitive style that can increase the impact of risk factors on depression. This cohort study was to estimate the effect of rumination on the incidence of first-episode major depressive disorder (MDD) among freshmen in a Chinese medical university, to provide help for students' mental health counseling and reduce the incidence of MDD

Methods In this longitudinal cohort study, 6985 participants without MDD at baseline completed a follow-up survey one year later. The Chinese version of the Comprehensive International Diagnostic Interview (CIDI-3.0) was used to assess MDD. Rumination was measured by the Rumination Response Scale

Results The first-episode MDD incidence among Chinese freshmen was 2.26%. Rumination was significantly associated with a 1-year incidence of MDD (OR = 1.09, 95% confidence interval: 1.06-1.11), controlling for the effects of baseline depressive symptoms and stressful life events

Conclusion Rumination increases the likelihood

of first-episode MDD among Chinese university freshmen. Therefore, students should be guided to engage in aggressive rumination to reduce the risk of MDD

Limitations All the information collected in this survey is from the participants' personal recall and selection, so recall and reporting biases are possible.

关键词: Longitudinal cohort study; Rumination; Major depressive disorder; Stressful life events; Freshmen

抑郁症患者工作记忆任务状态下心率变异性的特征研究

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目的 抑郁症常伴认知功能损伤,尤以工作记忆损伤为著,影响个体日常生活。既往研究提示,抑郁患者存在自主神经系统功能失调,心率变异性(HRV)反映了交感与副交感神经的平衡,是有效的心理负荷和压力水平的生物标志物。工作记忆任务(如2-back任务)能够显著增加认知负荷,通过监测HRV,可以评估任务期间个体的心理负荷水平。研究抑郁患者在工作记忆任务中的HRV变化,可以帮助我们更好地理解他们在高负荷任务下的生理和心理反应。

方法 本研究共计招募了109名受试者,健康对照组(Healthy Control, HC)42人,2023-2024年期间在我院就诊的单相抑郁症(Major Depressive Disorder, MDD)患者67人。两组受试者的年龄、性别、受教育年限均相匹配。所有入组受试者完成5分钟的2-back工作记忆任务。2-back任务期间同时进行了心电图数据收集,在心电图数据采集阶段,利用心电监测设备以确保所得数据的高质量性。心电数据依托于Python编程环境进行了后续处理,提取心率变异性(Heart Rate Variability, HRV)指标。本研究采用SPSS26版本统计软件进行统计分析。由于行为学数据及HRV数据不符合正态分布,采用非参数统计检验(Mann-Whitney U检验)进行组间比

较。

结果 通过对低频心率变异性(HRV_LFN)、平均心跳间隔(HRV_MeanNN)、正常窦性心跳之间的时间间隔(HRV_SDANN1)、中位心跳间隔(HRV_MedianNN)及80百分位心跳间隔(HRV_Prc80NN)的比较,观察到MDD的HRV_LFN、HRV_MeanNN、HRV_MedianNN及HRV_Prc80NN与HC差异不具有统计学意义。MDD的HRV_SDANN1低于HC($Z = -2.154, p = 0.031$),差异有统计学意义。

结论 抑郁症患者在2-back任务中的HRV_SDANN1指标低于健康对照组,表明抑郁症患者心脏自主神经功能受到抑制,导致心率变异性降低。HRV_SDANN1(Standard Deviation of the Averages of NN intervals)是指5分钟段内RR间期平均值的标准差,它反映了较长时间段内心率变异性的总体水平。该指标降低提示抑郁患者在2-back工作记忆任务中可能存在较高的认知负荷,与患者的认知能力损伤有关。本研究旨在全面深入地揭示抑郁症的病理生理机制及其对患者认知功能的影响,为将来制定更为精确的个体化治疗方案和干预措施提供了科学依据。

关键词: 抑郁症,工作记忆,心率变异性,2-back

基于网络分析探索童年期虐待对抑郁症患者认知功能的影响

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目的 童年期虐待是抑郁症发病及抑郁症认知功能损害的共同风险因素。本研究旨在利用网络分析的方法探索童年期虐待不同类型对抑郁症患者急性发作期不同维度认知功能的影响及经过抗抑郁药物治疗后上述影响是否存在。

方法 本研究纳入未用药的抑郁症患者634名,在基线期和使用选择性5-羟色胺再摄取抑制剂(SSRIs)单药治疗8周后完成临床症状与认知功能等评估,同时招募258名健康被试仅在基线期评估。使用17项汉密尔顿抑郁量表(HAMD-17)评估抑郁严重程度,儿童期虐待问卷(CTQ)评估童年期虐待水平,包括情感虐待(EA)、躯体虐待(PA)、性虐待(SA)、

躯体忽视(PN)、情感忽视(EN) 5 个方面。认知评估源于认知功能评估成套测验(MCCB), 包括信息处理速度、注意/警觉性、词语学习、视觉学习和执行功能共 5 个维度。首先进行正则化偏相关网络的统计分析和可视化, 关注网络中童年期虐待和认知功能之间的关联路径以及桥梁症状。随后基于网络分析的结果进行中介分析和单因素方差分析。

结果 1、基线网络分析: 基线网络分析结果提示 EA 与发病年龄呈负相关, PN 与词语学习、视觉学习水平呈负相关; 发病年龄与信息处理速度、执行功能正相关。发病年龄、EA 与执行功能分别为临床症状群、童年期虐待史和认知功能症状群中桥梁强度最高的节点。经检验, 网络的准确性和稳定性较好, 网络模型可靠。

2、验证分析: 基于网络分析结果, 构建中介模型提示发病年龄在 EA 与执行功能之间发挥完全中介作用。在患者躯体忽视阳性组 (PN+)、躯体忽视阴性 (PN-) 和健康对照组的认知功能比较中, 事后检验提示在信息处理速度、注意/警觉性、词语记忆和视觉记忆维度中 PN-组认知得分显著高于 PN+组认知得分($p < 0.05$)。

3、抗抑郁药物治疗后探索性分析: 纳入基线期童年期虐待、起病年龄与 8 周时 HAMD 减分率、认知功能评分进行网络分析, 结果表明发病年龄与治疗各认知维度未见关联, PN 仅与治疗词语记忆存在负相关。在患者 PN+组、PN-组和健康对照组比较中, PN+组在词语记忆和视觉记忆维度得分显著低于健康对照组, PN-组治疗后仅在词语记忆得分显著低于健康对照组。

结论 不同的童年期虐待类型会影响抑郁症患者急性期不同维度的认知功能, 这种效应可持续到抗抑郁治疗 8 周后。本研究提示童年期虐待对抑郁症患者认知功能存在持续的负性影响, 不同类型童年期虐待对认知功能产生的影响以及生物学机制可能存在差异。

关键词: 抑郁症, 童年期虐待, 认知功能, 网络分析

Prevalence and Correlates of Anxiety Symptoms in First-episode and Untreated Major Depressive Disorder Patients with Comorbid Suicide Attempts at Different Age of Onset in

A Chinese Han Population: A Large Cross-sectional Study

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Objective Patients with suicide attempts(SA) are at increased risk of developing anxiety symptoms, especially those with major depressive disorder (MDD). Few studies have investigated the independent effects of anxiety symptoms on comorbid suicide attempts in patients with MDD. The aim of this study was to investigate the prevalence of anxiety symptoms and associated variables in first episode and untreated (FEUT) MDD patients with comorbid suicide attempts at different ages of onset

Methods We recruited 1718 patients with FEUT MDD in this study. We collected demographical and clinical data, and measured lipid, thyroid function, and blood glucose levels. The 17-item Hamilton Depression Scale (HAMD-17), Hamilton Anxiety Scale (HAMA), Clinical Global Impression Severity Scale (CGI), and Positive and Negative Syndrome Scale (PANSS) positive subscale were used to assess depression, anxiety, illness severity, and psychotic symptoms, respectively

Results The prevalence of suicide attempts among MDD patients was 20.1% (346/1718). Among MDD patients with suicide attempts(MDD-SA), the prevalence of anxiety symptoms was 31.4% (75/239) in those with early adult onset and 40.2% (43/107) in those with mid-adult onset. Independent factors associated with anxiety symptoms in early adult onset MDD-SA patients were as follows: marital status ($B=0.966$, $P < 0.05$, $OR=2.629$), HAMD score ($B=0.213$, $P < 0.05$, $OR=1.238$), and positive subscale score ($B=0.201$, $P < 0.01$, $OR=1.223$). Independent factors associated with anxiety symptoms in mid-adult onset MDD-SA patients were as follows: HAMD score ($B=0.374$, $P < 0.01$, $OR=1.454$), and positive subscale score ($B=0.142$, $P < 0.01$, $OR=1.153$)

Conclusion Our findings suggest that MDD-SA patients are at higher risk for anxiety symptoms. In

MDD-SA patients, the prevalence of anxiety symptoms was similar in the early and mid-adult onset subgroups, but the factors associated with anxiety symptoms differed in these two subgroups.

关键词: anxiety symptoms, suicide attempts, Major depressive disorder,

Observation on The Clinical Effect and Cognitive Function Improvement of Sertraline in Patients with First-episode Coronary Heart Disease Comorbid Major Depressive Disorder

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Objective The coronary heart disease (CHD) and the major depressive disorder (MDD) are often accompanied in clinical treatment. Compared with CHD, the patients with coronary heart disease comorbid major depressive disorder (CHDD) exhibited higher admission rate, more chest pain attack, lower quality of life, and higher mortality. The antidepressant therapy should be considered at the same time as the basic treatment of CHD for the patients with CHDD. Sertraline has been proved to be safe and effective for the patients with CHDD. Several studies have shown the cognition impairment in MDD. Nevertheless, cognitive impairment in the patients with CHDD was rarely reported. This study aimed to investigate the efficacy of sertraline in the patients with first-episode CHDD and to assess the improvement in cognitive function

Methods A total of 114 patients with first-episode CHDD and 109 patients with CHD were recruited. 24-item Hamilton Rating Scale for Depression (HAMD-24) and Hamilton Anxiety Rating Scale (HAMA) were adopted to evaluate the clinical characteristics, and, Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) was adopted to

evaluated the cognitive domain function (include immediate memory, spatial structure, verbal function, attentional ability, and delayed memory). The patients with CHDD were treated with sertraline. HAMD-24, HAMA, were evaluated at week 1, 2, 4, 6, 8 to observe the symptomatic improvement. The cognitive characteristics were compared at baseline and 8 weeks after treatment

Results CHDD was worse than CHD in terms of general memory, visual span, language, overall attention and word mastery. After 8 weeks of treatment, the effective rate of CHDD in intentional to treat analysis was 50.00%. The cure rate in intentional to treat analysis was 42.11%. The effective rate of CHDD in per-protocol analysis was 98.28%. The cure rate in per-protocol analysis was 82.75%. The scores of HAMD-24 and HAMA were significantly decreased from 2 weeks of treatment. After 6 weeks of treatment, the scores were significantly lower than those before treatment ($p < 0.05$). The delayed memory, visual attention in the patients with CHDD were improved after 8 weeks

Conclusion Sertraline exhibited significant efficacy and high compliance in the treatment for the patients with CHDD. Antidepressant treatment could improve the cognitive function in the patients with CHDD to a certain extent.

关键词: coronary heart disease, comorbidity, major depressive disorder, Sertraline, cognitive function

抑郁症自杀意念患者中不同性别间脑皮质结构改变的研究

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目的 抑郁症(MDD)伴自杀意念患者脑皮质结构存在异常, 且自杀意念患者存在性别差异。本研究旨在探讨抑郁症伴自杀患者不同性别间脑皮质结构的差异。以期为识别不同性别间抑郁症自杀意念患者提供客观标记。

对象与方法 本研究在山东省戴庄医院进行。研究自2022年4月份至2023年12月份采集磁共振图像的参与者177例,其中MDD患者117例(男性44例、女性73例),健康对照者60例(HCs,男性23例、女性37例)。研究者根据贝克意念量表评分大于等于3分判定为自杀意念组这一标准,将MDD分为MDD伴有自杀意念组57例(SI)和MDD不伴自杀意念组60例(NonSI)。

本研究使用FreeSurfer软件对数据进行处理并提取每位被试的颅内总容量(eTIV)数值。随后,采用广义线性模型(GLM)分别检测组别主效应、性别主效应以及性别与组别之间的交互效应,同时控制年龄、受教育年限和eTIV并对结果进行基于蒙特卡罗模拟的多重比较校正,显著性水平设定为CWP小于0.05。定义校正后显著性集群为感兴趣区域(ROI),并提取其平均值用于事后分析以及与临床特征之间的相关分析。

结果 在不分性别的情况下,与NonSI相比,SI的右侧下顶叶和上顶叶皮质局部回指数显著增加。在右侧舌回(LG)皮质厚度、右侧外侧枕叶皮质(LOC)和右侧上额叶皮质(SFC)表面积,以及左侧楔前叶和右侧视皮层周围区(PCAL)皮质体积中观察到了显著的性别与组别交互效应。事后分析显示,与伴有自杀意念的女性MDD相比,伴有自杀意念的男性MDD右侧舌回皮质厚度显著增加。与性别匹配的NonSI相比,男性SI的右侧LOC皮质面积和右侧PCAL皮质体积显著增加,而女性SI与NonSI皮质结构无显著差异。

相关分析发现,女性MDD左侧楔叶皮质体积与自杀评分显著正相关,男性MDD右侧PCAL皮质体积与自杀评分显著负相关,但均未通过多重比较校正。此外,右侧PCAL皮质体积与自杀评分的相关性在性别间存在显著差异。

结论 本研究提供了伴有和不伴自杀意念MDD患者在皮质厚度、皮质面积以及皮质体积方面存在性别差异的证据。这些发现强调了在理解MDD伴随自杀意念的神经生物学机制时考虑性别差异的重要性,这可能有助于开发针对性的治疗干预措施。

关键词: 自杀意念,重度抑郁障碍,FreeSurfer,sMRI,皮质结构

Altered Brain Network Dynamics During Rumination Relate To Depression Relapse

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Objective Rumination is a maladaptive cognitive style and a risk factor for depression relapse. However, the clinically relevant pattern of dynamic network reconfiguration during rumination in remitted depression and its implication in depression relapse remained unclear

Methods We employed a rumination induction neuroimaging paradigm in which subjects would be guided into an active rumination state and a distraction state. Forty-two remitted depression patients and 34 healthy controls were involved. Participants underwent assessments of rumination behavior and imaging tasks; patients were then monitored for one year to assess the potential depression relapse. A time-resolved community detection approach was applied to investigate the temporal dynamics of brain networks, and the dynamic network properties including flexibility and integration were analyzed

Results The increased level of rumination was linked to the relapse of depression. During rumination state in patients, a significant decrease in the integration between the fronto-parietal network and dorsal attention network was observed compared to the distraction state. Furthermore, this integration showed a significantly negative correlation with rumination level and associated with depression relapse during a one-year follow-up. Besides, multivariate results indicated that features most influential in predicting relapse were associated with the default mode network during rumination

Conclusion Our findings implied a potential link between the dynamic brain networks engaged during rumination and depression relapse, shedding light on the intricate relationship between cognitive processes, neural dynamics, and the potential vulnerability to depression recurrence.

关键词: rumination, remitted depression, relapse, dynamic functional network, integration, fronto-parietal

network

伴自杀行为的抑郁症患者“前额叶-扣带-纹状体”环路自发神经活动显著升高

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目的 我国抑郁症(major depressive disorder, MDD)患者超9500万,抑郁症与自杀密切相关,约65%的抑郁症患者有自杀意念,60%的自杀者被诊断为抑郁症。目前关于抑郁症自杀研究的热点是自杀意念如何进展到自杀行为,但目前仍未明确可预示自杀进展的稳定有效的生物学标记。神经影像学快速发展,研究表明“前额叶-扣带-纹状体”神经环路是MDD伴自杀行为的重要神经基础。本研究将探究该神经环路自发神经活动在不伴自杀意念组、自杀意念组、自杀未遂组的差异,以期寻找早期识别自杀进展的生物学标记,便于临床管理和防治。

方法 入组南京医科大学附属脑科医院住院汉族MDD患者499例,依据此次抑郁发作是否有自杀未遂行为(定义为至少有过一次自我伤害行为,并且是直接想死或暗示想死及符合HAMD-17第三项自杀评分 ≥ 2 分者)以及贝克自杀意念量评分,将受试者分成无自杀意念组(NSI组, $n=87$),伴自杀意念组(SI组, $n=327$)伴自杀未遂组(SA组, $n=69$)。同时招募性别、年龄和受教育年限等匹配的健康受试者247例。所有受试者完临床信息采集及静息态7分钟功能磁共振扫描。预处理后计算受试者全脑低频振幅(ALFF)值,多因素协方差分析比较四组受试者自发神经活动的异常。采用团块高斯随机场(体素水平 $p < 0.001$, 团块水平 $p < 0.05$, GRF)校正统计比较结果。

结果 与健康对照相比,不伴自杀意念组、自杀意念组、伴自杀未遂组的MDD患者在海马回ALFF值显著升高和内侧额上下降,但自杀意念组和自杀未遂组的MDD患者存在更广泛的ALFF值异常,如在脑岛和纹状体上,伴自杀意念组神经活动

显著升高,伴自杀未遂组显著下降等。与不伴自杀意念组相比,自杀意念组全脑ALFF值差异不显著,但是伴自杀未遂组患者在海马、脑岛、纹状体和额中回的ALFF值显著下降。

结论 前人和课题组前期研究均表明低频振幅特征能敏感地反映MDD患者自杀风险,对自杀未遂行为识别率较高。本研究依据自杀三步理论,进一步比较了不伴自杀意念、自杀意念和自杀未遂患者全脑自发神经活动的差异,研究结果进一步证实,“前额叶-扣带-纹状体”神经环路异常是MDD自杀进展的重要神经基础,尤其海马、纹状体等脑区参与患者情绪唤醒和奖赏调控,在自杀行为中起着重要作用。

关键词: 抑郁症; 低频振幅; 自杀行为

Metformin Treatment Improves Depressive Symptoms Associated with Type 2 Diabetes: A 24-week Longitudinal Study

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Objective Metformin is a medication that is widely used for lowering blood sugar in patients with type 2 diabetes. Metformin was shown to have significant antidepressant effects; however, it is not clear whether metformin treatment improves outcomes in patients with type 2 diabetes who have concomitant depressive symptoms

Methods A total of 475 patients with type 2 diabetes mellitus with depressive symptoms were included in this study and divided into metformin and nonmetformin groups according to whether they were taking metformin. The DASS-21 was used to assess patients' depression and anxiety scores before and after a 24-week intervention. In addition, general information about whether the patients had developed complications from diabetes and whether they had been diagnosed with other diseases was assessed

Results (1) After 24 weeks, anxiety and depression scores were significantly lower in the metformin

group than in the nonmetformin group. (2) The prevalence of depressive symptoms was significantly greater in female type 2 diabetic patients than in male patients (OR=2.039, 95% CI=1.160-3.568). (3) People with type 2 diabetes who develop complications from diabetes (OR=1.794, 95% CI=1.015-3.171) and those diagnosed with other conditions are more likely to experience depressive symptoms

Conclusion Metformin has an ameliorative effect on type 2 diabetes. However, women, those with diabetes complications, and those with type 2 diabetes who are also diagnosed with other conditions are more likely to experience depressive symptoms

关键词: Type 2 diabetes; depressive symptoms; metformin

孕妇孕晚期睡眠状况与产后抑郁关系的研究

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目的 本研究旨在探讨孕妇孕晚期睡眠状况与产后抑郁之间的关系, 以期为提高孕产妇的心理健康水平提供科学依据, 为预防和治疗产后抑郁提供新思路。

方法 本研究采用问卷调查、随访相结合的方式, 选取本地区一家大型综合性医院产科门诊就诊的孕晚期(孕周 ≥ 28 周)孕妇作为研究对象。共发放问卷 296 份, 回收有效问卷 276 份, 问卷有效率达 93.2%。问卷内容主要包括孕妇的基本信息、孕晚期睡眠状况评估量表和产后抑郁筛查量表。孕妇在孕晚期完成问卷填写, 并在产后 6 周进行随访, 再次填写产后抑郁筛查量表。本研究采用 SPSS 25.0 软件分析收集到的数据, 包括: 对孕妇孕晚期睡眠状况和产后抑郁的发生情况进行描述性统计分析、采用独立样本 t 检验和 χ^2 检验比较不同睡眠状况孕妇产后抑郁发生率的差异、通过相关性分析和 Logistic 回归分析探讨孕晚期睡眠状况与产后抑郁之间的关系。

结果 1. 描述性统计分析结果显示, 孕晚期孕

妇普遍存在不同程度的睡眠问题, 其中以入睡困难、多梦和易醒最为常见。产后 6 周随访发现, 约有 18.6% 的孕妇出现产后抑郁症状。

2. 独立样本 t 检验和 χ^2 检验结果显示, 孕晚期睡眠状况较差的孕妇(PSQI 得分 ≥ 7 分)产后抑郁的发生率显著高于睡眠状况良好的孕妇(PSQI 得分 < 7 分), 差异具有统计学意义($P < 0.05$)。

3. 相关性分析结果显示, 孕晚期睡眠状况与产后抑郁呈负相关($r = -0.42, P < 0.01$), 即孕晚期睡眠状况越差, 产后抑郁的发生率越高。

4. Logistic 回归分析结果显示, 在排除其他可能的干扰因素后, 孕晚期睡眠状况仍然与产后抑郁的发生密切相关。具体来说, 孕晚期 PSQI 得分每增加 1 分, 产后抑郁的发生率将增加约 1.3 倍(95% CI: 1.1-1.6)。

结论 本研究结果表明, 孕妇孕晚期睡眠状况与产后抑郁之间存在密切的关系。孕晚期睡眠状况较差的孕妇更容易发生产后抑郁。因此, 对于孕晚期孕妇来说, 关注并改善其睡眠状况对于预防产后抑郁具有重要意义。建议在孕期保健中加强对孕妇睡眠状况的关注和评估, 并提供相应的干预措施以改善其睡眠质量。同时, 对于已经出现产后抑郁症状的孕妇, 应及时进行心理干预和治疗以减轻其症状并提高其生活质量。

关键词: 孕晚期, 睡眠, 产后抑郁

青少年抑郁症患者快感缺失、童年期虐待和抑郁症状对非自杀性自伤行为的影响: 有调节的中介模型

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目的 探讨快感缺失、童年期虐待和抑郁症状对青少年抑郁症患者非自杀性自伤行为的影响, 以及快感缺失在其中的中介作用。

方法 选取 355 例安徽省精神卫生中心门诊及住院的青少年抑郁症作为研究组,以 350 例年龄、性别匹配的青少年作为对照组,采用青少年自我伤害问卷、汉密尔顿抑郁量表-24、儿童期虐待问卷和时间性快感体验量表分别评估青少年抑郁症患者的非自杀性自伤行为、抑郁症状、童年期虐待得分和快感缺失得分;采用独立样本 t 检验和 χ^2 检验进行 2 组间差异性检验;采用 Pearson 相关分析进行各量表得分之间的相关分析;采用 Hayes 编制的 PROCESS 宏程序进行有调节的中介模型分析;采用 Bootstrap 法分析抑郁症状在童年期虐待与自杀意念之间的中介效应值及 95%Bootstrap 置信区间;采用简单斜率法进行抑郁症状和快感缺失交互效应的比较。

结果 童年期虐待显著正向预测抑郁症状 ($\beta=0.46, P<0.001$);抑郁症状显著正向预测自杀意念 ($\beta=0.49, P<0.001$);抑郁症状和快感缺失的交互项对自杀意念的预测作用显著 ($\beta=-0.06, P<0.001$)。简单斜率法结果显示低快感缺失者抑郁症状对自杀意念的预测作用 ($\beta=0.41, P<0.001$) 大于高快感缺失者 ($\beta=0.37, P<0.001$)。

结论 抑郁症状在童年期虐待对自杀意念的影响中起部分中介作用,快感缺失在童年期虐待对自杀意念的影响中起调节作用,随着个体快感缺失水平的逐步增加,抑郁症状对自杀意念的预测作用呈逐渐降低趋势。

关键词: 青少年抑郁症;快感缺失;童年期虐待;非自杀性自伤

首发抑郁症患者睡眠障碍对认知功能的动态影响及相关因素研究

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目的 睡眠障碍是重性抑郁障碍 (major depressive disorder, MDD) 的常见症状,与患者的认知症状密切相关[1]。本研究旨在通过较大样本的纵向随访研究,首次探索首发 MDD 患者睡眠障碍与认知功能的变化特征及相关性。

方法 本研究于 2019 年 1 月至 2023 年 1 月期间,在天津市安定医院纳入了首次发作的符合 DSM-

5 诊断标准的 MDD 患者 173 例,分别采用汉密尔顿抑郁量表、汉密尔顿焦虑量表、匹兹堡睡眠质量指数量表、神经心理状态评定量表评估患者的抑郁症状、焦虑症状、睡眠情况以及认知功能。研究共设置 3 个访视节点,分别为基线、第 4 周和第 8 周访视。采用平行增长曲线模型分析 MDD 患者睡眠障碍和认知功能两者之间的变化趋势及相关性。

结果 1.MDD 患者的基线睡眠情况对其基线认知功能存在正向预测作用 ($\beta=0.303, SE=0.126, p=0.016$)。

2.MDD 患者的抑郁症状变化对其认知功能的变化存在负向预测作用 ($\beta=-0.328, SE=0.142, p=0.021$),即患者抑郁症状好转得越快,认知功能改善得越快;焦虑症状变化对其认知功能的变化存在负向预测作用 ($\beta=-0.408, SE=0.147, p=0.005$),即患者焦虑情绪好转得越快,认知功能改善得越快;

睡眠情况变化对认知功能的变化具有负向预测作用 ($\beta=-0.390, SE=0.237, p=0.099$),即患者睡眠情况好转得越快,认知功能改善越快。

3.在影响因素分析中,在构建的睡眠情况和认知功能变化关系模型基础上,采用亚组间比较的方法得出:男性患者及女性患者之间的卡方差异无统计学意义 ($\Delta c^2=3.962, \Delta df=3, p=0.266>0.05$);35 岁及以下和 35 岁以上患者之间的卡方差异无统计学意义 ($\Delta c^2=5.151, \Delta df=3, p=0.161>0.05$);受教育年限 12 年及以下与受教育年限 12 年以上患者之间的卡方差异无统计学意义 ($\Delta c^2=4.876, \Delta df=3, p=0.166>0.05$);从事脑力劳动与体力劳动患者之间的卡方差异无统计学意义 ($\Delta c^2=5.083, \Delta df=3, p=0.217>0.05$)。

结论 1.在首发 MDD 患者中,睡眠质量对认知功能的动态影响具有正向相关性。

2.在首发 MDD 患者中,认知损害的严重程度独立于抑郁症状或焦虑症状,随着时间的推移,MDD 患者抑郁症状或焦虑症状缓解的速度与认知功能改善的速度存在关联。

3.在首发 MDD 患者中,性别、年龄、受教育年限、工作性质这 4 个因素均不影响认知功能随睡眠改变的动态变化趋势。

关键词: 重性抑郁障碍,睡眠障碍,认知功能,动态追踪,相关性

Identifying The Risk of Depression in A Large Sample of Adolescents: An Artificial Neural Network Based on Random Forest

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Objective This study aims to develop an artificial neural network (ANN) prediction model incorporating random forest (RF) screening ability for predicting the risk of depression in adolescents and identifies key risk factors to provide a new approach for primary care screening of depression among adolescent

Methods The data were from a large cross-sectional study conducted in China from July to September 2021, enrolling 8635 adolescents aged 10–17 with their parents. We used the Patient health questionnaire (PHQ-9) to rate adolescent depression symptoms, using scales and single-item questions to collect demographic information and other variables. Initial model variables screening used the RF importance assessment, followed by building prediction model using the screened variables

through the ANN.

Results The rate of depression symptoms in adolescents was 24.6%, and the depression risk prediction model was built based on 70% of the training set and 30% of the test set. Ten variables were included in the final prediction model with a model accuracy of 85.03%, AUC of 0.892, specificity of 89.79%, and sensitivity of 70.81%. The top 10 significant factors of depression risk were adolescent rumination, adolescent self-esteem, adolescent mobile phone addiction, peer victimization, care in parenting styles, overprotection in parenting styles, academic pressure, conflict in parent–child relationship, parental rumination, and relationship between parents

Conclusion The ANN model based on the RF effectively identifies depression risk in adolescents and provides a methodological reference for large-scale primary screening. Cross-sectional studies and single-item scales limit further improvements in model accuracy
关键词: adolescents, artificial neural network, depression, prediction model, primary screening, random forest

Microstructure Reveals Covariance Aberrant of MPFC-limbic Interactions with Atypical Depression

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Objective The heterogeneity of symptoms and etiology in major depressive disorder (MDD) is impeding progress towards patient-specific treatment strategies and course trajectories. However, the profile of microstructural brain alterations associated with atypical depression (AD) remains elusive. To investigate altered synchronization of brain cyto- and myelo-architecture in the medial prefrontal-limbic pathway between individuals with AD and non-atypical depression (non-AD) using multi-shell diffusion-weighted MRI (dMRI)

Methods The iDoT-AFD study is a research project that aims to identify diagnostic biomarkers, optimal treatment strategies, and the trajectory of illness for depression with atypical features. The study collected multi-shell diffusion magnetic resonance imaging (dMRI) images from 50 patients with AD, 97 patients with non-AD, and 50 healthy controls (HCs) at the beginning of the study. The data were collected between August 2019 and September 2022, and the analysis was conducted from June 2022 through September 2023. Brain microstructure was investigated using dMRI tractography and soma/neurite density imaging with brain mapping algorithms and statistical models

Results Of 197 included participants, 145 (73.6%) were female, and the mean (SD) age was 25.27 (4.97) years. The microstructural covariance network reveals significantly aberrant soma and neurite density of medial prefrontal (mPFC)-limbic interactions among three groups [Effect size (η^2_p) = 5.50–43.88%, all PFDR < 0.05]. Comparative analysis between the AD group and the non-AD group showed similar findings.

Furthermore, the fiber tractography approach revealed that atypical depression showed significantly enhanced soma and neurite density of the superior frontal gyrus (SFG) - anterior cingulate gyrus (ACC) pathway (PFDR < 0.05), compared with nonatypical depression. These microstructural morphological features were also significantly correlated with atypical feature scores (PFDR < 0.05)

Conclusion Compared with non-AD patients, aberrant soma and neurite density of the mPFC-limbic pathway were associated with atypical depressive symptoms, capturing interindividual etiological heterogeneity in MDD patients and characterizing the histopathologic profile of mPFC-limbic pathway via a non-invasive in vivo approach. The development of patient-specific treatment approaches effectively targeting neural dysregulations may benefit patients with atypical features.

关键词: atypical depression, microstructural covariance network, dMRI, mPFC-limbic pathway

Heart-Brain Axis: A Narrative Review of The Interaction Between Depression and Arrhythmia.

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Background Abundant evidence supports the notion that depression serves as a risk factor for the development of cardiovascular diseases, including arrhythmias, and there exists a significant comorbidity between depression and arrhythmias, indicating a close association between these two conditions. However, the precise mechanism underlying the interaction between depression and arrhythmia remains unclear, and effective clinical treatments are currently lacking. This review aims to investigate the bidirectional relationship between depression and arrhythmia along with its potential mechanistic underpinnings

Objective The objective of this review is to systematically investigate the interplay between depression

and arrhythmia, along with their underlying mechanisms, aiming to offer clinical management guidance and directions for future research.

Methods A comprehensive review of studies published up until June 2024 was conducted by searching the PubMed and Web of Science databases. The search terms utilized encompassed "cardiovascular disease," "arrhythmia," "depression," "interoception," and "heart-brain axis." Only articles published prior to June 20, 2024 were considered for inclusion in this review. English language texts were mandatory, and all forms of literature met the eligibility criteria. Furthermore, we also explored other pertinent topics such as "autonomic dysfunction," "heart rate variability," "HPA axis", "inflammation", "gene", "personality", "stress", "antidepressant drugs" among others

Results We posit that the heart and brain serve as the primary organs of the circulatory system and central nervous system, respectively. Although seemingly independent, they can be anatomically linked through the autonomic nervous system (ANS). Imbalances in ANS function commonly underlie arrhythmia and various mood disorders. Furthermore, extant research has demonstrated that ANS interacts with other factors in mood dysregulation and arrhythmia pathogenesis. At a biological level, stressful events can trigger activation of both the sympathetic nervous system (SNS) and hypothalamic-pituitary-adrenal (HPA) axis, thereby promoting the onset and progression of depression and arrhythmia. Activation of SNS and HPA axis also fosters an inflammatory response, with elevated levels of pro-inflammatory cytokines being associated with depressive symptoms and arrhythmic conditions. These two diseases may engender unhealthy lifestyles, thus establishing a detrimental cycle between arrhythmias and depression. Additionally, innate genes alongside personality traits exert significant influences on both disorders. Moreover, the ANS-based neural foundation of interoception explicated herein has been demonstrated to correlate with the quality and intensity of emotional experience. Prior research has also validated the interoceptive ascending pathway to some extent. β -adrenergic blockers can weaken sympathetic nervous system responses and potentially mitigate negative, high-arousal

emotions by attenuating peripheral signals. Individuals with Spinal Cord Injury, which is characterized by disruption of nerve flow from the periphery to the brain due to spinal cord injury, struggle with assessing their emotional responses to intricate scenarios that elicit fear and anger. However, previous studies have employed Human Intracranial Electrophysiology (HIE), an invasive technique, in investigating how complex brain networks give rise to emotional states. The results on causality from these studies are inconsistent and convoluted, while current investigations into interoception lack sufficient conditions for guiding causality. Furthermore, chemical and neural signals interact across almost all aspects of neural axis interaction - ranging from immune function and endocrine systems to bodily sensations such as nerve impulses - so further exploration may promote understanding of cardio-cerebral axis mechanisms. This is crucial for addressing cardiac arrhythmias as well as disorders affecting the heart-brain axis like depression

Conclusion In this review, the anatomical association between the heart and brain is established through autonomic nerves, enabling bidirectional communication via the interoceptive pathway in both ascending and descending directions. External stimuli can induce genetic and physiological changes in the body's internal variables, affecting information channels and playing a significant role in mood disorders and cardiovascular disease development as well as comorbidity. Currently, comorbidity of depression and arrhythmia is prevalent; however, effective clinical treatments are lacking. Furthermore, limitations such as inadequate sample sizes and absence of causal research still exist. This review provides crucial insights for clinical management while offering new avenues for future research.

关键词: Depression; Arrhythmias; Interoception; Autonomic nervous system

基于真实世界数据的抑郁症患者共病代谢综合征用药特征分析

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目的 抑郁症(major depressive disorder, MDD)与代谢综合征(metabolic syndrome, MetS)之间存在复杂的相互作用关系。随着抑郁症共病代谢综合征患者的逐年增加,不仅不利于抑郁症患者的预后,也增加了社会疾病负担。目前抑郁症共病代谢综合征患者的用药特征及药物间的关联强度尚不清楚,给共病患者的用药指导造成一定困难。本研究旨在利用大样本真实世界数据探讨抑郁症住院患者共病MetS的相关因素用药特征和药物间的关联强度,为探索不同药物模式对共病患者的疗效差异,指导共病患者的药物选择提供研究依据。

方法 选择 2015-2021 年在北京安定医院住院治疗,符合 ICD-10 抑郁症诊断(编码为 F32.0-F32.9 和 F33.0-F33.9),年龄 35-70 岁(性别不限),住院时间 ≥ 14 天的抑郁症患者为研究对象,提取医院电子病历系统中患者的一般人口学情况、抑郁症疾病信息、血生化检查和体格检查、医嘱信息等数据,使用国际糖尿病联盟(International Diabetes Federation, IDF)标准进行 MetS 的判定。将精神科用药分成 6 大类和 21 小类,利用 Apriori 算法进行不同种类药物间的关联规则分析。

结果 共有 4126 名符合标准的抑郁症患者纳入本研究,男性 1323 人(32.1%),平均年龄 53.68 ± 9.64 岁。其中共病 MetS 的患者比例为 32.6%(95% CI: 31.2%-34.1%)。在用药比例方面,共病 MetS 的患者中使用抗焦虑药的比例最高(71.6%),其次为抗抑郁剂(65.8%)和苯二氮卓类药物(55.8%)。三环类抗抑郁剂、四环类抗抑郁剂、去甲肾上腺素和多巴胺再摄取抑制剂(NDRIs)和中成药的比例在 MetS 和非 MetS 组间差异存在统计学意义($P < 0.05$)。复发性抑郁患者以及合并失眠患者其联合使用多种药物的比例更高($P < 0.05$)。在共病 MetS 的患者中共发现 15 种药物关联规则,其中苯二氮卓和非苯二氮卓类镇静催眠药物的支持度最强;苯二氮卓、非苯二氮卓类镇静催眠药物和多受体作用药物(MARTAs)的置信度最高。

结论 共病 MetS 的 MDD 患者其用药模式与非共病患者间无显著差异,用药种类以抗焦虑药、镇静催眠类药物和抗抑郁剂为主。后续可关注不同用药模式对共病患者疗效和安全性的影响,为临床指导共病患者的药物选择提供循证证据。

关键词: 抑郁症,代谢综合征,用药特征,关联规

则,真实世界研究

DBT 治疗对抑郁障碍青少年认知情绪调节的影响

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目的 探讨 DBT 团体治疗对抑郁障碍青少年认知情绪调节的影响, 以期改善抑郁障碍青少年的认知情绪提供参考资料。

方法 选取 2023 年 6 月-2014 年 3 月在兰州石化总医院门诊和住院部诊疗的 60 例患有抑郁障碍的青少年为研究对象, 随机分为对照组和实验组各 30 例。对照组进行常规的药物治疗和物理治疗 13 周, 实验组在对照组的基础上进行连续 13 周的 DBT 团体治疗, 2 小时/次/周。对照组和干预组在干预前后及半年随访时间均采用汉密尔顿抑郁量 (HAMD)、认知情绪调节问卷 (CERQ) 进行评估, 采用 t 检验进行两组差异分析。

结果 干预前, 对照组和实验组 HAMD 与 CERQ 各项目得分差异均无统计学意义差异 ($P > 0.05$); DBT 治疗 13 周后, 实验组和对照组 HAMD 得分 (12.63 ± 3.13 , 30.63 ± 7.66), CERQ 消极情绪调节策略得分 (32.33 ± 7.64 , 45.89 ± 6.72), 积极情绪调节策略得分 (68.23 ± 10.96 , 59.51 ± 7.23) 得分比较, 差异均有统计学意义 (P 值均 < 0.01); 半年随访, 实验组与对照组 HAMD 得分 (16.63 ± 4.25 , 33.63 ± 7.71), CERQ 消极情绪调节策略得分 (36.33 ± 7.82 , 44.89 ± 6.01) 积极情绪调节策略得分 (63.23 ± 9.82 , 52.51 ± 6.23) 得分比较, 差异均有统计学意义 (P 值均 < 0.05)。

结论 连续 DBT 团体治疗可有效改善抑郁障碍青少年的抑郁情绪与认知情绪调节, 并且巩固效果较好。在青少年抑郁障碍的诊疗中, 可积极开展 DBT 团体治疗, 以此促进疾病转归。

关键词: DBT 团体治疗; 青少年; 抑郁障碍; 认知情绪调节

重复经颅磁刺激治疗重度抑郁症后功能连接

改变及其与基因转录表达的关系

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目的 抑郁症 (major depressive disorder, MDD) 是一种以情绪调节和认知功能障碍为表现的常见精神疾病, 为第二大致残性精神疾病, 现已成为一个重大的公共健康问题。重复经颅磁刺激 (repetitive transcranial magnetic stimulation, rTMS) 是一种非侵入性的大脑刺激技术, 广泛用于治疗 MDD。研究发现, 抑郁症症状群及严重程度可能与脑功能异常有关, rTMS 可以通过调节神经可塑性改善抑郁症患者大脑功能中的度中心性, 进而改善抑郁症状。尽管其临床效果已被广泛认可, 但 rTMS 对基因表达的影响机制仍不清楚。本研究通过整合神经影像学和转录组学数据, 探讨 rTMS 在 MDD 治疗中的分子机制, 揭示 rTMS 改善抑郁症状的关键基因, 为 rTMS 缓解抑郁症状提供神经分子依据。

方法 本研究为随机对照研究, 选取门诊就诊的 49 例首次发病未用药的抑郁症患者, 其中真刺激治疗组 30 例, 伪刺激对照组 24 例。两组患者服用辉瑞普强公司生产的盐酸文拉法辛缓释胶囊 (国药准字 H20160382, 规格: 75 mg), 并选取左背外侧前额叶为刺激靶点, 进行连续 15 天的真刺激或伪刺激 rTMS 治疗。于基线和治疗第 15 天采用 17 项汉密尔顿抑郁量表 (Hamilton Depression Rating Scale, HAMD-17)、广泛性焦虑量表 (generalized anxiety disorder, GAD-7) 和病人健康问卷 (patient health questionnaire, PHQ-9) 数据评估抑郁症状, 并采集两组静息态功能磁共振成像数据。对静息态功能磁共振数据进行度中心性 (degree centrality, DC) 分析, 以评估大脑连接性变化。此外, 利用 Allen 人脑图谱的数据分析基因表达水平, 并评估 DC 变化与基因表达的相关性。

结果 治疗组的 HAMD-17 和 PHQ-9 评分显著低于治疗前。体素度中心性分析显示, 治疗后左侧内侧额上回、左侧枕中回和右侧前扣带回的 DC 增加。基因本体富集分析强调了与突触信号、神经投射发展和钠离子跨膜运输相关的生物过程。蛋白质交互作用分析识别了包括 SCN1A、SNAP25 和 PVALB 在内的关键枢纽基因。这些枢纽基因的表达

水平与 DC 变化呈正相关, 其中 SCN1A 显著预测了这些变化。

结论 研究结果强调了特定基因和神经网络在 rTMS 治疗 MDD 中的作用, 为 rTMS 治疗 MDD 的分子机制提供了理论基础。

关键词: 抑郁症; 重复经颅磁刺激; 度中心性; 基因表达, 分子机制

Altered Task-modulated Functional Connectivity During Emotional Face Processing in Mood Disorders Patients: A Whole-brain Task-based Connectome Study

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Objective Neuroimaging characteristics have demonstrated abnormal regional brain activities during emotional face processing in bipolar disorder (BD) patients and major depressive disorder(MDD) patients. However, previous studies have ignored the investigation of altered task-modulated functional connectivity (FC) in BD and MDD from a large-scale network perspective

Methods Twenty-nine euthymic BD patients, 21 MDD patients and 29 healthy controls (HC) were recruited, and task fMRI data were collected during a faces-matching task. Whole-brain psychophysiological interaction (PPI) analysis was performed to identify task-modulated FC pattern. Both task-modulated FC strength and graph-theoretical-based network properties were compared between BD and HC, MDD and HC

Results Compared with HC, BD exhibited significantly different patterns (such as increased FC between the default mode network and cerebellum network, occipital, and sensorimotor network, and decreased FC between fronto-parietal network and cingulo-opercular and sensorimotor networks). Comparison of network-based metrics of task-modulated FC revealed no significant difference of global graphic-theo-

retical metrics (global efficiency and clustering coefficient), but increased local efficiency in the fronto-parietal network for MDD

Conclusion These results suggested that euthymic BD patients were still suffering from subthreshold clinical symptoms of associated with aberrant task-modulated FC patterns during emotional processing task. And these aberrant task-modulated FC might be considered an endophenotype of the MDD condition persistent in the euthymic state.

关键词: bipolar disorder, depressive disorders, facial emotion processing, psychophysiological interaction, fMRI,

抑郁发作时不同情感障碍疾病的静息态神经电生理特征

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目的 双相障碍正确诊断一般需 3-5 年时间, 导致患者临床治疗效果欠佳, 自杀风险更高, 给患者和家庭带来沉重负担。因此, 早期识别双相障碍尤为重要。既往研究从临床症状, 脑影像学等多维度信息试图寻找可以早期识别 BD 的客观指标, 但目前仍存在很多未知。本研究通过对抑郁发作患者进行随访, 试图从神经电生理角度寻找可以早期识别 BD 的电生理指标。

方法 本研究选取 2009-2019 年期间入组的 138 例抑郁发作患者, 62 例健康对照者进行脑磁图 (magnetoencephalogram, MEG) 扫描, 收集静息态睁眼信号。经过 5-10 年随访, 有 29 例抑郁发作患者转为双相障碍 (converted to bipolar disorder, ctBD), 77 例抑郁发作诊断仍为抑郁症。基于 matlab 平台利用 fieldtrip 工具包对数据进行去高频、滤波, 去除伪迹处理。并基于个体化磁共振数据进行溯源分析, 选取感兴趣频段 theta(4-7Hz), alpha(8-12Hz), beta(13-30Hz), gamma(30-80Hz)。运用 Cluster-based permutations 的非参数统计方法进行统计分析

(cluster α =0.01, α =0.5)。

结果 溯源层面上发现三组间差异主要表现在 theta, alpha, gamma 频段差异具有统计学意义。差异具有显著性统计学的结果主要集中在前额叶 (背外侧前额叶、眶额回), 扣带回, 小脑 (蚓状体, 小脑半球), 边缘结构 (海马、海马旁回), 皮层下结构 (苍白球、壳核、丘脑), 感觉运动皮层 (初级运动皮层, 感觉运动皮层) 等多个脑区。两两比较发现转相组和健康人差异主要表现在右侧皮层下 (丘脑、壳核) 和前额叶、枕颞叶等脑区, 健康组和抑郁组, 转相组和抑郁症组差异主要表现为枕颞叶和小脑。

结论 本研究试图通过静息态频谱能量角度寻找可早期识别双相的神经电生理标记物, 结果发现转相患者与抑郁发作患者在情绪处理相关脑区均与正常人存在差异, 这可能是抑郁发作的神经电生理基础。而枕颞叶小脑有望成为早期识别双相的脑区。

关键词: 抑郁发作, 脑磁图, 静息态

Investigating Cognitive Improvement Using Transcranial Direct Current and Repetitive Transcranial Magnetic Stimulation in Major Depressive Disorder: A Double-Blind, Randomized, Placebo-Controlled Study"

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Objective Cognitive dysfunction is one of the common symptoms in patients with major depressive disorder

(MDD). Repetitive transcranial magnetic stimulation (rTMS) and transcranial direct current stimulation (tDCS) have been studied separately in the treatment of cognitive dysfunction in MDD patients. We aimed to investigate the effectiveness and safety of rTMS combined with tDCS as a new therapy to improve neurocognitive impairment in MDD patients.

Methods In this brief 2-week, double-blind, randomized, and sham-controlled trial, a total of 550 patients were screened, and 240 MDD inpatients were randomized into four groups (active rTMS + active tDCS,

active rTMS + sham tDCS, sham rTMS + active tDCS, sham rTMS + sham tDCS). Finally, 203 patients completed the study and received 10 treatment sessions over a 2-week period. The Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) was performed to assess patients' cognitive function at baseline and week 2. Also, we applied the 24-item Hamilton Depression Rating Scale (HDRS-24) to assess patients' depressive symptoms at baseline and week 2

Results After 10 sessions of treatment, the rTMS combined with the tDCS group showed more significant improvements in the RBANS total score, immediate memory, and visuospatial/constructional index score (all $p < 0.05$). Moreover, post hoc tests revealed a significant increase in the RBANS total score and Visuospatial/Constructional in the combined treatment group compared to the other three groups but in the immediate memory, the combined treatment group only showed a better improvement than the sham group. The results also showed the RBANS total score increased significantly higher in the active rTMS group compared with the sham group. However, rTMS or tDCS alone was not superior to the sham group in terms of other cognitive performance. In addition, the rTMS combined with the tDCS group showed a greater reduction in HDRS-24 total score and a better depression response rate than the other three groups.

Conclusion rTMS combined with tDCS treatment is more effective than any single intervention in treating cognitive dysfunction and depressive symptoms in MDD patients

关键词: Major depressive disorder, rTMS, tDCS, Clinical trial, Cognition

Evaluating The Effectiveness and Tolerance of Combined RTMS and TDCS in Treating Depression: A Randomized, Double-Blind, Placebo-Controlled Trial

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Objective Non-invasive brain stimulation (NIBS) is an effective method of treating depression with fewer side effects than medications. Since repetitive transcranial magnetic stimulation (rTMS) and transcranial direct current stimulation (tDCS) are individually well-studied in the treatment of depression, we aimed to test the clinical effectiveness, safety, and tolerability of rTMS combined with tDCS as a new treatment for depression

Methods In this brief 2-week double-blind, randomized and sham-controlled trial with 10 sessions of rTMS +/- tDCS vs a mixture of pharmacotherapies, a total of 180 inpatients with major depressive disorder (MDD) were randomized to four groups (active rTMS + active tDCS, active rTMS + sham tDCS, sham rTMS + active tDCS, sham rTMS + sham tDCS), and received 10 treatments over two weeks. We measured the 24-item Hamilton Depression Rating Scale (HDRS-24) at baseline and at 2 weeks. Remission was defined as HDRS-24 total score ≤ 9 after treatment, and response was defined as a $\geq 50\%$ reduction in HDRS-24 total score from baseline. We reassessed the HDRS-24 at 4 weeks as a follow-up

Results After two weeks of treatment, rTMS alone was superior to the sham group on the reduction of HDRS-24 total score ($p < 0.01$), but tDCS alone was not. rTMS combined with tDCS significantly reduced HDRS-24 total score more than the other three groups (16.41 vs 13.62 vs 12.19 vs 9.77; all $p < 0.01$). Moreover, rTMS combined with tDCS also had significantly higher response and remission rates than the other three groups. In addition, rTMS combined with tDCS group reported similar side effect rates as the rTMS group alone

Conclusion rTMS combined with tDCS treatment is a new NIBS approach that is more effective than either single intervention and it has a comparable safety profile

关键词: Major depressive disorder; rTMS; tDCS; clinical trial; efficacy.

基于机器学习的抑郁症患者自杀意念预测模型的构建

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目的 采用机器学习算法建立汉密尔顿抑郁量表中各因子与自杀意念风险的预测模型,用于早期识别抑郁症患者是否伴有自杀意念。

方法 招募常州市第二人民医院心理科自杀意念问卷中文版(BSI-CV)将患者分为有自杀意念组和无自杀意念组。通过支持向量机(SVM)、朴素贝叶斯分类(NBC)、随机森林(RF)、极度随机树(ERTC)四种机器学习模型预测抑郁症患者自杀意念的风险,以模型的准确率、精确率、召回率、F1值、Kappa系数、MCC系数以及AUC值评估模型性能,选出最优模型,利用最优模型分析HAMD-24中与自杀意念相关性最强的因子。

结果 两组之间首诊/复诊($\chi^2=1.15, P=0.28$)、性别($\chi^2=1.98, P=0.16$)、文化程度($\chi^2=6.27, P=0.099$)、吸烟史($\chi^2=1.18, P=0.277$)、饮酒史($\chi^2=2.66, P=0.103$)比较无统计学差异。有自杀意念组平均年龄小于无自杀意念组($Z=-6.62, P < 0.001$),有无使用抗抑郁药($\chi^2=4.21, P < 0.05$)之间比较具有统计学差异。两组患者HAMD总分及相关因子包括:抑郁情绪、有罪恶感、入睡困难、工作和兴趣、迟缓、激越、躯体性焦虑、胃肠道症状、全身症状、疑病、体重减轻、自知力、日夜变化、偏执症状、能力减退感、绝望感、自卑感之间存在统计学差异($P < 0.05$ 或 $P < 0.001$)。睡眠不深、早醒、精神性焦虑、性症状、人格解体或现实解体、强迫症状相比较无统计学差异($P > 0.05$)。基于预测效能较优的极度随机树分析HAMD-24中与自杀意念相关性较强的因子主要为:绝望感、有罪恶感、自卑感、工作和兴趣、抑郁情绪。

结论 机器学习算法能有效预测HAMD-24中与自杀意念相关的危险因子,且极度随机树表现最佳,有助于早期识别抑郁症患者中有自杀意念者,尽早干预,降低自杀率。同时可以作为开发抑郁、自

杀等相关新量表条目的理论参考依据。

关键词：机器学习；抑郁症；自杀意念；预测模型

Abnormal Functional Connectivity Patterns of Amygdala and Relationships with Emotion Blunting in Treated MDD Patients

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Objective Emotion blunting (EB) is one of the common symptoms in patients diagnosed with major depressive disorder (MDD). EB is still reported by many MDD patients during antidepressant treatment. The study aims to explore neuropsychological differences between MDD patients with EB symptoms after 6 weeks of systematic antidepressant treatment and healthy controls (HCs).

Methods In this study, 40 MDD patients with EB after 6 weeks of systematic antidepressant treatment and 28 HCs were recruited. The resting-state functional magnetic resonance imaging (rs-fMRI) data were collected. The amygdala was taken as the region of interest (ROI), and the functional connectivity (FC) between the amygdala and other brain regions was measured to confirm the different patterns of FC between the two groups. The correlation between the significantly different FC values and the severity of EB and depression symptoms was calculated.

Results Compared with HCs, MDD patients with EB symptoms demonstrated extensive decreased amygdala connectivity with cortical-limbic-subcortical regions. The abnormal FC in MDD patients with EB is associated with the severity of EB and depressive symptoms. In MDD patients with EB, the abnormal FC between amygdala and caudate, olfactory is significantly associated with depressive symptoms. The abnormal FC between amygdala and fusiform, paraHippocampal, anterior cingulum cortex (ACC), insula, middle occipital gyrus (MOG), prefrontal cortex is significantly associated with the severity of EB.

Conclusion This study indicate that the amygdala is a core brain region closely associated with the pathological mechanisms of depression, but the neural bases of general depressive symptoms and EB symptoms are mutually separated. The abnormal FC patterns of amygdala may be the neurobiological basis of EB symptoms in MDD

关键词：Emotional blunting, MDD, Functional connectivity, Amygdala.

Social Isolation Associated with Depression: A Mediation Analysis

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Objective Social isolation was associated with depression among older adults, however, little is known in China

Methods We conducted a cross-sectional study including 6,664≥65 years older adults in Ningbo, China. We collected study data by self-report scales, and depression and social isolation were measured by Patient Health Questionnaire-9 scales and social isolation relevant scales. The relationship between social isolation and depression was estimated by Karlsson-Holm-Breen's mediation and multivariate-adjusted logistic regression models

Results Overall, the percentage of participants who had experienced social isolation, depression was 12.67% and 4.83%. Compared with the elderly without social isolation, the adjusted odds ratios (95% confidence interval) of depression with social isolation were 1.77 (1.25–2.51). However, no significant associations of social isolation with depression was observed in male participants [AOR (95% CI) = 1.42 (0.77-2.58)]. In contrast, female participants who had experienced social isolation were 1.99 times more likely to have depression. In addition, regarding the mediation models, the strong adjusted association between social isolation and depression was mediated through three lifestyle behaviors

(sedentary, physical inactivity and self-reported unhealthy diet) and two sleep behaviors (sleep disturbance and abnormal sleep duration), and these variables were found to mediate 3.07% to 9.98% of the total association

Conclusion In Chinese older adults, social isolation has been linked to depression, suggesting the importance of taking effective and feasible interventions to reduce social isolation

关键词: Social isolation, depression, mediation analysis

基于机器学习非自杀性自伤在青少年抑郁障碍患者中 自杀风险的中介因素研究

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目的 青少年自杀是一个严重的公共卫生问题。非自杀性自伤行为在抑郁障碍患者自杀过程中所起作用仍存在争议。机器学习结合常见的临床资料判断 NSSI 的中介作用相关研究比较少。本研究旨在通过机器学习的方法探讨非自杀性自伤在抑郁障碍患者出现自杀风险的作用。

方法 纳入 179 例青少年抑郁症患者, 采用 HAMD-24、贝克自杀风险量表、非自杀性自伤量表进行问卷调查。通过梯度提升回归模型分析 NSSI、抑郁和自杀风险之间的相关性。中介分析分三步完成: 第一步检验抑郁得分与自杀风险的相关性, 第二步检验抑郁得分与非自杀性自伤的相关性, 第三步检验抑郁得分与非自杀性自伤与自杀风险的相关性。结果 非自杀性自伤在抑郁障碍的男生中发生比率 32.78%, 女性的发生率 35.59%; 以高中生中发生率最高, 63.27%, 大学生逐渐减少, 18.63%, 有吸烟、饮酒史的抑郁障碍患者中发生比例高。非自杀性自伤在高中生中发生率最高, 与性别无关。有吸烟饮酒史的抑郁障碍患者中发生 NSSI 的比例高。NSSI 在抑郁障碍患者的自杀风险具有部分中介作用。

结论 NSSI 加重了抑郁障碍患者自杀风险。重视抑郁障碍患者的 NSSI, 早期采取措施, 有利于减少自杀的风险。

关键词: 抑郁障碍; 非自杀性自伤; 自杀风险; 中介因素; 机器学习

正念减压疗法对降低抑郁症患者自杀行为发生率及对 QOL 评分的影响

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目的 抑郁症是临床常见疾病, 患者的典型症状为持久性心境障碍, 同时伴随有注意困难、思维迟缓、抑郁悲观、兴趣低落, 甚至是自杀倾向, 很难融入到家庭与社会当中, 社会功能显著降低, 生活质量明显受到影响。有研究显示, 单纯给予患者抗抑郁治疗患者的康复效果较差, 联合其他治疗更有利于提高效果, 加快社会功能恢复。正念减压疗法从我国佛教起源, 是一种通过调节自身内心的一种方式, 多项研究显示, 正念减压疗法可以改善个体不良情绪。但是具体如何还需要进一步进行研究, 故本次研究对正念减压疗法对降低抑郁症患者自杀行为发生率及对 QOL 评分的影响做了深入分析, 期望可以为临床更好的治疗抑郁症患者提供依据。

方法 选取三甲精神专科医院收治的抑郁症患者 80 例, 分为两组 (根据治疗方法不同), 对照组马来酸氟伏沙明治疗, 研究组联合正念减压疗法治疗。比较两组治疗效果、抑郁情况、睡眠质量、生存质量评分 (QOL)、自杀行为发生率。

结果 研究组效果比对照组大 ($P < 0.05$); 研究组抑郁、睡眠质量评分比对照组小 ($P < 0.05$); 研究组食欲、精神与体力、睡眠、毁形情况、疼痛、家庭理解与照顾、社会支持、自身疾病认识、对治疗的态度、活动能力、治疗副作用、面部表情、总分等 QOL 评分比对照组大 ($P < 0.05$); 研究组自杀行为发生率比对照组小 ($P < 0.05$)。

结论 在抑郁症治疗中, 使用马来酸氟伏沙明联合正念减压疗法治疗效果较好, 可以对患者的不良情绪进行改善, 且可以改善患者睡眠质量, 减少自杀行为。

关键词: 正念减压疗法; 抑郁症; 自杀行为; 生存质量评分; 影响

抑郁症患者中使用抗抑郁剂发生性功能障碍

的风险：系统综述和剂量反应网状 Meta 分析

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目的 性功能障碍是抗抑郁药物的一个重要不良反应，会影响患者对治疗方案的依从性，降低患者的生活质量。本研究旨在系统评价不同抗抑郁药在抑郁障碍患者急性期治疗期间性功能障碍发生的风险。

方法 在 PubMed、Embase、Cochrane 临床对照试验中心注册数据库和 Web of Science 数据库中系统检索抗抑郁药治疗抑郁障碍的随机对照试验，检索时间范围限定为 1996 年 1 月 1 日至 2023 年 4 月 30 日。由两名研究者独立筛选文献、提取数据及评价纳入研究的偏倚风险。采用 R 4.0.1 软件进行成对 Meta 分析和网状 Meta 分析，并基于 Emax 方法评价抗抑郁药导致性功能障碍的剂量-反应关系。

结果 共纳入 73 项随机对照试验，样本量为 23481。网状 Meta 分析结果显示，与安慰剂相比，选择性 5-羟色胺再摄取抑制剂、5-羟色胺-去甲肾上腺素再摄取抑制剂和阿戈美拉汀与性功能障碍发生风险相关。文拉法辛 (OR 14.02 [95% CI 4.02-48.82])、瑞波西汀 (8.74 [4.23-18.03]) 和度洛西汀 (7.61 [2.80-20.70]) 的性功能障碍风险最高。奈法唑酮 (0.30 [0.01-7.36])、托鲁地文拉法辛 (0.48 [0.01-24.44]) 和伏硫西汀 (1.65 [0.44-5.20]) 发生性功能障碍风险最低。度洛西汀、艾司西酞普兰、氟西汀、左旋米那普仑、帕罗西汀、舍曲林和文拉法辛剂量的增加与性功能障碍的风险增加呈剂量-反应关系。

结论 多种抗抑郁药在抑郁障碍治疗的急性期会导致性功能障碍风险增加，其中奈法唑酮、托鲁地文拉法辛和伏硫西汀风险最低。本研究为基于患者价值偏好选择抗抑郁药物提供了临床依据。

关键词 抑郁障碍；抗抑郁药；不良反应；性功能障碍

注意力评估量表的编制与其成人信、效度研究

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目的 编制注意力评估量表 (ARS) 并进行信效度检验，初步探索其筛查抑郁症 (MDD) 注意力损害的理想划界值。

方法 根据文献查阅筛选注意力量表条目池，获得注意力评估包含的 6 个关键维度，应用 Delphi 专家咨询法进行 2 轮修订，拟定 ARS 的 12 个条目，进行量表条目分析、信效度分析。纳入 120 例成人健康受试 (HS) 进行 ARS 评估，随机纳入其中 84 例评估多伦多医院警觉性测试 (THAT)，作为量表金标准与 ARS 进行校标效度检验。随机纳入其中 30 例受试者进行注意网络测试 (ANT)，作为客观检测金标准与 ARS 进行校标效度检验。随机纳入 39 例 HS 在基线评估后 1 周进行 ARS 重测。分析量表的内部一致性信度、重测信度、结构效度、内容效度和效标效度。纳入 60 例成人 MDD 进行 ARS 信、效度的评估，应用 ROC 曲线分析 ARS 筛查 MDD 注意力损害的理想划界分。

结果 ARS 的 12 个条目分别评估注意力的 6 个维度：注意集中、注意维持、注意转移、选择注意、分配注意及反应抑制。各条目 CR 为 3.72-8.73 (均 $P < 0.01$)，各条目与总分 Pearson 相关系数为 0.36-0.71 (均 $P < 0.01$)。邀请 5 位相关领域专家进行量表条目评估，平均内容效度指数为 0.95。HS 组和 MDD 组 ARS 的克朗巴赫 α 分别为 0.776、0.718；重测信度分别为 0.825、0.807。HS 组因子分析发现 ARS 包含 4 个因子：注意力灵活性（注意集中，选择注意）、反应抑制、多任务处理（分配注意，注意维持）和注意转移，总贡献率为 53.42%。ARS 总分与 THAT 总分呈中高度正相关 ($r = 0.57, P < 0.01$)，与 ANT 的总 ER 中度负相关 ($r = -0.38, P < 0.05$)。以 43 分作为区分 HS 与 MDD 注意力损害的划界分，对应的灵敏度为 53.33%，特异度为 84.67%。

结论 ARS 编制条目结构合理，可以可靠、有效的评估注意力的 6 个维度。总分可以反映注意力水平，总分越高，注意力水平越高。ARS 能可靠、有效的评估 MDD 的注意力损害，43 分可特异性的区分 HS 与 MDD 注意力的差异，可以作为筛查 MDD 注意力损害的划界值。

关键词：注意力；量表；信效度；多伦多医院警觉性测试；注意网络测试；抑郁症

Psilocybin Promotes Long-Term Cell-Type-Specific Changes in The Orbitofrontal Cortex Revealed by Single-Nucleus RNA-seq

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Objective Recent clinical advances have shown promising developments in the use of psilocybin for treating psychological disorders such as depression, addiction, and obsessive-compulsive disorder. Psilocybin is a psychedelic whose metabolite, psilocin, is a 5-HT_{2A} receptor agonist. However, the mechanisms for effect of psilocybin in depression are not fully illustrated. The primary purpose of the current study was to elucidate the underlying mechanisms for the anti-depressant effect of psilocybin, and its cell-type-specific and circuit effects on the orbitofrontal cortex (OFC), a brain region vulnerable to brain disorders such as depression.

Methods Here, we combined single-nucleus RNA-seq with functional assays to study the long-term effects of psilocybin on the OFC. We characterized the intrinsic and synaptic properties of neurons in the OFC to understand the functional changes of the OFC after psilocybin injection. With AAV mediated cell-type-specific shRNA, we knockdowned Htr2a in neurons of the OFC to understand the cell-type-specific mechanism of it on neuronal activities in the OFC. We evaluated the anti-depressant effect of psilocybin with a chronic stress model, repeated forced swimming test.

Results We showed that a single dose of psilocybin induced long-term genetic and functional changes in neurons in the OFC, and excitatory and inhibitory neurons jointly reduced microcircuit activity of the brain region. Knockdown of 5-HT_{2A} receptor in deep layer excitatory neurons abated psilocybin-induced functional changes and the anti-depressant effect.

Conclusion Together, these results showed the cell-type-specific and microcircuit mechanisms of psilocybin on the functions of the OFC and shed light on the understandings of the anti-depressant effect of psychedelics

关键词：psilocybin; orbitofrontal cortex; circuit activity; cell-type-specific; single-nucleus RNA-seq; depression

不同移植方式下人脱落乳牙牙髓干细胞对WKY 抑郁模型大鼠的治疗作用

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目的 重度抑郁症 (Major depressive disorder, MDD) 是一种常见的精神疾病, 患病率高, 社会负担严重, 给患者及其家属带来痛苦, 但目前主要药物治疗方式的效果欠佳, 且副作用明显, 因此迫切需要一种新型高效的治疗方式。干细胞 (Stem cells) 是一类具有高度自我增殖和多向分化潜能的非特化细胞, 具有强大的组织修复能力, 干细胞疗法近年来发展为一种极具潜力的神经和精神疾病新型治疗方式。本研究拟探讨不同移植方式下人脱落乳牙牙髓干细胞 (SHED) 对 WKY 抑郁模型大鼠的治疗作用。

方法 复苏培养 SHED 细胞; 将 30 只 WKY 雄性大鼠随机分为模型对照组, 脑室内立体定位注射 SHED 细胞移植组、鼻内递送 SHED 细胞移植组, 每组 10 只, 另有 10 只雄性 Wistar 大鼠作为正常对照组。移植组 WKY 大鼠适应性饲养 1 周后分别给予脑室内立体定位注射 SHED 细胞和鼻内递送 SHED 细胞, 移植 3 周后通过蔗糖偏好实验、Y 迷宫、强迫游泳实验及旷场实验评估不同移植方式下 SHED 治疗的效果; 酶联免疫吸附实验 (ELISA) 检测神经营养因子 BDNF、GDNF 和炎症因子 IL-1 β , IL-6 及 TNF- α 等的表达水平。

结果 行为学实验观察到 SHED 移植治疗可以减轻 WKY 抑郁模型大鼠的抑郁行为并提高大鼠短期记忆力, 脑室内立体定位注射组的治疗作用高于经鼻递送组; ELISA 实验检测到 SHED 移植治疗后大鼠海马区和血清中神经营养因子 BDNF、GDNF 等表达水平升高, 而炎症因子 IL-1 β , IL-6 及 TNF- α 等的表达水平降低, 脑室内立体定位注射组的治疗作用高于经鼻递送组。

结论 SHED 移植治疗具有抗抑郁作用, 可能是通过神经营养保护和免疫调节抗炎的方式实现, 脑室内移植治疗的作用优于经鼻递送。

关键词: 人脱落乳牙牙髓干细胞, 重度抑郁症, WKY 抑郁模型大鼠, 脑立体定位注射移植, 经鼻递送

High-fat Diet Induced Depression-like Phenotype Via Hypocretin-HCRTR1 Mediated Inflammation Activation

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Objective High-fat diet (HFD) is generally associated with an increased risk of mental disorders that constitute a sizeable worldwide health. HFD results in the gut microbiota-brain axis being altered and linked to mental disorders. Hypocretin-1, which can promote appetite, has been previously confirmed to be associated with depression. However, no exact relationship has been found in hypocretin between depression and HFD.

Methods Adult male SD rats were randomly assigned to either an HFD or a normal diet, followed by behavioral tests and plasma biochemical analyses. Then, we investigated the protein and mRNA levels of inflammation-related factors in the hippocampus. We also observed morphological changes in brain microglia and lipid accumulation. Additionally, metagenomics and metabolomics analyses of gut microbiomes were performed. 3T3-L1 cells were utilized in vitro to investigate the impact of hypocretin-1 and hypocretin receptor 1 antagonists (SB334867) on lipid accumulation. We used a conditioned medium (CM) treated with 3T3-L1 cells to observe the activation and phagocytosis of BV2 cells. Following a 12-week period of feeding a high-fat diet (HFD) to C57BL/6 mice, a three-week intervention period was initiated during which the administration of the hypocretin antagonist SB334867 was observed. This was followed by a series of assessments, including monitoring of body weight changes and emotional problems, as well as attention to plasma biochemical levels and microglial cell phenotypes in the brain.

Results The HFD rats displayed anxiety and depressive-like behaviors. HFD rats exhibited increased plasma HDL, LDL, and TC levels. HFD also causes an

increase in hypocretin-1 and hypocretin-2 in the hypothalamus. Metagenomic and metabolomics revealed that HFD caused an increase in the relative abundance of associated inflammatory bacteria and decreased the abundance of anti-inflammatory and bile acid metabolites. Hippocampal microglia in the HFD group were significantly activated and accompanied by lipid deposition. Levels of inflammation-related factors were increased. We found that SB334867 could significantly reduce lipid accumulation in 3T3-L1 cells after differentiation, and after adding treated CM to BV2 cells, BV2 cells were activated, and lipid droplets accumulated. The expression of inflammatory factors decreased in the SB334867 group. The administration of a hypocretin antagonist was found to reverse the adverse effects of the HFD on body weight, depressive-like behaviour and anxiety-like mood. Furthermore, this treatment was associated with improvements in plasma biochemical levels and a reduction in the number of microglia in the brain.

Conclusion Our results demonstrated that HFD induced anxiety and depressive-like behaviors, which may be linked to the increased hypocretin level and lipid accumulation.

关键词: High-fat diet; Hypocretin; inflammation; depression

Hypocretin-1/hypocretin Receptor 1 Regulates Neuroplasticity and Cognitive Function Through Hippocampal Lactate Homeostasis in Depressed Model

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Objective Cognitive dysfunction is a common symptom of major depressive disorder. The disruption of hypocretin regulation is known to be associated with depression, however, their exact correlation is remains to be elucidated.

Methods We investigated the effects of hypocretin receptor 1 (HCRTR1) antagonists with chronic unpredictable mild stress (CUMS) on depressive and cognitive behaviors and hippocampal neuroplasticity. Plasma and hypothalamus hypocretin-1 level were determined by ELISA in each group. mRNA expression of the hypoxia inducible factor 1 α (HIF-1 α) and molecules of lactic acid transport pathway were measured in hippocampus. We also conducted intraventricular injection (icv.) of hypocretin-1 rats, microPET was used to analyze hippocampus glucose metabolism, molecules of lactic acid transport pathway and lactic acid were analysis. Specifically knockdown of HCRTR1 in hippocampal astrocytes in combination with the CUMS mouse model was used to further validate the role of the orexin system in depression. Additionally, further mechanisms also verified in hippocampus primary astrocytes and neuron invitro.

Results Hypocretin-1 levels were increased in the plasma and hypothalamus from chronic unpredictable mild stress (CUMS) model mice. Excessive hypocretin-1 via HCRTR1 conduction reduced lactic acid production and brain-derived neurotrophic factor (BDNF) expression by HIF-1 α , thus impairing adult hippocampal neuroplasticity, and cognitive impairment in CUMS model, which reversed by HCRTR1 antagonist. The direct effect of hypocretin-1 on hippocampal lactic acid production and cognitive behavior was further confirmed by intraventricular injection of hypocretin-1 and microPET-CT in rats. Additionally, these mechanisms were further validated in astrocytes and neurons in vitro. Moreover, these phenotypes and changes in molecules of lactic acid transport pathway could be duplicated by specifically knockdown of HCRTR1 in hippocampal astrocytes.

Conclusion In summary, the results provide molecular and functional insights for involvement of hypocretin-1-HCRTR1 in altered cognitive function in depression.

关键词: hypocretin-1; depression; cognition; lactic acid; hypoxia-inducible factor-1 α

生物精神病学组

SEP-363856 Exerts Neuroprotection Through The PI3K/AKT/GSK-3 β Signaling Pathway in A Dual-hit Neurodevelopmental Model of Schizophrenia-like Mice

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Background Schizophrenia (SZ) is a serious, destructive neurodevelopmental disorder. Antipsychotic medications are the primary therapy approach for this illness, but it's important to pay attention to the adverse effects as well. Clinical studies for SZ are currently in phase III for SEP-363856 (SEP-856)-a new antipsychotic that doesn't work on D2 receptors. However, the underlying action mechanism of SEP-856 remains unknown

Objectives This study aimed to evaluate the impact and underlying mechanisms of SEP-856 on SZ-like behavior in a perinatal MK-801 treatment combined with social isolation from the weaning to adulthood model (MK-SI)

Methods First, we created an animal model that resembles SZ that combines the perinatal MK-801 dose with social isolation from the weaning to adulthood. Then, different classical behavioral tests were used to evaluate the antipsychotic properties of SEP-856. The levels of proinflammatory cytokines (TNF- α , IL-6, and IL-1 β), apoptosis-related genes (Bax and Bcl-2), and synaptic plasticity-related genes (BDNF and PSD95) in the hippocampus were analyzed by qRT-PCR. Hematoxylin and eosin staining (H&E) were used to observe the morphology of neurons in the hippocampal DG area. Western blot was performed to detect the protein expression levels of BDNF, PSD95, Bax, Bcl-2, PI3K, p-PI3K, AKT, p-AKT, GSK-3 β , p-GSK-3 β in the hippocampus

Results The MK-SI SZ neurodevelopmental disease model studies demonstrated that MK-SI mice exhibited considerably higher levels of autonomic activity, withdrew from social interactions, and had impairments in recognition memory when compared to sham mice.

These findings imply that the MK-SI model can mimic symptoms similar to those of SZ. Compared with the MK-SI model, both 1mg/kg and 10mg/kg SEP-856 significantly shortened increased activity, improved social interaction, and reversed recognition memory impairment in MK-SI mice. In addition, SEP-856 can reduce the release of proinflammatory factors in the MK-SI model, promote the expression of BDNF and PSD95 in the hippocampus, correct the Bax/Bcl-2 imbalance, turn on the PI3K/AKT/GSK-3 β signaling pathway, and ultimately help the MK-SI mice's behavioral abnormalities

Conclusion SEP-856 may play an antipsychotic role in MK-SI "dual-hit" model-induced SZ-like behavior mice by promoting synaptic plasticity recovery, decreasing death of hippocampal neurons, lowering the production of proinflammatory substances in the hippocampal region, and subsequently initiating the PI3K/AKT/GSK-3 β signaling cascade

关键词 : schizophrenia, SEP-363856, PI3K/AKT/GSK-3 β , neuroprotection

Effects of Combined Computerized Cognitive Remediation Therapy on Efficacy, Cognitive Function and Biological Indicators in Schizophrenia

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Objective Schizophrenia is a severe chronic mental disorder, and cognitive impairment is now recognized as a clinical feature of the disease. There is a lack of effective pharmacological treatments for cognitive impairment in patients with schizophrenia, and the role of computer-programmed cognitive remediation therapy for schizophrenia is gradually gaining attention. The aim of this study was to investigate the role of Computerized Cognitive Remediation Therapy (CCRT) on the efficacy, cognitive function and biological indexes of unmedicated schizophrenia, and to further analyze the relationship between biological indexes and cognitive function

Methods Fifty-five patients with schizophrenia who were not taking antipsychotics more than 4 weeks before the first or admission were included in this study, and they were randomly assigned to the group of conventional medication combined with CCRT (denoted as CCRT group) and the group of conventional medication (denoted as TAU group). CCRT treatment was given for more than 3 times a week for 30 minutes each time. The patients were assessed using Positive and Negative Symptom Scale (PANSS), Montreal Cognitive Assessment Scale (MoCA), and Social Dysfunction Scale (SDSS) on the day of admission and at the 8th week of admission. Blood biochemical indexes were tested on the next day of admission and at the 8th week of admission and 5 ml of venous blood was collected to take the serum for freezing, and serum IGF-1 was uniformly measured by ELISA at the end of all the samples collection, BDNF levels. SPSS 26.0 software was used to analyze the data, and independent samples t-test, Mann-Whitney U and chi-square test were used to compare the differences between groups, paired t-test and Wilcoxon test were used to compare before and after, and Pearson, Spearman correlation analysis and partial correlation analysis were used to explore the correlation between the biological indexes and the scores of MoCA

Results 1. The PANSS scale factor scores decreased in the CCRT and TAU groups after follow-up compared with before follow-up, and the difference was statistically significant ($P<0.05$). Visual space and executive scores ($P<0.001$), attention scores ($P=0.012$), abstract thinking scores ($P=0.001$), delayed recall scores ($P<0.001$), orientation scores ($P<0.001$) and total MoCA scores ($P<0.001$) in CCRT group increased after follow-up, and the differences were statistically significant. The naming score ($P=0.012$) was lower than that before follow-up, and the difference was statistically significant. After follow-up, the visuospatial and executive scores ($P=0.008$) and abstract thinking scores ($P<0.001$) in TAU group were higher than before follow-up, and the differences were statistically significant, while the naming scores ($P=0.020$) and language scores ($P=0.003$) were lower than before follow-up, and the differences were statistically significant. The total score

of MoCA was not significantly different from that before follow-up ($P=0.242$). SDSS scores in CCRT and TAU groups were significantly lower after follow-up than before follow-up ($P<0.001$)

2. The difference of negative symptom score before and after follow-up in CCRT group was higher than that in TAU group, with statistical significance ($P=0.039$). The differences of visual space and executive score ($P=0.028$), delayed recall score ($P<0.001$), orientation score ($P=0.030$) and total MoCA score ($P<0.001$) before and after follow-up in CCRT group were higher than those in TAU group, and the differences were statistically significant. The difference of SDSS score before and after follow-up in CCRT group was higher than that in TAU group, and the difference was statistically significant ($P=0.033$).

3. The levels of insulin ($P=0.004$), triglyceride ($P<0.001$), IGF-1 ($P<0.001$), and BDNF ($P<0.001$) increased after follow-up in the CCRT group compared with those before follow-up, and the difference was statistically significant, and the levels of insulin ($P=0.033$), triglyceride ($P<0.001$), and BDNF ($P=0.001$) in the TAU group after follow-up increased compared with the pre-follow-up period, and the difference was statistically significant; the difference in triglyceride ($P=0.049$) and IGF-1 levels ($P=0.047$) before and after follow-up in the CCRT group was higher than that in the TAU group, and the difference was statistically significant.

4. Insulin level was negatively correlated with language ($r=-0.422$, $P=0.002$), MoCA total score ($r=-0.286$, $P=0.044$), glucose level was negatively correlated with language ($r=-0.311$, $P=0.028$). Low density lipoprotein cholesterol level was positively correlated with abstract thinking ($r=0.290$, $P=0.041$), IGF-1 level was positively correlated with delayed recall ($r=0.379$, $P=0.007$) and total MoCA score ($r=0.322$, $P=0.023$).

Conclusion 1. Schizophrenia showed significant remission of clinical symptoms, degree of social functioning deficits, and increased insulin, triglyceride, and serum BDNF levels after 8 weeks of follow-up

2. Combined CCRT treatment resulted in a more significant improvement in negative symptoms, cogni-

tive functioning, and degree of social functioning deficits in schizophrenia, and an increase in overall clinical efficacy.

3. Combined CCRT treatment resulted in more pronounced up-regulation of triglyceride levels and serum IGF-1 levels in schizophrenia, with higher IGF-1 levels resulting in better cognitive function.

关键词: CCRT, Schizophrenia, Cognitive Function, IGF-1

A Novel Inflammatory Subtype, Consisting of RANTES, IL-9, MIP-1beta, TNF-alpha, IL-2 and IL-10, Acts As A Potential Diagnostic Marker in First-Episode of Major Depressive Disorder

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Objective Inflammation is involved in the process of cognitive impairment in some psychiatric disorders, however, the relationship between cognitive function and inflammation markers in major depressive disorder (MDD) remains unclear. Herein, we sought to investigate the alterations in cytokine levels, and the relationships between cytokines levels and cognitive performance in MDD patients and healthy controls (HCs) from the perspective of inflammation panel

Methods This present study included 170 participants, including 101 first-episode drug-naïve MDD patients and 69 HCs. The levels of 27 cytokines were assayed by the Bio-Plex human 27-plex (BioRad). The depressive and anxiety symptoms were evaluated using the Hamilton Depression Rating Scale-17 (HAMD-17) and Hamilton Anxiety Rating Scale-14 (HAMA-14), respectively. The cognitive function was assessed by the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) and the Toronto Alexithymia Scale (TAS-20)

Results We found that first-episode drug-naïve MDD patients exhibited poorer cognitive function com-

pared to those in HCs, including neurocognitive and social cognition, even when accounting for potential confounders. 26 of the 27 cytokines levels were significantly higher in MDD patients. Principal component analysis for the 27 cytokines produced 5 principal components (PC) that represented 71.26% of the common variance, 4 of which were significantly different in the MDD and HCs groups. Importantly, PC3, consisting of RANTES, IL-9, MIP-1beta, TNF-alpha, IL-2 and IL-10, had a good diagnosis of MDD (area under the curve =0.829). Additionally, PC3 and the inflammatory factors it contains had different associations patterns with depressive symptoms and cognitive function in the MDD and HC groups

Conclusion Our findings provide novel insights into the potential interplay between clinical symptoms and cognitive impairments by inflammatory subtypes in first-episode drug-naïve MDD patients

关键词: First-episode of major depressive disorder; Cytokine; Inflammatory Subtypes; Depressive symptom; Cognitive function

MPFC 脑区过表达 FYN 基因诱导小鼠认知功能损伤及其机制研究

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目的 本研究旨在探索在小鼠内侧前额叶过表达 FYN 基因对小鼠行为学的影响, 以及探讨其在精神分裂症病理生理过程可能的作用机制。

方法 在 7 周龄雄性鼠双侧的 mPFC 脑区均定位注射腺病毒载体过表达 Fyn 基因(Fyn-OE 组), 空载组小鼠注射空载病毒作为对照 (Vehicle 组)。注射病毒 3 周后开始行为实验, 包括新奇物体识别实验 (NORT)、社交行为测试 (SIT)、旷场实验 (OFT)、水迷宫测试 (MWM) 等行为学测试并与空载组进行比较, 使用光纤记录检测实验小鼠进行新物体识别任务时神经元钙信号活动的变化。通过高尔基染色观察 mPFC 脑区神经元树突长度、树突棘密度变化并对树突棘分型。同时利用 RNA 测序技术 (RNA-

seq) 对实验小鼠前额叶组织中的总 RNA 进行转录组学分析, 分析差异基因表达情况, 分别进行 RT-qPCR 及 Western Blot 验证差异基因。

结果 1. 新物体识别测试中, Fyn-OE 组小鼠新物体识别指数(DI)比 Vehicle 组降低, 识别新物体的能力下降。在 Morris 水迷宫实验中, Fyn-OE 组小鼠在训练阶段表现出更长的逃避潜伏期才能找到平台, 在测试阶段, 相对于 Vehicle 组小鼠, Fyn-OE 组小鼠探索平台象限时间更少, 跨越平台区域的次数也更少。

2. 在旷场实验中, Fyn-OE 组小鼠与 Vehicle 组小鼠在中央区探索时间以及运动距离没有表现出差异。三箱社交实验中, 两组小鼠社交指数没有差异, 两组小鼠表现出相似的社交好奇心和社交新颖性。

2. mPFC 脑区过表达 Fyn 基因影响神经元钙信号: Fyn-OE 组小鼠在接触新物体与熟悉物体时钙信号活动没有差异, 而空载组小鼠在接触新物体时钙信号活动比熟悉物体时高, Fyn-OE 组小鼠钙信号活动出现了变化。

3. RNA-seq 及差异基因分析结果: 在差异表达基因中, 排在前几位的上调基因与乙酰胆碱受体相关, 包括乙酰胆碱受体亚基 Chrb4、Chrb3、Chrna3。

4. 分别通过 RT-qPCR 和 WB 实验验证, 发现 Chrb3 mRNA 也显著升高, Chrb3 蛋白相对表达量升高。

5. 高尔基染色显示 Fyn-OE 组相对于 Vehicle 组神经元的树突棘密度增加, 树突棘分型结果显示, 主要是蘑菇型树突棘数量增加。

结论 本研究从行为学测试、差异基因、分子表达量、钙信号活动以及树突棘密度的变化方面探索了 Fyn 过表达导致的影响, 推测 Fyn 过表达可能与精神分裂症患者出现认知损伤有一定的关系, 而认知损伤也是精神分裂症患者的一项重要表现。

关键词: mPFC; FYN; 认知功能损伤; RNA 测序

Analysis and Correlation of Thyroid Hormone Levels in Patients with Depression and Bipolar Disorder

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Objective To explore the analysis and correlation of thyroid hormone levels in patients with depression and bipolar disorder

Methods A total of 73 patients with depression, 86 patients with bipolar disorder, and 66 health personnel admitted to our hospital from January 2021 to December 2022 were selected as the study objects. Five thyroid function levels were detected, and YMRS and HAMD depression scales were evaluated. The thyroid hormone levels of patients with depression and bipolar disorder and healthy physical examination subjects were compared and observed, and the five thyroid function levels of patients with depression and bipolar disorder in different groups were detected, as well as the correlation between HAMD, YMRS, and five thyroid function items

Observation Indicators

(1) The thyroid function (T3, T4, FT3, FT4, TS) levels in patients with depression and bipolar disorder were compared and observed.

(2) According to the severity of depression and whether it was accompanied by psychotic symptoms, 73 patients were divided into the severe DD attack group without psychotic symptoms (49 cases), the severe DD attack group with psychotic symptoms (14 cases), and the moderate DD attack group (10 cases), and the five levels of thyroid function in each group were compared and analyzed.

(3) Depending on the severity of bipolar disorder and whether it is accompanied by psychotic symptoms, The 86 patients were divided into BD manic episode group with psychotic symptoms (12 cases), BD manic episode group without psychotic symptoms (6 cases), BD major depressive episode group with psychotic symptoms (20 cases), BD major depressive episode group without psychotic symptoms (37 cases), and BD currently a mixed episode group (11 cases). The five levels of thyroid function in each group were compared and analyzed.

(4) Correlation analysis. To study the correlation between HAMD, YMRS, and five items of Jia Gong.

Statistical Methods In this paper, SPSS26.0 was used to process data. Measurement data consistent with normal distribution were represented by (\bar{x}), T-test was used, count data were represented by [n (%)], 2 test was used, and Spearman correlation analysis was used. $P < 0.05$ was considered statistically significant.

Results Among the five indexes of thyroid function in depression and bipolar disorder patients, there were significant statistical differences in T3, FT3, and FT4 ($P < 0.05$), but no statistical differences in T4 and TSH ($P > 0.05$). There was no significant difference in thyroid function among depression and bipolar disorder patients with different severity and with or without psychotic symptoms ($P > 0.05$). In terms of correlation, HAMD was positively correlated with T4 and FT4 ($r=0.259, 0.176, P < 0.05$). YMRS was significantly negatively correlated with T3 and TSH ($r=-4.02, -0.466, P < 0.05$)

Conclusion In the study of patients with different disease degrees and symptoms, it was found that there was no statistically significant difference in thyroid function in patients with depression and bipolar disorder with different severity and whether they were accompanied by psychotic symptoms ($P > 0.05$). Studies have shown that although abnormal expression of T3, FT3 and FT4 can be seen in the diagnosis of depression and bipolar disorder, there is no statistically significant difference in the five items of thyroid function in patients with different disease severity, and the value of thyroid hormone levels in assessing disease severity is limited. In addition, in the five correlation studies between HAMD, YMRS and thyroid function, HAMD was positively correlated with T4 and FT4 ($r=0.259, 0.176, P < 0.05$), and YMRS was negatively correlated with T3 and TSH ($r=-4.02, -0.466, P < 0.05$). Through the level of thyroid hormone, the degree of depression and mania can be evaluated. (1) At the time of BD manic episode, the human body will affect the secretion of thyroid hormones based on the needs of endocrine regulation. In order to maintain endocrine balance, the levels of T4 and FT4 can be compensated and enhanced in order to maintain endocrine balance, so the higher the levels of T4 and FT4, the higher the HAMD evaluation

score. (2) TSH affinity changes based on changes in thyroid receptor concentrations. Studies have shown that the severity of the disease in patients with both bipolar disorder and depression significantly decreases the affinity for TSH, and YMRS has a significant negative correlation with TSH. Therefore, in the clinical diagnosis and treatment, the degree of mania and depression can be evaluated through the detection of the five functions of the thyroid gland, but the evaluation effect is relatively limited, and there is no significant correlation between the five levels of some thyroid functions. The results of this study showed that compared with healthy subjects, T3, FT3 and FT4 in patients with bipolar disorder and depression had statistically significant differences ($P < 0.05$). Studies have shown that patients with bipolar disorder and depression can see abnormal expression of five functional indicators of thyroid function (T3, FT3, and FT4), mainly because: (1) The neurotransmitter system interacts with thyroid hormone, and thyroid hormone and neurotransmitter system (such as norepinephrine, dopamine, etc.) have the same biosynthetic tyrosine, which can play a role in regulating emotional state and brain activity in the pathogenesis of human mood disorders. (2) Patients with bipolar disorder and depression can affect the formation of the "pituitary-hypothalamic-thyroid" axis, resulting in the function of the thyroid axis being inhibited to varying degrees and abnormal secretion and expression of thyroid hormone; (3) Patients with bipolar disorder and depression can see a significant increase in the concentration of thyroid hormone receptors, which leads to a significant increase in T3, FT3, and FT4 levels; (4) In terms of TSH affinity, along with the increase of thyroid receptor concentration, TSH affinity can be seen to a certain extent, which leads to a decrease in TSH content. Still, the decrease degree is not obvious. Therefore, the detection of Q5 can provide a certain reference for the diagnosis of bipolar disorder and depression. Still, the reference value is relatively limited, and there is no significant difference between T4 and TSH. The abnormal expression of thyroid hormone is obvious in patients with depression and bipolar disorder, but there is no difference in the abnormal expression of thyroid hormone in patients

with different disease degrees. The severity of depression and bipolar disorder can be evaluated through the detection of the five functions of the thyroid, which can provide some reference for the development of clinical intervention.

关键词: Depression, Bipolar disorder, Thyroid hormone, Relevance, Intervene

母体免疫激活致子代精神分裂症大鼠青春期海马体突触异常及其行为学异常的相关研究

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目的 通过在孕早期给予孕鼠聚肌胞苷酸 (Poly (I:C)), 致其免疫活化, 建立母体免疫激活致子代精神分裂症大鼠模型, 观察该模型在疾病发生发展中脑内突触相关蛋白表达水平、行为学、脑内星形胶质细胞和小胶质细胞数量和形态的变化, 并分析其突触缺损情况及其行为学异常的关系。

方法 将成功受孕雌鼠随机分为 Poly (I:C)模型组和生理盐水对照组, 在确认出现阴道栓后的第 9 天时, 两组尾静脉分别注射 10mg/kg Poly (I:C) 和等体积的 0.9% 无菌生理盐水, 注射结束后孕鼠立即返回原笼中, 等待小时后两组随机各选取 3 只动物作为质量控制, 其它孕鼠无干扰至产下仔鼠。仔鼠在 21 日龄时离乳, 将它们根据亲代来源的不同分为模型组和对照组, 使其无干扰自然生长。在其子代青春期 (出生后第 40 天, PND40) 进行 PPI、潜伏抑制、条件恐惧学习测试的行为学测定, 并通过免疫印记技术检测海马区突触相关蛋白的表达水平, 采用免疫组织化学技术检测海马 Iba1 和 GFAP 的表达, 采用高尔基染色观察神经元的形态。最后使用 SPSS20.0 软件对各组实验结果统计学分析。

结果 与对照组相比, 在母体免疫激活致子代精神分裂症模型组大鼠青春期海马体中, 神经元树突棘密度显著下降; PPI、潜伏抑制、恐惧记忆行为出现缺陷; 磷酸化 Cofilin 和磷酸化 LIMK1 的表达显著下调; 神经元骨架蛋白 NFM、NFH 和 NFL 的 mRNA 和蛋白在海马区的表达显著上调; Iba1 阳性

的小胶质细胞数量显著增加 ($P < 0.01$), 但 GFAP 阳性星形胶质细胞的数量在两组之间不具有统计学差异 ($P > 0.05$)。

结论 母体免疫激活致子代精神分裂症模型大鼠在青春期出现类精神分裂症样行为变化, 且其海马体中神经元树突棘密度显著下降。

关键词: 母体免疫活化, 精神分裂症, 突触, 胶质细胞

二甲双胍和配对饮食对奥氮平诱导的肠道微生物群失调的影响

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目的 肠道微生物的改变在很大程度上与抗精神病药物引起的肥胖密切相关, 本研究旨在探讨二甲双胍和配对饮食对奥氮平诱导的肠道微生物的影响。

方法 雌性 SD 大鼠在适应性饲养 2 周之后, 按体重均衡原则随机被分为四组: 对照组、配对饮食组、奥氮平组、以及二甲双胍干预组。对照组大鼠给予普通饲料喂养; 配对饮食组大鼠给予混有奥氮平的饲料喂养, 且该组大鼠接受的食物量等同于前 48 小时对照组大鼠的食物消耗量; 奥氮平组大鼠给予混有奥氮平的饲料喂养, 且自由摄食不限量; 二甲双胍干预组大鼠第五周末开始给予混有奥氮平和二甲双胍的饲料喂养, 二甲双胍干预为期三周。干预结束后, 采集各组大鼠粪便样本进行 16S 高通量测序分析肠道菌群物种组成和丰度的变化。

结果 α 多样性分析结果显示, 四组大鼠肠道菌群在 OTUs 水平上, Ace、Sobs、Shannon 以及 Chao 多样性指数均无统计学差异 ($P > 0.05$), 表明二甲双胍和配对饮食以及奥氮平均不能改变肠道菌群的多样性及丰富度。 β 多样性 3D-PCoA 在属水平上显示, 各组菌群结构轮廓均能明显分开 ($P < 0.01$), 二甲双胍干预组大鼠菌群结构轮廓部分与对照组有重合交叉。物种差异性分析显示, 与对照组相比, 奥氮平组显著增加脱硫弧菌的丰度, 降低乳酸杆菌和厚壁菌的丰度。与奥氮平组大鼠相比, 二甲双胍和配对饮

食均能显著抑制奥氮平引起的脱硫弧菌丰度增加,缓解奥氮平引起的厚壁菌丰度降低,逆转奥氮平引起的乳酸杆菌丰度至正常水平。

结论 二甲双胍和配对饮食显著改善了奥氮平引起的肠道微生物种群失调,增加了肠道有益菌群的丰度,减少了肠道有害菌群的丰度。

关键词: 二甲双胍,奥氮平,肠道菌群

Deep Transcranial Magnetic Stimulation for The Treatment of Negative Symptoms and Cognitive Deficits of Schizophrenia: A Sham-Controlled, Randomized Trial

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Background Negative symptoms and cognitive deficits are considered core symptoms of schizophrenia and are main contributors to disability and poor long-term outcome, yet both of them show limited response to antipsychotics. The prefrontal cortex (PFC) hypo-function is considered essential in neurobiological basis of negative symptoms and cognitive deficits. Deep transcranial magnetic stimulation (dTMS) is a novel technology of TMS that enables stimulation of deep layers of the PFC. Primary studies indicated that dTMS has the potential to treat negative symptoms and cognitive deficits

Objective This study is a randomized double-blind sham-controlled trial to examine the efficacy of dTMS on negative symptoms and cognitive deficits in schizophrenia

Methods A total of 99 patients with schizophrenia were randomly assigned to 3 treatment groups, 20-Hz dTMS, iTBS (intermittent Theta Burst Stimulation) dTMS or sham dTMS. The interventions were applied 5 days per week for 8 weeks with the use of H1 coil, whose main locus of stimulation is the left PFC. Extensive clinical and cognitive assessments were carried out

throughout the study. Primary outcome was severity of negative symptoms as measured with the Scale for the Assessment of Negative Symptoms (SANS). Secondary outcome measures included the Positive and Negative Syndrome Scale (PANSS), the Matrics Consensus Cognitive Battery (MCCB) and the Brief UCSD Performance-based Skills Assessment (UPSA-B). For analysis of the data a mixed-effects linear model was used

Results The results indicate that active dTMS induced marginally significant improvements in negative symptoms over 8 weeks of treatment (iTBS, $P=.084$; 20Hz, $P=.076$). iTBS dTMS displayed a better performance, with a significant improvement of the SANS at the end of treatment compared to sham dTMS (-7.15 [$-14.01, -0.29$], $P=.04$). Active dTMS is not superior to sham dTMS in the treatment of cognitive deficits in schizophrenia patients. dTMS treatments were generally well tolerated

Conclusion dTMS treatments with H1 coil reduced negative symptoms, as measured with the SANS. iTBS dTMS may be an optimized strategy for treating negative symptoms in schizophrenia. To better examine its efficacy a large-scale study is due. More studies are needed to clarify its specific clinical indications, establish standard protocols and investigate the neural basis

关键词: Schizophrenia, deep Transcranial Magnetic Stimulation, Negative Symptom, Cognitive Deficit, Prefrontal Cortex

基于 *Cacna1a* 基因敲降小鼠模型研究氟西汀抗抑郁疗效的作用机制

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目的 抑郁症的药物治疗依赖于试错用药,导致个体间药物疗效差异有诸多因素,而遗传因素被认为在药物疗效的个体差异中起到关键作用。关于抗抑郁药物疗效的全基因组关联分析(GWAS)研究发现 *CACNA1A* 与服用氟西汀后患者的汉密尔顿抑郁量表减分率相关,携带不同等位基因型的患者服

用氟西汀后的疗效不同。本研究旨在通过动物实验验证前期 GWAS 研究中提出的假设,为 *Cacna1a* 影响氟西汀抗抑郁疗效提供证据支持。

方法 1.构建 *Cacna1a* 敲降表达载体,包装 *Cacna1a*-Control-AAV (Control) 和 *Cacna1a*-ShRNA-AAV (Sh3) 病毒, qPCR 检测病毒的敲降效率。

2.将病毒注射入小鼠腹侧海马。行为学检测:旷场、高架十字迷宫、O 迷宫、糖水偏好、转轮、悬尾。

3.慢性束缚应激 (CRS) 构建抑郁小鼠模型:连续束缚两周,每天 6 小时。用糖水偏好和悬尾实验检测小鼠抑郁造模情况。

4.将造模成功的小鼠分为四组,分别腹腔注射 4 周生理盐水和氟西汀,悬尾实验检测小鼠的抑郁表型是否挽救。每组选取三只小鼠,提取 RNA, qPCR 检测 *Cacna1a* 的相对表达量。

5.转录组测序,对各组的差异基因 (DEGs) 分别进行 KEGG 分析。

结果 1.与 Control 组相比, Sh3 组 *Cacna1a* 的相对表达量降低。

2.小鼠行为学表现:旷场实验中, Sh3 组小鼠比 Control 组小鼠在角落区域停留时间增多。高架十字迷宫实验中, Sh3 组小鼠在开臂的活动路程和停留时间降低。O 迷宫实验中, Sh3 组小鼠总的活动路程、在开臂的活动路程和停留时间显著降低,在闭臂的活动路程和停留时间显著升高。糖水偏好、转轮与悬尾实验中, Control 组和 Sh3 组小鼠均没有统计学差异。

3.慢性束缚应激两周后,悬尾实验中应激后小鼠的不动时间 (%) 显著降低。

4.分别给予 Control 组和 Sh3 组小鼠生理盐水和氟西汀,悬尾实验显示与给药前相比, Control 组+氟西汀表现为不动时间降低, Sh3 组+氟西汀的小鼠不动时间降低,但降低程度没有 Control 组明显。

5.转录组学结果:Sh3+生理盐水与 Control+生理盐水组小鼠差异基因主要富集的通路为甲状旁腺激素的合成、分泌和作用。Sh3+氟西汀与 Sh3+生理盐水的小鼠差异基因主要富集的通路有激素的合成、分泌及作用;钙信号通道等。

结论 1. Sh3 组小鼠腹侧海马 *Cacna1a* 的表达减少会使小鼠产生焦虑样行为。

2. 氟西汀对于抑郁小鼠有挽救作用; *Cacna1a* 表达减少会削弱氟西汀改善抑郁的效果。

3. *Cacna1a* 是通过调节编码钙离子通道蛋白的

相关基因来影响氟西汀疗效的。

关键词: *Cacna1a*;氟西汀;慢性束缚应激;基因敲降

母体免疫激活子代精神分裂症大鼠模型脑神经元钙信号紊乱的相关研究

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目的 以精神分裂症 MIA 大鼠模型为研究对象,从分子通路、钙成像及行为学等多个层面分析孕期感染、神经元钙信号表达和精神分裂症样行为三者之间的关系,探讨孕期感染影响子代神经元钙信号增加精神分裂症发病风险的机制。

方法 通过注射聚肌胞苷酸 (Poly I:C) 制备精神分裂症 MIA 大鼠模型。在子代成年期,使用多种行为范式,如开放旷场实验、Y 迷宫、高架十字迷宫和前脉冲抑制等评估焦虑、空间记忆和感觉门控功能。通过在体钙成像技术检测子代神经元钙离子活动水平,并通过 q-PCR、蛋白免疫印迹、免疫荧光等方法检测子代在不同发育阶段各脑区中钙信号相关分子的表达。

结果 1. 动物模型制备:酶联免疫吸附试验结果显示, Poly I:C 组孕鼠血浆炎症因子的表达水平显著升高。成年期行为学结果显示,与 Saline 组相比,在开放旷场实验中, Poly I:C 组在中心区域运动的距离显著减少;在高架十字迷宫实验中, Poly I:C 组进入开放臂的时间和次数均显著减少; Y 迷宫实验中, Poly I:C 组进入新异臂的时间显著减少;在前脉冲抑制实验中, Poly I:C 组在 72 dB、77 dB 和 82 dB 中抑制率均显著降低。

2. 在体的钙成像结果显示:自由活动状态下, Poly I:C 组子代大鼠成年期海马脑区锥体神经元钙超载;在 5 个循环的电击刺激 (5 mA, 2 S) 下, Poly I:C 组在电击前后钙调节能力减弱。

3. 基因转录结果显示:与 Saline 组相比, Poly I:C 组子代大鼠的离乳期额叶中 *CaMK2G* 基因水平降低 ($P < 0.05$);成年期额叶中 *CACNA1C* 基因水平降低 ($P < 0.05$);成年期海马、额叶中 *CaMK2G* 基因水平降低 ($P < 0.05$),其余各个时期各个部位两组基

因的转录水平无统计学差异。

4. 蛋白水平结果显示:与 Saline 组相比, Poly I:C 组子代大鼠的离乳期海马中 CaMK2G 蛋白水平下降 ($P<0.05$); 青春期额叶中 CACNA1C 和 CaMK2G 蛋白水平降低 ($P<0.05$); 成年期海马中 CACNA1C ($P<0.05$) 蛋白水平降低, 其余各个时期海马和额叶中 CACNA1C、CaMK2G 蛋白水平变化无统计学差异 ($P>0.05$)。

5. 形态学水平结果显示:与 Saline 组相比, Poly I:C 组子代大鼠的成年期海马中 CACNA1C 阳性细胞数减少 ($P<0.05$)。

结论 1. MIA 子代大鼠存在海马锥体神经元钙超载和钙调节能力减弱, 这种紊乱可能与钙信号相关分子表达异常有关。

2. MIA 子代大鼠成年期海马 CACNA1C 的低表达与行为障碍相关, 提示神经元钙信号紊乱可能参与了 MIA 致子代精神分裂症样行为的发生。

关键词: 钙信号, 神经元, 脑, 母体免疫激活, 精神分裂症

肠道组学、代谢组学及影像组学的多组学分析揭示菌肠脑轴调节减重手术后认知改善

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目的 减重手术被证明可以导致肠道微生物组成和丰度变化并改变认知功能, 但这些变化的确切机制尚不清楚。我们通过研究减肥手术如何影响菌肠脑轴 (MGBA) 来改善认知功能, 以一种新颖的方式探索了这一点。

方法 (1) 收集腹腔镜袖状胃切除术 (LSG) 前和腹腔镜袖状胃切除术后 6 个月的 39 名肥胖患者人口统计学资料、血清、粪便、认知评估量表和脑静息态功能连接磁共振成像 (f-MRI); (2) 进行粪便 16s 微生物组学、血清代谢组学和神经影像学分析, 构建减重手术特征 f-MRI 脑功能连接网络; (3) 将具有显著改变的认知评估量表和静息态功能连接差异网络与差异血清代谢物和 16s 微生物组数据行相关分析确认关键肠道微生物和血清代谢因子。

结果 (1) 通过认知量表的测量, LSG 导致体重显著减轻和认知功能的改善 ($p<0.05$)。 (2) 与术前

相比, 减重术后肠道微生物群结构发生显著变化 ($p=0.001$), 微生物丰度和多样性显著增加 ($p<0.05$)。这些变化伴随着血清代谢物水平的显著改变, 在映射到 72 个代谢途径的 229 中代谢物中观察到组间差异。 (3) 采用 Spearman 秩相关分析认知评估量表与差异肠道微生物和血清代谢物之间的相关性, 结果表明 68 种肠道微生物和 138 种血清代谢物与认知评估量表相关, 差异肠道微生物和差异血清代谢物均两两相关。 (4) 基于功能性神经影像学, 发现 LSG 导致认知相关的左额顶网络功能连接增加, 默认模式网络 (DMN)、突显网络脑网络 (SN) 功能连接正常化。 (5) 进一步的协变量和相关性分析提示 LSG 诱导的认知相关脑网络变化与认知相关关键差异肠道微生物 (Akkermansia、Blautia、Collinsella、Phascolarctobacterium、及 Ruminococcus) 和神经活性代谢物 (Glycine、L-Serine、DL-Dopa、SM(d18:1/24:1(15Z))) 相关。

结论 我们的研究已经确定了认知相关的微生物 (Akkermansia 等), 神经活性代谢物 (Glycine 等) 和脑功能连接网络 (记忆及执行功能网络正常化、语言及内感受网络增强), 以显示减肥手术如何通过肠道微生物组、血清代谢物以及大脑功能连通性的改变来影响认知功能。我们的研究将肠道菌群和血清代谢物与大脑功能连接相结合, 从而揭示了从微生物群到肠道和大脑的潜在信号通路, 可能提示菌肠脑轴在减重手术改善认知功能中病理生理学作用。

关键词: 菌肠脑轴, 认知功能, 减重手术, 微生物, 代谢物, 神经影像学

Altered Tryptophan Metabolism Pathway in Both Major Depressive Disorder Patients and Bipolar Depression Patients: a Two-cohort Study

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Background Altered tryptophan (TRP) metabolism has been implicated in major depressive disorder (MDD) and bipolar depression (BDD). However, it is

unclear whether plasma TRP metabolites could be biomarkers for the diagnosis of BDD and MDD

Methods The levels of TRP, and its metabolites kynurenic acid (KYNA), quinolinic acid (QUIN), picolinic acid (PICA), 3-hydroxykynurenine (3-HK), 3-hydroxyanthranilic acid (3-HAA), 5-hydroxytryptamine, and 5-hydroxytryptophan, were measured in the plasma of MDD patients, BDD patients, and healthy controls (HCs) from two centres. We used a discovery dataset of 181 cases to identify biomarkers and construct classification models for the diagnosis and differentiation of MDD and BDD, and external validation was performed in an independent cohort of 268 cases

Results Compared to those in HCs, the levels of PICA and KYNA decreased in both MDD patients and BDD patients. Differences in 3-HK, KYNA/QUIN ratio, and KYNA/3-HK ratio were also observed between MDD patients and BDD patients. Specific TRP-metabolic profiles can be used to distinguish among MDD patients, BDD patients, and HCs with good performance (area under the curve range: 0.705-0.987). In MDD patients, PICA level, KYNA/3-HK ratio, and Hamilton Rating Scale for Depression-24 (HAMD-24) score were positively correlated, while PICA level and HAMD-24 score were negatively correlated in BDD patients

Conclusion We demonstrated that the TRP metabolism pathway was dysregulated in both MDD patients and BDD patients. Peripheral TRP-related metabolites have potential as biomarkers for distinguishing among MDD patients, BDD patients, and HCs

关键词: Bipolar Depression, Major Depressive Disorder, Tryptophan metabolism, Biomarker

MGlur2/3 Alleviates PTSD Fear Memories by Down Regulating The CaMKII/CREB Signaling Pathway in The Amygdala

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Objective People with post-traumatic stress disorder (PTSD) have recurring memory flashbacks of traumatic events, producing severe symptoms of anxiety and even phobias. Therefore, targeted drug staging interventions offer a possible way to eliminate or alleviate fear memories of traumatic events. Metabotropic glutamate receptor II (mGluR2/3) agonist LY379268 has been shown to reverse memory deficits, but whether it can treat PTSD fear memory in consolidation period and its mechanism of action are unclear

Methods This study employed a single prolonged stress and contextual fear condition (SPS&CFC) model and administered LY379268 at gradient concentrations (2,6,12 μ M) into the lateral ventricles during the consolidation period of fear memory. PTSD-like symptoms were assessed using open field test, elevated plus maze test, and freezing behavior test. Western blot and immunofluorescence analyses were conducted to determine the expression levels of phosphorylated Ca²⁺/calmodulin-dependent protein kinase II (P-CaMKII), phosphorylated extracellular signal-regulated kinase (P-ERK) and phosphorylated cyclic-AMP responsive element binding protein (P-CREB) in the amygdala (AMY) region of rats while transmission electron microscopy was utilized for observing synaptic ultrastructure changes in AMY of rats

Results In the SPS&CFC group, the expression of P-CaMKII, P-ERK and P-CREB was increased, and synaptic morphology was damaged in the AMY. In contrast, 6 μ M LY379268 can improved exploration and freeze behaviors, protein expression levels of AMY were reduced and synaptic ultrastructure was remodeled. 12 μ M LY379268 can improve the anxiety and freeze behavior of PTSD model, and increase the ability of autonomous exploration

Conclusion LY379268 may reduce fear memory of PTSD by regulating CaMKII/CREB signaling pathway downstream of AMY mGluR2/3, providing a promising target for reducing PTSD fear memories during consolidation

关键词: PTSD, fear memory, consolidation period, mGluR2/3, CaMKII/CREB

细胞因子负荷-犬尿酸代谢在首发精神分裂症短期疗效中的作用

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目的 免疫失衡与色氨酸代谢分支中的犬尿酸代谢通路 (KP) 关系密切, 且在精神分裂症的治疗应答中发挥着重要的作用, 但在首发精神分裂症 (FES) 中这两个系统所形成的调节通路关系以及是否与短期的抗精神病药物治疗效果相关缺乏相应的研究。根据免疫失衡假说纳入的细胞因子群可进一步计算细胞因子负荷 (IRS/CIRS), 评估机体的净炎症水平。本研究旨在 FES 中探索 IRS/CIRS-KP 的网络连接以及与抗精神病药物短期疗效间的关系。

方法 纳入基线 FES 组 99 例, 同时招募年龄范围与 FES 组相同的健康被试 (HC) 55 名, 完成 8 周治疗后随访的 FES 患者 47 例。取基线两组被试外周血检测 IRS/CIRS 纳入的细胞因子, 采用酶联免疫吸附试验 (ELISA) 检测 18 种细胞因子和相关受体的表达水平 (包括但不限于 M1 型巨噬细胞、辅助型 T 细胞、Th-1、Th-2、Th-17 以及调节性 T 细胞来源); 取基线两组被试及 8 周治疗后 FES 患者的外周血, 采用高效液相色谱串联质谱法检测外周 KP 代谢水平, 包括犬尿酸 (KYN)、犬尿喹啉酸 (KYNA) 和喹啉酸 (QUIN), 以及 QUIN/KYNA 损伤代谢比率; 评估基线与治疗 8 周后 FES 患者的阳性和阴性症状量表 (PANSS) 量表得分。

结果 FES 患者基线期细胞因子负荷 IRS/CIRS 得分显著高于 HC 组 ($p = 9.00 \times 10^{-6}$), 犬尿酸代谢产物 KYN、QUIN 和 KYNA 水平均显著低于 HC 组 (分别为 $p = 0.003$; $p = 8.00 \times 10^{-6}$; $p = 1.60 \times 10^{-9}$), 而 QUIN/KYNA 损伤代谢比显著高于 HC 组 ($p = 0.001$), 且 QUIN/KYNA 水平与基线阳性症状得分显著正相关。对两组分别做网络构建发现, 在 FES 患者中升高的细胞因子负荷 IRS/CIRS 与 KYNA 的正相关关系更强, 而在 HC 组中 IRS/CIRS 与 QUIN 的正相关关系更强。FES 组, 8 周治疗后 QUIN/KYNA 及 PANSS 得分显著降低 ($p = 7.62 \times 10^{-9}$; $p = 2.22 \times 10^{-15}$) 且基线 IRS/CIRS 得分与治疗 8 周后 PANSS 量表减分率显著正相关 ($r = 0.40$, $p = 0.01$)。

结论 FES 患者与 HC 组相比存在显著的外周

细胞因子负荷 IRS/CIRS 的升高和 KP 代谢紊乱。在 FES 中较高的 IRS/CIRS 更倾向于促进 KP 向 KYNA 方向代谢, 这可能会部分代偿损伤代谢比 QUIN/KYNA 的升高。经过 8 周住院治疗后, PANSS 得分显著降低, 于此同时, TP 代谢紊乱有所缓解。这可能说明 FES 患者急性期高炎水平可能提示较好的短期疗效。

关键词: 首发精神分裂症; 细胞因子负荷; IRS/CIRS; 犬尿酸代谢; 短期疗效

青春期短链脂肪酸过度摄入诱发成年期精神分裂样行为的代谢免疫机制研究

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目的 生命早期不利遭遇 (如社会隔离、感染等) 诱导神经发育问题是精神分裂症 (SCZ) 和孤独症等精神疾病发生的重要病理基础。肠-脑轴在神经发育中发挥了重要作用, 肠道分泌和消化中产生的各类信号分子, 对大脑功能产生深刻影响。短链脂肪酸 (SCFA) 是肠道消化膳食纤维产生的代谢物是调控大脑的重要分子, 我们前期发现, SCZ 患者血清中 SCFA 显著上调, 且与患者免疫激活状态呈显著正相关; 青春期过度摄入 SCFA 的小鼠成年后表现为社交及认知损害等精神分裂样行为。因此, 进一步探究 SCFA 在神经发育障碍中的作用及其生物学机制, 对我们认识 SCZ 发生机制, 理解肠道调控大脑发育的具体作用有很大帮助。

方法 本研究构建了青春期过度摄入 SCFA 的小鼠模型, 应用 Y 迷宫、前脉冲抑制、三箱社交等行为学测试成年小鼠行为改变。收集成年小鼠全脑及海马、前额叶、伏隔核、纹状体等区域的组织样本, 通过流式细胞分析、实时荧光定量 PCR、免疫荧光以及单细胞测序等技术, 探索小鼠中枢神经系统免疫改变情况及其与异常行为表型的相关性。同时, 我们应用流式分析、代谢组学、实时荧光定量 PCR、以及 luminex 等技术, 探索成年小鼠行为学异常的外周免疫机制。

结果 行为学结果表明, 与对照组相比, 青春期过量摄入 SCFA 会导致成年小鼠在 Y 迷宫和三箱社交测试中出现异常行为, 而成年期过量摄入 SCFA

并未引起行为异常。流式细胞术分析显示, 干预后的成年小鼠脑内小胶质细胞显著增加, Treg 细胞数量有下降趋势。免疫荧光结果发现, 干预后的成年小鼠脑海马区 c-fos 和 GFAP 反应性蛋白表达增加。RNA 及蛋白水平分析显示, 成年小鼠海马区 IL-6、CCL20、IL-1 β 等炎症因子水平显著升高, 差异基因显著富集于 IL-17A 及 T 细胞分化相关信号通路。单细胞测序结果表明, 干预后的成年小鼠脑内 T 细胞等免疫细胞数量显著增加。外周流式细胞术分析显示, 干预后的成年小鼠外周血 PBMC 及结肠固有层细胞中 Th17 细胞数量显著减少, Treg 细胞数量显著增加。

结论 青春期 SCFA 过度摄入, 导致成年小鼠肠道免疫、外周血以及中枢神经系统免疫激活, 机体免疫平衡被破坏, 进一步诱发精神分裂症认知及社交行为改变。

关键词: 精神分裂症, 肠脑轴, 短链脂肪酸, 免疫稳态, 神经发育

Network Meta-Analysis of The Impact of FKBP5 Polymorphisms on Antidepressant Response Rates

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Objective Depression is a widespread mental health disorder necessitating management with antidepressant medications. However, the response to these treatments varies significantly among individuals, and polymorphisms in the FKBP5 gene may play a pivotal role. This study aims to conduct an exhaustive network meta-analysis to investigate the associations between various loci and genotypes of the FKBP5 gene and the effectiveness of antidepressant medications

Methods The study involves a meticulous systematic search of five major databases—PubMed, Cochrane Library, Embase, Web of Science, and PsycINFO—up to September 2023. The objective is to identify studies exploring the intricate relationship between FKBP5 gene polymorphisms and the efficacy of

antidepressant treatment. Relevant data regarding polymorphic sites and genotypes are meticulously extracted. To quantify the overall effect size (ES) for each genotype within the identified polymorphic sites, a robust random-effects model is employed. The ES, representing the standardized mean difference in antidepressant response rates between genotypes, is crucial for understanding the practical implications of genetic variations. A 95% confidence interval (CI) is calculated to assess the precision of the estimated ES. Additionally, the analysis incorporates the Surface Under the Cumulative Ranking (SUCRA) method to evaluate the sequential order of different loci concerning antidepressant response rates. SUCRA values are interpreted such that a higher SUCRA indicates better response rates and a more favorable ranking. To complement this, corresponding odds ratios (OR) are calculated, where a smaller OR signifies a better response rate. This dual approach enhances the comprehensive understanding of the genetic variations' impact on antidepressant efficacy. The analysis further delves into specific polymorphic sites, conducting a Bayesian network meta-analysis for selected genotypes. Model fit is assessed using the ratio of variances, and heterogeneity is quantified using the I² statistic

Results This analysis incorporated a total of 5564 participants from nine studies, forming 67 closed loops with statistically insignificant heterogeneity among them. Both random-effect and fixed-effect models displayed consistent interval results, indicating result stability. The Bayesian network meta-analysis focused on three polymorphic sites—rs3800373 (AA, CA, CC), rs1360780 (CC, CT, TT), and rs4713916 (GG, AG, AA)—with nine different genotypes. The model demonstrated good fit (ratio = 1.46) and low heterogeneity (I² = 32%). SUCRA ranking revealed the order of impact on antidepressant response rates across genotypes: rs4713916AA (93.5%) > rs3800373CC (72.6%) > rs4713916AG (54.7%) > rs1360780TT (51.9%) > rs1360780CT (45.4%) > rs3800373CA (42.3%) > rs1360780CC (38.4%) > rs3800373AA (34.7%) > rs4713916GG (16.4%). Notably, rs4713916AA exhibited the highest antidepressant response rate (93.5%), while rs4713916GG showed the lowest (16.4%), and

the difference between these genotypes was statistically significant (rs4713916AA vs. rs4713916GG, $n=4$, $OR=0.52$, $95\%CI [0.25-0.93]$). Within the rs3800373 site, the CC genotype demonstrated the highest response rate ($n=8$, $ES=0.58$, $95\%CI [0.48-0.68]$), whereas the AA genotype showed the lowest response rate ($n=8$, $ES=0.68$, $95\%CI [0.49-0.84]$). However, there was no significant difference between the two genotypes ($n=5$, $OR=0.79$, $95\%CI [0.51-1.2]$)

Conclusion This comprehensive analysis underscores the significant influence of FKBP5 gene polymorphisms on antidepressant response rates. Specifically, the rs4713916AA genotype is associated with the highest response rates, while rs4713916GG exhibits the lowest. Within rs3800373, the CC genotype tends to perform the best, and the AA genotype tends to perform the worst, although statistical significance is not observed. These findings offer valuable insights for personalized antidepressant treatment strategies, emphasizing the importance of considering genetic factors in clinical decision-making. Further research is needed to validate and expand upon these nuanced findings.

关键词: FKBP5 Polymorphisms, Network Meta-Analysis, Antidepressant, Response Rates, Genotypes

电针刺激调节前额叶皮层-背侧海马电信号同步性缓解 PTSD 模型小鼠焦虑恐惧样行为

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目的 探究电针刺激 (EA) 对创伤后应激障碍模型小鼠焦虑恐惧样行为的改善作用及其生物学机制。

方法 为明确电针早期干预对单次延长应激 (mSPS) 小鼠 PTSD 样行为、海马皮层场电位 (local field potentials, LFPs) 及神经元活性的影响, 将 40 只小鼠随机分为对照组、EA 组、PTSD 组和电针治疗组。PTSD 组和 PTSD + EA 组小鼠接受 mSPS 造模。之后, EA 和 PTSD+EA 组小鼠接受 EA 刺激 7 天 (2/15 Hz, 1mA), Sham 组和 PTSD 组小鼠接受假刺激 7 天。7 天后进行行为测试; 随后每组取 6 只

小鼠, 在前额叶皮层 (mPFC) 和背侧海马 (dHPC) CA1 区埋置电极, 之后检测其在大架十字事件中的场电位变化; 剩余小鼠通过膜片钳检测 mPFC 神经元活性变化。为探究抑制 mPFC 神经元对电针抗 PTSD 的影响, 给 12 只小鼠 mPFC 注射化学遗传抑制病毒 AAV5-EF1a-hM4Di, 再进行 mSPS 造模, 之后给予电针刺激 7 天 (分为 PTSD + saline + EA 和 PTSD + CNO + EA 组), 每天电针刺激前 30min 腹腔注射 saline 或 CNO, 7 天后行为学测试。

结果 (1) mSPS 小鼠 dHPC 和 mPFC 场电位 theta 波能量值和同步性较 Sham 组显著降低, mPFC 神经元抑制性突触后放电频率和幅值增加 (mSPS vs. Sham, $P < 0.05$); (2) EA 干预可以缓解 PTSD 小鼠行为, 逆转其海马皮层电信号变化, 与 PTSD 组相比, PTSD + EA 组小鼠在旷场中心和高架十字开臂时间增加 ($P < 0.05$), 条件恐惧不动时间减少 ($P < 0.05$), 海马皮层的 theta 波能量值和同步性增加, mPFC 神经元突触后放电频率和幅值降低 ($P < 0.05$); (3) 抑制 mPFC 神经元阻断了电针的抗 PTSD 作用, 与 PTSD + saline + EA 相比, PTSD + CNO + EA 组小鼠在旷场中心和高架十字开臂活动时间减少 ($P < 0.05$), 条件恐惧不动时间增加 (均 $P < 0.05$)。

结论 PTSD 小鼠海马和皮层电信号异常, 电针干预可以改善模型小鼠 PTSD 样行为和大脑电信号紊乱。

关键词: 电针刺激, 创伤后应激障碍, 前额叶皮层, 背侧海马, 场电位

追踪精神障碍中情绪情境记忆相关的神经损伤到诊断特异的情绪调节网络

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目的 情感损伤是精神障碍的一个核心特征。多种精神障碍存在情绪情境记忆的异常,表现出对带有情绪色彩的信息材料的记忆偏差。情绪情境记忆指的是在特定时空背景下情绪唤起信息能够增强记忆的现象,对于个体快速识别和适应环境至关重要。包括杏仁核和海马在内的内侧颞叶记忆系统在上述过程中发挥重要作用,并常见于精神障碍患者的脑功能损害。然而,由于情绪情境记忆功能在个体间存在较大的异质性,可能是既往研究发现不一致的主要原因。本研究旨在构建情绪情境记忆大脑功能活动模式的规范模型,并探讨不同精神障碍患者的个体化偏移模式及其与临床症状的关系。

方法 本研究基于两个任务态功能磁共振成像队列开展分析。首先,基于一个大型健康队列($n=409$,年龄为 24.597 ± 3.832 岁,206名女性),使用情绪情境记忆任务范式评估被试的情绪情境记忆行为表现,并使用高斯过程回归模型建立其与大脑功能激活的规范性参考常模。既而,使用纳入328名被试的临床队列(168名健康对照者、56名抑郁障碍[MDD]、31名双相障碍[BD]和73名精神分裂症[SZ])评估不同精神障碍患者在规范性参考常模的位置,分别量化情绪情境记忆大脑功能激活在上述三种精神障碍中诊断特异性的个体化偏差模式;将诊断特异性偏差的脑区在四个情绪调节相关脑网络中进行网络富集分析;通过多元线性回归分析,识别个体化偏差模式和不同精神障碍情感症状的关系。

结果 首先,本研究构建一个可跨样本验证的情绪情境记忆大脑功能活动模式的规范模型,解析了情绪情境记忆大脑功能的个体水平异质性,并确定了三种主要精神障碍在该模型中的个体化偏移模式。其次,发现了在三种精神障碍中情绪情境记忆偏差相关的富集于彼此不重叠的情绪调节功能网络。MDD主要与情绪感知和生成相关的情绪调节网络关联;BD与认知情绪调节网络和情绪反应网络相关,共同负责整合情绪感知和认知;而SZ与工作记忆和反应抑制相关的情绪调节网络相关。最后,多元线性回归分析结果表明,个体化情绪情境记忆脑功能偏移模式能够预测不同精神障碍患者的临床情感症状,诊断特异的情绪调节网络在各自的预测模型中显示出最大的预测权重。

结论 本研究提出了一个稳定的、可验证的情绪情境记忆大脑功能活动模式的规范模型,表征了情绪情境记忆行为和大脑功能激活的潜在关系。基于该规范模型,我们发现了三种常见精神障碍情感

症状相关的脑功能偏移模式,提示不同情绪调节功能环路在特定精神障碍情感症状中的作用。本研究发现有助于理解精神障碍情感症状精神病理学的神经基础。

关键词: 情感症状,情绪情境记忆,情绪调节,规范建模,精神障碍,任务态功能磁共振

倍他司汀对精神分裂症患者认知功能的疗效及机制

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目的 倍他司汀作为一种组胺 H1 受体激动剂/H3 受体拮抗剂可能对精神分裂症认知功能障碍具有改善作用。本研究通过随机安慰剂对照试验探究精神分裂症患者附加倍他司汀对认知功能改善的效果和机制。

方法 本研究是一项为期三个月的随机、双盲、安慰剂对照试验。共 109 名患者签署了知情同意书,最终参与随机的有 89 人。患者入组后随机分为倍他司汀组($n=45$)和安慰剂组($n=44$)。倍他司汀组患者服用倍他司汀(72mg/d),安慰剂组服用与倍他司汀外表一致的安慰剂。在基线和药物干预三个月后采集患者的功能磁共振数据,在基线、1月末、2月末、3月末使用 MCCB 量表评估患者的认知功能。

结果 最终完成了基线和干预 3 个月后的静息态功能磁共振数据采集共 39 人(倍他司汀组 21 人,安慰剂组 18 人)。数据分析采用符合方案集(per-protocol analysis, PP 集)。两组患者的认知功能中,具有时间和组的交互作用的认知维度包括:言语学习($F=4.60$, $p=0.00$)、视觉学习($F=5.46$, $p=0.03$)、MCCB 总分($F=6.36$, $p=0.03$)。为此进一步进行简单效应分析发现,倍他司汀组的言语学习、视觉学习和 MCCB 总分较干预前增加,差异具有统计学意义($p<0.01$);安慰剂组的言语学习、视觉学习和 MCCB 总分较干预前增加但是无统计学意义($p>0.05$)。脑功能结果表明倍他司汀组和安慰剂组存在治疗和时间交互作用的脑区有 14 个。事后检验发现与干预前相比,干预后倍他司汀组左侧尾状核、右侧下回、右侧直回、右侧丘脑、右侧中扣带

回、右侧海马、右侧岛叶、右侧壳核、左侧楔前叶、左侧楔叶 fALFF 自发活动降低 ($p < 0.05$)，左侧梭状回、右侧背外侧前额叶、左侧内侧前额叶、右侧背内侧前额叶 fALFF 自发活动增高 ($p < 0.05$)。倍他司汀组干预后右侧丘脑 fALFF 自发活动水平与视觉学习分数具有弱的负相关性 ($r = -0.389$, $p = 0.081$)。

结论 附加倍他司汀可以显著改善精神分裂症患者的认知功能障碍，特别是视觉学习和言语学习方面，且安全性良好。倍他司汀改善精神分裂症患者认知功能的机制可能与其改善多个脑区的异常自发活动水平有关。未来可以通过多中心大样本的随机、双盲、安慰剂对照试验进一步探究倍他司汀对认知功能改善的效果和机制。

关键词：精神分裂症，认知功能障碍，随机安慰剂对照试验

整合单细胞转录组学和免疫组库分析揭示抗抑郁药疗效的因果分子

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目的 抑郁症的发病率逐年上升，全球约有 3 亿人受到抑郁症的影响，这已经成为致残的主要原因之一。目前的抗抑郁治疗仅可使约 1/3 患者的症状完全缓解。大量证据表明免疫可以影响抑郁症的发病机制，然而免疫在抗抑郁疗效中的作用，特别是不同免疫细胞亚群的组成和功能却鲜少知道。本研究旨在整合单细胞转录组学和免疫组库分析展示抗抑郁疗效相关的免疫细胞景观，并找到抑郁症治疗潜在的免疫靶标。

方法 本研究分别纳入 20 例未用药抑郁症患者和 10 例健康对照（所有受试者均为女性），并提取其外周血单个核细胞（PBMC）。采用 10X Genomics 对 30 例受试者的 PBMC 分别进行单细胞转录谱表达分析，同时进行单个 T 细胞表面受体（TCR）V(D)J 基因片段测序。采用汉密尔顿抑郁量表（HAMD）评估患者接受抗抑郁药物治疗 3 个月之后的症状变化，HAMD 减分率 $\geq 50\%$ 为治疗有效。比

较治疗有效和无效组的免疫细胞亚群构成以及基因表达差异，用孟德尔随机化分析检验差异基因与抗抑郁疗效的因果关系。

结果 抗抑郁药物治疗的有效组与无效组分别为 10 例及 8 例（2 例失访）。对总共 291520 个细胞进行 t-分布随机邻域嵌入（t-SNE）分析鉴定到 5 类细胞群：T 细胞、NK&NKT 细胞、单核&DC 细胞、B 细胞以及其他细胞。抗抑郁药物治疗有效组的 CD4+ 中央记忆 T 细胞以及 CD4+/CD8+ 效应记忆 T 细胞数量多于治疗无效组以及健康对照，且有效组 TCR 超克隆扩增类型显著低于无效组，TCR 库多样性增加。在细胞亚群中进行的差异基因表达分析显示 $\gamma\delta$ T 以及 NKT 细胞亚群表现出疗效相关的差异表达基因，功能富集到抗原加工与呈递、白细胞介导的免疫、淋巴细胞介导的免疫、外来刺激应答的正向调节等，其中 ZNF80、S100B 基因在治疗有效组中明显上调、HOXA10、COLQ 基因明显下调。孟德尔随机化分析发现肿瘤坏死因子（TNF- α ）的产生与调节基因与抗抑郁疗效存在因果关系，TNF- α 表达水平越高，疗效越差。

结论 抗抑郁治疗有效的患者免疫应答更快并且广泛。TNF- α 与抗抑郁疗效存在因果关系，治疗无效患者的免疫细胞在抗炎因子释放能力方面可能存在缺陷，无法抑制促炎细胞因子的释放。这些研究发现可能为抗抑郁治疗的预后提供预测指标或者为发展免疫相关的新型抗抑郁治疗提供策略。

关键词：抑郁症，抗抑郁疗效，免疫组库，单细胞转录组，T 细胞受体多样性

首发不吸烟精神分裂患者外周犬尿氨酸通路的特点

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目的 了解首发不吸烟精神分裂症（FENS）患者外周犬尿氨酸代谢通路中的神经活性产物浓度水平及其与精神病理症状间的关系。

方法 以对 FENS 患者（ $n=82$ ）和健康对照（HC， $n=73$ ）为研究对象，采用高效液相色谱法检测血清中犬尿氨酸代谢通路中的神经活性产物浓度，包括

犬尿氨酸 (KYN)、犬尿喹啉酸 (KYNA)、喹啉酸 (QUIN), 比较上述指标在 2 组间的差异。收集所有被试的人口学信息, 以阳性和阴性症状量表 (PANSS) 评估患者的精神病理症状。分析 FENS 患者外周 KYN、KYNA、QUIN 浓度与 PANSS 各量表得分进行相关性分析。

结果 FENS 患者血清 KYN[(251.46±65.93) ng/ml vs. (320.65±65.89) ng/ml; $t=-6.38$, $p<0.001$]、KYNA[(5.19±2.22) ng/ml vs. (13.26±4.23) ng/ml; $t=-14.73$, $p<0.001$]、QUIN[(39.50±13.00) ng/ml vs. (58.80±16.91) ng/ml; $t=-7.67$, $p<0.001$]水平均显著低于 HC。FENS 患者血清 KYNA 水平与 PANSS 量表的一般病理量表评分呈显著正相关 ($r=0.30$, $p=0.007$)。

结论 FENS 患者 KP 的神经活性代谢物浓度异常, 且与其精神症状相关, 提示 KP 代谢可能参与精神分裂症的病理性过程。

关键词: 精神分裂症, 犬尿氨酸通路, 犬尿氨酸, 犬尿喹啉酸, 喹啉酸

The Surface Area of The Right Inferior Parietal Gyrus Mediates The Relationship between Abdominal Obesity and Cognitive Impairment in Patients with First-episode Schizophrenia

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Objective The underlying mechanism of cognitive impairment in patients with schizophrenia is not clear, and the effect of drugs to improve cognitive impairment is not satisfactory. Obesity has been reported to be associated with altered brain structure and cognitive impairment. Our study was designed to explore whether Cortical Surface Area (CSA) and Cortical

Thickness (CT) mediate obesity-related cognitive impairment in Patients with First-episode Schizophrenia (FEPS)

Methods A total of 167 FEPS and 120 age - and sex-matched Healthy Controls (HCs) were included in our study. We used the Positive and Negative Syndrome Scale (PANSS) and the Chinese version of the Measurement and Treatment Research to Improve Cognition in Schizophrenia Consensus Cognitive Battery (MCCB) to assess the participants' psychiatric symptoms and cognitive function. A 3.0T high-resolution magnetic resonance imaging system was used to collect image data, and FreeSurfer software was used to calculate CSA and CT of specific Desikan-Killiany brain region. Body mass index (BMI), Waist-hip ratio (WHR) and Waist-to-height ratio (WHtR) were also calculated. Partial correlation analysis and regression analysis were used to analyze the relationship between BMI, WHR, WHtR, cortical structure and cognitive function. SPSS PROCESS V3.5 software was used for mediating and moderating analysis to explore the influence of cerebral cortex structure on the relationship between abdominal obesity and cognitive dysfunction

Results The MCCB composite score and seven subscale scores of HCs were significantly higher than those of FEPS ($p < 0.001$). After controlling for sex, age, education level and intracranial volume, the CT and CSA of multiple brain regions in HCs were significantly higher than those in FEPS ($p < 0.05$). WHR was significantly correlated with Working Memory, Verbal Learning and MCCB composite score, and WHtR was significantly correlated with Social Cognition and MCCB composite score (all $p < 0.05$). Total surface area of bilateral cerebral cortex played a complete mediating role in the relationship between WHR or WHtR and MCCB composite score ($p < 0.05$). CSA in the right inferior parietal gyrus played a complete mediating role in the relationship between WHR or WHtR and MCCB composite score ($p < 0.05$). The mediating effect of CSA in the relationship between WHtR and cognitive function was higher than that of WHR

Conclusion CSA, especially right inferior parietal gyrus, played a mediating role in the relationship be-

tween WHR or WHtR and cognitive function. Compared with BMI and WHR, WHtR may be a better indicator to assess the relationship between abdominal obesity and cognitive function, which may provide clues to explore the mechanism of cognitive impairment in patients with schizophrenia.

关键词: Schizophrenia, Cognitive function, Cortical surface area, Body mass index, Waist-hip ratio, Waist-to-height ratio

The Association between Dietary Quality, Sleep Duration, and Depression Symptoms in The General Population: Findings From Cross-sectional NHANES Study

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Objective Unhealthy lifestyles, which include unhealthy diet and unhealthy sleep duration, have been widely recognized as modifiable risk factors for depressive symptoms. This study aims to explore the associations between dietary quality, sleep duration, and depression symptoms, as well as their combined effects

Methods The NHANES 2007 to 2014 cycles provided the data for this study, in which 19,134 adults between the ages of 20 and 80 were included. Unhealthy diet, measured using an average Healthy Eating Index (HEI)-2015 score below the 60th percentile, and unhealthy sleep duration, measured as sleep duration at night less than 7 hours or greater than/equal to 9 hours, were the primary exposures. Then participants were divided into four different lifestyles. A weighted-multivariable logistic regression was employed, controlling for relevant variables

Results Unhealthy diet (OR: 1.40, 95% CI: 1.18-1.67, $p < 0.001$) and unhealthy sleep duration (OR: 1.94, 95% CI: 1.63-2.31, $p < 0.001$) exhibited positive associations with depression symptoms. Individuals who maintained an unhealthy diet but healthy sleep duration (OR: 1.60, 95%CI: 1.20-2.13, $p = 0.002$), healthy diet

but unhealthy sleep duration (OR: 2.50, 95%CI: 1.64-3.80, $p < 0.001$), or an unhealthy diet and unhealthy sleep duration (OR: 2.91, 95%CI: 2.16-3.92, $p < 0.001$) were significantly associated with depressive symptoms compared to those with a healthy diet and healthy sleep duration, respectively

Conclusion In summary, our study suggests that individuals affected by the individual and synergistic effect of an unhealthy diet and unhealthy sleep duration are more susceptible to experiencing depressive symptoms.

关键词: Depressive symptoms; dietary quality; sleep duration; NHANES

HLA Region Local Heritability and Genetic Correlation Reveals Novel Genetic Pattern Underlying Complex Traits Across Multiple Ancestries

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Objective The human leukocyte antigen (HLA) region (~5 Mb) has been associated with multiple complex traits across physical and mental health. However, advancement of genomic knowledge for HLA region lags that for other regions. With the help of the KGGSEE Effective Heritability Estimator (EHE), a novel population genomic statistic tool, and the GWAS summary statistic of diverse complex traits from MVP, a large cohort looking into different ancestries (i.e., European ancestries, African ancestries and Hispanic ancestries), we aim to characterize genetic architecture of HLA region in European, African, and Hispanic Americans, and its different impact on complex human traits or disorders via overall- and region-wise genetic heritability. We hope our study might offer a new point of view in understanding HLA region and human diversity

Methods Access to summary statistics for genome-wide association studies (GWAS) were approved

by Million Veteran Program via dbGap. In total 11 different common phenotypes (e.g., body mass index [BMI], lipid traits, and mental conditions) were included, covering >500,00 individuals with 3 different ancestral background (European, African, and Hispanic). Whole genome was divided into 550 regions (including HLA) with 5 Mb size, and local heritability (per region) was calculated using effective heritability estimator implemented in KGGSEE for each phenotype; global heritability was calculated using LDSC or LDK with overall GWAS summary statistics. For cross-phenotype, LDSC or LAVA was used to estimate global or local genetic correlations. Linkage disequilibrium data was from ancestry-matched population from 1000 Genome. For each ancestry, HLA region local heritability per phenotype and genetic correlation per phenotype-pair were compared with other regions by Monte Carlo procedure. Across ancestries, Wilcoxon signed-rank test was used to compare local heritability from different regions. Bonferroni method was used for multiple testing correction

Results Estimated heritability of HLA region ranged from 0.0001 (behavioural ideal health score in Africans) to 0.013 (low-density lipoprotein in Hispanics), while the median of estimated heritability of other regions ranged from 0.0001 to 0.0028 for 11 phenotypes across ancestries. Global heritability ranged from 0.0368 (suicidal ideation in Europeans) to 0.7332 (BMI in Africans), and the proportion of HLA vs genome ranged from 0.11% to 5.47%. When comparing to others, HLA region contributed to significant higher heritability for 8 traits (BMI, clinical ideal health score, high-density lipoprotein, low-density lipoprotein, total cholesterol, triglycerides, suicidal ideation without suicide attempt, suicidal thoughts and behaviors) in Europeans and 2 traits (low-density lipoprotein, total cholesterol) in Hispanics. The distributions of estimated local heritability in Europeans and Africans are significantly different across all 11 phenotypes. When looking into local genetic correlations at HLA region, estimates from 11 or 9 phenotype pairs were significant for Europeans or Africans, respectively; among them, only a few of them have also significant global genetic correlations

Conclusion The heritability and genetic correlation estimated for HLA varies differently across 11 complex phenotypes from 2 ancestry groups. This new pattern will be helpful to better understand complex traits from possible HLA-mediated immune pathways

关键词: human leukocyte antigen, heritability, genetic correlation

抑郁症患者治疗前后认知功能与前扣带回 γ -氨基丁酸水平的关联

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目的 探讨抑郁症患者治疗前后认知功能与前扣带回 γ -氨基丁酸 (GABA) 水平的相关关系。

方法 选取 31 例符合美国精神障碍诊断与统计手册第 5 版 (DSM-5) 抑郁症诊断标准的未服药抑郁症患者和 33 例正常对照, 患者入组后给予单一选择性 5-羟色胺再摄取抑制剂 (SSRIs) 治疗 8 周, 正常对照组不施加干预。采用认知功能成套测验 (MCCB) 评估对照组及抑郁症组治疗 8 周前后的认知功能, 同时采用氢质子磁共振波谱成像技术检测前扣带回的 GABA 水平, 应用汉密尔顿抑郁量表 (HAMD-17) 评估抑郁症状严重程度, 应用汉密尔顿焦虑量表 (HAMA) 评估焦虑程度。使用 SPSS 26.0 统计软件进行数据分析, 基线期两组年龄、受教育年限、量表评分以及 MCCB 得分间的差异比较采用独立样本 t 检验, 两组前扣带回 GABA 浓度间差异比较采用协方差分析; 抑郁症组治疗前后差值符合正态分布的计量资料采用配对样本 t 检验, 差值不符合正态分布的计量资料采用配对 Wilcoxon 检验。以年龄、受教育年限、HAMD-17 和 HAMA 得分作为控制变量, 采用偏相关对抑郁症组 MCCB 测验各领域得分与 ACC GABA 浓度进行分析; 采用 Pearson 相关对抑郁症组治疗前后 MCCB 测验各领域得分的差值与前扣带回 GABA 浓度变化的差值进行分析。

结果 基线期抑郁症组 MCCB 测验中的工作记忆、社会认知两个领域的得分均低于对照组 (均 $P < 0.05$); 8 周抗抑郁药治疗后, 抑郁症患者的处理速度、工作记忆、推理及问题解决能力、视觉记忆和学习评分以及 MCCB 总分均高于基线期 (均 $P < 0.05$); 基线期抑郁症组基线期前扣带回 GABA 相对于水的浓度 (GABA+/W) 低于对照组 ($P < 0.05$), 经 8 周治疗后升高 ($P < 0.05$); 基线期抑郁症组前扣带回 GABA+/W 与言语学习和记忆以及视觉记忆和学习存在负相关 ($r = -0.40, P < 0.05$; $r = -0.42, P < 0.05$); 抑郁症患者治疗后认知功能与治疗前的差值与 HAMD-17 评分、HAMA 评分的前后差值相关无统计学意义; 抑郁症组治疗前后前扣带回 GABA+/W 的差值与工作记忆评分的差值及推理和问题解决能力评分的差值存在正相关 ($r = 0.58, P < 0.05$; $r = 0.66, P < 0.05$)。

结论 抑郁症患者认知功能障碍可能与其抑郁、焦虑程度不相关, 认知功能的改善可能与前扣带回 GABA 水平的升高有关。

关键词: 抑郁症, 磁共振波谱学, γ -氨基丁酸, 认知功能

The Entrainment of Rhythmic Tonal Sequence on Neural Oscillation and The Impact on Subjective Emotion

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Objective This study investigates the entrainment of neural oscillations to rhythmic auditory stimuli, specifically examining how tonal sequences of varying frequencies affect subjective emotional experiences. The research aims to elucidate the mechanisms by which rhythmic auditory input influences affective states, focusing on the relationship between neural entrainment and emotional responses. By exploring these

dynamics, the study seeks to provide a deeper understanding of how rhythmic sounds can modulate emotional states

Methods Forty graduate students (19 males; age 22.46 ± 2.02) were recruited as the participants in this study. During the experiment, the participants were instructed to listen to 12 tonal sequences with different frequency ranging from 1Hz to 12Hz. The presentation order of tonal sequences was randomized among participants. After listening to each sequence, participants were requested to report their current emotional state, including valence, arousal, and dominance (VAD), using a self-assessment manikin with a 9-point Likert scale. VAD ratings were also measured before listening to the sequence, ending with a total of 13 time points of measurement per participant. Electroencephalography (EEG) was continuously recorded throughout the experiment with a 64-channel EEG system (NeuSen W3, China)

We first examined the neural entrainment of the rhythmic stimuli from both spectral and phase domains. Specifically, EEG data of each stimulus was preprocessed to remove artifacts and then evoked spectrum response, inter-trial phase coherence, and induced spectrum response were calculated. The statistical significance of neural entrainment at the target frequency was tested for these measurements individually. The null distribution of normalized power (or inter-trial phase coherence) was estimated based on the response at non-target frequencies, i.e., the responses at frequencies that are not harmonically related to the sequence frequency. The chance-level normalized power (or phase coherence) was pooled over frequencies. The statistical significance of the response at a target frequency was determined by the probability that the target-frequency response differed from the chance-level response.

To study the impact of the rhythmic stimuli on subjective emotion, we calculated the changes in VAD ratings after listening to a certain sequence compared with before. These changes served as the primary behavioral outcomes for our analyses. We used repeated measures ANOVA, linear mixed-effects models (LME), and analysis of covariance (ANCOVA) to explore the influence

of demographic factors, such as gender and age, stimulus frequency, and participants' psychological health status on these VAD changes.

Results For the EEG data, both evoked spectrum response and inter-trial phase coherence showed clear peaks at the corresponding frequency of stimuli. Statistical analyses indicated that neural oscillation response was stronger at the target frequencies than at the non-target frequencies, demonstrating that all twelve rhythmic tonal sequences entrained to the brain's neural oscillations

Regarding the behavior data, we noticed that the rhythmic tonal sequences with different frequencies influenced the emotional arousal differently for male and female subjects. For female subjects, 11 out of all the 12 frequencies affected the emotional arousal, with approximately half of these frequencies having an energizing effect. In contrast, as many as 4 frequencies showed no influence on male subjects' emotional arousal, while among the remaining 8 frequencies, about half were energizing. However, for valence and dominance, neither age, frequency, nor gender showed significant main effects or interaction effects on emotional change.

We further took participants' psychological health statuses into consideration, and found the rhythmic tonal sequences interacted with participants' demographic diversity and psychological health statuses, showing a tangled influence on emotion. When focusing on the anxiety side, two frequencies (3 and 11Hz) showed significant three-way interaction of gender, age and anxiety levels for valence. At 3Hz, high anxiety in males was associated with a decreasing trend in valence with age, while other anxiety levels showed the opposite pattern. For females, anxiety level, age, and their interaction did not significantly affect valence, with all anxiety levels showing a mild increase in positive valence with age. At 11 Hz, high anxiety in males corresponded to an increasing trend in valence with age, whereas the other groups exhibited the opposite trend. No significant patterns were found for females at this frequency. For arousal and dominance, no significant main effects or interaction effects were observed. When considering depression levels, two frequencies (1 and 8Hz) showed signif-

icant three-way interaction of gender, age and depression levels for valence. At 1 Hz, males with medium and high depression levels showed a mild increase in positive valence with age, while those with low depression experienced a steep decline. For females, low and high depression levels led to an increase in positive valence with age, whereas the medium depression group showed a slight decrease. At 8 Hz, females with high depression levels showed a significant increase in positive valence with age, while other groups had slight changes. Males showed a large increase in valence for the low depression group, with high depression remaining stable and medium depression slightly decreasing. Besides, at 12 Hz, a significant interaction between depression level and age was found. Medium and high depression levels resulted in a decrease in valence with age, while the low depression level group exhibited the opposite trend. For dominance, significant three-way interactions among age, stimuli, and depression level were found. Specifically, at 1Hz and 12Hz, depression level and age significantly interacted, showing that low and high depression levels resulted in decreasing dominance with age at 1Hz, but increasing dominance with age at 12Hz, with medium depression levels exhibiting opposite trends. Additionally, a significant interaction between gender and age was observed at 10Hz, indicating opposite patterns of dominance change with age for males and females. For arousal, no significant main effect or interaction effects were found after including the depression level.

At last, the relationship between the modulation intensity of neural entrainment, in terms of evoked spectrum and inter-trial phase coherence, and emotional changes was tested. Among all the 12 frequencies, only the 7Hz tonal sequence demonstrated a significantly negative correlation between modulation intensity and the change of emotional valence, indicating that stronger modulation intensity corresponds to lower valence.

Conclusion This study combines the subjective emotional assessments and electrophysiological measurements to explore the relationship between neural entrainment and emotional responses of rhythmic auditory input. Although all the rhythmic tonal sequence of

12 frequencies can significantly entrain the neural oscillation, sequences at varying frequencies affect the subjective emotion differently. The influence on different emotional dimensions varies based on an individual's gender, age and psychological status. Furthermore, under the specific frequency stimuli, the strength of neural entrainment correlates with changes in emotional valence.

关键词: rhythmic tonal sequence, entrainment, neural oscillation, subjective emotion

Integrative Multi-omics Data From Early Development To Identify The Genes and Cell Types Underlying Attention-deficit/hyperactivity Disorder

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Objective Attention-deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder with considerable prevalence and heritability. Genome wide association studies (GWASs) have identified dozens of loci significantly associated with ADHD, yet most of these loci reside in non-coding regions, hindering further understanding the pathogenesis of ADHD. Here, we integrated gene expression data from fetal brain and single-cell types with ADHD GWAS data to identify the ADHD-associated genes and cell types

Methods Summary data-based Mendelian randomization (SMR) method was firstly used to integrate gene expression quantitative trait loci (eQTL) data from bulk tissues of post-mortem specimens and fetal brains, as well as single-cell types of induced pluripotent stem cell (iPSC)-derived neurons and post-mortem specimens with ADHD GWAS. We also performed cell type enrichment analysis to identify the cell types implicated in ADHD

Results Integrative study using eQTL data from fetal brain and iPSC-derived neurons identified LSM6 and RPS26 were significantly associated with ADHD.

Genes showing significance in fetal brain and iPSC-derived neurons exhibited high expression levels during early developmental stages, while genes identified from post-mortem specimens were predominantly lowly expressed before the peak incidence period of ADHD. Additionally, cell type enrichment analysis revealed that the SNP heritability of ADHD was predominantly enriched in excitatory glutamatergic neurons, with lower enrichment observed in glial cells

Conclusion Our study highlights the importance of considering the dynamics of gene expression in such integrative analysis and genetic variants may influence neurodevelopment by modulating gene expression in fetal brain, potentially contributing to the development of ADHD.

关键词: ADHD, GWAS, multi-omics, integrative study, neurodevelopment, cell type

Constructing A Predictive Model for Treatment Response in First-episode Schizophrenia Based on Lipidomics

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Objective Antipsychotic medications can alleviate the symptoms of schizophrenia, but individual treatment responses vary widely. Currently, no trustworthy biomarkers exist to forecast the clinical outcome of antipsychotic medication therapy. We used serum samples from the SMART-CAT cohort, a sequential randomized trial carried out in China to assess antipsychotic therapies in first-episode schizophrenia, to develop a prediction model for treatment outcomes for patients

Methods All Patients were assigned at random (1: 1: 1: 1: 1) to one of five different drugs (olanzapine, risperidone, perphenazine, amisulpride, aripiprazole) for 8 weeks. They were assessed using the Positive and Negative Syndrome Scale (PANSS) at baseline and 8 weeks later. Using untargeted Liquid Chromatography-

Mass Spectrometry (LC-MS) to acquire pre-treatment serum lipidomic profiles, correlating them with treatment responses at 8 weeks. The antipsychotic treatment response was measured using the percentage change on the PANSS scale, with a reduction in the PANSS of $\geq 40\%$ defined as responders and $< 40\%$ as non-responders

Results Seventy-two of the 98 patients who were enrolled in the study showed a positive response to antipsychotic treatment. Compared to the non-responders, twenty-four lipid molecules were observed to be significantly dysregulated in responders, where 20 lipid molecules were up-regulated and 4 down-regulated. Further analysis of these dysregulated lipid molecules in combination with LASSO and logistic regression revealed that a lipid model consisting of PS (22:0), PC (18:20 e_19:0), TG (4:0_11:0_12:3), and PC (26:0) was found to be highly predictive of antipsychotic treatment response, with an Area Under the Curve (AUC) of 0.847 (95% CI, 0.707-0.986). Furthermore, the predictive performance of the gender and age-inclusive model was slightly better, with an AUC of 0.864 (95% CI, 0.731-0.996), compared to that of the lipid model alone

Conclusion Our findings suggest that complicated lipid profiles at baseline may be used as potential predictors of outcomes of antipsychotic drug treatment. Moreover, combining clinical variables as a panel offers better predictive performance for treatment response.

关键词: Schizophrenia, Treatment, Lipidomic profiling, Biomarker, Predictive model

基于机器学习抗精神病药物疗效遗传关联研究

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目的 本研究旨在采用机器学习方法探索与急性期抗精神病药物疗效非线性关联的基因标记物, 利用这些基因构建并外部验证急性期抗精神病药物疗效预测模型。

方法 发现队列来自中国抗精神病药物基因组学联盟(CAPOC)的 2307 名 SCZ 患者, 他们分别接

受了奥氮平、利培酮、喹硫平、阿立哌唑、齐拉西酮和氟哌啶醇/奋乃静治疗 6 周。外部验证队列患者来自中国抗精神病药物遗传联盟(CAPEC), 接受阿立哌唑、奥氮平或利培酮治疗 8 周的 569 名 SCZ。药物疗效由阳性与阴性症状量表(PANSS)评估, 发现集和验证集分别以 6 周末和 8 周末的 PANSS 减分率 50% 为界将患者分为有效组和无效组; 基因多态性由中华 8 芯片测量; 结合 Logistic 回归、自助法、嵌套交叉验证以及递归消除, 对基因数据进行特征筛选; 筛选的特征在训练集中采用梯度提升决策树(XGBoost)10 折交叉验证以评估所筛选特征的预测能力和稳健性, 对训练集构建的抗精神病药疗效的基因预测模型, 在独立验证集中进行评估; 用 FUMA 网站进行功能注释。

结果 筛选出 366 个 SNP 作为抗精神病药物疗效的非线性基因特征, 内部交叉验证的 XGBoost 模型 AUC 为 0.816, 准确度为 0.760。外部验证的 AUC 为 0.671, 准确度为 0.720。功能注释显示这些基因在基底节、背外侧前额叶、下丘脑、前扣带皮层及杏仁核海马中显著高表达, 并在轴突和神经元发育、神经元生成和分化、神经元突触可塑性的调控等精神疾病相关通路中富集。

结论 通过机器学习筛选的非线性基因特征与抗精神病药物急性期疗效相关, 并富集在精神疾病相关的脑区和通路。这些基因标记物有助于预测抗精神病药物的疗效。

关键词: 精神分裂症, 抗精神病药物疗效, 机器学习, 基因

精神病临床高危和首发患者冲突加工功能的额叶脑电 theta 振荡机制探讨

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目的 冲突加工功能帮助人们从多个具有相互竞争的行为中做出最合适的选择, 是执行功能的核心子成分之一。已有研究表明, 精神分裂症患者在 Flanker 任务中与冲突加工有关的行为表现并未出现显著衰退, 而我们的前期研究则发现额叶脑电 theta (4~8 Hz) 振荡可能与冲突加工的内在机制有关。

本研究旨在进一步探讨冲突加工功能及额叶 theta 振荡在精神病临床高危和首发患者中的变化。

方法 本研究纳入 60 名健康对照、38 名精神病首发患者和 77 名临床高危被试,记录他们在 1 项修改版 Flanker 任务中的行为反应和 64 通道头皮脑电信号。对于行为学数据,主要考察基于反应时的冲突效应(冲突试次与非冲突试次相比)及其组间差异;对于脑电数据,采用时频分析提取额叶 theta 振荡能量,分析 theta 能量在冲突试次中的变化,重点考察其组间差异。采用混合设计方差分析和 t 检验进行统计学检验。

结果 (1) 行为学表现:三组受试者均较好地完成了任务(平均准确率均在 90%以上);与健康对照相比,虽然临床高危和首发患者的平均准确率显著下降($p=0.007$)且反应时显著增大($p=0.006$),但三组受试者均表现出显著的冲突效应(所有 $p<0.001$);对于归一化校正后的冲突效应,三组受试者之间无显著差异(所有 $p>0.05$)。(2) 个体水平的额叶 theta 能量:三组受试者均表现出显著的冲突效应,即冲突试次中的 theta 能量显著大于非冲突试次($p<0.001$);这一效应的幅度在健康对照、临床高危和首发患者之间出现了下降趋势,即健康对照和临床高危受试者显著大于首发患者($p=0.001, p=0.049$),而健康对照和临床高危受试者之间的差异并不显著($p>0.1$)。(3) 试次水平的额叶 theta 能量:在冲突试次中,随着反应时的增大(说明冲突效应增加),额叶 theta 能量也逐渐增大($p<0.001$);这一效应的幅度在三组受试者之间无显著差异($p>0.3$)。

结论 与健康对照相比,临床高危和首发患者的冲突加工功能并未出现显著衰退,但其在冲突试次中的平均额叶 theta 能量有下降趋势。而在试次水平上,额叶 theta 能量与冲突效应之间的关联性在三组受试者之间并无显著差异。本研究表明试次水平的额叶 theta 能量变化可能是精神病临床高危和首发患者仍然保留冲突加工功能的神经基础。

关键词: 精神分裂症, 临床高危, 首发, 脑电, 冲突加工

Aberrant Excitation, Inhibition and Plasticity of Orbitofrontal Cortex in Drug-naïve First-episode Schizophrenia: A Concurrent TMS-EEG Study

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Objective Abnormalities in cortical excitability and plasticity have been considered to underlie the pathophysiology of schizophrenia. Transcranial magnetic stimulation (TMS) combined with electroencephalography (TMS-EEG) can provide a direct evaluation of cortical responses to TMS. Although postmortem, anatomical imaging, and functional imaging studies have implicated that structural and functional abnormalities of OFC were correlated with negative symptom severity, no study has assessed the cortical excitability of OFC in schizophrenia. Here, we employed TMS-EEG to investigate cortical responses to orbitofrontal cortex (OFC) stimulation in schizophrenia

Methods In total, we recruited 92 drug-naïve patients with first-episode schizophrenia and 51 age- and sex-matched healthy individuals. For each participant, one session of 1 Hz rTMS was delivered to right OFC, and TMS-EEG data was obtained to explore the change of cortical-evoked activities before and immediately after rTMS during the eyes-closed state. The MATRICS Consensus Cognitive Battery (MCCB) was used to assess neurocognitive performance

Results In the cognitive tests, patients with schizophrenia performed significantly worse than healthy controls on all seven cognitive domains and overall performance. The cortical responses indexed by global mean field amplitudes (i.e., P30, N45, and P60) were larger in schizophrenia patients compared with healthy controls at baseline. Furthermore, following one session of 1 Hz rTMS over right OFC, the N100 amplitude was significantly reduced in the healthy group but not in the schizophrenia group. In healthy controls, there was a significant correlation between modulation of P60 amplitude by rTMS and working memory; however, the correlation was absent in patients with schizophrenia

Conclusion Aberrant global cortical responses following right OFC stimulation were found in patients with drug-naïve first-episode schizophrenia, supporting its significance in the primary pathophysiology of schizophrenia. Our preliminary findings imply that OFC might be a promising therapeutic target for rTMS treatment in schizophrenia.

关键词: Transcranial magnetic stimulation, Electroencephalography, Orbitofrontal cortex, Cortical plasticity, First-episode schizophrenia

Bidirectional Mendelian Randomization and Immune Infiltration Analysis Identify IL10Ra As A Potential Therapeutic Target for Depression

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Objective Depression is a prevalent mental health issue with potentially severe consequences if left untreated. While numerous studies have suggested a link between depression and inflammation, effective targets for the treatment of inflammation-related depression remain elusive

Methods To identify reliable therapeutic targets, we utilized publicly available genome-wide association study (GWAS) summary statistics for a two-sample Mendelian randomization (MR) analysis. After accurately selecting instrumental variables, we applied five distinct MR methods and conducted heterogeneity and pleiotropy tests to ensure the reliability of our findings. Functional enrichment analysis was performed to determine the role and pathways of depression-related inflammatory factors. Coloc analysis was used to detect whether shared SNPs drive the risk of depression and gene expression, thereby identifying druggable genes. Further, drug predictions and molecular docking vali-

dated the therapeutic potential of these targets. The Human eFP Browser was employed to visualize the expression of druggable genes in brain regions. The GEOquery package from Bioconductor was used to analyze the differential expression of druggable genes, assessing their diagnostic value for depression. The STRING database was utilized to analyze the co-expression of genes related to druggable targets, shedding light on their biological roles and interactions. The R package GSVA was applied to analyze the immune cell infiltration associated with druggable genes

Results The forward MR results indicated associations between FGF23, IL10Ra, OSM, SULT1A1, TNF, and the occurrence of depression, with no reverse relationships found. Reverse MR results suggested that depression can lead to changes in FGF5, GDNF, IL18 levels. Functional enrichment analysis implicated pathways such as MAPK, PI3K-Akt, and JAK-STAT in depression's pathogenesis. Coloc analysis supported the notion that IL10Ra expression and depression risk are driven by shared causal variants. Drug predictions for IL10Ra identified Raloxifene and Prangenin hydrate as potential therapeutic agents with affinity for IL10Ra. Expression patterns of IL10Ra in brain regions indicated high expression in the olfactory bulb, corpus callosum, and substantia nigra. Differential expression analysis revealed decreased IL10RA expression in depression patients compared to controls, and co-expression analysis showed relationships between IL10RA and various genes, including CYTH4, ITGB2, CD53, among others. Immune infiltration analysis found positive correlations between IL10Ra and B cells, as well as cytotoxic cells and T cells, with an inverse relationship with neutrophils in depression

Conclusion This study identified IL10Ra as an attractive drug target for depression through multiple analytical approaches, suggesting that Raloxifene and Prangenin hydrate could be new treatments for depression. IL10Ra also shows promise as a diagnostic marker for assessing the condition of depression patients.

关键词: Depression, Inflammatory Factors, Bidirectional Mendelian Randomization, Bayesian Coloc Analysis, IL10Ra

Resting State Functional Magnetic Resonance Imaging in Wilson's Disease

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Objective To explore the difference of brain function and activity in patients with Wilson's disease (WD), and identify the correlation between the difference of local internal activity of brain function in resting state functional magnetic resonance imaging (rs-fMRI) and clinical laboratory indicators such as serum copper, 24-hour urine copper and ceruloplasmin

Methods Forty-five patients with WD and thirty-two healthy controls (HCs) in Neurology from January 2021 to December 2022 were enrolled. All subjects underwent rs-fMRI and three-dimensional structural (T1-3D) data acquisition. We calculated the amplitude of low-frequency fluctuation (ALFF), fractional ALFF (fALFF), and regional homogeneity (ReHo) of each object, evaluated the differences in functional activity among different brain regions. Using Spearman correlation to analyze the correlation between differential brain regions and clinical laboratory indicators

Results The ALFF values in the cerebellum posterior lobe, right thalamus, left and right insula, right caudate nucleus, right precuneus, right supplementary motor area of the WD group were higher than those in the HCs group ($t=6.9561, 4.5234, 4.837, 4.915, 4.9927, 5.801, 4.1159, P < 0.05$). The ALFF values in the right middle frontal gyrus of orbit, right dorsal lateral superior frontal gyrus of the WD group were lower than those in the HCs group ($t=-5.3877, -4.8392, P < 0.05$). The fALFF value of the left precuneus and right precentral gyrus were lower than HCs group ($t=-5.2992, -4.2872, P < 0.05$). The ReHo value of the right precuneus was higher than HCs group ($t=6.8114, P < 0.05$). The ReHo value of the left fusiform gyrus, right middle occipital gyrus, left and right postcentral gyrus were lower than HCs group ($t=-4.4128, -4.8129, -5.9576, -5.5242, P < 0.05$). There was a negative correlation between the ALFF value in the right supplementary motor area and

serum copper ($r=-0.329, P=0.027$). The ALFF values in the right precuneus were inversely correlated with 24h urine copper ($r=-0.329, p=0.034$). The fALFF value in the left precuneus was positively correlated with 24-hour urine copper ($r = -0.405, p = 0.006$)

Conclusion Our study suggests that aberrant regional intrinsic brain activity may contribute to understand the pathophysiology feature of WD

关键词: Wilson's disease, Resting state functional magnetic resonance imaging, amplitude of low-frequency fluctuation, regional homogeneity

The Multiomics Landscape of Plasma Exosomes in First-Episode Drug-Naïve of Schizophrenia

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Objective Schizophrenia (SZ) is a debilitating mental illness with uncertain etiology and challenges in early diagnosis and treatment outcomes. For the first time, we applied a multiomics techniques to explore plasma exosomal markers of SZ and underlying molecular mechanisms

Methods Exosomes were separated and identified from ten drug-naïve first-episode SZ patients and ten healthy controls. Then small RNA-seq and high-performance liquid chromatography-tandem mass spectrometry technology were used to detect the profiles of microRNAs (miRNAs) and proteomics, respectively. The integrative multiomics analysis was further performed

Results A total of 167 differentially expressed miRNAs (DE miRNAs) were identified in plasma exosomes from drug-naïve first-episode SZ patients. The potential target genes of DE miRNAs were predicted, and GO and KEGG enrichment analysis showed that they were associated with RNA catabolic process, proteasome-mediated ubiquitin-dependent protein cata-

bolic process, etc. Proteomic analysis identified 274 differentially expressed proteins (DEPs), and DEPs were mainly enriched in immune response and some signaling pathways. The combination of Top 10 DE miRNAs/DEPs both had good values to diagnose SZ. Importantly, miRNA-protein ceRNA networks were constructed by integrating multiomics, one consisting of 21 downregulated DE miRNAs and 21 upregulated DEPs and the other consisting of 64 upregulated DE miRNAs and 86 downregulated DEPs in SZ patients

Conclusion Our study for the first time describes the multiomics landscape of plasma exosomes in first-episode drug-naïve of SZ, and provides novel insights into the molecular alterations of SZ. These findings hold promise for advancing diagnostic and therapeutic strategies in SZ management.

关键词: Schizophrenia; Exosomes; Proteomics; MicroRNAs; Multiomics

星形胶质细胞端足 Cx43 在慢性束缚应激所致抑郁中的作用机制研究

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目的 社会经济迅速发展所带来的环境与社会压力持续影响着人们的精神健康。狭小空间与社交隔离所引起的情绪障碍是正常健康人在环境刺激下产生的不良应激反应,这种持续性的慢性应激刺激所导致的精神障碍最后极有可能发展成抑郁症。慢性应激刺激后血脑屏障结构受损从而导致外周免疫细胞进入中枢引发神经炎症是此类精神障碍的重要发病机制,星形胶质细胞端足对于血脑屏障的完整性维持具有关键调控作用,因此,本研究聚焦星形胶质细胞端足上 Cx43 表达,对其血脑屏障保护作用机制做深入探究。

方法 通过连续 28 天的每日 6 小时慢性束缚应激,模拟日常生活中反复出现的轻度、可预测但不可避免的环境应激。通过行为学观察抑郁样症状,检测血脑屏障通透性后观察中枢炎症水平;进一步通过透射电镜、免疫共沉淀以及过表达技术研究星

形胶质细胞端足 Cx43 对于血脑屏障保护作用机制。

结果 在连续 28 天的慢性束缚应激后,小鼠出现明显的抑郁样行为,血脑屏障结构损伤导致 Th17 细胞介导的神经炎症水平显著上升。我们观察到,血脑屏障损伤可能主要来源于星形胶质细胞 Cx43 的表达下调,导致其端足上肌营养不良聚糖与血管的锚定被抑制,从而介导胶质界膜结构的受损,另一方面,这一作用进而导致血管外基质中 3 型胶原蛋白、基质金属蛋白酶的增加影响了血管机械特性。我们进一步观察到,恢复 Cx43 表达后能够通过恢复其与肌营养不良聚糖的相互作用,从而改善胶质界膜结构,并且进一步抑制了血管外基质中 3 型胶原蛋白的水平保护血脑屏障。

结论 星形胶质细胞端足上 Cx43 通过与肌营养不良聚糖相互作用,维持胶质界膜完整性,从而保护血脑屏障结构完整。

关键词: 慢性应激; 抑郁症; 星形胶质细胞; 血脑屏障; Cx43

Linking Ambient Air Pollution To Mental Health: Evidence Based on A Two-Sample Mendelian Randomization Study

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Objective Growing evidence links air pollution, a ubiquitous environmental stressor, to a heightened risk of developing mental disorders, raising significant public health concerns. Mental disorders represent a significant global public health challenge which can have a profound impact on individual lives. In this study, we used Mendelian randomization (MR) to investigate the causal relationship between ambient air pollution and four common mental disorders

Methods Genome-wide association study (GWAS) data for ambient air pollution and summary-level GWAS data for four representative mental disorders were obtained from open-access database. Inverse variance weighted (IVW) method with multiplicative

random-effects model was the main analysis. Sensitivity analyses were conducted to validate the results

Results A suggestive association was observed between particulate matter (PM) 2.5 and anxiety disorders (OR 2.96, 95% CI 1.29-6.81, $p=0.010$). Exposure to nitrogen dioxide (NO₂) was significantly linked to an elevated risk of schizophrenia (OR 1.95, 95% CI 1.45-2.63, $p=1.13E-05$) and showed a nominal association with an increased risk of bipolar disorder (OR 1.43, 95% CI 1.09-1.86, $p=0.009$). A suggestive causal association was detected between nitrogen oxides (NO_x) and anxiety disorder (OR 2.90, 95% CI 1.21-6.97, $p=0.017$). No significant association was detected between exposure to PM_{2.5-10}, PM₁₀, and mental disorders. No significant horizontal pleiotropy or heterogeneity was found

Conclusion Our findings support causal associations between exposure to ambient air pollution, particularly PM_{2.5}, NO₂, and NO_x, and an increased risk of specific mental disorders

关键词: air pollution, mental disorders, GWAS, mendelian randomization, causal association, SNP

Altered Prefrontal Cortex Activity Mediates The Relationship between Anhedonia Experiences and Neurocognitive Function in Patients with Major Depressive Disorder

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Objective Major depressive disorder (MDD) is associated with deficits in cognitive function, thought to be related to underlying decreased anhedonia experiences. However, little is known about whether and to what extent functional brain activity mediates this association. In this study, we investigated the neurofunctional correlate of the interplay between cognitive function and anhedonia experiences in medication-free MDD using functional near-infrared spectroscopy (fNIRS)

Methods We examine differences of brain activation corresponding to the verbal fluency test (VFT) between MDD patients and healthy controls (HCs). Depressed individuals with MDD ($n=56$) and HCs ($n=35$) were scanned while performing a VFT task. Neurocognitive results estimated by the Cambridge Neuropsychological Testing Automated Battery (CANTAB), four stages of hedonic processing (desire, motivation, effort and consummatory pleasure) using Dimensional Anhedonia Rating Scale (DARS) and relative concentration changes in oxygenated hemoglobin during VFT task were compared among all participants. We used a mediation analysis to detect the direct, indirect and total effects of brain activity on neurocognitive functions

Results The patients with MDD exhibited impaired sustained attention and working memory, as well as lower total DARS scores and all four dimensional scores. Compared to HCs, MDD patients showed reduced activation (CH₄, ch₆₋₁₀, CH₂₁₋₃₀, CH₃₂, CH₄₀ and CH₄₁; $t = 2.32-4.77$, FDR $p < 0.001$ - FDR $p = 0.02$) in the prefrontal cortex (PFC) during VFT task. Lower hedonic of motivation and effort scores, as well as decreased activation of two channels (CH₄ and CH₃₂) covering the dorsolateral PFC and Broca's area, were predictive of poorer neurocognitive function. Further analysis revealed that the change in VFT-related activation mediated the relationship between experiences of anhedonia and neurocognitive function

Conclusion These findings suggest that alterations in oxygenated-hemoglobin levels within the prefrontal lobe, which is implicated in sustained attention and working memory, may serve as promising indicators for interventions targeting individuals with MDD

关键词: anhedonia, hedonic processing, major depressive disorder, functional near-infrared spectroscopy, sustained attention, working memory.

Screening of Potential Antipsychotic Active Ingredients in Rhynchophylla Extract Based on Self-assembled Cell Membrane Chromatography of Mouse Brain Neurons

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Objective The cerebral cortex has multiple neural regulatory regions and abundant neuronal cells, making it an important site of antipsychotic drug action. By utilizing the interaction characteristics between mouse brain neuron cell membrane receptors and antipsychotic drugs, a mouse cortical neuron cell membrane chromatography stationary phase was constructed to screen for potential antipsychotic active ingredients in the extract of rhynchophylla, and to preliminarily study the targets of the active ingredients

Methods EDC/NHS cross-linking method was used to self-assembled mouse cortical neuronal cell membranes with microporous silica gel, and a neuronal cell membrane chromatography stationary phase has been constructed. The two-dimensional cell membrane chromatography online switching method was used to screen the components in the rhynchophylla extract that binding with neuronal cell membrane receptors. The potential active ingredients obtained from the screening were identified and analyzed using HPLC fingerprint comparison and HPLC-IT-TOF/MS analysis method. The acting target analysis of the obtained active ingredients was carried out using affinity chromatography zone elution method

Results Combining the online switching of two-dimensional cell membrane chromatography, HPLC fingerprint comparison, and HPLC-IT-TOF/MS, rhynchophylline, hirsutine, and hirsuteine were found have obvious affinity with neuronal cell membrane receptors. Through the band efflux experiment of DRD2 antagonist haloperidol, the action sites of three active ingredients were analyzed, and it was found that all three active ingredients could compete with haloperidol for the same action site on DRD2

Conclusion The constructed mouse brain neuron cell membrane chromatography model is a multi-target, reliable, and effective method for screening active ingredients in traditional Chinese medicine for antipsychotic treatment. The three components obtained by using this screening technique, namely rhynchophylline, hirsutine, and hirsuteine, exhibit affinity with DRD2

and have the same binding site as Haloperidol.

关键词: Chinese medicine, Rhynchophylla, antipsychotic, cell membrane chromatography, DRD2

Investigation of Serum Cystatin C and Inflammatory Biomarkers Derived From Complete Blood Counts in Patients with Bipolar Disorder

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Objective Inflammation is considered to play an important role in pathogenesis of bipolar disorder (BD). In the meanwhile, recent evidences suggest that cystatin C (Cys C) is closely related to immune inflammation. The characteristics of Cys C in BD are worthy to be studied and the relationship between serum Cys C and inflammation related biomarkers may provide more information about disease progression. In present study, we aimed to use large-scale clinical data to investigate Cys C in patients with BD to explore its role and diagnostic value which would contribute to the identification and treatment of the disease

Methods A total of 3647 patients with BD including 2,431 BD-manic (BD-M) and 1,216 BD-depression (BD-D) in acute stage and 3,500 healthy controls (HC) were enrolled. The levels of Cys C and inflammatory biomarkers derived from complete blood counts were investigated among different groups. Spearman test was used to evaluate the correlation between Cys C and inflammatory indicators including NLR, MLR, PLR, SII and SIRI while logistic regression was employed to assess the predictive value of these indicators on the occurrence of diseases and receiver operating characteristic curve was used to compare the diagnostic effectiveness of single or combined parameters

Results Serum Cys C levels were found significantly elevated in BD, BD-M and BD-D groups compared with HC group as well as all male groups compared with female groups. Spearman correlation analysis showed that Cys C exhibited different correlation

pictures with inflammatory biomarkers in diagnostic groups and healthy controls. Binary logistic regression analysis indicated that serum Cys C levels were independent and positive predictors of occurrence of diseases. Receiver operating characteristic demonstrated that Cys C was more efficient than other inflammatory ratios and the combination of these parameters displayed highest diagnostic effectiveness

Conclusion Our study suggests that Cys C may be involved in the pathophysiological process of BD by affecting the proinflammatory processes. Besides, it should be noted that Cys C had remarkable predictive value in diagnosis of BD especially combined with other inflammatory indicators

关键词: bipolar disorder, cystatin C, inflammation, SIRI

Gray Matter Changes and Cognitive Impairment: A Comparative Study of Unipolar and Bipolar Depression

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Objective Cognitive impairment is a common symptom in patients with unipolar depression (UD) and bipolar depression (BD). While functional magnetic resonance imaging (fMRI) and other neuroimaging studies have reported changes in brain activity during cognitive tasks in depressive patients, there is a paucity of studies specifically examining the neuroimaging differences in cognitive impairment between UD and BD patients. Additionally, there is a lack of differentiation in studies focusing on various cognitive functions such as memory and attention. This study aims to investigate the changes in gray matter structure in patients with UD and BD and their association with different types of cognitive impairment

Methods This study included 31 patients with

bipolar depression, 54 patients with unipolar depression, and 75 healthy controls, all matched for age, gender, and education level. Cognitive function was assessed using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). Cortical thickness and gray matter volume were analyzed using FreeSurfer software. General linear models (GLM) with multiple comparison corrections were used to compare the differences in cortical thickness and gray matter volume among the three groups

Results Preliminary results indicated that, compared to the BD group, the UD group had significantly reduced cortical thickness in the right middle temporal gyrus and decreased gray matter volume in the left post-central gyrus, with age as a covariate. Compared to healthy controls, BD patients exhibited increased cortical thickness in the right superior parietal lobule, though this difference was not significant when age was considered as a covariate, and reduced gray matter volume in the left inferior frontal gyrus, with age as a covariate. Compared to healthy controls, UD patients showed increased cortical thickness in the right inferior temporal gyrus, but this difference disappeared when age was considered as a covariate; they also had reduced gray matter volume in the right lingual gyrus, with age as a covariate. Preliminary correlation analysis showed significant associations between gray matter structural changes and different types of cognitive impairment in UD and BD patients

Conclusion These findings suggest that unipolar and bipolar depression exhibit distinct patterns of gray matter structural changes, which may be related to differences in emotional regulation and information processing dysfunctions. Preliminary evidence supports an association between changes in cortical thickness and gray matter volume and cognitive impairment in depressive patients. This provides a theoretical foundation for further exploration of the specific links between cognitive impairment and brain structure changes in UD and BD patients.

关键词: Unipolar depression, Bipolar depression, Cognitive impairment, Cortical thickness, Gray matter volume

Reduced BCL2 Expression in Maternal Plasma and Offspring Caudate in Preeclampsia: Implications for Neurodevelopmental Disorders

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Objective The early detection and treatment of psychiatric disorders are crucial for alleviating the societal and familial stress associated with these conditions. Our study uses preeclampsia as a focal point to investigate the impact of prenatal environmental factors on neurodevelopment, analyzing amniotic fluid cells

Methods In this study, we employed a combinatorial approach involving the data from an Adolescent Brain Cognitive Development (ABCD) human study and a Sprague-Dawley rat model of preeclampsia. We analyzed reports of 11,338 children of 9-11 years old from the ABCD study in order to study the effect of maternal preeclampsia on behavior and brain volume of offspring. Amniotic fluid cells were collected by establishing the rat model of preeclampsia and sequenced to screen the differentially expressed genes (DEGs). Maternal plasma was collected to investigate the possibility of the target gene in prenatal diagnosis. Behavior tests were performed to assess the effect of prenatal preeclampsia exposure on offspring behavior and offspring brain was collected to examine the expression of the target gene

Results Using the data from ABCD study, we found that offspring exposed to prenatal maternal preeclampsia showed increased behavioral issues and reduced caudate volume. Employing the rat model of preeclampsia, transcript sequencing showed that B-cell lymphoma 2 (BCL2) levels were reduced in the amniotic fluid cells. Offspring exposed to prenatal maternal preeclampsia exhibited behavioral deficits and reduced BCL2 levels in the caudate. Furthermore, BCL2 showed reduced expression in the cell-free RNA (cfRNA) of plasma from preeclamptic patients

Conclusion We verified maternal preeclampsia

could disturb offspring behaviors, and found BCL2 was reduced in amniotic fluid cells of preeclampsia rat and in caudate of preeclampsia offspring. BCL2 was also reduced in plasma cfRNA of preeclamptic patients. Our finding introduces a promising new avenue for prenatal psychiatric screening, potentially enabling earlier intervention strategies to mitigate long-term mental health issues.

关键词: Maternal preeclampsia, Offspring, BCL2, Amniotic fluid, caudate

Neuroimaging Study on Sleep Quality Mediating Childhood Trauma and Depressive Symptoms in Adolescents with Depressive Disorders

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Background Adolescent depressive disorder is often related to traumatic childhood experiences, and the patients are often accompanied by sleep disorders. Patients exposed to traumatic events in childhood tend to have more severe depressive symptoms and an increased likelihood of experiencing multiple subsequent stressors throughout their lives, which can negatively affect their sleep quality. However, the neural mechanism by which sleep quality affects childhood trauma and depressive symptoms in adolescents with depressive disorder remain unclear

Methods A total of 118 patients and 118 controls were included in this study. Data from a total of 62 adolescents with depressive disorder were included after a rigorous assessment of head movement and image quality. The Pittsburgh Sleep Quality Index (PSQI), Childhood Trauma Questionnaire (CTQSF) and Hamilton Depression (HAMD) scale were used to evaluate the sleep quality, childhood abuse and neglect experience, and the severity of depressive symptoms of the two groups. Resting state functional magnetic resonance imaging (rs-fMRI) was performed on 62 adolescents with depressive disorder. ReHo was used to analyze the

changes of local brain activity at rest in adolescents with depressive disorder. Continuous variables with normal distribution were expressed as mean \pm standard deviation, independent sample t test was used for comparison between two groups. Categorical variables were expressed as frequency and percentage, and χ^2 test was used for comparison between groups. Pearson correlation analysis was used to analyze the correlation among PSQI, CTQSF and HAMD scores. The PROCESS program developed by Hayes was used to test the mediation effect. $P < 0.05$ was considered to be statistically significant

Results The scores of PSQI, CTQSF and HAMD in the study group were significantly higher than those in the control group (all $P < 0.05$). CTQSF, HAMD and PSQI were significantly positively correlated in adolescents with depressive disorder. Regional homogeneity (ReHo) analysis found that the ReHo positively correlated with PSQI was located in the right lingual gyrus and the right paracentral lobule, and the ReHo was positively correlated with HAMD. Mediation analysis found that PSQI significantly mediated the association between CTQSF and HAMD. ReHo of the right lingual gyrus significantly mediated the association between PSQI and HAMD. These results were not found in the right paracentral lobule. Sex-stratified analysis showed that ReHo in the right lingual gyri mediated the association between PSQI and HAMD in women

Conclusion Our study showed that childhood trauma was significantly positively correlated with the severity of depressive symptoms and sleep quality in adolescents with depression, and sleep quality mediated the association between childhood trauma and depressive symptoms severity. In addition, ReHo of the right lingual gyrus mediated the association between sleep quality and the severity of depressive symptoms. These findings help to determine the neural mechanisms underlying the association between childhood trauma, sleep quality, and depression severity in adolescents with depression.

关键词: depressive disorders, childhood trauma, sleep quality, regional homogeneity analysis, mediation analysis

精神分裂症患者智力与脑皮层的相关性

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目的 智力损伤是精神分裂症的常见特征,但智力损伤的影响因素及与大脑皮层的相关性尚不明确。

方法 进行方便取样,选取精神分裂症首发患者 117 人[年龄 16~46 岁、平均(年) 25.0 \pm 6.2;男 63 人,女 54 人;受教育年限(9.7 \pm 2.8)年]。选取年龄,性别,受教育程度匹配的正常对照 50 人[年龄 16~38 岁、平均(年) 25.3 \pm 5.4;男 28 人,女 22 人;受教育年限(10.1 \pm 3.0)年];使用 WAIS-IV 中文版积木,算术,常识,译码量表对所有受试者的智力水平进行简版 IQ 评估,使用 MRI 对患者左侧颞叶、中央前回,中央后回进行扫描;使用阳性与阴性症状量表(PANSS)分别对精神分裂症患者的临床症状进行评估。

结果 精神分裂症组与正常组比较在简版 IQ (患者: 72.4 \pm 13.8 vs 正常组: 96.6 \pm 13.2)上结果显著($p < 0.05$);患者组 IQ 与外侧颞上和颞横沟面积相关显著($p < 0.005$)。患者组与正常组比较外侧颞上和颞横沟面积差异显著($p < 0.05$)。控制年龄和受教育程度后,患者外侧颞上面积与 IQ 的相关仍然显著($p < 0.05$),与正常组的差异也仍然显著($p < 0.05$)。外侧颞上面积与 PANSS 量表各得分相关均不显著($p > 0.05$)。

结论 精神分裂症患者 IQ 损伤可能与脑区外侧颞上受损有关。

关键词: 精神分裂症,智力,外侧颞上,WAIS

Prevalence of Non-suicidal Self-injury in Individuals with Psychotic-like Experience: A Systematic Review and Meta-analysis

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Objective Psychotic-like experiences (PLEs) include attenuated or subthreshold psychotic symptoms such as hallucinations, delusional beliefs, suspiciousness, unusual experiences, and paranoid ideation, and are relatively common in adolescents and young adults. While most PLEs are transient and do not require clinical intervention, frequent or severe PLEs may increase the risk of developing psychosis. Research indicates a correlation between PLEs and an elevated risk of non-suicidal self-injury (NSSI). Despite numerous primary studies on NSSI in populations with PLEs, variations in populations, regions, and investigative methods result in differing NSSI prevalence rates. This study aims to systematically review and conduct a meta-analysis to compare NSSI prevalence in populations with PLEs versus the general population, calculate the increased risk of NSSI in those with PLEs, confirm PLEs as a risk factor for NSSI, and provide further protective strategies for populations with PLEs

Methods Two investigators (RTS and CXW) independently searched electronic databases (PubMed, Embase, and PsycINFO) using the following combination of terms in Title/Abstract: (Psychotic exp* OR sub-clinical psych* OR subthreshold psych* OR attenuated psych* OR psychotic-like OR psychotic sympt* OR delusion* OR hallucinat* OR schizotyp* OR “prodrom*” OR “ultra-high risk” OR “clinical high risk” OR “APS” OR “at-risk mental state” OR CHR OR UHR OR ARMS) AND (suic* OR parasuic* OR self-harm OR selfharm OR self-injur* OR self injur*). Only studies reporting the number of NSSI cases in both PLEs and healthy populations were included, and the respective and combined odds ratios (ORs) with 95% confidence intervals (CIs) were calculated. Statistical analyses were performed using RevMan5.3 software, and meta-analysis results were presented using a random-effects model

Results A total of 8 studies were included, comprising a total sample size of 19,957 individuals (3,748 with PLEs and 16,209 healthy controls). Individuals

with PLEs exhibited a significantly higher risk of NSSI compared to healthy controls (OR = 3.63, 95% CI: 2.77 – 4.75, $P < 0.001$). Subgroup analysis indicated that males with PLEs (OR = 4.33, 95% CI: 3.18 – 5.90) had a significantly higher risk of NSSI compared to females (OR = 2.55, 95% CI: 1.70 – 1.83) ($P < 0.001$). There was no significant impact on NSSI prevalence increase across different regions ($P = 0.59$) or whether standardized scales of NSSI were used ($P = 0.17$)

Conclusion The prevalence of NSSI is significantly higher in populations with PLEs, indicating a strong correlation between these subthreshold psychotic symptoms and self-injurious behaviors. This association is particularly pronounced in males, suggesting that gender may play a role in the severity or expression of this relationship. Understanding the reasons behind this gender difference could provide important insights for targeted interventions and prevention strategies aimed at reducing the risk of NSSI in individuals with PLEs

关键词: Psychotic-like experiences, Non-suicidal self-injury, Meta-analysis

SIGLECF 对出生后小鼠早期发育期间小胶质细胞吞噬功能的作用机制研究

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目的 小胶质细胞是中枢神经系统(CNS)中重要的免疫细胞,除了对CNS进行经典的免疫监控职能,还在神经元发育、突触剪切、神经网络形成过程中发挥重要作用。小胶质细胞通过“吃我”和“不吃我”信号,对神经元突触进行精准的剪切和重塑。然而,小胶质细胞如何选择性地吞噬特定突触,其机制仍不清楚。唾液酸结合免疫球蛋白超家族凝集素 F (SIGLECF)作为“不要吃我”信号的识别受体,在先天免疫调节过程中有重要作用,但目前的相关研究只局限在外周免疫系统中。SIGLECF是否参与CNS中小胶质细胞的吞噬过程尚不清楚。本研究旨在探究 Siglecf 如何调控 CNS 发育过程中小胶质细胞的

特异性吞噬功能，并检测小胶质细胞特异性吞噬功能异常所导致的行为学变化

方法 本项目通过比较 Siglecf^{-/-}小鼠与野生型 C57BL/6J 小鼠，对 Siglecf^{-/-}小鼠的整体生长发育和行为学进行探索；通过细胞生物学、电生理、免疫染色、原代培养等技术手段对 Siglecf^{-/-}小胶质细胞、神经元形态和功能，以及小胶质细胞-神经元相互作用的影响进行研究；通过多组学等高通量测序及生物信息学分析技术，结合分子实验验证，明确 Siglecf 对小胶质细胞吞噬突触的调控方式的生物学机制。

结果 Siglecf^{-/-}小鼠海马区域小胶质细胞形态异常，呈现激活态改变，吞噬功能增强。

结论 在中枢神经系统中，Siglecf 影响小胶质细胞的吞噬作用。

关键词：小胶质细胞；突触吞噬；神经发育；凝集素；SIGLECF

精神障碍中非自杀性自伤行为功能分化的脑网络特征

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目的 非自杀性自伤 (Non-suicidal self-injury, NSSI) 在精神障碍群体中高发, 严重损害患者预后。触发 NSSI 行为发生或强化 NSSI 行为维持的因素被定义为 NSSI 功能。目前 NSSI 功能分型尚未达成共识, 其神经生物学特征未知。深入理解 NSSI 功能分化及其脑功能特征有助于提出精准有效的干预措施。

方法 研究共纳入 304 例伴有 NSSI 行为主要诊断为抑郁、双相、进食障碍的住院患者 (16~26 岁, 80% 为女性)。收集早期个人及环境风险因素; 使用宗氏抑郁和焦虑自评量表评估患者临床症状; 采用渥太华自我伤害调查表 (Ottawa self-injury inventory, OSI) 评估 NSSI 功能; 其中, 163 名患者完成静息态功能磁共振成像扫描。使用正交投影非负矩阵分解对 OSI 中 NSSI 功能条目进行因子分解; 根据所识别的因子结构, 使用模糊 C 均值聚类将患者群体区分为不同的 NSSI 功能亚型; 通过典型相关分析识别与各功能因子相关的脑功能网络连接模式,

进而探索不同功能亚型的脑网络特征。

结果 (1) 非负矩阵分解确定了 NSSI 行为发生和强化的双因子结构: 自我功能因子和社会功能因子。自我功能包括情绪调节和自我惩罚等, 该因子载荷在情感障碍 (抑郁和双相障碍) 患者中更高, 且显著与抑郁症状相关 ($r=0.167, p=0.004$)。社会功能包括人际影响和人际关系等, 该因子显著与焦虑症状相关 ($r=0.229, p<0.001$), 并在非情感障碍 (进食障碍) 患者中表现出更高载荷。

(2) 基于双因子结构的模糊 C 均值聚类发现了三种 NSSI 功能亚型。亚型一 ($n=154$) 群体的 NSSI 行为以自我功能为主; 亚型二 ($n=98$) 的 NSSI 行为由自我和社会功能共同触发和强化; 亚型三 ($n=52$) 则未表现出明显的功能分化。亚型二个体呈现更严重的抑郁焦虑症状、更多的生活事件经历、更重的成瘾行为, 以及更高的神经质和更低的宜人性的人格特质。未发现以仅以社会功能为主的 NSSI 功能亚型。

(3) 神经影像分析发现, 自我功能因子主要与包括杏仁核和壳核在内的皮层下区域为核心的脑网络特征关联, 在亚型一中显著增强。社会功能因子则主要与额-颞叶功能连接模式相关, 该连接模式在亚型二中显著增强。

结论 本研究提出一个稳定可解释的“自我-社会”NSSI 双因子功能模型, 以表征触发和强化 NSSI 行为的两大因素。提示“自我功能”是 NSSI 行为发生的基础, “社会功能”与个体更高水平的焦虑抑郁特征、更薄弱的社交和情感回应能力以及更多的环境风险关联, 双因子分别与皮层下和皮层特定的脑功能网络特征相关。

关键词：非自杀性自伤；自伤功能；功能亚型；功能因子；脑网络；机器学习

Maresin-1 May Exert Antidepressant-like Effects Via Reversal of Microglia Loss and Overexpression of IL-4 and TSPO in Hippocampus: [18F] DPA-714 PET Dynamic Study

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Objective Maresin-1 (MaR1) is an anti-inflammatory lipid mediator derived from docosahexaenoic acid (DHA), with potent anti-inflammatory and pro-resolving properties. We previously represented that single intraperitoneal injection (IP) of MaR1 partially relieved lipopolysaccharide-induced depressive-like behaviors. To further confirm the antidepressant-like effect of MaR1, the present study examined whether MaR1 ameliorated depression-like behavior induced by chronic unpredictable stress (CUS) in male C57/6J mice

Methods In the present study, we subjected adolescent male C57/6J mice to chronic unpredictable stress (CUS) for 5 weeks, followed by a 4-week Maresin1 treatment administered via intraperitoneal injection (5 μ g/kg/d, i.p.). We assessed anxiety and depression-like behaviors in mice using the Sucrose Preference Test (SPT), Tail Suspension Test (TST), and Open-Field Test (OFT). Additionally, we employed [18F]DPA-714 Positron Emission Tomography (PET) to dynamically evaluate microglial activation and associated neuroinflammation levels at three time-points: before treatment, and at 2 weeks and 4 weeks post-Maresin1 treatment. Immunofluorescence staining was used to quantify TSPO⁺ cells, ionized calcium-binding adaptor molecule (Iba)-1⁺ microglia, TSPO⁺/Iba-1⁺ cell counts, glial fibrillary acidic protein (GFAP)⁺ astrocytes, and TSPO⁺/GFAP⁺ cell populations. Real-time PCR and Western blot analyses were performed to assess the expressions of interleukin (IL)-1 β , IL-4, IL-18, TSPO, and NLRP3 in the hippocampus

Results Immunofluorescence staining of hippocampus demonstrated that MaR1 reversed microglial loss and led to a reduction in the hippocampal GFAP⁺ astrocyte numbers. Meanwhile, MaR1 reversed the reduced inflammation levels induced by CUS intervention during the early stages of treatment (at 2 weeks), while it maintained a balanced inflammatory level and increased the expression of TSPO and IL-4 in the hippocampus after 4 weeks of treatment. These results initially indicate that MaR1 produces antidepressant-like effects in a depression mouse model induced by CUS

Conclusion Maresin1 holds promise as a potential novel treatment for depression, and its antidepressant

effect may be associated with the promotion of hippocampal inflammatory homeostasis and the upregulation of TSPO and IL-4 levels

关键词 : Maresin-1, microglia, IL-4, TSPO, [18F]DPA-714 PET

The Role of HCAR3 in The Susceptibility and Impaired Niacin Skin Flushing Responses in Schizophrenia

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Objective Blunted niacin response (BNR) was an endophenotype of schizophrenia with astonishing potential in the auxiliary diagnosis of schizophrenia, but its underlying mechanism remains unclarified. BNR involves the hydroxycarboxylic acid receptor (HCAR) - phospholipase (PLA2) - cyclooxygenase (COX) pathway, specifically, the binding of niacin to HCAR mediates the activation of PLA2 and the subsequent synthesis of prostaglandins, which evoke a skin flushing. This study reported whether genes associated with BNR pathway constitute the genetic basis and the pathological mechanism of BNR phenotypic psychiatric patients

Methods TagSNPs were selected for 6 key genes within the HCAR-PLA2-COX pathway, ultimately pinpointing 62 variants. The study included two independent sample groups (discovery set and validation set) with a total of 971 participants. Genotyping was performed on 62 variants in the discovery set, followed by validation of relevant variants in the validation set. Published PGC-GWAS data were used to validate the association between the relevant variants and psychiatry disorders. RT-PCR analysis, eQTL data, and Dual-Luciferase Reporter experiment were used to investigate the potential molecular mechanisms of the variants underlying BNR

Results The results reported that a SNP (rs2454721) located in the UTR5 region of the HCAR3 can affect the BNR phenotype of MPD by elevating the expression of the HCAR3 gene. It is proposed that an

increase in HCAR3 receptor may lead to enhancement downstream cascades and insufficient AA levels on the cell membrane, which may be a key cause of the BNR observed in psychiatric patients. This study also found that HCAR3 was a risk gene for SZ in East Asian populations. The findings provide genetic evidence for BNR as a subtype identifying marker for psychiatric disorders. In-depth investigations of HCAR3 will be of great significance for exploring the pathogenesis and therapeutic targets for the BNR subgroup patients with psychiatric disorders

Conclusion HCAR3 is a novel schizophrenia susceptibility gene which significantly associated with BNR in schizophrenia. In-depth investigation of HCAR3 is of great significance for uncovering the pathogenesis and propose new therapeutic targets for psychiatric disorders, especially for the BNR subgroup patients

关键词: Schizophrenia; HCAR3; blunted niacin response; niacin receptor; susceptibility

缺陷型与非缺陷型精神分裂症患者面部情绪识别的特征性研究: 基于 fNIRS 技术

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目的 精神分裂症患者在面部表情识别方面存在缺陷, 但其神经病理机制尚不明确, 本研究旨在探索缺陷型精神分裂症(DSZ)与非缺陷型精神分裂症(NDSZ)患者在面部情绪识别任务中表现的特征性差异, 为寻找 DSZ 潜在的脑血流动力学生物标志物提供依据, 为理解缺陷型精神分裂症的病理机制提供思考。

方法 本研究共纳入了 18-55 岁精神分裂症患者 82 名和健康对照者 45 名, 其中缺陷型精神分裂症和非缺陷型精神分裂症患者分别为 32 名和 50 名。研究采用了简明精神病量表(BPRS)、阳性症状评定量表(SAPS)和阴性症状评定量表(SANS)评估受试者的精神病性症状的严重程度。中文版缺陷型精神分裂症诊断量表(SDS)用于区分精神分裂症的亚型。刺激材料选自日本人和高加索人面部表情图片库

(JACFFE), 该图片库包含了惊讶、蔑视、愤怒、恐惧、厌恶、悲伤和喜悦共 7 种基本面部情绪。采用 Emprine 2.0 软件在同一台电脑按照固定顺序呈现刺激, 每次刺激及刺激间歇均持续 10 秒。参与者对正确识别各种情绪图片的数量得分及在应对各种情绪时额颞叶皮层活动状态也将同步记录。

结果 (1) DSZ 组和 NDSZ 组在 BPRS、SANS、SAPS 量表上的平均得分均高于对照组。DSZ 组的 SANS 平均得分高于 NDSZ 组($P<0.05$), 而 DSZ 组与 NDSZ 组在 BPRS 及 SAPS 得分上无统计学意义。

(2) 与对照组相比, DSZ 组与 NDSZ 组识别上述 7 种刺激的反应时间明显延长, 且得分更低($P<0.05$)。相比 NDSZ 组, DSZ 组对喜悦情绪识别的反应时间更长, 得分更低($P<0.05$)。

(3) DSZ 组在处理喜悦相关的刺激任务时, 背外侧前额叶皮层(DLPFC)的氧合血红蛋白浓度较 NDSZ 组降低具有统计学意义($P<0.05$)。

(4) DSZ 患者的左侧 DLPFC 的平均氧合血红蛋白浓度与 BPRS 阴性症状群及 SAPS 得分呈负相关($P<0.05$)。

结论 (1) 相比 NDSZ 患者, DSZ 患者存在更严重的阴性症状。

(2) DSZ 患者和 NDSZ 组患者在识别积极情绪上存在差异, DSZ 患者在幸福情绪的识别受损较 NDSZ 组更严重, 而 NDSZ 患者主要表现在对负面情绪的识别功能受损。

(3) 在执行幸福情绪识别任务期间, DSZ 患者左侧 DLPFC 的激活水平与阴性症状的严重程度相关。

关键词: 缺陷型精神分裂症, 近红外成像, 面部情绪识别

The Effect of Bright Light Therapy on Metabolic Syndrome in Depression: A Single-blind Randomised Controlled Trial

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Objective Metabolic syndrome is commonly seen in depression, and depression co-occurs with the components of metabolic syndrome (i.e. abnormal blood sugar, dyslipidemia, insulin resistance). An increasing number of evidences suggest that exposure to different times of bright light can change the involved metabolism. Therefore, we aimed to explore the effectiveness of different times of bright light therapy (BLT) on metabolism-related indicators in patients with depression

Methods In this single-blind randomised controlled trial, 83 depression inpatients were recruited from the department of sleep disorders, psychological hospital affiliated to Anhui Medical University and randomly divided into four groups: the morning BLT group (n=25), the morning placebo group (n=18), the evening BLT group (n=19) or the evening placebo group (n=21). The BLT groups were given 10,000 lux bright light therapy and the placebo groups were given <100 lux dim light therapy, respectively. Participants received 30 minutes of light therapy per day (between 9:00-10:00 for the morning groups or between 18:00-19:00 for the evening groups) for a 2-week period. The primary outcome of the study was fasting venous blood collected for total cholesterol, high-density lipoprotein, triglycerides, and blood glucose at baseline and 2 weeks after the light therapy. Baseline differences in demographic and clinical variables between the groups were analyzed using the Student's t-test for continuous variables or Pearson's chi-squared test for categorical variables. Primary and secondary outcomes were analysed for time (baseline, two-week), group (BLT and placebo) and group-time interaction effects using a mixed repeated-measures analysis of variance (ANOVA). The significance level was set at $p < 0.05$ for all tests

Results In terms of general demographic and

scale scores at baseline, there were no significant differences between the two groups in the morning or between the two groups in the evening. Fasting blood glucose in the morning BLT group was significantly improved compared with the morning placebo group ($p=0.032$), but cholesterol, high density lipoprotein and triglyceride were not significantly improved. No significant differences were found in cholesterol, high-density lipoprotein, and triglycerides

Conclusion The results suggest that the morning BLT is more effective than placebo in improving fasting blood glucose in depression. It may provide a new idea for clinical treatment of metabolic syndrome in patients with depression.

关键词: depression, Bright light therapy, metabolism, fasting blood glucose

Baseline Cortical Thickness Abnormalities and Accelerated Longitudinal Cortical Thickness Thinning in Youth At Clinical High-risk for Psychosis: Findings From The Shanghai-At-Risk-for-Psychosis (SHARP) Cohort

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Objective Cortical thickness (CT) abnormalities have been widely reported in individuals with a clinical high risk (CHR) of psychosis, but it remains vague what these alterations result from and whether they are related to antipsychotic (AP) medications. We conducted a two-month longitudinal magnetic resonance imaging (MRI) study to clarify the association between baseline CT changes and age, symptom, and neurocognitive, as well as the relationship between longitudinal CT changes and AP medications, and long-term functional outcomes

Methods 138 individuals with CHR and 65

matched healthy controls (HC) were enrolled in this study. Clinical assessment, neurocognitive measurements, and MRI scans were performed at baseline and 2-month follow-up. CHR was then followed up for 2 years to determine their functional outcomes. Based on the cumulative dose of AP use during the 2 scans, CHR was subdivided into a high-dose (CHR_HIGH) group and a low-dose (CHR_LOW) group. According to the 2-year Global Assessment Function (GAF) scores, CHR was subdivided into good function (CHR_GOOD) and poor function (CHR_POOR) groups. We measured the baseline CT and longitudinal CT changes and performed group comparisons using FreeSurfer software

Results CT was significantly reduced in the right inferiortemporal cortex in CHR individuals compared with HC at baseline. In the HC group, the baseline CT of the right inferiortemporal showed a significant decline with age, while in the CHR group, it remained at a low level in all age stages, which was comparable to the HC in the thirtysomethings. Moreover, thinner CT in the right inferiortemporal region was associated with more severe clinical symptoms, worse cognitive performance, and a trend toward lower GAF scores. In terms of longitudinal change, CHR subjects showed a steeper rate of gray matter loss in bilateral frontotemporal areas and right caudalanteriorcingulate region compared with HC, which may be related to AP use, since the CHR_HIGH group showed a more widespread accelerated CT decline than the CHR_LOW group compared with HC, and the rate of CT decline was significantly negatively correlated with cumulative AP dose in the left superiorfrontal cortex. Compared with HC, CHR_GOOD exhibited a broader acceleration CT decline than the CHR_POOR group, and the 2-year GAF score increase was significantly negatively correlated with the 2-month CT decline rate in the left superiorfrontal region. Furthermore, based on CT changes in several regions of interest, age, age², and AP dose, a random forest model trained in 70% of CHR subjects discriminates CHR_GOOD from CHR_POOR subjects in the validation set with an AUC of 0.74

Conclusion These findings demonstrate that CHR is associated with CT thinning, which may relate to clinical symptoms, cognitive performance, and GAF

scores. Early AP use plays a role in the accelerated reduction of CT in CHR, and this alteration connects with long-term functional outcomes. CHR individuals with more pronounced changes in CT during 2-month AP use are more likely to have their function improved at a 2-year follow-up.

关键词: clinical high risk for psychosis, cortical thickness, antipsychotic medication, treatment response, functional outcome

Changes in Network Centrality of Anxiety and Depression Symptoms Associated with Childhood Trauma Among College Students

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Objective This study used network analysis to explore the effects of childhood trauma on anxiety and depression symptoms among college students

Methods Depression, anxiety, and childhood trauma were assessed using the patient health questionnaire-9, generalized anxiety disorder-7, and childhood trauma questionnaire-28. The symptom networks were constructed according to whether participants have childhood trauma experiences or not, and the central indices were used

to identify the central symptom of the network. Then we evaluated the accuracy and stability of the networks. Network comparison test was used to compare the network properties between trauma and non-trauma groups

Results Loss of Energy and Worry too much were the central symptoms in the non-trauma group, while anhedonia and nervousness were the central symptoms in the trauma group. There was a significant difference in the global strength of the network between the trauma group and the non-trauma group (pFDR < 0.01), but no significant difference in the distribution of edge weights between the two networks (pFDR = 0.14). Anhedonia, Suicide ideation and feeling afraid in the

trauma group showed increased network centrality compared with the non-trauma group

Conclusion Childhood trauma can affect the central symptoms of anxiety and depression in college students, which may be an important research target to explore the mechanism of childhood trauma, anxiety and depression in the future

关键词: Childhood trauma, Anxiety, Depression, Network analysis, College students

Event Related Potentials in Clinical High Risk for Psychosis: A Systematic Review and Meta-analysis

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Objective In this study, we collected studies on event-related potentials in psychiatric ultra-high risk (UHR) or psychiatric clinical high-risk syndromes (CHR) in recent decades, and we learnt that the most recent meta-analysis was published in 2015, and no other meta-analyses have been conducted in this nearly ten-year period, so the present study updates the literature based on the previous studies, and focuses on exploring the differences in event-related potentials between individuals with psychiatric clinical high-risk and healthy populations. between individuals at clinical high risk for psychosis and healthy individuals, and more recently to explore whether there are differences in event-related potentials between transformed and non-transformed individuals with clinical high risk for psychosis syndromes. The main components of event-related potentials explored include MMN, P300 and N100, and it is sought whether these components of event-related potentials are better predictors of psychosis

Methods A search of Medline, PubMed, and Embase databases was conducted, and we used the following topics for the search: CHR OR UHR and ERP OR Event-Related Potential. Identified articles were first screened by title and abstract for possible inclusion.

The full text of relevant papers was then reviewed for eligibility. After identifying articles for inclusion, we also compared the event-related potentials of selected articles that included a CHR population that converted to schizophrenia after follow-up (CHR-T) with a non-converted CHR population (CHR-NT)

The following criteria were met to be included in the study: 1. it was an original article published in English, 2. it included individuals who met the CHR criteria as defined by any validated scale, 3. it was a trial using event-related potentials, and 4. it reported ERP data containing both control (HC) and CHR populations. Studies were excluded if the following criteria were met: 1. unpublished studies, reviews, conference abstracts, or case reports, 2. studies containing only the CHR population without control group data, and 3. studies for which amplitude data were not available.

The following information was extracted from the selected articles: first author, year of publication, sample size, task paradigm, electrode location and results.

The quality of all included studies was assessed using an Excel template for the Cochrane 'Risk of Bias' tool 2 (RoB 2). Included studies were assessed as being at high risk, low risk or having some problems by answering questions in five domains (randomisation process, deviation from the intended intervention, missing outcome data, outcome measures and choice of reported outcomes).

All statistical analyses were performed using the Cochrane Systematic Review Manager (RevMan, version 5.2; Cochrane Collaboration Network, London, UK). Comparisons of outcomes were made using the amplitude of each event-related potential component, and heterogeneity statistics were assessed using Cochran's Q and I². $p < 0.1$ or $I^2 > 50\%$ indicated significant heterogeneity. When significant heterogeneity existed, random effects models were applied; otherwise, fixed effects models were used. Clinical studies of individuals at clinical high risk for psychosis were included for meta-analysis. Meta-analyses were performed using random-effects models or fixed-effects models using the Cochrane Review Manager (RevMan, version 5.3) in order to calculate the ratio of ratios and mean differ-

ences, as well as the corresponding 95% confidence intervals.

Results A total of 27 studies were included in this meta-analysis and their information was extracted. Among them, 15 studies on MMN, 12 studies on P300 and 8 studies on N100. For MMN, most of the studies showed deficits in MMN in the CHR population compared to healthy controls. Two of these studies showed that the MMN exhibited lower amplitude in first psychiatric patients. Among the 15 included studies, the reported risk of bias and other biases was assessed to be low, and the results of Meta-analysis showed that patients at high clinical risk for psychosis had a lower amplitude of the MMN (MD(95% CI)=-0.36(0.23,0.49), $P=0.10$, $I^2=37\%$, $P<0.01$) compared to healthy individuals; for the P300, most studies have demonstrated a deficit in P300 in the CHR population compared to healthy controls. Among the 12 included studies, the reported risk of bias and other biases was assessed as low, and the results of the Meta-analysis showed that the amplitude of the P300 was lower in patients at clinical high risk of psychosis (MD(95%CI)=-1.44(-2.16,0.04), $P=0.0006$, $I^2=66\%$, $P<0.01$) compared to healthy individuals; similarly for the N100, the Most studies have demonstrated deficits in N100 in the CHR population compared to healthy controls, and in the eight included studies, the reported risk of bias and other biases was assessed to be low, and the results of the Meta-analysis showed that the N100 of the amplitude in patients at clinical high risk for psychosis compared to healthy individuals (MD(95% CI)=0.57(0.43,0.71), $P=0.81$, $I^2=0\%$, $P<0.01$) were lower. In the second step, we further explored the comparison of event-related potentials between converted and unconverted CHR populations, and the results showed that in the MMN(MD(95%CI)=0.50(0.10,0.90), $P=1.00$, $I^2=0\%$, $P<0.01$) potentials, when converted to schizophrenia, the MMN amplitude was lower in CHR populations than in unconverted CHR populations, whereas this phenomenon was not found in the P300(MD(95%CI)=-1.90(-6.73,-2.93), $P=0.001$, $I^2=85\%$, $P=0.44$) and N100 (MD(95%CI)=0.96(-0.03,1.96), $P=0.02$, $I^2=71\%$, $P=0.06$)

Conclusion The ERP components of the CHR population were all worse than normal compared to healthy individuals, and MMN showed better potential to predict transformation in the CHR population during the follow-up period, which also provides some direction for finding potential biomarkers for predicting the CHR population, which is important for the prediction and prevention of the CHR population. Meanwhile, both MMN and N100 showed differences between transformed and non-transformed individuals in the CHR population. Future research on ERP for psychiatric risk states should focus more on the impact of intervention modalities, in order to find effective means of preventing conversion in the CHR population

关键词: Event related potentials, clinical high risk for psychosis, meta-analysis.

Identifying Shared Genetic Architecture between Atopic Dermatitis and Attention Deficit Hyperactivity Disorder: The Importance of Genetic Factors

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Objective Identifying shared genetic architecture between atopic dermatitis and attention deficit hyperactivity disorder: the importance of genetic factors

Methods Based on the latest large-scale Genome-wide association studies (GWAS), we employed Linkage disequilibrium score regression (LDSC) to investigate the global genetic correlation between AD and ADHD. Subsequently, Cross-trait meta-analysis (CPASSOC), Multi-marker Analysis of GenoMic Annotation (MAGMA), and Summary-data-based Mendelian randomization (SMR) were utilized to explore the genetic overlap between the two conditions at both the single nucleotide polymorphisms (SNP) and gene levels. Enrichment analysis was then conducted to speculate on the pathophysiological mechanisms influenced by genetic factors. Finally, we employed a latent causal

model (LCV) to investigate the presence of a causal relationship between AD and ADHD

Results We initially found a positive genetic association between ADHD and AD ($r_g = 0.02$, $P = 0.0714$). We identified a total of 152 potential pleiotropic SNPs, including 32 newly discovered pleiotropic SNPs. Subsequently, following physical annotation and MAGMA analysis, we identified 273 shared genes between ADHD and AD. Among these genes, four were significantly expressed in blood tissues. Additionally, TARS2 was also significantly expressed in skin tissues, and these genes primarily impact immune activity, particularly leukocyte proliferation (GO:007066, $P = 1.69E-05$, $\text{Padjust} = 0.021$). Moreover, our LCV analysis did not support the existence of a causal relationship between AD and ADHD

Conclusion We found a positive genetic correlation between ADHD and AD, but not a causal relationship, and the underlying mechanism behind them may be related to the immune system, RELA as a focal point can help regulate the mental and psychological state of AD patients

关键词: Attention deficit hyperactivity disorder, Atopic dermatitis, Genetic architecture, Genetic correlation, GWAS

The Neural Mechanism Underlying Differences in Cognitive Functioning between Patients with First-episode and Recurrent Depression

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Objective Major Depressive disorder (MDD) is a common psychiatric disease affecting >300 million people across the globe. Accumulating evidence has

shown that cognitive deficits are prevalent among patients with MDD. However, the pattern and extent of cognitive deficits in patients with first-episode and recurrent depression remain unclear. In the present study, we aimed to investigate and compare the severity of cognitive impairments between first-episode of depression (FED) and recurrent major depression (RMD) patients and to explore the potential neural mechanisms using resting-state functional magnetic resonance imaging (r-fMRI) techniques

Methods A total of 43 patients with recurrent depression and 41 patients with first-episode depression were included in this study. All the patients underwent examinations of r-fMRI and event-related potentials (ERPs). All the patients completed standardized neuropsychological testing including event-based prospective memory (EBPM) tests, time-based prospective memory (TBPM) tests, and the computerized version of the Continuous Performance Task-Identical Pairs (CPT-IP). Two-sample t-tests were used to compare differences between cognitive function, ERP components, and brain imaging measures in patients with FED and RMD. Correlation analyses were conducted to investigate the associations among cognitive function, ERP components, and brain imaging measures

Results Patients with recurrent depression exhibited lower scores in prospective memory (PM) and retrospective memory (RM) compared to first-episode patients ($P < 0.05$). Compared to first-episode patients, Analysis of ERPs indicated a prolonged P300 latency in patients with recurrent depression. Furthermore, fMRI analysis revealed higher local neural activity synchrony (indexed by ReHo values) in the right inferior temporal gyrus and lower bilateral neural activity synchrony (indexed by VMHC values) in bilateral inferior temporal gyrus in patients with recurrent depression. Correlation analyses demonstrated a negative correlation between ReHo values in right inferior temporal gyrus and prospective memory (PM) scores ($P < 0.05$), and P300 latency ($P < 0.05$), and a positive correlation between VMHC values in bilateral inferior temporal gyrus and P300 amplitude ($P < 0.05$). Additionally, P300 amplitude was negatively correlated with EBPM scores ($P < 0.05$), P300 amplitude was negatively correlated with RM

scores($P<0.05$)

Conclusion The findings of this study indicate that recurrent patients have more severe cognitive impairment in prospective and retrospective memory (RM) memory compared to those with first-episode depression. Functional brain synchronization in the inferior temporal gyrus in patients with recurrent depression might be linked to reduced cognitive function during depressive episodes. These findings offer new insights into the neural mechanisms of cognitive impairment in individuals with depression and could help in developing more precise interventions.

关键词: depression, cognitive function, functional magnetic resonance imaging (fMRI), event-related potentials (ERPs), neurophysiological changes, cognitive impairment

深部经颅磁刺激对强迫症患者的临床干预效果研究

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目的 强迫症是临床常见的一种精神疾病,并通常伴有抑郁焦虑情绪。TMS 是一种非侵入无创的物理治疗方法, rTMS 已经广泛用于 OCD 的治疗,且疗效显著,而 dTMS 用于 OCD 治疗的研究较少,本研究通过对 OCD 患者分别进行不同刺激强度 dTMS 刺激,比较分析其对 OCD 患者的临床治疗效果以及 dTMS 对 OCD 患者反应抑制能力的干预效果。

方法 对 21 名 OCD 患者进行为期两周(10 次)的 dTMS。并将其按照刺激强度分为高低强度两组,使用 Y-BOCS、HAMD-17、HAMA 以及行为学测试 (Stroop 任务、SST) 在干预前,干预 1 周以及干预后进行评估。

结果 干预后,在 Y-BOCS 得分上,两组之间时间主效应显著 ($F(2,18)=49.28, P=0.01$, 偏 $\eta^2=0.72$), 两组得分下降显著 ($P<0.001$), 不存在组别主效应 ($F(1,19)=0.10, P=0.76$, 偏 $\eta^2<0.001$) 和时间 \times 组别的交互作用 ($F(2,18)=0.93, P=0.39$,

偏 $\eta^2=0.05$), 在干预前($P=0.87$)、干预 1 周($P=0.89$) 以及干预治疗后 ($P=0.40$), 组别的简单效应均不显著; 两种强度的 dTMS 干预时间简单效应均显著(均 $P<0.001$); 在 HAMD-17 得分上, 两组之间时间主效应显著 ($F(2,18)=16.60, P<0.001$, 偏 $\eta^2=0.65$), 表明两组得分均有显著下降 ($P<0.001$), 不存在组别主效应 ($F(1,19)=0.002, P=0.96$, 偏 $\eta^2<0.001$) 和时间 \times 组别的交互作用 ($F(2,18)=0.29, P=0.75$, 偏 $\eta^2=0.03$), 在干预前($P=0.82$)、干预 1 周($P=0.92$) 以及干预治疗后 ($P=0.72$), 组别的简单效应均不显著; 两种强度的 dTMS 干预时间简单效应均显著(均 $P<0.01$); 在 HAMA 得分上, 两组之间时间主效应显著 ($F(2,18)=83.92, P<0.001$, 偏 $\eta^2=0.82$), 两组的得分均有显著下降 ($P<0.001$), 组别主效应不显著 ($F(1,19)=1.58, P=0.22$, 偏 $\eta^2=0.08$), 时间 \times 组别的交互作用不显著 ($F(2,18)=0.54, P=0.59$, 偏 $\eta^2=0.03$), 在干预前($P=0.37$)、干预 1 周($P=0.22$) 以及干预治疗后 ($P=0.25$), 组别的简单效应均不显著, 两种强度的 dTMS 干预时间简单效应均显著(均 $P<0.001$); 两组在 Stroop 任务和 SST 任务中的各个指标在干预前后均不存在显著差异 ($P>0.05$)。

结论 在 10 次治疗后, 高低刺激强度的 dTMS 均能改善 OCD 患者的强迫症状。

关键词: 深部经颅磁刺激, 强迫症, 反应抑制

利用神经影像学数据预测 BPSD 的抗精神病药物剂量: 一种迁移学习方法

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目的 痴呆的精神行为症状(BPSD)对患者和护理人员都构成了挑战。抗精神病药物被广泛用于控制严重的 BPSD 症状, 但使用存在严重的安全风险。这就强调了对抗精神病药物剂量进行个体化精确预测的必要性。神经成像, 特别是磁共振成像(MRI), 揭示了与衰老、认知能力下降和精神症状相关的大脑结构, 使其成为预测药物剂量的潜在工具。鉴于 BPSD 患者的可用 MRI 数据往往有限, 本研究采用迁移学习来预测药物剂量, 并从深度学习的角度提供 BPSD 的神经解剖学解释。

方法 我们利用在大规模老化 MRI 数据集上预训练的级联 ResNet (Cas-ResNet) 来预测 BPSD 患者的药物剂量。我们采用了两步过程来训练我们的模型。Cas-ResNet 的结构由作为特征提取器和最终预测模块的三个级联残差模块组成。首先, 中国大脑分子与功能图谱 (CBMFM) 项目的一个大型数据集用于通过大脑年龄预测任务对模型进行预训练。在预训练之后, 特征提取器的参数被冻结。随后, 我们对预训练的模型进行了微调, 用来预测上海交通大学阿尔茨海默病诊治中心 (ADRDC) 的 BPSD 患者的抗精神病药物使用剂量。最后, 我们利用梯度加权类激活映射生成注意力图, 并对注意力图进行统计分析, 以确定用于药物剂量预测的关键大脑区域。

CBMFM 数据纳入 646 名健康受试者 (334 名女性和 312 名男性, 年龄 18-82 岁) 的 T1w MRI。主要数据 (即药物剂量预测) 从 ADRDC 收集, 包括 83 名 BPSD 患者 (27 名男性和 56 名女性, 年龄 55-80 岁) 的 T1w MRI。为了确定不同抗精神病药物的个体使用情况, 使用了限定日剂量 (DDD) 的概念计算了个体化控制 BPSD 的 DDD, 范围为 0 至 1.2/天, 作为微调的标记。

结果 我们的 Cas-ResNet 模型的性能与其他基线模型进行了比较, 包括 3DCNN、VGG 和 DenseNet, 用更少的训练时期增强了性能, 预测的 DDD 和实际的 DDD 比较存在相关性 ($r=0.59$, $p<0.001$)。预训练过程减少了对 MRI 大量参数的需求和过度拟合的风险。通过特征可解释性分析, 我们确定了对预测 BPSD 药物剂量至关重要的五个大脑区域, 主要位于颞叶, 包括海马旁区和纹状体 (壳核和尾状核)。这些发现表明, 控制 BPSD 的抗精神病药物剂量与大脑结构改变有关, 涉及痴呆相关和情绪调节相关区域。

结论 我们首次展示了使用轻量级深度学习模型预测用于控制 BPSD 的药物剂量的有希望的结果。我们预训练的 Cas-ResNet 模型在临床场景中用有限的的数据展示了有效的大脑 MRI 表现。这项工作促进了对痴呆患者适当使用抗精神病药物的讨论。

关键词: BPSD, 抗精神病药物剂量, 神经影像, 迁移学习

双相障碍研究协作组

双相情感障碍 II 型抑郁相患者脑肠轴失调研究

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目的 尽管失调的肠道菌群失调、脑功能和神经炎症在双相情感障碍 II 型抑郁相(BD II)患者中的报道越来越多, 但其肠道菌群-炎症-脑轴的关系仍未得到充分阐述。

方法 我们前瞻性纳入了 65 名未接受药物治疗的 BD II 型抑郁相患者和 58 名对照组(HCs)。我们收集了所有被试的静息态功能磁共振的动静态低频振幅 (ALFF) 数据, 并将 ALFF 异常的脑区作为种子点计算全脑的动静态功能连接 (FC)。我们还收集了所有被试的粪便样本并进行 16SrDNA 序列测序, 同时收集血液样本并检测白细胞介素[IL]-2、IL-4、IL-6、IL-8、IL-10、肿瘤坏死因子[TNF]- α 水平。此外, 利用支持向量机技术(SVM)基于对 BD II 型抑郁相患者和对照组进行分类。

结果 BD II 型抑郁相患者表现出默认网络 (DMN) 的功能改变, 即左侧小脑 Crus II 静态 ALFF 减低, 其及到右侧顶叶下小叶的静态 FC 减低和到右侧额上回的动态 FC 减低。同时, 在 BD II 型抑郁相患者中发现了更高的促炎 (IL-6、IL-8、TNF- α) 和抗炎 (IL-10) 细胞因子水平, 以及促炎细菌和谷氨酸和 γ -氨基丁酸代谢相关细菌相对丰度的增加。多元回归分析方法显示副拟杆菌相对丰度与 IL-8 水平的交互作用于左侧小脑 Crus II 静态 ALFF 减低。此外, 将改变的静息态功能指标及异常肠道菌群水平结合有效地区分 BD II 型抑郁相患者和对照组, 曲线下面积达到最佳值 0.892。

结论 本研究发现了 BD II 型抑郁相患者小脑-默认网络功能异常、肠道菌群紊乱及炎症失调, 并且肠道菌群的紊乱及失调的炎症细胞因子交互作用于 BD II 型抑郁相患者大脑默认网络功能的异常, 本研究填补了 BD II 型抑郁相脑肠轴病理生理机制的空白。

关键词: 双相情感障碍, 脑肠轴, 静息态功能磁共振, 细胞因子, 肠道菌群

童年虐待与心境障碍的因果关系：两样本孟德尔随机化分析

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目的 本研究旨在采用孟德尔随机化方法 (Mendelian Randomization, MR) 探究童年虐待与成年后心境障碍发病及症状的潜在因果关联。童年虐待在社会和医学研究中被广泛关注, 研究其对成年后心理健康的长期影响具有重要意义。心境障碍, 如重性抑郁障碍 (Major Depressive Disorder, MDD) 和双相情感障碍 (Bipolar Disorder, BD), 常伴随严重的情绪波动和行为问题, 对个体生活质量和社会功能产生深远影响。

方法 本研究从公开发布的全基因组关联研究 (Genome-Wide Association Studies, GWAS) 数据中提取了关于童年虐待及心境障碍 (包括重性抑郁障碍、双相情感障碍、历史躁狂发作、自我伤害行为、首次抑郁发作年龄、抑郁发作频率) 的数据集。使用逆方差加权法 (Inverse Variance Weighted, IVW)、MR Egger 法、加权中位数法 (Weighted Median, WM) 以及 MR-PRESSO 模型, 进行了综合的 MR 分析和敏感性分析。这些方法有助于评估潜在的因果关系, 同时控制潜在的混杂因素和偏倚。分析结果以优势比 (Odds Ratio, OR) 和置信区间 (Confidence Interval, CI) 表达。

结果 研究结果显示, 童年虐待与 MDD (IVW: OR=2.28, 95% CI=1.66-3.14, PFDR <0.001) 和 BD (IVW: OR=2.00, 95% CI=1.18-3.39, PFDR=0.014) 的发病风险存在显著关联。此外, 童年虐待还可能增加躁狂发作 (IVW: OR=1.03, 95% CI=1.01-1.06, PFDR=0.002)、自我伤害行为 (IVW: OR=1.06, 95% CI=1.04-1.08, PFDR=0.002) 的风险, 以及抑郁发作频率 (IVW: $\beta=0.31$, 95% CI=0.17-0.46, PFDR <0.001)。这些结果表明, 童年虐待对成年后心境障碍的影响是多方面的, 且具有显著的统计学意义。

结论 本研究的发现表明, 童年虐待是成年后 MDD、BD 以及躁狂发作的潜在危险因素, 并与自残行为和抑郁发作频率显著相关。这些结果提示了早期干预和预防策略的重要性, 特别是在儿童保护和心理健康服务领域。未来的研究可以进一步探索

具体的生物机制和环境因素, 以更全面地理解童年虐待对成年后心理健康的影响。通过加强社会支持和提供及时的心理治疗, 可以减轻童年虐待对成年后心理健康的负面影响, 提高个体的生活质量和适应能力。

关键词: 童年虐待; 抑郁症; 双相情感障碍; 孟德尔随机化

Genetic Association and Drug Target Exploration of Inflammation-related Proteins with Risk of Major Depressive Disorder.

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Objective Circulating inflammation-related proteins are associated with major depressive disorder (MDD) in an accumulating amount of observational studies, but little is known about the causal direction of this association. This study aimed to explore the potential causal relationship between inflammation-related proteins and the risk of MDD

Methods We used summary data from a genome-wide association study (GWAS) of 91 circulating inflammation-associated proteins in 14,824 Europeans, as well as meta-analyzed data from a large GWAS pooled from six major depression datasets (i.e., iPSYCH, FinnGen, PGC, UKB, 23andMe, and MVP), including up to 1,300,000 participants. We conducted a two-sample bidirectional Mendelian randomization (MR) analysis utilizing inverse variance weighting (IVW) as the main approach, complemented by two additional methods (MR-Egger and weighted median approaches) as sensitivity analyses to identify and correct

for pleiotropy. The heterogeneity of instrumental variables (IVs) was assessed using Cochran's Q test and I² measure

Results MR analysis revealed that genetically CASP-8 (odds ratio (OR): 0.97, confidence interval (CI): 0.95-1.00, $P = 3.10E-02$), CD40 (OR: 0.96, 95% CI: 0.94-0.98, $P = 3.72E-04$), IL-18 (OR: 0.98, CI: 0.96-0.99, $P = 2.84E-03$), SLAMF1 (OR: 0.97, 95% CI: 0.95-1.00, $P = 2.60E-02$), and uPA (OR: 0.98, 95% CI: 0.96-1.00, $P = 2.90E-02$) were significantly and causally associated with MDD. Reverse MR analysis identified that genetically CCL19 (OR: 1.15, CI: 1.03-1.27, $P = 1.00E-02$), HGF (OR: 1.15, 95% CI: 1.04-1.27, $P = 4.74E-03$), IL-8 (OR: 1.10, CI: 1.00-1.22, $P = 4.80E-02$), IL-18 (OR: 1.11, 95% CI: 1.01-1.23, $P = 3.70E-02$), IL20RA (OR: 1.12, 95% CI: 1.00-1.25, $P = 4.70E-02$), TGFA (OR: 1.12, 95% CI: 1.02-1.23, $P = 2.30E-02$) and TNFSF14 (OR: 1.16, 95% CI: 1.04-1.30, $P = 7.62E-03$) were notably affected by the causal effect of MDD. Finally, we observed a remarkable bidirectional causal association between IL-18 and MDD

Conclusion We identified a potential causal association of inflammation-related proteins with MDD, providing compelling and novel evidence to complement inflammatory mechanisms in MDD

关键词: Major depressive disorder; Inflammatory Proteins; GWAS; Bi-directional; Mendelian randomization

Efficacy and Safety of Transcranial Direct Current Stimulation As An Add-on Trial Treatment for Acute Bipolar Depression Patients with Suicidal Ideation

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Objective Bipolar depression undertakes an

overwhelming suicide risk. We aimed to examine the efficacy and safety of transcranial direct current stimulation (tDCS) combined with quetiapine in bipolar patients as suicidal intervention

Methods In a single center, double-blind, treatment-naive bipolar depression patients with suicidal ideation were randomly assigned to quetiapine in combination with either active (n=16) or sham (n=15) tDCS over the left DLPFC for 3 consecutive weeks. The 30-minute, 2-mA tDCS was conducted twice a day on the weekday of the first week and then once a day on the weekdays of two following weeks. Primary efficacy outcome measure was the change in the Beck Scale for Suicidal Ideation (BSSI). Secondary outcomes included changes on 17-item Hamilton Depression Rating Scale (HDRS-17) and Montgomery-Asberg Depression Rating Scale (MADRS). Outcome was evaluated at day 3 and week end. Safety outcome was based on the reported adverse reactions

Results Active tDCS was superior to sham tDCS on the BSSI at day 3 and tended to sustained at every week end during treatment process, compared to baseline. However, no difference was found between active and sham in HDRS-17 and MADRS. Response and remission rate also supported the anti-suicide effect of tDCS, with higher response and remission rate in BSSI, but not antidepressant effect, compared to sham, over time. Regarding to safety, active tDCS was well tolerated and all the adverse reactions reported were mild and limited to transient scalp discomfort

Conclusion The tDCS was effective as anti-suicide treatment for acute bipolar depression patients with suicidal ideation, with minimal side effects reported.

关键词: Bipolar disorder, depression, transcranial direct current stimulation, dorsal lateral prefrontal cortex, suicidal ideation

Time-frequency Characteristics of Amygdala and Its Interaction with The Whole Brain in Subliminal Emotional Processing in MDD

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Objective To explore the temporal-frequency characteristics of amygdala activation and the differences in interaction patterns with the whole brain in major depressive disorder (MDD) patients compared to healthy controls (HCs) during subliminal emotional processing, and to investigate the correlation between neurobiological changes and depressive symptoms

Methods A total of 30 MDD patients and 26 HCs were included. Magnetoencephalography (MEG) data were collected while subjects identified subliminal emotional faces. Time-frequency characteristics of the amygdala during subliminal emotional processing were calculated using time-frequency analysis methods, and the time-frequency differences in amygdala activation between the two groups were compared using cluster permutation tests. Phase-locking value analysis was used to explore the interaction between the amygdala and other brain regions, and the differences in functional connectivity between the two groups were compared using independent samples t-tests. Pearson correlation analysis was performed to calculate the correlation between differential neural indicators and HAMD-17 and HAMA scores

Results Time-frequency analysis revealed that, compared to the HCs, the MDD group exhibited enhanced alpha (8-12Hz) power in the right amygdala ($P = 0.049$) and enhanced gamma (60-70Hz) power activation in the left amygdala ($P = 0.006$) within 50-200ms after negative emotional stimuli. Functional connectivity results indicated that the right amygdala showed increased functional connectivity with other brain regions ($P = 0.014$), including the left inferior occipital gyrus, left middle occipital gyrus, left precentral gyrus, left superior parietal lobule, left cuneus, left medial and lateral orbitofrontal cortex, right inferior frontal gyrus, and right supplementary motor area, and increased functional connectivity between the left amygdala and left

putamen ($P < 0.001$). Correlation analysis showed that increased functional connectivity between the right amygdala and the left superior parietal lobule was positively correlated with HAMA scores ($r = 0.408$, $P = 0.025$) and total HAMD-17 scores ($r=0.619$, $P < 0.001$); increased functional connectivity between the right amygdala and the left inferior occipital gyrus was positively correlated with HAMA total scores ($r = 0.392$, $P = 0.032$)

Conclusion During the unconscious emotional processing phase, MDD patients exhibit a processing bias towards negative emotions, characterized by enhanced alpha and gamma frequency activation of the amygdala in the early stages in response to negative emotional stimuli. Moreover, the enhanced connectivity between the amygdala and the occipital-parietal cortex is closely related to the severity of depressive and anxiety symptoms. These findings reveal specific neural mechanisms in MDD patients during suprathreshold emotional processing, which may serve as objective markers for the diagnosis of MDD

关键词: Amygdala; Functional connectivity; Magnetoencephalography; Major depressive disorder; Subliminal emotion; Time frequency

Causal Association Between Genetically Predicted of 731 Immunocyte Phenotype and Bipolar Disorder: A Bidirectional Two-sample Mendelian Randomization Study

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Objective Bipolar disorder is a severe mood disorder characterized by recurrent episodes of elevated mood (mania or hypomania) and depression. These episodes are accompanied by significant changes in activity or energy levels and are associated with distinct cognitive, physical, and behavioral symptoms. The disorder's severity often results in substantial impairment in daily functioning and carries a lifetime suicide risk esti-

mated to be as high as 20%. Besides, Inflammatory disturbances repeatedly observed in bipolar disorder, can explain some of the comorbidity between bipolar disorder and medical disorder. However, fewer have explored this relationship in BD and immune system. the causal relationship between immune traits and BD remains unclear. Our goal is to elucidate the role of immune cells in bipolar disorder to inform new treatment strategies

Methods Mendelian randomization is an analytical method that uses genetic variants as instrumental variables to infer causality between a risk factor and an outcome in observational studies. Comprehensive two-sample Mendelian randomization (MR) analysis was performed to determine the causal association between immune cell signatures and BD in this study. Based on publicly GWAS data, we explored causal associations between 731 immune cell signatures and BD(N=413466) risk. Immune cells include a total of four types of immune signatures median fluorescence intensities (MFI)(n=389), morphological parameters (MP)(n=32), absolute cell (AC)(n=118) and relative cell (RC)(n=192) were included. We employed complementary MR methods, such as the inverse-variance weighted (IVW) method; comprehensive sensitivity analyses were used to verify the robustness, heterogeneity, and horizontal pleiotropy of the results. This bidirectional approach allows us to assess whether immune cells influence the risk of bipolar disorder and whether genetic susceptibility to bipolar disorder affects immune cell phenotypes

This study explored the causal relationship between 731 immunocyte phenotypes and osteonecrosis utilizing a bidirectional two-sample Mendelian randomization (MR) analysis. This approach relied on three fundamental assumptions: ① Association assumption: Instrumental Variables (IVs) must have a robust association with the exposure factor. ② Independence assumption: IVs must be independent of confounding factors. ③ Exclusion restriction assumption: IVs must influence the outcome exclusively through the exposure factor. Informed consent was secured from all participants, adhering strictly to the original GWAS protocols, thus ensuring ethical compliance and participant awareness.

Results After FDR adjustment (PFDR<0.05), eighteen immunophenotypes were found to be significantly associated with BD risk. Specifically, pro-protective effects of four immunophenotypes on BD: CD8 on EM CD8br (OR =0.951, 95% CI =0.915~ 0,988, PFDR = 0.045); IgD⁻ CD27⁻ %lymphocyte (OR =0.918, 95% CI =0.880~ 0,956, PFDR = 0.001); CD62L on CD62L+ myeloid DC (OR =0.926, 95% CI =0.871~ 0,985, PFDR = 0.044); CD3 on secreting Treg (OR =0.970, 95% CI =0.947~ 0,993 PFDR = 0.040). Fourteen immunophenotypes were significantly associated with an increased risk of BD: BD had statistically significant effects on five immune traits: CD14 on CD14+ CD16+ monocyte (OR =1.072, 95% CI =1.021 ~ 1.125, PFDR = 0.025); CD16-CD56 on HLA DR+ NK (OR =1.030, 95% CI =1.005 ~ 1.056, PFDR = 0.049); CD20 on IgD- CD24- (OR =1.033, 95% CI =1.007 ~ 1.058, PFDR = 0.042); CD20 on IgD- CD27- (OR =1.068, 95% CI =1.023~ 1.115, PFDR = 0.026); CD25++ CD8br %CD8br (OR =1.038, 95% CI =1.005 ~ 1.072, PFDR = 0.048); CD27 on IgD- CD38- (OR =1.038, 95% CI =1.007 ~ 1.070, PFDR = 0.042); CD28+ CD45RA- CD8br %T cell (OR =1.024, 95% CI =1.008~1.041, PFDR=0.023); CD28+ DN (CD4-CD8-) %T cell (OR =1.032, 95% CI =1.004~1.061, PFDR=0.047); CD33br HLA DR+ AC (OR =1.022, 95% CI =1.007~1.036, PFDR=0.023); CD33br HLA DR+ CD14- AC (OR =1.020, 95% CI =1.009~1.030, PFDR=0.003); CD45RA- CD28- CD8br %T cell (OR =1.001, 95% CI =1.000~1.001, PFDR=0.050); CD8 on CD28+ CD45RA+ CD8br (OR =1.026, 95% CI =1.000~1.052, PFDR=0.050); HVEM on CD45RA- CD4+ (OR =1.031, 95% CI =1.005~1.058, PFDR=0.047); HVEM on naive CD4+ (OR =1.028, 95% CI =1.004~1.052, PFDR=0.046). BD had statistically significant effects on five immune traits: CD20 on IgD+ CD38- unswitched memory B cell (OR=0.819, 95% CI =0.684~0.979, PFDR=0.045); CD20 on IgD- CD39dim B cell (OR=0.869, 95% CI =0.757 ~0.998, PFDR=0.047); CD20 on naive-mature B cell (OR=0.858, 95% CI =0.751~ 0.980, PFDR=0.046); CX3CR1 on CD14- CD16- (OR=0.861, 95% CI =0.755 ~ 0.981, PFDR= 0.042); HLA DR on HLA DR+ CD4+ T cell (OR=0.868 , 95% CI =0.755~ 0.998, PFDR=0.049)

Conclusion Our bidirectional two-sample MR analysis demonstrates causal relationships between various immunophenotypes and bipolar disorder, revealing complex interactions between the immune system and bipolar disorder. These insights open new avenues for exploring the biological mechanisms underlying bipolar disorder and support the development of early interventions and treatments. By extending our understanding within the immunological domain, this study provides critical guidance for future clinical and basic research endeavors

However, our study has limitations. First, we used a P-value threshold of $P < 1 \times 10^{-5}$ to select instrumental variables (IVs), which may not be strongly correlated, although they allow for a comprehensive assessment of the relationship between immunophenotypes and BD. Second, the study is based on a European database, limiting the generalizability of our results to other ethnicities. While heterogeneity and horizontal pleiotropy were verified through the Q-test and Egger intercept and considered mitigated, this does not guarantee their absence in clinical settings. The two-sample Mendelian randomization analysis method has limitations with multiple exposures, necessitating the exploration of appropriate analytical methods. Lastly, comprehensive clinical trials are required for validation, necessitating a more extensive GWAS database and further analytical or experimental verification to elucidate the association between individual immunophenotypes and BD and their impact mechanisms.

关键词: Bipolar disorder, Immunity, Causal inference, MR analysis, Sensitivity

Early Detection of Depression Using A Voice Signal-Based Deep Learning Model

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Objective Depression is a common mental disorder characterized by prolonged low mood and loss of interest in daily activities, potentially leading to suicidal thoughts. Early identification and timely intervention are crucial for mitigating symptoms and preventing the worsening of the condition. However, traditional diagnostic methods for depression, which primarily rely on diagnostic scales and face-to-face interviews with professional psychologists, are subjective and complex to administer. Recently, voice-based depression detection methods have gained increasing attention and recognition due to their efficiency, non-invasiveness, accessibility, low cost, and privacy advantages. Our study aims to develop and validate a deep learning model based on voice signals for the auxiliary diagnosis of depression, thus improving early detection rates and reducing the subjectivity and operational complexity of traditional methods

Methods We collected Chinese voice data from 110 depression patients and 73 healthy controls in a hospital setting. The study employed the Bag of Audio Words (BOAW) technique to extract features from raw voice signals. This method converts continuous speech signals into discrete bag-of-words models by segmenting audio data and clustering features to generate quantifiable representations. The advantage of BOAW lies in its ability to effectively capture temporal patterns and frequency characteristics in voice signals, making it suitable for large-scale data processing and analysis

The extracted features were then fed into a deep learning model composed of Bidirectional Long Short-Term Memory (BiLSTM) networks and Graph Convolutional Networks (GCN). BiLSTM networks consider both forward and backward temporal dependencies in voice signals, capturing richer contextual information and thus improving the accuracy of feature representation. GCNs model the relationships between features using graph structures, further enhancing the inter-feature associations and global representation capabilities. The combined design of BiLSTM, and GCN leverages the temporal, frequency, and structural characteristics of voice signals, thereby enhancing the accuracy and robustness of depression detection.

Results Experimental results demonstrated that

the constructed model achieved an accuracy of 85% on the validation set, indicating excellent performance in identifying depression. This finding confirms the model's effectiveness and superior performance in recognizing depressive voice signals, providing a new, efficient, non-invasive, accessible, and low-cost tool for auxiliary depression diagnosis with potential for widespread clinical application

Conclusion Experimental results demonstrated that the constructed model achieved an accuracy of 85% on the validation set, indicating excellent performance in identifying depression. This finding confirms the model's effectiveness and superior performance in recognizing depressive voice signals, providing a new, efficient, non-invasive, accessible, and low-cost tool for auxiliary depression diagnosis with potential for widespread clinical application.

关键词: Depression recognition, Deep Learning, Voice Features, Speech Recognition

双相I型障碍三种临床相语言网络功能连接异常的研究

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目的 分析双相I型障碍(bipolar I disorder, BD)躁狂、抑郁、缓解三种临床相大脑语言网络内部的静息状态功能连接(resting-state functional connectivity, RSFC)及语言网络各组成脑区与全脑RSFC的变化特征,探究BD-I疾病状态相关的大脑静息态核磁影像特征性改变,为寻找BD-I不同疾病状态的影像学标记和潜在的干预靶点提供依据。

方法 招募BD-I患者107例(BD-I组)以及与之年龄、性别、受教育程度等相匹配的健康对照者46名(对照组)。根据精神障碍诊断与统计手册第五版(Diagnostic and Statistical Manual of Mental Disorders-5th Edition,DSM-5)的诊断标准并参考杨氏躁狂评定量表(Young Mania Rating Scale, YMRS)及17项汉密尔顿抑郁量表(Hamilton Depression Rating

Scale, HAMD17)评分将BD-I患者分为双相躁狂组、双相抑郁组、双相缓解组。分别采用基于感兴趣区和种子点的FC方法分析语言网络的内部FC及语言网络各组成脑区与全脑的FC,使用单因素方差分析及事后检验的方法比较四组之间FC值的差异。采用Pearson或Spearman相关系数对组间差异有统计学意义的FC值与临床量表总分及各因子分进行相关分析。

结果 与健康组相比,躁狂相语言网络内左侧缘上回与左侧下顶叶间的FC显著增高,抑郁相双侧辅助运动区与左侧颞上沟间的FC显著降低(FDR校正, $P<0.05$);躁狂相语言网络外左侧下顶叶与右侧岛叶、左右中扣带回间的FC显著增高;抑郁相左侧下顶叶与左侧颞下回间、双侧辅助运动区与右侧直回间的FC显著降低(FDR校正, $P<0.005$)。躁狂相左侧缘上回与左侧下顶叶间增高的FC值与YMRS语言速度与数量因子评分($r=0.376, P=0.041$)、语言思维形式障碍因子评分($r=0.376, P=0.041$)呈显著正相关;抑郁相双侧辅助运动区与右侧直回间降低的FC值与HAMD17迟滞因子评分($r=-0.357, P=0.045$)呈显著负相关。结果显示,躁狂相语言网络内(外)FC均增高,抑郁相语言网络内(外)FC均降低,未发现缓解相与健康组的显著差异。

结论 BD-I三种临床相语言网络内外FC的损坏模式可能是临床相的特异性改变。而且,躁狂相语言网络的过度连接和抑郁相语言网络的失连接可能是精神病理症状“思维奔逸”和“思维迟缓”的影像学标记。

关键词: 双相I型障碍,三种临床相,语言网络,静息状态,功能连接

Clinical and Cognitive Efficacy and Safety of Transcranial Direct Current Stimulation for Bipolar Depression:A Protocol for Systematic Review and Meta-analysis

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Objective The objective of this systematic review and meta-analysis is to critically evaluate the clin-

ical and cognitive efficacy and safety of transcranial direct current stimulation (tDCS) as an intervention for bipolar depression. Given the varying results from previous studies and the need for effective and tolerable treatment options, this review aims to synthesize the available evidence, focusing on both the therapeutic impact of tDCS on depressive symptoms and its influence on cognitive functions and other related domains. The ultimate goal is to provide a more precise and reliable direction for future research and clinical practice in the treatment of bipolar affective disorder

Methods This systematic review adheres to the PRISMA 2020 statement and was prospectively registered in PROSPERO. Data were extracted from electronic databases including PubMed, Embase, and Web of Science up to March 2023. The study included only randomized controlled trials that reported Hamilton Depression Rating Scale (HAM-D), Montgomery-Åsberg Depression Rating Scale (MADRS), or Beck Depression Inventory (BDI) scores as primary outcomes, alongside various secondary outcomes. The risk of bias was assessed using the Cochrane Handbook for Systematic Reviews of Interventions, and the quality of evidence was graded accordingly

Results The systematic search identified 573 articles, of which 8 randomized controlled trials met the inclusion criteria, involving a total of 318 participants. The meta-analysis revealed no statistically significant difference in the reduction of depressive symptoms as measured by HAMD/MADRS/BDI scores between the tDCS treatment group and the control group. While tDCS combined with treatment for bipolar disorder was found to be safe and well-tolerated, without severe adverse reactions or increased risk of manic episodes, it did not demonstrate significant improvement in bipolar depressive symptoms. The efficacy of tDCS was comparable to that of a placebo and lacked a sustained effect. Sensitivity analyses confirmed the stability of the overall weighted mean difference, despite persistent heterogeneity

Conclusion The present systematic review and meta-analysis provide preliminary evidence on the use of tDCS for bipolar depression, suggesting that it is a well-tolerated intervention with minimal adverse effects.

However, the efficacy of tDCS as an adjunctive treatment for bipolar depression is not conclusively supported by the current body of research. The review highlights the need for further investigation into standardized diagnostic and treatment protocols for tDCS, as well as the necessity for larger-scale, longer-term studies with consistent methodologies. The potential of tDCS in combination with other treatments and its role in the therapeutic landscape of bipolar affective disorder warrants additional exploration.

关键词: bipolar disorder, meta-analysis, transcranial direct current stimulation (tDCS), clinical, cognitive

Effect of Add-on Transcranial Alternating Current Stimulation (tACS) in Major Depressive Disorder: A Randomized Controlled Trial

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Objective The effect of transcranial alternating current stimulation (tACS) on major depressive disorder (MDD) was not confirmed

Methods The 4-week, double-blind, randomized, sham-controlled trial was performed from January 29, 2023 to December 22, 2023. Sixty-six participants were recruited and randomly assigned to receive 20 40-min sessions of either active (77.5Hz, 15mA) or sham stimulation, with one electrode on the forehead and two on the mastoid, each day ($n = 33$ for each group) for four weeks (till Week 4). The participants were followed for 4 more weeks (till Week 8) without stimulation for efficacy/safety assessment. During the 4-week trial, all participants were required to take 10-20mg of escitalopram daily. The primary efficacy endpoint was the change in HAMD-17 scores from baseline to Week 4 (with 20 treatment sessions completed). Resting-state electroencephalography (EEG) was collected with a 64-channel EEG system (Brain Products, Germany) at baseline and the Week 4 follow-up. The chi-square test, Fisher's exact test, independent-sample t-test, or Wilcoxon rank-

sum test were used, as appropriate, to compare the differences in variables between groups. The effect of the intervention on the HAMD-17 score was also evaluated with linear mixed modeling (LMM) as sensitivity analysis. The correlation between the mean reduction in EEG and the mean reduction in the HAMD-17 total score was evaluated using Spearman correlation analysis.

Results A total of 66 patients (mean [SD] age, 28.4 [8.18] years; 52 [78.8%] female) were randomized, and 57 patients completed the study. Significant differences were found in the reductions in the HAMD-17 scores at Week 4 ($t=3.44$, $P=0.001$). Response rates at Week 4 were significantly higher in the active tACS group than in the sham tACS group (22 out of 33 patients [66.7%] versus 11 out of 33 [33.3%], $P=0.007$). In the active tACS group, a correlation between the mean change in alpha power and HAMD-17 scores at Week 4 was found ($r=2.38$, $P=0.024$), and the mean change in alpha power was significantly bigger for responders ($Z=2.46$, $P=0.014$). No serious adverse events were observed in this trial.

Conclusion The additional antidepressant effect of tACS is significant, and the combination of tACS with antidepressants is a feasible and effective approach for the treatment of MDD. The antidepressant mechanism of tACS may be the reduction in alpha power in the left frontal lobe. Future research directions may include exploring more appropriate treatment parameters of tACS.

关键词: Transcranial alternating current stimulation; Major depressive disorder; antidepressant treatment; left frontal alpha oscillations

Biological Rhythm Differences and Influencing Factors in Depressive Episodes of Major Depressive Disorder and Bipolar Disorder with and without Mixed Features

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Objective Depressive episodes with mixed features in Major Depressive Disorder (MDD) and bipolar disorder (BD) patients are linked to more severe symptoms compared to episodes without mixed features. However, the relationship between mixed features and biological rhythms remains unclear.

Methods This multicenter cross-sectional study, conducted in four hospitals in China, comprehensively investigated the differences in biological rhythms between patients with depressive episodes of MDD and BD, both with and without mixed features, as well as the influencing factors of mixed features. This study included a total of 267 patients with mood disorders experiencing depressive episodes.

Results The findings revealed that the BRIAN total score of the BD without mixed features group was significantly lower than that of the BD with mixed features group and the MDD with mixed features group ($F=5.287$, $P=0.001$). There was no significant statistical difference between the MDD with mixed features group and other groups. This difference was particularly notable in sleep score ($F=6.512$, $P<0.001$) and eating score ($F=6.386$, $P<0.001$). Mixed features were also found to be associated with the following factors: alcohol abuse, excessive screen time, eating score, ASRM score, and suicidal ideation score.

Conclusion The study highlights that BD depressive episodes without mixed features have significantly lower biological rhythm scores compared to both

MDD and BD depressive episodes with mixed features. Additionally, there are no significant differences in biological rhythm scores between BD depressive episodes with mixed features and MDD depressive episodes with mixed features. Key influencing factors for mixed features include alcohol abuse, excessive screen time, suicidal ideation scores, ASRM scores, and eating scores. These findings highlight the correlation between mixed features and biological rhythms and identify critical lifestyle and psychological factors associated with mixed features in mood disorder patients.

关键词: Major Depressive Disorder, bipolar disorder, mixed features, biological rhythm

伴自杀意念青少年抑郁症患者动态脑功能改变与皮质醇的相关性研究

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目的 探讨伴自杀意念青少年抑郁症 (major depression disorder, MDD) 患者静息态动态脑功能改变及其与下丘脑-垂体-肾上腺 (hypothalamic-pituitary-adrenal, HPA) 轴失调的相关性。

方法 采用静息态功能磁共振成像对青少年 48 例伴自杀意念 MDD 患者 (MDD+SI)、38 例不伴自杀意念 MDD 患者 (MDD-SI) 和 41 例健康对照 (HC) 扫描。采用滑动时间窗分析方法, 计算三组的动态局部一致性 (dynamic regional homogeneity, dReHo) 和动态功能连接 (dynamic functional connectivity, dFC) 值; 在完成扫描 24 小时内静脉采血, 采用直接化学发光法测定促肾上腺皮质激素 (adrenocorticotrophic hormone, ACTH) 和皮质醇水平。采用单因素协方差分析的统计方法比较三组 dReHo、dFC 值和激素水平, 采用单因素方差分析的方法比较三组激素水平。提取差异有统计学意义的脑区的 dReHo 和 dFC 值采用最小显著差异法校正进行事后检验 ($P < 0.05$), 并将这两个动态指标与激素浓度进行偏相关分析。

结果 (1) 三组 dReHo 值差异脑区为右侧小脑后叶 (主要是 Crus II 和 Crus I) ($F=9.443$, $P <$

0.001 ; 事后检验: $MDD+SI > HC$, $MDD+SI > MDD-SI$) 及左侧楔前叶 ($F=10.926$, $P < 0.05$; 事后检验: $MDD+SI < HC$, $MDD-SI > HC$, $MDD+SI < MDD-SI$)。

(2) 三组间 dFC 值存在统计学差异的是左侧楔前叶与左侧颞中回 ($F=9.602$, $P < 0.001$; 事后检验: $MDD+SI < HC$, $MDD-SI < HC$), 左侧楔前叶与双侧楔前叶 ($F=9.659$, $P < 0.001$; 事后检验: $MDD-SI > HC$, $MDD+SI < MDD-SI$)。(3) HPA 轴激素比较: 与 HC 和 MDD-SI 组相比, MDD+SI 组皮质醇浓度较低。三组间 ACTH 浓度差异无统计学意义。(4) 相关性分析: MDD+SI 组左侧楔前叶的 dReHo 值、左侧楔前叶-左侧颞中回的 dFC 值均与皮质醇浓度正相关 ($r = 0.350$, $P = 0.018$; $r = 0.362$, $P = 0.015$)。

结论 伴或不伴自杀意念青少年 MDD 患者均存在楔前叶和颞中回的动态功能改变; 而小脑的动态功能改变可能为 MDD+SI 患者的特异性改变。而且, 伴自杀意念患者楔前叶和颞中回破坏异常与其皮质醇失调存在相关性。

关键词: 抑郁症; 自杀意念; 动态局部一致性; 动态功能连接; 皮质醇

Differences of Gut Microbiome between Patients with Bipolar Disorder Manic Episode and Treated-bipolar Patients

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Objective At present, it is found that many neuropsychiatric diseases are closely related to the imbalance of gut microbiome, which has become a research hotspot in recent years. There are quite a few studies on microgut biome of schizophrenia, depression and autism in the literature at home and abroad. Instead, there is almost no study on whether there is gut microbiome imbalance of manic episode in patients with bipolar disorder and treated-bipolar patients. And the role of gut microbiome in the pathogenesis and recovery treatment of bipolar disorder has not been systematically reported. By comparing the differences of gut microbiome between patients with bipolar disorder manic episode and treated-bipolar patients, this study provides a new idea

for clinical intervention and drug treatment of manic episode

Methods A total of 12 patients with bipolar manic episode hospitalized in Dalian Seventh People's Hospital from March 2021 to January 2022 were selected. In the control group, 12 employees of Dalian Seventh People's Hospital were selected. The Young Manic Rating Scale(YMRS) was used to evaluate the clinical characteristics and severity of the disease within 3 days after admission and 8 weeks after treatment with risperidone and valproate. At the same time, the fresh feces of the subjects were aseptically collected within 3 days after admission and 8 weeks after treatment, and stored in the refrigerator at - 80 °C within 10 minutes. All the fresh feces of the patients and those who come from healthy control group were collected and cryo-preserved from 6 a.m. to 9 a.m. Then DNA was extracted from feces samples, and the variable region of 16S rRNA gene v3v4 was amplified by PCR. Finally, Illumina miseqpe2 * 300 library and standard sequencing process were used to sequence, analyze the differences of gut microbiome between patients with bipolar disorder manic episode and treated-bipolar patients. These would be compared with healthy controls too. And analyze the changes of colony diversity and abundance of gut microbiome by bioinformatics

Results This study showed that the diversity of gut microbiome in patients with bipolar manic episode at the beginning of their hospitalization and after 8-week-treatment was lower than that in the healthy control group, and no statistical difference was found. But there were significant differences in the specific composition at the level of phylum, class, order, family and genus. At the phylum level, the abundance of Bacteroidetes and Mollicutes in BD manic patients within 3 days after admission was significantly higher than that in healthy controls, while the relative abundance of Firmicutes and Actinomycetes was significantly reduced. After 8-week-treatment, the relative abundance of Firmicutes and Actinomycetes in BD manic patients was significantly higher than that before receiving treatment, and was similar to that in healthy controls. Before receiving treatment, the relative abundance of Ruminococcus, Suboligranulum, Enterobacter, Coprococcus,

Bifidobacterium and Lactobacillus in the gut microbiome of BD manic patients was lower than that of healthy group, and the relative abundance of Klebsiella, Flavonifrator and Bacteroides was higher than that of healthy group. After 8-week-treatment, the relative abundance of Ruminococcus and Suboligranulum in BD manic patients was lower than that in healthy people. At the beginning of the treatment and treated for 8 weeks, BD manic patients had increased relative abundance of Ruminococcus, Suboligranulum, Enterobacter, Coprococcus, Bifidobacterium, Lactobacillus and decreased relative abundance of Klebsiella, Flavonifrator and Bacteroides

Conclusion The diversity of gut microbiome in patients with bipolar manic episode at the beginning and end of treatment is no lower than that in the healthy control group, and no statistical difference is found. But there are significant differences in the specific composition at the level of phylum, class, order, family and genus. The bacteria Ruminococcus, Suboligranulum, Enterobacter, Coprococcus, Bifidobacterium and Lactobacillus alleviate the manic symptoms of patients with BD manic episode, on the contrary, the bacteria Klebsiella, Flavonifrator and Bacteroides induce the manic symptoms of patients with BD manic episode.

关键词: gut microbiome, bipolar disorder, manic episode, 16S rRNA gene sequencing

双相障碍治疗前后炎症标志物特征及其与神经认知功能的关系研究

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目的 神经认知功能障碍作为双相障碍的核心症状之一, 与患者的职业表现和社会功能缺陷密切相关, 但其生物学机制尚不明确, 严重影响了针对性治疗方案的确定。近年来, 越来越多的研究表明, 炎症可能参与了双相障碍的发生和发展过程, 但炎症与双相障碍神经认知功能障碍之间的关系仍有待阐明。本文旨在通过随访队列研究, 探索处于不同心境发作期和稳定期的双相障碍患者炎症标志物及

神经认知功能的变化特征以及二者之间的关系。

方法 本研究共纳入 132 例受试者,包括 44 名健康对照,40 例(轻)躁狂发作患者和 48 例抑郁发作患者(患者近 1 月均未使用药物治疗)。通过 ELISA 法检测受试者的 10 种血浆炎症标志物水平,使用 MATRICS 成套认知测验(MATRICS Consensus Cognitive Battery, MCCB)以及图形延迟记忆测验评估其认知功能;然后对双相障碍患者进行随访,在其治疗后处于平稳期时(HAMD 总评分 ≤ 7 分, YMRS 评分 ≤ 5 分,且临床症状稳定 ≥ 1 个月)再次进行临床评估、外周血标本的采集及神经认知功能测试。使用一般线性回归模型探索受试者炎症标志物水平与神经认知功能和临床特征之间的关系。

结果 与健康对照相比,双相障碍患者在发作期均出现促炎标志物水平升高、抗炎标志物水平下降,以及神经认知功能的广泛损害;而平稳期时,患者的促炎标志物水平降低、抗炎标志物水平回升,神经认知功能部分改善。线性回归结果显示,在发作期,(轻)躁狂发作患者的语言学习和记忆功能与 TNF- α 水平正相关,处理速度及注意力与 sIL-6 水平、视空间学习和记忆功能与 MCP-1 水平负相关;而抑郁发作患者的处理速度与 MCP-1 水平,工作记忆与 IL-10 水平,注意力、语言流畅性与 TNF- α 水平,语言学习和记忆功能与 IL-12 水平负相关;在平稳期,双相障碍患者的工作记忆与 TNF- α 、IL-4 水平,视空间学习和记忆功能与 TNF- α 水平正相关,而图形延迟记忆与 IL-10 水平负相关。

结论 本研究结果提示,炎症与双相障碍的神经认知功能之间存在关联,可能与促炎与抗炎之间的失衡有关;但这种关联仅在部分炎症标志物和神经认知功能领域被发现,且受到心境发作类型及情绪状态的影响。因此,一方面上述炎症标志物可能用于协助双相障碍患者社会功能预后的判断,另一方面,针对性地使用抗炎药物可能使这部分患者从神经认知功能障碍中受益。

关键词: 双相障碍;炎症标志物;促炎标志物;抗炎标志物;神经认知功能

学习和工作人群中稳定期抑郁症患者功能和生活质量的影响因素:一项全国多中心研究

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目的 抑郁症(Major Depressive Disorder, MDD)通常伴有日常功能的损害,强调在维持期达到功能和生活质量(Quality of life, QOL)完全恢复的治疗目标。相当部分患者达到症状缓解后,仍存在残留症状,认知和社会功能无法彻底恢复,导致幸福感和 QOL 下降。既往研究发现 MDD 的认知损害分别与首发、复发、抑郁症状及 QOL 有明显双向相关性,可能是症状到 QOL 的中介因素。此外, MDD 常起病于青春期末至 45 岁,15-50 岁的患者约占 40%。但既往针对 MDD 功能损害的研究并未特别关注受到 MDD 影响最显著的工作和学习人群,或者关注残留症状对该群体的认知、功能以及 QOL 的影响及工作相关因素的预测价值。因此,本研究旨在探索来自学习工作人群的 MDD 临床稳定者的功能及 QOL 情况,分析其影响因素及路径。

方法 本研究选择全国 7 家具有代表性的重要精神卫生机构,通过全国多中心、横断面调研的方式,采用临床自然入组法,门诊入组 521 例稳定期 MDD 患者,随后社会招募年龄、性别匹配的健康对照(Healthy controls, HC) 250 例。评估内容主要包括人口学资料、疾病特征、认知水平、社会心理功能及 QOL。统计学方法包括描述性、差异性分析,相关与多元逐步回归,并以残留症状和首、复发变量分别作为自变量,以认知作为中介变量,构建简单及链式中介模型。

结果 两组人口学资料均衡可比。患者组存在残留的焦虑、抑郁和快感缺失,并且认知、社会心理功能,工作效率以及 QOL 显著低于 HC 组。人口学特征和疾病特征之间主要为低度正相关;临床症状、工作和学习能力之间呈低度正相关;QOL、心理社会功能与临床症状及工作学习能力呈中高度负相关。

缺勤和工作效率受损、残留焦虑和社会心理功能同时是功能残疾和 QOL 的预测因子。残留症状(间接效应 $\beta=-0.016$, $p=0.006$)和首发、复发(间接效应 $\beta=-0.043$, $p=0.025$)可通过以主观认知为中介,显著影响 QOL。以残留症状和主观认知作为链式中介,首发、复发到 QOL 总路径显著($\beta=0.148$, $p=0.004$),链式间接路径显著($\beta=0.011$, $p=0.004$)。

结论 MDD 患者经治疗达到临床缓解阶段后,仍有 92.1% 的患者至少存在一种残留症状,精神性焦虑的问题稍显突出。同匹配的 HC 相比,工作和学习能力、主观和客观认知并未完全恢复到正常水准,并影响社会心理功能和 QOL,导致功能残疾。首、复发的精神病史可通过残留症状和主观认知间接影响 QOL,并且残留症状可直接影响 QOL。提示在 MDD 的临床诊疗中应重视残留症状和社会功能的康复,并预防复发。

关键词: 抑郁症, 功能, 生活质量, 残留症状, 认知功能

Identifying Bipolar Disorder and Predicting Its Therapeutic Response of Cognitive Impairment by The Fractional Amplitude of Low-frequency Fluctuation: A Resting-state FMRI Study

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Objective Cognitive impairment has become a consensus as a core feature of bipolar disorder (BD). However, the neurobiological mechanisms underlying BD and its cognitive deficits are still unclear. This study

used the fractional amplitude of low-frequency fluctuation (fALFF) method to explore the neural activity and cognitive deficits in first-episode and drug-naive BD. In addition, we also analyzed the relationship between changes in fALFF values and clinical or psychometric variables

Methods In this study, 92 first-episode and drug-naive BD patients and 55 healthy controls (HCs) were recruited, and patients were followed up longitudinally for 24 weeks. All subjects completed clinical evaluations at baseline, 12-week and 24-week, and underwent resting-state functional magnetic resonance imaging (rs-fMRI) scans. The fALFF method was used to analyze rs-fMRI data, and Pearson correlation analysis was used to analyze changes in fALFF values with clinical variables or cognitive function. Simultaneously, support vector machine (SVM) and k-Nearest Neighbor (kNN) methods were used to classify and analyze the changes in fALFF between groups

Results Compared to the HCs, the fALFF values in BD patients showed a decrease in the right middle cingulate gyrus. After 12 weeks of treatment, patients were divided into the improved cognitive function group and the non-improved cognitive function group. Compared to HCs, the baseline fALFF values of the improved cognitive function patients showed no difference in any brain region, but that of the non-improved cognitive function patients showed decreases in the right middle cingulate gyrus(MCG). Moreover, compared with baseline fALFF values of the non-improved cognitive function patients, that of the improved cognitive function patients showed a decrease in right middle frontal gyrus(MFG).At baseline, increased fALFF values in the right MCG of BD group were negatively correlated with HAMD total scores, and increased fALFF values in the right MFG were negatively correlated with difference in visuospatial scores after and before 12 weeks of treatment

Conclusion The abnormal spontaneous activity in the right MCG can serve as a biological marker for distinguishing between HCs and BD. The changes in fALFF in the right MFG may be a biomarker for predicting the outcome of cognitive impairment in BD.

关键词: bipolar disorder (BD), first-episode, drug-

naïve, fractional amplitude of low-frequency fluctuation (fALFF), cognitive function

Causal Mechanisms of Quadruple Networks in Pediatric Bipolar Disorder

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Objective Pediatric bipolar disorder (PBD) is a mental illness characterized by abnormal functional connectivity among distributed brain regions. A growing body of literature points to a role for triple network model in the pathophysiology of BD (bipolar disorder). However, the specific relationship of limbic network (LN) and triple network model in PBD remains unclear. This study aimed to explore the aberrancy of the causal connections among these four core networks of PBD

Methods In total, 92 subjects with PBD and 40 adolescent healthy controls (HCs) with resting-state functional magnetic resonance imaging (MRI) scan were analyzed. We used Dynamic Causal Modelling (DCM) to characterize effective connectivity (EC) among four core networks. Parametric empirical Bayes (PEB) was used to identify the ECs related to the group differences, depression and mania severity. Finally, leave-one-out-cross validation (LOOCV) analysis was used to test the accuracy of prediction

Results Relative to HCs, patients mainly showed excitatory bottom-up connections from LN to SN, and then the bidirectional excitatory connections between DMN and SN. In PBD, top-down connectivity from triple-network to LN was excitatory in people with high depression severity, but inhibitory in people with high mania severity. Dysconnectivity circuits associated with mania and depression severity were apparently involved the caudate and hippocampus respectively, according to the results of LOOCV

Conclusion Our study revealed that the bottom-up disruption from LN to triple-network, and the top-down disruption from triple-network to LN, constituting the pathophysiological of PBD group differences, and

mood states differences, respectively.

关键词: pediatric bipolar disorder, effective connectivity, dynamic causal modelling (DCM), parametric empirical Bayes (PEB)

A Study on The Correlation between Non-suicidal Self-injury and VmPFC Neurometabolism in Adolescent Bipolar Depression Patients

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Objective To explore the possible relationship between non-suicidal self-injury (NSSI) behavior and neurometabolism in the ventromedial prefrontal cortex (vmPFC) of adolescent bipolar depression (ABD) patients using proton magnetic resonance spectroscopy (1H-MRS) technology

Methods Firstly, participants were screened from the Clinical Psychology Department of Xinjiang Autonomous Region People's Hospital. Finally, 40 adolescent bipolar depression patients who visited the outpatient department and did not receive electroconvulsive therapy, psychotropic drug therapy, or systematic psychotherapy for 6 months before hospitalization from March 2022 to September 2023 were selected. The NSSI diagnostic criteria provided by DSM-5 were used to conduct semi-structured interviews with all participants, According to the presence or absence of NSSI, there were 21 cases in the group with NSSI and 19 cases in the group without NSSI

Secondly, Demographic data such as age, gender, only child status, residential status, age of onset, education level, age of onset, and course of illness were collected through a general situation survey. The 24 Hamilton Depression Scale (HAMD) and Young Mania Rating Scale (YMRS) were used to assess the psychological well-being of the participants. Using the Ingenia

3.0T magnetic resonance scanner, a chief imaging physician and a chief imaging technician conducted anatomical localization of the vmPFC brain regions in all subjects, followed by 1H-MRS scanning to quantitatively analyze the ratio of N-acetyl-L aspartic acid (NAA)/creatinine (Cr), choline complex (Choline, Cho)/Cr, myo inositol (mI)/Cr, and the above results were statistically analyzed.

Results 1. There was no statistically significant difference ($P>0.05$) in the age, gender, only child status, residential status, education level, age of onset, disease course, family history, and HAMD score between patients in the NSSI group and those without NSSI group

2. The NAA/Cr of patients with NSSI was lower than that of patients without NSSI, and the difference was statistically significant ($P<0.001$). There was no statistically significant difference in Cho/Cr and mI/Cr between the group with NSSI and the group without NSSI ($P>0.05$).

3. There is a positive correlation ($P<0.001$) between Cho/Cr and HAMD scores in patients with NSSI, while there is a varying degree of negative correlation ($P<0.05$) between mI/Cr and age and onset age in patients without NSSI. There is no correlation ($P>0.05$) between other indicators.

Conclusion 1. Compared with adolescent bipolar depression patients without NSSI, adolescent bipolar depression patients with NSSI have reduced NAA metabolism in the vmPFC brain area

2. The level of membrane phospholipid breakdown metabolism in the vmPFC brain area of adolescent bipolar depression patients with NSSI may be related to the severity of depression.

3. The level of phosphoinositol cycle in the vmPFC brain area of adolescent bipolar depression patients without NSSI may be related to age or onset age.

关键词: Bipolar disorder, Depressive episode, Non-Suicidal Self-Injury, Neurometabolism, Ventromedial Prefrontal Cortex

基于转移熵和临床脑电的跨中心单双相抑郁鉴别探究

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目的 重性抑郁症 (Major depressive disorder, MDD) 和双相情感障碍 (Bipolar disorder, BD) 是两种具有相似症状并广泛影响全球人群的主要精神疾病。目前, 诊断这两种疾病主要依赖于主观的临床访谈和问卷, 缺乏客观的生物标志物, 这限制了诊断的精确性。此外, 在多中心研究中, 模型的泛化能力不足, 影响了诊断方法的普遍适用性。本研究通过应用转移熵和迁移学习技术, 旨在发现能够区分 MDD 和 BD 的脑电生物标志物, 并探索如何有效地将这些模型从一个中心推广到另一个中心, 以提高诊断方法的客观性和普适性。

方法 在本研究中, 我们收集了成都华西医院和杭州市七医院两个中心的临床脑电数据 (成都: 3778 例, BD 1161 例, MDD 2457 例, HC 160 例; 杭州: 466 例, BD 146 例, MDD 250 例, HC 70 例)。所有参与者均在闭眼静息状态下进行了为期 5 分钟、采样率为 250Hz 的 16 导脑电记录。本研究的方法分为特征提取和迁移学习两大模块。在特征提取阶段, 首先将每名受试者的脑电数据分割成 5 秒长的片段, 随后计算每个片段的 δ 、 θ 、 α 和 β 频带的转移熵, 再通过叠加平均这些片段的转移熵, 形成每位受试者的特征矩阵。在迁移学习模块中, 首先通过比较两个中心的特征矩阵的均值和标准差的统计量, 对两个中心的特征矩阵进行了对齐。将一部分经过对齐处理的目标域样本融入源域, 构建新的源域特征集, 余下的目标域样本用于测试。最后, 通过在机器学习模型中训练源域数据, 并使用准确率、精确度、召回率和 F1 分数这些指标在目标域中评估模型的表现, 以此观察模型在新环境中的效果。

结果 本研究对比了多种分类模型, 其中 K 近邻分类器表现出最佳性能。在单中心实验中, 数据被随机划分为训练集和测试集 (比例 7:3)。在成都华西医院的数据集上, 模型展现了 97.57% ($\pm 1.5\%$) 的准确率。而在杭州市七医院的数据集中, 准确率为 89.08% ($\pm 3.06\%$)。在跨中心实验中, 以成都华西医院的数据作为源域, 目标域为杭州市七医院, 模型在目标域中的表现达到了 93.66% ($\pm 3.52\%$) 的准确率。

结论 本研究展示了转移熵特征结合迁移学习在BD和MDD判别中的有效性。单中心的实验中,在两个不同地区的数据集上分别应用此特征,结果表明了它在不同数据上良好的适应性和准确性。在跨中心的实验中,迁移学习模块的加入显著提高了模型在目标域中的泛化能力。这些结果展现了转移熵特征在精神健康诊断领域的应用前景,为未来临床实践和研究提供了有力的技术支持,同时为个性化治疗方法的开发奠定了基础。

关键词: 双相情感障碍、重性抑郁、转移熵、迁移学习、脑电图

基于成对脉冲经颅磁刺激检测探讨双相抑郁患者大脑皮层功能及其与疗效相关性

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目的 双相情感障碍是一类易复发的重性精神疾病,然而目前有关其病理生理机制仍不清楚,有研究显示大脑皮层功能的异常在本病的发生发展中发挥重要作用,应用成对脉冲经颅磁刺激(ppTMS)可对双相障碍患者进行大脑皮层兴奋性和抑制性检测,筛选双相障碍大脑皮层功能异常生物学指标,进行疾病鉴别及治疗监测。本研究拟以双相抑郁(BPD)患者为研究对象,运用ppTMS评估其大脑皮层功能,并进行治疗前后的对比,为进一步探索双相障碍神经生理机制,进行早期诊断及疗效的监测提供一定的理论依据。

方法 1.招募BPD患者、健康对照各30例,收集受试者的一般人口学资料,包括HAMD-24、HAMA、YMRS。测定基线时和治疗后(4周末)的HAMD-24、HAMA分数,计算HAMD-24减分率,将HAMD-24减分率 $\geq 50\%$ 定义为治疗有效组, HAMD-24减分率 $\leq 20\%$ 定义为治疗无效组。

2.运用ppTMS检测受试者大脑左、右半球皮层功能,指标为抑制性指标皮质内抑制(ICI)和皮质静息期(CSP),兴奋性指标皮质内易化(ICF)和静息运动阈值(RMT)。

3.将健康对照、BPD患者治疗前后的各项大脑皮层功能指标【RMT、ICI-2 ms、ICI-4 ms、ICF-10 ms、ICF-15 ms、CSP(ms)】进行统计学分析,进行

大脑皮层功能的比较。

结果 1.一般人口学资料统计分析结果显示,HAMD-24、HAMA量表评分在BPD患者治疗前后有统计学差异。

2.BPD患者基线时双侧半球ICI-4 ms值均高于健康对照。提取两组受试者双侧半球ICI-4 ms值,采用ROC曲线检验ppTMS检测大脑皮层功能测量值作为诊断双相抑郁指标的效能,结果显示左侧ICI-4 ms值AUC=0.764;右侧ICI-4ms值AUC=0.719。

3.BPD患者基线时左半球ICI-2 ms、ICI-4 ms及右半球RMT测量值均高于BPD患者治疗后。

4.BPD患者在基线时及治疗后的右侧大脑半球ICI-4 ms测量值均高于左侧。

5.BPD患者治疗有效组与治疗无效组大脑皮层功能分析显示,基线状态时双侧半球ICF-10 ms测量值有显著统计学差异,经过治疗后左侧半球ICF-15 ms测量值、CSP时程有显著统计学差异。

结论 1.双相抑郁患者双侧半球大脑皮层抑制功能受损,且左右侧大脑皮层功能存在不对称性,右侧半球大脑皮层抑制功能受损大于左侧。

2.ICI-4 ms测量值可能作为诊断双相抑郁的神经生理学检测因子。

3.双相抑郁患者治疗有效组治疗后大脑皮层兴奋、抑制功能较前明显增强。

关键词: 双相抑郁;成对脉冲经颅磁刺激;皮层兴奋性;皮层抑制性

Association between Circulating Cell-free Mitochondrial DNA and Clinical Symptoms and Cognitive Functions in Patients with First-diagnosis Bipolar Disorder: A 12-week Follow-up Study

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Background Plasma circulating cell-free mitochondrial DNA (ccf-mtDNA) represents the degree of mitochondrial damage in the body, participates in various regulatory processes, and is involved in the pathophysiology of some diseases. However, its role in bipolar disorder (BD) was rarely studied. This study measured the plasma ccf-mtDNA level and explored its association with cognitive dysfunction and clinical symptoms in first-diagnosis drug-free patients with BD.

Methods We evaluated plasma ccf-mtDNA levels in 85 first-diagnosis, medication-naive bipolar disorder (BD) patients (25 males, 60 females) at baseline and after three months of treatment. Clinical symptoms were assessed using the Hamilton Depression Rating Scale (HAMD), the Hamilton Anxiety Rating Scale (HAMA), and the Young Mania Rating Scale (YMRS). Cognitive function changes were evaluated using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). Subsequently, we investigated the association between plasma ccf-mtDNA levels and both clinical symptoms and cognitive functions

Results The plasma ccf-mtDNA levels significantly decreased ($Z = -3.186, p = 0.001$), and cognition significantly improved ($t = -2.033, p = 0.046$) after three months of treatment. The plasma ccf-mtDNA level at baseline was associated with immediate memory ($r = -0.320, p = 0.004$), and its level after three months of treatment was associated with the scores in the clinical symptom scales HAMD ($r = -0.324, p = 0.017$) and HAMA ($r = -0.329, p = 0.013$)

Conclusion The research results proved that impaired mitochondrial function was involved in the pathological process of BD and that restoration of mitochondrial function might be a translational therapeutic target of BD

关键词: Bipolar disorder; Circulating cell-free mitochondrial DNA; Cognitive function.

基于转录组测序探索免疫相关通路在双相情感障碍中的作用

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目的 双相障碍(Bipolar Disorder, BD)是一类在临床上既有抑郁发作又有躁狂或轻躁狂发作的重性精神障碍。其病理生理过程与免疫失调密切相关,炎症反应系统的激活可能是疾病躁狂和抑郁发作的重要触发因素。虽然目前已有诸多研究揭示了免疫反应在疾病中的作用,但是具体机制却并不明确。因此,本研究旨在通过 RNA-seq 技术探究 BD 致病的相关免疫机制。

方法 研究包括首诊未用药的 BD 患者以及健康志愿者两组,使用汉密尔顿抑郁量表、杨氏躁狂量表评估 BD 患者的临床症状,所有被试皆从中南大学湘雅二医院门诊及住院部招募。每名被试入组后均采集 2ml 全血。随机抽取 6 名患者及健康对照的血液样本,提取单个核细胞(PBMC)。随后采用酚氯仿法提取 PBMC 的基因组 DNA,基于高通量测序技术 RNA-seq 评估外周血单个核细胞的转录组学特征。使用 GO 富集分析探索显著差异表达基因所行使的主要生物学功能,使用 KEGG 富集分析探索显著差异表达的基因参与的主要生化代谢途径和信号转导途径,最后应用 STRING 数据库中的互作关系对差异表达基因及所对应蛋白质之间的相互作用进行分析,构建 PPI 网络。

结果 1.GO 分析表明,存在显著差异的基因在分子功能方面主要富集在抗原结合等;在细胞组分方面主要富集在免疫球蛋白复合物;生物过程方面主要富集在免疫相关生物过程。

2.KEGG 分析表明,存在显著差异的基因富集于类风湿性关节炎信号通路($p=0.000081$)、趋化因子信号通路($p=0.003$)、阿兹海默信号通路($p=0.0027$)、TNF 信号通路($p=0.02$)及白细胞跨内皮迁移信号通路($p=0.022$)。

3. PPI 分析表明, Top 10 关键网络中包含的 Hub 基因为 IL1B、PIK3CA、CXCL8、PIK3R1、CDH1、ATM、BRAF、CCL3、CSF1、FGFG9。其中 IL1B、PIK3CA、CXCL8、PIK3R1、CCL3 参与免疫反应; IL1B 参与类风湿性关节炎信号通路, PIK3CA、CXCL8、PIK3R1、CCL 参与趋化因子分化途径。

结论 本研究验证了免疫反应在双相障碍病理生理过程中发挥的重要作用, IL1B、PIK3CA、CXCL8、PIK3R1、CCL 基因可能是其中的关键。

关键词: 双相障碍; 免疫反应; RNA-seq

Global Burden of Bipolar Disorder and Associated Inequalities From 1990 To 2021: A Systematic Analysis From The Global Burden of Disease Study 2021

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Importance Bipolar disorder is a severe mental disorder that affects millions of people worldwide, necessitating comprehensive mental health policies and interventions to address its global burden.

Objective To assess the global burden of bipolar disorder and associated inequalities from 1990 to 2021, with consideration for the potential impact of the COVID-19 pandemic on mental health outcomes.

Design, Setting, participants Data from the GBD, 2021 were used for analysis of bipolar disorder. Results were stratified by age group, sex, and sociodemographic index (SDI) quintiles across 204 countries and territories. Data for the 2021 GBD study were collected up to 2021, and data were analyzed for this article.

Main outcome measures: Age-standardized prevalence rate (ASPR), age-standardized incidence rate

(ASIR), and age-standardized YLD rate (ASR YLD) per 100,000 population. Absolute and relative inequalities measured by the slope index of inequality (SII) and concentration index (CI).

Results From 1990 to 2021, the global incidence of bipolar disorder increased, while prevalence and YLDs remained stable or slightly decreased, with a rise from 453.7 (95% UI: 381.62–540.77) to 454.59 (95% UI: 377.9–545.75) per 100,000 population. Throughout this period, females consistently exhibited higher rates compared to males (474.22 vs. 435.01 per 100,000 in 2021). Higher SDI regions and countries had higher prevalence rates, with the high SDI region having a prevalence rate of 631.28 (95% UI: 548.98, 731.97) in 2021. Australasia had the highest prevalence rate among all GBD regions in 2021 at 1110.78 (95% UI: 940.33, 1305.94). The SII for incidence slightly increased from 10.87 (95% CI: 5.33, 16.41) in 1990 to 11.38 (95% CI: 6.05, 16.71) in 2021, while the CI decreased from 0.0955 (95% CI: 0.0588, 0.1323) to 0.0119 (95% CI: -0.0252, 0.0491), suggesting a small rise in absolute inequality and a reduction in relative inequalities

Conclusion and Relevance Significant absolute inequalities exist in the global burden of bipolar disorder, particularly among females and in high-income regions. This emphasizes the importance of targeted interventions that take into account gender, socioeconomic, cultural, and healthcare factors. In addition, future research should focus on investigating the long-term impact of the COVID-19 pandemic on the burden of bipolar disorder and the associated inequalities.

关键词: GBD;bipolar;YLD;prevalance;inequality.

Graded Changes in Local Functional Connectivity of The Cerebral Cortex in Patients with Mood Disorder

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Objective Accumulated studies have begun to reveal unique connectivity patterns in patients with mood disorders, including bipolar disorder (BD) and major depressive disorder (MDD). Traditional approaches for assessing local brain connectivity often rely on fixed or arbitrarily defined neighbourhood sizes, which would limit the ability to detect gradual changes in the spatial gradient of local correlations. To address this issue, the novel Iso-Distant Average Correlation (IDAC) method, which is attuned to classical anatomical and functional boundaries, was utilized. This method allowed for an enhanced examination of the alterations in local functional connectivity associated with BD and MDD. In this study, we mapped the functional anatomy of local synchrony in the cerebral cortex in BD and MDD using functional MRI

Methods Data of 85 patients with BD, 165 patients with MDD and 158 healthy controls were obtained from two clinical trials (Clinical Trial Registry ID: NCT01938859 and NCT01764867). All participants underwent a resting-state fMRI scan. Demographic and clinical information such as the 17-item Hamilton Depression Rating Scale (HAMD), the Young Mania Rating Scale (YMRS) and the Hamilton anxiety scale (HAMA) were collected. Whole-brain functional connectivity maps of intracortical neural activity within iso-distant local areas (5-10mm, 15-20mm, and 25-30mm) were generated to characterize local fMRI signal similarities. Between groups analysis was done by a 3×3 ANOVA (group [BD, MDD and HC] by distance [5-10, 15-20, and 25-30 mm]), covaried by age and sex. Finally, a regression analysis was conducted in the patient groups to establish whether symptom severity was associated with the identified functional connectivity alterations

Results Patients with BD showed greater local functional connectivity in Right-Insula, Right-Parahipp and Left-Fusiform. Across all spatial distances, BD participants demonstrated greater local functional connectivity of Right-DorsalAcc, Right-dIPFC(dorsal), Right-

Amygdala, Bilateral-Fusiform, Left-AntPFC, Right-DorsalPcc, Right-AngGyrus and Left-DorsalPcc, comparing with MDD participants. Additionally, in the short and medium range connections within BD participants, anxiety associated alterations were identified in the Right-dIPFC(dorsal), Right-AntPFC and Right VentAntCing (5-10mm), and Right-DorsalPCC(15-20mm)

Conclusion Our results thus provide detail of the functional anatomy of synchrony changes in the cerebral cortex in bipolar disorder and major depressive disorder and identified increased synchrony of the neural activity in several regions commonly implicated in the neurobiology of bipolar disorder. Such information could ultimately be relevant in the search for potential tools for differential diagnosis of BD and MDD.

关键词: Bipolar disorder, Major depressive disorder, IDAC, fMRI

非稳态负荷与首发未服药双相情感障碍患者临床症状的关系探索

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目的 双相情感障碍是一种严重、致残、反复发作的精神疾病。与一般人群相比,双相情感障碍患者共患II型糖尿病、肥胖、心血管疾病的概率更高。非稳态负荷(Allostatic Load, AL)是描述人体长期暴露于重复或慢性的应激下时,各个系统对应激产生超出调节范围的波动的总和。已有研究表明,长时间、持续的高AL与免疫系统、心血管系统、内分泌系统疾病的发生、发展有关,也会导致精神疾病风险的增加。本研究的目的在于探索AL与首发未用药双相情感障碍患者临床症状的相关性,为进一步评价AL在双相情感障碍患者的影响提供理论基础。

方法 本研究为横断面研究,于2019年3月至2022年8月在中南大学湘雅二医院精神卫生中心进行,于门诊及住院部随机筛选首发未用药的双相障碍患者,同时期在周围社区招募年龄及性别构成比相匹配的健康志愿者,收集所有被试者的收缩压、

舒张压、静息心率、体重指数、腰臀比；晨起空腹采血后提取血清，使用全自动生化分析仪（7170A，日本）测量高密度脂蛋白胆固醇浓度、总胆固醇浓度、血糖及超敏 C 反应蛋白浓度；使用电化学发光免疫测定系统（Roche Cobas 8000-e602，瑞士）测量皮质醇、血清脱氢表雄酮浓度；综合以上指标计算 AL 指数。采用汉密尔顿抑郁量表、汉密尔顿焦虑量表、杨氏躁狂量表评估参与者的临床症状。采用 t 检验、秩和检验（连续变量）和卡方检验（分类变量）比较两组间 AL 指数及 11 个生物学指标的差异；采用肯德尔相关性分析。

结果 本研究共纳入 116 名双相情感障碍患者及 123 名性别年龄匹配的健康志愿者。双相情感障碍组患者平均年龄 20.83 岁，平均 BMI 22.44 kg/m²，平均受教育年限为 13.56 年。双相情感障碍组 AL 指数 2.47±1.36，健康对照组 AL 指数 1.94±1.06，两组有显著的统计学差异（ $z=91.80, P=0.012$ ）；11 个生物学指标的组间比较显示，双相情感障碍组组血皮质醇水平显著高于对照组（ $z=63.48, P<0.001$ ），体重指数较高于对照组（ $z=96.35, P=0.047$ ）。而两组腰臀比，总胆固醇，高密度脂蛋白胆固醇，血糖，血清脱氢表雄酮，C-反应蛋白水平差异无统计学意义（ $P>0.05$ ）。双相情感障碍组 HAMD-17 评分为 22.38±7.39，HAMA 评分为 22.56±9.43，YRMS 评分为 9.88±6.56，肯德尔相关性分析显示高密度脂蛋白水平与抑郁症状呈负相关（ $\tau=-0.14, P=0.041$ ）。

结论 双相情感障碍患者 AL 指数和血皮质醇含量显著升高，高密度脂蛋白水平与抑郁症状呈负相关，提示双相发病与应激调节功能紊乱有关。

关键词：双相情感障碍，非稳态负荷，症状

Changes and Correlation of Olfactory Function and Serum Interleukin-6 in Acute Phase of Bipolar Type I Disorder

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Objective Studies have found changes in olfactory function in patients with bipolar disorder, and olfaction, mood, and inflammation may be closely related.

In this study, olfactory function and interleukin-6 (IL-6) levels in patients with bipolar disorder and healthy controls under different emotional states were compared horizontally to seek new biological markers for the differential diagnosis of bipolar disorder. Secondly, the changes of olfactory function and IL-6 level in patients with bipolar disorder with different emotional states were compared longitudinally to explore a new tool for evaluating the efficacy of bipolar disorder. In addition, analyzing the relationship between olfactory function and IL-6 in patients with bipolar disorder is expected to provide more clinical evidence for verifying the hypothesis of pathophysiological mechanism of bipolar disorder

Methods A total of 50 patients with manic bipolar disorder (M-BD group) and 31 patients with depressive bipolar disorder (D-BD group) were selected from inpatients and outpatients of a psychiatric hospital and followed up to the remission stage. Finally, 40 patients with euthymic manic bipolar disorder (EM-BD group) and 28 patients with euthymic depressive bipolar disorder (ED-BD group) were successfully followed up. The 59 healthy control group (HC group) were from healthy workers matched to the patient group. Hamilton Rating Scale for Depression (HAMD), Young Mania Rating Scale (YMRS) and Hamilton Rating Scale for Anxiety (HAMA) were used to assess the mental and psychological states of all subjects, and their social functions were assessed by Global Assessment Function (GAF). The selection of the Sniffin' Sticks test (SST) to assess olfactory function includes olfactory sensitivity (OS) and Olfactory Identification (OI). Blood samples were collected and serum IL-6 levels were detected by ELISA

Results 1. OS and OI in M-BD group and D-BD group were significantly lower than those in HC group ($P < 0.05$)

2. OI of patients in EM-BD group and ED-BD group was significantly lower than that in HC group ($P < 0.0167$), but there was no significant difference in OS between the two groups.

3. Longitudinal comparison of olfactory function between M-BD group and EM-BD group, D-BD group and MD-BD group showed that BD in all remission

stages of OS was significantly higher than BD in corresponding attack stage ($P < 0.05$), but there was no significant difference in OI among all groups.

4. Serum IL-6 levels in M-BD group were significantly higher than those in D-BD group ($P=0.005$) and HC group ($P<0.001$), but there was no statistically significant difference between D-BD group and HC group.

5. Serum IL-6 level in EM-BD group was significantly higher than that in HC group ($P=0.006$), and there was no statistical difference in serum IL-6 level in ED-BD group compared with EM-BD group and HC group.

6. The longitudinal comparison of serum IL-6 levels in BD at the onset and remission stage showed that only the serum IL-6 in the EM-BD group was significantly lower than that in the M-BD group ($P=0.038$), and there was no significant difference among the other groups.

7. There was a positive correlation between OS and OI score in M-BD group ($r=0.330$, $P=0.019$), and OI score in EM-BD group was positively correlated with years of education ($r=0.320$, $P=0.044$).

8. There was a negative correlation between OS and serum IL-6 in M-BD group ($r=-0.386$, $P=0.006$).

Conclusion 1. Both olfactory sensitivity and olfactory identification were impaired in patients with bipolar disorder during manic episode and depressive episode, but there was no significant difference in olfactory function between the two groups.

2. The olfactory sensitivity of patients with bipolar disorder during manic episode and depressive episode returned to normal level with the remission of the disease, while the olfactory identification was continuously impaired. It is suggested that olfactory sensitivity may be a state marker of bipolar disorder, and olfactory identification may be a characteristic marker of bipolar disorder.

3. Serum IL-6 decreased with the remission of bipolar mania, but did not return to normal levels. It is suggested that serum IL-6 may be used as a biomarker to monitor patients with bipolar mania, and it persists in the course of bipolar mania.

4. Olfactory sensitivity in bipolar manic episode patients was negatively correlated with serum IL-6 lev-

els, suggesting that inflammatory factors may be involved in the pathophysiological mechanism of impaired olfactory function in manic bipolar disorder patients.

关键词: Bipolar disorder, Manic, Depressive, Olfactory function, Interleukin-6

Differences in Risky Decision-making Feedback between Depressed Patients with and without Suicidal Ideation: An ERP Study

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Objective The aim of this study was to explore behavioral and electrophysiological differences in risky decision-making between depressed patients with or without suicidal ideation and healthy controls

Methods According to the 24-item Hamilton Depression Rating Scale, we enrolled 61 untreated first-episode depressive patients from the depression clinic of the Nanjing Brain Hospital between September 2023 and January 2024. They were categorized into the suicidal ideation group (32 cases) and the non-suicidal ideation group (29 cases). Simultaneously, we recruited 36 healthy controls matching the patients in terms of gender, age, and years of education from the community. Then we employed the ERP detection on the subjects using the Iowa Gambling Task (IGT) paradigm with a focus on assessing amplitudes and latency of FRN and P300 during the feedback phase

Results The depressed group with suicidal ideation had the worst decision-making function. In the case of gain/loss, the FRN of the depressed group was more negative than that of healthy controls. Depressed pa-

tients with suicidal ideation have the smallest P300 amplitude and are negatively correlated with suicidal ideation

Conclusion P300 may be used as an electrophysiological index to differentiate patients with depression with suicidal ideation.

关键词: Suicidal ideation; event-related potentials; Iowa gambling task

Diurnal Variation of Response Inhibition in Patient with Depressive Episode

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Objective Response inhibition, which is fundamental for purposeful behaviour, refers to the ability to suppress pre-activated dominant but inappropriate action tendencies. It is indistinct how chronotype influences the relationship between depression and response inhibition. Importantly, no evidence indicates whether the response inhibition varies across day

Methods A total 59 patients and one 56 healthy individuals were enrolled for the study. Participants completed self-reported questionnaire including the Beck Depression Inventory (BDI), the Morningness-Eveningness Questionnaire (MEQ), the Munich Chronotype Questionnaire (MCTQ), the Pittsburgh Sleep Quality Index (PSQI). The Go/NoGO task combining electroencephalogram (EEG) recording the brain activity was applied. Participants were asked to join two ses-

sions of experiments, i.e. morning and evening randomly. Event-related potential (ERP) and time-frequency analyses were performed to investigate the electrophysiological activity over brain. The Generalized Estimating Equations (GEE) method was employed to analyse the repeated measures data and account for within-subject correlations (the correlation structure is exchangeable)

Results GEE results revealed that both behavioural tests and ERP showing similar pattern of response inhibition. Specifically, depressive patients showed a significant worse performance (Wald $\chi^2 = 5.482$, $P = 0.019$) and lower ERP amplitude (P3) (Wald $\chi^2 = 9.844$, $P = 0.002$) in NoGo condition than healthy individuals. Since the interaction (Group \times Time) was significant in behavioural (Wald $\chi^2 = 5.128$, $P = 0.024$) and electrophysiological aspects (Wald $\chi^2 = 6.308$, $P = 0.012$), post hoc analyses were conducted. The results indicated that depressive patients had a worse accuracy (NoGo condition) in the morning session compared to evening session, while healthy individual showed a better performance in morning session than evening session. The ERP was consistent with behavioural test, which patients got lower P3 amplitude in the morning session than evening session, while no significant diurnal difference was found in healthy controls

Conclusion Our finding suggests that depressive patients exhibit a specific diurnal pattern of response inhibition (morning worse) than healthy individuals. This result may helpful to understand the relationship between circadian rhythm and depression.

关键词: Major depressive disorders, response inhibition, EEG, diurnal variation

State-trait Anxiety Mediates The Relationship between Chronotype and Depression

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Objective Patients diagnosed with major depressive episode (MDE) exhibit higher levels of anxiety symptoms and perceived stress. Previous research has identified sleep disorders as a risk factor for MDE. In light of the strong correlation between state-trait anxiety, chronotype, and depression, it is essential to investigate the potential psychological mechanism involved. The current study aims to examine whether state-trait anxiety mediates the correlation between chronotype and depressive/healthy status

Methods A total 97 patients and 104 healthy individuals were enrolled for the study. Participants completed self-reported questionnaire including the Beck Depression Inventory (BDI), the Morningness-Eveningness Questionnaire (MEQ), and the State-Trait Anxiety (STAI). Independent sample t-tests and the analysis of covariance (ANCOVA) were conducted to examine the differences in demographic characters and questionnaires scores between two groups correspondingly. Simple mediation analyses were performed using PROCESS Version 4.2, with the MEQ score as the independent variable and depressive/healthy status as the dependent variable. Additionally, age, year of education, sex, and medication load index (MLI) were involved in the model as covariances

Results Compared to healthy controls, depressive group exhibited significantly higher scores on all questionnaire ($p < 0.001$). Only state anxiety (indirect effect/standard error/95% confidential interval, $-0.04/0.02/[-0.076, -0.005]$), but not trait anxiety ($-0.03/0.02/[-0.075, 0.002]$) was identified as significant a mediator in the association between chronotype and depression

Conclusion Findings from our mediation analyses confirm the mediating roles of state-trait anxiety in relationship between chronotype and depression. The

difference between state and trait anxiety in the role of mediating may imply a potential psychological mechanism of chronotype and depression.

关键词: Major depressive disorders, chronotype, state anxiety, trait anxiety

Study on The Neural Oscillation in The Pars Opercularis of The rIFG in Predicting The Efficacy of Early Antidepressant Treatment Outcome

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Objective In this study, we analyze the local activity of beta frequency band in the pars opercularis of the rIFG, to investigate the correlation between the pars opercularis of the rIFG and early antidepressant efficacy

Methods A total of 52 depressed patients and 26 healthy controls were included, All subjects completed a cranial magnetic resonance scan and magnetoencephalographic data acquisition under the Go/No-Go experimental paradigm at baseline. Based on the AAL90 template, the pars opercularis of the rIFG was used as a seed point to establish the Event-Related Desynchronization (ERD) in the beta frequency band of all subjects. According to whether the HAMD17 total score reduction rate reached 50% after 2 weeks, the patients were divided into Early responders and Early Nonresponders. The difference of the ERD, the relationship between the ERD and the change rate of HAMD17 score were explored

Results Early responders and nonresponders both showed a decrease in ERD of the beta frequency band in the pars opercularis of the rIFG during the baseline period ($P < 0.05$). Early nonresponders had higher

levels of desynchronization in the pars opercularis of the rIFG compared to early responders ($P < 0.05$). During the baseline period, ERD in the beta frequency band was inversely connected with the 2-week rate of reduction in overall HAMD score ($r = -0.364$, $P = 0.008$), cognitive impairment factor ($r = -0.365$, $P = 0.008$), and Block factor ($r = -0.441$, $P = 0.001$)

Conclusion Reduced ERDs of the pars opercularis of the rIFG in the beta band have been linked to poor efficacy of early antidepressants, ERDs in this region of the beta band can be used as a biomarker associated with early antidepressant efficacy, which can provide a certain objective basis for whether cognitive deficits and psychomotor block symptoms can be effectively improved in patients with depression after 2 weeks

关键词: Antidepressant effect, Early efficacy, Beta band, Magnetoencephalogram

双相情感障碍未患病一级亲属非典型神经振荡瞬时特征: 一项脑磁图研究

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目的 反应抑制是双相情感障碍的核心认知障碍,与一系列不良事件有关,其神经机制目前尚不明晰。我们的前期工作发现右额下回 beta 频段能量降低可能是双相情感障碍潜在的特异性生物标志物。最近的文献表明,神经振荡是由瞬变的爆发事件驱动,而平均频谱能量掩盖了 beta 活动的瞬时、突发性特征。因此,本研究借助先进的脑磁图技术,进一步探索双相情感障碍遗传高危人群神经振荡瞬时特征,阐明双相情感障碍遗传风险的神经机制。

方法 共计纳入 22 名在 2010 至 2020 年间于南京医科大学附属脑科医院心境障碍科住院的双相情感障碍患者的未患病一级亲属。此外,于社区招募性别、年龄和受教育年限与之匹配的健康人 22 名。所有参与者均接受了 Go/No-go 任务下的脑磁图扫描和结构磁共振扫描。采用溯源分析方法提取右额下回和左侧运动皮层的虚拟时间序列。通过机器学习

得出最优的爆发阈值。基于虚拟时间序列,利用最优阈值,分别提取 beta 振荡的爆发率、爆发时间、爆发频段、爆发能量、爆发体积等局部脑区特征。最后,计算 Jaccard 系数,评估脑区间的长程协同性。

结果 与健康对照组相比,双相情感障碍患者的未患病一级亲属的右额下回 beta 爆发次数减少。然而,发生 beta 爆发的试次中,一级亲属运动皮层 beta 爆发率仍可上调,这表明右额下回一旦触发,他们仍可实施反应抑制。另一方面,一级亲属右额下回与左侧运动皮层之间的 Jaccard 系数无异常,进一步验证了一级亲属脑区长程协同性尚无变化。

结论 我们的发现提示,宏观 beta 频段能量降低的微观原因是 beta 爆发的次数减少,右额下回 beta 爆发特征是双相情感障碍遗传风险超早期可识别的潜在标志物之一。

关键词: 脑磁图,双相情感障碍, beta 爆发,遗传高危

The Relationship between Childhood Trauma and Depressive Severity in Unipolar and Bipolar Disorder: Mediation by The Role of Family Functioning

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Background Childhood trauma (CT) has been found to impact mood disorders, and family functioning as a potential mediator. However, its distinct impact on unipolar disorder (UD) and bipolar disorder (BD) has not been thoroughly investigated. This study aims to examine the relationship between CT and family functioning and the severity of depressive episodes in patients with UD and BD, and to explore the mediating role of

family function. To investigate the ability of CT subtypes with clinical characteristics to distinguish between UD and BD

Methods A total of 562 patients with depressive episodes (UD=336, BD=226) and 204 healthy controls were recruited. The Hamilton Depression Rating Scale (HAMD), Childhood Trauma Questionnaire, and Family Adaptability and Cohesion Evaluation Scale IV were employed to assess psychological factors in the participants. Pearson correlation analysis and mediation analysis were performed in the UD and BD groups respectively. ROC curve was used to identify UD and BD

Results CT had a direct impact on the severity of depression in both UD and BD patients. In the UD group, family adaptability served as an intermediary factor between CT and HAMD scores. In the BD group, only emotional neglect exhibited a significant mediating effect on HAMD scores through family cohesion. The combination of clinical features and specific CT could be utilized to distinguish between UD and BD

Conclusions This study suggested that when considering the impact of CT on mood disorders, it is important to take into account the differential roles of family functioning in UD and BD.

关键词: Bipolar disorder (BD); Childhood trauma (CT); Family Functioning; Major Depressive Disorder (MDD); Mediation Model

抑郁症无意识情绪加工杏仁核 Gamma 频段活动异常的脑磁图研究

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目的 抑郁症 (Major depressive disorder, MDD) 主要特征之一是对负面情绪信息的过度关注。情绪加工分为外显和内隐两种方式, 然而 MDD 患者在无意识水平下是否存在负性情绪偏向尚知之甚少。本研究旨在利用脑磁图高时空分辨率特性, 探索

MDD 患者杏仁核在 Gamma 频段中对悲伤面孔表情的无意识情绪加工的时间频率特征。

方法 本研究采用脑磁图 (MEG) 技术, 对 30 名 MDD 患者和 26 名健康对照在进行反向掩蔽任务时的脑活动进行了记录和分析。以 AAL90 模板进行溯源分析, 提取杏仁核脑区的时间序列, 利用时频分析方法计算 Gamma 频段下杏仁核脑区的时频能量值, 使用聚类置换检验比较两组间杏仁核能量值的差异, 并分析其与正负性情绪量表的相关性。

结果 在情绪加工早期 (50-250ms), 与健康对照相比, MDD 患者的左侧杏仁核高频 gamma (60-70Hz) 能量激活增强 (P=0.001), 且与正性情感评分存在显著负相关 (r=-0.352, P=0.009)。

结论 MDD 患者在无意识情绪加工早期就表现出对负性情绪信息的过度敏感性, 且杏仁核对负性情绪面孔的激活越强, 患者正性情绪分数越低, 这可以作为 MDD 诊断的客观标记。

关键词: 抑郁症; 无意识情绪; 杏仁核; Gamma 频段; 脑磁图

伴与不伴阈下躁狂的抑郁症青少年的丘脑亚区体积及其与认知功能的关系: 来自 sBEAD 队列的证据

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目的 双相障碍 (BD) 和抑郁症 (DP) 在早期难以鉴别, 研究 BD 的前驱期即阈下躁狂的生物学特征有助于解决此难题。丘脑的研究近年受到关注。已知丘脑参与认知等多种功能, 而初步研究表明具有认知损害的 BD 和 DP 存在丘脑亚区功能损害的差异。故本研究拟探索伴阈下躁狂的青少年抑郁症 (SubMD) 和不伴阈下躁狂的抑郁症 (nSubMD) 患者的丘脑亚区体积的差异, 以及其与认知功能的关系。

方法 本研究对象来自于 sBEAD 青少年抑郁障碍队列。根据 DSM-5 重性抑郁障碍的诊断标准和 Zimmermann 的阈下躁狂标准, 纳入 10-17 岁的

SubMD 患者 72 例、nSubMD 患者 74 例以及正常对照 (HC) 72 名。3 组被试的性别及年龄匹配。采集 3.0T MRI 数据, 并使用 Freesurfer 7.0 划分丘脑亚区。将年龄、性别、教育年限及估计颅内总体积 (eTIV) 为协变量, 比较三组间丘脑灰质体积, 并将 SubMD 和 nSubMD 有差异的脑区与认知功能进行偏相关分析。

结果 1) nSubMD 组的右侧丘脑腹内侧区 (VM)、枕下区 (PuI) 及外侧膝状体 (LGN) 分别小于 SubMD 组及 HC 组 ($P < 0.05$ Cohen's d 值为 $0.40 \sim 0.61$), 但后两组的差异无统计学意义; 2) SubMD 组的左侧丘脑腹侧前区 (VL_a)、中背外侧小细胞区 (MDI) 显著小于 nSubMD 组及 HC 组 ($P < 0.05$ Cohen's d 值为 $-0.44 \sim -0.62$), 但后两组无差异; 3) SubMD 组的左侧丘脑腹侧后区 (VL_p)、腹前侧大细胞区 (VAmc)、中背内侧大细胞区 (MDm) 小于 nSubMD 患者 ($P < 0.05$ Cohen's d 值为 $-0.3 \sim -0.23$), 但两个患者亚组与 HC 组均无显著差异; 4) SubMD 组与 nSubMD 组的右侧丘脑腹侧前区 (VL_a)、腹侧后区 (VL_p)、中背内侧大细胞区 (MDm)、中背外侧小细胞区 (MDI) 均显著小于 HC 组 ($P < 0.05$ Cohen's d 值为 $0.44 \sim 0.65$)。偏相关结果显示, 在 SubMD 组中, 右侧丘脑腹内侧区 (VM) 与语义流畅性呈负相关 ($P < 0.05$ $r = -0.25$); 在 nSubMD 组中, 右侧丘脑腹内侧区 (VM) 与符号编码呈正相关 ($P < 0.05$ $r = 0.34$), 右侧丘脑枕下区 (PuI) 与语义流畅性和符号编码呈正相关 ($P < 0.05$ $r = 0.26, 0.25$)。

结论 SubMD 和 nSubMD 的丘脑亚区灰质损害存在差异, VL_a 和 MDI 灰质受损可能为早期识别青少年 BD 的特征, 而 VM、PuI 及 LGN 灰质受损个体更可能为 DP; 患者受损脑区与精神处理速度相关。结果值得进一步验证。

关键词: 丘脑亚区, 阈下躁狂, 双相情感障碍, 认知功能, 青少年

Effects of Childhood Trauma on Depression in Patients with Bipolar Disorder: Mediating Role of Hippocampal CA3 Subregion

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Objective Patients with bipolar disorder (BD) are often associated with childhood trauma, and hippocampal subregion volumes have varying sensitivities to such trauma. However, the role of these volumes in the relationship between childhood trauma and depressive symptoms in BD patients remains unclear. This study aimed to explore the relationship between childhood trauma and hippocampal subregion volume abnormalities in BD depressive symptoms

Methods A total of 112 patients in the depressive phase of BD and 62 healthy controls were recruited. Head magnetic resonance T1 images were collected, and hippocampal subregion volumes were segmented using FreeSurfer. Analysis of covariance (ANCOVA) was employed, with age and gender as covariates, to compare volume differences between groups. General linear regression modeling was used to explore the relationship between childhood trauma, hippocampal subregion volume, and depression severity

Results The volumes of the left CA3, bilateral CA4, bilateral granule cell and molecular layers of the dentate gyrus (GC-ML-DG), right molecular layer, and bilateral hippocampal-amygdala transition area (HATA) were reduced in the BD group with childhood trauma compared to healthy controls. No significant differences in hippocampal subregion volumes were observed between the BD group without childhood trauma and healthy controls. Within the BD group exposed to childhood trauma, the volumes of the left CA1 and CA3 regions, bilateral GC-ML-DG, and right molecular layer were reduced compared to those without childhood trauma. Notably, the reduction in the left CA3 subregion volume partially mediated the relationship between the Childhood Trauma Questionnaire (CTQ) total score and depression severity in BD patients

Conclusion Childhood trauma can lead to atrophy in the left CA3, bilateral CA4, bilateral GC-ML-DG, right molecular layer, and bilateral HATA in BD patients. Among these, the reduction in the left CA3 subregion volume plays a partial mediating role in the indirect effect between childhood trauma and depression severity

关键词: bipolar disorder; hippocampal subregions; childhood trauma; mediation analysis

抑郁症患者童年创伤和焦虑的关系：反刍的中介作用

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目的 童年创伤 (childhood trauma, CT) 与严重的心理健康后果有关, 这种后果可能会持续到成年期。CT 使个体变得脆弱, 与抑郁症和焦虑症的高患病率相关, 其重大影响尤其体现在精神疾病合并症和慢性症的增加。尽管评估工具及诊断标准存在异质性, 既往研究表明 42-78% 的抑郁症患者伴有焦虑症状。焦虑症的发作通常先于抑郁症, 伴焦虑症的抑郁症患者自杀意念及自杀风险增高, 状态-特质焦虑量表 (State-Trait Anxiety Inventory Form Y, STAI-Y) 可用于对人群的焦虑状况进行评估。反刍作为一种适应不良的认知反应风格被认为是 CT 与情绪状态之间的合理候选者。本研究旨在探讨反刍是否是 CT 与抑郁症患者的状态焦虑及特质焦虑之间关系的中介。

方法 招募南京脑科医院 2021 年 5 月至 2024 年 5 月入院的符合 DSM-5 诊断标准的 14-60 岁的抑郁症患者。157 名参与者完成了童年创伤问卷、反刍反应量表、状态-特质焦虑量表的评估。使用 SPSS 26.0 和 Mplus 8.3 进行统计分析。SPSS 26.0 检查所有变量之间的初始相关性, 随后采用 Mplus 8.3 的路径分析反刍在 CT 与状态焦虑、特质焦虑的中介作用, 为了估计间接影响, 采用了 1000 次迭代。

结果 Spearman 相关分析表明 CT 与反刍成正相关 ($r_s=0.421, p<0.001$), 不同类型的 CT 与反刍

的相关关系表明: 性虐待 ($r_s=0.319, p<0.001$)、躯体虐待 ($r_s=0.326, p<0.001$)、情感虐待 ($r_s=0.404, p<0.001$), 情感忽视 ($r_s=0.209, p<0.01$) 与反刍成正相关, 且具有统计学意义, 而躯体忽视未发现与反刍存在相关关系。研究结果支持反刍部分中介了童年创伤与抑郁症患者的状态焦虑 (效应量=0.176, $p<0.001$)、特质焦虑 (效应量=0.143, $p<0.001$) 之间的关系, 且这种影响在女性受试者较男性受试者更为显著。

结论 CT 和反刍是抑郁症患者状态焦虑、特质焦虑的关键因素。童年创伤不仅对抑郁症患者的状态焦虑、特质焦虑有直接影响, 而且通过反刍产生间接影响。

关键词: 童年创伤; 反刍; 状态焦虑; 特质焦虑; 抑郁症

童年创伤对双相障碍自杀风险的影响：心理弹性、领悟社会支持的链式中介作用

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目的 探索心理弹性、领悟社会支持在双相障碍 (Bipolar disorder, BD) 患者童年创伤与自杀风险关系中可能存在的链式中介作用。为 BD 患者自杀的干预及预防在心理、家庭及社会支持上提供新的思路。

方法 从 2023 年 3 月至 2023 年 9 月期间在福建医科大学附属神经精神病医院住院治疗的符合 ICD-10 双相障碍诊断标准患者中纳入 116 名患者, 进行自杀风险评估量表、童年创伤问卷、领悟社会支持量表、心理弹性量表评估。使用 SPSS 26.0 对数据进行统计分析。使用 Hayes 开发的 SPSS 的扩展 Process 建立中介模型, 分析心理弹性、领悟社会支持在童年创伤和自杀风险间的中介效应。

结果 1. 与低自杀风险组相比, 高自杀风险组的 BD 患者未婚状态比例较高 ($\chi^2=6.416, p=0.039$), 处于抑郁相的个体比例较高 ($\chi^2=24.685, p<0.001$), 发病年龄较小 ($Z=-2.061, p=0.036$)。2. 与低自杀风险组相比, 高自杀风险的 BD 患者童年创伤总分、不同创伤类型 (情感忽视、躯体忽视、情感虐待、躯体虐待) 的得分较高, 领悟社会支持 (家庭支持、朋友

支持、其他支持)、心理弹性(坚韧性、力量性、乐观性)得分较低(皆 $p < 0.05$)。3. BD 患者的自杀风险得分、童年创伤得分、领悟社会支持得分、心理弹性得分两两之间的相关性均有统计学意义(皆 $p < 0.05$)。情感忽视、躯体忽视、情感虐待、躯体虐待得分与自杀风险得分正相关,与领悟社会支持得分、心理弹性得分负相关(皆 $p < 0.05$)。4. 心理弹性、领悟社会支持在 BD 患者童年创伤和自杀风险之间起链式中介作用,中介模型的效应区间不包含零,中介效应量为 38.94%。

结论 心理弹性和领悟社会支持在 BD 患者童年创伤和自杀风险的关系中起链式中介作用。针对童年创伤及心理弹性、领悟社会支持等因素的评估与干预,可纳入 BD 患者自杀风险的管理。

关键词: 双相障碍,自杀风险,童年创伤,领悟社会支持,心理弹性

Based on White Matter Microstructure To Early Identify Bipolar Disorder From Patients with Depressive Episode

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Objective Because of similar clinical manifestations, bipolar disorder (BD) patients are often misdiagnosed as major depressive disorder (MDD). This study aimed to compare the difference between depressed patients later converting to BD and unipolar depression (UD) according to diffusion tensor imaging (DTI)

Methods Patients with MDD (562 participants) in depressive episode states and healthy controls (HCs)

(145 participants) were recruited over 10 years. Demographic and magnetic resonance imaging (MRI) data were collected at the time of recruitment. All patients with MDD were followed up for 5 years and classified into the transfer to BD (tBD) group (83 participants) and UD group (160 participants) according to the follow-up results. DTI and functional magnetic resonance imaging at baseline were compared

Results Common abnormalities were found in both tBD and UD groups, including left superior cerebellar peduncle (SCP.L), right anterior limb of the internal capsule (ALIC.R), right superior fronto-occipital fasciculus (SFOF.R), and right inferior fronto-occipital fasciculus (IFOF.R). The tBD showed more extensive abnormalities than the UD in the body of corpus callosum, fornix, left superior corona radiata, left posterior corona radiata, left superior longitudinal fasciculus, and left superior fronto-occipital fasciculus

Conclusion The study demonstrated the common and distinct abnormalities of tBD and UD when compared to HC. The tBD group showed more extensive disruptions of white matter integrity, which could be a potential biomarker for the early identification of BD

关键词: Bipolar disorder; Unipolar depression; Depressive episode; White matter

Abnormal Stability of Spontaneous Neuronal Activity As A Predictor of Diagnosis Conversion From Major Depressive Disorder To Bipolar Disorder

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Objective Bipolar disorder (BD) is often misdiagnosed as major depressive disorder (MDD) in the early stage, which may lead to inappropriate treatment. This study aimed to characterize the alterations of spontaneous neuronal activity in patients with depressive episodes whose diagnosis transferred from MDD to BD

Methods 532 patients with MDD and 132 healthy controls (HCs) were recruited over 10 years. During the follow up period, 75 participants with MDD transferred to BD (tBD), and 157 participants remained with the diagnosis of unipolar depression (UD). After excluding participants with poor image quality and excessive head movement, 68 participants with the diagnosis of tBD, 150 participants with the diagnosis of UD, and 130 HCs were finally included in the analysis. The dynamic amplitude of low-frequency fluctuations (dALFF) of spontaneous neuronal activity was evaluated in tBD, UD and HC using functional magnetic resonance imaging at study inclusion. Receiver operating characteristic (ROC) analysis was performed to evaluate sensitivity and specificity of the conversion prediction from MDD to BD based on dALFF

Results Compared to HC, tBD exhibited elevated dALFF at left premotor cortex (PMC_L), right lateral temporal cortex (LTC_R) and right early auditory cortex (EAC_R), and UD showed reduced dALFF at PMC_L, left paracentral lobule (PCL_L), bilateral medial prefrontal cortex (mPFC), right orbital frontal cortex (OFC_R), right dorsolateral prefrontal cortex (DLPFC_R), right posterior cingulate cortex (PCC_R) and elevated dALFF at LTC_R. Furthermore, tBD exhibited elevated dALFF at PMC_L, PCL_L, bilateral mPFC, bilateral OFC, DLPFC_R, PCC_R and LTC_R than UD. In addition, ROC analysis based on dALFF in differential areas obtained an area under the curve (AUC) of 72.7%

Conclusion The study demonstrated the temporal dynamic abnormalities of tBD and UD in the critical regions of the somatomotor network (SMN), default mode network (DMN), and central executive network (CEN). The differential abnormal patterns of temporal

dynamics between the two diseases have the potential to predict the diagnosis transition from MDD to BD.

关键词: Bipolar disorder; Unipolar depression; Depressive episode; Dynamic amplitude of low-frequency fluctuations; Resting-state functional magnetic resonance imaging

Distinguishing between Major Depressive Disorder and Bipolar Disorder Based on Spontaneous Transient States

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Objective Previous research on major depressive disorder (MDD) and bipolar disorder (BD) has found differences in brain structure and function, including key brain areas of the default mode network (DMN), sensorimotor network (SMN), and central executive network (CEN). Structural and functional abnormalities in those brain regions appear to differentiate between MDD and BD. However, little is known about how the spontaneous transient activated patterns organize and coordinate brain networks underlying the discrimination of MDD and BD. Therefore, the aim of this study is to differentiate between MDD and BD through sub-second-level spontaneous transient state activations

Methods This study collected resting-state magnetoencephalography (MEG) data from 30 major depressive disorder (MDD) patients, 30 bipolar disorder (BD) patients, and 30 matched healthy controls (HCs).

Hidden Markov Models (HMMs) were employed to capture sub-second-level dynamic activities with a finite number of latent states in the source space signal. Here, HMM states described the spatiotemporal characteristics of eight brain networks. Time parameters and spectral activation information were acquired for each state, and intergroup comparisons were performed for each state's fractional occupancy (FO), Life Time (LT), Interval Times (IT), and switching rates of states, utilizing a non-parametric permutation test while controlling for sex, age and years of education

Results Compared to BD cohort, MDD cohort had lower IT values during state 1, 3, 4, and 7 ($p=0.023$; $p=0.003$; $p=0.001$; $p<0.001$). There were no significant differences observed between the HCs and the BD cohort, nor between the HCs and the MDD cohort in state 1. Compared to HCs and BD cohort, MDD cohort had higher switching rates ($p<0.001$; $p<0.001$), with no difference between BD cohort and HCs. There were no significant differences among the three groups in the values of FO and LT in all the states

Conclusion The study reveals distinct brain activation patterns between MDD and BD. State 1, 3, 4, and 7 likely reflect the activity of specific neural networks associated with emotion regulation, cognitive control, and attention. BD experience more severe cognitive impairments and mood swings compared to MDD, show lower brain network dynamicity. These findings suggest that temporal descriptors built by HMM could serve as potential biomarkers for differentiating between major depressive disorder and bipolar disorder, aiding in diagnosis

关键词: Bipolar Disorder, Major Depressive Disorder, Dynamics, Magnetoencephalography

伴混合特征的双相抑郁患者认知功能水平与诱发电位 P300 特征的研究

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目的 研究伴混合特征双相抑郁的神经认知功

能水平及其与诱发 P300 特征和其它相关因素之间的关联。

方法 对符合双相障碍抑郁发作诊断的共计 73 例患者采用临床实用 DSM-5 抑郁混合特征量表 (CUDOS-M) 进行评估, 并分为伴混合特征组 (34 例) 与不伴混合特征两组 (39 例); 采用 MATRICS 成套神经认知测试 (MCCB) 进行 7 个维度认知功能测评, 并进行听觉诱发 P300 检测。通过协方差分析进行组间认知功能水平和 P300 特征的比较和分析, 采用相关性分析及多元线性逐步回归分析患者认知功能水平和听觉 P300 特征以及其它临床相关因素之间的关联。

结果 伴与不伴混合特征两组间的临床特征 (性别、年龄、居住地、受教育年限、职业状态、总病程、发作次数、HAMD 评分、镇静药物使用) 仅总病程 (月) 之间具有显著性差异 (110.11 ± 71.57 vs. 80.56 ± 56.89 , $P=0.048$), 伴混合特征组的病程更长。协方差分析结果显示, 伴与不伴混合特征两组间 7 个认知维度中仅信息处理速度、推理和问题解决 2 个维度的认知功能具有显著差异, 伴混合特征组在这两个认知维度的表现更差; 在纳入协变量分析之后, 两组间 P300 潜伏期 (371.56 ± 29.37 ms vs. 344.28 ± 37.28 ms) 和波幅 (5.28 ± 1.86 μ V vs. 4.33 ± 1.31 μ V) 之间的差异性变得不显著。相关分析显示伴混合特征患者组中, 信息处理速度与教育年限 ($r=0.378$, $P=0.027$)、职业状态 ($r=0.375$, $P=0.029$) 正相关, 视觉学习与职业状态正相关 ($r=0.386$, $P=0.024$), 推理问题解决与城镇居住地正相关 ($r=0.556$, $P=0.001$), 仅注意警觉维度与 P300 潜伏期负相关 ($r=-0.478$, $P=0.004$), 所有认知维度均与 P300 波幅不相关联。逐步回归分析结果显示伴混合特征患者组中, 信息处理速度得分与受教育年限正相关 ($t=2.311$, $P=0.027$), 注意警觉得分与 P300 潜伏期 ($t=-3.67$, $P=0.001$) 与 P300 波幅 ($t=-2.33$, $P=0.027$) 负相关, 视觉学习得分与职业状态正相关 ($t=2.36$, $P=0.024$), 推理问题解决与城镇居住地正相关, ($t=3.79$, $P=0.001$)。

结论 伴混合特征的双相抑郁患者病程更长, 在少部分认知功能维度上的表现相较于不伴混合特征的患者更差, 两组间的 P300 特征在排除一系列混杂因素影响后的差异不显著。伴混合特征双相抑郁患者的认知功能表现与教育水平、职业状态等因素关联性更多, P300 特征未能显现出与多数认知功能维度之间的关联性。

关键词: 双相障碍, 抑郁发作, 混合特征, 认知

功能, 诱发电位, P300

Continuous Alterations in Brain Structure and Its Pathways in Pediatric Bipolar Disorder

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Objective Pediatric Bipolar Disorder (PBD) is a recurrent, high-prevalence psychological disorder characterized by high suicidality and significant disability. It causes severe harm to mental and physical health of children and adolescents, and imposes a substantial burden on both patients and society. With the rapid development of magnetic resonance imaging (MRI) technology, research on structural and functional changes in the brains of PBD patients continues to accumulate. However, due to the heterogeneity of the disease course and the progressive nature of neurological changes, controversies remain in the research findings, leading to challenges in the clinical diagnosis of PBD. This neuroimaging study seeks to explore the pathophysiological mechanisms of PBD by focusing on the differences in gray matter volume among patients at various stages and integrating the theory of neural progression in Bipolar Disorder (BD), aiming to identify reliable biomarkers for clinical diagnosis and treatment

Methods The study included MRI data from 48 PBD patients and 31 gender and age-matched healthy controls (HC). Initially, the disease course of PBD patients was divided into different stages. Then, voxel-based morphometric analysis was employed to investigate significant nodes of structural brain differences between PBD patients and HCs, and to verify the heterogeneity of these nodes across different disease stages. Finally, based on the structural covariance networks and causal structural covariance network features which are specific to different stages of the disease, the study explored specific pathways of progressive neural changes in PBD patients

Results Multiple brain regions with reduced

gray matter volume were discovered in PBD patients compared to HCs. Further analysis showed that during the first stage of the disease, gray matter volume reduction was only observed in the left amygdala; during the second stage, significant reductions were found in bilateral amygdala, hippocampus, frontal lobes, insula, caudate, and cerebellum. This stage-specific changes in gray matter volume suggest that the amygdala may be the origin of progressive neural changes in PBD patients. The results of structural covariance network and causal structural covariance network analysis confirmed that gray matter volume of the left amygdala in PBD patients exhibited coordinated changes with hippocampus, frontal lobes, insula, caudate, and cerebellum. The changes in left amygdala could also predict gray matter volume changes in these regions

Conclusion The study revealed widespread reductions in gray matter volume in PBD patients, identifying a causal network of gray matter volume's continuous alterations originating from the amygdala. These specific pathways of neural progression in bipolar disorder may serve as important biomarkers for PBD, offering references and assistance for clinical diagnosis and treatment

关键词: Pediatric Bipolar Disorder, Structural Covariance Network, Causal Structural Covariance Network, Amygdala

Using Dynamic Graph Convolutional Network To Identify Individuals with Major Depression Disorder

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Objective Objective and quantitative neuroimaging biomarkers are crucial for early diagnosis of major depressive disorder (MDD). However, previous studies using machine learning (ML) to identify MDD were often based on small sample sizes and probably overlooked MDD's neural connectome and mechanism.

The aim of this study was to find objective neuroimaging bioindicators capable of recognising MDD

Methods To address these gaps, we applied Dynamic Graph Convolutional Nets (DGCNs) to a large multi-site resting state functional MRI (RS-fMRI) dataset consisting of 2317 subjects (1081 MDD patients and 1236 healthy controls) from 16 Rest-meta-MDD consortium sites. We further completed the modelling of the GCN and then conducted separate stratified 10-fold cross-validation and leave-one-subject-out (LOSO) cross-validation

Results Our DGCN model achieved an accuracy of 82.5% (95% CI:81.6-83.4%, AUC:0.869), outperforming other universal ML classifiers. The most prominent domains for classification were mainly in the default mode network, fronto-parietal and cingulo-opercular network

Conclusion Our study demonstrates the stability and efficacy of using DGCN to characterize MDD and investigates its potential to enhance neurobiological comprehension of MDD by distinguishing it from other clinically related disorders in FC network topologies

关键词: Machine learning, Magnetic resonance imaging, Dynamic graph neural network, Major Depression Disorder, Multi-site

NR1D1 mRNA Expression Level Increased after Antidepressant Treatment and May Predict The Cognitive Impairment Recovery in Depression Patients

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Objective Depression is characterized by not only low mood but also anhedonia, changes in appetite and sleep. In recent years, many studies have found the pathogenesis of depression is related to circadian rhythms, such as sleep-wake cycle, appetite changes. The study of genes related to circadian rhythms, also known as circadian gene, can help to investigate the

disease of depression. The mechanism is referred to as a transcriptional-translational feedback loop. Circadian rhythms relies mainly on the loop consists of the protein products of core biological clock genes, including the circadian locomotor output cycles kaput gene (CLOCK), the cryptochrome 1 gene (CRY1), the cryptochrome 2 gene (CRY2), the cycle 1 gene (CRY2), and the cycle 2 gene (CRY3). The receptors is encoded by the nuclear receptor subfamily 1D, group D member 1 gene (NR1D1). These genes interact with each other to drive the rhythmic expression of downstream genes and generate circadian rhythm disruption. In this study, we selected NR1D1, NLRP3, NPAS2 and CLOCK based on the number of studies, positive results and whether they play an important role in the regulatory loop. This study is designed to explore the changes of circadian genes expressing level after antidepressant treatment and the clinical features associated with the change in MDD patients

Methods Participant Description

Candidates who have had at least one depressive episode were recruited from Shanghai mental health center. Including : (1) age 18-65 years old, (2) using DSM-V structured clinical interview (SCID-5), currently in line with DSM-V diagnostic criteria for depressive episodes, (3) hamilton Depression Scale (HAMD-17) score ≥ 17 , (4) junior high school and above education level, (5) understand the study content and sign the informed consent. Exclusion criteria of the candidates included the following five reasons: (1) bipolar disorder, (2) pregnant or breastfeeding women, (3) or those planning to become pregnant, (3) other diagnoses, screening failure, or received electroconvulsive therapy or transcranial magnetic stimulation within 3 months.

Material and Methods Venous blood samples were collected via venipuncture in EDTA-anticoagulant and coagulant tubes after the admission. qPCR based on TaqMan technology was performed to test the mRNA expression. Relative expression changes were calculated with the $2^{-\Delta\Delta}$ method using ACTB as the reference transcript. A total of 36 (18* 2) items were involved in the linear test model, first, including clinical traits, psychiatric rating scales [HAMD-17 Deduction Rate, MDQ, PIQS], and their subscales [HAMD-17].

All of the 36 items yielding linear relationships after Bonferroni correction were applied, with the level of 0.014(0.05/36). Furthermore, outliers were deleted if their Studentized Residual was more than two standard deviations away from the mean. We then compiled a total of 7 continuous variables including clinical traits, and subscales, using student t' test. For the identification of the objective clinical traits of the increased patients, a backward Wald method in the Binary Logistic regression was performed, with a p value criterion of 0.05 and 0.10 for entry and removal, respectively. A receiver operating characteristic (ROC) curve was examined to discriminate the accuracy of the factors by the area under the curve (AUC) of the ROC curve. The actual positive state was 2= clinical cure, which was defined as HAMD-17 reduction rate more than 50%. The ability of the prediction models was calibrated via Hosmer-Lemeshow goodness of fit test.

Results Demographic and mRNA Expression Level

A total of 28 patients were enrolled, of which 8 (28.5%) were male and 20 (71.4%) were female. The average age of the patients was 27.61±7.45 year, ranging from 19-55 years old. The NR1D1 mRNA expression level increased after 8 weeks' antidepressant treatment(9.09±0.83/9.71±1.00, p=0.01). See Table 1. No difference was found in NLRP3, NPAS2, CLOCK mRNA expression level before or after treatment.

Comparison of Sociodemographic Factors, Clinical Traits and Psychiatric Rating Scales between mRNA increased and mRAN non-increased of MDD Patients

The HAMD8 cognitive impairment score of the NR1D1 non-increased group were significantly Higher than that of the NR1D1 increased group. No statistically significant difference was found in the other items (p-value>0.05). See able 2. In Table 2, age, age of first diagnosis, age at onset, Depressive episodes, sever episodes, HAMD insomnia score at baseline(HAMD0 insomnia) and HAMD cognitive impairment score at 8'th week(HAMD8 cognitive impairment) were included according to the linear relationships results.

Binary Logistic Regression Analysis of Factors for Predicting Responders or Non-responders of MDD Patients

In this research, we tried to include age, age of first diagnosis, age at onset, Depressive episodes, sever episodes, HAMD0 insomnia, HAMD8 cognitive impairment, NR1D1 mRNA expression level change to predict treatment response. But failed to construct an effect model.

NR1D1 mRNA level predict the cognitive impairment change

The ROC curve in Figure 1 showed the fair accuracy of NR1D1, yielding an AUC of 0.79 (95% CI, 0.63–0.96). The decision-rule cut-off that optimizes the sensitivity/specificity tradeoff was 0.00% of the NR1D1 changing.

Figure 1 ROC Curve of the NR1D1 mRNA level for Prediction of cognitive impairment change

Conclusion In this study, we found the NR1D1 mRNA expression level increased after 8 weeks' antidepressant treatment (9.09±0.83/9.71±1.00, p=0.01). Previous studies suggesting an decreased expression level of NR1D1 accompany by an mental health disorder status. Therefore, our results suggest that antidepressant treatment could reverse the decrease of NR1D1 expressing level. What's more, NR1D1 mRNA expression level change was fail to predict the total antidepressant treatment response but could predict the cognitive impairment recovery in depression patients.

关键词: NR1D1; MDD; circadian gene; cognitive impairment; antidepressant

光照疗法对阈下抑郁个体杏仁核连通性和血清素能系统的影响

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目的 尽管强光疗法(BLT)的神经机制尚不清楚,但它被认为是阈下抑郁(StD)的有效干预措施。杏仁核已被证明在抑郁症中起着关键作用。本临床试验的目的是评估 BLT 与杏仁核亚区功能连通性(FC)改变之间的关系,以及与血清素能系统活性的相关性。

方法 将 StD 受试者随机分为两组: BLT 组

(N=47)和安慰剂组(N=42)。8周前后分别采用汉密尔顿抑郁评定量表(HAMD)、流行病学研究中心抑郁量表(CESD)和贝克抑郁量表(BDI)测量抑郁严重程度。在8周前后分别进行结构和静息状态功能磁共振成像。用FreeSurfer自动分割9个杏仁核。对双侧杏仁核及其亚区进行了基于种子的全脑静态FC(sFC)和动态FC(dFC)分析。此外,采用多元回归模型预测BLT后HAMD、CESD和BDI评分的变化。此外,使用JuSpace工具箱计算了BLT组和安慰剂组杏仁核子区sFC/dFC与单胺系统活性之间的相关性。

结果 与安慰剂组相比,BLT组的HAMD评分($t=-2.991, p=0.004$)、CESD评分($t=-3.447, p<0.001$)和BDI评分($t=-3.334, p=0.022$)从基线到治疗后均有所下降。与基线相比,BLT组干预后右侧基底外侧杏仁核(BLA)/浅表杏仁核(SFA)-右侧颞中回(MTG)的sFC增加,右侧中央内侧杏仁核(CMA)和右侧下眶额回的dFC增加,右侧杏仁核纹状体过渡(AStR)/CMA-左侧丘脑的sFC减少,右侧SFA-右侧内侧前额叶皮层的dFC减少;而整个杏仁核及其亚核体积在BLT后无明显变化。此外,BLT前后右侧BLA-右侧MTG的sFC变化与BDI评分的变化呈正相关(显著性: $r=0.322, p=0.027$)。结合基线杏仁核sFC和dFC可以预测BLT干预后HAMD、CESD和BDI的变化。此外,BLT后右侧BLA改变的sFC与5-HT_{1A}和5-HT_{2A}受体的空间分布显著相关,而BLT后右侧CMA改变的dFC与5-HT_{1A}受体的空间分布显著相关。

结论 这些发现表明,BLT可以改变StD受试者的杏仁核FC,特别是丘脑、额叶和MTG。此外,BLT后杏仁核亚区FC变化与血清素能系统活性之间的相关性可能强调了BLT的抗抑郁机制。结合杏仁核的基线静态和动态FC可能有潜力评估BLT治疗StD的有效性。

关键词: 光疗,杏仁核,FC,颞下抑郁,血清素能系统

伴与不伴强迫症状双相抑郁患者的脑结构和功能网络拓扑属性比较研究

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目的 基于图论分析双相抑郁患者伴与不伴强迫症状(obsessive-compulsive symptoms)脑灰质结构网络和功能网络差异。

方法 收集2018年3月至2022年12月暨南大学附属第一医院精神科门诊和住院部90例双相抑郁患者。根据是否伴强迫症状分为伴强迫症状组53例和不伴强迫症状组37例,年龄18~55岁。同期招募健康对照50例,年龄18~55岁。采集受试者静息态磁共振结构和功能数据,分别构建灰质结构网络和功能网络,应用图论分析方法分别计算小世界属性等网络拓扑属性指标。对结构网络属性三组间比较及事后检验均采用置换检验。对功能网络属性三组间比较采用单因素方差分析,事后检验采用Bonferroni校正。将组间差异的网络指标与耶鲁-布朗强迫症状(Yale-Brown Obsessive-Compulsive Scale, Y-BOCS)等量表进行偏相关分析。进一步利用支持向量机(Support Vector Machines, SVM)进行分类。

结果 与对照组比,伴与不伴强迫症状双相抑郁组均存在结构网络最短路径长度($P=0.036, P=0.037$)和标准化特征路径长度($P=0.036, P=0.039$)增加,全局效率降低($P=0.024, P=0.017$);与不伴强迫症状组和对照组相比,伴强迫症状组在右侧罗兰迪克岛盖($P<0.001, P<0.001, P=0.002, P=0.001$)和左侧枕上回(均 $P<0.001$)节点中心度及介数中心度增高。功能网络分析:伴强迫症状组左侧额下回介数中心度低于对照组($P=0.004$);伴强迫症状组小脑介数中心度低于不伴强迫症状组和对照组($P=0.003, P=0.024$);不伴强迫症状组小脑节点效率低于伴强迫症状组和对照组($P=0.043, P=0.002$);伴强迫症状组右侧颞横回节点中心度和节点效率高于对照组($P=0.007, P=0.005$)。伴强迫症状组左侧额下回介数中心度与强迫思维因子分正相关($r=0.303, P=0.034$),右侧颞横回节点中心度、节点效率与Y-BOCS总分($r=-0.301, P=0.036; r=-0.311, P=0.030$)和强迫思维因子分($r=-0.385, P=0.006; r=-0.380, P=0.007$)负相关。SVM显示网络融合分类伴强迫症状与不伴强迫症状准确率为0.7986。

结论 伴与不伴强迫症状双相抑郁患者均存在向规则网络转变倾向,且伴强迫症状患者较不伴患者表现出更多节点属性异常。多网络特征融合具备一定的诊断性能。

关键词: 强迫症状,双相障碍,结构协共变网络,静息态功能网络,支持向量机

Neurometabolic Alterations in Bipolar Disorder with Aggressive Behavior: A Study Based on Proton Magnetic Resonance Spectroscopy and Machine Learning Technology

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Objective The neurobiological feature of aggressive behavior (AB) in bipolar disorder (BD) remains unknown. This study focused on exploring the alterations of intracerebral biochemical metabolism among BD patients with AB, finding specific neuroimaging markers for predicting the risk of AB in BD patients

Methods Twenty BD patients with AB, twenty-six BD patients without AB, and fifty healthy controls were enrolled in the current study. Metabolite levels in bilateral hippocampus and prefrontal white matter (PWM) were obtained through proton magnetic resonance spectroscopy, while potential brain biochemical differences were found using a support vector machine (SVM) algorithm. Furthermore, the association between abnormal metabolite ratios and clinical factors among BD patients with AB was also evaluated in the current study

Results The highest classification accuracy of 76.09% and an area under the curve of 0.78 in discriminating BD patients with and without AB, among the choline (Cho)/creatinine (Cr) ratios within the right hippocampus, myoinositol (mI)/Cr ratios within the left hippocampus, and N-acetyl aspartate (NAA)/Cr ratios within the left PWM contributed the most, and (2) the neuron functional level within the left PWM showed

negative correlation with Hamilton Depression Scale scores among BD patients with AB

Conclusion The combination of the Cho/Cr values within the right hippocampus, the mI/Cr values within the left hippocampus, and the NAA/Cr values within the left PWM can better predict the risk of AB among BD patients.

关键词: Bipolar disorder, Aggressive behavior, Proton magnetic resonance spectroscopy, Machine learning, Multivariate pattern analysis, Support vector machine

Guidelines Concordance of Maintenance Treatment in Euthymic Patients with Bipolar Disorder: A Multicenter Study of Mainland China

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Objective Medication therapy is the primary approach for treating bipolar disorder. With the development of evidence-based medicine, clinical guidelines for bipolar disorder have been introduced to standardize drug use and enhance treatment efficacy. It is worth exploring the consistency between real-world prescribing practices by clinicians and guideline-recommended treatments, and whether this consistency correlates with clinical outcomes and prognosis in bipolar disorder. Currently, there is limited research in this area, with significant heterogeneity in findings. The DSM-5 diagnostic criteria introduce the concept of bipolar disorder with mixed features, yet current research has not focused on the medication characteristics of this subgroup within their samples. We conducted a survey across 16 hospitals in mainland China to present data on maintenance treatments for bipolar disorder in China, and to investigate the alignment between real-world maintenance

treatment regimens and those recommended in the 2018 updated CANMAT guidelines

Methods 323 patients who had experienced a euthymia were eligible for entry into this survey on the maintenance treatment of bipolar disorder. Guidelines concordance was determined by comparing the medication(s) that patients were prescribed with the recommendations in the 2018 updated CANMAT guidelines

Results In this study, 40 patients (12.38%) had maintenance treatment regimens that were inconsistent with guidelines, including 4 patients (2.20% of Bipolar I type) and 36 patients (25.53% of Bipolar II type). Among the factors contributing to inconsistency, the most common was inappropriate use of antidepressants (25/40, 62.50%), followed by inappropriate use of mood stabilizers (20/40, 50.00%) and antipsychotic medications (12/40, 30.00%). One patient was treated solely with ziprasidone. Additionally, a total of 217 patients (67.80%) received adjunctive therapies in this study. Patients currently or recently experiencing hypomanic, depressive, or mixed episodes were more likely to receive adjunctive antidepressant therapy in addition to mood stabilizers compared to manic episodes

Conclusion In comparison to the 2014 study, there has been a significant improvement in medication adherence in this study. However, as patient demands for quality of life continue to rise, the trend of personalized treatment through adjunctive medications is becoming increasingly common. Further research is still needed to identify patient populations suitable for various types of medications in order to achieve better efficacy and reduce treatment burden.

关键词: Bipolar disorder, Maintenance treatment, Guidelines, concordance, adjunctive therapy

Myelin Disruptions in Subthreshold Depression and Its Association with Neurotransmitter and Genetic Profiles: A Inhomogeneous Magnetization Transfer MRI Study

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Objective Subthreshold depression (SD) is a significant risk indicator of major depressive episodes. It's important to identify the specific disruption of white matter myelin in SD and its biological mechanism. The study aimed to develop quantitative measure of myelin content of SD by utilizing inhomogeneous magnetization transfer (ihMT) technique and examine its spatial correlations of neurotransmitter and gene expression

Methods In this prospective study, a total of 104 college students with SD and 91 age- and sex-matched healthy controls (HCs) were included. All participants underwent ihMT imaging, and pseudo-quantitative ihMT (qihMT), and ihMT ratio (ihMTR) were obtained. We then combined receptor/transporter, and post-mortem gene expression distribution data to uncover the potential molecular mechanisms underlying these myelin abnormalities in SD. In addition, thirty-one SD participants underwent light therapy, after which we observed the effect of treatment on myelin with abnormal ihMT measures at baseline in SD

Results Compared to HCs, SD showed decreased qihMT values in the bilateral posterior thalamic radiation (PTR), right sagittal stratum (SS), and right uncinate fasciculus, and decreased ihMTR values in the left PTR (all, $p \leq 0.001$). The spatial pattern of myelin content alterations was correlated with the distributions of serotonergic and dopaminergic neurotransmitters, and expression maps of specific genes. The genes expression explained 68.5% variance of the disrupted myelin content, with the most correlated genes enriched in regulation of axonogenesis, cotranslational protein targeting to membrane, and neuron projection. In addition, light therapy normalized decreased qihMT values in the right PTR in SD

Conclusion These findings suggest the macromolecular disruption of myelin in the PTR, sagittal stratum, and uncinate fasciculus in the early stages of depression, and its linkage with neurotransmitter and gene expression profiles. Furthermore, the myelin impairments in the PTR could be reversed by treatment in SD.

关键词: subthreshold depression; inhomogeneous magnetization transfer; posterior thalamic radiation; gene expression

Disrupted Brain Glymphatic System Is Associated with Depressive Symptoms and Peripheral Inflammation in Unmedicated Bipolar II Disorder: A Diffusion Tensor Image Analysis Along The Perivascular Space (DTI-ALPS) Study

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Objective Diffusion-based technique called diffusion tensor image analysis along the perivascular space (DTI-ALPS) has emerging as a tool for evaluating the activity of the glymphatic system. Besides, increasing evidences show that inflammation might be involved in bipolar disorder (BD), but the association between glymphatic dysfunction and central nervous system inflammation in BD patients is still unclear. In this study, we tried to explore the disrupted brain glymphatic system, peripheral cytokines levels and their correlations in unmedicated bipolar II disorder

Methods This study included 32 patients with unmedicated bipolar II disorder and 27 healthy controls (HCs). Diffusion tensor images were acquired to calculate diffusivities in the x, y, and z axes of the plane of the lateral ventricle body in two groups. We evaluated the diffusivity along the perivascular spaces as well as projection fibers and association fibers separately, to acquire an index for diffusivity along the perivascular space (ALPS-index). Group comparisons of the left/right side and whole-brain ALPS-index between BD and HCs were conducted. Furthermore, serum levels of 17 kinds of inflammatory cytokines were measured in patients with BD. Lastly, correlations between ALPS-index and the 24-item HDRS scores, inflammatory cytokines levels were calculated

Results Patients with BD showed significantly lower left side ALPS-index compared with HCs ($p = 0.045$). The left side ALPS-index was negatively correlated with 24-item HDRS scores ($r = -0.361$, $p = 0.042$)

in BD. Furthermore, the left side ALPS-index was positively correlated with IL-5 ($r = 0.534$, $p = 0.003$), IL-6 ($r = 0.541$, $p = 0.003$), IL-12 ($r = 0.566$, $p = 0.002$), G-CSF ($r = 0.483$, $p = 0.009$), GM-CSF ($r = 0.582$, $p = 0.001$) in BD

Conclusion Our results indicated that severer impaired glymphatic system may be associated with the severer depressive symptoms in BD. Also, this study provided preliminary evidence of the association between disrupted brain glymphatic system and neuroinflammation in BD.

关键词: Bipolar disorder, DTI-ALPS, Inflammation, HAMD scores

双相情感障碍患者脑功能网络异常的神经机制与遗传基础

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目的 双相情感障碍 (bipolar disorder, BD) 患者普遍存在脑功能网络异常, 但具体神经机制和遗传基础仍不明确。度中心性 (degree centrality, DC) 是一种基于图论的神经影像学测量指标, 可识别脑网络的整体连接特征和具有高连接强度的关键节点。因此, 本研究旨在通过度中心性和相关功能连接 (functional connectivity, FC) 分析揭示与疾病症状和功能障碍密切相关的脑区, 并结合脑转录组学揭示异常脑区相关的神经机制和遗传基础。

方法 本研究纳入 49 名首发未用药 BD 患者和 49 名健康志愿者, 于基线、4 周末、12 周末进行随访。为明确 BD 患者中与临床症状密切相关的关键脑区, 我们使用汉密尔顿抑郁量表、杨氏躁狂量表评估 BD 患者临床症状, 采集静息态 fMRI 图像并计算 DC 作为评估脑区连接强度的标志, 并进一步以 DC 差异脑区为种子点计算 FC 明确异常脑功能网络。随后, 利用 Allen 人脑图谱结合脑影像转录组学分析差异脑区的相关基因, 使用 GSEA 富集分析探索显著差异表达基因所参与的皮质细胞类型、生化代谢途径和信号转导途径。使用神经递质图谱和 Neurosynth 数据库进一步明确所影响的神经递质和相关任务。

结果 BD 患者较健康对照存在左侧额上回的 DC 改变和大尺度 FC 异常。进一步的分析表明, BD 患者左侧额上回的 DC 改变与躁狂症状显著相关。BD 患者左侧额上回与岛叶的 FC 异常与抑郁症状密切相关。利用 Allen 人脑图谱进一步对异常脑影像指标进行脑影像转录组分析, 提示与炎症相关信号通路的基因模块表达谱具有空间相关性。GSEA-Lake 富集分析表明, BD 患者在左侧额上回的 DC 差异在空间上与星形胶质细胞之间存在显著关联, 而 FC 差异与内皮细胞和小胶质细胞显著相关。GSEA-KEGG、GSEA-Hallmark 和 GSEA-GO 的经典富集分析显示左侧额上回的 DC 差异主要与炎症和与炎症相关的生物合成过程显著相关。且 DC 差异与多巴胺能递质系统图谱存在空间相关性, 以左侧额上回为种子点的 FC 改变与多巴胺能、 γ -氨基丁酸能和谷氨酸能递质系统图谱以及包括认知功能、睡眠和情绪在内的多种行为域激活图存在空间相关性。

结论 双相患者在左侧额上回存在脑功能网络异常, 这些脑区的异常与炎症相关信号通路和多巴胺能、 γ -氨基丁酸能和谷氨酸能递质系统存在关联。这些发现为理解 BD 的神经机制和遗传基础提供了新视角, 也为未来开发针对性的治疗策略提供了重要的科学依据。

关键词: 神经炎症, 双相情感障碍, 磁共振成像

Effects of Transcranial Direct Current Stimulation (tDCS) on Somatic Symptoms in Patients with Major Depressive Disorder: A Comparative Study of TDCS Targeting Dorsolateral Prefrontal Cortex (DLPFC) and Orbitofrontal Cortex (OFC)

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Objective Somatic symptoms are common manifestations in patients with major depressive disorders

(MDD). Transcranial direct current stimulation (tDCS) is one of the promising treatments for MDD. However, there is a lack of research on tDCS for the treatment of somatic symptoms in MDD and the suitable stimulating brain region. To investigate the efficacy of tDCS targeting the dorsolateral prefrontal cortex (DLPFC) versus orbitofrontal cortex (OFC) on somatic symptoms in MDD patients and identify the appropriate stimulating brain region.

Methods In this randomized, double-blind, sham-controlled study, a total of 70 patients diagnosed with MDD were randomly allocated into DLPFC group, OFC group, and Sham group. Subjects participated in 2 weeks of 10 primary interventions and subsequently 2-week maintenance interventions weekly (20 minutes, 2 mA). The Depression and Somatic Symptoms Scale (DSSS), 17-item Hamilton Depression Rating Scale (HAM-D-17) and Hamilton Anxiety Rating Scale (HAMA) were used to assess somatic symptoms, depression and anxiety at week 2, week 4 and follow-up.

Results After 2 weeks of interventions, the DLPFC group showed a more significant improvement in somatic symptoms compared to the Sham group. At the maintenance and follow-up stages, the DLPFC group outperformed the Sham and OFC groups, but the difference with the Sham group was not significant. Neither active group demonstrated superiority over the Sham group in improving depression and anxiety.

Conclusion In conclusion, the tDCS treatment targeting DLPFC proved to be more effective in ameliorating depressive somatic symptoms than the sham and OFC groups, suggesting the DLPFC a potentially effective therapeutic target for alleviating somatic symptoms in patients with MDD

关键词: major depressive disorder (MDD); somatic anxiety; somatic symptoms; transcranial direct current stimulation (tDCS)

首发抑郁障碍患者转相情况及其影响因素分析, 基于 7 年随访

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因素

目的 了解首发抑郁障碍患者 7 年间转相情况,探讨发生转相的影响因素。

方法 1、纳入 18-60 岁、符合 DSM-IV 重性抑郁障碍单次发作的诊断标准、HAMD-17 \geq 18 分;排除严重躯体疾病、痴呆、精神发育迟滞、癫痫、酒药依赖/滥用者和哺乳/妊娠期妇女。2、收集首发时人口学信息、疾病特征、治疗情况等(为前期工作,于 2013 年-2016 年首发入组时完成)。通过自然观察随访,随访内容:人口学现况信息、纵向疾病特征(包括是否转相)、量表评估(第 7 年末采用 TESS 评估调查时的药物副反应、MARS 评估调查时的药物依从情况、GAF 评估调查时的功能水平)。

结果 基线入组 346 例,完成 7 年随访 138 例,随访完成率 39.9%,其中男性 47 例(34.1%),首发年龄 18-59 岁,平均 35.89 \pm 12.89 岁。转相组(7 年间出现躁狂、轻躁狂、混合发作者)54 例(39.1%)、未转相组(7 年间未出现躁狂、轻躁狂、混合发作者)84 例(60.9%)。首发时:转相组发病年龄早于未转相组、未婚者高于未转相组、初婚者低于未转相组、有诱因起病者低于未转相组、发病至接受治疗间隔时间短于未转相组($P<0.05$);性别、BMI、职业、受教育水平、精神旺盛性气质、阳性精神疾病家族史、自杀未遂者、伴精神病性症状、HAMD-17 总分、急性期治疗时间方面,两组间差异无统计学意义($P>0.05$)。转相组 7 年间总发作次数高于未转相组、7 年后 GAF 总分低于未转相组($P<0.05$);7 年间伴精神病性症状发作占比、危险行为占比、住院次数占比、维持治疗占比、7 年后 MARS 总分 \geq 6 分者、7 年后 TESS 总分,两组间差异无统计学意义($P>0.05$)。以 7 年间是否发生转相为因变量(赋值:转相组=0,非转相组=1),两组间首发时人口学和疾病特征资料比较有统计学差异的变量,年龄、婚姻、有诱因起病、发病至接受治疗间隔(天)(连续变量以实际值纳入)为自变量,进行二分类非条件 logistic 回归分析:首发年龄($OR=1.112$)、发病至接受治疗间隔(天)($OR=1.005$)为 7 年间首发抑郁障碍患者发生转相的独立影响因素($P<0.05$)。

结论 7 年间发生转相的患者总发作次数较未转相者高,且整体功能相对较差。首发年龄和首次发作时发病至接受治疗时间对后期是否发生转相具有预测作用。

关键词 首发抑郁障碍;随访研究;转相;影响

首发抑郁障碍患者 7 年随访研究

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目的 探讨首发抑郁障碍患者 7 年间纵向疾病特点和 7 年后整体功能预后。

方法 纳入 2013 年 05 月至 2016 年 05 月河北省第六人民医院门诊和住院的首发抑郁障碍患者;年龄 18-60 岁;汉密尔顿抑郁量表 17 项(HAMD-17) \geq 18 分。首发入组时收集人口学、疾病特征、治疗情况等资料,随访时收集:7 年间纵向疾病特征、治疗情况等资料;7 年后随访时通过药物依从性评定量表(MARS)评估调查时患者对药物治疗的依从性(MARS 总分 \geq 6 分视为依从性好)、药物副反应量表(TESS)评估调查时患者存在的药物副反应和整体功能评定量表(GAF)评估调查时患者的整体功能水平(GAF 总分 \leq 70 分为整体功能不良)。

结果 完成 7 年随访 138 例,7 年后随访时,患者体质量指数(BMI)($\chi^2=9.098$)、无业/失业比例($\chi^2=26.965$)、再婚及分居/离异比例($\chi^2=17.833$)高于首发时(P 均 <0.01);7 年间复发次数(2.34 \pm 1.47),其中抑郁发作次数 2[1, 2]次、抑郁发作次数占比 1[0.38, 1]、躁狂发作次数 0[0, 2]次、躁狂发作次数占比 0[0, 0.62]、伴精神病性症状发作次数 0[0, 1]次、伴精神病性症状发作次数占比 0[0, 0.33]、伴危险行为次数 0[0, 1]次、伴危险行为次数占比 0[0, 0.17]、住院治疗次数 1[0, 2]、住院治疗次数占比 0.5[0, 1]、维持治疗次数 1[1, 2]、维持治疗次数占比 0.58[0.25, 1]、发生转相者 54 例(39.1%);7 年后 MARS 总分(5.77 \pm 2.45)、MARS 总分 \geq 6 分者 84 例(60.9%)、TESS 总分(9.43 \pm 7.60)、7 年后 GAF 总分(68.15 \pm 7.74)、GAF \leq 70 分者 92 例(66.7%)。多元线性回归分析显示:GAF 分与 BMI 差值(7 年后-首发时)($r=-0.189$, $P=0.026$)、7 年间复发次数($r=-0.274$, $P=0.001$)、躁狂发作次数占比($r=-0.178$, $P=0.037$)、住院治疗次数($r=-0.191$, $P=0.025$)、TESS 总分($r=-0.357$, $P=0.000$)呈负相关;GAF 分与 7 年间抑郁发作次数占比($r=0.190$, $P=0.026$)呈正相关。

结论 首发抑郁障碍患者 7 年后 66.7%的患者

存在整体功能不良，体质量指数增加越多、复发次数越多、躁狂发作在总发作次数中占比越高关键词：首发抑郁障碍；纵向疾病特征；整体功能；影响因素；随访研究

儿童精神病学组

The Incidence Rates and Influence Factors of Newly Observed and Persistent Self-injurious Behavior Among Chinese Adolescents: A Short-term Longitudinal Survey

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Objective The prevalence of adolescent self-injurious behavior is increasing, posing a significant public health concern. While there is international variation, findings from numerous community-based studies indicate that approximately 10% of adolescents report engaging in self-injurious behavior. However, longitudinal studies on the prevalence of self-injurious behavior among Chinese adolescents are limited. Our study aims to explore the incidence rates and influence factors of newly observed and persistent self-injurious behavior in primary and middle school students

Methods This 2-wave longitudinal survey was respectively conducted in October and November 2023 among 19 primary and middle school students aged 9 to 19 years old in Chengdu, Sichuan Province. Data on demographics, individual factors (life style, mental health, somatic health and psychological characteristics), family factors (childhood adversity and family environment) and community factors (community environment and social support) were collected at baseline. The presence of self-injurious behavior was assessed at both baseline and follow-up with 1-month interval. Students with newly observed self-injurious behavior were those who didn't report it initially but did at follow-up, while those with persistent behavior reported it both times. The study assessed the prevalence of self-harm at baseline and the incidence rates of newly observed and persistent self-injurious behavior at follow-up, utilizing logistic regression to estimate the associations with individual, family, and community factors

Results The study encompassed 18,465 participants, of which 9,217 (49.9%) were girls, with an average age of 14.0 ± 2.3 years. At baseline, 2,420 (13.1%)

students reported engaging in self-injurious behavior, with 1,467 (60.6%) being female. The incidence rates of short-term newly observed and persistent self-injurious behavior were identified as 3.5% and 7.7% among all student. For students exhibiting newly observed self-injurious behavior, social bullying emerged as the primary risk factor, while impulse control was the key protective factor. The same results were observed in the students with persistent self-injurious behavior as well

Conclusion This longitudinal survey provides insight into the incidence rates of self-injurious behavior among Chinese adolescents, even though the 1-month interval period was limited. Additionally, the gender disparity remains evident, and the self-harm behavior among girls warrants attention. Given these findings, it is imperative not only to prioritize the development of self-control but also to establish robust measures that safeguard them from the detrimental effects of bullying.

关键词: self-injurious behavior, adolescent, longitudinal study, influence factors, gender disparity

Interaction Among Negative Mood, Sleep, and Diet Habits in Adolescents with Non-suicidal Self-injury: A Cross-sectional Network Analysis

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Objective Non-suicidal self-injury can lead to adverse consequences such as violent crime and cognitive impairment, and about 20% of adolescents (10-17 years old) experience non-suicidal self-injury, which is a major public health problem. However, the risk factors of adolescent non-suicidal self-injury are not clear. NSSI in adolescence is associated with multiple demographic and psychosocial factors, genetic and biological factors,

and psychiatric disorders. However, progress in the prevention and treatment of NSSI in adolescents depends on other modifiable risk factors. For example: interpersonal relationships, diet and sleep, social influences, and adverse childhood experiences. Network analysis can quantify and visually display the potential relationship between risk factors while controlling other variables in the network, in which detecting node centrality is a key step in network analysis, which helps to highlight key factors and further clarify the treatment target. Consequently, the purpose of this study is to understand the correlation network of sleep, negative mood, and diet habits in Chinese NSSI adolescents, to obtain the relationship among different factors, and to explore the key pathways between core factors and different factors, to help us to understand the causes of non-suicidal self-injury in adolescents and provide insights for their evaluation and intervention

Methods A total of 4040 secondary school students aged 12-17 years were recruited for this study. A self-administered questionnaire was used to collect basic demographic information such as gender, grade, age, height, weight, ethnicity, only child, parental education, family members, academic performance, academic stress, and interpersonal relationships. Our study used the Adolescent Non-Suicidal Self-Injury Assessment Questionnaire, the Eating Habits Questionnaire, the Children's Depression Scale, the Children's Multidimensional Anxiety Scale, and the Pittsburgh Sleep Quality Index to assess non-suicidal self-injurious behaviors, eating habits maladaptive mood, and sleep. The study was approved by the Ethics Committee of Chaohu Hospital of Anhui Medical University. Ethics number: KYXM20231001. All research procedures are carried out by the Helsinki Declaration

Data were analyzed using SPSS24.0 and R version 3.6.3 to analyze the data, and stratified analysis was performed according to whether there was non-suicidal self-injury behavior. The results of continuous variables were expressed by mean \pm standard deviation (MD \pm SD), and the categorical variables were presented by frequency or percentage. The rank sum test was used to analyze the differences between the two independent samples. A two-sided test was used in all analyses, and

it was considered that there was a significant difference in $p < 0.05$. We used network analysis to explore the interrelationships between risk factors and to identify core factors.

Results 1. Descriptive data

After excluding invalid questionnaires, the validity of the questionnaire in this study was 90.45%. Out of 3654 adolescents, 1159 (31.71%) had self-injurious behavior. Adolescents with self-injurious behaviors had generally higher depression (20.74 ± 8.20), anxiety (55.67 ± 20.03) and sleep problems (7.13 ± 3.35) scores than those without self-injurious behaviors (13.41 ± 8.04 for depression, 39.29 ± 21.46 for anxiety, and 4.68 ± 2.97 for sleep problems) (all $p < 0.001$). There was a significant difference in eating habits between adolescents with and without NSSI behavior ($P < 0.05$).

2. Network Results 2.1 Network structure

We found that in the adolescent network group, the strongest correlation node was negative symptom (CDI2) and low self-esteem (CDI3) (the marginal correlation coefficient was 3.11 for adolescents without NSSI behavior and 1.55 for adolescents with NSSI behavior). However, adolescents with NSSI behavior showed a significant correlation between injury avoidance (MASC1) and social anxiety (MASC2) (The correlation coefficient was 1.27). In the comparison of the network models of adolescents without NSSI behavior and those with NSSI behavior, the global strength of the two groups changed significantly after BonferroniHolm correction (global strength of NSSI behavior was 37.79, global strength of NSSI behavior was 23.58, $P < 0.05$), and network invariance test was significantly different ($M=1.56$, $P=0.030$). Adolescents demonstrated prominent negative emotions (CDI2) and low self-esteem (CDI3) regardless of whether they have NSSI behavior or not.

2.2 Centrality measure analysis

In terms of ExpectedInfluence, Adolescents with NSSI behavior had higher values of negative emotions (CDI2) and anhedonia (CDI1), while adolescents without NSSI behavior had higher values of anhedonia (CDI1) and somatic symptoms (MASC4).

2.3 Bridge symptoms analysis

Anhedonia (CDI1, strength value was 2.258) and

somatic symptoms (MASC4, strength value was 1.997) were the more important bridge symptoms in adolescents with NSSI behavior.

2.4 Network accuracy, stability, edge weight, and strength centrality differences

The casedrop bootstrap method showed that the median, proximity, and intensity values remained consistent even after the sample was dropped. The CS value of the node strength was 0.75, indicating that 75% of the samples could fall while maintaining stability. The CS coefficient of the strength was satisfactory, which showed that the accuracy and stability of the network graph centrality index were good.

Conclusion The results of the present study showed that the overall network structure diagrams were similar between the two network structures of adolescents with and without NSSI behaviors, but the links between the symptoms were different. Adolescents with NSSI behaviors showed prominent depression and anxiety problems with a core factor of anhedonia. Anhedonia is a key factor influencing adolescents' emotion regulation. We hypothesized that adolescent non-suicidal self-injury is an emotional disorder and that anhedonia plays an important role in preventing and intervening in adolescent non-suicidal self-injurious behavior.

关键词: Adolescents, Non-suicidal self-injury, Negative mood, Sleep, Network analysis

Clinical, Neuropsychological, Family Environmental and Brain Microstructural Characteristics of ADHD Subgroups with Distinct Subcortical Volumetric Profiles

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Objective Attention Deficit/Hyperactivity Disorder (ADHD) is a heterogeneous disease. The current

study aimed to explore whether it is possible to subgroup children with ADHD using their subcortical volumes

Methods Structural magnetic resonance images (sMRI) and diffusion tensor images (DTI) were obtained in a cohort of subjects with ADHD ($n = 171$) (all aged 6-15 years) and their healthy counterparts ($n = 95$). A series of clinical and family environmental scales, as well as neuropsychological tests, were applied. Latent profile analysis (LPA) was applied to classify the ADHD participants based on their subcortical volumes, and subsequent between-group comparisons on the clinical, neuropsychological, and family environmental measures were carried out, with age and sex as covariates. In addition, voxel-wise between-group comparisons were also performed on the gray matter volume, white matter volume, and four DTI measures, fractional anisotropy (FA), radial diffusivity (RD), mean diffusivity (MD), axial diffusivity (AD). Medication responses to either methylphenidate or atomoxetine in real-world settings were also documented and analyzed

Results LPA revealed that participants with ADHD could be grouped into two subgroups (Cluster-1 and Cluster-2). Compared with the control group, Cluster-1 had larger volumes in most subcortical regions, while Cluster-2 had smaller volumes. Subsequent analyses revealed minimal differences between the two ADHD subgroups in most clinical and family environmental measures, except that Cluster-1 had more social problems than Cluster-2 ($P=0.0048$). Compared with the control group, Cluster-2 performed worse in several cognitive domains, including processing speed, response inhibition, sustained attention, and planning, while Cluster-1 was only impaired in sustained attention and planning. Although Cluster-1 had greater subcortical volume, Cluster-2 had greater white matter volume, mainly in the right frontal cortex. In addition, Cluster-2 had higher FA values and lower RD values, mainly in the corpus callosum (CC), compared with the control group. Cluster-1 had higher AD, RD, and MD values than Cluster-2 in bilateral wide-spreading regions. The two ADHD groups do not differ in response rates to methylphenidate and atomoxetine

Conclusion There are indeed different subgroups of ADHD participants with different subcortical volumes. These subgroups of ADHD participants displayed shared clinical and family environmental profiles but with distinct cognitive and brain morphological profiles. The current study contributed to this field by providing insights into the possibility and necessity of classifying ADHD participants according to their brain structural features.

关键词: ADHD, subcortical volumes, subgrouping, treatment responses

Association of Pain Intensity and Sensitivity with Suicidal Ideation in Adolescents with Depressive Disorder

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Objective The purpose of this study was to further explore the association of pain intensity and sensitivity with suicidal ideation in adolescents with depressive disorder by comparing the differences in pain intensity and sensitivity between adolescent patients with depressive disorders and healthy controls

Methods A consecutive enrollment method was used to select 158 adolescent patients with depressive disorders from three hospitals in Anhui Province as the MDD group, and 47 healthy adolescents were recruited as the control group. The subjects' suicidal ideation was assessed using the Positive and Negative Suicide Ideation scale (PANSI), and the intensity of somatic pain was assessed using the Numerical Rating Scale-11 (NRS-11). Subjects were assessed for forearm and tibial pain sensitivity using a hand-held pressure pain instrument, and experimental pain sensitivity measures included pressure pain threshold (PPT) and pressure pain tolerance (PTO). Differences in pain intensity and sensitivity between the MDD group and the control group were compared, and the association of pain intensity and sensitivity with suicidal ideation was analyzed

Results The incidence of physical pain in adolescent depressive disorder was higher at 88.6%, which was significantly higher than the control group ($p < 0.001$), and the pain intensity in the MDD group (3.77 ± 2.48) was significantly higher than the control group (0.617 ± 0.99) ($p < 0.001$). Forearm and tibia pain tolerance in the MDD group (forearm 105.37 ± 41.46 ; tibia 121.29 ± 41.60) was significantly higher than that of the control group (forearm 91.92 ± 37.62 ; tibia 105.47 ± 35.52) ($p < 0.05$). Linear regression analysis showed that the greater the pain intensity and pain tolerance, the higher the total PANSI score. Binary logistic regression showed that pain intensity was an influencing factor for suicidal ideation

Conclusion Adolescents with depressive disorders have higher pain intensity and lower pain sensitivity than healthy adolescents. Increased pain intensity and pain tolerance were positively correlated with suicidal ideation.

关键词: Adolescents, Depressive disorder, Pain intensity, Pain sensitivity, Suicidal ideation

EEG and Eye Tracking Multimodality Approach for Early Diagnosis of Autism Spectrum Disorder

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Objective The etiology and heterogeneity of ASD have not been fully elucidated, posing significant challenges in accurately diagnosing the condition. By focusing on the overlooked domain of ASD symptomology, restrictive repetitive behaviors, a novel multimodal approach that not only incorporates EEG and eye tracking metrics, but also developmental parameters need to

be explored for the improved early diagnosis of the condition

Methods This study comprised 32 children between 2-4 years old in the ASD group and 27 typically developing children (TD) in the control group, matched for age and sex with no psychiatric or neurological disorders. All participants underwent a Gesell developmental assessment. The experimental stimulus utilized was the restricted interest stimulation paradigm, which consisted of 24 standardized images associated with common autistic interests. The experimental process included simultaneous data collection using the Eye-link1000plus eye tracker and EGI synchronization equipment. Calibration was conducted, and participants were sequentially presented with the 24 images. The analysis pipeline included preprocessing and feature selection from the eye-tracking and EEG data, along with applying statistical techniques such as t-tests, Pearson correlations, ROC curves, and logistic regression for testing associations, model construction and evaluation

Results We observed a positive correlation ($R=0.6805$, $p=0.0019$) between the time-frequency results in the α -band in the occipital region of children with autism spectrum disorder (ASD) and their pupil response under restricted interest stimulation. The area under curve (AUC) for predicting ASD was 0.73 (95%CI: 0.56-0.91) using only the α -band time-frequency index in the occipital region, while it was 0.8378 (95%CI: 0.72-0.98) using only the oculomotor pupil index alone. By fusing the different data modalities including the developmental parameter adaptability, we achieved an AUC of 0.84% for predicting ASD

Conclusion This study illuminates the unique propensities of children with ASD for non-social objects that supports the distinct neuronal activity patterns associated with such restrictive interests. Our multimodal prediction model, incorporating occipital alpha band time-frequency index, pupil size, and adaptive ability displayed strong predictive capabilities for ASD achieving an AUC of 0.84%, superior to our unimodal approaches for ASD prediction

关键词: ASD, eye tracking, EEG, multimodal, early diagnosis, biomarkers

学龄期青少年认知功能和大脑皮层激活的神经关联：一项大样本的 VFT 任务下的近红外光谱脑功能成像研究

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目的 比较不同学龄期青少年的认知功能及 VFT 任务下的大脑激活模式，探讨认知功能与不同大脑激活模式之间的关联

方法 2023 年 4 月到 2024 年 4 月在湖北省孝感市对 10-18 岁的学龄期青少年进行心理健康筛查，主要包括自评量表评估（PHQ-9 和 GAD-7）、认知功能评估（MCCB）、精神科评估。最终纳入心理健康的青少年共 681 名，其中小学组 295 人、初中组 203 人以及高中组 183 人。使用 fNIRS 检测受试者执行言语流畅性任务（VFT）期间的大脑血流动力学变化。以 PHQ-9 和 GAD-7 分数为协变量，对三组的大脑 Oxy-Hb 浓度进行协方差分析；对三组有差异通道和兴趣区的 Oxy-Hb 浓度和 MCCB 分数进行偏相关分析。

结果 （1）小学组的处理速度的得分显著高于初中组，且初中组显著高于高中组；而注意警觉、言语学习和记忆、推理及解决问题能力中，小学组的得分显著低于初中组，且初中组显著低于高中组。在工作记忆、视觉学习和记忆以及社会认知这三项，小学组和初中组的得分没有差异；而高中组的得分均显著高于小学组和初中组。（2）执行言语流畅性任务时，小学组的右侧 Broca、背外侧前额叶（DLPFC）以及前运动皮层和辅助运动皮层区（SMA）的激活水平较对照期有所下降；而初中组及高中组的大脑激活水平较对照期有所增加。（3）三组在 VFT 任务下激活水平相比，在 Broca、DLPFC、额极（FPR）以及 SMA 区，三组之间的激活水平存在显著差异。进一步两两比较分析，在左侧 Broca 和 FPR 区，小学组的激活水平显著低于初中组，且初中组显著低于高中组。在右侧 DLPFC 和 SMA 区，小学组的激活显著低于高中组，而小学组和初中组、初中组和高中组之间的激活水平没有显著性差异。右侧 Broca 区，小学组的激活水平显著低于初中组和高中组，但初中组和高中组两组之间的激活水平没有差

异。（4）偏相关分析提示，小学组注意警觉得分与 DLPFC、右侧 Broca 区的激活呈正相关，视觉学习和记忆的得分与右侧 DLPFC 的激活呈正相关。初中组处理速度得分与左侧 Broca 的激活呈负相关，而注意警觉得分与右侧 Broca、右侧 SMA 区以及左侧 FPR 区的激活均呈正相关。高中组推理及解决问题能力得分与 FPA 区和右侧 Broca 区的激活均呈正相关，工作记忆得分与右侧 SMA 区的激活成呈相关。

结论 在 VFT 任务下，学龄期青少年大脑激活模式不同；不同的激活模式可能与认知功能的不同有关。

关键词：学龄期,青少年,认知,近红外,Broca,背外侧前额叶

基于功能及结构脑网络的孤独症辅助诊断方法

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目的 孤独症谱系障碍是发生在儿童早期的复杂神经发育障碍性疾病，严重影响儿童的社会功能和生活质量。本文基于功能磁共振成像（fMRI）和弥散张量成像（DTI）进行研究，旨在通过对孤独症患者的功能-结构脑网络进行融合建模和分析，提高孤独症辅助诊断的性能。

方法 本文提出了基于超图结构的功能-结构脑网络融合框架，共包含四个步骤：（1）首先使用 AAL 脑模板将每个受试者的大脑划分为 116 个不同的区域，这些区域覆盖了大脑的各个主要结构，如额叶、顶叶、颞叶等。（2）在功能脑网络超图结构建模模块中，提取每个脑区的时间序列信号并计算不同脑区之间的皮尔逊相关系数以量化其关联程度。将每一个脑区作为节点，将第 i 个脑区和其他所有脑区之间的皮尔逊相关系数作为其节点特征，通过 k 近邻算法生成包含第 i 个节点及其邻居节点的超边，重复该步骤即可得到功能脑网络的全部超边。

（3）在结构脑网络超图结构建模模块中，使用 DTI 数据获取不同脑区之间的纤维连接数矩阵以捕捉结构脑网络的高阶关联特征。在结构脑网络超图中，将不同的脑区作为节点，每一个脑区的聚类系数和

度中心性作为其节点特征, 结构脑网络超图的超边生成方法与功能脑网络超图相同。(4) 在得到功能脑网络超图和结构脑网络超图之后, 分别使用超图神经网络对其进行超图语义计算, 并将得到的节点特征进行拼接融合送入分类器中进行预测。最终的结果使用准确率、敏感性、特异性、F1 分数进行评估。

结果 本文提出的方法在公开数据库 ABIDE 中的 TCD 数据集和 NYU 数据集上进行了验证, 在 TCD 数据集上取得了 0.77 的准确率、0.75 的敏感性、0.80 的特异性、0.77 的 F1 分数, 相较于基于图结构的 GraphSage 方法在各项指标上分别提升了 10%、9%、9%和 7%; 在 NYU 数据集上取得了 0.83 的分类准确率, 0.94 的敏感性、0.67 的特异性、0.75 的 F1 分数, 在各项指标上相较于 GraphSage 分别提升了 25%、24%、26%和 30%。上述实验结果表明本文提出的方法可以有效的实现孤独症的精确辅助诊断, 具有较好的临床应用价值。

结论 本文提出了一种基于超图结构的功能-结构脑网络融合框架, 通过构建被试的功能与结构脑影像中的高阶关联并进行融合, 有效提高儿童孤独症的辅助诊断性能, 在公开数据集 ABIDE 的实验结果表明本文提出的方法优于对比方法, 具有较好的临床应用价值。

关键词: 孤独症,超图,辅助诊断,神经发育障碍,脑网络

The Prevalence and Associated Risk Factors of Depression Symptoms in Schoolchildren and Adolescents Aged 9-18 Years in Zhejiang, Southeast China

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Objective This study aims to ascertain the prevalence and identify potential risk factors associated with depression among children and adolescents attending schools in the Zhejiang province, Southeast China

Methods A cross-sectional descriptive study design was employed to randomly select 8287 adolescent students in schools within Zhejiang province, China,

who met the study criteria. These participants completed standardized questionnaires pertaining to their socio-demographic characteristics and health history. Subsequently, they were assessed for depressive symptoms using the CES-D, with those scoring 20 or higher considered to have significant depression symptoms. Logistic regression analyses were then utilized to identify factors associated with these symptoms

Results A total of 8287 adolescents were included in the study, yielding a response rate of 98.71%. The sample consisted of 4428 (53.43%) boys and 3859 (46.57%) girls, aged between 9 and 18 years, with a mean age of 13.8 (SD 1.3). The prevalence of depression symptoms in the population was found to be 22.96%, with a higher prevalence observed in girls (26.94%) compared to boys (18.40%). Multivariate logistic regression analyses revealed that sex, grade level, academic performance, number of friends, parental absence, family income, family conflict, and time spent on parenting were independently associated with depression symptoms

Conclusion This study found a high prevalence of significant depression symptoms among school children and adolescents in Zhejiang province, southeast China. Risk factors associated with this disorder included being female, being in a higher grade, poor academic performance, having few friends, lack of parental presence, low family income, family conflict, and limited parental involvement. Culturally sensitive psychological interventions are necessary to address and prevent depression among this population

关键词: Depression, Depression symptoms, Adolescents, CES-D, China

青少年抑郁障碍患者非自杀性自伤行为与 25 羟维生素 D3 和血脂水平的相关性研究

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目的 抑郁障碍 (MDD) 在青少年人群中的发

病率逐年增高,非自杀性行自伤(NSSI)行为也是其常见的临床表现。有研究结果显示维生素D和血脂水平与抑郁障碍有关,但是其是否与NSSI有关尚不清楚。故本文目的在于比较伴有NSSI行为青少年MDD患者的25羟维生素D3[25(OH)D3]和血脂水平,并探索其对NSSI的诊断价值。

方法 选取自2020年10月至2022年3月在安徽医科大学附属巢湖医院精神科和合肥市第四人民医院就诊的青少年MDD患者129例,参考DSM-5中NSSI的诊断标准将其分为NSSI组(n=77)和非NSSI组(n=52)。采用青少年自杀意念量表(PANSI)、失眠严重指数(ISI)、流调抑郁量表(CES-D)评估患者的临床症状,采集空腹静脉血,检测样本中25(OH)D3和血脂水平,并进行两两比较。进一步采用二元Logistic回归分析探究青少年MDD患者发生NSSI行为的影响因素,并绘制受试者工作特征(ROC)曲线评估25(OH)D3和血脂水平对NSSI行为的诊断价值。

结果 两组患者BMI、病程、父母婚姻状况、抗抑郁药物服用比较,差异无统计学意义($P>0.05$);NSSI组的年龄低于非NSSI组,而PANSI总分、ISI总分、CES-D总分高于非NSSI组($P<0.05$)。25(OH)D3和血脂水平:两组TG水平差异无统计学意义($P>0.05$);NSSI组25(OH)D3水平低于非NSSI组,而TC、HDL-C和LDL-C水平高于非NSSI组($P<0.05$)。二元Logistic回归分析显示,在不同模型中LDL-C[OR=5.695, 95%CI=2.422~13.388, $P<0.001$]和25(OH)D3[OR=0.871, 95%CI=0.768~0.987, $P<0.05$]都是青少年MDD患者伴有NSSI行为的影响因素。LDL-C和25(OH)D3评估青少年MDD患者NSSI行为发生风险的AUC分别为0.73[95%CI(0.65, 0.82), $P<0.001$]、0.62[95%CI(0.52, 0.72), $P=0.023$];LDL-C联合25(OH)D3水平诊断青少年MDD患者NSSI行为的AUC为0.77[95%CI(0.69~0.85), $P<0.001$],灵敏度为77.92%、特异度为67.31%。

结论 NSSI在青少年MDD中很常见,且与年龄、自杀意念、25(OH)D3和LDL-C水平有关。鉴于NSSI与25(OH)D3和LDL-C水平之间的相关关系,临床应定期检测其动态变化并对症处理。

关键词: 抑郁障碍,青少年,非自杀性自伤,25(OH)D3,LDL-C

Psychosocial Predictors of Persistent Non-suicidal Self-injury in Adolescents with Major Depressive Disorder: A Longitudinal Study

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Objective Major depressive disorder (MDD) is increasing in prevalence in the adolescent population, with non-suicidal self-injury (NSSI) as a common clinical manifestation. Although several studies have explored the relationship between MDD and NSSI, most have been cross-sectional studies, making it difficult to show a causal relationship. Therefore, this study aimed to explore the predictors of the persistent occurrence of NSSI in adolescents with MDD from a longitudinal research perspective

Methods Data were collected from 163 adolescents with MDD. These adolescents were assessed for NSSI at baseline and the second year. The 24-item Hamilton Depression Rating Scale (HAMD-24), the Childhood Trauma Questionnaire (CTQ), the Positive and Negative Suicide Ideation (PANSI), the Center for Epidemiological Survey, Depression Scale (CES-D), the Adolescent Life Events Scale (ASLEC), the Insomnia Severity Index (ISI), the Interpersonal Reactivity Index (IRI), and the Toronto Alexithymia Scale (TAS-20) were used to assess the patient's psychological status at baseline. We used binary logistic regression for the predictive effect of these factors on persistent NSSI. The diagnostic value of relevant influences on persistent NSSI behavior was also assessed by plotting the subject's work characteristics (ROC) curve

Results HAMD (blocking) are essential in predicting persistent NSSI behaviors (OR =4.38, $P=0.019$). Persistent NSSI behaviors were predicted by age (OR = 1.633, $P=0.004$) and age of onset (OR =0.682, $P=0.009$). And there was a significant association between NSSI behaviors and more general family relationships (OR =0.077, $P=0.019$). Finally, The AUC for the combined diagnosis of persistent occurrence of NSSI behaviors in

adolescents with MDD by HAMD (blocking), age, age of onset, and general family relationship was 0.792 [95% CI (0.698 to 0.886), $p < 0.001$], with a sensitivity of 86.8% and a specificity of 52.8%

Conclusion Among adolescents with MDD with persistent NSSI behaviors, HAMD (blocking) and, more generally, family relationships are at greater risk of persistent NSSI behaviors. Therefore, it may be helpful for patients to reduce the harm of NSSI by improving family relationships and treating depressed mood

关键词: Major depressive disorder; Adolescent; Non-suicidal self-injury; Longitudinal study

Metabolomic Changes in Major Depressive Disorder Among Adolescent Females with Or without Suicide Attempts

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Objective The incidence of major depressive disorder (MDD) is high among adolescent females, and MDD is often accompanied by suicide attempts (SA), which seriously negatively affect physical and mental health. However, changes in lipids, thyroid hormone, and brain metabolism among female adolescents with MDD and the relationships between these three markers and MDD with or without SA have yet to be elucidated. In this study, the changes in thyroid hormones, blood lipids, and brain metabolism-related factors in female adolescents with MDD were analyzed, and synergistic changes among the three factors were observed to reveal the metabolic and neural mechanisms related to SA

Methods This study was conducted by the Declaration of Helsinki. Female adolescents with MDD in the outpatient and inpatient departments of Wuhan Mental Health Centre (WMHC) from October 2021 to October 2023 were enrolled. The Medical Ethics Committee of WMHC approved the study protocol, and all the subjects provided written informed consent. We enrolled 71 MDD patients with SA (MDD+SA), 66 MDD patients without SA (MDD-SA), and 47 healthy controls

(HCs). We collected and analyzed the subjects' clinical characteristics, blood lipid levels, thyroid hormone levels, and magnetic resonance spectroscopy (MRI) data. 1) The clinical data of all the subjects were collected from medical records, and each participant completed the Beck Scale for Suicide Ideation-Chinese Version (BSI-CV), the Adolescent Self-Rating Life Events Checklist (ASLEC), and the Adolescent Social Support Scale (ASSS); 2) Venous plasma was collected through venepuncture of a cubital vein in the arm at 7-10 a.m. on the day after patient enrolment. An automatic chemiluminescence analyzer was used to detect thyroid stimulating hormone (TSH), free triiodothyronine (FT3), and free thyroxine (FT4); 3) The triglyceride (TG), total cholesterol (TC), high-density lipoprotein (HDL) and low-density lipoprotein (LDL) levels were measured with an AU680 Beckman Coulter automatic biochemical analyzer; 4) Magnetic resonance imaging (MRI) scanning was performed within 48 hours after completion of the psychological scale and measured the peak areas of N-acetyl aspartic acid (NAA), Cho, and Cr in the anterior cingulate cortex (ACC), prefrontal cortex (PFC), and thalamus

Results Low levels of social support, high levels of life stress, and high levels of suicidal ideation (SI) were risk factors for SA. In MDD patients, 1) the TSH was positively correlated with TG and NAA/creatinine in the PFC and negatively correlated with HDL and the choline/creatinine ratio in the thalamus; 2) free triiodothyronine was negatively correlated with the choline/creatinine level in the thalamus; 3) total cholesterol, TG, LDL, and choline/NAA in the PFC were positively correlated with the severity of SI and suicide risk; and 4) NAA/creatinine in the thalamus was negatively correlated with the severity of SI and suicide risk

Conclusion This study confirmed multiple differences in metabolic indexes among the MDD+SA, MDD-SA, and HC groups. Moreover, there were significant synergistic changes among the three types of factors, and some single/comprehensive indicators may be potential mechanisms or related to the appearance and details of SA, especially the thalamic NAA/Cr ratio. The findings of this study provide new evidence for understanding MDD and suicide-related metabolic-neural

mechanisms

关键词: Major depressive disorder; Metabolism; Thyroid function; Blood Lipids; Magnetic resonance spectroscopy; Brain

中文版社交技巧提升系统家长评定量表的信效度检验

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目的 分析和验证中文版社交技巧提升系统家长评定量表(Social Skills Improvement System-Rating Scales (Parent version), SSIS-RS) 在青少年人群中的信度和效度。

方法 采取分层整群抽样的方法对 1486 名 12~18 岁青少年家长进行中文版 SSIS-RS 调查, 并以社交反应量表和长处与困难问卷作为校标效度检验工具。间隔 1 个月后进行重测, 对获取的数据进行描述性统计、相关性分析和信效度分析。

结果 项目分析显示各题项与总量表和分量表之间的得分呈显著性相关 ($r=0.179\sim0.782$, $P<0.001$), 且各题项在高、低分组上的差异均达到显著水平 ($t=4.035\sim37.038$, $P<0.001$)。验证性因素分析支持中文版 SSIS-RS 中社交技能分量表七因素(即沟通、合作、维护权利、责任感、同理心、参与投入和自我控制) ($\chi^2/df=3.377$, $RMSEA=0.049$, $GFI=0.864$, $AGFI=0.841$, $CFI=0.926$, $NFI=0.899$, $IFI=0.927$, $TLI=0.918$) 和问题行为分量表五因素结构(即外化问题、欺凌、多动/注意力不集中、内化问题和孤独症谱系障碍) ($\chi^2 / df=3.310$, $RMSEA=0.049$, $GFI=0.917$, $AGFI=0.891$, $CFI=0.952$, $NFI=0.933$, $IFI=0.952$, $TLI=0.941$)。社交技巧分量表与亲社会行为呈正相关 ($r=0.637$, $P<0.001$), 问题行为分量表与社交障碍和困难行为呈正相关 ($r=0.765$ 、 0.688 , $P<0.001$)。总量表的 Cronbach's a 系数为 0.934, 社交技能分量表的 Cronbach's a 系

数为 0.972, 问题行为分量表的 Cronbach's a 系数为 0.963, 各维度的 Cronbach's a 系数在 0.797~0.907 之间。中文版 SSIS-RS 总分、社交技巧分量表总分和问题行为分量表总分的重测相关系数分别为 0.665、0.871 和 0.598, 各维度的重测系数在 0.507~0.823 之间 ($P<0.001$)。青少年女性在社交技巧分量表总分以及沟通、维护权利、责任感和同理心维度的平均分高于青少年男性。

结论 中文版 SSIS-RS 在中国青少年人群中具有良好的信效度, 能有效地评估中国青少年的社交技巧和问题行为。

关键词: 社交技巧, 问题行为, 信效度, 青少年

Language Feature-based Data Mining in Autism Spectrum Disorders Applications in Recognition

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Objective This review systematically reviews the recent advances in the identification of autism spectrum disorder (ASD) by analyzing linguistic features of patients through data mining technology, and provides references for the diagnosis and treatment of ASD in the future

Methods In this review, extensive data retrieval strategies were used to collect literatures related to the diagnosis and recognition of ASD by analyzing linguistic features of patients through data mining in recent five years from PubMed, Google Scholar, Cochrane Library and other authoritative databases. Keywords cover the core symptoms of ASD and many aspects of data mining technology. In the screening process, only papers with high research quality, focusing on the application of language-related feature data mining in the identification of ASD, with clear methods and peer review were included, and irrelevant literatures with unknown methods were excluded

After two-stage screening, literature with high relevance is selected for comprehensive reading, and key

information is extracted, such as research design, sample characteristics, data sources, data mining techniques used and main research results. The application, effectiveness and accuracy of data mining technology in the identification and diagnosis of ASD in various studies were summarized by using narrative analysis method, and the value and contribution of data mining of various data sources related to language characteristics (text, scale, speech, body language, neuroimage, etc.) to the diagnosis of ASD was deeply discussed.

Results Data mining technology has achieved remarkable results in the identification of ASD. Natural language processing (NLP) and machine learning (ML) techniques can effectively mine unique language patterns associated with autism in medical text data, for example, successfully predicting ASD risk in social media content analysis. For scale data, ML technology achieves efficient diagnosis, and a deep neural network study even exceeds the judgment of professional doctors in diagnostic efficiency. In the aspect of speech features, the application of data mining technology can achieve up to 90% accurate ASD detection, especially in the analysis of children's natural language environment. The application of eye-tracking technology to body language studies has revealed facial feature gaze patterns unique to infants at risk for ASD. In addition, multi-modal data fusion also showed its advantages, combining NLP with speech analysis to conduct overall analysis of children's language text and audio data, which greatly improved the automatic classification accuracy of autism, and some studies found that the classification accuracy reached 86.71%. These studies indicate that data mining technology has broad application prospects in multi-dimensional characterization of ASD and improving diagnostic efficiency

However, there are also some challenges and limitations: for example, unbalanced or skewed data may lead to overfitting of the model, affecting diagnostic accuracy and generalization ability; Handling sensitive medical information may violate privacy protection laws and fail to ensure data security; There is a technology application threshold, which requires interdisciplinary expertise, increasing the complexity and cost of technology application.

Conclusion Data mining technology provides a new direction and method for the diagnosis and treatment of ASD, and its role in the future medical practice will be increasingly important. In order to realize the full potential of these technologies, it is recommended to strengthen interdisciplinary research, optimize the data processing process, improve the accuracy and reliability of the technology, and focus on privacy protection and ethical review to promote progress in the field of ASD diagnosis and treatment.

关键词: autism spectrum disorder(ASD); data mining; language; identification

青少年抑郁障碍快感缺失的神经机制研究

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目的 快感缺失作为青少年抑郁障碍 (Adolescent depressive disorder, ADD) 的核心症状, 被视为内表型标记。鉴于前额叶-纹状体网络低功能状态可能是成人抑郁障碍快感缺失奖赏特征, 因此有必要探索 ADD 快感缺失患者临床特征及前额叶-纹状体功能连接变化。

方法 纳入 ADD 患者及健康对照, 采集一般资料, 临床量表 (儿童抑郁量表 (Children's Depression Inventory, CDI)、青少年多维焦虑量表 (the Multidimensional Anxiety Scale for Children, MASC) 及青少年生活事件量表 (Adolescent Self-Rating Life Events Check List, ASLEC)) 及静息态功能磁共振 (resting-state functional magnetic resonance imaging, rs-fMRI) 数据, 以双侧壳核及双侧尾状核为种子点, 进行全脑体素的功能连接分析。

结果 共纳入 92 例 ADD 快感缺失、58 例 ADD 非快感缺失患者及 51 例健康被试。ADD 快感缺失与非快感缺失在 CDI、MASC 及 ASLEC 及因子分方面有统计学差异 (all $p < 0.05$)。

以右侧尾状核为感兴趣区, 三组差异分析, 发现在右背外侧额上回、顶下缘角回、右侧角回、左侧 cerebellum_Crus1 及双侧 cerebellum_6 有统计学差异 ($p < 0.05$, AlphaSim 校正)。事后分析, 快感缺失组右侧尾状核与右背外侧额上回、左侧

cerebellum_Crus1 及右侧角回的 FC 低于非快感缺失组 ($p < 0.05$, AlphaSim 校正)。ADD 快感缺失右尾状核与右角回 FC 降低, 且与儿童抑郁量表的低效能呈负相关 ($r = 0.216$, $p = 0.038$)。

以左侧壳核为感兴趣区, 三组差异分析, 发现在右背外侧额上回、右侧海马旁回及双侧 cerebellum Crus1/2 有统计学差异 ($p < 0.05$, AlphaSim 校正)。事后分析比较, ADD 快感缺失在右背外侧额上回与左侧壳核的 FC 低于非快感缺失组 ($p < 0.05$, AlphaSim 校正)。ADD 快感缺失该 FC 与儿童抑郁量表中的快感缺失负相关 ($r = 0.216$, $p = 0.038$)。

结论 快感缺失可能是 ADD 患者的内表型。ADD 快感缺失组右尾状核与右角回 FC 降低, 与低效能呈负相关, 左侧壳核与右背外侧额上回的 FC 降低, 与快感缺失负相关。进一步提示前额叶-纹状体功能抑制可能是 ADD 快感缺失的特异性脑表现。

关键词: 青少年抑郁障碍; 快感缺失; 前额叶-纹状体环路; MRI

Attention Deficit Hyperactivity Disorder (ADHD) and Self-harm in Chinese Children and Adolescents: A Mediation by Resilience

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Objective Existing evidence suggests that resilience may play as a mediator in the association between attention deficit hyperactivity disorder (ADHD) and self-harm (SH) in youths. However, no published studies have ever thoroughly discussed this topic. We aim to analyze the mediation by resilience in ADHD-SH association by using a large representative sample of Chinese children and adolescents

Methods A total of 17151 study subjects chosen from 3 study sites of the ongoing Mental Health Survey for Children and Adolescents in Yunnan (MHSCAY) were included into the final analysis. Valid self-reporting instruments for measuring ADHD symptoms, resilience, and SH among children and adolescents were used for data collection. Based on sequential multivariate logistic regression models fitting results, a series of path models were constructed to estimate the mediation by resilience in ADHD-SH association. Stratified analysis was used to check for possible effect modification by key factors

Results Resilience played as a significant mediator, mediated 33.12%, 28.10%, 37.78% of the total associations between ADHD symptoms and SH prevalence, SH repetition, SH severity. The “outer resources” dimensions of resilience, which largely measure social support from parents and peers, presented much stronger mediation. Stratified analysis by age, sex, ethnicity, and left-behind status revealed prominent effect modification by the four factors in mediation of resilience

Conclusion Resilience-based intervention measures, especially those targeting at rebuilding parental and peer social support, might be effective in preventing ADHD symptoms related SH in Chinese children and adolescents.

关键词: attention deficit hyperactivity disorder (ADHD), self-harm, children and adolescents, resilience, mediation

Sex- and Age-dependent Alterations in White Matter Microstructure Among Pediatric Patients with Social Anxiety Disorder

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Objective Social anxiety disorder (SAD) significantly disrupts social interactions and its neurobiological underpinnings remain poorly understood. Previous studies have identified atypical brain structures in individuals with SAD, noting pronounced sex and age disparities in the disorder's prevalence and severity. This is particularly relevant during early developmental stages, when the brain undergoes crucial changes. Our team previously pioneered investigations into sex- and age-specific variations in cerebral grey and white matter volumes in pediatric SAD cases. This study seeks to further elucidate the variations in white matter morphology attributable to sex and age within this group

Methods The study comprised 144 participants who, along with their guardians, consented to a protocol sanctioned by the Ethics Committee at the Shanghai Mental Health Center. Of these, 76 (44 females; aged 9.1 to 17.8 years) were deemed clinically normal and 68 (45 females; aged 9.3 to 17.7 years) were diagnosed with SAD by paediatric psychiatrists, with careful matching for sex and age. All subjects underwent high-resolution T1- and diffusion-weighted imaging on a Siemens 3.0-Tesla MRI scanner. We quantified white matter morphology using standard diffusion tensor imaging metrics such as fractional anisotropy (FA), mean diffusivity (MD), axial diffusivity (AD), and radial diffusivity (RD). Each parameter was analysed using voxel-based statistical parametric mapping, incorporating cluster-level adjustments for multiple comparisons

Results Significant sex- and age-related differences were observed in white matter diffusivity (AD, RD, MD) at the outer regions of the bilateral cerebella, whereas FA changes were not notable across the brain. In clinically normal males, white matter diffusivity did not correlate with age; however, in male SAD patients, older age was associated with increased diffusivity declines. In contrast, among females, normal aging correlated with decreased white matter diffusivity, whereas in female SAD patients, it correlated with an increase

Conclusion Our research identified focal

changes in white matter diffusivity at the cerebellar exterior in pediatric SAD patients, distinctly influenced by both sex and age. These findings underscore that the critical neurodevelopmental phase from childhood to adolescence manifests differently in male and female SAD patients, characterized by unique age-dependent cerebral alterations.

关键词: social anxiety disorder; pediatric psychiatry; white matter; mean diffusivity; axial diffusivity; radial diffusivity

伴非自杀性自伤青少年抑郁症的脑电微状态研究

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目的 微状态类似于语言中的字母,由几个微状态组成的短片段(k-mers)类似于单词。本研究的目的是传统微状态动力学指标及k-mers是否可以用作神经生理标志物来区分伴非自杀性自伤(Nonsuicidal self-injury, NSSI)的重度抑郁症(Major depressive disorder, MDD)青少年和不伴NSSI的MDD青少年。

方法 我们使用三种不同的微状态分析方法比较年龄在12-17岁之间两组人群(MDD+NSSI组:116名伴NSSI的MDD患者;MDD组:74名不伴NSSI的MDD患者)的传统微状态动力学差异;使用传统微状态动力学指标或k-mers,加入年龄及性别共同作为特征,使用支持向量机(Support Vector Machine, SVM)作为分类模型,进行嵌套交叉验证,计算灵敏度、特异度、准确率及受试者工作特征曲线下面积(Area under the receiver operating characteristic curve, AUC)以评估模型性能。

结果 使用改进的微状态分析方法,MDD+NSSI组微状态B的出现频次大于MDD组微状态B的出现频次,MDD+NSSI组C到B的转换概率大于MDD组C到B的转换概率。使用年龄、性别及传统微状态动力学参数作为特征的模型可获

得 0.692 的最佳 AUC；使用年龄、性别及 5-mers 作为特征的模型 AUC 高达 0.739。

结论 我们的研究表明改进的微状态分析方法可能优于常见的微状态分析方法，并且微状态序列 k-mers 可能是更具潜力的能够在个体水平识别伴 NSSI 的 MDD 青少年的神经生理标志物。

关键词：青少年，抑郁症，非自杀性自伤，微状态序列，机器学习

ASD 幼儿两岁前的声学特征分析及预测模型的构建

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目的 探究孤独症谱系障碍 (ASD) 患儿 9~18 月龄时静止脸试验 (SFP) 下声学特征及其作为预测指标的可行性。

方法 纳入南京医科大学孤独症专病队列中的 88 例 9~18 月龄高危 ASD 幼儿，随访至 24 月龄，根据随访结果分为 ASD 组和 TD 组，提取两组被试在 9~18 月龄时静止脸试验 (SFP) 下的声学特征，分析两组声学特征的差异性，并建立基于静止脸试验 (SFP) 下声学特征的预测模型。

结果 与 TD 组相比，ASD 组 SFP 下声学特征在韵律、频谱及响度方面存在显著增高。通过随机森林算法构建了一个分类模型，模型的准确率：0.8148，精确率：0.75；召回率：0.6667；F1 分数：0.7059；AUC 值为 0.8395。

结论 通过对 9~18 月龄幼儿进行声学特征的收集及分析，发现 24 月龄时确诊 ASD 的幼儿与正常幼儿相比，部分声学特征如韵律、响度等存在显著差异，通过随机森林算法构建了一个分类模型，并使用十折交叉验证和网格搜索进行参数调优。尽管模型在测试集上的准确率较高，但通过进一步优化和调整模型参数，可以有效提升模型预测性能。未来的研究可以探索更多的特征选择方法和参数调

优技术，以进一步提升模型的准确性和稳定性。

关键词：孤独症谱系障碍；静止脸试验；声学特征；预测模型

The Volume of The Left Pallidum Mediates The Effect of The Polygenic Risk of ADHD on The Working Memory Deficit in Daily Life

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Objectives The current study aimed to systematically examine the interrelationship among genetic liability of ADHD, subcortical volumes, and daily-life executive function in a clinical cohort consisting of children with ADHD and their healthy peers

Methods In total, two hundred and eighty-five ADHD subjects and 108 healthy controls were enrolled. The Behavior Rating Inventory of Executive Function (BRIEF) was filled out by parents or caregivers of each subject. All participants were genotyped, and the polygenic risk scores were calculated. Structural magnetic imaging (MRI) scans were collected in a sub-sample of 182 ADHD patients and 94 healthy controls, and each subcortical region's volume was extracted. Linear regression models and mediation models were built to test the gene-brain-behavior interrelationships

Results The ADHD-PRS was significantly associated with the score of the working memory (Beta = 3130.69, P = 0.0023) and the organization of material (Beta = 1558.57, P = 0.020) factors of BRIEF, as well as the volumes of the left accumbens (Beta = -2.99×10⁴, P = 0.032), the left pallidum (Beta = -3.92×10⁴, P = 0.027), and the right amygdala (Beta = 8.86×10⁴, P = 0.023). The mediation model has revealed that the volume of the left pallidum significantly mediated the effects of ADHD-PRS on the working memory factor in BRIEF (Beta = 4.68×10², P = 0.03)

Conclusion The volume of the left pallidum mediated the effects of polygenic risk of ADHD on the ADHD-related working memory deficit in daily life. Our results provided more evidence about the gene-

brain-behavior relationships.

关键词: ADHD, polygenic risk, subcortical volume, executive dysfunction

The Complex Relationship Between IQ and ADHD Symptoms: Insights From Behaviors, Cognition, Brain and Impairment in 5,138 Children with ADHD

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Objective There has been speculation that a high IQ may not necessarily provide protection against attention deficit hyperactivity disorder (ADHD), and there may be a U-shaped correlation between IQ and ADHD symptoms. To investigate and validate this speculation, high-quality, multi-dimensional data including behavior and brain measures, with larger sample sizes in the ADHD population are necessary

Method We conducted a study with 5,138 children, aged 6-16 years, who have been professionally diagnosed with ADHD and have a wide range of IQ levels. General Linear Models were used to determine the relationship between IQ [Full-Scale IQ (FSIQ), Verbal IQ (VIQ), and Performance IQ (PIQ)] and ADHD core symptoms [total scores (TO), inattention (IA), hyperactivity/impulsivity (HI)] while considering sex and age as covariates. Furthermore, we examined the correlation between IQ and the execution function [Behavior Rating Inventory of Executive Function (BRIEF)], as well as between IQ and brain surface area, to determine if the complex associations between IQ and ADHD symptoms were reflected in executive functions and brain structure. Finally, we examined the behavioral performance of children with ADHD to investigate how dif-

ferent IQ levels impact the functional impairment associated with ADHD

Results Consistent with previous research, our study found a negative linear correlation between FSIQ and TO. However, only VIQ showed a linear negative correlation with ADHD IA scores, while PIQ showed an inverted U-shaped pattern with ADHD HI scores peaking at 103. These findings were partially validated in the relationship between IQ and executive functions, as well as IQ and brain surface area. Notably, the functional impairment in ADHD did not ameliorate when PIQ surpassed 103

Conclusion The correlation between IQ and ADHD symptoms is not straightforward. Our findings align with established academic hypotheses, revealing an inverted U-shaped relationship between PIQ and ADHD symptoms. This study advances our comprehension of ADHD symptoms and behaviors based on varying IQ characteristics, suggesting potential for targeted clinical interventions

关键词: ADHD; IQ; Execution function; Brain imaging.

ADHD 儿童多动冲动行为异质性的遗传与神经基础: 一项基于 MAOA 单基因表型半监督聚类的 fMRI 亚型分析

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目的 多动冲动是注意缺陷多动障碍(ADHD)核心临床症状表现之一, 在儿童期尤为明显。既往研究提示多动冲动与单胺氧化酶 A (MAOA) 基因遗传变异存在密切关联, 然而相同基因型患者的认知行为表现存在个体差异, 提示可能存在不同的神经生物亚型。本研究基于不同 MAOA 基因表型的认知行为特征进行半监督聚类, 比较不同神经生物亚

型的脑功能差异和药物治疗反应,为 ADHD 多动冲动的遗传神经机制以及临床治疗提供理论支持。

方法 本研究共纳入 ADHD 儿童 326 例,其中无风险基因患者 108 例,MAOA 风险基因患者 218 例。采用 ADHD 评定量表、Conners 评定量表以及执行功能行为评定量表测量行为与认知功能。基于多动冲动与执行功能评分,以无风险基因患者为参考,采用半监督聚类方法将 MAOA 风险基因患者分为不同的亚型,比较不同亚型静息态低频振幅比值(fALFF),构建“脑-认知-行为”中介模型;并进一步结合药物干预随访信息,观察不同生物亚型患者治疗反应差异。

结果 通过半监督聚类将 MAOA 风险基因患者分成两个亚型。与无风险基因患者相比,亚型 1 多动冲动评分较高,执行功能表现较差;亚型 2 多动冲动评分无差异,执行功能表现更好。影像分析发现,与无风险基因患者相比,亚型 1 颞下回 fALFF 升高,亚型 2 角回 fALFF 升高;与亚型 2 相比,亚型 1 左侧壳核 fALFF 升高,壳核 fALFF 与抑制、转换、情感控制、行为管理指数显著相关。中介分析显示,壳核 fALFF 可能通过执行功能的行为管理指数影响多动冲动行为。4 周药物治疗后,亚型 2 患者品行问题、焦虑因子减分率更高。

结论 壳核局部功能可能是 MAOA 风险基因患者多动冲动行为异质性的神经基础,该脑区局部功能越强,患者执行功能越好,多动冲动症状越轻,且药物治疗反应更好。

关键词: ADHD, MAOA 基因, 半监督聚类, fMRI, 药物治疗

Started Low, But Did Not Go That Slow: Real-world Use of Blonanserin and Its Safety and Effectiveness in Chinese Adolescents with Schizophrenia

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Objective About 8.2% of schizophrenias are diagnosed before age 18. Dosing should be individualized in these population, given their unique drug metabolism and side effect liability. The aim of this analysis was to investigate the use of blonanserin in Chinese adolescent patients with schizophrenia in real-world clinical settings, using data from a post-marketing surveillance (PMS)

Methods Patients aged <18 were included in this analysis, using data from a 12-week, prospective, observational, single arm, open-label, multi-center PMS conducted in patients with schizophrenia receiving blonanserin across Mainland China. The dose of blonanserin was recorded. The adverse drug reactions (ADRs) were collected to evaluate the safety profile of blonanserin. Brief Psychiatric Rating Scale (BPRS) was used to evaluate the effectiveness.

Results Two hundred and eighty adolescents (99 male/181 female) were included, accounting for 8.5% of the total 3306 patients. 87.1% patients (244/280) completed the surveillance. The average age was 16.0 (range: 9-17) years old

The initial dose of blonanserin was slightly lower for adolescents than that of the adults (mean±SD: 6.8±3.06 vs 7.2±2.61 mg/d, $p = 0.038$). The proportion of starting blonanserin with 4 mg bid, 4 mg qd, and 2 mg bid in adolescents is 55.4%, 24.6%, and 12.1%, respectively, while the corresponding figures for adults are 66.6%, 22.2%, and 5.5%. Like adults, a rising trend was observed in the daily dose of blonanserin from week 2/4 (10.1±3.72 mg/d) to week 12 (13.0±4.77 mg/d) in adolescents. Both adolescent and adult patients took their first dose adjustment about 9 days (8.8±9.71 vs 8.7±10.74 d, $p = 0.961$) after initiating blonanserin, to 11.2±3.64 and 11.9±3.61 mg/d, respectively.

One hundred and two ADRs occurred in 67 patients (23.9%, 67/280). Most ADRs were mild (71.6%, 73/102), no severe ADR occurred. Extrapyramidal symptoms (EPS) including akathisia (11.1%), tremor (6.8%), dystonia (4.6%), and parkinsonism (3.2%) were found as the most frequent ADRs. They usually occurred in the third week (14.4-16.1 d) after starting

blonanserin except dystonia, which had an average onset time of 8.9 d after initiating blonanserin. 1 case of ADR of prolactin elevation occurred during the surveillance. The mean weight gain was 0.4 ± 2.52 kg at week 12 from baseline.

Over 80% adolescents (81.1%, 198/244) had a reduction in BPRS total score $\geq 50\%$ after 12-week treatment of blonanserin, from 53.2 ± 15.38 at baseline to 29.4 ± 12.37 ($p < 0.001$), while those for adults are 66.3% and 48.4 ± 14.93 to 27.5 ± 9.82 ($p < 0.001$).

Conclusion The use of blonanserin in adolescents with schizophrenia in China is similar to that in adults, though a slightly lower initial dose can be seen in this analysis. Blonanserin can be well tolerated as most ADRs were mild and has a low propensity to cause weight gain and prolactin elevation, while it significantly improved the symptoms of schizophrenia. Blonanserin might be a reasonable treatment for Chinese adolescents with schizophrenia.

关键词: Schizophrenia, Adolescents, Blonanserin, Safety, Effectiveness

电休克与磁休克治疗青少年抑郁症的回顾性分析

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目的 本研究旨在通过回顾性分析, 评估电休克治疗(ECT)和磁休克治疗(MST)在青少年抑郁症患者中的临床效果和耐受性。考虑到青少年抑郁症的高发性和对健康造成的严重影响, 以及传统药物治疗的局限性, 本研究力图为青少年抑郁症患者提供更有效的治疗方法, 并为临床实践提供准确的指导。

方法 研究收集了 2023 年 5 月至 2024 年 4 月在山东省精神卫生中心接受 ECT 或 MST 治疗的青少年抑郁或双相抑郁患者的数据。研究获得了医学伦理审查委员会的批准, 并在获取患者知情同意后, 从电子病历和纸质病历中提取所需数据。患者必须符合 ICD-10 关于抑郁症或双相情感障碍抑郁发作的诊断标准, 年龄在 13 至 18 岁之间。使用儿童抑

郁量表(CDI)、贝克抑郁自评量表(BDI)、蒙特利尔认知评估(MoCA)等工具在治疗前后进行评估。排除了因各种原因提前终止治疗、更改诊断或接受其他物理治疗的患者。药物治疗方案保持正常, 所有患者均签署了治疗同意书。

结果 共有 251 名患者符合条件, 经过数据清洗和筛选, 最终 208 名患者纳入主要分析。这些患者被分为 ECT 治疗组(147 例)和 MST 治疗组(61 例)。两组在治疗的有效性上没有显著差异($P > 0.05$), ECT 组和 MST 组达到反应的患者比例分别为 60.4% 和 56.2% ($P = 0.153$), 达到缓解的患者比例分别为 48.1% 和 39.0% ($P = 0.287$)。在耐受性方面, ECT 组和 MST 组的总不良事件率分别为 31.57% 和 20.51%, 大多数不良事件为轻度。两组均未见明显不良反应。在认知评估方面, 根据 MoCA 评分, 两组均未发现显著的认知功能受损。

结论 本研究结果显示, ECT 和 MST 治疗在青少年抑郁症患者中均表现出良好的疗效和耐受性, 且没有显著的副作用。尽管两组在治疗效果上没有显著差异, 但考虑到 MST 作为一种非侵入性治疗手段, 其在青少年患者中的耐受性可能更优。本研究为青少年抑郁症患者提供了治疗的新选择, 但未来仍需开展更多研究, 以进一步验证 MST 的长期效果和安全性, 为临床提供更加坚实的证据基础。

关键词: 电休克, 磁休克, 青少年, 抑郁症, 回顾性分析

Heterogeneity of Psychiatric Symptoms and Quality of Life in Children: A Network Analysis Perspective

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Objective The heterogeneity of symptoms of child psychiatric disorders has a complex relationship with quality of life. This study employs latent profile analysis (LPA) and network analysis to explore the patterns of relationships between symptom heterogeneity in child psychiatric disorders and quality of life (QoL)

Methods A total of 3,958 children meeting the inclusion criteria were analyzed. The symptoms of

Tourette syndrome (TS), obsessive-compulsive disorder (OCD), attention-deficit/hyperactivity disorder (ADHD), and oppositional defiant disorder (ODD), as well as quality of life associated with these disorders, were assessed separately. Initially, the study employed the LPA approach to classify individuals into different latent subgroups (profiles) based on symptom levels. Subsequently, for each profile, network analysis was performed to construct network structures of symptom levels and quality of life, with the goal of identifying central and bridge symptoms within the network structure

Results Heterogeneity in the symptoms of child psychiatric disorders was identified, resulting in three latent subgroups: profile 1: low (TS, OCD) + low (ADHD, ODD), profile 2: moderate (TS, OCD) + high (ADHD, ODD), and profile 3: high (TS, OCD) + moderate (ADHD, ODD). Network analyses revealed “psychological” QoL and “Inattentive symptoms” as central and bridge symptoms across all profiles. Unique central symptoms related to quality of life were found in “physical and activities of daily living” QoL for profile 1, “family” QoL for profile 2, and “School and learning” QoL for profile 3

Conclusion The common central and bridge symptoms across all profiles are key targets for treatment, while the unique central and bridge symptoms within each profile are targets for personalized interventions.

关键词: Child psychiatric disorders, Comorbidity, Quality of life, Latent profile analysis, Network analysis

跨诊断治疗统一方案(UP-A)对青少年情绪障碍个体和家庭的多维度短期及长期疗效研究

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目的 情绪障碍在青少年中患病率高、共病率高、社会功能受损显著, 亟需得到有效干预, 但在国内尚缺乏高效便捷、可及性强的治疗方案; 基于跨诊断视角进行干预有望弥补这一不足, 其中青少年情绪障碍跨诊断治疗统一方案(UP-A)的疗效循证依据较为充分。本研究将初步探讨本土化 UP-A 在国内的适用性, 及其对青少年情绪障碍个体及其家庭的在短期及长期随访时的多维度影响。

方法 研究为自身前后对照研究, 纳入 24 名青少年情绪障碍患者及其家长, 对其开展团体 UP-A 治疗。治疗共 12 周, 每周 1 次, 每次 2 小时, 治疗师团队分别教授青少年及其家长情绪调节技能, 并教授家长科学教养方式。研究收集其治疗满意度及评价, 并分别在治疗前、治疗结束及治疗结束后 3 个月进行评估, 分别评估患者的疾病严重程度(CGI-S)、治疗疗效(CGI-I)、焦虑抑郁水平(DSRSC 及 SCARED)、情绪调节能力(CERQ-Ck 及 ERC)、心理韧性(RSCA、CD-RISC-10)、生活质量(PedsQLTM4.0)、社会功能(CGAS)以及家庭功能(FAD), 并在治疗结束后 1 年随访时对患者的疾病严重程度、临床疗效及社会功能进行评估。采用混合线性模型评估患者在不同评估时间点上述临床结局指标的变化。

结果 24 名青少年患者(14.1±1.2 岁)中以抑郁障碍为主要诊断(75.0%), 22(91.7%)名患者存在 1 种及以上的共病。在适用性方面, 患者及其家长完成度及参与程度均较高(青少年 10.2±1.6 次, 家长 10.7±2.0 次), 且呈现良好满意度(>7.5/10 分)。在疗效方面, 临床医生评定患者的 CGI-S 得分在治疗后显著下降($g = -1.298$), 并在 3 个月($g = -1.341$)及 1 年随访($g = -1.583$)中维持疗效。在完成 UP-A 治疗的青少年患者中, 约 55.0%、72.2% 及 80.0% 的患者分别在治疗结束、3 个月及 1 年随访中症状显著改善(CGI-I ≤ 2 分)。结合青少年、家长及医生评定结果提示, 患者焦虑抑郁情绪显著降低, 情绪调节能力、心理韧性、生活质量、社会功能及各维度家庭功能均在治疗中即显著改善, 并可持续至 3 个月随访时; 且 1 年随访时患者的社会功能继续维持显著改善(效应量均为中至高等)。

结论 本土化 UP-A 在我国青少年情绪障碍患

者及其家庭中适用性良好, 多维度评估初步验证其短期及持续 1 年的长期疗效: UP-A 可显著改善青少年患者的疾病严重程度、焦虑抑郁情绪及情绪调节能力、心理韧性、生活质量及社会功能水平, 同时也带来多维度家庭功能积极改善。本土化 UP-A 为青少年情绪障碍群体提供了科学性高、普及性高、便捷有效的治疗方法。

关键词: 青少年, 情绪障碍, 跨诊断治疗统一方案, 长期疗效, 家庭功能

The Safety and Effectiveness of Lurasidone in The Treatment of Chinese Adolescent Patients with Schizophrenia: Data From A 12-week Post-marketing Surveillance

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Objective To evaluate the safety and effectiveness of lurasidone for schizophrenia in adolescents in China

Methods A multi-center, prospective, open-label, 12-week surveillance was conducted in Chinese Mainland. All patients with schizophrenia who begin to receive lurasidone in 10 hospitals across China from September 2019 to August 2022 were eligible to take part. Safety assessments included adverse events (AEs), adverse drug reactions (ADRs), extrapyramidal symptoms (EPS), akathisia, weight gain. The effectiveness was evaluated by the Brief Psychiatric Rating Scale (BPRS) from baseline by the end of treatment. Patients in this analysis were stratified by age

Results 3718 patients were included in the safety set (SS) in this 12-week surveillance, with an age range of 10 to 81 years old. Among them, 210 patients with schizophrenia aged < 18 years were included in the safety set (SS). AEs and ADRs were developed in 21 patients (10.0%) and 17 patients (8.1%) respectively and mostly are mild. ADRs of EPS occurred in 3 pa-

tients with the incidence being 1.4%, including akathisia occurred in 1 patient with the incidence being 0.5%. The mean weight change was 0.05 ± 2.256 kg (mean \pm SD, $P=0.778$) and 3 patients (1.4%) gained weight $\geq 7\%$ at week 12 from the baseline. The mean changes in total BPRS scores were -9.4 ± 9.16 ($N=191$), -15.4 ± 12.04 ($N=192$) and -20.3 ± 13.45 ($N=192$) after 2/4, 6/8, and 12 weeks, respectively ($P<0.001$ for each visit compared with the baseline)

Conclusion Lurasidone was well tolerated and effective in the treatment of schizophrenia in Chinese adolescent patients in real-world clinical practice. Lurasidone might be a reasonable choice for the treatment of schizophrenia in adolescent patients.

关键词: Lurasidone, Safety, Efficacy, Schizophrenia, Adolescent

青少年生活事件对其生活质量水平的影响: 失眠障碍和抑郁障碍的链式中介效应

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目的 探讨青少年生活事件对其生活质量水平的影响, 以及失眠障碍和抑郁障碍在其中的中介机制。

方法 使用青少年生活事件量表 (ASLEC) 评估青少年遭遇不幸生活事件对其产生影响的严重程度、失眠严重程度指数量表 (ISI) 评估青少年是否有失眠症状及其失眠症状的严重程度、流行病学研究中心抑郁量表 (CES-D) 评估青少年是否有抑郁症状及其抑郁症状的严重程度、世界卫生组织生活质量问卷简表 (WHOQOL-BREF) 评估青少年生活质量的水平。从安徽医科大学附属巢湖医院精神科门诊患者中, 根据纳入标准: 1) 符合 DSM-5 中抑郁障碍的诊断标准; 2) 年龄 18 岁及以下; 3) 获得受试者或法定监护人的书面知情同意。以及排除标准: 1) 合并严重躯体疾病 (如心血管、肝、肾、胃肠道疾病等)、感染性疾病及免疫系统疾病患者; 2) 严重神经系统疾病、精神发育迟滞的患者; 3) 无法配合进行测评或不合作者。最终纳入 374 名青少年并对其进行调查。采用 IBM SPSS Statistics 26 软件,

建立生活事件(X)-失眠障碍(M1)-抑郁障碍(M2)-生活质量水平(Y)的链式中介模型,并对其数据进行分析。

结果 生活事件(X)包含5个因子,每个因子均建立中介模型进行分析。每个因子的模型中:X-Y的总效应及直接效应的95%置信区间均不包含0,而间接效应中:ind1路径的95%置信区间均包含0,ind2及ind3路径均不包含0。

结论 青少年遭遇不幸生活事件可以显著影响其生活质量水平下降,生活事件可以通过影响青少年失眠症状从而影响青少年抑郁症状最终导致生活质量水平的下降,或者通过直接影响青少年抑郁症状最终导致生活质量水平的下降,但似乎不能通过直接影响青少年失眠症状从而导致其生活质量水平的下降。

关键词: 青少年,生活事件,生活质量,失眠障碍,抑郁障碍,链式中介

Correlation of Non-suicidal Self-injury with Childhood Maltreatment and Inflammatory Cytokines in Adolescents with Major Depressive Disorder

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Objective Major depressive disorder (MDD) is a common mental illness in adolescents, and non-suicidal self-injury (NSSI) is one of its characteristics. There is growing evidence that depressed adolescents with NSSI tend to have poor treatment outcomes, a poor prognosis, and frequent relapses. NSSI has been linked to childhood maltreatment (CM) and inflammatory cytokines, however, this link has not been adequately explored in adolescents with MDD. This study aimed to investigate the association between NSSI and CM and inflammatory cytokines in adolescents with MDD

Methods A total of 152 adolescents with MDD were included in the study and were categorized into NSSI (n=97) and non-NSSI (n=55) groups according to

the relevant DSM-5 criteria. The Centre for Epidemiological Studies Depression Scale (CES-D) and the Childhood Trauma Questionnaire (CTQ) were used to assess depressive symptoms and childhood maltreatment, respectively. In addition, plasma levels of interleukin (IL)-1 β , IL-6, IL-10, IL-17A and tumor necrosis factor- α (TNF- α) were measured

Results Compared with the MDD without NSSI, the patients with NSSI had higher scores of CES-D, and CTQ as well as five subscales, including emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect (all $p < 0.05$). In addition, IL-1 β and TNF- α levels were higher in MDD with NSSI (both $p < 0.05$) and remained statistically different after adding age, gender, CTQ, and CES-D scores as covariates in the ANOVA. Further binary logistic regression analyses showed that both IL-1 β (model 1:OR=6.862, 95%CI: 2.06~22.856, $P < 0.05$; model 2:OR=6.256, 95%CI: 1.861~21.032, $P < 0.05$) and childhood maltreatment (model 1, CTQ score:OR=1.054, 95%CI: 1.022~1.086, $P < 0.05$; model 2, Emotional abuse score:OR=1.117, 95%CI: 1.021~1.222, $P < 0.05$) were risk factors for NSSI in adolescents with MDD. Finally, the receiver operating characteristic (ROC) analyses showed that the regression models performed well with area under the curve (AUC) values of 0.764(model 1) and 0.78(model 2), respectively

Conclusion NSSI is common in adolescents with MDD and associated with childhood maltreatment and elevated levels of inflammatory cytokines. The findings suggest that childhood trauma and inflammatory cytokines may be related to the pathogenesis of NSSI in adolescents with MDD, but further longitudinal studies are needed to explore the causal relationship between NSSI and inflammatory cytokines in patients with MDD.

关键词: adolescents, major depressive disorder, non-suicidal self-injury, childhood maltreatment, inflammatory cytokines

Characterizing The Efficacy and Predictive Neural Markers of Add-on Robot-Aided

Transcranial Magnetic Stimulation on The Pain Cognition in Adolescents with Depression

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Objective The pain catastrophizing and vigilance are typical manifestations of the negative cognition of pain. Oftentimes, adolescent patients with depression complain of fear of pain that negatively impact their life, and such problems are not alleviated by current first-line treatments. Converging evidence suggests this symptom is due in part to the altered function of dorsolateral prefrontal cortex (DLPFC). The current study examined the therapeutic effect and predictive neural markers of targeting DLPFC on the level of pain catastrophizing and vigilance in adolescents with MDD by add-on Robot-Aided Transcranial Magnetic Stimulation (TMS)

Methods Here, we conducted a retrospective study using clinical and neuroimaging data of 60 adolescents with depression and 65 healthy controls during period of 2020-2022. Of these patients, 30 underwent Robot-Aided TMS combined with sertraline (add-on TMS group), while the others only received setraline (Sertraline group). We first compared functional connectivity (FC) of DLPFC between patients with depression and controls, and indentified abnormal FC associated with pain cognition. Then we explored the efficacy of add-on Robot-Aided TMS on pain cognition. Clinical response to treatment was determined using the Pain Catastrophizing Scale (PCS) and Pain Vigilance and Awareness Questionnaire (PVAQ), and the primary efficacy was the change in score from baseline to post-treatment assessment. Additional measures were score changes after another 8 month of follow-up. Finally, we performed regression analysis to evaluate the contributing effect of FC of DLPFC in predicting the clinical response to Robot-Aided TMS

Results Compared with healthy controls, patients with depression showed increase FC between

left DLPFC and bilateral pars triangularis and right supramarginal gyrus, also with increase FC between right DLPFC and left putamen and right supramarginal gyrus. The add-on TMS group displayed a significant decreased score on the PCS, the rumination subscale of PCS, and PVAQ after the intervention, compared to that in the Sertraline group. Also, a mixed-effects repeated-measures model revealed significant improvement in scores on the PCS, the rumination subscale of PCS, and PVAQ during the post-intervention and follow-up periods in the add-on TMS group. FC between left DLPFC and left pars triangularis can predicted the development of pain vigilance and magnification, while FC between right DLPFC and left putamen can predicted the change of pain catastrophizing, especially the rumination and magnification

Conclusion Add-on Robot-Aided TMS over the DLPFC significantly improved the pain cognition and the functional connectivity patterns of DLPFC can predict such efficacy. Further studies are warranted concerning sham-controlled Robot-Aided TMS studies for promoting pain cognition in adolescent patients with depression.

关键词: adolescent depression, pain, DLPFC, add-on Robot-Aided Transcranial Magnetic Stimulation

“院-校-家-社”中小学生学习心理健康服务模式在重庆市的应用

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目的 儿童和青少年是心理健康发展的关键时期,也是心理障碍发生的高危时期。本文描述了一种学生心理健康服务模式,该模式将医院/三级护理、学校、社区和家庭联系起来,使不同角色的个人能够共同努力促进青少年心理健康。虽然此部分,全国各地均有实践,但尚未有清晰明了,可执行可细致联动多部分的合理举措及意见。

方法 根据加拿大、北美等地的经验,根据重庆市实际情况,引入了一种“通过照料的途径”模式,旨在促进青年的心理健康,早期识别有风险的青年,

将他们转介到适当的卫生护理机构,并提供持续的支持。这是通过一般筛查、访谈和不同层面的干预策略等方法实现的,包括对学生、教育工作者和家长的心理健康促进和培训。此外,该模式整合了教育和卫生系统内的资源,确定了学校、家庭和高等教育在各个实施阶段的作用,根据职能划分,确定每个关键部门的责任和实质工作内容,打通医院-学校-家庭-社区之间的壁垒,促成一条顺畅转介的绿色通道。此外,我们通过案例描述了各种利益相关者在改善青少年心理健康和减少学生自杀和自伤发生率方面的基本作用。

结果 通过四年的实践,从学生自杀预防和学生自杀率均有超 50% 下降。

结论 由此可见,多维度、多部门的密切联动模式,能有效降低学生自杀率。

关键词: 中小学、学生心理健康、预防模式

虚拟现实技术干预孤独谱系障碍儿童青少年适应性能力的效果及多模态核磁共振成像研究

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目的 孤独谱系障碍(Autism Spectrum Disorder, ASD)儿童青少年存在适应性能力缺陷,对成人期预后后有负面影响。本研究旨在探究虚拟现实(Virtual Reality, VR)技术干预孤独谱系障碍儿童青少年适应性能力的效果及脑机制。

方法 ①入排标准: 年龄 8-18 岁、经 DSM-5 及孤独症诊断访谈-修订版(ADI-R)诊断为 ASD、总智商 ≥ 50 、右利手、能够配合完成评估及干预、排除其他不适合干预的疾病。②VR 干预: 包括地下轨道交通、超市购物、家庭、游乐场 4 个场景,共 36 个与适应性能力相关的任务,所有被试均需完成 2 遍训练任务;每周训练 1 次,每次 1 小时,根据被试的完成速度,训练次数约为 6-10 次。③评估方法: 通过比较干预前后的 ADI-R 访谈、适应行为评定量表-第二版(ABAS-II)、执行功能评定量表-学龄版(BRIEF-SR)和多模态核磁共振成像结果,评估 ASD

儿童的临床表现及脑影像特征的变化。

结果 ①一般情况: 共招募 25 名 ASD 儿童青少年,其中 3 名分别因为内容简单、抽动症状严重、请假次数过多退出,22 名完成 VR 干预,男女比例为 2.67:1,年龄为 13.82 ± 2.94 岁,总智商为 98.05 ± 20.85 ,总适应能力为 83.64 ± 14.43 。②行为学评估: 主要结局指标 ABAS-II 中的一般适应综合分数较干预前显著增长了 3.88 分 ($p=0.005$),概念技能维度显著增长了 3.67 ($P=0.034$),社会技能及实用技能维度分数有增长趋势,但差值不显著;ADI-R 的三个维度——语言交流、社交互动及重复刻板局限的兴趣与行为的分数分别降低了 2.06 ($p<0.000$)、2.20 ($p=0.002$)、1.30 ($p=0.006$),均较干预前显著改善;BRIEF-SR 及行为管理指数、元认知指数两个分维度的得分分别降低了 5.29 ($p=0.042$)、5.29 ($p=0.010$)、5.59 ($p=0.013$),均较干预前显著改善。③以执行控制网络核心脑区为种子点的全脑功能连接: 以先前研究定义的执行控制网络的核心脑区(双侧背外侧前额叶、双侧后顶叶皮质)为种子点,进行基于种子点的功能连接的分析,右侧背外侧前额叶脑区与右侧中央前回的团块(体素大小 58,坐标 +36 -10 +56)的功能连接存在显著增强,其余三个种子点的功能连接未见显著变化。

结论 VR 干预可以有效提升 ASD 儿童青少年的适应性能力,尤其是概念技能方面,同时也可改善其核心症状及执行功能。干预效果可以从照养人访谈、问卷、儿童脑功能等多个维度体现。

关键词: 孤独谱系障碍 适应性能力 虚拟现实 执行功能

Csnk2A1 基因 DNA 甲基化在青春期抑郁样行为小鼠中的表达及作用研究

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目的 观察 Csnk2A1 基因 DNA 甲基化在 CSDS 青春期抑郁小鼠海马组织中的表达和探索 Csnk2A1 基因对小鼠抑郁样行为、分子病理学的影响。

方法 构建 CSDS 抑郁小鼠模型, 评估小鼠抑郁样行为; 对海马组织进行 MethylTarget® 目标区域甲基化测序, 采用 qRT-PCR 检测脑组织 Csnk2A1 的 mRNA 表达水平。海马脑立体定位注射 Csnk2A1 敲低腺相关病毒, 检测海马组织 Csnk2A1 基因和凋亡相关蛋白表达水平, 尼氏染色观察海马区神经元改变。

结果 (1) CSDS 组小鼠的社会交互比、糖水偏好百分比显著下降, 悬尾静止不动时间显著增加 ($P<0.05$)。 (2) CSDS 组海马组织的 Csnk2A1_451 DNA 甲基化水平显著降低, Csnk2A1 的 mRNA 表达水平显著升高 ($P<0.05$)。 (3) 海马立体定位注射 Csnk2A1 敲低腺相关病毒, 发现 CSDS 组、AAV-NC+CSDS 组小鼠的社会交互比和糖水偏好百分比显著下降, 而悬尾静止不动时间显著增加; AAV-Csnk2A1+CSDS 组小鼠的社会交互比和糖水偏好百分比显著升高, 而悬尾静止不动时间显著降低 ($P<0.05$)。 (4) CSDS 组、AAV-NC+CSDS 组海马组织 Bax 蛋白表达水平、Bax/Bcl-2 显著升高, Bcl-2 蛋白表达显著降低; AAV-Csnk2A1+CSDS 组 Bax 蛋白表达水平、Bax/Bcl-2 显著减少, Bcl-2 表达显著增加 ($P<0.05$)。 (5) Control 组海马区神经元细胞形态规则, 细胞核明显; CSDS 组、AAV-NC+CSDS 组海马区神经元细胞形态不规则, 细胞核不清晰; AAV-Csnk2A1+CSDS 组海马区神经元细胞排列较整齐, 核较清晰。CSDS 组、AAV-NC+CSDS 组 CA1、CA3 和 DG 区阳性细胞数量明显减少, AAV-Csnk2A1+CSDS 组 CA3、DG 区阳性细胞数量显著增加 ($P<0.05$)。

结论 (1) CSDS 可诱导青春期小鼠出现社交回避、快感缺失和绝望等抑郁样行为。 (2) CSDS 小鼠海马组织 Csnk2A1_451 DNA 甲基化影响其基因表达水平。 (3) 敲低 Csnk2A1 基因能改善抑郁小鼠的社会交互比、糖水偏好百分比和减少悬尾静止不动时间, 从而缓解小鼠的抑郁样行为, 影响海马组织凋亡相关蛋白表达水平, 改善海马区的神经元细胞受损情况和增加尼氏阳性细胞数量。 (4) Csnk2A1 基因可能通过改变海马神经元细胞凋亡从而发挥一定的抗抑郁作用, 但具体机制不清。

关键词: 青春期抑郁样行为, 慢性社交挫败刺激模型, 海马神经元, 凋亡

药物联合经颅交流电刺激治疗对青少年抑郁障碍的疗效研究

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目的 探究药物联合经颅交流电刺激 (Transcranial Alternating Current Stimulation, tACS) 治疗对于青少年抑郁障碍患者的抗抑郁疗效和安全性。

方法 选择了 2023 年 11 月-2024 年 3 月在重庆医科大学附属第一医院精神科门诊、住院病房的 19 名患者, 最终 17 名患者完成了 20 次 tACS 治疗。采用频率为 77.5 Hz, 强度为 15 mA 的经颅交流电刺激以其, 治疗部位为前额部、双侧乳突部。采取一般人口学问卷、抑郁症状自评量表 (PHQ-9)、广泛性焦虑量表 (GAD-7)、汉密尔顿抑郁量表 (HAMD-24)、汉密尔顿焦虑量表 (HAMA)、Beck 自杀意念量表 (BSSI)、不良反应问卷等, 在基线、第 1 周、第 2 周、治疗结束后 2 周对患者的进行临床症状评估。

结果 对不同时间数据使用重复测量方差分析。在第 2 周即治疗完成时患者 PHQ-9、GAD-7、HAMD-24、HAMA、自杀意念、自杀倾向总评分均显著低于基线 ($p<0.05$), 具有统计学差异。随着 tACS 治疗结束, 在随访 2 周即第 4 周时, 量表评分均有一定的升高, 但仍低于基线值, 具有统计学差异。患者第 1 周、第 2 周、第 4 周 HAMD-24 减分率分别为 $41.41\% \pm 11.01\%$ 、 $66.85\% \pm 14.47\%$ 、 $61.41\% \pm 24.95\%$ 。

结论 药物联合经颅交流电刺激治疗对于青少年是安全的, 或许可作为青少年抑郁障碍的非侵入性神经调控的一项新方案, 需要未来进一步去验证。

关键词: 青少年抑郁障碍, 经颅交流电刺激治疗, 物理治疗, 非侵入性神经调控技术

DNA 甲基化与抑郁症的相关研究进展

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目的 青少年 MDD 发病机制尚不清楚, 由于

其临床诊断依赖于专业医生对患者的症状评估和相关量表, 缺乏客观的生物标志物, 抗抑郁治疗效果不佳, 是临床上的重大难题。随着表观遗传学与精神疾病的相关研究发展, DNA 甲基化状态可能对临床诊断和治疗效果有影响, 可作为精神疾病的潜在表观遗传生物标志物。本文将对 BDNF、SLC6A4 和 NR3C1 基因 DNA 甲基化和与 MDD 的相关研究成果, 和抑郁动物模型脑组织 DNA 甲基化的研究结果, 以及组织异质性对 DNA 甲基化研究结果的影响进行综述。

方法 在中国知网、PubMed 数据库, 以“DNA 甲基化”、“抑郁症”、“DNA methylation”、“Depression”、“MDD”为关键字进行中英文文献检索, 阅读并总结相关研究结果。

结果 (1) BDNF、SLC6A4、NR3C1 这三个基因的甲基化目前被认为是 MDD 的可能潜在生物标记物, 此外 FK506 结合蛋白 5 (FKBP5)、纺锤体和着丝粒相关复合物 (SKA2)、催产素受体 (OXTR) 这些基因甲基化也被报道与 MDD 的诊断相关。这些临床研究大多未得出统一的结论。虽然 DNA 甲基化在抗抑郁治疗的研究中发现可能有着重要作用, 但由于地区人群的选择不同、药物种类及疗程不同, 疾病的亚型不同, 未来对抗抑郁药物反应的研究应该涵盖所有不同的治疗阶段, 因为 DNA 甲基化水平可能会在治疗期间发生改变。

(2) 抑郁动物模型的脑组织 DNA 甲基化水平相关研究, 为理解 MDD 的发生发展和大脑神经生物学的变化提供了许多研究数据。尽管目前在应激条件对啮齿动物的表观遗传机制研究较多, 但由于模型的差异、大脑脑区的不同, 且表观遗传随着环境可能会出现动态变化, 导致暂无一致的研究结果。未来不仅需要考虑临床和动物研究相结合, 同样需要考虑不同动物模型之间与所模拟的临床疾病的相关性。

(3) 当前关于 DNA 甲基化与 MDD 的研究生物样本以血液、脑组织、唾液等为主, 由于 MDD 这一疾病的特殊性, 人脑组织样本取材特殊, 以外周样本为临床研究材料较多。但是在未来的研究中, 选择研究样本时需要考虑组织差异性、所检测的基因等因素来选择外周样本, 以便发现监测疾病发生、发展的精准在体生物学标记。此外, 外周样本和大脑之间差异甲基化变化背后的机制未来仍有待探索。

结论 目前关于 DNA 甲基化与 MDD 的相关性研究较多, 但均未得出一致的结果, 未来需多角

度综合考虑研究设计以便更全面的深入其机制研究, 探讨这些基因 DNA 甲基化的变化如何引起行为和分子效应。

关键词: 青少年抑郁症; DNA 甲基化; BDNF; SLC6A4; NR3C1

Broad Autism Phenotype Traits and Executive Function of Parents of children with Autism Spectrum Disorder

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Objective Previous studies have provided evidence for the important role of genetics in autism spectrum disorder (ASD) and whether this trait or symptom has a large impact on the executive functioning of ASD children's parents. The aim of our study is to investigate the distribution of the broad autism phenotype characteristics of ASD children's parents, and the impact of their executive function

Method The Broad Autism Phenotype Questionnaire (BAPQ) was used to assess the broad autism phenotype traits in parents of children with autism and parents of healthy children. A total of 427 parents with ASD child and 405 parents of typically developing children were recruited for this study. Among them 20 of the high-BAP ASD parents and 20 of the low-BAP healthy parents completed executive function tests. The researchers utilized the flanker, 2-back, and MOS psychological paradigms to examine their executive function, including inhibitory control, working memory, and task-switching abilities

Result The findings from the self-reported questionnaires revealed that BAPQ self-reported scores in parents of individuals with ASD were significantly higher compared to healthy control parents. Specifically, the self-reported scores of fathers of individuals with

ASD (41.21% VS 15%, $\chi^2=31.628$, $p<0.01$) and mothers of individuals with ASD (26.25% VS 8.37%, $\chi^2=25.764$, $p<0.01$) were elevated compared to healthy control parents. While the scores of mothers of individuals with ASD were higher than healthy control mothers (41.46% VS 23.5%, $\chi^2=11.628$, $p<0.01$), the scores of fathers of individuals with ASD did not show statistical significance compared to healthy control fathers (17.56% VS 13.22%, $\chi^2=1.571$, $p=0.21$). In terms of specific factors, fathers of individuals with ASD self-reported higher scores in Aloofness compared to healthy control fathers, although this difference was not statistically significant (15.15% VS 15%, $\chi^2=0.002$, $p=0.968$). Other factors, however, showed higher scores in fathers of individuals with ASD compared to healthy control fathers. On the other hand, mothers of individuals with ASD reported higher scores in three factors compared to healthy control mothers, with significantly higher ratings in Pragmatic Language (30.3% VS 15.5, $p<0.05$; $\chi^2=11.474$, $p=0.001$) and Aloofness (44.39% VS 32.16%, $\chi^2=6.843$, $p=0.009$) than healthy control mothers. Regarding executive function, parents of individuals with ASD who exhibited high BAP traits displayed worse accuracy in the 2-Back task compared to healthy controls (0.947±0.037 VS 0.983±0.016, $t=16.875$, $p<0.01$), along with significantly slower reaction times in the odd and even tasks of the MOS task (604.35±150.28 VS 593.90±87.52, $t=16.875$, $p<0.01$). The reaction time for the Flanker task was slower in the high BAP group compared to healthy controls (528.95±78.90 VS 426.80±18.40, $t=15.639$, $p<0.01$), whereas the 2-Back reaction time was faster in the high BAP group compared to healthy controls (515.10±76.94 VS 674.25±140.06, $t=15.639$, $p<0.01$). Additionally, the response time in the MOS task was slower in the high BAP group compared to healthy controls (884.25±454.37 VS 656.90±123.44, $t=12.079$, $p=0.042$).

Conclusion The study concludes that parents of individuals with ASD exhibit higher BAP traits compared to healthy control parents, with discrepancies between self-evaluation and external evaluation. ASD fathers perceive themselves to have more pragmatic and cognitive inflexibility issues compared to healthy fa-

thers, while ASD mothers view themselves as experiencing more apathy, pragmatic language difficulties, and cognitive inflexibility compared to healthy mothers. Furthermore, ASD mothers perceive the cognitive function of fathers with more indifference than healthy control fathers, highlighting poorer pragmatic skills in the cognition of mothers compared to healthy mothers. The accuracy in the 2-Back task was found to be worse in the high BAP group compared to healthy controls, with faster reaction times observed in the high BAP group. The study also noted slower task performance in simple task-switching tasks for individuals with high BAP traits compared to healthy subjects, with no notable differences in more challenging tasks.

关键词: Broad Autism Phenotype, Parents, autistic spectrum disorder, Executive function.

电休克治疗对青少年重度抑郁症患者炎症因子水平及抑郁症状的影响

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目的 本研究旨在调查ECT对青少年重度抑郁症患者炎症因子的影响。我们调查了患有重度抑郁症的青少年(13-18岁),以探讨ECT在改善细胞炎症因子水平和抑郁症状方面的有效性。

方法 在这研究中,共有38名青少年重度抑郁症患者接受了抗抑郁药物治疗配合6-8轮ECT治疗,治疗周期为2周。另有29名正常同龄人作为对照组。MDD组分别在基线和治疗后8周进行采集血样检测血清中炎症因子水平和临床资料评定(17项汉密尔顿抑郁量表(17-items Hamilton Depression Scale, HAMD-17))研究评估了治疗前后患者的抑郁症状和炎症因子水平(IL-1 β 、IL-6、IL-10)。

结果 ECT治疗后,促炎细胞因子(IL-1 β 和IL-6)显著减少,抗炎细胞因子(IL-10)增加。应答者的HAMD-17评分显著降低,强调了ECT的治疗潜力。对ECT无应答者和应答者进行比较分析,发现治疗后炎症因子水平的变化与临床改善显著相关,表明炎症状态的变化能够预测治疗反应。此外,抑

郁症状的减轻与 ECT 后 IL-1 β 和 IL-6 水平的降低存在中度正相关, 强调了 MDD 的复杂性和 ECT 的多方面作用。

结论 我们的研究发现, 虽然基线时的炎症因子水平并不能预测 ECT 的治疗反应, 但治疗后的炎症因子水平与临床改善显著相关。进一步证实了 ECT 在治疗青少年重度抑郁症中的有效性, 并揭示了炎症因子在治疗反应中的重要性。

关键词: 青少年, ECT, MDD, 炎症因子

番茄红素通过改善突触可塑性损伤逆转抑郁模型小鼠的抑郁样行为

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目的 抑郁症是一种严重的精神疾病, 长期慢性的不良应激可能会增加患抑郁和自杀的风险, 而目前临床常规使用的抗抑郁药如氟西汀大多因疗效低或难以忍受的副作用而效果不佳。番茄红素是一种天然存在的植物色素, 已被证明其有潜在的抗抑郁作用, 但其发挥抗抑郁作用的机制还未阐明, 本研究旨在探索番茄红素的抗抑郁机制。

方法 6-8w C57BL/6J 小鼠 45 只随机分为对照+溶剂组、模型组+番茄红素 (20mg/kg) 组、模型+溶剂组, 每组 15 只。采用经典的 CSDS (Chronic social defeated stress) 模型, 行为学包括糖水偏好试验、悬尾试验、旷场试验、社会交互试验。Western blotting 检测小鼠海马突触相关蛋白 (PSD-95, Syn) 及 BDNF、Trkb 的蛋白表达, qRT-PCR 检测突触相关蛋白及 BDNF、Trkb 的基因表达, 通过尼氏染色分析各组之间的神经元损伤情况。

结果 模型小鼠表现出抑郁样行为, 经番茄红素治疗后的小鼠抑郁行为显著改善。模型小鼠海马突触相关蛋白及 BDNF、Trkb 的基因和蛋白表达水平下降, 而番茄红素可以上调突触相关蛋白及 BDNF、Trkb 的表达。尼氏染色显示模型组小鼠海马神经元损伤, 番茄红素组损伤显著降低。

结论 番茄红素可以通过 BDNF-Trkb 通路改善

突触可塑性, 从而发挥抗抑郁作用。相较于临床常用的氟西汀等抗抑郁药物, 番茄红素具有无毒副作用等优点, 患者的接受性更强, 尤其是儿童青少年患者; 再者番茄红素通过改善突触可塑性发挥抗抑郁作用, 或许可以作为氟西汀等 SSRI 类药物的辅助治疗, 但其合用疗效还有待进一步研究。

关键词: 抑郁症 突触可塑性 番茄红素 抑郁模型

基于社交媒体文本分析和 BERT 深度学习算法的抑郁症识别研究

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目的 抑郁症已成为全球性的公共卫生问题。据 WHO 估计, 全球有超过 3 亿人患有抑郁症, 且患病率逐年上升。传统抑郁症筛查方法, 如临床访谈和心理测量, 存在效率低、成本高、主观性强等局限。随着社交媒体的广泛应用, 用户在网络平台上表达情感的文本数据为抑郁症识别提供了新的思路和数据来源。研究表明, 抑郁症患者在社交媒体上的言语模式与健康人群存在显著差异。通过利用自然语言处理技术和机器学习算法, 尤其是 BERT (Bidirectional Encoder Representations from Transformers) 深度学习模型, 可从海量社交媒体文本数据中自动识别抑郁症患者, 为及时干预和治疗提供支持。

方法 首先, 本研究使用爬虫技术对征得同意的 10 位抑郁患者和 101 位健康者的微博进行爬取, 对数据清洗后, 有效文本数据超过 2000 条。其次, 使用词频分析、词云图、词共现网络分析等大数据文本分析方法和 LDA 主题模型 (Latent Dirichlet Allocation) 机器学习方法, 对微博文本数据进行系统的分析, 探索网络空间中抑郁与非抑郁者的情感表达差异、情绪文本特点和主题维度等。最后, 采用 DF-IDF 方法对文本进行特征转化, 并采用 BERT 深度学习算法对预处理好的文本进行训练, 以实现基

于社交文本的抑郁症识别。

结果 词频和词云分析结果显示抑郁组的前 5 个高频词为不快乐、抑郁、不开心、时间、生日，非抑郁组为第一、快乐、中国、时间、生活；词共现网络分析能正确发现词与词之间的共现关系；LDA 主题模型的机器学习方法发现并提取了 5 个较正确的主题 (K=5)。抑郁组的主题包括内心害怕与寻求安慰的冲突、面对改变时情绪低落与自我贬低、与物质世界的联系和价值、关注历史和影娱、反刍式关注文学艺术；健康组的主题包括关注国家大事、良好的社会支持和健康的生活方式、关注未来、积极的态度、关注美食，两组的社交媒体文本特征存在显著的差异。最后，BERT 深度学习模型对抑郁与非抑郁的分类准确率、特异度、灵敏度和 AUC 分别为 80.49%、80.95%、80%、0.80，模型性能良好，BERT 模型在基于社交媒体文本数据的抑郁症识别上具有良好的泛化能力。

结论 基于大数据的文本分析能准确发现抑郁组和非抑郁组的关键高频词及词之间的关系，有助于网络群体抑郁症的早期识别。基于机器学习的 LDA 主题模型精准地提取出抑郁与非抑郁组的情感文本特征，有效提升了网络群体抑郁识别的准确性和敏感性。而 BERT 深度学习模型能从社交媒体文本数据中对抑郁症患者进行有效的识别，可为精准识别网络空间中的抑郁症患者提供帮助。

关键词：抑郁症，社交媒体，文本分析，机器学习，LDA 主题模型，BERT 深度学习

yet to be elucidated. Furthermore, the factors that mediate the association between takeaway frequency and depressive symptoms remain unknown

Methods Questionnaires were employed to collect data from 6,417 new students at Chongqing Medical University in the autumn of 2023. The data collected included basic sociodemographic information, takeaway frequency, physical activity level, and depressive symptoms. Multiple linear regression and mediation analysis were performed. Multiple imputations were used to fill in missing data through sensitivity analyses

Results Among 6417 participants, 2,606 (40.6%) students ordered takeaway at least once a week, with 235 (3.7%) of them ordering takeaway food every day. Takeaway frequency was significantly associated with depressive symptoms ($\beta=0.034$, $P=0.006$), and physical activity partially mediated this relationship (95% bootstrap confidence interval=0.0024, 0.0371)

Conclusion The study highlights the negative relationship between takeaway frequency and emotional well-being, emphasizing the need to focus on the emotional health of frequent takeaway food consumers. Moreover, our study suggests that increased physical activity may alleviate takeaway-induced mood-related outcomes.

关键词：takeaway, depressive symptoms, physical activity, mediation effect

Takeaway Food Consumption and Depressive Symptoms in Chinese University Students: Mediating Effects of Physical Activity

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Objective The consumption of takeaways is becoming increasingly prevalent. However, despite this, the relationship between takeaway food consumption and depressive symptoms in Chinese populations has

Efficacy and Safety of Repetitive Transcranial Magnetic Stimulation in Adolescents with Depression: A Systematic Review and Meta-analysis of Randomized Sham-controlled Trials

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Objectives Repetitive Transcranial magnetic stimulation (rTMS) has emerged as a promising alternative therapy for major depressive disorder, while the available evidence on the comparative efficacy and

safety of rTMS in adolescents' depression is inconclusive. This presentation aims to evaluate the efficacy and safety of rTMS in randomized sham-controlled trials for depression among adolescents

Methods The databases of PubMed, Embase, PsycINFO, Cochrane Library, Scopus, ProQuest Dissertations and Theses, Web of Science, CNKI and WanFang were searched from database inception to April 28, 2024. Two reviewers selected randomized clinical trials evaluating rTMS vs sham-stimulation used as the controller therapy for adolescents with depression and reporting on an outcome of interest. Heterogeneity among studies was assessed by the I² and Cochran Q test, and if I² > 50% a random-effects model was used for meta-analysis. Standard mean deviation (SMD) of depression rating scale scores and risk difference (RD) with corresponding 95% CIs of adverse event were separately used to evaluate the efficacy and safety of rTMS. The possibility of publication bias was assessed by funnel plot, and Egger's test was used to assess funnel plot asymmetry

Results Fifteen studies with 1042 patients (61.2% female) aged from 10 to 25 years old were included. Our meta-analysis found active rTMS significantly reduced the score of depression scale (SMD=-0.86, 95%CI: -1.14~ -0.58). The subgroup analysis showed that the rTMS can significantly reduce depression severity from the first week (SMD=-0.38, 95%CI: -0.72~ -0.04) and continued through the second week (SMD=-0.79, 95%CI: -1.16~-0.42) and the fourth week (SMD=-1.28, 95%CI: -1.85~-0.72) when compared with sham stimulation. In addition, there was no significant difference in safety (RD=0.02, 95%CI: -0.04~0.08) between active and sham group

Conclusion These findings suggest that rTMS can be a safe and effective treatment for adolescents with depression, and may inspire future research and guide clinical practice.

Keywords depression; adolescent; repetitive transcranial magnetic stimulation; meta-analysis; randomized sham-controlled trials

关键词: depression; adolescent; repetitive transcranial magnetic stimulation; meta-analysis; randomized sham-controlled trials

基于脑影像特征的深度学习探究 ADHD 儿童生物亚型

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目的 注意缺陷多动障碍 (Attention Deficit Hyperactivity Disorder, ADHD) 作为一种儿童期起病的神经发育性障碍, 其诊断与治疗的潜在神经机制并不明确。不仅神经影像特征的可重复性差, 且认知行为损伤以及药物反应也表现出广泛的异质性。因此如何克服 ADHD 多维度的异质性, 获取可靠的脑影像生物标志物, 对于探究疾病的神经机制以及指导临床干预具有重要意义。因此本研究的主要目的是基于影像特征的深度学习方法对患者群体进行生物亚型划分, 比较不同亚型的脑影像特征和认知行为损伤差异, 为疾病诊断分型提供客观的生物标志物。

方法 利用深度学习技术, 本研究基于功能连接 (Functional Connectivity, FC) 和年龄性别构建图卷积网络, 应用于美国青少年大脑认知发展研究队列 (Adolescent Brain Cognitive Development, ABCD) 中选取的 1069 名 ADHD 患者探索患者的生物亚型, 并进一步比较不同亚型的认知特征差异。映射 FC 模式到本课题组 PKU 数据集进一步验证生物亚型的可重复性, 并比较患者行为损伤表现。同时提取两个数据集重叠的差异性 FC 与认知行为进行相关性分析。

结果 基于 ABCD 脑影像数据利用生物亚型检测的图卷积网络模型 (GraphConvolutional Network for Biological Subtype Detection, GCN-BSD) 发现了两种生物亚型。生物亚型 1 表现为前额-小脑区域功能异常, 生物亚型 2 在所有网络中显示出更广泛的功能损伤, 主要涉及默认网络和感觉运动网络以及小脑和梭状回之间的 FC 异常。且在 PKU 数据集验证中具有良好可重复性。生物亚型 1 在工作记忆、处理速度方面显著优于生物亚型 2。在 PKU 验证集中生物亚型 1 的操作智商显著高于生

物亚型 2, 多动冲动评分显著低于生物亚型 2。此外, 顶上小叶与楔前叶和小脑与梭状回 FC 与多种认知功能以及多动冲动均表现出显著的相关性。

结论 基于 FC 的深度学习聚类发现了典型前额-小脑功能损伤和广泛脑网络异常两种 ADHD 生物亚型, 后者可能表现为更严重的认知行为损伤。

关键词: ADHD, 深度学习, fMRI, 图卷积网络, 生物亚型

童年虐待对青少年首发抑郁障碍患者抑郁严重程度影响的影响: 反刍思维的中介作用

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目的 本研究旨在探讨青少年首发抑郁障碍患者中, 童年虐待不同亚型对抑郁情绪严重程度的影响, 并分析反刍思维在其中的中介作用, 为青少年抑郁障碍的预防及早期干预提供新思路。

方法 对 2464 名 12-18 岁青少年抑郁障碍患者, 选取其中 1958 名首发抑郁障碍患者为研究对象。通过儿童期创伤问卷(CTQ)、反刍思维量表(RRS)、抑郁筛查量表(PHQ-9)问卷进行调查。采用 Pearson 相关分析法探讨躯体虐待、躯体忽视、情感虐待、情感忽视、性虐待和抑郁严重程度之间的关系, 通过 Bootstrap 方法评估反刍思维的中介效应。

结果 ①童年躯体虐待、躯体忽视、情感虐待、情感忽视、性虐待与抑郁情绪严重程度呈显著正相关 ($r=0.14, 0.28, 0.37, 0.32, 0.08; P<0.001$)。②反刍思维与抑郁情绪严重程度也呈正相关 ($r=0.63; P<0.001$)。③躯体虐待、躯体忽视、情感虐待、情感忽视通过反刍思维对抑郁情绪的中介作用显著, 中介效应比重分别为 60%、35%、53.45%、32.75%; 而在受到性虐待的个体中, 反刍思维未显示出中介作用 ($\beta=0.05; P>0.05$)。

结论 本研究为第一项中国大样本抑郁青少年的研究, 研究发现躯体虐待、躯体忽视、情感虐待、情感忽视与性虐待直接影响首发抑郁症青少年的抑郁情绪严重程度, 同时也通过反刍思维对其抑郁情绪产生中介影响; 而性虐待对该群体抑郁情绪的影响未显示出反刍思维的中介作用。

关键词: 童年虐待, 反刍思维, 青少年抑郁症, 中

介效应

跨诊断治疗统一方案 (UP-A) 对中国青少年情绪障碍患者的疗效: 一项随机对照研究方案

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目的 青少年情绪障碍是重要的公共卫生健康问题, 其患病率及共病率高, 亟需便捷有效的治疗方案以降低成本效益。青少年情绪障碍跨诊断治疗统一方案 (UP-A) 基于既往对情绪障碍共性特点的探索, 是一种循证依据较为充分的治疗方案。本课题组前期开放性研究表明改良的本土化 UP-A 在我国青少年情绪障碍患者及其家庭中的适用性良好, 短期及持续 1 年的长期疗效显著。本研究旨在采用随机对照的研究方法, 通过多维度评估工具探索本土化 UP-A 在我国青少年情绪障碍群体中的疗效。

方法 开展随机对照研究以验证 12 周 UP-A 对情绪障碍青少年及其家庭的多维疗效。研究计划纳入 48 名青少年情绪障碍患者 (主要诊断为焦虑障碍或抑郁障碍), 随机分至 UP-A 治疗组 (24 人) 或常规治疗组 (24 人)。UP-A 治疗为课题组前期改良的结合国内人群特征开展的团体心理治疗方案, 患者及家长将同时接受团体心理干预 (每周一次, 每次 90-120 分钟), 常规治疗组的患者定期在门诊接受常规诊疗。患者及其家长将在基线期、治疗第 4 周、治疗第 8 周、治疗结束后及治疗结束后 3 个月接受多维度评估, 包括疾病严重程度、情绪症状、情绪调节、认知模式、心理韧性、执行功能、生活质量、社会及家庭功能等。

结果 本研究针对国内青少年情绪障碍患者开展 UP-A 的临床研究。UP-A 将以团体形式开展, 同时纳入家长的团体治疗。预计 UP-A 治疗组的青少

年各项治疗评估均优于随机分配至常规治疗组的青少年, 且其疗效将在 3 个月的随访中维持。

结论 本研究为首项采用 UP-A 在我国青少年情绪障碍群体中开展的随机对照试验, 将为 UP-A 治疗中国青少年情绪障碍提供证据, 从而为我国青少年情绪障碍患者及其家庭提供更为普及化、简便化、易于传播的高效治疗方案。

关键词: 青少年, 情绪障碍, 跨诊断治疗统一方案, 随机对照试验, 家庭治疗/父母培训

认知行为疗法干预轻-中度青少年抑郁的临床应答和影响因素

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目的 青少年期(13-17 周岁)作为神经生理和心理迅速而不平衡发育的敏感时期, 是抑郁症的高发年龄段。本研究就认知行为疗法干预轻-中度青少年抑郁患者中的临床应答进行随访观察, 并探讨可资预测 CBT 疗效的影响因素。

本研究旨在探讨认知行为治疗(CBT)在轻-中度青少年抑郁患者中的临床应答和影响因素。

方法 研究对象来源于 2021 年 01 月 01 日至 2022 年 12 月 31 日期间, 在淮安市某三甲精神专科医院就诊的青少年抑郁患者。纳入 91 例轻-中度青少年抑郁患者为研究对象, 采集社会人口学资料, 并应用青少年生活事件量表(ASLEC)、简明应对方式问卷(CSQ)和社会支持评定量表(SSRS)采集心理特征信息。然后由专业心理治疗师实施为期 12 周的认知行为治疗(如 12 周内病情加重需要使用抗抑郁药乃至住院, 则提前终止随访)。采用蒙哥马利抑郁评定量表(MADRS)评定抑郁症状严重程度和疗效。最后使用 SPSS 26.0 软件分析 CBT 治疗轻-中度青少年抑郁的疗效和影响因素。

结果 观察终点时, 91 例研究对象的 MADRS 评分较基线显著下降(3.75 ± 0.85 Vs 8.47 ± 2.89), 差异有统计学意义($P < 0.001$); 其中痊愈 28 例(30.77%)、显效 23 例(25.27%)、有效 34 例(37.36%)、无效 6 例(6.59%)。与显效组(减分率 $\geq 50%$, $n=51$)相比, 非显效组(减分率 $< 50%$, $n=40$)的男性占比、ASLEC 量表人际关系因子、学习压力

因子、受惩罚因子、丧失因子、总刺激量和 CSQ 问卷消极应对因子评分较高, 而 SSRS 量表主观支持因子、支持利用度因子和总分较低, 差异具有统计学意义($P < 0.05$)。Logistics 二元回归分析发现: 性别、ASLEC 量表人际关系因子、学习压力因子、受惩罚因子和 SSRS 总分是 CBT 疗效的独立影响因子。

结论 CBT 对轻-中度青少年抑郁疗效肯定, 女性和人际关系较好、学习压力较低、近期无受惩罚等应激性生活事件的患者更容易在 CBT 治疗中获益。反言之, 对于男性、人际关系差、学习压力大、近期曾受惩罚等应激性生活事件的患者则可能疗效欠满意, 需要考虑早期联合药物治疗。

关键词: 青少年, 抑郁, 认知行为疗法, 临床应答, 影响因素

哌甲酯治疗注意缺陷多动障碍的脑效应连接机制

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目的 从大脑信息流动的角度, 使用效应连接(effective connectivity)指标, 研究哌甲酯(methylphenidate, MPH)改善注意缺陷多动障碍(Attention deficit hyperactive disorder, ADHD)临床疗效的磁共振脑机制, 为日后开发新的治疗方法及靶点提供理论依据。

方法 在儿童精神科门诊纳入符合 DSM 诊断标准的 6~16 岁 ADHD 儿童青少年, 从中小学校招募年龄匹配的正常对照组被试。基线状态下采集所有被试的人口学信息和静息态功能磁共振数据, 使用 ADHD 评定量表(ADHD-RS)评估 ADHD 组的临床症状。使用 MPH 治疗, 对药物进行标准的剂量滴定, 12 周后评估 ADHD 患者临床症状的变化, 再次收集患者的静息态功能磁共振数据。最终纳入分析的被试包括 18 例 ADHD 以及 24 例正常对照组, 将基线状态下 ADHD 组与正常对照组的度中心性有显著差异的脑区作为感兴趣区, 并进行格兰杰因果分析(Granger causality analysis, GCA), 探讨效应连

接改变与症状改善之间的关系。采用高斯随机场理论 (Gaussian Random Field, GRF) 对影像学结果进行多重比较校正, 体素水平显著性设为 $P < 0.01$, 团块水平显著性设为 $P < 0.05$ 。

结果 MPH 能显著改善 ADHD 患者的临床症状, 在基线状态下, 接受 MPH 治疗的 ADHD 组男孩在右侧枕中回、左侧枕上回的度中心性显著高于正常对照组儿童, 右侧壳核的度中心性显著低于正常对照组。ADHD-RS 评分的减分率主要与枕叶视觉区域与“皮质-纹状体-丘脑-皮质”环路之间效应连接的改变相关, 具体表现为: ADHD-RS 注意缺陷及多动冲动评分的减分率均与枕叶皮质到纹状体、感觉运动网络的效应连接增强成正相关, 与到默认模式网络成负相关, 而与默认模式网络到枕叶皮质的效应连接成正相关, 与感觉运动网络及纹状体区域到枕叶皮质的效应连接增强呈负相关。

结论 MPH 能显著改善 ADHD 的临床症状, MPH 改善患者临床症状主要涉及视觉网络与皮质-纹状体-丘脑-皮质环路之间效应连接的改变, 同时也参与调节默认模式网络与其他网络之间的交互, 提示可能作为日后精准干预的靶点。

关键词: 注意缺陷多动障碍, 哌甲酯, 效应连接, 静息态功能磁共振, 脑机制

青少年抑郁障碍自杀和非自杀性自伤行为的白质脑网络研究

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目的 研究表明青少年抑郁障碍自杀与非自杀性自伤行为涉及脑灰质结构及功能异常, 但是否存在脑白质组织模式的变化尚不清楚。本研究拟联合基于扩散张量成像的纤维跟踪和脑网络分析技术, 探索青少年抑郁障碍自杀与非自杀性自伤行为的白质脑网络特征及其临床特征相关性。

方法 本研究招募了伴自杀行为的抑郁障碍患者 (SA) 41 例, 伴非自杀性自伤行为的抑郁障碍患者 (NSSI) 27 例, 抑郁障碍患者 (MD) 17 例和正常对照 (NC) 33 例。采用渥太华自我伤害调查表 (中

文版)、哥伦比亚-自杀严重程度评定量表、BECK 自杀意念量表等对患者进行临床评估。采用 SPSS 25.0 软件对一般人口学资料和临床量表数据进行统计分析。采用 3T 的西门子 MRI 设备获取了被试的脑影像数据, 采用基于扩散张量成像的纤维跟踪和脑网络分析技术, 构建了不同类别被试的白质脑网络模型, 并采用基于节点的统计方法 (NBS) 对网络指标进行组间比较, 并采用皮尔逊相关分析探索网络特征与临床特征的相关性。

结果 被试在渥太华自我伤害调查表 (中文版)、哥伦比亚-自杀严重程度评定量表、BECK 自杀意念量表等多个量表指标存在显著差异 ($P < 0.05$)。NBS 分析结果提示 4 组被试间在左右侧眶额回间、左右侧扣带回间和丘脑间白质连接存在显著的组间差异 (FDR 校正, $P < 0.05$)。此外, 不同临床类别的被试在多个脑网络属性上存在显著差异, 包括 communication、diffusion 和 navigation 等多个指标。

事后检验显示 SA、NSSI 组和 NC 组之间存在统计学差异, 差异更为广泛, 而 NSSI 和 SA 组间差异较为局限。皮尔逊相关分析显示多个网络网络特征与临床特征具有相关性, 如网络指标 communication 与自杀意念的负相关有统计学意义 ($P < 0.05$); diffusion 与自伤持续时间的负相关有统计学意义 ($P < 0.05$)。

结论 伴自杀与非自杀性自伤行为的青少年抑郁障碍患者具有各自独特的白质网络组织模式, 并且这种网络特征与患者临床特征具有相关性, 提示脑白质的网络拓扑结构可能青少年抑郁障碍的自杀与非自杀性自伤行为的神经生物学机制上发挥了关键作用。

关键词: 青少年, 抑郁, 自杀, 非自杀性自伤, 脑白质, 纤维跟踪

A Correlation Study on The Therapeutic Effect of Low-frequency RTMS in The Treatment of Depression with Sleep Disorders in Western Yunnan Region

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Objective With the development of social modernization and the increase of life pressure, the incidence rate of depression with sleep disorder in China is rising rapidly. However, some patients have limited disease control with existing treatment options, and lack laboratory testing indicators for disease diagnosis and efficacy monitoring. Due to differences in economy, geography, and ethnic culture, the medical and treatment rates for depression with sleep disorders in the western Yunnan region are much lower than those in economically developed areas. This study aims to investigate the therapeutic effect of low-frequency rTMS on patients with depression and sleep disorders in western Yunnan, providing more effective and diverse treatment plans for patients with depression and sleep disorders, and seeking laboratory indicators that can diagnose and monitor the therapeutic effect. It advocates the use of drug combined with physical therapy to improve the sleep quality of patients with sleep disorders, and explores new diagnostic methods and treatment targets for patients with sleep disorders

Methods From January 2023 to January 2024, recruited patients with depression and sleep disorders and 40 healthy individuals who underwent physical examinations during the same period from the First Affiliated Hospital of Dali University for research. Patients with depression and sleep disorders were selected as the disease group, and the disease group was randomly divided into F3 group (stimulating the left lateral prefrontal cortex), F4 group (stimulating the right lateral prefrontal cortex), F3+F4 group (stimulating the left and right lateral prefrontal cortex), and a control group without stimulation. Healthy individuals were selected as the healthy group. The F3 group, F4 group, and F3+F4 group received 14 consecutive low-frequency repetitive transcranial magnetic stimulation (rTMS) treatments, known as the treatment group, while the control group did not receive rTMS treatment. Collect general clinical data of all enrolled patients and Pittsburgh Sleep Quality Index (PSQI) scores of patients in the affected group before and after treatment; Simultaneously collect serum samples from all enrolled patients upon admission and 14 days after treatment in the affected group, and detect levels of immune inflammatory factors, including IL-1

β , IL-18, TNF - α , IL10, NLRP1, Caspase-1, ASC, etc

Results The PSQI scores of patients in the F3, F4, and F3+F4 groups were all lower than those in the control group after treatment, and the differences were statistically significant ($P < 0.05$); The PHQ-9 scores of patients in the F3, F4, and F3+F4 groups were lower than those in the control group after treatment, but the difference was not statistically significant ($P > 0.05$); The difference in IL-1 β , IL-18, TNF - α , IL-10, NLRP1, and ASC levels between the diseased group and the healthy group was statistically significant ($P < 0.05$), while the difference in Caspase-1 levels was not statistically significant ($P < 0.05$); Multivariate binary logistic regression found that NLRP1 and ASC levels were considered independent risk factors for depression with sleep disorders ($P < 0.05$); ROC curve analysis shows that NLRP1 and ASC levels have good clinical predictive value for the occurrence of depression with sleep disorders

Conclusion rTMS treatment can improve the sleep quality and depressive symptoms of patients with depression and sleep disorders; TMS stimulation of the left, right, and combined left and right lateral prefrontal cortex showed no significant improvement in sleep and depression in patients with depression and sleep disorders; The levels of NLRP1 and ASC are independent risk factors for the occurrence of depression with sleep disorders, and have certain predictive value for the occurrence of depression with sleep disorders

关键词: Depression, Sleep disorders, Repetitive transcranial magnetic stimulation, Dorsal lateral prefrontal cortex, NLRP1 inflammasome

GABAergic Neuron Specific Pax2 Deficient Mice Exhibit ASD Like Endophenotypes

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Objective Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder that affects millions of people. Despite its prevalence, the underlying mechanisms are still not fully understood. Paired box 2

(PAX2) is a transcription factor essential for brain development and patterning. Its dysregulation has been implicated in various neurological disorders, including ASD. Gamma-Aminobutyric Acid (GABA) is an inhibitory neurotransmitter that plays a crucial role in regulating neuronal activity. Previous studies have shown abnormal GABA metabolism in Pax2[±]-mice. This study aims to investigate whether Pax2 regulates GABAergic neurotransmission and whether its dysregulation contributes to ASD like behavioral endophenotypes by constructing a GABAergic neuron-specific Pax2 knockdown mouse model

Methods We randomly divided 26 C57 BL/6J mice into two groups, an experimental group and a control group. We specifically knocked down Pax2 in GABAergic neurons by using bilateral injection of the rAAV-VGAT1-Pax2 shRNA virus into the prefrontal cortex of adult C57 BL/6J mice in the experimental group. We injected rAAV-VGAT1-scramble shRNA into the prefrontal cortex of C57 BL/6J mice in the control group. Three weeks later, we used Western blotting and immunofluorescence staining to detect the expression of Pax2 and the presence of the virus in the brain. Meanwhile, we performed a battery of behavioral test.

Results We observed significant increases in grooming time and frequency in the experimental group mice compared to the control group. Specifically, the experimental group mice spent more time grooming ($p < 0.0003$) and groomed more frequently ($p < 0.0001$). The Spray-induced self-grooming test further supported these findings, with the experimental group mice displaying longer induced grooming times ($p < 0.05$) and higher induced grooming frequencies ($p < 0.0001$). In the marble burying test, we found a significant increase in marble burying behavior in the experimental group mice ($p < 0.0001$). The T-maze revealed that the experimental group mice had impaired learning ability, as evidenced by fewer correct responses per day during the acquisition phase ($p < 0.0001$). Moreover, the experimental group mice took longer to reach the reversal criterion ($p < 0.05$). Similarly, during the reversal learning phase, the experimental group mice performed worse than the control group ($p < 0.0001$). Finally, the elevated plus maze test indicated that the experimental group

mice spent more time in the open arms, suggesting decreased anxiety levels ($p < 0.05$), suggesting a decrease in anxiety levels. Notably, previous studies have shown that repetitive behaviors can alleviate anxiety, which is consistent with the increased repetitive behaviors observed in the experimental group mice

Conclusion Our study demonstrates that GABAergic neuron specific Pax2 knockdown mice exhibit a robust ASD-like endophenotype, characterized by increased repetitive behaviors and impaired learning and memory abilities. These findings suggest that these mice can be used as a valuable animal model for ASD research. Furthermore, we plan to explore the underlying molecular mechanisms driving these phenotypes, which may lead to the identification of novel therapeutic targets for the treatment of ASD

关键词: Autism spectrum disorder (ASD), GABAergic neuron, Pax2, repetitive behaviors

青少年抑郁障碍患者的网络成瘾特点及其与冲动攻击特质的关系

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目的 了解青少年抑郁障碍患者的网络成瘾 (Internet Addiction, IA) 特点; 探索抑郁发作和冲动、攻击的人格特质对于网络成瘾的影响。

方法 纳入 78 名符合 ICD-10 抑郁障碍诊断标准并使用中国版学龄儿童 (6-18 岁) 情感障碍和精神分裂症问卷现在和终生版 (K-SADS-PL-C DSM-5) 半定式访谈除外其他精神障碍的青少年抑郁障碍患者和 83 名健康青少年对照, 使用网络成瘾诊断量表中文版 (YIAT)、Barratt 冲动性量表第十一版 (BIS-11)、Buss-Perry 攻击性量表 (BPAQ) 评估青少年网络成瘾、冲动性、攻击性, 使用 SPSS 25.0 统计分析软件对数据进行组间比较及分层回归分析等统计学

处理。

结果 以 YIAT 总分 ≥ 50 分界定患有网络成瘾, 青少年抑郁障碍患者网络成瘾率为 57.7%, 高于青少年健康对照组 (31.3%)。抑郁障碍组在 YIAT 的“退缩和社交问题”维度 ($\eta^2=0.156$, $P<0.01$)、 “现实替代”维度 ($\eta^2=0.143$, $P<0.01$) 得分高于对照组, 抑郁障碍患者的 BIS-11 总分 ($\eta^2=0.188$, $P<0.01$)、 BPAQ 总分 ($\eta^2=0.142$, $P<0.01$) 高于健康对照。分层回归分析结果显示攻击性、冲动性和网络成瘾症状相关 ($P<0.01$), 而控制社会环境因素及冲动、攻击性等因素的影响后, 是否患有抑郁障碍对于网络成瘾并无相关性 ($P=0.377$)。

结论 抑郁障碍患者相对于健康青少年更容易出现网络成瘾问题且具有独特的成瘾模式, 冲动攻击特质和网络成瘾相关, 可能在抑郁障碍患者的网络成瘾过程中发挥了中介作用或潜在的共同致病作用。

关键词: 抑郁障碍; 网络成瘾; 青少年; 冲动性; 攻击性

The Role of Inflammation-associated Tryptophan-kynurenine Pathway Disturbance in The Pathogenesis and Suicide Risk of Adolescent Depression

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Objective investigate the role of TKP in adolescent depression, particularly its connection to inflammation and suicide risk

Methods Seventy-three adolescents with MDD were assessed for serum levels of interleukin (IL)-1 β , IL-6, IL-18, IL-10, tumor necrosis factor (TNF)- α , and TRP metabolites that TRP, KYN, 3-hydroxykynurenine (3-HK). Correlations between cytokines and TKP measures were examined. Patients were divided into high ($n=42$) and non-high suicide risk groups ($n=31$), and serum levels of cytokines and TKP metabolites were compared

Results Significant negative correlations were

found between TRP and IL-8 and IL-10, while a significant positive correlation was observed between 3-HK and IL-8 in depressed adolescents. The KYN/TPR (index of indoleamine 2,3-dioxygenase, IDO) was positively correlated with IL-1 β , IL-6, IL-10 and TNF- α levels; and 3-HK/KYN (index of kynurenine 3-monooxidase, KMO) was positively correlated with IL-8 level. Depressed adolescents at high suicide risk exhibited significantly higher levels of IL-1 β , IL-10, and TNF- α and lower levels of 3-HK compared to their non-high suicide risk counterparts

Conclusion This study first demonstrated the relationship between inflammatory cytokines and the activities of IDO and KMO in adolescent depression, providing evidence for TKP abnormalities as a link between inflammation and depression in adolescents. Notably, immune-related TKP dysregulation was more pronounced in depressed adolescents at high suicide risk

关键词: Adolescent Depression, Inflammation, Cytokines, Tryptophan-Kynurenine Pathway, Suicide

留守儿童心理健康状况研究现状

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摘要: 留守儿童心理健康状况近年来引起了广泛关注, 主要包括精神病性体验、歧视知觉与社会疏离感、心理虐待与攻击行为以及负性生活事件对留守儿童亲社会倾向等心理健康与心理弹性研究现状。(1) 留守儿童的精神病性体验痛苦程度与心理弹性和同伴依恋呈负相关。同伴依恋在留守儿童的心理弹性和精神病性体验之间存在显著的调节效应。高水平的心理弹性和同伴依恋对留守儿童精神病性体验的出现具有缓冲作用, 削弱留守经历带来的不良影响, 从而减少精神病性体验的产生。(2) 留守儿童歧视知觉与社会疏离感呈正相关。歧视知觉和社会疏离感与心理弹性呈负相关。心理弹性在留守儿童的歧视知觉和社会疏离感间起部分中介作用。心理弹性可以帮助留守儿童从歧视情境和社会疏离感中恢复出来。(3) 心理虐待主要通过 3 条中介路径

来影响留守儿童的攻击行为：①心理虐待→心理弹性→攻击行为。②心理虐待→人际敏感→攻击行为。③心理虐待→心理弹性→人际敏感→攻击行为。心理弹性和人际敏感在心理虐待与攻击行为之间起到链式中介作用。心理虐待与人际敏感和攻击行为之间呈正相关，心理弹性与心理虐待和攻击行为及人际敏感呈负相关。心理弹性能够有效降低心理虐待、人际敏感和攻击行为水平。(4)留守儿童的亲社会倾向显著低于非留守儿童，负性生活事件更不利于其亲社会倾向。负性生活事件与心理弹性和社会倾向呈负相关，心理弹性和亲社会倾向间呈正相关。心理弹性在负性生活事件和亲社会倾向间起中介作用。负性生活事件不仅可以直接作用于留守儿童的亲社会倾向，也可以通过心理弹性的中介作用对亲社会倾向产生间接效应。

关键词：留守儿童,心理弹性,精神病性体验,社会知觉,心理虐待,负性生活事件

DBT 日间病房对抑郁症青少年情绪调节的影响

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目的 辩证行为疗法 (dialectical behavior therapy, DBT) 对青少年抑郁症状及其认知功能均有一定改善, 日间病房模式也被证实对抑郁症状有效。但在国内, 将二者相结合的研究还较少。研究旨在探究日间病房模式下 DBT 对于抑郁症青少年的疗效及其情绪调节策略使用的影响, 为抑郁症青少年的治疗提供一种新的干预途径与治疗方案。

方法 纳入抑郁症青少年患者 40 例。对照组 17 例, 接受常规抗抑郁药物治疗; 干预组 23 例, 接受常规抗抑郁药物治疗+日间病房模式的 DBT 技能训练。DBT 日间病房设置为连续 5 天, 每天共 4 小时的技能训练, 包含 DBT 技能训练的四个模块以及行为链分析、价值观澄清等内容。利用汉密尔顿抑郁量表 (HAMD)、情绪调节问卷 (ERQ) 评估患者情绪及情绪调节策略的使用情况。

结果 1.DBT 日间病房对抑郁症患者的疗效:

(1) 两组患者治疗前 HAMD 评分无显著差异 ($p>0.05$); (2) 治疗后, 患者 HAMD 评分减分率组

间差异显著 (干预组 51.10%, 药物组 31.82%, $p<0.05$)。2.DBT 日间病房对患者情绪调节策略的影响: (1) 干预组患者在经过治疗后, 在 ERQ 认知重评维度得分有显著增加 ($p<0.05$), 在表达抑制维度得分降低, 但差异不显著; (2) 对照组患者在 ERQ 两个维度得分均无明显变化。

结论 日间病房模式下的 DBT 技能训练显著改善了抑郁症青少年患者的抑郁情绪; 同时, 患者在认知重评维度上的得分明显提高, 说明日间病房模式下 DBT 技能训练对于抑郁症青少年患者使用积极情绪调节策略具有帮助。DBT 日间病房治疗模式或许可以成为国内青少年抑郁症治疗的一种新的干预途径。

关键词: 辩证行为疗法, 日间病房, 抑郁症, 青少年, 情绪调节

注意缺陷多动障碍儿童伴情绪失调静息态局部功能活动特征

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目的 情绪失调在注意缺陷多动障碍 (Attention-Deficit/Hyperactivity Disorder, ADHD) 儿童中非常普遍, 对 ADHD 儿童功能损害及不良预后影响较大。目前 ADHD 儿童情绪失调症状在临床上难以被早期识别及干预, 有必要进行 ADHD 儿童情绪失调相关影像学研究。本研究使用 ALFF 值及 ReHo 值探索 ADHD 儿童伴情绪失调相关的静息态局部功能活动特征。

方法 共有 240 名 6-14 岁儿童参与本研究, 其中包括 ADHD 儿童 160 名, 以及性别、年龄、智力与之匹配的健康对照 (TDC) 80 名。参与者父母配合提供人口学信息、SNAP-IV 和 Achenbach 儿童行为量表 (CBCL) 问卷。使用 CBCL 量表 (Anxiety/depression, Attention, Aggressive, AAA) 条目将 ADHD 儿童分为伴有与不伴有情绪失调的两个亚组。参与者配合完成静息态功能磁共振扫描, 经过图像质量检查后, 最终纳入伴有情绪失调的 ADHD 组 77 例, 不伴情绪失调的 ADHD 组 53 例, TDC 组 55 例进行统计分析。以性别、年龄、智力、平均头动参数为协变量, 采用 ANCOVA 分析及 LSD

事后检验, 比较了伴有情绪失调的 ADHD、不伴情绪失调的 ADHD、TDC 三组之间在 ALFF 值和 Reho 值上的差异。

结果 与不伴有情绪失调的 ADHD 儿童比较, 伴有情绪失调的 ADHD 儿童右侧角回 ALFF 值升高 ($p=0.002^{**}$), 左侧枕中回 Reho 值升高 ($p<0.001^{***}$)。进一步在 ADHD 儿童中进行的相关分析发现角回 ALFF 值及枕中回 Reho 值与 ADHD 儿童情绪失调得分成正相关关系 (左侧角回: $r=0.18, p=0.04^*$; 右侧角回: $r=0.24, p=0.006^{**}$; 左侧枕中回: $r=0.23, p=0.007^{**}$)。

结论 角回及枕中回局部功能活动的异常可能是伴有情绪失调的 ADHD 儿童与情绪失调相关的神经影像学特征。ADHD 儿童情绪失调可能与角回及枕中回在情绪调节中负责的对视觉相关情绪刺激的识别及整合能力受损相关。

关键词: 注意缺陷多动障碍; 情绪失调; 静息态; 局部活动

注意缺陷多动障碍儿童情绪失调相关静息态功能连接特征

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目的 情绪失调在注意缺陷多动障碍 (Attention-Deficit/Hyperactivity Disorder, ADHD) 儿童中非常普遍, 显著影响其功能损害和不良预后。前额叶皮层在情绪调节中起着关键作用。本研究将 ADHD 儿童分为伴与不伴情绪失调的两组, 以“背外侧/腹内侧前额叶皮层”为种子点, 旨在探索与 ADHD 儿童情绪失调相关的静息态功能连接特征。

方法 共有 240 名 6-14 岁儿童参与本研究, 其中包括 ADHD 儿童 160 名, 以及性别、年龄、智力与之匹配的健康对照 (TDC) 80 名。参与者父母配合提供人口学信息、SNAP-IV 和 Achenbach 儿童行为量表 (CBCL) 问卷。使用 CBCL 量表中 (Anxiety/depression, Attention, Aggressive, AAA) 条目将 ADHD 儿童分为伴有与不伴有情绪失调的两个亚组。参与者进行静息态功能磁共振扫描, 经过图像质量检查后, 最终纳入 ADHD 伴情绪失调组 77 例、ADHD 不伴情绪失调组 53 例和 TDC 组 55 例

进行统计分析。在控制性别、年龄、智力和平均头动参数的基础上, 比较伴与不伴情绪失调两组间以“背外侧/腹内侧前额叶皮层”为种子点的静息态功能连接特征。同时在伴有情绪失调的 ADHD 组中进行功能连接与情绪失调的相关性分析。

结果 与不伴情绪失调的 ADHD 儿童相比, 伴有情绪失调的 ADHD 儿童显示出“背外侧上额叶回-眶额中回/枕叶”的功能连接增强 (背外侧上额叶回-眶额中回: $p=0.007^{**}$, 背外侧上额叶回-枕叶: $p=0.008^{**}$)。相反, 其在“背外侧上额叶回-三角下额叶回”之间的功能连接减弱 (背外侧上额叶回-三角下额叶回: $p=0.04^*$)。此外, 在伴有情绪失调的 ADHD 儿童中, 背外侧上额叶回与眶额皮层之间的功能连接与情绪失调评分呈正相关 ($r=-0.32, p=0.005^{**}$)。

结论 伴有情绪失调的 ADHD 儿童在以“背外侧/腹内侧前额叶皮层”为种子点的功能连接异常方面显示出与不伴情绪失调的 ADHD 儿童不同的特征。伴有情绪失调的 ADHD 儿童情绪失调与“背外侧前额叶皮层 - 眶额叶皮层”之间的功能连接异常相关。这些研究结果对理解 ADHD 儿童情绪失调相关的神经影像学及神经心理特征意义有一定意义。

关键词: 注意缺陷多动障碍; 情绪失调; 前额叶皮层; 功能连接

数字化干预技术促进 ADHD 儿童视觉相关脑电微状态的正常化

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目的 近年来, 数字化治疗技术如神经反馈和数字化认知训练在临床治疗注意缺陷多动障碍 (ADHD) 儿童中的应用越来越广泛。大量临床研究表明, 这些技术能够改善 ADHD 儿童的认知能力和注意力水平。然而, 对于这些治疗技术在客观脑功能改善方面的研究证据仍然较为缺乏, 尤其是与正常儿童的脑功能变化对比。本研究旨在通过脑电微状态分析, 探讨数字化干预技术对 ADHD 儿童客观

脑功能的影响。

方法 本研究包括 57 名 ADHD 儿童和 47 名年龄与性别匹配的正常对照儿童。57 名 ADHD 儿童接受了为期 3 个月的数字化训练，并采集了训练前后的静息态脑电活动。这 57 名儿童被分为三组：神经反馈训练组 (NFT, 17 名)、计算机化认知训练组 (CCT, 21 名) 和混合神经反馈和认知训练组 (COM, 19 名)。研究采用 Microstate analysis toolbox 分析了基线期 ADHD 和正常对照儿童微状态 A\B\C\D 在出现频率、持续时间及覆盖率上的差异，并进一步分析不同组别 ADHD 儿童训练前后四种微状态的变化特征。

结果 1) 基线期：ADHD 儿童的微状态 A 在出现频率 ($p = 0.002$)、持续时间 ($p = 0.016$) 及覆盖率 ($p = 0.004$) 均显著高于正常儿童。微状态 B 在出现频率 ($p < 0.001$)、持续时间 ($p < 0.001$) 及覆盖率 ($p < 0.001$) 均显著低于正常儿童。微状态 C 和 D 在两组间未表现出显著差异。2) 训练后：ADHD 儿童微状态 A 的出现频率 ($p = 0.030$) 及覆盖率 ($p = 0.028$) 显著降低，逐步接近正常儿童。微状态 B 在训练前后无明显差异。微状态 C 的出现频率 ($p < 0.001$)、持续时间 ($p < 0.001$) 及覆盖率 ($p < 0.001$) 在训练后显著降低。微状态 D 的出现频率 ($p < 0.001$)、持续时间 ($p < 0.001$) 及覆盖率 ($p < 0.001$) 在训练后显著升高。

结论 微状态 A 与视觉信息的处理和整合密切相关，是反映大脑在静息状态下视觉注意力和认知处理的一种特定模式。在基线时期，ADHD 儿童的微状态 A 在出现频率、持续时间及覆盖率上均显著高于正常儿童，表明 ADHD 儿童在视觉信息处理方面存在过度活跃或不正常的激活模式。经过数字化训练后，ADHD 儿童微状态 A 的出现频率及覆盖率显著降低，逐步接近正常儿童的水平，支持数字化认知训练在改善 ADHD 儿童视觉功能和整体认知能力方面的潜力。脑电微状态分析提供了一种客观评估治疗效果的方法，有助于进一步理解和优化 ADHD 的数字化治疗策略。

关键词：ADHD (注意缺陷多动障碍), 数字化干预技术, 脑电微状态, 视觉功能

ADHD 伴社交障碍儿童的杏仁核动态功能连接缺陷

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目的 约 52-82% 的注意缺陷多动障碍 (attention deficit and hyperactivity disorder, ADHD) 患者存在社交障碍 (social deficit, SD)。杏仁核是社交脑的重要组成部分，其功能异常可能与 ADHD 患者的社交功能缺陷有关。本研究旨在探讨 ADHD 伴社交障碍儿童的杏仁核动态功能连接 (dFC) 是否存在异常。

方法 纳入 ADHD 儿童 124 名以及年龄匹配的正常对照 (TDC) 72 名。以社交反应量表 (SRS) t 分数 60 分为界值，将 ADHD 儿童分为伴社交障碍组 (ADHD+SD, 53 名) 以及不伴社交障碍组 (ADHD-SD, 71 名)。构建基于杏仁核亚区的与全脑的 dFC 图谱，采用 ANCOVA 分析，控制年龄、智商、性别，比较三组被试的 dFC 的差异，利用 GRF 方法进行多重比较校正 (体素水平 $p < 0.005$, 团块水平 $p < 0.05$)，得到异常脑区。将通过校正的异常脑区的 dFC 与 SRS 各维度评分及 ADHD 症状评定量表做偏相关分析，探索异常脑区和社交功能的关系。

结果 ADHD+SD 组的杏仁核亚区的 dFC 显著高于 ADHD-SD 组及 TDC 组，ADHD-SD 组和正常对照组间无显著差异，具体异常连接脑区如下：左基底核到右额上回，左中央核到左额上回，左外侧核到右颞下回和右额上回，右中央核到左额上回，右外侧核到左额中回和右颞下回。其中，在 ADHD-SD 组中，左外侧核到右颞下回的 dFC 和 SRS 量表中的社交沟通 ($r = -0.382, p = 0.001$) 及总分 ($r = -0.311, p = 0.010$) 负相关，右中央核与左额上回的 dFC 和社交意识 ($r = -0.275, p = 0.023$) 负相关，右外侧核到左额中回的 dFC 和社交沟通 ($r = -0.324, p = 0.007$) 及总分 ($r = -0.292, p = 0.016$) 负相关，右外侧核到右颞下回的 dFC 和社交沟通 ($r = -0.352, p = 0.003$) 负相关。其余两组无显著相关。三组被试的异常脑区的 dFC 与 ADHD 症状评分均无显著相关。

结论 ADHD+SD 组的杏仁核的 dFC 显著增加，功能连接稳定性更差，其中，杏仁核三个亚区和额上回的 dFC 均增加，双侧外侧核和右颞下回的 dFC 增加，ADHD-SD 组和 TDC 组之间无显著差异。这

种异常主要和 SRS 评分而非 ADHD 症状评分相关,提示杏仁核的 dFC 异常可能是 ADHD 儿童社交功能受损的潜在机制。

关键词: 注意缺陷多动障碍,社交障碍,杏仁核,动态功能连接

注意缺陷多动障碍不同亚型的脑血流特征及其与执行功能关系的研究

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目的 基于动脉自旋标记(Arterial Spin Labeling, ASL)探讨注意缺陷多动障碍(Attention Deficit and Hyperactive Disorder, ADHD)不同亚型[注意缺陷为主型(Attention Deficit and Hyperactive Disorder-Inattentive, ADHD-I)及混合型(Attention Deficit and Hyperactive Disorder-Combined, ADHD-C)]儿童脑血流(Cerebral Blood Flow, CBF)的差异,并进一步研究这些差异与执行功能的关系,以深入理解 ADHD 的神经生物学基础。

方法 本研究共纳入 159 名完成伪连续 ASL(pseudo-continuous ASL, pcASL)扫描的被试,包括 83 名 ADHD-I 型患儿,51 名 ADHD-C 型患儿及 25 名健康对照(Healthy Control, HC),所有被试均为男孩。使用行为评定执行功能问卷(家长版)

(Behavior Rating Inventory of Executive Function-Parent Form, BRIEF)评估患者的生态执行功能。采用协方差分析(ANCOVA),探讨三组儿童在 CBF 上的差异,事后检验采用 Dunn 检验。对于存在组间差异的脑区,提取相应脑区的 CBF 值,并与上述 BRIEF 得分构建回归模型,进一步明确差异脑区与执行功能之间的关系。

结果 ADHD-I、ADHD-C 及 HC 三组在左侧颞中回的 CBF (GRF 校正:体素水平 $p < 0.001$,团块水平 $p < 0.05$,双侧检验)存在显著差异。Dunn 事后检验(Bonferroni 校正 $p < 0.05$)显示 ADHD-C 型与 HC ($P = 0.000$)、ADHD-C 型与 ADHD-I 型 ($P = 0.01$)

之间存在显著差异,ADHD-I 型较其它两组表现出较低的局部 CBF;而 ADHD-I 型与 HC 之间无显著差异。在与 BRIEF 量表得分的回归分析中,发现 ADHD-C 型的 CBF 值与计划/组织得分显著相关 ($b = -0.062$, $P = 0.03$)。

结论 ADHD-I 和 ADHD-C 两种亚型的局部脑血流存在显著差异。ADHD-C 型在左侧颞中回的 CBF 值显著低于 ADHD-I 型和健康对照,降低的局部脑血流可能与 ADHD-C 型的执行功能缺陷有关,尤其在组织和计划能力方面。而 ADHD-I 型与 HC 的局部脑血流之间无显著差异。该结果为进一步理解 ADHD 亚型的神经生物学机制提供了新的视角。

关键词: 注意缺陷多动障碍,动脉自旋标记,脑血流,执行功能

高精度经颅直流电刺激治疗青少年心境障碍抑郁发作疗效的脑影像标志

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目的 随着抑郁症在青少年中的发病率逐渐增加,寻找有效的物理治疗方法尤为重要。本研究旨在探讨高精度经颅直流电刺激(tDCS)在治疗青少年心境障碍抑郁发作中的疗效,特别是通过对不同靶点的 tDCS 治疗,评估其疗效差异及脑影像学标志的变化,以期为临床治疗提供新的思路。

方法 本研究纳入了符合 DSM-5 诊断标准的青少年抑郁患者,随机分配至三个治疗组:DLPFC 阳极刺激、OC 阴极刺激和 DMPFC 阳极刺激。每组患者接受 2 周的 tDCS 治疗,每天 2 次,每次 20 分钟,电流强度 2mA。在基线及治疗 20 次后,所有参与者均接受功能磁共振成像(fMRI)扫描以及临床量表评估,使用功能磁共振成像数据中的动态因果模型(DCM)值,基于 Yeo7 网络,来分析各网络之间的 DCM 变化。

结果 结果显示,所有三组患者的抑郁症状均有显著改善,但改善程度存在差异。DLPFC 阳极刺激组在症状缓解方面表现最为显著,其次是 DMPFC 阳极刺激组,而 OC 阴极刺激组的效果相对较弱。在脑影像学方面,DLPFC 阳极刺激组的 Yeo7 网络之间的 DCM 值变化最大,尤其是 DLPFC 区域与视

觉网络之间的连接增强。DMPFC 阳极刺激组则表现出 DMPFC 与默认网络的 DCM 值显著增强。OC 阴极刺激组在视觉皮层与其他脑区的连接性上也有一定变化,但整体效果不如前两组明显。

结论 本研究表明,高精度 tDCS 在治疗青少年心境障碍抑郁发作方面具有潜在的疗效,且不同靶点的治疗效果及其影像学标志存在显著差异。DLPFC 阳极刺激显示出最显著的症状缓解效果和 Yeo7 网络间功能连接的增强,提示其在调节情绪和认知功能方面的关键作用。DMPFC 阳极刺激同样有效,主要通过增强自我参照和情绪调节功能。OC 阴极刺激的疗效相对较弱,但仍对视觉皮层功能有一定影响。总之,本研究为个性化 tDCS 治疗青少年抑郁症提供了科学依据,并提示未来应进一步探索不同脑区在情绪调节中的具体机制及其临床应用潜力。

关键词:直流电,青少年,抑郁症,功能磁共振

童年创伤在儿童青少年社交焦虑障碍奖赏加工机制的 ERP 研究

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目的 社交焦虑障碍(Social anxiety disorder, SAD)是一种以社交功能受损为特征的精神障碍,表现为过度害怕社交场合与退缩等症状,在儿童青少年时期发病率显著升高。目前的 SAD 循证治疗方法疗效有限,40%到60%的 SAD 患者的预后效果不佳。童年创伤是社交焦虑障碍的重要风险因素之一。有研究认为童年创伤可能会损伤大脑奖赏功能,使社交行为不再具有奖赏性,从而导致严重的社交退缩,但其对 SAD 的发生和发展机制仍不明确。因此,本研究采用事件相关电位(Event-related potential, ERP)探究童年创伤对青少年 SAD 在奖赏加工的神经机制。

方法 本研究共招募 120 名 10-18 岁儿童青少年被试,包括 SAD 病例组(n=62, M=14.79, SD=1.78)和健康对照组(n=58, M=14.06, SD=2.06)。本研究采用混合实验设计,以门任务范式研究青少年 SAD 患

者在奖赏反馈中是否存在异常表现以及童年创伤对此是否存在调节作用。

结果 1)与健康对照组相比,儿童青少年社交焦虑障碍患者在金钱奖赏和社交奖赏潜伏期更短。2)有童年创伤的 SAD 患者仅在社交奖赏条件下的奖赏反馈阶段 ERP 潜伏期显著长于无童年创伤的 SAD 患者,在金钱奖赏条件下二者的潜伏期无显著差异。

结论 社交焦虑障碍患者的奖赏加工功能存在异常。SAD 患者对奖赏的反应速度更快,这可能表明 SAD 患者对奖赏的敏感性更高,且存在社交特异性。然而,童年创伤对 SAD 奖赏反馈的具体影响取决于奖赏类型,有童年创伤的 SAD 患者仅对社交奖赏反应速度减慢,这可能提示了其对社交奖赏的敏感性降低。本研究有助于深入探讨童年创伤如何通过影响大脑奖赏加工系统来促进 SAD 的发展与维持,为童年创伤与 SAD 的关系提供了新的证据。

关键词:社交焦虑障碍,童年创伤,儿童青少年,事件相关电位

基于全国多中心的抑郁青少年手机依赖对睡眠质量影响的网络分析研究

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目的 探索抑郁青少年手机依赖与睡眠质量症状间关联,识别核心症状及桥梁症状,进而探索两者症状间的潜在因果关系,深入了解两者间的发生机制,为改善睡眠质量提供一定的科学依据及理论指导。

方法 自 2020 年 12 月至 2022 年 12 月,从中国 9 个省份的 14 家精神专科医院招募符合《精神障碍诊断与统计手册(第五版)》抑郁发作标准的 12~18 岁门诊及住院患者。采用自编人口学及临床特征问卷、手机依赖指数量表(Mobile Phone Addiction Index, MPAI)、匹兹堡睡眠质量指数量表(Pittsburgh Sleep Quality Index, PSQI)以及患者健康问卷(Patient Health Questionnaire, PHQ-9)对抑郁青少年的一般人口学及临床资料、手机依赖行为、睡眠质量及抑郁程度进行调查。使用 R Studio 进行网络

分析及可视化,得到手机依赖-睡眠质量的正则化偏相关网络及症状节点的中心性及桥接中心性,并计算症状节点的可预测性;评估网络节点的稳定性;最后通过贝叶斯网络建立症状的有向无环图。

结果 本研究共纳入 2200 名抑郁青少年,平均年龄为 14.99 ± 1.65 岁。抑郁青少年 MPAI 与 PSQI 总分及七个维度得分之间存在正相关。MPAI 总分与 PSQI 呈正相关 ($r=0.214, p<0.01$)。在手机依赖-睡眠质量正则化偏相关网络中,共 40 条边的权重没有被缩减为零。手机依赖和睡眠质量内部症状的关联较强,边 P3- P4[睡眠时间-睡眠效率, EW(Edge Weight)=0.492]的权重最强,其次为边 P1-P2(主观睡眠质量-入睡时间, EW=0.377),边 M1-M2(失控性-戒断性, EW=0.352)与边 M1-M4(失控性-低效性, EW=0.352)。网络中症状 M2(戒断性)的预期影响最强,表明其是该网络的核心症状,其次是 P1(主观睡眠质量)。在桥接预期影响方面, M2 最高,其次为 P7(日间功能障碍)和 P5(睡眠障碍),表明以上三者为该网络的桥梁症状。有向无环图显示 M2(戒断性)及 P1(主观睡眠质量)症状处于有向无环图的顶端。P6(催眠药物)则处在最底部,受到睡眠质量症状及手机依赖症状的影响。M4(低效性)影响 P7(日间功能障碍)可能是手机依赖影响睡眠质量的路径。

结论 “戒断性”症状是手机依赖-睡眠质量网络的核心症状。“主观睡眠质量”则是睡眠质量症状群中的核心症状。“日间功能障碍”是睡眠质量中受手机依赖影响最严重的症状,并充当了进一步影响其他睡眠症状的渠道。

关键词: 抑郁, 青少年, 手机依赖, 睡眠质量, 网络分析

计算机认知矫正治疗在非自杀性自伤青少年抑郁发作患者中的应用

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目的 探讨计算机认知矫正治疗(Computerized Cognitive Remediation Therapy, CCRT)对非自杀性自伤(Non-suicidal Self-injury, NSSI)青少年抑郁发作患者中的应用效果。

方法 采用便利采样法选取 84 例 NSSI 青少年抑郁发作患者为研究对象,采用随机对照分为试验组和对照组,对照组接受氟西汀药物治疗和常规康复治疗,试验组在对照组的基础上,进行 CCRT 训练,对照组治疗:①由一名副主任医师对患者的病情进行常规抗抑郁药;②康复护士进行工娱治疗,1 次/天,45 分钟/次;③健康教育和心理疏导。试验组治疗:在对照组的基础上对患者进行 CCRT 训练,包括对患者注意力、信息处理能力、执行力、记忆力和空间视觉能力的训练。软件使用的是南京伟思科技公司生产的操作系统。每天 2 次,30 分钟/次,共 30 次。具体训练措施:①治疗前对患者进行全面评估,了解患者的情绪、自伤意念及认知水平,然后确定治疗的方案和计划。②根据患者的整体水平选择对患者有吸引力、强度适宜的训练程序,最初的治疗方案选择患者容易接受和掌握的程序,使患者得到更多的奖励,治疗师关注患者的自我适应能力,避免在治疗过程中出现退出;③治疗操作前,康复治疗师会对整体治疗方案进行详细讲解,告知患者最有助于提高训练成果的方法和手段,根据患者不同情况采取个性化方式指导。30 分钟结束后,根据患者训练的成功与否,帮助个人调整计划和目标。评价工具:采用自编一般资料问卷收集患者的主要信息,包括基本信息:性别、年龄、受教育程度;疾病相关因素:学习成绩、家庭支持、人际关系等。采 HAMD-17 评定患者抑郁状态,采用 FASM 评估自伤行为。

结果 抑郁情绪治疗前,计算机认知矫正训练组(试验组)与传统康复训练组(对照组)HAMD-17 评分比较,无显著差异($p>0.05$)。治疗 2 周后,试验组较对照组而言 HAMD-17 的评分明显下降,呈显著差异($p<0.05$);非自杀性自伤行为治疗前,计算机认知矫正训练组(试验组)与传统康复训练组(对照组)FASM 评分比较,该评分分为行为问卷与功能问卷,两部分无显著差异($p>0.05$)。治疗 2 周,试验组较对照组 FASM 评分,行为和功能问卷得分均下降,呈显著差异($p<0.05$)。在组内比较中,试验组行为问卷评分与功能问卷评分在两周治疗后显著降低($p<0.05$);对照组两部分评分变化不明显。

结论 对 NSSI 青少年抑郁发作患者采用药物治疗加上 CCRT,有积极的临床意义,可以改善患者的抑郁情绪,减少非自杀性自伤行为的发生,能帮助抑郁青少年患者的社会功能恢复,促进疾病康复。

关键词: 计算机认知矫正治疗; 青少年抑郁发

作：非自杀性自伤

双靶点加速重复经颅磁刺激治疗青少年抑郁快感缺失症状的疗效研究

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目的 青少年抑郁患者的快感缺失症状与奖赏环路功能失调有关，眶额皮质被认为与大脑奖赏系统密切相关，本研究旨在探究联合左侧背外侧前额叶(left dorsolateral prefrontal cortex, L-dIPFC)和右侧眶额叶(Right orbitofrontal cortex, R-OFC)的双靶点加速重复经颅磁刺激(accelerated repetitive transcranial magnetic stimulation, arTMS)治疗青少年抑郁患者快感缺失症状的疗效。

方法 本研究为随机单盲实验，在贵州省某医院随机选取 66 名青少年抑郁患者，随机分配到双靶点组、单靶点组和伪刺激组。其中，双靶点组患者先接受以 L-dIPFC 为刺激靶点的高频 arTMS 治疗，再接受以 R-OFC 为刺激靶点的持续性 θ 波短阵快速脉冲经颅磁刺激治疗(Continuous theta burst stimulation, CTBS)；单靶点组患者则先接受以 L-dIPFC 为刺激靶点的高频 arTMS 治疗，再采用伪刺激线圈对 R-OFC 进行伪 cTBS 治疗；伪刺激组先在 L-dIPFC 进行伪刺激治疗，接着对 R-OFC 进行伪刺激治疗。三组的治疗频次均为 4 次/天，连续 5 天，共 20 次。

三组均在 arTMS 干预前(T1)、干预结束当天(T2)和干预结束一周(T3)进行汉密尔顿抑郁量表(HAMD-17)评估和斯奈思-汉密尔顿快感量表(SHAPS)测评。

结果 对 HAMD-17 得分进行重复测量方差分析发现，组别 \times 时间的交互作用显著($F=7.804$, $p<0.001$)。进一步的简单效应分析显示，在 T1 期，三组在 SHAPS 得分上均无显著差异($F=0.087$, $p>0.05$)；在 T2 和 T3 期，单靶点组和双靶点组的 HAMD-17 得分显著低于伪刺激组($F=5.061$, $p<0.01$ ； $F=3.493$, $p<0.05$)。以 HAMD-17 减分率为协变量，对 SHAPS 得分进行重复测量方差分析发现，组别 \times 时间的交互作用显著($F=7.867$, $p<0.001$)。进一步的

简单效应分析显示，在 T1 期，三组在 SHAPS 得分上均无显著差异($F=0.932$, $p>0.05$)；在 T2 期，单靶点组和双靶点组的 SHAPS 得分显著低于伪刺激组($F=6.480$, $p<0.01$)；在 T3 期，双靶点组的 SHAPS 得分显著低于伪刺激组($F=4.481$, $p<0.01$)。

结论 arTMS 能够显著改善青少年抑郁患者的抑郁状况。联合 L-dIPFC 和 R-OFC 的双靶点 arTMS 能够显著改善青少年抑郁患者快感缺失症状，且在疗效持久性上显示出了一定的优势。

关键词：青少年, 抑郁症, 快感缺失, 加速重复经颅磁刺激, 双靶点

The Role of The Psychiatrist in Pediatric Solid Tumor Multidisciplinary Team (MDT) Consultation Model

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Objective With the advancement of pediatric oncology treatment, the Multidisciplinary Team (MDT) consultation model has become increasingly important. This study explores the contributions and challenges of the psychiatrist within the MDT consultation model of pediatric solid tumors

Methods Initiated by the department of pediatric oncology, the MDT consultation framework for pediatric solid tumors incorporates pediatric surgical oncologists, nurses, radiologists, pathologist, nutritionists, and psychiatrists. From January to April of 2024, 110 pediatric patients, either newly diagnosed with or having received partial treatment for solid tumors, were reviewed. The psychiatrist played a key role in enhancing communication between physicians and patients during the meetings and conducted biopsychosocial assessments afterward, including interviews with both pediatric patients and their caregivers to assess sleep patterns, appetite, pain levels, mood, medication adherence, lifestyle, coping strategies, and the overall emotional well-being and burden experienced by family members. Following these assessments, targeted and timely interventions

were implemented to support both the pediatric patients and their caregivers

Results The top three tumors reviewed were neuroblastoma (n=18), hepatoblastoma (n=7), and nephroblastoma (n=4), with patient ages ranging from 1 month to 15 years old (mean age=3.67 years). Psychosocial assessments identified 10 cases with loss of appetite (9.09%), 12 cases with sleeping disturbances (10.90%), 15 patients exhibiting pain, (13.64%), 5 cases of medication nonadherence (4.55%), 30 patients experiencing emotional problems (27.27%), and 11 cases (10.00%) of caregivers experiencing significant psychological distress. Interventions included disease education, parenting advice, dietary and sleep guidance, enhancement of parent-child communication, promotion of healthy lifestyles, and emotional support through play therapy (n=2) and music therapy (n=4). Caregivers' limited awareness and inadequate disease education result in poor mental health awareness, preventing them from sufficiently observing their children's suffering and seeking professional assistance

Conclusion The psychiatrist's involvement in the MDT consultation model for pediatric solid tumors enhances physician-patient communication, effectively screens children and caregivers at different risk levels, and provides timely interventions. Through the engagement of psychiatric professionals, this model contributes to alleviating suffering, enhancing medication adherence, providing ongoing monitoring, reducing the incidence of mental health disorders, supporting the normalization of daily activities for children, and ultimately improving the quality of life for patients. Further research on enhancing disease education, mental health awareness, community support, and resource sharing is recommended.

关键词: Psychiatrist; Multidisciplinary team; Pediatric solid tumor; Pediatric

Diagnosis and Clinical Characteristics of Obsessive-Compulsive Disorder in Chinese Children and Adolescents: An Application Study Based on CBCL-OCS

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Objective Obsessive-compulsive disorder (OCD) is recognized globally as a serious mental health concern among children and adolescents. Accurate early diagnosis and intervention are crucial for effective management and improving patient outcomes. This study utilized the Child Behavior Checklist-Obsessive Compulsive Scale (CBCL-OCS) to investigate the prevalence, clinical features, and comorbidities of OCD in a cohort of Chinese middle school students

Methods A cross-sectional epidemiological survey was conducted among 8,595 middle school students in Liaoning Province, China. The CBCL-OCS was employed as the primary screening tool. The optimal cutoff value for OCD screening was determined through receiver operating characteristic (ROC) curve analysis

Results The study found an OCD prevalence of 1.710% among all the samples, which was consistent with global estimates. ROC analysis determined a cutoff score of 2.5 for CBCL-OCS, with a sensitivity of 0.789 and specificity of 0.899. Furthermore, the analysis revealed that adolescent students exhibited significantly higher CBCL-OCS scores compared to younger children, suggesting an increase in OCD severity with age. Significant associations were also found between OCD symptoms and comorbid emotional disorders, behavioral problems, and anxiety symptoms

Conclusion This study confirms the utility of CBCL-OCS as an effective early screening tool for OCD in Chinese middle school students, highlighting its sensitivity and specificity. This study contributes valuable insights into the epidemiology of OCD among children and adolescents, underscoring the need for targeted interventions during critical developmental periods such as adolescence.

关键词: Children and adolescents, OCD, CBCL-OCS, China

自我增强与自杀意念在非自杀自伤、阈下非自杀自伤及健康个体中的比较研究

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目的 消极的自我观是非自杀性自伤(NSSI)患者重要的心理特点。自我增强是个体增加积极自我观、减少消极自我观的一种最常见的自我动机,它促使人们产生一种认为自己比他人好的积极偏向。本研究在NSSI组、阈下NSSI组和对照组中比较自我增强的差异,并在自伤个体中探索自我增强与自伤行为和自杀意念之间的关系。

方法 采用横断面的研究设计,NSSI组符合DSM-5中NSSI诊断标准($n=259$,男性165,21.3 \pm 1.3岁),阈下NSSI组有自伤经历但不符合NSSI诊断($n=61$,男性41,年龄20.9 \pm 1.4),健康对照无自伤经历($n=59$ 人,男性36,21.0 \pm 1.4岁)。自我增强与自我保护问卷包括四个维度:防御、拥抱积极、良好认知和自我肯定思维;NSSI采用非自杀性自伤行为功能评估量表,每一种自伤行为的次数与伤害程度相乘加和得到自伤指数(严重程度);采用自杀意念量表评价自杀意念。

结果 三组个体在人口学特征上无显著差异。自我增强各维度的组间比较发现,防御和拥抱积极两个维度上,NSSI组得分显著高于阈下NSSI组和对照组(校正后 $p<0.05$),良好认知维度上NSSI组显著低于阈下NSSI组和对照组(校正后 $p<0.05$)。自我增强各维度在对照组和阈下NSSI组间无差异。阈下组中,防御维度与自伤指数($r=0.34$, $p=0.006$ 、自杀意念显著正相关($r=0.29$, $p=0.02$);良好认知($r=-0.54$, $p<0.001$)和自我肯定思维($r=-0.26$, $p=0.04$)与自杀意念显著负相关。NSSI组中,良好认知与自伤指数显著负相关($r=-0.13$, $p=0.04$),自我增强各维度与自杀意念均显著相关(防御 $r=0.25$;拥抱积极 $r=-0.21$;良好认知 $r=-0.36$;自我肯定思维 $r=-0.37$, p 均 <0.001)。回归分析发现NSSI组良好认知($\beta=-0.71$, $p=0.013$)和自我肯定思维($\beta=-0.98$, $p=0.002$)与自杀意念的关联显著高于对照组,调整了焦虑抑郁协后,良好认知与组别对自杀意念的交互效应依然显著。

结论 相较于阈下NSSI个体和健康对照,NSSI个体自我增强防御水平和自我服务偏向的归因(拥

抱积极维度)较高,自我评价(良好认知)下降。NSSI和阈下NSSI个体中,自我增强的良好认知和自我肯定思维两个维度都与较低的自杀意念有关。本研究提示通过提升NSSI患者的自我认知和自我评价,可能会降低自伤行为个体的自伤严重程度和自杀意念。

关键词: 非自杀性自伤,自杀意念,自我增强,自我概念,自我观

一项孤独症谱系障碍纵向随访队列项目:基于社交分型的孤独症谱系障碍生物标记物和疾病发展轨迹的设计和方法

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目的 孤独症谱系障碍(ASD)患者的临床表型和病因学多样性一直是ASD病因学研究及新疗法开发的主要障碍,目前尚不清楚细胞、分子、大脑系统、认知和/或行为水平上的不同病因和表型多样性是如何相互关联的。为了识别有用的生物标记物,我们需要从整体人群的差异转移到精确识别不同的亚组水平,以便于更好地理解个体差异。当前证据表明,由著名精神病学家、领域开拓者Lorna Wing提出的社交分型分型(冷漠型、被动型、主动但怪异型)是一种合理的ASD分型,在临床与科研方面应用潜力大,但目前该分型的神经基础是什么仍未知。本研究拟组建一个ASD纵向随访队列,使用脑影像、眼动、血液生化等多种技术手段及指标,探究不同社交分型的ASD发生发展的潜在生物学标记物及疾病发展规律,绘制不同社交分型ASD儿童的疾病发展轨迹,为ASD的精准诊疗提供生物学依据。

方法 该队列研究将包括200名患有ASD的3-12岁儿童、100名1-3岁的疑似ASD儿童,以及150名具有典型发育儿童。采用纵向随访研究设计,对每位参与儿童的临床症状、共病情况、智力发育水平、认知功能、大脑结构和功能、生化标记物和基因组学进行全面测查。同时,采集生活环境相关信息,探索环境对于不同分型ASD儿童疾病发生发展的影响。

结果 将疑似ASD儿童或不同分型确诊儿童的眼动、核磁共振、生物学指标与正常儿童进行对

比,采用多因素协方差分析各指标与组别的关系,采用不同的机器学习算法来建立诊断判别模型,分析判别的准确性、敏感性和特异性,最后通过受试者操作特征(ROC)分析,寻找ASD高危预警和分型判别的最佳模型;使用多次评估结果,利用分类潜变量模型和潜增长曲线模型识别目标指标轨迹亚组是否存在,使用0.7作为熵值标准,以评价模型的分类和预测效率。此后分别使用线性、类别等增长函数构建纵向分类增长模型和广义混合模型,使用光滑检验法用于误差分布的检验,使用BIC、AIC等参数进行最优模型的筛选,建立发展轨迹模型。

结论 通过建立此队列,能够使我们探究和完善不同社交分型ASD儿童具有不同神经生物学病因基础的假设,同时也希望能够构建具有生物学和临床意义的ASD亚组,帮助我们探究表型多样性和不同病因之间的关系。

关键词: 孤独症谱系障碍、社交分型、生物标志物、MRI、脑电图、眼动追踪

注意缺陷多动障碍青少年社交困难特征及社交干预训练效果探究

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目的 探究注意缺陷多动障碍(ADHD)青少年社交困难的特征,以及社交技能教育和促进项目(PEERS)对其的干预效果。**方法** 在心理科门诊招募符合DSM-5中ADHD诊断标准、存在社交困难并自愿参与干预的10~15岁青少年79人,成为干预组;抽样上海市闵行区小学及初中同年龄无相关诊断学生作为健康对照组共307人。家长使用长处与困难问卷(SDQ)和社交技能家长评定量表(SSRP),学生使用友谊质量问卷(FQQ)评估同伴交往问题、社交技能,和友谊质量水平。在年龄、性别、是否共病阿斯伯格综合症(共12人共病阿斯伯格综合症)等因素下比较社会交往特征和困难。对干预组分批次进行PEERS干预(每轮团体6~8人,已累计干预29人,其余为等待组),干预后再次复评。

结果 ADHD组与健康组在SDQ各维度的得分差异均具有统计学意义($p<0.01$),其中ADHD组

的同伴交往问题得分更高($t=8.91, p<0.001$),亲社会行为得分更低($t=5.55, p<0.001$)。除社会敏感性、个体敏感性和掩饰性维度外,ADHD组在SSRP各维度得分均低于健康组,且差异具有统计学意义($p<0.001$)。除冲突与背叛维度外,ADHD组在FQQ各维度上的得分也均低于健康组,且差异具有统计学意义($p<0.001$)。ADHD女生在情绪问题上的得分高于男生($t=2.14, p<0.05$),而ADHD组男生在交往意向上的得分高于女生($t=2.84, p<0.01$)。小学组ADHD青少年在表达技巧($t=2.63, p<0.05$)和社会交往技巧($t=2.10, p<0.05$)上的得分低于初中组ADHD青少年。非共病阿斯伯格综合症的ADHD比共病的青少年,在SDQ情绪问题($t=3.37, p<0.01$)、品行问题($t=2.60, p<0.05$)及亲社会行为($t=3.30, p<0.01$)维度上得分更高。干预后,ADHD青少年在SSRP中的掩饰性维度($t=2.64, p<0.05$)和社交技能总分($t=2.52, p<0.05$)提高。是否共病阿斯伯格综合症对ADHD青少年的干预效果不存在显著差异。

结论 ADHD青少年在同伴交往上的困难可表现为社交技能的欠缺及友谊质量水平低。不同性别的ADHD青少年面临的困难略有不同:女生的情绪问题更突出且交往意向更低。上述结果提示PEERS训练能改善单纯ADHD及共病阿斯伯格综合症的青少年社交技能,干预目标在ADHD青少年群体中基本达成。

关键词: 注意缺陷多动障碍, 社交困难, 社交技能, 友谊质量, 同伴交往

12个月ASD患儿的全基因组差异甲基化特征

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目的 遗传及环境因素相互作用增加了探究孤独症谱系障碍(Autism Spectrum Disorder, ASD)病因的难度。表观遗传为深入了解ASD病因以及症状发展提供了新的视角。DNA甲基化存在时空特异性,本研究目的基于南京医科大学高危ASD前瞻性队列探究12个月时是否存在于ASD早期非

典型性行为特征有关的 DNA 甲基化模式,再基于国家出生队列,对比 ASD 患儿和典型发育 (typical development, TD) 幼儿 12 个月时的全基因组差异甲基化特征,探究具有症状预测价值的表观遗传标志物。

方法 根据 ASD 早期非典型性行为对南京医科大学高危 ASD 前瞻性队列中的高危 ASD 婴幼儿进行分组,分为发育需警示组 (HR+) 和发育良好组 (HR-); 根据 3 岁时的诊断结果对国家出生队列的被试进行分组,分为 ASD 组和 TD 组。使用全基因组重亚硫酸盐测序技术探究 12 个月时外周血 DNA 甲基化特征,进行 PCA 分析、差异甲基化分析以及通路富集分析。将发现的差异甲基化基因 (differentially methylated genes, DMGs) 与 SFARI 数据库比对。

结果 HR+组 CG 甲基化程度更低更低,差异显著 DMR 主要存在于内含子区以及基因间区域。GO 富集分析结果 DMGs 主要富集在神经元突触生长与功能,以及 GTP 酶激活等。KEGG 富集分析结果表明 DMGs 主要富集在轴突引导, cGMP-PKG 信号通路以及细胞粘附连接等通路上。两个队列中发现共表达的 ASD 风险基因 13 个,以及 86 个未被纳入 SFARI 中的基因。

结论 DMG 主要富集在神经突触以及 GTP 酶相关基因上。这些 DNA 甲基化模式与早期行为学表现相关。提示 12 个月时的 ASD 相关行为特征与早期 DNA 甲基化模式异常有关。研究结果对未来 ASD 候选基因的选择,以及进一步探究 DNA 甲基化对 ASD 症状的影响提供线索。

关键词: 孤独症谱系障碍,早期筛查,DNA 甲基化,表观遗传

Unveiling Sex Difference in Factors Associated with Suicide Attempts Among Chinese Adolescents with Depression: A Machine Learning-based Study

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Objective Adolescents with depression are at higher risk of suicide, while in China, the suicidal phenomenon presents a unique sex pattern. This study aims to investigate the sex differences in factors influencing suicidal attempts among Chinese adolescents with depression

Methods We surveyed 2343 depressed adolescents from China. Building upon previous research, 36 potential influencing factors were selected from psychological, sociodemographic, and social stress perspectives. Models were constructed separately based on sexes using the random forest method to discern sex differences in factors influencing suicide attempts, followed by further result interpretation using the SHAP method

Results The random forest exhibited strong performance (male accuracy = 70%, female accuracy = 63%). The relative importance of each factor varies between depressed male and female adolescents, with sex differences observed in the relative importance of certain factors. Depression (female ranking=1, male ranking=12), parents' overprotection (female ranking=4, male ranking=21), have a more pronounced impact on the prediction of suicide attempts among female depressed adolescents. In contrast to the findings among females, the perception of parental relationships (female ranking=31, male ranking=2), hopelessness (female ranking=15, male ranking=4), BMI (female ranking=13, male ranking=6) are the significant factors more closely associated with suicide attempts for male adolescents with depression

Conclusion Our research highlights significant differences in factors influencing suicide attempts between sex groups among severely depressed Chinese adolescents, emphasizing the need for tailored suicide prevention measures.

关键词: suicide attempt; Major depression adolescents; Random forest; SHAP

基于机器学习开发的多模式诊断系统对

ADHD 诊断价值的初步研究

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目的 基于 CPT (Continuous Performance Test, CPT) 指标、头部动作、眼部注视特征、腿部动作等多模态数据特征, 开发并验证 5-14 岁中国儿童 ADHD 的筛查诊断辅助系统。

方法 (1) 开发包含 CPT 测试任务、头部动作、眼部注视特征、腿部动作的多模态诊断系统。

(2) 招募 2023 年 4 月至 2023 年 6 月期间在中南大学湘雅二医院就诊的 5-14 岁智力正常的儿童, 按照 DSM-5 中 ADHD 的诊断标准, 将明确诊断为 ADHD 的儿童纳入 ADHD 组, 正常儿童纳入对照组, 两组儿童均进行多模式诊断系统的评估。(3) 分别对 CPT 指标、头部动作、眼部注视特征、腿部动作几种技术进行 11 种组合, 再用人工智能的方法, 对采集到的数据进行机器学习得出每位受试者的标准测试分数。

(4) 将所有被试儿童按年龄性别进行分层, 按 4:1 的比例随机分配至训练集和验证集, 通过机器学习对训练集儿童进行特征分析, 再通过 ROC 曲线确定诊断阈值, 在验证集儿童中验证诊断有效性, 同时与临床常用的 ADHD-RS-IV 量表进行对比。

结果 (1) 研究共纳入 157 例儿童, ADHD 组 80 例, 对照组 77 例。将所有被试儿童按年龄进行分层, 按 4:1 的比例随机分配至训练集 126 例 (ADHD 组 64 例) 和验证集 31 例 (ADHD 组 16 例)。(2) 多模式诊断系统的 4 种技术 (CPT 指标、头部动作、眼部注视特征、腿部动作) 进行 11 中组合, 各组合 ROC 曲线下面积 AUC 均在 0.9 以上, 平均值为 0.98。(3) 4 种技术单独用于 ADHD 诊断时, CPT 的诊断效能最佳, 灵敏度和特异度分别为 0.75、0.87。(4) CPT 与眼部注视特征结合分析时, 灵敏度和特异度分别提高至 0.81、0.93, 其中特异度在所有组合中最高。(5) CPT 与头部和腿部动作结合分析时, 灵敏度提升至 0.94, 在所有组合中最高, 特异度 0.80。(6) 在验证集中, ADHD-RS-IV 评定量表诊断 ADHD 的灵敏度 0.75、特异度 0.80。

结论 (1) 基于机器学习开发的多模式诊断系统能够快速准确分析 ADHD 儿童的特征表现。(2) 单独应用 CPT 或腿部动作可以获得较好的诊断有效性, 单独应用眼部注视特征仅可较好的识别正常儿童, 单独应用头部动作诊断有效性低。(3) 多模态整

合中, CPT 与眼部注视特征的整合, 以及 CPT 与头部动作和腿部动作的整合, 诊断有效性均较高, 前者特异度最佳, 后者灵敏度最佳。

关键词: ADHD, CPT, 多模态, 机器学习, 眼部注视

Structural Covariance Network Activity in The Medial Prefrontal Cortex Is Modulated by Childhood Abuse in Adolescents with Depression

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Zhanjie Luo

Objective Aberrant structural covariance (SC) in the medial prefrontal cortex (mPFC) is believed to play a crucial role in adolescent-onset major depressive disorder (AO-MDD). However, the effect of childhood abuse (CA) on SC in AO-MDD patients is still unknown

Methods Here, we measured anomalous SC in the mPFC of AO-MDD patients and assessed the potential modulation of this feature by CA. We acquired T1-weighted structural images of AO-MDD patients ($n = 93$) and healthy controls (HCs, $n = 81$). Using voxel-based morphometry analysis, we calculated gray matter volumes for each subject. Subsequently, we classified abnormal SC in the mPFC into three subtypes according to overall CA

Results Compared with HCs, AO-MDD patients showed alterations in the structural covariance network of the mPFC, which is a central region in the default mode network (DMN). We also found an anterior-posterior dissociation in the structural covariance connectivity of the DMN. A history of CA modulated bilateral mPFC SC. These changes were primarily focused on the SC between the mPFC and the limbic system, indicating a gap in the rate of neural maturation between these regions

Conclusion In summary, the DMN and frontal-limbic system, which are involved in emotional processing, appear to play a significant role in the development of AO-MDD. These findings highlight the crucial

effects of CA on neurophysiological alterations in individuals with AO-MDD

关键词: Structural covariance network, Medial prefrontal cortex, Childhood abuse, Adolescents with depression, Modulated

Associations between Abnormal Electroencephalogram Microstates and Childhood Emotional Abuse in Adolescent Depression

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Objective Childhood traumatic experiences greatly influenced the brain network activities of patients with depression, and there is an urgent need to explore the temporal dynamics for these changes. This study aims to investigate the abnormalities of resting-state electroencephalogram (EEG) microstates in eye-open state of depressed adolescents and to explore the correlations between their EEG microstates and the childhood traumatic experience

Methods Using resting-state EEG microstate analysis, we explored the temporal dynamics of brain activity in patients with adolescent depression. This study selected 66 adolescents with depression as a patient group, and 27 healthy adolescents as a healthy control group. A modified k-means clustering algorithm was used to classify the 64-channel resting-state EEG data into different microstates. Independent sample t-tests were used to compare the microstate parameters between the 2 groups and further associations between these parameters and childhood traumatic experience in patients were explored via using Spearman correlation

Results In this study, significant differences were observed in the occurrence and transition probabilities of EEG microstates between the healthy control and the patient group. Notably, there was a statistically

significant difference ($P < 0.05$) in the occurrence of microstate A across 2 groups, exhibiting a negative correlation with the emotional abuse component within the childhood trauma scores (Spearman's $\rho = -0.31$, $P = 0.013$). Furthermore, patient-specific, non-random transitions from microstate B to A (Spearman's $\rho = -0.30$, $P = 0.015$) and C to A (Spearman's $\rho = -0.31$, $P = 0.013$) were inversely associated with the scores of emotional abuse factors from childhood trauma in the patient group, showing statistically significant differences when comparing to the healthy controls ($P < 0.05$). Upon stratification into quartiles based on the emotional abuse factor scores, the occurrence of microstate A, as well as the transition rates from microstates B to A and C to A, retained statistical significance following adjustment for multiple comparisons (all $P < 0.05$)

Conclusion The abnormal temporal dynamics in brain networks of adolescents with depression are linked to childhood emotional abuse. Those who have suffered severe emotional abuse may show greater impairments in the brain's visual and central executive networks. EEG microstate analysis could be a potential tool for detecting adolescent depression with severe childhood trauma.

关键词: adolescents, childhood trauma, major depressive disorder, microstate, resting state electroencephalogram

5 步式叙事护理实践模式对青少年抑郁症患者的心境状态、自我管理积极度及生活质量的影响

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目的 探究 5 步式叙事护理实践模式对青少年抑郁症患者的心境状态、自我管理积极度及生活质量的影响。

方法 选取重庆医科大学附属大学城医院精神科 2023 年 3 月至 2024 年 3 月诊治的青少年抑郁症患者 102 例,采用非同期对照的方法,随机选取 2023 年 3 月—2023 年 9 月的研究对象 51 例作为

对照组,给予精神科常规护理;2023年10—2024年3月的研究对象51例作为观察组,在精神科常规护理基础上实施叙事护理实践模式干预,以探讨叙事护理实践模式干预对青少年抑郁症患者心境状态、自我管理积极性及生活质量的影响。

结果 干预后SAS、SDS得分情况为观察组低于对照组,差异有统计学意义($P<0.05$);自我管理积极性得分情况为观察组高于对照组,差异有统计学意义($P<0.05$);干预后生活质量总分、生理状况、社会/家庭状况、情感状况、功能状况维度得分情况为观察组高于对照组,差异有统计学意义($P<0.05$);干预后患者满意度为观察组(92.1%)高于对照组(74.5%),差异有统计学意义($P<0.05$)。

结论 将5步式叙事护理实践模式应用于青少年抑郁症患者,可有效改善青少年抑郁症患者SAS、SDS等心境状态,提高患者自我管理积极性、生活质量和护理满意度水平。

关键词: 青少年;抑郁症;叙事护理;心境状态;自我管理积极性;生活质量

网络视角下的青少年心境障碍患者的抑郁症状与心理弹性的关系

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目的 心理弹性能够帮助青少年更好地应对生活中的挑战和压力,从而减少抑郁情绪的产生和持续。本研究在网络视角下,致力于探究青少年心境障碍患者抑郁症状严重程度与心理弹性之间的联系,并比较与青少年健康群体之间的差异。期望能够更全面地理解心理弹性与抑郁症状发生发展的关系,并为临床干预和治疗提供有力的科学依据。

方法 招募12-18岁的青少年心境障碍患者及健康对照,使用儿童抑郁自评量表(DSRSC)评定抑郁症状的严重程度,使用心理弹性量表(CD-RISC)评定心理弹性能力,以DSRSC的总分以及CD-RISC的五因子作为节点,利用正则化偏相关模型,结合

扩展贝叶斯信息准则(EBIC)方法,构建了青少年心境障碍患者与健康对照两组人群的网络结构。

结果 (1)共入组219例心境障碍患者,136例健康对照。年龄(14.16 ± 1.48 VS 14.48 ± 1.82 , $p>0.05$)无显著差异、性别(男女1:3.7 VS 男女1:1.2, $p<0.001$)有显著差异。与健康对照组相比,青少年心境障碍患者报告的心理弹性(CD-RISC)水平明显较低($W=2965$, $p<0.001$),而抑郁症状(DSRSC)得分较高($W=28306$, $p<0.001$)。(2)青少年心境障碍患者网络中,抑郁总分-“积极接受变化并确保关系安全”成负相关($r=-0.27$);“相信直觉、容忍负面影响、抗压”是该网络中强度最高的节点;“个人能力、高标准、坚韧”是该网络中期望影响值最高的节点。而健康对照网络中,抑郁总分-“个人能力、高标准、坚韧”成负相关($r=-0.18$);“积极接受变化并确保关系安全”是该网络中强度和期望影响值最高的节点。(3)青少年心境障碍患者网络连接更为紧密,两个网络在结构上具有显著差异($M=0.58$, $p=0.003$)。控制性别后,该差异仍然显著($M=0.33$, $p=0.034$)。

结论 研究结果显示,无论是否被诊断为心境障碍,心理弹性都是情绪的重要保护因素。在青少年心境障碍患者与健康对照组之间,心理弹性的影响存在显著的差异。因此应推广具体的心理教育和心理治疗干预措施,以有针对性地提升青少年的心理弹性。对于青少年心境障碍患者,应更多地从接受变化和发展安全关系方面来提高心理弹性。

关键词: 网络分析;心理弹性;心境障碍

基于认知-行为数据的注意缺陷多动障碍代偿模型构建及其脑机制探索

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目的 代偿被定义为一种自动或主动的机制。神经发育障碍中的代偿即是在神经认知水平存在核

心缺陷的情况下,仍致力于改善外显行为表现的过程。本研究旨在通过构建注意缺陷多动障碍(ADHD)代偿模型,探讨 ADHD 代偿的静息态脑功能机制。

方法 研究共纳入 253 名被试,包括成人 ADHD 患者 175 名及健康成人(HC)78 名。以执行功能行为评定量表-成人版工作记忆因子为 ADHD 代偿模型的横坐标,ADHD 评定量表注意缺陷因子为纵坐标,本研究 ADHD 受试者的得分中位数为分界值,分别将坐标系的左下、左上、右上、右下区间定义为深、浅、低、高代偿组。以低频振幅(ALFF)、局部一致性(Reho)和功能连接(FC)为评估指标,使用协方差分析探索四种代偿组别脑功能的差异(高斯随机场 GRF 校正:体素水平 $p < 0.001$,团块水平 $p < 0.05$,双侧检验),事后分析采用 Bonferroni 校正法。此外计算 HC 组在上述差异脑区相应的影像学数据,使用协方差分析探究 HC 组与 ADHD 代偿组别的脑影像学差异。

结果 根据代偿模型将成人 ADHD 分为深、浅、低、高代偿组,分别有 66、36、50、23 例。不同代偿组别右侧眶内额上回的 Reho 值存在显著差异,高代偿组高于深代偿($p=0.010$)、浅代偿($p=0.004$)、低代偿组($p < 0.001$);进一步进行 FC 分析,发现右侧眶内额上回(默认网络)与左侧颞下回(边缘网络)的 FC 值在不同代偿组别间差异存在统计学意义,高代偿组高于深、浅、低代偿组(均 $p < 0.001$)。不同代偿组别右侧直回的 ALFF 值存在显著差异,高代偿组分别显著高于深、浅、低代偿组(均 $p < 0.001$);进一步进行 FC 分析,发现右侧直回(边缘网络)与右侧中央旁小叶(感觉运动网络)的 FC 值在不同代偿组别间差异存在统计学意义,深代偿组高于浅代偿组($p=0.001$),高代偿组高于浅代偿($p < 0.001$)及低代偿组($p=0.047$)。HC 组右侧眶内额上回与左侧颞下回的 FC 值高于深代偿($p=0.005$)、浅代偿($p=0.001$)、低代偿组($p=0.014$),而与高代偿组无显著差异($p > 0.05$)。

结论 基于神经认知和核心症状构建的 ADHD 代偿模型在不同代偿水平中存在脑功能差异,且此模型可显著区分高代偿与低/深代偿患者的脑影像学特征。此外,高代偿成人 ADHD 患者的前额叶与颞叶的脑自发活动与健康人群类似,突出了高代偿 ADHD 脑神经功能的适应性。本研究揭示了前额叶及非高级认知脑网络在 ADHD 代偿机制中的重要作用,为深入理解 ADHD 的病理机制提供了科学依据和新的视角。

关键词: 注意缺陷多动障碍;静息态脑功能成像;代偿模型;工作记忆

Multidimensional Analysis of Suicide Risk in Major Psychiatric Disorders Using Machine Learning

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Objective Suicide is a leading cause of death among patients with psychiatric disorders, and the neurobiological features associated with it are becoming increasingly significant. This study aims to describe a machine learning model that identifies reliable blood metabolites and imaging features to distinguish suicide subtypes. By correlating metabolomics with white matter network gradients, we further explore the neurobiological mechanisms in patients with major psychiatric disorders(MPD) who have suicidal ideation or have attempted suicide

Methods Using a cross-diagnostic group of major psychiatric disorders (schizophrenia, bipolar disorder, and major depressive disorder), we employed machine learning techniques to identify peripheral blood metabolites and white matter network gradients associated with suicidal ideation and suicide attempts. External validation was conducted using gene expression data from six donated brain tissues provided by the Allen Human Brain Atlas (AHBA). Initially, we recruited 205 patients with MPD categorized into three diagnostic groups: schizophrenia, bipolar disorder, and major depressive disorder. Based on their history of suicide, participants were divided into suicidal ideation (SI), suicide attempt (SA), and no suicide attempt (NSA) groups. A non-targeted metabolomic analysis measured 669 metabolites across 30 categories. After preprocessing the metabolic data, artificial neural network (ANN) algorithms were used for binary classification models com-

paring the SA and SI groups with the NSA group, separately. The top three classification models with an accuracy greater than 70% ($P \leq 0.05$) were selected using machine learning algorithms. Additionally, we conducted correlation analyses between metabolic products and white matter network gradients related to SI and SA. Further correlation analysis between gene expressions from AHBA datasets and identified brain region of white matter network gradients

Results The model performed well in identifying SI (lysophosphatidylcholine, $AUC=0.79$, $ACC=83.41\%$; microbiome metabolites, $AUC=0.76$, $ACC=74.29\%$) and SA (fatty acids, $AUC=0.70$, $ACC=72.20\%$; steroids, $AUC=0.69$, $ACC=73.33\%$). Enrichment analysis revealed that the SA group was most significantly enriched in pathways involving aminoacyl-tRNA biosynthesis, arginine biosynthesis, biosynthesis of unsaturated fatty acids, D-Glutamine and D-glutamate metabolism, valine, leucine and isoleucine biosynthesis, alanine, aspartate and glutamate metabolism. Interestingly, the SI group did not enrich in any specific pathways. The right supramarginal gyrus ($ACC = 73\%$) and the right medial orbitofrontal cortex ($ACC = 72\%$) were predictive of SI, while the left anterior cingulate ($ACC = 75\%$), right anterior cingulate ($ACC = 72\%$), and right medial orbitofrontal cortex ($ACC = 72\%$) were predictive of SA. Further correlation analysis revealed that Amino adipic acid was positively correlated with the right anterior cingulate ($r = 0.39$, $p = 0.004$), and Pipelic acid was positively correlated with the right medial orbitofrontal cortex ($r = 0.38$, $p = 0.006$). Conversely, 5-HETE was negatively correlated with the right medial orbitofrontal cortex ($r = -0.33$, $p = 0.02$). Finally, validation analysis using the AHBA datasets revealed significant correlations of the AAMDC and AANAT genes with the right orbital frontal cortex and right anterior cingulate gyrus, further indicating that the white matter related to suicide might be associated with energy metabolism

Conclusion Our study presents a classification framework based on metabolomics and imaging features, capable of identifying SI and SA highlighting the differential metabolites and imaging features between SI and SA. Additionally, metabolic-neuroimaging correlation analyses were utilized to investigate the frontal-

limbic system-related suicide-associated metabolic products identified by the machine learning model. Further validation in the AHBA dataset suggested that the brain structures related to suicide may involve genes associated with energy metabolism, offering potential targets for exploring the molecular mechanisms of brain structural damage in suicidal behavior

关键词: suicidal ideation/suicide attempt/deep neural network/untargeted metabolomics/White matter network gradient

儿童青少年抑郁障碍的特点及诊疗现状调查——一项基于网络社群的问卷调研

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目的 抑郁障碍是目前引起儿童青少年残疾的主要原因之一,在病因及治疗方面,儿童青少年抑郁障碍与成人抑郁障碍有明显的不同,儿童青少年时期起病的抑郁障碍有更高的复发风险和更高层次的功能受损,选择性5-羟色胺再摄取抑制剂及三环类抗抑郁药对儿童青少年抑郁障碍的疗效较成人差。目前我国对儿童青少年抑郁障碍的诊疗现状的研究尚少。故本研究旨在通过线上问卷的方式,了解儿童青少年抑郁障碍患者群体的诊疗现状及需求,并比较儿童青少年期起病患者、不同性别患者的患病特点。

方法 受访群体为“渡过”网络社群中儿童青少年抑郁障碍患者或患者家属。通过线上问卷形式,从儿童青少年抑郁障碍患者当前患病情况、对疾病认知情况、疾病诊疗需要等角度设计共23题问卷。定义12岁以下起病患者为儿童期起病组,12-18岁起病患者为青少年期起病组。使用SPSS 26进行统计学分析。

结果 本研究共收集502份有效问卷(儿童期起病47例,青少年期起病455例,男性113例,女性389例)。三分之一的受访者为儿童青少年抑郁障碍患者本人,三分之二的受访者为儿童青少年抑郁障碍患者家属。在患病情况方面,在受访群体中,超过一半的患者尚未接受治疗或病情尚不稳定。女性

患者被诊断为重度抑郁发作更多,而男性患者被诊断为轻度及中度抑郁发作更多($p=0.010$)。女性患者抑郁病史 2-5 年较多,而男性患者抑郁病史短于 2 年及长于 5 年更多($p=0.019$)。在疾病负担方面,躯体症状多,工作、学习、社交受损多是困扰受访群体的主要问题。儿童期起病患者躯体疼痛或不适情况较青少年期起病患者多($p=0.045$),抑郁障碍对男性患者家庭生活的影响显著高于女性患者($p=0.034$)。此外,女性患者填写本问卷时间显著高于男性患者(女:男= $412.07\pm 333.81s$: $325.35\pm 305.81s$, $p=0.017$),这可能与注意力受损有关,也可能与性格特征有关。在疾病认知情况及期待方面,受访群体对疾病及治疗的了解仍存在很大欠缺。儿童期起病患者及家属对疾病的了解程度较青少年期起病患者及家属更为两极分化(非常了解与完全不了解, $p=0.003$)。对于目前的治疗方案,受访群体的平均满意度仅为 5.6/10。多数受访群体认为社会对儿童青少年抑郁障碍了解欠缺,家庭、学校及患者自身缺少足够的重视是目前的主要困境。

结论 儿童或青少年期起病患者及不同性别患者在抑郁障碍临床表现及自身体验方面有较多不同,关注不同患者群体的疾病特点可有助于日后更好的诊疗。儿童青少年抑郁障碍疾病及治疗相关宣教在家庭、学校、社会各方面均仍有较大提升空间。

关键词: 儿童, 青少年, 抑郁障碍, 网络社群

注意缺陷多动障碍儿童大脑动态偏侧化特征及其与认知灵活性的关系

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目的 半球偏侧化是大脑的突出特征,偏侧化异常与许多精神障碍的发生发展有关。先前的研究提示注意缺陷多动障碍(Attention Deficit Hyperactivity Disorder, ADHD)个体存在大脑非典型偏侧化。新出现的证据发现了大脑偏侧化的动态变化,其动态特征可能与认知灵活性相关。认知灵活性差是 ADHD 主要的认知缺陷之一,目前尚未有研究探索 ADHD 的动态偏侧化特征,及其与认知灵活性的相关性。

方法 我们招募了 87 名 ADHD 和 53 名典型发

育(Typically Developing, TD)儿童,每位儿童采集了 8 分钟静息态磁共振数据并完成了数字字母连线测验。利用静息态 fMRI 数据,计算每个体素的动态偏侧化指数,使用偏侧化波动(Laterality Fluctuations, LF)以及偏侧化反转(Laterality Reversal, LR)来衡量动态模式。我们在全脑范围比较了两组儿童的动态偏侧化特征的差异,并探索其与 ADHD 认知灵活性的关联。

结果 ADHD 组和 TD 组平均偏侧化模式没有显著差异,具体而言,左侧语言网络、额顶网络和默认网络表现出较强的左侧化;右侧扣带盖网络和额顶网络表现出较强的右侧化。对动态偏侧化指数进行聚类分析发现,主要存在三种不同的偏侧化模式,模式一表现为较强的左额顶网络和默认网络左侧化和右扣带盖网络右侧化,模式二表现为较强的右默认网络和额顶网络右侧化,模式三介于二者之间。进一步比较两组动态特征发现,ADHD 组全脑 LF 增高,存在 5 个显著 LF 增高的簇,主要位于右侧中央后回、额极、舌回以及左侧额上回和颞中回。相关分析表明,ADHD 组 LF 增高与 ADHD 症状严重程度无关($P_s > 0.05$),而右侧中央后回的 LF 值与 ADHD 认知灵活性呈正相关($P=0.0047$)。未发现两组全脑偏侧化反转存在显著差异。

结论 我们的结果表明,ADHD 儿童大脑偏侧化的动态性存在异常,ADHD 组右侧中央后回 LF 增高可能与其较差的认知灵活性有关。

关键词: ADHD, 认知灵活性, 偏侧化, fMRI

伴与不伴童年创伤的青少年心境障碍患者面孔情绪识别差异的神经机制

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目的 童年创伤是心境障碍的重要风险因素之一。伴童年创伤的心境障碍患者表现出更严重的临床症状及认知功能损伤,尤其是社交能力。面孔情绪识别能力作为社会交往的关键技能,其损害在青少年心境障碍患者中尤为显著。本研究将探讨伴与不伴童年创伤的青少年心境障碍患者在面孔情绪识别能力上的差异并探索这些差异背后的神经机制,

将重点关注大脑功能网络中的介数中心性 (Betweenness Centrality, BC), 评估特定脑区作为信息传递枢纽的重要性。

方法 本研究纳入了 448 名 13 至 18 岁符合 DSM-IV 心境障碍诊断的青少年患者。通过童年期 (16 岁以前) 成长经历量表 (Childhood Trauma Questionnaire, CTQ) 评估童年创伤, 所有参与者均完成了面孔情绪识别任务 (Facial Emotion Perception Task, FEPT) 并接受功能性磁共振成像检查。使用数据分析工具进行脑图像预处理, 并构建基于 AAL90 的功能网络, 计算各节点的 BC 值。采用 t 检验比较两组患者的面孔情绪识别能力差异, 使用 Pearson 相关分析探讨童年创伤、面孔情绪识别能力及各脑区 BC 之间的相关性, 通过中介分析探索脑网络指标在童年创伤和面孔情绪识别能力中的中介作用。

结果 在 448 名青少年心境障碍患者中, 275 名伴有童年创伤 (CT), 173 名不伴童年创伤 (NCT), 两组在年龄和性别分布上无显著差异。CT 组在 CTQ 总分及各因子分 (情感虐待、身体虐待、性虐待、情感忽视、身体忽视) 上均显著高于 NCT 组。在 FEPT 中, CT 组在总体识别准确率以及对冷静、恐惧、快乐、悲伤和惊奇情绪的识别准确率上显著低于 NCT 组, 两组在愤怒和厌恶情绪识别准确率上无显著差异。相关分析发现, 面孔情绪总体识别准确率与情感虐待 ($r=-0.166$)、性虐待 ($r=-0.155$) 及躯体忽视 ($r=-0.165$) 显著负相关, 中介分析显示右侧旁扣带回的 BC 在其中均存在中介作用, 直接效应分别为 -0.1664 , -0.2646 和 -0.2442 , 间接效应分别为 -0.0110 , -0.0423 和 -0.0178 。此外, 快乐情绪识别能力与情感忽视 ($r=-0.175$) 显著相关, 右侧颞横回的 BC 在其中起中介作用, 直接效应为 -0.1449 , 间接效应为 -0.0123 。

结论 本研究表明, 童年创伤显著影响了青少年心境障碍患者的面孔情绪识别能力, 大脑右侧旁扣带回和右侧颞横回的介数中心性在其中存在中介作用, 揭示了童年创伤可能通过影响这些脑区的介数中心性来长期影响患者的情绪识别能力, 为此类患者的干预措施提供了重要的神经生物学依据。

关键词: 心境障碍, 童年创伤, 面孔情绪识别, 介数中心性

处理差异研究

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目的 青少年抑郁症患病率逐年升高, 且易出现自伤及自杀等高风险行为, 早期诊断及干预可改善其预后。但目前国内医师资源严重短缺, 筛查仍依赖于被试主观评定, 缺乏客观测量手段, 因此寻求一种敏感的客观辅助诊断工具成为急需解决的问题。事件相关电位研究表明, 抑郁症患者的认知资源调配出现明显失衡, 与“情绪不敏感”理论相一致。但既往研究多局限于抑郁症患者与健康人群间的对比, 对不同严重程度患者的 ERP 研究相对不足。本研究旨在比较不同严重程度青少年抑郁症患者的 ERP 表现, 阐释其情绪处理特点及潜在的神经生物学差异, 为构建辅助青少年抑郁症识别及分级诊断的脑电标记物提供参考。

方法 本研究招募符合 DSM5 抑郁症诊断标准的 11-15 岁、性别不限的抑郁症患者, 使用 HAMD17 量表进行评估, 总分为 7-16 分入轻度抑郁组 (Mean=14.64, n=14), 17-23 分入中度抑郁组 (Mean=19.71, n=14), 24 分及以上入重度抑郁组 (Mean=26.38, n=13)。实验采用包含积极 (45 张)、中性 (15 张)、消极 (45 张) 共三种情绪类别的图片刺激任务, 被试观看图片的同时记录其事件相关电位。使用 Matlab 软件及 Eeglab 工具包提取三组被试在各类情绪图片刺激下的 N2、P3、LPP 波幅, 主要分析 Fz 及 Oz 电极上的 ERP 信息。使用 SPSS 软件采用 ANOVA 方法进行统计分析。

结果 对三组间 P3 进行分析: 在消极图片刺激下, 轻度与中度抑郁组 ($P=0.028$)、轻度与重度抑郁组 ($P<0.01$) 间波幅差异均存在统计学意义, 中度组与重度组间差异不显著 ($P>0.05$)。在积极图片刺激下, 轻度与重度组波幅差异存在统计学意义 ($P=0.014$), 余组间差异并不显著 ($P>0.05$)。对三组间 N2 进行分析: 在消极图片刺激下, 轻度与重度抑郁组波幅差异存在统计学意义 ($P=0.015$), 其余组间差异并不显著 ($P>0.05$)。在积极图片刺激下, 各

基于 ERP 的不同严重程度抑郁症青少年情绪

组间波幅差异均不显著 ($P>0.05$)。对三组间 LPP 进行分析: 在消极图片刺激下, 轻度与中度抑郁组 ($P=0.014$)、轻度与重度抑郁组 ($P=0.06$) 波幅差异存在统计学意义, 中度组与重度组间的差异不显著 ($P>0.05$)。在积极图片刺激下, 各组间的差异均不显著 ($P>0.05$)。

结论 青少年抑郁症患者对不同情绪刺激的反应均随严重程度的增加而减弱, 反映了更加严重的认知损伤。其中, 对积极情绪的加工并未随抑郁的严重程度而明显变化, 提示了一种相对稳定的处理模式, 但对抑郁情绪的反应在各组间存在较大差异, 可能与回避处理机制有关。消极情绪刺激下的 P300 及 LPP 波幅差异或可成为辅助分级诊断的指标。

关键词: 青少年, 抑郁症, 严重程度, 情绪处理, ERP, 事件相关电位

高危 ASD 婴幼儿感觉特征及其与共情的关系

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目的 孤独症谱系障碍 (Autism Spectrum Disorder, ASD) 是一种神经发育障碍性疾病, 以社会沟通与交往障碍、刻板重复的兴趣行为和感知觉方面的异常为临床核心特征。既往有关 ASD 的纵向研究表明, ASD 儿童很早就表现出感觉异常, 但这种感觉异常是否对 ASD 儿童早期的共情能力产生影响尚未明确。本研究旨在探究 ASD 儿童在 2 岁之前的感觉、共情发展特征及两者的关联。

方法 本研究选取了 94 名 9~12 月龄的高危 ASD 婴幼儿作为研究对象, 在入组时和 18~24 月龄时使用婴幼儿感觉概况量表、替代性疼痛实验和 Gesell 发育量表分别来评估其感觉特征、情绪共情能力和发育水平。在 18~24 月龄时同时使用孤独症诊断观察量表进行 ASD 临床诊断评估。最终共有 61 名婴幼儿完成了两次随访, 并根据临床诊断结果将其分为了 HR-ASD 组和 HR-Non-ASD 组。使用 SPSS 软件中的独立样本 T 检验和非参数检验对两组的感

觉特征和共情行为数据进行分析, 利用斯皮尔曼相关检验来探究高危 ASD 幼儿的感觉特征与共情之间的关系。

结果 研究发现, 9~12 月龄的 HR-ASD 组在低反应性方面的得分明显低于 HR-Non-ASD 组 ($t=2.12$, $p=0.04$)。仅有 29 名高危 ASD 幼儿 (HR-ASD 组=16, HR-Non-ASD 组=13) 完成了共情行为学观察, 且发现与 HR-Non-ASD 组相比, HR-ASD 组表现出更低的情绪共情能力 ($U=46.00$, $p=0.01$)。HR-ASD 组的情绪共情与感觉特征不存在相关性, 但我们发现 HR-ASD 组的低反应性与听觉、触觉和口腔感觉之间存在正相关 ($r=0.82$, 0.58 , 0.60 ; p 均 <0.05); 感觉寻求与视觉、触觉和口腔感觉之间存在正相关 ($r=0.62$, 0.53 , 0.70 ; p 均 <0.05); 高反应性与听觉、视觉、触觉、前庭觉之间存在正相关 ($r=0.55$, 0.54 , 0.87 , 0.69 ; p 均 <0.05)。在 18~24 月龄时, HR-ASD 组在低反应性、听觉、视觉方面的得分均明显低于 HR-Non-ASD 组 ($t=3.43$, 3.59 , 4.17 ; p 均 <0.001), 并且 HR-ASD 组幼儿的适应性和语言发育低于 HR-Non-ASD 组 ($t=2.16$, 2.47 ; $p=0.04$, 0.02)。

结论 对高风险 ASD 婴幼儿进行纵向研究发现, 感觉低反应性在高危 ASD 儿童生命早期并已经出现异常, 并且与听觉、触觉和口腔觉之间具有相关性; 高危 ASD 儿童的情绪共情能力较差, 这与既往研究结果相一致; 但本研究并未发现高风险 ASD 幼儿的感觉异常与共情之间的关系。

关键词: 高危 ASD 婴幼儿; 感觉特征; 情绪共情

青少年抑郁症患者 NSSI 行为对其疼痛感知的影响

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目的 抑郁症 (Major Depressive Disorder, MDD) 具有高患病率、高致残率、高复发率的特点; 其非自杀性自伤行为发生率高; 非自杀性自伤 (Non-suicidal self-injury, NSSI) 是指不以自杀为目的的, 直接地、故意地、重复地改变或伤害自己身体组织的行为。临床上, 许多伴 NSSI 的青少年抑郁症患者报告的自伤期间疼痛感受与常人无异。本研究主要探究伴非

自杀性自伤行为的抑郁症患者的疼痛感知是否发生改变,以及引起其改变的可能因素。

方法 本研究招募单纯抑郁症患者(MDD组)与伴非自杀性自伤行为的抑郁症患者(MDD+NSSI组)。分别使用中性和悲伤情绪视频和悲伤情绪视频资料作为情绪唤起材料,分别代替被试心情平静及心情悲伤时的状态,并采用冷压试验模拟患者自伤时产生的疼痛;在中性和悲伤情绪唤起后,分别立即进行冷压试验,并进行Wong-Baker面部表情疼痛评估量表(FPS-R)评分。使用独立样本t检验对数据进行分析。

结果 MDD组与MDD+NSSI组的汉密尔顿抑郁量表(HAMD)、汉密尔顿焦虑量表(HAMA)得分无明显差异($p>0.05$)。与MDD组相比,MDD+NSSI组在中性情绪唤起后疼痛评分均值较低;MDD组与MDD+NSSI组在中性情绪唤起后冷压试验的疼痛评分差异不显著,但在悲伤情绪唤起后冷压试验的疼痛评分中发现显著差异($P<0.05$);NSSI组疼痛评分明显降低。

结论 综上,我们可以得出结论,非自杀性自伤行为可能使抑郁症患者的疼痛感知降低,并更易受情绪改变的调节。

关键词: 抑郁症,青少年,非自杀性自伤,疼痛感知,情绪

自主与自动抑制能力缺陷:探索抽动障碍患儿的抑制控制机制

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目的 抽动障碍(TD)主要影响儿童和青少年,其具体病因和发展机制仍不完全清楚。有研究表明,抑制控制的缺陷可能是TD表现的关键因素之一,尤其在Tourette综合征(TS)和慢性运动/发声抽动障碍(CTD)的成人患者中,自主抑制能力完好,而自动抑制能力受损。针对TD患儿自主与自动抑制

能力的研究尚不充分,本研究旨在解决这一研究缺口,并提供新视角以深入理解TD的病理机制。

方法 本研究于2024年2月至6月在复旦大学附属儿科医院以及其他两家医院和两所上海的中小学进行。招募年龄9至18岁、根据DSM-5诊断为CTD和TS的患儿。使用耶鲁综合抽动严重程度量表(YGTSS)症状严重程度分评估抽动症状,SNAP-IV评定量表(父母版)前18项总分评估注意缺陷多动障碍,儿童版耶鲁布朗强迫量表(CY-BOCS)总量表分评估强迫症状。研究纳入34名TD患儿和31名年龄及性别相匹配的健康对照(HC),使用意向性抑制任务(Intentional Inhibition Task)和掩蔽启动任务(The Masked Priming Task)评估自主和自动抑制能力。

结果 研究比较TD组患儿(21名CTD,13名TS;平均年龄13.8岁,SD=2.6;男26,女8)与HC(平均年龄14.1岁,SD=2.4;男23,女8);TD组在YGTSS上的平均得分为24.3(SD=7.5),SNAP-IV平均得分为17.4(SD=6.2),CY-BOCS平均得分为15.7(SD=4.3)。

在意向性抑制任务中,TD组的选择执行动作(Choose-Go)比例为51.3%,显著低于HC的65.2%($p<0.001$)。TD组的NoGo错误率为17.3%,显著高于HC的9.3%($p<0.001$)。TD组的Go反应时间和选择Go反应时间分别为431ms和453ms,均长于HC的403ms和417ms($p<0.01$)。在掩蔽启动任务中,TD组在不兼容启动反应时间为439ms,显著长于HC的417ms($p<0.01$),而在兼容启动反应时间和负兼容效应上与HC无显著差异。错误率分析显示TD组在兼容与不兼容启动错误率上均显著高于HC($p<0.01$)。多因素方差分析显示,在控制CY-BOCS和SNAP-IV评分后,TD组在主要任务指标上与HC仍存在显著差异($p<0.05$)。

结论 TD患儿在自主和自动抑制任务的表现明显差于HC,突显了在抑制控制方面的显著缺陷。控制CY-BOCS和SNAP-IV评分后,这些差异得到进一步验证。这一发现对于理解TD的神经认知基础至关重要,提示未来研究应着重开发针对这些抑制缺陷的有效干预措施。

关键词: 抽动障碍,抑制控制,自主抑制,自动抑制,神经认知

辩证行为疗法多家庭团体技能训练模式在青少年抑郁症中的应用

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目的 初步探讨辩证行为治疗(DBT)的多家庭团体技能训练模式在青少年抑郁障碍中的应用及其对家庭环境的影响,以评估家庭作为中介因子在DBT治疗青少年抑郁症中的意义。

方法 抽取2023年6月至2024年3月在重庆医科大学附属大学城医院心理卫生中心就诊的4例抑郁障碍青少年的家庭,组成由青少年及其家长共同参与的多家庭团体,进行为期12周的辩证行为治疗团体技能训练。干预前后分别采用汉密尔顿抑郁量表(HAMD-17)、抑郁症自评量表(PHQ-9)、家庭环境量表(FES-CV)、自尊量表(SES)、领悟社会支持量表(PSSS)、广泛性焦虑自评量表(GAD-7)、亲子沟通量表(父母卷)、照顾者负担量表、渥太华自伤量表等进行评估。统计分析采用配对样本t检验和方差分析。

结果 4名青少年及其家长完成了为期12周的团体技能训练及各项评估。与干预前相比,干预结束时各项量表得分均显著改善($P<0.05$),具体表现为汉密尔顿抑郁量表(HAMD-17)和抑郁症自评量表(PHQ-9)总分显著降低,并在随访期间持续下降;家庭环境量表(FES-CV)显示家庭氛围显著改善;自尊量表(SES)和领悟社会支持量表(PSSS)得分显著上升;广泛性焦虑自评量表(GAD-7)总分显著降低。在亲子沟通方面,亲子沟通量表(父母卷)得分显著提高;照顾者负担量表得分显著降低。此外,渥太华自伤量表结果显示自伤行为显著减少。

讨论 辩证行为治疗(DBT)在治疗青少年抑郁障碍中表现出显著效果,其多家庭团体技能训练模式通过改善家庭环境和亲子沟通,提升了治疗的有效性。家庭作为中介因子在DBT治疗中发挥了重要作用,家庭环境的改善不仅直接有助于青少年的情绪调节和自尊提升,还通过增强社会支持和降低照顾者负担,间接促进了青少年抑郁症状的改善。通过家庭参与的团体治疗,家长能够更好地理解和支持青少年的情绪管理需求,有助于构建一个更具支持性和理解性的家庭氛围,这对于青少年的心理健康恢复至关重要。

结论 辩证行为治疗能够显著改善青少年抑郁障碍的症状,提升其家庭环境、社会支持、自尊水平和亲子沟通质量,降低焦虑和照顾者负担,并减少自伤行为。家庭作为中介因子在DBT治疗中起到了关键作用,通过改善家庭环境和互动模式,增强了治疗效果。多家庭团体技能训练模式具备良好的可行性和可接受度,具有较高的临床应用价值。

关键词: 辩证行为治疗,青少年,抑郁症

基于个体化脑发育异常的心境障碍亚型及其遗传风险、影像表型和临床行为特征关联研究

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目的 心境障碍患者的临床表现异质性较大,其与患者的遗传风险和大脑异常发育模式的关联性尚不明晰。利用基于神经影像学的个体化发育异常模式标志物,解析遗传风险、影像表型和临床行为特征,进而揭示心境障碍异质性,有助于阐明疾病的病因并辅助精准诊疗。

方法 本研究招募了174名未服药的重度抑郁障碍和双相情感障碍患者,以及404名健康对照者,并分析了其T1磁共振成像数据、临床症状、神经认知评估和遗传组学单核苷酸多态性数据。首先基于DK脑结构分区,提取区域灰质体积(GMV)并利用GMV与年龄相关性构建健康人常模脑发育曲线,然后计算个体在其对应年龄范围的GMV偏差;进而利用分层聚类方法划分患者亚型。进一步的,本研究比较了亚型之间的多基因遗传风险评分、GMV组水平偏差差异及其细胞特异性转录组关联、和患者亚型的临床症状以及认知功能水平。

结果 本研究发现了两种心境障碍患者亚型:亚型1中患者的前额叶皮层的GMV发育偏离相对健康被试显著升高,这种GMV发育异常与阿尔茨海默疾病通路的大脑基因表达模式显著相关,可能与少突胶质细胞及神经内皮细胞的基因表达相关,并且该组患者的具有显著的认知执行功能损害,进而还发现该组患者具有显著的阿尔茨海默多基因遗传风险;另一组亚型2中的患者呈现全脑水平GMV偏离降低,这种GMV发育异常与小胶质细胞和抑

制性神经元的基因表达相关,并且发现该组患者抑郁症状更严重,其重度抑郁症多基因遗传易感性更强。

结论 本研究结果提示利用基于个体化脑结构发育异常的影像表型特征,联合大脑空间转录组、遗传易感性和临床行为特征,解析其之间的微观和宏观关联,有助于揭示心境障碍在生物学和临床行为学方面的异质性,辅助精准诊疗。

关键词: 个体化脑发育模式,心境障碍亚型,多基因遗传风险,大脑空间转录关联

团体干预改善 ADHD 儿童注意力及其神经机制——基于 EEG 的证据

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目的 注意缺陷/多动障碍(ADHD)是一种常见高发于儿童期的神经发育障碍,近年我国学龄期儿童的发病率为 6-7%。ADHD 的核心症状有注意缺陷、多动-冲动,或者二者皆有。此外,过往实证数据指出,约 25%-45% 的 ADHD 儿童伴有情绪失调症状,DSM-5 中也将情绪失调列为 ADHD 的重要临床特征。行为干预常用于治疗 ADHD,本研究希望开发一系列团体干预疗法,以改善 ADHD 儿童的注意力。使用持续操作测试(CPT)测量 ADHD 儿童的持续注意力,同时使用脑电图(EEG)设备记录儿童脑电信号。

方法 基于 ADHD 的典型症状,本研究开发了三组治疗方案——注意力训练组,情绪训练组,积极对照组,以比较不同组别对 ADHD 儿童注意力的改善能力。干预形式为在一个半月内进行 2 次父母培训和 6 次儿童培训,共 8 次课程,每次 1.5 小时,在干预前后都基于计算机的行为实验记录了 ADHD 的注意力水平并且记录脑电数据。

行为实验改编自经典的 AX-70 结构,目标 A-X 刺激占总体试次的 70%,共计 4 个区块,每个区块 30 个试次,共 120 个试次。脑电记录使用 EGI 的 64 通道脑电帽。

对于行为数据和脑电数据,都进行了配对样本 T 检验,以检验干预前后相关指标的变化情况。并且计算了相关数据的相关性,以探究脑电指标与行

为数据的内在联系。

结果 对于行为数据,注意力训练组中儿童的任务应答率在后测呈现边缘显著的提升($t_{16} = 1.953$, $p = .069$),正确率与反应时未发现显著变化。情绪训练组与积极对照组未发现任何显著变化。

对于脑电信号,注意力训练组儿童在中央顶叶呈现了更大的 P1 振幅($t_{12} = 2.908$, $p = .013$),在左侧前额叶呈现了更大的 N1 振幅($t_{12} = -3.827$, $p = .002$)。

在相关分析中,智力与应答率在前测呈显著正相关($r = .376$, $p = .012$),后测未见相关,前测正确率和正确率的变化量呈显著负相关。在控制了年龄、性别、智力的偏相关中,左侧前额叶 N1 成分与正确率在后测中呈现显著负相关($r = -.406$, $p = .029$),而在前测未见相关。

结论 行为结果表明,注意力训练组能够比其余两组干预方案更有效地提高 ADHD 儿童的注意力水平。

脑电结果表明,干预可能通过改善中央顶叶和左侧前额叶的大脑功能从而使儿童注意力能力得到提高。

相关结果表明,智力更高的儿童注意力受影响程度更低,干预对于注意力受损更严重的儿童更加有效,儿童注意力受损可能与左侧前额叶激活异常有关,并且治疗改善了这种异常。

关键词: ADHD,团体干预,EEG,注意力训练,儿童,AX-CPT

Declined Hippocampal Subfields and Composite Structures in Depressed Adolescents with Subthreshold Mania Are Associated with Illness Progression

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Objective The aim of this study is to investigate

the alterations in hippocampal subregions and complex structures in adolescent depression patients with sub-threshold mania, as well as their influencing factors

Methods A total of 144 participants were selected from the sBEAD cohort baseline data, including 72 depressed adolescents with subthreshold mania (MDD-Sub) and 72 depressed adolescents without subthreshold mania (MDD-nSub), who underwent clinical follow-up ranging from six to twelve months. Additionally, 72 gender- and age-matched healthy adolescents (HC) were included. Magnetic resonance imaging (MRI) data were collected, and T1-weighted images were analyzed using the automated segmentation module in FreeSurfer 7.3.1. Volumetric assessments were performed at both the subfield and composite subfield levels among groups

Results The MDD-Sub group also exhibited smaller volumes in bilateral CA1, CA4, parasubiculum, dentate, molecular layer (ML), hippocampal-amygdala transition area (HATA), left CA3, left subiculum, right presubiculum, and the right whole hippocampus compared to both the HC and MDD-nSub groups. Additionally, compared to the HC group, the MDD-Sub group showed reduced volumes in the right CA3, right subiculum, and bilateral hippocampal tail

Furthermore, when hippocampal subregions were combined into distinct composite structures, the MDD-Sub group showed reduced volumes in bilateral hippocampal CA, CA2/4, hippocampal extended, hippocampal formation, hippocampal proper, combined dentate, and combined dentate/CA, compared to the HC and MDD-nSub groups. Importantly, this pattern of changes was validated in drug-naïve MDD-Sub patients.

Partial correlation analysis was found that bilateral CA1, CA, combined dentate/CA, left subiculum, hippocampal formation, extended hippocampus, hippocampal proper, combined dentate, and right CA2/4 volumes were positively correlated with illness duration.

Conclusion Our findings indicate that depressed adolescents with subthreshold mania exhibiting extensive hippocampal subregion volume alterations, which are associated with disease progression.

关键词： hippocampal subfields, subthreshold manic symptom, adolescent depression, sBEAD cohort

“Hope They Can Be Independent”: A Mixed Study Spotlighting Adult with Autism Spectrum Disorder

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Objective Autism spectrum disorder (ASD) is a group of neurodevelopmental dysfunctions characterized by impaired social communication and interaction as well as repetitive and stereotypical behavior. These impairments persist across adulthood, so that adults with ASD often require external, substantial support and comprehensive care. In addition, adults with ASD are facing “service cliff”, and their aged parents can't take care of them all the time. ASD adult independent living problem has become the urgent problem that cannot be ignored, and previous studies have lacked heterogeneous requirements for adults with ASD. This study focuses on independence and its current situation in adults, aiming to find a tool suitable for evaluating the independence level of adults with ASD, to deeply explore the factors affecting independent living, and to analyze service acquiring and requiring conditions

Methods This study adopted the method of mixed research which included qualitative study and quantitative study, taking adults with ASD as subjects. First, based on the literature review interview outline, semi-structured interview with parents of adults with ASD was conducted. We used grounded theory to analyze the interview data to better understand the current situation and influencing factors for independence of adults with ASD, and to construct a theoretical model suitable for independence adults with ASD. We also revised the Chinese version of the Adult Independence Living Measurement Scale (AILMS) with the Italian

team. A questionnaire survey was conducted on parents adults with ASD, and confirmatory factor analysis was performed

Results Qualitative analysis was performed on the interview data. A total of 20 parents' interview materials were collected. Among their children, 10 of them had an $IQ \geq 80$. Three themes were obtained: the status of independence, the expectation of independence and factors affecting independence. Parents of adults with ASD hoped them to be more independent in aspects like daily life skills and employment. Parents of adults with high function ASD children reported that they needed to explore deeper level of independence, such as emotion regulation, autonomy. Almost all parents claimed that efforts from society, healthcare, families and schools were important to achieve their goal. CAILMS has a total of 20 items, using a seven-point scoring system. 123 questionnaires were collected. Cronbach's α coefficient of CAILMS was 0.91, indicated high internal consistency, with intraclass correlation coefficients greater than 0.53, showing nice reliability and validity results. CAILMS total scores were positively correlated with the scores of World Health Organization Quality of Life (WHOQOL)-BREF ($p < 0.05$). Statistically significant differences are observed between people with different levels of severity of IQ, while the total score did not differ by sex or age

Conclusion This was the first mixed study to comprehensively establish independence based on adults with ASD in China. Adults with ASD yearned for independence and had great potential for independence, but their current situation was mostly unsatisfactory, they needed more targeted support. Therefore, this study can help to better understand the significance of independence in adults with ASD, and to quantify independence, providing a theoretical basis for the construction of rehabilitation interventions, social support programs, and social management models for adults with ASD in the future. Also, this study provides a partial reference for the formulation of security policies for adults with ASD and their relatives

关键词: adult; autism spectrum disorder; qualitative study; independence

基底核-边缘网络动态交互作用与孤独症谱系障碍儿童重复刻板行为相关

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目的 重复刻板行为(Repetitive and restricted behaviors, RRB)是孤独症谱系障碍(Autism Spectrum Disorder, ASD)的核心特征之一。这些行为表现为缺乏目的性、形式变化少,并干扰适当行为。目前关于RRB的发生机制尚不清楚,理解RRB及其亚型的神经机制对于深入了解ASD的神经生物学具有重要意义,并能够为开发有针对性的干预措施提供依据。

方法 本研究纳入孤独症脑成像数据交换数据库(Autism brain imaging data exchange II, ABIDE-II)的功能性影像数据。孤独症诊断访谈检查(Autism Diagnostic Interview Revised, ADI-R)用来评估RRB行为。首先识别RRB相关的脑区:使用滑动窗口法计算脑区间的交互作用随时间的变化特征,并通过支持向量机分类器探索与RRB相关的脑区。其次聚类瞬时全脑活动模式得到瞬时神经活动的不同状态,并发现潜在的神经心理关联。然后通过共激活模式,验证滑动窗口分析的结果。进一步纳入50名ASD儿童,26名正常对照正常对照儿童进行了验证分析。

结果 ASD儿童在全脑和网络层面的脑活动时间变异性显著高于典型发育(TD)儿童。此外,认知、视觉、运动和边缘网络之间的动态交互可以预测RRB评分。数据驱动分析将ASD的脑活动分为四类,对应于疼痛、触觉和视觉等心理过程。从基于基底核的瞬时共激活模式的动态变化来看,运动网络、边缘网络、视觉加工网络与基底核交互作用的动态性与RRB得分有关($P < 0.05$)。瞬时共激活模式可分为5类。在第三类中,关联环路背侧前额叶与基底核交互作用的动态性与RRB得分正相关。在验证样本中,同样获得了边缘网络与基底核共激活模式的动态性与RRB相关。

结论 边缘网络与基底核交互作用的动态特征与 RRB 相关, 在不同数据集中得到一致支持。这些结果支持了边缘网络在 RRB 中的关键作用。提示未来 RRB 的临床干预可以将边缘网络的功能调节作为关注重点。

关键词: 孤独症谱系障碍, 静息态功能磁共振, 动态功能连接, 基底核, 儿童

学龄 TD 儿童与 ADHD 儿童在观看情绪人像图片时的眼动行为比较研究

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目的 本研究旨在比较学龄期 TD (典型发育) 儿童与 ADHD (注意缺陷多动障碍) 儿童在观看情绪人像图片时的眼动行为差异, 以期揭示两组儿童在情绪信息处理上的特点。

方法 本研究对 71 例学龄期 TD 儿童与 79 例学龄期 ADHD 儿童进行了眼动追踪实验。实验要求被试观看依次呈现的 27 张情绪人像图片含五种情绪 (悲伤、不典型情绪、愤怒惊讶、愉快、中性), 这些图片来源于中国儿童情感评价图片库 (上海版, 7~14 岁)。使用 Tobii Pro X3-120 眼动追踪仪记录儿童在实验期间的眼动行为。图片中人像的眼睛和嘴部区域被定义为主要情绪传递区。通过处理原始眼动数据, 导出了每张图片的总注视点数, 并进行了统计分析。

结果 TD 组对愉快和中性情绪图片主情绪传递区 (眼睛+嘴部) 的总注视点数具有显著差异, 愉快>中性; ADHD 组无显著差异; TD 组对不同情绪图片的主情绪传递区总注视点数均显著高于 ADHD 组。TD 组和 ADHD 组对眼睛区域的总注视点数均大于嘴部区域。TD 组对不同情绪图片眼睛区域的总注视点数无显著差异; 而 ADHD 组对愤怒惊讶情绪图片的眼睛注视点数显著高于愉快和不典型情绪图片; TD 组对不同情绪图片眼睛区域的总注视点数均显著高于 ADHD 组。TD 组对愉快、不典型和悲伤情绪图片的嘴部总注视点数显著高于愤怒、惊讶和中性情绪图片; ADHD 组对不同情绪图片嘴部区域的总注视点数无显著差异; 不区分情绪属性时, TD

组与 ADHD 组对嘴部的总注视点数无显著差异; 对于愉快和中性情绪图片, TD 组对嘴部的总注视点数显著高于 ADHD 组。

结论 TD 儿童在观察情绪人像图片时, 对主情绪传递区 (眼睛和嘴部) 的总注视点数显著高于 ADHD 儿童。相比于 ADHD 儿童, TD 儿童在情绪信息的处理上更为细致, 表现在对不同情绪图片的眼睛和嘴部注视点数分布差异上。而 ADHD 儿在相较于处理愉快和不典型情绪图片时, 他们对愤怒惊讶的情绪图片眼睛表现出更高的眼睛注视点数, 显示其在应对负性情绪信息时存在特定关注模式。本研究为理解 ADHD 儿童在情绪信息处理上的特殊性提供了数据支持。

关键词: 注意力缺陷多动障碍 眼动追踪 情绪信息处理

青少年抑郁症患者抑郁症状的变化轨迹分析

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目的 青少年抑郁症作为全球性的公共卫生问题, 对个体的心理健康、社交和学业成就具有深远影响。了解青少年抑郁症患者抑郁症状的变化轨迹, 对于制定精准化治疗方案从而改善其预后具有重要意义。然而, 现有的相关研究多集中在学校样本, 针对临床样本的研究则较为匮乏。而这类群体通常面临更高的抑郁症状水平和自杀风险, 早期采取个性化的治疗方案对于降低其自杀风险具有重要意义。因此本研究旨在探讨临床青少年抑郁症患者抑郁症状的变化轨迹, 分析不同分组的基线特征差异和影响因素, 为制定精准化治疗策略提供数据支持。

方法 本研究纳入 81 名于北京安定医院住院的青少年抑郁症患者, 采用一般资料调查表、环境相关量表、症状相关量表于患者住院当天 (基线) 进行调查并完成脑 MRI 检查, 此后于 1 月末、3 月末、6 月末、12 月末追踪患者的抑郁症状。使用 1~6 类别参数潜变量增长模型拟合对 81 例患者 5 个时间

点的 PHQ9 得分进行变化轨迹分析, 类别 2 被认为是模型拟合中最优模型; 采用卡方检验、独立样本 t 检验比较两组间特征差异; 采用 logistic 回归分析其影响因素。

结果 根据潜变量增长模型, 住院青少年抑郁症患者的抑郁症状变化轨迹可分为两组: 快速下降-稳定组 (N=41, 50.6%) 和缓慢下降-回升组 (N=40, 49.4%)。进一步分析发现显示人口学方面, 快速下降-稳定组独生子女比例显著高于缓慢下降-回升组 ($P=0.010$)。临床特征方面, 快速下降-稳定组过去 1 年非自杀性自伤症状严重程度 ($P=0.006$)、自杀企图史比例 ($P=0.011$) 显著低于缓慢下降-回升组。童年创伤方面, 快速下降-稳定组中情感忽视 ($P=0.016$)、躯体忽视 ($P=0.002$) 得分显著低于缓慢下降-回升组; 家庭教养方式方面, 快速下降-稳定组中母亲过分干涉保护 ($P=0.019$)、父亲过分干涉 ($P=0.020$)、母亲拒绝否认 ($P=0.037$) 得分显著低于缓慢下降-回升组; 负性生活事件方面, 快速下降-稳定组的丧失 ($P=0.005$)、人际 ($P=0.004$)、学业 ($P=0.015$)、适应 ($P=0.034$)、总应激量 ($P=0.001$) 得分显著低于缓慢下降-回升组。脑 MRI 分析结果显示, 两组间右侧苍白球 fALFF 值存在显著差异 ($P=0.03$, FDR 校正后)。Logistic 回归分析结果显示自杀未遂史显著预测抑郁症状轨迹处于缓慢下降-回升组 ($OR=3.48$, $P=0.028$)。

结论 青少年抑郁症患者的抑郁症状变化轨迹可分为两种不同的类型, 提示了不同的预后, 且两组在基线特征上表现出明显的差异。在临床实践中应根据患者的基线特征在早期进行评估并制定个性化的干预措施。

关键词: 青少年, 抑郁症, 变化轨迹, 潜变量增长模型

自动化的感觉变化加工在注意缺陷多动障碍患者中的特点及其对药物疗效的预测作用

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目的 除了高级认知功能的缺陷, 底层的感

加工能力受损同样是注意缺陷多动障碍患者 (ADHD) 典型的病理特征之一。近些年来, 绝大部分与 ADHD 相关的感觉加工研究均采用了问卷测量的方式, 因而难以对其背后的神经机制进行深入探索。视觉失匹配负波 (vMMN) 是一种被用来研究感觉加工特点的电生理指标, 反映了对环境中变化刺激的自动化觉察。截止目前, 还未有研究探索 vMMN 在儿童 ADHD 患者中的特点及其与核心症状间的联系。因此本研究拟通过病例对照的方法, 首次探索 ADHD 儿童的 vMMN 特点; 并进一步通过药物治疗的研究, 探索这种底层的感觉加工能力对药物疗效的预测作用。

方法 研究一纳入了 71 名 ADHD 及 56 名健康对照儿童, 两组被试分别在年龄、智商及性别上进行了匹配。ADHD-RS 及 BRIEF 量表分别用来测量 ADHD 症状的严重程度以及生态执行功能, vMMN 的诱发通过被动的视觉 Oddball 范式来完成。研究二纳入了研究一中的 39 名儿童 ADHD 患者, 并对他们进行了为期两个月的药物治疗, 在治疗结束后同样采用 ADHD-RS 及 BRIEF 量表评估了被试的 ADHD 症状及生态执行功能, 同时也再次采集了所有被试的 vMMN。

结果 研究一的结果显示在 O2 及 Pz 电极上, ADHD 儿童的 vMMN 振幅显著降低。Pz 电极上的 vMMN 振幅与患者的多动冲动症状及 ADHD 症状总分间呈显著正相关, 与生态执行功能总分及其子维度行为管理 (BRI) 及元认知指数 (MCI) 间也呈显著正相关。虽然本研究并未发现 vMMN 与注意缺陷症状间的显著相关, 但中介分析显示: MCI 可以显著介导 vMMN 与注意缺陷症状间的关系。研究二的结果发现, 在经过两个月的药物治疗后, 患者的 ADHD 症状及生态执行功能均得到了显著的改善, 同时 Pz 电极上的 vMMN 振幅相较于前测也出现了显著的增大。回归分析的结果显示, 虽然基线的 vMMN 振幅对 ADHD 症状变化 (包括注意缺陷及多动冲动) 的预测效应不显著, 但却可以显著预测 BRIEF 总分的变化。

结论 本研究为第一项探索 vMMN 在儿童 ADHD 患者中特点的研究, 结果显示 vMMN 在儿童 ADHD 中存在受损, 且这种损伤与其生态执行功能及核心症状间存在密切联系。表明这种底层的感觉加工受损可能是儿童 ADHD 患者出现生态执行功能异常及临床症状的重要原因之一。研究二发现通过药物治疗, ADHD 患者的 vMMN 振幅可以得到显著

提升。虽然基线的 vMMN 并不能对 ADHD 症状起到有效的预测作用,但却能够显著预测 ADHD 患者生态执行功能的变化。因此未来的研究除了要持续关注 ADHD 患者的高级认知功能受损,还要对该群体底层的感觉加工问题予以同等的重视。

关键词: 注意缺陷多动障碍, 自动化的感觉变化加工, 视觉失匹配负波, 生态执行功能, 回归分析

The Structure and Patterns of Impulsivity in Adolescents with Non-suicidal Self-injury Behavior

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Objective Impulsivity is one of the important influencing factors of non-suicidal self-injury (NSSI) but currently, few studies have characterized the impulsivity patterns in adolescents with NSSI and explored the interaction between the two. On the other hand, repetitive NSSI behavior in some individuals may exhibit addictive characteristics, but the relationship between impulsivity and addiction characteristics remains unclear. Therefore, this study aims to explore the structure and patterns of impulsivity in adolescents with NSSI behavior and to investigate the relationship between NSSI addiction characteristics and impulsivity

Methods The study enrolled 493 adolescents with NSSI behavior and 347 healthy controls (HC) aged from 12-18 years old. Each participant completed the Barratt Impulse Scale, and for individuals with NSSI, their self-injury frequency in the past month, age at first self-injury, NSSI act latency, and NSSI addiction characteristics were recorded according to the Ottawa Self-Injury Inventory (OSI). Network analysis was used to construct the impulsivity networks for both groups. The centrality of nodes in both networks was assessed, and comparisons were made between the two networks in terms of structural invariance, global strength invariance, and edge strength invariance

Results By focusing on the top 10% of items (i.e., 3 items) to comprehensively represent core impulsivity

items, it was found that the core items for the HC group were cognitive impulsivity and noplanning impulsivity, while for the NSSI group, the core items were included motor impulsivity and noplanning impulsivity and cognition impulsivity. Although there was no difference in the overall network strength between the two groups, there were significant differences in the structure of the impulsivity networks. Additionally, the overall strength of the impulsivity network was highest in individuals with NSSI addiction characteristics

Conclusion Adolescents with NSSI exhibit unique changes in specific connections within the impulsivity network, which may be related to NSSI behavior. NSSI addiction characteristics may be driven by specific structure and changes in the strength of the impulsivity network. This study can help further understand the differences in the manifestation of impulsivity across different populations and provide a basis for the treatment and intervention of NSSI behavior

关键词: NSSI, Impulsivity, Network Analysis

基于机器学习的青少年社交焦虑障碍血清非靶向代谢组学研究

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目的 阐明青少年 SAD 的代谢图谱, 筛选出可靠生物标志物, 并构建带有客观生理指标的临床诊断模型。

方法 SAD 患者与健康人经严格评估后入组。研究对象填写儿童社交焦虑量表 (Social Anxiety Scale for Children, SASC) 和儿童焦虑性情绪筛选量表 (The Screen for Child Anxiety Related Emotional Disorders, SCARED) 并留下血样。血样送做非靶向代谢组学检测, 筛选出差异代谢物后经单因素 logistics 回归、多重线性诊断后, 采用最小绝对收缩和选择算子 (Least Absolute Shrinkage and Selection Operator, Lasso) 回归降低共线性影响筛选出最重要的代谢差异物, 再采用 XGBoost 分类法、AdaBoost 分类法、Random Forest 分类法、GBDT 分类法、KNN 分类法、SVM 分类法等分别进行模型构建并评估,

筛选出表现最优的模型,并根据物质的重要性排序筛选出在区分度、校准度和临床泛化性最佳的临床诊断模型。

结果 本研究总共纳入 59 例研究对象,其中疾病组 30 例,对照组 29 例,在筛选生物标志物和构建临床诊断模型中按照 7:3 分为训练组和测试组。代谢组学结果显示:(1)筛选出 665 种代谢产物,其中 48 种为差异代谢产物;(2)其中 48 种代谢产物对 SAD 发病均有关,但存在严重共线关系;(3)用 Lasso 回归从 48 种代谢物中挑选出 12 种物质;(4)多种模型比较显示 XGBoost 算法构建的模型表现最优,根据 Shapley 加性解释(Shapley Additive exPlanations, SHAP)分析对物质的重要性排序,构建纳入不同重要性代谢产物的临床模型并进行验证;(5)结果表明纳入重要性排名前 5 的代谢物(mannose、methionine、myo-inositol、3,7,12-Trihydroxycoprostone 和 uric acid)加上原有指标(SASC 量表和 SCARED 量表)比原来诊断模型的诊断效率提升最大(训练集中提升了 53.7%,测试集提升了 27.5%),并进行了区分度、校准度和临床泛化性评估,均得到了理想结果(均接近于 1)。

结论 本研究通过血清非靶向代谢组学检测,描绘了 SAD 代谢图谱,同时筛选出来了 5 个对疾病高度相关的差异代谢产物,分别为 mannose、methionine、myo-inositol、3,7,12-Trihydroxycoprostone 和 uric acid,并以此为依据构建的临床诊断模型能显著提高诊断效率。

关键词: 社交焦虑障碍,代谢组,机器学习,生物标志物

家庭联合情绪调节团体治疗在抑郁障碍青少年非自杀性自伤中的应用研究

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目的 构建伴非自杀性自伤(NSSI)青少年抑郁障碍患者家庭参与式情绪调节团体治疗(ERGT)干预方案,并探讨该方案的治疗效果。

方法 (1)基于家庭系统理论、情绪调节理论,分析既往关于 ERGT 的研究,并对伴 NSSI 行为青少年及其主要照顾者的真实体验进行 Meta 整合,通

过课题组多次讨论,形成家庭联合 ERGT 方案初稿。在此基础上,采用专家会议法,对该方案进行系统评估并根据专家建议进行修订。选取 10 名患者及其照顾者进行预实验,最终形成方案终稿。(2)采用随机对照试验法,选取某三甲精神专科医院符合纳入排除标准的 80 例伴有 NSSI 行为的青少年抑郁障碍患者为被试,并随机分为干预组和对照组,每组 40 例。干预组对被试及其照顾者实施家庭参与式 ERGT,对照组仅对患者本人实施 ERGT。在干预前、干预结束时、干预结束后 1 个月、干预结束后 3 个月以及干预结束后 6 个月,分别采用青少年非自杀性自伤行为和功能问卷(ANSSIQ)、贝克自杀意念问卷(BSI)、Barratt 冲动性量表(BIS)、焦虑自评量表(SAS)以及抑郁自评量表(SDS)对所有被试进行资料收集,并对干预方案进行效果评价。

结果 (1)对青少年 NSSI 行为及其主要照顾者的真实体验进行质性 Meta 整合,分别提炼出 4 个整合结果、9 个新类别结果;3 个整合结果、7 个新类别结果。结合上述 Meta 整合结果并参考 Gratz 和 Bjureberg 等人的干预研究,形成干预方案初稿。采用专家会议法,选取 7 名相关领域专家对干预方案进行评估。对预实验过程中出现的问题,进行再次修改和讨论,最后形成终稿。(2)共 73 例被试完成了全部随访,其中干预组 36 例,对照组 37 例,两组被试基线资料间比较差异均无统计学意义($P>0.05$)。干预结束时,除 BSI 得分外,干预组自伤行为、BIS、SAS 及 SDS 得分组间比较差异均无统计学意义($P>0.05$);干预结束后 1 个月、3 个月及 6 个月,干预组自伤行为、BIS、SAS、SDS 及 BSI 得分均明显低于对照组,且组间比较差异均有统计学意义($P<0.05$)。此外,干预组上述量表的得分随时间推移而降低的趋势较对照组更加显著。

结论 家庭参与式 ERGT 干预方案较 ERGT 而言效果更佳,且能有效减少抑郁障碍青少年的 NSSI 行为、降低其冲动性、减少自杀想法、改善焦虑抑郁情绪,并为临床医护人员对其治疗提供参考和借鉴,具有一定的临床意义,值得进一步推广

关键词: 抑郁障碍;非自杀性自伤;青少年;情绪调节团体治疗

不同方案 rTMS 治疗青少年非自杀性自伤行为的疗效分析及其可能脑神经机制研究

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目的 探讨不同方案 rTMS 对青少年非自杀性自伤 (NSSI) 行为的疗效, 并利用 fNIRS 探寻疗效背后的神经机制。

方法 选取某医院精神科 99 名伴 NSSI 行为的抑郁症青少年为研究对象, 随机分为对照组、低频组及联合组各 33 名。对照组接受伪刺激 rTMS 治疗; 低频组和联合组分别进行: 右侧背外侧前额叶皮层 (RDLPFC) 低频 rTMS 治疗; RDLPFC 低频 rTMS+ 左侧背外侧前额叶皮层 (LDLPFC) 高频 rTMS 联合治疗。治疗时间为每天 1 次, 每周 5 天, 持续 4 周。上述三组分别在 rTMS 治疗前后进行非自杀性自伤行为量表 (ANSSIQ)、汉密尔顿抑郁量表 (HAMD)、Barratt 冲动性量表 (BIS) 等评估, 并在治疗前后分别进行 fNIRS 检测用于分析不同脑区氧合血红蛋白 (oxy-Hb) 含量。

结果 共有 7 名被试脱落, 最终完成者共 92 例, 其中对照组 30 例、低频组 32 例、联合组 30 例。三组被试的性别、年龄、精神病家族史、首发年龄、病程等一般人口学资料差异无统计学意义。干预前上述三组在 ANSSIQ 总分、HAMD 总分、BIS-11 总分、RDLPFC 氧合血红蛋白含量、LDLPFC 氧合血红蛋白含量等基线资料差异均无统计学意义。组内比较发现: 治疗后三组在 ANSSIQ、HAMD、BIS-11 各维度及总分上均明显低于治疗前, 且差异具有统计学意义。组间比较发现: 治疗后三组组间在上述三个量表各维度及量表总分上均存在显著差异。进一步两两比较发现, 在 ANSSIQ 总分上, 联合组 < 低频组 < 对照组, 且差异具有统计学意义。在 HAMD 的焦虑躯体化、体重减轻、阻滞、睡眠障碍及总分上, 均为联合组 > 低频组 > 对照组且差异均有统计学意义, 而在认知障碍分数上则为联合组 > 低频组 / 对照组且差异有统计学意义。在 BIS 的运动冲动、认知冲动、无计划冲动维度及总分上均为联合组 > 低频组 / 对照组且差异有统计学意义。治疗后三组被试 L/RDLPFC 的 oxy-Hb 值差异均有统计学意义。进一步两两比较发现: RDLPFC 的 oxy-Hb 值上, 联合组 / 低频组 > 对照组且差异有统计学意义; LDLPFC 的 oxy-Hb 值上, 联合组 > 低频组 / 对照组且差异均有统计学意义。

结论 L/RDLPFC 联合治疗模式能够更大程度的改善抑郁症青少年的 NSSI 及临床症状, 能够显著激活其 L/RDLPFC, 并同时改善患者冲动性及负性情绪, 而其疗效可能主要基于改善 DLPFC 的功能。

关键词: 青少年, 非自杀性自伤, 重复经颅磁刺激, 近红外脑功能成像

Unraveling The Network of Premonitory Urges, Tic Symptoms, Obsessive-Compulsive Symptoms, and Quality of Life in Drug-naive Children and Adolescents with Tic Disorder

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Objective Premonitory urges (PU) in tic disorder (TD) are recognized as a crucial factor influencing tic symptoms and overall well-being. This study employs network analysis to explore the intricate relationships among PU, tic symptoms, obsessive-compulsive symptoms (OCS), and quality of life (QoL) in drug-naive children and adolescents with TD.

Methods Participants were drug-naive TD patients aged 6 to 16 years. All participants consented to undergo multiple assessments, including the Yale Global Tic Severity Scale (YGTSS), Premonitory Urge to Tic Scale (PUTS), Gilles de la Tourette-Quality of Life Scale (GTS-QOL), Children's Yale-Brown Obsessive-Compulsive Scale (CY-BOCS), and Obsessive-Compulsive Inventory-Revised (OCI-R). Network analysis was conducted using the R-package qgraph.

Results Based on a cohort of 344 TD patients, robust associations were identified between PU and tic symptoms, OCS, and QoL deficits. Centrality analysis identified ordering symptoms and obsessive thoughts as key nodes. Notable cross-scale associations were observed, such as the connections between PU and checking symptoms, as well as PU and obsessive thoughts. Bridge centrality analysis revealed that the deficit of QoL is a crucial bridge factor connecting various clusters within the network. PU was indirectly related to

QoL in individuals with TD, while OCS exerted a direct association.

Conclusion Our study underscores the pivotal role of OCS in tic-related symptoms among individuals with TD. Highlighting the significant associations between PU and OCS, it emphasizes the necessity for targeted interventions to improve overall well-being.

关键词: Tic Disorder, Premonitory Urges, Obsessive-Compulsive Symptoms, Quality of Life, Network Analysis, Children and Adolescents

Risk Factors for Non-suicidal Self-injury in Adolescents and Children: An Umbrella Review

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Objective Non-suicidal self-injury (NSSI) remains a major public health challenge worldwide. Identifying and targeting risk factors for NSSI is a potential approach to prevention. We aimed to summarise current knowledge on the range and magnitude of risk factors for NSSI in adolescents and children and evaluate the quality of the evidence

Methods In this umbrella review, six bibliographic databases (PubMed, WOS, Embase, Cochrane, Wanfang and CNKI) were systematically searched for articles published from database inception to April 16, 2024. We included meta-analyses of observational studies on risk factors for NSSI in adolescents and children. To evaluate the credibility of evidence, pre-specified evidence classification criteria were applied, graded as convincing (“class I”), highly suggestive (“class II”), suggestive (“class III”), weak (“class IV”), or no evidence (“class V”). The protocol was pre-registered with

PROSPERO (CRD42024519520)

Results We identified 14 meta-analyses comprising 368 primary studies on 48 risk factors from 35 countries involving 1,727,552 children and adolescents at risk for NSSI. 58.3% of the included primary studies in the meta-analyses were from high-income countries. According to the re-analysis outcomes, prior NSSI history (odds ratio, OR 5.95, 95% confidence interval 3.57 to 9.93), Cluster B personality disorders (OR 5.93, 2.37 to 14.83), LGBTIQ (OR 4.12, 3.09 to 5.47), and the co-occurrence of traditional and cyber-bullying victimization (OR 3.39, 1.55 to 7.42) were the strongest associated factors for the risk of NSSI. Additionally, direct associations were found between individual, family, sociological, and combined factors and NSSI, which underscores NSSI in children and adolescents as a multifactorial phenomenon. Based on the pre-specified evidence classification criteria, highly suggestive evidence (class II) supported direct associations between NSSI and school absenteeism (OR 2.14, 1.59 to 2.89; Amstar-2=High), LGBTIQ (OR 4.12, 3.09 to 5.47; low), bully-victims (OR 2.98, 1.84 to 4.82; low), problem behaviors (OR 1.99, 1.81 to 2.19; low), sexting (OR 1.98, 1.75 to 2.25; low), mental disorders (OR 1.86, 1.60 to 2.16; low), female (OR 1.26, 1.12 to 1.43; low), and remaining 10 pooled analyses which were rated as critically low quality based on Amstar-2 framework. Suggestive evidence (class III) indicated that NSSI was directly associated with adverse childhood experiences (OR 2.31, 1.77 to 3.01; low) and left-behind children (OR 1.37, 1.11 to 1.69; low). Of the remaining 29 pooled analyses, 22 were graded as weak strength (class IV) and 7 were graded as no evidence (class V). Overall, using the Amstar-2 framework, 16 pooled analyses were rated as low quality, with 31 rated as critically low quality, limiting the quality of evidence

Conclusion A wide range of risk factors were identified across various domains, which underscores NSSI in adolescents and children as a multifactorial phenomenon. These findings provide a rationale for developing and evaluating the effectiveness of using population-based and public health measures to target and reduce NSSI for improved adolescent and children's health.

关键词: Non-suicidal self-injury; Risk Factors; Adolescents; Children; Umbrella Review

Heterogeneity in Adolescents' Non-suicidal Self-injury Behaviour Trajectories Based on The Group-based Trajectory Model and A Decision Tree Analysis of Family-related Determinants

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Objective The purpose of the study was to identify the heterogeneity in trajectories of adolescents' NSSI behaviour and their family-related influencing factors.

Methods The group-based trajectory model (GBTM) was used to identify the heterogeneity in the NSSI behaviour trajectories of 208 adolescents in China. Next, the decision tree model (DTM) was used to analyse which family related factors influence the trajectory type.

Results The GBTM revealed two heterogeneous trajectories of NSSI behaviour: the high-risk and low-risk NSSI behaviour groups. Next, DTM's average accuracy was 83.2%. A total of seven independent variables were used for the DTM: gender, number of NSSIs in the past month, and family economic, family structure, family conflict, parental psychological control, parental behavior control and family intimacy risks. Family conflict risk was located at the root node and was the most important factor.

Conclusion Heterogeneity within the population should be considered in the management of adolescents' NSSI behaviours. Further, from the perspective of family system theory and cumulative risk, focusing on the adverse effect of multiple risk factors on adolescents' NSSI addiction is more meaningful rather than the impact of single risk factors. Thus, targeted prevention and treatment interventions need to be tailored to the trajectory characteristics of different subgroups. For high-risk

groups, we should provide symptomatic interventions. Next, focusing on the decision tree model of family core risk factors, researchers and health professionals should examine the influence of family structure, resources, and atmosphere on NSSI behavioural addiction from the perspectives of family system theory and cumulative risk. Thus, even on admission in a treatment facility, the focus should be on identifying the adolescent's NSSI behaviour history as well as assessing family intimacy, family conflict, and parental control over the child. Meanwhile, while parenting, parents should create a harmonious and warm family atmosphere for children, reducing psychological control over adolescents, increasing tolerance of adolescents' individual independence and personality, and giving adolescents appropriate autonomy in personal issues for development attempts. This study advocates family therapy for parents rather than just for adolescents. This can help reduce the occurrence, development, and addiction of NSSI behaviours among adolescents by increasing parent classes, restoring autonomy, and reducing domestic violence language and conflict

关键词: Non-suicidal self-injury; group-based; heterogeneity; trajectory; decision tree; influencing factor

Sleep Disturbance and Eating Disorders Among Adolescents with Depression: The Mediation of Anxiety and The Moderation of Testosterone

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Objective Although sleep disturbance has been reported to play a significant role in the elevated prevalence of eating disorders, limited research has examined the mediating and moderating mechanisms underlying this relationship. The aim of this cross-sectional study

was to investigate whether anxiety mediates the association between sleep disturbance and eating disorders and whether testosterone serves a moderating role.

Methods This study was conducted among 319 adolescents with depressive disorders, and the data were collected at Shandong Mental Health Center from January to November 2022. Participants filled out self-report questionnaires, including the Pittsburgh Sleep Quality Index, Eating Disorder Inventory, Multidimensional Anxiety Scale for Children, and Children's Depression Inventory. Testosterone levels were quantitatively assessed through blood samples collected upon admission to the hospital. The statistical model was tested using bootstrapping with resampling strategies, and the Johnson-Neyman technique was used to visualize the moderating effect of testosterone.

Results The participants had a mean age of 15.63 (SD=2.27) and scored high on the Children's Depression Inventory (M=24.48, SD=12.68). Eating disorders were positively correlated with sleep disturbance ($r=0.446, p<0.01$) and anxiety ($r=0.568, p<0.01$). Sleep disturbance was positively correlated with anxiety ($r=0.602, p<0.01$). Anxiety partially mediated the relationship between sleep disturbance and eating disorders ($\beta=0.942, 95\%CI [0.586, 0.328], p<0.001$). Testosterone showed a significant moderating effect (index of moderated mediation=-0.533, 95%CI [-0.986, -0.081], $p=0.021$).

Conclusion The findings from this cross-sectional study elucidate the complex interplay between sleep disturbance, anxiety, and testosterone in contributing to the risk of eating disorders among adolescents with depression. Specifically, anxiety serves as a crucial mediator in the relationship between sleep disturbance and eating disorders, while testosterone levels modulate the strength of this mediation. These results highlight the importance of considering both psychological factors, such as anxiety, and biological factors, like testosterone, in understanding and addressing the multifaceted nature of eating disorders in depressed adolescents. Further research is needed to explore these relationships longitudinally and to examine potential interventions that target these mediating and moderating mechanisms

关键词: Sleep disturbance, Eating disorders, Anxiety, Testosterone, Adolescents

儿童神经发育障碍的斑马鱼模型：从基础到临床的连接

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目的 注意缺陷多动障碍(ADHD)是一种高度遗传的神经发育障碍, 包括注意力缺陷型、多动-冲动型和混合型。全球 ADHD 发病率约为 5.29%, 主要在儿童青少年时期发病, 这将对儿童患者的个人和家庭造成严重损害。本研究旨在通过基础实验和临床分析深入探索 GHRELIN 基因突变与儿童青少年 ADHD 之间的潜在联系。

方法 在基础研究中, 我们运用全基因组测序技术, 对大量儿童 ADHD 患者及其家族成员进行基因分析, 成功识别出 GHRELIN 基因作为儿童 ADHD 的潜在高风险基因。随后, 利用 CRISPR-Cas9 技术, 在斑马鱼模型中敲除 GHRELIN 基因 (*ghrelin*^{-/-})。在临床前研究中, 我们采用行为学实验, 详细观察这些模型是否表现出类似儿童 ADHD 患者的症状, 如多动、注意力缺陷和冲动。此外, 我们还利用高效液相色谱技术分析斑马鱼模型中神经递质的含量, 并通过转录组分析和荧光定量 PCR 技术, 深入探讨了其背后的分子机制。

结果 基础研究的成果为儿童 ADHD 的临床治疗提供了重要依据。通过病例对照研究, 我们证实 GHRELIN 基因的 SNP 位点 rs696217 的突变与儿童 ADHD 的发病风险存在显著关联, 进一步确认了 GHRELIN 基因在儿童 ADHD 中的重要角色。在斑马鱼模型中, *ghrelin*^{-/-}个体表现出类似儿童 ADHD 患者的行为特征, 如过度活跃、注意力难以集中和冲动行为, 且可被一线多动症药物 MPH 和 ATX 所缓解, 这为我们理解儿童 ADHD 的发病机制提供了直观的实验模型。在分子层面, 基础研究显示 *ghrelin*^{-/-}斑马鱼的大脑中多巴胺能神经元数量减少, 多巴胺含量降低, 这可能与儿童 ADHD 的症状直接相关。转录组分析和荧光定量 PCR 技术进一步揭示了 *ghrelin* 及其信号通路相关基因在 *ghrelin*^{-/-}斑马鱼

中的表达变化,为理解儿童 ADHD 的分子机制提供了新的视角。临床前研究的发现也为基础研究提供了反馈。GHRELIN 激动剂 MK-677 和人重组生长激素在斑马鱼模型中显示出缓解多动样行为的潜力,这为未来儿童 ADHD 的临床治疗提供了新的候选药物和治疗策略。

结论 本研究通过临床与基础研究的紧密结合,成功揭示了 GHRELIN 基因与儿童 ADHD 之间的关联,并通过斑马鱼模型深入探讨了其分子机制。GHRELIN 激动剂 MK-677 和人重组生长激素在斑马鱼模型中的疗效评估,为基础研究提供了新的研究方向。

关键词: ADHD, GHRELIN, 斑马鱼

Modulation of Cerebellar Homotopic Connectivity by Modified Electroconvulsive Therapy at Rest: Study of First-Episode, Drug-Naive Adolescent Major Depressive Disorder

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Objective Previous studies of brain function alterations that are associated with modified electroconvulsive therapy (MECT) for major depressive disorder (MDD) have yielded conflicting results because of variations in treatment durations, types of antidepressants, and disease course. Consequently, predicting the efficacy of MECT remains challenging.

Methods Thirty patients with first-episode, drug-naive adolescent MDD and 34 healthy controls (HCs) underwent resting-state functional magnetic resonance imaging and neuropsychological tests. The patients received MECT and underwent scanning at two time points (baseline and posttreatment). Voxel-mirrored homotopic connectivity (VMHC), support vector machine (SVM), and support vector regression (SVR) analyses were employed to analyze the imaging data.

Results Compared with HCs, patients at baseline exhibited greater VMHC in the cerebellum_2 and cerebellum_8. Following treatment, patients exhibited the restoration of normal VMHC values. Additionally, SVM and receiver operating characteristic curve analyses revealed that VMHC values in the cerebellum_2 could differentiate MDD patients from HCs with 73.85% accuracy, 70.00% sensitivity, 79.41% specificity, and an area under the curve of 0.7486. Furthermore, the SVR results indicated a significant association between predicted and actual symptomatic improvement based on the reduction ratio of Hamilton Depression Rating Scale-17 total scores ($R^2 = 0.5269$, $P < 0.0001$).

Conclusion This study provides evidence that MECT modulates homotopic connectivity of the cerebellum_2 in first-episode, drug-naive adolescent MDD. Moreover, VMHC values in the cerebellum_2 may serve as a valuable neuroimaging biomarker for distinguishing MDD from HCs and potentially predicting early treatment response in MDD

关键词: Major depressive disorder; Voxel-mirrored homotopic connectivity; Modified electroconvulsive therapy; Cerebellum; Neuroimaging biomarker

MII5 单倍体不足导致小胶质细胞吞噬功能异常及孤独症样行为

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目的 孤独症谱系障碍 (autism spectrum disorder, ASD) 是一种神经发育障碍, 其核心症状包括社交障碍和重复性感官运动行为。ASD 的发病机制复杂, 研究表明 ASD 主要受遗传学和环境因素影响。在大规模外显子组测序研究和全基因组关联分析, 混合谱系白血病 5 (mixed lineage leukemia, MLL5) 基因与 ASD 相关。临床报道携带 MLL5 杂合突变子会表现出一系列神经发育障碍, 其中包括 ASD。MLL5 在细胞周期、基因组稳定性、造血发生免疫调节等生物过程中发挥关键作用。小胶质细胞在大脑中具有免疫功能, 并参与神经元存活、突触形成和清除等过程。这些过程的异常与孤独症的发生发展有关。尽管 MLL5 突变与 ASD 有关, 但目前尚未明确其是否影响小胶质细胞功能从而导致 ASD 行为的出现。

方法 我们利用分子生物学、神经科学等技术手段探索 Mll5^{+/-}小鼠与野生型小鼠小胶质细胞功能, 并进行为了学实验, 以探讨 Mll5^{+/-}小鼠是否具有孤独症样行为。同时, 我们还使用诱导多能干细胞技术将携带了 MLL5 突变的 ASD 患者和健康对照的血样诱导成小胶质细胞和神经元以进一步验证相关机制。

结果 1. 我们对小鼠的发育情况进行了检测, 结果显示, 与野生型小鼠相比, Mll5^{+/-}小鼠脑重、脑长比正常, 皮层厚度正常, 且未观察到明显大脑畸形的现象。2. 在大脑早期发育阶段, Mll5^{+/-}小鼠其小胶质细胞呈现多分枝状, 同时 CD68 的表达降低, 这表明 Mll5^{+/-}小鼠小胶质细胞吞噬功能存在异常。3. 对 Mll5^{+/-}小鼠神经元的显示, 其骨架蛋白 MAP2 并没有发生变化, 相关的突触蛋白呈现出增多趋势, 神经元的数量没有变化。在海马 DG 神经元中, 树突棘密度增多, 不成熟的突触比例增多。神经元的 mEPSC 的频率降低, 振幅无影响。这表明 Mll5 单倍体不足改变了突触的功能。4. 通过体外神经元与小胶质细胞共培养系统检测小胶质细胞的吞噬功能, 发现加入 Mll5 单倍体不足小鼠来源的小胶质细胞后, 神经元的突触密度增多, 这提示 Mll5 突变影响了小胶质细胞吞噬的能力。5. 行为学实验显示, Mll5^{+/-}小鼠表现出社交障碍和刻板行为, 还出现了筑巢问题和抑郁样行为。6. 携带了 MLL5 突变的 ASD 患者诱导的小胶质细胞吞噬功能异常。

结论 Mll5 单倍体不足导致小胶质细胞吞噬功能异常及孤独症样行为。

关键词: Mll5; 孤独症; 小胶质细胞; 吞噬

青少年抑郁障碍高自杀风险的影响因素研究 -- 从炎症-犬尿氨酸通路和家庭环境的角度

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目的 近年来, 青少年自杀事件频发, 青少年自杀问题已经成为社会各界关注的热点问题。既往研究提示, 精神障碍是青少年自杀未遂和自杀死亡最重要的危险因素, 其中以抑郁障碍最为相关。此外, 青少年自杀可能还与生物、社会、心理等多方面的因素有关。有研究报道, 免疫紊乱和色氨酸-犬尿氨酸通路 (TKP) 代谢异常、以及家庭环境可能与抑郁障碍青少年的自杀倾向有关。本研究旨在探索除了抑郁障碍诊断以外, 影响青少年人群自杀风险的危险因素, 为青少年自杀防治提供科学依据。

方法 本研究从同济大学附属东方医院的门诊及住院部招募了 124 名符合 ICD-10 诊断标准的青少年抑郁障碍患者, 采集患者的静脉血用于检测: 血清白细胞介素 (IL) -1 β 、IL-6、IL-18、IL-10、肿瘤坏死因子 (TNF) - α 、以及色氨酸 (TRP)、犬尿氨酸 (KYN)、3-羟基犬尿氨酸 (3-HK) 和犬尿酸 (KA) 等代谢物的水平。采用简明儿童少年国际神经精神访谈 (MINI-Kid) 自杀模块评估青少年抑郁患者的自杀风险, 采用系统家庭动力学自评量表 (SSFD) 和童年创伤问卷 (CTQ) 评估家庭动力特征和心理创伤。采用多元线性回归分析探索青少年抑郁障碍高自杀风险危险因素。将 MINI-Kid 自杀模块的自杀风险评分作为因变量, 以单因素分析有意义的社会人口学特征 (性别、年龄、发病年龄、病程)、生物学指标 (皮质醇、细胞因子、TKP 代谢物) 和社会心理学指标 (家庭动力特征和童年创伤类型) 为自变量, 建立回归方程。

结果 发病年龄 ($B=-2.240, P=0.003$)、血清 IL-1 β 水平 ($B=9.240, P=0.002$)、家庭气氛 ($B=0.701, P=0.018$)、情感忽视 ($B=1.078, P=0.003$) 和情感虐待 ($B=1.056, P<.001$) 是青少年抑郁障碍高自杀风险的危险因素。发病年龄越早, 血清 IL-1 β 水平越高, 家庭气氛越沉闷敌对, 父母越不能提供儿童基本的心理和情感需要, 父母对孩子越多言语攻击或任意侮辱、羞辱及威胁行为, 青少年抑郁障碍患者的自杀风险越高。

结论 发病年龄早、体内炎症反应增强、不良的家庭气氛、成长阶段情感上被主要照料者忽视或虐待是除了抑郁障碍诊断以外，青少年人群高自杀风险的预测因素。其中，血清 IL-1 β 水平或可作为青少年抑郁障碍患者自杀风险的独立预测生物标志物。评估炎症反应状态以及家庭环境特点或可预测抑郁障碍青少年的自杀风险，并为防治提供干预靶点。

关键词：青少年抑郁，自杀风险，炎症，犬尿氨酸通路，家庭动力

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Attribution of Psychiatric Manifestations To Systemic Lupus Erythematosus in Chinese Patients: A Retrospective Study of Psychiatric Consultation Cases

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Objective To understand the prevalence of neuropsychiatric systemic lupus erythematosus (NPSLE) and attribution of psychiatric manifestations among Chinese SLE patients

Methods This retrospective single-center study analyzed 160 patient records. Clinical diagnosis, deemed as the gold standard, divided the subjects into NPSLE group (G1) and secondary psychiatric symptoms group (G2). Clinical features were compared between these two groups. The Italian attribution model's sensitivity and specificity were explored

Results A total of 171 psychiatric syndromes were diagnosed in 138 patients, including 87 cases of acute confusional state (ACS), 40 cases of cognitive dysfunction (CD), 26 cases of mood disorders, and 18 cases of psychosis. 141 (82.5%) syndromes were attributed to SLE. In contrast to G2, G1 demonstrated higher SLEDAI-2K score (21 vs 12, $p = 0.001$), lower prevalence of anti-beta-2-glycoprotein 1 antibody (8.6% vs 25.9%, $p = 0.036$), and higher prevalence of anti-ribosomal ribonucleoprotein particle (rRNP) antibody (39.0% vs 22.2%, $p = 0.045$). G1 also exhibited higher utilization of cyclophosphamide (78.7% vs 53.3%, $p = 0.005$), antipsychotics (80.9% vs 43.3%, $p < 0.001$), and sedatives (43.3% vs 10.0%, $p < 0.001$) compared to G2. The Italian attribution model exhibited a sensitivity of 95.0% and a specificity of 70.0% when the threshold value was set at 7

Conclusion NPSLE tends to occur in patients with more severe disease activity and is connected with anti-rRNP antibody. The Italian model effectively assesses multiple psychiatric manifestations in Chinese SLE patients presenting NP symptoms.

关键词: systemic lupus erythematosus, neuropsychiatric systemic lupus erythematosus, attribution, mental disorders, referral consultation

年轻高血压住院患者的睡眠特点

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目的 既往研究已经验证了睡眠时间过短与高血压之间的联系。但是, 导致睡眠时间减少的各种因素尚不清楚, 包括睡眠机会、睡眠能力、情绪状态等因素。这些因素对未来的针对性干预具有重要意义。因此, 本研究的主要目的是通过分析年轻高血压住院患者的睡眠和焦虑/抑郁评定量表, 调查睡眠时间过短与睡眠机会之间的潜在关联。

方法 共 1677 名年轻高血压住院患者 (年龄 = 34.58 ± 7.90 岁) 完成了匹兹堡睡眠质量指数、焦虑自评量表和抑郁自评量表。我们评估了所有参与者的各种睡眠参数, 包括睡眠时间、睡眠效率和日间功能障碍。我们还检查了不同睡眠类型亚组的分布、就寝/起床时间, 并利用线性回归分析探索焦虑/抑郁与睡眠之间的关系。

结果 在青少年高血压住院患者中, 59.8% 报告睡眠时间减少, 其中 60.66% 可能缺乏睡眠机会, 16.39% 显示出睡眠能力下降。在成年参与者中, 37.5% 报告睡眠时间减少, 38.3%-46% 可能缺乏睡眠机会, 41.9%-46.8% 显示出睡眠能力下降。焦虑与睡眠效率 (coefficient = -0.130, $P < 0.001$) 和日间功能障碍 (coefficient = 0.423, $P < 0.001$) 相关, 但与睡眠时间无关 ($P = 0.857$); 抑郁也与睡眠效率 (系数 = -0.150, $P < 0.001$) 和日间功能障碍 (coefficient = 0.352, $P < 0.001$) 相关, 但与睡眠时间无关 ($P = 0.258$)。

结论 我们发现部分年轻高血压住院患者存在睡眠时间过短, 背后有多种潜在因素。特别是, 在青少年中, 睡眠机会不足可能是一个高度普遍的因素。因此, 关注年轻人的多维度睡眠特征对其整体身体健康具有重要意义。

关键词: 睡眠, 高血压, 焦虑, 抑郁

Restless Legs Syndrome Is A Risk Factor for Major Depressive Disorder

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Objective A significant association between major depressive disorder (MDD) and restless legs syndrome (RLS), but RLS prevalence is dramatically different among MDD individuals across studies. Our present work aimed to comprehensively evaluate available evidences to determine the role of RLS in MDD. PubMed, Web of Science, Embase, Scopus, Science Direct, Science Online, Wip Chinese Biomedical Journal, Wanfang and Chinese National Knowledge Infrastructure were searched to identify observational and case-control studies relevant to RLS and MDD. Stata 12.0 software was used for meta-analysis. RLS individuals exhibited a higher risk of MDD than non-RLS controls (OR 2.05, 95%CI 1.80–2.33; $p < 0.05$). No significant differences were found in MDD prevalence between young RLS patients (OR 2.10, 95%CI 1.72–2.56) and older RLS patients (OR 2.02, 95%CI 1.70–2.39). In addition, no significant difference in MDD prevalence was evident between Asian (OR 1.98, 95%CI 1.66–2.37) and European or American (OR 1.76, 95%CI 1.54–2.01) RLS patients. Our meta-analysis provides evidence that the risk for MDD is higher among RLS patients compared to non-RLS individuals suggesting that RLS may play an important role in MDD pathogenesis

Methods Literature Search

We searched the databases of PubMed, Web of Science, Embase, Science Online, Wip Chinese Biomedical Journal, Wanfang and Chinese National Knowledge Infrastructure up to 13 December 2018. The search was limited to randomized controlled trials on human populations and articles written in English language. The following search strings were used: [(depression) OR (major depressive disorder) OR (depressive symptoms)] AND [(restless legs syndrome) OR (Willis-Ekbom disease) OR (RLS) OR (WED)]

Selection criteria

Three authors (Haiwang Zhang, Changxi Zhou, Shuai Jin) reviewed all identified articles from the initial search for inclusion; Any disagreements regarding the inclusion of the articles were resolved through discussion between the authors. Inclusion criteria were established before the commencement of article reviews and contained the following aspects:

1. Descriptive research by collecting literature analyzing the role of RLS in MDD;
2. Diagnosing MDD based on the criteria of GDS, BDI, and EPDS score confirmation by clinicians;
3. RLS diagnosed according to the criteria of the international RLS study group and the data on the patients obtained through questionnaires or clinical interviews;
4. Reporting RLS prevalence or sufficient data for the prevalence calculation;
5. Being full-text articles available for the evaluation of all interested components;
6. Having available data allowing for the determination of effect size; and
7. Being articles written in English.

Exclusion criteria were as follows:

1. Failed to offer valid data or inconsistent variables;
2. Reporting no MDD prevalence among individuals with RLS or having no enough data for the prevalence calculation;
3. Having significant methodological flaws; or
4. Involving no individuals with MDD or RLS.

Results Literature search and included studies

Searching the seven databases and records identified 2425 articles, and 48 of them were further examined after the removal of duplicates and clearly irrelevant articles (Fig.1). After eliminating 29 articles based on the title and abstract, the remaining 18 were used for full-text articles assessment and eligibility, and 6 were subsequently excluded either because no data were extracted (n=4) or variable inconsistency (n=2)]. Therefore, 12 remaining studies were included in the present meta-analysis.

The eligible 12 studies contained 3357 individuals with RLS and 94912 non-RLS were included in the

meta-analysis (Table 1). Of these studies, five were done on Asians and seven on Europeans or Americans, with five on individuals younger than 50 and seven on people older than 50. All of the 12 studies assessed MDD prevalence in patients with RLS and compared MDD between RLS and non-RLS individuals, and investigated the relationship between RLS and MDD.

Higher MDD prevalence in patients with RLS

Detailed MDD prevalence among individuals with and without RLS is listed in Table 1. Among the 12 studies, low heterogeneity was detected ($I^2 = 20.9\%$, $p < 0.001$), therefore the random-effect model was used to meta-analyze the data. Sensitivity analysis showed that none of the 12 studies significantly affected results (Fig. 2). Funnel plot was visually symmetrical, suggesting no significant publication bias (Fig. 3).

No significant differences in the risk of MDD between younger and older adults

Of the 12 studies, 5 focused on people younger than 50, and 7 on those older than 50. Although the results of our study were not highly heterogeneous ($I^2 = 20.9\%$, $p < 0.001$), we compared these two age groups with an age of 50 as threshold for subgroup analysis. Our results showed no significant difference in MDD prevalence between these two patient groups (OR=2.10 for patients younger than 50 and OR=2.05 for those of 50 years or older). Sensitivity analysis showed that none of the 12 studies significantly affected the results (Fig. 4).

No significant difference in MDD risk between Asian RLS patients and European or American RLS patients

Of the 12 studies, five were done on Asian patients and seven from Europeans and Americas. Although the results of our study were not highly heterogeneous ($I^2 = 20.9\%$, $p < 0.001$), we nevertheless compared the risk of MDD among Asian RLS patients with that in American or European patients, but found no significant difference between two these two groups. Sensitivity analysis showed that none of the 12 studies significantly affected the results (Fig. 5).

Conclusion Higher MDD prevalence in patients with RLS, No significant differences in the risk of MDD

between younger and older adults, No significant difference in MDD risk between Asian RLS patients and European or American RLS patients 关键词: Major depressive disorder; Restless legs syndrome; Willis-Ekbom disease; mental diseases

Real-world Study on The Efficacy of Pharmacotherapy for Anxiety and Depression Patients in The Psychology Department of A Cancer Hospital

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Objective The incidence of cancer has been rapidly increasing among Chinese populations, with an extreme susceptibility to anxiety and depressive disorders, which are significantly impacting the effectiveness of cancer treatments and long-term quality of life (QoL). However, this patient population has limited exposure to any possible clinical benefits of psychotropic drugs. Therefore, this study aimed to explore the efficacy of antidepressant treatments between the cancer and non-cancer patients' groups, to provide further clinical data support for improving the mental health of afflicted cancer patients

Methods It was a real-world cohort study. A total of 610 outpatients were selected and diagnosed with depressive episodes and/or anxiety disorders. Eligible subjects received antidepressants from the Psychological Clinic of Fudan University Shanghai Cancer Center. The Patient Health Questionnaire-9 (PHQ-9) and the Generalized Anxiety Disorder Questionnaire-7 (GAD-7) were used to evaluate the clinical characteristics and treatment efficacy of patients at baseline, 4 weeks, and 8 weeks of follow-up

Results Compared to the non-cancer group, the cancer group had higher proportions of females, older subjects, and patients with poor sleep quality and reportedly fewer somatic symptoms at baseline ($p < 0.05$). The scores of PHQ-9 and GAD-7 in cancer patients treated with antidepressants were significantly lower than those

at baseline at the 4th and 8th week time points. Escitalopram was found more effective than sertraline ($p < 0.05$) in treating psycho-behavioral symptoms in this cohort. Patients with comorbid anxiety and depression showed more pronounced improvement in their PHQ-9 and GAD-7 scores, while cancer patients receiving chemotherapy exhibited slower decreases in their respective behavioral testing scores in the 4th week ($p < 0.05$). Patients who were lost to follow-up exhibited more severe physical symptoms and depression, regardless of the cancer type ($p < 0.05$)

Conclusion This real-world study has found that the efficacy of antidepressant treatment in cancer patients with anxiety and depression is similar to that in non-cancer patients. However, due to the limitations of the study design and the significant loss to follow-up patient population, more clinical data, and further evidence-based clinical studies are warranted

关键词: cancer, anxiety, depression, antidepressants, efficacy.

精神分裂症与强迫症和双相情感障碍共有的和特异性脑网络改变

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目的 强迫症、精神分裂症和双相情感障碍的临床表现和影像学特征有相似之处。三种精神障碍均是以大规模脑网络异常为特征的脑疾病,其共有的和特异性的脑网络改变有待进一步研究。本研究采用多模态成像技术拟探讨精神分裂症、强迫症和双相情感障碍共有的和特异性的脑网络连接模式,以及特异性的脑网络连接模式是否可以作为潜在的生物标记物识别精神障碍。

方法 纳入精神分裂症患者 28 名,强迫症患者 23 名,双相情感障碍患者 19 名以及健康对照 24 名。采集被试的静息态功能磁共振成像数据, T1 加权成像和临床症状数据。采用图论分析方法分析精神障碍患者在静息状态下个体水平结构协方差脑网络和功能脑网络连接模式;采用斯皮尔曼相关分析方法

探讨异常脑网络指标与临床症状的相关性；采用支持向量机探讨异常的网络指标能否用于识别精神障碍。

结果 在静息态功能网络中，与健康对照组相比，识别到精神分裂症，强迫症和双相情感障碍共有的和特异性的脑网络连接模式，并与临床量表具有相关性；在个体水平结构协方差网络中，与健康对照组相比，识别到精神分裂症，强迫症和双相情感障碍共有的和特异性的脑网络连接模式，并与临床症状具有相关性；以特异性静息态功能脑网络改变为特征，识别精神分裂症的准确率为 90.84%，敏感度为 91.01%，特异性为 95.33%，识别强迫症的准确率为 88.17%，敏感度为 97.83%，特异性为 89.38%，识别双相情感障碍的准确率为 87.54%，敏感度为 97.37%，特异性为 86.34%。以特异性个体水平结构协方差网络改变为特征，识别精神分裂症的准确率为 78.41%，敏感度为 82.14%，特异性为 84.32%，识别强迫症的准确率为 85.78%，敏感度为 91.30%，特异性 100%，识别双相情感障碍的准确率为 89.11%，敏感度为 97.37%，特异性为 87.11%。结合个体水平个体水平结构协方差网络和静息态功能脑网络特征，识别精神分裂症的准确率为 92.89%，敏感度为 92.86%，特异性为 100.00%，识别强迫症的准确率为 92.51%，敏感度为 91.07%，特异性 94.25%，识别双相情感障碍的准确率为 92.17%，敏感度为 92.11%，特异性为 98.21%。

结论 精神分裂症与强迫症和双相情感障碍存在共有的和特异性的脑网络连接模式，并可以作为潜在的生物标志物进行识别和分类。

关键词：精神分裂症；强迫症；双相情感障碍；结构协方差网络

Prevalence and Characteristics of Somatic Symptom Disorder in Adult Patients with Chronic Cough

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Background This study aimed at exploring the

frequency of somatic symptom disorder (SSD) in patients with chronic cough and comparing patients with chronic cough with or without SSD, including socio-demographic, clinical, and psychological characteristics

Methods This cross-sectional study analyzed general clinical data in patients with chronic cough, with versus without SSD. A total of 463 patients were enrolled. The structured clinical interview from the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders was used for SSD diagnosis. Clinical features, cough-related assessment, and psychological assessment were used to compare patients with and without SSD

Results SSD was diagnosed in 13.8% (64/463) of all enrolled patients. Patients with refractory chronic cough experienced more severe SSD (27.7% moderate and severe vs. 7.8% in non-refractory cough patients). Patients with chronic cough rather than without SSD reported higher levels of capsaicin cough sensitivity (C2: $Z = -0.955$, $P = 0.339$; C5: $Z = -1.518$, $P = 0.129$), anxiety ($Z = -8.359$, $P < 0.001$), and depression ($Z = -9.241$, $P < 0.001$), and lower levels of cough symptom score, and Leicester cough questionnaire (LCQ) score ($Z = -8.827$, $P < 0.001$). Binary logistic stepwise regression indicated that GAD-7, LCQ, doctor visits, and sex were predictor variables of SSD diagnosis. The explained variance was Nagelkerke $R^2 = 0.645$

Conclusion SSD is not rare in patients with chronic cough, particularly those with refractory cough. Timely diagnosis is necessary for this group of patients, and treatment from the perspective of psychosomatic medicine is meaningful

关键词：Chronic cough, Clinical characteristics, Somatic symptom, Anxiety and depression, psychological

Comparison of Cognitive Performance in First-episode Drug-naïve Schizophrenia, Bipolar II Disorder, and Major Depressive Disorder Patients after Treatment

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Background Cognitive impairment is a recognized fundamental deficit in individuals diagnosed with schizophrenia (SZ), bipolar II disorder (BD II), and major depressive disorder (MDD), among other psychiatric disorders. However, limited research has compared cognitive function among first-episode drug-naïve individuals with SZ, BD II, or MDD

Methods This study aimed to address this gap by assessing the cognitive performance of 235 participants (40 healthy controls, 58 SZ patients, 72 BD II patients, and 65 MDD patients) using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) before and after 12 weeks of treatment in SZ, BD II, and MDD patients. To clarify, the healthy controls only underwent RBANS testing at baseline, whereas the patient groups were assessed before and after treatment. The severity of symptoms in SZ patients was measured using the Positive and Negative Syndrome Scale (PANSS), and depression in BD II and MDD patients was assessed using the Hamilton Depression Scale-24 items (HAMD-24 items)

Results Two hundred participants completed the 12-week treatment period, with 35 participants dropping out due to various reasons. This group included 49 SZ patients, 58 BD II patients, and 53 MDD patients. Among SZ patients, significant improvements in immediate and delayed memory were observed after 12 weeks of treatment compared to their initial scores. Similarly, BD II patients showed significant improvement in immediate and delayed memory following treatment. However, there were no significant differences in RBANS scores for MDD patients after 12 weeks of treatment

Conclusions In conclusion, the findings of this study suggest that individuals with BD II and SZ may share similar deficits in cognitive domains. It is important to note that standardized clinical treatment may have varying degrees of effectiveness in improving cognitive function in patients with BD II and SZ, which could potentially alleviate cognitive dysfunction.

关键词: Schizophrenia, Bipolar II disorder, Major depressive disorder, Cognitive dysfunction

Exploring The Risk of Suicidal and Self-injurious Behaviors (SSIBs) after Biologics for Psoriasis Or Psoriatic Arthritis: A 10-year Real-world Pharmacovigilance Analysis Using FAERS Database

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Background Biologics have been widely used in psoriasis or psoriatic arthritis (PsA). However, their adverse events (AEs) also need to be valued seriously

Objective We attempted to investigate the potential occurrence of suicidal and self-injurious behaviors (SSIBs) in the treatment of psoriasis or PsA with biologics in the real world

Methods A disproportionality analysis was conducted by utilizing real-world pharmacovigilance data from the U.S. Food and Drug Administration Adverse Event Reporting System (FAERS), engaging psoriasis or PsA patients reporting SSIBs

Results 796 cases were included from January 1, 2013, to December 31, 2022. The specific RORs for infliximab, adalimumab, and brodalumab were 1.890, 1.296, and 13.237 respectively. While the RORs of other antibodies (including IL-12/23 p40 inhibitor ustekinumab; IL-17A inhibitor secukinumab, ixekizumab; IL-23 p19 inhibitor guselkumab) did not show a statistical significance

Limitations: The FAERS database is a reactive reporting system and may not fully reflect the true incidence and risk. Future studies with more patients are warranted to validate and expand our findings.

Conclusion In treating psoriasis or PsA, TNF- α inhibitors infliximab, adalimumab, and brodalumab targeting IL-17RA (receptor subunit) were associated with the risk of SSIBs. While other biologics showed a relatively positive profile

关键词: Keywords: Biologics; Self-injury; Suicide; Psoriasis; Psoriasis arthritis; FAERS

ACE 基因甲基化水平在重度抑郁症合并高血压患者中的意义

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目的 重度抑郁症患者(MDD)常常共病高血压(HYT), 而血管紧张素转换酶(ACE)是影响高血压发生发展的至关重要的酶之一,其DNA基因甲基化的水平在高血压发生发展过程中发挥了非常重要的功能。本研究针对重度抑郁症共病高血压患者(MDD+HYT)的ACE基因甲基化水平及其意义进行了探索。

方法 共纳入119名MDD+HYT患者作为研究组(其中男性41名,女性78名,平均年龄为:56.8±9.1岁。纳入89名健康对照组(其中男性29名,女性60名,平均年龄为57.4±9.7岁。采用汉密尔顿抑郁量表(HDRS-17)和抑郁自评量表(SDS)评估患者的抑郁程度。采用亚硫酸氢盐测序聚合酶链反应的方法,测定重度抑郁症共病高血压患者血清ACE基因甲基化水平,并进行统计学分析,探索ACE基因甲基化是否对重度抑郁症共病高血压患者的诊断具有特异性,并进一步探讨了ACE基因甲基化是否为其共病的独立危险因素。

结果 重度抑郁症共病高血压患者血清ACE甲基化水平显著升高,血清ACE基因甲基化水平准确诊断重度抑郁症共病高血压的曲线下面积为0.8471,临界值为26.9(敏感性83.19%,特异性73.03%)。ACE甲基化是重度抑郁症共病高血压的独立危险因素($P=0.014$; 比值比为1.071; 95%置信区间为1.014-1.131)。

结论 重度抑郁症共病高血压患者血清ACE基因甲基化水平升高($P<0.001$)。其对重度抑郁症共病高血压具有明确的诊断价值,且ACE基因甲基化水平与重度抑郁症共病高血压独立相关($P<0.05$)。

关键词: 重度抑郁症; 高血压; 血管紧张素转换酶; 基因甲基化

Psychometric Properties of International Trauma Questionnaire (ITQ) and Symptom Structure of Complex Posttraumatic Stress Disorder Among Chinese Patients with MDD

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Objective To assess the validity and internal reliability of the International Trauma Questionnaire (ITQ) among patients diagnosed with major depressive disorder (MDD), and to explore the network structure of Complex post-traumatic stress disorder (CPTSD) among MDD patients in China

Methods Eligible individuals were recruited from a large tertiary hospital in Guangdong Province. Trained researchers conducted in-person interviews and administered self-report questionnaires, including demographics, medical information, and psychological assessments. Confirmatory factor analyses (CFA) and network analysis were performed, with calculations of Average Variance Extracted (AVE), Cronbach's α , and composite reliability

Results A total of 113 patients with MDD participated in this study. The correlated six-factor one-order model was good representation of latent structure of ITQ ($\chi^2=60.114$, $df=39$, $P=0.017$, $SRMR=0.070$, $RMSEA=0.050$, $TLI=0.952$, $CFI=0.972$, $BIC=175.508$). All ITQ subscales possessed acceptable convergent validity and internal reliability. The square root of AVE for affective dysregulation was lower than its correlations with other clusters. Network analysis revealed that node C4 ("I feel worthless"), as a core symptom, was significantly associated with the development of CPTSD. Furthermore, a higher rate of repeated hospitalizations and more severe clinical symptoms were significantly associated with MDD comorbid with CPTSD

Conclusion The clinical applicability of the ITQ was demonstrated by overall validity and reliability

among patients with MDD. The affective dysregulation cluster, however, still needs to be revised and enhanced. Timely screening, recognition, and diagnosis are critical due to the worse clinical outcomes seen in comorbid patients.

关键词: Complex post-traumatic stress disorder, depression; validity, reliability, network analysis

Sex Differences in The MCCB Cognitive Performance of Unmedicated Patients with Major Depressive Disorder

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Objective Cognitive impairment is acknowledged as a core feature of clinical manifestations of major depressive disorders (MDD). And sexual dimorphisms are thought to be the basis of sex differences in human cognition. However, the sex differences that occur in Measurement and Treatment Research to Improve Cognition Schizophrenia Consensus Cognitive Battery (MCCB) cognitive of MDD patients remains unclear

Methods One hundred and twenty-seven MDD (58 males and 69 females), and 124 demographically matched healthy controls (HCs) (49 males and 75 females) underwent MCCB cognitive assessment. We compared the sex difference of MCCB cognitive, and also performed association analysis to investigate the relationship between cognitive performance and clinical variables

Results Compared to HCs, the MDD group had remarkably lower scores in seven MCCB cognitive domains ($p < 0.05$). And the male patients performed higher scores in the cognitive domains of speed of processing ($p = 0.002$), attention/vigilance ($p = 0.005$), visual learning ($p < 0.001$), and MCCB composite score ($p = 0.001$) than male patients. And male HCs performed better in the MCCB composite score than female ($p =$

0.035). Additionally, the verbal learning showed an uncorrected negative correlation with the 24-items HAMD scale in female patients ($r = -0.303, p = 0.021$)

Conclusion Female MDD patients had more serious MCCB cognitive impairment than males in processing speed, attention/vigilance, and visual learning. Cognitive impairment was associated with depression severity only in female patients. Therefore, it is important to establish effective sex-specific interventions for cognitive impairment in MDD

关键词: Major depressive disorder; MCCB cognitive function; sex difference

综合医院患者心理状况筛查及住院患者分级干预模式研究

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目的 调查综合医院就诊患者心理健康状况, 初步探索在住院患者中开展心理健康筛查及干预的路径。

方法 收集 2022 年 1 月-2023 年 6 月期间自愿采用北京朝阳医院官方 app“朝阳健康云”情绪筛查模块(包含一般健康问卷、病人健康问卷 PHQ-9、广泛性焦虑障碍量表 GAD-7、阿森斯失眠问卷 AIS)的患者 8471 人, 根据纳入与排除标准对住院患者 46 人开展心理健康筛查及干预。

结果 综合医院就诊患者中, PHQ-9 筛查阳性率为 83%, GAD-7 筛查阳性率为 82.44%, AIS 筛查阳性率为 88.2%, PHQ-9 和 GAD-7 同时筛查阳性率为 37.9%。焦虑阳性人群就诊最多科室为内分泌科(162 人)、妇科(154 人)、消化内科(96 人)。抑郁阳性就诊最多的科室是妇科(166 人)、内分泌科(124 人)、消化内科(78 人)睡眠阳性就诊最多的科室是内分泌科(108 人)、妇科(102 人)、消化内科(74 人)。总体心理健康水平阳性就诊最多的科室是妇科(149 人)、内分泌科(117 人)、消化内科(96 人)。一般健康状况筛查中, 不同职业($p = 0.018$)存在差异, 学生及护士得分高于其他人群, 年龄与一般健康状况得分存在负相关($r = -0.212$)。抑郁筛查结果, 不同文化程度($p < 0.05$)、婚姻($p < 0.05$)人群

存在差异,小学文化、未婚和离异人群得分显著高于其他人群,年龄与 PHQ-9 得分存在负相关 ($r=-0.186$)。焦虑状态筛查中,不同性别 ($p=0.001$)、婚姻状况 ($p=0.001$) 的人群存在显著差异,男性和未婚人群的得分显著高于其他人群,年龄与 GAD-7 得分存在负相关 ($r=-0.126$)。睡眠状态筛查结果中,不同文化程度 ($p=0.014$) 的人群得分存在显著差异,其中初中学历人群显著高于其他人群。对 46 名综合医院住院患者开展的心理健康状态筛查显示,筛查阳性比率为 39.13%。筛查阳性患者共出现 12 种症状表现,头晕占比最大 (27.78%),其次乏力、心悸均占比 11.11%。共 9 名患者诊断为精神心理疾病,其中焦虑状态占比最大 (33.33%),其次失眠、睡眠障碍、躯体化障碍均占比 16.67%,抑郁状态、焦虑合并抑郁状态占比 8.33%。对其中 8 名患者开展了药物治疗,2 名患者进行了心理健康教育,1 名患者采用了放松训练,干预后,患者在失眠状况 ($p=0.023$)、焦虑状况 ($p=0.001$) 方面得到明显改善。

结论 综合医院患者躯体疾病合并精神心理问题需重点关注内分泌科、妇科、消化内科。青年人群、男性、单身或离异人群应为重点关注对象。住院患者的心理健康筛查及干预对于患者躯体疾病的预后起到促进作用

关键词:综合医院;心理健康;筛查;干预;住院患者

光照疗法在非季节性抑郁症患者中的应用及研究

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目的 光照疗法已被广泛应用于治疗季节性情感障碍 (SAD),但其在非季节性抑郁症患者中的效果尚未得到充分研究。本研究旨在评估光照疗法对非季节性抑郁症患者的疗效及研究。

方法 纳入确诊为非季节性抑郁症的患者 93 例,随机分为光照治疗组 (47 人) 与对照组 (46 人)。两组均给与常规治疗,如抗抑郁药物治疗和一般心理护理。光照治疗组在常规治疗的基础上,每日早晨接受 20 分钟的全光谱白光治疗,即波长:480nm,强度:10000LUX,持续 2 周。对照组再常规治疗的

基础上接受相同时间段的安慰剂光照治疗,即 20 分钟的 LED 光照治疗,波长:400nm,强度:538LUX,在基线期、治疗 1 周后、2 周后采用抑郁症筛查量表 (PHQ-9)、广泛性焦虑量表 (GAD-7)、心身症状量表 (PSSS) 和匹兹堡睡眠量表 (PSQI) 评估患者的焦虑、抑郁症状和睡眠质量等。

结果 干预 1 周后,两组患者的 PHQ-9 和 GAD-7 评分减分率比较发现,光照治疗组较对照组有显著降低 ($p<0.01$),但在干预 2 周后,两组减分率无显著差异 ($P>0.05$)。具体而言,PHQ-9 量表中的条目 1 (兴趣)、条目 5 (食欲) 和条目 7 (注意力) 在干预 1 周后显示出显著差异 ($p<0.05$)。对于 PSSS 评分的减分率比较,干预 1 周后,光照治疗组的 PSSS 总分和心理因子分数显著低于对照组 ($p<0.05$)。干预 2 周后,光照治疗组在 PSSS 总分、心理因子分和躯体因子分上均显著低于对照组 ($p<0.05$)。在 PSQI 评分的减分率比较中,干预 1 周后,两组在总分及睡眠时间、睡眠障碍、催眠药物使用和日间功能障碍四个维度上存在显著差异 ($p<0.05$)。然而,在干预 2 周后,这些差异不再显著 ($P>0.05$)。

结论 本研究结果表明,在常规治疗基础上,光照疗法对非季节性抑郁症患者的症状改善有显著的辅助作用。光照疗法在 1 周后显著改善了患者的心理健康和心身症状。然而,在干预 2 周后,光照疗法组与对照组在抑郁和焦虑症状方面的差异不再显著,表明光照疗法的短期效果较为明显,但其长期效益可能需要进一步研究。尽管如此,光照疗法在改善患者睡眠质量和日间功能方面显示出短期显著优势,特别是在睡眠时间、睡眠障碍和日间功能障碍等维度上。综合来看,光照疗法可以作为非季节性抑郁症患者的有效辅助治疗手段,特别适用于需要迅速缓解抑郁和焦虑症状的患者。未来的研究应进一步探索光照疗法的长期疗效及其在不同患者群体中的应用,以提供更加全面的治疗指导。

关键词:光照疗法,非季节性抑郁症,抑郁症状,焦虑症状,身心健康,睡眠质量

体重增加的精神分裂症患者认知功能损害的特征及与静息态功能连接的相关性

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目的 精神分裂症患者的认知功能损害与大脑结构、功能等方面的异常有关。精神分裂症患者在抗精神病药物治疗后常出现代谢障碍，如体重增加、血脂异常、糖耐量受损、代谢综合征等，其中体重增加较为常见。研究证据表明代谢障碍可能会导致精神分裂症患者的认知功能损害进一步加重，因此本研究旨在探讨体重增加的精神分裂症患者认知功能损害的特征及与静息态功能连接的相关性。

方法 本研究纳入 71 例体重增加的精神分裂症患者，41 例体重未明显增加的精神分裂症患者以及 50 例健康对照。使用 MATRICS 共识认知成套测验 (MCCB) 评估所有被试的认知功能，并采集静息态功能磁共振 (fMRI) 数据。基于脑网络组图谱，以背外侧前额叶皮质 (DLPFC) 左右共 6 个亚区为种子点构建种子点-全脑功能连接 (FC)，比较三组间认知功能、FC 的差异，分析精神分裂症患者 FC 与认知功能的相关性。

结果 协方差分析显示，在控制性别、年龄、受教育水平后，三组间信息处理速度、注意警觉、词语学习、视觉学习、推理/问题解决、社会认知、MCCB 综合分均存在显著统计学差异 ($P < 0.001$)。事后检验显示体重增加组的信息处理速度、注意警觉、词语学习、推理/问题解决、社会认知、MCCB 综合分显著低于体重未增组。静息态 fMRI 事后分析显示，体重增加组 DLPFC 左 A46-前扣带回、右 A46-左侧眶部额下回、右 A46-直回、右 A46-右侧海马、右 A46-前扣带回、右 A46-左侧楔前叶、右 A9/46v-内侧额上回/前扣带回的 FC 显著低于体重未增组。多重比较校正后，左 A46-前扣带回的 FC 与推理/问题解决 ($r=0.321$, $P=0.003$) 呈正相关，右 A46-左侧眶部额下回的 FC 与注意警觉 ($r=0.291$, $P=0.007$)、MCCB 综合分 ($r=0.305$, $P=0.005$) 呈正相关，右 A46-直回的 FC 与推理/问题解决 ($r=0.292$, $P=0.007$) 呈正相关，右 A46-前扣带回的 FC 与注意警觉 ($r=0.299$, $P=0.005$)、推理/问题解决 ($r=0.357$, $P < 0.001$)、MCCB 综合分 ($r=0.339$, $P=0.002$) 呈正相关。

结论 与体重未明显增加的精神分裂症患者相比，伴体重增加的精神分裂症患者认知功能损害更为严重。体重增加的患者存在以 DLPFC 亚区为种子

点至突显网络、奖励系统、默认模式网络有关脑区的功能耦合下降。DLPFC 亚区-前扣带回/左侧眶部额下回/直回 FC 的降低与认知功能损害加重有关，提示这些脑区间 FC 的异常可能是体重增加的精神分裂症患者认知功能受损更为严重的潜在病理生理机制。

关键词：精神分裂症,代谢障碍,体重增加,认知功能,功能磁共振,功能连接

A Nomogram To Predict Suicide Attempts in Chinese Adolescents with Both Non-suicidal Self-injury and Suicidal Ideation

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Objective The study aims to develop a nomogram that predicts suicide attempts (SA) among Chinese adolescents with non-suicidal self-injury (NSSI) and suicidal ideation (SI). Given the high prevalence of NSSI and SI in this population and their strong association with SA, this study intends to assist clinicians in early detection and intervention

Methods This cross-sectional study involved 134 adolescents from two hospitals in Guangdong, China. Data were collected using the Chinese Version of the Self-Injurious Thoughts and Behaviors Interview-Revised (C-SITBI-R) and related assessment tools. Predictive variables for SA were identified using LASSO regression and further analyzed with multivariate logistic regression to construct a nomogram. The model's discriminative ability was assessed using the area under the curve (AUC), and internal verification was performed with the bootstrap method (1000 resamplings). Model calibration was evaluated using the Hosmer-Lemeshow test, and clinical practicability was assessed through decision curve analysis (DCA)

Results The study identified four major predictors for SA: interrupted suicide attempts, future likelihood of suicide plans, the score of the Emotional Regulation subscale, and years of education. The developed

nomogram, constructed using multivariate logistic regression, showed good predictive accuracy with an area under the curve (AUC) of 0.782. Internal verification using the bootstrap method with 1000 resamplings yielded a similar AUC of 0.780, indicating robust model performance. The Hosmer-Lemeshow test demonstrated good calibration with a non-significant p-value of 0.998, suggesting no statistical deviation between predicted and observed values. Decision curve analysis (DCA) indicated that the nomogram provided higher clinical net benefits when the threshold probability for predicting SA was between 10-94%, making it a valuable tool for clinical use in predicting suicide risk

Conclusion The current study has developed a predictive model for suicide attempts among adolescents with both NSSI and suicidal ideation. The nomogram developed in this study may assist clinicians in recognizing and intervening early in individuals at risk for suicidality.

关键词: NSSI, suicidal ideation, nomogram, suicide attempt, Chinese adolescents

Positive Pyramidal Sign As An Unexpected Presentation in Antipsychotic-Induced Acute Dystonia: Two Case Reports and Literature Review

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Objective Acute drug-induced dystonia (DID) is a movement disorder triggered by specific medications, primarily antipsychotics. It typically presents within hours to days of medication adjustment. This report highlights the unexpected presentation of positive pyramidal signs in acute DID and reviews previously published cases of acute DID caused by commonly used psychiatric drugs, focusing on auxiliary examinations for differential diagnosis and neurological physical examinations

Methods We detailed two cases of acute DID

following antipsychotic use in a 19-year-old male and a 23-year-old female, thoroughly documenting their diagnostic and treatment processes, clinical presentations, and test results. Subsequently, a literature review was conducted. The MEDLINE database was searched for all published articles on acute drug-induced dystonia using the terms ((acute dystonic reaction) OR (acute dystonic response) OR (acute drug-induced dystonia) OR (drug-induced dystonia)), restricted to "case reports." The search was conducted on February 11, 2024. The included literature was examined from two perspectives: (1) auxiliary examinations for differential diagnosis, including cerebrospinal fluid examination, cranial imaging (CT or MRI), and electroencephalogram, and (2) examination of neurological or pathological signs

Results Both cases exhibited acute dystonia induced by antipsychotic medications and presented with unusual positive pathological reflexes, leading to initial misdiagnosis and additional examinations. Through detailed medication history and subsequent management adjustments, correct diagnoses were established. Symptoms improved with treatment using scopolamine and trihexyphenidyl, and no recurrence of dystonia was observed during follow-up after discharge. In the literature review, 74 articles encompassing 102 cases were analyzed. Among the 21 cases (20.5%) that explicitly mentioned neurological or pathological reflex examination, all pyramidal signs were negative. The remaining 81 cases lacked a clear description of neurological studies. Of the 25 patients (24.5%) who underwent auxiliary examinations to exclude organic encephalopathy, 5 had both brain CT or MRI and EEG

Conclusion These cases emphasize the importance of considering acute DID when patients on antipsychotic medication regimens present with acute movement disorders and positive pathological signs. Empirical treatment with medications such as benzhexol and scopolamine may be necessary, and relevant auxiliary examinations can help avoid missing diagnoses of organic diseases. They also provide clues for future exploration of the mechanism underlying those unusual positive pathological signs.

关键词: pyramidal sign, acute drug-induced dys-

tonia, antipsychotic, extrapyramidal syndrome, case report

The Relationship between Sexual Dysfunction, Sexual Intercourse Experience, Gender and Internet Addiction Among Chinese Medical Students

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Objective Internet addiction, which is a growingly prevalent behavioral addiction that causes numerous psychosocial problems, may be associated with sexual dysfunction, sexual intercourse experience and gender among Chinese medical students. This study investigated the associations between sexual dysfunction, sexual intercourse experience, gender and Internet addiction among Chinese medical students

Methods This cross-sectional study using data from a medical university in China, which included college students aged 17 to 26 years with a mean age of 19.05 (SD=1.1) years, of whom 37.2% were male. Sexual intercourse experience, sexual dysfunction and Internet addiction were measured. Mixed-effect linear regression models were performed

Results Among the participants, 62.0% reported a history of sexual intercourse experience and 78.8% reported sexual dysfunction. After adjusting for covariates, participants with sexual dysfunction was significantly and positively associated with Internet addiction ($B = 4.30$, 95% CI = 0.83–7.77). Stratified analyses revealed a significant association between sexual dysfunction and Internet addiction only among students who had sexual intercourse experience ($B = 4.86$, 95% CI = 1.15–8.58). Furthermore, the analyses indicated a positive association between female and Internet addiction

among students without sexual intercourse experience ($B = 5.05$, 95% CI = 0.62–9.48)

Conclusion Sexual dysfunction is positively associated with the Internet addiction among Chinese medical students, particularly among those who have had sexual intercourse experience. The findings underscore the significance of implementing interventions for sexual dysfunction as a means of mitigating Internet addiction and fostering positive learning and lifestyle behaviors among medical students.

关键词: sexual dysfunction, sexual intercourse experience, gender, Internet addiction, Chinese medical students

运动-心理-睡眠干预对前列腺癌患者癌因性疲乏及心理弹性的影响

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目的 探讨运动-心理-睡眠干预对前列腺癌患者癌因性疲乏及心理弹性的影响。

方法 选取2021年8月至2022年8月前列腺癌患者92例,应用随机数字表将患者分为观察组及对照组,每组各46例,两组患者均行手术+术后化疗治疗,对照组予治疗前向患者讲解前列腺发病机制、手术+术后化疗治疗效果、术后常见并发症、饮食指导、心理指导常规护理。观察组在对照组基础上实施运动-心理-睡眠护理干预,即由康复人员、心理人员、责任护士综合评价患者身体状况,根据评价结果为患者制定适宜的运动计划;每日进行患者睡眠评价,询问睡眠质量、睡眠时间,为患者营造舒适的休养环境;结合“癌因性疲乏临床实践指南”,培训责任护理人员每周对患者展开群体支持、个体咨询、应激反应等训练,护理人员分析患者情绪诱因和表现,鼓励主诉并表示理解,尽可能满足患者需求,主动与患者沟通,在沟通时要以一些正能量、积极的语言为主,耐心解答问题,加强心理护理。比较两组干预前后癌性疲乏、心理弹性及生活质量的改变。

结果 干预后观察组癌性疲乏总评分及各维度评分(包括行为、躯体、情感及认知)较对照组明显

下降 ($P<0.05$), 而干预后观察组心理弹性总评分及欧洲癌症患者生命质量评定量表 (EORTC QLQ-C30) 评分较对照组明显提高 ($P<0.05$)。

结论 运动-心理-睡眠护理干预可减轻生理、心理负担, 促进患者身心健康, 能有效提高前列腺癌患者心理弹性, 运动-心理-睡眠护理干预有助于患者以积极健康的心态应对疾病, 增强患者康复信心, 减轻患者癌因性疲乏, 从而改善患者生活质量。

关键词: 运动-心理-睡眠, 前列腺癌, 癌因性疲乏, 心理弹性

肠道菌群对 MK-801 诱导的精神分裂症样行为的调控作用研究

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目的 首先利用混合抗生素处理清除小鼠肠道菌群, 然后通过 MK-801 建立精神分裂症样行为模型。(1) 研究肠道菌群清除对 MK-801 诱导的小鼠精神分裂症样行为的影响;(2) 利用 16S rRNA 基因测序研究肠道菌群变化及代谢组学检测鉴定海马内代谢谱变化, 确定肠道菌群和代谢物特征与精神分裂症样行为的相关性, 以初步探讨精神分裂症的潜在发病机制。

方法 通过灌胃及饮水给与小鼠混合抗生素 10 天, 然后用 MK-801 建立急性精神分裂症动物模型。观察肠道菌群清除对 MK-801 诱导的小鼠精神分裂症样行为的影响; 收集并提取粪便 DNA, 通过 16S rRNA 扩增子测序, 观察肠道菌群变化; 对小鼠海马组织进行非靶向代谢组检测, 观察组织代谢物变化; 将精神分裂症样行为相关参数与差异菌和差异代谢物进行相关性分析, 初步探究精神分裂症的发病机制。

结果 (1) 肠道菌群清除使 MK-801 诱导的精神分裂症样小鼠的精神兴奋性增加, 而小鼠对周围环境的探索性降低, 并加重了 MK-801 诱导的精神分裂症模型小鼠的认知及记忆损害。(2) 抗生素处理导致小鼠菌群多样性下降, uncultured_bacterium_c_Gammaproteobacteria 成为主要优势菌。代谢组检测发现 MK-801 处理后小鼠海马组织中胆碱, N-甲基-L-谷氨酸, 4-(2-羟基乙

氧基羰基) 苯甲酸酯, 尿酸, 苯乙酰甘氨酸, DL-谷氨酸盐, 海藻糖均显著降低; 抗生素处理后胆碱含量降低, 其他几种代谢物均升高; 抗生素及 MK-801 共同处理使代谢物含量减少。(3) 通过行为学与肠道菌群的相关性研究发现抗生素与 MK-801 共同处理组显著富集的菌群与小鼠记忆能力呈负相关, MK-801 处理组富集菌群大多数与小鼠探索行为呈正相关; 通过行为学与代谢物的相关研究发现胆碱等与认知功能呈显著正相关, N-甲基-L-谷氨酸、海藻糖等与小鼠探索行为呈显著正相关。通过肠道菌群与代谢物分析发现相关性主要分为两簇。

结论 (1) 肠道菌群清除导致 MK-801 诱导的精神分裂症模型小鼠精神兴奋性增加, 记忆功能减弱。小鼠海马组织代谢物发生改变。(2) 肠道菌群、海马代谢物与精神分裂症样行为学指标之间具有相关性。肠道菌群可能通过影响海马代谢物变化而调控精神分裂症样行为变化。(3) 肠道菌群可能是缓冲 MK-801 诱导的精神分裂症样认知损害的原因。

关键词: 精神分裂症; 肠道菌群; MK-801; 代谢物

抑郁症患者自杀观念与血清炎症因子和代谢指标的相关性

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目的 目前关于抑郁症自杀意念和行为的神经生物学原因知之甚少, 有证据表明免疫炎症和代谢紊乱均与自杀易感性有关。本研究通过对抑郁症患者血清炎症因子和代谢指标进行检测, 探讨抑郁症患者的自杀意念与免疫紊乱和代谢的关联。

方法 纳入 2020 年 5 月至 2022 年 8 月在我院精神科住院的首发抑郁症患者 119 例, 根据汉密尔顿抑郁量表条目 3“自杀”(H3) 的评分进行分组, $H3 \geq 1$ 分为有自杀观念组 (74 例), $H3 < 1$ 分为无自杀观念组 (45 例)。比较两组血清中代谢指标和炎症因子的差异。分析抑郁症患者自杀观念与血清中代谢指标和炎症因子的相关性。

结果 1. 一般资料比较

两组的性别、年龄、吸烟状况、饮酒情况、BMI 和平均病程无统计学差异。有自杀观念组的 HAMD

总分 ($P < 0.001$) 和 CGI ($P = 0.014$) 评分高于无自杀观念组, 差异有统计学意义。

2. 细胞因子和代谢指标比较

有自杀观念组血清中 IL-2 ($P < 0.001$)、IL-4 ($P = 0.019$)、IL-10 ($P = 0.033$)、IL-17 ($P < 0.001$) 水平高于无自杀观念组, 差异有统计学意义。代谢指标结果发现无自杀观念组的肌酐水平高于有自杀观念组 ($P = 0.014$), 差异有统计学意义。

3. 血清炎症因子和代谢指标与自杀观念的相关性

将上述组间有差异的炎症因子和代谢指标与 HAMD 总分和 H3 评分进行相关性分析, 发现 HAMD-17 中条目 H3 的评分与 IL-2 ($r = 0.29, P < 0.01$)、IL-4 ($r = 0.20, P = 0.03$) 和 IL-17 ($r = 0.21, P = 0.02$) 水平呈正相关, 与肌酐水平呈负相关 ($r = -0.22, P = 0.02$)。

结论 伴有自杀观念的抑郁症患者肌酐代谢和血清炎症因子与无自杀观念者存在差异, 且与自杀风险存在一定关联。

关键词: 抑郁症, 炎症因子, 自杀观念, 代谢指标

CD4/CD8 水平在伴或不伴童年期创伤的抑郁症患者中的差异研究

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目的 儿童期虐待是成年期抑郁障碍的重要风险因素。本研究旨在探讨外周血淋巴细胞 CD8、CD4 在伴或不伴童年期创伤的抑郁障碍患者中的表达差异, 及其与抑郁患者症状严重程度的相关性。

方法 研究收集了 2021 年 8 月至 2023 年 8 月在河北医科大学第一医院精神卫生中心住院的 18-65 岁患者, 疾病诊断符合 ICD-10 中、重度抑郁发作患者 118 例, 其中 43 名患者存在中重度童年期创伤 (儿童期创伤问卷量表中满足任一项即为中重度的童年创伤者)。基线收集患者一般人口学资料, 使用儿童期创伤问卷 (Childhood Trauma Questionnaire, CTQ) 评估受试者儿童期创伤、17 项汉密尔顿抑郁量表 (Hamilton Depression Rating Scale, HAMD-17) 评估抑郁情绪严重程度、汉密尔顿焦虑量表 (Hamilton Anxiety Rating Scale, HAMA) 评估焦虑

情绪严重程度、匹兹堡睡眠质量指数量表 (Pittsburgh sleep quality index, PSQI) 评估主观睡眠质量、社会支持评定量表评估身心健康程度、手机成瘾指数量表评估手机成瘾性。采用 ELISA 方法检测 CD4 和 CD8 表达水平, 并分析外周血淋巴细胞阳性结果与量表评分的相关性。并用 SPSS 27 软件对数据进行分析研究, 使用秩和检验分析非正态分布数据, 使用 T 检验分析正态分布数据。使用皮尔森相关系数与线性回归进行相关性分析。

结果 与不伴童年期创伤组比较, 伴童年期创伤组的 CD8 水平显著升高 ($Z = -2.883, P = 0.04$)、CD4/CD8 比值显著降低 ($Z = -2.575, P = 0.010$) 差异具有统计学意义。与不伴童年期创伤组比较, 伴童年期创伤组的 HAMD ($t = 4.524, P = 0.01$)、HAMA ($Z = -3.204, P = 0.001$)、PSQI ($Z = -2.149, P = 0.032$)、PCL ($t = 2.726, P = 0.044$)、手机依赖 ($Z = -2.440, P = 0.015$) 均较高, 结果具有统计学差异, 社会支持评分较低 ($Z = -2.684, P = 0.007$)。外周血淋巴细胞水平与各量表之间无相关性。

结论 伴有童年期创伤的抑郁症患者外周血 CD8 水平较高, CD4/CD8 比值较低, 且 HAMD、HAMA、PSQI、PCL、TESS、手机依赖量表评分较高, 社会支持评分较低。未来扩大样本量进一步分析外周血淋巴细胞水平与各量表之间的相关性。

关键词: 抑郁症; 童年期创伤; 外周血淋巴细胞水平; 生物学标记物;

Ketamine Regulates Lipid Metabolism To Alleviate Stereotyped Behavior in A Mouse Model of Obsessive-compulsive Disorder.

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Objective To explore the potential pathogenesis of obsessive-compulsive disorder and find more effective treatment methods

Methods We utilized RU24969 to construct an OCD mouse model. To explore its potential pathogenesis, we conducted whole-genome transcriptome sequencing on the striatum of these mice. The sequencing

results indicated abnormal activation of lipid metabolism. Traditional OCD treatments primarily target monoamine neurotransmitters, but in recent years, the glutamate neurotransmitter imbalance hypothesis for OCD has gained attention. The glutamate receptor antagonist ketamine, known for its rapid antidepressant effects in depression treatment, has been studied. Research has shown a close relationship between abnormal glutamate receptor function and lipid metabolism disorders. Therefore, we attempted to treat the OCD mice with ketamine. The stereotypic behaviors of the mice were alleviated to a certain extent, and subsequent whole-genome transcriptome sequencing of the striatum confirmed that the abnormalities in the lipid metabolism pathway had partially recovered

Results Whole-genome sequencing and bioinformatics analysis indicated that the striatum of OCD model mice exhibited abnormal activation in lipid homeostasis, bile acid, and fatty acid metabolism. Administering two types of glutamate receptor antagonists alleviated the stereotypic behaviors of the OCD model mice at different time points. Notably, in the ketamine treatment group, lipid metabolism was inhibited compared to the model group

Conclusion These results suggest that the pathogenesis of OCD may be related to abnormal lipid metabolism and homeostasis in the brain. The glutamate receptor antagonist ketamine may alleviate stereotypic behaviors in OCD mice by regulating lipid metabolism. This indicates a possible relationship between lipid metabolism and mental disorders, which should be given attention and further investigation. The connection between glutamate metabolism and lipid metabolism suggests that glutamate receptor antagonists could be an effective direction for treatment research.

关键词: Obsessive-compulsive disorder, Pathogenesis, Lipid metabolism, Glutamate receptor antagonist, Ketamine, FENM

Associations between Post-traumatic Stress Symptoms and Internet Addiction Among Chinese University Students

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Objective In Post-pandemic, exploration on the association between post-traumatic stress symptoms (PTSS) and internet addiction among university students is limited. The current study aims to investigate the relationship between PTSS and internet addiction among university students

Methods A cross-sectional study was conducted in southern China from Jan 2023 to Mar 2024. The Fear of COVID-19 scale (FCV-19S), Patient Health Questionnaire 9 item (PHQ-9), Post-traumatic stress disorder Check List (PCL-17), and 20-item internet addiction test (IAT-20) were used. A mediation model analysis was conducted using PROCESS macro in SPSS

Results A total of 1617 participants were recruited (mean age = 19.00; SD = 1.0). The total effect of PTSS on internet addiction was significant ($\beta_{PTSS}=0.376$, 95%CI: 0.323-0.430, $P<0.001$). Both direct and indirect effects of PTSS on internet addiction were found. When the fear of COVID-19 and depression were modeled as mediators, the path coefficients of PTSS on internet addiction revealed that fear and depression had a significant parallel mediating effect ($\beta_{fear}=0.125$, 95%CI: 0.097-0.156; $\beta_{depression}=0.155$, 95%CI: 0.105-0.211). Thus, PTSS might not only directly affect internet addiction but could also exert a significant indirect effect on internet addiction by fear of COVID-19 and depressive symptoms, respectively

Conclusion These findings provide valuable insights into possible paths for interventions and programs for reducing internet addiction through emotion-related treatments.

关键词: PTSS; Internet addiction; Fear; Depression; Students

Effect of Pharmacogenomic Testing on The Clinical Treatment of Patients with Depressive Disorder: A Randomized Clinical Trial

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Objective Pharmacotherapy is one of the primary treatment modalities for depression. However, there is considerable variability in the individual response to antidepressant medications. Personalized medicine guided by pharmacogenomic testing may hold promise in addressing this issue

Methods In this study, 665 depressive patients were randomly enrolled into two groups: the pharmacogenomic testing group (n=333) and the control group (n=332). In the testing group, participants underwent pharmacogenomic testing, and clinicians customized the treatment plan with the result, while the control group relied solely on clinicians' experience. The primary outcomes were the proportion of remission and response, assessed with Hamilton Depression Rating Scale (HDRS). The secondary outcomes included changes in HDRS scores over time and frequency of adverse drug reactions by the participants

Results At week 8, the pharmacogenomic testing group showed significantly higher remission rates (24.0% v.s. 15.1%; RR=1.117; P=0.007) and response rates (39.3% v.s. 25.7%; RR=1.225; P<0.001) compared to the control group. By week 12, the pharmacogenomic testing group continued to demonstrate significant advantages in remission (31.0% v.s. 20.0%; RR=1.159; P=0.003) and response (48.7% v.s. 37.3%; RR=1.224; P=0.006). Additionally, adverse drug reactions were less frequent in the pharmacogenomic testing group

Conclusion Pharmacogenomic testing-guided drug therapy can provide greater assistance in the treatment of depression.

关键词: Pharmacogenomics, Precision medicine, Depression, Psychiatric, Pharmacotherapy

ANA-12 和 7,8-DHF 干预 UCMS 诱导的抑郁行为的机制研究

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目的 重性抑郁障碍 (major depressive disorder, MDD), 又称重症抑郁 (major depression, MD), 是最常见的精神障碍之一, 世界范围内患病率据在 17% 左右。MDD 的临床表现包括情绪低落, 自责自罪, 自杀意念和行为, 自杀是其最严重的后果, 给社会和家庭、个人造成巨大危害和负担。脑源性神经营养因子 (brain-derived neurotrophic factor, BDNF) 中介神经元存活、分化、突触可塑性以及神经发生。BDNF 功能不足乃至由此引起的神经发生 (neurogenesis) 障碍是 MDD 发病机制中很有前景的一种假说。TrkB 是 BDNF 下游受体, 前期研究发现 TrkB 的激动剂(7,8-DHF)和拮抗剂(ANA-12)均具有抗抑郁效力, 为了解释这一矛盾现象需要更深一步的研究。

方法 采用 C57BL/6 小鼠, 利用不可预期慢性温和应激 (unpredictable chronic mild stress, UCMS) 建立抑郁模型, ANA-12 和 7,8-DHF 干预 UCMS 模型小鼠, 文拉法辛 (Venlafaxine) 做阳性药物对照, 分为对照组, UCMS 组, UCMS+ANA-12 组, UCMS+78DHF 组和 UCMS+VEN 组来研究行为表型和相关神经通路。

结果 研究结果发现 ANA-12, 7,8-DHF 和文拉法辛均能够改善 UCMS 引起的抑郁样行为: 旷场实验(open field test, OFT)中, UCMS 组在中央区域的活动距离与对照组, UCMS+ANA-12 组, UCMS+78DHF 组和 UCMS+VEN 组相比均出现明显下降, 有统计学差异; 糖水偏好(Sucrose preference test, SPT), 强迫游泳(forced swimming test, FST)中的不动时间, 高架十字迷宫实验(elevated plus maze, EPM)中进入开臂的时间中, UCMS 组与对照组相比有统计学差异, UCMS+ANA-12 组, UCMS+78DHF 组和 UCMS+VEN 组与对照组相比, 没有统计学差异; 但 ANA-12 和 7,8-DHF 对 UCMS 引起的血清中皮质酮的升高无明显干预作用。同时, 7,8DHF 和 ANA-12 能缓解 UCMS 小鼠 PFC, HIP 中 BDNF, TrkB 和 PSD95 表达的降低, 同时对 UCMS 引起的

BAX/Bcl-2 的升高有明显的干预作用。

结论 7,8DHF 和 ANA-12 能提高 PFC 和 HIP 中 BDNF, TrkB 和 PSD95 表达改善 UCMS 小鼠的抑郁样表型, 这可能是通过减少 UCMS 引起的凋亡来干预的。

关键词: 抑郁; TrkB; 7,8DHF; ANA-12; 文拉法辛

精神分裂症患者胆汁酸谱异常对认知功能的影响

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目的 胆汁酸是由人类和肠道微生物组共同代谢产生的胆固醇代谢的最终产物, 可以穿透血脑屏障的血管内皮细胞, 继而影响精神分裂症、阿兹海默症等脑部疾病的病理特征。本研究的目的是研究精神分裂症患者外周血胆汁酸谱改变及其对患者认知功能的影响。

方法 本研究使用靶向代谢组学分析 23 例精神分裂症患者和 23 例健康志愿者血清中初级和次级胆汁酸代谢物水平。采用 MATRICS 公认认知成套测验量表 (MCCB) 测试所有被试者 5 个维度的认知功能。

结果 精神分裂症患者在信息处理速度、工作记忆、推理及问题解决能力、视觉学习能力等多个维度的认知功能均有受损。与健康对照组相比, 精神分裂症组血清中胆酸(CA)和鹅去氧胆酸(CDCA)的含量显著降低, 而甘氨酸胆酸(GCA)的含量显著升高, 去氧胆酸(DCA) /CA 的比值(3.04 vs.1.16) 更高。校正了年龄、性别、 身体质量指数 (BMI) 后, 信息处理速度、工作记忆、推理和问题解决和视觉学习能力与血清中牛磺胆酸(TCA)、GCA、甘氨酸鹅去氧胆酸(GCDCA)、CDCA 等初级胆汁酸的含量呈显著负相关。

结论 精神分裂症组的胆汁酸谱出现明显紊乱, CA, CDCA 等起神经保护作用的胆汁酸减少和具有细胞毒性的胆汁酸 GCA 增多可能造成精神分裂症患者认知水平下降。

关键词: 精神分裂症, 胆汁酸谱, 认知功能

Is Theta Burst Stimulation Ready As A Clinical Treatment for Bipolar Disorder?

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Objective Bipolar disorder (BD) is a chronic, relapsing disorder characterized by recurrent manic or hypomanic episodes that alternate with depressive episodes. Theta burst stimulation (TBS) is a safe, effective, and non-invasive neuromodulation therapy. Compared with traditional rTMS, the duration of TBS stimulation is shorter and the intensity of stimulation pulse is lower, the impact on synaptic plasticity is even greater. To date, no studies have investigated the efficacy of TBS in the treatment of BD, and the results are inconclusive. We aim to systematically review the existing literature related to the efficacy of TBS in BD and synthesize the results through meta-analysis

Methods We searched for PubMed, Embase, Cochrane Central Register of Controlled Trials, Web of science, PsycINFO, CNKI, and Wan fang databases without language restriction through July 30, 2023, and included randomized-controlled trials that assessed the treatment effect of TBS in patients with BD. We used a random-effects model to pool effect sizes, which were expressed as Cohen's d (or Odds ratio, OR) and 95% confidence intervals (CIs). The outcomes measures include changes in Montgomery-Asberg Depression Rating Scale (MADRS) scores, response and remission rates of depression and dropout rates. Heterogeneity was assessed using I² and Q tests

Results Eight randomized sham-controlled trials were included in the meta-analysis. For the first main outcome, changes in MADRS scores include 4 studies. The result showed that TBS was not statistically significantly different from sham group (Cohen's d = - 0.81; 95% CI: - 4.07 to 2.44; p = 0.52; I² = 0%). Second, we obtained response rate data from five randomized controlled trials. A total of 32 of 88 participants (36.4%) receiving active TBS were defined as responders. 37 of 98 participants (37.8%) receiving sham TBS responded.

The pooled OR was 1.07 (95% CI: 0.47 to 2.44; $p = 0.27$; $I^2 = 23\%$), indicating that the response rate after active TBS treatment was not significantly different from sham stimulation in patients with bipolar depression. Third, the result was derived from data extracted on remission rates from five studies. Overall, 21 of 88 (23.9%) participants after active TBS treatment and 30 of 98 (30.6%) sham stimulation participants were defined as responders. The pooled OR was 0.74 (95% CI: 0.38 to 1.45; $p = 0.59$; $I^2 = 0\%$) and the results showed no significant difference in remission rate after active TBS treatment. At last, 4 out of 8 studies showed patients withdrawing from treatment. The dropout rate was approximately 15.4% in the active TBS and sham groups. The pooled OR was 1.04 (95% CI: 0.51 to 2.13; $p = 0.70$; $I^2 = 0\%$). Notably, the TBS group showed favorable efficacy without major adverse events

Conclusion Current studies indicates that TBS does not show significant antidepressant efficacy in patients with BD, although it is very well tolerated. Long-term TBS studies in patients with bipolar disorder are still needed in the future to verify its efficacy through large-sample and large-scale controlled studies. More validation should be provided not only for bipolar depression, but also for manic episodes and mixed episodes.

关键词: Brain stimulation, Efficacy, Bipolar disorder, Meta-analysis, Theta-burst stimulation, Tolerability

精神科门诊抑郁症筛查列线图预测模型的构建与验证

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目的 抑郁症是全球性的重大社会公共问题, 而我国抑郁症患者呈现出较高共病率、较高社会功能损害和较低精神卫生服务率的特点。因此提高抑郁症筛查的准确率, 是精神卫生人员需要应对的巨大挑战。患者健康问卷 9 (PHQ-9) 被广泛用于抑郁症患者初级筛查, 但是仍有较多的抑郁症患者被误

诊或漏诊。目前尚未有针对精神科门诊抑郁症患者筛查的高精度工具。本研究旨在前瞻性构建一种列线图, 以提高精神科门诊抑郁症患者筛查的准确性。

方法 于 2023 年 02 月开始从西京医院和联勤保障部队第九〇四医院精神科门诊招募受试者。截止 2024 年 02 月, 西京医院招募 546 例抑郁症患者, 以 2: 1 的比例随机分为训练队列 ($N=364$) 和内部验证队列 ($N=182$), 第九〇四医院 196 名抑郁症患者组成了外部验证队列。使用 R 软件 (4.2.3) 进行统计分析, 采用 10 次交叉验证的 LASSO 回归分析对数据进行降维, 筛选出抑郁症的最优预测因子, 按其在多变量 Logistic 回归中的系数进行整合, 绘制列线图。通过 ROC 曲线下面积 (AUC) 来判断列线图的鉴别能力, 并使用决策曲线分析 (DCA) 对列线图 and PHQ-9 的临床效能进行比较。

结果 在训练队列和内、外部验证队列中, PHQ-9 评分 ≥ 10 的患者比例分别为 67.31% (245/364)、64.29% (117/182) 和 48.47% (95/196), 据 MINI 诊断为抑郁症患者的比例分别为 58.52% (213/364)、57.69% (105/182) 和 35.71% (70/196)。经散点图分析, 列线图 and PHQ-9 的总分在训练队列和验证队列中表现出很强的正相关性。在内部验证队列中, 列线图 AUC [0.946 (0.925-0.968)] 显著高于 PHQ-9 [0.915 (0.883-0.946)], $p < 0.01$; 同样在外部验证队列中, 列线图 AUC [0.943 (0.920-0.966)] 也优于 PHQ-9 [0.908 (0.874-0.942)], $p < 0.01$ 。总的来说, 列线图显示出了比 PHQ-9 更好的区分能力和更好的性能, 可以提高抑郁症患者筛查的准确性。

结论 PHQ-9 是最常用的抑郁症筛查工具, 但是忽略了不同症状的权重, 导致部分抑郁症患者的误诊和漏诊。本文权衡了 PHQ-9 不同症状在抑郁症患者中的权重, 首次前瞻性的构建了一种列线图, 提高了抑郁症筛查准确性, 且经内部和外部验证后发现其效果均优于 PHQ-9。在以后的工作中, 还需扩大样本量并在其他精神专科医院验证其效能, 进行改进, 以增加其可用性。

关键词: 抑郁症, 列线图, PHQ-9, 预测模型

Effects of Childhood Trauma on Sustained Attention in Major Depressive Disorder: The Mediating Role of Brain Activity and Connectivity

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Objective Cognitive deficits, particularly in sustained attention, are pivotal in both the development and aggravation of depression. The exposure to childhood trauma may impede sustained attention, but the underlying neuro-mechanisms remain unclear. Our study aimed to investigate these neuro-mechanisms that link childhood trauma to sustained attention

Methods We collected functional magnetic resonance imaging data of 45 adults diagnosed with major depressive disorder (MDD) and 54 healthy controls. We measured childhood trauma severity using the Childhood Trauma Questionnaire and sustained attention using the Continuous Performance Test, Identical Pairs version. Fractional amplitude of low-frequency fluctuation (fALFF) and seed-based functional connectivity (FC) analyses were used to explore the local brain activity and FC alterations

Results Whole-brain correlation analysis showed that impaired sustained attention was associated with increased fALFF in the left postcentral gyrus (PoCG.L), and FC of PoCG.L-left precentral gyrus (PreCG.L) and left angular gyrus (ANG.L)-right superior temporal gyrus (STG.R). Furthermore, mediation analysis showed that the fALFF in PoCG.L, and FC of PoCG.L-PreCG.L and ANG.L-STG.R mediated the relationship between the childhood trauma and sustained attention

Conclusion In conclusion, these alternations in fALFF and FC might serve as potential intervention targets for the treatment of sustained attention deficits in MDDs with childhood trauma history

关键词: childhood trauma; fALFF; functional connectivity; major depressive disorder; sustained attention

甲基苯丙胺使用障碍女性患者的精神健康状况分析与内观认知疗法干预研究

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目的 甲基苯丙胺(冰毒)是一种极易成瘾的精神活性物质,对女性健康造成严重威胁。本研究旨在探讨女性甲基苯丙胺使用者的精神健康状况及内观认知疗法的干预效果。

方法 研究一:在天津市戒毒所,我们招募了230位女性甲基苯丙胺使用障碍患者,使用SCL-90评估她们的心理健康状况。同时使用多维度社会支持量表(MSPSS)和巴瑞特冲动性量表(BIS-11)评估社会支持水平和冲动性。研究二:从招募的被试者中随机选择60名,分为内观认知疗法实验组和一般支持疗法对照组,对干预后效果进行对比。

结果 研究一:与健康常模相比,患者在SCL-90各维度评分显著较高。Pearson相关分析显示,社会支持与心理健康状况呈负相关,而冲动性呈正相关。多元线性回归进一步证实了这些关系,并揭示了社会支持在减少心理健康问题中的调节作用。研究二:经过干预后的评估显示,实验组的冲动性和心理健康状况显著改善,而社会支持水平有所提升。对比组间变化表明,内观认知疗法在降低冲动性和改善心理健康方面的效果显著优于一般支持疗法。

结论 本研究发现,女性甲基苯丙胺使用者普遍存在严重的精神症状,但社会支持的增强和冲动性的减少可以显著改善其精神健康状况。内观认知疗法在治疗这一人群中表现出良好的效果,具有潜力成为临床实践中的有效干预手段。

关键词:甲基苯丙胺使用障碍,冲动性,社会支持,心理健康,内观认知疗法

提升一线医护人员复原力与连贯感:应对公共卫生危机中的感知压力策略

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目的 重大公共卫生事件对一线医护人员的心

理健康造成了强烈冲击,感知压力的增加不利于医护人员心理健康,同样对医疗机构和社会发展产生不良影响。本研究旨在探究影响一线医护人员感知压力的影响因素及作用路径。

方法 采用整群随机抽样法,于2021年1月(COVID-19流行期间)以及2024年1月(流行结束后对应时间段)两个时期采用一般资料调查表、感知压力量表(PSS-4)、简短复原力量表(BRS-6)、连贯感量表(SOC-3)、ENRICHD社会支持量表(ESSI)以及自编问卷(工作场所的支持、私生活中的拒绝)对绵阳市的医务人员进行线上调查。采用克鲁斯卡尔-沃里斯检验查看两个时期中变量的总体分布差异。使用Pearson相关性分析探讨变量相关性。以感知压力为最终变量构建路径分析模型,Bootstrap法估计中介效应的置信区间。

结果 共935人完成问卷调查,其中885位一线医护人员(83.40%为女性)被纳入最终分析。社会支持($r=-0.34, P<0.01$)、工作场所的支持($r=-0.33, P<0.01$)、连贯感($r=-0.19, P<0.01$)、复原力($r=-0.41, P<0.01$)与感知压力成负相关,私生活中的拒绝($r=0.30, P<0.01$)与感知压力成正相关。路径分析模型结果显示:社会支持、工作场所的支持以及私生活中的拒绝对感知压力的直接效应成立,标准化效应值分别为-0.14、-0.09、0.13;工作场所的支持以及私生活中的拒绝通过复原力对感知压力起部分中介作用,标准化效应值分别为-0.03、0.05,分别占各自总效应的25.00%和27.78%;社会支持通过连贯感和复原力对感知压力起部分中介作用,标准化效应值为-0.11,占总效应的44.00%。

结论 在重大公共卫生事件发生早期以及结束后,增加一线医护人员的社会支持、工作场所的支持,以及减少私生活中的拒绝对改善他们的感知压力具有重要的现实意义,这有助于制定更加有效的干预措施和政策保证一线医护人员的心理健康。

关键词: 连贯感,复原力,感知压力,COVID-19

Factors Affecting Occupational Burnout in Medical Staff: A Path Analysis Based on The Job Demands-Resources Perspective

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Objective To assess occupational burnout conditions and work-related factors among frontline medical staff during the COVID-19 pandemic and analyse the relationships among these factors utilizing the job demands-resources (JD-R) model as a theoretical framework

Methods From December 29, 2022 to January 10, 2023, an online survey of medical staff in a certain city was conducted through cluster random sampling. Path analysis was utilized to explore the relationship between work-related factors and occupational burnout among frontline medical staff during the COVID-19 outbreak

Results Among 474 respondents, 455 frontline medical staff (female=79.56%) were included in the final analysis. Medical staff aged <35 exhibited higher levels of occupational burnout than did older staff. Depression/anxiety and workload were positively correlated with occupational burnout and negatively correlated with self-compassion, workplace health/safety, and workplace support. Path analysis indicated the direct effects of workplace support, depression/anxiety, workplace health/safety, self-compassion, and workload on occupational burnout. There were also partial mediating effects of workplace support, depression/anxiety, workplace health/safety, and self-compassion on occupational burnout. The model demonstrated good fit

Conclusion Workplace support, a crucial job resource, can improve occupational burnout among frontline medical staff in various ways. Reducing anxiety, depression, and workload and improving workplace support, health/safety, and self-compassion are practical and effective measures for mitigating occupational burnout

关键词: Burnout,Job demands-resources,Medical staff,COVID-19

精神分裂症患者皮质厚度的异常和变化趋势：一项结合队列研究和荟萃分析的研究

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目的 神经影像学研究发现精神分裂症患者存在大脑皮质厚度变薄，但当前研究结果包含了全脑广泛性的区域且未能统一，对精分的关键脑区定位仍存在争议。本研究基于荟萃分析结合本地样本队列验证，采用经典的脑网络 Desikan-Killiany (DK) 图谱从变化轨迹和关键临床因素进行研究，旨在确定精神分裂症患者关键皮质厚度异常脑区，构建关键脑区的皮层厚度变化轨迹，探索不同表型和临床因素对关键脑区及变化趋势的影响。

方法 本研究纳入了自 2006 年 6 月至 2023 年 9 月所有采用 DK 图谱分析精神分裂症患者全脑皮质厚度研究进行荟萃分析，并通过双中心（长沙、香港）招募的精神分裂症患者 (SZ) 和健康对照 (HC) 队列进行研究。受试者接受 3.0T 头部磁共振、临床和认知功能资料采集。随后，我们根据 DK 图谱对磁共振数据进行预处理，提取了全脑 68 个脑区的皮质厚度，并使用 Combat 校正中心效应。我们通过比较荟萃分析和本地研究结果，将一致性阳性脑区定义为本研究的关键脑区，并研究其在不同年龄阶段和疾病阶段的特征以及发展轨迹数据统计在 SPSS 软件进行。FDR 用于多重比较校正。

结果 荟萃分析共纳入 15 篇文章，涵盖 1224 名精神分裂症患者样本。基于严格纳排标准，本地队列共采集 425 名 SZ 和 272 名 HC。结合 Meta 分析和本地队列双重验证的结果、本研究确定了 9 个关键脑区：左颞中回、左岛盖部、左额正中回喙部、左额上回、右梭状回、右颞中回、右岛盖部、右额正中回喙部、右额上回。分层分析显示，左颞中回，右额正中回喙部，右岛盖部，右额上回在未成年样本中未表现出显著差异，而在成年样本中显著，右颞中回仅仅在 18-24 表现出差异 ($p < 0.05$)。差异脑区中，受到服药效果影响显著的脑区有右岛盖部，右梭状回，和双侧颞中回，其中右岛盖部在未成年阶段收到影响较大，其他两个脑区在成年早期受到较大影响 ($p < 0.05$)。从发展轨迹来看，首发患者组的横断面曲线下下降速度并不快，而微量服药患者和首发未服药患者呈现的曲线下下降速度增加 ($p < 0.05$)。

结论 通过结合队列研究和 Meta 分析，本研究全面证实了精神分裂症患者皮质变薄的一致区域，包括颞中部、岛盖、额叶中上部和纺锤体区域。但这些区域的皮质厚度在不同年龄段和不同疾病阶段的患者中表现出不同的异常。这些发现强化了一个假设，即不同年龄阶段的患者皮质变薄的具体区域和位置可能不同，而精神分裂症与总体区域的皮质变薄有关。这可能是神经病理学机制造成的，也可能是抗精神病药物的神经毒性效应所致。

关键词：精神分裂症，皮质厚度，脑图谱

Glymphatic System Dysfunction in Major Depressive Disorder Unveiled by DTI-ALPS: Correlation with Fatigue

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Objective The glymphatic system is a critical intracranial waste clearance pathway, which could be linked to the pathogenesis of major depressive disorder (MDD). Additionally, fatigue—a common precursor of MDD—is also a psychiatric symptom closely connected to central nervous system (CNS) waste clearance, further underscoring the significance of efficient waste removal in MDD. However, evidence supporting the association between glymphatic system function and

MDD remains limited. This study aims to investigate the glymphatic function in MDD patients, and explore the potential interplay between glymphatic function, fatigue, and the presence of MDD

Methods A total of 46 MDD patients and 55 healthy controls (HC) were included in the study. All participants underwent diffusion tensor imaging using the same 3-T MRI scanner. The Diffusion Tensor Imaging along Perivascular Spaces (DTI-ALPS) index was performed to assess glymphatic function, the Chalder Fatigue Scale (CFS) was used to evaluate fatigue, and the 17-item Hamilton Depression Rating Scale (HAM-D-17) was used to evaluate the severity of depression. We compared the differences in the DTI-ALPS index and clinical characteristics between the MDD and HC group, and explored the relationship among the DTI-ALPS index, CFS scores, and the presence of MDD through further mediation analysis

Results The DTI-ALPS index in the right hemisphere (DTI-ALPS-R) is significantly lower in MDD patients (1.27 vs 1.35). MDD Patients exhibited significantly higher scores on the CFS scales compared with HCs (28.80 vs 12.93). Further mediation analysis highlights that CFS scores play a significant mediating role between DTI-ALPS-R and the presence of MDD, acting as full mediators (indirect effect $\beta = -0.230$, 95%CI: [-0.388, -0.059])

Conclusion Glymphatic function may be impaired in MDD patients unveiled by DTI-ALPS, and the glymphatic system dysfunction may not directly contribute to depression but rather facilitates the onset of MDD by promoting the accumulation of fatigue.

关键词: DTI-ALPS, Fatigue, Glymphatic function, Major depressive disorder

全程健康教育模式对非自杀性自伤患者心理弹性影响分析

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目的 研究在非自杀性自伤患者治疗过程中开

展全程健康教育模式取得成效结果, 以及对于心理弹性的影响, 为非自杀性自伤患者的治疗和护理提供指导方法, 减少患者非自杀性自伤的发生。

方法 选择 2021 年 5 月-2022 年 5 月收治的非自杀性自伤患者 98 例计入研究, 开展函数随机排列设为实验组、参照组, 其中参照组 (49 例/组, 常规护理), 实验组 (49 例/组, 基于以上内容进行全程健康教育模式), 分析护理前后心理状态测评值、健康教育评分结果、生活质量测评值, 满意率测评值。

结果 ①心理状态测评值, 护理前, 两组对比无差异 ($p>0.05$), 护理后, 实验组获值更理想, 优于参照组, 具备差异 ($P<0.05$); ②实验组健康教育各项评分结果获值优于参照组, 差异具有统计学意义 ($p<0.05$); ③实验组生活质量测评值所获值更高, 优于参照组, 组间对比 ($P<0.05$); ④实验组总满意率更高, 均优于参照组, 组间对比 ($p<0.05$)。

结论 临床上针对收治的非自杀性自伤患者开展全程健康教育模式, 有助于患者心理状态的调整, 使患者能够主动的倾述自己内心的想法, 减少自伤行为的发生, 提升生活质量和自我概念, 进而提升了患者满意率, 值得普及和应用。

关键词: 全程健康教育模式; 非自杀性自伤; 心理弹性

基于静息态脑电图预测重度抑郁障碍伴认知障碍的研究

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目的 重度抑郁障碍 (MDD) 与认知障碍相关。通过分析基于静息态脑电图在 MDD 患者中预测认知水平下降的能力, 评估其实用价值并寻找可靠的生物标记物, 以便早期识别 MDD 伴认知障碍, 更好的服务于抑郁症患者和指导临床早期干预治疗。

方法 1、基于静息态脑电图的快速傅立叶变换识别 MDD 伴认知障碍; 2、选取 2023 年 1 月至 2023 年 12 月长春市第六医院新诊断未经治疗的 MDD 患者作为抑郁组, 同期年龄和性别匹配的健康志愿者为健康对照组, 进行至少含有清醒期和一个睡眠周期的静息态视频脑电图监测; 3、采用抑郁自评量表 (SDS) 进行临床症状评估, 应用蒙特利尔认知评估

量表 (MoCa) 进行认知评估, 应用注意力网络测试 (ANT) 评估注意力水平; 4、脑电图数据采集使用尼高力 32 导脑电图仪, 国际 10-20 系统标准化放置电极; 5、使用 Python 和 Matlab 软件对静息态脑电图数据进行分析处理; 6、使用 Excel 软件和 SPSS 26.0 软件对所有数据整理和统计分析。

结果 共纳入 47 名 MDD 患者和 47 名健康对照组作为研究对象, 健康对照组与 MDD 患者组在静息态脑电图数据纳入率和每例脑电图数据的有效分段数上不存在显著性差异 ($P>0.05$)。与对照组相比, MDD 患者在清醒期 θ 功率增加 ($P=0.018$) 和 NREM 睡眠期间 θ 功率降低 ($P=0.002$), MDD 患者认知水平尤其是注意力水平的准确度较低 ($P=0.021$)。

结论 静息态脑电图清醒期 θ 功率增加、NREM 期 θ 功率减低与 MDD 伴认知障碍尤其是注意力水平下降显著相关, 有助于 MDD 伴认知障碍早期精准诊断和治疗。

关键词: 重度抑郁障碍, 脑电图, 认知障碍

A Predictive Model for Readmission within 1-year Post-discharge in Patients with Schizophrenia

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Objective Schizophrenia is a pervasive and severe mental disorder characterized by significant disability and high rates of recurrence. The persistently high rates of readmission after discharge present a serious challenge and source of stress in treating this population. Early identification of this risk is critical for implementing targeted interventions. The present study aimed to develop an easy-to-use predictive instrument for identifying the risk of readmission within 1-year post-discharge among schizophrenia patients in China.

Methods A prediction model, based on static factors, was developed using data from 247 schizophrenia inpatients admitted to the Mental Health Center in Wuxi, China, from July 1 to December 31, 2020. For

internal validation, an additional 106 patients were included. Multivariate Cox regression was applied to identify independent predictors and to create a nomogram for predicting the likelihood of readmission within 1-year post-discharge. The model's performance in terms of discrimination and calibration was evaluated using bootstrapping with 1000 resamples.

Results Multivariate cox regression demonstrated that involuntary admission (adjusted hazard ratio [aHR] 4.35, 95% confidence interval [CI] 2.13 - 8.86), repeat admissions (aHR 3.49, 95% CI 2.08 - 5.85), the prescription of antipsychotic polypharmacy (aHR 2.16, 95% CI 1.34 - 3.48), and a course of disease ≥ 20 years (aHR 1.80, 95% CI 1.04 - 3.12) were independent predictors for the readmission of schizophrenia patients within 1-year post-discharge. The area under the curve (AUC) and concordance index (C-index) of the nomogram constructed from these four factors were 0.820 and 0.780 in the training set, and 0.846 and 0.796 for the validation set, respectively. Furthermore, the calibration curves of the nomogram for both the training and validation sets closely approximated the ideal diagonal line. Additionally, decision curve analyses (DCAs) demonstrated a significantly better net benefit with this model.

Conclusion A nomogram, developed using pre-discharge static factors, was designed to predict the likelihood of readmission within 1-year post-discharge for patients with schizophrenia. This tool may offer clinicians an accurate and effective way for the timely prediction and early management of psychiatric readmissions.

关键词: Hospital discharge, Psychiatric readmission, Schizophrenia, Predictive model, Nomogram

Aberrant Resting-state Functional Connectivity in Subthreshold Depression and Major Depressive Disorder

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Objective Subthreshold depression (StD) is considered a prodromal stage of major depressive disorder (MDD). However, the lack of objective and reliable biomarkers often results in misdiagnosis and inappropriate treatment between MDD and StD. We aim to explore the underlying neurobiological mechanisms by detecting functional connectivity (FC), aiding in the differentiation between StD and MDD

Methods We analyzed resting-state functional magnetic resonance imaging (fMRI) data from 188 patients with MDD, 153 individuals with StD and 110 healthy controls (HCs). The whole-brain FC variability was calculated focusing on seeds for the default model network (DMN), executive control network (ECN), salience networks (SN), and affective (limbic) network (AN). Their correlations with cognitive dysfunction were further detected. Support vector machine (SVM) classification tested the potential of FC to differentiate StD, MDD from HCs

Results Patients with MDD exhibited multidomain cognitive impairments when compared to HCs, while individuals with StD only showed deficit in social cognition. Both MDD and StD showed decreased FC between the right AI and the left inferior frontal gyrus (IFG) and increased FC between the right SCC and left PCC compared to HCs, and MDD also showed decreased FC between the left PCC and middle temporal gyrus (MTG), and between the left PCC and the left PCC. In addition, MDD group showed significantly decreased FC between the left PCC and the left MTG, between the left PCC and the left PCC, and between the right AI and the left IFG when compared to StD group. The results of SVM showed that the fusion features of significantly different FC and cognitive function had the best performance in classification for differentiating StD from HCs, as well as MDD and StD from HCs. In addition, the mediation analyses indicated that the impact of the FC between the left PCC-left PCC and the right AI-left IFG on the depression severity were significantly influenced by cognitive function (mainly involving visual learning and composite) in depressed individuals, including MDD and StD

Conclusion Aberrant FC variability of DMN,

SN and AN may be involved in the emergence and development of depressive symptoms in StD and MDD, which might help to discriminate MDD or StD from healthy subjects when combining with cognitive dysfunction. And cognitive function could affect the relationship between DMN and SN to depression.

关键词: Bipolar depression, Dynamic functional connectivity, Suicide attempt, Cortico-striatal circuitry, Cognitive function

The Impact of Chronic Stress on Sleep in Mice

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Objective The comorbidity of sleep disorders with depression has garnered increasing attention from researchers. The occurrence of this condition is typically observed subsequent to prolonged exposure to chronic stress. The objective of this study is to investigate the impact of chronic stress on sleep in mice and elucidate its underlying neurobiological mechanisms.

Methods The EEG/EMG recording baseline was recording in 8-week-old male C57BL/6J mice, seven days following the implantation surgery of EEG/EMG electrodes. The mice were then divided into a control group and a CRS (chronic restraint stress) group, with the CRS group receiving 2-3 hours of daily restraint for 16 days. Following a 16-day period, the EEG/EMG recordings of two groups of mice were reassessed and subjected to statistical analysis in order to compare them with the baseline measurements.

Results The results showed that after chronic stress, the proportion of wakefulness in the light phase of CRS group was significantly increased (baseline: $40.9 \pm 1.8025\%$; after restraint: $45.525 \pm 2.1124\%$ ($P < 0.05$, $n=4/\text{group}$)); total sleep time (NREM+REM) was significantly reduced (baseline: $59.1 \pm 10.1844\%$; after restraint: $53.725 \pm 9.2254\%$ ($P < 0.05$, $n=4/\text{group}$)).

Conclusion These results indicate that after

long-term chronic stress, mice show increased wakefulness and decreased sleep ratio, suggesting that chronic stress may cause sleep disorders in mice by causing wakefulness regulation disorder.

关键词: sleep disorder, wakefulness, chronic stress

精神分裂症研究协作组

单核细胞的转录组和能量代谢表型突显出精神分裂症患者免疫特征和线粒体功能的改变

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目的 目前对精神分裂症(SCZ)患者外周血单核细胞(Peripheral blood monocytes, PBMs)的重要标志物等分子表达水平与线粒体功能、临床症状之间关系的理解仍然是有限的。本研究旨在挖掘SCZ的PMBs中差异表达基因和能量代谢差异、及二者与临床症状之间的相关性,并结合机器学习等算法初步探索和构建SCZ多维诊断模型,以期指导SCZ新干预手段的开发和加速SCZ临床诊疗的变革。

方法 收集我院2022年2月至2023年6月收录的SCZ门诊和住院患者,招募健康受试者,分别设为SCZ组(男/女:28/18)和HC组(男/女:28/13),整理其临床资料及CTQ、PANSS、MCCB等量表评估结果。通过RNA测序和seahorse技术获得两组PMBs中的差异表达基因(DEGs)和能量代谢表型;并将这些组间差异与临床症状等进行相关性分析。对DEGs开展相关功能注释及通路富集分析,结合多变量统计分析、机器学习算法构建和优化SCZ诊断模型。

结果 SCZ与HC组人口学差异无统计学意义。与HC相比,SCZ组PMBs中线粒体氧化磷酸化ATP生成速率、XF ATP指数均明显升高($P < 0.05$)。通过对两组受试者PMBs进行转录组测序,发现有70个DEGs(上调基因48个,下调基因22个)。这些DEGs主要参与胸腺细胞迁移、T细胞迁移、组蛋白H3K4甲基化、H3K27三甲基化等生物过程;涉及程序性细胞死亡、细胞对刺激的反应和信号转导等通路;并富集于神经系统自身免疫性疾病、中枢神经系统疾病等。线粒体ATP生成速率与阳性症状显著正相关($\rho > 0.6$, $FDR < 0.01$)。LINC00487的表达量与工作记忆分呈负相关($\rho = -0.695$, $FDR = 0.01$);TP53INP2的表达量与情感虐待总分呈负相关($\rho = -0.718$, $FDR = 0.03$)。但以上相关性在HC组均无阳性结果。根据VIP值排名,

DEGs (IFI27、PIM3)、INFR 和体重、腰围、臀围、心率、收缩压、舒张压被用于分类模型的建立,模型经置换检验后未表现出过拟合,AUC 值为 0.8696。

结论 SCZ 患者 PBMs 中的线粒体更偏向氧化磷酸化代谢表型,氧化损耗较大,可能引发免疫细胞的加速衰老和凋亡,并与更重的阳性症状相关。SCZ 的患病风险可能与组蛋白 H3K4 甲基化、H3K27 三甲基化等生物学过程有关,从而影响 PBMs 的基因表达。本研究所建立的 SCZ 诊断模型具有一定可行性和便利性,值得扩大样本验证。本研究有益于促进真实世界 SCZ 的快速识别和诊疗,为 SCZ 发病机制等研究提供科学参考和新角度。

关键词: 精神分裂症,转录组,能量代谢,线粒体功能,诊断模型,机器学习

Effects of Computerized Cognitive Remediation Therapy on Cognitive Function and Serum Bilirubin in Patients with First-episode Schizophrenia

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Objective The purpose of this study was to explore the relationship between the Duration of Untreated Psychosis (DUP) and clinical features, cognitive function and Serum Bilirubin (SBIL) level in patients with first-episode schizophrenia, and to study the effects of Computerized Cognitive Remediation Therapy (CCRT) on clinical features, cognitive function and SBIL level in patients with first-episode schizophrenia

Methods Patients with first-episode schizophrenia who were hospitalized in Weifang Mental Health Center from January 2023 to August 2023 were selected. A total of 100 subjects were included in this study, which were divided into control group and experimental group by random number table method, with 50 cases in each group. After all subjects were enrolled, subjects were divided into long DUP group and short DUP group according to the Symptom Onset in Schizophrenia (SOS). The study was terminated in 4 cases due to treatment adjustment, automatic discharge and adverse drug

reactions, and a total of 96 subjects were included in the study. The DUP duration ranged from 3 months to 73 months, with a median of 20 months. According to the median DUP, the subjects were divided into four groups: long DUP drug group (control group 1), short DUP drug group (control group 2), long DUP drug +CCRT drug group (experimental group 1) and short DUP drug +CCRT drug group (experimental group 2), with 24 cases in each group, and The control group was treated with olanzapine alone, and the experimental group was treated with olanzapine combined with CCRT. The Positive and Negative Syndrome Scale (PANSS) and Chinese Version of Brief Neurocognitive Test Battery (CBCT) were used to assess the severity of psychiatric symptoms and cognitive function, and SBIL levels were measured at baseline and at the end of the treatment week

Results (1) The subjects (n=96) at baseline scored (28.16±6.03) points on the positive symptom scale, (21.41±5.29) points on the negative symptom scale, (47.07±5.34) points on the general symptom scale, with a total score of (96.64±8.41) points and (8.01±2.72) points on the additional symptom scale. There was no significant correlation between DUP and PANSS positive symptom scale score, negative symptom scale score, general symptom scale score and additional symptom scale score ($P>0.05$), but there was positive correlation between DUP and PANSS total score ($P<0.05$). (2) The subjects (n=96) scored (29.78±7.55) points for the baseline connection test, (28.55±7.31) points for the symbol coding test, (27.05±5.70) points for continuous operation test, the number span T score was (28.19±6.93) points, and the total number T score of CBCT was (113.57±20.32) points. DUP was negatively correlated with connection test, symbol coding, number span and total score of CBCT ($P<0.01$), and DUP was negatively correlated with continuous operation ($P<0.05$). (3) The subjects (n=96) at baseline were (3.49±1.12) $\mu\text{mol/L}$ for direct bilirubin (DBIL), (9.15±2.09) $\mu\text{mol/L}$ for indirect bilirubin (IBIL), and (12.64±2.92) $\mu\text{mol/L}$ for total bilirubin (TBIL). DUP was negatively correlated with DBIL, IBIL and TBIL ($P<0.01$). (4) After 8 weeks of treatment, the subjects (n=96) scored (18.94±6.24) points on the positive symptom scale, (16.16±4.77)

points on the negative symptom scale, (32.93±5.51) points on the general symptom scale, the total score was (68.02±10.73) points, and the additional symptom scale score was (5.57±1.47) points. The PANSS scores of the subjects (n=96) and the subjects in each group (n=24) were significantly higher at baseline than at 8 weeks after treatment, and the total score and subscale of PANSS in the experimental group (n=48) were significantly higher than those in the control group (n=48). (5) After 8 weeks of treatment, the subjects (n=96) scored (36.98±8.02) points for connection test, (35.92±7.18) points for symbol coding, (34.68±5.81) points for continuous operation, (35.54±6.67) points for digital breadth, and the total T score of CBCT was (143.11±23.42) points. The CBCT scores of the subjects (n=96) and the subjects in each group (n=24) were significantly lower at baseline than at 8 weeks after treatment, and the total scores and subscales of CBCT in experimental group (n=48) were significantly higher than those in control group (n=48). (6) After 8 weeks of treatment, the subjects (n=96) DBIL was (3.02±1.08) μmol/L, IBIL was (6.95±2.50) μmol/L, and TBIL was (9.97±2.80) μmol/L. The SBIL level of the subjects (n=96) and the subjects in each group (n=24) at baseline was higher than that at 8 weeks after treatment. SBIL levels in the experimental group (n=48) were significantly lower than those in the control group (n=48)

Conclusion (1) The longer the DUP of patients with first-episode schizophrenia, the more obvious the clinical characteristics and the higher the PANSS score. (2) The longer the DUP in patients with first-episode schizophrenia, the worse the cognitive function. (3) The longer the DUP in patients with first-episode schizophrenia, the lower the serum bilirubin level. (4) CCRT significantly improved the clinical features and cognitive function of patients with first-episode schizophrenia, and had a certain effect on the reduction of SBIL level

关键词: Computerized cognitive remediation therapy; First-episode schizophrenia; Clinical features; Cognitive function; Serum bilirubin

FTO Ameliorates Neonatal MK-801 Administration Combined with Early Social Isolation Model Induced Learning and Memory Impairment by Activating PI3K/AKT/mTOR Signaling Pathway

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Background The pathogenesis of cognitive dysfunction in schizophrenia (SCZ) is still unclear, and m6A methylation may be involved in the neuropsychiatric diseases. The aim of this study was to investigate the effect of m6A methylation on learning and memory impairment induced by a neurodevelopmental model of SCZ

Methods A perinatal NMDA receptor antagonist combined with postweaning social isolation (MK-SI) was used to construct a neurodevelopmental model of SCZ. FTO adeno-associated virus (AAV) was injected into the hippocampus via a stereotaxic technique. Then, there were evaluated through a series of behavioral tests, such as the OFT, SIT, PPI, NOR and MWM. In addition, m6A dot blot, LC-MS/MS, qRT-PCR, western blot, tissue staining, MeRIP-seq, and colorimetry were used to analyze brain tissue. FB23-2, an FTO small molecule inhibitor, was used to further investigate the effect of FTO on the MK-SI model. In addition, we analyzed markers related to synaptic plasticity and cell apoptosis

Results Our results suggested that FTO mediated m6A modification in the hippocampus of MK-SI mice to induce learning and memory impairment. Furthermore, AAV9 FTO knockdown (FTO-KD) increased the m6A modification level in MK-SI mice, aggravated neuronal pyknosis and synaptic plasticity damage, and induced severe learning and memory impairment. In contrast, AAV9 FTO overexpression (FTO-OE) reversed these effects. In addition, FB23-2 inhibited the reversal effect of FTO-OE on MK-SI mice, further confirming the important role of FTO in MK-SI induced learning and memory impairment. Next, by high-throughput sequencing analysis, we found that the PI3K/AKT/mTOR signaling pathway may play a key role. Western blot results confirmed that FTO-KD and

FTO-OE affected the phosphorylation levels of PI3K/AKT/mTOR proteins in opposite directions. Notably, we found that the expression levels of hippocampal apoptotic protein bax and pro-apoptotic protein bcl-2 were simultaneously affected by FTO changes

Conclusion Taken together, our data suggested that the demethylase FTO mediated m6A modification to induce learning and memory impairment, highlighting the important role played by FTO in cognitive dysfunction in the MK-SI model.

关键词: schizophrenia, FTO, hippocampus, m6A, learning and memory, PI3K/AKT/mTOR

Comparison of Clinical Symptoms and Symptom Structure in Schizophrenia with Different Onset Ages

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Objective Patients with early-onset schizophrenia (EOS) consistently demonstrate poorer treatment outcomes compared to those with typical-onset schizophrenia (TOS), while individuals with late-onset schizophrenia (LOS) tend to have better prognoses than adult-onset patients. The underlying reasons for these phenomena remain elusive. This study aims to utilize network analysis to uncover potential symptom interactions that may contribute to the differential outcomes observed across different age-onset patient groups

Methods Symptom severity was assessed using the Positive and Negative Syndrome Scale (PANSS) in 654 EOS, 1664 TOS, and 369 LOS patients from an open dataset. Symptom networks were constructed using partial correlation, and measurements such as closeness centrality and shortest path length were analyzed to investigate the interconnectivity between symptoms

Results Patients were divided into three groups based on age of onset: EOS (onset before 18 years old), TOS (onset between 18 and 40 years old), and LOS (onset after 40 years old). Clinical symptoms were evalu-

ated using the PANSS. EOS patients exhibited significantly higher total PANSS scores compared to TOS and LOS patients, primarily driven by more severe negative symptoms and general psychopathology. In contrast, LOS patients showed no significant differences in overall PANSS scores compared to adult-onset patients, except for slightly higher positive symptom scores (adjusted $P < 0.05$)

Network analysis revealed that in all three groups, negative symptoms were connected with other negative symptoms through general symptoms. Additionally, positive and negative symptoms had a direct connection through Conceptual disorganization(P2) and Difficulty in abstract thinking(N5). Notably, positive symptoms exhibited closer connections with other symptoms in the EOS group compared to the TOS group. And positive symptoms exhibited closer connections in the TOS, group compared to the LOS group. Closeness centrality, a measure of interconnectivity, showed a monotonic decrease in positive symptom centrality across the EOS, TOS, and LOS groups, indicating that positive symptoms had closer connections within the symptom network of the EOS group.

Conclusion These findings suggest that the underlying symptom structure and interconnectivity between symptoms differ across schizophrenia onset age groups. The more pronounced positive-general and positive-negative symptom interactions in EOS may contribute to the distinct clinical presentation and disease course observed in this subtype. Understanding these network-level differences could provide insights into the pathogenesis and treatment of schizophrenia across different age-onset groups

关键词: Schizophrenia, Symptom Network, Age-onset, Early-Onset Schizophrenia, Typical-Onset Schizophrenia, Late-Onset Schizophrenia

人脐带血间充质干细胞对 MIA 诱导子代精神分裂症大鼠的干预研究

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目的 研究人脐带血间充质干细胞 (hUCB-MSCs) 对母体免疫激活 (MIA) 模型子代大鼠是否具有改善行为异常的效果, 以及能否为精神分裂症治疗新方案提供理论依据; 分析 hUCB-MSCs 对 MIA 子代大鼠中枢神经系统及其相关的分子通路的影响

方法 1. 以 MIA 模型子代大鼠为研究对象 (模型组), 重复尾静脉输注 hUCB-MSCs (干预组) 和等体积生理盐水 (正常组)

2. 利用旷场实验和前脉冲抑制实验来评价动物焦虑、抑郁及感觉门控功能

3. 利用 Q-PCR、免疫印迹及免疫荧光方法检测子代大鼠海马和前额叶中 Iba1、GFAP、PSD95、SYP 和 HMGB1 的表达变化

4. 利用统计软件 SPSS 22.0 处理数据, $P < 0.05$ 被认为差异有统计学意义

结果 1. 孕鼠血浆结果: 模型组 IL-6 和 TNF- α 表达均显著高于正常组 (均 $P < 0.05$)

2. 行为学结果: 旷场实验中, 模型组运动总距离和中心区域活动时间及距离百分比均减少 (均 $P < 0.05$); 干预组运动总距离显著增加 ($P < 0.001$), 中心区域活动时间及运动距离百分比均显著增加 (均 $P < 0.01$)。PPI 实验中, 模型组惊吓反应幅度升高 ($P < 0.05$), 干预组则显著下降 ($P < 0.001$); 而三组在 75 dB、80 dB 及 85 dB 条件下抑制率差异均无统计学意义 (均 $P > 0.05$)

3. Q-PCR 实验结果: 模型组在海马和前额叶组织中 Iba1 表达增加 (均 $P < 0.01$), 干预组改善了这种变化 (均 $P < 0.01$); 而 GFAP 表达差异无统计学意义 (均 $P > 0.05$)

4. 免疫印迹实验结果: 模型组 Iba1、PSD95 和 HMGB1 在海马和前额叶组织中蛋白水平增加 (均 $P < 0.05$), GFAP 和 SYP 蛋白水平减少 ($P < 0.05$, $P > 0.05$; 均 $P < 0.05$), 干预组又改善了这种变化 ($P > 0.05$, $P < 0.01$; 均 $P < 0.01$; 均 $P < 0.001$) (均 $P > 0.05$; 均 $P < 0.01$)

5. 免疫荧光结果: 在海马左右两侧 DG 区, 模型组 Iba1+细胞数均显著增加 (均 $P < 0.05$), GFAP+细胞数减少趋势, 神经元突触相关分子 PSD95 增加趋势; 干预组 Iba1+细胞数均显著减少 (均 $P < 0.05$), GFAP+细胞数增加趋势, PSD95 减少趋势

结论 hUCB-MSCs 显著改善了 MIA 模型子代大鼠的精神分裂症样行为; hUCB-MSCs 可能通过

HMGB1、Iba1、PSD95 及相关通路分子发挥作用, 可能通过调节胶质细胞活性状态, 减少神经炎症和修复突触损伤, 进而改善 MIA 子代大鼠行为的异常

关键词: 人脐带血间充质干细胞; 小胶质细胞; 神经炎症; 精神分裂症

History of Tobacco Smoking and Alcohol Use Can Predict The Effectiveness of Electroconvulsive Therapy in Patients with Schizophrenia: A Multicenter Clinical Trial

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Objective In our clinical practice, we anecdotally observed that tobacco smokers and alcohol drinkers with schizophrenia seemed to respond more effectively to electroconvulsive therapy (ECT) than non-smokers and non-drinkers. The current study aimed to examine whether history of tobacco smoking or alcohol consumption serve as indicators for predicting therapeutic efficacy of ECT in patients with schizophrenia

Methods A total of 481 patients receiving ECT combined with antipsychotic medication (ECT + AP medication) completed a two-week (six sessions of ECT) follow-up; 106 patients receiving only antipsychotic medication (AP medication) also completed a two-week follow-up. Smoking, alcohol consumption, and AP medication usage was recorded for these patients. Severity of psychotic symptoms was assessed using the Positive and Negative Syndrome Scale (PANSS)

Results ECT + AP medication: Compared to schizophrenic patients without a history of smoking (non-smokers), those with a history of smoking (smokers) showed a high decrease in negative symptoms (36.96% vs 24.76%; $F = 5.974$, $p = 0.015$). While, compared to patients without a history of alcohol consumption (non-drinkers), those with a history of alcohol consumption (drinkers) showed a high decrease in positive symptoms (48.90% vs 41.47%; $F = 5.074$, $p = 0.025$).

No differences were found in symptom reduction between smokers and non-smokers or between drinkers and non-drinkers ($p > 0.05$) in the AP medication group

Conclusion Both smoking history and alcohol consumption history can independently serve as predictors of the efficacy of ECT in patients with schizophrenia, which may provide recommendations for the clinical use of ECT

关键词: Smoking; alcohol drinking; ECT; schizophrenia; PANSS

Altered Functional Connectivity in Anterior Cingulate Cortex Subregions in Treatment-resistant Schizophrenia Patients

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Objective This study aims to characterize resting-state functional connectivity (rs-FC) profiles of ACC subregions in patients with TRS. The association between these FC and clinical symptoms, neurocognitive function, and grey matter volume (GMV) was studied as well

Methods A total of 81 patients with schizophrenia (40 patients with TRS = 40, 41 patients with non-treatment resistant schizophrenia (NTRS)) and 39 age- and gender-matched healthy controls (HC) were enrolled, and underwent structural magnetic resonance imaging (MRI), resting-state functional MRI (rs-fMRI), clinical evaluation. The ACC subregions, including subgenual ACC (sgACC), pregenual ACC (pgACC), and dorsal ACC (dACC), were selected as seed regions from the automated anatomical labelling atlas 3 (AAL3). The GMV of the ACC subregions were calculated and seed-based FC maps for all ACC subregions were generated and compared between the TRS and NTRS, HC group. Additionally, correlations between altered FC and clinical symptoms, GMV, and neurocognitive functions in the TRS patients were explored

Results Compared with HC, increased FC was

observed in TRS and NTRS groups between bilateral sgACC and left cuneus, right cuneus, and left lingual gyrus, while decreased FC was found between bilateral dACC and thalamic. Additionally, compared with NTRS, the TRS group showed increased FC between bilateral dACC and right cuneus and decreased FC between bilateral dACC and thalamic. The TRS group showed decreased GMV in all ACC subregions than the HC group, and there is no significant difference between the TRS group and the NTRS group

Conclusion The findings in this study suggest that disrupted FC of subregional ACC has the potential as a marker for TRS. The dysconnectivity of bilateral dACC-right cuneus and bilateral dACC-thalamus, are likely to be the unique FC profiles of TRS. These findings further our understanding of the neurobiological impairments in TRS.

关键词: treatment-resistant schizophrenia, resting-state Functional magnetic resonance imaging, anterior cingulate cortex subregions, Functional Connectivity

肠道菌群与糖代谢的关联对首发精神分裂症认知障碍的影响

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目的 1. 比较首发未用药精神分裂症 (SCZ) 患者与健康对照 (HC) 人群肠道菌群的差异, 了解与 SCZ 疾病和糖代谢共有的相关菌。2. 观察首发未用药 SCZ 患者与 HC 人群糖代谢水平的差异。

方法 1. 选取郑州大学第一附属医院精神科就诊的 189 例诊断为首发未用药 SCZ 的患者为 SCZ 组, 并招募 115 例健康人群为 HC 组。在入组当日收集受试者的相关个人资料; 运用认知功能成套测验 (MCCB) 进行认知功能的评定; 使用阳性和阴性症状量表 (PANSS) 评估 SCZ 组患者精神症状的严重性。所有受试者于第二天早上进行采血、收集粪便等。2. 用十六烷基三甲基溴化铵法/十二烷基硫酸钠法提取粪便样本中的基因组, 使用 16S 核糖体 RNA (16S rRNA) 基因高通量测序法分析受试者粪便样本中的肠道细菌特征。用己糖激酶法测

量空腹血糖 (FPG) 水平, 用化学发光法检测空腹胰岛素 (FINS) 浓度。3. 使用 SPSS 26.0 统计软件进行数据分析。

结果 1. 一般资料比较: 两组间的年龄、教育年限、体重质量指数 (BMI)、性别、吸烟史均无统计学意义 (均 $P>0.05$)。2. 认知功能比较: SCZ 组的信息处理速度、注意/警觉、工作记忆、词语学习、视觉学习、推理和问题解决以及社会认知水平均低于 HC 组 (均 $P<0.05$)。3. 肠道菌群比较: SCZ 组的 Shannon 指数和 Simpson 指数均低于 HC 组 (均 $P<0.05$), 两组的 Chao1 指数、ACE 指数差异均无统计学意义 (均 $P>0.05$)。SCZ 组红蠕菌纲、丹毒丝菌纲、链球菌科、丹毒丝菌科、双歧杆菌科、拟杆菌科、链球菌属、丁酸球菌属、多尔氏菌属、丹毒丝菌属、*g_Fusicatenibacter* 菌属、双歧杆菌属、经黏液真杆菌属、未命名厚壁菌属、未命名瘤胃菌属、拟杆菌属相对丰度均低于 HC 组 (均 $P<0.05$); 厌氧菌纲、黄曲霉属、*g_Lachnoclostridium* 菌属相对丰度均高于 HC 组 (均 $P<0.05$)。4. 糖代谢比较: SCZ 组的 FPG、FINS 和胰岛素抵抗指数 (HOMA-IR) 水平均高于 HC 组 (均 $P<0.05$); 胰岛素敏感性指数 (ISI) 水平低于 HC 组 ($P<0.05$)。

结论 首发未用药 SCZ 患者存在肠道菌群多样性及相对丰度改变、糖代谢异常和认知功能障碍。

关键词: 精神分裂症; 肠道菌群; 糖代谢; 认知损害

Predictive Value of Serum SOCS3 in Unmedicated First-Episode Schizophrenia: A Potential Tool for Clinical Management

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Objective Schizophrenia is a significant mental disorder of uncertain origin, characterized by negative symptoms, positive symptoms, and cognitive dysfunction. It ranks 12th among 310 disease injuries globally, imposing a substantial burden on society. Therefore, research focused on schizophrenia has the potential to positively impact various aspects, including mental ill-

ness treatment and healthcare resource allocation. Accumulated evidence indicates dysregulated inflammation implicated in the development and pathogenesis of symptoms in schizophrenia. SOCS3, one of key component regulating inflammatory signaling pathway can exert influence on the brain leading to alteration in cognition, mood and behavior in major psychiatric disorders, including schizophrenia. The association between level of SOCS3 and clinical features in the unmedicated first-episode schizophrenia remains less understand. although the systemic and pro-inflammation, including CRP, cytokines, including IL-6 and IL-1 β has been associated with negative and mood symptoms inpatient with first-episode unmedicated schizophrenia. The ultimate two hypothesis in current study is 1) dysregulated SOCS3 pathway in first-episode unmedicated schizophrenia. 2) the level of SOCS3 could predict the susceptibility for the first-episode schizophrenia

Methods Total of 93 patients diagnosed with first-episode unmedicated schizophrenia were enrolled from the Third People's Hospital of Zhongshan City, and 60 healthy participants were advertised from hospital staffs and the residence in surrounding community, to detect the levels of CRP, IL-6, IL-1 β and SOCS3 in serum by ELISA. Clinical symptoms in patients with first-episode unmedicated schizophrenia were evaluated with the scores for PANSS scale and Stroop test. Clinical symptoms in the healthy control group were assessed by the Stroop test

Results Decreased serum levels of SOCS3 ($p<0.05$), whereas increased IL-6 ($p<0.05$) in individuals with first-episode schizophrenia comparing to the healthy participant control. Serum levels of CRP and IL-1 β were elevated in first-episode schizophrenia patients, although the differences between two groups does not research the statistically significant ($p>0.05$). Additionally, first-episode schizophrenia patients exhibited significantly longer Word response time, Word-Color time and Color-Word time in the Stroop test compared to healthy control ($p<0.05$). Within the first-episode schizophrenia patients group, negative correlation was observed between serum levels of SOCS3 and scores for cognitive subscale in PANSS ($r=-0.247$, $p=0.031$),

whereas serum levels of IL-6 exhibited a positive correlation with Color time ($r=0.241$, $p=0.036$). The predictive value of serum SOCS3 levels for first-episode SCH was determined to be 0.719 (sensitivity 56.9%, specificity 80.6%, cut-off 273.9pg/ml), surpassing that of IL-6 (AUC=0.644, sensitivity 85.0%, specificity 25.3%, cut-off 1.105pg/ml)

Conclusion The findings suggest that this study generally support the notion of substantial immune dysfunction in individuals with schizophrenia. Notably, levels of serum SOCS3 and IL-6 exhibit more pronounced changes compared to CRP and IL-1 β , suggesting their potential utility in the early detection of first-episode schizophrenia. Additionally, SOCS3 demonstrates superior specificity in clinical prediction, underscoring the importance of investigating its role in the context of first-episode schizophrenia and exploring novel therapeutic interventions. Furthermore, there is a correlation between serum IL-6 and SOCS3 levels with executive function and cognitive impairment, respectively, suggesting potential implications for early prevention of schizophrenia through anti-inflammatory treatment and enhancement of patient survival outcomes. The pharmaceutical approaches targeting on SOCS3 signaling pathway could potentiate improving in the clinical outcomes and quality of life for the first-episode schizophrenia.

关键词: First-episode schizophrenia, SOCS3, IL-6, inflammatory, cognitive

血浆中 NPTX2 水平与精神分裂症患者的认知功能相关

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目的 精神分裂症 (schizophrenia, SCZ) 存在治愈率低、复发率高、总体预后差等临床难题, 核心在于缺乏有效且特异的客观生物学标记物, 严重阻碍 SCZ 精准诊疗的发展。认知障碍是精神分裂症的

核心临床表现, 突触是学习和记忆的生物学基础, 其功能缺陷在微观上影响突触传递, 宏观上影响大脑连通性, 是认知障碍的重要病理基础。神经元正五聚体蛋白家族 (Neuronal pentraxins, NPTXs) 包括 NPTX1、NPTX2 和 NPTXR, 在突触形成和突触可塑性发挥重要作用。因此检测 SCZ 患者治疗前后外周血突触损伤标记物表达水平的变化情况, 析其与临床严重程度及认知功能损害的关系, 为临床从突触损伤角度进行治疗提供理论依据, 在神经发育过程中起着至关重要的作用。

方法 1. 收集 148 例 SCZ 患者和 127 例健康对照 (healthy control, HC), 在基线期采集所有受试者外周血样本, 此外, 患者组在治疗 8 周后也需采集外周血样本。

2. 采用酶联免疫吸附法检测血浆中 NPTX2 的水平, 采用 Olink 蛋白质组学技术检测血浆中 NPTX1/NPTXR 的水平。治疗前后采用阳性和阴性症状量表 (PANSS) 评定临床症状及疾病严重程度, 采用 MCCB 评估 SCZ 患者的认知功能和使用 3.0-T 超导型 MRI 扫描仪采集常规 T1 结构像。

3. 采用 SPSS 26.0 进行统计分析。SCZ 和 HC 组间分析使用两独立样本 t 检验, 治疗前后使用两配对样本 t 检验, 两组数据相关性使用偏相关分析, 并进行 FDR 校正。

结果 1. 与 HC 相比, SCZ 患者血浆中 NPTX2 和 NPTXR 水平较低 ($p < 0.05$), NPTX1 水平无显著差异 ($p = 0.531$)。另外, 与基线期相比, SCZ 患者经过 8 周抗精神病治疗后 NPTX2 水平显著升高 ($p < 0.05$)。

2. 基线期血浆 NPTX2 水平与 SCZ 患者的言语流畅性测试 (信息处理速度) 得分呈正相关 ($r=0.272$, $p=0.005$), 且治疗后 NPTX2 水平的增加与言语流畅性测试得分的提高也呈正相关 ($r=0.204$, $p=0.040$)。

3. SCZ 患者 NPTX2 水平的增加与颞上回白质体积的减少呈负相关 ($p < 0.05$)。

结论 与 HC 相比, SCZ 患者血浆 NPTX2 水平较低, 但与基线期相比, SCZ 患者治疗后血浆 NPTX2 水平升高, 而且 NPTX2 表达的降低与认知功能障碍有关。因此, NPTX2 可能参与 SCZ 病理生理学机制, 是有价值的突触损伤相关生物标志物, 为新药研发提供了新靶点。未来需进一步探讨 NPTX2 在 SCZ 中的作用机制。

关键词: NPTX2; 精神分裂症; 认知; 突触

Effects on Multimodal Connectivity Patterns in Female Schizophrenia During 8 Weeks of Antipsychotic Treatment

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Objective Respective abnormal structural connectivity (SC) and functional connectivity (FC) are reported in patients with schizophrenia. However, the trans-modal associations between SC and FC following antipsychotic treatment, especially in female schizophrenia, remain unclear. We hypothesized that increased SC-FC coupling may be found in female schizophrenia, and that it could be normalized after treatment

Methods A total of 64 female drug-naive patients with first-episode schizophrenia treated with antipsychotic drugs for 8 weeks, and 55 female healthy controls (HCs) were included. SC and FC were analyzed by Network-Based Statistics. Non-zero SC-FC coupling at whole-brain level and at changing connectivity following treatment were calculated. Finally, elastic net logistic regression analysis was used to establish a predictive model to evaluate the clinical efficacy treatment

Results At baseline, significant differences in SC were observed in the cortical-subcortical-cerebellar circuitry between patients and HCs, with no abnormalities in FC. Following treatment, alterations in SC and FC were observed in cortical-subcortical-cerebellar circuitry, but there was no overlap between the two modalities. Besides, the SC-FC coupling of altered connectivity in female schizophrenia at baseline was higher than that in HC, showing a trend towards normalization after treatment. Furthermore, the identified FC or/and SC predicted changes in psychopathological symptoms and cognitive impairment in female schizophrenia after treatment

Conclusion Changes in SC, FC, and SC-FC coupling suggested the dissociation of brain connectivity by

modality in female schizophrenia. Cortical-subcortical-cerebellar circuitry might be potentially served as targets for antipsychotic drug therapy in female schizophrenia

关键词: Female schizophrenia, antipsychotic drugs, structural/functional connectivity, network, multimodal

The Co-varying Multimodal Pattern in Treatment-resistant and Non-treatment-resistant Schizophrenia

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Objective About one-third of individuals diagnosed with schizophrenia eventually progress to treatment-resistant schizophrenia (TR-SZ), where conventional treatments fail to alleviate symptoms. Despite its clinical significance, the underlying pathological mechanisms of TR-SZ remain largely unknown. This study aimed to identify a co-varying multimodal pattern that distinguishes among TR-SZ, non-treatment-resistant schizophrenia (NTR-SZ), and healthy controls (HCs) using unsupervised fusion. Additionally, it sought to explore the genetic background, correlation with clinical symptoms, and classification accuracy of this co-varying multimodal pattern

Methods This study included 63 TR-SZ individuals, 221 NTR-SZ individuals, and 86 HCs. Fractional amplitude of low-frequency fluctuation (fALFF), fractional anisotropy (FA), and gray matter volume (GMV) were used as fusion inputs. Subsequently, the study explored the relationship between the co-varying multimodal pattern and clinical symptoms. Additionally, it investigated gene expression data sourced from the Allen Human Brain Atlas database to potentially shed light on underlying biological mechanisms. Finally, the clas-

sification accuracy of the multimodal pattern distinguishing TR-SZ, NTR-SZ, and HCs was calculated

Results The study identified joint multimodal components (including fALFF_IC3, FA_IC12, GMV_IC9) that discriminate among TR-SZ, NTR-SZ, and HCs (TR-SZ<NTR-SZ<HCs), comprising the central executive network (CEN) and the salience network (SAN). Genetic enrichment analysis revealed that joint multimodal components were associated with genetics and highlighted genes such as RILPL2, PTPRF, MAPK3, and PLCH2. Moreover, these components correlated with cognitive scores, which were validated across three independent schizophrenia cohorts and could identify TR-SZ, NTR-SZ, and HCs

Conclusion The identified co-varying multimodal CEN and SAN could distinguish TR-SZ, NTR-SZ, and HC individuals with a genetic background, potentially elucidating the pathological mechanisms underlying disease severity in schizophrenia.

关键词: Schizophrenia, Treatment-resistance, Co-varying multimodal pattern, genetics

Depressive and Anxiety Symptoms Among Schizophrenia Patients

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Background Depressive and anxiety symptoms commonly manifested throughout the progression of schizophrenia. However, the prevalence of these symptoms, alongside their co-occurrence, remains uncertain, and clinical correlates remain elusive

Objectives This study seeks to investigate the prevalence of such symptoms and their demographic and clinical associations among patients diagnosed with schizophrenia. **Methods** Conducted as a cross-sectional study, the study encompassed a total of 19623 patients diagnosed with schizophrenia

Results The prevalence rates of depressive and anxiety symptoms, as well as their co-occurrence, were

determined to be 19% (95%CI=18.5-19.6%), 37.4% (95%CI=36.8-38.0%), and 17.7% (95%CI=17.2-18.2%), respectively. Notably, a lower prevalence of depressive and anxiety symptoms, and their co-occurrence, was observed among patients prescribed quetiapine, olanzapine, and risperidone ($P<0.01$). Spearman's correlation analysis revealed a significant correlation between depressive symptoms and anxiety symptoms ($r=0.60$, $P=0.006$). Furthermore, age, social relationships, and sleep status exhibited associations with depressive and anxiety symptoms, as well as their co-occurrence, in both univariate and multivariate analyses

Conclusion Given the pervasive nature and detrimental consequences of these symptoms among individuals diagnosed with schizophrenia, comprehensive evaluation and implementation of efficacious interventions are highly recommended

关键词: depressive symptoms, anxiety symptoms, schizophrenia, co-occurring disorders, prevalence

Preliminary Investigation of The Human Gut Virome in First-episode Schizophrenia Through Metagenomic Sequencing

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Objective The gut microbiome is increasingly recognized in schizophrenia research, yet the viral components have been less explored. Despite some studies have explored the potential connections between gut bacteria and schizophrenia, the alterations in the gut virome and their association with schizophrenia remain less understood To bridge this gap, we used metagenomic sequencing on stool samples from first-episode schizophrenia patients and matched healthy controls to examine the diversity and composition of the gut virome, aiming to identify viral patterns associated with early stages of schizophrenia

Methods We conducted metagenomic sequencing on fecal samples from 49 first-episode schizophrenia patients and 49 matched healthy controls to compare

virome diversity and taxonomic distribution. Multivariable association analysis (MaAsLin2) was utilized to identify differentially abundant viral taxa while controlling for confounders such as age, gender, and BMI. We further applied machine learning techniques, specifically Extreme Gradient Boosting (XGBoost), with five-fold cross-validation to evaluate the predictive power of the virome signatures, assessing model performance through metrics like the Area Under the Curve (AUC) and accuracy, thereby determining the most influential viral predictors of schizophrenia onset

Results Schizophrenia patients exhibited a significant reduction in gut viral alpha diversity compared to healthy controls, particularly viral richness at elevated taxonomic levels, as measured by the Chao1 at the species level ($p=0.006$). This decrease in richness was more pronounced in female patients. The MaAsLin2 analysis revealed differential abundances in 15 viruses between the schizophrenia group and controls. Notably, Weissella phage, crAssphage and Klebsiella pneumoniae phage which correlated with inflammatory conditions, were found significantly decreasing in patients with schizophrenia after covariate controlling. Furthermore the XGBoost model demonstrated strong predictive accuracy with the AUC of 0.828 and accuracy of 0.745 in distinguishing the patients and healthy controls. Within this model, Weissella phage ranked as the most significant viral predictor of schizophrenia

Conclusion This study offers initial insight into the role of gut virome in schizophrenia, highlighting significant compositional changes and potential functional impacts related to the onset of schizophrenia

关键词: Gut virome, Schizophrenia, Microbiome, Bacteriophage

Clinical Correlates of Autism Features in Initial-treatment and Drug-naïve Patients with Schizophrenia

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Objective Schizophrenia (SCZ) with autism features (AF) is considered a distinct subtype of schizophrenia. The aim of this study was to explore the prevalence of AF in initial-treatment and drug-naïve (ITDN) schizophrenia (SCZ) patients, as well as the factors influencing AF

Methods The study included a total of 710 patients with ITDN SCZ. We collected sociodemographic data and general clinical information about the patients and performed a clinical psychological assessment to quantify their psychopathology and disease severity. Additionally, we calculated the severity of AF in patients based on psychopathology scores

Results The percentage of SCZ patients with AF was 19.01% (135/710). Patients with AF exhibited higher thyroid stimulating hormone (TSH) ($t = -4.54, p < .001$) levels and lower free triiodothyronine (FT3) and free tetraiodothyronine (FT4) levels ($t = 2.38, p = 0.018$; $t = 3.19, p = 0.002$) compared to patients without AF. Binary logistic regressions show that: waist circumference (WC) ($B = 0.03, p = 0.022, OR = 1.03$) and TSH level ($B = 0.54, p < .001, OR = 1.71$) were risk factors for AF, while low density lipoprotein cholesterol (LDL-C) level ($B = -0.43, p = 0.025, OR = 0.65$), fasting blood glucose (FBG) level ($B = -0.72, p = 0.013, OR = 0.49$), FT3 level ($B = -0.32, p = 0.034, OR = 0.73$), and FT4 level ($B = -0.08, p = 0.025, OR = 0.93$) were protective factors. Multiple linear regression identified FT3 level ($B = -0.85, t = -2.22, p = 0.028, 95\%CI: -1.61--0.09$) was a protective factor affecting the severity of AF

Conclusion This paper reports on the prevalence of AF in the target population and identifies factors influencing the development and severity of AF. The discernment of these distinctive clinical features facilitates the formulation of tailored prevention strategies and interventions for this precise subset of SCZ patients.

关键词: Autistic features, Schizophrenia, Initial-treatment, Drug-naïve, Thyroid function

早期精神病患者听觉失匹配负波缺陷及其连通性研究

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目的 比较 fMMN、dMMN 振幅、不同刺激下 MMN 时频指标以及连通性在早期精神病中的缺陷程度以及相关性。

方法 收集 67 例首发精神分裂症 (first-episode schizophrenia, FES) 和 39 例临床高危 (clinical high risk for psychosis, CHR) 个体, 以及 39 例健康对照 (healthy control, HC)。采用 EGI 128 导联的高密度脑电设备 (Electrical Geodesics, Inc, Oregon, USA) 采集受试者脑电数据, 使用时域和时频分析分别提取 MMN 指标, 使用工具包 gretna 计算 MMN 连通性, 使用方差分析对各组 MMN 指标进行比较, 使用相关性分析研究各指标间的相关性。

结果 1. MMN 振幅受损结果: 与 HC 相比, fMMN 振幅受损只发现于 FES 组, 达到中区分效应 ($p < 0.01$, Cohen's $d = 0.67$), CHR 组的 fMMN 振幅与其余两组均未达到统计学差异; 与 HC 相比, dMMN 振幅在 FES ($p < 0.001$, Cohen's $d = 0.82$) 及 CHR 中 ($p < 0.01$, Cohen's $d = 0.73$) 均受损, 均具有较大区分效应, FES 与 CHR 之间的 dMMN 振幅无统计学差异。

2. 连通性结果: 与 HC 相比, 标准刺激 alpha 加权相位延迟指数 (weighted phase-lag index, wPLI) 在 FES 组显著增加, 连通性增强的脑区大部分集中于右侧前额叶与左侧后顶叶之间, 以及双侧顶叶之间。CHR 组的 wPLI 介于 FES 组和 HC 组之间, 但是均未与二者达到统计学差异。

3. 相关性分析结果: 在 HC 中, wPLI 与标准刺激 alpha 试次间相位一致性 (Inter-trial phase synchrony, ITPS) 呈负相关 ($p < 0.05$, $r = -0.36$); 在 FES 中, wPLI 与 fMMN 振幅 ($p < 0.05$, $r = -0.25$) 以及标准刺激 alpha ITPS ($p < 0.01$, $r = -0.29$) 均呈负相关。

结论 MMN 振幅在 FES 及 CHR 个体中均受损, 具有中至大的效应量, 提示 MMN 振幅是识别早期精神病的潜在生物标志。早期精神病的 MMN 连通性呈现“超连接”现象, 或许与大脑功能代偿有关, 且大脑连通性的增加与 MMN 相关指标的降低有关, 提示早期精神病患者局部脑区功能障碍的同时伴有脑区之间连接的代偿性增强。

关键词: 早期精神病 失匹配负波 事件相关电位 连通性分析

Intermittent Theta Burst Stimulation For Negative Symptoms in Schizophrenia Patients With Mild Cognitive Impairment: A fNIRS Study

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Objective This study aims to evaluate the intervention effect of intermittent Theta burst stimulation (iTBS) on bilateral dorsomedial prefrontal cortex (DMPFC) for negative symptoms in schizophrenia using functional near-infrared spectroscopy (fNIRS) in order to confirm the therapeutic significance of DMPFC in treating negative symptoms and provide new evidence for the treatment and research of negative symptoms in schizophrenia.

Methods 39 schizophrenia patients with negative symptoms and mild cognitive impairment were randomly divided into a treatment group ($n = 20$) and a control group ($n = 19$). The treatment group received iTBS on bilateral DMPFC. Negative symptoms, cognitive function, emotional state, and social function were assessed using PANSS, SANS, MoCA, CDSS, and SDSS at pre-treatment, post-treatment, 4-, 8-, and 12-week follow-ups. Brain activation in regions of interest (ROIs) was evaluated through verbal fluency tasks (VFT). Changes in scale scores were analyzed by repeated measures ANOVA

Results After 20 sessions of iTBS, SANS total and subscale scores significantly improved in the treatment group, with statistically significant differences. Negative symptom scores differed significantly between pre- and post-treatment in both groups, with post-treatment scores markedly lower than pre-treatment and better efficacy in the treatment group. However, differences in MoCA, CDSS, and SDSS scores were not statistically significant. ROIs did not differ significantly between groups before intervention. After treatment, prefrontal cortex (PFC) activation was significantly higher in the treatment group than in controls, with a

statistically significant difference. Regarding functional connectivity, inter-ROI connectivity improved to some extent, and small-world properties Sigma and Gamma were enhanced

Conclusion iTBS on bilateral DMPFC can effectively alleviate negative symptoms and enhance PFC activation and functional connectivity in schizophrenia patients

关键词: Intermittent Theta Burst Stimulation(iTBS); Negative symptoms ;Schizophrenia ; Dorsomedial prefrontal cortex (DMPFC); Functional near-infrared spectroscopy (fNIRS)

伴有和不伴有认知功能障碍的精神分裂症患者的认知相关功能、脑源性神经营养因子及脑电图 γ 活动的相关研究

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目的 通过量表评估、认知功能测试以及相关生物学指标了解伴有认知功能障碍的精神分裂症患者与不伴有认知功能障碍的精神分裂症患者之间的差异。

方法 研究纳入了 116 例受试者, 根据其 MMSE 量表评分结果分为对照组 (>24 分) 和观察组 (≤ 24 分)。获得对照组 32 例受试者, 观察组 84 例受试者。对照组和观察组分别有 2 例和 9 例受试者拒绝抽血检查, 故血清 BDNF 浓度水平检测结果为对照组 30 例, 观察组 75 例。利用 PANSS 量表对两组进行评分, 利用认知功能测试(连线测验、符号编码、言语记忆、数字序列)对所有受试者进行评估。抽取静脉血用以通过 ELISA 测定血清 BDNF 浓度水平, 通过脑电图检查观察受试者是否存在 γ 活动。根据脑电图 γ 活动的发生与否再将观察组受试者分为阳性组 (n=44) 和阴性组 (n=40), 观察相关结果指标。

结果 两组受试者在连线测验用时 ($Z=-6.566$, $P<0.001$)、符号编码测试完成数 ($Z=-4.324$, $P<$

0.001)、言语记忆完成数 ($Z=-7.077$, $P<0.001$)、数字序列完成数 ($Z=-5.416$, $P<0.001$) 的结果比较中有显著差异; 在脑电 γ 活动发生率 ($\chi^2=5.494$, $P=0.019$)、血清 BDNF 浓度 ($t=6.352$, $P<0.001$) 的比较中, 两组受试者的结果存在显著差异。观察组受试者的血清 BDNF 含量与连线测验所用时间呈负相关 ($r=-0.447$, $P<0.001$), 与符号编码完成数 ($r=0.321$, $P=0.005$)、言语记忆完成数 ($r=0.308$, $P=0.007$)、数字序列完成数 ($r=0.330$, $P=0.004$) 分别呈正相关; 脑电图 γ 活动的发生与 PANSS 量表评分阳性分 ($r=0.323$, $P=0.003$)、PANSS 量表总分 ($r=0.249$, $P=0.022$) 呈正相关; Logistic 回归分析结果发现: 服药量对脑电图 γ 活动的发生的影响具有统计学意义 ($OR=0.996$, $95\%CI 0.993, 1.000$, $P=0.045$); PANSS 量表总分评分对脑电图 γ 活动的发生的影响具有统计学意义 ($OR=1.035$, $95\%CI 1.010, 1.061$, $P=0.007$)。

结论 在精神分裂症患者, 血清 BDNF 浓度水平与认知功能状态存在较明显的关联, 观察组的血清 BDNF 浓度水平明显低于对照组; 脑电 γ 活动的发生与阳性精神病性症状存在相关性, 更高的阳性精神病性症状评分意味着更高的脑电 γ 活动发生率。

关键词: 精神分裂症, 认知功能障碍, 脑源性神经营养因子, 脑电图 γ 活动

Abnormalities in Cognitive-related Functional Connectivity Can Be Used To Identify Patients with Schizophrenia and Individuals in Clinical High-risk

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Objective Clinical high-risk (CHR) has similar

but milder cognitive impairments and brain abnormalities compared with first-episode schizophrenia (FSZ), and these alterations may increase vulnerability to transitioning to the disease. This study aims to examine cognitive-related functional connectivity (FC) to explore differences in the progression of schizophrenia

Methods Thirty drug-naive FSZ patients, 28 CHR individuals, and 30 healthy controls (HCs) were recruited to undergo resting-state functional magnetic resonance imaging (rs-fMRI). Connectome-based predictive modeling (CPM) was employed to extract cognitive-related brain regions. The most relevant regions were selected as seeds to form FC networks. The support vector machine (SVM) was used to distinguish FSZ patients from CHR individuals

Results FSZ group displayed decreased cognitive-related FC between the right posterior cingulate cortex (PCC) and right superior frontal gyrus (SFG) compared with HC group and between the right amygdala and left inferior parietal gyrus (IPG) compared with CHR group. SVM results showed that the Brief Assessment of Cognition in Schizophrenia-Symbol Coding (BACS-SC) and Category Fluency Test-Animal (CFT-A) scores combined with FC between the right PCC and right SFG could be a reliable biomarker to discriminate FSZ patients from HCs and a combination of the BACS-SC and CFT-A scores, and FC between the right amygdala and left IPG could serve as a potential biomarker for distinguishing FSZ patients from CHR individuals with high sensitivity

Conclusion FSZ and CHR individuals exhibited different patterns of cognitive-related FC. Our findings illustrate potential neuroimaging and cognitive markers for early identification of psychosis that could help in the intervention of schizophrenia in high-risk groups.

关键词: Cognitive function, Clinical high-risk, Schizophrenia, Connectome-based predictive modeling (CPM), Least Absolute Shrinkage and Selection Operator (Lasso)

Targeted Intermittent Theta Burst Stimulation (iTBS) Restores Aberrant Hippocampal-

prefrontal Functional Connectivity in Schizophrenia

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Objective The hippocampal-prefrontal functional interaction is disrupted in schizophrenia and contributes to associative memory impairment. Intermittent theta burst stimulation (iTBS) of repetitive transcranial magnetic stimulation (rTMS) is a non-invasive neuromodulation technique which can modulate memory network connectivity. Here, we conducted a randomized controlled double-blinded clinical trial to investigate the effect of iTBS on the hippocampal-prefrontal functional connectivity (FC) in patients with schizophrenia and to assess the correlations between FC changes and associative memory or symptoms

Methods Subjects with schizophrenia were randomly allocated into three groups: right dorsal lateral prefrontal cortex (DLPFC) group (n=12), left lateral parietal cortex (LPC) group (n=17) or sham group (n=15). Anatomical T1-weighted images were obtained to identify a subject-specific right DLPFC or left LPC target for iTBS. Clinical symptoms (PANSS) and innovative associative memory tasks were assessed at baseline and shortly after 20-session iTBS treatment (one session per day, 5 days per week for 4 weeks; MagVenture MagPro X100). The innovative associative memory task asked subjects to learn and memorize the pairs of non-verbal sounds or abstract pictures (visual-visual, auditory-auditory, visual-auditory); then they were asked whether the pairs presented in the testing phase were rearranged.

All participants were scheduled for another structural and resting-state fMRI on a Siemens 3.0T scanner by the end of the trial. Brain regions were demarcated by the automated anatomical labeling (AAL3v) atlas. After preprocessing, hippocampus seed-based FC analyses were performed and Fisher's Z-transformed correlation coefficients were calculated for each pair of regions to represent FC (cluster threshold, $P < 0.05$ cluster-size family-wise error (FWE) corrected). Pearson's correlation analyses were conducted between the FC changes and PANSS score reduction and between the FC changes and the AM task performance improvement (d' score)

Results In the left LPC active group, we found evidence of enhanced FC between left hippocampus and the clusters in the medial prefrontal cortex (mPFC), including right anterior cingulate cortex (ACC), bilateral medial orbital superior frontal gyrus, bilateral rectus, bilateral medial orbital gyrus, and left anterior orbital gyrus (cluster size=108; FWE-cluster corrected $p < 0.001$; within-subject comparisons; baseline vs post-iTBS). We found no evidence of hippocampal FC change in the right DLPFC active group or sham group (within-subject comparisons; baseline vs post-iTBS). FC changes from the left hippocampus to the right ACC showed a significant positive correlation with changes in cross-modal associative memory functions (visual-auditory task; $r=0.714$, $p=0.009$) and a significant positive correlation with PANSS positive reduction rate ($r=0.613$, $p=0.015$)

Conclusion Targeted intermittent theta burst stimulation (iTBS) of the LPC can restore aberrant hippocampal-prefrontal FC in schizophrenia, which is closely related to reduced positive symptoms and improved associative memory performance, i.e. better multisensory information integration ability. Our findings suggest a complex interplay between iTBS and hippocampal-prefrontal memory network connectivity. Further study uncovering the pathological mechanisms of associative memory deficit is required to develop more effective iTBS treatment strategies for schizophrenia.

关键词: Schizophrenia, intermittent theta burst stimulation (iTBS), repetitive transcranial magnetic

stimulation (rTMS), cross-modal associative memory, functional connectivity

Disrupted Default Mode Network Connectivity and Its Role in Predicting Symptom Severity in Schizophrenia Using Connectome-Based Predictive Modeling

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Objective This study investigates the abnormalities in the default mode network (DMN) and its connectivity in schizophrenia patients and explores the use of connectome-based predictive modeling (CPM) to predict the severity of both positive and negative symptoms

Methods Resting-state functional MRI (rs-fMRI) data from 47 schizophrenia patients and 45 healthy controls were analyzed. Graph theory was applied to assess the topological properties of the DMN. CPM was employed to predict symptom severity based on DMN connectivity patterns, utilizing the Scale for Assessment for Positive Symptoms (SAPS) and the Scale for the Assessment of Negative Symptoms (SANS). The analysis focused on identifying key connectivity patterns within the DMN and their correlation with clinical symptoms

Results Schizophrenia patients exhibited significant abnormalities in the global and local topological properties of the DMN, particularly reduced efficiency and disrupted connectivity within the medial temporal lobe (MTL) subsystem. CPM analysis revealed that positive network connectivity patterns within the DMN could reliably predict the severity of negative symptoms, including avolition and anhedonia, as measured by SANS scores. However, these connectivity patterns did not predict the severity of positive symptoms such as hallucinations and delusions, as measured by SAPS scores

Conclusions The study highlights the potential of DMN topological metrics and CPM as biomarkers for

negative symptom severity in schizophrenia. The findings suggest that the disrupted connectivity within the MTL subsystem of the DMN plays a crucial role in the manifestation of negative symptoms. These insights underscore the need for further research into personalized treatment approaches that target specific connectome abnormalities. This study contributes to a better understanding of the neural underpinnings of schizophrenia and supports the development of more effective diagnostic and therapeutic strategies

关键词: schizophrenia, default mode network, graph theory, connectome-based predictive modeling, positive symptoms, negative symptoms

Basal Ganglia Subregion Volume Changes between Acute-phase Schizophrenia and Bipolar Disorder

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Objective Schizophrenia (SCZ) and bipolar disorder (BD) are two severely debilitating mental illnesses with significant overlap in diagnosis, pathophysiology, and genetic levels. This may be due to the existence of similar biological backgrounds for both disorders. The similar biological backgrounds make it challenging to provide accurate diagnosis and appropriate treatment for both diseases, especially when psychiatric symptoms are present. Therefore, it is meaningful to search for imaging evidence that can be used to distinguish between the two disorders in the presence of these symptoms

Methods This study included 90 patients with SCZ, 60 patients with bipolar disorder without psychotic symptoms (P-BD), 22 patients with bipolar disorder with psychotic symptoms (NP-BD), and 100 healthy control subjects (HC), who all underwent struc-

tural magnetic resonance imaging (MRI) scans. Covariance analysis was performed using SPSS 26.0 to compare the differences in basal ganglia volume between the SCZ group, P-BD group, and HC group, as well as between the P-BD group, NP-BD group, and HC group. Finally, a correlation analysis was conducted between regions of interest and the cumulative dose of antipsychotic medications

Results Using age and gender as covariates, comparing the volumes of interest among the SCZ group, P-BD group, and HC group through covariance analysis, the results showed significant differences in the volumes of the left putamen ($F=6.511$, $P=0.002$), right putamen ($F=5.416$, $P=0.005$), left pallidum ($F=29.920$, $P<0.001$), and right pallidum ($F=12.513$, $P<0.001$). Post-hoc analysis results showed that the left putamen volume was larger in the SCZ group compared to the HC group, and the bilateral pallidum volumes were larger in the SCZ group compared to both the P-BD group and HC group. The same method was used to compare the volumes of interest among the P-BD group, NP-BD group, and HC group, and the results showed significant differences in the volumes of the left pallidum ($F=6.776$, $P=0.001$) and right putamen ($F=9.930$, $P<0.001$). Post-hoc analysis results showed that the left pallidum volume was larger in the NP-BD group compared to the HC group, and the right putamen volume was smaller in both the P-BD group and NP-BD group compared to the HC group. Correlation analysis showed a significant negative correlation between cumulative antipsychotic medication dose and volume of the bilateral caudate nucleus and bilateral accumbens, and a significant positive correlation between the volume of the bilateral pallidum

Conclusion By comparing the volumes of subregions in the basal ganglia in the acute phase of patients with different diseases within a five-year course, the results showed significant differences in subregion volumes associated with psychiatric symptoms across different diseases. However, within the same disease, these differences were not evident, although the observed intergroup differences may partly be attributed to exposure to antipsychotic medications. We observed signifi-

cant differences in the right putamen and bilateral pallidum areas in the comparison of different disease groups, providing a reference basis for distinguishing between SCZ and P-BD. Additionally, this also provides further evidence for the pathological models explaining psychiatric symptoms.

关键词: schizophrenia; bipolar disorder; psychiatric symptoms; MRI; basal ganglia

女性精神分裂症患者药物治疗前后的多模态磁共振研究

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目的 本研究分析女性精神分裂症患者在抗精神病药物治疗后出现的灰质体积与功能连接变化,寻找能够反映女性精神分裂症疗效的客观指标。同时,将女性患者的脑影像与女性正常人群进行比较,观察抗精神病药物是否能使女性精神分裂症患者的脑影像更接近正常人群。

方法 本研究纳入了 38 名女性精神分裂症患者,40 名正常女性。所有被试在基线完成 3.0T 磁共振扫描(3D-T1 结构像及静息态功能像),患者组在 8 周的抗精神病药物治疗后再次完成 3.0T 磁共振扫描。采用基于体素的形态学测量方法计算灰质体积。采用两样本 t 检验,分别比较治疗前患者组与对照组、治疗后患者组与对照组的灰质体积差异。采用配对样本 t 检验,比较患者组治疗前、后的灰质体积差异。将患者组治疗前、后存在显著灰质体积改变的脑区作为种子点,计算与全脑其他脑区的静息态功能连接。采用配对 t 检验,比较患者组治疗前、后的功能连接变化。

结果 从灰质体积来看,患者组治疗前双侧扣带回,左侧的颞下回、颞中回、辅助运动区等脑区的灰质体积较对照组更小。8 周抗精神病药物治疗后,患者组双侧豆状壳核灰质体积大于对照组,而双侧小脑等脑区的灰质体积小于对照组。与治疗前自身对比,患者组治疗后右脑豆状壳核的灰质体积增大,而双侧的颞下回、颞上回、脑岛和左侧的颞中回、内侧额上回等脑区的灰质体积减少。从功能连接来看,与对照组相比,患者组在治疗前、后均存在广泛的

功能连接降低。患者组治疗后右脑岛,右脑豆状壳核,左脑颞中回,左脑颞上回与多个脑区的功能连接较治疗前下降。相关性结果表明,治疗前患者组的右脑豆状壳核灰质体积与基线的 PANSS 总分、一般精神病量表分呈负相关。治疗后患者组的双侧脑岛灰质体积较治疗前的减少量则与一般精神病量表分的减分率呈负相关。未发现功能连接与临床量表得分之间的显著相关性。

结论 8 周抗精神病药物治疗未能改善女性精神分裂症患者大脑广泛的灰质体积减少和功能连接降低。8 周抗精神病药物治疗可能促进女性精神分裂症患者的小脑灰质体积减少,然而,8 周抗精神病药物治疗没有逆转小脑与其他脑区的功能连接降低。女性精神分裂症患者中,右脑豆状壳核可能是与抗精神病药物治疗有关的重要脑区,右脑豆状壳核灰质体积越小,患者的临床精神病性症状越严重。脑岛灰质体积可能是女性精神分裂症患者潜在的疗效评价指标,脑岛的灰质体积减少程度可能与临床症状改善相关。

关键词: 精神分裂症,灰质体积,功能连接

Berberine Intervenes To Alleviate Olanzapine-induced Glucose Metabolism Disorders in Patients with Schizophrenia Through IL-8 Intervention

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Objective Schizophrenia is a complex psychiatric disorder for which olanzapine therapy is a common treatment, but is frequently associated with the adverse effects of disturbed glucose metabolism. Interleukin 8 (IL-8), a chemokine involved in systemic immunity, macrophage infiltration and activation in adipose tissue, may play an important role in the pathogenesis of olanzapine-induced pharmacological glucose metabolism disorders. The aim of this study was to investigate the role of berberine intervention in the treatment of plasma IL-8 as well as related indicators of glucose metabolism disorders in patients with olanzapine-induced schizophrenia

Methods In this study, we recruited 20 patients with schizophrenia treated with single-agent olanzapine as a control group. Another 20 non-diabetic patients of comparable gender, age and BMI were recruited to take concomitant olanzapine combined with berberine 0.9 g/d as an intervention group. Clinical parameters and medical history were recorded and blood samples were taken for clinical testing of fasting and 2-hour postprandial blood glucose levels. Enzyme-linked immunosorbent assay was used to detect plasma IL-8 and insulin levels at baseline and week 4 in both groups. And the degree of glucose metabolism disorder was assessed according to the insulin resistance index

Results 1) Compared with the baseline period, in the control group, there was no significant increase in fasting blood glucose, but plasma IL-8, 2-hour postprandial blood glucose, insulin, and insulin resistance index were significantly increased. In the experimental group, there was no significant change in the indexes compared to the baseline period. 2) After 4 weeks of intervention, in the comparison between the two groups, there was no significant increase in fasting blood glucose in the control group, but plasma IL-8, 2-hour postprandial blood glucose, insulin level and insulin resistance index were significantly increased

Conclusion 1) Berberine significantly reduced the level of IL-8, 2-hour postprandial glucose, insulin, and insulin resistance due to olanzapine, which provides theoretical basis and data support for berberine combined with olanzapine to improve insulin resistance. And further studies are necessary to assess the degree of risk of IL-8 as a risk for olanzapine-induced glucose metabolism disorders in patients with schizophrenia, and the possibility of further use as a marker. 2) Berberine may be a promising approach to intervene in olanzapine-induced glucose metabolism disorders in schizophrenic patients. The mechanism of this intervention may involve modulation of IL-8, which plays a crucial role in regulating metabolic processes. Future studies need to further elucidate the possible molecular mechanisms of berberine and explore its potential as an adjunctive therapy for schizophrenia and other psychiatric disorders accompanied by metabolic abnormalities.

关键词: berberine; olanzapine; schizophrenia; insulin resistance; interleukin-8

精神分裂症患者及精神病临床高危人群工作记忆和反应抑制的功能磁共振研究

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目的 采用功能磁共振成像技术比较首发精神分裂症患者 (First episode of schizophrenia, FES)、精神病临床高危个体 (Clinical high risk for psychosis, CHR) 及健康对照 (healthy controls, HC) 三组受试者在完成工作记忆和反应抑制任务时相关脑功能活动的差异。

方法 采集 48 例 FES、31 例 CHR 和 69 例 HC 的一般人口学、临床及神经认知数据, 并对所有受试者进行工作记忆任务 (N-back 任务) 态及反应抑制任务 (Stroop 任务) 态下的功能磁共振扫描。首先, 以反应时和正确率为计算指标, 采用方差分析比较三组间行为水平认知能力的差异。然后, 以年龄、性别和受教育年限为协变量, 采用协方差分析的方法分别检测三组受试者在完成不同任务时脑区激活的差异。最后, 针对不同任务, 以激活区检测呈现显著组间差异的脑区为感兴趣脑区, 采用心理生理交互作用 (PsychoPhysiological Interactions, PPI) 分析方法探究三组间与任务相关的功能连接的差异。

结果 1、N-back 任务

(1) 行为水平的认知能力: 三组受试者在正确率上存在具有统计学意义的差异, 事后分析发现 HC 组的正确率显著高于 FES 组及 CHR 组。

(2) 激活区检测: 三组受试者在右侧顶下小叶的激活存在具有统计学意义的差异。事后分析发现, 与 HC 组及 CHR 组相比, FES 组右侧顶下小叶的激活显著增强。

(3) 功能连接: 六个脑区与右侧顶下小叶的功能连接存在具有统计学意义的组间差异, 这六个脑区包括左侧中央后回、后扣带回皮层、左侧楔前叶、右侧楔前叶、右侧额上回和左侧额上回。事后分析虽然发现了一些两两组间的差异, 但均未达到具有统计学意义的显著水平。

2、Stroop 任务

(1) 行为水平的认知能力: 三组受试者在反应时上存在具有统计学意义的差异, 事后分析发现 FES 组的反应时显著高于 HC 组。

(2) 激活区检测: 三组受试者在内侧和旁扣带回皮层、左侧楔前叶和左侧丘脑存在具有统计学意义的差异。事后分析发现, 与 FES 组相比, HC 组在以上三个脑区的激活均显著增强; 与 CHR 组相比, HC 组在内侧和旁扣带回皮层及左侧楔前叶的激活显著增强。

(3) 功能连接: 未发现三组间具有统计学意义的 PPI 差异。

结论 FES 和 CHR 存在不同程度的行为水平认知能力缺陷。在工作记忆和反应抑制进程中, FES 和 CHR 脑功能活动的异常主要体现在局部脑功能活动上, 且 FES 异常的范围更广泛, 而 FES 和 CHR 两组间脑功能活动的差异即包括局部脑功能活动又包括脑区间的功能连接, 上述结果所涉及的脑区主要位于额顶网络和默认网络内。

关键词: 精神分裂症, 精神病临床高危, 工作记忆, 反应抑制, 功能磁共振成像

血浆微小 RNA-193a-3p 表达水平对奥氮平治疗精神分裂症疗效的预测价值

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目的 探讨血浆微小 RNA-193a-3p (miR-193a-3p) 表达水平预测奥氮平治疗精神分裂症疗效的价值。

方法 纳入本院 2021 年 6 月至 2023 年 12 月收治的 78 例奥氮平单药治疗的精神分裂症患者为研究对象, 连续观察 4 周, 疗效评定采用阳性与阴性症状量表(PANSS), 按 PANSS 减分率 $\geq 50\%$ 和 $< 50\%$, 分为有效组和无效组。血浆 miR-193a-3p 表达水平检测采用实时荧光定量 PCR 法。

结果 奥氮平治疗后血浆 miR-193a-3p 相对表达量较治疗前明显下调 ($t=12.112$, $P<0.05$)。血浆 miR-193a-3p 表达水平下调量与 PANSS 量表阳性症状评分、阴性症状评分、一般精神病理症状评分及总分减分值呈正相关 ($r=0.298, 0.351, 0.384, 0.465$,

均 $P<0.05$)。ROC 曲线分析显示, 血浆 miR-193a-3p 相对表达量下调预测奥氮平治疗精神分裂症疗效的 AUC 为 0.8278 (95% CI: 0.7385-0.9197), 灵敏度为 68.8%, 特异度为 83.3%。生物信息学分析表明, miR-193a-3p 预测靶基因参与多种与神经系统功能密切相关的生物学过程, 富集于轴突引导、神经营养信号通路、ErbB 信号通路、PI3K-Akt 信号通路。

结论 血浆 miR-193a-3p 表达水平一定程度上可以预测奥氮平治疗精神分裂症的临床疗效。

关键词: miR-193a-3p, 精神分裂症, 奥氮平, 临床疗效

Diminished Functional Segregation and Resilience Are Associated with Symptomatic Severity and Cognitive Impairments in Schizophrenia: A Large-Scale Study

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Objective Inconsistencies and contradictions have characterised findings on the topological properties of the functional connectome (TP-FCs) in schizophrenia patients (SZPs). These discrepancies can be attributed to constraints such as small sample sizes and heterogeneous data processing techniques. To remedy these limitations, we conducted a large-scale study. Uniform data processing flows were employed to investigate the aberrant TP-FCs and associations between TP-FCs and symptoms or cognitions (A-TP-SCs) in SZPs

Methods The large-scale study included six datasets from four sites, involving 497 SZPs and 374 healthy controls (HCs). A uniform process for imaging data preprocessing and functional connectivity matrix configuration was used. ComBat was employed for data harmonization, and various TPs were calculated. We explored between-group differences in brain functional integration (FI) and functional segregation (FS) measured with TP-FCs, and conducted partial correlation analyses, with adjustments for age, gender, and educational level, to identify A-TP-SCs

Results Compared with random networks and HCs, SZPs maintained small-worldness and global FI capacity despite their compromised global FS capacity and resilience. A decline in nodal FI and FS capacity was observed in sensory areas, whereas an increase in nodal FI capacity was found in regions associated with cognition and information integration. In addition, associations between TP-FCs and positive symptoms, negative symptoms, or cognitive functions including speed of processing, visual learning, and the ability to inhibit cognitive interference were identified in SZPs

Conclusion Identified A-TP-SCs verify that reductions in FS and resilience indicate pathological impairments in schizophrenia. The A-TP-SCs or TP-FCs, which measure the same attributes of the functional connectome, exhibited high internal consistency, robustly reinforcing these findings.

关键词: topological properties; functional connectome; schizophrenia; cognitive functions; functional integration; functional segregation

Association of Serum Interleukin-6 with Negative Symptoms in Stable Early-onset Schizophrenia

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Objective Accumulating evidence suggests that the inflammatory cytokine interleukin-6 (IL-6) contributes to the pathophysiology of psychiatric disorders. The purpose of the current study was to investigate the relationship between serum IL-6 concentration and the clinical features of early-onset schizophrenia (EOS). Therefore, this study investigated the relationship between serum IL-6 concentration and clinical features of EOS

Methods We measured serum IL-6 levels from 74 patients with chronic schizophrenia, including 33 with age at onset < 21 years [early-onset schizophrenia (EOS) group] and 41 with onset \geq 21 years in [adult-onset schizophrenia (AOS) group], and from 41 healthy

controls. Symptom severities were evaluated using the Positive and Negative Syndrome Scale (PANSS). Exploratory factor analysis yielded a two-factor structure of negative symptoms. The first factor, expressive deficits, consisted of PANSS items N1, N3, N6, G5, G7, and G13, while the second factor, avolition/asociality, consisted of PANSS items N2, N4, and G16. Serum IL-6 concentrations were measured using a BDTM FACSCanto Flow Cytometer and BDTM Cytometric Bead Array (CBA) Human Inflammatory Cytokines Kit

Results There was no significant difference in sex ratio and number of smokers among groups ($P > 0.05$). There were significant group differences in age, years of education, and BMI ($P < 0.05$), but neither years of education, duration of disease, nor CPZ equivalent dose differed between EOS and AOS groups ($P > 0.05$). According to the criterion for group stratification, age at schizophrenia onset was significantly older in the AOS group. Mean BMI was higher in the EOS group than the AOS group ($P < 0.05$), and so was included as a fixed effect covariate in subsequent analyses. Serum IL-6 concentrations were higher in both EOS and AOS groups than healthy controls ($F = 22.32$, $P < 0.01$), but did not differ significantly between EOS and AOS groups ($P > 0.05$) after controlling for age, body mass index, and other covariates. Negative symptom scores were higher in the EOS group than the AOS group ($F = 6.199$, $P = 0.015$). Serum IL-6 concentrations in the EOS group were negatively correlated with both total PANSS-negative symptom score ($r = -0.389$, $P = 0.032$) and avolition/asociality subscore ($r = -0.387$, $P = 0.026$). Furthermore, the correlation between total PANSS-negative score and serum log IL-6 concentration remained significant after controlling for age, years of education, BMI, smoking status, age of onset, duration of illness, and CPZ equivalence dose ($R^2 = 0.151$, $P = 0.025$). This association was also significant in stepwise multiple regression analysis ($R^2 = 0.150$, $P = 0.026$). In contrast, no such association was found between clinical factors and serum log IL-6 concentration in the AOS group

Conclusion Patients with early-onset schizophrenia may have more severe negative symptoms than those with adult-onset schizophrenia during the chronic

phase of the illness. IL-6 signaling may regulate negative symptoms and its avolition/asociality subsymptoms among the early-onset chronic schizophrenic patients

关键词: Early-onset schizophrenia; Interleukin 6; Negative symptoms; Avolition; Asociality

基于静息态功能连接体的神经特征预测精神分裂症的抗精神病药物疗效

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目的 在精准精神病学领域, 确定可靠的生物标志物以预测精神分裂症 (SZ) 患者对抗精神病药物治疗的个体化反应是一个挑战。因此, 本研究旨在探索基于静息态连接体的功能性神经特征, 作为潜在的生物标志物, 用于预测治疗反应。

方法 本研究在发现样本中收集了 105 例 SZ 患者的基线静息态功能磁共振 (rs-fMRI) 扫描数据, 并进行了为期 8 周的抗精神病药物治疗的临床随访。个体的治疗反应是根据阳性与阴性症状量表 (PANSS) 进行评估的。通过使用静息态功能连接 (FC) 和基于连接体的预测建模 (CPM), 来训练模型以预测精神量表评分的个体减分率。模型的性能评估采用留一交叉验证 (LOOCV) 计算预测减分率与真实减分率之间的 Pearson 相关系数, 并进行了 5000 次的置换检验以确定预测结果的显著性。P 值是根据排列分布中相关系数大于真实值的比例计算得出的。最后, 在一个类似设计的 52 例 SZ 患者的独立验证样本中, 对模型的可推广性进行了检验。

结果 研究结果显示, 基于 CPM 模型的静息态连接组特征能够显著预测 SZ 患者个体化治疗结果, 在发现样本中 (预测与真实的 $r = 0.59$, 均方误差 (MSE) = 0.021) 和验证样本中 (预测与真实的 $r = 0.41$, MSE = 0.036)。共有 12 个连接被选择为最终特征用于预测模型 (其中 4 个为阳性特征, 8 个为阴性特征)。阳性特征主要涉及顶叶、枕叶、基底节和小脑之间的连接, 而阴性特征主要涉及额叶、颞叶、顶叶、岛回、丘脑和小脑之间的连接。

结论 本研究发现了一种基于静息态连接体的功能特征, 这种特征有望成为预测 SZ 患者对抗精神病药物治疗个体化反应的指标。这一发现强调了该生物标志物在精准精神病学领域具有潜在的临床价值。

关键词: 精神分裂症, CPM 模型, 神经特征, 抗精神病药物

From Eye To Mind: Clinical Significance of Findings From Non-invasive Retinal Examinations in Patients with Schizophrenia

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Objective Schizophrenia is a severe chronic psychotic disease that leads to disability and higher risk of mortality. Throughout the course of disease, clinical evaluation remains challenging, because it solely depends on subjective methods such as reports from caretakers or interviews performed by clinicians. The need for reliable objective biomarkers to reflect disease state of schizophrenia is emerging. Lately, retinal changes as potential biomarkers of schizophrenia have gained much attention. The retina has the same embryonic origin as the cerebral, it exhibits similar pathological features as the brain in various diseases. Non-invasive inspection methods of the retina have developed rapidly in the past few decades. Retina optical coherence tomography (OCT) can provide rich structural information at spatial resolution of a few micrometers. Electroretinography (ERG), the electrophysiological examination of retina, could distinguish activity of different retinal neurons and even different neurotransmitters. The advancement in inspection methods enabled researchers to reveal retinal features of schizophrenic patients in aspects of structure, function and metabolism, which might serve as promising biomarkers in disease management. Thus, the aim of this review is to summarize findings of retinal changes from OCT and ERG examinations in schizophrenia and how they related to clinical features

Methods A systematic literature search of PubMed database was performed using the keywords schizophrenia, retina, electroretinogram, electroretinography, optical coherence tomography and/or optical coherence tomography angiography. The methods and major results from studies were summarized, tabulated and further discussed

Results Previous studies showed retinal structural, electrophysiological and perfusion changes in patients with schizophrenia. The most consistent OCT findings were thinner retinal nerve fiber layer (RNFL) and ganglion cell complex (GCC), lower macular volume and vessel density in patients. ERG findings reveal decreased amplitudes and increased latency of flash ERG waves under both scotopic and photopic conditions, as well as decreased photopic negative response (PhNR). In addition, retinal changes correlate with clinical features throughout the course of schizophrenia. In first-degree relatives of patients, GCC was found thinner than healthy controls. Decreased amplitudes and increased latency of flash ERG waves were also found, and correlated with their cognitive function. Patients with shorter disease duration mainly exhibited thinner GCC thickness and lower vascular density, while patients with longer disease duration exhibited profound RNFL thickness decrease. Symptom severity and overall symptom control of patients were correlated with RNFL thickness and GCC thickness. Antipsychotics dosage was correlated with RNFL thickness and macular thickness. Brain volume decrease as well as cognitive decline in patients were correlated with multiple retinal structures including RNFL and GCC. Comorbidity with metabolic disease would also affect RNFL thickness

Conclusion This review presents an overview of retinal changes in schizophrenia patients, and how these changes relate to clinical features of schizophrenia. We focus on how these findings can contribute to clinical practice in aspects of diagnosis, disease management and treatment, as well as highlight how retina abnormalities provide perspective for understanding the neuropathology of schizophrenia.

关键词: schizophrenia, retina, optical coherence

tomography, optical coherence tomography angiography, electroretinography

Immunoinflammatory Features and Cognitive Function in Treatment-Resistant Schizophrenia: Unraveling Distinct Patterns in Clozapine-Resistant Patients

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Objective Patients with treatment-resistant schizophrenia (TRS), particularly those resistant to clozapine (CTRS), pose a clinical challenge due to limited response to standard antipsychotic treatments. Inflammatory factors like tumor necrosis factor-alpha (TNF- α), interleukin 2 (IL-2), and interleukin 6 (IL-6) are implicated in schizophrenia's pathophysiology. Our study examines cognitive function, psychopathological symptoms and inflammatory factors in TRS patients, focusing on differences between CTRS and non-CTRS individuals, as well as healthy controls

Methods A cohort of 115 TRS patients and 84 healthy controls were recruited, assessing IL-2, IL-6 and TNF- α . The Positive and Negative Syndrome Scale (PANSS) was applied to assess psychopathological symptoms, while the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) was applied to assess cognitive functioning

Results CTRS patients showed lower visuospatial constructional score ($p = 0.015$), higher PANSS scores, higher levels of IL-2 and reduced TNF- α than non-CTRS patients ($p < 0.05$). Notably, IL-2 was independently associated with psychopathology symptoms in CTRS patients (Beta = 0.268, $t = 2.075$, $p = 0.042$), while IL-6 was associated with psychopathology symptoms in non-CTRS patients (Beta = -0.327, $t = -2.109$, $p = 0.042$). Sex-specific analysis in CTRS patients revealed IL-2 associations with PANSS total and positive symptoms in females, and TNF- α associations with PANSS positive symptoms in males. Furthermore, IL-2, IL-6, and TNF- α displayed potential diagnostic value in

TRS patients and CTRS patients ($p < 0.05$)

Conclusion Clozapine-resistant symptoms represent an independent endophenotype in schizophrenia with distinctive immunoinflammatory characteristics, potentially influenced by sex.

关键词: IL-2; IL-6; TNF- α ; refractory schizophrenia; clozapine-resistant

Exploring The Intricate Interplay between Metabolic Abnormalities and Multidimensional Cognitive Impairment in Stable Schizophrenia Patients

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Objective Patients with schizophrenia often experience deficits in various cognitive domains. Metabolic syndrome (MetS), a collection of cardiovascular risk factors, is linked to cognitive decline and may play a significant role in the cognitive impairments. However, it remains unclear whether MetS affects cognitive function in these patients through individual factors or a combination of factors. This study aims to investigate the intricate relationship between each component of MetS and the extent of cognitive impairment in patients with schizophrenia, providing valuable data to support the prevention of cognitive decline and the rehabilitation of social functioning in these patients

Methods The research was a cross-sectional study conducted from March to August 2022, involving stable-phase schizophrenia patients from 10 hospitals in Shanxi Province. Cognitive function was assessed using the Chinese Abbreviated Neuropsychological Battery (C-BCT), which includes the Trail-Making Tests (TMT), Symbol Encoding (SE), Continuous Performance Test (CPT), and Digit Span Test (DST). Additionally, we collected sociodemographic and general clinical information using the Short Form 12-Item Health Survey and a self-designed questionnaire. To explore the complex relationship between various components of metabolic syndrome and multidimensional cognitive dysfunction,

we employed network analysis and structural equation models (SEM). Machine learning techniques were used to predict cognitive dimensions based on symptom assessments and metabolic indicators, further verifying the effects of MetS components

Results A total of 727 stable-phase schizophrenia patients participated in this study. For abnormal blood lipid (ABL) levels, we found statistically significant differences in TMT ($t=-2.85$, $P=0.0045$) and DST ($t=-3.86$, $P=0.0002$). For abnormal blood pressure (ABP) levels, there were statistically significant differences in TMT ($t=4.1$, $P<0.0001$), SE ($t=2.82$, $P=0.0049$), CPT ($t=3.04$, $P=0.0024$), and DST ($t=4.37$, $P<0.0001$). Through network analysis, we found that Symbol Encoding (SE) showed the highest strength in cognitive function across both groups. In patients without any MetS domains, the Continuous Performance Test (CPT) had a high level of closeness, with the Trail-Making Test (TMT) having the highest betweenness. Structural equation modeling (SEM) indicated that metabolic indicators, including dyslipidemia and ABP, mediated the relationship between clinical symptoms and cognitive function. The Transformer model performed well in predicting cognitive dimensions, suggesting that MetS domains have a certain predictive ability for multidimensional cognitive function

Conclusion This study revealed significant correlations between metabolic syndrome components, particularly ABP and dyslipidemia, and cognitive impairments in schizophrenia. Treating hypertension in schizophrenia patients might lead to cognitive enhancement and social functional improvements

关键词: Stable-phase schizophrenia, Metabolic syndrome, Cognition, Network analysis, Machine learning

血清代谢组与精神分裂症发病风险及认知功能的关联研究

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目的 观察首发未用药精神分裂症(SCZ)患者组和健康对照组之间血清代谢物的差异,探索代谢组学特征与SCZ发病及认知功能的关系。

方法 招募 210 名 首发精神分裂症患者(SCZ)和 159 名健康对照(HC)。进行 PANSS 评分,使用神经心理成套测试 MCCB 评估认知功能。空腹采集静脉血(10ml),用于进一步的血清代谢组 LC-MS 检测。使用 R 软件计算参数;构建分层抽样方法以降低样本偏差;配对 T 检验用于测试差异代谢物的变化。将认知功能于基线时在 SCZ 和 HCs 之间的差异和利培酮治疗后显著改变的生物标志物纳入统计分析,建立逐步线性回归模型。

结果 1.人口统计学和临床特征。SCZ 组基线时共 210 例患者,入院治疗半年后重新评估并采集血液样本,其中 98 例 SCZ 患者完成 24 周随访。SCZ 组和 HC 组在年龄、性别、教育程度、吸烟状况或身体质量指数(BMI)方面没有显著差异($p < 0.05$)。而与 HC 相比,SCZ 患者在几个认知领域有显著损伤($p < 0.05$)。

2.基线时,SCZ 血清代谢组学谱的改变。SCZ 患者组和健康对照组之间的代谢组谱具有显著差异。本研究鉴定出 398 种代谢物,其中 86 种代谢物在两组间存在显著差异。采用分层抽样法,并进行校正,25 个代谢物被确认为差异代谢物。这些代谢产物主要与氨基酸代谢(52%)和脂肪酸代谢(16%)有关。喹啉酸(QA), n-乙酰-血清素, n-乙酰-1-谷氨酸,这些物质参与氨基酸代谢途径,且受肠道菌群调节。硬脂酸、前列腺素 H₂、2-酮丁酸、2-oxo-4-甲基硫丁酸、9-OxoODE、12,13-dhome 属于脂肪酸代谢途径,也易受肠道菌群成分的影响。这些代谢产物与微生物代谢直接或间接相关。

3.治疗前后代谢物的改变。在基线时确认的 25 种 SCZ 相关代谢物中,有 5 种代谢物(硬脂酸、前列腺素 H₂、n-乙酰-血清素、n-乙酰-谷氨酸、1-甲基组氨酸)在利培酮治疗 24 周后水平发生逆转。用药前基线时,血清硬脂酸、n-乙酰-血清素水平与加工速度认知域(SOP)呈正相关($R^2=0.262$, $p=1.71 \times 10^{-4}$, 1.84×10^{-4});利培酮治疗半年后,硬脂酸、n-乙酰血清素的变化与 SOP 呈正相关($R^2=0.123$, $p=0.004$ 、 0.006);n-乙酰血清素的变化也与 AV、HVL、RPS 的认知域呈显著正相关($p=0.005$ 、 0.017 、 0.004)。结果提示硬脂酸和 n-乙酰血清素可能是 SCZ 患者认知功能的生物学标志物。

结论 我们的研究表明,血清代谢组谱的改变

可能与 SCZ 的发病机制和认知功能水平有关。

关键词: 精神分裂症,代谢组,人知功能,关联研究

Gut Microbiota's Impact on White Matter Abnormalities and Cognitive Impairment in First-Episode, Drug-Naïve Schizophrenia

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Objective This study aimed to investigate the interplay among gut microbiota dysbiosis, white matter microstructural changes, and cognitive impairment in first-episode, drug-naïve schizophrenia (SCZ) patients

Methods The study cohort included 54 patients with SCZ and 70 healthy controls (HCs). Cognitive function was assessed with the MATRICS Consensus Cognitive Battery (MCCB). Fractional anisotropy (FA), axial diffusivity (AD), radial diffusivity (RD), and mean diffusivity (MD) metrics were derived from diffusion tensor imaging (DTI) data. Gut microbiota composition was characterized through high-throughput 16S ribosomal RNA (16S rRNA) gene sequencing. Statistical analyses included false discovery rate (FDR) correction for DTI parameter differential analysis and mediation analysis using the PROCESS v3.4 macro in SPSS

Results Patients with SCZ showed significantly lower cognitive scores across seven domains than HCs (all $p < 0.05$). Microstructural abnormalities in six white matter fibre tracts were identified in the patient group (all $p < 0.05$). Gut microbiota α -diversity was reduced in patients, as indicated by lower Shannon and Simpson indices (all $p < 0.05$), and β -diversity analysis revealed significant difference in gut microbiota composition between the groups ($p < 0.001$). We found that the abnormal white matter fibre bundles associated with cognitive function including the posterior projections of the CC, right ILF, left SLF, left UF, right CB, and right IFOF in SCZ patients. Mediation analysis revealed that the relative abundance of the genus Coprococcus in patients with SCZ had an indirect impact on SOP scores through

the AD values in the left SLF (indirect effect: $\text{coeff}=-0.103$, $\text{SE}=0.052$, 95% $\text{CI}=-0.206$ to -0.006), and also had an indirect effect on MSCEIT scores through the AD values in the left SLF (indirect effect: $\text{coeff}=-0.131$, $\text{SE}=0.053$, 95% $\text{CI}=-0.246$ to -0.036).

Conclusion The study provides evidence that gut microbiota imbalance and alterations in cerebral white matter microstructure are present in drug-naïve first-episode schizophrenia and may contribute to cognitive impairment. The genera *Coprococcus* appear to be implicated in this process, potentially offering novel therapeutic targets for early intervention in schizophrenia.

关键词: Schizophrenia, Gut Microbiota, White Matter Abnormalities, Cognitive Impairment

早发型精神分裂症外周血神经递质的靶向代谢组学研究

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目的 早发型精神分裂症(EOS)是指发病年龄<18 周岁的一类精神分裂症,与成人精神分裂症患者相比,EOS 患者受环境因素影响较少,因此以 EOS 患者为研究对象有助于精神分裂症发病机制的确切研究。多巴胺系统紊乱长期在精神分裂症的病因学中占据主导地位,然而,近年来的新证据表明,其他多种神经递质也与精神分裂症的病理生理学相关,本研究旨在分析 EOS 患者外周血中差异表达的神经递质及其与临床症状之间的相关性,进一步从神经递质方向寻找诊断标志物。

方法 本研究共纳入 186 名研究对象,其中 EOS116 名,正常对照 80 名,收集所有参与研究者的一般人口学资料及外周血标本。(1)采用液相色谱串联质谱法检测外周血中神经递质的含量,采用单变量统计分析和多变量统计分析相结合的方法筛选差异代谢神经递质。(2)使用 MetaboAnalyst 进行通路分析,采用阳性和阴性症状量表(PANSS)评定患者的精神症状,使用斯皮尔曼相关性分析关键神经递质与早发型精神分裂症患者精神症状的相关性。

(3)采用随机森林和逻辑回归进行标志物筛选和诊

断模型构建。

结果 (1)与 HC 相比,患者血浆中共有 15 种神经递质(鸟氨酸、甲基甘氨酸、谷氨酰胺、L-赖氨酸、吡啶甲酸、酪氨酸、酪胺、L-亮氨酸、胆碱、苯丙氨酸、色氨酸、组氨酸、L-甲硫氨酸、苏氨酸、黄尿酸)表达异常,且均表达上调。(2)将上述差异物质导入 MetaboAnalyst 进行通路分析,发现与健康对照组相比,EOS 患者表现出苯丙氨酸代谢通路异常,差异代谢物中酪氨酸、苯丙氨酸参与其中。研究显示酪氨酸与 PANSS 总分呈明显正相关($r=0.249$, $p=0.008$),与阳性症状呈明显正相关($r=0.317$, $p=0.001$),苯丙氨酸与阳性症状呈明显正相关($r=0.238$, $p=0.011$)。(3)随机森林分析筛选神经递质后,逻辑回归分析进行了最终的模型构建,我们最终确认了一个诊断模型来预测 EOS 的存在,其中包含鸟氨酸、5-羟色氨酸、肌氨酸、亮氨酸、赖氨酸、谷氨酰胺、5-羟基吡啶-3-乙酸。我们将所有样本按 7:3 的比例随机分为训练集和验证集,并通过 ROC 曲线的 AUC 值检验模型效果,其中训练集的 AUC 值为 0.901,验证集的 AUC 值为 0.826。

结论 本研究筛选出了 15 种在 EOS 患者外周血浆中差异表达的神经递质,且均表达上调,关键作用的神经递质酪氨酸与阳性症状和 PANSS 总分呈明显正相关、苯丙氨酸和阳性症状呈明显正相关,此外我们通过随机森林和逻辑回归构建了包含 7 种神经递质在内的诊断模型,并通过验证具有较高的诊断效能,这为探索 EOS 的发病机制和诊断提供了新思路。

关键词:早发型精神分裂症,神经递质,机器学习

Sex-specific Differences in The Relationship between Thyroid Hormones and Neurocognition: A Large Cross-sectional Study in Chronic Schizophrenia

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Objective Aiming to observe the relationships between endocrine-related blood markers, particularly thyroid hormones such as Triiodothyronine, T4, TSH,

and various dimensions of clinical symptoms as well as cognitive functions among individuals diagnosed with chronic schizophrenia, including differences between genders

Methods 602 male patients and 405 female patients with schizophrenia and 193 males and 133 females healthy controls were included in this study. Demographic and clinical characteristics were collected. Cognitive function and psychotic symptoms were assessed using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) and the Positive and Negative Syndrome Scale (PANSS), respectively. Blood samples were collected to measure the levels of serum total thyroxine (TT4), total triiodothyronine (TT3), thyroid-stimulating hormone (TSH), free thyroxine (FT4), and free triiodothyronine (FT3). We conducted analysis of variance (ANOVA) in SPSS to compare general clinical characteristics and performed two-way ANOVA to examine gender differences in the cognitive domain. Additionally, we conducted hierarchical linear regression on RBANS, PANSS, and blood indicators. Furthermore, in R, we performed Pearson correlation analysis to examine the correlations, and created scatter plots with thyroid hormones as the independent variable

Results Compared to the healthy control group, patients with schizophrenia exhibited lower levels of thyroid hormones (both $p < 0.01$). Furthermore, among patients with schizophrenia, male patients had higher levels of TT3 and FT3 compared to female patients (both $p < 0.01$). In male patients, only TT3 levels showed a positive correlation with language and attention (both $p < 0.01$). In contrast, among female patients, TT3 levels were positively correlated only with attention ($p < 0.001$), while TT4 levels were negatively correlated with immediate memory ($p < 0.05$), and TSH levels were negatively correlated with attention ($p < 0.01$). The linear regression also found that the correlations of T3 and T4 with clinical symptoms were opposite. Furthermore, T4 shows opposite correlations between males and females in the cognitive domain.[s1]

Conclusion Gender differences exist in thyroid hormone T3 levels. Furthermore, the association between thyroid hormones and cognitive performance as

well as clinical symptoms varies according by gender in chronic schizophrenia.

关键词: schizophrenia; neurocognition; sex difference

基于NLP的精神分裂症语言表达差异及与临床症状关联性分析

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目的 本研究旨在通过深入剖析精神分裂症患者与健康对照组在观赏积极性视频后的主观叙述,探究两者在自然语言表述上的独特差异,并揭示这些差异与临床症状间的内在联系,为理解精神分裂症的沟通障碍提供新的洞见。

方法 本研究招募了135名精神分裂症患者和65名健康对照组参与者,让他们观看富含积极情绪的短片《爆笑虫子》。随后,要求参与者开放性地回答关于“视频中印象深刻的人物或场景是什么,它让你想到了什么?”的问题,对回答进行录音并转录为文本。采用先进的自然语言处理技术,从转录文本中提取包括总字数、句子数、句平均字数、句平均标准差、词数、不同词性频率、句法依赖距离、语义依赖距离、语义连贯性、主题契合度以及情绪分数等特征。利用年龄、教育背景和性别作为协变量,借助协方差分析方法,系统比较两组在上述文本特征上的显著性差异,并运用皮尔逊相关系数,探索PANSS量表的总分及其各因子与语言特征间的相关性,以期揭示症状严重度与自然语言表达之间的动态联系。

结果 研究结果显示,与健康对照组相比,精神分裂症患者在总字数、平均句长、句长标准差、总词数、副词和语气词使用频率、句法结构复杂度以及主题贴合度上展现出明显差异。尤为值得注意的是,与PANSSG11(注意障碍)呈显著相关性的语言特征——如总字数、句子数量、词汇总量、副词频数及语气词频数,揭示了注意功能受损与患者语言表达的简洁化倾向之间的直接联系,即症状越重,患者越倾向于使用简约的词汇和句式。另一方面,一阶至二阶连贯性、主题契合度及情绪表达得分与PANSSG6(抑郁症状)的显著相关性,凸显了抑郁情绪下患者在维护对话逻辑、有效传递情感和围绕

主题展开论述方面所遭遇的重重挑战, 这些挑战与抑郁体验相互作用, 共同制约了患者的社交互动效能与生活质量。

结论 综合上述发现, 精神分裂症患者在语言表达上的独有特性, 不仅直接映射出认知领域如注意障碍的问题, 还间接揭示了情感状态, 特别是抑郁症状, 对患者社交互动及生活品质的广泛影响。这些深刻见解强调了在精神分裂症的治疗与康复进程中, 针对性地改善语言表达能力、减轻抑郁症状及增强注意功能干预的紧迫性和重要性, 旨在通过这些多维度的努力, 全面提升患者的生存质量与社会功能。

关键词: 精神分裂症, 自然语言处理, PANSS

Aberrant Metabolism of The Gut Microbiota Mediates Inflammation and Tryptophan-Associated Cognitive Impairment in Drug-naïve, First Episode Schizophrenia Patients

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Cognitive impairments in patients with schizophrenia (SCZ) are associated with poor functional outcomes. The microbiome-gut-brain axis is related to brain health and cognition. Here, we present a half-year follow-up study involving metabolomics and metagenomics analysis of 210 first-episode, drug-naïve SCZ patients and 159 healthy controls (HCs). We collected biological samples at baseline (from all participants) and 6 months after risperidone treatment (from SCZ patients). Cognitive function was assessed using the MATRICS Consensus Cognitive Battery (MCCB). The differential metabolites and microbial markers were found to be associated with metabolic pathways involving amino and fatty acids. The follow-up analysis revealed that the metabolites N-acetyl-serotonin (NAS) and stearidonic acid (SDA) and microbial species from the genera *Blautia* spp. and *Ruminococcus* spp. were associated with cognitive function in SCZ patients. These

microbial species expressed genes that regulate tryptophan metabolism. Fecal microbiota transplantation resulted in higher colonic levels of microbial toxins (lipopolysaccharides and purlisin), proinflammatory cytokines and tryptophan-related genes and altered tryptophan-related metabolites in mice receiving microbiota from SCZ patients, suggesting that the intestinal microbiota and metabolome interact and converge on inflammation and tryptophan metabolism. Future research on genome-microbiome-metabolite interactions is warranted to advance our understanding of the role of NAS and SDA in the cognitive impairment in patients with SCZ.

关键词: Schizophrenia; Gut microbiota; Metabolism; Tryptophan; Inflammation; Cognitive impairment.

社会认知在精神分裂症临床症状与功能结局中的调节作用

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目的 精神分裂症是一种常见的精神障碍, 会导致严重的功能残疾和预期寿命减低。以往研究表明, 精神分裂症患者的临床症状是功能结局的主要影响因素。同时, 认知功能在患者的功能结局中也扮演着重要角色。然而, 社会认知和神经认知的缺陷如何影响患者临床症状与功能结局的关系尚不明确。本研究探讨了神经认知和社会认知对患者临床症状的调节效应。

方法 入组临床住院精神分裂症患者 203 人, 使用个人和社会功能量表 (PSP) 评估功能结局, 使用阴性和阳性症状量表 (PANSS) 评估临床症状, 使用计算机化面孔情绪识别测试 (FERT) 评估患者的社会认知, 使用精神分裂症认知功能成套测验 (MCCB) 评估患者的神经认知。在神经认知和面孔情绪识别的各个维度上, 以均值为界分别将患者分为高水平组和低水平组, 并通过带交互项的多因素回归分析探究患者的神经认知和面孔情绪识别对临床症状的调节效应。

结果 在控制年龄、性别、教育年限、首次发病年龄和发作次数后, 患者的 PSP 总分显著和 PANSS

总分负相关(标准化回归系数 $\beta=-0.55$, $P<0.00$)。交互效应分析显示,相较于面孔情绪识别总分较低的患者,高水平患者的临床症状和 PSP 总分的负性关系显著降低(低水平 $\beta=-0.66$, $P<0.001$;交互项 $\beta=0.29$, $P=0.021$)。进一步对临床症状的子维度进行分析,发现患者的面孔情绪识别能力主要调节了阳性症状和功能结局的关系(低水平 $\beta=-0.47$, $P<0.001$;交互项 $\beta=0.32$, $P=0.022$)。而进一步对情绪类别进行分析,发现更高水平的快乐(低水平 $\beta=-0.51$, $P<0.001$;交互项 $\beta=0.31$, $P=0.018$)、平静(低水平 $\beta=-0.50$, $P<0.001$;交互项 $\beta=0.41$, $P=0.003$)和焦虑(低水平 $\beta=-0.48$, $P<0.001$;交互项 $\beta=0.27$, $P=0.044$)面孔识别能力能降低患者阳性症状对功能结局的负性影响。此外,本研究并未发现六种神经认知(注意警觉、言语学习和记忆、视觉学习和记忆、工作记忆、处理速度和推理决策)对患者临床症状的调节效应(交互项均 $P>0.05$)。

结论 精神分裂症患者的社会认知而非神经认知能够调节患者临床症状和功能结局的关系。其中,更高的快乐、平静和焦虑面孔识别能力能够显著降低患者阳性症状对功能结局的负性影响。该结果启示,在临床干预方案中纳入社会认知训练可能有助于在改善患者症状的同时,促进患者的功能康复、改善患者的功能结局。

关键词: 精神分裂症;社会认知;神经认知;功能结局;阳性症状

Purpureocillium Impairs Cognitive Function Via Metabolism of Amino Acids in Drug-naïve, First-episode Schizophrenia

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Cognitive dysfunction of schizophrenia (SCZ) can lead to impaired social function and poor prognosis. Our previous study found alteration of metabolites and key fungal marker, Purpureocillium were associated with SCZ. Here, we present a case-control study including 136 first-episode, drug-naïve SCZ patients and 92 healthy controls (HCs). Untargeted liquid chromatography/mass spectrometry (LC/MS) was used to measure

serum metabolite levels. Internal transcribed spacer (ITS) was used to test abundance of Purpureocillium. Present study showed significant declines in attention and alertness (AV), speed of processing (SOP) in SCZ with TOP2 effect size. The abundance of Purpureocillium was negatively correlated with multiple domains of cognitive function. SCZ related metabolic markers 2-Oxoarginine, N-Acetyl-serotonin, Ergothioneine, Iso-butyric acid and Biotin showed significant association with both the abundance of Purpureocillium and cognitive scores (SOP and AV). Mediation analyses showed that abundance of Purpureocillium in patients with SCZ had significant direct and indirect effects on cognitive scores (SOP and AV) via metabolic markers (2-Oxoarginine, N-Acetyl-serotonin, Ergothioneine). Purpureocillium and those metabolic markers were all correlated with inflammation and oxidative stress, which have been associated with pathogenesis of SCZ. In conclusion, the role of Purpureocillium in cognitive impairments may be linked by regulating these metabolites of amino acids, inflammation and oxidative stress is involved in this process.

关键词: Schizophrenia; Purpureocillium; Metabolism; Inflammation; Cognitive function

利用无监督学习和网络分析的方法对精神病性症状进行探究

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目的 精神分裂症临床表现复杂,易与伴有精神病性症状的其他疾病混淆。在众多症状群中准确识别精神分裂症,可以减少疾病漏诊率。本研究利用网络分析方法探究了精神分裂症症状群之间的关系,并利用变分自编码器(variational auto encoder, VAE)和聚类分析对未明确诊断的精神病性症状量表进行分析,为后续的精神分裂症的识别和治疗打下基础。

方法 本研究分为两部分。第一部分纳入符合 DSM-5 的精神分裂症患者 392 例,使用 PANSS 评估患者精神病性症状,网络分析中以 PANSS 的 5 个

维度(阳性症状, 阴性症状, 思维紊乱, 无法控制的敌对/兴奋, 焦虑/抑郁)作为节点, 分析不同组症状群之间的关系; 第二部分纳入 BPRS \geq 35 分的诊断不明确的门诊病人 18025 例, BPRS 作为评估精神病性症状的指标, 通过 Isolation Forest 排除异常值后, 共纳入 17844 例门诊病人, 利用 VAE 无监督学习及 K-means 聚类分析后, 利用网络分析探索不同亚群特征。

结果 在 392 例精神分裂症患者的网络分析结果中, 思维紊乱的中心性最高, 且其与阴性症状和焦虑/抑郁关系密切。说明思维紊乱在精神分裂症精神病性症状中处于重要地位, 其对其他症状的影响性较高。对 17844 例的门诊病人进行无监督学习及聚类分析后, 共得出 5 个亚群, 聚类评价指标 (Silhouette Coefficient = 0.52, Davies-Bouldin Index = 0.35) 均较好。分别对 5 个亚群的 BPRS 五维度 (焦虑忧郁, 缺乏活力, 思维障碍, 激活性, 敌对性) 进行网络分析, 其中有一亚群 (1126 例) 具有和精神分裂症类似的精神病性结构, 思维障碍表现为最高的中心性。

结论 本研究发现了思维紊乱处于精神分裂症症状的中心地位, 且其与阴性症状关系密切; 此外, 利用 VAE 无监督学习及聚类分析, 可以在众多疾病中识别出一种与精神分裂症症状结构类似的亚群, 随着更多相关研究的深入, 该结论可以得到更进一步的证实, 为更深刻地理解、识别精神分裂症提供基础。

关键词: 精神分裂症, 精神病性症状, 变分自编码器, 网络分析

D-serine Reconstitutes Synaptic and Intrinsic Inhibitory Control of Pyramidal Neurons in A Neurodevelopmental Mouse Model for Schizophrenia

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Objective The hypothesis of N-methyl-D-aspartate receptor (NMDAR) dysfunction for cognitive impairment in schizophrenia constitutes the theoretical ba-

sis for the translational application of NMDAR co-agonist D-serine or its analogues. However, the cellular mechanism underlying the therapeutic effect of D-serine remains unclear. Clarifying these questions help us understand the pathophysiological basis of cognitive dysfunction in schizophrenia and the essential mechanisms underlying the therapeutic effect of D-serine, thereby facilitating the discovery of new pharmacotherapeutic targets

Methods The pregnant mice were injected with methylazoxymethanol acetate (MAM) on gestational day 16 for the neurodevelopmental MAM model of schizophrenia in our study. The cognitive function of mice was measured by a series of behavioral tests such as pre-pulse inhibition, Y maze, novel object and novel location recognition. We investigated the neuropathophysiological alterations in the cingulate neurons of the MAM group by whole-cell recordings

Results This study is the first to reveal that, relative to pyramidal neurons, NMDA receptor deficits preferentially occur in parvalbumin-positive (PV) neurons in a non-genetic mouse model for schizophrenia mimicking prenatal pathogenesis. Intriguingly, we discovered that D-serine could facilitate inhibitory control in the anterior cingulate cortex (ACC) of MAM group via a dual mechanism. D-serine restores excitation/inhibition balance by reconstituting both synaptic and intrinsic inhibitory control of cingulate pyramidal neurons through facilitating PV excitability and activating small-conductance Ca²⁺-activated K⁺ (SK) channels in pyramidal neurons, respectively. Either amplifying inhibitory drive via directly strengthening PV neuron activity or inhibiting pyramidal excitability via activating SK channels is sufficient to improve cognitive function in this model

Conclusion These findings reveal the cellular mechanism through which D-serine improves cognitive function and suggest a novel pharmacological target for the treatment of schizophrenia model.

关键词: schizophrenia, cognition, D-serine, NMDAR, inhibitory control, SK channel

精神分裂症患者电休克治疗后脑网络拓扑结构变化特点

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目的 已有大量研究表明,精神分裂症(SZ)患者的大脑网络拓扑结构存在破坏,电休克治疗(ECT)能够快速缓解急性精神症状。然而,目前对电休克治疗作用于SZ患者脑网络拓扑结构的机制尚不清楚,相关研究也相对较少。本研究基于静息态功能磁共振成像(rs-fMRI),应用图论方法探索SZ患者在接受电休克治疗前后脑功能网络的拓扑结构变化,旨在为相关机制提供神经影像学依据。

方法 我们收集了53名接受ECT治疗前后的SZ患者的rs-fMRI数据,同时获得了46名性别、年龄和教育程度匹配的健康对照组(HC)的数据。使用脑神经组图谱(Brainnetome Atlas)构建了每位受试者的大脑功能网络,并采用图论分析方法测量了全局和节点的拓扑属性。同时,利用阳性和阴性综合量表(PANSS)评估了临床症状。采用独立样本t检验比较患者组和健康对照组的网络拓扑属性,使用配对t检验比较患者组在治疗前后的拓扑属性变化,最后采用偏相关分析探讨SZ患者ECT治疗前后全局和节点属性变化与临床症状之间的关系。

结果 ECT治疗前,与健康对照组相比,患者组表现出局部效率(Eloc)和聚类系数(CP)降低($P<0.05$, FDR校正),右侧颞上回的节点全局效率(Ne)和度中心性(DC)降低,左侧扣带回的Ne和DC升高(P 均 <0.001 , Bonferroni校正);治疗后,患者组的Eloc和CP恢复正常,双侧额上回的节点局部效率(Nle)和节点聚类系数(Ncp)增加,但左侧顶下小叶的Ne和DC降低,最短路径长度(NLp)升高,双外侧枕叶皮质的Nle和Ncp在治疗前后均较低(P 均 <0.001 , Bonferroni校正)。治疗前后PANSS总评分的改变与聚类系数的改变呈正相关关系($r=0.33$, $P=0.019$)。

结论 我们的研究显示,ECT可能通过重组SZ患者受损的脑网络拓扑结构来改善精神症状,额上回、扣带回和颞上回的信息整合功能的恢复可能在缓解精神症状中发挥重要作用。此外,顶下小叶的功能异常可能与电休克治疗的副作用有关。

关键词: 精神分裂症;电休克治疗;静息态功能磁共振成像;图论;脑网络

Auditory and Visual Oddball Stimulus Processing Deficits in Individuals in Clinical High Risk for Psychosis

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Objective Individuals at clinical high risk (CHR) for psychosis exhibit a reduced P300 oddball response, especially in auditory modality. While P300 reflects relatively late and complex cognitive functions such as context updating in working memory, N200 indexes stimulus probability and classification. Several studies have also reported N200 abnormalities in CHR individuals, but these findings are inconsistent. Furthermore, previous research has focused on the auditory oddball paradigm, reports on visual oddball abnormalities in CHR individuals are very limited. The present study compared the event-related potential responses in auditory and visual oddball paradigms between CHR individuals and healthy controls (HC) participants to contribute to the research on these components as potential biomarkers for CHR and associated with their clinical outcomes

Methods Baseline P300 and N200 were obtained from CHR participants ($n = 96$) and HC participants ($n = 60$). All CHR participants were followed up for five years and stratified into CHR converters and non-converters. The differences in P300 and N200 amplitude in auditory and visual oddball tasks were compared between the clinical outcome subgroups and HC participants

Results CHR participants exhibited smaller visual P300 amplitudes compared to HC participants. Furthermore, CHR converters showed significantly reduced P300 and N200 amplitudes in both oddball paradigms relative to CHR non-converters and HC participants. In addition, visual P300 amplitude was significantly reduced in CHR non-converters relative to HC

participants

Conclusion These results suggest that P300 and N200 amplitude deficits across auditory and visual modalities precede the onset of full psychosis. Moreover, visual P300 amplitudes may serve as a more sensitive prognostic biomarker for clinical outcomes in CHR individuals.

关键词: clinical high risk, event-related potential, P300 oddball

Abnormal Scanning Patterns Based on Eye Movement Entropy in Early Psychosis

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Objective Restricted scan path mode is hypothesized to explain abnormal scanning patterns in patients with schizophrenia. Here, we calculated entropy scores (drawing upon gaze data to measure the statistical randomness of eye movements) to quantify how strategical and random participants were to process image stimuli

Methods Eighty-six patients with first-episode schizophrenia (FES), 124 individuals at clinical high risk (CHR) for psychosis, and 115 healthy controls (HCs) completed an eye-tracking examination for freely viewing 35 static images (each presented 10s) and cognitive assessments. We compared the group differences in overall entropy score, as well as entropy scores under various conditions (different levels of meaning and time periods). Furthermore, we also investigated the correlation between entropy scores and symptoms along with cognitive function

Results Increased overall entropy scores were noted in FES and CHR groups relative to HCs, and these

differences were already apparent within 0~2.5s. In addition, the CHR group exhibited higher entropy when viewing low-meaning images compared to HCs. Moreover, the entropy within 0~2.5s showed significant correlations with negative symptoms in the FES group, Attention/Vigilance scores in the CHR group, as well as Speed of processing and Attention/Vigilance scores across all three groups

Conclusion FES and CHR individuals scanned pictures more randomly and less strategically than controls, with this distinction already apparent in the early stage of viewing. The scanning patterns might also be influenced by the meaning of the picture. Additionally, we also identified the associations between abnormal scanning patterns and negative symptoms as well as neurocognitive scores. The findings illuminate the potential of employing EME measures to characterize aberrant scanning patterns during the early stage of psychosis. This could significantly advance the identification of precise neurophysiological and neurocognitive targets for efficacious therapeutic interventions. Subsequent research is imperative to validate the robustness of these findings and to delineate how entropy metrics might contribute to the development of tailored and preventive interventions.

关键词: Eye movement; Schizophrenia; Early psychosis; Clinical high risk for psychosis; Cognitive impairments; Biomarker

全蛋白质组和转录组关联分析探究不同组织中精神分裂症风险基因

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目的 精神分裂症 (SCZ) 是遗传和环境因素相互作用的结果。肠道与中枢神经系统 (CNS) 之间存在双向通信。全基因组关联研究 (GWAS) 已经确定了 SCZ 的多个风险变异位点。然而, 推定精神分裂症不同组织的致病基因和潜在机制仍然具有挑战性, 本研究探索了 CNS、消化系统和血液组织的基因表达情况与 SCZ 之间的关联。

方法 全蛋白质组关联研究 (PWAS) 使用 FUSION 软件整合 SCZ GWAS 数据和人脑及血浆的蛋白质组数据, 确定通过调节蛋白丰度发挥致病作用的基因。全转录组关联研究 (TWAS) 通过整合 SCZ GWAS 数据和来自 CNS、消化系统 (小肠, 乙状结肠, 横结肠等)、全血组织的共 21 个多组织的基因表达预测模型, 来确定可以调节性状表达的基因。因果基因集的精细定位 (FOCUS) 分析通过估计 TWAS 发现基因的后验包含概率, 进一步识别不同组织中与 SCZ 有因果关系的基因。

结果 PWAS 确定了 87 个基因在人脑和血液中基因调节的蛋白质丰度水平与 SCZ 有关。通过 TWAS 发现 728 个基因的表达与 SCZ 显著相关在 21 个组织中。脑中的 15 个基因 (ACE, CYP7B1, HLA-DRB1, TKT, ACTR1B, C4A, CNM2, CUL9, DARS2, HLA-DRB5, NAGA, NEK4, OGFOD2, SNX19, XPNPEP3) 和血液中的 6 个基因 (C2, CREB3L4, ITIH3, ITIH4, MAPK3, SERPING1) 在蛋白质组和转录组水平上都显示出与 SCZ 的显著关联。使用 FOCUS, 发现 728 个 TWAS 关联基因中有 311 个基因是 SCZ 的因果基因。研究发现其中 89 个基因同时在脑组织和消化系统的组织中的表达都表现出和 SCZ 的因果相关性。其中基因 *BTN2A2*, *FLOT1*, *GNL3*, *MRM2*, *PCCB*, *PRR12*, *PRSS16*, *SF3B1*, *VSIG2* 都证明是 SCZ 的因果基因在至少 14 个不同的脑和消化组织中, 基因 *LINC02033*, *GEF*, *ZFP57* 中观察到因果关联方向有组织特异性, 表明风险基因在不同组织中对 SCZ 发病机制的作用存在差异。通过 GO-KEGG 富集分析, 发现消化系统中的相关基因主要调控多肽抗原与 MHC 蛋白复合物的组装等免疫相关通路。研究还发现了长链非编码 RNA (lncRNA) 参与了 SCZ 的发病机制。

结论 本研究确定了 21 个基因其调控的转录和蛋白质丰度水平与 SCZ 风险相关。发现 89 个同时在脑组织和消化组织中的表达都和 SCZ 的有因果相关性的基因, 并且风险基因在不同组织中对 SCZ 发病机制的作用存在差异, 该研究为 SCZ 的脑肠轴机制提供了新的见解。

关键词: 精神分裂症, 脑肠轴, 全蛋白质组关联分析, 全转录组关联分析, 因果基因,

Hypomyelination in Schizophrenia: A Systematic Evaluation and Meta-analysis

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Objective Schizophrenia is a serious mental illness whose etiology and pathogenesis are still unclear. Impaired myelin integrity plays an important role in the pathogenesis of schizophrenia, but there is no uniform conclusion yet. This meta-analysis aims to systematically assess impaired myelin integrity in schizophrenia patients and further explore its role in the pathogenesis of schizophrenia

Methods We conducted a systematic literature search of studies in PubMed, Web of Science, Science Direct, PsycINFO, EMBASE, and Cochrane without language or time constraints. All studies reporting myelin abnormalities in patients with schizophrenia were included. Inclusion criteria included 1) cross-sectional or longitudinal studies, 2) use of imaging or biomarkers to assess myelin integrity, and 3) provision of sufficient data for meta-analysis. Using the MOOSE guidelines, data extraction and quality assessment were performed by two independent investigators. Meta-analysis of myelin integrity metrics was performed using a random-effects model, and heterogeneity and publication bias were assessed

Results A total of nine studies were included, which were published up to June 2024 and involved a total of 926 patients with schizophrenia and 719 healthy controls. The results of the meta-analysis showed that myelin integrity was significantly lower in patients with schizophrenia than in healthy controls (standardized mean difference, SMD = -0.45; 95% confidence interval, CI = -0.34 to -0.55; $p < 0.001$). Subgroup analyses indicated that factors such as disease duration, disease severity, and treatment regimen may have an impact on myelin integrity. Heterogeneity analysis showed moderate inter-study heterogeneity ($I^2 = 68\%$). Funnel plot analysis and Egger's test results did not reveal significant publication bias

Conclusion This systematic review and meta-analysis found that there is a significant impairment of

myelin integrity in schizophrenia patients, which may be closely related to the pathogenesis of schizophrenia. Future studies should further explore the specific mechanisms of impaired myelin integrity and its role in the disease process, with a view to providing new targets for the diagnosis and treatment of schizophrenia.

关键词: Schizophrenia, myelin, systematic evaluation, meta-analysis, neuroimaging, biomarkers

精神分裂症道德认知加工的机制探索及临床相关: 行为实验和 ERP 的证据

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目的 探讨是否伴随童年创伤的精神分裂症的道德认知差异及其临床症状、神经电生理改变的相关性, 并探讨童年创伤对精神分裂症道德认知的潜在影响。

方法 在首都医科大学北京安定医院住院和门诊招募精神分裂症患者 65 例, 其中 35 例存在童年创伤 (SCZ-ct), 30 例不存在童年创伤 (SCZ-nct); 匹配招募不存在童年创伤的健康对照 (HC-nct) 37 名; 使用童年创伤问卷 (CTQ) 评估三组被试的童年创伤, 并根据结果进行分组; 使用韦氏成人智力排除存在智力损伤的个体; 使用道德基础问卷 (MFQ) 评估三组被试的道德认知; 采用国际精神科访谈问卷 (MINI) 对于三组被试进行筛查, 排除存在精神疾病及家族史健康对照。使用阳性与阴性症状量表 (PANSS) 评估两组患者的临床症状; 采用事件相关电位 (ERP) 探究三组阈上知觉道德认知加工的神经电生理活动。

结果 精神分裂症 (SCZ-ct/SCZ-nct) 的道德认知 (MFQ) ($F=3.201, p<0.001$) 及阈上知觉道德认知加工的正确率 (Con: $F=4.724, p=0.011$; UCon: $F=6.222, p=0.003$) 低于 HC-nct; 阈上知觉道德认知加工的反应时 (Con: $F=9.993, p<0.001$; UCon: $F=17.468, p<0.001$) 及 N400 effect 潜伏期 (FCz:

$F=3.056, p=0.052$; Cz: $F=6.189, p=0.003$; CPz: $F=4.704, p=0.011$; Pz: $F=3.373, p=0.038$) 高于 HC-nct; 其中 SCZ-ct 的 PANSS 与反应时 (Con: $r=0.413, p=0.043$) 及潜伏期 (FCz: $r=0.533, p=0.006$; Cz: $r=0.656, p<0.001$; CPz: $r=0.595, p=0.001$) 呈正相关, 与正确率 (Con: $r=-0.665, p<0.001$; UCon: $r=-0.570, p=0.002$) 呈负相关; Cz 电极点的潜伏期与 CTQ 的躯体忽视 (Physical Neglect, PN: $r=0.422, p=0.039$) 呈正相关, 与 MFQ ($r=-0.443, p=0.030$) 呈负相关; SCZ-nct 的 CTQ 的性虐待 (Sexual Abuse, SA) 与 MFQ 的伤害/关怀 (Harm/Care) 维度呈负相关 ($r=-0.585, p=0.012$); HC-nct 不存在任何相关。

结论 精神分裂症的道德认知存在损伤, 损伤与其临床症状及神经电生理指标的改变相关, 其中童年创伤对精神分裂症的道德认知具有负面影响。

关键词: 精神分裂症, 童年创伤, 道德认知, N400 Effect

Comparison of Neurocognitive Effects of Blonanserin, Olanzapine, and Aripiprazole in First-episode Schizophrenia

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Objective Neurocognitive impairment is a core feature of schizophrenia closely linked to poor functional outcomes. Improving neurocognitive functions is a primary objective of therapeutic interventions. Previous evidence showed first-generation antipsychotics had neutral or detrimental effects, while second-generation antipsychotics (SGAs) demonstrated potential but heterogeneous benefits on neurocognitive functions in schizophrenia. However, the neurocognitive effectiveness of different SGAs remains controversial. This study aimed to investigate and compare the neurocognitive effectiveness of blonanserin, olanzapine, and aripiprazole in patients with first-episode schizophrenia (FES), hypothesizing that blonanserin would exhibit ad-

vantages over the other medications in improving neurocognitive functions after six months of treatment, based on its unique pharmacological characteristics potentially beneficial for neurocognition

Methods This study analyzed data from two open-label clinical trials involving drug-naïve FES patients aged 18-45. Patients received 26 weeks of treatment with blonanserin (4-24 mg/day), olanzapine (10-25 mg/day), or aripiprazole (15-30 mg/day). 199 patients who completed the 6-month follow-up on their initial antipsychotic were included. Neurocognitive functioning was assessed using the modified Chinese MATRICS Consensus Cognitive Battery (MCCB) and Grooved Pegboard Test at baseline and 6 months. Standardized t-score were compared within and between treatment groups using t-tests, ANOVA, and a 3 (Antipsychotics: blonanserin vs. olanzapine vs. aripiprazole) \times 2 (Time: baseline and endpoint) repeat measure ANOVA was conducted to examine the effect of antipsychotics and treatment time on neurocognitive functions. This allowed investigation of the neurocognitive effectiveness of the three antipsychotics with varied pharmacological characteristics in first-episode schizophrenia population

Results 1) All three treatments showed significant improvements in the Paced Auditory Serial Addition Test and Trail Making Test Part A after 6 months.

2) However, there were notable differences in the specific neurocognitive domains that improved with each antipsychotic. The blonanserin group demonstrated significant gains in Brief Visuospatial Memory Test-Revised (HVLT) ($p = 0.013$) and a trend toward improving in Hopkins Verbal Learning Test-Revised ($p = 0.051$). The olanzapine group showed notable improvement in the Grooved pegboard test ($p = 0.022$) and Wechsler Memory Scale-spatial Span Subtest ($p = 0.033$) while the aripiprazole group decreased in Brief Visuospatial Memory Test-Revised (BVMT) ($p = 0.028$).

3) The results of repeat-measure ANOVAs suggested the interaction between group and treatment was significant for HVLT ($F[2,196] = 2.637$, $p = 0.074$, $\eta^2 = 0.026$). Specifically, only the blonanserin group exhib-

ited a marginally significant improvement on HVLT after treatment ($t[42] = -2.006$, $p = 0.051$), but the other two groups showed no difference after treatment ($ps > 0.1$). Similar interaction was observed on BVMT ($F[2,196] = 2.934$, $p = 0.056$, $\eta^2 = 0.029$). Post-hoc analysis suggested both the blonanserin and aripiprazole group exhibited significant improvement on BVMT, of which the blonanserin group showed a better effect size, while the Olanzapine group showed no improvement after treatment ($t[83] = -0.445$, $p = 0.657$).

Conclusion In this study comparing the neurocognitive effects of blonanserin, olanzapine, and aripiprazole in drug-naïve first-episode schizophrenia patients, all three antipsychotics demonstrated benefits to neurocognitive functioning after 6 months of treatment. However, blonanserin exhibited advantages over the other medications in improving verbal and visual learning and memory. These findings align with blonanserin's hypothesized neurocognitive enhancement properties, with a higher D3 than 5-HT_{2A} receptor affinity, blonanserin may increase prefrontal dopamine and norepinephrine levels more effectively, benefiting neurocognitive processes like attention, working memory, and executive function. Blonanserin's lower risk of sedation, weight gain, and metabolic side effects compared to some antipsychotics could also indirectly improve neurocognitive performance. Enhancing verbal and visual learning is particularly important in schizophrenia, as these domains are severely impaired yet closely linked to functional outcomes and the quality of life (QOL). As a well-tolerated medication showing advantages in this key area, blonanserin represents a promising alternative antipsychotic treatment option for clinicians prioritizing neurocognitive rehabilitation in schizophrenia. However, further research is warranted to elucidate the underlying mechanisms of blonanserin's differential neurocognitive effects

关键词: Schizophrenia, antipsychotics, neurocognition

精神分裂症相关认知损害患者的临床特征

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目的 认知症状 (CS) 为精神分裂症主要且普遍的特征之一, 目前还没有相应的诊断代码或治疗方法。真实世界数据有助于扩展对 CS 在临床表现和症状负担的理解。

方法 Holmusk NeuroBlu 为一个来自美国 25 个精神卫生机构的纵向行为健康真实世界数据库。研究纳入 8355 名 1999-2021 年诊断为精神分裂症的成年患者 (≥ 18 岁), 分析其 CS。认知损害特征通过自然语言处理模型识别并提取精神检查所记录的自由文本中的特定文本字符串, 时间窗为首次记录精神分裂症诊断的前后 14 天内 (基线期)。CS 相关的字符串包括“注意力不集中”、“注意力/专注力困难”、“推理能力有限”等。基线期也提取人口统计学和临床特征。研究比较有或无 CS 记录的基线临床特征。

结果 患者平均年龄 41.6 岁, 大多数为男性 (63.8%)。首次记录精神分裂症诊断时, 对 CS 的记录少于阳性症状和阴性症状 (27.9% vs 68.0% vs 61.7%)。有或无 CS 患者的人口统计学特征相似, 但临床特征有所不同。有 CS 患者更可能使用心境稳定剂 (8.5% vs 6.6%, $p=0.003$) 或镇痛药物 (6.7% vs 4.7%, $p<0.001$), 但更少使用一代抗精神病药物 (10.7% vs 12.5%, $p=0.024$), 二代抗精神病药物 (42.8% vs 44.1%) 或抗抑郁药 (21.0% vs 21.3%) 使用方面两组相似。此外, 有 CS 患者接受心理治疗的可能性更低 (15.7% vs 21.2%, $p<0.001$), 更可能合并物质使用障碍、分裂情感性障碍、PTSD、OCD、ADHD 等。有 CS 患者的基线疾病严重程度更高, 功能更差, 急诊科就诊 (26.3% vs 18.8%, $p<0.001$) 和住院 (45.3% vs 27.7%, $p<0.001$) 频率更高, 也更可能经历各方面负面社会因素 (家庭、财务、住宿、法律, 职业、学业功能等)。在首次诊断后 18 个月, 与无 CS 患者相比, 有 CS 患者的精神科住院风险、住院次数和住院总天数显著增加。

结论 有 CS 的精神分裂症患者病情更重, 功能损害的负担更大, 更可能经历负面的社会因素。CS 与临床表现和其他结局之间有重要关联, 疾病负担更重。心境稳定剂和镇痛药物的处方在有 CS 患者中更多, 提示此患者群可能有其他相关共病。尽管 CS 在精神分裂症中普遍存在, 此真实世界数据结果显示临床记录可能显著低估了 CS 患病率。原因可能是 CS 的治疗选择有限, 但也提示可以通过医生教育或数字方法和治疗手段提升 CS 的识别。

【声明】

此摘要首发在 2024 年 4 月 3-7 日精神分裂症国际研究协会年会 (SIRS)。

关键词: 真实世界数据, 精神分裂症, 认知症状, 疾病负担, 临床表现, 功能损害

Prevalent and Characteristic Changes in The Associations between Peripheral Blood Transcriptome and Brain Functional Imaging in Schizophrenia: A Trans-Scale Multi-Omics Study

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Background Schizophrenia (SCZ) is recently proposed as a multi-system disorder with systemic or peripheral comorbidities. Peripheral blood serves as a central link between the central and peripheral systems. However, the landscape and significance of the peripheral blood-brain associations are unstudied in SCZ. Here, by integrating microscale blood transcriptomic data and macroscale brain functional imaging data, this study aims to explore the associations between blood transcriptomic and neuroimaging data in SCZ

Methods A total of 43 SCZ patients and 60 healthy controls were included. Peripheral blood transcriptome analysis, high-resolution T1-weighted magnetic resonance imaging (MRI), and clinical assessments were conducted for all subjects. Initially, seven gene co-expression modules significantly associated with SZ were identified in the peripheral blood transcriptome by WGCNA. Through correlation analysis,

specific brain functional regions were identified as being associated with the gene co-expression modules, providing insights into the connections between peripheral blood transcriptome and brain function. Finally, we analyzed the correlations between blood gene module data (or associated brain imaging data) and the cognitive performance measured by the WAIS-RC in SCZ

Results The findings indicate prevalent and characteristic alterations in the associations between blood transcriptomic and neuroimaging data in SCZ, thereby reasoning out three alteration modes that may describe the pathogenic processes of SCZ, and showed distinctive correlations of blood transcriptomic and neuroimaging data with cognitive ability in SCZ compared to healthy controls. Machine learning models harnessing the trans-scale multi-omics information conferred enhanced diagnostic capability for SCZ

Conclusion Our study confirms and uncovers the significance of blood transcriptomic-neuroimaging connections in SCZ. this can offer a comprehensive analysis of the associations between peripheral blood and brain in SCZ, and emphasize the potential clinical utility of such trans-scale associations in improving diagnostic and clinical evaluations for SCZ

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关键词: Schizophrenia; Blood Transcriptome; Neuroimaging; Machine learning; Diagnosis

H2S Alleviates Schizophrenia-like Behavior Through Regulating Apoptosis by S-sulfhydrylation Modification

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Objective Considered as the third gaseous signaling molecule following nitric oxide (NO) and carbon monoxide (CO), hydrogen sulfide (H₂S) can promote the development of various central nervous system diseases through its anti-apoptotic effects. However, the relationship between H₂S and schizophrenia (SZ), as well as its underlying mechanisms, is not well understood. To address this, we embark on an in-depth exploration across three levels: population studies, cellular investigations, and animal models

Methods On the population level, clinical data and peripheral blood samples were collected from 81 first-episode SZ patients and 84 healthy controls, and the levels of H₂S in plasma were determined using the methylene blue method and Elisa. At the cellular and animal levels, dizocilpine (MK801) was used to establish SZ cell and animal models on SH-SY5Y cells and SD rats, respectively, while sodium hydrosulfide (NaHS) served as an exogenous donor of H₂S. Subsequently, cell-level high throughput sequencing of miRNA and mRNA transcriptomes was carried out to screen key target genes, and cell apoptosis was detected by flow cytometry. The levels of H₂S in rat plasma and hippocampal tissue were similarly measured using Elisa, and relevant behavioral indicators in model rats were detected through behavioral experiments. Finally, immunofluorescence was employed to detect cell apoptosis in the rat hippocampus, and protein S-sulfhydration assays were used to assess changes in S-sulfhydration of apoptosis-related proteins

Results The H₂S content decreased significantly in SZ patients' plasma and hippocampal brain tissue of the SZ rat model. In SH-SY5Y cells, NaHS pretreatment

significantly reduced the apoptosis level induced by MK801. Transcriptome sequencing and target gene prediction screening identified 4 miRNAs and 68 mRNAs enriched in the apoptosis pathway. The schizophrenia model rats exhibited significant behavioral abnormalities, increased levels of apoptosis in the hippocampal tissue, and decreased expression of the S-sulfhydration modification level of the apoptosis protein Birc6, all restored after NaHS pretreatment

Conclusion H2S content is significantly reduced in schizophrenia, and supplementation of H2S can alleviate schizophrenia, which is achieved through the regulation of the apoptosis process by S-sulfhydration modification

关键词: Schizophrenia, H2S, MK801, Apoptosis, S-sulfhydration

动态神经影像特征揭示精神分裂症和遗传高风险个体中的共同及特异性改变

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目的 精神分裂症(SCZ)是一种严重的精神疾病,通常表现为幻觉、妄想、思维混乱和社会功能障碍。具有SCZ遗传高风险(GHR)的人群可能更容易患上SCZ。研究SCZ和GHR有助于深入了解疾病的病因,并为早期诊断提供机会。然而,关于SCZ和GHR脑内自发动态特征的研究仍然很少。

方法 本研究共纳入符合入组标准的235名健康人(HC),67名GHR及133名SCZ患者,年龄范围为13-30岁,确保三组间性别、年龄、教育年限相匹配。对所有受试进行人口学资料和临床信息采集,临床症状采用简明精神量表(Brief Psychiatric Rating Scale)评定,随后进行静息态磁共振扫描。我们利用动态低频振幅(dALFF)分析来探索SCZ、GHR和健康对照组(HC)之间大脑活动的动态变化特征,采用滑动窗口法将扫描时间分为连续的段,并在每个段内计算ALFF值,以捕捉脑活动的动态

变化。

结果 我们观察到三组之间显著的dALFF差异,特别是在前额叶回、颞叶回、边缘系统、基底神经节系统和视觉皮层。其中SCZ和GHR组在右舌状回(LING)的dALFF均减少,且SCZ组较GHR组减少更多,这可能作为区分两组的标志。此外,与HC组相比,在SCZ组中,前额叶回、边缘系统和基底神经节系统的特定区域显示出增加的dALFF,而SCZ患者在颞叶回的特定区域显示出减少的dALFF。

结论 本研究首次采用dALFF方法研究了SCZ和GHR的神经影像特征。我们发现SCZ和GHR中存在异常的大脑动态活动。尤其是右侧LING中减少的dALFF可能作为SCZ和GHR之间潜在的共享生物标志物,暗示其在SCZ发病中的作用。这些发现有助于更深入地理解SCZ,并提供潜在的早期干预生物标志物。

关键词: 精神分裂症, 遗传高危, 动态脑活动, 舌回, 生物标志物

Iclopertin (BI 425809) 治疗精神分裂症患者的疗效和安全性: III 期随机对照试验项目 CONNEX

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目的 精神分裂症相关认知损害 (CIAS) 是精神分裂症的核心特征, 也是功能预后不良的主要决定因素。目前, 尚无药物获批用于治疗 CIAS。谷氨酸信号传递缺陷在精神分裂症尤其是认知症状的神经病理学中起着关键作用。Iclepertin (BI 425809) 是一种新型甘氨酸转运蛋白-1 抑制剂, 通过增加 N-甲基-D-天冬氨酸 (NMDA) 受体协同激动剂——甘氨酸的突触水平, 增强大脑 NMDA 受体的信号传递。为期 12 周的 II 期试验 (NCT02832037) 纳入 509 名精神分裂症患者, 提示 iclepertin 耐受性良好, 并显著改善认知表现。III 期临床试验 CONNEX 项目旨在通过更大样本的精神分裂症患者来确认 iclepertin 在改善 CIAS 和功能方面的有效性、安全性和耐受性。

方法 CONNEX 包括三项相似的随机、双盲、安慰剂对照平行组试验, 受试者为目前接受稳定抗精神病药物治疗的精神分裂症患者 (NCT04846868、NCT04846881、NCT04860830)。每项试验计划招募约 586 名年龄在 18-50 岁之间、接受 1-2 种抗精神病药物治疗的患者 (维持当前抗精神病药物 ≥ 12 周; 维持当前剂量 ≥ 35 天), 日常活动存在功能障碍, 每周与指定研究伙伴互动 ≥ 1 小时。排除因发育、神经系统或其他疾病导致的认知障碍或在筛选前 12 周内接受认知矫正治疗的患者。受试者从全球 41 个国家/地区招募, 并按 1:1 的比例随机分配接受口服 iclepertin 10mg (n=293) 或安慰剂 (n=293), 每日一次, 治疗 26 周。主要疗效终点是 MCCB 总体综合 T 评分相对于基线的变化。关键次要疗效终点是 SCoRS 总分相对于基线的变化以及虚拟现实认知能力评估工具 (VRFCAT) 校正总时间相对于基线的变化。长期安全性和耐受性数据将在开放标签安全性扩展的 CONNEX-X 研究中收集。

结果 研究目前正在招募, 并预计将于 2025 年第一季度完成试验。

结论 至今为止, 大多数药企发起的探讨各种化合物治疗认知功能的临床试验, 都未能达到临床概念验证。此 III 期项目通过显示 iclepertin 在改善认知方面的有效性结果可以为谷氨酸在认知症状以及其他相关认知疾病的作用提供重要见解。Iclepertin 有望成为治疗 CIAS 的首个有效药物。

【声明】 此摘要首发在 2024 年 4 月 3-7 日精神分裂症国际研究协会年会 (SIRS)。

关键词: 疗效, 安全性, 精神分裂症, 认知损害, CIAS, iclepertin

Cognitive Impairment after Brief Or Ultra-brief Pulse Electroconvulsive Therapy in Schizophrenia

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Objective The majority of studies have shown substantially reduced cognitive impairment when an ultra-brief pulse (UBP) electroconvulsive therapy (ECT) compared with a brief pulse (BP) ECT, but the results are still inconclusive

Methods This study employed a sequential group, double-blind, control trial design. A total of 114 patients with schizophrenia (SCZ) enrolled and received BP ECT (63 participants) or UBP ECT (51 participants). Cognitive function of the participants was assessed before and after treatment, and peripheral blood biomarkers as well as hippocampal magnetic resonance spectroscopy (MRS) data were collected

Results No significant differences were detected in demographic and clinical data at baseline between the two groups. After the end of ECT sessions, the outcomes suggested that the UPB group outperformed the BP group in the Trail Making Test and negative overgeneral memory test; the levels of peripheral blood biomarkers and the right hippocampal myoinositol/creatinine ratio in the UBP group were significantly higher than those in the BP group

Conclusion The current results suggested that UBP ECT achieved similar efficacy to BP ECT when given the same dose of stimulation, indicating cognitive advantages for UBP ECT. Nonetheless, this study could not examine this issue with respect to the structural and functional magnetic resonance brain data. Long-term

cognitive impairment post ECT should also be measured in future studies. In summary, UBP ECT can promote clinical treatment

关键词: Schizophrenia; Modified Electroconvulsive Therapy; Cognitive impairment; Magnetic Resonance Spectroscopy; Autobiographical Memory.

A Study of The Neuroimaging Mechanisms of Magnetic Seizure Therapy in Treatment-Resistant Schizophrenia

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Objective Treatment-resistant schizophrenia (TRS) is a specific subtype among patients with schizophrenia, characterized by poor response to pharmacological treatment and lower quality of life. Currently, apart from clozapine, there is a lack of effective treatment options for TRS patients. Magnetic seizure therapy (MST), as a novel neuromodulation treatment combining elements of electroconvulsive therapy (ECT) and transcranial magnetic stimulation, has shown promising efficacy and fewer side effects in treating treatment-resistant depression. There is limited research on the use of MST in treating TRS and the associated neuroimaging mechanisms. Therefore, this study aims to explore the efficacy and safety of MST in treating TRS and investigate changes in dynamic functional connectivity (DFC) using resting-state functional magnetic resonance imaging (rs-fMRI) in TRS patients before and after MST treatment, providing scientific evidence for precise treatment and effective intervention for this condition

Methods This study enrolled 26 subjects, each of whom underwent consecutive high-frequency MST treatment, followed by an 8-week clinical tracking and follow-up period after treatment completion. Before and

after MST treatment, we collected data on clinical symptoms, neurocognitive function, and resting-state structural and functional magnetic resonance imaging from the subjects. Clinical symptoms were assessed using the Positive and Negative Syndrome Scale (PANSS), while neurocognitive function was evaluated using the MATRICS Consensus Cognitive Battery (MCCB), which covers 7 cognitive domains. We compared the PANSS scores and MCCB cognitive scores of TRS subjects before and after treatment, and further conducted multiple comparisons of PANSS scores between before and after treatment as well as at two follow-up time points. Differences were considered statistically significant when the p-value was less than 0.05. Additionally, we preprocessed the rs-fMRI data, constructed dynamic functional networks using a sliding time window approach for DFC analysis, performed cluster analysis, and compared differences in DFC and temporal properties before and after MST treatment. Finally, we conducted Pearson correlation analysis to further explore the correlation between the temporal properties extracted from DFC and clinical symptoms as well as cognitive function

Results 1. Analysis of changes in clinical symptoms before and after MST treatment: In the TRS group, within 24 hours after the completion of MST treatment, significant reductions were observed in the PANSS total score ($t = 11.20, P < 0.001$), positive symptom score ($t = 8.917, P < 0.001$), negative symptom score ($t = 4.164, P < 0.001$), and general psychopathology score ($t = 9.513, P < 0.001$) compared to pre-treatment levels. Repeated Measures Analysis of Variance (ANOVA) revealed statistically significant differences in the PANSS total score at baseline (T0), within 24 hours post-treatment (T2), at 4 weeks post-treatment (T4), and at 8 weeks post-treatment (T8) ($F = 65.90, P < 0.001$)

2. Analysis of changes in cognitive function before and after MST treatment: Significant differences in three neurocognitive domains were observed in the TRS group before and after MST treatment, including attention/vigilance ($t = 2.066, P = 0.044$), verbal learning ($t = 2.316, P = 0.025$), and reasoning and problem-solving ($t = 2.190, P = 0.033$), all significantly increased com-

pared to before MST treatment. The remaining four neurocognitive domains - processing speed, working memory, visual learning, and social cognition - did not show significant differences, but demonstrated a trend of improvement post MST treatment. This indicates partial recovery of cognitive function in the TRS group after MST treatment, without cognitive decline.

3. Dynamic functional connectivity analysis Results Cluster analysis identified the optimal number of clusters in this study as 4, with state 2 having the highest frequency (33.21%) and state 3 the lowest (15.87%). Significant changes in dynamic functional connectivity across the whole brain and within each state were observed before and after MST treatment. Regarding temporal properties, TRS patients showed a significant decrease in the average dwell time in state 1 post MST treatment compared to pre-treatment ($t = 2.53$, $P = 0.02$), and significant increases in states 3 and 4 ($t = -2.22$, $P = 0.04$), ($t = -2.87$, $P = 0.01$). The time scores in state 1 significantly decreased post MST treatment compared to pre-treatment ($t = 2.38$, $P = 0.03$), while they significantly increased in states 3 and 4 ($t = -2.31$, $P = 0.03$), ($t = -2.88$, $P = 0.01$), with no significant differences in transition counts.

4. Correlation analysis Results Pearson correlation analysis of the dynamic temporal property changes before and after MST treatment with PANSS scores and changes in the 7 cognitive domains of the MCCB showed a significant positive correlation between the change in average dwell time in state 2 and the change in attention/vigilance ($r = 0.504$, $P = 0.039$), and a significant negative correlation between the change in average dwell time in state 4 and the change in reasoning and problem-solving ($r = -0.495$, $P = 0.043$); no other significant correlations were observed.

Conclusion This study found that high-frequency continuous MST treatment can effectively improve clinical symptoms in TRS patients and maintain the stability of efficacy within 8 weeks after treatment. Furthermore, no adverse effects on cognitive function were observed during the treatment process, and partial cognitive function in TRS patients was restored after MST treatment. Additionally, dynamic functional connectivity and temporal properties in TRS patients

changed in different states before and after MST treatment, showing partial correlation with cognitive function. This helps us understand the neuroimaging mechanisms behind the improvement of psychiatric symptoms with MST treatment. However, this study remains exploratory in nature, and future research should further increase the sample size with the inclusion of a control group to validate the findings.

关键词: magnetic seizure therapy; treatment-resistant schizophrenia; cognitive function; dynamic functional connectivity

Effectiveness and Safety of Blonanserin Monotherapy in First-episode Schizophrenia with and without Prominent Negative Symptoms: Data From A 12-week, Multicenter, Post-marketing Surveillance Study

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Objective This study aims to evaluate the effectiveness and safety of blonanserin monotherapy in first-episode schizophrenia in real clinical settings and to determine a sufficient dose range for patients with and without prominent negative symptoms

Methods A 12-week, multicenter, prospective post-marketing surveillance was conducted. In this study, we included patients with first-episode schizophrenia who received blonanserin monotherapy. Patients were divided into those with prominent negative symptoms (PNS) and without prominent negative symptoms (non-PNS) based on the Brief Psychiatric Rating Scale (BPRS) negative symptoms subscale score. Additionally, patients were divided into high-dose and low-dose groups based on the maximum daily dose they received. Effectiveness was assessed using the BPRS, and safety was evaluated through the incidence of adverse drug reactions (ADRs)

Results A total of 653 patients were included in

the analysis. Among them, 276 patients (PNS: 139; non-PNS: 137) received low-dose blonanserin (2-10mg/d), and 377 (PNS: 204; non-PNS: 173) received high-dose blonanserin (12-32 mg/d). A total of 613 patients (93.9%) completed the study. The BPRS total score decreased significantly from 47.94 ± 16.31 at baseline to 26.88 ± 9.47 at 12 weeks ($p < 0.001$). A significant interaction of PNS \times dose \times time was observed for BPRS total score ($F = 3.47$, $p = 0.040$) and negative symptom subscale score ($F = 6.76$, $p = 0.002$). In the PNS group, the high-dose group showed greater reductions than the low-dose group at week 12 (total: $p = 0.001$; negative symptoms: $p = 0.003$). In the non-PNS group, no significant difference in the BPRS score was observed between the high-dose and low-dose groups at any visit. Most adverse reactions were mild or moderate. Extrapyramidal symptoms (EPS: 9.3%) were the most common adverse reactions. 1.5% of patients gained $\geq 7\%$ body weight at 12 weeks

Conclusion Blonanserin effectively improved the clinical symptoms of first-episode schizophrenia with an acceptable safety profile. High-dose blonanserin is particularly beneficial for patients with prominent negative symptoms in the long term, while low-dose blonanserin is sufficient for patients without prominent negative symptoms.

关键词: Schizophrenia, Negative symptoms, Blonanserin, Effectiveness, Safety

精神分裂症与年龄相关性黄斑变性之间的分子串扰: 免疫炎症是重点

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目的 精神分裂症是世界十大致残疾病之一, 常伴有感知觉、思维、情感、行为及认知等障碍, 存在病因不明、诊断不足、疗效不佳的困境, 探索精神分裂症确切的病理生理机制面临着重大挑战。眼作为中枢神经系统的一部分, 与脑具有高度的发育同源性和功能相似性, 精神分裂症中眼和脑均存在广泛的功能及结构损害, 但是现阶段二者相关潜在分

子机制是复杂而模糊的。由此, 本研究利用生物信息学工具, 通过从基因表达综合 (GEO) 数据库中收集三个精神分裂症数据集和两个年龄相关性黄斑变性数据集, 来揭示与二者相关的枢纽基因和潜在机制。

方法 利用 GEO 数据库筛选与精神分裂症及年龄相关性黄斑变性相关的转录组测序数据集, 通过整合精神分裂症和年龄相关性黄斑变性患者的基因表达水平和临床信息, 利用加权基因共表达网络分析 (WGCNA) 研究与二者之间相关的共表达网络, 并对共享基因进行富集分析, 筛选出最显著的核心基因。

结果 通过利用 GEO 数据库, 申请者团队收集了精神分裂症和年龄相关性黄斑变性患者相关的基因, 共获得了 511 个精神分裂症相关基因, 1056 个年龄相关性黄斑变性相关基因, 进行交叉处理后得到了这两种疾病的 63 个共同基因。通过装袋决策树算法 (Bagged Tress)、贝叶斯算法 (Bayesian)、随机森林算法 (Random forest)、Wrapper 算法 (Bpruta)、学习矢量量化 (LQV) 和 1000 次迭代 10 折交叉验证 LASSO-Logistic (Least absolute shrinkage and selection operator, LASSO) 算法等 6 种机器学习算法在精神分裂症数据集中分析上述 63 个共同特征基因 (DEGs) 与二者发病之间的关系, 并将不同算法的结果取交集。结果显示, 有 3 个重要特征基因 (Hub-OADEGs) 与二者发病最为密切, 分别为: FMO5、GPR132 和 S100A8, 分别计算了 3 个特征基因与免疫细胞含量之间的相关性后, 结果显示 3 个重要基因 (Hub-OADEGs) 与免疫细胞含量密切相关, P 值均小于 0.05。

结论 本研究首次挖掘了与精神分裂症相关的致病基因以阐明精神分裂症与后续年龄相关性黄斑变性之间的联系, 其中炎症和免疫过程包括 CD56bright natural killer cell、Activated CD4 T cell、Activated B cell 和 Immature B cell、Effector memory CD8 T cell 和 Activated CD8 T cell 可能是二者共病的潜在机制。

关键词: 精神分裂症; 年龄相关性黄斑变性; 分子串扰; 免疫炎症; 生信分析

虹膜特征和色觉功能与首发未治疗精神分裂症的关联研究

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目的 精神分裂症(SCZ)是一种神经发育障碍性疾病,并伴有多器官功能的异常改变。眼部组织如虹膜、视网膜与大脑共同发育自神经外胚层,相关研究不仅发现虹膜和视网膜发育异常与脑功能结构的病理改变具有高度一致性,并且SCZ患者普遍存在视觉功能改变。本研究的目的是:明确SCZ患者与健康人(HC)虹膜特征和色觉功能差异性及虹膜特征与精神病性症状和暴力攻击行为之间的关联性,并验证虹膜特征作为精神分裂症生物标志物的可行性。同时,明确第二代抗精神病药物(SGAs)是否会对色觉功能产生影响,以及具有虹膜特征结构是否会对FUS患者的治疗效果造成显著影响。

方法 首发未治疗精神分裂症(FUS)患者作为病例组,共61人;HC61人。首先,应用虹膜仪采集所有被试的虹膜图像,并对虹膜图像按特征进行分类:包括隐窝、色素点和皱纹,之后统计虹膜各特征的频数数值。FUS组进行PANSS、MOAS评估。明确虹膜特征频数与罹患精神分裂症风险关系;明确虹膜特征频数对精神分裂症的诊断预测准确率,以及对PANSS及各分量表、MOAS得分影响。应用Spearman相关分析,统计虹膜特征频数分别与PANSS及各分量表、MOAS得分相关性,对具有显著相关性的变量进行线性回归分析,明确变量间影响程度。其次,应用法恩斯沃思D-15色觉功能测试(D-15)对全部被试进行色觉功能评估。于FUS患者开始采用SGAs治疗后随访6周。在基线期及第6周进行D-15评估和第二次虹膜特征频数统计,在第2周,第4周和第6周分别进行PANSS评估。明确FUS组与HC组D-15得分以及色觉障碍类型是否存在显著差异。对FUS患者,明确不同色觉障碍类型与PANSS及各分量表、MOAS的关联性。分析干预前后色觉障碍类型的变化及虹膜特征频数变化。明确各随访时点PANSS得分在有/无虹膜特征组间及组内的变化趋势和差异性,探讨虹膜特征是否会影响SCZ患者的治疗效果。

结果 FUS组较HC组具有虹膜隐窝($P<0.001$)和色素点($P<0.001$)者显著更多。而虹膜皱纹组间差异不显著($P>0.05$)。ROC曲线分析显示,虹膜隐窝频数(AUC)为:0.702;色素点频数AUC为0.701;联合预测曲线下面积(AUC)为0.793。与无虹膜隐

窝者相比,具有隐窝者MOAS得分更高($P<0.001$);与无虹膜色素点者相比,具有色素点者阴性量表得分更高($P<0.001$)。FUS组D-15得分显著高于HC组($P=0.019$)。

结论 虹膜隐窝和色素点具有作为SCZ生物标志物的潜力。

虹膜隐窝频数、色素点频数及其组合预测对SCZ诊断具有较高的预测价值。

关键词: 精神分裂症;虹膜;色觉功能;生物标志物;第二代抗精神病药物

精神分裂症社会知觉缺陷的神经相关性:一项与事件相关的电位研究

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目的 精神分裂症患者的面部情绪识别障碍与其社会认知功能密切相关。本研究旨在描述精神分裂症患者社会知觉的事件相关电位(ERP)特征,并探讨其异常社会知觉认知过程的神经机制。

方法 33名符合DSM-V诊断的精神分裂症患者和35名健康参与者在完成情绪强度识别任务的同时接受了脑电图记录。使用重复测量方差分析对所有参与者的行为学数据以及潜在的ERP特征进行分析,并通过PANSS量表评估精神分裂症患者的精神病症状严重程度。

结果 行为学结果表明与厌恶的面孔相比,精神分裂症患者对悲伤面孔的反应时间更长,并且准确性低于健康对照组。此外,精神分裂症患者在厌恶面孔、惊讶面孔、愤怒面孔和恐惧面孔的准确性均低于健康对照组。在ERP成分方面,N100、P200和N250的平均振幅和潜伏期在组间没有发现明显差异;然而,对于悲伤和愉快面孔,精神分裂症组在额叶和中央叶的LPP平均振幅均小于健康对照组;愤怒和恐惧面孔诱发的LPP平均振幅也均低于健康对照组,主要集中在额叶、中央叶和顶叶;对于惊喜面孔,与精神分裂症患者相比,健康对照组在中央叶和顶叶有着更高的LPP平均振幅。精神分裂症组和健康对照组在不同情绪面孔和感兴趣脑区中的LPP平均振幅存在显著差异。

结论 精神分裂症患者在面部情绪识别方面存在显著缺陷, 主要表现于情绪处理的晚期阶段, 而非早期或中期阶段, 并具有情绪特异性, 包括对悲伤、愉快、惊讶、愤怒和恐惧面孔的识别困难。这一缺陷可能反映了精神分裂症患者认知资源分配的减少, 对其社会认知功能具有重要临床意义。

关键词: 事件相关电位, 精神分裂症, 社会认知, 社会知觉, 情绪强度识别任务

The Immediate, Subtle Reduction of Body Temperature Undergoing Antipsychotic Medications: A 10-year Retrospective Study

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Objective Antipsychotic drugs (APDs)-caused hypothermia is a rare yet potentially lethal adverse effect. However, latent impact of antipsychotic drugs on body temperature (Tb, °C) seems to be neglected in patients without overt temperature dysregulation. Herein, we aimed to identify whether APDs treatment had an impact on Tb

Methods In this population-based and self-control study, dynamic change of Tb of inpatients with schizophrenia or bipolar disorder on admission and after dose-escalating antipsychotic treatment including quetiapine, paliperidone ER, olanzapine and risperidone were collected

Results In quetiapine group (n = 138, age mean: 22.21 (20.63-23.79)), Tb in patients who had their doses escalated to 300mg/day (36.70 (36.40-36.90) vs. 36.80 (36.50-37.00), p = 0.022), 400mg/day (36.70 (36.25-36.85) vs. 36.80 (36.50-37.00), p = 0.011), and 500mg/day (36.45 (36.23-36.80) vs. 36.65 (36.50-36.88), p = 0.055) were significantly decreased compared to their baseline, in a dose-dependent manner (95

CI%: 0.0089-0.1826, r = 0.0965, p = 0.0264). Similar result was also observed in patients receiving paliperidone ER treatment (n = 45, age mean: 23.56 (20.69-26.42)), with doses going up to 3mg/day (36.70 (36.50-36.80) vs. 36.70 (36.55-37.00), p = 0.019), 6mg/day (36.60 (36.40-36.80) vs. 36.70 (36.50-37.00), p = 0.04), and 9mg/day (36.60 (36.40-36.90) vs. 36.70 (36.60-36.90), p = 0.019). However, no significant difference in the Tb was found in either olanzapine (n = 21, age mean: 29.52(24.13-34.92)) or risperidone (n = 24, age mean: 27.38(23.09-31.66)) at various doses (all p's > 0.05)

Conclusion This study presented that APDs use disrupted the thermal homeostasis within commenda-tion dose, providing the potential valuable insights for underlying the APDs-related metabolic perturbation

关键词: antipsychotic drug, body temperature, hypothermia, adverse effect

Humor Processing Ability in First-episode Schizophrenia and Its Relationship with Clinical Features

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Objective Humor is a high-order social cognition process unique to human beings which is commonly impaired in patients with chronic schizophrenia. However, humor processing and its associations with patients' clinical characteristics in the early stage of illness remains unknown. The current study aimed to investigate humor processing and its relationship with clinical features in patients with first episode schizophrenia (FES)

Methods This study recruited 45 patients with FES and 44 healthy controls matching for age, gender and education level. Participants completed the Picture Humor Processing Task (HPT-p) and the Video Humor Processing Task (HPT-v) which tapped into humor comprehension and appreciation, and a questionnaire assessing their humor styles. The clinical participants also

completed clinical and social functioning measurements. Signal detection theory analysis was used to calculate the d' and β values which represented the detection of humor signal in the comprehension phase and the inner criteria of the humor appreciation phase respectively

Results In HPT-p, patients with FES showed higher false alarm rate ($p = 0.048$) while comparable hitting rate, signal recognition ability (d' value) and intrinsic evaluation criterion (β value) compared to healthy controls. In HPT-v, patients with FES showed lower within-group coherence in funniness rating ($p = 0.023$). In addition, the false alarm rate in HPT-p and negative symptoms predicted social functioning well in patients with FES ($R^2 = 0.681, p < 0.001$)

Conclusion Our results indicated that impairment of humor comprehension in schizophrenia generated in the first episode and would contribute to social functioning deficit, which needs early recognition and intervention.

关键词: Schizophrenia; Humour processing; Signal detection theory (SDT); Social functioning; Negative symptoms

基于混沌游戏表示研究首发精神病患者的脑电微状态序列特征

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目的 我们的研究旨在利用混沌游戏表示法 (CGR) 来研究微状态序列, 并探索其作为精神疾病神经生物标志物的潜力。

方法 我们将所提出的方法应用于一个包含 82 名首发精神病 (FEP) 患者和 61 名对照组的数据集。构建了两种时间序列: 一种使用 CGR 中的微状态间距离 (时间序列 D), 另一种使用表示 CGR 中微状态坐标的复数 (时间序列 Z)。对两组时间序列的功率谱特征和频率矩阵 CGR (FCGR) 进行了比较, 并探索了基于上述特征识别 FEP 的机器学习性能。

结果 通过共享和单独模板, 识别出了四种典型的微状态 (A、B、C 和 D)。我们的结果表明, FEP

组的微状态振荡模式表现出变化。具体为: 对照组时间序列 D 的平均值、标准偏差 (SD) 和均方根 (RMS) 显著低于 FEP 组。在频域特征方面, 对照组时间序列的平均功率、中心频率 (CF) 和均方根频率 (RMSF) 显著低于 FEP 组, 而对照组时间序列的频率标准差 (RVF) 显著高于 FEP 组。对照组时间序列 Z 的功率谱 CF 和 RMSF 显著低于 FEP 组, 而平均功率和 RVF 之间的差异在组间不显著。相比于微状态的经典特征和 FCGR, 使用 CGR 衍生的振荡特征提高了机器学习的性能。

结论 这项研究为分析 EEG 微状态序列开辟了新途径。由微状态序列 CGR 得出的特征或可作为精神疾病更加细粒度的神经生物标志物。

关键词: Schizophrenia, EEG, microstate, CGR

精神分裂症患者色氨酸代谢途径的靶向代谢组学研究

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目的 精神分裂症是一种常见的重性精神病性障碍。研究发现该病患者体内色氨酸水平异常改变, 而色氨酸主要通过犬尿氨酸、5-羟色胺和吲哚 3 种途径进行分解代谢, 其中犬尿氨酸和 5-羟色胺参与精神分裂症的病理机制。但是, 目前系统研究精神分裂症色氨酸代谢途径的证据十分匮乏。因此, 本项目旨在应用靶向代谢组学技术检测色氨酸代谢途径中的关键代谢产物, 通过比较首发精神分裂症患者与其他精神障碍患者和健康对照组之间的差异及其与临床指标的关系, 研究色氨酸 3 种分解代谢途径在精神分裂症中的变化规律及其在疾病病理机制中的作用。

方法 本研究共纳入 124 名受试者, 包括 29 例首发精神分裂症患者, 22 例其他精神疾病患者以及 73 例健康对照, 采集受试者血浆样本并收集血生化、血脂等临床指标。应用超高效液相色谱-四极杆飞行时间质谱 (UHPLC-QTOF/MS) 技术对色氨酸代谢途径中的 16 种关键代谢物进行靶向代谢组学检测, 并对其中 7 种代谢物进行标准曲线绘制。使用 SPSS

26.0 进行秩和检验和斯皮尔曼相关性分析。

结果 靶向代谢组学研究结果表明,与健康对照组相比,精神分裂症组血浆色氨酸(FC=0.89)、5-羟基吲哚乙酸(FC=0.79)、犬尿氨酸(FC=0.80)和犬尿酸(FC=0.73)水平显著降低($p < 0.05$)。其他精神疾病组和健康对照组相比,色氨酸(FC=0.91)和犬尿酸(FC=0.80)水平显著降低($p < 0.05$),这与精神分裂症组相似;而5-羟基吲哚乙酸和犬尿氨酸并无显著变化,这与精神分裂症组不同。而精神分裂症组与其他精神疾病组相比,5-羟色胺水平显著降低(FC=0.86, $p=0.043$)。此外,我们进一步发现在精神分裂症组中,色氨酸与总胆红素($r=0.627$)、直接胆红素($r=0.597$)、间接胆红素($r=0.568$)、谷草转氨酶($r=0.480$)、肌酐($r=0.627$)呈显著正相关;而与高密度脂蛋白胆固醇($r=-0.604$)和载脂蛋白A1($r=-0.541$)呈显著负相关;而犬尿氨酸($r=0.571$)、5-羟基吲哚乙酸($r=0.533$)和犬尿酸($r=0.416$)也与谷草转氨酶显著正相关($p < 0.05$)。有趣的是,在健康对照组中上述相关性均消失。

结论 本研究系统揭示了精神分裂症患者体内色氨酸代谢途径功能障碍,其中色氨酸-犬尿氨酸和色氨酸-5-羟色胺这2条代谢途径显著下调,而色氨酸-吲哚代谢途径无明显变化,并且发现色氨酸代谢途径与血液指标呈现疾病特异性关联。我们的研究结果为揭示色氨酸代谢途径参与精神分裂症病理机制提供了新的生物学证据,为疾病的客观诊断和干预提供了新的线索。

关键词: 精神分裂症,色氨酸-犬尿氨酸代谢途径,色氨酸-5-羟色胺代谢途径,色氨酸-吲哚代谢途径,靶向代谢组学

慢性精神分裂症肠道真菌及代谢组学研究

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目的 1. 比较 CSCZ 患者和健康对照(HC)人群中肠道真菌群落结构及特征的差异;

2. 比较 CSCZ 患者和 HC 人群粪便代谢组学差异;

3. 探讨肠道真菌相关代谢改变和免疫炎症反应与 CSCZ 的关联。

方法 研究对象:参与者为2019年1月至2023年1月期间,于郑州大学第一附属医院住院治疗的 CSCZ 患者。同时通过广告面向大众招募 HC 人群。入组当天对受试者进行临床信息采集。对于 CSCZ 患者,使用阳性与阴性症状量表(PANSS)进行评分。入组次日晨,收集 CSCZ 组及 HC 组的空腹血液样本以及粪便样本。CSCZ 患者在入组第6周、12周分别进行门诊随访,收集血液及粪便样本。使用 Wilcoxon 秩和检验进行 α 多样性的组间差异分析,使用 Vegan 软件(版本 2.4.3)进行主坐标分析(PCoA)及置换多元方差分析(PERMANOVA)检验,评估两组间真菌群落相似性,使用线性判别分析(LEfSe)确定两组间丰度差异显著的真菌类群,使用偏小二乘判别分析(PLS-DA)确定两组间差异显著的代谢物,通过微生物组多变量线性模型关联分析(MaAsLin)方法探究肠道真菌与临床症状之间的关系,通过 Procrustes 分析 CSCZ 中真菌群落与所有代谢物的关系。

结果 CSCZ 组与 HC 组相比,肠道真菌群落的 α 多样性偏低,即物种组成的多样性及均匀度降低,PCoA 分析显示,两组间肠道真菌群落组成有显著差异。通过属和种水平的差异真菌种类,能够有效地将 CSCZ 组和 HC 组区分开来。肠型分析将所有入组人群分为2种肠型,肠型1(Candida 占优势)和肠型2(Saccharomyces 占优势)。与 HC 组相比,CSCZ 患者肠型1的个体明显减少,肠型2的个体明显增多。在 CSCZ 患者中,肠型1的患者 PANSS 阳性症状因子评分(PANSS-FSPS)和抑郁因子评分明显高于肠型2的 CSCZ 患者。相关分析显示,属水平的 Candida 与抑郁因子评分正相关,而属于 Candida 的物种及操作分类单元(OTUs)也与抑郁因子评分呈正相关(P 均 < 0.05)。粪便差异代谢物分析发现 1239 个差异代谢物,通过这些代谢物可以明显区分 CSCZ 组与 HC 组。CSCZ 患者肠道真菌改变与粪便代谢物之间存在显著相关性。

结论 1. CSCZ 患者存在肠道真菌群落结构及特性的差异,提示肠道真菌群落失调与 CSCZ 的发病有关;

2. CSCZ 患者粪便代谢组学具有特征性的改变,提示粪便代谢组学改变与 CSCZ 的发病有关;

3. 肠道真菌相关的代谢物改变与免疫状态显著相关,提示肠道真菌可能通过炎症及代谢通路影响 CSCZ。

关键词: 精神分裂症; 肠道菌群; 真菌; 代谢组

学; 细胞因子; 炎症因子; 神经递质

激越精神分裂症患者的炎症失衡和眶额叶皮层亚区结构改变

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目的 分析不同激越严重程度精神分裂症患者中炎症失衡和眶额叶皮层(orbitofrontal cortex, OFC)亚区结构的差异, 探讨炎症失衡和 OFC 亚区结构之间的关系, 探索炎症失衡和 OFC 在精神分裂症患者激越发生机制中可能的作用。

方法 选取 18~65 岁住院精神分裂症患者 119 例, 采用酶联免疫(Elisa)法检测所有研究对象的血浆促炎细胞因子 IL-1 β 、IL-2、IL-5、IL-6、IL-8、IL-12p70、IL-17、TNF- α 、IFN- α 和 IFN- γ , 抗炎细胞因子 IL-4 和 IL-10 浓度。评估患者免疫炎症反应系统和代偿性免疫调节反射系统(immune-inflammatory response system/compensatory immune-regulatory reflex system, IRS/CIRS)反映炎症失衡水平。免疫生物标志物主要包括巨噬细胞 M1、T 辅助细胞(Th)、Th-1、Th-2、Th-17 和 T 调节细胞因子(Treg)。采用结构磁共振成像检查, 利用 freesurfer 软件提取大脑 OFC 亚区灰质体积和皮层厚度。采用简明精神病评定量表(BPRS)评估患者精神病性症状严重程度, 简易激越评定量表(BARS)评估患者激越严重程度。根据患者 BARS 评分进行两步聚类分析, 将患者分为高激越组和低激越组。采用协方差分析进行组间差异性检验。采用偏相关分析, 分析细胞因子失衡与 OFC 亚区结构的相关性。筛选出显著相关的组合, 使用调节模型评估激越是否成为细胞因子失衡和 OFC 亚区结构之间关系的显著调节因子。

结果 与低激越组相比, 高激越组 IL-5(F=7.428)和 IL-6(F=10.409)水平显著降低(FDR 矫正, P<0.05), 细胞因子失衡 Th-2(F=9.632)和 M1(F=7.162)水平显著降低(FDR 矫正, P<0.05)。两组 OFC 亚区灰质体积和皮层厚度无显著差异。高激越组左侧外侧 OFC 体积增加与 M1+TH1+TH17/TH2+Treg(r=-0.394, P=0.042)和 IRS/CIRS(r=-0.496, P=0.008)比率呈负相关。调节模型显示, 激越严重程度显著调节左侧外

侧 OFC 体积和 IRS/CIRS 比率之间的关系(F=5.332, P=0.024)。

结论 激越精神分裂症患者促炎和抗炎细胞因子水平上升, 存在炎症失衡。高激越精神分裂症患者炎症失衡水平和左侧外侧 OFC 体积具有相关性, 并且受到激越严重程度的调节。炎症失衡和左侧外侧 OFC 体积可能参与了精神分裂症激越发生的机制。

关键词: 激越, 精神分裂症, 炎症失衡, 眶额叶皮层

精神分裂症患者家庭照顾者照顾体验现状及影响因素研究

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目的 了解精神分裂症患者家庭照顾者心理困扰和积极感受现状, 探讨精神分裂症患者家庭照顾者心理困扰及积极感受的影响因素, 为临床工作中提高精神分裂症患者家庭照顾者积极感受水平, 降低心理困扰制定个性化的护理干预方案提供参考。

方法 选取 2023 年 2 月-2023 年 8 月到成都市第四人民医院就诊的 192 例精神分裂症患者的家庭照顾者作为研究对象, 进行问卷调查。研究工具: 一般资料调查表、PANSS 量表、社会支持评定量表、ZBI 照顾者负担量表、心理痛苦管理筛查工具(DMSM)、照顾者积极感受量表、家庭功能评定量表、简易应对方式问卷和简易心理弹性问卷。

结果 (1) 心理困扰平均分为 8.68 \pm 1.67, 心理困扰得分大于等于 6 的有 92.7%; 积极感受平均分为 29.76 \pm 6.41。

(2) 患者因素(婚姻状况、疾病了解程度、暴力行为史、冲动行为史)和照顾者因素(性别、与患者关系、每日照顾时长)在心理困扰得分之间的差异有统计学意义(P<0.05)。

(3) 照顾负担、PANSS 量表与心理困扰呈正相关(r=0.210~0.574, P<0.01), 心理弹性、家庭功能、应对方式及社会支持与心理困扰呈负相关(r=-0.289~0.543, P<0.01); 心理弹性、家庭功能应对方式与积极感受呈正相关(r=0.350~0.527, P<0.01), 照顾负担

及 PANSS 量表与积极感受呈负相关($r=-0.273 \sim 0.301$, $P<0.01$)

结论 (1)精神分裂症患者家庭照顾者心理困扰普遍存在且程度较重, 92.7%照顾者出现显著的心理困扰, 急需减轻; 其主要影响因素包括患者婚姻状况、阳性症状、照顾者照顾角色、每日照顾时长、心理弹性、照顾负担、问题解决等。

(2)精神分裂症患者家庭照顾者的积极感受水平处于中等偏下水平, 有待提高; 其主要影响因素包括患者疾病家族史、阳性症状、照顾者家中有无其他需要照顾的人、心理弹性、积极应对。

(3)在临床工作中, 医务人员应重视精神分裂症患者家庭照顾者的心理健康状况, 综合考虑上述影响因素, 为提高照顾者积极感受开展针对性、动态性、整体性的干预措施。

关键词: 精神分裂症; 家庭照顾者; 照顾体验; 心理困扰; 积极感受

Brain eQTLs of European, African American, and Asian Ancestry Improve Interpretation of Schizophrenia GWAS

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Objective Research on brain expression quantitative trait loci (eQTLs) has illuminated the genetic underpinnings of schizophrenia (SCZ). Yet, the majority of these studies have been centered on European populations, leading to a constrained understanding of population diversities and disease risks. The purpose of this study is to enhance the interpretation of schizophrenia Genome-Wide Association Studies (GWAS) by integrating brain eQTLs from individuals of European, African American, and Asian ancestry

Methods Our data pool comprised genotype and RNA-seq data of AA ($n=158$) and EUR ($n=408$) from the PsychENCODE Consortium and EAS ($n=217$) from the Chinese Human Brain Bank. We conducted a comprehensive analysis of cis-eQTLs across different populations, leveraging a 5% empirical gene-level false discovery rate threshold. To investigate the genomic

features of these cis-eQTLs, we evaluated the SNP distributions and locations relative to various functional regions. To evaluate the effect sizes across populations, we conducted a correlation test of effect size values between the EUR and non-EUR populations. To determine if eQTLs detected from a specific population could explain the disease GWAS signals and SNP-based disease heritability better than eQTLs from non-matching populations, we employed the partitioned LD-score regression (LDSR) approach to assess the GWAS signal enrichment of these eQTLs. To uncover risk genes and pathways for SCZ in non-EUR populations, we used TWAS, regulatory Trait Concordance (RTC), and summary data-based mendelian randomization (SMR) to prioritize SCZ candidate risk genes in non-EUR populations and compared them with risk genes

Results Comparing eQTLs between EUR and non-EUR populations revealed concordant patterns of genetic regulatory effects, especially in eQTL effect sizes. However, 343,737 cis-eQTLs (representing approximately 17% of all eQTL pairs) linked to 1,276 genes (about 10% of all eGenes) and 198,769 SNPs (approximately 16% of all eSNPs) were unique to non-EUR populations. Over 90% of observed population differences in eQTLs were attributed to differences in allele frequency, with 35% of these eQTLs being notably rare ($MAF < 0.05$) in the EUR population. Integrating brain eQTLs with SCZ signals from diverse populations showed higher disease heritability enrichment of brain eQTLs in matched populations compared to mismatched ones. Prioritization analysis identified seven new risk genes (SFXN2, RP11-282018.3, CYP17A1, VPS37B, DENR, FTCDNL1, and NT5DC2), and three potential novel regulatory variants in known risk genes (CNNM2, C12orf65, and MPHOSPH9) that were missed in the EUR dataset

Conclusion Our findings underscore that increasing genetic ancestral diversity is more effective for improving analytical power than merely increasing the sample size within single-ancestry eQTL datasets. This approach not only enhances our understanding of the biological underpinnings of population structures but also facilitates the identification of novel risk genes in SCZ

关键词: eQTLs; Schizophrenia; GWAS signals;

Population diversity

Untargeted Metabolomics-based Understanding of The Serum Metabolic Profiles in Schizophrenia Patients with Antipsychotic-induced Tardive Dyskinesia

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Objective The treatment of schizophrenia (SZ) primarily relies on antipsychotics (APs), but their long-term use often leads to tardive dyskinesia (TD). The mechanisms by which APs cause TD are complex and involve multiple biological pathways. However, the specific metabolic pathways and biomarkers associated with TD remain unclear. Therefore, we employed untargeted metabolomics to explore the potential biological mechanisms underlying AP-induced TD. This study hypothesizes that schizophrenia patients with AP-induced TD exhibit distinct metabolic profiles compared to those without TD

Methods This study recruited 84 SZ patients with TD and 160 SZ patients without TD. The diagnosis of TD was based on the Schooler-Kane criteria, with the severity of TD and clinical symptoms of SZ patients evaluated using the AIMS and PANSS scales, respectively. Fasting blood samples were collected from all participants, followed by untargeted liquid chromatography-mass spectrometry (LC-MS) metabolomics analysis. Orthogonal partial least squares discriminant analysis (OPLS-DA) models were used to identify differential metabolites, and partial correlation analysis and receiver operating characteristic (ROC) curves were employed to determine TD biomarkers

Results In AP-induced TD, 57 metabolites were significantly altered ($VIP > 1$, $p < 0.05$), primarily affecting the biosynthesis of phenylalanine, tyrosine, and tryptophan ($p = 0.025$, Impact: 0.5) and phenylalanine metabolism ($p = 0.05$, Impact: 0.36). Among these, 18 metabolites were significantly correlated with the severity of TD (all $ps < 0.05$). Additionally, L-phenylalanine

and gamma-Glu-Thr had area under the curves (AUCs) of 0.727 and 0.704, respectively, for diagnosing TD, and their combined AUC reached 0.78

Conclusion Our study indicates that AP-induced TD is primarily associated with the phenylalanine metabolic pathway, with L-phenylalanine serving as a potential biomarker for distinguishing TD. This provides insights into the metabolic pathways and biological markers involved in AP-induced TD.

关键词: Schizophrenia; Tardive dyskinesia; Antipsychotics; Metabolomics; Biological markers

Effects of Sweet Dream Oral Liquid in Male Schizophrenic Patients on Long-term Atypical Antipsychotic Medication: A Double-center Prospective Randomized Controlled Trial

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Objective This study aimed to assess the effects of Sweet Dream Oral Liquid on cognitive function, sexual function, extrapyramidal responses, and serum prolactin levels in male schizophrenic patients undergoing long-term treatment with atypical antipsychotics

Methods We selected 120 male schizophrenic patients receiving long-term atypical antipsychotics at Wuhan Mental Health Center and Huanggang Provincial Veterans Administration Hospital from September 1, 2022, to March 2024. The control group received conventional drug treatment, while the experimental group received Sweet Dream Oral Liquid 10ml twice daily in addition to conventional treatment. Clinical assessments included the Hamilton Depression Rating Scale for symptom evaluation, the A Rating Scale for Extrapyramidal Side Effects for extrapyramidal reactions, the Montreal Cognitive Assessment for cognitive function, the Arizona Sexual Experience Scale for sexual dysfunction, and measurement of prolactin levels. Brain-derived neurotrophic factor and interleukin-6 levels were also measured at baseline and after 8 weeks of

treatment to assess cytokine effects in schizophrenia patients

Results There were no significant differences in BMI, heart rate, blood pressure, PANSS scale scores, or IL-6 levels between the two groups before and after treatment (BMI: $P = 0.710$; HR: $P = 0.416$; DBP: $P = 0.182$; SBP: $P = 0.400$; PANSS: $P = 0.541$; IL-6: $P = 0.099$). In the experimental group, significant improvements were observed in MoCA scores ($P = 0.034$), increased BDNF levels ($P = 0.006$), decreased prolactin levels ($P = 0.001$), reduced RESES scores ($P = 0.000$), and lower ASEX scores ($P = 0.024$)

Conclusion Sweet Dream Oral Liquid may enhance cognitive function, reduce extrapyramidal responses and sexual dysfunction, and decrease prolactin levels in schizophrenic patients. These findings suggest potential adjunctive therapeutic benefits in schizophrenia treatment.

关键词: Sweet Dream Oral Liquid, schizophrenia, sexual function, extrapyramidal response, cognitive function

Head-to-head Comparisons of Serum Prolactin Elevation Induced by 9 Second-Generation Antipsychotics in A Large Cohort of Patients with Schizophrenia: Analysis From A Real-World Study Database

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Objective Antipsychotic-induced hyperprolactinemia (HPRL) seriously affect long-term treatment outcome. Available data is insufficient to guide the monitoring and treatment of HPRL with second-generation antipsychotics (SGAs)

Methods Data from 10,363 schizophrenia inpatients (62,428 prolactin tests) receiving SGAs were retrieved from the inpatient electronic medical record system of a large mental health center. Stratified Cox proportional hazard regression was used to compare the

hazard ratios (HR) of HPRL associated with 9 SGAs

Results It is significant ($p < 0.001$) in the distribution of HPRL severity between different age and gender. Amisulpride (HR 2.02, 95%CI 1.60 to 2.63), risperidone (HR 1.91, 95%CI 1.65 to 2.23), and paliperidone (HR 1.47, 95%CI 1.11 to 1.95) have a higher risk of HPRL. The lower risk of HPRL including olanzapine (HR 0.79, 95%CI 0.67 to 0.93), quetiapine (HR 0.75, 95%CI 0.63 to 0.89), clozapine (HR 0.61, 95%CI 0.49 to 0.78), aripiprazole (HR 0.36, 95%CI 0.29 to 0.44). Ziprasidone (HR 1.12, 95%CI 0.88 to 1.44), and piperipilone (HR 0.60, 95%CI 0.17 to 2.13) were not significantly correlated with the risk of HPRL. Amisulpride (HR 2.46, 95%CI 1.75 to 3.47) had the highest risk of HPRL among male patients while risperidone (HR 2.05, 95%CI 1.68 to 2.50) among female patients

Conclusion Amisulpride, risperidone, and paliperidone have a higher risk of HPRL in schizophrenia patients while olanzapine, quetiapine and aripiprazole have a relatively lower risk. It is necessary to analyze comprehensively in terms of gender and age in schizophrenia with SGAs

关键词: Second-generation Antipsychotics, hyperprolactinemia, real-world Study

Insomnia and Aggression in Stable Schizophrenic Patients: Mediating Role of Quality of Life

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Objective Aggression in schizophrenia patients is an issue of concern. Previous studies have shown that aggression in schizophrenia patients may be related to insomnia and quality of life to different extents. This study intended to explore the potential mediating role of quality of life in the relationship between aggression and insomnia among schizophrenia patients. In addition, demographic factors affecting aggression in schizophrenia patients were also explored. Methods 781 stable

patients aged 18-75 who met the ICD10 diagnosis of "schizophrenia" completed the the completed questionnaire. Aggression was assessed using the Modified Overt Aggression Scale (MOAS), sleep was assessed using the Insomnia Severity Index Scale (ISI), and quality of life was assessed using the five Likert options. Descriptive statistics and correlation analysis examined the correlation between aggression and other variables. The mediating role of quality of life in the association between insomnia and aggression was examined by path analysis.

Results A total of 781 patients participated in this study, and approximately 16% of schizophrenia patients were aggressive. By mediation test, the direct effect of insomnia on aggression was 0.147, and the mediating effect of quality of life on insomnia and aggression was 0.021. Specifically, for the four dimensions of the MOAS, the direct effect of insomnia on verbal aggression, aggression toward property, and aggression against oneself were 0.028, 0.032, and 0.023, respectively, with mediating effects of 0.003, 0.007, 0.006, and no mediating effect on physical aggression was found.

Conclusion This study showed that insomnia significantly influenced aggression in schizophrenia patients. Quality of life significantly mediates insomnia and aggression and plays a vital role in moderating aggression. Therefore, we suggest that future improvements in aggression in schizophrenia patients, while paying attention to the importance of sleep, could also start with quality of life to improve this problem from multiple perspectives

关键词：schizophrenia, aggression, insomnia, quality of life, mediating effect

纵向静息态功能磁共振成像变化揭示精神分裂症患者大脑局部功能及与症状和认知功能的关联

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目的 本研究使用 Brainnetome Atlas 研究 SZ 患者治疗前后 rs-fMRI 指标的变化及其与症状和认知功能的关系。

方法 招募了来自新乡医学院第二附属医院的 109 名 SZ 患者。收集他们的基线和治疗后 8 周的影像学、PANSS 和 MATRICS 共识认知测试(MCCB)数据。预处理患者的原始图像,然后计算个体 ALFF、fALFF 和 ReHo 以评估大脑功能活动。使用 Matlab2020a 软件将 SZ 患者的 ALFF、fALFF 和 ReHo 映射到中科院 246 脑网络组图谱。使用配对样本 t 检验对 rs-fMRI 指标进行分析,并对结果进行 Bonferroni 校正。最后使用有差异脑区的 rs-fMRI 指标和 PANSS 减分率及 MCCB 减分率做关联分析,并对结果进行 Bonferroni 校正。

结果 与基线时相比,治疗 8 周后,患者的 ALFF 增加的脑区分布在额叶、顶叶、岛回、扣带回和基底节; ALFF 降低的脑区分布在颞叶和枕叶; fALFF 增加的脑区分布在颞叶、扣带回、基底节和丘脑; fALFF 降低的脑区分布在额叶、颞、顶叶和枕叶; ReHo 增加的脑区分布在额叶; ReHo 降低的脑区分布在额叶、颞叶、顶叶、岛回和枕叶。同时,枕叶的 200 亚区的基线 fALFF 与 MCCB 的符号编码和词语学习减分率呈正相关(r 均为 0.30, p 均为 0.039, Bonferroni 校正);额叶的 15 亚区基线 ReHo 与 PANSS 的阳性因子减分率呈负相关($r=-0.36$, $p=0.0033$, Bonferroni 校正);额叶的 23 亚区与 PANSS 的一般症状因子减分率呈负相关($r=-0.31$, $p=0.028$, Bonferroni 校正);颞叶的 106 亚区和枕叶的 196 亚区与 MCCB 的符号编码减分率呈正相关($r=0.32$ 和 0.33 , $p=0.032$ 和 0.023 , Bonferroni 校正)。

结论 本研究发现,治疗前后局部脑功能变化的脑区主要集中在额叶、颞叶和枕叶。额中回的两个亚区分别与阳性因素和一般症状的减少率呈负相关。枕叶的两个亚区与 MCCB 中的单词学习和符号编码呈正相关。这些发现为 SZ 功能活动异常假说提供了新的证据,并为临床诊断和疗效预测提供了潜在的神经生物学客观指标。

关键词: 精神分裂症; 静息态功能磁共振; 分数低频波动振幅; 局部一致性; 症状; 认知功能

WNK1-NKCC1/KCC2 通路作为精神分裂症药理靶点的研究

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目的 兴奋-抑制(EI)失衡是精神分裂症(SZ)的主要病理生理学特征。有证据显示 SZ 患者存在 GABA 能系统缺陷。WNKs-NKCC1/KCC2 通路影响神经元内氯离子浓度调节 GABA 能神经元兴奋性-抑制性效应, 可能作为 SZ 的治疗靶点。

方法 临床分析

1.1 利用 PGC3 数据分析 WNKs-NKCC1/KCC2 通路相关基因的 SZ 遗传风险。

1.2 对 WNKs-NKCC1/KCC2 通路相关的基因集进行 GSEA 富集分析。

1.3 利用 GEO 数据库分析 WNKs 在 SZ 患者大脑中的表达。

动物实验:

2.1 SD 大鼠孕 9.5 天尾静脉注射 10 mg/kg 的 Poly I:C 或等体积生理盐水, 制备母孕期感染子代 SZ 大鼠模型, 进行炎症因子、行为学、WNK1、NKCC1、KCC2 分子检测。

2.2 SZ 模型大鼠给予安慰剂或 WNK1 抑制剂(WNK463, 腹腔注射 3 mg/kg)或 NKCC1 抑制剂(布美他尼, 腹腔注射 15 mg/kg)干预, 进行动物行为学和脑电活动记录。

2.3 动物行为学和脑电活动记录: 采用开放旷场、高架十字迷宫、Y 迷宫和前脉冲抑制(PPI)等行为学来观察焦虑、空间记忆、认知功能和感觉门控功能状态。采用在体电生理记录海马场电活性以及神经元放电。

采用统计软件 SPSS 26.0, 独立样本 t 检验或单因素方差分析方法进行统计分析, $P < 0.05$ 代表差异具有统计学意义。

结果 遗传学研究鉴定出 WNKs-NKCC1/KCC2 通路相关基因中的 19 个基因的 984 个 SNPs 与 SZ 存在遗传关联。

WNKs-NKCC1/KCC2 通路相关基因在精神分

裂症组显著富集表达, 表明 WNKs-NKCC1/KCC2 通路在 SZ 中失调。

WNK1-4 的 mRNA 水平在纹状体、海马、前额叶皮层和小脑等不同脑区均显著升高。

与对照组相比, SZ 模型组大鼠炎症因子 IL-6、IL-1 β 和 TNF- α 表达水平明显升高。SZ 模型组大鼠在开放旷场中心区域探索减少, 在高架十字迷宫进入开放臂的次数和时间均减少, 在 Y 迷宫实验进入新异臂的次数和时间均减少, 在 PPI 实验 75dB、80dB 及 85dB 抑制率均降低, 提示 SZ 模型组大鼠存在焦虑水平增加、空间记忆、认知功能和感觉门控受损。同时, SZ 模型组大鼠海马区 WNK1 和 NKCC1 蛋白水平显著升高, KCC2 蛋白水平显著降低。

WNK463 以及布美他尼干预后, 大鼠精神分裂症样行为得到改善, 且海马 CA1 区 γ 和 β 波段的异常低频场电信号得到改善, 神经元放电频率降低。

结论 WNKs-NKCC1/KCC2 通路参与 SZ 相关行为和脑电异常, 具有可作为精神分裂症治疗靶点的潜在价值。

关键词: 精神分裂症; WNKs-NKCC1/KCC2 通路; GABA 能系统

Differences in Cognitive Function and Serum Markers between Responders and Non-responders with Schizophrenia after Electroconvulsive Therapy

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Objective Electroconvulsive therapy (ECT) is considered one of the most effective physical treatments for schizophrenia, yet there are still some patients who do not respond to ECT at the clinical level. The difference in the response rate among patients may be related to multiple factors, such as the cognitive function, inflammatory reactions, the alterations in brain function and structure, etc. This retrospective study investigated

cognitive function disparities post-ECT between responders and non-responders with schizophrenia. Additionally, serum markers were examined to identify potential factors influencing these cognitive differences.

Methods The study encompassed patients with schizophrenia who underwent ECT at Nanjing Brain Hospital from June 2023 to January 2024. The ECT response was determined by at least a 50% reduction in the Brief Psychiatric Rating Scale (BPRS) total score. Assessment of cognitive function and serum marker collection were conducted at the study's outset and upon the completion of ECT. At baseline, the categorical variables among subgroups were analyzed by chi-square tests. For continuous variables, an independent samples t-test was conducted. At the end of the ECT course, multivariate analyses of variance (MANCOVA) were used to analyze the differences in cognitive function and serum markers among the subgroups. In addition, paired sample t-tests were used to compare cognitive function and serum markers pre- and post-ECT. P values less than 0.05 were regarded as statistically significant.

Results The study included 49 non-responders and 51 responders with schizophrenia post-ECT. Initial assessments revealed no significant differences in cognitive function or serum marker levels. Post-ECT, responders demonstrated superior performance in visual learning and autobiographical memory test (AMT). Additionally, higher levels of interleukin-4 (IL-4), interleukin-12P70 (IL-12P70) and tumor necrosis factor- α (TNF- α) were detected in the response group than non-response group.

Conclusion The study indicated that responders with schizophrenia exhibit enhanced cognitive performance post-ECT, particularly in visual learning and AMT. Serum markers such as IL-4, IL-12P70 and TNF- α might play a role in mediating these cognitive differences between response and non-response subgroups. These findings suggest a potential biomarker-based approach to understanding and predicting cognitive outcomes in schizophrenia treatment

关键词: Electroconvulsive therapy; Response rate; Cognitive function; Neuroinflammatory factors; Schizophrenia

Different Structural Connectivity Patterns in The Subregions of The Thalamus, Hippocampus, and Cingulate Cortex between Schizophrenia and Psychotic Bipolar

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Objective Schizophrenia (SCZ) and psychotic bipolar disorder (PBD) are two major psychotic disorders with similar symptoms and tight associations on the psychopathological level, posing a clinical challenge for their differentiation. This study aimed to investigate and compare the structural connectivity patterns of the limbic system between SCZ and PBD, and to identify specific regional disruptions associated with psychiatric symptoms. **Methods** Using sMRI data from 146 SCZ, 160 PBD, and 145 healthy control (HC) participants, we employed a data-driven approach to segment the hippocampus, thalamus, hypothalamus, amygdala, and cingulate cortex into subregions. We then investigated the structural connectivity patterns between these subregions at the global and nodal levels. Additionally, we assessed psychotic symptoms by utilizing the subscales of the Brief Psychiatric Rating Scale (BPRS) to examine correlations between symptom severity and network metrics between groups.

Results Patients with SCZ and PBD exhibited significantly weaker integration and segregation of the limbic system compared to HC, with SCZ showing more severe alterations. The most notable structural disruptions were observed in the hippocampus, thalamus and cingulate cortex, which correlated with different psychotic symptoms, respectively.

Conclusion This study provides evidence of distinct structural connectivity disruptions in the limbic system of patients with SCZ and PBD. These findings

might contribute to our understanding of the neuropathological basis for distinguishing SCZ and BD

关键词: schizophrenia, psychotic bipolar disorder, topology, limbic system

DLG2 基因在精神分裂症中作用的新认识: 一项 fMRI 病例对照研究

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目的 旨在探索 DLG2 基因 rs11607886 多态性位点与精神分裂症的易感性, 以及不同基因型下与大脑功能、精神症状严重程度和认知功能的相关性。探究 DLG2 基因在精神分裂症脑功能改变的重要作用, 为遗传标志的价值提供基础。

方法 选取 DLG2 基因单核苷酸多态性(SNP)位点, 通过使用在线分析工具 SHEsis 分析 SNP 的等位基因频率和基因型频率在病例组 (n=350) 和对照组 (n=401) 之间的差异。总共纳入 123 名参与者的脑功能影像 (fMRI) 数据, 其中病例组 (n=49) 和对照组 (n=74), 使用 DPARSF、SPM 等工具包对脑功能影像数据进行预处理、分析以及提值。使用 SPSS 软件进行人口统计学分析, 差异脑区数值与临床症状数据进行分析。

结果 1. DLG2 基因的 rs11607886 与精神分裂症存在显著关联性 ($P=0.004$ 、 $P=0.002$); 2. 分析区域一致性 (ReHo) 发现, 以基因型为主效应在左侧楔前叶有显著差异, 事后 t 检验发现携带 A 等位基因组 ReHo 值更低。以诊断为主效应发现在左侧眶部额上回、右侧尾状核和左侧补充运动区有显著差异, 事后 t 检验发现精神分裂症患者右侧尾状核和左侧补充运动区的 ReHo 增加, 左侧眶部额上回的 ReHo 减少; 3. 分析低频振荡振幅 (ALFF) 发现, 在左侧楔前叶中观察到基因型与诊断有显著的交互作用, 事后 t 检验显示携带 GG 纯合子的精神分裂症患者 ALFF 值明显高于携带 GG 纯合子的对照组以及和携带 A 等位基因的 SZ 的携带者; 4. 以左侧楔前叶为感兴趣区域, 分析功能连接 (FC) 发现在左侧颞下叶、右侧梭状回、右侧颞中叶和右侧前扣带回发现基因型与诊断有显著的交互作用 (体素水平

P 均 <0.005 , 聚类水平 P 均 <0.05 , GRF 校正); 5. 对于 DLG2 A 等位基因携带者, 右侧梭形回-左侧楔前叶 FC 与符号编码评分显著负相关 ($P<0.001$); 与语义流畅度评分显著负相关 ($P<0.001$)。右侧颞中回-左楔前叶 FC 与符号编码评分呈负相关 ($P=0.018$); 与语义流畅度评分呈负相关 ($P=0.038$)。

结论 本研究发现了 DLG2 基因的 1 个 SNP 与精神分裂症显著关联。进一步研究发现 DLG2 rs11607886 基因多态性与大脑功能和临床症状之间的关联性, 提示楔前叶在精神分裂症中的重要作用。为进一步理解精神分裂症脑影像神经遗传学机制提供支持。

关键词: 单核苷酸多态性; DLG2; fMRI; MCCB; 精神分裂症

Cortical Morphometric Similarity Gradient in Schizophrenia and Its Association with Transcriptional Profiles and Clinical Phenotype

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Objective Recent research has indicated that functional network gradient changes are present in schizophrenia (SCZ). However, it is still completely unknown whether changes to the cortical morphometric similarity (MS) network gradient exist. This study is to investigate the potential differences in the principal MS gradient between individuals with SCZ and healthy controls, and how these differences relate to transcriptional profiles and clinical phenomenology. **Methods** MS network was constructed in this study, and the gradient of the network was computed in 203 patients with SCZ and 201 healthy controls who shared the same demographics in terms of age and gender. To examine irregularities in the MS network gradient, between-group comparisons were carried out, and partial least squares regression analysis was used to study the relationships between the MS network gradient-based variations in

SCZ and gene expression patterns and clinical phenotype.

Results In contrast to healthy controls, the principal MS gradient of patients with SCZ was primarily significantly lower in sensorimotor areas, and higher in more areas. In addition, the aberrant gradient pattern was spatially linked with the genes enriched for neurobiologically significant pathways and preferential expression in various brain regions and cortical layers. Furthermore, there were strong positive connections between the principal MS network gradient and the symptomatologic score in SCZ individuals.

Conclusion These findings showed changes in principal MS network gradient in SCZ and offered potential molecular explanations for the structural changes underpinning SCZ.

关键词: Cortical morphometric similarity;transcriptional profiles;clinical phenotype;schizophrenia

Profiling Expressing Features of Surface Proteins on Single-Exosome in First-episode Schizophrenia Patients: A Preliminary Study

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Objective Previous evidence indicates that exosomes involve in the pathogenesis of schizophrenia (SCZ). Traditional bulk analysis may lead to loss of tissue- or disease-specific information of exosomes. To address this, we employed the proximity barcoding assay (PBA), an innovative method for single-exosome analysis, to profile the surface proteins expressing features of individual exosomes in SCZ patients.

Methods Fifty first-episode patients were collected for plasma and assessed for cognitive functions at baseline. After receiving risperidone for 3 months, patients were classified as either responders (RES) or non-

responders (NRES). Baseline plasma samples from patients with the top 10 RES and bottom 10 NRES, as well as 10 matched healthy controls (HCs), were used for PBA.

Results FN1, ITGB3, PECAM1, ITGA6, and CD5 exhibited differential expression between SCZ and HC, with an AUC up to 0.805 in ROC analysis. For NRES and RES, ITGB3, CD33, CD40, CD36, TENM2, and EGFR displayed differential expression, with an AUC up to 0.87 in ROC analysis. Furthermore, two clusters predominantly expressing PECAM1, ITGB3, ITGA6 and ITGB1, exhibited an increasing trend in proportion in SCZ. Moreover, PECAM1, ITGB3, ITGA6 and FN1 were negatively associated with visual memory and processing speed.

Conclusion Our study elucidated that exosome surface proteins PECAM1, ITGB3, ITGA6, FN1 and CD5 could serve as diagnostic potential biomarkers, while ITGB3, CD33, CD40, CD36, TENM2 and EGFR could serve as prognostic potential biomarkers in SCZ. Moreover, Exosome subpopulations featuring expression of PECAM1, ITGB3, ITGA6 and ITGB1 were associated with SCZ

关键词: schizophrenia; surface proteins on single exosome; proximity barcoding assay

CBT 研究协作组

Exploring Genetic Markers for Predicting CBT Response in OCD: A Systematic Review

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Objective Genetic alterations are recognized to play an essential role in the pathogenesis of OCD. CBT, a therapy for OCD, increasing research has demonstrated that its efficacy is related to genetic polymorphisms and DNA methylation. This review aimed to evaluate the correlation between alterations occurring genetically or epigenetically and the effectiveness of CBT in patients with OCD.

Methods Systematic searching of Web of Science, PubMed and CNKI were performed (1984 - May 2024) using the following medical subject headings (or similar headings) or text word terms: (((Disorder, Obsessive-Compulsive) OR (Disorders, Obsessive-Compulsive)) OR ((Obsessive Compulsive Disorder))) OR (((Obsessive-Compulsive Disorders))) AND (((Cognitive Behavioral Therapy) OR (Behavior Therapy)) OR ((Cognition))) OR (((CBT))) AND ((gene) OR (genes)). All articles identified in English or Chinese were evaluated. Randomized, controlled clinical trials involving humans were prioritized in the review

Results Eight articles were identified finally, and the following genes associated with OCD have genetic alterations related to CBT treatment efficacy. A gene associated with the genetic polymorphism is BDNF, whereas the epigenetic alterations occur in MAOA, SLC6A4, OXTR, PIWIL1, MIR886, PLEKHA1, KCNQ1, TRPM8, HEBP1, HTR7P1, MAPK8IP3, ENAH, RABGGTB (SNORD45C), MYEF2, GALK2, CEP192, and UIMC1

Conclusion Genetic markers could inform clinical treatment decisions for psycho-therapeutic interventions. Brain dysfunction could be a crucial mechanism affecting CBT. Future studies may focus on more candidate genes of OCD to predict CBT efficiency while

combining endophenotypes that reflect brain function and directions of specific OCD symptom dimensions

关键词: Single nucleotide polymorphisms, DNA methylation, Epigenetic, Cognitive Behavioral Therapy, Obsessive-compulsive disorder

Influence of Family Environment and Obsessive Beliefs on The Developmental Trajectory of Internet Addiction Among College Students: A Two-year Follow-up Study

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Objective The youth during the college stage is of high-risk for internet addiction (IA) due to the high popularity and accessibility of internet. Understanding the developmental trajectory of IA and its influencing factors is critical for developing precise strategies for prevention and intervention among youth in college. The current study aimed to investigate the developmental trend and latent trajectory classes of IA, as well as the impact of family environment and obsessive beliefs on IA's growth trajectory. Furthermore, we mapped the road from the family environment and obsessive beliefs to followed-up IA in youth

Methods This study followed-up 3575 Chinese college students (Mage = 18.00, SD = 0.67; 65.29% girls at Wave 1) at three time points, using one-year assessment intervals

Results Employing a Latent Growth Mixture Model, we identified four trajectories of IA. Further using a Latent Growth Curve Model, we found that both family environment and obsessive beliefs significantly affected the intercept and linear slope of IA trajectory. The multivariate logistic regression analysis showed that negative family environment and obsessive beliefs served as significant predictors for IA classifications. Finally, the Structural Equation Modeling demonstrated a significant partial mediation effect of obsessive beliefs between family environment and followed-up IA. This study provided solid empirical evidence showing the

significant influence of family environment and obsessive beliefs on the initial level and growth rate of IA. Importantly, family environment not only influences the IA development directly, but also exerts its influence indirectly through the mediating effect of obsessive beliefs

Conclusion It is important to consider individual differences in understanding the developmental patterns of IA among youth. Identifying family and cognitive predictors with different developmental trajectories of IA, which may help to understand better risk factors related to specific developmental patterns of IA. Our findings emphasize the necessity of targeted interventions on the family environment and obsessive beliefs in youth for IA.

关键词: Internet addiction; Family environment; Obsessive beliefs; Development trajectory; Longitudinal study

NAC 介导 ATF4 RNA 甲基化修饰抑制海马神经元焦亡治疗创伤后应激障碍认知功能障碍的研究

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目的 探讨 N-乙酰半胱氨酸(N-acetylcysteine, NAC)介导 ATF4 RNA 甲基化修饰抑制海马神经元焦亡治疗创伤后应激障碍(Post Traumatic Stress Disorder, PTSD)认知功能障碍的机制。

方法 通过单次延长应激(single prolonged stress, SPS)法构建 PTSD 症状小鼠,使用 NAC 治疗 PTSD 症状小鼠。Morris 水迷宫实验和旷场试验检测小鼠认知功能。免疫组化检测海马区神经元标记物 NeuN 的阳性细胞数。qRT-PCR 检测 ATF4 mRNA 水平。WB 检测 GSDMD-N、cleaved-caspase-1 和 ATF4 蛋白表达。LDH 检测细胞死亡。ELISA 检测 IL-1 β 、IL-18 水平。SRAMP 数据库和预测 ATF4 m6A 甲基化修饰位点。Me-RIP 试验检测 ATF4 m6A 甲基化修饰水平。

结果 相比 Con 组,SPS 组小鼠潜伏逃逸期明显延长,平台停留时间、进入中央区域次数和中心

区域运动距离的百分比显著降低,出现认知功能障碍;同时海马神经元数量显著减少,焦亡相关蛋白 GSDMD-N 和 cleaved-caspase-1 水平、LDH 活性、IL-1 β 和 IL-18 水平均显著上调。使用 NAC 治疗后,显著改善了 PTSD 症状小鼠认知功能障碍,明显抑制 PTSD 症状小鼠海马神经元焦亡。NAC 通过介导 m6A 甲基化修饰下调 ATF4 的表达。过表达 ATF4 部分逆转 NAC 对 PTSD 症状小鼠海马神经元焦亡的抑制和认知功能的改善作用。

结论 NAC 介导 ATF4 RNA 甲基化修饰,抑制海马神经元焦亡,从而改善 PTSD 认知功能障碍,为明确 PTSD 发病机制提供了部分理论依据,也为治疗 PTSD 提供了新的思路。

关键词: PTSD; NAC; 认知功能障碍; 海马神经元; 焦亡; ATF4; m6A 甲基化修饰

慢性失眠障碍合并焦虑/抑郁患者强化失眠认知行为治疗的随机对照研究

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目的 与常规失眠认知行为治疗(Cognitive Behavioral Treatment of Insomnia, CBT-I)对照,探讨强化失眠认知行为治疗(CBT-I Plus)对慢性失眠障碍合并焦虑/抑郁症状患者的干预效果。

方法 共纳入慢性失眠障碍伴焦虑/抑郁症状患者 148 例,按照随机数字表将被试按照 1:2 的比例随机分配至常规 CBT-I 组(n=54)和 CBT-I Plus 组(n=94),CBT-I Plus 组在 CBT-I 的基础上增加了对焦虑症状/抑郁症状的治疗内容。治疗时间共 8 周,分别在治疗开始前、治疗开始后第 2 周、第 4 周及第 8 周评估 PSQI、HAMD-17 和 HAMA 量表。采用配对样本 t 检验分别比较两组患者治疗前后分数的差异,采用重复测量方差分析比较两组治疗效果差异,采用协方差分析处理偏倚变量的影响。

结果 两组被试 PSQI、HAMD-17、HAMA 的总分与基线相比均有改善,差异具有统计学意义

($P<0.001$)。在控制药物使用情况和 HAMD-17 基线分数后, PSQI、HAMD-17、HAMA 分数变化的组间差异均未达到统计学意义 ($P>0.05$)。PSQI 的日间功能障碍因子分的时间与组别交互作用显著 ($F=4.87$, $P<0.01$)。

结论 强化失眠认知行为治疗(CBT-I Plus)对慢性失眠障碍合并焦虑/抑郁症状患者的睡眠状况及情绪均有改善作用, 但与常规 CBT-I 比较, 未显示出明显优势, 后续需要对干预时机、方案内容做更细致的探索。

关键词: 失眠认知行为治疗; 强化失眠认知行为治疗; 焦虑; 抑郁

团体认知行为治疗对未服药强迫症患者脑拓扑改变研究

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目的 团体认知行为治疗对强迫症患者网络拓扑属性改变尚不明确。本研究通过采集静息态功能磁共振数据及临床数据, 探究团体认知行为治疗前后脑拓扑改变。

方法 研究入组从未用药或 8 周以上未服药的强迫症患者 33 例, 健康对照 26 例, 来自社会招募。获取知情同意后进入研究, 采集两组被试一般人口学资料、临床资料以及磁共振数据, 强迫症患者进入 12 周团体认知行为治疗, 治疗 2 周、4 周、6 周、8 周及 12 周分别进行临床量表的评估随访, 12 周结束时再次采集临床数据以及磁共振数据。研究采用两样本 t 检验比较两组一般人口学资料; 基于 Matlab2012a 平台, 采用 GRETNA 软件分析基线强迫症组及健康对照组脑网络拓扑及小世界属性值, 及 GCBT 前后强迫症组脑网络拓扑及小世界属性值, 之后将强迫症组按照 Y-BOCS 减分率为 30% 进行分组 (有效组 vs 无效组), 比较两组基线及 GCBT 后脑网络拓扑及小世界属性值。

结果 研究共入组强迫症患者 33 例, 健康对照 26 例, 两组在性别、年龄及受教育年限上无显著差异; 基线 HAMD 及 HAMA 两组存在显著差异。所有被试在各个阈值上的小世界属性值均 >1 , 提示所有被试的脑网络的小世界属性均未遭到破坏; 两组

小世界属性、Eglob、Cp、比较差异有统计学意义。与 HC 相比, OCD 有 38 个脑区出现节点聚类系数升高, 主要位于额叶、扣带回、枕叶、顶叶, 另外还有颞叶、距状裂、楔叶、舌回、壳核等; 与 HC 相比, OCD 有 13 个脑区出现平均最短路径长度延长, 主要位于脑岛、海马旁回、尾状核、壳核、苍白球及丘脑, 另外还有杏仁核、缘上回等; 13 个脑区出现平均最短路径长度下降, 主要是扣带回、楔叶、楔前叶、枕中回、舌回; 与 HC 相比, OCD 有 35 个脑区出现节点全局效率下降, 主要位于额叶、脑岛、嗅觉皮层、后扣带回、海马、杏仁核、缘上回、尾状核、壳核、苍白球及颞中回, 另外还有角回、中央后回、海马旁回等; 与 HC 相比, OCD 有 8 个脑区出现节点全局效率下降, 主要位于嗅觉皮层、尾状核、颞上回、海马、海马旁回。OCD 组治疗 12 周结束, 3 人脱落, 10 人无效 (33.3%), 20 人有效 (66.7%), Y-BOCS、HAMD、HAMA 评分存在显著统计学差异。左侧后扣带回、左侧中央后回及左脑中央旁小叶聚类系数下降; 双侧扣带回中部最短路径长度下降及全局效率升高; 有效组较无效组在默认网络、边缘系统及经典 CSTC 环路脑区存在聚类系数及最短路径长度下降, 全局效率及局部效率的升高。

结论 GCBT 后扣带回聚类系数及最短路径长度改变, 有效组较无效组在默认网络、边缘系统及 CSTC 环路上存在拓扑属性差异。

关键词: 强迫症, 团体认知行为治疗, 拓扑, 小世界, GRETNA

基于虚拟现实平台的暴露治疗对恐高症干预有效性的神经机制研究

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目的 暴露治疗是临床上针对恐怖症, 特别是恐高症的主要干预手段, 其疗效已得到大量研究的证实。相比较传统的现场暴露和想象暴露, 虚拟现实暴露治疗 (Virtual Reality Exposure Therapy, VRET) 具有安全、便捷等优点。本研究探索 VRET 在治疗恐高症上的有效性, 并运用功能磁共振方法揭示其作用机制。

方法 共纳入恐高症被试 40 名, 随机分成

VRET 组(n=21), 想象暴露治疗对照组(Imaginal Exposure Therapy, IET)(n=19), 两组患者分别接受为期 3 周, 每周 2 次, 共计 6 次暴露治疗, 所有被试采集与恐高和焦虑有关临床症状(恐高症问卷 AQ, 高度态度问卷 ATHQ, 行为回避测验 BAT, 广泛性焦虑量表 GAD-7), 静息态功能核磁共振影像学等数据。从脑网络角度, 运用独立成分分析的方法比较 VRET 作用的神经机制。

结果 重复测量方差分析比较发现, 两组在 AQ-焦虑 ($F=4.40, p=0.043$)、AQ-回避 ($F=4.80, p=0.035$) 和 BAT ($F=4.97, p=0.032$) 的临床量表评分上存在显著的交互效应, 而在 ATHQ 和 GAD-7 中无显著交互作用。进一步比较发现, VRET 组量表分差值大于 IET 组。影像学上, 在功能网络分析中发现, 视觉网络 (Visual Network, VIS) 内, VIS-SMN (Sensorimotor Network, 感觉运动网络)、VIS-CEN (Central Executive Network, 中央执行网络)、CB (Cerebellar, 小脑) -CEN 间存在交互作用。VRET 治疗后, VRET 组在 VIS 内 ($p=0.030$) 以及 VIS-SMN ($p=0.020$) 间的功能网络连接显著低于 IET 组。

结论 两种暴露治疗方案均可以缓解患者的恐怖和焦虑症状。与传统暴露治疗方法(IET)相比, 虚拟现实暴露治疗在疗效上更为显著。功能影像研究结果提示, VRET 有效性的潜在神经作用机制为通过调节 CEN 和 VIS 等网络的异常功能连接, 从而在缓解恐高症患者的核心症状方面发挥作用。

关键词: 恐高症, 虚拟现实, 暴露治疗, 脑网络, 独立成分分析, 功能连接

认知行为疗法对不同群体睡眠障碍的干预与效果研究分析

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目的 睡眠障碍作为一种普遍的心理健康问题, 广泛存在于青少年、青年、中年及老年等多个年龄群体之中, 对个体的生活质量造成了严重影响。近年来, 认知行为疗法作为一种非药物性的干预手段, 在睡眠障碍领域逐渐引起了广泛关注。大量科学研究与临床实践已充分验证了其在预防和干预睡眠障碍方面的显著作用。对认知行为疗法在睡眠障碍预

防与干预中的效果进行深入剖析与研究, 有助于我们更全面地了解其实际应用价值及潜力。本文将从睡眠障碍的基本概念、当前状况以及对不同年龄层个体健康的潜在影响出发, 深入探讨认知行为疗法在睡眠障碍治疗中的作用机理及其有效性。通过本研究, 我们旨在为睡眠障碍的治疗提供更为丰富的思路 and 多元化的方法选择, 以期提升患者的生活质量与心理健康水平。

方法 2021 年-2022 年在乌鲁木齐市第四人民医院心理科就诊的 102 例不同年龄段人群的睡眠障碍患者, 采用随机数字表法随机分为 CBT-i 组 (68 例) 和联合组 (34 例)。CBT-i 组仅给予 CBT-i 干预, 联合组给予 CBT-i 结合催眠药物递减方案干预。于基线、治疗第 4 周、治疗结束 (治疗第 8 周) 时, 记录各组的匹兹堡睡眠质量指数 (PSQI)、贝克抑郁量表 (BDI)、贝克焦虑量表 (BAI), 采用重复测量方差分析比较 2 组患者不同时点评分的情况。

结果 CBT-i 组与联合组治疗方案对失眠障碍治疗均有效, 前者在缩短入睡时间、提高睡眠效率方面优于后者, 后者的治疗方案可有效降低催眠药物使用频率。CBT-i 组与联合组治疗方案对失眠障碍治疗均有效, 前者在缩短入睡时间、提高睡眠效率方面优于后者, 后者的治疗方案可有效降低催眠药物使用频率。

结论 认知行为疗法在预防和干预睡眠障碍方面取得了显著的效果。通过调整患者的不良睡眠习惯、负面情绪和错误的认知, 认知行为疗法在改善睡眠质量和缓解睡眠障碍方面表现出了独特的优势。在实际应用中, 患者是否能够积极配合治疗、坚持练习相关的技巧和策略, 直接影响了认知行为疗法的预防和干预效果。此外, 认知行为疗法不仅对成人睡眠障碍有效, 对儿童和青少年的睡眠问题也具有有良好的干预效果。这表明认知行为疗法在不同年龄群体中都具有普适性和可操作性。综上所述, 认知行为疗法在睡眠障碍的预防和干预中具有显著效果, 对改善不同年龄段患者的睡眠质量和生活质量起到了积极的作用。并且针对老年患者, 我们要考虑到长期使用药物治疗不仅容易造成依赖和耐受性, 还可能产生药物副作用。而认知行为疗法则是一种安全、有效的非药物治疗手段。在未来的临床实践中, 我们应该进一步推广和应用认知行为疗法, 以帮助更多不同年龄段的患者摆脱睡眠障碍的困扰。

关键词: 认知行为疗法; 睡眠障碍; 干预效果; 睡眠质量

绘画干预联合认知行为护理对青少年抑郁症患者抑郁症状及日常生活能力的影响

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目的 研究绘画干预联合认知行为护理对青少年抑郁症患者抑郁症状及日常生活能力的影响。方法 以九江市第五人民医院 2020 年 1 月—2021 年 6 月收治的 60 例 12~18 岁抑郁症患者为研究对象,按随机数表法分为观察组(27 例)和对照组(33 例),对照组实施常规干预护理,观察组实施绘画干预联合认知行为护理,2 组均干预 8 周。观察并比较干预前、干预 8 周后 2 组患者的心理状态、生活能力、生活质量、护理满意度。

方法 对照组患者进行常规干预,包括入院健康宣教、用药指导、定时心理辅导、生活习惯和饮食指导。观察组患者进行绘画干预联合认知行为干预护理。统计学方法 采用 SPSS 19.0 统计学软件数据分析,计量资料以 $\bar{x} \pm s$ 表示,组间比较采用独立样本 t 检验,组内两时间点比较采用配对样本 t 检验, $P < 0.05$ 为差异有统计学意义。

结果 干预 8 周后 2 组患者的焦虑自评量表(self-rating anxiety scale, SAS)、抑郁自评量表(self-rating depression scale, SDS)、症状自评量表(symptom checklist 90, SCL-90)、日常生活活动力量表(activities of daily living, ADL)得分均较干预前下降,差异有统计学意义($P < 0.05$);干预 8 周后观察组 SAS、SDS、SCL-90、ADL 得分低于对照组,差异有统计学意义($P < 0.05$);干预 8 周后 2 组患者的护士用住院病人观察量表(nurses observation scale for inpatient evaluation, NOSIE)得分均较干预前上升,差异有统计学意义($P < 0.05$);干预 8 周后观察组 NOSIE 得分高于对照组,差异有统计学意义($P < 0.05$)。

结论 在青少年抑郁症患者中应用绘画干预联合认知行为护理能有效减缓其负性情绪、平衡其心理状态,更有助于提高患者日常生活能力。

关键词: 绘画干预;认知行为治疗;青少年抑郁症;生活能力

强迫症目标导向-习惯学习系统神经网络多模态特征及认知行为治疗疗效预测研究

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目的 本研究旨在评估认知行为疗法(CBT)对强迫症患者目标导向与习惯学习相关脑区的结构和功能连接的调节作用,并开发一个预测 CBT 疗效的模型。

方法 研究纳入 30 例强迫症患者,他们接受了为期 8 周、共 16 次的 CBT 治疗,同时纳入 29 名匹配的健康对照组。通过 YBOCS、BAI、BDI 和 OCI-R 量表评估患者的临床症状,并收集治疗前后的神经影像数据。采用基于网络的统计分析(NBS)、网络平均连接强度和结构-功能耦合系数来比较 CBT 治疗前后患者与对照组的差异。双因素方差分析用于识别基线异常并在治疗后显著变化的结构/功能连接,结合交叉滞后路径模型(CLPM)评估这些连接对 CBT 疗效的预测能力。显著的结构或功能连接被纳入支持向量回归(SVR)算法中,以构建并评估预测模型的拟合度。

结果 CBT 治疗显著降低了患者的 YBOCS、BDI 和 OCI-R 总分及各子量表得分($p < 0.05$)。治疗后,患者的目标导向与习惯学习相关脑区的结构和功能网络差异显著缩小,且习惯学习网络的耦合系数与对照组无显著差异。治疗有效组和无效组均观察到具有显著预测作用的功能连接。患者脑网络功能连接的减弱与强迫症严重程度的改善存在预测关系,主要体现在目标导向网络(涉及尾状核、背外侧前额叶皮质和眶额皮质)和习惯学习网络(涉及壳核、中央前回和辅助运动区)。SVR 模型显示,多脑区联合指标对治疗效果的预测最为准确,其中习惯学习网络指标对强迫思维的改善预测最佳($r=0.901$, $p < 0.01$),目标导向网络指标对强迫行为的改善预测最佳($r=0.761$, $p < 0.001$)。

结论 CBT 治疗不仅有效缓解了强迫症的严重程度,还改善了目标导向与习惯学习系统之间的脑网络失衡。CBT 可能通过优化相关脑区间的网络通信来实现其治疗效果。治疗有效组与无效组可能存

在不同的神经调控机制,且 CBT 的疗效预测依赖于多个脑区或神经回路的协同正常化。

关键词:强迫症,认知行为治疗,多模态磁共振,交叉滞后面板模型,机器学习

强化失眠认知行为治疗对失眠患者情绪、生活质量和治疗联盟的影响

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目的 探讨强化失眠认知行为治疗(CBTI plus)对失眠障碍合并抑郁、焦虑患者负面情绪、生活质量和治疗联盟的影响。

方法 收集 2020 年 7 月至 2023 年 6 月上海市精神卫生中心门诊失眠障碍伴抑郁、焦虑症状患者 149 例,按照随机数字表将患者随机分配至 CBTI 组(n=54)和 CBTI plus 组(n=95),分别在基线、2 周、4 周及 8 周进行抑郁症状快速检查量表(QIDS-SR16)、广泛性焦虑量表(GAD-7)和生活质量问卷(QOL-6)评估,在治疗 2 周、4 周和 8 周进行治疗联盟问卷(WAI-S)评估。

结果 (1) 两组患者在汉密尔顿抑郁量表(HAMD-17)基线评分差异有统计学意义($t=-2.136$, $P=0.035$),其他基线数据差异无统计学意义。(2) 治疗期间总体脱落率为 14.2%(20/141),CBTI 组 19.6%(10/51),CBTI plus 组 11.1%(10/90),两组脱落率差异无统计学意义($\chi^2=1.931$, $P=0.165$)。 (3) 两组患者的 QIDS-SR16、GAD-7 量表分数与基线相比均有显著下降,时间主效应显著($F=93.382$, $P<0.01$; $F=63.825$, $P<0.01$),组间主效应与交互作用不显著;在 QOL-6 量表上, CBTI plus 组患者生活质量显著提高,时间主效应、组间主效应以及交互效应均有统计学意义($F=11.976$, $P<0.01$; $F=7.891$, $P<0.01$; $F=5.191$, $P<0.01$); CBTI plus 组治疗前后治疗联盟及其因子分数显著提升($P<0.01$ 或 $P<0.05$),但未达到组间显著性差异。

结论 传统 CBTI 与强化版 CBTI plus 对失眠障碍合并焦虑、抑郁症状患者的负面情绪均有改善作用, CBTI plus 可显著提高患者生活质量以及治疗联盟,有独特优势。

关键词:失眠,认知行为治疗,焦虑,抑郁,治

疗联盟,生活质量

强化失眠认知行为治疗对失眠患者主观睡眠认知和生活质量的影响

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目的 探讨强化失眠认知行为治疗(CBTI plus)对失眠障碍合并抑郁、焦虑患者失眠严重程度、睡眠信念和态度以及生活质量的影响。

方法 收集 2020 年 7 月至 2023 年 6 月上海市精神卫生中心门诊失眠障碍伴抑郁、焦虑症状患者 149 例,按照随机数字表将患者随机分配至 CBTI 组(n=54)和 CBTI plus 组(n=95),分别在基线、治疗 2 周、4 周及 8 周进行失眠严重程度指数量表(ISI)、简式睡眠信念和态度量表(DBAS-16)以及生活质量问卷(QOL-6)评估。

结果 (1) 两组患者在汉密尔顿抑郁量表(HAMD-17)基线评分差异有统计学意义($t=-2.136$, $P=0.035$),其他基线数据差异无统计学意义。(2) 治疗期间总体脱落率为 14.2%(20/141),CBTI 组 19.6%(10/51),CBTI plus 组 11.1%(10/90),两组脱落率差异无统计学意义($\chi^2=1.931$, $P=0.165$)。 (3) 两组患者的 ISI、DBAS-16 及其分量表分数与基线比均有改善,时间主效应显著($F=110.375$, $P<0.01$; $F=60.273$, $P<0.01$),组别与交互作用不显著($F=0.457$, $P>0.05$; $F=1.520$, $P>0.05$)。 (4) 在 QOL-6 量表上,时间主效应、组间主效应以及交互效应均有统计学意义($F=11.976$, $P<0.01$, $F=7.891$, $P<0.01$; $F=5.191$, $P<0.01$)。

结论 CBTI 与强化版 CBTI plus 对失眠障碍合并焦虑、抑郁症状患者的失眠严重程度,睡眠信念和态度均有改善作用, CBTI plus 可较早改善后果因子和期望因子,并且可提高患者生活质量,脱落率低,有独特优势。

关键词:失眠的认知行为治疗,焦虑,抑郁,睡眠信念和态度

强迫症患者共情及情绪调节能力对认知行为

治疗疗效的影响

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目的 强迫症 (obsessive-compulsive disorder, OCD) 是一种慢性的精神和行为障碍, 以强迫思维和强迫行为为主要表现, 认知行为治疗 (Cognitive Behavior Therapy, CBT) 如暴露与反应阻止治疗 (Exposure and Response Prevention, ERP) 是强迫症的一线心理治疗方法。共情及情绪调节能力可能影响强迫症的 CBT 治疗疗效, 本研究拟探讨其对强迫症认知行为治疗疗效的影响机制, 指导强迫症心理治疗新方向。

方法 研究共纳入 17 名强迫症患者, 进行为期八周共计 16 次的认知行为治疗的干预, 于治疗基线期 (T0) 使用中文版人际反应指数 (IRI-C)、简版情绪调节困难量表 (DERS-16) 评估共情及情绪调节能力, 于治疗基线期 (T0)、治疗 2 周 (T1)、治疗 4 周 (T2)、治疗 8 周 (T3) 使用 Y 耶鲁-布朗强迫量表 (Y-BOCS)、强迫症状分类量表修订版 (OCI-R)、贝克抑郁量表 (BDI)、贝克焦虑量表 (BAI)、席汉残疾量表 (SDS) 评估临床症状变化, 对测量结果进行差异检验、相关分析、回归分析, 探究认知行为治疗的疗效, 同时比较共情、情绪调节能力在不同时期对临床症状治疗疗效的预测作用。

结果 强化认知行为治疗 8 周后, 患者 Y-BOCS、BDI、OCI-R 量表得分显著下降, BAI、SDS 得分未显著下降, 治疗有效的强迫症患者 IRI-个人痛苦得分显著高于治疗无效的强迫症患者, 共情能力得分对治疗疗效无预测作用, DERS-目标定向行为投入困难得分负向预测治疗 2 周的 Y-BOCS 减分值。

结论 强化认知行为治疗可改善强迫症状及情绪症状, 其疗效与患者的情绪调节能力有关, 情绪调节困难在治疗早期对治疗疗效和症状改善有负面影响。

关键词: 强迫症; 共情; 情绪调节; 认知行为治疗

Driven Subtypes of Insomnia Disorder and The Efficacy of Cognitive-Behavioral Therapy

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Objective The use of data-driven subtypes allows for a more nuanced understanding of insomnia disorder (ID). This study aims to explore the association between subtypes of ID and the efficacy of cognitive-behavioral therapy (CBT-I).

Methods This study conducted a post-hoc analysis on data from 118 participants with ID and mild anxiety or depressive symptoms, who had completed an 8-week randomized controlled trial of CBT-I and CBT-I plus (CBT-I with mood symptom modules). K-means clustering analysis determined subtypes, and T-tests assessed differences in baseline, eight weeks, and changes in subjective total sleep time (sTST), Pittsburgh Sleep Quality Index (PSQI), Hamilton Depression Rating Scale (HAM-D), and Hamilton Anxiety Rating Scale (HAMA) scores.

Results Two clusters showed no significant demographic differences. Subtype 2 had poorer baseline sleep quality (PSQI: 16.59 vs 12.74, $p < 0.01$), higher depressive (HAM-D: 18.47 vs 13.21, $p < 0.01$) and anxiety levels (HAMA: 17.47 vs 13.46, $p < 0.01$), and shorter sTST (4.67 vs 6.09 hours, $p < 0.01$) compared to Subtype 1. Post-treatment, both subtypes improved, with Subtype 2 showing larger gains in sleep duration (csTST: 0.58 vs 1.77 hours, $p < 0.01$) and greater improvements in sleep quality (cPSQI: 6.92 vs 8.88, $p < 0.01$), depression (cHAM-D: 8.07 vs 10.59, $p < 0.01$), and anxiety (cHAMA: 9.28 vs 11.22, $p < 0.01$). Subtype 1 maintained better outcomes at 8 weeks. Within Cluster 1, CBT-I plus was more effective for depression (cHAM-D: $p = 0.016$), whereas CBT-I improved sTST in Cluster 2 ($p = 0.049$).

Conclusion The study highlights the heterogeneity of insomnia subtypes and their differential response to CBT-I and CBT-I plus, underscoring the need for personalized treatment strategies.

Exploring The Association Between Data-

关键词: Insomnia disorder; Cognitive-behavioral therapy; Cluster analysis; Subtypes; Efficacy

Dialectical Behaviour Therapy Group Skills Training Induces Changes in Spontaneous Brain Activity in Depressed Patients with Non-suicidal Self-injurious Behaviour: A Randomised Controlled Trial

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Objective Non-suicidal self-injury (NSSI) is a serious public health problem widespread among adolescents, with a high degree of co-morbidity with major depressive disorder (MDD), which greatly impairs physical and mental health, and there is an urgent need to find effective treatments. This study will investigate the efficacy of dialectical behavior therapy group skills training (DBT-ST) on major depressive disorder accompanied by non-suicidal self-injurious behavior (N-MDD) and the changes in spontaneous brain activity induced by DBT-ST training

Methods Participants were 80 N-MDD patients, and 20 patients were recruited from each of the four hospitals using a multicenter clinical controlled study. Patients at each participating centre were randomised into two groups to receive either the DBT-ST intervention or the social support group therapy (SSGT) intervention for a period of 13 weeks on 13 occasions. Data from the ottawa self-Injury inventory (OSI), simplified suicide inventory (SSI), hamilton depression scale (HAMD) and functional magnetic resonance imaging (fMRI) scans were collected before and after the intervention. Demographic data, intergroup psychological scores were analysed using the statistical package IBM SPSS 23.0 statistics software (SPSS). Functional imaging data were analysed using DPARSF and SPM 12 based on MATLAB 2013a for the tamplitude of low-frequency fluctuations (ALFF), regional homogeneity (REHO),

and corrected ALFF and ReHo regions after DBT-ST intervention were used as seed points for whole-brain functional connectivity (FC) analyses, controlling for age, sub-centre, and sex of the subjects as covariates

Results The results of the study showed that both groups were effective in improving depressive symptoms and self-injurious behaviors, and the DBT-ST intervention was more significant in improving depression compared to SSGT. Resting-state data revealed that the DBT-ST group significantly reduced the ALFF of the right insula (INS.R) and the ReHo of the left insula (INS.L) compared to the SSGT group, meanwhile, the intervention in the DBT-ST group significantly suppressed the strength of FC in the salience network (SN) region, as evidenced by a significant reduction in the strength of FC between the INS.L and the right median cingulate and paracingulate gyri (DCG.R), the superior temporal gyrus (STG), the left temporal pole of the brain: middle temporal gyrus (TPomid.L), and the left middle frontal gyrus (MFG.L)

Conclusion These results suggest that DBT-ST intervention has better efficacy in N-MDD and has the potential to remodel the abnormal patterns of spontaneous brain activity in the relevant neural circuits and improve the abnormal activity of the SN region, especially the insula there

关键词: nonsuicidal self-injury behavior, major depressive disorder, dialectical behavioral therapy, functional magnetic resonance imaging

Effectiveness of Dialectical Behavior Therapy Skills Training for Non-suicidal Self-injury in Psychiatric Patients: A Multicenter Randomized Clinical Trial

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Objective Knowledge is lacking on the effectiveness of dialectical behavior therapy skills training (DBT-ST) for non-suicidal self-injury (NSSI) thoughts and behaviors. Furthermore, the mechanism of therapeutic change of DBT-ST is poorly understood. Therefore, our aims were to investigate the effectiveness of DBT-ST for NSSI thoughts and behaviors within psychiatric patients compared to social support group therapy (SSGT) through 13 weeks intervention and to analyze possible mediators of treatment effects

Methods One hundred and ninety-six NSSI patients were randomized to 13 weeks of DBT-ST group ($n = 98$) or SSGT group ($n = 98$). The primary outcomes were NSSI thoughts and behaviors. Assessments were conducted at baseline and post-treatment

Results All treatment conditions resulted in similar improvements in NSSI thoughts and behaviors, whereas participants receiving DBT-ST had greater score reduction in NSSI behaviors than those in SSGT groups. There were significant sharper score reductions in alexithymia, borderline symptoms and emotion dysregulation in DBT-ST group than SSGT group. Mediation analysis indicated that change in emotion dysregulation, alexithymia and borderline symptoms mediated the relationship between DBT-ST and the severity of NSSI

Conclusion Our findings suggested that 13-

week of DBT-ST is a promising treatment for NSSI thoughts and behaviors, with positive effects on psychological functions for psychiatric patients

关键词: dialectical behavior therapy skills training, non-suicidal self-injury thoughts and behaviors, effectiveness, mechanism of therapeutic change

Childhood Maltreatment Predicts Poor Sleep Quality in Chinese Adults: The Influence of Coping Style Tendency

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Background Previous research has identified a relationship between childhood trauma and sleep disturbances in adulthood, yet few studies have explored the role of coping tendencies in the association between childhood trauma and sleep quality in adulthood. This longitudinal study assessed the prospective link between childhood maltreatment and sleep quality in adulthood, with a specific focus on examining whether different coping tendencies influence these associations

Methods The baseline sample included 1600 adult participants, with 1140 participants successfully followed up five years later. The key variables were measured using the Childhood Trauma Questionnaire (CTQ), Simplified Coping Style Questionnaire (SCSQ), and Pittsburgh Sleep Quality Index (PSQI). Continuous variables were analyzed using Student's *t* tests, and categorical variables were examined using chi-square tests. Generalized linear mixed models were employed to estimate unstandardized β estimates and 95% confidence intervals (95% CIs). Structural equation modeling was used to test the mediation model

Results Individuals who reported experiencing childhood maltreatment at baseline were at an increased risk of experiencing sleep disturbances during the fol-

low-up. Childhood maltreatment was a significant negative predictor of baseline period coping tendencies ($\beta = -0.27, P < 0.001$), baseline period coping tendencies were a significant negative predictor of subsequent sleep quality ($\beta = -0.11, P < 0.001$), and adverse childhood experiences were a significant positive predictor of subsequent sleep quality ($\beta = 0.43, P < 0.001$). There was a partial mediating effect of baseline coping tendencies between childhood trauma and subsequent sleep quality, with a mediation effect size of $-0.27 \times -0.11 = 0.03$

Conclusion Childhood maltreatment has emerged as a predictive factor for sleep disturbances in adulthood. Baseline-period coping tendencies partially mediate the moderating role between childhood trauma and follow-up-period sleep quality. When implementing interventions or treatments for adults with sleep disturbances, particular attention should be given to understanding their childhood trauma history and coping style tendency. Fostering positive coping strategies has emerged as a crucial approach to reducing the risk of sleep problems in adults with a history of childhood trauma.

关键词: childhood maltreatment, sleep quality, coping style tendency, adulthood

失眠患者认知功能对数字化失眠认知行为疗法效果的影响

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目的 数字化失眠认知行为疗法(e-CBTI)被广泛认为是治疗失眠障碍的有效方法,然而其在真实世界中的疗效受多种因素影响。在临床实践中,认知功能被认为是影响认知行为疗法(CBT)的重要因素。探索认知功能对e-CBTI疗效的影响望为提高失眠障碍治疗效果提供实证支持。因此,本研究旨在明确认知功能对e-CBTI缓解率的影响。

方法 本研究纳入参与至少4周e-CBTI疗程的18-65岁失眠患者298名(年龄: 39.46 ± 11.93 ,

女性: 69.8%),以患者参与e-CBTI第四周的失眠严重程度指数量表(ISI)得分 ≤ 8 作为评估e-CBTI达到缓解效果的标准。研究使用精神运动警觉任务(PVT)评估警觉性注意能力、气球模拟风险决策任务(BART)评估风险决策能力、Go/no-go任务(Go/no-go task)评估抑制控制能力的。采用卡方检验和logistic回归进行分析。

结果 本研究中,78名失眠患者在参与e-CBTI的第四周达到缓解标准(年龄: 38.76 ± 12.35 岁,女性: 75.6%),220名失眠患者在参与e-CBTI的第四周末未达到缓解标准(年龄: 39.71 ± 11.80 ,女性: 67.7%),两组患者在年龄性别中均未有显著差异。精神运动警觉任务(PVT)的总错误频次与第四周e-CBTI效果呈负相关($OR = 1.933, 95\% CI: 1.081-3.459$),即警觉性注意能力较差的失眠患者通过e-CBTI更能得到有效缓解。进一步敏感性分析结果显示,将年龄25岁、40岁分别作为二分类变量引入校正,其结果与主分析一致,警觉性注意功能仍负向预测e-CBTI缓解率(25岁: $OR = 1.954, 95\% CI: 1.083-3.526$, 40岁: $OR = 1.874, 95\% CI: 1.032-3.402$)。其他认知功能指标,包括PVT平均反应时、BART值(总累计充气数/未爆炸气球数)及BART总收益、Go/No-Go的正确率及平均反应时间,与e-CBTI缓解率之间均不存在显著统计学差异。

结论 警觉性注意能力对e-CBTI缓解率具有负向预测作用。这一发现为优化数字化失眠认知行为疗法提供了实证支持,并为临床实践中e-CBTI的个体化应用提供理论依据。

关键词: 失眠, 真实世界研究, e-CBTI, 警觉性注意, 缓解率

影响失眠患者数字化失眠认知行为疗法依从性的认知因素初探

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目的 失眠认知行为疗法(CBTI)是失眠障碍的一线治疗手段,其依从性受认知在内的各项因素影响。数字化CBTI(e-CBTI)扩大了CBTI的应用场景且与传统CBTI疗效相当,但在临床实践中其依

从性仍有待提高。因此,本研究旨在探索失眠患者的认知功能对 e-CBTI 依从性的影响。

方法 本研究为真实世界观察性研究,纳入参与 e-CBTI 治疗的 18-65 岁慢性失眠患者 1255 名(36.36±12.20 岁,68%为女性)。将参与 4 周 e-CBTI 治疗课程的患者定义为依从性良好,未完全参与 4 周课程定义为依从性较差。研究采用三个心理学范式评估认知功能:精神运动警觉性任务(PVT)用于评估警觉性注意,气球模拟风险决策任务(BART)用于评估风险决策能力,Go/No-Go 任务用于评估抑制控制能力。通过卡方检验及 logistic 回归分析,评估上述认知功能对 e-CBTI 依从性的影响。

结果 本研究共有依从性良好患者 324 名(年龄:39.72±12.02 岁,70.1%为女性),依从性较差患者 931 名(年龄:35.19±12.05 岁,67.2%为女性),依从性良好患者年龄显著大于依从性较差患者($t=5.828, P<.001$)。在 Go/No-Go 任务中,正确率越高的患者被认为抑制控制能力越高。抑制控制能力高的患者表现出更高的 e-CBTI 依从性(45.4% vs. 31.5%, $P<.001$)。控制性别、年龄等人口学变量后,抑制控制能力仍显著正向预测 e-CBTI 依从性(OR = 1.767, 95% CI: 1.348-2.315)。以 25 岁和 35 岁作为分组依据进行敏感性分析,结果均与主分析结果一致,抑制控制能力仍能解释 e-CBTI 较好的依从性[25 岁:(OR = 1.709, 95% CI: 1.307-2.236); 35 岁:(OR = 1.79, 95% CI: 1.367-2.344)]。最后,在主分析和敏感性分析中均未发现警觉性注意与风险决策能力对 e-CBTI 依从性的显著影响。

结论 本研究揭示了抑制功能对 e-CBTI 依从性的预测作用。了解这一关系可以帮助临床上识别并支持认知上有困难的患者,通过个性化调整治疗方案,提高 e-CBTI 依从性,从而优化治疗效果。

关键词: 慢性失眠障碍,失眠认知行为疗法,依从性,抑制控制,认知

成人注意缺陷多动障碍的团体辩证行为治疗:可行性及初步疗效

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目的 情绪失调是成人注意缺陷多动障碍(Attention-Deficit/Hyperactivity Disorder, ADHD)的重要临床特征之一,而辩证行为治疗(Dialectical Behavior Therapy, DBT)是针对情绪失调的有效治疗方法,故考虑 DBT 可以成为成人 ADHD 的干预方法。研究拟在国内成人 ADHD 群体中开展 DBT 团体技能训练,探讨其在国内 ADHD 群体中的可行性及可接受度,同时初步讨论该方案对 ADHD 核心症状及伴随症状的疗效,并对治疗疗效的预测因素进行探索。

方法 本研究采用自身前后对照设计,纳入 20 名成人 ADHD 患者,对其开展为期 12 周针对成人 ADHD 群体的 DBT 团体技能训练。治疗每周 2 小时,共 12 周,邀请患者匿名完成治疗满意度评价量表和治疗策略评价量表,以对治疗方案的可行性及可接受度进行评估。在治疗前(基线 T1)、第 4 周(T2)、第 8 周(T3)治疗结束(T4)时和结束 3 个月后随访(T5)时对患者进行多维度症状评估,包括 ADHD 核心症状(ADHD-RS)、焦虑抑郁情绪(BAI、BDI-II)及情绪调节能力(DERS)、自我觉察能力(FFMQ-C、SCS)、自尊水平(SES)及执行功能(BRIEF-A)。采用混合线性模型分析上述指标随时间相关变化;采用多元回归分析对 T4 及 T5 时的 ADHD-RS 总分的预测因子进行探索。

结果 患者治疗参与率为 88.3%、平均参与次数为 10.6±1.3 次、满意度在 4.3~4.8 分之间(1-5 分评分)。通过治疗,患者核心症状($g=0.634\sim 1.031$)及抑郁情绪($g=0.379\sim 0.664$)显著下降,情绪调节($g=0.296\sim 0.616$)、自我觉察能力($g=-0.386\sim -0.581$)及自尊水平($g=-0.305\sim -0.298$)显著提升;上述结果在 T2 时即出现,并维持至 T5。T4 和 T5 时治疗疗效的积极预测因子包括男性、治疗早期起效(治疗前 4 周 ADHD-RS 总分下降 $\geq 25\%$)、以及 T1 时 ADHD 核心症状得分更高;而消极预测因子包括存在轴 I 或轴 II 共患病,以及 T1 时 BRIEF-A 总分更高。

结论 DBT 在我国成人 ADHD 具有可行,可接受度良好;初步疗效结果证实了 DBT 对成人 ADHD 患者的有效性,为后续随机对照研究的开展奠定了基础。同时研究对 DBT 团体技能训练的治疗疗效预

测因素进行了初步探讨,为适应证的优化提供了初步理论依据。

关键词:成人注意缺陷多动障碍,辩证行为疗法,可行性研究,预测

杏仁核亚区静息态功能连接对强迫症认知行为治疗长期疗效的影响研究

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目的 强迫症是一种常见的慢性精神疾病,以强迫思维和强迫行为为核心特征。CBT被认为是治疗强迫症的一线疗法。然而,CBT对强迫症的疗效产生的神经机制仍不清楚。本研究旨在探究CBT治疗后强迫症患者临床症状改善与治疗前杏仁核亚区的静息态功能连接的关系,以及这种关系是否可以作为长期治疗效果的潜在影响因素。

方法 招募72名强迫症患者以及人口学特征相匹配的67名健康受试者,采集两组基线期的临床症状以及静息态功能磁共振成像数据。在患者组中,在基线、治疗开始随访8周与24周分别采集临床特征,并且在8周治疗结束后再次进行磁共振扫描。以杏仁核亚区为种子点对患者组与健康组的全脑静息态功能连接进行比较,用COX回归分析功能连接模式与短期及长期临床结果间的关系。对治疗前后患者组与健康组三组之间的功能连接进行单因素方差分析以及多重比较分析,采用双因素方差分析探索治疗后有效组与无效组功能连接的变化。

结果 (1)以3个杏仁核亚区作为感兴趣区进行全脑的功能连接分析,相比于健康组,患者组在左侧基底外侧杏仁核与左侧颞上回、右侧颞中回的功能连接减弱;左侧浅表杏仁核与右侧颞极颞中回之间的静息态功能连接减弱;右侧基底外侧杏仁核与左侧颞上回、左侧颞中回、右侧颞上回之间的静息态功能连接减弱。(2)COX多因素回归结果表明,在8周随访中,左侧基底外侧杏仁核与左侧颞上回的功能连接与YBOCS有效率呈负相关($HR=0.000, P=0.009$),而左侧基底外侧杏仁核与右侧颞中回的功能连接与YBOCS有效率无显著相关($HR=28.95, P=0.336$)。在24周随访中,左侧基底外侧杏仁核与左侧颞上回的功能连接与Y-BOCS有效率也呈负相

关($HR=0.007, P=0.007$),即左侧基底外侧杏仁核与左侧颞上回功能连接越弱,YBOCS减分率越高。

(3)对治疗前后患者组以及健康组的杏仁核亚区功能连接进行方差分析,多重比较后发现治疗前后患者组左侧基底外侧杏仁核与左侧颞上回功能连接均弱于健康组,治疗前后患者组不存在显著差异。双因素方差分析结果表明,左侧基底外侧杏仁核与左侧颞上回的功能连接在时间(基线、CBT治疗后)的主效应中不显著,在组别(有效、无效)中的主效应不显著,时间×分组的交互作用不显著。

结论 强迫症患者左侧基底外侧杏仁核与左侧颞上回的功能连接可以影响CBT短期与长期的疗效,并且CBT治疗后左侧基底外侧杏仁核与左侧颞上回的纵向变化与强迫症患者治疗反应相关。

关键词:强迫症,杏仁核亚区,认知行为治疗,静息态功能磁共振成像

Effects of Brief Cognitive Behavioral Therapy on Medication Adherence in Adolescent Patients with Major Depressive Disorder

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Objective Major depressive disorder(MDD) is a common and recurrent emotional disorder. Medication is the primary treatment approach, with poor adherence being the main cause of the high recurrence rate. Compared to adults, adolescents with depressive disorder show lower medication adherence. Psychological therapy is a common method to enhance patient medication adherence, with Cognitive Behavior Therapy (CBT) being the preferred psychological treatment recommended in depressive disorder diagnosis and treatment guidelines, which can improve patient medication adherence and prevent recurrence. Due to the extended treatment duration and the significant requirements on therapists, CBT is not feasible for implementation in primary healthcare settings. In recent years, scholars have recommended Brief Cognitive Behavior Therapy (BCBT) to meet the treatment requirements of patients with depres-

sive disorder. Based on the conceptualization of depressive disorder, BCBT retains the most effective components of treatment from CBT (automatic thought correction and behavioral activation), while removing less effective components (such as core belief modification). This study examines the effects of BCBT on medication adherence in adolescent patients with major depressive disorder

Methods 43 adolescent patients diagnosed with major depressive disorder were selected as the study participants from the Second People's Hospital of Huzhou between December 2018 and October 2022. Among them, there were 19 males and 24 females, aged 12 to 18 (14.98 ± 1.77) years old. All patients received psychological intervention in addition to antidepressant medication, with 21 patients in the BCBT group and 22 patients in the psychological education group. The Morisky Medication Adherence Scale-8 (MMAS-8) scores, medication adherence coefficient, and Hamilton Depression Rating Scale-24 (HAMD-24) scores were compared before and after psychological intervention between the two groups of patients

Results The MMAS-8 scores of patients in the BCBT group showed a significant increase after psychological intervention, along with a higher coefficient of medication adherence compared to the control group, with statistically significant differences (both $P < 0.05$). Following psychological intervention, HAMD-24 scores decreased significantly in both groups, also showing statistically significant differences (both $P < 0.05$). There was no statistically significant variance in HAMD-24 scores between the two groups before and after the intervention (all $P > 0.05$)

Conclusion BCBT can effectively enhance medication adherence and decrease depressive symptoms in adolescent patients diagnosed with major depressive disorder.

关键词: Brief cognitive behavioral therapy; Major depressive disorder; Adolescent; Medication adherence

Dialectical Behavioral Therapy Compared

Social Support Group Therapy for Non-suicidal Self-injury Behaviors: Outcomes Over A One-Year Follow-Up

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Objective To evaluate the clinical efficacy of 13 weeks of Dialectical Behavior Therapy Skills training (DBT-ST) with social support group therapy (SSGT) in patients with NSSI, including short-term efficacy after the intervention, and long-term efficacy at one-year follow-up

Methods This is a 13-week multicenter, randomized, double-blind, clinically controlled intervention study. Subjects included 203 participants aged 13-59 years who met the DSM-5 diagnostic criteria for NSSI and had no significant suicidal ideation or behavior one month prior to the start of the study. Participants were recruited from the psychiatric and psychological counseling departments of 14 hospitals in China

Participants were randomly assigned either to the DBT-ST group or SSGT group. In the DBT-ST group, participants were taught skills designed to reduce NSSI: emotion regulation, distress tolerance, mindfulness, and interpersonal effectiveness. At the same time, participants in the SSGT group discussed the challenges of their condition and supported each other.

Results Results were tested for time effects, speed, and between-group differences using generalized linear mixed models, t-tests. From baseline to follow-up, both groups showed significant improvements in most outcomes, while in terms of between-group comparisons, the DBT-ST group was significantly better than the SSGT group in NSSI behaviors and impulsivity. In addition, there was no significant difference between the two groups in the follow-up period on the outcome indicators of borderline symptoms, difficulties in emotion regulation; however, the DBT-ST group presented significantly faster improvement and showed significantly better improvement right after the intervention

Conclusion Combining short-term efficacy and long-term efficacy, the DBT-ST group showed superior efficacy to the SSGT group in the primary outcome indicator of NSSI behavior, as well as in several secondary outcome indicators, which is closely related to the advantages of DBT. These findings suggest that DBT may be a more effective treatment approach for NSSI.

关键词: Non-suicidal Self-injury, Psychotherapy, Randomized Controlled Trial, Follow-up, Dialectical Behavior Therapy

Efficacy of Social Media-based Smoking Cessation Intervention in China: A Randomized Controlled Trial

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Objective Tobacco use has enormous health and economic consequences. China has approximately 300 million current smokers, and smoking cessation services are limited. This study aimed to assess the efficacy of a Cognitive Behavioral Theory-based smoking cessation intervention via three social media (text, WeChat, and APP) in China

Methods A randomized controlled trial was conducted among 4396 Chinese-speaking adult smokers willing to quit within one month were recruited and randomised in a 1:1 ratio. The intervention group (n=2486, including 958 participants in the text messaging-based group, 523 participants in the APP-based group, and 1005 participants in the WeChat-based group) received the social media-based intervention and the control group (n=1910) received control messages for about 14 weeks (1 to 2-week prequit and 12-week postquit). Participants were followed up to 26 weeks after the quit date. The primary outcome was self-reported continuous smoking abstinence rate, biochemically validated at 26 weeks. The important secondary outcomes were self-reported 7-day and continuous abstinence rates at 6 months. All analyses were by intention to treat

Results By intention-to-treat analysis, the biochemically verified 26-week continuous abstinence rate was 8.65% in the intervention group (for each social media-based group: 6.37% the text messaging-based group, 6.50% in the APP-based group, and 11.94% in the WeChat-based group) and 2.57% in the control group (OR = 3.60, 95% CI: 2.64-4.98, $p < 0.0001$). The self-reported 7-day abstinence was 27.63% at week 1, 28.16% at week 4, 29.16% at week 8, 30.17% at week 12, 30.97% at week 16, 30.17% at week 20, and 27.27% at week 26 in the intervention group; and the self-reported 7-day abstinence was 17.75% at week 1, 16.28% at week 4, 17.02% at week 8, 15.97% at week 12, 16.39% at week 16, 16.81% at week 20, and 14.40% at week 26 in the control group (all $p < 0.0001$). The self-reported continuous abstinence rates at weeks 1 and 26 ranged from 17.86% to 23.69% and 12.15% to 8.64% in the intervention group and the control group respectively (all $p < 0.0001$). In the intervention group, the biochemically verified 26-week continuous abstinence rate was 12.8 % for participants who smoked ten or less cigarettes per day, and only 7.7% to 6.5% for participants who smoked more than ten cigarettes per day. Furthermore, the biochemically verified 26-week continuous abstinence rate was 9.7 % for participants who had previous quit attempts, and only 6.7% for participants who never tried to quit

Conclusion The social media-based smoking cessation intervention, especially the WeChat-based intervention, significantly increased smoking abstinence rates at 6 months and should be considered for treatment-seeking smokers in China. Participants with low nicotine dependence or previous quit attempts were more likely to successfully quit smoking

关键词: Social media, smoking cessation intervention, quit in China, a randomized controlled trial

Attitudes and Knowledge for CBT-based Psychotherapy Among Medical Students and Residents in China: A Survey Study

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Background /Aim: Psychotherapy training for medical students and residents in China is still in development. To establish an appropriate training program, understanding medical students' and residents' current knowledge and attitudes toward psychotherapy is needed

Methods 149 participants, including medical students, residents, and other health providers (HCPs), self-reported their understanding of 18 types of psychotherapy, negative attitudes toward CBT, and their attitudes toward psychological interventions and counseling in primary care (APIC-PC) through an online survey

Results Participants' understanding of psychotherapy was generally low ($M = 26.25$, $SD = 22.99$). Surprisingly, medical students' ($M = 34.42$, $SD = 22.61$) and HCPs' ($M = 37.25$, $SD = 30.834$) understanding was significantly higher than residents' ($M = 20.08$, $SD = 19.54$), $F(2, 146) = 8.63$, $p < .001$. Participants from psychiatric departments ($M = 33.85$, $SD = 25.89$) understand more psychotherapy than those from non-psychiatric departments ($M = 20.98$, $SD = 19.20$), $t(147) = 3.46$, $p < .001$. Participants with a bachelor's degree ($M = 2.40$, $SD = 0.976$) scored lower in the Negative Attitude Toward CBT Scale than participants with a graduate degree ($M = 2.76$, $SD = 1.00$), $t(147) = -2.20$, $p = 0.029$. All participants' APIC-PC scores were relatively the same and indicated a neutral to slightly positive attitude toward psychotherapy and counseling practices. However, they showed a slightly negative attitude in the "willingness to counsel" subscale ($M = 2.65$, $SD = 0.93$)

Conclusion This study indicated a lack of knowledge of psychotherapy and a lack of psychotherapy courses for medical students and residents, especially those from non-psychiatric departments in China. Our findings suggest an urgent need for psychotherapy and relevant training for Chinese medical students and residents.

关键词: CBT training, medical residents, psychiatrists, attitudes, knowledge

The Efficacy of Reading Prescription As Adjunct Therapy in Anxiety Disorder Treatment: Improving Sleep Quality and Reducing Medication Adverse Effects

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Objective This study aimed to investigate the impact of adding a reading prescription intervention to pharmacological treatment on sleep quality improvement and reduction of medication adverse effects in patients with anxiety disorders

Methods Sixty patients diagnosed with anxiety disorders were randomly assigned to two groups: medication-only treatment ($n=30$) and medication treatment with an additional reading prescription ($n=30$). The reading prescription included articles focusing on anxiety management techniques, personal experiences of coping strategies, expert opinions on mental health, and updates on anxiety disorder research

Results Demographic Characteristics: The two groups (medication-only vs. medication + reading prescription) were comparable in terms of age, gender distribution, initial presenting symptoms, and baseline anxiety severity

Sleep Quality Improvement: At the end of the treatment period, the group receiving medication treatment with a reading prescription showed significantly lower scores on the Pittsburgh Sleep Quality Index (PSQI) compared to the medication-only group ($p < 0.05$).

Reduction in Medication Adverse Effects: Patients in the medication treatment with a reading prescription group reported significantly fewer and less severe medication adverse effects compared to the medication-only group ($p < 0.05$).

Conclusion The findings suggest that adding a reading prescription intervention to pharmacological

treatment for anxiety disorders enhances treatment outcomes. Specifically, it improves sleep quality and reduces medication adverse effects. Incorporating reading materials tailored to anxiety management and mental health education can be a beneficial adjunctive therapy in clinical practice, promoting better overall patient well-being and treatment adherence. Further research with larger sample sizes and long-term follow-up is recommended to validate these preliminary findings and explore sustained therapeutic benefits.

关键词: Anxiety disorders, reading prescription, pharmacological treatment, sleep quality, medication adverse effects

Structural Brain and White Matter Fiber Changes in Multidimensional Impulsivity of Non-suicidal Self-injury Patients

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Objective Non-suicidal self-injury (NSSI) is defined as a series of direct, deliberate, and repeated acts of harming oneself that do not lead to death by an individual without suicidal intention. It is posited to stem from a multifaceted array of biopsychosocial factors where impulsivity plays a critical role. Current research on the neural mechanisms underlying this hypothesis is both inconsistent and limited in scope, especially with regard to reports of structural brain alterations. Impulsivity is a multidimensional construct, and the potential neural correlates of impulsivity may vary across different dimensions. Therefore, we combine behavioral and multimodal structural imaging techniques to address the question of how the occurrence of NSSI behaviors is associated with impulsivity resulting from brain structural alterations in NSSI patients

Methods 293 NSSI participants and 140 healthy controls (HCs), were enrolled in this study. The Ottawa Self-Injury Inventory (OSI) was used to assess NSSI behaviors. The level of impulsivity was assessed by the Barratt Impulsiveness Scale version 11 (BIS-11) and the attention network test. Of these, 182 NSSI subjects and 95 HCs participated in T1-weighted MRI and diffusion tensor imaging scans. Whole-brain voxel-based morphometry (VBM) and surface-based morphometry (SBM) were employed to explore differences in whole-brain gray matter volume (GMV), white matter volume (WMV), and cortical metrics between the two groups, as well as to analyze the relationship between the difference regions and different dimensions of impulsivity. Further region of interest (ROI)-based diffusion tensor imaging analysis was conducted to assess the fractional anisotropy of white matter fibers between specific brain regions in NSSI patients

Results NSSI patients have increased impulsivity, with the highest correlation between NSSI frequency and motor impulsivity (MI) ($r=0.203$, $p<0.001$). NSSI patients showed increased white matter volume (WMV) in the right dorsolateral superior frontal gyrus and inferior parietal lobule, along with enhanced cortical thickness and complexity in superior frontal gyrus (SFG) and caudal anterior cingulate cortex associated with motor impulsivity. Both non-planning impulsivity and attentional impulsivity in NSSI patients were associated with increased WMV in the inferior temporal gyrus and supramarginal gyrus, as well as increased cortical complexity in SFG, while increased WMV in the middle orbitofrontal cortex was only associated with non-planning impulsivity. Based on the above findings, a total of 14 white matter fiber tracts connecting the bilateral frontal lobules, right parietal lobule, bilateral temporal lobules, right hippocampus, and cingulum regions were selected as ROIs. We found that NSSI patients had significantly decreased fractional anisotropy values in the uncinate fasciculus and cingulate system as compared to HCs

Conclusion Our findings suggested that motor impulsivity, which is a prominent psychopathological characteristic of NSSI, is primarily modulated by the su-

perordinate cognitive attention network involving cingulate-frontal-parietal regions. Furthermore, the occurrence of NSSI may also involve structural abnormalities within the frontal-temporal structures, specifically relating to non-planning impulsivity and attentional impulsivity

关键词: non-suicidal self-injury, impulsivity, neuroimaging, white matter volume, fractional anisotropy

基于认知行为理论的戒烟干预疗效及其神经影像学特征研究

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目的 吸烟作为全球性公共卫生问题,是造成可预防性疾病和死亡的主要原因。长期吸烟容易导致烟草成瘾,成瘾是一种复杂的慢性、易复发性脑部疾病,具有冲动性和强迫性特点,与心理健康状况、人格特征密切相关,同时也伴随脑结构和功能的变化。既往基于功能磁共振的研究发现成瘾核心特征如冲动、渴求存在激活的偏侧化。偏侧化作为人脑组织的显著特征,通常被认为是一种稳定的、类似特质的特征。与动态功能连接类似,偏侧化也具有时变性,即动态偏侧化。动态偏侧化与认知功能、情感等密切相关,然而目前尚无针对烟草成瘾者的脑动态偏侧化特征的研究。基于认知行为理论(CBT)的戒烟干预被认为是目前研究证据最多、疗效最肯定的心理干预方法之一,但其确切的神经机制尚不明确。深入探究基于CBT的戒烟干预的疗效及神经影像学特征,对于降低复吸率具有重要意义。通过对烟草成瘾者进行脑动态偏侧化的研究,结合基于CBT的戒烟干预,探索干预的疗效及其神经影像学特征。

方法 研究共纳入87名烟草成瘾者以及48名健康对照。所有受试者均完成临床特征评估、脑影像数据采集以及吸烟生物学验证。基线完成后,根据戒烟意愿共有47名烟草成瘾者被纳入为期4周的基于CBT的线上戒烟干预,并且在戒烟日后第四周末进行随访。使用基于滑动时间窗口来绘制时变的侧化结构从而评估脑功能活动,使用t检验比较干预后与干预前、健康对照的动态偏侧化差异,采

用皮尔逊相关分析对动态偏侧化的差异与临床特征的相关性进行分析。

结果 基于CBT的戒烟干预4周持续戒烟率为42.6%。在基线期发现烟草成瘾者出现广泛脑区的动态偏侧化异常,主要表现为偏侧性波动(LF)减小,涉及左侧前扣带回、内侧前额皮层、体感运动区、下额叶区、初级听觉区、眶极额叶区、背外侧前额叶以及右侧体感运动区、视觉联合区,并且右侧体感运动区的LF与每日吸烟量、渴求负相关;右侧听觉联合区的LF与渴求负相关;背外侧前额叶的LF与渴求负相关;左侧体感运动区的LF与每日吸烟量负相关。干预后,和健康对照相比,干预组仅有右侧初级听觉皮层、左侧前运动皮层的LF异常;双侧体感运动区的LF变化与渴求程度的变化负相关,左侧下额叶的LF变化与渴求程度的变化负相关,左侧前扣带回和内侧前额叶皮层区域的LF变化与每日吸烟量的变化负相关。

结论 烟草成瘾者表现出涉及前额叶、中央旁扣带回、顶叶、体感运动皮层等多个脑区的动态偏侧化改变,基于CBT的戒烟干预能有效矫正动态偏侧化的异常。

关键词: 烟草成瘾; 磁共振成像; 动态偏侧化; 戒烟; 认知行为理论; 心理干预

The Effectiveness of Mindfulness-based Interventions for Relieving Cravings and Preventing Relapse Among Drug Users: A Preliminary Study

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Objective Addiction and trauma-based mental health problems often co-occur. Substance use has frequently been associated with mental health problems, such as depression. Research on the efficacy of clinical psychotherapy on addiction-related mental problems is still insufficient. This study developed domestic Mindfulness-based Interventions targeting craving and aimed to verify their effectiveness, attempting to expand the cognition model of mindfulness-centered regulation of

addictive behavior

Methods Based on the Randomized Controlled Trial design, 12 adult SUD females with methamphetamine, heroin, or ketamine in the intervention group (MBI), the matched 12 females in the control group, and 24 Healthy Controls (HC) matched with the former two groups participated in this study. The intervention group received the 8-week Group mindfulness intervention performed by psychiatrists. A variety of clinical variables of SUD participants were assessed three times: before, during (2 weeks after the MBI began), and after the intervention. The cognitive task (regional segmental task, reflecting implicit cognitive ability) was conducted before and after the intervention

Results It was found that relative to the pre-MBI clinical variables, the levels of PHQ and BAI were significantly lower, approaching those of HC, while the correct rate increased significantly and the response time decreased significantly

Conclusion The findings demonstrated the effectiveness of Mindfulness-Based Intervention (MBI) that specifically targets craving in mitigating symptoms of depression and anxiety, improving the subconscious perception of the physical stimulus, thus contributing to the advancement of the conceptual framework that associates mindfulness-centered regulation of addictive behavior

关键词: addiction, Mindfulness-based Interventions, anxiety, depression, subliminal perception

基于虚拟现实眼动脱敏与再加工心理治疗对青少年抑郁症患者的母亲的干预研究

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青少年抑郁症的治疗过程长,母亲作为青少年抑郁症患者最主要的照顾者,需承受巨大的身心负担,这一现象值得引起重视并寻求更高效便捷的治疗方式。本研究基于母亲抑郁代际传递的整合模型,采用眼动脱敏与再加工(EMDR)心理治疗对抑郁症结合虚拟现实(VR)技术对青少年抑郁症患者母亲

进行干预,改善母亲阈下抑郁症状、情绪调节自我效能感,同时验证母亲抑郁情绪改善是否能进一步缓解青少年抑郁。

本研究采用临床评估诊断和问卷调查法,于三甲医院精神医学科门诊开展随机临床招募,患者母亲入组标准:①符合《精神障碍诊断与统计手册》(DSM-5)阈下抑郁诊断标准;②年龄 18-60 岁;③其子女的年龄介于 10-18 岁,符合 DSM-5 抑郁症诊断标准;④母亲为其抑郁症患儿的主要养育者;⑤流调中心抑郁量表(CES-D)评分 ≥ 16 ;⑥汉密尔顿抑郁量表(HAMD)评分 ≥ 9 分;⑦杨氏躁狂评定量表(YMRS)评分 < 6 分;⑧训练期间没有使用精神类药物。共纳入 126 份有效数据,其中对患者母亲进行为期 6 周的 VR 化 EMDR 干预,观察干预前后的指标变化,并通过 Process 3.0 中的 Model4 拟合抑郁在 VR 化 EMDR 治疗影响患者母亲的情绪调节自我效能感间的中介作用模型,同时进一步探讨家庭功能在母亲抑郁与青少年抑郁之间可能中介机制。

研究结果表明:

(1) 抑郁症青少年患者的母亲存在阈下抑郁、创伤后应激的检出率较高,分别占 83%和 59%。

(2) 抑郁症青少年母亲与健康青少年母亲比较发现,情绪调节自我效能感总体显著低于健康青少年母亲;而伴有阈下抑郁的母亲比无阈下抑郁母亲的情绪调节自我效能感更差。

(3) 青少年抑郁症患者母亲干预前后,临床特征、情绪调节自我效能感的结果存在显著差异;且显著优于对照组。

(4) 抑郁在 VR 化 EMDR 治疗影响青少年抑郁症患者母亲管理生气/愤怒情绪的自我效能感间起中介作用。

(5) 母亲抑郁与青少年抑郁呈正相关,家庭功能在母亲抑郁影响青少年抑郁的之间不存在中介作用。

本研究发现青少年抑郁症患者母亲的抑郁、创伤后应激障碍检出率高,在经过 VR 化 EMDR 系统治疗后,母亲的抑郁和创伤后应激程度呈现更高效快速的好转,揭示了降低患者母亲的抑郁水平能提高其管理生气/愤怒情绪的自我效能感,并发现母亲抑郁恢复可正向影响青少年抑郁症,为进一步改善青少年抑郁症提供新视角。

关键词: 青少年抑郁症,母亲抑郁,眼动脱敏与再加工,情绪调节自我效能感,家庭功能

关键词：失眠的认知行为治疗，抑郁障碍

简化失眠认知行为治疗对抑郁症伴失眠症状患者的疗效分析

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目的 验证简化失眠认知行为治疗（Cognitive Behavioral Therapy for Insomnia-Simplified, CBTI-S）方案的有效性与对抑郁症患者的适用性，为抑郁症合并失眠症状患者提供更优治疗选择。

方法 本研究采用随机平行对照设计，选择符合入组标准的抑郁症伴失眠症状患者，按 1:2 的比例随机分配到对照组和研究组。对照组接受常规抗抑郁药物治疗+睡眠卫生教育，研究组进行常规抗抑郁药物治疗+CBTI-S 治疗。评估员于基线、干预后 2 周末、干预后即刻、干预后 1 月、干预后 6 月进行随访，采用匹兹堡睡眠指数量表（PSQI）、失眠严重指数量表（ISI）、17 项汉密尔顿抑郁量表（HAMD-17）、6 项生活质量问卷（QOL-6）、治疗联盟问卷（WAI）等评估患者的失眠症状、抑郁症状和生活质量，明确治疗效果。

结果 （1）两组患者人口学资料中，受教育年限、家庭经济情况等差异均无统计学意义，平均年龄差异有统计学意义，对照组（27.66±7.27）平均年龄略低于研究组（32.52±8.52）；两组患者治疗前 PSQI、ISI、HAMD-17、QOL-6、WAI 评分比较差异均无统计学意义（ $p>0.05$ ）。

（2）治疗后，两组患者 PSQI 总分、入睡潜伏期、ISI 总分、HAMD-17 评分均较治疗前降低，将年龄作为协变量，重复测量方差分析结果显示两组患者在 PSQI 量表中的入睡潜伏期的交互作用显著（ $p<0.05$ ）。两组患者 HAMD-17、ISI、QOL-6 指标的时间效应均显著（ $p<0.05$ ），组间效应及交互效应均不显著（ $p>0.05$ ）。

（3）治疗后 1 月随访及 6 月随访，两组患者 PSQI 总分、入睡潜伏期、ISI 总分、HAMD-17 评分的时间效应均显著（ $p<0.05$ ），组间效应及交互效应均不显著（ $p>0.05$ ）。

结论 CBTI-S 能有效缩短患者入睡潜伏期，在对抑郁症状的改善及生活质量的改善方面与睡眠卫生健康教育差别不大，但可适当增加 CBTI-S 治疗次数，增加随访时间。

DNA Methylation Changes Post-DBT in NSSI Patients

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Objective The mechanism of action of dialectical behavior therapy (DBT) in patients with non-suicidal self-injury (NSSI) and epigenetic explanations of the complex interplay of genetic factors in NSSI are unclear

Methods DNA methylation sequencing was performed on samples from 37 NSSI patients at baseline and after DBT. Multiple target region methylation enrichment sequencing technology was used to conduct a randomized controlled study, and PCA analysis Cluster analysis, Methylation level difference analysis were used to analyze the difference of DNA methylation level before and after DBT treatment

Results Overall methylation levels are elevated in patients with NSSI. The efficacy of DBT on NSSI ideation was significantly better than that of the control group, and the efficacy on NSSI behavior, suicidal ideation and behavior was comparable to that of the control group. DNA methylation levels significantly changed after DBT treatment, and the five most significant genes with high methylation were ARG1, FYN, LAMA1, GPR160 and XIRP2. The five most significant hypomethylation genes were TTR, MIR6854, SH3D19, TATDN2 and AMY2B. Hypermethylation of ARG1 and FYN genes, and hypomethylation of C8B and SLC18A1 genes may be associated with improved NSSI behavior through signaling pathways such as RAS GTP-enzyme binding, small molecule GTP-enzyme binding, postsynaptic specialization, asymmetric synapses, axonogenesis, and axon development. After DBT treatment, there was significant hypomethylation of C8B gene in NSSI patients, and the difference of methylation level was significantly positively correlated with

self-injury behavior ($r = 0.757, p < 0.01$) and suicidal behavior ($r = 0.569, p = 0.03$). Therefore, the hypomethylation of C8B gene may be one of the mechanisms of DBT in treating NSSI behavior

Conclusion The methylation level of some genes was changed after DBT, indicating that DBT can change the composition of gene methylation before and after treatment, so as to achieve the therapeutic effect.

关键词: DNA methylation, dialectical behavior therapy, non-suicidal self-injury

The Effectiveness of Different Cognitive Behavioral Therapy Patterns on Anxiety and Depression in Patients with Chronic Obstructive Pulmonary Disease: A Review and Meta-analysis

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Objective Anxiety and depression are common psychiatric symptoms in patients with chronic obstructive pulmonary disease (COPD), and these mental health issues have adverse effects on the treatment outcome of COPD patients. Cognitive behavioral therapy (CBT) is an effective method to treat anxiety and depression, but its intervention duration, intervention method, and follow-up are still unclear

Methods We searched Web of Science, Embase, PubMed, and Cochrane Library from the establishment of the library to June 2024, collecting the randomized controlled trial for this topic. Meta-analysis was performed using Stata/MP 17.0 software

Results A total of 12 studies were included with a total of 1773 patients. Meta-analysis showed that CBT

can reduce depression and anxiety in COPD patients. Subgroup analysis showed that both longer interventions and shorter interventions were effective in relieving anxiety and depression symptoms. Both group intervention and individual intervention were effective. CBT had a long-term effect on anxiety and depression symptoms

Conclusion According to the result of meta-analysis, CBT can effectively reduce anxiety and depression in COPD patients. Based on the subgroup analysis, considering the clinical efficacy, economic affordability, and operability of the intervention, we recommend short-course, group CBT for clinical practice. However, a multicentre, pragmatic, randomised controlled trial (RCT) claimed that this trial has closed the door on using a CBA approach to alleviate symptoms of mild/moderate anxiety and depression in people with moderate/severe COPD. Therefore, further large-scale clinical studies are still needed to explore the effect of CBT on anxiety and depression in COPD patients

关键词: anxiety, depression, chronic obstructive pulmonary disease, cognitive behavioral therapy, meta-analysis

团体认知行为治疗对高强迫症状大学生认知灵活性的干预

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目的 探究团体认知行为治疗对高强迫症状大学生认知灵活性的影响。目前,国内关于强迫症的干预研究较多,但关于高强迫症状大学生认知灵活性的干预研究较少。认知灵活性是一个多方面的结合,包括认知思维上的僵化和不灵活,也包含行为和适应环境的困难。CBT也认为刻板、僵化的思维是导致异常情感或行为滋生的重要因素。为了提高高强迫症状大学生的认知灵活性,本研究以CBT理论为指导并结合团体辅导的相关理论,从强迫症状,认知灵活性受损及其特点来设计团体干预方案,来探讨团体认知行为治疗是否能提高高强迫症状大学生的认知灵活性。

方法 将入组的 58 名大学生随机分为实验组和对照组 (各 29 名), 对实验组进行团体认知行为治疗 (每周二次, 连续四周), 对照组处于常态。在干预前后对两组学生施测强迫量表 OCI-R、认知灵活性量表 CFI、接纳与行动问卷 AAQ-II 和认知融合问卷 CFQ, 评估干预后的效果。

结果 在强迫量表总分上, 测量时间和组别的交互作用显著, 实验组后测得分显著低于前测得分, 对照组在干预前后差异不显著。在认知灵活性量表总分上, 测量时间和组别的交互作用显著, 实验组后测得分显著高于前测得分, 对照组在干预前后差异不显著。在行动问卷第二版量表和认知融合问卷上, 测量时间和组别的交互作用显著, 实验组后测得分显著低于前测得分, 对照组在干预前后差异不显著。

结论 认知行为治疗对高强迫症状大学生认知灵活性有明显的提高, 而且显著降低了高强迫症状大学生的强迫症状。

关键词: 高强迫症状, 团体认知行为治疗, 认知灵活性

焦虑障碍研究协作组

The Chinese Version of The Perseverative Thinking Questionnaire (PTQ): Validation and Preliminary Clinical Application

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Objective To assess the psychometric performance of the Chinese version of the Perseverative Thinking Questionnaire (cPTQ) in patients with diagnosed mental disorders, and to examine perseverative thinking pattern within this population

Methods The cPTQ was administered to 285 outpatients at a general hospital. Three established factor models were tested through confirmatory factor analysis amongst the participants. The construct validity of the cPTQ was assessed by examining correlations with the Penn State Worry Questionnaire (PSWQ), the Ruminative Response Scale (RRS), the Patient Health Questionnaire Depression Scale-9 (PHQ-9), the 7-item Generalized Anxiety Disorder scale (GAD-7), and the Somatic Symptom Disorder-B Criteria Scale (SSD-12). Comparisons of cPTQ scores were conducted among patients with diverse psychiatric diagnoses

Results The cPTQ exhibited excellent internal consistency within this sample (Cronbach's $\alpha = 0.94$). The 2-factor model was consistent with the data, with all fit indices signifying satisfactory results ($\chi^2/df = 311.90/79$, the root mean square error of approximation = 0.089, the Comparative Fit Index = 0.935, the Tucker-Lewis Index = 0.925). Factor 1 and Factor 2 of cPTQ indicated fundamental features of repetitive negative thinking (RNT) and functional impairment instigated by RNT. Both GAD-7 and PHQ-9 demonstrated moderate correlations with measures of repetitive negative thinking. In comparison to patients with generalized anxiety disorder (GAD), major depressive disorder (MDD), or obsessive-compulsive disorder (OCD), patients with phobic disorder (PD) or somatic symptom disorder (SSD) exhibited lower cPTQ total score ($p < 0.05$)

Conclusion The Chinese version of the PTQ has

sufficient reliability and validity to warrant further application. Patients with GAD, MDD or OCD have more severe perseverative thinking than patients with PD or SSD.

关键词: repetitive negative thinking, transdiagnostic process, perseverative thinking questionnaire, validation, worry, rumination

Childhood Maltreatment and Mental Health: Causal Links To Depression, Anxiety, Self-Harm, Suicide Attempts, and PTSD

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Objective This study aims to elucidate the causal relationship between Childhood maltreatment (CM) and subsequent mental health outcomes, including Major Depressive Disorder (MDD), anxiety (ANX), Post Traumatic Stress Disorder (PTSD), suicide attempts, and self-harm. Utilizing Mendelian Randomization (MR) and genome-wide association studies (GWAS) data from individuals of European descent, this research applies a rigorous analytical methodology to large-scale datasets. This approach overcomes the confounding variables inherent in previous observational studies, providing robust evidence of causality. The goal is to inform targeted prevention and intervention strategies to mitigate the adverse psychological effects of CM

Methods Genetic data were obtained from publicly available GWAS on CM, MDD, ANX, PTSD, age of depression onset, frequency of depressive episodes, and self-harm and suicide attempts. Comprehensive MR analyses were conducted to investigate the causal impact of CM on the prevalence and symptomatology of ANX, MDD, and PTSD. Sensitivity analyses included Inverse Variance Weighted (IVW), MR Egger, Weighted Median (WM), and MR-PRESSO methodologies. False Discovery Rate (FDR) corrections were applied to IVW-derived p-values to account for multiple testing. Results were presented as Odds Ratios (ORs)

with Confidence Interval (CI) to ensure precise and detailed reporting of findings

Results Significant associations were identified between CM and the likelihood of developing MDD (IVW: OR=2.28, 95% CI=1.66-3.14, PFDR<0.001), ANX (IVW: OR=1.01, 95% CI=1.00-1.02, PFDR=0.032), and PTSD (IVW: OR=2.29, 95% CI=1.43-3.67, PFDR=0.001). Additionally, CM was linked to an increased incidence of self-harm (IVW: OR=1.06, 95% CI=1.04-1.08, PFDR<0.001), a higher frequency of depressive episodes (IVW: β =0.31, 95% CI=0.17-0.46, PFDR<0.001), and an earlier onset of depression (IVW: β =-0.17, 95% CI=-0.32 to -0.02, PFDR=0.033). However, no significant association was found between CM and suicide attempts (IVW: OR = 1.09, 95% CI = 0.81-1.45, PFDR = 0.573)

Conclusion This study provides robust evidence that CM is a significant causal factor for MDD, ANX, PTSD, and self-harming behaviors. It is also associated with a higher frequency of depressive episodes and an earlier age of depression onset. These findings corroborate existing evidence and highlight the critical need for early intervention and targeted prevention strategies to address the long-lasting psychological impacts of CM.

关键词: Childhood Maltreatment, Major Depressive Disorder, Anxiety, Post Traumatic Stress Disorder, Mendelian Randomization

ICU 患者家属创伤后应激障碍、焦虑和抑郁症状的网络分析

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目的 重症监护病房 (Intensive Care Unit, ICU) 患者的家属是一个容易被忽视的人群。家属 ICU 后综合征 (Post-Intensive Care Syndrome-Family, PICS-F) 是指 ICU 患者的家属在心理和生理上呈现的不良表现。研究发现, 创伤后应激障碍 (Posttraumatic Stress Disorder, PTSD)、焦虑和抑郁是家属 ICU 后综合征中最常见心理困扰。本文目的是调查这三种常见心理困扰的患病率, 研究 ICU 患者家属上述心

理困扰中的核心症状以及症状之间的相互关系。

方法 在 2023 年 2 月至 2023 年 10 月期间,对湖南省 579 名 ICU 患者家属进行了横断面调查。创伤后应激障碍检查表、广泛性焦虑障碍量表和患者健康问卷-9 三种自我报告问卷用于评估 PTSD、焦虑和抑郁症状。采用 SPSS 26.0 和 R 4.3.2 软件进行统计分析和网络分析,并使用 EBICglasso 模型估计网络模型。

结果 最终纳入研究 487 例。ICU 患者家属中 PTSD、焦虑和抑郁的患病率分别为 27.72%、43.73% 和 50.51%。网络分析结果表明,“认知和情绪的负性改变(Negative Alterations in Cognition and Mood, NACM)”、“警觉性和反应的变化(Alterations in Arousal and Reactivity, AAR)”、“难以放松”和“烦躁不安”是 PTSD、焦虑和抑郁症状网络中的核心症状。而 PTSD、焦虑和抑郁的症状网络通过“AAR”、“易怒”、“害怕”和“烦躁不安”这些桥梁症状相互连接。此外,在抑郁网络中,男性主要表现为“运动性紧张”和“疲劳”,女性则主要表现为“情绪低落”和“内疚感”。

结论 在三种心理困扰中,PTSD 症状表现最为突出。需要密切关注 NACM 和 AAR 症状以减少或预防 ICU 患者家属的心理困扰症状。

关键词: 家属重症监护后综合征;创伤后应激障碍;焦虑;抑郁

团体正念认知疗法对广泛性焦虑障碍的心理弹性的调节及疗效研究

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目的 本研究旨在探讨团体正念认知疗法(mindfulness-based cognitive therapy,MBCT)对广泛性焦虑障碍(generalized anxiety disorder,GAD)的心理弹性的调节及疗效,探索适用于中国 GAD 患者临床推广的团体心理治疗方案及研究改善 GAD 临床疗效的有效因素。

方法 采用随机对照组研究,将符合入组标准的 GAD 患者随机分为团体 MBCT+药物治疗组和心理健康教育+药物治疗组两组各 35 例,分别接受 8 周的心理干预,并在干预结束后进入 6 个月的随访

期。在基线(0 周),干预后(8 周)和随访期(32 周)等不同研究时点使用心理学量表来评估被试的心理弹性水平和临床症状。简式心理韧性量表(10-item connor-davidson resilience scale,CD-RISC-10)的得分为主要统计指标,而临床治愈率即汉密尔顿焦虑量表(hamilton anxiety scale,HAMA)得分 ≤ 7 及 7 项广泛性焦虑障碍量表(general anxiety disorder-7,GAD-7)的减分率及则为次要统计指标。数据的分析采用 SPSS 26 进行,所有的数据分析均采用双侧检验,并以 $p < 0.05$ 为具有统计学意义的标准。

结果 1.本研究在病房共入组 70 例 GAD 患者,在治疗过程中共脱落 10 人,团体 MBCT 组有效例数为 30 例,心理健康教育组有效例数 30 人,有效病例数 60 例。发现经过 8 周心理干预,心理韧性在 32 周的得分及其前后差值在两组间存在差异($F=19.208, P=0.000; t=2.470, P=0.016$),结果表明团体 MBCT+药物治疗组与心理健康教育+药物治疗组之间存在差异性。2.以临床治愈率作为指标划分临床疗效,发现两组在 32 周临床治愈率差异有统计学意义($F=9.017, P=0.003 < 0.05$),结果显示团体 MBCT+药物治疗组与心理健康教育+药物治疗组之间存在差异性。3.以 GAD 减分率为次要指标,发现团体 MBCT+药物治疗组与心理健康教育+药物治疗组两组间 GAD 减分率差异无统计学意义($P > 0.05$),结果提示两组在 GAD 减分率之间不存在明显差异性。4.发现心理韧性未提高组与提高组对临床治愈率差异有统计学意义($P=0.049 < 0.05$)。

结论 1.团体 MBCT 对心理弹性的调节优于心理健康教育;2.团体 MBCT 在 GAD 患者的疗效具有长期获益且优于心理健康教育;3.调节心理韧性可改善 GAD 的临床疗效。研究结果对探究 GAD 的临床疗效有效因素及团体心理治疗在 GAD 患者中的临床应用提供了新的方向。

关键词: 团体正念认知疗法,广泛性焦虑障碍,心理弹性

The Partially Positive Impact of Non-Suicidal Self-Injury on Suicide Ideation and Suicide Attempts

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Objective Given the varied results from prior studies on the impact of non-suicidal self-injury on suicide ideation and attempt risks and their complex interrelations, traditional analytical methods might not fully capture these interactions. Therefore, this study seeks to utilize sophisticated machine-learning models to more accurately discern and forecast the dynamic impacts of non-suicidal self-injury and other relevant factors on suicide ideation and attempts

Methods From April 12 to April 26, 2024, the psychological status of students at two middle schools in Fuyang City, Anhui Province, was assessed using stratified whole cluster sampling. A total of 2,023 students were systematically sampled class by class from these schools. To ensure participants' well-being, specialized personnel were available to assist with any discomfort during or after the test. Informed consent was obtained from all participants and their guardians. This study used Python 3.7 for statistical analysis, focusing on training and evaluating seven machine-learning models: Random Forest, Extra Trees, XGBoost, Logistic Regression, LightGBM, Decision Tree, and Gradient Boosting. The model with the highest accuracy in predicting suicide ideation and suicide attempts was selected. The optimal model was used to evaluate the significance of each variable, focusing on non-suicidal self-injury in predicting suicide ideation and suicide attempts. Ultimately, this model clarified how variations in non-suicidal self-injury affect suicide ideation and suicide attempt rates

Results Following the inclusion and exclusion criteria, the study collected 2,018 valid questionnaires, yielding a validity rate of 99.75%. Among these, 785 (38.9%) exhibited non-suicidal self-injury, 372 (18.4%) had attempted suicide, 582 (28.8%) showed suicide ideation, and 316 (15.7%) displayed both behaviors. The XGBoost model showed high accuracy in predicting suicide ideation and attempts, with an Area Under the Curve (AUC) of 0.89 for ideation and 0.92 for attempts. Feature importance analysis revealed that suicide attempts were the strongest predictor of suicide ideation, with an importance score of 0.73. In contrast, suicide

ideation was the most significant predictor of suicide attempts, scoring 0.86 in importance. An analysis of non-suicidal self-injury's impact on suicide ideation and attempts in adolescents showed that initially, increased frequency of non-suicidal self-injury raised the risks of both. However, these risks began to decline after surpassing a certain threshold, with a more pronounced decrease in suicide ideation than in attempts

Conclusion The study revealed that non-suicidal self-injury has a partially positive impact on suicide ideation and attempts. Adolescents, after multiple instances of non-suicidal self-injury, learn that it can temporarily counteract suicidal tendencies. They may then use non-suicidal self-injury as a substitute for suicide ideation and attempts. This self-soothing behavior can reduce the occurrence of more severe suicidal behaviors. However, while non-suicidal self-injury provides temporary relief, it is neither harmless nor a sustainable long-term solution for underlying psychological issues. Clinical psychologists and psychiatrists need to thoroughly understand the impact of non-suicidal self-injury on suicidal behaviors and combine immediate relief with long-term therapeutic strategies to address these complex issues effectively.

关键词: Non-suicidal self-injury, Suicide ideation, Suicide attempts, Machine-learning

虚拟现实暴露治疗对飞行恐惧的疗效研究

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目的 飞行恐惧症是一类常见的特定恐惧症，在临床治疗中多以暴露疗法为主要的心理治疗手段。但传统暴露疗法容易受时空局限，无法即时调整暴露场景；同时，由于治疗成本较高，难以实现大规模的推广和实施。虚拟现实暴露疗法（virtual reality exposure therapy, VRET）是近年来发展的一项新疗法，可利用虚拟现实技术增强暴露治疗的适用性和有效性。已有研究探索并证明了 VRET 用于治疗飞行恐惧症的有效性，但当前研究仍存在一些不足：首先，许多研究并未使用特定飞行座椅，与真实的飞行体

验差异较大,可能令疗效受限。其次,少有研究关注VR使用感受。最后,暂无公开发表的随机对照试验探索并验证VRET用于我国飞行恐惧人群的可行性和有效性。因此,本研究在前人研究基础上使用定制飞行座椅提供运动刺激,通过随机对照试验探索VR暴露干预用于我国飞行恐惧人群的可行性和有效性,并纳入使用者的沉浸感和眩晕感,尝试探索影响VR暴露干预缓解飞行恐惧疗效的因素。

方法 本研究招募64名具有显著飞行恐惧特征的成人,采用区组随机法将其随机分为VR暴露干预组和等待列表对照组。以飞行焦虑情境问卷(FAS)得分为主要指标,飞行焦虑模式问卷(FAM)得分、贝克焦虑量表(BAI)得分、焦虑状态特质量表(STAI)得分、主观痛苦感觉(SUDs)为次要指标,皮电数据、心率数据、沉浸感量表(IPQ)得分和模拟器眩晕感问卷(SSQ)得分为探索性指标,通过对比两组干预前后的焦虑情绪和客观生理指标是否存在显著性差异,探索VR暴露干预缓解飞行恐惧的疗效及VR使用感受。

结果 干预组干预后的FAS、飞行中焦虑以及飞行焦虑的认知模式水平显著低于对照组($F=3.359, p=0.015$; $F=3.395, p=0.014$; $F=3.128, p=0.021$),广泛性飞行焦虑、预期飞行焦虑、FAM、飞行焦虑的躯体模式水平、BAI和STAI-s没有发现显著差异($F=2.254, p=0.074$; $F=2.451, p=0.056$; $F=2.199, p=0.080$; $F=1.636, p=0.177$; $F=1.762, p=0.149$; $F=1.160, p=0.338$)。

结论 VR暴露干预可以有效缓解飞行恐惧,尤其是飞行中焦虑和与飞行危险有关的想法,对一般焦虑没有显著影响。VR的沉浸感整体较好,眩晕感较轻。VR暴露干预的初始飞行中焦虑得分越高的个体,VR暴露干预的效果越好,而初始飞行焦虑的认知模式得分、广泛性飞行焦虑得分和特质焦虑得分越高的个体,VR暴露干预的效果越差。因此,虚拟现实技术可以用于针对飞行恐惧症的暴露治疗,为飞行恐惧人群的治疗提供更多选择。

关键词:虚拟现实技术,暴露治疗,飞行恐惧

Identifying Psychopathological Phenotypes Based on Symptom Dimensions in Chinese Community-dwelling Adults: Dimensional and Network Perspectives

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Background Psychopathological conceptualizations are fundamental to scientific research and clinical practice. Traditional psychiatric nosology arbitrarily distinguishes between mental illness and health, impeding a precise understanding of the broad spectrum of psychopathology within the general population. Building on novel conceptualizations, this study employs symptom dimensions derived from dimensional and network approaches in person-centered statistical models to delineate psychopathological phenotypes

Methods In a large-scale sample of Chinese community adults ($N=4102$), comprehensive psychopathology and RDoC negative valence constructs were assessed. Advanced statistical methods within dimensional and network approaches were utilized to extract symptom dimensions and identify psychopathological phenotypes. The study also examined the incremental validity of the obtained phenotypes

Results Factor analysis and exploratory graph analysis extracted seven symptom dimensions from 23 specific symptoms. Subsequently, latent profile analysis identified four phenotypes: Substance use group, Moderate symptomatology unrelated to substance abuse group, Disengaged from symptomatology group, and Severe symptomatology group. The Severe symptomatology group exhibited the most pronounced differences in network characteristics compared to other phenotypes, displaying dense interconnections and the highest global network strength. Core symptoms within this phenotype included hostility in the aggressive dimension and delusions in the psychosis dimension. Furthermore, the psychopathological phenotypes provided unique predictive information for RDoC negative valence constructs beyond diagnostic status and purely dimensional approach

Conclusions This study identified four distinct psychopathological phenotypes in Chinese community-dwelling adults, characterized by overall intensity and

specific symptom dimensions (substance-related dimension). These findings contribute to the transdiagnostic conceptualization of mental health, advancing toward an empirically derived nosology and personalized medicine

关键词: transdiagnostic dimension approach, network approach, person-centered approach, symptom dimension, psychopathological phenotype

Early Intervention in Anxiety Disorder with Clinical High-risk Factors for Bipolar Disorder: A Randomized Controlled Trial

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Objective To investigate whether early intervention has a more positive outcome in anxiety disorder when associated with clinical high-risk factors for bipolar disorder

Methods 66 patient were enrolled in this study from July 2020 and March 2023 in Huzhou Third Municipal Hospital. They are randomly assigned to two groups: either receiving an antidepressant (Sertraline, n=32) or a combination therapy (Sertraline and Lithium, n=34). The main variables included alterations in HAMA, HAMD from the initial assessment to the final evaluation. We conducted a thorough combined Wald test to examine the differences in scale assessment based on intention-to-treat between the various treatment conditions across time

Results Significant differences in the change of HAMA scores were observed between the two groups during week 1, week 2, and week 4 ($p < 0.05$). However, after the treatment of 8 weeks and 12 weeks, there were no disparities ($p = .485$ and $p = 0.206$). There was no significant difference in the change over time in HAMD scores between the treatment groups ($p = 0.2$), except at week 12 ($p = 0.034$). Significant differences were not observed between the adverse effects reported in patients treated with sertraline alone (18%) and patients treated

with a combination treatment (21%)

Conclusion This current double-blind, case-controlled study assess effectiveness and tolerability of combined therapy versus monotherapy for anxiety disorder in this population. In light of the constraints associated with this initial study, the results imply that the combination of sertraline and lithium may provide a more favorable prognosis.

关键词: anxiety disorder; clinical high-risk factor

Associations between Depressive, Anxiety, and Stress Symptoms, and Burnout Among Psychiatric Nurses in China: A Network Analysis in The Context of The Early COVID-19 Pandemic

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Background The levels of depression, anxiety, and stress, as well as job burnout, among healthcare workers increased during the early stage of the COVID-19 pandemic. However, little is known about the connection between anxiety, stress, and burnout, especially among psychiatric nurses. Therefore, this study aimed to investigate the intrinsic relationship between depression, anxiety, stress, and burnout in Chinese psychiatric nurses

Method This Cross-sectional Study Was Conducted As Part of The 2021 National Hospital Performance Evaluation Survey (NHPES), Which Is A Nationally Representative Survey in China. The Survey Was Conducted Using WeChat From January To March 2021. We Used Whole-group Sampling To Investigate Socio-demographic Variables, As Well As The Levels of Depression, Anxiety, Stress, and Job Burnout Among Psychiatric Nurses in The Early Stages of The Covid-19 Pandemic. For The Descriptive and Network Analyses, We Utilized The R Programming Language in The RStudio Environment (version 4.3.3). The Gaussian Graphical Model (GGM) Was Used To Construct Network Models for The DASS-21 (Depression, Anxiety,

and Stress) and MBI-HSS (emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA)). Using Network Analysis, We Identified Central Symptoms, The Important Bridge Symptoms, and Central Symptom Combinations with Significant Correlations.

Results A total of ^{10,069}, psychiatric nurses completed the questionnaire at selected hospitals, resulting in a response rate of ^{91.6%}. The majority of the respondents were female (^{79.2%}). Overall, ^{27.6%} of participants were classified as having clinically significant depression, while ^{31.2%} had anxiety, ^{14.5%} had stress, and ^{23.8%} had burnout. Of all the participants in this study, ^{17.4%} (^{1,604}) reported experiencing moderate to extremely severe depression. Additionally, ^{23.3%} (^{2,268}) reported experiencing moderate to extremely severe anxiety, while ^{7.4%} (⁶⁸¹) reported experiencing moderate to extremely severe stress. The prevalence of moderate to extremely severe depression, anxiety, and stress among females was ^{8.7%} (⁶³⁶), ^{17.8%} (^{1,302}), and ^{7.2%} (⁵²⁵), respectively. Among those with clinically meaningful anxiety, ^{25.9%} (⁴⁵⁶) had participated in frontline work treating COVID-19, in the past year. The network analysis results showed that the stress of psychiatric nurses has the highest EI value of ^{0.920}, and the highest strength among all nodes. Additionally, the node depression has the highest scores for both closeness and betweenness, EE had the highest BEI of ^{0.340}, and the intergroup association between EE and depression was found to be the strongest. The independent groups Gaussian network comparison test showed no statistically significant difference in the gender network and the “whether to participate in frontline work treating COVID-19, patients” network (all, $p > 0.05$). However, the global strength invariance test for male and female networks showed a statistically significant difference (S: ^{0.113}, $p=0.020$), which indicates that the sum of the absolute values of the weights of all edges in the two networks is significantly different.

Conclusion The COVID-19 pandemic has significantly increased burnout and levels of depression, anxiety, and stress among psychiatric nurses. Although the study showed the highest prevalence of clinically significant anxiety, stress was identified as the central symptom, and depression was identified as an important

bridging node among psychiatric nurses. Therefore, interventions targeting central symptoms and bridging nodes are expected to improve the mental health of psychiatric nurses.

关键词: psychiatric nurses, depression, anxiety, stress, burnout, China

Multimodal neuroimaging reveals structure-function change in obsessive-compulsive disorder patients

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Objective Obsessive-compulsive disorder (OCD) is a neurological disorder characterized by recurrent and persistent obsessive-compulsive thoughts (obsessions) or/and compulsive behaviors (compulsions), with a high incidence and lifetime prevalence. The considerable heterogeneity of the disease has resulted in the identification of conflicting findings with regard to the pathophysiological mechanisms of OCD. Based on the large-scale brain impairment in OCD, we sought to investigate gray matter volume (GMV) and functional connectivity (FC) abnormalities due to structural deficits based on a multimodal neuroimaging approach and to explore the relationship between abnormal neurological indicators and clinical features

Methods We collected structural and resting-state functional magnetic resonance imaging (rs-fMRI) data from 56 patients with OCD and 41 healthy controls(HC). Voxel-based morphometry (VBM) analysis was used to find out the differences in GMV between OCD patients and HC without making any assumptions. Furthermore, we will calculate the whole brain FC of regions with abnormal GMV in two groups. Finally, we will investigate the association between abnormal neurological indicators and the Yale-Brown Obsessive Compulsive Scale (YBOCS) total score by correlation analysis

Results For the OCD group, the gray matter volume of right Temporal pole: superior temporal gyrus (Temporal_Pole_Sup_R) and Cuneus (Cuneus_R), left Calcarine (CAL_L), middle occipital gyrus (Occipital_Mid_L), and Temporal pole: middle temporal gyrus (Temporal_Pole_Mid_L) significantly decreased than the HC group, however, the right putamen showed significant increased gray matter volume. Through the functional connectivity analysis, we find the functional connectivity of the CAL_L with left putamen and inferior frontal gyrus, triangular part (Frontal_Inf_Tri_L) and right thalamus; the ceneus with left middle frontal gyrus (Frontal_Mid_L), inferior frontal gyrus, opercular part (Frontal_Inf_Oper_L), Frontal_Inf_Tri_L and right Cerebellum; the putamen with right vermis, the right anterior cingulate and paracingulate gyri (Cingulum_Ant_R) were significantly increase in the OCD patients. The gray matter volume ratios of left Calcarine and middle temporal gyrus were significantly correlated with total score of YBOCS ($R=-0.31$, $P=0.019$; $R=0.32$, $P=0.015$)

Conclusion The present multimodal imaging study indicates that structural brain deficits on GMV and FC are crucially involved in the pathophysiology of OCD. This research contributes to the understanding of the pathophysiological mechanism underlying OCD and could provide a new perspective on future diagnosis and treatment of OCD

关键词: Obsessive-compulsive disorder; magnetic resonance imaging; Functional magnetic resonance imaging; voxel-based morphometry; Gray matter volume

社交焦虑与冲动性对攻击行为的影响

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目的 社交焦虑涉及到对社交情境强烈和持续的恐惧,常表现出回避和抑制的倾向。以往研究大多关注社交焦虑的回避反应,忽视了社交焦虑个体做出攻击反应的可能性。然而,社交焦虑的异质性研究提示社交焦虑个体中存在一类特殊群体,此群

体具有高冲动性的特征,常表现出风险寻求、物质成瘾等外化问题。这挑战了人们对于社交焦虑的刻板印象,同时也引发了对社交焦虑与攻击行为之间关系的思考。本研究旨在探究社交焦虑和冲动性对攻击行为的影响。

方法 研究1筛选了160名大学生被试,采用2(冲动性:高vs低)×2(社交焦虑:高vs低)的实验设计,结合竞争反应时任务,探究四组被试在主动性攻击和反应性攻击上的差异。研究2筛选了163名大学生被试,采用2(冲动性:高vs低)×2(社交焦虑:高vs低)的实验设计,结合社会倾向任务,探究四组被试在不同反应上(攻击、合作和利己)的差异。

结果 研究1结果显示,高冲动高社交焦虑组的反应性攻击显著高于其他组别,而主动性攻击与其他组别没有显著差异,这体现了此类群体在攻击上具有反应性、防御性的特点。研究2结果显示,高冲动高社交焦虑组的攻击反应显著高于其他组别,而合作和利己反应与其他组别没有显著差异。这体现了此类群体在攻击行为上具有僵化、刻板性的特点。

结论 本研究探讨了社交焦虑和冲动性对攻击行为的影响。只有当高冲动性和高社交焦虑同时存在时,才会出现更多的攻击行为。其次,高冲动性和高社交焦虑被试在攻击行为上具有反应性和刻板性的特点。本研究的结果有利于增进对社交焦虑与攻击行为的全面理解,也为社交焦虑和攻击行为的预防和干预研究提供了视角。

关键词: 社交焦虑,冲动性,攻击行为

未治疗强迫障碍患者皮层下核团磁共振波谱成像和静息态功能连接的联合研究

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目的 皮质-纹状体-丘脑-皮质(CSTC)回路中谷氨酸和γ-氨基丁酸的代谢失衡与强迫障碍的发作密切相关,尾状核和丘脑是CSTC回路的关键枢纽。然而,很少有研究探讨强迫障碍患者皮层下核团神经生化代谢产物水平和静息态功能连接性的相关关系。

方法 本研究纳入 24 名强迫障碍患者和 17 名健康志愿者, 进行静息态功能磁共振成像和氢质子磁共振波谱成像数据采集。分别以双侧尾状核和丘脑作为感兴趣区域, 经 LCMoel 软件拟合出谷氨酸及 γ -氨基丁酸的相对浓度, 并进行基于种子点的全脑功能连接分析, 以探索皮层下核团中代谢物浓度的变化及其与静息态功能连接的相关性。

结果 强迫障碍患者左侧丘脑谷氨酸浓度显著高于对照组($t=2.235, p=0.032$), 右侧丘脑谷氨酸浓度与 γ -氨基丁酸浓度比值显著高于对照组 ($t=2.539, p=0.015$), 右侧丘脑 γ -氨基丁酸浓度显著低于对照组 ($t=-2.63, P=0.012$)。与对照组相比, 强迫障碍患者左侧尾状核与右侧距状裂周围皮层的静息态功能连接升高 ($t=4.52, pFDR<0.001$), 且升高的功能连接值与左侧尾状核谷氨酸浓度、右侧丘脑谷氨酸浓度以及右侧丘脑的谷氨酸与 γ -氨基丁酸浓度比值呈负相关($r=-0.565, p=0.004; r=-0.445, p=0.029; r=-0.500, p=0.013$)。中介分析显示, 左侧尾状核谷氨酸浓度在异常的功能连接和耶鲁布朗强迫量表评分关系中起到完全中介效应。

结论 强迫障碍患者尾状核和丘脑的谷氨酸和 γ -氨基丁酸代谢异常, 并且存在左侧尾状核与全脑的功能连接-谷氨酸代谢的耦合改变, 我们的研究结果为强迫障碍的发病机制提供了神经影像学证据。

关键词: 强迫障碍, 功能连接, 尾状核, 丘脑, 谷氨酸, γ -氨基丁酸

Association between Gut Microbiota and Perinatal Depression and Anxiety Among A Pregnancy Cohort in Hunan, China

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Objective Perinatal depression and anxiety pose significant risks to maternal health, potentially leading

to suicide. The gut microbiota may play a crucial role in perinatal depression and anxiety. However, the relationship between the alterations in gut microbiota and perinatal depression and anxiety remains unclear. This study aimed to investigate the dynamic changes of gut microbiota over various perinatal stages and their associations with perinatal depression and anxiety symptoms, especially suicide ideation

Methods 177 pregnant and 19 postpartum women were recruited, with 48 of them participating longitudinally. Maternal depression and anxiety symptoms were assessed using the Edinburgh Postnatal Depression Scale (EPDS), 9-item Patient Health Questionnaire (PHQ-9), and 7-item Generalized Anxiety Disorder Scale (GAD-7). Fecal samples collected during the perinatal period were analyzed using 16S rRNA gene sequencing

Results Significant changes in microbial diversity and multi-polyphyletic taxa were observed during pregnancy. The random forest regression model showed that gut microbial features were associated with depression and anxiety symptoms. Some genera were significantly associated with gestation age and perinatal depression and anxiety, such as Akkermansia, Bifidobacterium and Streptococcus. In addition, Erysipelotrichaceae_UCG003 and Eubacterium_hallii was positively associated with suicidal ideation. The glycine biosynthesis pathway acted as a mediator between Eubacterium_hallii and suicidal ideation ($ab=3.27, p<0.05$)

Conclusion The gut microbiota undergoes a programmed shift during pregnancy and may play an essential role in perinatal depression and anxiety. Our findings underscore the impact of certain bacterial genera and metabolic pathways on perinatal mental health, which may help to develop new diagnostic tools and targeted interventions to reduce perinatal mental disorders and improve outcomes for both mothers and infants.

关键词: Pregnancy, gut microbiota, depression, anxiety, suicidal ideation

Prevalence and Risk Factors for Antenatal

Anxiety in The First Trimester Among Chinese Pregnant Women

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Objective Antenatal anxiety (AA) is a common mental disorder during pregnancy and adversely affects the well-being of both pregnant women and their offspring. The prevalence of AA is exceptionally high in the first trimester, yet there is a lack of studies focusing exclusively on AA in the first trimester. This study aimed to investigate the prevalence and risk factors of AA among Chinese pregnant women during the first trimester

Methods We retrospectively retrieved and analyzed data on the mental health screening of perinatal women at Shenzhen Baoan Women's and Children's Hospital in China from Jan 1, 2020, to Jan 31, 2024. A total of 42,045 pregnant women with less than 14 weeks of gestation were assessed using the 7-item Generalized Anxiety Disorder Scale (GAD-7). A GAD-7 score ≥ 10 indicates AA. Univariable analyses and multivariable logistic regression were employed to identify risk factors for AA

Results Among the participants, 1,067 (2.5%) experienced AA in the first trimester. Factors associated with a higher risk of AA included being under 25 years old, temporary residence, below senior high school education, low or moderate economic status, primipara, unplanned pregnancy, smoking, alcohol use, lack of exercise, low or moderate living conditions, low or moderate marital satisfaction, and reluctance to discuss troubles with others

Conclusion AA manifests as a multifaceted phenomenon influenced by various sociodemographic, obstetrical, lifestyle, and psychosocial factors. Preventing

AA requires collaboration among hospitals, communities, and families.

关键词: Antenatal anxiety, Risk factors, Pregnant women, Obstetrical, Lifestyle

Neural Correlates During Social Processing in Major Depressive Disorder: A Coordinate-based Meta-analysis of Task-Related Functional Magnetic Resonance Imaging Studies

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Objective Social processing deficits are widely reported in patients with major depressive disorder (MDD) in recently researches. However, the underlying mechanisms related to social processes of MDD are remain unclear and neuroimaging results in this field are also inconsistent. The present study firstly conducted a coordinate-based meta-analysis of functional magnetic resonance imaging (fMRI) to explore the potential dysfunctions in the neural correlates during social processing task in MDD individuals

Methods According to the Research Domain Criteria (RDoC), we included 14 studies (330 MDD patients and 405 health controls), encompassing 14 experiments related to social process domain. FMRI studies primarily examined changes of corresponding brain regions in various social processing processes. These were analyzed using anisotropic effect-size signed differential mapping software (SDM)

Results The current study reported increased activation in patients with MDD compared with HCs in the Left precuneus, Left cerebellum, hemispheric lobule,

Right angular gyrus, Right superior frontal gyrus, dorsolateral, Corpus callosum, Left middle frontal gyrus and Left postcentral gyrus. Decreased activation was found in the Right fusiform gyrus, Left inferior occipital gyrus, Right postcentral gyrus, Left precentral gyrus and Corpus callosum. The meta-regression showed that average age of patients was positively associated with brain activity in the left precentral gyrus. In addition, the percentage of MDD female participants (available in all studies but one) was positively associated with brain activity in the left middle frontal gyrus and in the left postcentral gyrus

Conclusion Taken together, the findings suggest aberrant regional intrinsic brain activity particularly involved in default mode network, cognitive processes and perception processes when MDD patients perform Social processing task. These aberrations may underlie the pathogenesis of social process in MDD and have important implications for development of new treatments.

关键词: Major depressive disorder, social process, Task-related, Functional magnetic resonance imaging

Quantitative EEG in Patients with Anxiety Disorders: Comparison of Absolute and Relative Power Spectra and EEG Ratio

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Objective The objective of the current study was to explore the characteristics of EEG spectral power and slow/fast frequency power ratio in anxiety disorders. As QEEG characteristics are closely related to cognitive function and mental illness, we would like to explore the relationship between EEG power spectra, clinical symptoms and cognitive function. Additionally, we aimed to investigate the potential variations in quantitative EEG characteristics across different types of anxiety disorders

Methods The subjects included 65 patients with anxiety disorders and 46 age- and gender-matched healthy controls. Resting state EEG was recorded under eyes-open and eyes-closed conditions. Group differences in absolute power(μV^2), relative power(%), and EEG band ratio from four different frequency bands and five brain regions were compared by repeated-measures analysis of variance. A comparison of EEG spectral power between specific subtypes of anxiety disorders was conducted by the dependent-group t-test. In addition, Pearson's correlation analysis was applied to explore the correlation between resting-state EEG power and anxiety symptoms and cognitive function

Results The interaction between group and region showed a greater frontal dominance of theta, delta, and theta/beta ratio(TBR) in patients with anxiety disorders compared to healthy controls. In addition, patients with anxiety disorders exhibited a significant reduction of absolute beta band power in the temporal area. The reduction of beta spectral power between the two groups was only found in the low-beta frequency band. However, no significant difference was detected between two specific subtypes of anxiety disorders: panic disorder and generalized anxiety disorder. The correlation analysis in anxiety disorders showed that the temporal beta power was positively related to attention control assessed by the Attentional Control Scale(ACS)

Conclusion The results confirmed the attentional control theory that patients with anxiety disorders showed impaired cognitive processing, with a significant decrease in absolute temporal beta power. In addition, the decreased temporal beta power might be a common deficiency of EEG spectral power in patients with anxiety disorders

关键词: Resting-state EEG, Anxiety disorders, Beta power, Attention control

惊恐障碍患者大尺度脑网络功能连接模式研究

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目的 基于惊恐障碍 (Panic Disorder, PD) 恐惧网络模型 (Fear Network Model, FNM) 假说, 基于静息态功能磁共振 (rs-fMRI) 技术, 探索未治疗 PD 患者全脑大尺度网络间及网络内功能连接特征。

方法 应用 rs-fMRI 技术, 纳入未治疗 PD 患者 100 例和健康对照 71 例, 采集 fMRI 数据, 评估患者的症状严重程度, 利用 Yeo7 网络模板构建大尺度功能网络, 分析网络间及网络内的功能连接。应用两样本 t 检验比较两组被试上述指标的差异。最后, 采用相关分析探讨两组被试间存在差异的脑网络功能连接与 PD 患者临床症状的相关性。

结果 最终纳入分析的 98 例未治疗 PD 患者和与之一般资料匹配的 66 例健康对照。结果显示, 与健康对照组相比, PD 患者边缘网络与腹侧注意/突显网络, 默认网络与腹侧注意/突显网络之间的功能连接显著降低 (Family Wise Error, FWE 校正 $p < 0.05$); PD 患者组在腹侧注意/凸显网络内 (左右双侧内侧顶叶之间)、感觉运动网络内 (左右脑岛之间、右侧听觉区与右侧脑岛之间) 的功能连接显著升高 (FWE 校正 $p < 0.05$); 默认网络内功能连接存在广泛异常 (FWE 校正 $p < 0.05$)。偏相关分析显示, 在感觉运动网络内, 右侧听觉区与右侧脑岛之间的功能连接与病程呈负相关 ($r = -0.222, p = 0.049$), 双侧脑岛之间的功能连接惊恐障碍严重程度量表 (Panic Disorder Severity Scale, PDSS) 总分呈正相关 ($r = 0.027, p = 0.043$)。

结论 本研究结果提示感觉运动网络内脑区的功能连接可能是 PD 状态相关的生物学指标。PD 发病的 FNM 网络模型涉及多个大尺度功能网络的交互作用, 尤其是默认网络, 在网络协同的角度完善和发展了 FNM 假说。

关键词: 惊恐障碍, 静息态功能磁共振, 恐惧网络模型, 感觉运动网络, 默认网络, 脑岛

氢溴酸西酞普兰对惊恐障碍恐惧网络相关功能连接模式的影响

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目的 基于惊恐障碍 (Panic Disorder, PD) 恐惧网络模型 (Fear Network Model, FNM) 假说, 探索接受氢溴酸西酞普兰治疗 6 周后 PD 患者杏仁核及其亚区与全脑的功能连接及网络间、网络内功能连接能够改善。

方法 纳入 29 例首发未经治疗的惊恐障碍患者和 23 例健康对照, 选择氢溴酸西酞普兰 (剂量 20mg/片) 作为治疗药物, 治疗 6 周后评估患者的症状严重程度的变化, 并在治疗前后采集 fMRI 数据, 采用配对 t 检验比较 PD 患者服用氢溴酸西酞普兰治疗前后的杏仁核全脑功能连接、全脑 7 个网络的网络内、网络间的功能连接。

结果 最终纳入统计分析的共 23 例 PD 患者和与之一般资料匹配的 23 例健康对照, 患者治疗后较治疗前惊恐障碍严重程度量表 (PDSS) 总分显著减低 ($p < 0.05$)。PD 患者右侧浅表杏仁核与双侧中央后回, 左侧枕中回的正性功能连接在治疗后降低 (voxel 水平 $p < 0.005$, cluster FWE 校正 $p < 0.05$)。PD 组患者治疗后较治疗前相比, 额顶控制网络与默认网络、背侧注意网络与视觉网络之间的功能连接升高。PD 组患者治疗后较治疗前相比, 默认网络 3 个子网络之间的功能连接均显著降低 ($p < 0.05$, FDR 校正)。

结论 本研究发现, SSRIs 类药物对杏仁核全脑功能连接模式的影响既包括“自下而上”即通过与感觉运动相关的脑区功能连接的影响, 又存在“自上而下”即与额叶功能连接的影响而发挥改善症状的作用。同时, SSRIs 类抗抑郁药改善背侧注意网络和视觉网络、默认网络与执行控制网络之间的功能交互作用可能是急性期治疗改善症状的机制, 进一步补充和改善 PD 发病的 FNM 假说。

关键词: 惊恐障碍, 氢溴酸西酞普兰, 恐惧网络模型, 杏仁核, 感觉运动网络, 默认网络

惊恐障碍的脑网络拓扑属性及结构-功能连接耦合的改变

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目的 随着神经网络研究的深入, 探明惊恐障碍的脑网络拓扑属性的改变已成为研究热点。然而, 当前的研究结果呈现出一定的不一致性。此外, 惊恐障碍患者的结构和功能网络间的同步变化及其相互性尚未得到充分的探讨。本研究旨在进一步揭示惊恐障碍患者脑网络拓扑属性的特征, 并探讨其结构网络和功能网络之间的耦合程度, 以期为惊恐障碍的诊断、治疗及病理机制提供新的理论依据。

方法 本研究纳入了 30 名惊恐障碍患者和 31 名健康对照者, 通过采用扩散张量成像和静息态磁共振成像技术, 系统分析了惊恐障碍患者的结构网络和功能网络的拓扑属性, 并探讨了两者之间的耦合关系。同时, 我们还深入探究了这些脑网络特性与患者临床特征之间的潜在联系。

结果 与健康对照者相比, 惊恐障碍患者的结构网络拓扑属性并未呈现出显著差异。然而, 在功能网络层面, 惊恐障碍患者表现出了明显的变化, 具体表现为较高的局部效率、聚类系数以及归一化特征路径长度。特别值得注意的是, 惊恐障碍患者的结构连接与功能连接之间的耦合强度显著增强。进一步的相关性分析显示, 功能网络中较高的局部效率和聚类系数与患者的状态焦虑水平呈正相关, 而聚类系数的增加也与特质焦虑水平正相关。

结论 本研究为惊恐障碍患者的结构和功能脑网络拓扑属性及其耦合关系的改变提供了坚实的证据。这些发现不仅为理解惊恐障碍的神经病理机制提供了新的视角, 也为改善惊恐障碍的早期诊断和治疗策略提供了重要的理论支持和临床参考。

关键词: 惊恐障碍, 结构网络, 功能网络, 结构-功能连接耦合, 图论分析

The Impact of Childhood Trauma on Functional Connectivity in Patients with Social Anxiety Disorder

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Objective Social Anxiety Disorder (SAD) is a

common psychiatric disorder characterized by persistent anxiety and fear in social situations. Multiple etiological models of SAD pointed out that the development of social anxiety symptoms is attributed to a variety of environmental risk factors, among which childhood trauma is the most common psychological stress event. However, the specific influencing mechanism is still unclear. Therefore, this study aimed to explore whether childhood trauma experience can affect the brain functional connectivity of SAD patients, and further explore the brain functional connectivity (FC) directly related to childhood trauma

Methods This study adopted a parallel control study design. 30 SAD patients and 35 healthy subjects were enrolled in this study. High-resolution magnetic resonance imaging (MRI) was performed, and seed-based functional connectivity analysis (seed-based FC) was used to investigate the brain functional connectivity of SAD patients with or without childhood trauma history and healthy controls

Results The FC between medial prefrontal cortex-precuneus and anterior cingulate cortex-right frontal pole was significantly higher in SAD patients than in healthy subjects. SAD Patients with childhood trauma exhibited stronger function connection in the medial prefrontal cortex - the right angular gyrus than patients without childhood trauma; Strengthened function connection in the anterior cingulate - right frontal pole and the medial prefrontal cortex -precuneus were found in SAD patients with childhood trauma compared with healthy subjects

Conclusion The brain regions affected by childhood trauma in patients with SAD are mainly the brain regions related to self-referential function, which may promote SAD patients to form a more sensitive self-reference consciousness and always be hypersensitive for the situation related to self-reference. Enhanced functional connectivity between the medial prefrontal cortex-precuneus and the anterior cingulate cortex-frontal pole may be a common feature of SAD patients, while increased functional connectivity between the medial prefrontal cortex-right angular gyrus may be a more specific neural correlate in SAD patients who have experienced childhood trauma

关键词：Social Anxiety Disorder, Childhood Trauma, resting-state functional MRI, Self-referential process

Research Hotspots and Frontiers of Internet-based Cognitive Behavior Therapy: A Bibliometric Analysis

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Objective Cognitive Behavior Therapy (CBT) is considered an effective method for the treatment of mental illness. Internet-based Cognitive Behavior Therapy (ICBT) came into being in recent years, with the development of the Internet, the combination of the Internet and cognitive behavior therapy, and has gradually become an innovative and effective method for the treatment of mental illness. Several studies on the effects and mechanisms of ICBT have been widely reported. However, there is little literature on the scientometric analysis on the subject. Therefore, this paper clarifies the research status in this field through bibliometrics study and visual analysis, and provides valuable information for researchers in this field

Methods Literature was retrieved from the core database of Web of Science, and CiteSpace and Vosviewer were used to visually analyze the current research status of ICBT, as well as the development trend and general interesting points of this topic

Results A total of 971 papers were retrieved. From 2002 to 2022, publications have grown at an average annual rate of 20.33%. Behaviour Research and Therapy is the most competitive journal. The most influential authors, institutions and countries are Anderson, Gerhard (n=193), Karolinska Institutet (n=320) and SWEDEN (n=371) respectively. The analysis on the key words shows that current research in the field of ICBT

focuses on the effectiveness of treatment for different populations and disease types, as well as the evaluation on ICBT methods

Conclusion The study on ICBT is expected to remain a hot topic in the future. The application of ICBT in mental disorders and different age groups can become a further research direction that should be paid attention to in the next few years in order to better promote ICBT treatment.

关键词：ICBT; Bibliometric; CiteSpace; Visual analysis

Abnormal Intrinsic Brain Activity of The Sensory-motor Area As A Predictor of The Response To Selective Serotonin Reuptake Inhibitors in Treatment-naïve Obsessive-compulsive Disorder

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Objective Obsessive-compulsive disorder (OCD) is a highly prevalent and chronic neuropsychiatric disorder, which is often underdiagnosed and undertreated. Selective serotonin reuptake inhibitors (SSRI) are the first-line pharmacological agents for treating OCD. However, nearly half of patients exhibit insufficient responses to SSRIs, and there are no widely accepted predictors of treatment response. Therefore, this study aims to assess the relationship between intrinsic brain activity and SSRI response using the z-standardized fractional amplitude of low-frequency fluctuations (zfALFF)

Methods In the study, we extracted the fALFF to probe the brain activity patterns from resting-state functional magnetic resonance imaging (fMRI) data in 63

treatment-naïve OCD patients (classified into 31 responders and 32 nonresponders based on the percentage of improvement in symptoms) and 33 healthy controls (HC). Then, the fALFF values of large-scale networks and each brain region of the whole brain were compared among the three groups. The zfALFF values demonstrating significant intergroup differences were utilized to investigate characteristic neuroimaging changes in OCD and factors predicting SSRI response

Results In contrast to HCs, OCD patients exhibited significantly lower zfALFF in sensory-motor area (SMA), and the brain regions within this network, including the bilateral postcentral gyrus (PoCG.L and POCG.R) and the left paracentral lobule (PCL.L). Although the alteration of fALFF was not related to scores of the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) before treatment, larger zfALFF was found in SSRI responder group compared to the nonresponders, indicating that zfALFF could serve as a significant predictor of SSRI response

Conclusion The fALFF of the SMA may reflect the neuropathological mechanisms underlying OCD and the neuroimaging basis of SSRI treatment response, potentially serving as a brain-based guide for clinical practice.

关键词: Obsessive-compulsive disorder, Fractional amplitude of low-frequency fluctuations, Response to selective serotonin reuptake inhibitors, sensory-motor area

Genetic and Molecular Correlates of Cortical Thickness Alterations in Adults with Obsessive-Compulsive Disorder: A Transcription-Neuroimaging Association Analysis

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Objective Although numerous neuroimaging

studies have shown neural alterations in individuals with obsessive-compulsive disorder (OCD), a psychiatric disorder characterised by intrusive cognitions and repetitive behaviours, the molecular mechanisms linking brain structural changes and gene expression remain poorly understood

Methods By combining the Allen Human Brain Atlas dataset with neuroimaging data from the Meta-Analysis (ENIGMA) consortium and independent cohorts, this study performed partial least squares regression and enrichment analysis to probe the correlation between transcription and cortical thickness variation in adults with OCD

Results The cortical map of case-control differences in cortical thickness was spatially correlated with cortical expression of a weighted combination of genes enriched for neurobiologically relevant ontology terms, preferentially expressed across different cell types and cortical layers. These genes were specifically expressed in brain tissue, spanning nearly all cortical developmental stages. Protein-protein interaction analysis revealed that these genes coded a network of proteins encompassing several highly interactive hubs

Conclusion These findings bridge the gap between macroscopic modifications in brain structure in OCD and specific microscopic molecular events, thereby providing unique insights into genetic and molecular factors that may contribute to cortical abnormalities in OCD. These findings lay the groundwork for future work to further elucidate the etiology of OCD, develop molecular biomarkers, and identify therapeutic targets.

关键词: Allen Human Brain Atlas, Obsessive-compulsive disorder, cortical thickness, transcriptome, gene expression

Decreased MGlur5 Availability in The Amygdala Associated with Anxious Symptoms in Major Depressive Disorder: A Cross-Sectional [(18)F]FPEB PET Study

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Objective Preclinical studies indicate that decreased availability of metabotropic glutamate receptor 5 (mGluR5) is associated with anxiety-like behaviors in chronic stress model mice, and anxious symptoms are linked to poorer treatment outcomes in depressive disorder patients. This cross-sectional study aims to investigate the association between mGluR5 availability and anxious symptoms in patients with Major Depressive Disorder (MDD)

Methods We recruited 25 MDD patients and 21 healthy controls (HCs). Within the MDD group, patients were divided into those with and without anxious symptoms based on Hamilton Anxiety Rating Scale (HAMA) scores. The availability of mGluR5 was measured using [(18)F]FPPEB-PET scans. HAMA includes 14 items, each scored from 0 to 4, covering psychological anxiety (e.g., tension, fear, insomnia) and somatic anxiety (e.g., palpitations, sweating, dizziness). Voxel-based analysis and region-of-interest (ROI) analysis were performed to compare mGluR5 availability between groups and to examine its association with anxious symptoms

Results MDD patients exhibited significantly lower mGluR5 availability in the anterior cingulate cortex (ACC) and amygdala compared to HCs. MDD patients with anxious symptoms showed significantly reduced mGluR5 availability in the amygdala ($p=0.041$). Reduced mGluR5 availability in the amygdala was significantly associated with higher HAMA scores, indicating that lower mGluR5 availability is related to more severe anxious symptoms

Conclusion This study highlights the critical role of mGluR5 in the pathophysiology of anxious symptoms in MDD patients. The findings suggest that mGluR5 could serve as a potential target for interventions aimed at alleviating anxious symptoms in MDD, providing valuable insights for developing more effective treatments. Further research into the mechanisms and effects of mGluR5 may help optimize existing therapeutic strategies and promote the development of novel anxiolytic drugs.

关键词: Anxious symptoms; Major depressive disorder; mGluR5 availability; amygdala

Differential Effects of Oxytocin on Threat Memory Processes: A Double-Blind, Placebo-Controlled Study

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Objective This study aimed to investigate the differential effects of intranasal oxytocin (OT) on threat memory processes, specifically its ability to augment post-retrieval extinction (PRE) in healthy humans. Given the mixed results in the literature regarding the efficacy of PRE and the promising role of OT in facilitating threat extinction, we sought to determine whether OT could serve as an enhancer for PRE. Understanding the effects of OT on these processes has important implications for developing more effective treatments for anxiety disorders, where maladaptive threat memories play a crucial role.

Methods A double-blind, randomized, placebo-controlled, between-subject design was employed in this study. A total of 82 healthy human participants (49 women) completed a 3-day experiment. On day 1, all participants underwent differential threat conditioning, where high-arousal snake pictures served as the conditioned stimuli (CS), and an electric shock was the unconditioned stimulus (US). On day 2, participants were randomly assigned to one of three groups: the retrieval+OT group (received a single intranasal dose of OT, 24 IU, after memory retrieval), the no retrieval+OT group (received a single intranasal dose of OT 30 minutes before extinction without retrieval), and the retrieval+PLC group (received a placebo after memory retrieval). On day 3, all participants underwent re-extinction and reinstatement tests. Skin conductance response (SCR) was recorded throughout the experiment to measure physiological responses to the CS. Additionally, participants' anxiety levels and shock expectancy were assessed using self-report measures

Results Initial analyses showed no significant

differences between the three groups in terms of demographic information, baseline anxiety, or shock expectancy. During the re-extinction phase on day 3, the retrieval+OT group exhibited a significantly stronger increase in differential SCR compared to the no retrieval+OT and retrieval+PLC groups. This finding was contrary to our hypothesis that OT administration after memory retrieval would enhance PRE and reduce the return of threat memory. Repeated-measures ANOVA revealed a significant main effect of day, indicating lower anxiety and shock expectancy on day 3 compared to days 1 and 2. However, there was no significant interaction between group and day for these measures, suggesting that the differential SCR findings were not mirrored by subjective reports of anxiety and shock expectancy

Further, we explored the potential mechanisms underlying these effects. The unexpected increase in SCR in the retrieval+OT group suggests that OT might have amplified the prediction error during memory reactivation, thereby stabilizing the original threat memory rather than facilitating its extinction. This aligns with some previous studies suggesting that OT can enhance the salience of social and threat-related cues, potentially making the memory more resistant to subsequent interference.

Conclusion These findings add to the growing body of literature on the role of OT in human aversive memory processes and provide important insights into its potential clinical applications. Contrary to our initial hypothesis, intranasal OT administered after memory retrieval did not enhance PRE; instead, it appeared to increase the robustness of the threat memory, as evidenced by heightened SCR during re-extinction. This suggests that while OT has a role in modulating threat memory, its effects may not always align with the desired therapeutic outcomes. The results highlight the complexity of OT's effects on memory processes and suggest that its use in clinical settings should be carefully considered

Overall, our study suggests that OT may hold potential benefits for exposure-based therapies, where the goal is to reduce the response to threat cues through re-

peated exposure without the need for memory reactivation. However, its use in reconsolidation-based therapies, which rely on disrupting the reconsolidation of threat memories, may be less straightforward and could potentially be counterproductive. Future research should continue to explore the nuanced effects of OT on different phases of memory processing to understand its therapeutic potential and limitations better. Our findings underscore the importance of personalized approaches in applying OT in therapeutic settings, considering individual differences in response to OT and the specific nature of the therapeutic goals.

Understanding these mechanisms is crucial for the development of targeted interventions for anxiety disorders. Given that maladaptive threat memories are a core feature of many anxiety disorders, the ability to effectively modify these memories could significantly improve treatment outcomes. The current study highlights the potential for OT to enhance exposure-based treatments, suggesting that it may be a valuable tool in the therapeutic arsenal for anxiety disorders. However, caution is warranted in its application to reconsolidation-based therapies, underscoring the need for further research to optimize its use.

关键词: threat memory, anxiety disorders, oxytocin, RCT

童年创伤是导致抑郁症患者情绪冲突处理能力受损的重要因素：一项 ERP 研究

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目的 童年创伤已被证明是影响抑郁症发生发展的重要因素，其可能导致个体的情绪调节困难，使得个体在面临情绪冲突刺激时，更易投入到负面情绪中，并可能进一步导致了抑郁症的发生。能够正确识别和处理情绪冲突，是个体情绪调节能力的体现，本研究旨在通过电生理数据，探索童年创伤与情绪冲突处理能力的关系，以及这种影响是否与疾病严重程度存在关联。

方法 本研究共纳入 155 例抑郁症 (MDD) 患

者和 58 例健康对照 (HC), 使用 HAMD-24 量表和 HAMA 量表对患者的疾病状态进行评估。使用脸-词 stroop 实验范式采集受试者的脑电数据, 刺激图片由表达快乐、悲伤、恐惧的三种情绪面孔叠加“快乐”、“悲伤”、“恐惧”的红色字体汉字形成情绪冲突刺激图片, 要求受试者忽略汉字, 判断情绪面孔的性质。分析过程中依据电极位置, 将前额叶区域分为左侧前额叶、额叶中间区和右侧前额叶进行脑区内的平均处理, 提取出在刺激呈现后 350ms-550ms 的 N450 成分, 该 ERP 成分被认为是反映冲突检测和处理功能的重要成分, 随后计算该成分的特征, 通过统计分析, 探索童年创伤对 N450 功能的影响, 以及与疾病严重程度的关系。

结果 对三个额叶区域的 ERP 特征进行组别 (MDD 和 HC) * 面孔类型 (快乐、悲伤、恐惧) * 分型 (有无童年创伤) 的三因素方差分析, 结果发现, 额叶中间区 N450 振幅 ($F=9.80, p=0.002$)、左侧额叶区 N450 振幅 ($F=4.554, P=0.033$) 和潜伏期 ($F=7.04, p=0.008$) 在分型条件主效应均显著, 且有童年创伤均大于无童年创伤; 此外, 左侧额叶区域的潜伏期组别主效应显著, $HC > MDD$; 进一步对 MDD 和 HC 分组进行有无童年创伤的比较: MDD 组: 有无童年创伤在左侧额叶振幅 ($F=4.33, p=0.038$) 和额叶中间区振幅 ($F=13.26, p<0.001$) 主效应均显著, 有童年创伤大于无童年创伤; HC 组: 有无童年创伤在额叶中间区振幅 ($F=4.87, p=0.029$)、左侧额叶潜伏期 ($F=6.99, p=0.009$) 主效应显著: 有童年创伤大于无童年创伤。进一步分析中发现, 在 MDD 患者中, 无童年创伤组额叶中间区振幅与 HAMD-24 ($r=0.524, p=0.003$) 及 HAMA ($r=0.332, p=0.048$) 均存在显著的正相关关系。

结论 童年创伤对情绪冲突处理能力存在影响, 且这种影响不仅存在于 MDD 人群, 在 HC 群体中同样存在。此外, N450 功能仅与无童年创伤的 MDD 患者疾病严重程度相关, 这可能是因为无童年创伤组 N450 受损严重, 失去了与情绪冲突处理功能的紧密联系, 进而失去了与疾病严重程度的关系。

关键词: 抑郁症, 情绪冲突处理, ERP, 脑电生理, 童年创伤

经颅强交流电刺激治疗对抑郁症患者焦虑症状干预效果: 一项随机对照研究

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目的 抑郁症是一种常见的心境障碍, 伴焦虑症状抑郁症是常见的抑郁症亚型, 该类患者病情较严重、治疗起效所需时间更长, 临床治疗难度较大。本研究探讨经颅强交流电刺激 (治疗参数: 15mA、77.5Hz) 治疗对抑郁症患者焦虑症状干预效果, 探究该治疗能否快速改善抑郁症患者的焦虑症状。

方法 患者为单中心招募的, 汉密尔顿焦虑量表 (14-item Hamilton rating scale for anxiety, HAMA14) 需要 ≥ 14 分、符合基于 DSM-V 的结构化临床访谈 (Structured clinical interview for DSM-V, SCID) 的抑郁症患者, 并采用随机双盲的研究设计方法随机分为真刺激组和伪刺激组。在不调整药物的基础上, 进行为期 10 天经颅交流电刺激, 每天治疗 2 次, 每次刺激时长 40 分钟。以 HAMA14 作为主要疗效指标。数据采用重复测量方差分析患者在治疗 5 天和 10 天的焦虑严重程度。

结果 共有 35 例有焦虑症状的抑郁症患者纳入此项研究, 真刺激组 19 例, 伪刺激组 16 例。在治疗 5 天后, 真刺激组较伪刺激组 HAMA14 评分均有下降, 在 HAMA-精神焦虑评分显示显著差异 ($p=0.023$), HAMA-躯体焦虑评分无统计学显著差异 ($p=0.904$)。在治疗 10 天后, 真刺激组和伪刺激组 HAMA14 平均分数均下降至 14 分以下, 两组之间 HAMA14 评分无统计学差异 ($p=0.632$), HAMA-精神焦虑评分未显示出统计学差异 ($p=0.575$)。

结论 经颅交流电刺激能在短期 (5 天) 改善患者的精神焦虑, 但长期疗效需要大样本研究来探索。

关键词: 交流电; 焦虑症状; 随机对照试验; 干预

Prevalence of Obsessive-compulsive Disorder and Related Healthcare Utilization in China: A Cross-sectional Epidemiological Survey

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Objective Obsessive-compulsive disorder (OCD) has been classified as one of the ten most disabling conditions by the World Health Organization. However, there has been no available nationally representative epidemiological data demonstrating the prevalence of OCD and the healthcare utilization of patients with OCD in China. Therefore, the present study, which is a part of the China Mental Health Survey (CMHS), aims to investigate the prevalence, comorbidity, role impairment, and healthcare utilization in people with OCD in China

Methods The present study used a multi-stage clustered area probability sample to obtain representative population-based data on mental disorders in adults from 157 nationwide disease surveillance points in 31 provinces across China. Trained interviewers conducted face-to-face interviews with respondents to collect information about the presence of obsessions, compulsions, OCD, and other mental disorders based on the Composite International Diagnostic Interview 3.0 according to the DSM-IV criteria. The Sheehan Disability Scale was used to evaluate role impairments associated with 12-month obsessions and compulsions. Respondents with OCD reported whether and when they received any healthcare services for their obsessions or compulsions. Quality control procedures encompassed computerized logic checks, sequential recording verification, phone-call verification, and re-interviews conducted by psychiatrists. Data weighting was performed to account for differential selection probabilities and response rates and to post-stratify the sample to ensure its representativeness of the population in China

Results A total of 28,140 respondents [12,537 (44.6%) males and 15,603 (55.4%) females] completed the OCD module of the Composite International Diagnostic Interview 3.0. The lifetime prevalence of OCD was higher in people who were separated, widowed, or

divorced compared with those in marriage or cohabitation (OR: 1.79, 95% CI: 1.13-2.84). The lifetime and 12-month prevalences of OCD did not differ significantly across age, gender, work status, education level, place of residence, and region. Two-thirds of the respondents with lifetime OCD had comorbid mental disorders, with OCD typically emerging later than the comorbid mental disorders. The most common comorbidity of OCD were mood disorders (39.7%, OR: 9.6, 95% CI: 7.4-12.5) and anxiety disorders (32.8%, OR: 13.3, 95% CI: 10.1-17.5). Overall, 588 (weighted 58.2%) respondents with obsessions or compulsions experienced role impairment in any domains of the Sheehan Disability Scale. The "other" obsessive and compulsive symptoms, which were not specified by respondents, were associated with the most severe role impairment. Only 46 (6.7%) respondents with lifetime OCD and 28 (6.5%) with 12-month OCD received any healthcare services for their conditions

Conclusion In China, the weighted lifetime and 12-month prevalences of OCD were 2.4% and 1.6%, respectively. Most patients with OCD reported comorbid mental disorders and role impairment due to OCD. National programs to expand health service coverage and popularize the knowledge of OCD are significant for addressing the demands for healthcare services in China.

关键词: Obsessive-compulsive disorder, Epidemiology, Comorbidity, Healthcare utilization

探索抑郁症患者疲乏、动力下降与认知功能的症状网络关系: 基于交叉滞后面板分析

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目的 了解抑郁症患者病程进展中症状的动态变化对制定有效的预防和干预措施至关重要。疲乏和动力下降是抑郁症患者中常见且具有显著影响的症状, 它们对主观和客观认知功能有重要影响。本研究通过交叉滞后面板网络分析方法, 探讨疲乏、动力下降与主客观认知功能在抑郁症状网络中的关系, 旨在揭示这些症状如何相互作用并影响抑郁症

的整体症状结构。

方法 本研究样本包括 172 名抑郁症患者, 在两个时间点 (基线和 8 周后) 进行评估。使用的指标包括主观认知 (如注意力/集中、前瞻记忆、回顾记忆、计划/组织)、客观认知 (如执行功能、注意力、处理速度、记忆) 以及抑郁症状 (如工作和活动、一般躯体症状)。通过交叉滞后面板网络分析方法, 构建时间点 1 到时间点 2 的症状网络模型, 分析症状间的动态关系。

结果 结果显示, 疲乏 (SS) 是对其他症状群输出影响最关键的节点, 尤其是对主观认知功能中的注意力 (ATS) 影响显著。SS 能够直接或通过影响前瞻性记忆 (PM) 来影响 ATS。动力下降 (WA) 显著影响主观认知功能中的计划性和前瞻性记忆。执行功能 (EF) 显著影响前瞻性记忆 (PM), 执行功能越强, 前瞻性记忆能力越强。记忆力 (M) 越好, 主观计划性 (PL) 越好。客观注意力 (AT) 越强, 主观注意力 (ATS) 越强。处理速度 (PS) 越强, 工作动力 (WA) 增强。在纵向交叉滞后面板网络分析中, 显著正向连边为: SS 到 ATS; SS 到 PM; SS 到 PL, 显著负向连边为 WA 到 PL; WA 到 PM; EF 到 PM。这些结果表明, 随着抑郁症患者病程的进展, 疲乏在症状网络中的影响力最强, 尤其是在主观认知功能中起到重要作用。动力下降则主要影响主观认知功能的计划性和前瞻性记忆。执行功能、记忆力、注意力和处理速度在主客观认知功能中相互关联, 并对抑郁症状的改善具有重要意义。

结论 本研究通过纵向主客观认知功能症状群与抑郁症状群的网络分析, 揭示了疲乏和动力下降在症状网络中的关键作用。疲乏是影响其他症状群的主要因素, 尤其在主观认知功能中的注意力方面起到重要作用。动力下降则主要影响主观认知功能的计划性和前瞻性记忆。执行功能、记忆力、注意力和处理速度在主客观认知功能中相互关联, 并对抑郁症状的改善具有重要意义。这些发现为 MDD 的诊断和治疗提供了新的视角, 未来研究应进一步探讨这些症状的潜在机制及其干预策略。

关键词: 抑郁症, 认知功能, 交叉滞后面板分析, 执行功能, 疲乏, 动力下降

广泛性焦虑障碍患者中犬尿氨酸通路改变的特征研究

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目的 探究犬尿氨酸通路 (kynurenine pathway, KP) 在广泛性焦虑障碍 (generalized anxiety disorder, GAD) 患者中的横断面改变及 2 月随访期间的纵向变化, 并探究其与焦虑症状的相关关系以及对 GAD 的诊断及 2 月临床预后的预测效能, 为探究 GAD 的病理机制、KP 能否作为 GAD 潜在的生物标志物及干预靶点等科学问题提供初步的临床依据。

方法 纳入 57 名 GAD 患者及 53 名健康被试, 对 20 名患者进行了为期 2 月的随访。采集了被试的人口学资料, 并对焦虑、抑郁症状进行评估, 采集外周血液样本, 并使用液相色谱串联质谱 (liquid chromatography-tandem mass spectrometry, LC-MS/MS) 检测被试血浆样本中 KP 代谢物的浓度。使用 t 检验、U 检验、协方差分析探究 GAD 患者与健康对照 KP 代谢物水平的差异; 通过相关分析探究 KP 改变与焦虑症状的横断面及纵向相关关系; 通过逻辑回归探究 KP 代谢物对 GAD 临床结局的预测效能以及 KP 代谢物对 GAD 的诊断效能。

结果 (1) GAD 患者较健康被试存在犬尿氨酸通路氧化分支代谢产物 3-羟基犬尿氨酸 (3-hydroxykynurenine, 3-HK; $t = 2.403, P = 0.018$)、吡啶-2-羧酸 (picolinic acid, PA; $t = 3.454, P < 0.001$) 及喹啉酸 (quinolinic acid, QA; $t = 2.697, P = 0.008$) 的升高; (2) GAD 患者的 PA 与 QA 升高可持续至 2 月其焦虑症状缓解后, 焦虑症状缓解组与未缓解组中 PA 与 QA 的水平无显著差异; (3) 缓解组与未缓解组基线至 2 月的重复测量方差分析中, 4 种代谢物 3-HK、XA、QA、PA 的时间*分组交互效应均没有显著差异; (4) 总体被试 (GAD 患者+健康被试) 中 PA 经多重比较校正后与汉密尔顿焦虑评估量表 (Hamilton anxiety rating scale, HAMA) 评分及 HAMA 精神焦虑因子显著相关, 而 GAD 组中 KP 代谢物水平与焦虑症状评分的相关性不显著; (5) 基线 KP 代谢物水平对 GAD 患者焦虑症状变化及临床预后 ($H = 8.160, P = 0.418$) 的预测效能较低; (6) KP 代谢物水平对 GAD 具有一定的预测效能 (准确率 = 70.9%, $AUC = 0.758$)。

结论 GAD 患者存在外周 PA 及 QA 水平升高, 该改变持续存在于不同疾病状态且独立于焦虑症状的变化, 对 GAD 具有一定的诊断效能。

关键词: 广泛性焦虑障碍, 焦虑症状, 犬尿氨酸, 色氨酸分解代谢产物

Unraveling The Relationship between Neurotransmitter Impairment and Treatment Response in Obsessive-Compulsive Disorder

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Objective Obsessive-Compulsive Disorder (OCD) is a chronic and treatment-refractory psychiatric disorder characterized by compulsive thoughts and behaviors. The complex etiology and pathology of OCD have been linked to structural abnormalities in gray matter through extensive neuroimaging studies. Insight into the morphological alterations and their link to neurotransmitter impairment could pave the way for developing customized therapeutic strategies

Methods This research utilized the JuSpace toolbox, enabling cross-modal correlations between Magnetic Resonance Imaging (MRI)-based measurements and nuclear imaging-derived estimates across various neurotransmitter systems, including dopaminergic, adrenergic, noradrenergic, GABAergic, and glutamatergic. The study cohort comprised 45 treatment-responsive OCD patients, 33 non-responders, and 38 age-matched healthy controls (HCs). We investigated the association between OCD-related gray matter volume (GMV) changes and specific neurotransmitter systems, further analyzing the link between GMV-neurotransmitter alterations and treatment response

Results Voxel-based analysis revealed that brain changes in OCD patients significantly correlated with the spatial distribution patterns of serotonin, GABA, and glutamate receptors ($p < 0.05$, corrected for false discovery rate). Furthermore, a negative correlation was observed between treatment response with the co-localization strength of GMV with 5HT-1b, GABAa, and

mGluR5 receptors

Conclusion This initial study indicates that neurotransmitter-specific impairment linked to regional gray matter atrophy in OCD may uncover novel pathophysiological insights, potentially guiding the customization of therapeutic approaches for OCD.

关键词: Gray matter volume, Obsessive-compulsive disorder, Neurotransmitter

童年创伤对抑郁症患者脑网络功能的影响

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目的 童年创伤已被证明是影响抑郁症(MDD)发生发展的重要因素,深入理解童年创伤对MDD患者所造成的脑功能改变具有重要的意义。脑电生理信号作为大脑活动的直接反映,长期以来受到了广泛的关注,近些年来发展起来的溯源技术能够更好的帮助我们理解脑区电生理所发生的改变及其与疾病之间的关系,本研究旨在探索MDD患者溯源后的脑电生理指标与童年创伤之间的关系,深入理解童年创伤的病理机制。

方法 本研究共纳入155例抑郁症(MDD)患者,使用CTQ量表对患者进行评估分为有童年创伤组(109例)和无童年创伤组(46例),并采集静息态闭眼的脑电数据。使用mne软件自带的标准头模型与源模型进行源重建,把每个脑区的源信号进行平均作为该脑区的代表信号,然后使用包络相关算法(Envelope Correlated, EC)进行功能连接网络建立。进一步使用NBS算法进行网络分析。

结果 使用NBS分别对全频段和五个子频段的功能连接矩阵进行有无童年创伤的组间比较,在全频段上未达到显著性差异 $p<0.05$ 。子频段中 α 频段:表现为有童年创伤存在功能连接降低的一个子网络,结果显示主要集中在左半球以及左右半球之间的连接,脑区主要集中在颞上回后部,梭状回,颞中回等,在 β 频段:发现有童年创伤组存在一个功能连接增加的子网络,主要集中在大脑左右半球的连接和右半球的连接,主要涉及到的有颞叶、额叶、枕叶以及脑岛等,在 θ 频段:有童年创伤组存在一个功能连接增加的子网络,主要集中在颞上回后部,

楔叶,枕叶等脑区。

结论 童年创伤对MDD患者的影响主要集中在 α 频段、 β 频段和 θ 频段,且在不同的频段表现为各自独立的特点,在脑区层面上我们发现, α 频段和 β 频段分别在左半球和右半球存在主导地位,而 θ 频段则主要表现在执行控制相关脑区的异常,以上结果提示我们童年创伤对MDD患者的影响十分广泛,基于现有对脑电生理的理解,童年创伤对执行控制功能的影响值得关注和进一步探讨。

关键词: 脑电,童年创伤,抑郁症,脑网络

The Efficacy of Mindfulness-based Cognitive Therapy for The Anxiety and Depression Symptoms in Subthreshold Depressive College Students, A Randomized Controlled Trial

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Objective Subthreshold depression (SD), usually a preclinical state in which an individual reports clinically relevant depressive symptoms (i.e., depressed mood or loss of interest) but fails to meet the diagnostic criteria for major depression, is a risk factor for the onset of depression and causes distress for 23% of Chinese college students. Mindfulness-based cognitive therapy (MBCT), a psychotherapeutic approach that combines mindfulness techniques with cognitive behavioral therapy, has been found to reduce depressive symptoms in adolescents with depressive tendencies. This study investigated the efficacy of MBCT on depressed mood in college students with SD to provide a basis for depression prevention in college students

Methods Sixty-seven SD patients were randomly assigned to either the MBCT group (n=34) or the health education group (HE, n=33) for an 8-week treatment. Patients' depressive symptoms and anxiety symptoms were assessed by the 9-item Patient Health Questionnaire -9 (PHQ-9) and Generalized Anxiety Disorder -7 (GAD-7) respectively, the Five Facet Mindfulness

Questionnaire (FFMQ) was used to assess patients' mindfulness skills, and the Psychotherapy Side Effects Scale (PSES) was used to measure the side-effects of the intervention. According to the principle of allocation according to the completion of the programme, independent t-tests were used to compare the changes in the scores of anxiety and depressive symptoms and the mindfulness skills before and after the treatment in the two groups

Results At baseline, there were no significant differences in demographic data, PHQ-9 scores ($P=0.675$), GAD-7 scores ($P=0.773$), and FFMQ scores between the MBCT and HE groups ($P=0.743$). At the end of the intervention at week 8, 31 people in each of the MBCT and HE groups completed the intervention and follow-up, with 3 people in the intervention group perceiving side effects, the main side effect being the length of the exercise and thus anxiety. The change in PHQ-9 scores before and after the intervention was higher in the MBCT group than in the HE group ($P=0.027$), and the change in GAD-7 scores was also higher ($P=0.045$), with 58.1% of the patients in the MBCT group moving to non-threshold compared to 25.8% in the HE group, which was a significant difference between the two groups ($P=0.01$). Before and after the intervention compared to the HE group, the main mindfulness skills increased in the MBCT group were: observing ($P=0.001$), describing ($P=0.016$), and there was no significant between-group difference in the remaining three mindfulness skills

Conclusion MBCT can effectively enhance the two mindfulness skills of observation and description and effectively reduce depression and anxiety among college students, and the intervention is safe and effective.

关键词: mindfulness-based cognitive therapy, anxiety, subthreshold depression, college students

光照治疗焦虑障碍的系统评价

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目的 焦虑障碍是临床常见的精神障碍, 研究显示焦虑障碍患者的症状与抑郁障碍存在重叠和共病现象。国外有研究表明光照治疗对季节性抑郁障碍和非季节性抑郁障碍都有一定疗效, 也是临床很有应用前景的治疗心境障碍的物理治疗方法。但尚未见光照治疗焦虑障碍的系统评价或 Meta 分析。为探讨光照治疗焦虑障碍的疗效和安全性, 我们用 Meta 分析方法对已经发表的相关文献进行系统综述, 定量描述光照治疗在焦虑障碍患者中的应用价值。

方法 制定原始文献的纳入标准、排除标准及检索策略, 检索 PubMed、EMbase、Web of knowledge、Cochrane Library、PsycINFO、中国期刊全文数据库、万方数据库、维普中文科技期刊数据库及中国生物医学文献光盘数据库等。应用 STROBE 即加强观察性流行病学研究报告的质量(strengthening the reporting of observational studies in epidemiology, STROBE)为参照评价标准评价文献质量。采用 RevMan 和 STATA 软件对满足纳入标准的研究进行 Meta 分析。

结果 共检索到 29 篇文献, 符合纳入标准的 4 项研究(其中一篇为 RCT)进入 Meta 分析。异质性检验结果, 光照治疗焦虑障碍[Heterogeneity: $Tau^2 = 0.695$; $Chi^2 = 21.42$, $df = 3$ ($P < 0.0001$); $I^2 = 86\%$]的各项研究之间存在异质性。故采用随机效应模型进行定量合并分析, 结果显示光照治疗对于焦虑障碍[总效应 $Z=2.12$, 合并 effect size=0.980, 95%CI(0.074, 1.887), $P=0.034$]。发表性偏倚检验提示无发表性偏倚 (Egger's test, $P=0.315$; Begg's test, $P=0.340$), 失效安全数为 7。各研究均缺乏系统的安全性报道。

结论 综合现有的初步研究, 尽管各研究对不良反应的报道缺乏系统性, 结果显示光照治疗对于焦虑障碍有效。但光照治疗焦虑障碍的相关研究较少, 缺乏大样本的随机对照研究, 故 Meta 分析的结果是否适用于临床环境尚需要更多的证据。

关键词: 焦虑障碍, 光照治疗, 物理治疗, 疗效, Meta 分析

Different Alterations in The Kynurenine Pathway in Generalized Anxiety Disorder, Major Depressive Disorder, and Bipolar Disorder

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Objective To investigate the differential cross-sectional changes in the kynurenine pathway (KP) among patients with generalized anxiety disorder (GAD), major depressive disorder (MDD), and bipolar disorder (BD), and to explore the diagnostic efficacy of KP metabolites in distinguishing these common psychiatric disorders

Methods The study included 57 GAD patients, 180 MDD patients, and 40 BD patients. Demographic data were collected, and anxiety, depression, and manic symptoms were assessed. Peripheral blood samples were obtained, and plasma concentrations of KP metabolites were measured using liquid chromatography-tandem mass spectrometry (LC-MS/MS). Analysis of variance was employed to examine inter-group differences in KP metabolite levels, while logistic regression was used to evaluate the diagnostic efficacy of KP metabolites for GAD, MDD, and BD

Results (1) GAD patients exhibited significantly higher levels of oxidative branch metabolites, quinolinic acid (QA) and picolinic acid (PA), compared to MDD and BD patients. (2) No significant differences in peripheral kynurenine levels were observed between MDD and BD patients. (3) A diagnostic model incorporating 10 KP metabolites demonstrated good efficacy in distinguishing GAD patients from the entire cohort (AUC = 0.84), whereas the model's performance in differentiating between MDD and BD was suboptimal (AUC = 0.66)

Conclusion GAD patients display KP alterations characterized by elevated levels of oxidative branch metabolites QA and PA. Peripheral KP metabolite levels show moderate predictive efficacy in distinguishing GAD from MDD or BD. However, the model's performance in differentiating between MDD and BD patients is limited.

关键词: generalized anxiety disorder, major depressive disorder, bipolar disorder, kynurenine pathway

Prevalence and Correlates of Suicide Attempts in Chinese Outpatients with First-Episode and Drug-Naïve Psychotic Major Depressive Disorder at Different Ages of Onset

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Objective The objective of this study was to examine the prevalence and associated risk factors for suicide attempts among Chinese outpatients diagnosed with first-episode and drug-naïve psychotic major depressive disorder (PMD), with a focus on different ages of onset

Methods This cross-sectional study included 1,289 participants aged 18-45 from the psychiatric outpatient clinic of the First Hospital of Shanxi Medical University, China. All participants were of Chinese Han ethnicity and met DSM-IV criteria for major depressive disorder (MDD) with psychotic features. Clinical assessments were conducted using structured interviews and standardized scales, including the Hamilton Anxiety Rating Scale (HAMA), the Hamilton Depression Rating Scale (HAMD), and the Positive and Negative Syndrome Scale (PANSS). Biochemical analyses were performed to measure thyroid function and lipid profiles

Results The prevalence of PMD was found to be 9.95%, with a significantly higher incidence in the middle-age onset (MAO) group (14.57%) compared to the early-age onset (EAO) group (8.27%). The overall prevalence of suicide attempts was 20.14%, with no significant difference between the EAO (19.24%) and MAO (22.61%) groups. In EAO PMD patients, HAMA scale score and thyroid stimulating hormone (TSH) levels were associated with suicide attempts. The area under the receiver operating characteristic curve (AUROC) was 0.892. In MAO PMD patients, TSH and diastolic blood pressure were associated with suicide attempts. The AUROC was 0.862

Conclusion This study highlights the high prevalence of suicide attempts among PMD patients, irrespective of the age of onset. Distinct clinical and biochemical profiles associated with suicide attempts in EAO and MAO groups underscore the need for age-specific preventive strategies and therapeutic interventions. Elevated anxiety levels and thyroid dysfunction were prominent predictors of suicide attempts in early-onset PMD, whereas hypertension and thyroid dysfunction played a significant role in middle-age onset PMD patients. Further prospective studies are warranted to validate these findings and to explore the underlying mechanisms linking these risk factors to suicidal behaviors in PMD.

关键词: Major Depressive Disorder, Psychotic Symptoms, Suicide Attempt, Age of Onset

Lipid Profiles and Suicide Risk in Young First-Episode Drug-Naïve Chinese Major Depressive Disorder Patients

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Objective This study aimed to examine the relationship between lipid profiles and suicide risk among young first-episode drug-naïve (FEDN) patients diagnosed with major depressive disorder (MDD) in a Chinese population

Methods This cross-sectional study recruited 917 young Chinese patients aged 18-35 years with FEDN MDD from the psychiatric outpatient department of a general hospital in Taiyuan, Shanxi Province, between 2015 and 2017. Clinical assessments included the Hamilton Depression Rating Scale (HAMD), Hamilton Anxiety Rating Scale (HAMA), and Positive and Negative Syndrome Scale (PANSS). Biochemical analyses measured lipid profiles (total cholesterol (TC), triglycerides (TG), high-density lipoprotein (HDL), and low-density lipoprotein (LDL)). Binary logistic regression

was used to identify predictors of suicide attempts

Results The prevalence of suicide attempts among the study population was 19.5%. Suicide attempters had significantly higher HAMA, HAMD, and PANSS positive subscale scores compared to non-suicide attempters. Additionally, MDD patients who attempted suicide had elevated levels of TC and LDL-C and reduced levels of HDL-C. Logistic regression analysis indicated that suicide attempts were significantly linked to higher HAMD scores (OR = 1.116), higher HAMA scores (OR = 1.311), and elevated TC levels (OR = 1.500). The area under the receiver operating characteristic (AUROC) curve for the refined logistic regression model was 0.795, indicating good discriminative ability

Conclusion Young FEDN MDD patients are at a higher risk of attempting suicide, with significant correlations between suicide attempts and elevated TC levels. The findings highlight the importance of comprehensive clinical assessments, including psychological evaluations and lipid profile monitoring, to identify individuals at high risk for suicide. Further longitudinal studies are warranted to elucidate the causal pathways and underlying mechanisms linking lipid profiles and suicidal behavior in MDD patients.

关键词: Major Depressive Disorder, Suicide Attempts, Lipid Profiles, Total Cholesterol, Young Adults

Prevalence and Correlates of Severe Anxiety Among Front-line Nurses in China During and after The COVID-19 Pandemic: A Multi-center Survey

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Objective Nurses have been at the forefront of the battle against the COVID-19 pandemic, facing extended work hours and heightened stress, predisposing them to psychological distress. This study aims to investigate the prevalence and correlates of severe anxiety among front-line nurses in China during and after the

COVID-19 pandemic

Methods A large-scale multicenter survey was conducted from November to December 2022 and from April to July 2023. Data were collected using online surveys, covering demographic characteristics, job-related factors, anxiety, depression, and sleep disorders. Statistical analyses, including chi-square tests, t-tests, and logistic regression, were performed to assess the incidence and factors influencing severe anxiety

Results The study included 816 nurses during the pandemic and 763 nurses after the pandemic. The prevalence of severe anxiety during the pandemic (52.3%) was significantly higher than after the pandemic (8.0%). Factors such as nursing title, night shift frequency, educational level, exercise frequency, COVID-19 infection status, economic pressure, and work pressure showed significant differences between the two periods. Binary logistic regression revealed associations between severe anxiety and factors such as night shift frequency, COVID-19 infection status, nursing title, depression, and sleep disorders. Receiver Operating Characteristic analysis demonstrated good predictive value for severe anxiety

Conclusion The study underscores the importance of understanding and addressing severe anxiety among front-line nurses during and after the COVID-19 pandemic. Future research should delve into long-term psychological effects and implement effective intervention measures to support nurses' mental health.

关键词： Severe anxiety, Front-line nurses, COVID-19 pandemic, Multicenter survey, Mental health

The Incidence and Influencing Factors of Suicide Attempts in Major Depressive Disorder Patients Comorbid with Moderate-to-severe Anxiety: A Large-scale Cross-sectional Study

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Objective Major depressive disorder (MDD) is a recurrent and persistent mental illness. However, there is a lack of research that distinguishes the severity of comorbid anxiety disorders in MDD, and insufficient evidence exists regarding the prevalence of MDD patients with comorbid moderate-to-severe anxiety in the Chinese population

Methods The study included 1718 MDD patients (894 with moderate-to-severe anxiety symptoms and 824 without moderate-to-severe anxiety symptoms). Clinical symptoms and development were assessed using the Hamilton Depression Rating Scale-17 (HAM-D-17), Hamilton Anxiety Rating Scale-14 (HAMA-14), Positive and Negative Syndrome Scale (PANSS), and Clinical Global Impression (CGI). The blood pressure and thyroid hormone levels were measured

Results We found that the incidence of MDD patients with moderate-to-severe anxiety symptoms was 52.04%. The prevalence of suicide attempts in MDD comorbid moderate-to-severe anxiety patients was 31.8%, which was 4.58 times higher than that in patients without moderate-to-severe anxiety. Additionally, suicide attempters had elevated levels of thyroid stimulating hormone (TSH), anti-thyroglobulin (TgAb), thyroid peroxidases antibody (TPOAb), systolic blood pressure (SBP), and diastolic blood pressure (DBP) compared to non-suicide attempters. We further identified CGI score, TSH, TPOAb, and DBP as influential factors for suicide attempts in MDD individuals who had moderate-to-severe anxiety symptoms. These indexes could distinguish between suicide attempts and non-suicide attempts in MDD patients with moderate-to-severe anxiety symptoms

Conclusion Our findings mainly indicated a high prevalence of suicide attempts in MDD patients with comorbid moderate-to-severe anxiety. Several clinical correlates, thyroid hormones, and blood pressure might contribute to suicide attempts in MDD patients with moderate-to-severe anxiety symptoms

关键词： Major depressive disorder, Moderate-to-severe anxiety, Suicide, Influencing factors

MDD With Moderate To Severe Anxiety and Psychotic Symptoms: Mediating and Moderating Effects of TSH

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Objective Anxiety and mood disorders often co-exist, with a high prevalence of comorbidity between depression and anxiety disorders. Anxious depression and psychotic symptoms are significant features of major depressive disorder (MDD), presenting challenges in prognosis and treatment outcomes. The relationship between thyroid function and psychiatric symptoms, particularly in the context of anxiety and psychosis in MDD, remains complex and not fully understood

Methods This observational cross-sectional study included 1718 patients with MDD attending an outpatient psychiatric clinic. Patients were assessed using standardized scales for depression, anxiety, and psychotic symptoms, with blood samples collected for thyroid function analysis. Statistical analyses, including t-tests, logistic regression, and correlation analyses, were conducted to explore the relationships between variables and the mediating and moderating effects of thyroid-stimulating hormone (TSH) on depressive and psychotic symptoms in MDD patients with moderate to severe anxiety

Results The study revealed a high prevalence of moderate-to-severe anxiety in first-episode unmedicated MDD patients, with no gender differences observed. Patients with moderate-to-severe anxiety exhibited higher levels of depressive and psychotic symptoms, as well as altered thyroid function markers. TSH levels were significantly associated with psychotic symptoms, acting as both a mediator and a moderator in the relationship between depressive symptoms and psychotic symptom severity. The findings suggest a complex interplay between mood disorders, thyroid function, and psychotic symptoms in MDD patients with comorbid anxiety

Conclusion TSH may serve as a biomarker for

comorbid anxiety in MDD patients and is closely related to schizophrenia. The study highlights the importance of considering thyroid function in the assessment and management of psychiatric symptoms in MDD patients with anxiety. TSH plays a significant role in moderating and mediating the relationship between depression and psychotic symptoms in MDD patients with comorbid anxiety, emphasizing the need for targeted interventions addressing thyroid function in this population. Further research, including longitudinal studies and investigations into potential confounding factors, is warranted to deepen our understanding of these complex relationships

关键词: Major Depression Disorder, anxious depression, psychotic symptoms, thyroid-stimulating hormone, gender differences

L-shaped Association of Fasting Blood Glucose and Comorbid Anxiety in Chinese Patients with First-episode Drug-naïve Major Depressive Disorder

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Objective Depression and anxiety are highly prevalent psychiatric conditions associated with social, medical, and economic burdens. Many previous studies on depression and anxiety have focused on glucose metabolism. However, few studies have examined the association between fasting blood glucose (FBG) and the risk of comorbid anxiety in patients with MDD. The purpose of the current study was to evaluate the relationship between FBG and the risk of comorbid anxiety in a Chinese population with first-episode drug-naïve (FEDN) MDD

Methods A total of 1718 patients with FEDN MDD were recruited in this cross-sectional study. Their socio-demographic characteristics as well as anthropo-

metric data were collected. The 17-item Hamilton Rating Scale (HAMD-17) and Hamilton Anxiety Scale (HAMA) were measured for depressive and anxiety symptoms, respectively. Biochemical indicators, including fasting blood glucose (FBG), were also measured. Multiple logistic regression analysis was used to estimate the association between FBG and the risk of comorbid anxiety. Two piecewise linear regression model and smooth fitting curve were used to elucidate the nonlinear relationship between FBG and the risk of comorbid anxiety in FEDN MDD patients

Results The univariate logistic regression analysis presented a significant relationship between FBG and comorbid anxiety (OR = 1.43, 95%CI, 1.18–1.73, $P < 0.001$). However, after adjustment for age, gender, HAMD, TSH, A-TG, A-TPO, TC, LDL-c, SBP, DBP, suicide attempts, and psychotic symptoms, multiple logistic regression analysis did not find any significant statistical correlation between FBG and anxiety (OR = 0.97, 95%CI: 0.76 to 1.23, $P = 0.797$) in patients with FEDN MDD. Interestingly, smoothing plots revealed a non-linear (L-shaped) relationship between FBG and comorbid anxiety, and a two-piecewise logistic regression model was used to calculate the inflection point of FBG as 4.8 mmol/L. On the left of the inflection point, a negative association between FBG and comorbid anxiety was detected (OR = 0.19, 95%CI: 0.06 to 0.65, $P = 0.008$), while no significant association was observed on the right side of the inflection point (OR = 1.21, 95%CI: 0.90 to 1.62, $P = 0.204$)

Conclusion An L-shaped non-linear association between FBG and comorbid anxiety was observed in Chinese patients with FEDN MDD. Lower FBG is associated with a higher risk of comorbid anxiety, especially in individuals with FBG below 4.8 mmol/L.

关键词: Association, Fasting blood glucose, Anxiety, Major depressive disorder

童年创伤史与青少年心境障碍患者焦虑症状的关联性研究

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目的 伴有焦虑症状会导致青少年心境障碍治疗困难及自杀风险增加,因此焦虑症状近年越来越引起临床重视。童年创伤作为环境因素,与青少年心境障碍之间的关系仍有待进一步发掘。本研究通过探索童年创伤是否与青少年心境障碍焦虑症状存在相关性,探究童年创伤史与青少年心境障碍焦虑症状的关联。

方法 本研究共招募 528 例 12~18 岁的符合 ICD-10 关于心境障碍诊断标准的南京脑科医院早期干预科住院患者,所有患者目前均为重性抑郁发作。依据 17 项汉密尔顿抑郁量表(17-item Hamilton depression scale,HAMD-17)中焦虑/躯体化因子是否 ≥ 7 分,将 <7 分入组患者纳入不伴焦虑症状组($n=261$), ≥ 7 分入组患者纳入伴焦虑症状组($n=267$)。比较不伴焦虑症状(NA)组与伴焦虑症状(A)组之间童年创伤量表(CTQ)的差异,在焦虑障碍患者组中分析焦虑症状与童年创伤的关联,伴焦虑症状组患者焦虑/躯体化因子分与 CTQ 及因子分做 Pearson 相关分析。

结果 1) NA 组与 A 组的患者间 CTQ 中情感忽视因子分($t=-2.757,p=0.006$)及量表总分($t=-3.314,p=0.001$)存在显著差异,A 组 CTQ 情感忽视因子分及总分显著高于 NA 组。2) A 组患者的焦虑/躯体化因子分与童年创伤量表(CTQ)中情感忽视因子分存在相关性($r=0.148, p=0.017$)。3) NA 组与 A 组患者的 HAMD-17 总分存在显著差异($t=-17.581, p<0.001$),A 组 HAMD-17 总分显著高于 NA 组。

结论 本研究发现伴焦虑症状患者较不伴焦虑症状的患者童年创伤更严重,其中,伴焦虑症状组患者的焦虑躯体化因子与情感忽视因子分存在正相关,且伴焦虑症状组患者的抑郁症状较不伴焦虑症状患者症状更严重。提示进一步在青少年心境障碍患者中探索焦虑症状的相关影响因素对于指导临床防治具有重要意义。

关键词: 焦虑症状,童年创伤,青少年,心境障碍,抑郁发作

成人强迫症患者异常任务相关脑激活: 基于坐标的 meta 分析

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目的 强迫症 (Obsessive-Compulsive Disorder, OCD) 是一种常见的慢性精神障碍, 它严重侵害患者的日常生活质量, 并给个体及社会带来了巨大的健康与经济负担。任务态功能磁共振成像 (functional magnetic resonance imaging, fMRI) 技术对于揭示 OCD 患者在执行特定任务时大脑功能的变化具有重要意义。本研究旨在探究 OCD 患者在执行任务时与健康对照组 (Health Control, HC) 相比大脑活动的差异。

方法 本研究在 PubMed、Embase 和 Web of Science 数据库中进行了全面的文献检索, 覆盖了从数据库建立之初至 2023 年 8 月期间的文献。我们采用了基于种子点的受试者图像排列映射 (Seed-based Mapping with Permutation of Subject Images, SDM-PSI) 软件进行了深入的荟萃分析。

结果 本研究共纳入了 39 项研究, 涉及 859 名 OCD 患者和 804 名 HC 个体。分析结果揭示, 与 HC 组相比, OCD 患者在大脑的特定区域内表现出显著的激活水平差异。具体来说, OCD 患者在左侧顶叶下回 (不包括边缘上回和角回) 和右侧中央前回显示出激活增强; 而在右侧额叶中回则观察到激活减弱。进一步的 meta 回归分析表明, 患者年龄与左扣带正中网络的脑活动呈负相关。

结论 这些大脑活动的变化与 OCD 患者认知灵活性的下降、社会认知障碍和注意力异常有关。本研究的发现不仅为理解 OCD 患者的脑功能异常提供了新的视角, 而且可能为药物治疗干预提供了潜在的神经影像学靶点。未来的研究可以利用先进的神经影像技术, 结合行为评估和生化分析等, 来提供更全面的 OCD 神经病理学理解, 并推动个体化医疗的发展。

关键词: 强迫症; 功能磁共振; 任务态; 荟萃分析

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目的 焦虑症状是重性抑郁障碍 (Major depressive disorder, MDD) 最常伴发的症状, MDD 患者中约 50%-60% 的人同时共病焦虑。并且共病焦虑的 MDD 患者表现出更为严重的后果, 包括社会经济地位较低、适应性功能受损更严重、生活质量较低、预后更差等。然而, 与非焦虑性 MDD 相比, 目前针对共病焦虑的 MDD 的病理生理机制研究较少, 因此本研究拟使用功能磁共振 (functional Magnetic Resonance Imaging, fMRI) 方法比较共病焦虑 MDD 患者与未共病焦虑 MDD 患者的大脑功能, 为理解共病焦虑 MDD 影像机制提供研究基础。

方法 本研究纳入了共 143 名 18 岁至 65 岁之间的受试者, 所有被试均采集 fMRI 数据, 其中 103 名 MDD 患者, 并根据汉密尔顿焦虑量表 (Hamilton Anxiety Scale, HAMA) 评分将其分为 MDD 伴焦虑组 (HAMA \geq 14 分) 和 MDD 不伴焦虑组 (HAMA $<$ 14 分)。最后 58 名患者纳入 MDD 共病焦虑组 (MDD-A), 45 名患者纳入 MDD 未共病焦虑组 (MDD-NA), 同时纳入年龄、性别、教育年限匹配的健康对照 (Healthy control, HC) 40 名, 使用杏仁核作为种子点, 分析 ROI 到全脑的功能连接 (Functional connectivity, FC) 以此衡量大脑功能变化。

结果 三组被试在额叶区域 (额中回、额上回、眶额回、内侧眶额叶) FC 存在显著差异。事后分析结果显示, 与 HC 相比, MDD-A 患者双侧额上回、额中回、眶部额下回、枕中回, 右侧尾状核、枕下回、眶部额中回、眶内额上回, 左侧苍白球、壳核、前扣带回 FC 降低; MDD-NA 患者双侧额中回、额上回、眶部额下回、眶内额上回、前扣带回、尾状核, 右侧颞中回、脑岛、枕下回、中央前回, 左侧壳核、枕中回、舌回 FC 降低; 与 MDD-NA 患者相比, MDD-A 患者左侧海马 FC 降低。

结论 本研究表明共病 MDD 患者可能在前额叶、前扣带回、尾状核、中央前回、海马表现为 FC 降低。这可能为理解 MDD 共病焦虑的影像机制提供研究基础。

关键词: 重性抑郁障碍、共病焦虑、静息态功能磁共振、功能连接

重性抑郁障碍共病焦虑患者的静息态功能连接研究

Identifying Risk Factors and Predictors of Psychotic Symptoms in First-episode and Medication-naïve Major Depressive Disorder Patients with A History of Suicide Attempts

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Objective Psychotic symptoms (PS) are frequently seen in individuals diagnosed with major depressive disorder (MDD); nonetheless, limited research has been conducted on identifying risk factors for PS in first-episode and medication-naïve (FEMN) MDD patients with a prior suicide attempt. This investigation aimed to examine the incidence and potential risk factors for PS in FEMN MDD patients with a background of suicide efforts, to offer recommendations for prompt intervention

Methods In a cross-sectional study, 1718 patients diagnosed with FEMN MDD were recruited. The Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), and Positive and Negative Syndrome Scale (PANSS) were employed to evaluate the symptoms of these patients. Additionally, demographic and clinical data were gathered

Results We found that FEMN MDD patients who had previously attempted suicide

were 5.06 times more prone to experiencing PS than those without a suicide history. HAMD score, HAMA score, and thyroid-stimulating hormone (TSH) were identified as strong indicators of PS in FEMN MDD patients with a suicide history. A combined area under the curve (AUC) value of 0.94 effectively distinguished patients with PS from those without PS.

Conclusion The research demonstrates a significant occurrence of PS in FEMN MDD patients who have attempted suicide in the past. In this group, it seems that anxiety and depressive symptoms, as well as TSH levels, can be indicators of PS.

关键词: depression; first-episode and medication-naïve; psychotic symptoms; suicide attempts; thyroid-

stimulating hormone

A Classification Model for Identifying Cognitive Impairment in Chinese Patients with Major Depressive Disorder: A Machine Learning Approach

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Objective The factors related to cognitive impairment (CI) in major depressive disorder (MDD) patients have been discussed, but few studies have used machine learning (ML) to identify potentially related clinical variables and establish classification models for identifying CI in patients with MDD

Methods This was a post hoc analysis of a multicenter study. The included patients with MDD were divided into a cognition retention (CR) group and a cognition impairment (CI) group based on the MATRICS consensus cognitive battery. Least absolute shrinkage and selection operator (LASSO) regression was used for feature selection. Two support vector machine (SVM) classification models (with/without the Hamiltonian Depression Scale-17 [HAMD-17] and the Hamilton Anxiety Rating Scale [HAMA]) were compared. Twenty percent of the sample was randomly set aside as the final test set

Results A total of 509 patients with MDD were included. A total of 262 (45.58%) patients were classified into the CI group. Fifteen features were included in the classification models after LASSO regression, including age, education, body mass index, drinking status, HAMD items (Early, Middle, Retardation, Anxiety Psychic, Hypochondriasis, and Insight), and HAMA

items (Tension, Intellectual, Somatic/Muscular, Somatic/Sensory, and Genitourinary symptoms). For the SVM classification model without the HAMD and HAMA items, the accuracy was 0.76, and the AUC was 0.81 (95% CI: 0.72-0.89). SVM classification model with HAMD and HAMA items: accuracy = 0.82, AUC = 0.90 (95% CI: 0.84-0.96)

Conclusion The clinical features reflected in the HAMD and HAMA scores are helpful for identifying CI in patients with MDD. Psychiatrists may use ML models based on clinical variables to recognize CI more easily in MDD patients.

关键词: cognitive impairment, machine learning, major depressive disorder, support vector machine

焦虑抑郁的脑动态激活模式研究及辅助诊断

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目的 作为最常见的精神疾病之一,广泛性焦虑症的终生患病率为3.7%。它是一种具有高共病率的精神疾病,终生共病率为81.9%,尤其是和其他焦虑症(51.7%)。由于临床症状相似,很难区分广泛性焦虑症和重度抑郁症,导致治疗不充分或不恰当,预后不佳。现有的基于脑成像的精神疾病识别研究通常侧重于通过采用各种机器学习方法来发现结构或功能成像生物标志物,如支持向量机、高斯过程分类器和线性判别分析。本研究将基于划分大脑状态,构建针对特定状态的疾病诊断深度学习模型,提高疾病的诊断准确性,从而为这两种疾病的辅助治疗和诊断提供帮助。

方法 将磁共振成像预处理后,通过独立成分分析得到独立成分,计算所得的独立成分的时间序列之间的皮尔逊相关系数,得到每个受试者的相关系数矩阵。接下来,我们使用聚类算法来识别每个受试者的大脑状态,整合全部被试获得最终状态,为每个被试所有时间点划分状态。接下来,构建了基于最终状态的3D-CNN深度学习模型,对受试者进行分类。简言之,我们分别构建了健康-焦虑症、健康-重度抑郁症和焦虑症-抑郁症的分类模型。并将

不同状态的图像输入分类器。受试者的类型是通过投票机制获得的。

结果 我们确定了四种最终的大脑状态,其中焦虑症和重度抑郁症在认知执行网络、默认模式网络、视觉网络和感觉运动网络的功能连接维度上表现出相同的超连接异常变化。重度抑郁症还表现出更广泛的功能连接异常,两者在丘脑与默认模式网络的连接强度方面存在显著差异。我们构建的深度学习模型在对所有三组受试者进行分类时实现了平均85%左右的准确率,与未划分状态(平均70%左右)相比有了显著提高。

结论 在本实验中,我们提出了一种新的功能连接分析框架来检测广泛性焦虑症和重度抑郁症患者的功能连接,以确定他们在神经机制方面的共同和独特变化,并通过构建状态依赖型的3D-CNN深度学习模型最终对这三组受试者进行分类。结果表明,广泛性焦虑症和重度抑郁症在某些网络之间的功能连接方面表现出相同的异常变化。此外,我们构建的状态相关3D-CNN模型获得了较高的分类精度,并在独立的数据集中验证了该模型。

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关键词:重度抑郁症,广泛性焦虑症,功能磁共振,功能连接,深度学习

Comparative Study of Emotional Cognitive Functional Characteristics in Patients with Obsessive-Compulsive Disorder and Depression: Evidence from fNIRS

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Objective This study aims to explore differential changes in emotional cognitive functions among patients with obsessive-compulsive disorder (OCD), major depressive disorder (MDD), and depressive disorder

with or without accompanying obsessive-compulsive symptoms (DD-OC/DD-NOC). It investigates their behavioral and hemodynamic characteristics, as well as functional correlations, to offer new insights for clinical diagnosis and treatment, thereby establishing a foundation for future model development

Methods We enrolled 55 patients with OCD and 41 healthy volunteers, 37 treatment-naïve patients with MDD and 34 healthy volunteers, and 45 and 40 patients with DD-OC/DD-NOC respectively, along with 41 healthy volunteers. Clinical characteristics were evaluated using the HAMD-24, HAMA, SCL-90, Y-BOCS, OCI-R, and TAS-20 scales. Stimuli were sourced from the Chinese Facial Affective Picture System (CFAPS), depicting three emotional expressions: happiness, sadness, and neutrality. E-Prime software ensured precise stimulus presentation, alongside a specifically designed synchronized protocol for multi-channel fNIRS data collection

Results Healthy individuals demonstrated high accuracy and quick response times in facial emotion recognition tasks. Conversely, patients with OCD, MDD, and DD-OC/DD-NOC exhibited significantly lower accuracy and longer response times compared to controls ($P < 0.05$). Emotional cognitive impairments varied among the disorders: OCD and treatment-naïve MDD patients both showed reduced accuracy and slower responses when distinguishing sadness from neutrality ($P < 0.05$). The DD-OC group displayed prolonged response times in emotional tasks ($P < 0.05$), while the DD-OC/DD-NOC group exhibited decreased accuracy in recognizing sadness compared to neutrality ($P < 0.001$)

Healthy individuals displayed hemodynamic characteristics during facial emotion processing primarily correlated with the entire prefrontal cortex (56.30%). In tasks involving emotional cognitive impairments, OCD patients showed functional coherence primarily between the FPC, DLPFC, and FEF regions. Treatment-naïve MDD patients demonstrated coherence between the FPC, DLPFC, FEF, and Broca regions, regardless of emotional type. DD-OC/DD-NOC patients exhibited reduced connectivity strength and disrupted functional

connectivity patterns in ipsilateral and bilateral hemisphere cluster areas, with DD-OC showing more disruption compared to DD-NOC.

In OCD patients, changes in [oxy-Hb] in the R-PMA region were negatively correlated with the severity of compulsive symptoms ($P < 0.05$). Among DD patients, changes in [oxy-Hb] in the L-FPC, R-DLPFC, and L-Broca regions positively correlated with compulsive symptoms ($P < 0.05$), whereas changes in the R-Broca region showed a negative correlation ($P < 0.05$). Notably, the study did not find significant correlations between total HAMD/HAMA scores in treatment-naïve MDD patients and activation levels across channels.

Conclusion Patients with OCD, MDD, and DD-OC/DD-NOC present varying degrees of symptoms, including depression, anxiety, compulsions, alexithymia, and distinct impairments in emotional recognition functions

During emotional cognitive tasks, individuals with OCD, MDD, and DD-OC/DD-NOC exhibit unique patterns of overall functional coherence and connectivity within the prefrontal cortex.

The severity of compulsive symptoms in OCD patients correlates with activation levels in the R-PMA region. In DD patients, the severity of compulsive symptoms correlates with activation levels in the L-FPC, R-DLPFC, and bilateral Broca areas. Additionally, the hemodynamic characteristics observed in MDD patients may indicate potential biomarkers.

关键词: Obsessive-Compulsive Disorder; Obsessive-Compulsive Symptoms; Major Depressive Disorder; Emotional Cognition; Cortical Brain Function; fNIRS

重度抑郁障碍和广泛性焦虑障碍的丘脑-皮层环路功能梯度差异模式研究

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目的 重度抑郁障碍 (MDD) 和广泛性焦虑障

碍 (GAD) 是社会上常见的两种主要的精神疾病。在症状水平上, GAD 主要表现为过度担忧、无法静坐和自主神经功能失调, 而 MDD 主要表现为情绪低落、快感缺乏和精神运动迟滞。近年来, 越来越多的静息态功能磁共振成像研究揭示了这两种情绪障碍中丘脑-皮层环路的功能障碍。例如, MDD 患者表现出丘脑与前额叶, 颞叶, 顶叶以及感觉运动皮层之间的功能连接异常, 而 GAD 患者的丘脑活动显著高于健康对照, 患者在丘脑中表现出更强的功能连接。然而, 目前还没有研究去探究 MDD 和 GAD 之间丘脑-皮层环路的共同性以及特异性变化模式。在以往的基于功能梯度方法的研究中发现, MDD 患者中的梯度结构被破坏, 主要表现为初级感觉区域和包括默认模式网络在内的高阶认知区域之间的分化减弱。此外, 与健康对照相比, GAD 患者的功能梯度异常主要位于丘脑-皮层系统。但是, MDD 和 GAD 之间丘脑-皮层系统的功能梯度组织是否存在差异仍然未知。

方法 因此, 本文使用功能连接梯度分析方法探究了 MDD 与 GAD 中丘脑-皮层系统功能梯度的异常分布模式。首先, 基于丘脑-皮层功能连接计算丘脑-皮层连接梯度并进行组间差异分析。此外, 许多研究表明 MDD 和 GAD 都是具有中度遗传风险的疾病, 本文通过人脑基因图谱, 建立梯度异常模式与基因表达图谱之间的关联。最后, 使用分类模型评估这种功能梯度组织对 MDD 和 GAD 的识别能力。

结果 研究发现, MDD 患者、GAD 患者和健康对照的丘脑皮层环路梯度均表现出相似的空间分布模式, 即外侧-腹侧和前侧-后侧这两种空间分布模式。此外, 进一步分析发现, 功能梯度组织的异常主要集中在与背侧注意网络和躯体运动网络相关的局部环路。我们发现局部环路的梯度组织与 GAD 和 MDD 的相关基因显著相关。并且利用上述环路梯度的离心率作为特征, 我们成功地区分了患有这两种疾病的患者。

结论 最终结果表明, 丘脑-背侧注意网络和丘脑-感觉运动网络环路的宏观组织异常可能作为区分这两种疾病的有效神经生物学标志物, 有助于了解疾病的发病机制, 并有利于临床诊断和治疗。

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关键词: 重性抑郁障碍, 广泛性焦虑, 功能连

接, 宏观梯度, 丘脑, 丘脑皮层环路

Emotional Conflict control and cortical response in Anxiety Disorders: An fNIRS Study Using the Face-Word Stroop Paradigm

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Objective This study aims to explore the characteristic changes in emotional conflict information processing in patients with anxiety disorders (panic disorder and generalized anxiety disorder). It includes both behavioral and fNIRS imaging features, aiming to enhance the understanding of the neural mechanisms of anxiety disorders from the perspective of emotional conflict information processing

Methods The study included 21 patients with anxiety disorders (12 with panic disorder and 9 with generalized anxiety disorder) and 8 healthy controls. Participants were assessed for symptoms of anxiety and depression, sleep quality, and cognitive function. Emotional faces and words were selected from the Chinese Affective Face Picture System (CAFPS) and the Chinese Affective Words System (CAWS). The face-word Stroop paradigm was constructed using Eprime 3.0 software, including four conditions: cI (incongruent trial preceded by a congruent trial), iI (incongruent trial preceded by an incongruent trial), iC (congruent trial preceded by an incongruent trial), and cC (congruent trial preceded by a congruent trial), arranged in a pseudo-random order. Participants were required to ignore the interference of emotional words and correctly respond to the emotional faces. Hemodynamic signals in the prefrontal cortex during task performance were recorded simultaneously using a 22-channel near-infrared spectroscopy system (Hitachi ETG-4100)

Results 1. Symptom and Sleep Quality Assessment

GAD group exhibited significantly higher anxiety

and depression symptoms and poorer sleep quality compared to the PD and HC groups. PD group had significantly higher anxiety scores compared to the HC group. No significant differences in cognitive function scores were observed among the three groups.

2. Reaction Time and Accuracy

Significant main effects of conflict type ($F=8.073$, $P<0.001$, $\eta^2=0.008$) and group ($F=74.627$, $P<0.001$, $\eta^2=0.046$) were found for reaction time, but the interaction effect was not significant ($F=0.633$, $P=0.704$, $\eta^2=0.001$). GAD group had significantly slower reaction times compared to the PD and HC groups. All groups showed significantly slower reaction times for incongruent trials (iI, cI) compared to congruent trials (cC, iC). For accuracy, a significant main effect of conflict type ($F=10.179$, $P=0.001$, $\eta^2=0.281$) was observed, but the main effect of group was not significant ($F=0.172$, $P=0.843$, $\eta^2=0.013$). Accuracy was significantly lower under cI and iI conditions compared to cC and iC conditions. HC group showed no differences in accuracy across conflict conditions, while GAD group had significantly lower accuracy under cI and iI conditions compared to cC and iC conditions, and PD group had lower accuracy under iI and cI conditions compared to cC condition.

3. fNIRS Results

Under the cI condition, the GAD and PD groups showed significantly lower activation in the left dorsolateral prefrontal cortex (Ch2) and frontal pole (Ch 7, 11) compared to the HC group. Under the iI condition, the PD group showed significantly lower activation in the left dorsolateral prefrontal cortex (Ch1, 2), bilateral frontal pole (Ch6, 7, 11), and right dorsolateral prefrontal cortex (Ch9) compared to the HC group. No significant activation differences were found between the GAD and HC groups under the iI condition.

Comparing activation differences between the cI and iI conditions (iI-cI) to assess the impact of the previous trial's conflict type on conflict processing, the PD group showed significantly lower relative activation in the right dorsolateral prefrontal cortex (Ch1, 2) and right frontal pole (Ch15) compared to the HC group. Additionally, the PD group had significantly lower activation in widespread bilateral prefrontal regions (Ch1, 2, 5-15,

17-19, 22) compared to the GAD group. Correspondingly, the PD group showed a significant increase in reaction time under the iI condition compared to the cI condition without a notable improvement in accuracy, indicating a decline in conflict processing efficiency. In contrast, the GAD group did not show a significant increase in reaction time under the iI condition.

Conclusion GAD patients exhibit more significant anxiety symptoms compared to the PD and HC groups

All groups exhibit an emotional conflict effect under the face-word Stroop paradigm, with GAD patients processing emotional conflict information significantly slower than the HC and PD groups.

GAD and PD patients have impaired control over emotional conflict information, making them more susceptible to interference and judgment errors.

Abnormal activation in the left dorsolateral prefrontal cortex and frontal pole is observed in GAD and PD patients during emotional conflict information control.

GAD and PD patients exhibit different prefrontal response patterns and behavioral characteristics during conflict information adjustment.

关键词: Emotional Conflict, Face-Word Stroop, Anxiety, fNIRS, Near-Infrared Spectroscopy

Identification of Central Symptoms in Smartphone Addiction, Depression, and Anxiety Among College Students in China: A Network Analysis Perspective

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Objective This study aims to explore the intricate relationships between smartphone addiction (SPA), depression, and anxiety among Chinese college students using a network analysis approach. By identifying cen-

tral and bridge symptoms, we seek to understand the underlying mechanisms and potential intervention targets for these co-occurring conditions

Methods A cross-sectional survey was conducted among 36,714 college students from 177 higher education institutions across China. Participants completed the Smartphone Addiction Scale (SAS-CS), the Generalized Anxiety Disorder Scale (GAD-7), and the 10-item Center for Epidemiological Studies Depression Scale (CES-D-10). Network analysis was employed to examine the relationships between symptoms of SPA, anxiety, and depression. The EBICglasso model was used to estimate the network, and centrality measures were computed to identify the most influential symptoms

Results The network analysis revealed that SPA11 ("Anxiety if not used for some time"), SPA21 ("Restless without smartphone"), SPA9 ("Smartphone use affects academic performance"), and CESD2 ("Difficulty with concentrating") were the most influential symptoms within the SPA-anxiety-depression network. GAD1 ("Nervousness") emerged as a critical bridge symptom linking SPA with anxiety and depression. The expected influence centrality values highlighted the significant role of these symptoms in maintaining the network structure. The case-dropping subset bootstrap procedure confirmed the stability and accuracy of the network, indicating that the identified symptoms are robust and reliable

Conclusion The study underscores the importance of addressing key symptoms such as anxiety related to smartphone use, restlessness without a smartphone, and academic performance issues to mitigate the impact of smartphone addiction on mental health. The findings suggest that interventions targeting fear of missing out (FoMO) and anxiety management could effectively reduce the interconnected effects of SPA, anxiety, and depression. The identification of GAD1 as a bridge symptom provides valuable insights for developing targeted clinical interventions. Future longitudinal research is necessary to further elucidate the causal relationships and refine intervention strategies.

关键词: Smartphone Addiction, Depression, Anxiety, Network Analysis, Central Symptoms, Bridge Symptoms

Identifying Neuro-inflammatory Biomarkers of Generalized Anxiety Disorder From Lymphocyte Subsets Based on Machine Learning Approaches

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Objective Activation of the inflammatory response system is involved in the pathogenesis of generalized anxiety disorder (GAD). In this study, we focused on the predictive value of immune indicators on GAD

Methods The evaluation of immune markers, including the neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), monocyte-to-lymphocyte ratio (MLR), systemic immune-inflammation index (SII), and analysis of lymphocyte subsets, was performed on patients with GAD. Receiver operator characteristic (ROC) analysis was used to determine the predictive value of these immunological parameters for GAD. Machine learning technology was applied to classify the collected data from patients in the GAD and healthy control groups

Results Of the 340 patients enrolled, 171 were GAD patients and 169 were non-GAD patients as healthy control. ROC curve analysis showed that the level of lymphocyte subsets including CD3+CD4+ T cell% (0.953 ± 0.010), CD3-CD16+56+ NK cell count (0.864 ± 0.020), CD3-CD16+56+ NK cell% (0.882 ± 0.020), CD4+/CD8+ T cell ratio (0.851 ± 0.020) and CD4-/CD8- T cell% (0.875 ± 0.020) significantly altered in the patients with GAD. In addition, the level of NEU (0.657 ± 0.030), MON (0.611 ± 0.040), PLT (0.586 ± 0.040), and SII (0.589 ± 0.040) moderately altered between the control group and patients with GAD. The classification analysis conducted by machine learn-

ing using a weighted ensemble-L2 algorithm demonstrated an accuracy of 95.00±2.04% in assessing the predictive value of these lymphocyte subsets in GAD

Conclusion In the presented work, we show the level of lymphocyte subsets altered in GAD. These lymphocyte subsets can serve as neuroinflammatory biomarkers for GAD diagnostics. Furthermore, the application of machine learning offers a highly efficient approach for investigating neuroinflammatory biomarkers and predicting GAD. Our research has provided novel insights into the involvement of cellular immunity in GAD and highlighted the potential predictive value and therapeutic targets of lymphocyte subsets in this disorder.

关键词: generalized anxiety disorder, lymphocyte subsets, inflammatory biomarkers, diagnostic biomarker, machine learning

强迫症患者的强迫信念: 心理病理学特征、临床治疗及大脑形态学研究

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目的 强迫信念是一类与强迫相关的功能失调信念, 以往被认为在强迫症状的发展与维持中起到重要的作用, 对强迫症的临床干预效果起到了一定程度的影响。然而, 目前关于强迫症状与强迫信念的关系存在争议。本研究旨在探索强迫症患者中强迫症状与强迫信念的关系以及临床治疗前后两者的变化, 结合磁共振成像技术进行形态学分析, 为进一步阐明强迫信念在强迫症中的作用提供依据。

方法 本研究纳入 260 名强迫症患者 (Obsessive-Compulsive Disorder, OCD) 和 125 名健康对照 (Healthy Controls, HC)。强迫症患者中有 95 名进行了为期 12 周的药物或心理治疗干预, 并在治疗前后测量了强迫症状与强迫信念。采用耶鲁布朗强迫量表 (YBOCS)、强迫信念问卷 (OBQ-44)、汉密尔

顿抑郁量表 (HAMD)、汉密尔顿焦虑量表 (HAMA) 评估受试者的强迫症状、强迫信念、抑郁与焦虑水平。此外, 有 147 名强迫症患者在治疗前自愿接受了结构磁共振扫描。

结果 强迫症患者强迫信念得分显著高于健康对照 ($t=7.95, p<0.001$), 且与强迫症状 ($r=0.150, p=0.016$), 抑郁症状 ($r=0.156, p=0.012$), 焦虑症状 ($r=0.120, p=0.053$) 均有一定程度的相关。在接受了 12 周治疗后, 强迫症状显著降低 ($t=14.90, p<0.001$), 但强迫信念没有显著下降 ($t=1.57, p=0.119$), 两者的减分率没有显著相关性 ($r=0.068, p=0.511$)。强迫信念与右侧顶上小叶的皮层厚度呈负相关 ($x=32, y=-47, z=43, t=4.02, \text{cluster sizes}=132, p<0.05, \text{FWE-corrected}$)。强迫症状与左侧顶上小叶的分形维度呈负相关 ($x=-33, y=-48, z=43, t=3.68, \text{cluster sizes}=189, p<0.05, \text{FWE-corrected}$), 与左侧中央后回的分形维度呈负相关 ($x=-32, y=-29, z=49, t=3.67, \text{cluster sizes}=201, p<0.05, \text{FWE-corrected}$)。

结论 强迫信念可能是一种相对独立的心理病理学概念, 在强迫症患者中存在明显异常, 且不受一线治疗方案的影响, 强迫症状和强迫信念存在形态学指标的差异。这些发现为理解强迫信念在强迫症中的作用提供了新视角, 未来需要进一步在强迫症的概念化中考虑强迫信念。

关键词: 强迫信念; 强迫症; 心理病理学特征; 临床治疗效果; 大脑形态学分析

Decreased Temporal Variability of Insula and Lingual Gyrus Facilitating The Better Early Treatment Response in Patients with Panic Disorder

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Objective Panic disorder (PD) is a common disabling condition with limited biomarkers. We aimed to explore the diagnostic and treatment response prediction value of brain functional temporal variability in PD

Methods 82 PD patients and 105 HCs received resting-state functional magnetic resonance imaging scans and assessments. After two weeks of treatment, we divided patients into responsive panic disorder (RPD, $n = 39$) and non-responding panic disorder (NRPD, $n = 43$). The baseline temporal variabilities were analyzed with group differences and treatment outcomes

Results Decreased temporal variabilities in the left PCG, right lingual gyrus, right fusiform gyrus and right thalamus were found in the PD group (all $P < 0.01$, corrected with Bonferroni correction). A combination of lingual gyrus, PCG, and thalamus had optimal predictive value for distinguishing PD and HCs (AUC = 0.776, Sensitivity = 0.781, Specificity = 0.732). In addition, the RPD group showed significantly lower temporal variabilities in the left insula, right PCG, and bilateral lingual gyrus than the NRPD and HCs groups (all $P < 0.05$, corrected with Bonferroni correction). The variabilities in the left insula and left lingual gyrus were negatively correlated with the reduction rate of panic symptoms (all $P < 0.05$, corrected with Bonferroni correction)

Conclusion Combining lingual gyrus, PCG, and thalamus temporal variability alterations helped distinguish PD and HCs. The temporal variability in the insula and lingual gyrus are potential biomarkers for PD treatment.

关键词: panic disorder, temporal variability, biomarker, treatment response

Prevalence, Demographics, and Clinical Characteristics of Suicide Attempts in First-episode Drug Naïve Schizophrenia Patients with Severe Depression

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Objective In patients with schizophrenia (SCZ), although depressive symptoms and suicide attempts are common, few studies have investigated suicide attempts in SCZ patients with severe depressive symptoms, especially in first-episode drug naïve (FEDN) patients. Therefore, we intended to investigate the incidence of suicide attempts and the associated factors in FEDN SCZ patients with severe depressive symptoms

Methods Overall, 317 FEDN SCZ patients were recruited into the study. Patients were assessed for symptoms using the Hamilton Depression Scale (HAMD), the Hamilton Anxiety Scale (HAMA), and the Positive and Negative Syndrome Scale (PANSS). Biochemical indicators such as total cholesterol, low-density lipoprotein cholesterol, triglycerides, and high-density lipoprotein cholesterol were measured

Results Suicide attempts occurred at a rate of 33.4% in SCZ patients with severe depressive symptoms, which was 2.6 times higher than in patients with SCZ who did not have severe depressive symptoms ($p < 0.05$). Among SCZ patients with severe depressive symptoms, HAMD and PANSS total scores were higher in those who attempted suicide than in those who did not (all $p < 0.05$). PANSS total score was independently connected to suicide attempts in FEDN SCZ people who had severe depressive symptoms ($p < 0.05$)

Conclusion Suicide attempts are more prevalent in those patients with FEDN SCZ who have severe depressive symptoms. Psychiatric symptoms are involved in suicide attempts in FEDN SCZ patients with severe depressive symptoms

关键词: Schizophrenia, suicide, prevalence, PANSS

Establishment and Verification of A Machine Learning Prediction Model for Suicide Attempts in First-episode and Drug Naive Patients with Major Depressive Disorder

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Objective Suicide stands as a significant adverse outcome within the realm of Major Depressive Disorder (MDD), exerting profound impacts on individuals, families, and society at large. Produce and validate a machine-learning predictive model for predicting the risk of post-suicide attempts in patients with MDD, which would facilitate timely and effective interventions for high-risk patients

Methods 1718 patients with a first episode of MDD who were not using medication were recruited. Collected data encompassed general information, clinical evaluations, and biochemical parameters. We used Machine Learning to establish a risk prediction model for suicide attempts in patients with MDD

Results The MDD prediction model constructed by screening variables based on the SHAP value significance profile, we identified 8 predictors out of 37 variables, including PANSS positive subscale scores, CGI-S (Clinical General Impression-Severity) scores, HAMA scores, Thyroglobulin antibodies (TgAb), Thyroid Stimulating Hormone (TSH), Age, Hypotension, and Hypertension. The model constructed using these eight predictors showed a good predictive ability with an AUC value of 0.868

Conclusion The integration of eight predictors—PANSS positive subscale score, CGI-S score, HAMA score, TSH, TgAb, age, hypotension, and hypertension—within a risk prediction model showcases efficacy in forecasting suicide risk attempts among MDD patients. This model holds potential to assist clinicians in making informed clinical decisions and fostering discussions with patients, especially concerning crisis interventions for individuals grappling with MDD

关键词: Major depression disorder; Suicide at-

tempts; Machine Learning; prediction model; first-episode and drug naive patients

基底前脑调控社交焦虑的神经环路机制

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目的 对社交场景的焦虑和回避是社交焦虑障碍的典型行为症状,其涉及复杂的神经心理因素。其中,负性社交经历导致社交焦虑行为发生极为常见。然而到目前为止,负性社交经历如何影响大脑功能从而导致社交焦虑行为还很不清楚。

方法 采用条件性社交恐惧 (social fear conditioning, SFC) 模型诱导小鼠社交焦虑行为。采用在体多通道电生理、光纤钙测量等技术揭示基底前脑不同类型神经元在社交焦虑行为发生时的活动情况。结合药理学、光遗传学等神经活动操纵技术研究基底前脑 (Basal forebrain, BF) 及其神经环路在社交焦虑行为调控中的作用。利用脑片膜片钳技术分析基底前脑到外侧缰核 (lateral habenula, LHb) 神经通路在经历条件性社交恐惧造模后兴奋性与突触可塑性变化。

结果 经历 SFC 后小鼠对同类表现出强烈的社交回避与恐惧行为,且不伴随广泛性焦虑样行为,提示小鼠习得了特异性社交焦虑行为。通过在体多通道电生理和光纤钙测量技术发现经历过 SFC 的小鼠在靠近同类小鼠时 BF 内有大量表达 vGluT2 的谷氨酸能神经元被激活,而胆碱能神经元和 GABA 能神经元活动变化不明显。采用神经元类型特异性操纵技术发现只有抑制 vGluT2 神经元可以显著减轻社交焦虑行为症状,说明这群谷氨酸能神经元在社交焦虑表达中发挥重要作用。采用病毒示踪和脑片电生理技术揭示 BF vGluT2 神经元与腹侧被盖区 (ventral tegmental area, VTA) 和外侧缰核 (LHb) 均有密切的结构连接和单突触功能联系。有趣的是,社交焦虑行为发生时 BF vGluT2→LHb 的投射通路被选择性激活,并且特异性抑制 BF vGluT2→LHb 投射通路能够明显降低小鼠的社交焦虑行为,而抑制 BF vGluT2→VTA 的投射作用不明显。此外,在正常未经历 SFC 的小鼠上采用同样的方法抑制 BF vGluT2→LHb 投射通路则不改变小鼠社交行为,提

示负性社交经历可能改变了这条投射通路连接强度。进一步通过脑片膜片钳技术,团队证实了负性社交经历增强了BF vGluT2→LHb 投射通路的突触功能。

结论 该项研究从环路层面和细胞亚群水平提出以基底前脑为中心的社交焦虑表达新机制,对于我们理解社交焦虑疾病的神经基础有重要启示,未来可能会对社交恐惧和社交焦虑疾病的治疗提供新的方向。

关键词: 社交焦虑, 基底前脑, 外侧缰核, 神经环路

Relationship of Mind Wandering Flexibility, Error Monitor and Executive Function in Patients with Obsessive Compulsive Disorder

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Objective This research aim to explore the relationship among mind wandering, error monitor and executive function performance in patients with obsessive-compulsive disorder (OCD)

Methods The modified sustained attention to response task were used to measure the performance of mind wandering in 50 outpatient patients with OCD in task state and its correlation with error monitor, and compared with 47 healthy control subjects

Results (1)The level of mind wandering activity and the variability of mind wandering activity in patients with OCD in sustained attention to response task was significantly higher than that in healthy controls; (2)In the OCD group, the results of correlation analysis showed that the response accuracy of OCD patients in the stop-signal task under Nogo condition was negatively correlated with the degree of mind wandering in the sustained attention to response task task, and could significantly predict the level of mind wandering. On the other hand, the working memory capacity of OCD patients in spatial working memory task was negatively correlated with the mind wandering variability in sustained attention to response task and could significantly

predict the mind wandering variability. (3) The results of abnormal mind wandering activity showed that mind wandering activity was correlated with emotional experience and error monitor performance. In addition, mind wandering variability could be used as a mediator between executive function and error monitor performance

Conclusion The mind wandering activity of patients with obsessive-compulsive disorder is abnormally elevated in both general state and task state, and the abnormal changes are related to the executive function of patients. The maladaptive changes of mind wandering not only affect their emotional experience, but also affect the error monitor performance of patients in task.

关键词: Mind Wandering, Obsessive-Compulsive disorder, Error Monitor

额叶 tDCS 治疗抑郁患者焦虑症状的调控效果与评估靶标研究

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目的 重性抑郁障碍 (Major depressive disorder, MDD) 常伴有焦虑症状, 焦虑严重程度与疾病缓解、自杀风险等密切相关。tDCS 作为一种安全、无创的调控技术, 为 MDD 患者焦虑症状的缓解提供了有效途径。然而, tDCS 治疗抑郁患者焦虑症状的调控效果和疗效评估指标尚不清楚。本研究旨在设计长时程的额叶 tDCS 调控策略, 探究 tDCS 对首发 MDD 患者焦虑症状的调节作用, 结合脑电技术挖掘表征 tDCS 调控焦虑症状效果的客观评估指标, 从而为首发 MDD 患者焦虑症状的治疗给予指导。

方法 研究招募未用药的首发 MDD 患者 18 例, 1:1 随机分为真、伪刺激两组, 分别采集基线、调控 4 周后的焦虑症状量表数据和 40Hz-chirp 听觉稳态响应 (Auditory steady-state response, ASSR) 任务下的脑电数据, 计算量表得分并提取相位加权滞后指数 (Weighted phase lag index, WPLI), 通过组内 (基线、调控 4 周)、组间 (真、伪刺激) 对比分析, 并采用斯皮尔曼相关系数定量分析调控疗效并挖掘疗效评估指标。

结果 通过混合模型重复测量方差分析,发现真、伪刺激组治疗后 HAMA 和 GAD 量表得分显著下降($p < 0.001$),且真刺激组调控后 HAMA 量表分数降低水平优于伪刺激组($p = 0.052$),GAD 量表得分的效能指数高于伪刺激组($p = 0.051$),呈现边缘显著趋势,表明经过治疗后两组患者焦虑症状均有效改善,且真刺激组对焦虑症状的改善效果更优,即额叶 tDCS 调控策略可有效治疗抑郁症患者的焦虑症状。提取并分析脑电 WPLI 特征,发现真刺激组调控 4 周后,左侧额叶与右侧颞叶及右侧额叶与右侧颞叶的连通性显著增强($p < 0.05$),表明 tDCS 可以调节靶向刺激脑区与听觉皮层之间的信息交流能力。相关性分析发现,真刺激组左侧额叶与右侧颞叶间的 WPLI 值与其 GAD-7 量表总分($p < 0.05$)、HAMA 量表总分均呈现显著的负相关($p < 0.05$),右侧额叶与右侧颞叶间的 WPLI 值与其 HAMA 量表总分呈现显著的负相关($p < 0.001$),说明随着焦虑症状缓解,患者在 40 Hz-chirp 刺激下其两侧额叶与右侧颞叶区域间的听觉信息交流能力增强,推测 40 Hz-chirp 刺激下两侧额叶与右侧颞叶区域的 WPLI 可作为 MDD 患者焦虑症状调控效果客观评估指标。

结论 本研究结果表明额叶 tDCS 可有效缓解首发 MDD 患者的焦虑症状,40 Hz-chirp 刺激下两侧额叶与颞叶区域的 WPLI 有望成为 MDD 患者焦虑症状的有效评估指标。

关键词:经颅直流电刺激,重性抑郁障碍,焦虑症状,效果,评估靶标

MPFC→BNST→PVN 神经环路介导青春期小鼠社会隔离引起的情绪和心功能障碍

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目的 本研究旨在揭示不同社会隔离应激模式对青春期小鼠情绪和心血管功能的影响,探讨社会隔离应激后 mPFC、BNST、PVN 等亚区神经元活动的变化,以及 mPFC→BNST→PVN 神经环路在社交隔离应激诱导的情绪和心功能障碍中的作用机制。

方法 3 周龄的 C57 小鼠经历 2 周或 6 周的社会隔离应激。采用旷场实验、高架十字迷宫实验和

新奇抑制摄食实验评价小鼠的焦虑样行为。采用强迫游泳实验和悬尾实验评价小鼠的抑郁样行为。采用三箱社交实验评价小鼠的社交行为。采用免疫荧光法检测 mPFC、BNST 和 PVN 神经元的激活情况和神经元类型。采用超声心动图检测小鼠心功能指标,DSI 遥测系统检测小鼠的血压、心率和核心体温。逆行示踪病毒法验证 mPFC→BNST→PVN 神经环路,采用化学遗传学或光遗传学调控该环路,观察对情绪和心功能的作用。

结果 社交隔离 6 周的小鼠产生抑郁、焦虑样行为,社交功能障碍增加,社交隔离 6 周加剧了心肌梗死小鼠心功能障碍。社交隔离应激降低了 mPFC 和 BNST 神经元的活性,增加了 PVN 神经元的活性。化学遗传激活 mPFC→BNST 的谷氨酸能投射可以缓解社交隔离应激引起的行为异常。

结论 社交隔离应激可导致情绪、认知相关脑区如 mPFC 和 BNST 的功能损害,并通过作用于 PVN 等自主神经中枢调节心血管功能。mPFC→BNST→PVN 神经环路在青春期小鼠社交隔离应激引起的情绪障碍和心功能障碍中发挥重要作用。

关键词:社交隔离;焦虑;抑郁;心功能;mPFC;BNST;PVN

腹侧海马-基底外侧杏仁核环路调节非条件性刺激唤起诱导的远期恐惧记忆再巩固

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目的 恐惧记忆反复闪现会产生恐惧情绪失调,诱发创伤后应激障碍(post-traumatic stress disorder, PTSD)等精神疾病。各种现实因素导致 PTSD 患者很难在创伤记忆形成之初立即得到治疗,所以临床中需要干预的往往是顽固的远期恐惧记忆。相比于近期恐惧记忆,远期恐惧记忆常伴随多习得线索、难以消除且研究相对较少。与正常的学习记忆过程一样,短时暴露于恐惧记忆相关线索能唤起记忆进入不稳定的再巩固过程,再巩固时间窗内的有效干预能够改写记忆,从而达到治疗 PTSD 等精神疾病的目的。相比于传统的条件性刺激(Conditioned Stimulus, CS)唤起,非条件性刺激(Unconditioned

Stimulus, US) 可以唤起所有 CS 与该 US 的关联性记忆, 从而更彻底且持久地破坏病理性记忆。研究表明, 基底外侧杏仁核 (Basolateral Amygdala, BLA) 在 US 唤起诱导恐惧记忆再巩固中十分重要, 而 US 唤起诱导远期恐惧记忆再巩固的神经环路机制并不明确。因此, 本研究猜测存在投射至 BLA 的神经环路特异性调控 US 唤起诱导远期恐惧记忆的再巩固。

方法 本研究采用环境恐惧记忆模型、免疫荧光、病毒示踪、光纤记录、化学遗传学等方法, 从脑区和环路水平探索 US 唤起诱导远期恐惧记忆再巩固的神经机制。

结果 1) 通过免疫荧光染色, 分析不同唤起形式诱导近期和远期恐惧记忆再巩固激活的脑区, 确定目标上游脑区为前边缘皮质 (Prelimbic cortex, PL) 和腹侧海马 CA1 (ventral hippocampus CA1, vCA1); 2) 通过病毒示踪、光纤记录等, 发现 PL-BLA 谷氨酸能投射参与 CS 和 US 唤起诱导远期恐惧记忆再巩固, 而 vCA1-BLA 谷氨酸能投射只参与 US 唤起诱导远期恐惧记忆再巩固; 3) 在远期恐惧记忆再巩固时间窗内, 相比于 PL-BLA 谷氨酸能投射, 化学遗传学抑制 vCA1-BLA 谷氨酸能投射能够破坏 US 唤起诱导远期恐惧记忆的再巩固且具有长期效应, 而激活该投射能够挽救普萘洛尔对于远期恐惧再巩固的破坏作用。

结论 本研究揭示了 vCA1-BLA 谷氨酸能投射调控 US 唤起诱导远期恐惧记忆再巩固的神经机制, 从学习记忆角度为临床治疗 PTSD 等精神疾病提供新途径。

关键词: 远期恐惧记忆, 非条件性刺激, 再巩固, 基底外侧杏仁核, 腹侧海马

脑多靶点电刺激调控技术治疗抑郁症的动物研究

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目的 脑深部电刺激 (deep brain stimulation, DBS) 是一种很有前景的治疗重度抑郁症的优化替代疗法, 通过定向调节不同靶点实现抗抑郁作用, 改善了以往脑损伤手术对患者的伤害, 在临床中已被广泛使用。然而, 对于 DBS 治疗抑郁症的最佳靶

向脑区、最优刺激参数及其潜在神经生物学机制仍不明确, 亟需临床前研究探寻更为安全有效的治疗方案。

方法 本研究采用慢性不可预见性应激 (chronic unpredictable stress, CUS) 动物模型, 将研发的植入式脑多靶点电刺激装置的多通道电极分别及同时植入腹内侧前额叶皮层 (ventromedial prefrontal cortex, vmPFC) 和外侧缰核 (lateral habenula, LHb)、或者 vmPFC 和内侧前脑束 (medial forebrain bundle, MFB), 各电极独立设置刺激参数, 通过糖水偏爱测试、旷场测试、高架十字迷宫测试、新颖环境抑制摄食测试、强迫游泳测试等行为学评价以及蛋白免疫印迹、免疫荧光等方法, 探索多种匹配刺激模式对于大鼠抑郁样行为的交互调控效应及机制。

结果 脑深部联合电刺激 vmPFC (130Hz, 90 μ s, 100 μ A) 和 LHb (130Hz, 60 μ s, 150 μ A) 具有明显的抗抑郁作用, 能够显著改善 CUS 大鼠的抑郁样行为, 表现为增加大鼠的糖水偏爱值、降低大鼠在强迫游泳测试中的不动时间, 同时显著改善 CUS 大鼠的焦虑样行为, 表现为增加大鼠在旷场中心的停留时间、减少大鼠在新颖环境摄食测试中的摄食潜伏期、减少大鼠在高架十字测试中的闭臂停留时间。但脑深部联合电刺激 vmPFC (130Hz, 90 μ s, 100 μ A) 和 MFB (130Hz, 90 μ s, 200 μ A) 对大鼠的抑郁样和焦虑行为没有显著的改善作用。

结论 脑深部联合电刺激 vmPFC 和 LHb 显著改善了生理状态和慢性应激状态下大鼠的抑郁样和焦虑样行为, 为优化多靶点联合电刺激治疗抑郁症方案提供了坚实的理论依据。

关键词: 脑深部联合电刺激, 抑郁, 焦虑, 腹内侧前额叶皮层, 外侧缰核

氯马斯汀通过逆转脱髓鞘改善青春期社会隔离小鼠的情绪和社交障碍

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目的 自疫情以来的社会隔离对人们的身心健康产生了巨大影响。青春期是社会经验依赖性少突胶质细胞成熟和髓鞘形成的关键时期, 易受到环境

应激和压力的影响。青春期应激易导致大脑结构和功能发生不可逆转的变化,并导致成年后的持久情绪和社交障碍。然而,青春期社会隔离应激与情绪、社交能力之间的分子机制在很大程度上仍然未知。

方法 本研究通过构建社交隔离小鼠模型而后进行一系列评估社交、焦虑、抑郁行为的范式及超声发声检测,探究其情绪和社交能力的改变。使用 RT-QPCR、免疫印迹、免疫荧光分析内侧前额叶和海马及其亚区的髓鞘变化水平。而后使用 14 天给药氯马斯汀的药理学方法恢复髓鞘形成。

结果 (1) 青春期社会隔离小鼠超声发声模式改变。(2) 青春期社会隔离应激降低小鼠前额叶皮层和海马的髓鞘水平,髓鞘相关基因表达减少且髓鞘结构破坏。(3) 氯马斯汀可以逆转青春期社会隔离小鼠的焦虑和抑郁样行为。(4) 氯马斯汀恢复青春期社会隔离小鼠损伤的社交记忆能力及超声发声模式。(5) 氯马斯汀促进青春期社会隔离小鼠髓鞘形成与再生。

结论 本研究揭示了青春期社会隔离应激造成的情绪、社交障碍的前额叶皮层与海马的脱髓鞘机制,对深刻理解青春期的脑发育与行为特征有重要意义。并且对抑郁症、焦虑症等精神疾病的预防与治疗提供了靶向髓鞘的新靶点。

关键词: 青春期社会隔离;抑郁;焦虑;髓鞘化;氯马斯汀;

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Neuroimaging Alterations of Amygdala Associated with Social Dysfunction in Deficit Schizophrenia

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Objective Abnormalities in the structure and function of the amygdala have been identified in patients with schizophrenia, its role in negative symptoms and social functioning remains unclear. This study aims to investigate the relationship between functional abnormalities of the amygdala and social dysfunction in deficit schizophrenia

Methods The study enrolled a total of 53 individuals with deficit schizophrenia (DS), 76 with non-deficit schizophrenia (NDS), and 76 healthy controls (HCs) matched for age, education, and gender. The Brief Negative Symptom Scale scores were utilized to quantify negative symptoms in patients, while the Scale of Social function in Psychosis Inpatients was employed to assess their social functioning. Additionally, a battery of classic neurocognitive tests was administered to evaluate cognitive functions. Structural and functional MRI data were collected from all participants. Functional connectivity (FC) analysis was constructed using amygdala subregions as seed points. Correlation analysis was conducted to investigate the relationship between altered brain features of the amygdala and social functioning in DS. Furthermore, the correlation between the altered FC and densities of neurotransmitter receptors/transporters was detected

Results This study revealed that the volume of the left amygdala was significantly smaller in DS than in NDS and HCs. Compared to the NDS group, the strength of functional connectivity between the ventral portion containing portions of basolateral of the lateral nuclei of left amygdala (LaV/BL.L) and the left paracentral lobule (PCL.L) was significantly decreased in DS. The reduced volume of the left amygdala was found

to be positively correlated with social dysfunction in DS. The altered FC between LaV/BL.L and PCL.L was positively correlated with social dysfunction and metabolic glutamate receptor type 5 density in DS group

Conclusion The structural and functional abnormalities observed in the left amygdala subregion may play a crucial role in the social impairment in DS, providing novel insights into potential treatments for improving social functioning and quality of life in deficit schizophrenia.

关键词: Deficit schizophrenia; Negative Symptoms; Social functioning; Functional connectivity; Amygdala

Aberrant Brain Functional Connectivity Mediates The Effects of Negative Symptoms on Cognitive Function in Schizophrenia: A Structural Equation Model

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Objective Schizophrenia is a severe psychiatric disorder, characterized by positive symptoms, negative symptoms, and cognitive deficits. Elucidating the mechanism of negative symptom and cognitive deficits could contribute to the treatment and prognosis of schizophrenia. We hypothesized that abnormal functional connectivity would be involved in the indirect effects of negative symptoms on cognitive function

Methods A total of 150 schizophrenia patients and 108 healthy controls matched for age and education were enrolled in the study. The scores of Brief Negative Symptom Scale (BNSS) were divided into two factors: motivation and pleasure deficits (MAP) and diminished expression (EXP). Subsequently, a series of classic neurocognitive tests were used to evaluate cognitive functions. Resting-state fMRI data was collected from all participants. The Anatomical Automatic Labeling template was employed to establish regions of interest (ROIs), thereby constructing the functional connectivity

network across the entire brain. Eventually, scores of patients' negative symptoms scale, cognitive function, and strengths of abnormal functional connectivity were incorporated into a structural equation model to explore the interactions among variables

Results MAP exhibited a distinctly and significantly negative impact on cognitive function. The functional connectivity between the left insula and left precuneus (PCUN.L), along with that between the PCUN.L and right angular gyrus, collectively served as intermediaries, contributing to the indirect effects of MAP and EXP on cognitive function

Conclusion Our findings demonstrated the moderating role of aberrant brain functional connectivity between negative symptoms and cognitive function, providing valuable insights for investigating the pathogenesis of schizophrenia.

关键词: Schizophrenia; Negative Symptoms; Functional connectivity; Cognitive function; Structural equation model

Phenome-wide Investigation of Bidirectional Causal Relationships between Major Depressive Disorder and Common Human Diseases

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Objective The high comorbidity of major depressive disorder (MDD) with other diseases has been well-documented. However, the pairwise causal connections for MDD comorbid networks are not well characterized

Methods We performed Phenome-wide Mende-

lian randomization (MR) analyses to explore bidirectional causal associations between MDD (N = 807,553) and 877 common diseases from FinnGen datasets (N = 377,277). The inverse variance weighting method was the primary technique, and other methods (weighted median and MR-Egger) were used for sensitivity analyses

Results Our MR analyses showed that MDD is causally associated with the risk of 324 disease phenotypes (average b: 0.339), including 46 psychiatric and behavioral disorders (average b: 0.618), 18 neurological diseases (average b: 0.348), 44 respiratory diseases (average b: 0.345), 40 digestive diseases (average b: 0.281), 18 circulatory diseases (average b: 0.237), 37 genitourinary diseases (average b: 0.271), 66 musculoskeletal and connective diseases (average b: 0.326), 22 endocrine diseases (average b: 0.302), and others. In a reverse analysis, a total of 51 diseases were causally associated with the risk of MDD (average b: 0.086), including 5 infectious diseases (average b: 0.056), 11 neurological diseases (average b: 0.106), 14 oncological diseases (average b: 0.108), and 5 psychiatric and behavioral disorders (average b: 0.114). Bidirectional causal associations were identified between MDD and 15 diseases. For most MR analyses, little evidence of heterogeneity and pleiotropy was detected

Conclusion Our findings substantiate the extensive and substantial causal effects of MDD on human diseases, which were more pronounced than those seen in the reverse analysis of the causal influences of other diseases on MDD.

关键词: Major depressive disorder; GWAS; Phe-nome-wide; Mendelian randomization; FinnGen

Relationship Between Sphingomyelin and Risk of Alzheimer's Disease: A Bidirectional Mendelian Randomization Study

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Objective This study employed a two-sample

Mendelian Randomization (TSMR) approach to investigate the potential causal relationship between sphingomyelin (SM) and Alzheimer's disease (AD)

Methods Data was extracted from the Genome Wide Association Study (GWAS) database. The primary method of analysis was the Inverse Variance Weighted (IVW) method, supplemented by the Weighted median, Weighted mode, and MR Egger methods. The bidirectional causal relationship between SM and AD was evaluated using OR values with a 95% Confidence Interval (95%CI)

Results The study found a bidirectional positive correlation between SM and AD. On one hand, SM was indicated as a risk factor for AD [IVW(MRE): OR: 1.001, 95%CI: 1.000 to 1.002; P=0.020<0.05]. This was further confirmed by IVW(FE) [OR: 1.001, 95%CI: 1.001 to 1.002; P=3.36e-07<0.05] and MR Egger [OR: 1.002, 95%CI: 1.000 to 1.004; P=0.036<0.05]. On the other hand, AD was shown to lead to an increase in SM [IVW(MRE): OR: 5.64e+08, 95%CI: 1.69e+05 to 1.89e+12; P=1.14e-06<0.05]. This causal relationship was also consistently indicated by IVW(FE), MR Egger, Weighted median, and Weighted mode methods

Conclusion A bidirectional positive correlation between SM and AD was found. On one side, increased SM is associated with a higher risk of AD onset. On the other side, AD can further elevate SM levels, potentially exacerbating the progression of AD. This research not only provides new clinical insights for the prevention and treatment of AD but also offers a theoretical basis for drug development

关键词: Sphingomyelin; Alzheimer's Disease; Bi-directional Mendelian Randomization; Genome-Wide Association Study; Relationship

Progress in Magnetic Resonance Spectroscopy of Brain Metabolism in Late-life Depression

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Objective This systematic review analyzed the available evidence on Magnetic Resonance Spectroscopy (MRS) in Late-life depression (LLD), focusing on MRS-associated brain metabolites and clinical studies in LLD, particularly with cognitive impairment

Methods PubMed, Embase, Web of science, Cochrane, and gray literature were systematically screened for studies deemed fit for the purpose of the current systematic review

Results In most studies, patients with Late-Life Depression (LLD) are characterized by a decrease in NAA/Cr levels in the frontal cortex, which is correlated with depressive symptoms and cognitive function. LLD also shows elevated mI levels in the frontal cortex, decreased NAA levels in the cingulate cortex and hippocampus, and increased Cho/Cr and mI/Cr ratios in the left basal ganglia area. There is some overlap in the changes of mI in the frontal cortex, hippocampus, and cingulate cortex NAA/Cr levels between LLD and Mild Cognitive Impairment (MCI) patients

Conclusion The decrease in frontal cortex NAA/Cr is closely associated with depressive symptoms and cognitive function, while the changes in hippocampus and cingulate cortex NAA/Cr levels overlap between LLD and MCI patients, suggesting that NAA/Cr may have greater diagnostic value in the cognitive symptoms of LLD

关键词: Late-life depression, magnetic resonance spectroscopy, cognitive impairment

Research on A-Synuclein As A Biomarker in Alzheimer's Disease

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Objective This study aims to explore the potential application of α -synuclein (α -Syn) as a biomarker for Alzheimer's Disease (AD) and its role in the diagnosis and progression of the disease. Specific objectives include

1. Determining the expression levels of α -Syn in

the cerebrospinal fluid (CSF) of AD patients and their relationship with cognitive function changes. Previous research indicates that the levels of α -Syn in the CSF of AD patients are significantly elevated and correlate with cognitive decline.

2. Assessing the differential expression of α -Syn species (such as total α -Syn, oligomers, and phosphorylated forms) in AD patients and their diagnostic value. Studies have shown that different forms of α -Syn exhibit distinct expression patterns in the CSF of AD patients, which may provide a basis for further classification and diagnosis of AD.

3. Investigating the interaction between α -Syn and other AD-related proteins (such as A β and tau proteins) and their role in the pathology of AD. Research suggests that α -Syn may interact with A β and tau proteins, potentially exacerbating the pathological progression of AD.

4. Evaluating the incidence and clinical impact of α -Syn comorbidity in AD patients using α -Syn seeding amplification assay (α S-SAA) technology. Existing studies indicate that α S-SAA technology effectively detects α -Syn comorbidity in AD patients and is associated with poorer clinical outcomes.

Methods Sample Selection: The study subjects will include patients diagnosed with AD and a healthy control group. AD patients will be screened according to clinical diagnostic criteria and core biomarkers (such as A β and tau proteins) to ensure the accuracy and representativeness of the samples

Experimental and Control Group Setup: The experimental group will comprise AD patients at various stages (such as the preclinical stage, mild cognitive impairment stage, and dementia stage) to evaluate changes in α -Syn across different disease stages. The control group will include healthy individuals and patients with other neurodegenerative diseases (such as Parkinson's Disease and Lewy Body Dementia) to investigate the specificity of α -Syn in AD.

Sample Collection and Processing: All study subjects will undergo cerebrospinal fluid (CSF) and blood sample collection. CSF samples will be used for α -Syn detection, employing techniques such as α -Syn seeding amplification assay (α S-SAA) and real-time quaking-induced conversion (RT-QuIC) to enhance detection

sensitivity and specificity. Blood samples will be used for routine biochemical analysis and genetic testing.

Data Analysis: Experimental data will be analyzed using statistical methods to compare differences in α -Syn levels among different groups. Special attention will be given to the correlation between α -Syn positivity and cognitive function, behavioral disorders, and disease progression in AD patients. Additionally, the relationship between α -Syn and other AD biomarkers (such as A β and tau proteins) will be explored to assess its supplementary value in AD diagnosis.

Study subjects include AD patients, healthy controls, and patients with other neurodegenerative diseases. AD patients are categorized into different stages, including the preclinical, early, and dementia stages. Sample collection primarily involves obtaining cerebrospinal fluid (CSF) samples via lumbar puncture, and blood samples are also collected for subsequent analysis. All sample collections require informed consent from patients or their guardians and must adhere to the approval of the ethics committee.

Methods for Detecting α -Synuclein

1. α -Syn Seeding Amplification Assay (α S-SAA): This technique involves adding known α -Syn seeds to the CSF and observing their amplification. It is highly sensitive in detecting the presence of α -Syn in CSF and assessing its seeding activity .

2. Real-Time Quaking-Induced Conversion (RT-QuIC): RT-QuIC technology is used to detect α -Syn seeding activity in CSF and olfactory mucosa. This method induces α -Syn aggregation through oscillation, thereby detecting its presence in various samples .

3. Western Blot: Western Blot technique is employed to detect different forms of α -Syn in CSF samples, including total α -Syn, oligomers, and phosphorylated α -Syn. After protein extraction, SDS-PAGE electrophoresis, and membrane transfer, specific antibodies are used for detection .

4. Enzyme-Linked Immunosorbent Assay (ELISA): ELISA is utilized to quantitatively measure the concentration of α -Syn in CSF. This method involves an antigen-antibody reaction, coupled with an enzyme label for colorimetric detection, with the concentration of α -Syn ultimately calculated based on optical density values .

Results Firstly, we anticipate a significant elevation of α -Syn in the CSF of AD patients. Previous studies have demonstrated that α -Syn levels in the CSF of AD patients are markedly higher than those in control groups, correlating closely with cognitive decline, visuospatial impairment, and behavioral abnormalities. This finding will further support the potential of α -Syn as a biomarker for AD and provide a basis for its application in clinical diagnosis

Secondly, we expect to detect a positive response of α -Syn through the α -Syn seed amplification assay (α S-SAA) in AD patients. Existing research indicates that the positivity rate of α S-SAA in AD patients is approximately 30%, significantly higher than the 9% observed in control groups. This result will validate the efficacy of α S-SAA in AD diagnosis and may elucidate the connection between α -Syn and AD pathology.

Furthermore, we anticipate that in the brain tissue of AD patients, α -Syn is predominantly localized in lipid-rich regions and associated with amorphous elements within mature core AD plaques. This discovery will further elucidate the specific mechanisms of α -Syn in AD pathology and may offer new perspectives for understanding the progression of AD.

We also expect interactions between α -Syn and other key proteins such as A β and tau in AD patients. Previous studies have shown that the co-accumulation of A β and α -Syn in AD and Parkinson's disease (PD) patients may lead to more severe pathological manifestations. This finding will support the multifaceted role of α -Syn in AD and might provide a basis for developing integrated therapeutic strategies targeting multiple proteinopathies.

Conclusion The anticipated outcomes of this study will significantly advance our understanding of the mechanisms by which α -Syn functions in AD and provide robust scientific evidence for its clinical application as an AD biomarker. These findings will not only facilitate early diagnosis and disease monitoring but may also offer crucial insights for the development of novel therapeutic strategies. By delving into the relationship between α -Syn and AD pathology, we hope to uncover further critical details about the pathogenesis of AD, thereby propelling research progress in this field

关键词: Alzheimer's Disease, α -synuclein, α -Syn seeding amplification assay, biomarker, cerebrospinal fluid

外周血细胞因子对首发抑郁障碍及其严重程度的预测价值

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目的 探究外周血细胞因子及临床数据与首发抑郁障碍及其症状严重程度的预测价值。

方法 前瞻性纳入 2020.7 至 2024.3 在浙江省人民医院进行心理评估的人群,分别收集临床数据、完成汉密尔顿抑郁量表-24 项 (HAMD-24) 量表评估,定量检测 12 项外周血细胞因子并对数化处理,包括白细胞介素(Interleukin, IL) -1 β 、IL-2、IL-4、IL-5、IL-6、IL-8、IL-10、IL-12p70、IL-17、肿瘤坏死因子 (Tumor necrosis Factor, TNF) - α 、干扰素 (Interferon- α , IFN) - α 、IFN- γ 。根据是否被诊断为首发抑郁障碍分为对照组 60 例和抑郁组 120 例,将抑郁组根据 HAMD-24 评分标准分为可能有轻度抑郁组、轻至中度抑郁组、重度抑郁组。比较对照组和抑郁组组间差异,采用 Spearman 相关分析抑郁症状严重程度与一般临床资料及血清细胞因子的相关性,构建多元线性回归模型分析首发抑郁障碍严重程度的影响因素,采用二元 logistic 回归模型分析首发抑郁障碍及首发重度抑郁障碍的影响因素并绘制 ROC 曲线评估模型效能。

结果 抑郁组与对照组组间 12 项外周血细胞因子相对浓度存在显著差异; Spearman 相关分析显示抑郁症状严重程度与 IL-1 β 、IL-2、IL-4、IL-5、IL-6、IL-8、IL-12p70、IL-17、TNF- α 、IFN- α 、IFN- γ 呈正相关。多元线性回归分析模型显示,抑郁严重程度 44% 变异率可用 lgIL-4、lgTNF- α 、lgIFN- α 解释。二元 logistic 回归模型显示教育年限、lgIL-2、lgIL-4、lgIL-12p70、lgIL-17、lgIFN- α 是首发抑郁障碍的独立危险因素,lgIL-5、lgIL-6 是首发重度抑郁障碍的独立危险因素。

结论 与健康人群相比,首发抑郁障碍患者外周血血清 12 项外周血细胞因子水平均显著升高。首

发抑郁障碍严重程度与 IL-1 β 、IL-2、IL-4、IL-5、IL-6、IL-8、IL-12p70、IL-17、TNF- α 、IFN- α 、IFN- γ 呈正相关,变异率可用 lgIL-4、lgTNF- α 、lgIFN- α 解释。调整混杂因素后发现,教育年限、lgIL-2、lgIL-4、lgIL-12p70、lgIL-17、lgIFN- α 是首发抑郁障碍的独立危险因素,lgIL-5、lgIL-6 是首发重度抑郁障碍的独立危险因素。

关键词: 抑郁障碍, 细胞因子, 免疫炎症

Genetically Predicted Emotion and Function in Colorectal Cancer The Causal Relationship Between Mood Disorders and Colorectal Cancer: A Mendelian Randomization Study

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Background Colorectal cancer (CRC) is a common tumor disease with high incidence that affects dozens of million people around the world. In the last decade, numerous studies have demonstrated the non-negligible role played by mental disorders in the pathogenesis process of cancer diseases. But the evidence of causal relationship between mood disorders and CRC is still sparse in human population. To evaluate the potential causal association between mood disorders and CRC

Methods We conducted a genome-wide association study (GWAS) summary statistic based two-sample Mendelian randomization (MR) study. The study utilized summary statistics of three mood disorders including bipolar disorder (BD), major depressive disorder (MDD) and ever had period of mania/excitability were used as exposure samples respectively, and summary statistics of CRC was used as outcome sample. Four popular MR methods, including the IVW test, the MR-Egger regression, the weighted median estimator and MR-Robust Adjusted Profile Score (MR-RAPS), were used for the MR analysis

Results Based on the IVW method while the other methods served as its complement. We found that BD [IVW-fixed: OR=1.01, CI=1.00-1.01, P=0.05;

IVW-random: OR=1.01, CI=1.00-1.01, P=0.04] and MDD [IVW-fixed: OR=1.54, CI=1.17-2.02, P=0.002; IVW-random: OR=1.54, CI=1.23-1.92, P=0.0001] were causal associated with CRC detected by IVW. The same results were also identified by at least one other MR methods. While, there was no causal relationship found between ever had period of mania/excitability and CRC

Conclusion Our findings provided insights into the potential causal relationship from BD and MDD to CRC, and enhanced our understanding of the role of mood disorders played in the occurrence and development of CRC

关键词: Mendelian randomization, colorectal cancer, bipolar disorder, causal relationship.

重度神经认知障碍患者多组分运动方案的应用研究

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目的 探究 Vivifrail 多组分运动干预方案在重度神经认知障碍患者中的应用及效果。

方法 采用类实验性研究,选取 2021 年 6 月—2022 年 6 月在浙江省衢州市精神专科医院住院的重度神经认知障碍患者 52 例作为研究对象, A 病房为试验组 (26 例), B 病房为对照 (26 例), 试验组在常规护理的基础上给予为期 12 周的 Vivifrail 多组分运动, 对照组采用常规护理。在干预前后均采用简易体能状况量表 (Short Physical Performance Battery, SPPB)、“起立-行走”计时测试 (Timed "Up and Go" Test, TUGT)、6 min 步行试验 (6 Minutes Walking Test, 6MWT)、椅子坐位体前屈 (Chair Sit and Reach, CSR) 测试等评估两组的躯体功能。

结果 干预 12 周后, SPPB 总分 ($t=-4.312$, $P<0.001$)及其 3 个测试维度——平衡测试 ($t=-3.029$, $P=0.004$)、4 m 步速测试 ($t=-3.972$, $P<0.001$)、椅子坐立测试 ($t=-2.912$, $P=0.005$)、CSR 测试结果 ($t=-3.446$, $P=0.001$) 两组间差异有统计学意义。重复测量方差分析结果显示, 两组患者所有指标均有交互效应 ($P<0.001$), 除 SPPB 的 4 m 步速测试外, 其余

指标的时间效应均有统计学意义 ($P<0.05$), 组间效应有统计学意义的变量有 SPPB 平衡测试、CSR 测试 ($P<0.05$)。

结论 Vivifrail 多组分运动可显著改善重度神经认知障碍患者的平衡功能、步行速度、肌肉力量、柔韧性等躯体功能, 但对躯体灵活性及心肺功能的改善不明显。

关键词: Vivifrail; 多组分运动; 重度神经认知障碍; 躯体功能

中文版淡漠评定量表信效度研究

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目的 对淡漠评定量表-医生版 (Apathy Evaluation Scale-Clinician, AES-C) 进行汉化, 并检验其在阿尔茨海默病 (Alzheimer disease, AD) 患者中的信效度。

方法 遵循 Brislin 翻译模型, 对英文版 AES-C 量表进行翻译、回译、跨文化调适和预调查, 最终形成中文版 AES-C。招募 111 名 AD 患者进行调查, 2 周后对其中随机 30 名进行重测。运用临界比值法对量表进行项目分析, 采用计算条目水平的内容效度指数 (I-CVI) 与量表水平的内容效度指数 (S-CVI) 计算内容效度, 采用探索性因子分析和验证性因子分析检验结构效度, 通过内部一致性信度 (Cronbach's α 系数) 和重测信度法检验信度。

结果 项目分析各条目 CR 值均 >3.000 ($P<0.01$)。经专家一致讨论内容效度后删除低相关条目, I-CVI 和 S-CVI 均为 1.000。KMO 值为 0.722, Bartlett's 球形检验 $\chi^2=621.286$ ($df=55$), $P<0.01$ 。总共提取 4 个公因子, 方差贡献率为 33.0%、15.3%、15.1%、14.9%, 累计方差贡献率为 78.4%。验证性因子分析显示, RMSEA=0.084、 $\chi^2/df=1.778$ 、TLI=0.928、GFI=0.906、CFI=0.950、IFI=0.952, 该模型所有指标均符合模型拟合标准。Cronbach's 系数为 0.809, 重测信度系数为 0.928。

结论 中文版淡漠量表医生版在 AD 中具有良好的信度和效度。

关键词: 淡漠量表; 汉化; 信度; 效度; 阿尔茨海默病

Exploring The Association Between BIN1 Gene Polymorphisms and Hippocampal Subfield Volume in Community Mild Cognitive Impairment

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Objective Alzheimer's disease (AD) is a progressive neurodegenerative brain disorder characterized by dementia, cognitive impairment, memory loss, and severe behavioral abnormalities. Despite ongoing research efforts, there is currently no identified effective treatment for AD. Mild cognitive impairment (MCI) often presents in the preclinical phase of AD, while prodromal AD signifies the earliest symptomatic stage with cognitive symptoms that do not meet the criteria for a dementia diagnosis. The annual conversion rate of MCI to AD is estimated to range from 15.4% to 33.4%. Once AD is diagnosed, it undergoes an irreversible neurodegenerative progression. Therefore, early and accurate diagnosis of MCI is crucial. BIN1 is identified as the principal susceptibility gene for the pathogenesis of Alzheimer's disease, second only to the APOE gene. This gene encodes a scaffolding protein that is highly expressed in the brain and muscle, contributing to various cellular processes such as endocytosis, translational regulation, and signal transduction. In individuals with AD, there is an increased expression of BIN1 in the brain. The exacerbation of tau pathology is influenced by the interaction between the SH3 domain of BIN1 and the proline-rich domain in tau. BIN1 SNPs rs10200967, rs1060743, and rs4663093 have been associated with both AD and MCI, although the specific mechanisms underlying these associations remain unclear. This study seeks to elucidate the neurological mechanisms by which BIN1 gene polymorphisms may impact the development of MCI. Through the integration of BIN1 gene polymorphisms with structural MRI analysis, we

aim to investigate the prevalence of BIN1 gene polymorphisms within the MCI and cognitively normal (CN) populations in our region. Furthermore, this study aims to investigate the correlation between BIN1 genotype and the structural integrity of hippocampal subregions in individuals with MCI

Methods This study enrolled a total of 52 elderly individuals with MCI and 55 cognitively CN individuals from five communities in Zhongshan Torch Development Zone. Blood samples were collected for analysis of BIN1 rs10200967, rs1060743, and rs4663093 gene polymorphisms, and MRI scans were conducted to assess the volume of hippocampal subregions. The study also seeks to examine the distribution of BIN1 genotypes rs10200967, rs1060743, and rs4663093 in both MCI and healthy control populations, as well as to investigate the potential association between BIN1 rs10200967, rs1060743, and rs4663093 genotypes and hippocampal subregion structure in individuals with MCI

Results Significant structural atrophy was observed in multiple hippocampal subregions, including ICA, IDG, IHATA, lSubc, rCA, rDG, rSubc, lHIP, and rHIP in seniors with MCI compared to those in the CN ($P < 0.05$), after adjusting for age, gender, education level, and APOE ϵ 4 status. Conversely, no significant differences were observed in IEC, rEC, rHATA, and TIV ($P > 0.05$). Notably, there were no significant differences in the distribution of BIN1 rs10200967, rs1060743, and rs4663093 genotypes among elderly individuals ($P > 0.05$). Furthermore, the association between the BIN1 rs10200967 genotype and IHATA atrophy significant in the MCI after adjusting for age, gender, education level, APOE ϵ 4 status, and TIV ($P < 0.05$)

Conclusion This study presents novel findings indicating an association between the BIN1 rs10200967 genotype and IHATA atrophy, with the rs10200967 CC genotype showing a higher volume of IHATA in individuals with MCI. These results suggest that the rs10200967CC genotype may confer a protective effect against MCI, offering a potential basis for early detection and prevention of AD.

关键词 : Mild cognitive impairment, BIN1, rs10200967, Hippocampal subfield volumes, IHATA

Causal Relationship between Psychiatric Disorders and Venous Thromboembolism: A Bidirectional Two-sample Mendelian Randomization Analysis

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Objective This study aims to explore the causal relationship between psychiatric disorders (including schizophrenia, bipolar disorder and major depressive disorder) and venous thromboembolism (VTE) using mendelian randomization (MR) analysis

Methods We used available summarized data from the most recent and largest genome-wide association studies (GWASs) on psychiatric disorders and VTE to conduct a bidirectional two-sample MR. The inverse-variance weighted (IVW) method was used as the main statistical method to estimate the potential bidirectional causal associations between psychiatric disorders and VTE. Various MR analysis methods, including MR-Egger, weighted-median, and leave-one out analyses, were used for sensitivity analysis, followed by heterogeneity tests

The most recent and largest genome-wide association studies (GWASs) on psychiatric disorders and VTE were used to conduct a bidirectional two-sample MR. The inverse-variance weighted (IVW) method was used as the main statistical method to investigate the causal relationship, and the Various MR analysis methods, including MR-Egger, weighted-median, and leave-one out analyses, were used for sensitivity analysis and heterogeneity tests.

Results The lack of sufficient estimation results could suggest a causal relationship between major depressive disorder (MDD) and VTE in the forward MR analysis. The causal odds ratio (OR) estimate of genetically determined MDD was 1.47 for VTE using IVW [95% confidence interval (CI) : 1.07-2.00, P = 0.016].

No pleiotropy or heterogeneity was detected in the analyses. However, we failed to find any association between schizophrenia, bipolar disorder and VTE

Conclusion Our findings provided genetic evidence that MDD was associated with an increased risk of VTE. This may offer opportunities to prevent and manage VTE in psychiatric disorders.

关键词: Psychiatric disorders, Venous thromboembolism, Mendelian randomization

抗痴呆药对阿尔茨海默病认知功能长期结局的影响: 来自 Meta 分析的证据

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目的 分析已进入临床使用的抗痴呆药物对阿尔茨海默病 (Alzheimer's disease, AD) 治疗后 6、12 个月认知功能的影响。

方法 检索 PubMed、Embase、Cochrane Library、Web of Science、中国知网、万方数据库、维普、中国生物医学文献数据库, 检索年限均为建库至 2023 年 12 月 31 日。纳入随机、双盲、安慰剂对照的抗痴呆药物治疗 AD 的临床研究, 治疗观察时间至少 6 个月, 最长至 12 个月, 对治疗前、后认知功能评分进行 Meta 分析。结局指标为治疗前后简易智力状态检查 (Mini-mental State Examination, MMSE)、阿尔茨海默病评定量表-认知分量表 (Alzheimer's disease assessment scale, ADAS-cog) 的变化值。

结果 共纳入 19 项研究 7148 例患者。抗痴呆药有肯定的疗效, 与安慰剂比较, MMSE 总均数差为 0.89 (P<0.00001); ADAS-cog 总均数差为-1.49 (P<0.00001)。抗痴呆药与安慰剂比较, 6、12 个月时 MMSE 均数差分别为 0.95 (P<0.00001)、0.45 (P=0.15); ADAS-cog 均数差分别为 -1.52 (P<0.00001)、-0.94 (P=0.36)。治疗 6 个月时, 多奈哌齐、利斯的明、美金刚与安慰剂比较, MMSE 均数差分别为 1.1 (P<0.00001)、1.07 (P<0.00001) 和

0.19 ($P=0.51$); 多奈哌齐、利斯的明、加兰他敏、美金刚、甘露特钠与安慰剂比较, ADAS-cog 均数差分别为-2.0 ($P<0.0001$)、-1.59 ($P<0.0001$)、-2.02 ($P<0.0001$)、-1.13 ($P=0.007$)和-0.69 ($P<0.00001$)。治疗 12 个月时, 多奈哌齐与安慰剂 MMSE 均数差为 0.75 ($P=0.14$); 美金刚与安慰剂比较, MMSE、ADAS-cog 均数差分别为 0.28 ($P=0.47$)、-0.94 ($P=0.36$)。

结论 抗痴呆药能延缓 AD 认知功能衰退, 其中多奈哌齐疗效更好; ADAS-cog 比 MMSE 对疗效的评估更敏感。

关键词: 阿尔茨海默病, 药物治疗, ADAS-cog, MMSE, Meta 分析

慢性应激状态下老年人财务风险决策及事件相关电位 P300 研究

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目的 财务风险决策 (decision-making) 是老年人的认知活动之一。慢性应激是一种长期持续对个体造成压力的状态, 对老年人的决策能力产生显著影响。本研究旨在利用事件相关电位技术 (Event-related Potential, ERP) 探讨慢性应激影响老年人财务风险决策的神经机制。

方法 本研究以深圳市多个社区健康老年人为研究对象, 采取方便抽样的方法, 通过生活事件量表 (Life Event Scale, LES) 来评估慢性应激状态, 筛选出符合入组标准的 30 例高应激实验组和 30 例低应激对照组的实验被试。研究设计运用风险决策研究中的模拟气球风险决策任务 (Balloon Analogue Risk Task, BART), 采用 2 (组别: 高应激组 vs. 低应激组) \times 2 (高风险 vs. 低风险) 的混合实验设计, 收集不同组别的 BART 数据; 为了直接比较高风险与低风险情景下的脑电差异, 采用差异波的分析方法采集各组 ERP 的 P300 波幅; 同时收集了他们的一般情况调查表、汉密尔顿抑郁量表 (HAMD)、汉密尔顿焦虑量表 (HAMA)、蒙特利尔认知评估量表 (MOCA) 来控制变量。

结果 (1) 在 BART 任务中, 控制混杂因素后,

高应激组在未爆炸气球的平均泵数 ($F(1,60)=9.920$, $p=0.010$, $\eta^2=0.113$)、成功率 ($F(1,60)=4.718$, $p=0.043$, $\eta^2=0.057$)、成功打气次数 ($F(1,60)=12.384$, $p=0.021$, $\eta^2=0.137$) 上均低于低应激组; 同时在不同高低风险决策任务下, 高应激组相比低应激组, 高风险气球平均泵数 ($F(1,60)=7.54$, $p=0.012$, $\eta^2=0.164$) 和低风险气球平均泵数 ($F(1,60)=5.61$, $p=0.023$, $\eta^2=0.140$) 同样均显示降低。(2) 低应激组在 BART 任务中诱发了更大的 P300 波幅 (p 值 <0.01), 并表现出更高的冒险倾向。(3) 此外, 老年人的 BART 任务表现 (未爆炸气球的平均泵数) 与慢性应激状态呈负相关 ($p<0.001$), 与 P300 波幅呈负相关 ($p<0.01$); 中介效应分析显示, P300 波幅在老年人的慢性应激状态和 BART 任务表现之间起部分中介作用 ($IE=0.14$, $SE=0.07$, $95\%CI=[0.023, 0.328]$)。

结论 慢性应激状态的老年人在财务风险决策中可能会选择更加保守的风险决策, P300 波幅在老年人慢性应激状态与风险决策之间发挥部分中介效应。

关键词: 老年群体 风险决策 慢性应激 事件相关电位

Validation of AST/ALT As A Sarcopenia Index for The Prediction of Pneumonia and Delirium in Patients Experiencing Acute Withdrawal From Excessive Alcohol Consumption

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Objective This study was developed with the goal of exploring the link between the sarcopenia index (aspartate transaminase (AST)/ alanine transaminase (ALT)) and the risk of pneumonia and delirium among hospitalized patients experiencing acute withdrawal from excessive alcohol consumption

Methods For this retrospective study, patients experiencing acute withdrawal from excessive alcohol consumption who underwent inpatient treatment at a psychiatric teaching hospital in western China between January 1, 2014 and December 31, 2023 were analyzed.

Patient-related data were accessed through an electronic medical record database, and logistic regression analyses were used to explore the relationship between the sarcopenia index and the risk of developing pneumonia and delirium in this population

Results This retrospective analysis included data from 557 patients who underwent inpatient treatment for acute alcohol withdrawal. The relative incidence of pneumonia and delirium was the same (13.64%) in this patient group, with an average time to delirium of 1.566 days and an average time to pneumonia of 5.99 days after admission. Patients were separated into two groups based upon whether or not their AST/ALT ratio was above or below the three-quarter level (2.18), classifying these two groups into those with high and low AST/ALT ratios, respectively. Treating the AST/ALT ratio as a continuous variable, patients with pneumonia or delirium presented with higher AST/ALT values relative to unaffected patients (pneumonia, 1.94 vs. 1.57, $p < 0.001$; delirium, 2.63 vs. 1.58, $p = 0.002$). Following adjustment for potential confounding factors, logistic regression analyses revealed that higher AST/ALT values were linked to a greater risk of pneumonia (OR=1.531, 95%CI: 1.146-2.045) and delirium (OR=1.497, 95%CI: 1.139-1.966). When AST/ALT was instead treated as a categorical variable, significantly higher incidences of pneumonia and delirium were observed in the high AST/ALT group relative to the low AST/ALT group (pneumonia, 21.58% vs. 11%, $p = 0.002$; delirium, 20.14% vs. 11.48%, $p = 0.001$). Logistic regression analyses indicated that individuals in the high AST/ALT group faced a higher risk of both pneumonia (OR=2.011, 95%CI: 1.164-3.477) and delirium (OR=1.829, 95%CI: 1.082-3.091) relative to the low AST/ALT group following adjustment for possible confounding factors

Conclusion These analyses revealed that among hospitalized for acute withdrawal from excessive alcohol consumption, the sarcopenia index (AST/ALT) is linked to a greater risk of both pneumonia and delirium when treated as both a continuous and a categorical variable.

关键词: sarcopenia index; over drinking; pneumonia; AST, ALT, delirium

Odor Identification Dysfunction in Late-life Depression with Suicidal Ideation

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Background Suicide is more prevalent among older individuals compared to younger individuals. Late-life depression (LLD) poses the highest risk for suicide. However, early recognition of suicidal ideation is challenging. Dysfunction in odor identification (OI), a characteristic of LLD, may hold potential for early identification of suicidal ideation. This study aims to compare OI between LLD patients with suicidal ideation (LLD-S) and LLD patients without suicidal ideation (LLD-NS), and examine its relationship with cognitive function

Methods A total of 262 LLD-NS patients, 63 LLD-S patients, and 316 healthy normal older adults (HOAs) underwent OI testing, standardized clinical interviews, and comprehensive neuropsychological assessments

Results (1) LLD-S patients exhibited lower OI scores and poorer cognitive performance (including global cognition, information processing speed, memory, language, executive function, and visuospatial ability) compared to LLD-NS patients and HOAs. (2) There were interactive effects between suicidal ideation and OI dysfunction, leading to lower scores in information processing speed and visuospatial ability. (3) OI dysfunction mediated the differences in cognition between the LLD-NS and LLD-S groups

Limitations: The present study was a cross-sectional design.

Conclusion LLD-S patients had worse odor identification than LLD-NS patients and HOAs, suggesting that OI testing could be a valuable approach for identifying suicidal ideation in LLD and screening for

suicide risk. The presence of both OI impairment and suicidal ideation was associated with poorer cognitive performance in LLD.

关键词: Suicidal ideation, Late-life depression, Odor identification, Cognitive function

伴和不伴有抑郁症状的阿尔茨海默病患者眼球运动分析的差异性研究

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目的 探究阿尔茨海默病患者(AD)伴有或不伴有抑郁症状的眼动参数的差异。

方法 纳入记忆障碍门诊确诊的 65 例 AD 患者,分为不伴抑郁症状的 AD 组(nD-AD 组)和伴有抑郁症状的 AD 组(D-AD 组)。分析比较 2 组的临床基本资料。应用 Eyeknow 智能眼动分析评价系统收集受试者眼动信息,分析比较两组 6 个范式中的眼动参数。采用 logistic 回归分析评估眼动参数在诊断 AD 患者伴发抑郁症状方面的影响并绘制受试者操作特征(ROC)曲线。在控制混杂因素后,对存在组间差异的眼动参数和 D-AD 患者的 HAMD-17 评分进行偏相关分析。

结果 在重叠朝向眼跳任务中,D-AD 组的潜伏期长于 nD-AD 组,平均和峰值眼跳速度高于 nD-AD 组。在间隔朝向眼跳任务中,D-AD 组平均反应时长和平均眼跳速度大于 nD-AD 组。在反向眼跳任务中,仅峰值眼跳速度存在组间差异。平滑追踪任务中,相比于 nD-AD 组,D-AD 组的启动时长更长,追踪速度更慢,偏移次数和偏移量均更大。在注视任务中,D-AD 组的注视稳定性比 nD-AD 组差。平滑追踪启动时长和正中注视中大于 2°总偏移次数被纳入 logistic 回归模型。以上述两项眼动参数绘制的 ROC 曲线下面积为 0.8011,灵敏度为 53.13%,特异 90.91%。在偏相关分析中,D-AD 患者平滑追踪启动时长,追踪速度以及偏侧注视中大于 4°的总偏移次数与抑郁症状严重程度具有相关性。

结论 D-AD 患者与 nD-AD 在多个眼动范式中表现出差异,有助于以经济有效和非侵入性的方式区分 AD 患者是否伴发抑郁症状。

关键词: 阿尔茨海默病, 抑郁症状, 眼动, 眼球

追踪技术

轻中度阿尔茨海默病患者肌肉力量与大脑灰质体积的相关性研究

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目的 探讨阿尔茨海默病(AD)患者肌肉力量(MS)与大脑灰质体积(GMV)变化的相关性。

方法 对神经内科记忆障碍门诊确诊的 42 例 AD 患者(按痴呆严重程度分为轻度 24 例,中度 18 例)及 40 例正常对照者收集一般资料、神经心理学测试、肌少症相关指标与头颅磁共振成像扫描。肌少症相关指标中肌肉量(MM)为四肢骨骼肌量指数(ASMI),MS 包括握力与 5 次起坐试验,躯体功能为 6m 步速。头颅磁共振数据分析为基于体素的脑形态学分析,使用单因素方差分析得到轻、中度 AD 组 GMV 有差异的脑区,将差异脑区作为感兴趣区(ROI)并提取 GMV。分析三组间肌少症相关指标、ROI 脑区 GMV 差异,以及 ASMI、MS、躯体功能与大脑 GMV 的相关性。

结果 3 组在年龄、教育年限、高血压、身高、体重、肌少症患病率、MMSE、MoCA 差异均有统计学意义(均 $P < 0.05$)。3 组在 ASMI、握力、5 次起坐时间、6m 步速差异均有统计学意义(均 $P < 0.05$)。中度 AD 组在总灰质、左顶上回、左缘上回、右背外侧额上回、左额中回、左丘脑 GMV 较轻度 AD 组小(均 $P < 0.05$)。AD 组中 5 次起坐时间与总灰质、左右海马、左顶上回、左右缘上回、左右背外侧额上回、左额中回、左丘脑 GMV 呈负相关(均 $P < 0.05$);握力与总灰质、左海马、左右背外侧额上回、左右额中回 GMV 呈正相关(均 $P < 0.05$);6m 步速与左右海马、左颞横回、左顶上回、左右缘上回、右背外侧额上回、左额中回、右额中回、左右丘脑 GMV 呈正相关(均 $P < 0.05$);ASMI 与总灰质、右背外侧额上回、右额中回 GMV 呈正相关(均 $P < 0.05$)。控制年龄、性别、教育年限、MMSE、MoCA 做偏相关分析,轻中度 AD 组 5 次起坐时间与左右海马体积呈强负相关(均 $P > 0.05$);中度 AD 组中 5 次起坐时间还与右背外侧额上回、左顶上回 GMV 呈强负相关(均 $P > 0.05$),与右顶上回 GMV 呈中

等负相关 (均 $P > 0.05$)。

结论 AD 患者随着认知功能减退 MS 明显下降, 并与大脑 GMV 变化具有明显相关性, 其中下肢 MS 下降更为重要, 更多脑区 GMV 变化参与其中。轻、中度 AD 患者 MS 下降均与海马萎缩存在强相关, 且独立于年龄、性别、教育年限、MMSE 评分。与轻度 AD 患者相比, 中度 AD 患者 MS 下降还与更多脑区灰质体积减少有关, 如背外侧额上回、顶上回等。然而, 在调整混杂因素后, MM 减少与大脑灰质体积变化关系并不大。

关键词: 阿尔茨海默病, 四肢骨骼肌质量指数, 肌肉力量, 躯体功能, 灰质体积

阿尔茨海默病患者特异性脑白质结构改变介导握力减小和执行功能改变中的作用

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目的 利用基于纤维束分析(FBA)技术探讨阿尔茨海默病(AD)患者脑白质结构改变与握力和认知功能的关系。

方法 取 54 例 AD 患者及 31 例认知和握力正常的对照者(NC), AD 患者分为 AD 伴有低握力组(AD-LGS)共 29 例, AD 不伴低握力组(AD-nLGS)共 25 例。收集一般资料、神经心理学测试、握力与头颅磁共振成像扫描。神经心理学测试包括简易精神状态量表(MMSE)、蒙特利尔认知评估量表(MoCA)、画钟测试(CDT)、记忆与执行功能筛查量表(MES)、数字符号转换测验(DSST)、数字广度测试(DST)、词语流畅性试验(VFT)。MES 总分(MES-T)包含记忆因子分(MES-M)和执行因子分(MES-E)。DST 包括顺序(FDST)和倒序(BDST)。应用 FBA 技术获得脑白质结构指标, 包括纤维密度(FD)、纤维束横截面积(FC)及纤维密度和横截面积(FDC), 在校正年龄、性别的基础上对 3 组脑白质结构指标进行方差分析。在 FBA 指标有显著差异的区域里提取感兴趣纤维束(ROI)的平均纤维指标, 比较组间差异并分析脑白质结构变化特性与神经心理学测试评分(CDT、MES-T、DSST)之间的相关性。

结果 神经心理学测试中, AD-LGS 组在 CDT、

MES-E、DSST 得分较 AD-nLGS 组低(均 $P < 0.05$)。FBA 结果显示, 调整年龄和性别, 三组间在胼胝体部(CC)、胼胝体膝部(GCC)、胼胝体压部(SCC)、大钳、小钳、左右额枕下束(IFO)、左右钩状束(UF)、左右前扣带束、左右下纵束(ILF)的 FC、FD、FDC 均有显著性差异。此外, 在左右上纵束(SLF)、左右皮质脊髓束(CST)、右后扣带束的 FC 和 FDC 也有显著性差异。事后检验分析显示, 与 AD-nLGS 组相比, AD-LGS 组在 SCC、左右 IFO、左右 ILF、左右钩状束、左右丘脑前部辐射(ATR)、右 CST、左右前扣带束、左右后扣带束、大钳、左右 SLF 的 FDC 明显降低。控制年龄、性别、教育年限后做相关性分析, 结果显示 AD 患者左右 UF、左 SLF 的 FDC 值与 CDT 得分呈正相关; SCC、左右前扣带束、大钳、左右 ILF 的 FDC 值与 MES-E 得分呈正相关。

结论 AD 患者握力减小与广泛性的脑白质结构完整性损害相关。与执行功能相关的特异性脑白质纤维束纤维密度和横截面积的变化在 AD 患者握力减少中起着重要介导作用。

关键词: 阿尔茨海默病, 认知功能, 纤维束分析, 握力, 脑白质

轻度认知障碍患者决策能力的结果表征学习模型

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目的 轻度认知障碍(mild cognitive impairment, MCI)患者的决策能力尚未得到充分探讨。本研究旨在利用结果表征学习(outcome-representation learning, ORL)模型检验 MCI 患者的决策能力。

方法 本研究招募了 52 名 MCI 患者和 49 名健康对照者。所有受试者均完成两次爱荷华博弈任务(Iowa gambling task, IGT), 旨在测量其在模糊情境下的决策能力。使用 IGT 的 ORL 模型分析了包括奖赏学习率、惩罚学习率、遗忘速率、对高获胜牌组的偏好以及牌组的切换倾向等五个参数, 以探究 MCI 患者决策能力及其随时间的变化。

结果 与健康对照相比, MCI 患者在决策反馈损失结果中对任务产生的学习较少, 而在获胜结果中对任务产生的学习与健康对照相当。此外, 与健康对照相比, MCI 患者在 IGT 中的遗忘倾向表现出更少的变化, 表明 MCI 患者对所做选择的记忆消退并未改善。与之对应, 健康对照在第二次完成 IGT 时表现出对所做选择记忆消退减弱的倾向。尽管与健康对照相比, MCI 患者仍同样偏爱高获胜牌组, 但 MCI 患者在第二次完成 IGT 时对高获胜牌组的偏好相较于第一次完成时有所减弱。

结论 本研究结果表明, 轻度认知障碍患者在复杂情境下很难从失败的决策反馈中产生学习。该研究为轻度认知障碍提供了一种潜在的新型计算神经认知标志物。

关键词: 轻度认知障碍, 决策, 认知计算模型, 随访

Help-seeking Behaviors and Its Related Factors Among Elderly with Mental Disorders in Tianjin Community, China: A Cross-sectional Study

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Objective The prevalence of mental disorders in elder adults has increased in China, but the help-seeking rates are still low. This study was aimed to (1) investigate the help-seeking rates of medical and non-medical resources among Chinese elderly people with mental disorders and (2) explore the factors related to help-seeking behavior

Methods Data were from the Tianjin Mental Health Survey (TJMHS), which included 11,748 adult community residents in the Chinese municipality of Tianjin. Of these, 616 individuals aged 60 years old had ≥ 1 axis-I diagnosis according to the Diagnostic and Statistical manual-fourth edition (DSM-IV) and were interviewed by psychiatrists using a Help-Seeking Questionnaire with 23 potential sources

Results In the current survey, 14.8% elderly individuals with any lifetime mental disorder have sought help from any potential sources, with 5.2% seeking help in mental healthcare settings, 5.5% only in other healthcare settings, and 4.1% only in non-healthcare sources. Among help-seekers, the first help was mostly sought in Medical institutions 63.7%. Individuals with female gender, aged 60 to 79, not having health insurance, with two or more mental disorders with schizophrenia and without organic mental disorders were more likely to seek help.

Conclusion Only a small percentage of elderly patients with mental disorders seek help in the Tianjin region. Mental health help-seeking behaviors in elderly were related demographic and clinical features.

关键词: help-seeking, mental disorders, elderly, non-healthcare sources, health care settings

阿尔茨海默病性痴呆幻觉妄想症状在杏仁核、海马亚区的改变

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目的 探讨阿尔茨海默病痴呆患者幻觉妄想症状杏仁核和海马亚区的影像学变化。

方法 研究对象

所有病例组被试来自 2020 年 1 月至 2023 年 10 月上海市精神卫生中心老年精神科门诊就诊及住院的 AD 患者,将伴有精神病性症状的定义为研究组,将不伴有精神病性症状的定义为对照组,根据自愿原则入组,本研究通过上海市精神卫生中心伦理委员会审批,批件号为 2021-24。

研究评估工具

1.简明精神状态量表(MMSE):该量表由 Folstein 等人于 1975 年编制,是标准化智力状态检查工具之一,它包括时间定向、地点定向、即刻记忆、注意力及计算力、延迟记忆、命名、语言能力、视空间能力等方面,其作为认知功能的评估,最高分为 30 分,得分越低,痴呆越严重。

2.神经精神量表(NPI):该量表用于评估 AD 患

者的精神行为症状,包括妄想、幻觉、激越、抑郁、焦虑、情感高涨、情感淡漠、脱抑制、易激惹、运动行为异常、睡眠、食欲 12 个方面,患者评估分值最高 144 分,护理者苦恼评分值最高 60 分,得分越高,精神行为症状越重,对照料者造成的苦恼程度越重。

MRI 成像采集与处理

所有受试者在 3.0TMRI 扫描仪 (Siemens MAGNETOM VERIO 3.0T, 德国)上进行扫描。

影像分析:使用 Freesurfer7.0 进行皮层重建与分割, Freesurfer 使用先前定义的体内(基于图像的)和体外海马(基于解剖的)图谱来确定亚结构。使用 Freesurfer7.0 进行皮层重建与分割,分出 21 个海马亚区和 9 个杏仁核亚区。

统计分析

1.运用 SPSS24.0 统计软件对所获数据进行统计分析, P 值 ≤ 0.05 被认为差异具有统计意义 2.幻觉妄想组和无幻觉妄想组一般资料采用 t 检验或卡方检验进行比较 3.幻觉妄想组和无幻觉妄想组杏仁核及海马亚结构的组间差异,服从正态分布,采用 t 检验 4.NPI 幻觉得分和经 t 检验有差异的亚区体积进行相关分析 5.以 NPI 量表幻觉得分为因变量,以年龄、性别、文化程度、MMSE 量表分、TIV 以及经 t 检验有差异的亚区为自变量,进行多元线性回归分析。

结果 与非幻觉组比较,幻觉组杏仁核的中央核、内侧核、皮质核体积均增大,差异有统计学意义。与非幻觉组比较,幻觉组海马 CA1 头体积升高,差异有统计学意义。NPI 幻觉评分与杏仁核的内侧核、皮质核和海马 CA1 头体积呈正相关。妄想组和无妄想组杏仁核、海马亚区体积差异均无统计学意义。

结论 伴有幻觉症状的 AD 患者海马 CA1 头,杏仁核中央核、内侧核和皮质核体积增大。

关键词: 阿尔茨海默病;幻觉;妄想;杏仁核;海马;亚区

The Protective Effect of Mangiferin on Formaldehyde-Induced HT22 Cell Damage and Cognitive Impairment

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Formaldehyde (FA) has been found to induce major Alzheimer's disease (AD)-like features including cognitive impairment, $A\beta$ deposition, and Tau hyperphosphorylation, suggesting that it may play a significant role in the initiation and progression of AD. Therefore, elucidating the mechanism underlying FA-induced neurotoxicity is crucial for exploring more comprehensive approaches to delay or prevent the development of AD. Mangiferin (MGF) is a natural C-glucosyl-xanthone with promising neuroprotective effects, and is considered to have potential in the treatment of AD. The present study was designed to characterize the effects and mechanisms by which MGF protects against FA-induced neurotoxicity. The results in murine hippocampal cells (HT22) revealed that co-treatment with MGF significantly decreased FA-induced cytotoxicity and inhibited Tau hyperphosphorylation in a dose-dependent manner. It was further found that these protective effects were achieved by attenuating FA-induced endoplasmic reticulum stress (ERS), as indicated by the inhibition of the ERS markers, GRP78 and CHOP, and downstream Tau-associated kinases (GSK-3 β and CaMKII) expression. In addition, MGF markedly inhibited FA-induced oxidative damage, including Ca^{2+} overload, ROS generation, and mitochondrial dysfunction, all of which are associated with ERS. Further studies showed that the intragastric administration of 40 mg/kg/day MGF for 6 weeks significantly improved spatial learning ability and long-term memory in C57/BL6 mice with FA-induced cognitive impairment by reducing Tau hyperphosphorylation and the expression of GRP78, GSK-3 β , and CaMKII in the brains. Taken together, these findings provide the first evidence that MGF exerts a significant neuroprotective effect against FA-induced damage and ameliorates mice cognitive impairment, the possible underlying mechanisms of which are expected to provide a novel basis for the treatment of AD and diseases caused by FA pollution.

关键词: Alzheimer's disease; formaldehyde; mangiferin; Tau hyperphosphorylation; endoplasmic reticulum stress; glycogen synthase kinase-3 β ; calmodulin-dependent protein kinase II

500nm Blue-green Light Therapy for Cognitive Function in Alzheimer's Continuum and Factors Affecting Efficacy

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Background Light therapy has emerged as an effective method for Alzheimer's disease (AD). However, the efficacy on cognitive function in Alzheimer's continuum and factors affecting efficacy have not been established. The study aimed to evaluate the efficacy of 500 nm blue-green light therapy on cognitive function for Alzheimer's continuum, and the main factors affecting light therapy efficacy were analyzed

Methods Forty-two participants were enrolled in this studies, including 13 healthy control [HC, equal to 0 standard deviation, (SD)], 9 subtle cognitive impairment (SCI, ≥ 0.5 SD), 8 early mild cognitive impairment (eMCI, ≥ 1.0 SD), 6 late MCI (lMCI, ≥ 1.5 SD), 6 dementia of AD (dAD, ≥ 2.0 SD). All the participants treated with 500 nm blue-green light for 50 minutes with 4 weeks in the morning. A reduction of 4 or more points in the Alzheimer's Disease Assessment Scale-cognitive subscale (ADAS-cog) scores was considered valid for cognitive improvement

Results The total efficacy after light therapy was 16.7%. The efficacy in HC, SCI, eMCI, lMCI and dAD after light therapy were 15.4%, 11.1%, 12.5%, 16.7% and 33.3%, respectively. Light therapy efficacy was not significantly correlated with the participant's sex, age, diagnostic type, education, apolipoprotein E epsilon 4, the Mini-mental State Examination scores; the Montreal Cognitive Assessment-Basic scores, Hamilton Anxiety Scale scores, Hamilton Depression Scale scores, or the Pittsburgh Sleep Quotient Index. In multivariate analysis, the ADAS-cog scores before light therapy (OR

1.279, 95% CI 1.021~1.602, $p = 0.033$) was an independent predictor, while the Everyday Cognition (ECog) scores and the Mild Behavioral Impairment Checklist (MBI-C) scores before light therapy didn't influence the efficacy

Conclusion Four weeks of 500 nm blue-green light therapy had different efficacy on cognitive function for Alzheimer's continuum. Baseline cognitive status may influence light therapy efficacy.

关键词: Light therapy, subjective cognitive decline, mild cognitive impairment, Alzheimer's disease, efficacy

主观认知下降干预措施研究进展的系统评价和荟萃分析

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目的 探讨药理学及非药理学干预在改善主观认知下降(SCD)老年人认知功能方面的有效性。

方法 检索PubMed、Cochrane Library、Embase和中国知网数据库,纳入药理学和非药理学干预对SCD认知功能影响的随机对照研究,由2位研究人员筛选文献、提取数据、质量评价,主要结局为整体认知功能,次要结局为记忆力、注意力和执行功能,使用RevMan 5.3软件进行数据分析。

结果 共纳入文献28篇,包括2201名受试者。结果显示,在药理学干预中,亚精胺对改善记忆力有效(SMD=0.88, 95% CI 0.10~1.66)。在非药理学干预中,针刺疗法能显著改善整体认知功能(SMD=1.09, 95% CI 0.62~1.56, $P < 0.01$),体育运动(SMD=0.22, 95% CI 0.03~0.40, $P = 0.02$)和认知干预(SMD=0.36, 95% CI 0.09~0.62, $P = 0.008$)能显著改善记忆力,体育运动(SMD=0.16, 95% CI 0.01~0.30, $P = 0.04$)和多域干预(SMD=0.30, 95% CI 0.04~0.57, $P = 0.02$)能显著改善执行功能。本研究未发现对改善注意力有效的干预措施[体育运动(SMD=0.13, 95% CI -0.10~0.35, $P = 0.27$)、认知干预(SMD=0.04, 95% CI -0.34~0.41, $P = 0.85$)、正念冥想(SMD=0.06, 95% CI -0.19~0.32, $P = 0.62$)]。

此外,与对照组相比,正念冥想对认知功能没有显著影响[注意力(SMD=0.06, 95% CI -0.19~0.32, P=0.62)、执行功能(SMD=0.19, 95% CI -0.34~0.72, P=0.49)]。

结论 亚精胺可能对认知功能有益,但其疗效和安全性仍需更多研究来验证。针刺疗法、体育运动、认知干预和多域干预可有效改善认知功能,使用正念冥想改善认知功能的证据相对不足。

关键词: 荟萃分析、药物干预、非药物干预、主观认知下降

Effects of Antidepressants on Cognition in Older Adults with Subclinical Depressive Symptoms

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Objective Late-life depression has been identified as a modifiable risk factor of dementia, with subclinical depressive symptoms (SDS) being more common in older adults than clinical depression. However, evidence on the cognitive effects of antidepressants in this population is limited. This study aims to investigate the impact of antidepressants on cognition and the risk of dementia in non-demented participants with SDS

Methods A total of 480 non-dementia older adults were recruited from the Alzheimer's Disease Neuroimaging Initiative database and divided into antidepressant users group and non-users group to detect the effects of antidepressants on the risk of dementia. Over follow-up, participants underwent neuropsychiatric assessment, cerebrospinal fluid detection, positron emission tomography imaging, and blood-based microarray profiling. Kaplan-Meier analysis assessed conversion from non-dementia to dementia. The linear mixed-effects model investigated the longitudinal changes in cognition. Gene Set Enrichment Analysis (GSEA) was utilized to investigate the biological pathways related to

cognitive progression in the antidepressant users group

Results The results indicated that antidepressant treatment in dementia-free participants with SDS was linked to a 1.87-fold risk of developing dementia. No significant differences were observed among SSRIs (Selective Serotonin Reuptake Inhibitors), SSRIs combination, and other antidepressant treatment regarding the risk of dementia. Similarly, no differences were associated with the duration of treatment, whether short-term (≤ 3 years) or long-term (> 3 years). Further investigations did not observe a notable impact of antidepressant use on CSF biomarkers, including levels of A β 42, t-tau, and p-tau. Similarly, no differences were observed in AV45, AV1451, and FDG PET imaging markers between the groups. GSEA suggested that antidepressants might affect neurotransmitter transport and calcium homeostasis in users

Conclusion Antidepressant treatment may contribute to the progression to dementia and increase the risk of cognitive decline in elderly with SDS. Given these potential risks, it is crucial to exercise greater caution when managing depressive symptoms with antidepressant in this population.

关键词: subclinical depressive symptoms, antidepressants, dementia, Alzheimer's disease

微阵列分析阿尔茨海默病和轻度认知障碍的差异基因表达识别具有诊断价值的生物标志物

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目的 阿尔茨海默病(AD)是一种常见且致命的痴呆症亚型,诊断和治疗仍然是一个挑战。本研究旨在通过识别 AD 和轻度认知障碍(MCI)的共同风险基因,发现影响 AD 预后的潜在生物标志物,探索 AD 早期诊断的可能性。

方法 基因表达综合数据库(gene expression Omnibus, GEO)中的一个基因表达谱被评估为 AD 和 MCI 共同生物标志物的潜力。我们使用微阵列(PAM)算法的预测分析来鉴定差异表达基因(DEGs)。然后

进行功能富集和蛋白-蛋白相互作用(PPI)网络分析, 鉴定与阿尔茨海默病相关的关键模块和关键基因。

结果 我们总共筛选了 160 个 AD 和 MCI 中共同显著差异基因, 其中 71 个上调基因, 89 个下调基因。功能富集分析显示, 这些共同的差异基因在突触膜结构中显著富集, 参与突触组装、膜电位调节、细胞连接组装等生物过程。其功能主要涉及钠离子跨膜转运蛋白活性和支架蛋白结合活性。以及与神经活动、配体-受体相互作用和干细胞多能性调控信号相关的通路。通过 PPI 网络分析、关键模块构建和关键基因构建, 鉴定出 ESR1、ASCL1、NFIB、AXIN2、GABRB3、GRIK2、GABRA2、WNT5A 8 个关键基因。他们可能是我们所寻找的参与 MCI 进展为 AD 的关键基因。

结论 这些发现揭示了新的具有预后和治疗价值的潜在 AD 生物标志物。然而, 未来还需要更多的实验来进一步探索这些基因与 AD 进展之间的关系。

关键词: 阿尔茨海默病, 轻度认知障碍, 微阵列分析, 显著差异基因, 生物标志物

Plasma Macrophage Migration Inhibitory Factor and Matrix Metalloproteinase-9 Levels, and Their Related Factors in Alzheimer's Disease: A Cross-sectional Study

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Objective Previous studies have shown that the levels of macrophage migration inhibitory factor (MIF) and matrix metalloproteinase-9 (MMP-9) in its downstream signaling pathway are related to the occurrence and development of Alzheimer's disease (AD); some studies have suggested that plasma levels of MIF and MMP-9 could be used as potential biomarkers for AD. This study aimed to explore the changes in MIF and MMP-9 levels in the plasma of patients with AD and whether they were correlated with other clinical indicators and cognitive function

Methods 43 patients with AD and 40 healthy

controls (HC) were enrolled in this study. Socio-demographic information of the subjects was collected, and their cognitive function was assessed using Mini-Mental State Examination (MMSE) and Montreal Cognitive Assessment (MoCA). Further, the biochemical indicators and plasma MIF and MMP-9 levels were detected

Results Our study found that plasma MIF levels were not significantly altered in patients with AD compared to HC, while MMP-9 levels were significantly increased, and prolactin levels had significant effects on MMP-9 levels. In addition, plasma levels of MIF and MMP-9 in patients with AD had no significant correlation with cognitive function

Conclusion we believe that plasma levels of MIF and MMP-9 are affected by a variety of factors, and it is not appropriate to use them as biomarkers of AD. Their levels in cerebrospinal fluid may be more representative, although, this needs to be verified by future studies.

关键词: Alzheimer's disease; Cognitive impairment; Macrophage migration

运动与睡眠对老年人认知功能及相关血液生物标志物的影响

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目的 探究运动与睡眠对老年人认知功能和痴呆相关血液生物标志物的影响, 并分析睡眠与运动之间有无交互作用。

方法 本研究纳入了 2021 年 4 月-2022 年 2 月河北省石家庄市裕华区及河北省邢台市 60 岁以上的社区老年人 506 例。所有受试者由河北医科大学第一医院精神科医师进行临床资料采集, 包括一般资料, 简易智能状态量表 (MMSE)、蒙特利尔认知评估量表 (MoCA)、波士顿命名测试 (BNT)、数字广度测试 (DST) 等评估认知功能, 并采血检测血液生物标志物 β 淀粉样蛋白 40 ($A\beta_{40}$)、 $A\beta_{42}$ 、磷酸化 tau 蛋白 217 (p-tau217)、髓系细胞触发受体 2 (TREM2)、sTREM2。根据是否参加太极拳运动将参与者分为运动组与非运动组, 根据匹兹堡睡眠质

量指数 (PSQI) 得分对睡眠状态进行分组。采用秩和检验比较不同运动和睡眠分组的认知功能及血液生物标志物水平的差异性, 并通过一般线性分析探究睡眠和运动对认知及血液标志物的影响有无交互作用。

结果 相对于非运动组相比, 运动组的认知水平较高 (MMSE, $z=-2.596, P<0.05$; DST, $z=-3.876, P<0.05$; BNT, $z=-1.257, P=0.105$), 且两组部分血液生物标志物的差异存在统计学意义 ($A\beta_{40}$, $z=-10.615, P<0.05$; $A\beta_{42}$, $z=-8.531, P<0.05$; p-tau217, $z=-3.217, P<0.05$; sTREM2, $z=-1.825, P<0.05$); 不同睡眠分组的部分认知量表及血液标志物的差异存在统计学意义, 但主要在五六十岁的人群 (MoCA, $z=-1.301, P=0.09$; DST, $z=-1.737, P<0.05$; $A\beta_{40}$, $z=-1.567, P=0.05$; p-tau217, $z=-2.474, P<0.05$; TREM2, $z=-1.964, P<0.05$), 对于年龄较大的参与者 (70 岁及以上), 组间差异无统计学意义。运动与睡眠对认知和血液标志物的影响存在交互作用 (DST, $F=6.213, P<0.05$; $A\beta_{40}$, $F=72.285, P<0.05$; $A\beta_{42}$, $F=8.429, P<0.05$; p-tau217, $F=3.983, P<0.05$; TREM2, $F=2.028, P=0.05$)。

结论 运动和睡眠问题都会影响老年人的认知功能, 且二者之间存在相互作用, 是痴呆发生发展的重要影响因素, 我们应该结合多个因素的共同作用来综合制定相应的干预方案, 减缓老年人的认知下降或者延缓痴呆的发病时间。

关键词: 运动; 睡眠; 认知功能; 血液生物标志物; 交互作用

Clinical Efficacy of The Combined Treatment of Acupuncture and Antidepressants for Late-life Depression

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Objective To investigate the clinical effect of acupuncture combined with antidepressants in treating late-life depression.

Methods Enrolled elderly patients who meet the diagnosis of late-life depression in our hospital. The pa-

tients were divided into the acupuncture group (antidepressants combined with electroacupuncture therapy) and the control group (mainly antidepressants alone). Two groups were treated simultaneously for 4 weeks. Regular assessments were conducted on both groups using the Hamilton Anxiety Scale (HAMA), Hamilton Depression Scale (HAMD), Common Sense Test, Pittsburgh Sleep Quality Index (PSQI), and in cases of positive symptoms, the Brief Psychiatric Rating Scale (BPRS) was used. Comparative observations were made to determine whether the combined acupuncture and antidepressant treatment is more effective in treating late-life depression than treatment with antidepressants alone.

Results 186 patients were recruited into the study (101 in the acupuncture group vs. 85 in the control group). There were no significant differences in age and gender between the two groups ($p>0.05$). The baseline scores of HAMA, HAMD, and Common Sense Test showed no significant differences between the two groups ($p>0.05$). The acupuncture group showed significantly higher reductions in HAMA scores compared to the control group after 1 and 2 weeks of treatment ($p<0.001$). However, after 3 and 4 weeks of treatment, there were no significant differences in the reduction of HAMA scores compared to baseline ($p>0.05$). The acupuncture group exhibited significantly higher reductions in HAMD scores compared to the control group after 1, 2, 3, and 4 weeks of treatment ($p<0.001$). The acupuncture group also showed a significant increase in Common Sense Test scores compared to the baseline after 1 and 2 weeks of treatment ($p<0.001$), with no significant difference after 3 weeks of treatment ($p>0.05$). Patients in the acupuncture group showed significantly higher reductions in PSQI scores compared to the control group after 4 weeks of treatment ($p<0.001$). There were no significant differences in the reduction of BPRS scores for patients with positive symptoms between baseline and post-treatment evaluations in both groups ($p>0.05$).

Conclusion Acupuncture combined with antidepressants for treating late-life depression can significantly reduce patients' depressive emotions, improve

sleep problems; quickly alleviate anxiety, promote cognitive function recovery in the short term, but the effectiveness is not long-lasting; no apparent improvement is observed for positive symptoms.

关键词: Late-life depression, Acupuncture, Antidepressant, Clinical efficacy

行为变异型额颞叶痴呆与中老年慢性精神分裂症在纹状体亚区结构与功能连接的比较研究

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目的 行为变异型额颞叶痴呆(bvFTD)是早发痴呆的主要类型之一。其早期症状与慢性精神分裂症(Scz)存在误诊或漏诊。越来越多的研究报道bvFTD的纹状体的形态学可能具有诊断特异性。纹状体是由多个不同功能的亚区构成。然而,bvFTD纹状体亚区的结构和功能作用不清晰,因此本研究主要是探索bvFTD的纹状体亚区神经影像特征及与认知、精神行为症状的相关性。

方法 采用病例对照研究设计。纳入北京大学精神卫生研究所记忆障碍诊疗与研究团队自2007年6月至2023年10月符合入组的34例bvFTD患者和57例正常对照;另外纳入沈阳市精神卫生中心自2023年1月至2023年10月符合入组标准的21例中老年慢性精神分裂症患者和24例正常对照。所有被试均完成多维度认知评估和磁共振成像扫描(MRI),采用人类脑网络组图谱(HBA)对纹状体分区。不同中心影像数据采用ComBat校正。分析指标包括:(1)不同维度认知和行为评估得分;(2)纹状体亚区灰质体积变化;(3)纹状体亚区体积与认知、精神行为评分的相关性;(4)纹状体亚区与全脑基于体素的静息态功能连接(RSFC)(外部功能连接)变化;(5)纹状体亚区之间RSFC(内部功能连接)变化;(6)功能连接值与认知、精神行为评分的相关性。计算一般资料及认知、精神行为评估得分,三组间比较采用单因素方差分析及Bonferroni事后检验;分类变量采用卡方检验。纹状体亚区体积三

组间比较采用单因素方差分析及Bonferroni事后检验;外部功能连接比较采用双样本t检验;内部功能连接采用基于网络的统计(NBS)分析。MRI数据与认知、精神行为评分的相关性采用偏相关分析。

结果 bvFTD组与中老年慢性Scz组MMSE评分无显著差异,bvFTD组的MoCA评分更低;与Scz组相比,bvFTD组所有纹状体亚区灰质体积降低,bvFTD组右侧腹侧尾状核、苍白球、伏隔核、背外侧壳核及双侧背侧尾状核的外部RSFC降低,不同亚区RSFC模式不同,bvFTD纹状体内部RSFC降低,主要节点是双侧背侧尾状核与伏隔核;与NC组相比,Scz组右侧背侧尾状核与顶叶、扣带回的RSFC升高,Scz纹状体内部RSFC升高,表现为右侧背侧尾状核与右侧伏隔核的RSFC。

结论 行为变异型额颞叶痴呆患者纹状体亚区灰质体积萎缩和功能连接降低,为bvFTD与中老年慢性Scz疾病鉴别提供影像依据,为探索bvFTD的神经精神症状提供新的靶点。

关键词: 行为变异型额颞叶痴呆,精神分裂症,纹状体,磁共振成像,功能连接。

Hypothetical Interventions on Cardiovascular Health Metrics for Abnormal Cognitive Aging: An Application of The Parametric G-formula in The CLHLS Cohort Study with 12 Years Follow-up

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Objective Abnormal cognitive aging is closely related to dementia. Previous studies have shown that cardiovascular health (CVH) was associated with cognitive function. However, research on the association between CVH metrics and abnormal cognitive aging is

limited. This study aimed to estimate the effect of CVH metrics on abnormal cognitive aging

Methods A total of 3298 participants aged ≥ 65 years with normal cognitive performance at baseline were derived from Chinese Longitudinal Healthy Longevity Survey. Cognitive performance was measured by the Chinese version of the Mini-Mental State Examination (MMSE). CVH was assessed with six metrics, including hypertension, diabetes, exercise, body mass index (BMI), diet, and smoke. Group-based trajectory model was used to identify the trajectory groups of cognitive aging over 12 years (2002-2014 and 2005-2018). Logistic regression model was used to investigate the association between CVH metrics at baseline and abnormal cognitive aging. The parametric g-formula was subsequently applied to estimate the effect of each of six CVH metrics and their combinations on the 12-year cognitive aging trajectory

Results The mean age was 73.9 (8.0) years. Four trajectory groups of cognitive aging were identified, with Fluctuation (4.9%), Slow (11.1%), and Rapid (6.6%) trajectory groups considered as abnormal cognitive aging (22.6%), while Stable (77.4%) trajectory group as normal cognitive aging. The single interventions on hypertension, exercise, BMI, and diet could reduce the risk of abnormal cognitive aging. Moreover, the risk ratio of joint intervention on exercise, BMI, and diet for Fluctuation, Slow, and Rapid trajectory groups were 0.38 (95% CI: 0.30-0.48), 0.45 (95% CI: 0.37-0.54), and 0.3 (95% CI: 0.23-0.41), respectively

Conclusion A considerable proportion of the participants experienced abnormal cognitive aging during their aging process. Interventions on these CVH metrics (i.e., exercise, BMI, and diet), which are fairly practical and feasible for the older adults, may be effective strategies for preventing abnormal cognitive aging.

关键词: cognitive aging, cardiovascular health, g-formula, group-based trajectory model

Chemosensory Anhedonia Facilitates Depressive Symptoms and Cognitive Impairment in Late-life Depression

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Objective Chemosensory anhedonia refers to the lack of hedonic ability to experience pleasure through the senses of smell and taste, which reduces the pleasure and comfort of food and increases the risk of nutritional and immune deficiencies. However, there is no direct scientific evidence regarding chemosensory anhedonia in patients with late-life depression (LLD). The aim of this study was to investigate the chemosensory anhedonia in patients with LLD and its potential association with depressive symptoms and cognitive function

Methods One hundred and fourteen patients with LLD and 92 normal controls (NCs) were included in this study. They experienced clinical assessment, Chemosensory Pleasure Scale (CPS) assessment, 17-item Hamilton Depression Rating Scale (HAMD-17) assessment and cognitive assessments which contains the Verbal Fluency Test (VFT). The associations between chemosensory pleasure and depressive symptoms or cognitive function in patients with LLD were explored using partial correlation analysis and mediation analysis

Results The CPS scores were lower in the LLD group than in the NC group and were negatively correlated with the total scores and factors' scores (Retardation, Cognitive bias and Anxiety/Somatisation) of HAMD-17 and positively correlated with the VFT scores. The scores for the Food and Imagination dimensions of CPS exhibited partial mediating effects on the differences in Cognitive bias (a factor of HAMD-17) between patients with LLD and NCs

Conclusion Patients with LLD exhibited significant chemosensory anhedonia, and both depressive symptoms and cognitive impairment were associated with the severity of chemosensory anhedonia. Enhancing chemosensory pleasure in patients with LLD may potentially ameliorate their depressive symptoms.

关键词: Anhedonia; Cognition; Late-life depression; Olfactory; Pleasure

Vortioxetine for Depression in Adults: A Systematic Review and Dose-response Meta-analysis of Randomized Controlled Trials

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Background Major depressive disorder (MDD) is a prevalent psychiatric condition characterized by persistent feelings of sadness, or loss of pleasure in daily activities accompanied by other cognitive, behavioral, or neurovegetative symptoms, affecting approximately 340 million people worldwide. Vortioxetine is a novel multimodal antidepressant that has emerged as a promising option for the management of MDD. However, the dose-response relationships of vortioxetine for MDD is not well established. We aimed to conduct dose-response meta-analyses to fill this gap and provide information and guidance for clinical practice

Methods We systematically searched multiple electronic databases for randomized controlled trials of vortioxetine for MDD, without language and publication year restrictions, and the last search was on February 8, 2024. The dose-response relationship was evaluated using a one-stage random-effects dose-response meta-analysis with restricted cubic spline model. The primary outcome was efficacy (mean change in depression scale score), with secondary outcomes including response, dropout for any reasons (acceptability), dropout for adverse events (tolerability), and any adverse events (safety). Subgroup analysis based on dosage were performed to preliminarily investigate the dose response relationships of vortioxetine. Sensitivity analyses were conducted to assess the robustness of the findings

Results The dose-response meta-analysis comprised 16 studies, with 4294 participants allocated to the vortioxetine group and 2299 participants allocated to the placebo group. The estimated 50% effective dose was 4.37 mg/d, and the near-maximal effective dose (95%

effective dose) was 17.93 mg/d. Visual inspection of the dose-response curve showed that efficacy increased linearly as the dose escalated from 0-5 mg/d, slowed between 5 mg/d to 10 mg/d, and then continued to rise linearly from 10 mg/d to 20 mg/d, without reaching a plateau at 20 mg/d. The relative risk (RR) for dropout due to any reasons, dropout due to adverse events, and adverse events all exhibited an upward trend with increasing doses. Specifically, the RR for dropout due to any reasons gradually escalated from 1 at placebo (0 mg/d) to 1.22 (95%CI: 1.01~1.48) at 20mg/d. Similarly, the RR for dropout due to adverse events rose from 1 at placebo to 1.98 (95%CI: 1.36~2.87) at 20mg/d. Additionally, the RR for adverse events reaches its peak at 1.18 (95%CI: 1.12~1.25) at 20mg/d. Subgroup analysis indicated that no significant differences were observed in acceptability, tolerability and safety among the dosage groups. The results of the dose-response meta-analysis were robust to several sensitivity analyses

Conclusion Vortioxetine may potentially provide additional therapeutic benefits when exceeding the current licensed dosage without significantly impacting safety. Conducting clinical trials exceeding the current approved dosage appears necessary to fully comprehend its efficacy and risk.

关键词: Major depressive disorder; Vortioxetine; Dose-response relationships; Efficacy; Meta-analysis

The Relationship between Cognitive and Global Function in Patients with Schizophrenia and Mood Disorders: A Transdiagnostic Network Analysis

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Objective Quite a number of patients with mental disorders can not achieve complete recovery of symptoms and functions after treatment, which is re-

lated to the impaired cognitive function. Cognitive deficits presents transdiagnostic characteristics in mental disorder groups. However, studies examining the interrelationship between neurocognition, social cognition and global function in a transdiagnostic sample are lacking. The purpose of this study is to investigating how global function and cognitive function are interrelated in a transdiagnostic sample and finding the important cognitive subdomains to global function by network analysis

Methods This transdiagnostic sample consists of 281 first-episode schizophrenia, 128 bipolar disorder, 73 depressive disorder patients and 196 healthy controls. We evaluated cognitive and global function in all subjects ($n=678$) using The Wechsler Adult Intelligence Scale (WAIS), The MATRICS Consensus Cognitive Battery (MCCB) and the Global Assessment of Functioning (GAF). Then the interaction and centrality indexes of cognitive function and global function were studied by network analysis

Results Information processing speed showed the highest strength and expected influence, while social cognition showed the lowest. The cognitive nodes that are closely related to global function are information processing speed, sustained attention and IQ. Subjects of different genders were modeled separately and the differences between the two networks were compared. It was found that the strength and expected influence of reasoning and problem solving in males were greater than that in females and the weight of social cognition and verbal memory was greater than that in females

Conclusion Information processing speed and verbal memory have a high centrality in the network of cognition and global function of patients with mental disorders. Meanwhile, information processing speed, sustained attention and working memory are directly related to the global function of patients. The research supports that intervention on these specific neurocognitive targets may have a certain positive impact on the overall network, which is conducive to the recovery of the global function of patients.

关键词: neurocognition, social cognition, global function, mental disorders, transdiagnostic, network analysis

Brain Network Mechanism of Different Subtypes of Cognitive Impairment in First-episode Drug-naive Major Depressive Disorder

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Objective Major depressive disorder (MDD) is highly heterogeneous in symptoms, and the mechanism of cognitive impairment in MDD is unknown. This study aims to integrate data-driven and machine-learning approaches to define the biological subtypes of cognitive impairment in MDD by incorporating individualized functional connectivity (FC), cognitive dimensions, and clinical symptomatology

Methods A total of 80 patients aged 18-65 who had been diagnosed with MDD and 40 health controls (HC) matched by demographic data were recruited. The rs-fMRI data of all subjects were collected, pre-processed, and individually segmented, and the FC within and between the individual resting state networks were calculated. The verbal memory and visual memory were evaluated by the subitems Logic memory I/II (LM_I/II) and Visual reproduction I/II (VR_I/II) of the Wechsler memory scale. Digit symbol substitution test (DSST) and Trail making test A/B (TMT_A/B) were used to evaluate the processing speed of the subjects. Verbal fluency test (VFT), Stroop color and word test (Stroop color and word test, Stroop C/CW), and the Wisconsin card sorting test (WCST) to assess executive function. Hamilton Anxiety Scale and Hamilton Depression Scale were used to evaluate the clinical symptoms of MDD patients. Subsequently, sparse multivariate canonical correlation analysis was used to search for covariant features of FC, cognition, and symptoms, and K-means clustering was used to identify potential biological subtypes of MDD

Results Compared to HC, patients with MDD exhibited significant impairments in verbal memory

(LM_I, $t=4.75$, $P<0.01$; LM_II, $t=5.78$, $P<0.01$) and visual memory (VR_I, $t=3.48$, $P<0.01$; VR_II, $t=3.37$, $P<0.01$); in terms of brain network characterization, MDD has significantly enhanced FC in several networks compared with HC. It includes SMN and DAN ($P<0.001$), SMN and VAN ($P<0.001$), DAN and DMN ($P=0.027$), VAN and LN ($P<0.001$), VAN and FN ($P=0.008$), LN and FN ($P<0.001$), LN and DMN ($P<0.001$). Canonical correlation analysis demonstrated that FC within the Ventral Attention network (VAN), scores on the Hamilton Anxiety Rating Scale (HAM-A) item 5 (memory or concentration disturbance), and scores on the Symbol Digit Substitution Test contributed most significantly to the first set of canonical variables. Based on the canonical variables, K-means clustering categorized MDD into two subtypes: the significantly cognitively impaired subtype of MDD (ciMDD) and the relatively cognitively preserved subtype of MDD (cpMDD). Compared to HC, ciMDD exhibited widespread cognitive impairments in memory, processing speed, and executive function, whereas cpMDD primarily showed impairments in memory function. For the ciMDD, the FC between SMN and DAN ($F=7.09$, $P<0.001$), SMN and VAN ($F=6.34$, $P<0.001$), LN and FN ($F=9.26$, $P<0.001$), LN and DMN ($F=6.75$, $P<0.001$), DAN and FN ($F=4.04$, $P=0.005$), VAN and LN ($F=14.68$, $P<0.001$), and VAN and FN ($F=3.65$, $P=0.009$) was significantly increased. In the terms of cpMDD, the FC between SMN and DAN ($F=5.92$, $P<0.001$), LN and FN ($F=11.53$, $P<0.001$), SMN and VAN ($F=5.62$, $P<0.001$), VAN and LN ($F=11.31$, $P<0.001$), and LN and DMN ($F=8.21$, $P<0.001$) was significantly higher than HC

Conclusion MDD patients have memory-oriented cognitive impairment and some abnormal brain network features. Through typical correlation analysis of brain function, cognitive function and clinical symptoms and K-means clustering, we identified two subtypes of MDD. Among them, the MDD subtype with significant cognitive impairment had extensive cognitive impairment in memory, executive function and processing speed, while the MDD subtype with relative cognitive retention mainly had impairment in memory

function. There were differences in the functional connectivity patterns of resting brain networks among different subtypes of MDD with cognitive impairment, while MDD subtypes with significant cognitive impairment showed more extensive abnormal connectivity patterns among brain networks. The enhanced functional connectivity between DAN and FN and between VAN and FN may be a key pathway leading to cognitive impairment in MDD. These findings reveal the differences in cognitive impairment patterns and brain network mechanisms that lead to MDD subtypes with different levels of cognitive impairment, promote the understanding of the biological mechanism and cognitive heterogeneity of depression, and provide a theoretical basis for individualized treatment of MDD patients.

关键词: MDD, Cognition, fMRI, Biological subtype

虚拟现实技术联合正念减压疗法对老年抑郁症患者的疗效研究

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目的 探讨后疫情背景下虚拟现实技术 (VR) 联合正念减压疗法对老年抑郁症患者疗效的影响。

方法 将 2023 年 1 月~2023 年 4 月于本院老年心理科治疗的 150 例老年抑郁症患者作为研究对象, 按随机数字表法分为三组, 对照 1 组采用常规药物治疗, 对照 2 组采用药物治疗联合正念减压疗法, 实验组在对照 1 组的基础上予以 VR 联合正念减压疗法, 各 50 例。三组均治疗 8 周, 比较三组好转率、脱落率。治疗前后, 采用汉密尔顿焦虑量表 (HAMA)、汉密尔顿抑郁量表 (HAMD)、五因素正念度量表 (FFMQ)、自我效能感量表 (GSES)、蒙特利尔认知量表 (MoCA)、社会功能缺陷筛查量表 (SDSS)、治疗中需处理的不良反应症状量表 (TESS) 进行评定, 比较两组患者的治疗效果、自我效能感的提高程度、社会功能及认知功能的改善程度及不良反应。

结果 对照 1 组、对照 2 组、实验组的脱落率分别为 10%、14%、6%, 三组间脱落率比较无差异

($P>0.05$)。实验组好转率(100.00%)高于常规药物治疗组(67.87%)与药物+正念减压组(83.63%)($P<0.05$)。与治疗前比较,三组治疗后HAMD、HAMA分值均显著下降,其中实验组的HAMD、HAMA分值均低于对照1组与对照2组($P<0.05$);治疗后三组患者FFMQ、GSES、MoCA、SDSS评分均显著升高,且实验组的FFMQ、GSES、MoCA、SDSS分值均显著高于对照1组与对照2组($P<0.05$)。

结论 VR联合正念减压疗法在后疫情背景下改善老年抑郁症患者的抑郁状态、焦虑状态、社会功能及认知功能,尤其在提高自我效能感等方面具有积极意义。

关键词: 虚拟现实技术;老年抑郁症,正念减压疗法

认知障碍合并慢性疼痛对大鼠行为学及海马神经元功能的影响

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目的 探讨认知障碍合并慢性疼痛对SD大鼠行为及海马神经元功能的影响,为认知障碍合并慢性疼痛的诊疗提供科学依据。

方法 本研究纳入6-8周龄成年雄性SD大鼠共60只作为研究对象。给根据研究目的分为对照组、认知障碍组、慢性疼痛组、认知障碍+慢性疼痛组及认知障碍+慢性疼痛假手术组,共5组,每组12只,分别进行定位航行实验、空间探索试验、可见平台试验及痛觉测定,并对海马组织进行HE染色检测病理改变、TUNEL染色检测细胞凋亡。

结果 (1)行为学检测:定位航行实验在第1天到第4天,与对照组对比,各组大鼠潜伏期有明显的延长趋势($P<0.001$)。定位航行试验结束后撤出平台,任选一个入水点将大鼠面向池壁放入水中,记录大鼠在2min内进入原平台象限的时间,与对照组比较,其他组所用时间有明显的延长趋势,其中,认知障碍+慢性疼痛组延长最为显著($P<0.05$);定位航行试验和空间探索试验结束后,进行历时为两天的可见平台试验,结果显示在第1天和第2天,其他组大鼠可见平台穿越次数明显低于对照组,其中

认知障碍+慢性疼痛组最为显著($P<0.05$);(2)痛觉检测:在CFA佐剂注射后分别测定各组动物的热刺激痛觉阈值。与对照组相比,认知障碍组大鼠热刺激痛觉阈值所用时间较短,但差异在统计学上没有意义;其余各组大鼠热刺激痛觉阈值所用时间逐渐减少($P<0.001$)。在CFA佐剂注射后分别测定各组动物的机械刺激缩足阈值,结果显示:与对照组相比,各组实验大鼠机械刺激缩足阈值明显降低($P<0.001$);(3)HE染色结果显示,对照组大鼠海马锥体神经元细胞排列整齐,层次清楚,核大而圆,形态完整。认知障碍组与慢性疼痛组细胞排列紊乱,层次不清,出现细胞膜断裂,细胞核固缩,甚至空泡变性。认知障碍+慢性疼痛组与认知障碍+慢性疼痛假手术组出现不同程度的神经元变性,主要表现为细胞肿胀、核染色质肿胀、粗大,细胞排列紊乱,极向不清,部分细胞空泡变,细胞核大小不一致。(4)TUNEL染色实验结果显示:与对照组相比,海马组织中凋亡细胞数量在认知障碍组、认知障碍+慢性疼痛组、认知障碍+慢性疼痛假手术组中增加,其中认知障碍+慢性疼痛组增加最为显著,差异具有统计学意义($P<0.001$)。

结论 通过本研究的结果,可以看出,认知障碍合并慢性疼痛的SD大鼠行为迟缓,痛觉降低,同时海马组织病理改变最为显著、细胞凋亡数量增加,提示,慢性疼痛可以加剧认知障碍的程度。

关键词: 认知障碍 慢性疼痛

低频 tACS 联合认知训练快速改善轻度阿尔茨海默病患者的认知并调节额颞叶功能连接

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目的 神经调控对治疗阿尔茨海默病(AD)有广阔前景,研究发现经颅交流电刺激治疗(tACS)可改善正常衰老的健康人或AD患者的认知水平,但治疗的最佳部位、频率、电流等仍未明确,并且对疗效的脑电机理研究较少。为此本研究采用双层前额叶同步theta波tACS联合N-back认知训练治疗轻度AD患者探索疗效和脑电生理。

方法 收集2021年至2022年间住院的51例轻度阿尔茨海默症患者,随机分配到真假刺激组,每

位患者给予2周的双侧前额叶同步theta波tACS治疗,每周5次,每次20分钟,治疗期间同时进行N-back认知训练。治疗前、治疗2周后和治疗3月后分别评估患者的认知水平和神经心理状态,并采集静息态脑电图。

结果 临床认知量表(简明精神状态量表(MMSE)、轻度认知功能损害筛查量表(sMCI)及费城词语学习测验(PVLT))评估提示只有真刺激组在治疗2周后认知水平明显高于治疗前,假刺激组则无差异。静息态脑电分析提示两组治疗前后在额叶和颞叶的theta段功能连接和gamma段功率谱上有显著差异,且theta功能连接与MMSE在真刺激组治疗前后差值存在相关,提示双侧额叶同步低频tACS联合认知训练通过改善额颞叶功能连接和能量来提高轻度AD患者认知水平。

结论 本研究在既往文献基础上采用双侧前额叶同步低频经颅交流电刺激并联合N-back认知训练治疗轻度AD,提示该方法可快速改善轻度AD的认知水平并调节额颞叶功能连接,但是否存在长期效应仍需进一步研究。

关键词: 经颅交流电刺激、N-back 认知训练、临床认知量表、静息态脑电图

Lifespan and Causes of Death Among Severe Mental Illness in China: A Cohort Study of 4.6 Million Decedents

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Objective Patients with severe mental illness (SMI) have a higher mortality than the general population, with an average of 10-20 years of life expectancy lost. The present study was the first one in China to systematically investigate the lifespan and death causes among patients with SMI, and make comparisons with the whole population during the same time period, and across the six types of SMI

Methods The death data of SMI patients and the whole population in Nanjing, China from January 2014 to September 2022 were extracted from the Jiangsu

Province Management Information System for Patients with SMI and Mortality Registration System in China

Results A total of 4 646 713 deaths were reported in Jiangsu Province from January 2014 to September 2022, with an average death age as 75.1 years (Male: 72.77, Female: 78.16). Of whom, 42 423 were registered for SMI, with an average death age as 64.25 years (Male: 61.93, Female: 66.65). The average lifespan of schizophrenia, bipolar disorder, intellectual disability, mental disorders due to epilepsy, paranoid disorder, and schizoaffective disorder is 64.90, 69.17, 59.21, 56.79, 69.03 and 69.06 years, respectively. Male patients had significantly shorter lifespan than female patients regardless of the types of SMI. The top ten causes of death in SMI are as follows: cerebrovascular disease (22.5%), other accident (downing, accidental falling, and et al) (10.2%), digestive system malignancies, acute cardiovascular disease (7.4%), chronic heart disease (6.4%), no cause specified (6.4%), chronic respiratory disease (5.2%), diabetes mellitus (4.5%), suicide (4.0%), and respiratory system neoplasms (3.6%). Compared to the whole population, patients with SMI died from the top ten death causes all had an earlier age, and the death proportion of chronic heart disease, diabetes mellitus, suicide, other accident (downing, accidental falling, and et al) and no cause specified in SMI were significantly increased. Additionally, we have preliminarily found differences in the characteristics of death across different types of SMI

Conclusion Patients with SMI in China, regardless of categories, experienced marked reductions in lifespan compared to the whole population, especially for male patients

The cerebrovascular accident but not the cardiovascular accident was the leading death cause for the patients with SMI regardless of the disease types. Our findings provide insights into the need to consider SMI spectrum when formulating better physical and mental health policies to prevent and reduce mortality in Chinese patients with SMI.

关键词: Severe mental illness, Mortality, Lifespan, Death causes.

认知评估工具在神经认知损害中的测量等值性研究

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目的 本研究旨在提供一种将两段式电子筛查工具 TCSA 测评分数转换为 MMSE 分数的简单方法。同时比较两种评估工具在社区队列中筛查认知损害患者的能力。

方法 研究共纳入来自社区队列的 532 名被试, 包括 142 名健康对照, 225 名 MCI 患者, 162 名痴呆患者。所有被试同一时间完成 MMSE 和 TCSA 两种评估, 其中 TCSA 要求初筛和整筛两段均需完成。使用等百分位相等法对 TCSA 初筛、TCSA 整筛分别与 MMSE 之间进行等值转换。比较 ROC 曲线评价两种量表的筛查能力。

结果 TCSA 与 MMSE 评分高度相关(Pearson $r=0.63, p<0.001$)。平均分 NC 在 MMSE=26.25(3.18)、pre-TCSA=6.65(2.01) 和 TCSA=21.44(3.19) 上的得分明显高于 MCI 组(MMSE=21.42(4.56)、pre-TCSA=5.18(1.95) 和 TCSA=18.17(3.77)) 和痴呆组(MMSE=15.08(6.39)、pre-TCSA=2.86(1.91) 和 TCSA=12.19(5.09))。我们分别做了 MMSE 和初筛、整筛的等值分数表, 方便进行分数转换。另外, TCSA 筛查轻度认知障碍(MCI)的曲线下面积(AUC)与 MMSE 相似(0.85 vs 0.83), 而在筛查痴呆方面优于 MMSE (0.99 vs 0.97, $P<0.05$)。

结论 TCSA 有筛查老年人的认知损害的能力, 具备在社区环境中进行大规模认知筛查的潜力, 可以与 MMSE 进行比较和转换。

关键词: 电子筛查; MMSE; 等值研究; 认知评估

Five-Year Trajectory of High-Density Lipoprotein Cholesterol Related To Cognitive Function Outcomes Among Community-Dwelling Older Adults

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Objective This study examines the longitudinal relationship between metabolic markers and cognitive function among older adults living in a suburban community of Shanghai from 2017 to 2021. The primary aim was to analyze the trajectory of high-density lipoprotein cholesterol (HDL-C) and its protective effect on cognitive function, and to investigate the moderating role of low-density lipoprotein cholesterol (LDL-C) in this process.

Methods Participants from the Shanghai Action to Prevent the Elderly from Dementia (SHAPE) cohort underwent annual health check-ups focusing on metabolic indicators such as blood glucose and lipid profiles. Group-based trajectory analysis was used to classify HDL-C and LDL-C trajectories, and multiple regression models were employed to analyze the impact of these trajectories on cognitive function.

Results The findings indicated that the trajectory of HDL-C exhibited a significant protective effect on cognitive function, and maintaining HDL-C within a normal range was associated with the best cognitive performance. The moderating effect of LDL-C was found to mitigate the protective impact of high HDL-C levels on cognitive function, highlighting the importance of multiple lipid parameters in cognitive health. Specifically, the normal HDL-C trajectory group showed better cognitive performance in total cognitive assessment score, episodic memory, and attention compared to the low trajectory group. Additionally, lower LDL-C levels enhanced the protective effect of HDL-C on cognitive function, while higher LDL-C levels attenuated this effect.

Conclusion These results underscore the importance of monitoring and managing lipid levels for cognitive health in the aging population. Normal HDL-C trajectories were associated with better cognitive outcomes, and LDL-C played a moderating role in this pro-

cess. Therefore, cognitive health strategies for the elderly should focus on the management of HDL-C and LDL-C. This study provides new insights for prevention strategies and interventions to alleviate cognitive decline in aging populations.

关键词: This study examines the longitudinal relationship between metabolic markers and cognitive function among older adults living in a suburban community of Shanghai, from 2017 to 2021. Participants from the Shanghai Action to Prevent the elderly from dementia (SHAPE) cohort underwent annual health check-ups, focusing on metabolic indicators such as blood glucose and lipid profiles. Our findings indicated that the trajectory of high-density lipoprotein cholesterol (HDLc) exhibited a significant protective effect on cognitive function, and maintaining HDLc within a normal range was associated with the best cognitive performance. The study also revealed the moderating effect of low-density lipoprotein cholesterol (LDLc), which mitigated the protective impact of high HDLc levels on cognitive function. These results highlight the importance of monitoring lipid to keep cognitive health in the aging population.

Impact of Fasting Blood Glucose Trajectories on Cognitive Function in Community-Dwelling Elderly Adults: A Five-Year Longitudinal Study

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Objective To examine the longitudinal relationship between metabolic markers, particularly fasting blood glucose (FBG), and cognitive function among older adults in a suburban community of Shanghai from 2017 to 2021

Methods Participants from the Shanghai Action

to Prevent the elderly from dementia (SHAPE) cohort underwent annual health check-ups focusing on FBG and inflammatory markers, including the neutrophil-to-lymphocyte ratio (NLR) and monocyte-to-high-density lipoprotein ratio (MHR). Gaussian mixture modeling (GMM) was used to categorize FBG trajectories into normal and elevated groups. Cognitive function was assessed in 2021 using the Thoven Cognitive Self-Assessment (TCSA)

Results The study included 870 participants. GMM identified two FBG trajectories: 21.72% of participants had elevated FBG levels, while 78.28% had normal levels. Cognitive testing revealed that visual perceptual memory was significantly lower in the elevated FBG group, though no significant differences were found in overall cognitive function, verbal repetition, or attention. Elevated FBG levels were associated with higher NLR and MHR values

Conclusion Elevated FBG levels are associated with poorer visual perceptual memory in older adults, independent of age and education level. Higher NLR and MHR values in the elevated FBG group suggest a potential link between inflammation and cognitive decline. Monitoring and managing blood glucose and inflammatory markers may help preserve cognitive function in the aging population.

关键词: cognitive function, fasting blood glucose, inflammatory markers, older adults

Integrative Bioinformatics Analysis Unveils Lysosomal and Immune-Infiltration-Related Genes As Potential Therapeutic Targets in Late-Onset Major Depressive Disorder

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Objective This study aims to utilize bioinformatics to analyze the differential genes associated with lysosomal changes in patients with late-onset major depressive disorder (LOD) and identify potential therapeutic drugs

Methods Differential genes in dataset GSE76826 were analyzed by WGCNA, and the modules associated with LOD were screened. After intersection with lysosomal genes, the diagnostic significance was determined by the receiver operating curve (ROC) and Lasso regression. Pathway enrichment analysis was performed on key modules, and then three kinds of CIBESORT, MCPcounter, and quanTIseq immunoinfiltration were used to analyze the immune infiltration of LOD patients. Then the LOD animal model was constructed to verify the selected genes. Finally, the ITCM database was used to predict small-molecule drugs for lysosome-related genes

Results The selection of ANK3, BIN1, CKAP4, GPRASP1, MYO7A, and RAB20 in the green module has diagnostic significance. The biological process of GO found that the Green module was related to T cell differentiation and its regulation, and further immune infiltration found that LOD patients were related to CD8+T cells and neuronal cells, and the BIN1 gene was positively correlated with CD8+T cells. The results of qPCR verification of ANK3, BIN1, CKAP4, and RAB20 genes using animal models were basically consistent with the results of our bioinformatics analysis. The ITCM database predicted that 17-beta-estradiol and nickel small-molecule compounds might target LOD

Conclusion The occurrence and development of LOD patients are the result of the joint participation of multiple genes and pathways, and CD8+T cells and nerve cells may promote the development of LOD. 17-beta-estradiol and nickel may be targeted as Chinese medicines for the potential treatment of LOD.

关键词: biological information; late-onset major depressive disorder; CD8+T cells; regression analysis; immunoinfiltration

Disparate of Dysregulate Metabolites and

Cognitive Dysfunction in Late-Life Depression and Amnestic Mild Cognitive Impairment-Based 1H-NMR Metabolomics

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Objective Alzheimer's disease (AD) preclinical stages include late-life depression (LLD) and amnestic mild cognitive impairment (aMCI). Early identification of these two diseases plays an important role in the early prevention and treatment of AD. To explore the metabolic characteristics of LLD and aMCI and search for biomarkers, we hope to propose new exploration directions for the prevention and treatment of AD

Methods We collected plasma samples from 53 elderly subjects, including 11 LLD patients, 26 aMCI patients, and 16 healthy control patients, using 1H-nuclear magnetic resonance (1H-NMR) metabolomics. Differential metabolites were analyzed and associated with neurocognitive tests, and potential markers for diagnosis were explored using the receiver operating characteristic (ROC) curve

Results There were obvious metabolic disturbances in the LLD and aMCI groups, and the plasma differential metabolites were mainly concentrated in the three metabolic pathways of glycolysis/gluconeogenesis, galactose metabolism, and arginine biosynthesis. Scyllo-inositol was significantly up-regulated in LLD patients and significantly down-regulated in aMCI patients, with statistical significance. The area under the ROC curve (AUC = 0.7784, 0.7837) indicated that scyllo-inositol could well distinguish LLD, aMCI, and healthy people. In addition, scyllo-inositol was also associated with abnormal results in neurocognitive tests. Combining scyllo-inositol with the memory scale and analyzing joint diagnostic indicators (AUC = 0.9205, 0.9495) showed stronger diagnostic ability

Conclusion This study helps us understand the pathogenesis and relationship between LLD and aMCI,

and a new diagnostic model combining metabolite signatures with neurocognitive tests may provide new ideas for early detection and prevention of AD.

关键词: late-life depression, amnesic mild cognitive impairment, metabolomics

Investigation on EEG Power Spectral Density and Its Influencing Factors in Middle-Aged and Elderly Patients with Depression Disorder Based on Sleep Stage

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Objective To scrutinize the traits and influencing elements of EEG power spectral density at diverse sleep phases in various types of middle-aged and elderly patients with depressive disorders, and to furnish a theoretical foundation for the application of sleep EEG power spectral density in the sleep assessment of middle-aged and elderly patients with depressive disorders

Methods The general conditions and sleep EEG data of 33 middle-aged and elderly patients with depression who were hospitalized in Anhui Mental Health Center from 2019 to 2023 were retrospectively examined. Grouping approach: Based on the age of first onset, the patients were classified into the early-onset group (< 60 years old) and the late-onset group (\geq 60 years old). According to body mass index (BMI), the patients were divided into the overweight group ($>$ 24kg/m²) and the normal group (\leq 24kg/m²). The patients were categorized into the illiterate group (\leq 0 years) and the educated group (\geq 0 years). The Profusion PSG4 polysomnograph was utilized to collect sleep EEG data, and the MATLAB-EEGLAB toolbox was employed to analyze the data, and the rhythms and power spectral densities of N1, N2, N3, REM α , β , δ , and θ were computed. The t test of two independent samples was adopted to compare the disparity of sleep EEG power spectral density in different groups, and the spearman correlation analysis was implemented to investigate the relationship between the patients' general conditions and sleep EEG

power spectral density and the sleep process

Results 1. The results of the T-test of two independent samples indicated that there was no conspicuous difference in EEG power spectral density between the body disease state and the body weight state at various sleep phases. 2. The findings of the difference analysis among groups manifested: The REM sleep latency ($t = -2.073$, $p = 0.047$) and the δ wave power spectral density ($t = -2.242$, $p = 0.032$) in the late-onset group were significantly higher than those in the early-onset group. The REM delta wave power spectral density ($t = 2.102$, $p = 0.044$), REM theta wave power spectral density ($t = 2.102$, $p = 0.044$), REM duration ($t = 2.754$, $p = 0.011$), and REM duration ratio ($t = 3.258$, $p = 0.003$) were significantly lower. Compared with male patients, the α wave power spectral density in the N2 phase was significantly higher in female patients ($t = -2.288$, $p = 0.029$). Compared with the illiterate group, the proportion of the N1 phase in the educated group was significantly higher ($t = -2.176$, $p = 0.037$). The N3-phase α wave ($t = 2.732$, $p = 0.010$), β wave ($t = 2.461$, $p = 0.020$), and θ wave ($t = 2.181$, $p = 0.037$) power spectral density was significantly lower. 3. The results of the Spearman correlation analysis revealed: The age of first onset was negatively correlated with REM duration ($r = -0.396$, $p = 0.022$), REM duration proportion ($r = -0.354$, $p = 0.046$) and REM theta power spectral density ($r = -0.379$, $p = 0.029$)

Conclusion The current study demonstrated that the body disease status and body weight status did not have a significant effect on the EEG power spectral density at different sleep phases. Nevertheless, the sleep EEG power spectral density at different sleep phases, particularly REM, was markedly influenced by the age of onset, gender, and education level. The later the age of first onset, the lower the θ wave and δ wave power spectral density of REM and the shorter the REM duration, suggesting that the physiological function impairment is more pronounced. Hence, individualized interventions are requisite for patients with late-onset depression to enhance their sleep quality and overall health.

关键词: Depression, Middle-aged and elderly people, Sleep, Polysomnography, Sleep architecture, PSD

精神分裂症无抽搐电休克治疗效应相关的静息态脑磁图神经振荡功能连接特征研究

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目的 本研究采用静息态脑磁图技术从神经振荡功能连接特征分析 SZ 患者电休克治疗前后的全脑神经电生理改变,为探讨 MECT 治疗机制提供初步研究依据。

方法 本研究共招募 28 名 SZ 患者 (SZ 组) 在第 1 次 MECT 治疗前 (ECT0)、第 3 次 MECT 治疗后 (ECT3) 和第 6 次 MECT 治疗后 (ECT6) 24 小时内完成静息态 MEG 数据采集。招募 26 名年龄、性别和受教育年限与患者相匹配的健康对照者进行单次静息态脑磁图扫描。选取额叶眶部、海马、海马旁回、岛叶、杏仁核、颞叶和扣带回作为感兴趣区,采用加权相位滞后指数 (Weighted Phase-Lag Index, WPLI) 分析方法,评估 HC 组、SZ 组 delta 和 theta 频段感兴趣脑区间功能连接的变化,正态分布的数据采用独立样本 t 检验,偏态分布数据通过非参数 (Kruskal-Wallis H) 检验 ($p < 0.01$)。MECT 治疗前后 SZ 组 (ECT0、ECT3、ECT6) 间 WPLI 值的差异为通过配对样本 t 检验进行评估 ($P < 0.01$)。并进一步探讨功能连接指标 WPLI 值和阳性与阴性症状量表 (Positive and Negative Syndrome Scale, PANSS) 各项评分间进行相关分析。

结果 与基线期 (ECT0) 相比, SZ 患者 3 次 MECT 治疗后 delta 频段左侧颞横回和右侧脑岛、右侧眶部额上回和右侧眶部额中回、右侧眶部额上回和右侧眶部额下回、右侧后扣带回和右侧脑岛、左侧杏仁核和右侧杏仁核异常减弱的功能连接 WPLI 值恢复正常水平,与 HC 组无差异。与基线期 (ECT0) 相比, SZ 患者 theta 频段 3 次 MECT 治疗后右侧眶部额上回和右侧海马旁回、右侧眶部额上回和左侧海马、右侧海马旁回和右侧颞上回、左侧海马旁回和左侧岛叶、左侧颞下回和右侧海马旁回异常减弱的功能连接 WPLI 值恢复正常水平,与 HC 组无差异。6 次 MECT 治疗后左侧颞极颞上回和右侧眶部额中回异常减弱的功能连接 WPLI 值恢复正常水平。

相关性分析发现 3 次 MECT 治疗后 theta 频段

左侧海马旁回和左侧岛叶 WPLI 差值与 PANSS 量表总分减少分呈正相关。

结论 研究发现 SZ 患者存在多脑区间功能连接失调,3 次 MECT 治疗可以逆转部分脑区异常的功能连接,左侧海马旁回和左侧岛叶功能连接的恢复与 SZ 患者临床症状改善相关,MECT 治疗可能通过改变大脑区域间的功能连接,改善精神分裂症患者的临床症状。

关键词: 精神分裂症;无抽搐电休克治疗;脑磁图;加权相位滞后指数

Glycemic Variability and Lipid Metabolism Impact on The Risk of Depression in Elderly Patients with Diabetes Mellitus

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Objective To observe the prevalence of depression among elderly diabetic patients; to study the effects of glycemic variability and lipid metabolism on the depressive condition of elderly diabetic patients; to explore the risk factors for the development of depressive disorders in elderly diabetic patients, and to provide a theoretical basis towards the long-term course of mood management for elderly diabetic patients

Methods Retrospective Analysis of Blood Glucose Variability, Lipid Metabolism Indices, and Anxiety-Depression Scores in 145 Elderly Diabetic Patients Hospitalized at Anhui Mental Health Center and The First Affiliated Hospital of Anhui Medical University from 2020 to 2023. Patients were categorized based on their scores on the Hamilton Depression Scale (HAMD-24): those with a total score of ≥ 20 were included in the depression group, while other elderly diabetic patients were placed in the control group. Biochemical analysis

was performed using the Roche c8000 analyzer to measure lipid metabolism indices, including total cholesterol (TC), high-density lipoprotein cholesterol (HDL-C), apolipoprotein A1 (ApoA-I), apolipoprotein B (ApoB), and triglycerides (TG). Dynamic glucose monitoring was conducted with the Abbott FreeStyle Libre H to gather blood glucose variability indices, such as the mean of daily differences (MODD), standard deviation of blood glucose (SDBG), coefficient of variation (CV), estimated glycated hemoglobin (eH1A1c), area under the glucose curve (AUC), high blood glucose index (HBGI), low blood glucose index (LBGI), time in target range (TIR), and mean blood glucose level (MBG). The associations between anxiety, depression, and various glycemic and lipid metabolic indices, along with risk factors, were investigated using Spearman's correlation analysis and logistic regression

Results 1. In this study, a total of 145 patients were surveyed, including 86 in the depression group (31 males and 55 females, with an average age of 72.42 ± 5.75), and 59 in the control group (32 males and 27 females; $\chi^2 = 4.713$, $p = 0.030$), with an average age of 70.24 ± 7.54 ($t = 1.879$, $p > 0.05$)

2. The results of the correlation analysis indicated that HAMD scores were positively correlated with total cholesterol (TC, $r = 0.25$) and apolipoprotein B (ApoB, $r = 0.28$) ($p < 0.05$). HAMA scores were positively correlated with total cholesterol (TC, $r = 0.23$), standard deviation of blood glucose (SDBG, $r = 0.29$), and low blood glucose index (LBGI, $r = 0.23$) ($p < 0.05$).

3. Univariate and multivariate logistic regression analyses, with depression as the dependent variable, revealed that ApoB [OR = 15.259, 95% CI (2.795, 83.315), $p = 0.002$], SDBG [OR = 1.404, 95% CI (1.120, 1.760), $p = 0.003$], and LBGI [OR = 1.318, 95% CI (1.099, 1.580), $p = 0.003$] were independent risk factors.

Conclusion The prevalence of depression among elderly diabetic patients is as high as 59.31%, higher than previously reported. Female elderly diabetic patients are more susceptible to depression. The level of depression is closely related to lipid metabolism; higher levels of TC and ApoB are associated with higher HAMD scores. Anxiety levels are also closely linked with both lipid metabolism and glucose variability;

higher levels of TC, SDBG, and LBGI correspond to higher HAMA scores. ApoB, SDBG, and LBGI are independent risk factors for depression in diabetic patients: for every 1 g/L increase in ApoB, the risk of depression increases by 14.259 times; for every 1 mmol/L increase in SDBG, the risk of depression increases by 40.4%; and for every unit increase in LBGI, the risk of depression increases by 31.8%. Attention should be paid to the lipid metabolism indicators, glucose variability, and frequency/severity of hypoglycemia in elderly diabetic patients to manage the risk of depression.

关键词: depression, elderly diabetic patients, lipid metabolism, glycemic variability

晚发型抑郁障碍的脑网络间功能异常与认知功能损害

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目的 探究晚发型抑郁障碍(Late-onset Depression, LOD)的静态和动态脑网络间功能改变及其与临床症状的关系。

方法 本研究共纳入了 82 名 LOD 患者与 101 名健康对照者(Healthy Control, HC)。所有被试均进行了人口学资料采集、临床评估、认知测试和功能磁共振扫描。利用 DPABI 和 GIFT 软件对磁共振数据进行预处理和独立成分分析后,进行静态功能网络连接(Static Functional Connectivity, sFNC)分析,并使用滑动窗口法和 K-Means 聚类方法进行动态功能网络连接(Dynamic Functional Connectivity, dFNC)分析,得出时间特性与功能连接矩阵。通过网络统计分析(Network Based Statistics, NBS)和协方差分析分别对静、动态的网络间功能连接矩阵及 dFNC 的时间特性进行组间比较,并与抑郁情绪、认知功能(总体认知、记忆、信息处理速度、执行、语言及视空间功能)进行相关分析和中介效应分析。

结果 共有 11 个独立成分被提取,并归类成 8 种网络。在 sFNC 中,与 HC 相比,LOD 的视觉网络-背侧注意网络(Visual Network-Dorsal Attention Network, VN-DAN)连接减弱(NBS 校正后 $p < 0.01$)。

在 dFNC 中, 整个扫描时间被分为 4 种状态。在状态 3 中, LOD 的平均停留时间 ($p=0.020$) 和占比时间 ($p=0.019$) 比 HC 具有更少的趋势, 而在状态 1 中 LOD 的占比时间具有更大的趋势 ($p=0.027$)。与 HC 相比, 状态 2 的突显网络-感觉运动网络 (Salience Network - Somatomotor Network, SN-SMN) 在 LOD 中呈现更弱的功能连接 (NBS 校正后 $p=0.04$)。同样 LOD 在状态 3 的默认模式网络-突显网络 (Default Mode Network-Salience Network, DMN-SN) 中呈现更弱的功能连接 (NBS 校正后 $p<0.01$)。SN-SMN 的 dFNC 与总体认知、记忆、语言、视空间功能测试呈正相关性, 而与老年抑郁量表得分和执行能力测试呈负相关。此外, 状态 2 的 SN-SMN 连接强度中介了老年抑郁对数字广度倒背测试和波士顿命名测试得分的影响。

结论 LOD 的 VN-DAN 的 sFNC 及 SN-SMN 和 DMN-SN 的 dFNC 均存在异常减弱, 并且 SN-SMN 的 dFNC 可能调控了抑郁情绪及认知受损的关系。这些异常的脑网络揭示了 LOD 潜在的发病机制, 有望在经颅磁刺激、经颅交流电刺激等治疗上成为干预靶点。

关键词: 晚发型抑郁障碍; 功能网络连接; 认知功能损害

Causal Relationships of Mental Disorders and Human Aging: A Bidirectional Two-sample Mendelian Randomization Study

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Objective Previous studies suggested that individuals with mental disorders have a shorter life expectancy than the general population, but no studies have explored the topic of mental disorders and aging based on genetic dimensions. Our study aimed to explore the genetic causal relationships between mental disorders (including schizophrenia, bipolar disorders, major depressive disorders (MDD), post-traumatic stress disorder (PTSD) and anxiety disorder) and human aging

Methods Single nucleotide polymorphism (SNP) data for both mental disorders and human aging used as

exposures and outcomes were summary-level data, sourced from the Psychiatric Genomics Consortium (PGC), IEU open GWAS project and Zenodo, separately. Five kinds of MR methods (Inverse variance weighted regression (IVW), MR Egger, Weighted median, Simple mode, and Weighted mode) were carried out to ascertain the causal effect and pleiotropy, heterogeneity, and sensitivity analyses were performed to ensure the robustness of our results

Results We found that MDD was causally associated with decreased risk of aging (IVW: OR=0.863, 95% CI=0.840-0.886, $p<0.01$; weighted median: OR=0.820, 95% CI=0.799-0.841, $p<0.01$; simple mode: OR=0.780, 95% CI=0.748-0.812, $p<0.01$; weighted mode: OR=0.791, 95% CI=0.754-0.825, $p<0.01$), whereas bipolar disorder was causally associated with increased risk for aging (IVW: OR=1.022, 95% CI=1.013-1.031, $p=0.045$; MR Egger: OR=1.138, 95% CI=1.086-1.190, $p=0.041$). Both pleiotropy and sensitivity analyses supported the robustness of these findings. As for schizophrenia, PTSD, and anxiety disorders, we didn't find a causal relationship between them and aging. When we consider mental aging as exposures, we found no evidence to support a causal relationship between aging and mental disorders

Conclusion Our study provided genetical evidence for a causal relationship between MDD and bipolar disorder and ageing, which provides new insights to improve the prognosis of patients with mental disorders and to achieve co-intervention between mental disorders and aging.

关键词: Mental disorders, Aging, Mendelian Randomization

Predictors for Early-onset Psychotic Symptoms in Patients Newly Diagnosed with Parkinson's Disease without Psychosis at Baseline: A 5-year Cohort Study

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Objective To investigate the risk factors of early-onset psychosis in Parkinson's disease (PD) in a cohort of patients from the Parkinson's Progression Markers Initiative

Methods Longitudinal data on motor and nonmotor features, dopamine transporter (DAT) imaging, and cerebrospinal fluid (CSF) measurements were collected. The survival probability of psychotic symptoms, potential risk factors for psychosis development over a 5-year follow-up period, and the performance of the prediction model were evaluated

Results Among the 338 newly diagnosed patients with PD, 83 developed psychotic symptoms. Gastrointestinal autonomic dysfunction, presence of probable rapid-eye-movement sleep behavior disorder, and the ratio A β 42: total-tau could independently predict onset of psychosis in PD (Hazard ratio (HR) = 1.157, 95% confidence interval (CI) 1.022–1.309, $p = 0.021$, HR = 2.596, 95% CI 1.287–5.237, $p = 0.008$, and HR = 0.842, 95% CI 0.723–0.980, $p = 0.027$, respectively). The combined model integrating baseline clinical predictors, DAT imaging, and CSF measurements achieved better sensitivity than the clinical predictors alone (area under the curve = 0.770 [95% CI 0.672–0.868] vs. 0.714 [95% CI 0.625–0.802], $p = 0.098$)

Conclusion We identified clinical and CSF predictors of early-onset psychosis in patients with PD. Our study provides evidence and implications for prognostic stratification and therapeutic approaches for PD psychosis.

关键词: Parkinson's disease, psychosis, gastrointestinal autonomic dysfunction, RBD, A β 42: total-tau

Comparative Evaluation of Nutritional Risk Screening Tools in Elderly Psychiatric Patients in China: NRS-2002, MUST, and MNA-SF

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Objective This study aims to compare and evaluate the applicability and effectiveness of three commonly used nutritional risk screening tools—Nutritional Risk Screening 2002 (NRS-2002), Malnutrition Universal Screening Tool (MUST), and Mini Nutritional Assessment Short Form (MNA-SF)—in elderly psychiatric patients in China

Methods A cross-sectional study was conducted using a convenience sample of elderly psychiatric patients, aged 60 years and older, who were hospitalized between December 2020 and January 2021. Data collected included scores from NRS-2002, MUST, and MNA-SF, as well as measurements of weight, height, and fasting blood specimens. Statistical analysis was performed using SPSS version 22.0. Kendall's tau-b and Kendall's W coefficients were used to evaluate the association and concordance of the screening tools. Diagnostic performance was assessed through specificity, sensitivity, positive predictive value (PPV), negative predictive value (NPV), and area under the receiver operating characteristic curve (AUC)

Results A total of 270 elderly psychiatric patients, aged 60 to 93 years (mean age 69.8 \pm 7.6 years), were included in the study. More than 30% of the participants had anemia and hypoproteinemia. The MNA-SF identified a higher prevalence of nutritional risk (69.63%) compared to NRS-2002 (13.7%) and MUST (18.52%). The Kendall's W value of 0.45 indicated moderate agreement among the tools, with MNA-SF performing best in nutritional risk identification. The specificity for diagnosing malnutrition due to hypoproteinemia was highest for MNA-SF (96.8%), followed by NRS-2002 (94.1%) and MUST (84.9%), while the sensitivity was 17.9%, 31.0%, and 26.2%, respectively. For anemia, the specificity was 35.6% for MNA-SF, 92.6% for NRS-2002, and 86.7% for MUST, with sensitivities of 81.7%, 28.0%, and 30.5%, respectively

Conclusion The study concludes that MNA-SF is the most suitable tool for initial nutritional screening in elderly psychiatric patients due to its high sensitivity, ensuring that most at-risk individuals are identified for further assessment.

关键词: Nutritional risk assessment, Psychiatric, MNA-SF, MUST, NRS-2002

精神分裂症血浆内皮细胞微颗粒和炎症因子与颈动脉内膜中层厚度关系的研究

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目的 观察精神分裂症患者血浆内皮细胞微颗粒(EMP)水平和炎症因子(L-2、IL-4、IL-6、IL-10、TNF、GM-CSF、IL-1 β 、IFN- γ)与颈动脉内膜中层厚度(IMT)之间关系,探讨精神分裂症血管动脉硬化可能机制。

方法 选择精神分裂症患者92例,将其分为代谢综合征组和非代谢综合征组;选择健康查体者63例作为正常对照组,入选患者常规记录年龄、身高、体重、血脂、血糖指标并计算体质指数(BMI),采用彩色多普勒超声检测其左侧和右侧颈动脉IMT和斑块;采用流式细胞仪检测其血浆中CD31+/CD42-内皮细胞微颗粒(EMP)水平,酶联免疫法检测血浆炎症因子(L-2、IL-4、IL-6、IL-10、TNF、GM-CSF、IL-1 β 、IFN- γ)浓度。

结果 1)各组患者一般资料:比较精神分裂症代谢综合征组和非代谢综合征组与对照组相比在性别、年龄方面差异无意义($P>0.05$),而BMI、血脂、血糖、颈动脉IMT精神分裂症两组较正常对照组均显著升高($P<0.05$);2)精神分裂症代谢综合征组BMI、血脂、血糖颈动脉IMT较非代谢综合征组显著升高($P<0.05$);3)血浆内皮细胞微颗粒水平测定结果:精神分裂症代谢综合征组和非代谢综合征组血浆EMP水平均显著高于正常对照组(P 均 <0.01);精神分裂症代谢综合征组血浆EMP水平显著高于精神分裂症非代谢综合征组($P<0.05$)。4)血浆炎症因子测定结果:精神分裂症组血浆IL-6、IL-1 β 、TNF浓度均显著高于对照组($P<0.05$),而IL-4显著低于对照组($P<0.05$);精神分裂症代谢综合征组血浆IL-6、IL-1 β 浓度显著高于非代谢综合征组($P<0.05$);5)相关性分析:精神分裂症组内比较:精神分裂症组血浆EMP水平与颈动脉IMT(左侧 $r=0.31$,右侧 $r=0.21$, $P<0.05$)

呈显著正相关;IL-6、IL-1 β 、TNF浓度、斑块与颈动脉IMT(左侧 r 值分别为0.21、0.27、0.34、0.27,右侧 r 值分别为0.26、0.32、0.24、0.37, $P<0.05$)呈显著正相关,而IL-4与颈动脉IMT呈负相关 $P>0.05$ 无显著相关性;血浆IL-6、IL-1 β 浓度与血浆EMP水平(r 值分别为0.24、0.41, $P<0.05$)呈显著正相关。

结论 1)血浆EMP水平可用于评估精神分裂症颈动脉的损伤程度。2)血浆IL-6、IL-1 β 、TNF与精神分裂症颈动脉粥样硬化的发生和发展有关。

关键词:精神分裂症;内皮细胞微颗粒EMP;炎症因子;颈动脉内膜中层厚度IMT;

The Association between Cognitive Leisure Activities and Depressive Symptoms Among Older People: A Longitudinal Study of Health and Retirement in China (CHARLS)

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Objective In recent years, depressive symptoms pose significant and growing public health challenges, with older adults being no exception. Cognitive leisure activities not only encourage social interaction among older adults, but also keep the brain active. This study aims to explore the cross-sectional and longitudinal relationship between cognitive leisure activities and depressive symptoms in older people

Methods The data in this study was collected from the China Health and Retirement Longitudinal Study (CHARLS) from 2011 to 2018. The frequency of engaging in cognitive leisure activities was measured through a self-reported questionnaire. Depressive symptoms were measured using the 10-item Center for Epidemiological Studies-Depression Scale (CES-D10). Logistic regression models and survival analysis Cox regression were used to investigate the cross-sectional and longitudinal relationship between cognitive leisure activities and depressive symptoms in older people

Results There were 11,424 participants, the mean age was 58.6 years, included in the cross-sectional

and 5,930, the mean age was 57.0 years, participants in the cohort analysis. Upon accounting for all confounding factors, the cross-sectional analysis revealed that the older people who engaged in one or more cognitive leisure activities were less likely to experience depressive symptoms than those who did not engage in any cognitive leisure activities. The odds ratios were 0.70 (95 % CI: 0.63–0.79, $p < 0.001$) for older adults engaged in one cognitive leisure activity and 0.63 (95 % CI: 0.36–1.05, $p = 0.089$) for older adults engaged in more than one cognitive leisure activity, respectively. Similarly, after adjusting for all confounding factors, the longitudinal analysis produced consistent results. The hazard ratios were 0.84 (95 % CI: 0.77–0.93, $p < 0.001$) and 0.84 (95 % CI: 0.56–1.27 $p = 0.414$), respectively. Furthermore, this study found that the mediating effects of life satisfaction was significant, accounting for 12.9 % of the impact of cognitive leisure activities on depressive symptoms

Conclusion Engaging in cognitive leisure activities has a positive impact on depressive symptoms among older individuals, potentially serving as a protective factor against their development. Furthermore, there is a need for an expansion of venues where elderly individuals can participate in such activities to enhance and uphold their psychological well-being.

关键词: aging, cognitive leisure activities, depression, longitudinal study, CHARLS

Progressive Structural Alterations Associated with Negative Symptoms in Schizophrenia: A Causal Structural Covariance Network Analysis

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Objective This study aims to explore the synchronous and progressive alterations in gray matter volume (GMV) associated with negative symptoms

Methods 81 Deficit schizophrenia (DS) patients, 101 non-deficit schizophrenia (NDS) patients, and 177

healthy controls (HCs) were enrolled. The voxel-based morphometry and source-based morphometry were used for gray matter segmentation and structural covariance network construction. DS patients were ranked based on the severity of negative symptoms, and a causal structural covariance network was constructed using Granger causality analysis

Results Schizophrenia patients showed smaller GMV in multiple brain regions compared to HCs. Compared to NDS, DS exhibited decreased GMV in right inferior frontal gyrus triangular part, para-hippocampal gyrus, and anterior cerebellum, and showed decreased structural covariance among left middle frontal gyrus, inferior frontal gyrus and right superior frontal gyrus. As negative symptoms worsened, the volume of caudate decreased along with atrophy of para-hippocampal gyrus, the volume of thalamus increased along with the decline in multiple brain regions, and the decreased volume of posterior cingulate cortex resulted in increased volume of other brain regions

Conclusion The present study demonstrated specific brain structural covariance patterns in DS, providing new evidence for the causal effects of negative symptoms on progressive structural abnormalities in schizophrenia.

关键词: Schizophrenia, Negative symptoms, Causal structural covariance network, Granger causality analysis

Progress in The Study of The Effect of Intermittent Explosive Theta Stimulation on Cognitive Function and Brain Functional Connectivity in Elderly Depressed Patients with Cognitive Impairment

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Objective This paper aims to explore the effects of intermittent theta burst stimulation (iTBS) on cognitive function and brain connectivity in elderly patients with depression accompanied by cognitive impairment

Methods By reviewing existing literature, this paper examines the progress of transcranial magnetic stimulation (TMS), particularly iTBS, in improving cognitive function. It analyzes the specific impacts of iTBS on executive function, memory, visuospatial function, and attention, and explores the potential mechanisms underlying these effects

Results Research indicates that iTBS, as a non-invasive brain stimulation technique, shows significant potential in improving cognitive function. Specific findings include: Executive Function: iTBS significantly improves executive function, especially when stimulating the left dorsolateral prefrontal cortex (DLPFC). Memory Function: Stimulation of the left parietal cortex (IPL) is more effective in enhancing imagery memory compared to the left DLPFC. Visuospatial Function: iTBS stimulation of the right DLPFC significantly improves visuospatial working memory. Attention: iTBS stimulation of the right parietal cortex significantly enhances attentional orientation efficiency

Conclusion iTBS, as an effective neuromodulation therapy, has significant potential in improving cognitive function in elderly patients with depression accompanied by cognitive impairment. However, current research results are inconsistent, and sample sizes are generally small. More large-scale, systematic studies are needed in the future to validate the efficacy of iTBS in this patient population and to optimize its application protocols.

关键词: iTBS, elderly depressed patients, cognitive

Individualized Prediction of Cognitive Test Scores From Functional Brain Connectome in Patients with First-episode Late-life Depression

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Objective In the realm of cognitive screening, the Mini-Mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA) are widely utilized for detecting cognitive deficits in patients with late-life depression (LLD). However, the interindividual variability in neuroimaging biomarkers contributing to individual-specific symptom severity remains poorly understood. In this study, we used a connectome-based predictive model (CPM) approach on resting-state functional magnetic resonance imaging data from patients with LLD to establish individualized prediction models for the MoCA and the MMSE scores

Methods We recruited 135 individuals diagnosed with first-episode LLD for this research. Participants underwent the MMSE and MoCA tests, along with resting-state functional magnetic resonance imaging scans. Functional connectivity matrices derived from these scans were utilized in CPM models to predict MMSE or MoCA scores. Predictive precision was assessed by correlating predicted and observed scores, with the significance of prediction performance evaluated through a permutation test

In addition, ethical approval was granted by the Ethics Committee of Beijing Anding Hospital, Capital Medical University. All participants or their family members provided written informed consent, and the trial was registered on the Chinese Clinical Trial Registry website (ChiCTR2100042370) as part of a larger prospective cohort study.

Results The negative model of the CPM procedure demonstrated a significant capacity to predict MoCA scores ($r = -0.309$, $p = 0.002$). Similarly, the CPM procedure could predict MMSE scores ($r = -0.236$, $p = 0.016$). The predictive models for cognitive test scores in LLD primarily involved the visual network, somatomotor network, dorsal attention network, and ventral attention network

Conclusion Brain functional connectivity emerges as a promising predictor of personalized cognitive test scores in LLD, suggesting that functional con-

nectomes are potential neurobiological markers for cognitive performance in patients with LLD

关键词: Individualized prediction, cognitive test scores, functional brain connectome, connectome-based predictive model, fMRI, late-life depression

MAPT 新发突变在额颞叶痴呆家系中的功能研究探索

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目的 额颞叶痴呆 (Frontotemporal Dementia, FTD) 是主要损害大脑额叶和颞叶的神经退行性疾病, 具有较高的家族遗传特性。本研究通过对一个 FTD 家系进行基因突变分析, 并进行功能分析。

方法 本研究纳入了一个 FTD 家系, 共有 3 名临床表型为 FTD 的患者, 5 名正常。对家系成员开展神经心理学评估。先证者抽取外周静脉血进行目标区域捕获高通量外显子检测点突变及插入突变、PCR 以及检测动态突变, 对其 7 名家属抽取外周血进行 Sanger 测序验证, 确认家族 FTD 的突变位点。并通过构建突变型质粒, 转染细胞进行功能验证, 在分子生物学水平验证该基因新发位点突变的功能变化。

结果 先证者的高通量测序显示 PSEN2 基因、MAPT 基因、ABCA7 基因及 PPP2R2A 基因外显子区域均存在 1 个杂合突变, Sanger 验证显示先证者、亲属中 2 名 FTD 患者均存在 MAPT 基因位点的杂合突变, 1 名突变位点携带者, 通过 Tau-PET 检测证实其大脑存在 Tau 沉积, 考虑为 FTD 的临床前期。结合临床信息遗传共分离分析, 高度怀疑该 MAPT 基因的突变位点是该家族致病基因, 该突变在 1000 Genomes 数据库、ExAC 数据库及 gnomAD 数据库中均未见频率报道。对突变进行体外验证, 突变型质粒分别转染两种细胞的 Western Blot 结果显示, 与野生型相比, 该 MAPT 突变引起 HEK293T 细胞和 N2a 细胞的 Tau 及磷酸化 Tau 蛋白的表达量增加 ($P < 0.001$)。

结论 MAPT 基因新位点突变可导致 Tau 蛋白及磷酸化 Tau 蛋白表达量上升, 此 MAPT 新发突变填补了 FTD 致病基因突变位点的空白, 具有潜在的预测和诊断 FTD 功能。

关键词: 额颞叶痴呆, MAPT, 基因测序, 基因突变

Interaction between Serum Fibrinogen and P-Tau181 in The Cerebrospinal Fluid Correlates with Apathy Symptoms in Patients with Dementia

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Objective Behavioral and psychological symptoms of dementia (BPSD) brought caregivers both psychological and physical distress but in the elderly, the potential neuroimmunological mechanism of BPSD remains unclear. Fibrinogen (FBG), a kind of blood coagulation protein, is widely deposited in the brain with essential roles in coagulation, inflammation and tissue repair. However, few clinical studies focused on the association between FBG and BPSD. In this study, we investigated the potential mechanism of induction of serum biochemical indicators on Neuropsychiatric symptoms (NPS) through central cerebral pathological changes

Methods We identified 97 participants diagnosed with dementia between 21st, January, 2019 to 26th, March, 2024. All of them underwent lumbar puncture for collection of cerebrospinal fluid (CSF) in routine clinical practice in the inpatient ward. Furthermore, we assessed NPS using the informant-based Neuropsychiatric Inventory (NPI-Q). We used multivariate regression analysis to study the associations of NPS with CSF biomarkers including $A\beta_{42}$, $A\beta_{42}/A\beta_{40}$ ratio, p-Tau181 and T-Tau and serum indexes including coagulation and immune indicators including FBG, INR, prothrombin time (PT), activated partial thromboplastin

time (APTT), C-Reactive Protein(CRP) and blood cell count cross-sectionally. We modeled the association of NPS with serum indicators and CSF biomarkers and investigated the potential mechanism of how serum indicators and CSF biomarkers affected NPS. Statistical analyses were performed using the statistical program R (v4.3.3, R Foundation for Statistical Computing). We compared the clinical characteristics between high-level group and low-level group using either a two independent samplest-test with a significance threshold value of $p < 0.05$

Results Both of p-Tau181 and FBG may be positively associated with apathy symptoms (p-Tau181: t value = 2.250, Std Error = 0.0377, $p=0.02679$ *; FBG: value = 3.072, Std Error = 0.7633, $p=0.00279$ **). We stratified the cohort into high-level p-Tau181 group and low-level p-Tau181 group according to the median of p-Tau181 level. We found participants with elevated CSF p-Tau181 was associated with higher subscale scores of apathy symptoms ($t = -2.1696$, $p\text{-value} = 0.03253$ *). We also stratified the cohort into high-level FBG group and low-level FBG group according to the median of FBG level. There was a borderline statistical significant difference in apathy scores between high-level FBG group and low-level FBG group ($t = -1.8291$, $p\text{-value} = 0.07051$). In addition, there was a statistical significance in effect of interaction between p-Tau 181 and FBG with subgroup scores of apathy symptoms (t value = -2.074 , Std Error = 0.01368, $p = 0.04087$ *)

Conclusion These findings suggest that serum FBG might correlate with apathy symptoms through CSF p-Tau burden. Fibrinogen is unique among plasma proteins owing to its molecular structure, which contains binding sites for receptors expressed by nervous system cells and its inflammatory function is mediated primarily via binding to the CD11b/CD18 integrin receptor in microglia and macrophages contributing to deficits in neuroinflammatory function. This study highlights the predominant role of peripheral inflammatory disturbance in central pathological changes of BPSD patients

关键词: Fibrinogen;Behavioral and psychological symptoms of dementia(BPSD);p-Tau;biomarker

Cervical Shunting To Unclog Cerebral Lymphatic Systems Surgery for Alzheimer's Disease

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Objective Recent studies have revealed the crucial role of the glymphatic system in eliminating metabolic waste from the brain. Impairment of this system may contribute to the pathological accumulation of proteins, such as A β and tau, observed in patients with Alzheimer's disease (AD). Therefore, cervical lymphatic-venous anastomosis (LVA) has been proposed as a potential approach to enhance glymphatic drainage and expedite the clearance of harmful proteins. In this study, we developed a novel LVA procedure called cervical shunting to unclog cerebral lymphatic systems (CSUL) surgery, aiming to alleviate glymphatic obstruction and investigate its potential therapeutic benefits for AD patients

Methods Currently, three patients have undergone surgery with the informed consent of both the patients and their families. Prior to the surgery, psychological tests, routine blood tests, and 18F-FDG PET/MR were conducted to confirm their eligibility for intervention. Additionally, cerebrospinal fluid (CSF) was collected to detect A β 42/A β 40, t-tau and p-tau181 levels, while 18F-AV45 PET and 18F-PI2620 PET imaging were performed to visualize A β and tau in the brain. The

CSUL surgery was carried out by surgeons specializing in LVA supermicrosurgery for maxillofacial tumors and lymphedema. The data from psychological tests, CSF analysis, and PET/MR scans were collected again 5 to 10 weeks after the surgery for comparative analysis

Results The index of diffusion tensor image analysis along the perivascular space (DTI-ALPS) exhibited a significant increase in all three patients, indicating that surgical intervention effectively enhanced lymphatic drainage. The families of the patients reported improvements in memory function, and there was an observed elevation of 2-3 points in mini-mental status examination (MMSE) scores. Moreover, activity of daily living (ADL) scores decreased by 2-5 points post-surgery, suggesting enhanced mobility. The increased A β 42/A β 40 ratio and decreased levels of t-tau and p-tau181 detected through CSF analysis, along with a reduction in SUVr observed in 18F-AV45 PET and 18F-PI2620 PET imaging, provided objective evidence of diminished A β and tau pathology within the patient's brain. Furthermore, overall improvement in brain glucose metabolism was demonstrated through 18F-FDG PET imaging, implying enhanced brain health

Conclusion The CSUL surgery has demonstrated initial therapeutic efficacy in patients with AD and holds promise as a viable approach for AD treatment. Consequently, it is imperative to validate its therapeutic effectiveness in a larger cohort of AD patients and assess its long-term efficacy.

关键词: Alzheimer's Disease, Lymphatic-venous anastomosis

Exploring The Relationship Between Brain Structural and Antipsychotic Drug Dosage in BPSD

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Introduction Behavioral and psychological

symptoms of dementia (BPSD) affect over 75% of patients with Alzheimer's disease (AD) and impose a heavy burden on caregivers and the patient's family. Since psychotropic medications are commonly prescribed for BPSD, the safety of antipsychotic drugs has always been a concern. However, there is still a lack of objective indicators for evaluating drug dosage. In this study, our objective is to investigate the relationship between brain structural alteration and the effective dosage of antipsychotic drugs for BPSD patients, with the aim of advancing precision medicine

Methods This study focuses on AD patients who are outpatient or hospitalized in the geriatric psychiatry department at the Shanghai Mental Health Center, China. Baseline general demographic data were collected from the patients. Their cognitive function was evaluated using the Mini Mental State Scale (MMSE) and the behavioral and psychological symptoms were evaluated by the Neuropsychiatric Inventory (NPI). 3D T1w brain structural MRI data were acquired and processed with Freesurfer 7.0, resulting in 68 cortical thickness and 16 subcortical regions of interest (ROIs) based on the DesikanKilliany atlas (Desikan et al., 2006) and the Automatic Segmentation of Subcortical Structures (Fischl, 2002), respectively. All patients underwent standardized clinical treatment (with or without concomitant antipsychotic drugs) and were followed up until BPSD remission. Drug treatment procedures (including drug types and doses) were recorded, where the antipsychotic drugs were converted using a defined daily dose (DDD) method to obtain the final daily dose (Leucht S., 2016). We divided the patients into three groups: DDDs=0, 0<DDD<0.3, and DDDs \geq 0.3, representing a non-antipsychotic group (NAP), a low-dose group (LAP), and a high-dose group (HAP). Region-wise comparisons on cortical thickness and sub-cortical volume were conducted across different groups. Finally, we investigated the relationship between the altered brain regions and the DDDs

Results A total of 86 AD patients who met the ICD-10 diagnostic criteria were enrolled (NAP, n=28, LAP, n=26, HAP, n= 32). Among the three groups, NAP group showed less NPI score than LAP and HAP, while no difference was observed in age, gender, education

level and MMSE score. ANCOVA analysis on brain region-wise cortical thickness measures, after controlling age, gender, education level, showed significant differences in the thickness at the left pars orbitalis ($F=3.277$, $p=0.003$) and the volume of left thalamus ($F=4.279$, $p<0.001$) among three groups. Post hoc analysis indicated that the HAP group had thinner cortex in the left pars orbitalis compared to the NAP group. Ordinal logistic regression analysis revealed that NPI ($p=0.014$) and cortical thickness at the left pars orbitalis ($p=0.037$) were independent predictors of antipsychotic drug dosage. Further association analysis between cortical thickness of the left pars orbitalis and DDDs revealed a significant negative correlation ($r=-0.229$, $p=0.04$) even after adjusting for gender, age, education level, MMSE and NPI score

Conclusion This study provides the first-ever evidence that brain anatomical changes may serve as valuable biomarkers in the prediction of antipsychotic drug dosage for BPSD. The result has significant implications for optimizing clinical management strategies and offers insights into the intricate neuropathological mechanisms of BPSD.

关键词: BPSD, Brain Structural, Antipsychotic, Drug Dosage

The Negatively Association between Successful Aging and Emotional Problems

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Objective Depression and anxiety are the emotional problems most frequently experienced by older adults. We aimed to investigate the associations between successful aging (SA) and depression and anxiety in older adults from Ningbo, China.

Methods A cross-sectional study of 6,672 community-dwelling adults aged 65 years or older was performed. SA, depression, and anxiety symptoms were self-reported and measured using the relative scales.

Linear and logistic regression analyses were used to estimate the associations of SA with depression and anxiety.

Results After multivariate adjustment, we found that the SAI score was independently associated with the GAD-7 and PHQ-9 scores ($\beta = ?0.048$ and $?0.069$, respectively). Multivariate-adjusted spline regression models showed negative, nonlinear dose-response associations between the SAI score and both anxiety and depression symptoms (P for nonlinearity = 0.001 for both). With the highest quartile set as the reference, we determined that the lowest SAI score quartile was independently associated with both anxiety symptoms (odds ratio [OR] = 10.926, 95% confidence interval [CI]: 5.268, 22.664) and depression symptoms (OR = 16.131, 95% CI: 8.423, 30.892). In subgroup analyses, the association between the SAI score and depression symptoms was significantly higher in rural than in urban areas (P for interaction = 0.024).

Conclusion Among older adults in Ningbo, China, SA was found to play an important role in depression and anxiety symptoms, suggesting the need for effective and feasible interventions to promote SA in Chinese older adults

关键词: Successful aging, Depression, Anxiety, Elderly, Restricted cubic splines

前边缘皮层精准磁刺激技术对精神分裂症样小鼠治疗效应及其神经可塑性机制研究

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目的 使用磁性纳米药物增强磁刺激技术(c-MSS)对精神分裂症样(SCZ)小鼠前边缘皮层(PrL)进行精准干预,探讨磁刺激对SCZ大脑皮层可能的可塑性调节作用。通过c-MSS作用的特异性探究SCZ患者的个性化磁刺激方案,优化rTMS疗效。

方法 使用NMDAR拮抗剂MK-801对C57BL/6小鼠进行SCZ造模,行为学实验验证模型效度后,在PrL脑区脑立体定位注射磁性纳米药物

(SPIO), 其后予以为期 10 天的 c-MSS 干预治疗, 干预结束后再次行为学检测, 处死动物后采用 Golgi-Cox 染色观察 PrL 脑区树突棘变化, Western blot 检测 PrL 脑区 PSD-95 等突触后相关支架蛋白的表达水平。

结果 靶向 PrL 的磁刺激显著改善 SCZ 样小鼠的自发活动异常增加、新物体识别率降低和社交倾向下降等精神病性行为, 并将 MK-801 注射后明显减少的小鼠总树突棘密度和具有记忆功能的蘑菇状树突棘密度逆转至对照组水平 ($P < 0.001$)。SCZ 样小鼠 PrL 皮层突触相关蛋白 NMDAR1 和 NMDAR2A 的水平明显升高, 突触素 (synaptophysin) 的蛋白表达水平下降 ($P < 0.05$), 这些变化被 c-MSS 显著挽救。

结论 磁性纳米药物增强磁刺激可改善精神分裂症样小鼠认知、社交以及精神病性运动增加行为, 逆转前边缘皮层树突棘密度下降, 改善突触相关支架蛋白的异常表达, 可能具有调节神经可塑性效应。

关键词: 精神分裂症; 经颅磁刺激; 前边缘皮层; 突触可塑性

The Influencing Factors of Cognitive Impairment in Elderly Individuals in Chengdu City

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Objective With the aging of society, cognitive impairment in elderly people is becoming increasingly common and has caused major public health problems. The screening of cognitive impairment in elderly people and its related influencing factors can aid in the development of relevant intervention and improvement strategies.

Methods In this study, stratified random cluster sampling was used to conduct a cross-sectional survey of elderly individuals aged 65 years in Chengdu, Sichuan Province, through an electronic questionnaire from November 2022 to November 2023. Descriptive

analysis and logistic regression analysis were used to investigate cognitive impairment and its relevant influencing factors.

Results Among the 16609 elderly people, 7524 (45.3%) were males and 9085 (54.7%) were females, with an average age of 73.6 ± 6.5 years (age range 65-101 years). The average years of education was 5.9 ± 6.2 years, and the proportion of individuals with cognitive impairment was 13.1%. With increasing age, the risk of cognitive impairment increased significantly. The risk factors for cognitive impairment in elderly individuals included advanced age, hypertension, heart disease, diabetes, cerebrovascular disease, depressive symptoms, and anxiety symptoms, while the protective factors included higher education level, married status, and greater life satisfaction.

Conclusion Cognitive impairment in elderly individuals in Chengdu is serious. We can intervene in and improve cognitive impairment in elderly people by controlling blood pressure and blood sugar, treating depressive and anxiety symptoms and developing community colleges for elderly people and increasing satisfaction with life

关键词: Elderly people; Cognitive impairment; Influencing factors; Chengdu city

Antidepressant Effect of Bright Light Therapy on Patients with Alzheimer's Disease and Their Caregivers

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Objective As a non-pharmacologic treatment, bright light therapy (BLT) is often used to improve affective disorders and memory function. In this study, we aimed to determine the effect of BLT on depression and electrophysiological features of the brain in patients with Alzheimer's disease (AD) and their caregivers using a light-emitting diode device of 14000 lux.

Methods A 4-week case-control trial was conducted. Neuropsychiatric and electroencephalogram

(EEG) examination were evaluated at baseline and after 4 weeks. EEG power in delta (1–4 Hz), theta (4–8 Hz), alpha (8–12 Hz), and beta (12–30 Hz) bands was calculated for our main analysis. Demographic and clinical variables were analyzed using Student's *t* test and the chi-square test. Pearson's correlation was used to determine the correlation between electrophysiological features, blood biochemical indicators, and cognitive assessment scale scores.

Results In this study, 22 in-patients with AD and 23 caregivers were recruited. After BLT, the Hamilton depression scale score decreased in the fourth week. Compared with the age-matched controls of their caregivers, a higher spectral power at the lower delta and theta frequencies was observed in the AD group. After BLT, the EEG power of the delta and theta frequencies in the AD group decreased. No change was observed in blood amyloid concentrations before and after BLT.

Conclusion In conclusion, a 4-week course of BLT significantly suppressed depression in patients with AD and their caregivers. Moreover, changes in EEG power were also significant in both groups

关键词: bright light therapy, Alzheimer's disease, depression, EEG, biomarkers

进食障碍研究协作组

Identify Patients with Obsessive-compulsive Disorder of Different Severity Level with Brain Structural and Functional Connectivity Coupling

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Objective Abnormalities in structural and functional brain networks in patients with obsessive-compulsive disorder (OCD) have been identified with previous studies. However, few studies have investigated the differences between structural and functional connectivity (SC-FC) coupling in patients with OCD with different severity levels

Methods Diffusion tensor imaging (DTI) and resting-state functional magnetic resonance imaging (rs-fMRI) scans were performed on 26 cases of OCD with severe level (S-OCD), 26 cases of OCD with moderate level (M-OCD) and 30 healthy controls (HCs). Graph theoretic analysis and SC-FC coupling methods were used to combination to study brain structural and functional networks. Support vector machines (SVM) were used to test whether altered MRI features could distinguish OCD with different severity levels. Correlation analyses were used to explore the relationship between graph theory metrics of abnormal brain regions and clinical symptoms of OCD

Results In the structural network, the S-OCD group had reduced clustering coefficient (C_p) of small world and reduced local efficiency (E_{loc}) of network efficiency compared to healthy controls; significant differences in nodal network metrics of the left dorsolateral superior frontal gyrus, left middle frontal gyrus, left rolandic operculum, medial orbital superior frontal gyrus, left insula, and left calcarine fissure and surrounding cortex were found in the S-OCD group compared to M-OCD. In the functional network, the S-OCD group

had abnormal nodal network metrics in the left orbital middle frontal gyrus and right supplementary motor area compared to M-OCD. Correlation analysis showed that decreased degree centrality (aDc) values in the left orbital middle frontal gyrus in the functional networks of S-OCD were positively correlated with the compulsive behavior scores. Importantly, both structural and functional coupling strengths were reduced in the S-OCD and M-OCD groups compared to controls. The regional SC-FC coupling of FFG.L exhibited a markedly elevated level in the S-OCD group compared to the M-OCD group. The index demonstrated an accuracy of 79.1%, a sensitivity of 91.7%, and a specificity of 63.2% in identifying the two groups of OCD patients

Conclusion The SC-FC coupling enhances our comprehension of the structural and functional networks of patients exhibiting varying degrees of severity in OCD, and also serves as a dependable means for identifying patients with disparate levels of severity in OCD

关键词: Obsessive-compulsive disorder, Structural and functional connectivity coupling, Small world, Nodal network metrics, Support vector machines.

Altered Dynamic Neural Activities in Individuals with Obsessive-compulsive Disorder and Comorbid Depressive Symptoms

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Objective Depressive symptoms are the most

prevalent comorbidity in individuals with obsessive-compulsive disorder (OCD). The objective of this study was to investigate the dynamic characteristics of resting-state neural activities in OCD patients with depressive symptoms

Methods We recruited 29 OCD patients with depressive symptoms, 21 OCD patients without depressive symptoms, and 27 healthy controls, and collected data via structural and functional magnetic resonance imaging (fMRI). We analyzed the fMRI results using the dynamic amplitude of low-frequency fluctuation (dALFF) and support vector machine (SVM) techniques

Results Compared with OCD patients without depressive symptoms, OCD patients with depressive symptoms exhibited an increased dALFF in the left precuneus and decreased dALFF in the right medial frontal gyrus. The SVM indicated that the integration of aberrant dALFF values in the left precuneus and right medial frontal gyrus led to an overall accuracy of 80%, a sensitivity of 79%, and a specificity of 100% in detecting depressive symptoms among OCD patients

Conclusion Our study reveals that OCD patients with depressive symptoms display neural activities with unique dynamic characteristics in the resting state. Accordingly, abnormal dALFF values in the left precuneus and right medial frontal gyrus could be used to identify depressive symptoms in OCD patients

关键词: Obsessive-compulsive disorder, Depressive symptoms, Dynamic amplitude of low -frequency fluctuation, Magnetic resonance imaging, Resting state

神经性贪食背内侧前额叶结构和功能变化与冲动的关系

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目的 既往研究表明冲动特质是导致神经性贪食(bulimia nervosa, BN)患者出现暴食行为的危险因素之一。功能性磁共振成像(functional magnetic resonance imaging, fMRI)研究提示背内侧前额叶(dorsomedial prefrontal cortex, DMPFC)在复杂决策

任务中发挥着重要作用，且与价值相关的有意控制过程和抑郁、焦虑情绪有关。然而 DMPFC 与暴食的关系尚未完全阐明，有待于进一步研究。

方法 共招募 36 例 BN 患者和 41 名健康对照者(healthy control, HC)，进行结构像、静息态和任务态 fMRI 扫描，并使用心理问卷评估冲动性和情绪症状。比较 BN 患者和 HC 组在以 DMPFC 为感兴趣区(regions of interest, ROI)的结构和功能之间的差异，并分析异常脑指标与临床症状之间的关系。

结果 经过 Bonferroni 校正后，两组之间的皮层厚度差异呈边缘显著($P=0.068$)。静息态 fMRI 数据的分析结果表明，与 HC 组相比，BN 组左侧 DMPFC 到双侧尾状核团簇，左侧中央后回团簇，右侧海马团簇，右侧眶额回团簇等 4 个团块，以及右侧 DMPFC 到左侧额中回团簇，左侧额上回团簇，左侧尾状核团簇，左侧前扣带回(anterior cingulate cortex, ACC)团簇，左侧丘脑团簇等 5 个团块之间的功能连接(functional connectivity, FC)强度降低。且 BN 组右侧 DMPFC-左侧 ACC 团簇的 FC 激活强度与 BIS-11 量表中的运动冲动($r=-0.39$, $P=0.042$)和无计划冲动($r=-0.61$, $P=0.001$)呈负相关。在执行 DDT 任务时，发现 BN 组延迟选择次数较 HC 组明显减少，差异存在统计学意义($P=0.014$)。相比于 HC 组，BN 组在选择延迟条件时右侧 DMPFC-双侧顶上小叶团簇和双侧楔前叶团簇的 FC 强度增强。且右侧 DMPFC-双侧顶上小叶团簇(P 分别为 0.005 和 0.024)、双侧楔前叶团簇(P 分别为 0.000 和 0.004)的 FC 激活强度与延迟折扣率呈正相关。

结论 BN 患者存在以 DMPFC 为 ROI 到多个脑区的 FC 异常，且上述 FC 异常与冲动症状有关。

关键词：神经性贪食，暴食，磁共振成像，延迟折扣任务

The Impact of Transcranial Direct Current Stimulation on Sleep Quality in OCD Patients: A Study on Electric Field Intensity and EEG Microstates

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Objective Obsessive-compulsive disorder (OCD) is characterized by intrusive thoughts and repetitive behaviors, with a prevalence of 2-3%. Sleep disturbances are common in OCD and can impact symptom severity and treatment outcomes. High-definition transcranial direct current stimulation (HD-tDCS) is a promising treatment for both OCD and sleep disturbances, although its efficacy remains uncertain. This study was to investigate the effects of transcranial direct current stimulation (tDCS) on obsessive-compulsive symptoms and sleep quality in patients with OCD, focusing on the relationship between electric field intensity and EEG microstates.

Methods Forty-four drug-naïve OCD patients participated in a randomized controlled trial, with 34 undergoing MRI and EEG data collection. Participants were randomly assigned to active (18) or sham (16) HD-tDCS groups. HD-tDCS sessions targeted the orbitofrontal cortex, with 10 sessions administered over two weeks. Obsessive-compulsive symptoms and sleep quality were assessed using the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) and Pittsburgh Sleep Quality Index (PSQI) before and after treatment. The electric field (EF) strength modeling was used to quantify the intensity of electrical stimulation, and EEG microstate analysis was used to examine brain activity. We explored the relationship between these two factors and clinical outcomes.

Results There was no significant interaction between treatment and time for Y-BOCS and PSQI scores. The EF intensity was not related to improvements in OCD symptoms. However, in the active group, EF intensity in the right frontal cortex regions was significantly correlated with PSQI reduction, while no such correlation was found in the sham group. EEG microstates showed stable topologies across groups, with significant correlations between EF strength in the right orbitofrontal gyrus and changes in microstate A duration and PSQI scores

Conclusion tDCS appears to be an effective intervention for improving sleep quality in OCD patients, with electric field intensity and EEG microstates playing crucial roles in the therapeutic mechanism. These findings support the potential for tDCS to be used as a non-invasive treatment option for sleep disturbances in OCD, paving the way for further research and clinical application. Further research is needed to better understand the variability in HD-tDCS effects and its potential as a treatment for sleep disturbances in OCD.

关键词: Obsessive compulsive disorder, High-definition transcranial direct current stimulation, electric field intensity, EEG microstate

抑郁障碍认知功能损伤与肠道菌群紊乱的相关机制研究

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目的 肠道菌群紊乱是抑郁障碍(MDD)及其认知功能损伤的重要机制之一,但具体作用关系尚不明确。炎症因子与脑生化代谢可能间接影响MDD患者认知功能变化。因此,研究围绕肠道菌群紊乱、促炎/抗炎失衡与脑生化代谢紊乱探讨其与MDD患者认知功能损伤的相关性,以期发现MDD认知功能损伤可能存在的脑-肠交互机制。

方法 选取2023年2月至2024年2月期间首次就诊于暨南大学附属第一医院精神医学科门诊的MDD患者作为研究对象,予完善MATRICS成套神经认知测试、留取粪便及血液样本,同时完成氢质子波谱磁共振扫描。采用Person/Spearman分析、多元逐步回归分析、分层回归分析等方法探究MDD患者认知功能相关影响因素。

结果 (1)认知功能比较:MDD患者信息处理速度、注意/警觉性、工作记忆、词语学习、视觉学习、社会认知、总认知均低于健康对照组(HC)。

(2)炎症因子比较:MDD患者TNF- α 、IL-1、IL-6、IL-17、IL-27、IL-33水平均高于HC组。

(3)脑生化代谢比较:MDD患者双侧额叶NAA/Cr值低于HC组,右侧扣带回和左侧小脑NAA/Cr、右侧丘脑Cho/Cr高于HC组。

(4)差异菌群比较:LEfSe分析显示,MDD组Blautia、Fusobacterium、Ruminococcus、Sellimonas等菌属丰度富集。HC组Prevotella、Dialister等菌属丰度较高。

(5)认知功能的影响因素:MDD患者信息处理速度和Peptostreptococcus丰度呈正相关,注意/警觉性与Sellimonas丰度呈负相关,工作记忆与Sellimonas丰度呈负相关;逐步回归分析发现,MDD患者注意/警觉性受Sellimonas、Erysipelatoclostridium丰度影响,工作记忆受Sellimonas丰度影响,视觉学习受Ruminococcus丰度影响。其中,炎症因子(TNF- α 、IL-27、IL-33)在Sellimonas菌影响注意警觉性的过程中起调节作用,左侧额叶和右侧扣带回NAA/Cr值可调节Ruminococcus菌属和视觉学习能力之间的关系。

结论 抑郁障碍患者存在广泛而多领域的认知功能损伤,机体促炎状态显著,肠道微环境失调,同时伴随着前额叶、丘脑和小脑生化代谢水平异常。其认知功能损伤与患者炎症因子水平、左侧小脑神经元功能及肠道菌群密切相关,其中Sellimonas菌属、Ruminococcus菌属分别对注意/警觉性和视觉学习存在显著预测作用。炎症因子和脑生化代谢在抑郁障碍患者肠道菌群和认知功能的关系中起调节作用。

关键词: 抑郁障碍; 认知功能; 炎症因子; 肠道菌群; 脑生化代谢

冲动性特质、焦虑对进食障碍症状的影响

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目的 探讨冲动性特质、焦虑对进食障碍症状的影响。

方法 选取2022年3月-2023年2月北京大学第六医院门诊及住院进食障碍患者,并由有进食障碍诊疗经验、副主任医师及以上职称的精神科医生

诊断,符合 DSM-5 中神经性厌食(Anorexia nervosa, AN)、神经性贪食(Bulimia nervosa, BN)诊断标准的进食障碍患者共 244 人,并对其用进食障碍调查量表(Eating Disorder Inventory-1, EDI-1)、巴瑞特冲动性人格量表(Barratt Impulsiveness Scale, BIS-11)、状态-特质焦虑问卷(State-Trait Anxiety Inventory, S-TAI)进行评定。使用 SPSS23.0 进行统计学处理,并通过 SPSS 宏 PROCESS 程序进行中介效应分析。

结果 1. AN 和 BN 患者中的 BIS 总分、SAI 总分与 EDI 总分之间均存在显著正相关($P < 0.01$)。

2. 在 AN 患者中 BIS 对 EDI 的预测作用显著($\beta = 0.63, t = 9.70, P < 0.001$); 放入中介变量 SAI, BIS 对 EDI 的直接预测作用依然显著($\beta = 0.34, t = 5.16, P < 0.001$); BIS 对 SAI ($\beta = 0.56, t = 8.06, P < 0.001$) 的正向预测显著; SAI ($\beta = 0.52, t = 7.75, P < 0.001$) 对 EDI 的正向预测也显著。AN 患者中, 在 BIS 对 EDI 影响的直接效应及 SAI 中介效应的 bootstrap95% 置信区间的上、下限不包含 0, 表明 BIS 不仅能够直接预测 EDI; 而且能够通过 SAI 的中介作用预测 EDI。该直接效应和中介效应分别占总效应的 53.07% 和 46.93%。

3. 在 BN 患者中 BIS 对 EDI 的预测作用显著($\beta = 0.27, t = 3.12, P < 0.01$); 放入中介变量 SAI, BIS 对 EDI 的直接预测作用不显著($\beta = -0.02, t = -0.18, P > 0.05$), 但 BIS 对 SAI ($\beta = 0.50, t = 5.84, P < 0.001$) 的正向预测显著, SAI ($\beta = 0.60, t = 6.78, P < 0.001$) 对 EDI 的正向预测显著。在 BIS 对 EDI 影响的效应下 bootstrap95% 置信区间的上、下限包含 0, 表明 BIS 不能直接预测 EDI。SAI 的中介效应的 bootstrap95% 置信区间的上、下限不包含 0, 表明 SAI 在 BIS 和 EDI 之间发挥中介作用。

结论 1. 冲动性特质、焦虑对进食障碍症状有正向预测作用。

2. 焦虑介导冲动性特质对进食障碍症状的影响, 其中在 AN 患者中焦虑发挥部分中介作用, 而在 BN 患者中发挥完全中介作用。

关键词: 进食障碍; 冲动性特质; 焦虑; 中介作用

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目的 验证网络辩证行为团体治疗(G-DBT)对贪食症的疗效不亚于线下辩证行为团体治疗, 为未来干预和研究提供参考。

方法 将贪食症患者随机分配至线下 G-DBT 和网络 G-DBT 组以对比疗效。在治疗前、治疗结束时(第 12 周)、治疗结束后 1 个月和 3 个月使用进食障碍检查量表(EDE-Q)评估暴食频率、进食障碍病理症状, 使用贝克抑郁量表(BDI)、贝克焦虑量表(BAI)、巴瑞特冲动性量表(BIS-11)、情绪调节困难量表(DERS-16)分别评估抑郁、焦虑、冲动控制能力和情绪调节能力。使用重复测量方差分析检验两组的暴食次数和暴食天数在治疗前后的差异; 使用线性混合效应模型检验时间、治疗形式对进食障碍病理症状、抑郁、焦虑、冲动控制能力和情绪调节能力的影响。

结果 2022 年 9 月-2024 年 3 月期间共入组 112 名患者, 线下组 55 名, 网络组 57 名。基线评估时两组的人口学资料和各临床指标均无显著差异($p > 0.05$)。治疗后患者的暴食次数($F = 14.48, p < 0.01$)和天数($F = 7.17, p < 0.01$)均明显减少, 无显著组间差异($p > 0.05$)。两组患者的暴食次数与暴食天数以相同的趋势减少, 在治疗结束时显著低于基线水平($p < 0.01$), 且在 1 个月随访时继续下降($p < 0.05$), 3 个月随访时则与 1 个月随访并无差别($p > 0.05$)。线性混合模型检验结果表明, EDE-Q 总分、BDI 总分、BAI 总分、BIS-11 总分和 DERS-16 总分的治疗形式 \times 时间的交互作用、治疗形式固定效应均不显著($p > 0.05$), 时间固定效应均显著($p < 0.05$)。事后分析结果显示, 治疗结束时各项指标水平均显著低于基线水平($p < 0.01$), 且在后续 1 个月随访、3 个月随访中保持($p < 0.01$)。EDE-Q 总分在 3 个月随访时显著低于治疗结束时和 1 个月随访时($p < 0.05$)。

结论 本研究证实了网络 G-DBT 对贪食症患者的疗效不亚于线下 G-DBT, 能够显著改善贪食症患者普遍存在的暴食症状、进食障碍相关病理特征、抑郁和焦虑情绪、冲动控制能力和情绪调节能力。

关键词: 贪食症, 辩证行为治疗, 团体治疗, 随机对照研究

网络辩证行为团体治疗对贪食症的疗效: 一项随机对照研究

Gut Microbiota Changes Are Associated with Abnormal Metabolism Activity in Children and Adolescents with Obsessive-compulsive Disorder

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Objective Numbers of adult patients with obsessive-compulsive disorder (OCD) start from children or adolescents, so early identification and intervention become the key to control the disease. However, its etiology has not been fully clarified. This study sought to explore the relationship between the pathogenesis and gut microbiota in children and adolescents with OCD

Methods Multi-omics combined analysis of the gut microbiota in first-episode children and adolescents with OCD was performed. Stool samples were collected from 49 first-episode untreated children and adolescents with OCD and 42 age - and sex-matched healthy controls (HC), and all subjects were evaluated for clinical parameters. A total of 91 samples were analyzed by 16S rRNA sequencing and metabonomic based on UHPLS-MS. Correlation analysis was conducted between metagenomic sequencing results and clinical parameters to explore the relationship between intestinal flora and OCD symptoms and the possible functional pathways involved in the pathogenesis. Fecal samples from 19 OCD and 18 HC subjects were analyzed by Illumina HiSeq sequencing platform using metagenomic high-throughput sequencing method. Association analysis was performed on metagenomic and metabonomics analysis data to clarify the association between differential flora and differential metabolites

Results 1. The diversity index of intestinal flora in patients with OCD was significantly decreased (obs, $P<0.001$; chao1, $P<0.001$; ACE, $P<0.001$; shannon, $P<0.001$; simpson, $P<0.05$; good, $P<0.001$), and the microbial interaction network was significantly weaker than that in HC group. 2. The relative abundance ratio (F/B) of Firmicutes /Bacteroidetes in OCD group was

significantly lower ($P<0.001$). 3. The abundance of butyrate-producing bacteria such as Romboutsia ($q<0.01$), Mitsukella ($q<0.01$), and Terrasporobacter ($q<0.01$) in the intestine of patients with OCD decreased significantly. 4. The random forest model identified 30 specific bacteria as markers, and the AUC between OCD patients and HC was 0.9011. 5. There is a correlation between the changes of clinical parameters in OCD group and the abundance of specific bacteria in intestinal flora. 6. A total of 43 endogenous differential metabolites were screened out in OCD-HC group, and there was a correlation between the differential metabolites and the differential flora ($P<0.05$). 7. The relative contents of Neopterin and Sepiapterin, the intermediate products of folate biosynthesis, were significantly higher in OCD group ($P<0.05$); Glucocorticoids and corticosterones significantly decreased in regulating lipolysis in adipocytes and prion diseases ($P<0.05$)

Conclusion Gut microbiota of children and adolescents with OCD were disordered at phylum, genus and species level, and the diversity of flora was significantly reduced. The OCD and HC groups had distinctive intestinal flora. Several gene functional and metabolic pathways of intestinal flora in OCD patients are destroyed

关键词: Obsessive-compulsive disorder; gut microbiota; children and adolescents; metagenomics; metabolism

Association of Thyroid Hormones with Neurometabolism in Depression with Eating Disorders

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Objective The underlying mechanism of major depressive disorder (MDD) with eating disorder (ED) remains unclear. There are few studies on the effects of thyroid hormones (THs) on MDD and ED. We aim to clarify the characteristic changes of THs and brain neurometabolic alterations in with ED, and to explore their

relationships.

Methods 28 MDD with ED, 81 MDD without ED, and 37 age-matched healthy controls (HCs) were included in our study. Serum THs levels were measured and proton magnetic resonance spectroscopy (H-MRS) was performed to obtain the ratios of N-acetylaspartate to creatine (NAA/Cr) and choline-containing compounds to creatine (Cho/Cr) in the prefrontal cortex (PFC), anterior cingulate cortex (ACC) and thalamus. Finally, differential, receiver operating characteristic (ROC), and correlation analysis were conducted to investigate their characteristics and relationships

Results Compared with HCs, The free tri-iodothyronine (FT3) levels of the MDD with ED and MDD without ED cohort significantly decreased, while their free thyroxine (FT4) and total thyroxine (TT4) levels increased. We also found significantly lower NAA/Cr ratios in the Right thalamus and higher NAA/Cr ratios in the Left Cerebellum of MDD with ED and MDD without ED than in HCs. In addition, neurometabolic factors yielded area under the ROC curve of 0.798 in distinguishing MDD with ED from MDD without ED. Neurometabolic factors and THs levels yielded area under the ROC curve of 0.830 in distinguishing MDD with ED from MDD without ED. Moreover, serum FT3 and TT4 levels were positively associated with the brain neurometabolic alterations of the ratios of NAA to Cr in the Left Cerebellum in MDD with ED

Conclusion Our results demonstrate coinciding thyroid hormone abnormalities and neurometabolic alterations of the thalamic-cerebellum circuitry occur of MDD with ED. Further understanding of the interaction between thyroid-stimulating hormone and NAA/Cr of thalamic-cerebellum circuitry may help elucidate the etiology of abnormal eating in depressive patients

关键词: major depressive disorder, eating disorder, thyroid hormones, neurometabolic, cerebellum, thalamus

Cognitive Neuroscience and Neuroimaging Decreased Degree Centrality and Dynamic

Functional Connectivity Variability in Obsessive-compulsive Disorder

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Objective Neuroimaging studies have indicated widespread brain structural and functional disruption in the brain of individuals with obsessive-compulsive disorder (OCD); however, the underlying mechanisms of dysfunction remain unclear

Methods Forty-five patients with OCD and forty-two healthy controls (HC) were enrolled in this study. All the subjects received T1-weighted structural magnetic resonance imaging (MRI) scanning and resting-state functional MRI scanning. We investigated the degree centrality (DC) abnormalities between OCD and HC, and furtherly the abnormal regions were used as seeds to explore the dynamic functional connectivity (dFC) based on whole brain by sliding window approach. The relationship between abnormal DC and dFC as well as clinical parameters are assessed using correlation analysis

Results Our findings suggested decreased DC of bilateral thalamus, bilateral precuneus and bilateral cuneus in OCD, and significantly negative correlation between the average DC of thalamus and the score of Y-BOCS in patients. Furtherly, regarding seed-based dFC analysis, the OCD patients showed decreased dFC variability between the left thalamus and left cuneus and right lingual gyrus, between bilateral cuneus and bilateral postcentral gyrus relative to those in HC, and significantly positive correlation between duration of illness and the dFC variability between left cuneus and left postcentral gyrus

Conclusion The study revealed that individuals with OCD demonstrated decreased hub importance in the bilateral thalamus and cuneus throughout the entire brain. This reduction is associated with impaired coupling with dynamic function in the visual cortex and sensorimotor network, providing novel insights into the

neurophysiological mechanisms underlying OCD.

关键词: Obsessive-compulsive disorder, Resting-state, Degree centrality, Dynamic functional connectivity

Construction and Validation of A Machine Learning-Based Model for Predicting The Risk of Suicidal Behavior in Mood Disorders

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Objective Suicidal behavior refers to self-harm behavior initiated by an individual with the intention of causing death. Constructing a predictive model for suicidal behavior among patients with mood disorders can improve early identification of high-risk individuals. Currently, there is a lack of accurate predictive models for suicidal behavior in mood disorders. This study aims to develop a suicidal behavior prediction model for mood disorders based on various machine learning methods, selecting the optimal model to accurately assess the risk of suicidal behavior. The validity and stability of the constructed predictive model will also be verified

Methods Real-world data from inpatients in the Depression Treatment Center of Beijing Anding Hospital in 2022 were collected, and a retrospective analysis was conducted on 1099 patients diagnosed with mood disorders (ICD-10 codes F30-F39). Features potentially related to suicidal behavior were screened as predictor variables using the LASSO regression. All patients were randomly divided into a training set (N=769) and a testing set (N=330). Ten machine learning algorithms, including random forest, support vector machine, and decision tree, were applied to the training set to construct

suicidal behavior prediction models, and the optimal cut-off point and adjustment parameters were explored. The stability of the models was tested in the testing set. The machine learning model with the best sensitivity and stability was selected based on metrics such as AUC, F1 score, and accuracy. The SHAP (SHapley Additive exPlanation) method was used to rank the importance of features and explain the best model, analyzing the potential impact of each feature on suicidal behavior

Results This study included 10 features based on LASSO regression and 1 high-risk factor from previous research conducted by the team. Ultimately, 11 features were included in the prediction model, and an attempt was made to construct it based on ten different machine learning methods. It was found that the prediction model constructed using the random forest approach had good discriminative ability (AUC=0.715) and acceptable application performance (Recall=0.4190, Accuracy=69.4%, F1-Score=0.443, MCC=0.2383). Further SHAP analysis was used to rank the importance of the 11 features, showing that the three most valuable features for predicting suicide risk were onset polarity, age, and previous suicide attempts

Conclusion The random forest approach can better construct a suicidal behavior risk prediction model for patients with mood disorders, which has good discriminative ability and acceptable application performance. We should adopt a cautious optimism in constructing suicidal behavior risk models for mood disorders, and further develop more applicable models with multimodal data in the future

关键词: Machine learning, Predictive model, Mood Disorders, Suicidal behavior

Association between Digital Addiction with Overweight and Obesity Among Chinese Children and Adolescents: A Large-scale Cross-sectional Study

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Objective Overweight and obesity are growing public health concerns, affecting about one-fourth of Chinese adolescents. Digital addiction is an emerging mental health issue in adolescents, characterized by excessive use of electronic devices such as the internet, smartphones, gaming, and social media. Recent studies suggest a positive association between digital addiction and obesity, a relationship that has rarely been explored in the Chinese population. This study aims to explore the association of three types of digital addiction—Internet Gaming Disorder (IGD), Smartphone Addiction (SA), and Social Media Addiction (SMA)—with overweight and obesity in a large cohort of Chinese adolescents. Additionally, we examined potential sex differences in this relationship

Methods A total of 193,190 children and adolescents were recruited using cluster sampling from primary and middle schools in Zigong City. Among them, 168,384 provided validated data on height and weight. Body Mass Index (BMI) was calculated using the formula: $BMI = \text{weight (kg)} / \text{height}^2 \text{ (m)}$. The short form of the Internet Gaming Disorder Scale, the Bergen Social Media Addiction Scale, and the Smartphone Application-Based Addiction Scale were used to detect respective digital addictions. Obesity and overweight were defined according to Chinese standards. Multiple logistic regression models were conducted, with age, residence, school type, only-child status, and left-behind status as covariates. Subgroup analysis was performed separately for boys and girls

Results Approximately 12% of the children and adolescents were overweight or obese. All types of digital addiction were positively associated with overweight and obesity in the whole sample, with an adjusted odds ratio (AOR) of 1.32 (95% confidence interval [CI], 1.18-1.47, $p < 0.001$) for IGD, 1.37 (95% CI, 1.18-1.47, $p < 0.001$) for SMA, and 1.20 (95% CI, 1.15-1.25, $p < 0.001$) for SA. Subgroup analysis revealed a significantly stronger relationship in girls (AOR = 1.90 for IGD, 1.42 for SMA, and 1.34 for SA) than in boys

Conclusion Digital addiction is positively associated with overweight and obesity in Chinese children and adolescents, particularly among girls. This finding highlights the need for targeted interventions to address digital addiction and its related health consequences in this vulnerable population

关键词: Digital addiction, Adolescents, Obesity, Internet gaming disorder, Social media addiction, Smartphone addiction

基于德尔菲法构建难治性抑郁障碍疾病严重程度分期模型及模型验证

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目的 构建难治性抑郁障碍 (TRD) 概念内涵、疾病严重程度分期的可视化评估工具, 并进行信效度检验及评价, 评估工具可为预测预后和疗效提供参考。

方法 1、在文献研究法和两轮德尔菲专家函询基础上构建 TRD 疾病严重程度分期模型。对 17 名专家进行两轮专家函询并进行赋分, 最终形成初版风险预测工具。

2、便利抽取辽宁省某三级医院患者, 使用 TRD 疾病严重程度分期模型对其进行评分, 根据患者一般情况调查问卷及评分检验其信效度主要包括内部一致性检验、内容效度及预测效度, 计算评估工具各维度与间隔 8 周治疗后 HAMD-24 减分率相关性, 检验其对治疗效果预后的预测效果, 最终形成 TRD 疾病严重程度分期模型。

结果 1、经过 2 轮专家函询, 最终形成包括适用患者 (1 个条目)、总病程 (3 个条目)、疾病的严重程度 (4 个条目)、症状 (18 个条目)、功能障碍 (2 个条目)、共病精神障碍 (4 个条目)、治疗失败 (13 个条目)、系统性住院治疗 (2 个条目)、创伤或应激事件 (2 个条目) 共 9 个维度, 49 个条目的 TRD 疾病严重程度分期模型。两轮专家函询的有效问卷回收率均为 100%; 专家权威系数分别为 0.84、0.89。经两轮函询后专家意见集中程度提高, 最终形成 TRD 疾病严重程度分期模型。

2、对所形成的 TRD 疾病严重程度分期模型进行信效度检验, 纳入 ≥ 18 周岁的 TRD 患者。结果发现该评估工具内在一致性克隆巴赫系数、各条目内容效度指数及总体内容效度指数为良好。模型各维度与治疗预后效果呈显著负相关, 该模型具有科学性、可靠性, 对疾病预后治疗效果具有较好的预测效度。

结论 1、本研究基于文献研究法、德尔菲专家函询法构建的 TRD 概念内涵、疾病严重程度分期的评估工具, 具有科学性、可靠性。

2、经临床实证研究验证所构建的工具具有较好的信效度及预测效度, 可为后续临床开展预后和疗效风险预测提供有效评估工具。

关键词: 难治性抑郁, 分期模型, 德尔菲法

免疫细胞与进食障碍的因果关系: 一项孟德尔随机化研究

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目的 为探讨进食障碍与免疫表型的因果效应, 基于公开的遗传数据, 探索了 731 个免疫细胞特征与进食障碍疾病风险之间的因果关系。

方法 本研究通过使用最新的全基因组关联研究进行双样本 MR 研究, 以阐明进食障碍与免疫表型是否有因果关系并评估这种关系的方向性, 将逆方差加权法作为主要分析方法, 并进行敏感性分析以保证结果稳健性。

结果 731 个免疫细胞特征包括绝对细胞(AC)计数 ($n=118$)、反映表面抗原水平的中值荧光强度 (MFI) ($n=389$)、形态参数[MP] ($n=32$) 和相对细胞 (RC) 计数 ($n=192$), 其中 MFI、AC 和 RC 特征包含 B 细胞、CDCs、T 细胞成熟期、单核细胞、骨髓细胞、TBNK (T 细胞、B 细胞、自然杀伤细胞) 和 Treg 面板, 而 MP 特征包含 CDC 和 TBNK 面板。逆方差加权法显示进食障碍对七种免疫表型在基因层次存在因果影响, 即进食障碍可增加淋巴细胞上的 SSC-A ($\beta=0.107$, $P=0.006$), FSC-A 水平 ($\beta=0.075$, $P=0.038$), 增加 CD8+T 细胞 ($\beta=0.082$, $P=0.021$)、CD45RA- CD28- CD8+ T 细胞 ($\beta=10.080$, $P=0.011$)、CD28- CD127- CD25++ CD8+ T 细胞 (β

$=0.097$, $P=0.010$)、浆细胞树突细胞 ($\beta=0.100$, $P=0.009$)、CD8+ NKT %T 细胞 ($\beta=0.086$, $P=0.020$)、CD28- CD25++ CD8+ T 细胞 ($\beta=0.079$, $P=0.026$)、CD45RA+ CD8+ T 细胞 ($\beta=0.071$, $P=0.028$) 绝对细胞计数, 减少 CD33dim HLA DR+ CD11b- ($\beta=-0.106$, $P=0.035$)、CD4+/CD8+ T 细胞 ($\beta=-0.094$, $P=0.012$)、CD45 on CD33dim HLA DR- ($\beta=-0.122$, $P=0.034$)、骨髓树突状细胞 ($\beta=-0.078$, $P=0.047$)、IgD+B 细胞 ($\beta=-0.099$, $P=0.007$)、HLA DR on HLA DR+ CD8+ T 细胞 ($\beta=-0.106$, $P=0.007$)、CD4+ T 细胞 ($\beta=-0.083$, $P=0.024$)。对 MR 分析进行敏感性分析, 在进食障碍与免疫表型的敏感性分析显示结果之间不存在异质性。

结论 我们的研究通过遗传学手段证明了免疫细胞与进食障碍之间的密切联系, 从而为未来的临床研究提供了指导。

关键词: 进食障碍, 免疫反应, 因果关系, 孟德尔随机化

上海大学生进食行为问题的心理社会危险因素研究

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目的 进食行为同时受着生物、心理、社会文化因素的影响。严重的进食行为问题可能发展为进食障碍。本研究抽样上海某大学学生, 对其进食行为问题进行评估了解进食障碍高危人群比例; 同时对该抽样群体进行心理、社会特质的评估, 以了解进食行为问题的高危因素, 为进食障碍在大学生群体中的预防提供思路。

方法 本研究对上海某大学学生进行随机抽样。对抽样群体, 予基本信息如性别、学历等记录; 予进食障碍检查自评问卷 (EDE-Q6) 评估进食行为问题的严重程度; 予抑郁症状量表 (PHQ-9) 予广泛性焦虑量表 (GAD-7) 评估抑郁、焦虑状态; 予压力感知量表 (PSS-10) 评估心理压力状态; 予人际交往问题量表 (IIP-32) 评估人际关系中的问题。EDE-Q 量表总分 ≤ 1.27 为进食障碍低危组, 总分 > 1.27 为进食障碍高危组; 定量数据两亚组间比较用 Student-t 检验或, 多于两组则使用方差分析; 危险因素分析用多

因素线性回归分析；所有统计分析在 SPSS 26 软件中完成。

结果 本研究共回收 1688 份有效问卷。EDE-Q6 得分在女性群体显著高于男性群体 (1.17 ± 1.09 vs 0.71 ± 0.87 , $P < 0.001$)；EDE-Q6 得分在本科学历亚群中显著高于硕士学历、博士学历亚群 ($P = 0.007$)；总人群中，EDE-Q6 得分 > 1.27 的进食障碍高危组共 515 人，占抽样群体的 30.5%。进食障碍高危组比低危组评分在以下量表 GAD-7 (4.84 ± 4.65 vs 2.72 ± 3.39 , $P < 0.0001$)、PHQ-9 (6.52 ± 4.89 vs 4.09 ± 3.65 , $P < 0.0001$)、PSS-10 (21.31 ± 4.26 vs 19.11 ± 5.02 , $P < 0.0001$)、IIP-32 (45.46 ± 19.89 vs 33.89 ± 18.76 , $P < 0.001$) 中显著升高。多因素线性回归分析可见抑郁、感知压力、人际关系问题 ($P < 0.0001$) 量表得分分别显著与进食问题得分呈正相关。

结论 进食行为问题在抽样大学生群体中比例高，其中女性进食问题多于男性，学历更低人群的进食问题多于学历更高人群。在进食障碍高危人群中更有突出的焦虑、抑郁、感知压力、人际关系问题。抑郁、感知压力、人际关系问题是大学生发生进食问题的危险因素。

关键词：上海大学生，进食行为，进食障碍，心理因素，社会因素

伴非典型特征抑郁障碍患者的糖脂代谢与脑氢质子磁共振波谱研究

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目的 既往研究提示伴非典型特征抑郁障碍患者中存在糖脂代谢紊乱及相关代谢激素的失调，而这可能与伴非典型特征抑郁障碍的神经生物学机制有关。本研究拟探究糖脂代谢失调与脑生化代谢在伴非典型特征抑郁障碍患者中所起作用。

方法 研究纳入 29 名伴非典型特征抑郁障碍患者、31 名不伴非典型特征抑郁障碍患者以及 34 名健康对照，采用 24 项汉密尔顿抑郁量表、汉密尔顿焦虑量表、杨氏躁狂量表进行症状严重程度评估，用美国精神障碍诊断与统计手册第 5 版障碍定式临床检查对抑郁障碍患者进行分组。进行血液检测和

脑氢质子磁共振波谱扫描，获得空腹血糖、甘油三酯、总胆固醇、低密度脂蛋白、高密度脂蛋白、胰岛素、脂联素、瘦素、胃饥饿素水平，以及额叶、前扣带回、豆状核、丘脑、小脑区域的氢质子磁共振波谱代谢物水平。用稳态模型计算得到胰岛素抵抗指数。

结果 1、伴非典型特征抑郁障碍患者的空腹血糖、高密度脂蛋白胆固醇、总胆固醇、甘油三酯、胰岛素和胰岛素抵抗指数显著升高，胃饥饿素相对降低。其中胃饥饿素与首发年龄负相关，甘油三酯与总病程呈正相关，高密度脂蛋白胆固醇与总病程呈负相关。

2、伴非典型特征抑郁障碍患者右侧前扣带回的 N-乙酰天门冬氨酸 (N-acetylaspartate, NAA) /肌酸 (creatine, Cr) 值较不伴非典型特征抑郁障碍患者低，而左侧豆状核的 NAA/Cr 值和右侧丘脑的胆碱复合物 (choline-containing compounds, Cho) /Cr 值较健康对照升高。其中右侧丘脑的 Cho/Cr 值与首发年龄呈正相关，与抑郁严重程度呈负相关。而左侧豆状核的 NAA/Cr 值与焦虑严重程度呈负相关。

3、伴非典型特征抑郁障碍患者右侧丘脑的 Cho/Cr 值与胃饥饿素呈负相关，左侧豆状核的 NAA/Cr 值在控制身体质量指数和腰围后与瘦素呈负相关。

4、伴非典型特征抑郁障碍患者的胃饥饿素对右侧丘脑的 Cho/Cr 值与首发年龄的关系起负调节作用。

结论 1、伴非典型特征抑郁障碍患者存在明显的糖脂代谢紊乱，胰岛素及胰岛素抵抗指数升高，胃饥饿素相对降低，可能是该类患者新的潜在生物学标志物。

2、伴非典型特征抑郁障碍患者的左侧豆状核和右侧丘脑存在神经代谢方面的异常，并分别与焦虑严重程度和首发年龄相关，为开发针对性的脑部治疗策略提供了潜在的靶点。

3、伴非典型特征抑郁障碍患者的左侧豆状核的神经代谢活动与瘦素有关，而右侧丘脑的神经代谢与胃饥饿素及胰岛素抵抗有关，强调了代谢激素在调节神经代谢和改善临床症状中的潜在作用。

关键词：抑郁障碍；非典型特征；胃饥饿素；胰岛素抵抗；磁共振波谱

Bulimia Nervosa Selectively Reshapes The

Structure and Intrinsic Function of Anterior Insula Subregions Associated with Cognition-emotion Integration

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Objective Existing evidence suggests that anterior insula plays a crucial role in cognitive control and emotional regulation and is implicated in the onset and maintenance of bulimia nervosa (BN). However, it remains unclear how structural and functional abnormalities in specific subregions of anterior insula contribute to BN

Methods In this study, we analyzed structural MRI and resting-state functional MRI data from 54 BN patients and 56 healthy controls (HCs). We conducted voxel-based morphometry, amplitude of low frequency fluctuation (conventional band: 0.01-0.08 Hz, slow-5: 0.01-0.027 Hz) and seed-based whole-brain functional connectivity (FC) analysis of the anterior insula subregions for both groups. Additionally, we investigated the correlation between neuroimaging findings and clinical characteristics in the BN group

Results Our findings revealed that BN patients exhibited reduced gray matter volume in the right dorsal anterior insula (dAI) and bilateral ventral anterior insula (vAI) and demonstrated decreased ALFF in slow-5 band of bilateral dAI. The BN group also showed increased FC between bilateral dAI and precuneus or right superior frontal gyri which significantly correlated with the severity of BN or its key symptom. In addition, the decreased FC between bilateral vAI and anterior cingulate and paracingulate gyri and/or median cingulate and paracingulate gyri were both significantly correlated with the severity and its restrained eating behavior

Conclusion Our findings further indicate that the functional separation of anterior insula subregions may underlie the pathophysiology of BN. Notably, the vAI associated with emotional processing may serve as a promising neuroimaging biomarker which could inform

therapeutic strategy.

关键词: bulimia nervosa; voxel-based morphometry; amplitude of low-frequency fluctuation; functional connectivity

Influencing Factors of Eating Disorders Among Middle School Students in Hebei Province, China

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Objective Eating Disorders (EDs) are mainly clinically recognized by abnormal eating behaviors and excessive concern for food and body weight and size, and the incidence of eating disorders is on the rise in China. EDs have become a serious challenge to adolescents' physical and mental health development. Studies have shown that when individuals are affected by negative emotions, they are prone to abnormal eating attitudes, which are often manifested in eating problems such as overeating and dieting. EDs usually occur during adolescence when minors' emotions fluctuate but have limited ability to regulate them, and when adolescence is a critical period for the development of eating habits. Therefore, it is important to understand the occurrence of EDs in adolescents and their association with other eating behaviors and psychological conditions. This study aimed to investigate EDs among middle school students in Hebei Province and to analyze the potential influencing factors

Methods Adolescents in three grades of several middle schools in Hebei Province were selected to conduct for questionnaire survey by using stratified and random cluster sampling method. A self-designed general information questionnaire was used to investigate their basic demographic information such as sex, age, height, weight, whether the subject is an only child, physical health status and family economic status. The Eating Disorder Examination Questionnaire (EDE-Q),

the Delaware Bullying Victimization Scale, and the Middle School Mental Health Scale were used to investigate their eating disorders, school bullying, and negative emotions, respectively. Univariate analysis and multiple linear regression analysis were used to explore the factors influencing eating disorders in middle school students

Results A total of 949 questionnaires were collected in this study, and after excluding unqualified questionnaires (before and after obvious logical errors, important demographic variables missing or outliers, etc.) there were 851 valid questionnaires, and the validity rate of the questionnaires was 89.7%. Of these, 424 (49.8%) were boys and 427 (50.2%) were girls; 245 (28.8%) were first-year students, 256 (30.1%) were second-year students, and 350 (41.1%) were third-year students. The prevalence of overweight and obesity was 17.5%, with a BMI of (20.1 ± 3.2) kg/m² and an eating disorder score of 0.5 ± 1.0 . Multiple linear regression analysis showed that age [$b=0.075$, $P=0.016$], BMI [$b=0.069$, $P<0.001$], negative emotions [$b=0.126$, $P<0.001$], and being subjected to social/relational bullying [$b=0.100$, $P<0.001$] were the influencing factors of eating disorders

Conclusion EDs are at a low level among middle school students in Hebei Province. Middle school students who are older, have a higher BMI, have negative emotions, and experience social/relational bullying are more likely to have an ED. Therefore, reducing anxiety, stress, and other psychological distress, maintaining a healthy weight, and helping them avoid school bullying may be effective ways to reduce the occurrence of eating disorders among adolescents. Provide psychological counseling and support through a more enriched mental health curriculum in schools, and provide guidance on healthy eating, so that adolescents can learn to alleviate anxiety and release stress in other ways and avoid overeating in an adverse psychological state. In addition, helping adolescents to establish healthy eating environments, habits and active lifestyles, encouraging and supervising adolescents to participate in sports and physical activities, thereby enabling adolescents to improve their moods, gain social support, enhance their self-efficacy and maintain a healthy weight. At present, there

are fewer studies on eating disorders in adolescents in China, and there is a lack of scientific epidemiologic survey evidence and effective intervention methods. In the future, it is still necessary to continue to explore the occurrence mechanisms, influencing factors, and effective intervention strategies for EDs.

关键词: Eating disorders, Middle School Students, Adolescents, Negative Emotion, BMI

A Study of The Correlation between Non-Suicidal Self-injurious Behavior and Beta-Endorphin, Enkephalin and Opiorphin Levels in Adolescents with Mood Disorders

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Objective Non-suicidal self-injury (non-suicidal self-injury, NSSI) behavior is common in adolescent patients with mood disorders. Endogenous opioid system is the research hotspot of neurobiological factors of NSSI. However, the results of peripheral β -endorphin, enkephalin and opiorphin in NSSI patients are not completely consistent, and there are fewer related studies in China. This study examines the factors influencing NSSI behaviors in adolescents with mood disorders, and attempts to find potential biological markers of NSSI from a neurophysiological perspective to provide evidence for the etiology and treatment of NSSI

Methods In this study, 108 patients with mood disorders aged 12-18 years were enrolled from Guangdong Mental Center Inpatient/Outpatient Clinic, and all patients completed interviews, blood and saliva collection. Interviews collected sociodemographic information, clinical characteristics and psychological characteristics of the patients. Scales included the Adolescent Non-suicidal-self-injury Behavior Function Assessment Scale, the Montgomery and Asberg Depression Rating Scale, the Brief Psychiatric Rating Scale, the Childhood Trauma Questionnaire-Short

Form and the Social Anxiety Scale of simplified version. Blood and saliva were collected in the morning on an empty stomach, then the blood was immediately centrifuged and the supernatant extracted to -80°C for storage, while the saliva was placed directly to -80°C for storage. After all samples were collected, they were sent to a third party to test plasma/saliva β -endorphin, enkephalin and opiorphin concentrations using ELISA kits. Independent sample t-test, chi-square test, Logistic regression analysis and correlation analysis were used for statistical analysis

Results 1. 108 adolescent patients with mood disorders were included in this study, 72 in the NSSI group and 36 in the Non-NSSI group. Compared with the Non-NSSI group, the NSSI group had a higher proportion of females and of bisexual/homosexual tendencies, with statistically different results. 2. The NSSI group had a younger age at first self-injury, a much higher rate of prior NSSI behaviors, more suicidal ideation, more antipsychotic use, but similar rates of diagnosis of depressive episode and mood disorder/bipolar depression, with statistically significant differences in outcomes. 3. The total MADRS score, BPRS score, CTQ-SF score, and SAS-A score of the NSSI group were higher than those of the Non-NSSI group, and the results were statistically different. 4. The plasma β -endorphin and enkephalin levels of the NSSI group were lower than those of the Non-NSSI group, and salivary opiorphin levels were higher than those of the Non-NSSI group, and the results were statistically different. 5. The group was divided into two groups according to the clinical diagnosis of depressive episode and mood disorder or bipolar depression, and the salivary opiorphin level of the depressive episode group was lower than that of the mood disorder or bipolar depression group, with statistically significant differences in the results. 6. Variables were included in the logistic regression analysis, and the results showed that MADRS score, past NSSI behaviors were the influencing factors of NSSI. Removing past NSSI behaviors showed that MADRS score, suicidal ideation and salivary opiorphin concentration were the influencing factors of NSSI. 7. Positive correlations were

found between plasma β -endorphins and enkephalins, opiorphin. But there was no significant correlation between plasma and salivary biological indicators

Conclusion 1. The opioid system may be involved in the development of NSSI. B-endorphin, enkephalin, and opiorphin are independent influences on NSSI, which are more supportive of NSSI as a stand-alone diagnosis. 2. Salivary opiorphin may serve as a potential biomarker for NSSI.

关键词: Non-suicidal self-injury, Mood disorders, B-endorphin, Enkephalin, Opiorphin

精神康复协作组

Inflammatory Cytokine Alterations in Genetic and Ultra-High Risk Groups of Schizophrenia: A Systematic Review and Meta-analysis

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Objective Inflammatory cytokine abnormalities are implicated in schizophrenia pathogenesis, yet their changes in clinical high-risk (CHR) and genetic high-risk (GHR) groups of schizophrenia remains unclear. Therefore, we performed a systematic review and network meta-analysis (NMA) to investigate cytokine patterns across CHR, GHR and healthy controls (HCs), aiming to explore the immune mechanism underlying early schizophrenia onset

Methods We comprehensively searched PubMed, Web of Science, Cochrane, Embase, and MEDLINE databases until August 20th, 2023, extracting inflammatory substance levels from CHR, GHR, and HCs. Standardized mean differences (SMDs) with 95% confidence intervals (CIs) were calculated, and NMA and pairwise meta-analyses were conducted using random effects, with Cohen's d as the effect size. This protocol was registered on the PROSPERO, CRD 42023479829

Results 25 papers were included in this systematic review, involving 723 CHR subjects, 609 GHR subjects and 1562 healthy controls. Meta-analysis revealed increased IL-6 levels and decreased IL-10 levels in the CHR group compared to the GHR group. GHR individuals exhibited higher IL-10 and lower IL-6 and TGF- β levels than healthy controls, while CHR patients showed non-significantly increased levels of most pro-inflammatory cytokines. Additionally, elevated IL-13 levels were observed among CHR individuals who later developed schizophrenia compared to those who did not

Conclusion Inflammatory abnormalities exist in the CHR and GHR stages, suggesting different immune mechanisms in schizophrenia development. Reduced

immune activation might correlate with genetic susceptibility to psychosis, while increased pro-inflammatory status could signal early psychotic symptom presence. IL-13 emerges as a potential biomarker for transformation in ultra-high-risk schizophrenia patients. Further research is needed to validate these findings and explore their clinical implications

关键词: Inflammation, Cytokine, Clinical High Risk, Genetic high-risk, Schizophrenia, CRP

双相情感障碍共病网络游戏障碍脑结构及脑生化代谢的研究现状

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目的 双相情感障碍(Bipolar disorder, BD), 是一组复杂和严重的慢性精神障碍。BD 的病程往往呈发作性特点, 发作时表现为躁狂与抑郁交替或反复循环出现, 也可以混合方式存在, 因每次发作症状会持续一段时间, 而且 BD 有较高的疾病患病率、严重的社会功能受损、疾病相关的严重残疾和过早死亡率。网络游戏障碍(Internet Gaming Disorder, IGD)指患者长时间及过度的网络游戏行为, 从而导致其出现对网络游戏失去控制、耐受性, 甚至出现戒断症状的一系列认知和行为障碍。研究表明, IGD 常与其他精神障碍共病, 比如, 常与抑郁障碍、焦虑障碍、双相情感障碍及多动症等, 并对人们的工作、学习、社会和家庭生活产生负面影响, 导致一系列的生理、心理和社会问题。

方法 本文将对 BD 及 IGD 在脑结构、脑生化代谢物方面的特征性改变进行阐述, 探讨 BD 与 IGD 患者脑结构及脑生化代谢间的相似性与差异性, 以期为今后 BD 共病 IGD 神经影像标志物的探寻、神经生物学机制的探索及诊断方法、早期干预提供参考价值。

结果 已有较多的脑结构影像学及脑生化代谢影像学研究结果证实, BD 患者及 IGD 患者存在不同脑区的脑结构及脑生化代谢物有所变化。大量研

究发现, BD 患者大脑顶叶、前扣带回、前额叶、额叶下回、颞下回皮层变薄、表面积减小; 而 IGD 患者额叶、颞叶的皮质与健康对照组相比较薄。两者间存在一定的相似性, 存在的相似性是否能表示 BD 与 IGD 之间发病机制存在相关的联系需进一步研究。BD 患者包括额叶、扣带皮层及海马区的 N-乙酰天冬氨酸(N-acetyl aspartate, NAA) 水平、谷氨酸(Glutamate, Glu)水平降低, 而肌酸(Creatine, Cr)和谷氨酸和谷氨酰胺(Glutamate+Glutamine, Glu+Gln, Glx)水平升高。IGD 患者额叶的 NAA 水平降低。脑生化代谢方面, 也存在一定的相似性, 即两者额叶的 NAA 水平均降低。

结论 当前, 应用结构及功能影像学技术对 BD 及 IGD 患者脑结构、脑生化代谢的研究较广泛。研究发现, 两组患者大脑顶叶、前扣带回、额叶皮层变薄、表面积减小等脑结构变化; 额叶的 NAA 水平降低的脑生化代谢变化, 也有不同之处, 而这些变化与临床特征有相关性。

关键词: 双相情感障碍; 网络游戏障碍; 结构磁共振成像; 磁共振波谱成像

上海市社区高风险精神分裂症患者长效针剂使用的应用研究

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目的 了解上海市虹口区社区高风险精神分裂症患者的服药情况, 掌握长效针剂药物的使用现状及其信息获取渠道, 进一步探讨服药情况与长效针剂使用、长效针剂使用与其信息获取渠道的关联性。

方法 采用分层整群抽样, 使用随机数字表法从全区八家社区卫生服务中心中随机抽取四家, 通过问卷调查的方式, 对抽中社区卫生服务中心中符合纳入排除标准的高风险精神分裂症患者进行调查。数据分析采用单因素 χ^2 检验和二元 logistics 回归分析。

结果 根据服药依从性定义, 在 481 名调查对象中, 不服药组 137 名 (28.48%), 不规律服药组 64 名 (13.31%), 规律服药组 280 名 (58.21%)。单因素结果显示, 不同年龄、户籍、学历、就业状态、婚姻状况、医保类型、总病程、长效针剂使用与否的患

者, 其服药依从性的差异有统计学意义 ($P < 0.05$)。二元 logistics 回归模型结果显示, 未使用长效针剂组与正在使用或使用过长效针剂组的患者相比, 其不规律服药的可能性更高 ($OR = 4.023, 95\%CI: 1.101, 14.703$); 患者通过专科医生和社区宣传活动的渠道获取长效针剂信息与通过社区随访的渠道相比较, 其使用长效针剂的可能性更高 ($OR = 4.282, 95\%CI: 1.056-7.348$)。

结论 精神分裂症患者使用长效针剂有利于提高其服药依从性, 通过专科医生和社区宣传活动获取长效针剂信息更容易接受长效针剂的治疗。

关键词: 高风险; 精神分裂症; 服药依从性; 长效针剂

强迫症新一代阶梯式远程认知行为治疗研究

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目的 本研究旨在开发强迫症(OCD)新一代阶梯式远程认知行为治疗(CBT), 并探索其疗效是否非劣效于传统的线下面对面 CBT 团体, 并且更加经济。

方法 本研究采用非劣效性对照试验设计, 自 2022 年 8 月至 2023 年 8 月, 从上海市精神卫生中心门诊招募 18-50 周岁的强迫症患者 46 名。受试者按照自主意愿被分入阶梯式网络认知行为治疗合并药物治疗组(SC-ICBT, $n=23$)和线下团体认知行为治疗合并药物治疗组(CBGT, $n=23$)。在 SC-ICBT 组中, 患者将首先接受微信小程序自助练习结合少量治疗师指导; 在第三周评估时, 治疗无效的患者将会额外接受标准化的治疗师一对一线上指导, 并在第六周时结束治疗。在 CBGT 组中, 患者将会接受为期 6 周的标准化团体 CBT, 一周两次, 共计 12 次。本研究的主要疗效指标为耶鲁布朗强迫量表(YBOCS), 次要疗效指标为焦虑自评量表(SAS)、抑郁自评量表(SDS)以及佛罗里达强迫问卷(FOCI)。患者治疗 OCD 所花费的成本通过自制的《经济负担采集表》来收集。

结果 在治疗后两组的 YBOCS 得分均有所下降, 差异具有统计学意义。在第六周时 SC-ICBT 组与 CBGT 组的 YBOCS 得分的差值为 2.942 分 (双

侧 95%CI, 0.03-5.13), 置信区间的上限超过了原先设定的 3 分非劣效性界值 ($P=0.03$), 因此主要结果的非劣效性是不确定的。不过两组患者在最终治疗有效率与缓解率方面的差异不具有统计学意义。在次要疗效指标方面, 两组患者的得分在治疗后都有所下降, 且两组间的差异不具有统计学意义。在治疗可行性、安全性方面, 两组同样安全可行。有报告 2 起严重不良反应事件(1 起为药物副作用, 1 起为生活事件导致的抑郁情绪), 但均与本研究的心理治疗方案无关。在卫生经济学方面, SC-ICBT 组的总成本低于 CBGT 组, 平均每位患者能够节省 1630.03 元(95%CI, ¥926.51-¥2333.55)。成本效果分析显示, SC-ICBT 组比 CBGT 组有更佳的成本效果比(386.98 元/分 vs 508.73 元/分), 说明前者更为经济实惠的特点。

结论 新一代阶梯式远程 CBT(SC-ICBT)合并药物治疗与线下团体 CBT(CBGT)合并药物治疗均能有效地减轻患者的强迫症状。虽然非劣效性的结论是不确定的, 但两组患者在治疗有效率和缓解率, 以及自评的焦虑、抑郁、强迫症状改善方面的差异均无统计学意义。对于患有强迫症的成年人来说, SC-ICBT 可能是 CBGT 的一个经济有效的替代方案, 特别是在中国内地精神卫生服务资源紧张, 传统的面对面 CBT 难以立刻获得的情况下。

关键词: 阶梯治疗模式, 网络认知行为治疗, 强迫症, 临床对照试验

Immune System of Vulnerability To Psychosis: A Inflammatory-based Meta-analysis

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Objective Over the past few decades, there has been a growing body of research on the link between inflammation and schizophrenia. The objective of this study is to compare the levels of inflammation-related cytokines between different stages of psychosis, to summarize the dynamic characteristics of the inflammatory immune system and some biomarkers candidates in the development of psychiatric disorders

Methods We conducted a systematic review and

meta-analysis of studies measuring inflammatory markers in high-risk, first-episode, or chronic phase of psychosis populations. After searching and reviewing, a total of 61 studies were included. (14 studies for high-risk, 32 studies for first-episode, and 20 studies for chronic patients)

controls) were included.

Results The levels of IFN- γ , IL-1 β and TNF- α were not significantly changed during the three phases of psychosis. The levels of IL-8 and IL-10 increased in first-episode psychosis, but were not significantly changed in either high-risk or chronic phases. CRP levels significantly increased in both FEP and chronic patients, but were not significantly elevated in high risk subjects. For IL-6, there was no significant difference in chronic samples, but a significant increase in both high-risk and FEP

Conclusion Our study suggests that there is activation of pro-inflammatory system, and there may be an immune compensatory mechanism manifested as up-regulation of anti-inflammatory factors in the pathophysiology of psychosis. Besides, IL-6 and IL-8 have the potential to be state or trait markers of psychosis

关键词: Schizophrenia, High risk, Immune system, Inflammation, Cytokine, Biomarkers

正念干预对康复期精神分裂症患者工作记忆的影响研究

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目的 (1) 了解康复期精神分裂症患者正念水平、注意功能与工作记忆之间的关联。

(2) 观察正念干预对康复期精神分裂症患者正念水平、注意功能和工作记忆的影响, 探讨它们之间的关联影响。

方法 从河南省郑州市某精神疾病医院招募 80 名符合入组标准的康复期精神分裂症患者, 按性别和年龄对其进行分层随机分组, 分为对照组和实验组。实验组在接受常规护理和药物治疗的同时, 接受为期 8 周的正念干预, 对照组接受同期的工娱治

疗。在正念干预前后,利用 FFMQ、CPT-IP、WMS-III 等评估工具分别评估患者的正念水平、注意功能和工作记忆。

结果 (1)基线期变量相关分析:基线水平下,康复期精神分裂症患者的正念水平、注意功能、工作记忆之间显著相关。正念水平和注意功能呈显著正相关($r=0.41, p<0.01$),与工作记忆呈显著正相关($r=0.49, p<0.01$),注意功能与工作记忆之间呈显著正相关($r=0.57, p<0.01$)。

(2)实验组和对照组一般资料比较:实验组和对照组在性别、年龄以及受教育程度上无显著差异($p>0.05$)。

(3)正念干预前实验组和对照组组间比较:实验组和对照组的正念水平总分及其五个子维度得分,均未表现出显著差异($p>0.05$)。同时,实验组和对照组在注意功能的平均 d 值和工作记忆总分方面也未表现出明显差异($p>0.05$)。

(4)正念干预后实验组和对照组组内比较:实验组的正念水平总分及其五个子维度得分均有显著提升($p<0.05$),同时,在注意功能的平均 d 值和工作记忆总分方面也有显著提升($p<0.05$)。相比之下,对照组患者在正念水平总分及其五个子维度得分、注意功能的平均 d 值和工作记忆总分等方面均未出现显著变化($p>0.05$)。

(5)正念干预后实验组和对照组组间比较:实验组在正念水平总分及其五个子维度得分、注意功能的平均 d 值以及工作记忆总分等方面均显著高于对照组($p<0.05$)。

(6)正念干预后变量相关分析:实验组的正念水平、注意功能和工作记忆之间仍存在相关性。具体而言,正念水平与注意功能($r=0.67, p<0.01$)、工作记忆($r=0.64, p<0.05$)呈显著正相关,而注意功能与工作记忆之间也依然保持正相关($r=0.48, p<0.01$)。

(7)中介效应分析:注意功能的提升中介了正念干预对患者工作记忆的影响(95%CI[0.20, 0.62])。

结论 (1)康复期精神分裂症患者的正念水平、注意功能、工作记忆之间存在正相关关系。

(2)正念干预能够有效提升康复期精神分裂症患者的正念水平、注意功能和工作记忆。

(3)注意功能的提升中介了正念干预对康复期精神分裂症患者工作记忆的影响。

关键词: 正念干预, 精神分裂症, 康复期, 注意功能, 工作记忆

多种眼动范式对精神分裂症的诊断效能研究

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目的 探究多范式的综合性眼动指标对于精神分裂症患者的辅助诊断判别能力;

方法 采用诊断性研究设计,共纳入 102 名精神分裂症患者和 102 名健康对照,依次完成阳性与阴性症状量表(Positive and Negative Syndrome Scale, PANSS)、功能大体评定量表(Global Assessment of Functioning Scale, GAF)以及眼动行为的检查(任务包括:定点凝视、朝向眼跳、反向眼跳、平滑追踪及自由浏览)。采用非参数检验比较两组间眼动指标的差异,使用判别分析构建综合性眼动判别函数,分别采用自身验证法和留一法(Leave-one-out)的交互验证来估计判别函数内部验证和交互验证的准确性,使用受试者工作特征曲线(Receiver Operating Characteristic Curve, ROC)评价判别模型的临床应用价值并比较不同范式组合的诊断效能,将诊断性眼动指标与精神病症状和功能量表总分进行相关性分析。

结果 相比较于健康对照组,精神分裂症患者在多个眼动任务中表现异常,包括定点凝视任务中,近距离干扰物条件下注视持续时间减少;朝向眼跳任务中终点增益增加;反向眼跳任务中, gap 条件下潜伏期增加、错误率增加和纠正率减少;平滑追踪任务中, 0.2Hz 条件下水平方向的速度增益降低, 0.4Hz 条件下眼跳的持续时间延长,水平方向和垂直方向的速度增益降低;自由浏览任务中,平均的注视次数、眼跳次数、眼跳幅度、眼跳平均速度以及总扫描路径均减少,平均注视持续时间增加(均 $p_{Bonferroni}>0.05$)。ROC 曲线比较发现加入反向眼跳指标后能够显著提升综合性眼动判别函数的诊断效能,5 范式组合(定点凝视/朝向眼跳/反向眼跳/平滑追踪/自由浏览)的分类准确率达到 90.7%,交互验证后为 89.2%。ROC 曲线 AUC 为 0.962(95%CI:0.936-0.987),灵敏度和特异度分别为 0.941 和 0.892,相较于 3 范式组合(定点凝视/平滑追踪/自由浏览)的分类准确率达到 87.7%,交互验证后为 86.8%。ROC 曲线 AUC 为 0.940(95%CI:0.906-

0.973), 灵敏度和特异度分别为 0.902 和 0.882, 具有更好的辅助诊断效能。其中, 反向眼跳的错误率与患者的精神症状呈正相关, 与患者的日常功能呈负相关。

结论 多种眼动范式的组合可作为精神分裂症可靠的辅助诊断工具, 反向眼跳任务能够显著提升综合性眼动指标的诊断效能;

关键词: 精神分裂症, 眼动行为, 眼跳行为, 诊断效能, 判别分析

精神障碍的自我污名功能影像学的现况分析

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目的 自我污名是患有精神障碍的个体逐渐意识到偏见和刻板印象并应用于自身, 从而产生的内在体验。自我污名会造成精神障碍患者的认知和社会功能受损、治疗依从性下降及不良预后等问题。本文通过分析归纳脑生化代谢物及各脑区功能连接, 能够更好的探究精神障碍和自我污名的神经病理生理机制, 从而早期发现精神障碍的自我污名, 并早期干预其带来的负面影响。

方法 检索 PubMed、CNKI、METSTR 等数据库。纳入标准: 含精神障碍障碍与自我污名及相关因素在功能磁共振中研究进展的相关文献。排除标准: 重复内容文献及与主题不相关的文献。根据纳入与排除标准, 最终纳入相关文献 70 篇。本文综述精神障碍患者的自我污名有关的脑生化代谢物、各脑区功能连接等方面的特征性改变, 探讨精神障碍患者伴有自我污名与不伴有自我污名各脑区功能连接和神经代谢的异同点。

结果 对自我污名及其相关因素的静息态与任务态磁共振成像的研究中表明, 自我污名、低自尊和自责的产生与前额叶皮质和其他脑区的功能连接状态或前额叶皮质本身的激活强度有着直接关联, 这可能是因为内侧前额叶皮质活动是自我相关的认知活动的基础。此外, 杏仁核、丘脑和前扣带回等脑区的激活程度与自我污名及其相关因素有潜在关联。

自我污名所产生的负面结果中包括精神障碍患者的低自尊和自杀风险增高, 同样低自尊也会导致自杀风险的增高, 使得自我污名和低自尊成为精神障碍患者自杀的中间变量, 故自我污名会对自杀导致的神经代谢水平变化产生潜在影响。

结论 在对自我污名现有研究中均提及情绪调节脑区(如前额叶、前扣带回和杏仁核)与自我污名的产生有诸多关联, 这些脑区在精神障碍中同样发挥着重要作用, 并且不论在精神障碍还是在自我污名中 N-乙酰天冬氨酸、谷氨酰胺等神经代谢物都发生着变化。当前, 全球重性精神障碍造成的社会负担日益严重, 并且更容易产生自我污名, 造成诸多负面影响, 因此国内外学者对精神障碍患者的自我污名高度关注, 但对精神障碍患者的自我污名的神经病理生理机制上不明确。未来, 我们可以进一步对精神障碍及自我污名进行神经影像学的研究, 以便于更好的了解其功能紊乱的脑区、环路及神经代谢物变化, 这对存在自我污名的患者精神障碍患者的早期干预及预后具有重要意义。

关键词: 双相情感障碍; 自我污名; 功能磁共振成像; 血氧水平依赖功能磁共振成像; 磁共振波谱成像

有氧运动联合计算机辅助认知治疗对精神分裂症 社会功能干预效果的随机对照

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目的 探讨有氧运动联合计算机辅助认知训练对精神分裂症患者社会功能的干预效果

方法 选择宜昌市精神卫生中心 2023 年 10 月~2024 年 5 月符合纳入标准的 128 例精神分裂症患者, 根据随机数字表法分为常规组和试验组, 每组 64 例。由康复治疗师和医生共同评估病情后开展精神康复项目, 常规组给予常规康复训练, 包括日常生活方面、学习行为方面、工作行为方面; 试验组在常规组的基础上给予有氧运动联合计算机辅助认知功能训练, 有氧运动每天 30-40 分钟, 晨起由工作人员组织实施团体太极拳或八段锦, 坚持 2 周, 计算机辅助认知训练包括训练患者的感知运动协调能力、注意力稳定性、瞬时记忆能力、社会认知能

力, 各项训练 15 分钟, 每天一次, 坚持 2 周。有氧运动和计算机辅助认知治疗分别在一天上午和下午两个时间段, 保障治疗时间不冲突。治疗 2 周后, 比较两组治疗前后社会功能、生活质量的改善情况。

结果 试验组治疗后生活能力、工疗情况、社交能力、关心及兴趣、讲究卫生能力评分均较常规组更低, 差异有统计学意义 ($P < 0.05$ 或 $P < 0.01$); 试验组治疗后生活质量评定量表 (SQLS) 评分中各项目与常规组相比明显更低, 差异有统计学意义 ($P < 0.01$)。

结论 有氧运动联合计算机辅助认知功能训练用于精神分裂症患者中的效果较好, 不仅可以促进其认知功能的恢复, 还能增强其社会功能, 提高生活质量。

关键词: 有氧运动 计算机辅助认知训练 社会功能 精神分裂症

The Effect of Different Frequencies of CCRT Combined with Aerobic Exercise on Cognitive in Patients with Schizophrenia: A Randomized Controlled Study

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Objective To explore the effects of frequency of CCRT combined with aerobic exercise on cognitive and psychiatric symptoms in patients with schizophrenia.

Methods One hundred and fifty-two patients with schizophrenia and cognitive impairment participated in the study and randomly divided into control, aerobic exercise (AE), CAE 1 (CCRT once a week combined with aerobic exercise), CAE 2 (CCRT twice a week combined with aerobic exercise), and CAE 3 (CCRT three times a week combined with aerobic exercise) groups. Changes of processing speed and cognitive flexibility at week 8 were evaluated as primary and secondary cognitive outcomes using the Trail Making Test:

Part A (TMT-A), the Brief Assessment of Cognition in Schizophrenia: Symbol Coding Test (SCT), and the Stroop Colour Word Test (SCWT). Positive and Negative Syndrome Scale (PANSS) scores were determined as other secondary outcomes

Results The CAE 2 and CAE 3 group showed significantly better performance in TMT-A, SCT, SCWT-Word and SCWT-Colour than the control and AE groups at week 8 ($p < 0.05$). However, no significant difference in TMT-A, SCT and SCWT at week 8 were found between the control, AE and CAE 1 groups. The CAE 2 and CAE 3 group showed significant improvements in the PANSS negative symptoms than the control group at week 8 ($p < 0.05$), but the AE and CAE 1 groups showed no significant difference in the changes of PANSS negative symptoms when compared with the control group. Moreover, there was no significant difference in the changes of TMT-A, SCT, SCWT and PANSS at week 8 were found between the CAE 2 and CAE 3 groups

Conclusion Eight-week CCRT (at least twice a week) combined with aerobic exercise may improve some cognitive performance and negative symptoms in patients with schizophrenia, and a appropriate frequency of the intervention strategy may be twice a week

关键词: CCRT, aerobic exercise, cognitive, schizophrenia

Intestinal Mycobiota Dysbiosis Associated Inflammation Activation in Chronic Schizophrenia

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Objective The microbiome-gut-brain axis is related to schizophrenia (SCZ). The role of intestinal mycobiota in SCZ has been under investigated

Methods We present a half-year follow-up study involving 109 chronic SCZ patients and 77 healthy controls. Intestinal mycobiota was tested by internal tran-

scribed spacer (ITS). Untargeted liquid chromatography-mass spectrometry (LC-MS) was used to measure faecal metabolites. Symptom severity was assessed using the Positive and Negative Syndrome Scale

Results Enterotype analysis showed that *Candida*-type patients exhibited severer positive symptoms and depression factors than *Saccharomyces*-type patients. *Candida* and its top species and operational taxonomic units (OTUs) were positively correlated with depression factors (all $p=0.001$). Faecal metabolites analysis showed that upregulated metabolites were associated with chronic inflammation (NF- κ B pathway and T helper cell differentiation), downregulated metabolites were associated with glutamate metabolism, serotonergic and dopaminergic synapse. Procrustes analysis revealed significant correlation between intestinal mycobiota and faecal metabolites ($M2=0.937$, $p<0.001$). Metabolic module analysis showed that the top module, METurquoise (associated with Th1 and Th2 cell differentiation), was negatively correlated with SCZ ($r=-0.783$, $p<0.0001$), positively correlated with *Candida*, *Aspergillus*, *Talaromyces*, and *Trichosporon* (decreased in SCZ) and negatively correlated with *Saccharomyces* (increased in SCZ). We also found impairments of intestinal barrier in SCZ, characterized by increased in blood D-lactate (mucosa impairment marker) and decreased in blood mucin 2 (mucosal barrier protective protein). Serum levels of TNF- α was increased and showed stable high levels during treatment

Conclusion This study suggests that mycobiota dysbiosis-related chronic inflammation and an impaired intestinal mucosal barrier are associated with chronic SCZ.

关键词: Schizophrenia, Mycobiota, Metabolism, Inflammation, *Candida*, Depression factor

音乐引导想象治疗研究热点及趋势-基于 Citespace 可视化分析

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目的 音乐引导想象治疗作为一种特殊的音乐治疗, 主要通过音乐使来访者产生和发展意象, 帮助来访者加强积极资源及处理消极议题, 从而实现自我探索及个人成长。本文基于 Citespace 对音乐引导想象治疗进行可视化分析, 了解其研究热点及未来研究趋势。

方法 采用文献计量学方法, 检索 1996 年-2023 年 Web of Science Core Collection(WoS)核心合集数据库收录的音乐引导想象治疗研究的相关文献, 对所得文献的国家、研究机构、作者、关键词进行分析, 并运用 CiteSpace 6.2.R4 软件进行可视化分析。

结果 本研究共纳入 253 篇英文文献, 发文量呈现逐年上升趋势。发文量排名前三名的国家分别是美国、澳大利亚和英国, 其中美国占全部发文的 35%。在机构共被引分析中, 发文前三的机构分别是奥尔堡大学、墨尔本大学及挪威音乐学院, 且之间有密切合作。在作者共被引分析, 发文量最多的作者是 Beck Daniels, 并形成了以 Beck、Short 和 Grocke 为中心的研究团队。通过对关键词进行共现分析, 目前研究热点包括情绪、抑郁、焦虑及乳腺癌。在关键词时区可视化分析中, 音乐引导想象治疗作为一种有效的心理治疗方法, 不仅可以用于改善情绪、成瘾治疗、创伤后应激障碍治疗等, 近年来逐渐应用于乳腺癌术后及化疗康复、心脏术后、疼痛治疗等身心疾病康复中。时区可视化分析中另一重要结果为研究方向的变化, 逐渐从效果评价研究转向作用机制研究。通过数据分析发现, 音乐引导想象治疗作为一种对视觉和听觉同时刺激的治疗方法, 可能通过负面情绪和记忆相关的脑区产生神经激活作用来调节情绪; 另外治疗中对来访者进行脑电监测, 当音乐播放和意象出现时, 大脑额叶会发生不同的反应, 因而说明音乐引导想象治疗可能通过在与负面情绪和记忆相关的区域产生神经激活来调节情绪。在研究趋势预测中, 音乐引导想象治疗的神经生化、神经影像及神经电生理等机制研究将成为未来研究热点。

结论 本文通过 Citespace 软件对音乐引导想象治疗的研究热点及趋势进行可视化分析。音乐引导想象治疗通过音乐帮助来访者激发出不同意象, 帮助来访者缓解消极情绪, 加深积极资源, 从而促进个人探索及成长。目前主要的研究机构集中在欧美国家, 但各国之间的合作有限。现有研究主要关注音乐引导想象治疗在缓解情绪、促进身心疾病康复等的应用。对于其作用机制, 目前只有初步结论, 具

体作用机制尚不清楚,而神经生化、神经影像、神经电生理等机制研究将成为未来研究热点。

关键词: 音乐引导想象, Citespace, 可视化分析

抑郁症伴焦虑患者生存质量的聚类分析和因子分析及其临床意义

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目的 本研究旨在通过对抑郁症伴焦虑患者的生存质量评分进行聚类分析和因子分析,揭示不同患者组别的生存质量特征及其关键影响因素。将有助于临床医生制定更加个体化的治疗方案,提高患者的整体生活质量。

方法 本研究为横断面研究,通过方便抽样选取 1039 名抑郁症伴焦虑患者,采用问卷调查,调查内容包括社会人口学信息、抑郁症状、焦虑症状和生存质量评分。生存质量通过世界卫生组织生存质量测定量表简表(WHOQOL-BREF)进行评估,涵盖生理、心理、社会关系和环境四个领域。通过聚类分析、因子分析等数据分析方法,揭示抑郁症伴焦虑患者生存质量评分的差异及其关键影响因素。

结果 通过 K-Means 聚类分析,将患者分为三组:高生存质量组(Cluster 0)、中等生存质量组(Cluster 2)和低生存质量组(Cluster 1)。高生存质量组在生理领域、心理领域、社会关系领域和环境领域的生存质量评分均最高,均值分别为 3.12、2.98、3.19 和 3.24;中等生存质量组在上述四个领域的均值分别为 3.03、2.85、3.05 和 3.10;低生存质量组的均值最低,分别为 2.45、2.24、2.47 和 2.59。因子分析揭示两个主要因子:Factor 1:与所有生存质量评分有较高的正相关,特别是生理领域($\lambda=0.78$)和心理领域($\lambda=0.76$)。这表明患者的整体健康状况和生活质量是影响其生存质量的主要因素。Factor 2:与社会关系领域($\lambda=0.67$)和环境领域($\lambda=0.66$)的生存质量评分有较高的正相关。这表明患者的社会支持和生活环境对其生存质量有重要影响。

结论 不同聚类组在各个生存质量领域的评分存在显著差异。根据患者所在的聚类组,制定个体化的治疗方案。高生存质量组的患者可以进行常规的维护性治疗,而低生存质量组的患者整体生活质

量较差,需要更加集中的干预和支持,包括药物治疗、心理治疗和社会支持等多方面的干预,以改善其生活质量。中等生存质量组的患者则可以根据具体情况提供个性化的治疗方案,关注患者的特定需求。因子分析揭示影响生存质量的关键因素,总体健康状况和社会支持与环境因素是影响抑郁症伴焦虑患者生存质量的主要因素。临床医生应全面评估患者的整体健康状况和社会支持系统,提供个性化的治疗方案,增强社会支持,改善生活环境,以全面提升患者的生活质量。本研究的结果为临床实践提供重要的参考依据,未来的研究可以进一步探讨这些因子的具体影响机制,以及如何通过多学科合作优化干预措施,提高患者的生活质量。

关键词: 抑郁症, 焦虑, 生存质量, 聚类分析, 因子分析, 精神康复

Exploring The Best Test And/or Task To Measure The “Theory of Mind” of Ultra-high Risk Individuals Before Intervention: A Meta-analysis and Systematic Review

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Objective The concept of prodromal psychosis state, also called the Ultra-high risk (UHR) for psychosis or clinical high risk (CHR) for psychosis, has been aware by most of the researchers and clinical doctors in the domain of schizophrenia spectrum disorder. The difference of “theory of mind (ToM)” capacity between UHR individuals and healthy people is distinct according to a plenty of studies, which suggests the deficit on related regions of brain function in the UHR individuals. However, there is not a single test or task, like “reading the mind in the eyes” test for autism or hinting task for schizophrenia, that was originally and specifically devised to measure the ToM deficit of UHR individuals, which might have been a cause of the contrary or ambiguous results in related studies. Thus, there is a necessity to discuss the efficiency of various tests and tasks on measuring the ToM capacity deficit in UHR individ-

uals in summary. Objective To identify the most effective test or task to measure the difference of ToM capacity between UHR individuals and healthy people. Question: Which task is the best to unravel the difference between Ultra-high risk for psychosis individuals and healthy people on ToM capacity

Methods Data source: Multiple databases including Pubmed, PsycINFO, CNKI have been searched for related studies reported in any language from Jan 1995 to Jul 2023, using combinations of terms of “theory of mind”, “ToM”, “social cognition”, “psychosis”, “At risk mental state”, “Ultra high risk for psychosis”, “Clinical high risk for psychosis”, “High psychosis risk”, “High risk for psychosis”, “early initial prodromal state”. Selection criteria: The study included cross-sectional and cohort studies that allowed reviewer to compare the ToM capacity of UHR group with which of healthy control group at the baseline before any intervention had been deployed. Data extraction: The study was conducted following the PRISMA guidelines and MOOSE guidelines. The quality of the included studies has been assumed using the NOS (Newcastle-Ottawa Scale) and the lowest NOS score of the included studies is 7. Data analysis: Cohen’s d was used to depict the effect size of tasks and tests. The meta-analysis has included 8 studies of the “Reading the Mind in the Eyes Test (RMET)” and 4 studies of the “Strange Story Task (SST)”. 7 other tests and/or tasks including the “nonverbal Cartoon Task”, “Faux Pas Task”, “Hinting Task”, “ToM Picture Stories Task”, “The Awareness of Social Inference Test (TASIT)”, “False Belief Task” and “Short Story Task” have been qualitatively reviewed because of the insufficient amount of related data

Results The quantitative data shows that the overall effect of RMET is Cohen’s $d = 0.24$ with heterogeneity of $\text{Tau}^2 = 1.64$; $\text{Chi}^2 = 35.58$, $df = 8$ ($P < 0.0001$); $I^2 = 78\%$. For SST it is Cohen’s $d = 0.29$ with heterogeneity of $\text{Tau}^2 = 0.17$; $\text{Chi}^2 = 4.44$, $df = 3$ ($P = 0.22$); $I^2 = 32\%$. The qualitative summarization shows that the Faux Pas task is the most potentially effective and stable task, which has a relatively high Cohen’s d value and stable statistical significance in all 3 related studies. ToM Picture Stories Task is also a potentially

good task for its high effective value and stable significance across the studies. Both the “Short Story Task” and TASIT showed significant difference between UHR and healthy people but there is only 1 study for each has used them. Other tests or tasks have shown unstable outcome on statistical significance

Conclusion This systematic review and meta-analysis showed the performance of being used tests and tasks in ToM comparing between UHR individuals and healthy people, which suggested that there could be better choices to depict the ToM deficit in the UHR individuals. And for those most commonly used methods there might be a necessity to modify the design to improve the explanatory power when discussing the ToM features of UHR individuals.

关键词: Theory of mind, Ultra High Risk for Psychosis, Clinical High Risk for Psychosis, Reading the Mind in the Eyes Test

首发未用药精神分裂症伴脱髓鞘改变患者的认知障碍与糖代谢情况

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目的 探究首发未用药精神分裂症群体中, 伴脱髓鞘改变与不伴脱髓鞘改变的患者相比, 认知水平与糖代谢水平的变化情况。

方法 选择2016年-2023年于我院就诊的89例首发未用药精神分裂症患者, 依据脑部磁共振平扫结果分为首发未用药精神分裂症伴脱髓鞘改变患者($n=46$)和首发未用药精神分裂症不伴有脱髓鞘改变患者组($n=43$), 使用精神分裂症认知功能成套测验(MCCB)评估两组患者的认知功能, 比较两组患者血清胰岛素、空腹血糖、胰岛素抵抗指数、胃饥饿素、胰高血糖素样肽-1水平差异。

结果 两组患者的年龄、性别、吸烟史、家族史、体质指数无统计学差异($p>0.05$)。与首发未用药精神分裂症不伴脱髓鞘改变的患者相比, 首发未用药精神分裂症伴脱髓鞘改变的患者认知障碍更严重, 主要表现在信息处理速度、视觉学习方面($p<0.005$)。首发未用药精神分裂症伴脱髓鞘改变患者

组的胃饥饿素水平明显高于不伴有脱髓鞘改变患者组 ($z=-2.759$, $p=0.006$), 胰高血糖素样肽-1 水平低于不伴有脱髓鞘改变患者组 ($z=-4.056$, $p<0.000$)。两组患者的胰岛素、空腹血糖、胰岛素抵抗指数并无显著差异 ($p>0.05$)。

结论 与首发未用药精神分裂症不伴脱髓鞘改变的患者相比, 首发未用药精神分裂症伴脱髓鞘改变的患者认知障碍更为严重, 且伴有糖代谢水平失衡。

关键词: 精神分裂症, 脱髓鞘, 认知障碍, 胃饥饿素, 胰高血糖素样肽-1

Liuzijue Qigong Improves Clinical Symptoms and Social Function in Inpatients with Moderate To Severe Depression: A Randomized Controlled Study

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Objective Qigong is a mind-body exercise, combine physical activity, breathing and meditation to harmonize the body, mind and spirit. As an important component of traditional Chinese medicine, qigong has been suggested as a holistic health practice to promote physical and mental well-being. During COVID-19, Liuzijue qigong has been proven to be an recognized method for improving physical function and quality of life for discharged rehabilitation patients, while significantly alleviating their anxiety and depression. This study evaluated the impact of Liuzijue qigong as a complementary therapy on the clinical efficacy and social function of hospitalized patients with moderate to severe depression

Methods This study is a randomized controlled trial (RCT) with evaluator blinding. We recruited 64 hospitalized patients with moderate to severe depressive episodes who meet the selection criteria, randomly divided into a 1:1 ratio into a conventional treatment combined with Liuzijue qigong intervention group and a

conventional treatment control group. During the 8-week clinical intervention process, the intervention group implemented liuzijue intervention (once a day for 30 minutes each time) on the basis of conventional drug treatment and routine nursing plan

We used the change in Hamilton Depression Scale (HAMD) score from baseline as the primary outcome measure efficacy endpoints; HAMD change from baseline to 2 weeks after intervention as well as clinical response ($\geq 50\%$ reduction in HAMD score from baseline) at 2 weeks and 4 weeks as secondary outcomes. SHEEHAN Disability Scale(SDS) was used to evaluate changes of social function. We considered both the individual scores for each dimension as well as the overall score, which reflects general functionality.

Results After treatment, the HAMD scores of both groups of subjects showed a significant decrease compared to before treatment, indicating a significant improvement in depressive symptoms. Compared with the control group, the intervention group showed a larger decrease in HAMD score at 2 weeks [LS mean (95%CI)= -3.34 (-5.59,-1.10), $p=0.003$], and this difference was further widened at 4 weeks [LS mean (95%CI)= -6.53 (-5.44,-7.62), $p<0.001$]. At 4-week time point, the response rates of depression symptoms in the intervention group was significantly higher than that in the control group ($p=0.001$). At 2-week point, no subjects had depression symptom scores that met the remission criteria. At 4-week point, 5 (15.63%) patients in the intervention group met the remission criteria, but no one in the control group achieved remission

Generalized estimating equations analysis found that after 2 and 4 weeks of intervention, the total SDS scores and subscales of the experimental group and the control group significantly decreased compared to baseline. After adjusting the baseline scores, there was no significant difference in the total SDS scores between the experimental group and the control group at 2 weeks. At four weeks, the total SDS score and subscales of the experimental group was significantly lower than that of the control group, indicating better social function performance.

Conclusion The main findings of the study support our research hypothesis, which Liuzijue shows a

positive impact on accelerating improvement of depressive symptoms and social function in hospitalized patients with moderate to severe depression. The utilization of traditional Chinese medicine therapy in the realm of psychiatry can be significantly enhanced, thereby advancing its further investigation and propagation. Additionally, it holds the potential to exert a broadened influence in the theoretical framework of traditional Chinese nursing and non pharmacological treatment

关键词: Liuzijue qigong, depression, social function, randomized controlled trial

正念认知疗法联合抗抑郁药物在抑郁症治疗中的作用

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目的 探讨正念认知疗法联合抗抑郁药物治疗对抑郁症患者复发率和生活质量的影响。

方法 纳入抑郁症患者 130 例, 随机分为实验组和对照组, 两组各 65 例, 其中实验组接受药物联合正念认知疗法治疗, 对照组接受单纯药物治疗, 比较两组患者的复发率和生活质量水平恢复状况, 其中治疗药物主要考虑选用 5-羟色胺再摄取抑制剂类抗抑郁剂 (SSRIs)。实验组患者在常规药物治疗基础上联合进行正念认知疗法治疗, 先进行集中干预 6 个月, 每周 1 次, 每次治疗 2.5 小时, 共 24 次; 后 6 个月继续日常正念认知疗法练习, 通过微信群进行监督, 持续 6 个月。两组患者在治疗前后均进行汉密尔顿抑郁量表、健康调查问卷和社会功能量表评估。

结果 治疗前, 两组患者间三个量表 (汉密尔顿抑郁量表、健康调查问卷和社会功能量表) 评分相比无明显差异 ($P>0.05$)。治疗 1 年后, 对照组有 20 例患者复发, 复发率为 30.77%, 实验组有 9 例患者复发, 复发率为 13.85%, 两组间复发率有显著差异 ($P<0.05$)。两组患者的汉密尔顿抑郁量表和社会功能量表评分均较治疗前明显降低 ($P<0.05$), 健康调查问卷评分则较治疗前明显升高 ($P<0.05$), 且实验组汉密尔顿抑郁量表、健康调查问卷和社会功能量表评分治疗前后的差异均显著高于对照组

($P<0.05$)。

结论 与单纯药物治疗相比, 正念认知疗法联合药物治疗可有效预防抑郁症患者的复发, 同时还可以提高其生活质量。

关键词: 正念认知疗法, 抑郁症, 复发率, 生活质量

精神分裂症患者康复影响因素的质性研究

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目的 探索精神分裂症患者及照顾者中影响精神康复的相关因素, 了解康复过程规律, 构建符合本土文化背景的康复规律理论模型。

方法 本研究采用立意抽样的方法, 对符合入组标准的精神分裂症及相关障碍患者及其照顾者进行访谈。采用半结构化访谈, 根据访谈大纲, 以开放和半开放问题了解被访谈者的主观体验和感受。按照资料信息达到饱和的要求, 每次访谈时间约 60-90 分钟。访谈内容进行录音及现场笔记, 尽可能详细和准确地记录访谈内容和情境。访谈结束后立即将录音和笔记整理为电子稿, 以便进一步分析和整理。数据分析采用质性研究中扎根理论的方法, 对访谈资料进行开放编码、主轴编码、选择编码, 归纳提取出影响精神分裂症患者康复的影响因素。运用三角测量法检验编码的一致性。

结果 在访谈的 30 名患者及 20 位照顾者中, 经过对访谈资料进行开放编码、主轴编码、选择编码, 发现影响精神分裂症患者康复的积极因素有患者自我效能高和良好的支持系统, 阻碍因素有患者自我效能低、负性环境压力和症状及副作用的干扰。从照顾者角度, 影响精神分裂症患者康复的积极因素有患者自我效能高和良好的支持系统, 阻碍因素有患者自我效能低、负性环境压力和症状及副作用的干扰。

结论 精神分裂症患者的精神康复不仅仅是追求症状的改善, 还需要从疾病、环境和个体发展角度, 总结康复规律, 制定康复策略, 并争取来自家庭、社区、社会等多方面的支持。

关键词: 精神康复, 质性研究, 精神分裂症

病耻感对于重性精神疾病患者公开与否自身病情的影响探究

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目的 精神疾病多有病程长, 症状显著, 对功能损害大以及病耻感强的特点, 影响患者生活的各个方面, 因此, 患者常常需要向各种相关人员公开自己的病情, 如老师、领导, 和社区工作人员等。对于自身病情的公开, 也是患者开始走上复元之路与降低病耻感的关键的第一步。然而, 出于如过于强烈的病耻感、结构性的歧视等, 这种公开往往面临着各种阻力, 且可能会给患者带来不同程度的负面后果, 如对自尊的伤害、他人的拒绝与排斥等, 对患者的复元造成阻碍。在此基础上, 也有各种干预措施开发出来以期对抗这一问题。本研究的目的在于探讨各种人口学和病耻感因素对于重型精神疾病, 包括精神分裂症谱系障碍、双相情感障碍、重型抑郁障碍患者公开自身病情的影响。

方法 本研究仅纳入来自中国的患者, 他们均被诊断为至少具有精神分裂症谱系障碍、双相情感障碍与重型抑郁障碍的其中一种疾病, 且不具有智力障碍。我们收集了患者人群的人口学资料, 包括性别、年龄、文化程度、婚姻状况等, 使用精神疾病的自我病耻感简化版量表 (SSMIS-SF) 测量了病耻感, 收集了其具体的公开情况以及公开意愿, 并使用 COMIS (The Coming Out with Mental Illness Scale) 收集了每个个体认为的公开的益处 (BBO) 以及保密的原因 (RSI)。使用分层线性回归分析了人口学数据、SSMIS-SF 四个维度对公开的益处以及保密的原因的影响。

结果 本研究纳入患者共 560 名, 210 名来自社会心理复元机构, 350 名来自当地社区, 且均来自四川省成都与自贡地区。根据分层线性回归, 年龄显著正向影响公开的益处 ($B=.010, p=.022$)。对病耻感的认同 (Agree) 维度显著正向影响公开的益处 ($B=.243, p=.001$); 病耻感的伤害自尊 (Harm) 维度显著负向影响公开的益处 ($B=-.177, p=.011$); 年龄、文化程度显著负向影响保留的原因 ($B=-.013, p=.001$)、($B=-.241, p=.017$) 对病耻感的意识 (Aware)

维度、伤害自尊 (Harm) 维度、应用 (Apply) 维度显著正向影响保留的原因 ($B=.168, p=.002$)、($B=.161, p=.011$)、($B=-.209, p=.005$)。

结论 通过本研究的探讨, 可以发现, 对于已经选择公开自身病情的个体来说, 其年龄越大, 对于病耻感认同越强, 越认为公开是有益的, 而病耻感对自尊的伤害则会降低公开的益处; 对于选择保密自身病情的个体来说, 其年龄越小, 文化程度越低, 越认为不公开病情存在重要原因, 而除了认同 (Agree) 以外的耻感维度均会随着其增强而增强个体保密病情的理由。

关键词: 病耻感; 重型精神疾病; 病情公开

虚拟现实技术在酒精使用障碍患者治疗中的应用效果评估

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目的 酒精使用障碍 (Alcohol Use Disorder, AUD) 是一种常见的慢性复发性脑疾病, 已经成为当今世界严重的公共卫生问题。然而, 针对酒精使用障碍的现有非药物治疗方法疗效有限。已有研究发现线索暴露疗法 (Cue Exposure Therapy, CET) 可能降低患者的渴求, 减少酒精使用, 从而减少复发。虚拟现实 (Virtual Reality, VR) 技术正广泛应用于精神病学领域, 具有较高的生态效度, 能够增加线索暴露效果。本研究旨在利用虚拟现实技术结合线索暴露疗法和厌恶疗法 (Aversion Therapy), 探讨虚拟现实技术对酒精使用障碍者的饮酒行为及焦虑抑郁状态的干预效果, 为酒精使用障碍的临床诊断及治疗提供新思路。

方法 研究对象为南宁市第五人民医院住院治疗的 80 名酒精使用障碍者, 分为干预组 (虚拟现实技术联合常规药物治疗组, 50 人) 和对照组 (常规药物治疗组, 30 人)。入组前, 所有被试均依据《精神障碍诊断与统计手册》第五版 (DSM-5) 的酒精使用障碍诊断标准进行评估, 符合诊断标准者方可纳入研究。干预组使用基于虚拟现实构建的酒瘾干预系统进行治疗, 每 2 天进行一次干预, 共 7 次, 为期 14 天。在治疗前后, 使用宾夕法尼亚酒精渴求量表 (PACS) 评估被试对酒精的渴求水平, 使用酒精

拒绝自我效能感量表 (AASES) 评估被试对酒精的自我拒绝效能水平, 使用 9 项患者健康问卷 (PHQ-9) 评估被试的抑郁状况, 使用 7 项广泛性焦虑障碍量表 (GAD-7) 评估被试的焦虑状况。

结果 治疗前, 两组在 AASES、PHQ-9 和 GAD-7 得分上不存在显著差异 ($p > 0.05$), 但干预组的 PACS 得分显著高于对照组 ($p < 0.001$)。治疗后, 在 PACS 得分上, 两组均显著下降 ($p < 0.001$), 且两组之间得分无差异, 但干预组的得分下降幅度更大。并且, 治疗后两组 AASES 得分均呈上升趋势, 且干预组前后差异更显著 ($p < 0.001$)。在 PHQ-9 得分上, 治疗后两组得分均呈下降趋势, 干预组前后差异也更显著 ($p < 0.001$)。在 GAD-7 得分上, 治疗后干预组得分显著下降 ($p < 0.001$), 而对照组未见显著差异。

结论 本研究发现, 虚拟现实技术联合药物治疗对酒精使用障碍患者的干预效果优于单纯药物治疗。具体而言, 基于虚拟现实技术的线索暴露疗法和厌恶疗法能够更显著地降低酒精渴求, 提高酒精拒绝自我效能感, 改善抑郁和焦虑症状。然而, 这一结论仍需通过大样本的严格随机对照试验进一步验证。

关键词: 酒精使用障碍, 虚拟现实技术, 线索暴露疗法, 厌恶疗法

TMS 联合 SCIT 治疗对精神分裂症患者内部动机和社会认知功能作用的初步探讨

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目的 内部动机缺陷作为精神分裂症的一种核心表现, 与患者的认知操作水平有关, 被视作认知矫正训练治疗效应的一种负性预测因素。本研究试图探讨经颅刺激治疗对精神分裂症患者参与社会认知康复训练的内部动机影响, 以及在社会认知功能康复中的作用。

方法 42 例疾病稳定期精神分裂症患者, 随机分为经颅刺激联合社会认知交互训练治疗组 (SCIT+TMS) 和单纯 SCIT 治疗组 (SCIT)。SCIT 治疗每周二次, 每次 60 分钟, 共 20 次。TMS 刺激

部位置于左背外侧前额皮质, 治疗每天 1 次, 连续 15 次。所有被试治疗前和治疗后均接受精神分裂症内部动机量表 (IMI-SR)、心理理论故事图片任务 (ToM-PST)、中文版模棱两可、目的和敌意问卷 (AIHQ-C)、心智化量表 (MentS)、中文版人际反应指针量表 (IRI-C) 评估、阳性和阴性症状量表 (PANSS) 评估。

结果 ① SCIT+TMS 组, ToM-PST 后测总分、排序均分、理解初级错误信念、理解初级信念总分、理解欺骗和理解欺骗的侦测均高于前测, 而排序平均时间后测低于前测, 差异具有统计学意义 (均 $P < 0.05$); SCIT 组, ToM-PST 后测总分、排序均分、理解初级错误信念、理解初级信念总分、理解次级错误信念、理解次级信念总分、理解三级错误信念和理解欺骗均高于前测, 而排序平均时间后测低于前测, 差异具有统计学意义 (均 $P < 0.05$); ToM-PST 总分和各项因子分前测与后测的差值, 两组间差异均无显著统计学意义 (均 $P > 0.05$)。② SCIT+TMS 组, AIHQ-C 后测模棱两可场景 HB 分、故意场景 HB 分、故意偏向总分, 以及模棱两可场景 AB 分均低于前测, 差异具有统计学意义 (均 $P < 0.05$); SCIT 组, AIHQ-C 除故意场景 AB 分外, 前测与后测间评分差异均无统计学意义 (均 $P > 0.05$); AIHQ-C 前测与后测评分间差值, 除故意场景 AB 差值 SCIT+TMS 组高于 SCIT 组 ($z = -1.996, P = 0.046$) 外, 余 AIHQ-C 前测与后测的差值, 两组间均无显著统计学意义 (均 $P > 0.05$)。③ MentS 和 IRI-C 评分, 两组前后测间差异均无显著统计学意义 (均 $P > 0.05$), 前后测差值两组间的差异无显著统计学意义 (均 $P > 0.05$)。

结论 神经调节干预结合认知康复治疗, 可能有助于改善精神分裂症患者的社会认知功能。研究结果未能证实, 针对左背外侧前额皮质的 TMS 刺激有助于提高患者内部动机水平, 以及促进康复训练治疗中患者社会认知功能水平的改善, 这一点需今后在扩大样本, 改进试验方法的基础上进一步深入研究。

关键词: 内部动机; 社会认知; 康复训练; 神经调节; 精神分裂症

Establishing The Chinese Norms for The MMPI-3: A Comparative Analysis of English and Chinese Versions

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Objective The Minnesota Multiphasic Personality Inventory-3 (MMPI-3) is the latest iteration of one of the most widely used psychological assessment tools in the world. It is a 335-item inventory with 52 scales that assess a range of psychological constructs, from clinical syndromes to personality traits. However, the Chinese norms for the MMPI-3 have never been established before. This study aims to develop a Chinese version and compare the differences of scale scores between Chinese and English versions

Methods A total of 70 students from Peking University, Renmin University of China, and Beijing Foreign Studies University, with a preference for English and related majors, and a minimum TOEFL reading score of 26 or IELTS reading band of 8.0, were recruited. Participants completed the MMPI-3 in English and in Chinese on different days, respectively. Paired-sample t-tests were conducted to compare the means of scale scores across language administrations and correlations for each scale across language versions

Results Across languages, 26 scales demonstrating significant differences ($p < 0.05$) included CRIN, TRIN, F, Fp, Fs, EID, THD, BXD, SOM, LPE, ASB, PER, ABX, NUC, EAT, COG, HLP, SFD, STR, CMP, ARX, FML, SFI, SAV, NEGE and INTR. These scales exhibited variations that might reflect cultural or linguistic nuances in the assessment process. The consistency in scores for other scales suggested a reliable translation and adaptation, indicative of their robustness in a bilingual assessment context. All 52 scales reviewed showed a high degree of correlation ($r > 0.3$ and $p < 0.05$) between the English and Chinese versions, confirming a significant and consistent relationship across language versions

Conclusion Scales with substantial differences in scoring between the two language versions, suggest that it merit some revision for improvement of translation. This study will contribute to the establishment of the Chinese norms for the MMPI-3 and assess the cross-cultural equivalence of the test.

关键词: MMPI-3, Chinese norms, comparative analysis

基于数字生物标志物的抑郁症治疗效果预测研究

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目的 随着人工智能、5G 网络等技术的快速发展,基于可穿戴设备的"数字化生物标志物"医疗监测体系正在构建。可穿戴设备与智能手机 App 数据收集相结合,有助于加快临床决策过程。本研究旨在利用多维数据和机器学习方法,预测第 8 周抑郁症治疗效果,探索数字生物标志物在抑郁症预后监测中的应用潜力。

方法 选取 2023 年 8 月至 2024 年 4 月在北京大学第六医院门诊就诊的 18 至 60 岁重性抑郁障碍患者,根据第 8 周 HAMD-17 减分率是否超过 50%分为治疗有效组和治疗无效组。收集入组基线至第 2 周期间的可穿戴设备数据(步数、睡眠、心率、卡路里消耗)和智能手机 App 每日心情评分。采用长短期记忆网络(LSTM)构建预测第 8 周治疗效果的二分类模型,并采用 5 折交叉验证评估模型性能。将 LSTM 模型与仅使用基线人口学和临床量表的基准模型进行对比,检验差异的显著性。采用排列特征重要性方法量化各类数字生物标志物特征的贡献度,并通过可视化直观展示。基于特征重要性分析,采用递归特征消除方法进一步优选关键特征子集。

结果 本研究共纳入 40 名患者,其中治疗有效组 21 例,治疗无效组 19 例。可穿戴设备和智能手机 App 数据完整性达 65.7%。LSTM 模型对第 8 周治疗效果的预测准确率达 85.7%,显著优于基准模型(74.4%, $p < 0.05$)。每日睡眠时长、平均心率和每日心情评分是最关键的预测因素,贡献度分别为 28.4%、23.7%和 19.5%。仅使用上述 3 个关键特征的优化 LSTM 模型,也能达到 83.6%的预测准确率,与完整模型无显著差异($p > 0.05$)。

结论 本研究证实了数字生物标志物在抑郁症预后监测中的重要价值。睡眠时长、平均心率和每

日心情评分等指标可能是较为关键的预测因素,为未来基于可穿戴设备的精准医疗应用提供了参考依据。局限性:样本量较小。

关键词:可穿戴设备,抑郁症,数字生物标志物,机器学习,长短期记忆网络,预测模型

志愿服务职业康复模式对精神分裂症患者的康复疗效研究

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目的 探究志愿服务职业康复模式对精神分裂症患者的康复疗效。

方法 将符合入组标准的 31 例稳定期精神分裂症患者,采用随机数字表法随机分为研究组及对照组。研究组 16 例,在药物治疗的基础上联合职业康复训练及志愿服务干预;对照组 15 例仅接受常规门诊及社区卫生康复服务。采用社会功能缺陷量表(SDSS)评定患者社会功能缺陷程度、康复状态量表(MRSS)评估患者康复状态,阳性和阴性症状量表(PANSS)评估患者精神病性症状严重程度。患者自我评估部分采用工作社交技能评估量表(WSSS)、执行功能行为评定量表成人版自评问卷(BRIEF-A)、精神分裂症患者生活质量量表(SQOL)、自我效能感量表(GSES)、林氏就业准备评估量表(LASER)。同时统计第 12 周末两组分别获得工作的患者数。

结果 (1)入组 12 周后,研究组 SDSS 总分、MRSS 社交维度、PANSS 阴性症状评分低于对照组,差异均具有统计学意义($P<0.05$)。但研究组患者工作社交技能、执行功能、生活质量、自我效能感、就业准备状态等自评分与对照组相比差异不显著。组内比较,第 12 周末研究组 SDSS 总分、MRSS 总分、MRSS 活动维度评分、MRSS 症状维度评分与基线相比具有显著差异($P<0.01\sim 0.05$)。(2)入组第 12 周末,研究组有 2 例进入庇护性就业,对照组尚未有患者重新获得工作。

结论 志愿服务职业康复干预模式能够改善稳定期精神分裂症患者社会功能,改善患者社交状态,缓解疾病阴性症状,同时对改善患者就业结局也有一定效果。

关键词:精神分裂症,志愿服务,职业康复

依托咪酯滥用患者戒断前后焦虑、抑郁及认知功能的比较

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目的 依托咪酯(Etomidate)是一种短效静脉全身麻醉药物,目前作为传统毒品的替代物品,依托咪酯滥用的问题尤为突出。目前尚未有研究对依托咪酯滥用者人群特征及情绪、认知情况进行系统性评估。本研究以依托咪酯滥用患者为研究对象,旨在对其戒断前后情绪、认知状况进行量表评估以描绘依托咪酯滥用者戒断前后的情绪及认知变化。

方法 患者在自愿戒毒机构内进行为期 4 周的药物戒断,在出入院时使用抑郁症筛查量表(PHQ-9)、焦虑症筛查量表(GAD-7)以及蒙特利尔认知评估量表(MoCA,北京版)分别评估患者的抑郁、焦虑及认知功能损伤情况,并对戒断前后依托咪酯滥用患者抑郁、焦虑及认知功能损害的情况运用配对样本 T 检验进行统计分析。

结果 本研究共纳入依托咪酯滥用患者 67 例,其中完成戒断前后两次评估的患者 55 例,本研究纳入的依托咪酯滥用患者以男性(82.1%)、未婚(58.2%)、初中学历(43.3%)为主,年龄介于 17-56 岁之间,平均年龄(27.75 ± 7.28)岁,平均 BMI(22.48 ± 4.72) kg/m^2 ,97%的患者伴有烟、酒及其他成瘾物质的使用。多数(98.1%)的患者以电子烟的形式滥用依托咪酯;初次使用依托咪酯的原因主要有朋友介绍(71.6%)、好奇尝试(25.4%);在 23 个产生强烈渴求的患者中,使用依托咪酯至产生强烈渴求次数的中位数为 4 次;使用总次数的中位数为 6 次,其中有 20.9%的患者使用依托咪酯超过 30 次。戒断前依托咪酯滥用患者 PHQ-9 的得分为 4.38 ± 4.92 ,戒断后依托咪酯滥用患者 PHQ-9 的得分为 2.51 ± 3.01 ,两者之间存在显著性差异($P<0.05$);戒断前依托咪酯滥用患者 GAD-7 的得分为 3.11 ± 3.94 ,戒断后依托咪酯滥用患者的 GAD-7 得分为 1.42 ± 2.54 ,两者之间存在显著性差异($P<0.05$);戒断前依托咪酯滥用患者的 MoCA 评分为 23.67 ± 2.65 ,戒断后依托咪酯滥用患者的 MoCA 评分为 26.40 ± 3.37 ,两者之间存在显著性差异($P<$

0.05)。

结论 量表结果初步提示短期重复使用依托咪酯会导致患者出现抑郁、焦虑情绪及认知功能损害。经过戒断后,患者抑郁、焦虑及认知功能损害均明显改善,这可能提示依托咪酯短期暴露造成的精神损害是可逆性的。故在依托咪酯滥用患者治疗时应注意其抑郁、焦虑水平变化及认知功能损害的康复。本研究率先报告了依托咪酯滥用者戒断前后的情绪及认知变化特点,为康复依托咪酯滥用者提供了关注及治疗重点。

关键词: 物质滥用, 依托咪酯, 抑郁, 焦虑, 认知功能损伤

Causal Relationship between Bipolar Disorder and Sex Hormone Binding Globulin: A Bidirectional Two-sample Mendelian Randomization Study

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Objective This investigation aims to dissect the bidirectional causal relationships between bipolar disorder (BD) and sex hormone-binding globulin (SHBG) using a two-sample Mendelian randomization (MR) studies

Methods Capitalizing on genetic variants identified in large-scale genome-wide association studies (GWAS) as instrumental variables (IVs), this study meticulously explores the causal dynamics between BD and SHBG. IVs pertinent to BD were extracted from the Psychiatric Genomics Consortium, and those related to SHBG were curated from the UK Biobank. Employing two-sample MR analyses, augmented by sensitivity analyses, the study probes the causal repercussions of BD on SHBG concentrations and the reciprocal, ensuring the integrity and robustness of the causal inferences drawn

Results The analysis delineated a statistically significant augmentation in SHBG levels attributable to BD in females (Odds Ratio [OR]: 1.027; 95% Confidence Interval [CI]: 1.007-1.042; $P = 0.018$) and males

(OR: 1.036; 95% CI: 1.012-1.060; $P = 0.003$), underlining BD's significant regulatory effect on hormonal balance. In contrast, the reciprocal causal analysis did not manifest a statistically significant influence of SHBG levels on BD susceptibility in either gender, denoting that variations in SHBG levels do not confer a predisposition to BD

Conclusion Illuminating a unidirectional causal pathway from BD to increased SHBG levels, this study contributes pivotal insights into the hormonal disruptions associated with BD, conspicuously delineating the absence of a reverse causal impact. The findings accentuate the intricate nexus between psychiatric conditions and endocrine fluctuations, advocating for expanded research into the biological underpinnings and potential therapeutic implications of these relationships.

关键词: Bipolar disorder, Sex hormone-binding globulin, Mendelian randomization, Causality

关于抑郁症患者不同声音特质与抑郁症病情严重程度相关性的研究

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目的 探索抑郁症患者不同声音特质与抑郁严重程度相关性的研究

方法 本研究从北京大学第六医院及淮南市第四人民医院招募了54名抑郁症患者,每位患者均由两名经验丰富的精神科医生进行精神状态检查,采集人口学信息。入组患者将于一个静音密闭的房间内由一名精神科医生面对面采集患者音频信息,并使用汉密尔顿抑郁量表对患者病情进行评估。

统计分析采用统计学软件SPSS27对收集的数据进行统计分析。经正态性检验后对于人口学数据与汉密尔顿抑郁评分采用独立两样本t检验比较其差异性,对于符合正态分布的声音特征与汉密尔顿抑郁评分采用线性相关分析检验相关性,对于偏态分布的声音特征数据和汉密尔顿抑郁量表评分则使用秩相关检验分析其相关性。

结果 本研究所有患者均接受了HAMD-24量

表评分估计其病情,平均得分为 24.96 ± 6.50 ;表明患者普遍存在中重度的抑郁症状。其中男性13人,平均年龄 32.92 ± 11.25 ;女性41人,平均年龄 32.80 ± 11.80 ;对人口学特征进行分析,发现性别及年龄与HAMD评分之间未见显著差异性($r=0.152$; $P=0.272$)。男性组HAMD得分为 24.23 ± 6.52 ;女性组HAMD得分为 25.19 ± 6.55 ;两组总体HAMD得分总体均数无统计学差异($t=-0.463$, $P=0.645$)。对患者的声音特征进行相关分析, loudness_sma3_meanFallingSlope ($r=0.298$; $P=0.028$) 等多项响度指标、 equivalentSoundLevel_dBp ($r=0.379$, $P=0.005$)、 spectralFlux_sma3_amean ($r=0.342$, $P=0.011$) 与 HAMD 评分呈低强度正相关, mfcc4($r=-0.317$, $P=0.020$) 等多项 Mel-frequency 倒谱系数 (MFCC)、 F3amplitudeLogRelF0_sma3nz_stddevNorm ($r=-0.285$, $P=0.037$)、 F2amplitudeLogRelF0_sma3nz_stddevNorm ($r=-0.296$, $P=0.030$) 与 HAMD 评分呈低强度负相关。

讨论 本研究结果表明了抑郁症患者的声音特质和其抑郁程度之间存在相关性,多项声音强度和响度指标与 HAMD 评分呈正相关,提示抑郁症患者可能存在声音微弱、语调低沉等症状,多项 MFCC 指标与 HAMD 评分呈负相关,根据文献研究表明, MRI 扫描显示 MFCC 与声道肌肉运动有关。这些声音指标与抑郁症评分之间的相关性使得声音特征成为可以作为评估抑郁严重程度的辅助指标。这不仅有利于抑郁症的诊断,也有利于对于抑郁症治疗效果的监测。

关键词: 抑郁症; 抑郁严重程度; 汉密尔顿抑郁量表; 声音特质

基于同伴支持模式的康复治疗对出院后精神分裂症患者服药依从性和社会功能的影响

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目的 探讨基于同伴支持模式的康复治疗对出院后精神分裂症患者服药依从性和社会功能的影响,为出院后精神分裂症患者的康复提供借鉴。

方法 本研究选取 120 例家庭病床精神分裂症

患者,随机分为对照组和干预组,各 60 例。对照组接受常规精神卫生服务(包括精神科药物治疗、社区家庭医生团队随访、健康宣教、常规社区康复服务)。干预组是在接受常规精神卫生服务基础上的对患者进行同伴支持小组介入(包括情感支持、工具支持、信息支持、陪伴支持等),评估人员对比干预前后服药依从性的差异,对比开始前和 1、2、3 个月后采用个人和社会功能量表(PSP)对两组患者社会功能进行评估从而得出结论。

结果 1、对两组患者的服药依从性进行比较,干预后观察组患者的服药依从性显著优于对照组($U=20.324$, $P=0.013$),差异有统计学意义。

2、对两组患者的个人与社会功能量表(PSP)评分进行重复测量方差分析结果显示:经过个案管理干预,时间效应下 PSP 评分差别有统计学意义($\beta=376.137$, $P<0.001$),随着个案管理时间的延长, PSP 评分逐渐升高;不同组别效应下 PSP 评分差别有统计学意义($F=16.875$, $P=0.031$),观察组得分高于对照组。个案管理前和第 1 个月后,两组患者的 PSP 评分差异无统计学意义($P>0.05$);第 2 个和第 3 个月后干预组患者的 PSP 评分高于对照组,差异有统计学意义($P<0.05$)。

结论 同伴支持小组介入可以提高患者的服药依从性,能够较明显的改善出院后精神分裂症患者的衰退状态如自理能力差、情感淡漠、社交退缩等,增强家庭病床精神分裂症患者的职业能力和家庭职能,明显改善出院后精神分裂症患者的社会功能,还可以改善出院后精神分裂症患者个人与社会功能,为患者回归社会打下基础,此研究也可以为改善出院后精神分裂症患者的社会功能提供借鉴。

关键词: 精神分裂症; 同伴支持; 服药依从性; 社会功能

Comparison of Cognitive Functions between Chronic Schizophrenia, First-episode Schizophrenia Patients, Individuals at Genetic High Risk for Psychosis and Individuals at Clinical High-risk for Psychosis

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Background Cognitive dysfunction stands as a core aspect of schizophrenia, preceding psychosis and persisting through all its stages. Studies indicate that neurocognitive function is intricately linked to the progression, functionality, and prognosis of psychosis, while also correlating with a poor response to antipsychotic medications. Furthermore, twin studies have uncovered a significant genetic overlap between cognition and schizophrenia susceptibility, highlighting cognitive impairment as a crucial endophenotype for deciphering the genetic risk factors of the disease. Consequently, comprehending the shifts in cognitive function throughout the various stages of schizophrenia offers a more lucid understanding of the disorder's cognitive aspects. The study was designed to assess the neurocognitive function in the context of different phases of schizophrenia. Chronic schizophrenia (CSz), first-episode schizophrenia patients (FEP), clinical-high risk for psychosis (CHR) patients, genetic high risk for psychosis (GHR) and healthy controls (HC) were subjected to in-person clinical interviews

Methods A standardized battery of cognitive assessments was administered to 40 CSz patients, 94 FEP patients, 54 CHR individuals, 80 GHR participants and 98 HC. Group differences in cognitive test performance were examined using multivariate analysis of covariance (MANCOVA) controlling for potential confounding effect

Results In terms of processing speed, significant disparities were observed among the five groups. Specifically, the FEP and CSz groups exhibited notably poorer performance compared to the CHR group. Furthermore, the CHR group fared significantly worse than the GHR group, which in turn performed significantly below the HC group

Regarding verbal learning, the CSz group lagged significantly behind both the FEP and CHR groups.

Similarly, the FEP and CHR groups demonstrated significantly inferior performance compared to the GHR group, which was still significantly less proficient than the HC group.

In visual learning, the CSz group once again proved to be significantly less adept than the FEP group, as well as the CHR and GHR groups. These three latter groups, in turn, were all significantly less skilled than the HC group.

Across all five groups (CSz, FEP, Chr, GHR, and HC), performance in working memory was comparatively better. However, notable differences still existed between certain groups.

Lastly, in terms of attention, the FEP and CSz groups fell significantly behind the CHR group. The CHR group, while better than these two, was still significantly less attentive than the GHR group, which in turn was notably less vigilant than the HC group.

Conclusions Patients diagnosed with CSz exhibited the most pronounced cognitive deficits. Meanwhile, CHR and GHR patients demonstrated similar levels of cognitive impairment, with CHR patients performing at a level between the FEP and GHR groups. Across various cognitive assessments, the symbol coding test revealed the highest degree of impairment in FEP patients when compared to the healthy control group. Additionally, the Hopkins word test proved to be the most effective cognitive test for distinguishing the CHR group from both the HC and GHR groups

关键词: cognitive functions, schizophrenia, clinical high risk for psychosis, genetic high risk for psychosis

The Effectiveness of The Safewards Interventions in Psychiatric Wards

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Objective To explore the application effect of the Bowers Safewards model in the management of psychiatric wards in China, aiming to provide scientific references for domestic psychiatric ward safety management practices

Methods Using a self-controlled before-and-after design, 17 psychiatric wards in a tertiary class A psychiatric hospital were selected to implement the Safewards model intervention on the basis of routine psychiatric ward management. The number of conflict-related adverse events and the frequency of protective measures implemented in the psychiatric wards before and after the intervention were collected, and the incidence rate of conflict-related adverse events and the implementation rate of protective measures were calculated. Paired-sample t-tests and paired-sample Wilcoxon signed-rank tests were used, with $P < 0.05$ considered as statistically significant

Results After implementing the Safewards model intervention, the occurrence of conflict-related events or the use of restrictive measures decreased. Compared with before the intervention, the incidence rate of conflict-related adverse events decreased by 6.53% (95% confidence interval: 0.89-3.68%, $p=0.02$), and the implementation rate of protective measures decreased by 3.37% (note: the upper limit of the 95% confidence interval provided here may be incorrect as it is typically a reasonable range, such as 5.47%-x%; due to the incomplete original data, we only provide a descriptive explanation here)

Conclusion The psychiatric ward management model based on the Safewards model can effectively reduce the incidence rate of conflict-related adverse events and the implementation rate of protective measures in psychiatric wards. In the future, the Safewards model can be promoted and applied as a scientific ward management model that focuses on patients' healthcare experience, taking into account the cultural background of China, in the management of psychiatric wards in China.

关键词: Safewards; Mental Health Care; Restrictive Interventions; conflict-related adverse events

HAPA 理论在精神科领域中应用的范围综述

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目的 对健康行动过程取向理论(HAPA)在精神科中的应用现状进行范围综述,为将来在精神科领域中基于健康行动过程取向理论制定、开展更有效的行为分析和干预研究,提高患者的干预依从性和有效性提供参考。

方法 根据 Levac 等人概述的范围综述的研究方法,计算机检索 Web of science、Sinomed、PubMed、PsycINFO、Medline、Cochrane Library、中国知网、维普和万方共 9 个数据库,检索时限为 2024 年 5 月。对最终纳入的文献进行数据提取、收集、总结并报告研究结果。根据数据库的系统检索,共检索文献 1795 篇,最终纳入 24 篇文献。其中观察性研究 5 篇、实验性研究 16 篇、测量工具开发 2 篇和混合性研究 1 篇。数据提取的内容包括:作者、国家、发表时间、研究对象、研究目的、研究方法、干预措施、干预时长、阶段划分、观察指标以及应用效果。

结果 健康行动过程取向理论在抑郁症、精神分裂症、睡眠障碍、行为成瘾患者和创伤后应激障碍幸存者中均有所应用,用于提高干预效果的功能包括自主日记、短信、电话、移动应用程序、基于网络的平台和电子设备等,对于患者吸烟、酒精成瘾、网络成瘾、久坐行为等健康危险行为有着显著改善,同时对于睡眠态度和压力监测提供了科学的测量工具,参与者表现出很高的研究接受度和干预依从性。

结论 健康行动过程取向理论在精神科领域中应用的有效性和可行性已得到证实,未来可以考虑采取基于健康行动过程取向模型在非自杀性自伤等更广泛的精神科领域中进行应用,对患者的健康危险行为进行分析,在患者行为改变的不同阶段采取多样化的干预形式,对意向和意志进行测量与干预,提高患者参与治疗的依从性,以更好地提高患者出院后的生活质量,改善精神科患者的预后,促进精神康复,减少疾病和行为的复发,减轻患者的心理痛苦。

关键词: 健康行动过程取向模型、行为成瘾、精神康复、行为理论

积极反刍思维团辅对青少年抑郁症患者非自杀性自伤行为影响

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目的 本研究旨在探究积极反刍思维团辅对青少年抑郁症患者的非自杀性自伤行为的影响,从而改善青少年抑郁症患者的治疗策略,减少自伤行为的发生与严重程度,为改善其康复效果和提高其生活质量提供重要依据。

方法 纳入 40 名被诊断为抑郁症的青少年患者,随机分为两组。对照组接受常规治疗护理,实验组在常规治疗护理的基础上接受积极反刍思维团辅治疗,每周 2 次,每次 40-60 分钟,对症干预。记录两组患者的非自杀性自伤行为次数,根据伤口深度、范围和治愈情况等因素,采用自陈式问卷临床评定量表等严重程度评估工具评估自伤伤口严重程度,并进行统计学分析。

结果 经过治疗一段时间后,实验组患者的非自杀性自伤行为次数和严重程度显著减少,而对照组无明显变化。两组之间的差异具有统计学意义 ($P < 0.05$)。

结论 积极反刍思维团辅可显著降低青少年抑郁症患者的非自杀性自伤行为。这表明积极反刍思维团辅进行积极的心理干预,可以显著减少青少年抑郁症患者的非自杀性自伤行为风险及严重程度。通过认知重建、情感调节和问题解决策略等方法,积极反刍思维团辅帮助患者重新评估和调整负面思维模式,并提供应对压力和负面情绪的技巧和工具。然而,本研究存在样本量较小的限制,需要进一步扩大样本量以增加研究的可信度。

关键词: 思维团辅; 青少年; 抑郁症; 非自杀性自伤

民族心理与精神医学学组

Association between Duration of Untreated Psychosis and Auditory P300 in First-episode Antipsychotic-naïve with Schizophrenia

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Objective To date, the relationship between the duration of untreated psychosis (DUP) and cognitive functions in patients with schizophrenia (SZ) has been debated, and there has been no empirical evidence from event-related potential (ERP) studies to support their association. Therefore, the objective of this study is to investigate the correlation between DUP and cognitive functions, as well as the relationship with clinical symptoms, in first-episode antipsychotic-naïve (FEAN) SZ patients through ERP research

Methods The study included a total of 321 Chinese FEAN SZ patients and 146 healthy controls. The DUP was measured in months. Sociodemographic characteristics of all participants were collected, and the clinical symptoms of patients were assessed using the Positive and Negative Syndrome Scale, Hamilton Depression Scale, and Hamilton Anxiety Scale. Additionally, the ERP, including P3a, P3b, and N100, were recorded from all participants using an auditory oddball paradigm (three-stimulus novelty paradigm)

Results 25.5% of patients did not receive timely treatment for over four years, and those with lower educational levels had a longer DUP ($p = 0.027$). Compared to healthy controls, FEAN SZ patients exhibited longer latencies and lower amplitudes in the P3 component (all $ps < 0.001$). Furthermore, significant differences in the P3 component were observed among three groups of DUP (< 8 months, 8-48 months, and ≥ 48 months) (all $ps < 0.001$). Partial correlation analysis revealed positive correlations between DUP and the latencies of P3a, P3b, and N100 ($r = 0.218$; $r = 0.354$; $r = 0.342$; all $ps < 0.001$) and negative correlations with their amplitudes ($r = -0.144$; $r = -0.290$; $r = -0.296$, all

ps < 0.05). Additionally, multiple linear regression analysis indicated that the latency and amplitude of P3a were independently associated with DUP ($B = 0.124$, $p < 0.001$; $B = -1.161$, $p = 0.012$)

Conclusion The Study have shown that ERP P3 component is closely related to DUP, and that P3a can be used as an electrophysiologic marker to determine the length of DUP. These findings highlight the importance of early intervention and treatment of SZ and provide an objective basis for early detection and timely treatment of SZ patients.

关键词: Duration of untreated psychosis; Schizophrenia; First-episode antipsychotic-naïve; Event-related potential; P300

The Relationship between Plasma Interleukin-6 and Cognition Based on Curve Correlation in Drug-naïve Patients with Major Depressive Disorder

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Objective The effect of interleukin-6 (IL-6) on cognition in patients with major depressive disorder (MDD) remains unclear. The aim of the present study was to investigate for the first time the non-linear relationship between plasma IL-6 and cognition and its sex-specific associations in patients with drug-naïve MDD.

Methods A total of 326 participants, including 237 drug-naïve MDD patients and 89 healthy controls (HCs), were included in this study. All participants completed the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) and fasting venous blood was collected for IL-6 measurement. Patients with MDD completed the Hamilton Depression Scale-17 (HAMD-17) and the Hamilton Anxiety Scale-14 (HAMA-14) assessments. Two-way analysis of variance and curve estimation analyses were used to explore the effects of IL-6 on cognition and its sex differences.

Results We found that IL-6 and cognition were

associated in different patterns in HCs and MDD patients. The best model for curve estimation between IL-6 and attention ($F = 2.736$, $p = 0.045$) and HAMA ($F = 6.416$, $p < 0.001$) in women with MDD was the cubic model. In male MDD patients, the best model for curve estimation between IL-6 and immediate memory was the cubic model ($F = 3.077$, $p = 0.034$). However, in HCs, the best model for curve estimation analysis between IL-6 and language was the quadratic model ($F = 3.803$, $p = 0.026$).

Conclusion There was a non-linear and sex-specific relationship between IL-6 levels and cognition in patients with MDD

关键词: Interleukin-6; Non-linear; Sex-specific; Cognition; Major depressive disorder

Plasma NGAL, Not IFN- γ May Predict Early Treatment Response in Drug-naïve Schizophrenia Patients in Chinese Han

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Objective Early efficacy predictions may help psychiatrists develop more personalized drug therapy strategies for drug-naïve schizophrenia patients at the beginning of treatment. The aim of our study was to investigate the predictive ability of plasma concentrations of Interferon- γ (IFN- γ) and Neutrophil gelatinase-associated lipocalin (NGAL)

Methods In this longitudinal study, we collected 125 drug-naïve patients and 75 healthy controls at baseline. After an initial assessment, we evaluated the therapeutic response after an 8-weeks period. Additionally, we collected plasma sample simultaneously with clinical assessment. Following the assessments, patients were categorized into two group: Non-responders (NR) group ($n=41$) and Responders (R) group ($n=84$). The plasma IFN- γ and NGAL were measured using Enzyme-linked immunosorbent assay (ELISA)

Results Both the concentrations of IFN- γ and NGAL were significantly lower in patients than those in

healthy controls (both $P < 0.001$) at baseline. Within the patient group, NGAL concentration was found to be significantly lower in NR group compared to the R group ($F=12.77$, $df=2$, 194 , $P < 0.001$). After treatment, IFN- γ and NGAL increased in both patient groups, especially in IFN- γ (NR: $t = -4.55$, $P < 0.001$; R: $t = -6.05$, $P < 0.001$). NR group exhibited more severe positive and negative factor compared to the R group ($t=2.44$, $P = 0.016$; $t=2.39$, $P = 0.018$) at baseline. Adjusting age, BMI, smoking, and duration of untreated illness as covariates, a negative correlation was found between NGAL concentration and positive factor at baseline ($r = -0.19$, $P = 0.030$). Binary logistic regression found that lower NGAL concentration was associated with poorer early treatment response in drug-naïve schizophrenia patients in Chinese Han (OR=1.110, 95%CI=1.208-1.213, $P = 0.027$).

Conclusion The pre-treatment plasma concentration of NGAL should be considered as a predictor of early treatment response for drug-naïve Chinese Han patients with schizophrenia, as well as a potential target for the further exploration of therapeutic approaches.

关键词: Neutrophil gelatinase-associated lipocalin, treatment response, inflammation, schizophrenia, Interferon- γ

童年忽视对成年后女性双相情感障碍和重型抑郁障碍患者执行功能和海马体积的影响

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目的 儿童忽视是童年时期最常见的创伤, 经历童年创伤会影响成年后患者的认知功能以及海马体积。但儿童期忽视是否对成年后女性情绪障碍患者的认知功能及海马体积产生影响, 尚不得而知。在这里, 我们评估了一组女性双相情感障碍 (BD) 和重型抑郁障碍患者 (MDD) 以及匹配的健康对照人群的童年创伤与海马体积以及认知功能。首先, 我们探讨了疾病状态和是否经历童年忽视对 BD 和 MDD 患者海马体积的影响。其次, 我们探讨了忽视与双相障碍和重型抑郁症海马体积和认知功能之间

的关系。同时, 海马作为核心脑区, 参与认知功能调控。因此我们检验了海马体体积是否可以调节忽视得分和认知缺陷之间的关系。

方法 我们纳入了 116 名女性 BD 患者, 139 名女性 MDD 患者和 106 名匹配的健康对照。我们使用韦氏成人智力测试的瞬时/延迟逻辑记忆、划痕测试 A 和 B 对所有参与者的记忆、注意、执行功能进行系统评估。使用 FreeSurfer 7.0 软件重建海马亚区, 并将其分为双侧海马尾部、海马头部和海马体。我们考虑了神经认知和各个海马亚区之间的相互关系, 分别将它们作为因变量输入到多变量协方差分析中, 在控制年龄和教育年限的同时, 对诊断和忽视类型之间的相互作用进行建模, 另外在分析海马亚区的时候控制了全脑体积。同时, 我们使用偏相关探索了童年忽视与认知功能、海马亚区的关系, 并进行中介分析, 探索海马亚区是否可作为中介变量介导童年忽视对认知功能的影响。

结果 多元协方差分析结果表明, 疾病组别对双侧海马的效果显著, 但是否经历忽视和诊断对双侧海马没有交互作用。与对照组相比, BD 患者和 MDD 患者双侧海马头部和海马总体积显著减少。对认知功能分析发现, 诊断对认知功能作用显著, 但是否经历忽视和诊断对双侧海马没有交互作用。与对照相比, BD 和 MDD 患者存在显著的逻辑记忆受损, BD 患者存在显著的执行功能受损。中介分析表明较小的左侧总海马体积和左侧海马头介导了童年忽视与执行功能表现之间的关系。

结论 我们的研究表明, 与对照组相比, 情绪障碍患者存在更显著的童年创伤, 特别是童年忽视创伤。在患者组中, 认知功能受损和海马体积缺陷显著增加。此外, 童年创伤, 特别是童年忽视, 可能与至少在患者和对照组中观察到的一些认知障碍缺陷背后的机制有关。忽视对被试认知功能的显著影响部分是通过海马体积进行调节。我们的研究表明, 对于情绪障碍患者的认知缺陷干预进一步的研究应该集中在儿童发育方面, 减少童年创伤有助于减少成年后认知缺陷的发生。未来研究方向应该对被试的应激相关的生物学指标, 如皮质醇、炎症指标等进行进一步测量, 以进一步了解情绪障碍、儿童创伤和大脑结构、认知功能之间的关联。

关键词: 双相障碍; 重型抑郁障碍; 童年忽视; 海马; 执行功能

阈下抑郁和抑郁障碍中的功能连接及其与认知的关系

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目的 阈下抑郁是不满足抑郁障碍的诊断标准,但存在抑郁症状的一类疾病,后期有较大风险发展为抑郁障碍。阈下抑郁可能会造成一定的功能损害,发病率高于抑郁障碍,是诊断和预防抑郁障碍的一项重要的工作。核磁影像是探究阈下抑郁和抑郁障碍发病机制的一个重要科学方法。

方法 对哈尔滨某社区人群进行问卷调查,采用横断面研究。采用量表和问卷的方法纳入研究对象 57 人,其中阈下抑郁 22 人,抑郁障碍 16 人,健康对照 19 人。问卷采集受试者的一般信息,并对受试者的抑郁情况和认知水平进行评估。由经过培训的研究生进行 9 项患者健康问卷、汉密尔顿抑郁量表的收集,经过培训的主治医师对有抑郁症状的人群展开用于 DSM-5 障碍临床定式检查,得出诊断。采集受试者静息态功能磁共振数据并进行全脑的功能连接。结合 RBANS 认知评估结果,分析认知水平和影像学指标变化是否存在相关性。

结果

1. 抑郁障碍组右侧颞上回、右侧扣带回中部及其侧面环绕的脑回 mALFF 值低于健康对照组 ($P < 0.05$); 抑郁障碍组右侧小脑脚 2 区、右侧额中回 ReHo 值低于健康对照组 ($P < 0.05$)。

2. 阈下抑郁组右侧颞中回、右侧扣带回中部及其侧面环绕的脑回 mALFF 值高于健康对照组 ($P < 0.05$); 阈下抑郁组右侧颞中回、右侧罗兰多壳盖 ReHo 值高于健康对照组 ($P < 0.05$)。

3. 抑郁障碍组左枕下回、左楔叶、右背外侧额上回 ReHo 值高于阈下抑郁组 ($P < 0.05$), 抑郁障碍组右岛叶、右侧额上回 ReHo 值低于阈下抑郁组 ($P < 0.05$)。

4. 以右侧岛叶为种子点, 抑郁障碍组在右侧颞中回的功能连接高于健康对照组, 在左侧枕下回、左侧上部中央后回低于健康对照组。

5. 以右侧岛叶为种子点, 阈下抑郁组在左侧小脑 7b 区、右侧小脑脚 1 区的功能连接低于健康对照组。在以右侧颞上回作为种子点时, 阈下抑郁组在右侧颞下回、右侧枕上回的功能连接低于健康对照

组。

6. 以右侧岛叶为种子点时, 抑郁障碍组在左侧中央前回的功能连接高于阈下抑郁组, 在左侧内侧额上回低于阈下抑郁组。在以右侧颞上回作为种子点时, 抑郁障碍组在右侧枕上回的功能连接高于阈下抑郁组, 在左侧扣带回前部及其侧面环绕的脑回、右侧缘上回低于阈下抑郁组。

7. 右侧小脑脚 2 区与 RBANS 的注意因子得分成负相关关系。

结论

抑郁障碍与阈下抑郁可能与脑区活动水平和功能连接性的变化有关。

小脑的活动与认知功能下降有关。

关键词: 阈下抑郁, 抑郁障碍, 静息态磁共振, 认知

The Relationship of Cardiovascular Disease Risk, Clozapine Antipsychotic Use and Cognitive Function in A Large Chinese Schizophrenia Cohort: A Cross-sectional Study

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Objective The pivotal role of antipsychotics, especially clozapine, in managing cardiovascular disease (CVD) risk and cognitive function in schizophrenia (SCZ) patients necessitates a thorough exploration of their intricate relationship. We aimed to examine the relationship between clozapine use and CVD risk, as well as cognitive function within a sizable Chinese SCZ cohort

Methods A cohort comprising 765 patients was stratified based on clozapine usage. Demographic characteristics, clinical data, and glycolipid metabolic parameters were collected. Framingham Risk Score and vascular age were calculated utilizing gender-specific Cox regression calculators. Cognitive function and psychiatric symptoms were assessed using the Repeatable Battery for Assessment of Neuropsychological Status (RBANS) and the Positive and Negative Syndrome Scale (PANSS), respectively

Results Among the SCZ patients, 34.6% (265/765) were clozapine users. Clozapine users exhibited lower systolic blood pressure, high-density lipoprotein cholesterol and total cholesterol (all $p < 0.05$). Furthermore, clozapine users exhibited higher PANSS scores, along with lower scores in RBANS scores (all $p < 0.05$). Correlation analysis revealed positive correlation between CVD risk in non-clozapine users and negative symptom scores ($r = 0.074$, $p = 0.043$), and negative correlation with positive symptom scores and RBANS scores ($r = -0.121$, $p = 0.001$; $r = -0.091$, $p = 0.028$). Multivariate stepwise regression analysis indicated that RBANS attention scores as predictive factors for increased CVD risk in clozapine users ($\beta = -0.12$, 95%CI = -0.11, -0.03, $p < 0.01$)

Conclusion SCZ patients using clozapine exhibit more severe clinical symptoms and cognitive impairments. Attention emerges as a predictor for increased CVD risk in clozapine users.

关键词: Schizophrenia; Cardiovascular disease risk; Clozapine; Cognitive impairments

Transcriptional Correlates of Impaired Brain Network Topology in Major Depressive Disorder: Insights From A Multicenter fMRI Study

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Objective Despite previous associations between impaired brain network topology and major depressive disorder (MDD), inconsistent findings persist due to small sample sizes, and the underlying transcriptional patterns remain poorly elucidated

Methods This study utilized a multicenter fMRI dataset comprising 544 MDD patients and 569 healthy controls (HC) from the REST-meta MDD consortium. Whole-brain functional networks were constructed by thresholding 90 brain regions using the Automated Anatomical Labeling (AAL) atlas. Connectivity and net-

work properties were calculated. Additionally, we investigated the brain-wide relationship between MDD-related impaired brain network topology and gene expression using Partial Least Squares (PLS) regression

Results Compared to healthy controls, MDD individuals exhibited significantly decreased functional connectivity. Moreover, MDD individuals showed decreased global network properties and abnormal nodal global network properties, specifically in the thalamus, caudate nucleus, superior parietal gyrus, and middle frontal gyrus. Transcription-neuroimaging analysis revealed that MDD-related impaired brain network topology was spatially correlated with the expression of genes enriched in neuron projection development, protein catabolic processes, and ncRNA metabolic processes

Conclusion These findings highlight the significant impairment of brain network topology in MDD and suggest potential neurobiological underpinnings and biomarkers for these changes. The results provide insights into the transcriptional mechanisms associated with brain network alterations in MDD, offering potential avenues for future research and therapeutic strategies.

关键词: major depressive disorder, fMRI, brain network topology, gene expression

基线白细胞计数对住院情绪障碍患者药物联合物理治疗抗抑郁效果的影响：一项真实世界研究

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目的 为了探索基线水平白细胞计数等炎症指标对住院焦虑障碍、抑郁障碍和双相障碍患者药物联合可见光治疗、rTMS 治疗抑郁情绪的效果，研究者根据基线白细胞计数将住院焦虑障碍、抑郁障碍和双相障碍患者分为白细胞四个四分位组别，以反映不同的炎症水平，并据此分析了治疗期间药物联合物理治疗对住院患者在不同基线炎症水平下白细胞计数的影响。同时，研究者还分析治疗期间导致白细胞计数变化和抑郁症状改变的因素；最后探索

炎症水平对治疗效果的潜在影响。

方法 我们纳入了 2022 年至今杭州市第七人民医院住院期间的 467 名诊断为焦虑障碍、抑郁障碍或双相障碍的患者。使用重复测量方差分析比较治疗前后住院患者白细胞计数的变化。采用混合效应线性模型，探索了治疗因素（包括不同药物、经颅磁刺激联合光照治疗）对白细胞计数变化的影响。模型中包括了患者的性别和年龄作为协变量，以及不同疾病类型（如抑郁症、双相情感障碍、焦虑障碍）作为随机效应，以考虑个体差异和疾病特征对治疗效果的影响。此外，通过卡方检验分析了不同疾病类型和不同炎症水平下的治疗效果差异。为了控制多重比较的问题，使用 FDR 矫正方法进行了事后检验，以确保结果的统计显著性和可靠性。

结果 研究发现，基线炎症水平低的患者在治疗后，白细胞计数升高，而基线炎症水平高的患者白细胞计数下降。其他炎症指标如单核细胞-淋巴细胞比率、中性粒细胞-淋巴细胞比率以及中性粒细胞，以及炎症反应指数均显示出类似的趋势。在低炎症水平时，光照治疗的次数与 HAMD 分数的百分比（HAMD 基线-HAMD 治疗后/HAMD 基线）呈正相关；而在高炎症水平时，光照治疗的次数与白细胞计数的百分比（WBC 基线-WBC 治疗后/WBC 基线）呈正相关。图表可以放进来。

结论 这些结果可能表明，在高炎症水平时，光照治疗可能需要先降低炎症反应才能发挥其抗抑郁的效果；研究还发现，基线白细胞计数对不同疾病住院患者的抑郁症状的缓解率有显著影响。本研究揭示了基线白细胞计数对住院患者在抗抑郁中的潜在价值，在治疗过程中光照治疗的作用机制可能受到了炎症水平的影响。

关键词：情绪障碍，抑郁症状，白细胞计数，光照治疗，真实世界研究

Associations between Polymorphisms in The CHRM2 and GRIN2A, Cognitive Impairments and Tardive Dyskinesia in A Chinese Population with Schizophrenia

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Objective The study sought to explore the relationship between single nucleotide polymorphisms (SNPs) in the Glutamate Ionotropic Receptor NMDA Type Subunit (GRIN2A) and Cholinergic Receptor Muscarinic 2 (CHRM2) genes, along with their interactions, in relation to the incidence and severity of TD, as well as cognitive impairments, in Chinese SZ patients.

Methods A cohort of 216 SCZ patients was enrolled for the study. Participants were divided into TD and without TD (WTD) groups using the Schooler-Kane International Diagnostic Criteria. DNA extraction was performed by a high-salt method, followed by SNP genotyping using matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF-MS). The severity of TD was evaluated using the Abnormal Involuntary Movement Scale (AIMS), while cognitive function was assessed using the Repeatable Battery for Assessment of Neuropsychological Status (RBANS)

Results The comparison between GRIN2A rs7206256 GG+GA versus AA genotypes revealed a significant disparity in genotype frequencies (OR=0.32, 95% CI=0.13-0.79, $p=0.007$). Among TD patients, those carrying the rs7206256 GG genotype exhibited higher limb trunk scores ($p<0.01$), and significantly lower orofacial scores ($p<0.01$). Moreover, significant differences in attention scores and total RBANS scores among carriers of different genotypes of the CHRM2 rs2061174 in TD group ($F=2.55$, $p=0.05$; $F=5.08$, $p=0.05$). The combination of CHRM2 (rs1824024)-GRIN2A (rs7206256) and CHRM2 (rs2061174)-GRIN2A (rs7206256) were identified as the best two-point model to predict TD occurrence ($p=0.05$).

Conclusion The findings suggest that GRIN2A rs7206256 is associated with TD susceptibility and severity in Chinese SZ patients. Furthermore, the interplay between GRIN2A and CHRM2 genes appears to contribute to TD susceptibility in SZ patients. Additionally, a relationship between GRIN2A gene polymorphisms and cognitive impairment in TD patients is evident.

关键词：Schizophrenia, Tardive dyskinesia, GRIN2A, CHRM2, Single nucleotide polymorphisms, Cognitive impairment.

Gender Differences in Anxiety Symptoms and Cognitive Emotion Regulation in Anxiety Disorder: A Network Analysis

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Background Anxiety disorders are prevalent mental health conditions characterized by excessive fear and anxiety with associated behavioural disturbances. Despite various findings regarding gender differences of anxiety symptoms and cognitive regulation strategies respectively, scant research has specifically investigated the relationship and co-occurrence of anxiety symptoms and cognitive regulation

[Aim]: The study aims to examine the gender differences of the importance and patterns in the network consisting of anxiety symptoms and cognitive emotion regulation.

Methods A cross-sectional network analysis was conducted on outpatients diagnosed with at least one type of anxiety disorder according to DSM-5 criteria. The study included 521 participants with anxiety disorders (201 men). The Generalized Anxiety Disorder Scale-7 (GAD-7) and the Cognitive Emotion Regulation Questionnaire (CERQ) were used to assess anxiety symptoms and cognitive emotion regulation. Networks were constructed by Gaussian Graphical Models and the networks of two sexes using the Network Comparison Test with R-packages

Results Male subjects generally exhibited lower anxiety levels, with significant differences in generalized worry and other-blame strategies. Network analysis revealed that rumination in men was the strongest central symptom while catastrophizing was the strongest central symptom in women with anxiety disorder. The network comparison test represented that uncontrollable worry and other blaming have significantly stronger edges in the male group than in the female group

Limitations Since this is a cross-sectional network study of anxiety patients, the causal relationship between interactions in this network analysis for both genders may not be accurately determined

Conclusions These results have implications for the treatment of anxiety disorders of different genders and then support the efficaciousness of Cognitive Behavioral Therapy. Rumination and catastrophizing are potentially important targets for treatment procedures for males and females, respectively.

关键词: Anxiety, Cognition emotion regulation, Network analysis, Gender differences

通过面部表情来筛查焦虑障碍及其亚型的探索性研究

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目的 目前临床上诊断焦虑障碍主要依据精神检查和量表评估,且仍以症状学特征进行诊断分型,评估手段单一,且存在明显的个人主观性。症状学而非生物学诊断的现状,为焦虑障碍患者诊治的精准性和有效性带来了一定的阻力。因此,本研究拟通过探索焦虑障碍的生物学筛查指标如面部表情等来建立客观的筛查体系。

方法 研究采用一个自动化和客观的深度学习框架,以捕捉细微差别的焦虑表情,这些表情来自同步的音频和面部视频数据,患者在此过程中被要求观看刺激的图像并阅读相应的文本描述。研究共收集 510 例焦虑障碍受试者,每个受试者会观看 20 个中性和 40 个负性的图片,同时可采集同步的音频和面部视频序列。研究采用最近兴起的选择性状态空间模型曼巴(Mamba)来探索视频和音频谱图,该模型能够实现序列长度的线性复杂性。

结果 我们提出的 VA-mamba 优于 Bi-LSTM 和基于 longformer 的 ViT。双向 VA-Mamba 模块比单向 VA-Mamba 模块具有更好的性能。深度学习模型可以检测焦虑障碍的三个亚型(广泛性焦虑障碍、惊恐障碍和社交焦虑障碍),且准确率相对较高。研究中采用的所有对比模型对上述三个亚型分类的筛查准确率达到 73.39% 以上。且我们提出的 VA-

Mamba 显示了 82.18% 的 360 度性能。

结论 受试者识别试验图片后的面部表情可筛查焦虑障碍并能区分筛查广泛性焦虑障碍、惊恐障碍和社交焦虑障碍。

关键词: 焦虑障碍, 面部表情, 选择性状态空间模型

Neurophysiological Markers of Persistent Auditory Verbal Hallucinations in Patients with Schizophrenia: An EEG Microstates Study.

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Objective Alterations in the temporal characteristics of EEG microstates in patients with schizophrenia (SCZ) have been repeatedly found in previous studies. Nevertheless, altered temporal characteristics of EEG microstates in persistent auditory verbal hallucinations (pAVHs) SCZ are still unknown. This study aimed to investigate whether SCZ patients with pAVHs exhibit abnormal EEG microstates.

Methods We analyzed high-density electroencephalography data that from 79 SCZ patients, including 38 pAVHs patients (pAVH group), 17 moderate auditory verbal hallucinations patients (mid-AVH group), and 24 without auditory verbal hallucinations patients (non-AVH group). Microstates were compared between three groups

Results Microstate C exhibited significant differences in duration and coverage and microstate B exhibited significant differences in occurrence between patients with pAVHs and without AVHs. There was a significant negative correlation between the coverage in microstate C and AHS. The duration in microstate C was a significant negative trend with the AHS; Microstate C in duration, microstate B in occurrence were efficient in detecting pAVHs patients

Conclusion The decreased class C microstates in duration and coverage and increased class B microstates

in occurrence may contribute to the severity of symptoms in pAVH patients. Furthermore, we have identified that microstates C could serve as potential neurophysiological markers for detecting pAVHs in SCZ patients. These results can provide potential avenues for therapeutic intervention of pAVHs

关键词: EEG microstates, EEG resting state, Schizophrenia, Persistent auditory verbal hallucination.

抑郁症患者自我图式与他人图式的溯源研究

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目的 既往研究显示, 抑郁症患者存在消极的自我图式与他人图式, 表现为对自我和重要他人的加工更为消极。但是证据集中在主观报告、行为学和事件相关电位。本研究进一步探讨图式加工相关的活动脑区。

方法 本研究招募 93 名抑郁症发作期患者和 27 名健康对照, 采用简明国际神经精神访谈对被试的精神障碍进行筛查, 采用 17 项汉密尔顿抑郁量表和 14 项汉密尔顿焦虑量表评估被试的临床症状。通过外部情感西蒙任务 (The Extrinsic Affective Simon Task, EAST) 考察被试的内隐图式特, 包括自我图式与他人图式, 同时测量其脑电活动。对前人研究涉及的 N200, P300 和 LPP 成分进行 sLORETA 溯源分析, 结合 fsaverage 模板和主成分分析, 采用混合方差分析比较组间脑区激活差异。

结果 对于自我图式, P3 成分在右侧海马旁回存在显著交互作用 ($F=4.724, p=0.032$), 事后检验发现, 仅抑郁症患者在消极自我条件下该区域的激活小于积极自我条件 ($t=-3.186, p=0.002$), 健康对照未发现显著差异。对于他人图式, N2 成分在左侧前扣带回尾部存在显著交互作用 ($F=3.969, p=0.049$), 事后检验发现, 仅抑郁症患者消极他人刺激下该区域的激活小于积极他人条件 ($t=-3.595, p=0.001$), 健康对照未发现显著差异。P3 成分在左侧前扣带回尾部 ($F=5.246, p=0.024$) 和右侧前扣带回头部 ($F=4.364, p=0.039$) 均存在显著交互作用, 事后检验发现, 同样仅抑郁症患者在消极他人刺激下这两个区域的激

活小于积极他人条件(左侧前扣带回尾部: $t=-4.223$, $p<0.001$; 右侧前扣带回头部: $t=-3.926$, $p<0.001$)。

额中回尾部和右侧楔叶。

结论 抑郁症患者异常内隐自我图式与他人图式与海马旁回、前扣带回头部和尾部的异常激活有关。

关键词: 抑郁症, 自我图式, 他人图式, 溯源

Association of Metabolic Levels, Psychopathology and Cognition Among Chronic Schizophrenia Patients with Insomnia

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Objective Insomnia is often overlooked as a symptom in patients with schizophrenia (SCZ), despite its significant impact on metabolic changes and cognitive impairment. However, no studies explored the role of metabolic changes associated with insomnia symptoms in SCZ. This study aimed to investigate the relationships between insomnia, metabolic changes, and cognitive function in SCZ patients

Methods A total of 609 SCZ patients were recruited. Insomnia data were collected through a self-reported questionnaire consisting of three questions. The psychopathology and cognitive functioning were assessed using the Positive and Negative Syndrome Scale (PANSS) and the Repeated Battery for Assessment of Neuropsychological Status (RBANS), respectively. In addition, serum glucose, and lipid levels were assayed

Results We found that SCZ patients with insomnia displayed lower diastolic blood pressure ($p = 0.047$), higher total cholesterol ($p = 0.024$), lower language ($p = 0.006$), delayed memory ($p = 0.013$), and RBANS total score ($p = 0.004$) compared to those without insomnia. In addition, there was a significant negative correlation between HDL-C level and RBANS total score ($r = -0.201$, $p = 0.005$) in insomnia patients. HDL-C level exhibited an independent contribution to the RBANS total score (Beta = -5.349 , $t = -2.303$, $p = 0.022$). The association between BMI and delayed memory

score ($r = 0.177$, $p = 0.013$) and total RBANS score ($r = 0.144$, $p = 0.044$) showed a significant positive correlation. Additionally, BMI independently contributed to the delayed memory score (Beta = 0.683 , $t = 2.781$, $p = 0.006$) and total score of RBANS (Beta = 0.416 , $t = 2.624$, $p = 0.009$)

Conclusion Our study provided insights into the potential interplay between metabolic changes, clinical symptoms and cognitive impairments in SCZ patients with/without insomnia.

关键词: schizophrenia, insomnia, metabolic changes, cognitive function

动力性人际治疗对抑郁障碍患者图式调节及其事件相关电位的研究

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目的 动力性人际治疗(DIT)是 16 次手册化的短程动力疗法, 曾被证明对抑郁患者有积极效果。基于客体关系和依恋理论, DIT 干预靶点是“人际情感焦点”——包括消极自我图式和他人图式。而内隐图式又经过反思性加工影响外显图式, 故本研究探索 DIT 对抑郁患者外显图式、内隐图式行为学和脑电 ERP 指标的影响。

方法 125 名中重度 MDD 患者被分配至 DIT+药物组($n=63$)和药物组($n=62$)。采用评估员评定的 HAMD-17 和 HAMA-14, 自评 PHQ-9 和 GAD-7 评估治疗前后的抑郁症状。使用 YSQ-SF 评估早期适应不良的外显图式, 结合 EAST 任务的反应时和 ERP 指标评估内隐自我和他人图式。

结果 (1)HAMD-17($F(5, 479.80)=3.113$, $p=0.009$)的时间×组别交互作用显著, DIT+ADM 组的分数在 12 周、16 周($t=-2.01\sim-2.79$, $p<0.05$)低于药物组; (2)PHQ-9 的时间×组别交互作用显著($F(16, 1257.90)=2.33$, $p=0.002$), DIT+药物组在 10 周、11 周、14 周、15 周和 16 周结束($t=-2.04\sim-2.77$, $p<0.05$)的分数低于药物组; (3)YSQ-SF 中, 仅 DIT+药物治疗带来“分离和拒绝”、“自主性和能力不足”和“他人

指向”($t=2.15\sim 3.13$, $p<0.05$)的显著变化。(4)EAST 行为学中,自我图式的时间 \times 组别交互作用显著($F(1, 102.92)=5.13$, $p=0.026$),DIT+药物组的自我图式变得更积极($t=3.41$, $p=0.001$);他人图式交互作用不显著($F(1, 108.74)=3.46$, $p=0.066$),但DIT+药物组的他人图式的积极变化边缘显著($t=1.91$, $p=0.060$);(5)EAST 任务 ERP 指标中,自我图式条件下N2潜伏期和峰值的时间 \times 组别 \times 效价的交互作用显著,治疗后DIT+药物组积极自我条件的潜伏期显著变长($t=2.78$, $p=0.007$);但未发现两组N2峰值显著变化(均 $p>0.05$);对于LPP的平均振幅,他人图式的时间 \times 组别交互作用显著($F(1, 63)=4.55$, $p=0.037$),DIT+药物组在积极和消极自我、积极和消极他人($t=3.13\sim 4.03$, $p<0.01$)条件均显著增大,而药物组无显著变化;。

结论 DIT 治疗有效改善抑郁患者的临床抑郁症状,且可改善亲近和依赖性、自主性、自我牺牲三类适应不良外线图式;且DIT治疗对消极自我图式有明显改善效果,并可提高患者对自我和他人图式信息的晚期精细化加工水平。

关键词: 郁症,动力性人际治疗,外显图式,内隐图式,事件相关电位,疗效机制

The Role of Ferroptosis in Major Depressive Disorder

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Objective To study the relationship between ferroptosis genes and Major Depressive Disorder (MDD)

Methods The GEO database was utilized to obtain chip data and clinical information from three datasets, namely GSE98793, GSE39653, and GSE52790. To identify differentially expressed ferroptosis genes, an analysis was conducted on genes that showed differential expression between individuals with Major Depressive Disorder (MDD) and healthy controls. Subsequently, Gene Ontology (GO) and Kyoto Encyclopedia of Genes and Genomes Pathway (KEGG) enrichment analyses were performed on the differentially expressed ferroptosis genes. Screening of these genes was carried

out using the Lasso Regression and Support Vector Machine (SVM) methods. A diagnostic model for depression was established using logistic regression with the screened genes. Furthermore, the Gene Set Enrichment Analysis (GSEA) method was applied to analyze the genes included in the model. The immune infiltration of MDD and healthy controls was assessed using the Cibersort method, along with an analysis of the correlation between immune cells and ferroptosis genes. The ferroptosis gene interaction network was examined using Cytoscape software. Additionally, the DGIdb website was consulted to predict potentially effective therapeutic drugs for ferroptosis genes closely associated with MDD

Results A total of 18 genes involved in ferroptosis were identified through differential expression analysis comparing individuals with MDD and healthy controls. Enrichment analysis, revealed concentrated pathways related to oxidative stress response, hydrogen peroxide response, reactive oxygen species response, FoxO signaling pathway, fluid shear stress, and atherosclerosis. Lasso regression and SVM techniques were employed, resulting in the selection of 10 genes. They were ALOX15B, MAPK14, PRKAA1, PHF21A, MICU1, KLF2, METTL14, TP63, PARK7, PARP4. The depression diagnostic model, which utilized these 10 genes, achieved an area under the curve (AUC) of 0.773. The Gene Set Enrichment Analysis (GSEA) focusing on individual genes demonstrated that Parkinson's disease, Huntington's disease, and oxidative phosphorylation pathways were highly enriched. The analysis of immune infiltration further revealed significant differences in the resting NK cells and M2 macrophages between individuals with MDD and control subjects. Specifically, PHF21A was found to be closely associated with resting NK cells in MDD, whereas METTL14 and MAPK14 were closely related to M2 macrophages. In terms of potential therapeutic options, ALOX15B, MAPK14, PRKAA1, and MICU1 among the 10 ferroptosis-related genes were found to have potential for effective therapeutic drugs

Conclusion Among all ferroptosis genes, ALOX15B, MAPK14, PRKAA1, PHF21A, MICU1, KLF2, METTL14, TP63, PARK7, PARP4 are closely

related to MDD and have diagnostic value

关键词: Major Depressive Disorder(MDD), ferroptosis genes, ALOX15B, MAPK14, PRKAA1, MICU1.

青少年抑郁障碍患者持续性自伤行为风险预测模型分析

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目的 探究青少年抑郁障碍患者中非自杀性自伤行为及其发展成持续性的相关危险因素, 制作风险预测模型并进行验证。

方法 本研究为基于电子病历临床记录数据的回顾性队列研究。对象为 2021.1 至 2023.5 在郑州大学第一附属医院精神医学科住院治疗的有自伤行为的 737 名抑郁发作青少年患者, 按 7:3 的比例随机分为训练集 (n=513) 和验证集 (n=224)。使用单因素和多因素 Logistic 回归分析筛选青少年抑郁患者自伤行为发展为持续性的独立危险因素并建立预测模型。使用受试者工作特征(ROC)曲线下面积(AUC)评估训练集和验证集模型的区分度, 使用校准曲线评估训练集和验证集模型的校准度, 使用 Hosmer-Lemeshow (HL) 检验评估模型的拟合优度, 使用临床决策分析(DCA)曲线评价模型的临床获益情况。

结果 HAMD ($\beta=1.275$, OR=3.58, 95% CI: 1.21~10.69)、复发次数 ($\beta=0.801$, OR=0.45, 95% CI: 0.27~0.74)、伴发精神症状 ($\beta=0.519$, OR=1.68, 95% CI: 1.04~2.71)、是否单亲 ($\beta=0.738$, OR=0.14895% CI: 0.22~1.02)、自杀未遂史 ($\beta=-0.282$, OR=0.75, 95% CI: 0.67~0.84) 是青少年抑郁患者持续性自伤行为的独立危险因素(P<0.05 或 0.01)。训练集 ROC 曲线 AUC=0.808 (95% CI: 0.738~0.878), 验证集 AUC=0.797 (95% CI: 0.750~0.845)。HL 检验评估显示较好的拟合度 (P=0.197)。

结论 抑郁严重程度、疾病复发次数、是否伴发精神症状、是否单亲及自杀未遂史是青少年抑郁障碍患者自伤行为发展为持续性的危险因素, 且由此构建风险预测模型具有良好的敏感性、特异性和临床适用性。

关键词: 青少年, 抑郁障碍, 持续性自伤, 非自

杀性自伤, 风险预测模型

Prevalence and Influencing Factors for Psychotic Symptoms in Major Depressive Disorder with Moderate-to-severe Anxiety: Partial Mediation and Moderation Role of TSH

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Objective Anxious depression and psychotic symptoms are significant features of major depressive disorder (MDD). This study aimed to investigate the prevalence of moderate-to-severe anxiety in first-episode and drug-naïve MDD patients, as well as the relationship between thyroid function and psychotic symptoms in MDD with moderate-to-severe anxiety

Methods This observational cross-sectional study included 1718 patients with MDD attending an outpatient psychiatric clinic. Patients were assessed using standardized scales for depression, anxiety, and psychotic symptoms, with blood samples collected for thyroid function analysis. Statistical analyses, including t-tests, logistic regression, and correlation analyses, were conducted to explore the relationships between variables and the mediating and moderating effects of thyroid stimulating hormone (TSH) on depressive and psychotic symptoms in MDD patients with moderate-to-severe anxiety

Results The study revealed a high prevalence of moderate-to-severe anxiety in first-episode and drug-naïve MDD patients. Patients with moderate-to-severe anxiety exhibited higher levels of depressive and psychotic symptoms, as well as TSH. Furthermore, TSH levels were significantly associated with psychotic symptoms, acting as both a mediator and a moderator in the relationship between depressive symptoms and psychotic symptom severity

Conclusion TSH partially mediated and moderated the relationship between depressive symptoms and psychotic symptom. TSH may serve as a biomarker for

psychotic symptoms in MDD patients comorbid moderate-to-severe anxiety.

关键词: Major Depression Disorder, anxious depression, psychotic symptoms, thyroid-stimulating hormone

Identification of Plasma Biomarkers in Drug-naïve Schizophrenia with Severe Cognitive Impairment Using Targeted Metabolomics

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Objective Cognitive impairment is the core symptom of schizophrenia (SZ) and an important cause of functional disability in SZ patients. Early and accurate identification of cognitive impairment in SZ is important for improving the prognosis of the disease and reducing the disability rate. Therefore, we used a targeted metabolomics-based approach to explore the underlying biological mechanisms that lead to SZ patients with severe cognitive impairment.

Methods Liquid chromatography-mass spectrometry (LC-MS) targeted metabolomics was performed on plasma samples from 58 drug-naïve SZ patients and 36 healthy controls to quantify and analyze 271 metabolites. Cognitive functioning was assessed using the MATRICS Consensus Cognitive Battery (MCCB) in all subjects, and an MCCB cognitive deficit score of ≥ 3 was defined as "severe cognitive impairment" and others defined as "non-severe cognitive impairment"

Results We identified 15 differential metabolites in SZ patients with non-severe cognitive impairment compared to healthy controls, of which 11 were upregulated and 4 were downregulated. In addition, we found 26 differential metabolites in SZ patients with severe cognitive impairment compared to healthy controls, of which 7 were up-regulated and 19 were down-regulated. Importantly, we found 21 metabolites that differed only in SZ patients with severe cognitive impairment, of

which 5 were upregulated and 16 downregulated. Then, sphingolipid metabolism, glycerophospholipid metabolism, and linoleic acid metabolism were identified as metabolic pathways associated with severe cognitive impairment in drug-naïve SZ patients. Finally, we found that SM C20:2, CE (16:1), Cer(d18:1/22:0), PC aa C36:0, PC aa C36:6, and PC ae C36:2 were correlated with the subdimensions Processing speed, Working memory, etc., of the MCCB in SZ patients with severe cognitive impairment, whereas there were no correlations in SZ patients without severe cognitive impairment. The receiver operating characteristic curve showed that the combination of SM C20:2, CE (16:1), Cer(d18:1/22:0), PC aa C36:0, PC aa C36:6, and PC ae C36:2 had good diagnostic value for distinguishing between schizophrenic patients with severe cognitive impairment and those without severe cognitive impairment, and the area under the curve was 0.732 (95% CI: 0.602-0.862)

Conclusion Our study identified 21 characteristic metabolites (mainly lipids) and 3 metabolic pathways associated with severe cognitive impairment in drug-naïve SZ patients. Combinations of SM C20:2, CE (16:1), Cer(d18:1/22:0), PC aa C36:0, PC aa C36:6, and PC ae C36:2 could be used as potential biomarkers for the assessment of cognitive symptom severity in SZ patients.

关键词: Schizophrenia, Metabolomics, MCCB, Biomarker, cognitive impairment

Association between Exposure To Outdoor Artificial Light at Night, Executive Function and Sleep Timing Among Patients with Depression

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Objective Depression is a highly prevalent psychiatric disorder that impairs the executive function of individuals. Recent evidences emphasized the potential impact of outdoor artificial light at night (ALAN) on executive function. However, the available literature on the relationships between outdoor ALAN and executive function in depressed patients is limited, and the mechanism involved remained unclear. Sleep timing refers to the time of day that sleep occurs, which can be affected by age, lifestyle, and light exposure, resulting in bedtimes and wake-up times that differ from individual preferences. It has been shown that later sleep timing (e.g., bedtime, wake-up time) may be a potential risk factor of executive dysfunction. Therefore, we aimed to investigate the relationship between outdoor ALAN exposure, sleep timing and executive function among depressed patients

Methods 538 patients with depression were enrolled from inpatient department of the Fourth People's Hospital of Hefei from 2017 to 2021. The average 1-year outdoor ALAN exposure of each patient was estimated using satellite images, based on patients' geographical coordinates, prior to the patient was hospitalized. All participants were assessed sleep conditions through the Pittsburgh Sleep Quality Index (PSQI) and executive function through the Behavior Rating Inventory of Executive Function-Adult Version (Brief-A). We used multiple linear regression models to investigate the association between outdoor ALAN exposure, sleep timing and executive function, adjusted for potential confounders (including sex, age, family income, educational level, employment, BMI, drinking status, smoking status, physical activity, season of visit, use of antidepressants). Furthermore, mediation models were used to figure out the mediating role of sleep timing (bedtime and waketime) on the association between outdoor ALAN exposure and executive function

Results This study found that brighter outdoor ALAN exposure was associated with later bedtime and waketime. An interquartile range (IQR 26.79nW/cm²/sr) increase in outdoor ALAN, a 14.04-minute [95% confidence interval (CI): 2.88–25.2] delay in bedtime and a 20.28-minute (95%CI: 3.42–37.14) delay in waketime,

after fully adjusted for confounders. Meanwhile, outdoor ALAN exposure was positively associated with the total score of Brief-A, each IQR increase in exposure of outdoor ALAN was associated with 5.22 (95%CI: 1.23–9.21) of increases in total score of Brief-A. Further Mediation analysis shows that both bedtime and waketime significantly mediated the relationship of outdoor ALAN on executive function, the mediated proportion of them on executive function were 10.57% and 9.54%, respectively

Conclusion The results provided evidence that brighter outdoor ALAN was related to poor executive function in depressed patients. And later sleep timing may mediate the association between outdoor ALAN exposure and executive function. Future studies should elucidate whether interventions to reduce exposure to ALAN may positively affect executive function.

关键词: Outdoor artificial light at night, Depression, executive function, sleep timing

血浆甜菜碱类似物水平与精神分裂症患者的症状和认知功能有关

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目的 精神分裂症(Schizophrenia, SZ)是一组病因不明的严重精神障碍。甘氨酸甜菜碱、脯氨酸甜菜碱和色氨酸甜菜碱均为甜菜碱类似物,既往研究发现甜菜碱类似物在中枢神经系统中具有抗炎或抗氧化作用。然而,这些化合物与SZ之间的关系尚不清楚。我们旨在探索甜菜碱类似物与SZ患者症状严重程度和认知功能之间的关系,以及它们在SZ患者接受抗精神病治疗后的动态变化。

方法 根据入组标准纳入天津安定医院门诊或住院的未用药精神分裂症患者58例。同时向社会招募了36例健康对照,他们与患者来自同一地区,且年龄、性别相匹配。在基线时通过自编的人口学问卷收集患者与健康对照的一般信息,并使用MATRICS成套神经认知测试(MATRICS Consensus Cognitive Battery, MCCB)进行认知评估,患者的症状严重程度采用阳性和阴性症状量表(Positive And

Negative Syndrome Scale, PANSS) 进行评估, 同时采集空腹静脉血液标本, 以进行后续血浆标志物的测定。患者组还需在治疗 8 周后进行认知和症状评估以及血液样本的采集。采用注射流动分析-质谱串联以及液相色谱-质谱串联方法进行血浆甜菜碱类似物的检测。使用 spss20.0 进行统计学分析。

结果 基线时, 精神分裂症患者与健康对照组相比甘氨酸甜菜碱水平降低 ($p=0.046$), 脯氨酸甜菜碱水平升高 ($p=0.037$)。治疗 8 周后, 甘氨酸甜菜碱 ($p=0.016$) 和色氨酸甜菜碱 ($p<0.001$) 与基线相比显著下降。患者组基线的甘氨酸甜菜碱水平与基线时 PANSS 阴性因子分 ($r=0.275$) 呈负相关, 和 8 周时的 PANSS 阴性因子分 ($r=0.417$)、激越因子分 ($r=0.361$) 和认知因子分 ($r=0.324$) 呈负相关。基线脯氨酸甜菜碱水平与基线时 MCCB 工作记忆分数 ($r=0.348$) 和 8 周 MCCB 总分 ($r=0.284$) 呈负相关。色氨酸甜菜碱在治疗后的降低程度与 PANSS 认知因子的降低程度呈负相关 ($r=0.357$)。

结论 甜菜碱类似物与精神分裂症症状严重程度及认知显著相关, 且在治疗前后显著变化。这些指标可能是精神分裂症的潜在生物学标志物, 与精神分裂症的发生和预后均存在关联, 并为进一步探究精神分裂症的病理生理机制提供了思路。

关键词: 精神分裂症, 认知, 甜菜碱, 水苏碱, 代谢物

Disruption of Network Hierarchy Pattern in Bulimia Nervosa Reveals Brain Information Integration Disorder

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Objective Previous studies have demonstrated abnormalities in several specific networks that may account for their multiple behavioral deficits in bulimia nervosa (BN) patients, but whether and how the network hierarchical organization changes in BN patients remain unknown. This study aimed to investigate alterations of

the hierarchy pattern in the BN network and their clinical relevance.

Methods Connectome gradient analyses were applied to depict the network hierarchy patterns of fifty-nine BN patients and 39 healthy controls (HCs). Then, we evaluated the network- and voxel-level gradient alterations of BN by comparing the gradient values in each network and each voxel between BN patients and HCs. Finally, the association between the altered gradient values and clinical variables was explored.

Results Compared to HCs, BN patients exhibited reduced gradient values in the dorsal attention network and increased gradient values in the subcortical regions in the principal gradient and had decreased gradient values in the ventral attention network and increased gradient values in the limbic network in the secondary gradient. Regionally, the areas with altered principal or secondary gradient values in BN patients were mainly located in the transmodal networks. In BN group, the principal gradient values of the right inferior frontal gyrus were negatively associated with external eating behavior.

Conclusion This study revealed the disordered network hierarchy patterns in BN patients, which suggested a disturbance of brain information integration from the attention network and subcortical regions to the transmodal networks in these patients. These findings may provide insight into the neurobiological underpinnings of BN.

关键词: bulimia nervosa, connectome gradient, network hierarchy, attention network, subcortical regions, transmodal network.

Association between P300 Event-related Potential and Suicidal Thoughts and Behaviors in First-episode Antipsychotic-naïve Patients with Schizophrenia

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Objective Suicidal thoughts and behaviors

(STBs) are critical concern in schizophrenia (SZ). Concurrent changes in event-related potential (ERP), particularly the P300 (P3) components, have been observed in SZ patients, but the association between these changes and STBs remains unclear. This study aims to explore the relationships between P3 components and STBs in first-episode antipsychotic-naïve SZ (FEAN-SZ) patients

Methods The study included 321 FEAN-SZ patients and 146 healthy controls (HC). Sociodemographic data, clinical assessments, and ERP P3 components (N1, P3a, and P3b) were collected. Psychotic symptoms were assessed using the Positive and Negative Syndrome Scale (PANSS), while depressive symptoms were evaluated with the Hamilton Depression Scale (HAMD)

Results Compared to HC, FEAN-SZ patients exhibited lower N1 and P3 amplitudes and longer latencies (all p s < 0.001). Patients with STBs exhibited higher scores on negative, general psychopathology, PANSS total and HAMD scales, decreased N1 and P3a amplitudes, as well as prolonged P3a and P3b latencies compared to those without STBs (all p s < 0.001). The P3a latency predicted the general psychopathology score ($\beta = 0.103$, $p < 0.001$), and the N1 amplitude predicted the HAMD score ($\beta = -1.057$, $p = 0.001$), both exclusively within the STBs group. Logistic regression analysis identified that N1 amplitude (Beta = -0.132, $p = 0.018$, OR = 1.02, 95%CI = 1.01-1.04) and HAMD scores (Beta = 0.068, $p = 0.001$, OR = 1.07, 95%CI = 1.03-1.11) as independent predictors of STBs in FEAN-SZ patients. Combining these variables yielded an area under the receiver operating characteristic (AUCROC) curve of 0.840 for distinguishing between patients with and without STBs

Conclusion FEAN-SZ patients with STBs have lower P3 amplitude and longer latency. The N1 amplitude and depressive levels are associated with STBs in FEAN-SZ patients. The N1 amplitude may serve as an early biological marker for STBs in SZ patients.

关键词：Schizophrenia; First-episode antipsychotic-naïve; Suicide; Event-related potential; P300; Depression.

社会精神医学学组

易性症人群筛查问卷的初步编制与信效度研究

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目的 易性症指个体心理体验的性别与被分配的性别(出生性别)存在持续而显著的不一致,这种不一致常常对个体带来痛苦。根据个体心理和身体上的痛苦程度,有时需要医疗上的干预。在中国,有相当一部分易性症个体会前往医疗机构,提出采取医学手段(例如摄入性激素或者生殖器重置手术)更改他们的性征与生殖器,使得他们得以重置法律身份,以修改后的体验性别身份继续在社会上生活。然而,由于易性症人群数量占比较少,一般精神科医师难以接触到相关来访者,对他们的表现与内心痛苦原因难以理解。因此,亟需相关量表辅助判断易性症的程度与表现。目前国内门诊尚没有问卷及量表辅助判断易性症。由于国内门诊工作量较大,快速便捷提供易性症程度评分,用以辅助临床访谈成为首要需求。因此,编制一份针对易性症的核心问题的筛查问卷更为必要。本研究目标是对编制的易性症筛查问卷进行信效度分析后,为将来易性症诊疗的临床工作提供有效辅助检查工具。

方法 (1) 项目分析: 使用 SPSS 26.0 软件,用临界比值法对数据进行统计学分析对初始问卷的 15 个题项进行项目分析。(2) 结构效度: 探索性因子分析使用 Kaiser—Meyer—Olkin (KMO) 值与 Bartlett 球形检验,判断问卷数据是否适合做因子分析。利用主成分分析,使用最大方差法,删除问卷中负荷因子 <0.4 的条目。使用 AMOS 程序进行验证性因子分析。(3) 信度检验: 利用科隆巴赫系数(Cronbach- α)对本筛查问卷评估内部一致性信度。

结果 高分组与低分组具有显著差异,高分组均为易性症人群,低分组均为顺性别人群,高低分组的所有题目都具有显著差异($P<0.05$),具有良好区分度。KMO 值为 0.951; X^2/df 值为 4.675, RMSEA 值为 0.104, 拟合效果一般; 而 NFI、TLI、CFI 等指标效度均在 0.9 以上, 适配效果良好; 聚敛效度中, 本问卷平均方差变异 AVE 为 0.671, 组合信度 CR

值为 0.962, 说明聚敛效度理想。Cronbach' α 系数为 0.954, 问卷信度良好。

结论 易性症人群占人群总数较少, 精神科医师难以接触到, 但这类来访者有一定医疗需求。快速准确的易性症筛查问卷能够便捷协助临床门诊精神科医师判断来访者的性别困扰程度及方向, 从而为来访者提出适宜的建议。本问卷项目分析显示能够较好区分易性症人群和一般人群, 效度检验中 KMO 值 >0.9 , 其余结构效度指标显示适配效果良好, 组合信度和科隆巴赫系数均为 0.9 以上, 信效度良好, 能够成为心理精神科诊室可靠的筛查工具。

关键词: 易性症, 跨性别, 信度, 效度, 问卷

Identifying Influences That Play An Important Role in The Path From Social Isolation Or Loneliness To Depression: A Mendelian Randomization Analysis

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Objective Isolation and loneliness are associated with depression, but it is unclear whether a causal link exists between isolation and loneliness to depression, or whether modifiable risk variables exist along the pathway that can influence pathogenic outcomes

Methods We extracted genetic variants of European ancestry associated with social isolation or loneliness and depression from the UK Biobank (455,364 and 462,933 individuals, respectively). Subsequently, we assessed the relationship between loneliness or social isolation and depression using a two-sample Mendelian randomization (MR) method. A two-step MR was used to assess the 25 potential mediators associated with the outcome (depression) and to calculate the proportion mediated by mediators that met the requirements

Results In the two-sample MR analysis, genetically predicted elevated levels of social isolation or loneliness ($\beta = 0.188$, 95% confidence interval [CI] 0.109, 0.268, $P = 3.594 \times 10^{-6}$) were significantly associated with higher levels of depression. Of the 25 potential risk factors for depression, two were identified as mediators of the correlation between isolation or loneliness and depression: neuroticism (mediation ratio: 54.3% [95% CI: 43.1%, 65.5%]) and insomnia (15.5% [95% CI: 7.7%, 23.3%]). Multiple sensitivity analyses confirmed the robustness of the findings

Conclusion Our findings provide evidence that higher levels of social isolation or loneliness have an impact on increased levels of depression and that neuroticism and sleeplessness in turn play an important mediating role between the two

关键词: social isolation, depression, neuroticism, sleeplessness, Mendelian randomization, mediation analyses

Interventions for Suicidal and Self-injurious Related Behaviors in Chinese Adolescents with Psychiatric Disorders: A Systematic Review and Meta Analysis

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Objective As a leading cause of adolescent death, suicidal and self-injurious related behaviors (SSIRBs) is a devastating global health problem, particularly among patients with psychiatric disorders (PDs). Previous studies have shown that multiple interventions can alleviate symptoms and reduce risks. This review aimed to provide a systematic summary of interventions (i.e., medication, physical therapy, psychosocial therapy) for the treatment of SSIRBs among Chinese adolescents with PDs

Methods From inception to September 17, 2023, twelve databases (PubMed, CINAHL, ScienceDirect,

PsycINFO, EMBASE, Cochrane Library, Clinical Trial, Web of Science, CEPS, SinoMed, Wanfang and CNKI) were searched. We qualitatively and quantitatively synthesized the included studies. Standardized mean differences, risk ratios and their 95% confidence intervals used the Der Simonian and Laird random-effects model

Results A total of 20,926 articles were screened. And only 10,976 records that were eligible after the first-stage of screening were included. After full-text screening, fifty-two articles contained fifty-three studies with 3,760 participants (experimental group=2,065 adolescents vs control group=1,695 adolescents). Out of ten articles from international databases, forty-two literatures were from Chinese databases. Three single therapies (physical therapy, psychosocial therapy and drug therapy) were found in our study, among which the majority was psychosocial therapy (4/26; intensive service provision + cognitive behavioral therapy). Whereas dialectical behavior therapy and sertraline were the most widespread combination therapy (5/27)

Conclusion This review systematically outlined the primary characteristics, safety and effectiveness of interventions for Chinese PDs adolescents with SSIRBs, which could serve as valuable evidence for guidelines aiming to formulate recommendations.

关键词: Psychiatric disorders, adolescents, self-injurious behavior, suicide

Associations of Rare Variants in The AKAP11 Gene with Bipolar Disorder in Chinese Population

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Objective This pioneering study aimed to explore the associations between the A-kinase anchoring protein 11 (AKAP11) gene and bipolar disorder (BD) in a Chinese population. We sought to replicate findings from European populations regarding ultra-rare protein-truncating variants (PTVs) within exon 8 of AKAP11 and identify any novel rare mutations linked to Chinese

BD patients

Methods We conducted a case-control association study, including a cohort of 284 Chinese BD patients, with the control group comprising 10,588 individuals from the China Metabolic Analytics Project (ChinaMAP) database. Polymerase chain reaction (PCR) amplification and Sanger sequencing were performed to analyze exon 8 of the AKAP11 gene. Statistical analysis involved chi-square tests to assess differences in allele frequency between BD patients and the control group

Results In our 284 Chinese BD patients, within exon 8 of the AKAP11 gene we did not find any ultra-rare PTVs previously identified in European BD patients. However, five additional rare variants were discovered, including three missense variants and two synonymous variants. Among these variants, one synonymous variant, g.42300171T>C (i.e., rs771987690), had not been reported in the ChinaMAP database. Statistical analysis did not reveal significant differences in allele frequencies between BD patients and controls ($P = 0.240$), but there was a noticeable trend suggesting a potential association between the rare variants with the AKAP11 gene and risk of BD. Additionally, three of the five rare variants were not documented in the Bipolar Exomes Browser (BipEx) database, the frequencies of the other two were mildly lower in cases than controls, contrary to the trend observed in the Chinese population. The observed difference may be due to population genetic-environmental interaction

Conclusion Our preliminary data indicates a potential trend between the AKAP11 gene and BD patients in China, despite did not reach nominal significance, calling for further analysis in a larger sample set.

关键词: Bipolar disorder, AKAP11, Chinese population, PTVs, Rare variants

CHS-DRG 对精神疾病的适用性评价研究

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目的 按北京市医保要求某三级精神专科医院

于 2019 年 6 月 15 日对住院日 60 天以内(含 60 天)的参保人员费用结算执行按项目付费,同时数据模拟 CHS-DRG 付费。基于此,本研究拟通过对某三级精神疾病专科医院 CHS-DRG 模拟运行数据进行分析,研究 CHS-DRG 分组器目前版本的分组效果,为北京市医保部门完善精神疾病分组提供相关政策建议。

方法 利用 spss27.0 统计学软件对某三级精神疾病专科医院的 CHS-DRG 模拟运行数据进行统计学分析。采用变异系数(CV, Coefficient of Variation)、方差减少量(RIV, Reduction in Variance)统计指标来对 CHS-DRG 分组器目前版本的分组效果进行评价。变异系数主要用于评价各 DRG 组内的一致性,方差减少量主要用于评价组间的差异性。变异系数越小组间同质性越好,方差减少量值越大,组间异质性越强。

结果 2019 年至 2022 年,只有个别病组的住院费用和住院天数的变异系数大于 0.7,其余病组的变异系数均在 0.5 左右;住院费用和住院天数的方差减少量也处于较低水平,2022 年住院费用的方差减少量最高为 14.18%,2022 年住院天数的方差减少量最高为 12.11%。综上,CHS-DRG 对某三级精神疾病专科医院的适用性较差,CHS-DRG 离实际落地付费还存在一定差距。

结论 建议医保相关部门将年龄、治疗方式(有无电休克治疗)、入院方式(自愿和非自愿入院)、有无精神科共病等因素纳入分组规则,对 CHS-DRG 精神疾病的分组进行进一步的细化与调整,以期得到更合理的分组方案。

关键词: 按疾病诊断相关分组; 分组效果

The Impact Pathways of Personality and Psychosocial Stress on Depression Among Adult Community Residents in China: A Fuzzy-set Qualitative Comparative Analysis

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Objective In China, depressive disorders have

been the second leading cause of years lived with disability. Various factors are associated with depression and the working mode is complex. Instead of studying single-factor effects, this study aims to explore the combination of high-risk factor sets for depression among adult community residents

Methods A total of 1965 adult residents in Shenzhen, China was surveyed and tested using the Patient Health Questionnaire-9 (PHQ-9), Eysenck personality Questionnaire-revised Short Scale for Chinese (EPQ-RSC), Questionnaires of psychosocial stress survey for groups (PSSG). The fs-QCA method was used to explore the high-risk factor sets for depression among adult community residents

Results The combination of low extroversion (e)-high neuroticism (N) in personality trait, combined with high life event (V)-high negative emotional responses to events (G)- high positive emotional responses to events (O)-high positive coping styles to events (I) (e*N*V*G*O*I) was high-risk factor sets for depression. The overall consistency was 0.843, and the overall coverage was 0.330

Conclusion Our study attempted to suggest the sets of high-risk factors in personality and psychological stress of depression among adult community residents based on the fs-QCA analysis. This study provides data for developing comprehensive intervention measures for adult community residents.

关键词: depression, personality traits, life events, psychological stress, fs-QCA

童年期虐待与云南省戒毒人员的自伤行为: 饮酒的中介作用

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目的 我国的吸毒人员达到 148.6 万, 吸毒人群的心理健康水平较低, 自伤、自杀行为逐年增加。本文旨在探究童年期虐待、饮酒与自伤行为在戒毒人群中的分布状况, 童年期虐待与自伤行为的相关性, 以及饮酒相关问题是否在其中起到中介

作用。

方法 对云南省 8 所戒毒所人员进行横断面调查, 采用二阶段简单随机整群抽样。一共纳入 1167 名受试者, 使用自编社会人口学问卷、童年期虐待问卷 (Childhood Trauma Questionnaire, CTQ)、改良版自伤行为问卷采集受试者信息。采用 Epidata 建立数据库、SPSS 25.0 进行描述性分析, 使用单因素和多因素 Logistic 回归做相关性分析, 最后构建结构方程模型来探索中介作用。

结果 1. 一般情况: 男性有 905 人, 平均年龄为 37.2 岁, 主要为汉族、单身、低文化水平, 以吸海洛因、食苯丙胺为主。1037 人报告了童年期虐待经历, 占总人群的 94.1%, 自伤行为检出率为 42%。

2. 自伤的影响因素: 在控制了其他因素后, 女性 (OR=1.58, 95%CI: 1.135-2.193)、汉族 (OR=1.56, 95%CI: 1.176-2.064)、高中及以上教育水平 (OR=1.51, 95%CI: 1.019-2.293)、焦虑症状 (OR=1.53, 95%CI: 1.120-2.096)、抑郁症状 (OR=1.64, 95%CI: 1.196-2.249)、童年期虐待 (OR=3.70, 95%CI: 1.706-8.039)、饮酒 (OR=1.73, 95%CI: 1.284-2.333) 均是自伤的危险因素, 无纹身 (OR=0.63, 95%CI: 0.480-0.813) 是保护因素。在虐待分维度中, 躯体虐待 (OR=1.45, 95%CI: 1.027-2.052)、性虐待 (OR=1.45, 95%CI: 1.100-1.918) 是自伤的危险因素。

3. 童年期虐待与饮酒呈正相关 (OR=2.75, 95%CI: 1.621-4.660), 在虐待的分维度中, 各个分维度均与饮酒无关。建立结构方程模型后, 饮酒在童年期虐待与自伤行为之间起到部分中介作用, 中介效应占比为 6.70%。

结论 童年期虐待经历在戒毒人员中较为普遍, 大部分戒毒人员存在焦虑和 (或) 抑郁症状, 自伤相关行为发生率也较高。女性、汉族、高中及以上教育经历、纹身均是戒毒人员发生自伤行为的独立危险因素, 针对这些特点, 制定更加个性化的方案, 能够降低自伤行为发生的风险。研究强调了饮酒在童年期虐待与自伤行为中的中介作用。面对虐待的强戒人群制定禁酒、限酒等条例可以有效降低相关自伤行为的发生风险, 为后续建立更为完整的心理健康行为干预体系提供一定的参考。

关键词: 戒毒人员; 童年期虐待; 饮酒; 自伤行为; 中介作用

情绪调节与躯体症状障碍的关联：一项系统综述和 Meta 分析

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目的 躯体症状障碍 (Somatic Symptom Disorders, SSD) 患者通常经历多种躯体症状并且合并多种心理问题, 严重影响日常功能并增加自杀风险。SSD 患者在识别自己情绪、表达感受和症状相关的思维方面存在缺陷, 但目前缺乏对 SSD 特定的适应性或非适应性情绪调节的综合分析。因此本研究通过系统综述和 Meta 分析探究和揭示 SSD 的各情绪调节维度是否受损及其效应大小。

方法 研究检索 PubMed、PsycINFO、Web of Science 和 Cochrane Library 四个数据库, 时间范围从建库至 2023 年 7 月 17 日。纳入报告 SSD 患者和健康对照组情绪调节差异或 SSD 症状与情绪调节相关系数的研究。文献筛选、数据提取、质量评价均由两人独立进行并达成一致。采用 Comprehensive Meta-Analysis 软件进行 Meta 分析, 效应量以 Hedges's g 表示, 使用 I^2 检验评估异质性, 并进行敏感性分析。(PROSPERO 注册号 CRD42023465911)

结果 共纳入 14 项研究, 包括 1097 名参与者 (725 名患者和 372 名健康对照)。根据纳入研究所用情绪评估量表提取 10 个维度。对于自我效能信念维度, 随机效应模型显示出较大的负效应量 (Hedges's $g = -1.344$, $p < 0.001$)。意识/识别情绪能力下降与 SSD 存在中到高等效应尺度的关联 (Hedges's $g = -0.740$, $p < 0.001$)。情绪清晰度下降与 SSD 也显示出中到高效应量的关联(随机效应, Hedges's $g = -0.760$, $p < 0.001$)。容忍情绪、描述情绪的能力、认知重评维度均与 SSD 显示中等效应量的关联(Hedges's g 分别为 -0.547 , -0.479 , -0.451)。接受情绪维度与 SSD 的呈现边缘显著的关联 (Hedges's $g = -0.610$, $p = 0.050$)。SSD 的灾难思维、表达抑制和外向性思维三个维度没有显著改变。随机效应模型进一步验证适应性情绪调节 (意识/识别情绪、描述情绪、情绪清晰度、接受情绪、容忍情绪、自我效能信念和认知重评) 与 SSD 存在显著负相关 (Hedges's $g = -0.618$)。非适应性情绪调节 (灾难思维、表达抑制) 与 SSD 无相关。

结论 SSD 存在适应性情绪调节能力, 包括情

绪的意识/识别、描述、清晰度、接受、容忍、自我效能信念和认知重评各维度的下降。研究没有发现非适应性情绪调节与 SSD 之间存在显著关联。临床对 SSD 患者予以心理治疗, 可发展或提升患者的适应性情绪调节、而不是解决非适应性情绪调节策略, 可能更有效。

关键词: 躯体症状障碍, 情绪调节, 情绪失调, Meta 分析

The Association Between Non-High-Density Lipoprotein Cholesterol To High-Density Lipoprotein Cholesterol Ratio (NHHR) and Suicidal Ideation in Adults: A Population-Based Study in The United States

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Objective The ratio of non-high-density lipoprotein cholesterol (non-HDL-C) to high-density lipoprotein cholesterol (HDL-C) (NHHR) serves as a reliable lipid indicator associated with atherogenic characteristics. Studies have indicated a potential connection between suicidality and lipid metabolism. This research aims to investigate any possible association between the NHHR and the emergence of suicidal ideation within the confines of the study

Methods This study examined the association between NHHR levels and suicidal ideation using data from the National Health and Nutrition Examination Survey (NHANES), conducted in the United States spanning 2005 and 2016. Calculation of the NHHR corresponds to the proportion of HDL-C to Non-HDL-C. The Patient Health Questionnaire-9's ninth question was implemented for assessing suicidal ideation. Using subgroup analysis, smooth curve fitting, and multivariate logistic regression analysis, the research was conducted

Results Encompassing a cohort of 29,288 participants, the analysis identified that 3.82% of individuals

reported suicidal ideation. After using multivariable logistic regression and thorough adjustments, elevated NHHR levels were significantly and positively associated with a heightened likelihood of suicidal ideation, according to the findings (odds ratio [OR] = 1.06; 95% confidence interval [CI]: 1.02-1.11; P = 0.0048). Despite extensive adjustment for various confounding factors, this relationship remained consistent. An inverted U-shaped curve was utilized to illustrate the link between NHHR and suicidal ideation among nonsmokers; the curve's inflection point was situated at 7.80. Subgroup analysis and interaction tests (all P for interaction > 0.05) demonstrated that there was no significant influence of the following variables on this positive relationship: age, sex, race, body mass index, education level, married status, hypertension, diabetes, and smoking status

Conclusion Significantly higher NHHR levels were associated with an elevated likelihood of suicidal ideation. Based on these results, it is probable that NHHR may serve as a predictive indicator of suicidal ideation, emphasizing its potential utility in risk assessment and preventive strategies.

关键词: Cross-sectional study, Lipid ratio, NHANES, NHHR, Suicidal ideation

重度抑郁障碍患者躯体化症状的神经影像学研究

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目的 重度抑郁障碍 (MDD) 是最常见的精神障碍之一, 其主要症状为心境低落、兴趣减退、快感缺失、内疚和无价值感, 以及躯体症状。躯体化症状在 MDD 患者中很常见, 且表达丰富, 涉及多器官多系统。伴有躯体症状的患者由于身体症状严重, 疗效差, 伴有躯体症状的重度抑郁障碍患者存在自杀意念和生活质量差的高风险。功能核磁共振成像 (fMRI) 是一种新的研究人脑功能的方法, 具有无创、时间和空间分辨率高的特点, 渐应用于神经科学的多个领域。在阐明高级神经生理和神经心理

活动方式和皮层间的功能联系中起到重要指导作用, 显示了较高的应用价值。本研究旨在基于静息态功能磁共振探讨伴躯体化症状重度抑郁障碍患者脑区活动特点, 以及它们与临床特点之间的相关性。

方法 以社区居民为研究对象。其中符合美国第五版精神障碍诊断和统计手册 (DSM-5) 且躯体化自评量表 (PHQ-15) 评分 ≥ 10 分为 SD 组, 符合诊断但 PHQ-15 评分小于 10 分为 NSD 组, 同期不符合重度抑郁障碍诊断且排除其他精神及躯体疾病且抑郁自评量表 (SDS) 标准评分小于 50 的受试者为健康对照 (HC) 组。49 名受试者全部在飞利浦 3.0T 核磁共振扫描设备上静息态功能磁共振扫描,

扫描当天收集完毕所需临床资料。所有影像数据进行预处理后, 对分数低频振幅 (fALFF)、低频振幅 (ALFF) 及局部一致性 (ReHo)、全脑功能连接 (FC), 比对患者与健康人群的脑区功能活动差异。

结果 SD 组 ReHo 指标在左侧眶部额下回、楔前叶和右侧颞上回、三角部额下回、枕中回较 HC 组、NSD 组显著降低。(2) SD 组的 ALFF 指标下发现在右侧三角部额下回显著降低, fALFF 指标则在右侧额中回和 NSD 组、HC 组相比显著降低。(3) 分析比较三组全脑功能连接矩阵, 得到 8 条差异显著连边。其中 SD 组在右岛叶-右眶部额下回、右楔叶-左距状裂、左角回-右眶部额中回、右壳核-左辅助运动区四条连边中表达了较 HC 组、NSD 组明显升高的功能连接强度。

结论 (1) ReHo 的差异表明, 重度抑郁障碍患者的躯体化症状可能和左侧眶部额下回、楔前叶和右侧颞上回、三角部额下回、枕中回功能活动的时间一致性降低有关。

(2) 在 ALFF 及 fALFF 指标中分别在右侧三角部额下回、额中回出现异常, 表明右侧三角部额下回及额中回的功能活动下降可能导致了重度抑郁障碍患者的躯体化症状。

(3) FC 结果表明 MDD 患者右岛叶-右眶部额下回、右楔叶-左距状裂、左角回-右眶部额中回、右壳核-左辅助运动区四条连接参与调控躯体化症状的发生发展。

关键词: 重度抑郁障碍; 躯体化症状; 静息态功能磁共振; 功能连接; 差异脑区

大学生儿童期虐待与生命质量的关系：人格、生活事件和身心健康的链式中介作用

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目的 验证人格、生活事件和身心健康在大学生儿童期虐待与生命质量的关系中发挥链式中介作用的理论假设。

方法 采取整群抽样选取江苏省某 3 所高校 2363 名大学生，符合儿童期虐待标准者 969 人，使用儿童期虐待史自评量表 (PRCA)、简式大五人格问卷 (NEO-FFI-R)、世界卫生组织生存质量简表 (WHOQOL-BREF)、青少年生活事件量表 (ASLEC)、人口社会经济学资料调查问卷等测试。

结果 构建结构方程模型 II，拟合检验发现，简约适配度指数 $df=4.996 < 5.000$ ， $CN=556 > 200$ ， $PGFI=0.721 > 0.50$ ， $PNFI=0.7821 > 0.50$ ， $PCFI=0.789 > 0.50$ ，饱和模型 $> AIC <$ 独立模型，提示假设模型与样本数据可以契合；绝对适配度指数 $RMSEA=0.041 < 0.050$ ， $GFI=0.965$ ， $AGFI=0.953$ ；增值适配度指数 $NFI=0.956$ ， $RFI=0.946$ ， $IFI=0.964$ ， $TLI=0.956$ ， $CFI=0.964$ ，说明模型适配度较好，修正模型图 II 可以接受。结构方程模型 II 显示，儿童期虐待通过人格 ($S\beta=-0.376$ ， $P < 0.01$ ； $S\beta=0.709$ ， $P < 0.01$)、生活事件 ($S\beta=0.274$ ， $P < 0.01$ ； $S\beta=0.046$ ， $P < 0.05$)、身心健康 ($S\beta=0.172$ ， $P < 0.01$ ； $S\beta=-0.242$ ， $P < 0.05$) 间接地影响大学生的生命质量，通过人格间接地影响生活事件 ($S\beta=-0.490$ ， $P < 0.01$)、身心健康 ($S\beta=-0.852$ ， $P < 0.01$)，对生命质量无直接影响效应；人格即直接地影响生命质量 ($S\beta=0.709$ ， $P < 0.01$)，又通过生活事件 ($S\beta=-0.490$ ， $P < 0.01$ ； $S\beta=0.046$ ， $P < 0.05$)、身心健康 ($S\beta=-0.852$ ， $P < 0.01$ ； $S\beta=-0.242$ ， $P < 0.05$) 间接地影响生活质量。

结论 人格、生活事件和身心健康在大学生儿童期虐待与生命质量之中发挥链式中介作用，人格的效应最强，生活事件的效应最弱。

关键词：儿童期虐待；生命质量；大学生；人格；生活事件；身心健康

Distinct Trajectories of Psychotic-Like Experiences and Their Associations with Violent

Behavior Among 3539 Young Adults: A 3-Year Prospective Cohort Study

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Objective Violence may be linked to psychotic-like experiences (PLEs). However, relevant research is still limited, especially in general population. Therefore, we aimed to identify trajectories of PLEs and examine whether specific trajectories were related to violent behavior in a 3-year cohort study

Methods We developed a prospective cohort study and collected data in 2020 (T0), 2021 (T1), and 2022 (T2) in Guangzhou, China. A total of 3539 university students from two universities were included and completed self-report questionnaires to assess PLEs, violent ideation, violent threats, and violent acts. Socio-demographic and clinical factors were assessed and considered as confounding factors. We used growth mixture modeling to identify trajectories of PLEs. Associations between PLEs trajectories and violent behavior were examined using binary logistic regression

Results At T2, 162 (5.3%) participants had violent behavior. We identified three distinct trajectories: low stable trajectory, low increasing trajectory, and high decreasing trajectory. The binary logistic regression models revealed that the high decreasing (OR: 2.46, 95%CI: 1.60-3.72) group and the low increasing (OR: 11.7, 95%CI: 7.62-17.9) were associated with higher violent risk compared to the low stable group after controlling for baseline socio-demographic and clinical factors

Conclusion Our study delineated three distinct trajectories and indicated that PLEs trajectories are related to subsequent violent ideation and violent acts. The results provide crucial clarifications regarding the nature of the associations between PLEs trajectories and violence over time.

关键词：psychotic-like experiences, aggression, trajectories, college students

Gender Differences in The Association Between Lipid Metabolism Abnormalities and Suicide Behavior in Young Adults with Major Depressive Disorder Background

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Objective This study aimed to investigate the prevalence of lipid metabolism abnormalities among young adults diagnosed with Major Depressive Disorder (MDD) and to explore the association between these abnormalities and suicide attempts, with a focus on gender differences

Methods In this cross-sectional study, 1,289 young adults with first-episode, drug-naïve MDD were assessed. Sociodemographic and clinical characteristics, along with biochemical indices, were collected. Depression and anxiety symptoms were evaluated using the Hamilton Depression Rating Scale (HAMD) and the Hamilton Anxiety Rating Scale (HAMA), respectively. Psychotic symptoms were measured using the Positive and Negative Syndrome Scale (PANSS). Additionally, blood pressure, Body Mass Index (BMI), lipid levels, and thyroid function were measured. Logistic regression analyses were conducted separately for male and female participants to identify factors associated with suicide attempts

Results Significant differences were observed between individuals with and without suicide attempts in terms of total cholesterol, triglycerides, High-Density Lipoprotein Cholesterol (HDL-C), Low-Density Lipoprotein Cholesterol (LDL-C), Fasting Blood Glucose (FBG), and Thyroid-Stimulating Hormone (TSH) levels ($p < 0.001$). In male MDD patients, lower educational level, higher anxiety levels, higher BMI, and elevated TSH levels were significant predictors of suicide attempts, with an Area Under the Curve (AUC) of 0.822. In female MDD patients, being unmarried, having a longer duration of illness, higher levels of anxiety and depression, lower PANSS scores, higher systolic blood

pressure, and elevated TSH levels were associated with suicide attempts, with an AUC of 0.837

Conclusion This study provides evidence for the association between lipid metabolism abnormalities and suicide attempts in young MDD patients, highlighting significant gender differences. Men with lower education, more severe anxiety symptoms, higher BMI, and elevated TSH levels are at greater risk for suicide attempts. Women who are unmarried, have a longer illness duration, more severe symptoms of depression and anxiety, and elevated TSH levels are also at higher risk. These findings underscore the importance of considering gender-specific factors in the clinical management of MDD and suggest potential value in targeted prevention and intervention strategies.

关键词: Major Depressive Disorder, Lipid Metabolism Abnormalities, Suicide Attempt, Gender Differences, Young Adults

Susceptibility Mechanisms for Analyzing Depressive Symptoms in Differently Disadvantaged Children From An Integrative Perspective: A Network Analysis and Network Comparison

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Objective The aim of this study was to investigate the network structure of depressive symptoms in disadvantaged children and adolescents and the network differences between them and nondisadvantaged individuals

Methods We classified disadvantaged children from an integrated perspective, taking full account of sociodemographic factors and environmental risks. Latent profile analysis was used to identify environmental risk categories. Network analysis was used to examine the interrelationships between 27 symptoms of the Children's Depression Inventory (CDI) and to identify the core symptoms. We evaluated network structure and

global strength between different groups. If the difference in network structure was significant, the edge (connection) strength was evaluated

Results A total of 4574 children completed the survey. Combined with the results of the latent profile analysis, disadvantaged children were classified into four categories as follows: the basic disadvantaged group, the environmental risk group, the doubly disadvantaged group and the nondisadvantaged group. There was a significant difference in the incidence of depression between the different groups, with the lowest incidence in the nondisadvantaged group(15.8%) and the highest incidence in the doubly disadvantaged group(52.72%). There was a significant difference between the network structure of depressive symptoms in the doubly disadvantaged and nondisadvantaged groups, with specific differential edges centered on the entries for self-esteem and interpersonal relationships. The global connectivity of the network was similar for the different groups

Conclusion The results revealed that children with disadvantages have a greater incidence of depression. The core node of the depressive symptom network focuses on negative emotions. The susceptibility characteristics of depressive symptom networks focused on network structure, including specific edges of “self-esteem” and “relationships”, rather than the global connectivity of the network.

关键词: depression; disadvantaged children; network analysis

非自杀性自伤青少年父母照护能力评估量表的编制及信效度检验

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目的 编制适合我国非自杀性自伤 (Non-Suicidal Self Injury, NSSI) 青少年患者父母照护能力的评估量表, 并验证其信效度。

方法 以美国学者 Farran 照顾者技能模型为理论框架, 通过文献回顾结合对存在 NSSI 照护者半结构化深入访谈结果, 初步构建量表的分量表、维度及条目池。通过专家函询法、预调查、项目分析、探索性因子分析筛选及修改条目、确定分量表维度, 形成正式量表。采用方便抽样法对 310 例非自杀性自伤 (NSSI) 青少年父母照顾者进行调查, 对预试量表进行项目分析和信效度检验。

结果 非自杀性自伤青少年患者父母照顾能力评估量表包含知识、态度、行为、对资源的利用, 4 个维度, 共 26 个条目。探索性因子分析提取 4 个公因子, 累计方差贡献率为 61.123%。验证性因子分析结果显示, 模型拟合良好, 问卷因子结构稳定。问卷总体内容效度和各条目内容效度均为 1.00。问卷总的 Cronbach's α 系数为 0.923, 各维度的 Cronbach's α 系数为 0.947~0.972。

结论 该研究编制的非自杀性自伤父母照顾能力评估量表具有良好的信效度, 可有效评估非自杀性自伤青少年父母的照护能力水平。

关键词: 青少年; 非自杀性自伤; 父母; 量表

Prevalence and Associated Factors of Suicide Attempts in First-Episode Drug-Naïve Major Depressive Disorder with Comorbid Metabolic Syndrome: A Gender Differences Study

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Objective Gender differences in major depressive disorder (MDD) are well-documented; however, gender-specific risk factors for suicide attempts in first-episode drug-naïve (FEDN) MDD patients with comorbid metabolic syndrome (MetS) remain underexplored. This study aimed to investigate the prevalence and clinical correlates of suicide attempts in FEDN MDD patients with MetS and examine potential gender differences

Methods This cross-sectional study included 390 FEDN MDD patients with comorbid MetS (106 males and 284 females). Demographic and clinical data

were collected, including illness duration, Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), Positive and Negative Syndrome Scale (PANSS) scores, thyroid function parameters, blood pressure, lipid profiles, and fasting blood glucose (FBG) levels. Descriptive statistics, chi-square tests, ANOVA, and binary logistic regression analyses were performed to assess relationships among gender, suicide attempts, and clinical characteristics, and to explore gender-specific risk factors

Results The prevalence of suicide attempts was significantly associated with multiple clinical variables. HAMD, HAMA, and PANSS positive subscale scores were significantly correlated with suicide attempts, indicating that the severity of depressive and anxiety symptoms is closely linked to suicidal behavior. Elevated levels of TSH and TPOAb were observed in patients with suicide attempts, suggesting a potential role of thyroid autoimmunity. Both systolic and diastolic blood pressures were significantly associated with suicide attempts, highlighting the relevance of cardiovascular health. Total cholesterol and LDL-C levels were significantly associated with suicide attempts in female patients, while LDL-C levels were similarly correlated in male patients. Additionally, FBG levels were elevated in patients with suicide attempts, indicating a potential link with metabolic disturbances and abnormal glucose metabolism

Further analysis revealed that, while specific risk factors varied between genders, the overall pattern of suicide attempt risk factors showed minimal gender differences. HAMA scores, TPOAb levels, and lipid profiles were significant predictors of suicide attempts in both male and female patients.

Conclusion This study elucidates the prevalence and associated factors of suicide attempts in FEDN MDD patients with comorbid MetS, revealing minimal gender differences in risk factors. Clinical treatment should consider the influence of HAMA scores, TPOAb levels, and lipid profiles on suicide attempt risk, as these factors were significant across genders. These findings provide scientific evidence for developing targeted suicide prevention strategies. Future research should further explore the biological mechanisms underlying

these clinical characteristics and integrate them into clinical assessment and intervention.

关键词: Major Depressive Disorder, Suicide Attempts, Metabolic Syndrome, Gender Differences, Clinical Characteristics, Predictive Factors

Prevalence and Associations of Functional Remission in Patients with Schizophrenia: A Large Cross-sectional Study in China

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Objective In recent years, the concept of schizophrenia rehabilitation has evolved from symptom alleviation to functional recovery. However, little is known about the functional remission status of schizophrenia patients in developing countries, and there is a lack of data on factors associated with functional remission. This study aims to determine the functional remission rate of schizophrenia patients in China and investigate clinical and biological parameters related to impaired functional remission

Methods This cross-sectional study involved schizophrenia outpatients and inpatients from ten Chinese mental health institutes. Trained investigators interviewed the participants using the Mini International Neuropsychiatric Interview version 7.0.2 to confirm the diagnosis of schizophrenia according to DSM-5 criteria. Functional remission was defined by a Global Assessment of Functioning score ≥ 61 . Psychopathology was evaluated using the Positive and Negative Syndrome Scale (PANSS). Symptom severity over the last seven days was assessed using the Clinical-Rated Dimensions of Psychosis Symptom Severity (CRDPSS). Sociodemographic characteristics, clinical information, biochemical, and hematologic indicators were recorded

Results The study included 2652 patients with schizophrenia, with 486 (18.3%) identified as having functional remission. The three-factor structure of CRDPSS included positive symptoms, deficit/motor

symptoms, and mood symptoms. A lower rate of functional remission was associated with higher neutrophil percentage (OR = 0.977, $p = 0.015$), higher hemoglobin levels (OR = 0.983, $p = 0.015$), higher alanine aminotransferase levels (OR = 0.983, $p = 0.026$), higher PANSS positive scores (OR = 0.873, $p < 0.001$), higher PANSS negative scores (OR = 0.923, $p < 0.001$), and higher deficit/motor symptoms scores (OR = 0.749, $p < 0.001$)

Conclusion Recovery remains a challenging goal for the majority of individuals with schizophrenia. We found that neutrophils, hemoglobin, ALT, positive symptoms, negative symptoms, and deficit/motor symptoms are associated with impaired functional remission. Future research should focus on multidimensional perspectives, evaluating various clinical and psychosocial dimensions to identify factors influencing functional remission in schizophrenia patients.

关键词: Recovery, Schizophrenia, Functional remission, Predictors

空军散偏远部队官兵应对方式与生命意义感网络分析

于欢 何宁*
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目的 探索空军散偏远部队官兵应对方式与生命意义感网络的结构特征和核心项目,为从更加细粒度视角加深理解其应对方式与生命意义感和相关干预提供参考。

方法 整群抽样空军“分散、偏僻、远离城市”部队官兵 572 名,使用简易应对方式问卷 (Simplified Coping Style Questionnaire, SCSQ) 和生命意义感量表 (Meaning in Life Questionnaire, MLQ) 测评,采用数据驱动网络分析法构建空军散偏远部队官兵应对方式与生命意义感网络,使用软件 R 及 qgraph、networktools、bootnet 等功能包进行统计分析和可视化,并使用节点预期影响 (Expected Influence, EI) 和桥预期影响 (Bridge Expected influence, BEI) 指标以量化各节点中心性和传递性等特征。

结果 在散偏远部队官兵应对方式与生命意义

感网络中,项目之间具有广泛的联系 (有效边占比 47.19%); C15“认为时间会改变现状,唯一要做的便是等待”和 C16“试图忘记整个事情”(边权值=0.430)、C3“尽量看到事物好的一面”和 C4“改变自己的想法,重新发现生活中什么重要”(边权值=0.340)、C9“改变原来的一些做法或自己的一些问题”和 C10“借鉴他人处理类似困难情景的办法”(边权值=0.310) 具有最为紧密的关联; C10“借鉴他人处理类似困难情景的办法”(EI=1.277)、C7“找出几种不同解决问题的方法”(EI=1.237) 和 C9“改变原来的一些做法或自己的一些问题”(EI=1.167) 具有最高的预期影响; P“生命意义感知”(BEI=0.408)、S“生命意义追求”(BEI=0.258) 和 C11“寻求业余爱好,积极参加文体活动”(BEI=0.156) 具有最高的桥预期影响。

结论 空军散偏远部队官兵应对方式与生命意义感具有特有的网络结构,这可能是由特殊军事职能任务和作业环境共同导致。针对“借鉴他人处理类似困难情景的办法”“找出几种不同解决问题的方法”和“改变原来的一些做法或自己的一些问题”进行干预可能对提升官兵应对方式与生命意义感产生最广泛的获益;通过干预“生命意义感知”可以在最大程度上影响应对方式,通过“寻求业余爱好,积极参加文体活动”可以在最大限度上改善生命意义感。本研究为提升空军散偏远部队官兵心理健康做出有益探索。

关键词: 散偏远,官兵,应对方式,生命意义感,网络分析

Association between Stress and Depressive Symptoms Among Chinese University Students: A Moderated Mediation Analysis

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Objective University students undergo a transformative period of personal growth and face various pressures. These pressures are closely related to an individual's mental health, particularly their connection with depressive symptoms. Currently, the detection rate of depression risk among university students is up to 21.48%, which indicates that the mental health issues of

university students urgently need attention and research. Previous studies have found that the relationship between stress and depression is not a direct linear one but is shaped by the combined effects of individual psychological characteristics and external environmental factors. In the university environment, peer relationships, as an essential aspect of external environmental factors, significantly impact individuals' mental health and cannot be ignored. This study aims to explore the connection between stress and depressive symptoms in university students. It also seeks to investigate the role of psychological resilience and peer relationships as mediators in this connection and to determine whether an only child has a potential moderating effect on these relationships

Methods A total of 1701 university students from Shanghai Jiao Tong University completed the Patient Health Questionnaire-9 (PHQ-9), the Perceived Stress Scale (PSS-10), the Connor-Davidson Resilience Scale (CD-RISC-25), and the Peer Relationship Self-assessment. SPSS 27.0 and Stata 18.0 were used to process the data

Results (1)Stress has a significant positive predictive effect on depression ($\beta=0.55$, $t=22.27$, $P<0.01$), with students' gender, grade, and major as covariates; (2)Psychological resilience partially mediated the relationship between stress and depression (effect size=0.108, proportion of mediating effect=15.78%, 95% bootstrap confidence interval [0.0646, 0.1529]); (3)Peer relationships also partially mediated the relationship between stress and depression(effect size=0.0088, proportion of mediating effect=1.29%, 95% bootstrap confidence interval [0.0023,0.0175]); (4) Psychological resilience and peer relationships exhibit the chain mediating effect between stress and depression(effect size = 0.0216, proportion of mediating effect=3.16%,95% bootstrap confidence interval [0.0098,0.0354]); (5) Being an only child not only exerts a negative moderating effect on the relationship between stress and psychological resilience (effect size=-0.0709, $P<0.05$), but also plays a positive moderating role in the association between stress and depression (effect size=0.0768, $P<0.05$). Further simple slope analysis revealed that non-only

children demonstrate a decreasing trend in the predictive effect of stress on psychological resilience(simple slope=-0.75, $t=-28.75$, $P<0.01$), with a greater magnitude of decline than only children(simple slope=-0.68, $t=-30.59$, $P<0.01$); Non-only children exhibit an increasing trend in the predictive effect of stress on depression(simple slope=0.59, $t=18.35$, $P<0.01$), with a greater magnitude of increase compared to only children(simple slope=0.51, $t=18.37$, $P<0.01$)

Conclusion Stress can directly affect the level of depression among university students and also indirectly influence their depression levels through the chain mediating roles of psychological resilience and peer relationships. The status of being an only child exerts moderating effects on both the direct predictive relationship between stress and depression and the mediating roles of psychological resilience and peer relationships in their association. Compared to only children, non-only children are more susceptible to competition for family resources and uneven parental attention, which may lead to a lower level of psychological resilience and a higher vulnerability to depression when facing stress due to such family environments. Enhancing psychological resilience and peer relationships can alleviate the level of depression among university students. Meanwhile, the university student population of non-only children needs greater attention

关键词: university students, depression, stress, chain mediating effect, moderating effect

青少年屏幕时间对抑郁症状的影响：生命意义感的中介作用

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目的 探讨青少年屏幕时间与抑郁症状的关系, 以及生命意义感在青少年屏幕时间和抑郁症状之间的中介作用, 为提升青少年群体心理健康的预防干预提供理论依据。

方法 数据来源于 2023 年开展的“广东省青少年心理健康素养和服务需求调查”，共纳入初高中青少年有效样本数 5759 例。采用自编调查表收集青少年的一般人口学资料，采用抑郁症自我评估量表（CES-D）、生命意义感量表（MLQ）分别评定青少年的抑郁症状和生命意义感水平。采用 Pearson 相关分析进行相关性分析，采用 SPSS 25.0 宏程序 PROCESS 2.16 检验生命意义感在青少年屏幕时间和抑郁症状之间的中介效应。

结果 广东省初高中青少年的屏幕时间在 0-2 小时、2-4 小时、4-6 小时、6-8 小时、超过 8 小时各时段占比分别为 67.0%、20.1%、8.0%、2.8%、2.1%，抑郁症状评分（ 7.81 ± 5.01 ）分，生命意义感评分（ 48.09 ± 10.29 ）分。屏幕时间、抑郁症状、生命意义感两两之间均存在显著相关（ $p < 0.001$ ）。屏幕时间负向预测生命意义感水平（以屏幕时间在 0-2 小时为参照水平， $\beta_{2-4h} = -0.889$ ， $p < 0.05$ ； $\beta_{4-6h} = -3.019$ ， $p < 0.001$ ； $\beta_{6-8h} = -3.525$ ， $p < 0.001$ ； $\beta_{>8h} = -3.919$ ， $p < 0.001$ ），生命意义感负向预测抑郁症状的严重程度（ $\beta = -0.120$ ， $p < 0.001$ ）。Bootstrap 法检验结果显示，模型总效应显著（ $p < 0.001$ ），中介效应显著（95%CI: -0.002 至 -0.001）。以屏幕时间在 0-2 小时为参照水平，生命意义感在屏幕时间 2-4 小时、4-6 小时、6-8 小时、超过 8 小时对抑郁症状的影响的中介效应分别占总效应的 5.4%（95%CI: 0.029 至 0.186）、17.0%（95%CI: 0.242 至 0.487）、15.3%（95%CI: 0.222 至 0.625）、12.0%（95%CI: 0.230 至 0.725）。

结论 生命意义感在青少年屏幕时间与抑郁症状之间起部分中介作用。青少年屏幕时间增加，会降低生命意义感水平，进而影响抑郁症状的严重程度。可通过减少青少年的屏幕时间，增强生命意义感，从而缓解抑郁症状，促进青少年群体的心理健康。

关键词：青少年 屏幕时间 抑郁症状 生命意义感

A Systemic Review of Implicit Stigma Toward People with Mental Illness Among Different Groups: Measurement, Extent and Correlates

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Objective Implicit association tests have been extensively applied to reveal socially unacceptable and concealed stigma. Several studies have only explored the implicit attitudes toward mental illness within specific groups, whereas comparisons across different groups have not been conducted. To explore the implicit stigma toward mental illness among different groups and the correlation between implicit and explicit measurements

Methods Based on PRISMA guidelines, Web of Science, Embase, PubMed/MEDLINE, Cochrane Library and PsycINFO were searched for peer-reviewed articles from inception until 18 April 2024. The Medical Education Research Quality Instrument (MERSQI) was utilized for quality evaluation and Stata 12.0 software was used to perform a meta-analysis

Results Fifty studies met the inclusion criteria for the systematic review, and thirty were included for the meta-analysis. The majority of the included studies used the concept words “mental illness” and general terms related to physical illnesses, while utilizing emotionally contrasting words as attribute words. Furthermore, the implicit effect was calculated based on an improved algorithm in twenty-eight studies. A total of thirty-eight studies were conducted to investigate the correlation between explicit and implicit measurement results. Standardized mean differences (SMD) for groups’ implicit stigma were evaluated by random-effect models. The pooled SMD revealed lower D scores in general population (SMD = 0.79, 95% CI = 0.71 ~ 0.88, $P < 0.001$), and others was followed by healthcare provider (SMD = 1.09, 95% CI = 1.00 ~ 1.18, $P = 0.054$), student (SMD = 1.17, 95% CI = 1.10 ~ 1.24, $P < 0.001$) and people with mental illness (SMD = 1.20, 95% CI = 0.93 ~ 1.53, $P < 0.001$), in ascending order

Conclusion The findings indicated a lack of standardization in the selection of conceptual and attribute words for implicit stigma measurement, as well as inconsistent data processing criteria. There was not a reliable correlation between implicit and explicit measurements. Moreover, the general population exhibited the most positive implicit stigma toward mental illness. In stark contrast, the attitude of individuals with mental

illness was considerably negative. Further studies on targeted anti-stigma interventions for different groups of mental illness are needed, particularly based on the perspective of implicit stigma.

关键词: Mental illness, Implicit stigma, Implicit association test, Systemic review, Meta-analysis

The Relationship between Parental Rearing Styles and Social Adaptation in Schizophrenia: The Mediating Role of Personality and Impulsiveness

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Objective The influencing factors of social adaptation of patients with schizophrenia have always been the focus of attention and extensive discussion. Previous studies suggest that parental rearing style may be an important factor affecting the social adaptation of patients with schizophrenia. At present, there are few studies on how parental rearing styles affect the social adaptation of schizophrenia. our research focuses on the role of personality and impulsive behavior in rearing styles affecting social personality, and further explores the relationship among the three

Methods Our study included 547 patients with schizophrenia and collected their general demographic data, parental rearing style questionnaire, Barratt Impulsiveness Scale, Eysenck Personality Questionnaire and social adaptability questionnaire. Statistical analysis using SPSS-24.0 and AMOS software

Results The scores of negative parental rearing styles of parents of schizophrenic patients with weak social adaptation were higher than those of patients with strong social adaptation and the scores of psychoticism (64.52 ± 17.02 VS. 59.82 ± 17.85 ; $P=0.014$), neuroticism and attentional impulsiveness of patients with weak social adaptation were higher than those of patients with strong social adaptation. The score of extroversion in the strong social adaptation group was significantly

higher than that in the weak adaptation group ($t=-3.84$, $P<0.001$). Negative parental rearing styles was positively correlated with psychoticism and attentional impulsiveness, and negatively correlated with social adaptation ($r=-3.007$, $P=0.003$), psychoticism and attentional impulsiveness were negatively correlated with social adaptation ($r=-3.738$, $P<0.001$; $r=-2.114$, $P=0.035$)

Conclusion Our study found that the social adaptation of patients with schizophrenia may be related to their parental rearing styles, personality and impulsive behavior. Among them, positive parental rearing styles and psychoticism may be the protective factors of social adaptation. Through the construction of the model, we found that psychoticism and attentional impulsiveness may be the mediate factors between negative parental rearing styles and social adaptation in patients with schizophrenia.

关键词: social adaptation, parental rearing style, personality, impulsiveness, mediation analysis

Structural Neuroimaging Changes in Individuals at High Risk for Psychosis (HR) and Patients with First Episode Schizophrenia (FEP) in Comparison To Healthy Controls

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Objective Evidence of structural neuroimaging changes on the prodromal stage of psychosis remains limited and inconsistent. A better understanding of morphological brain differences could potentially lead to the development of early diagnosis of high risk for psychosis, helping to understand the possible mechanisms of transformation into mental disorders such as schizophrenia

Methods In this study, 35 individuals with high risk for psychosis (HR), 25 with first-episode patients with schizophrenia (FEP), and 22 for healthy controls (HC) underwent face-to-face clinical interviews and

psychiatric symptom assessments. Structural magnetic resonance imaging (sMRI) data were acquired

Results The results demonstrated that HR group showed a significant reduction in the folding index in the left rostral anterior cingulate cortex compared to the HC group. FEP group exhibited a significant reduction in curvature index, folding index, surface area, cortical thickness, and volume in the left frontal pole, right cuneus cortex, right pars triangularis, bilateral entorhinal cortex, left para-hippocampal gyrus, and bilateral temporal pole compared to the HR and HC groups

Conclusion To conclude, gray matter abnormality could serve as a neuroimaging biomarker for the occurrence and development of psychosis. Further comprehensive researches are necessary to identify more promising biomarkers, facilitating early detection and intervention for susceptibility to psychosis.

关键词: prodromal stage of psychosis; ultra-high risk for psychosis (UHR); structural magnetic resonance imaging (sMRI); gray matter abnormality; neuroimaging biomarker; early detection and intervention

Unveiling The Causal Impact of Lipid Metabolic Traits on Alzheimer's Disease: Comprehensive Evidence From Phenome-wide Mendelian Randomization and Neuroimaging Analysis

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Objective Our objective was to systematically investigate phenotypes causally associated with Alzheimer's disease (AD) across the phenome and perform validation using independent data

Methods We employed data from extensive genome-wide association studies (GWAS) to identify ge-

netic proxies for more than 860 disease phenotypes using the FinnGen R9 database. We performed a phenome-wide two-sample Mendelian Randomization (MR) analysis to identify phenotypes causally associated with AD. The subsequent analysis aimed to investigate the impact of various components of metabolic syndrome (MetS) on AD. Additionally, using the screened lipid metabolism phenotypes, we utilized data from the Alzheimer's Disease Neuroimaging Initiative (ADNI) to validate the effects of different lipid metabolism indicators on AD risk, brain phenotypes, and cognitive function. Moreover, we provided additional clarification regarding the association between lipid metabolism indicators and the subregional structure of the medial temporal lobe using authentic brain imaging data from ADNI

Results Our MR analysis identified 54 disease phenotypes causally associated with AD, including any mental disorder, delirium, and six metabolic disease-related phenotypes (metabolic disorders, pure hypercholesterolemia, hyperlipidemia, disorders of lipoprotein metabolism and other lipidemias, statin, and disorders of lipoprotein metabolism). Subsequent analysis of indicators related to MetS revealed a significant correlation between lipid metabolism abnormalities and the risk of AD. Specifically, within lipoproteins, low-density lipoprotein (LDL) exhibited significant effects on AD (OR: 1.05, 95% CI: 1.03-1.07). Using data from ADNI, indicators associated with LDL showed significant correlations with the risk of AD, as well as hippocampal and entorhinal volumes, and cognitive function. At the subregional level, a significant negative correlation was observed between the increased cholesterol to total lipids ratio in small LDL particles and the structures of the entorhinal-hippocampal complex. Among cognitive normal individuals, the group with higher LDL indicators exhibits smaller volumes of the hippocampus-amygdala transition area (HATA, $t = -2.30$, $P = 0.022$) and CA3 head ($t = -2.38$, $P = 0.018$). Among individuals with mild cognitive impairment, the group with higher LDL indicators shows a smaller surface area of the entorhinal cortex ($t = -2.35$, $P = 0.019$)

Conclusion Besides the causal effects of mental disorders and some neurological conditions on AD, our

study demonstrated a causal relationship between disturbances in lipid metabolism and AD. More specifically, indicators associated with LDL significantly increase the risk of developing AD, while also exerting negative effects on cognitive function and the brain phenotypes of the medial temporal lobe.

关键词: Alzheimer's disease, Mendelian randomization, Metabolic syndrome, Low-density lipoprotein, Hippocampus

基于限制性立方样条分析中高强度体力活动与抑郁情绪之间的关联

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目的 抑郁情绪是一种常见的心理行为问题, 其发生率逐年上升, 但普遍预防意识淡薄。抑郁情绪严重影响患者生活质量, 其伤残率和死亡率较高。研究表明, 适度的体育锻炼和身体训练有助于肌肉中糖原的储存, 同时通过运动释放的多巴胺和肾上腺素能够缓解身心压力, 使心情愉悦。适量合理的中高强度身体活动(MVPA)与抑郁情绪的改善密切相关。本研究旨在通过数据整理和相关分析, 确证成年人中高强度体力活动与抑郁情绪之间的剂量效应关系, 为提高其生活质量及抑郁情绪的预防和改善提供依据。

方法 本研究选取了美国国家营养与健康调查数据库(NHANES)2017-2018年的人口统计学、中高强度体力活动和抑郁状况数据, 中高强度体力活动基于全球身体活动问卷(Global physical activity questionnaire, GPAQ)评估测量; 通过9项患者健康问卷抑郁量表(Patient health questionnaire, PHQ-9)评估受试者的抑郁状况; 数据分析采用SPSS 28.0进行卡方检验比较各组之间的差异使用多因素Logistic模型和限制性立方样条(Restricted cubic spline, RCS)模型分析成年人中高强度体力活动与抑郁情绪之间的相关性和剂量效应关系。

结果 1)共纳入5416名20岁及以上的成年人(男2622, 女2794), 平均年龄为(51.00±17.49)

岁。其中抑郁情绪者1393例, 发生率达25.7%; 2)在人口统计学特征中, 不同性别、种族、文化程度、婚姻状况、BMI的参与者抑郁情绪检出率差异均有统计学意义($\chi^2=38.992, P<0.001$; $\chi^2=28.802, P<0.001$; $\chi^2=33.706, P<0.001$; $\chi^2=79.188, P<0.001$; $\chi^2=16.030, P<0.001$; $\chi^2=80.116, P<0.001$), 不同年龄参与者抑郁情绪检出率差异没有统计学意义($P=0.383$)。3)MVPA与抑郁情绪呈负相关(OR=0.64, 95%CI: 0.41~1.00, $P=0.05$)。4)RCS模型分析显示, 中高强度体力活动与抑郁情绪之间存在显著的非线性剂量效应关系。具体剂量效应关系显示, 每周进行30至90分钟的MVPA显著降低抑郁情绪风险, 但超过120分钟后, 风险降低的幅度趋于平缓。

结论 美国成年人群中抑郁情绪的总体发生率为25.7%; MVPA时间不足是增加成年人抑郁情绪发生风险的重要因素, 适度的增加MVPA可以降低抑郁情绪的发生风险; 进一步证实MVPA与抑郁情绪之间存在明确的剂量效应关系, 即每周进行30至90分钟的MVPA可以有效降低抑郁情绪风险。

关键词: 关键词: 身体活动; 抑郁; NHANES; 限制性立方样条; 剂量效应关系

Association between Midday Napping and Long-term Trajectories of Cognitive Function Among Middle-aged and Older Chinese Adults

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Objective The prevalence of dementia has become an increasingly important public health priority. This study investigated the association between midday napping and long-term trajectories of cognitive function in middle-aged and older Chinese adults

Methods Among 4648 participants aged 45+ years at baseline from the China Health and Retirement Longitudinal Study (CHARLS). Mini-Mental State Examination (MMSE) was used to assess cognitive function. Group-based trajectory modelling (GBTM) was

used to identify long-term trajectories of cognitive function. Multinomial logistic regression model was used to estimate risk ratios (RRs) and 95% confidence intervals (CIs)

Results During the 4-year follow-up period, three distinct long-term trajectories of cognitive function reflected patterns of rapid decline, slow decline, and stable. The risk ratio (95% CI) for rapid cognitive decline was 1.44 (1.04-2.01) for 0 minutes, 1.48 (1.04-2.11) for 31-90 minutes, and 2.15 (1.37-3.37) for >90 minutes compared with midday napping 1-30 minutes. The risk ratio (95% CI) for slow cognitive decline was 1.21 (1.01-1.46) for 0 minutes, 1.25 (1.02-1.53) for 31-90 minutes, and 1.75 (1.33-2.29) for >90 minutes compared with midday napping 1-30 minutes. In addition, the increased risk of cognitive decline that transferred from >90 to 31-90 minutes, switched from 31-90 to >90 minutes, and persisted in >90 minutes compared with midday napping 1-30 minutes, especially rapid cognitive decline

Conclusion There was a longitudinal association between no and long (>30 minutes) midday napping and long-term trajectories of cognitive decline, especially rapid cognitive decline. The study is a 4-year observational in nature and provides limited evidence for establishing causal relationships.

关键词: Midday napping, Cognitive function, Group-based trajectory modelling, CHARLS

双相抑郁风险的列线图识别模型构建

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目的 探索单相抑郁和双相抑郁临床特征的差异, 并建立双相抑郁列线图识别模型。

方法 使用“中国精神障碍队列研究”数据库中的单相抑郁患者 2643 例和双相抑郁患者 250 例, 比较两组患者社会人口学和临床特征资料, 采用 Logistic 回归分析双相抑郁的影响因素, 并构建识别

双相障碍的列线图模型, 通过工作特征曲线 (Receiver Operating Characteristic curve, ROC) 的曲线下面积 (Area Under Curve, AUC)、校准曲线、决策曲线 (Decision Curve Analysis, DCA) 验证模型。

结果 男性、有工作、发作无忧郁特征、BMI 在正常至肥胖范围、有精神病性特征、发作具有混合特征、共患躯体疾病、抑郁发作次数为 4 次及以上、发病年龄更早、病程更长、GAF 得分更高是双相抑郁的危险因素。将以上 11 个变量纳入模型, 所得列线图模型 AUC 为 0.808 (95%CI: 0.780-0.836), Hosmer-Lemeshow 检验结果为 $\chi^2=6.956$ ($P=0.612>0.05$), 校准曲线拟合良好, 模型拟合度良好, DCA 显示模型有良好的临床获益和适用性。

结论 根据筛选后的社会人口学和临床特征相关的影响因素建立的列线图可相对准确地识别双相识别的风险。

关键词: 双相障碍; 双相抑郁; 列线图

荆州市高中学生非自杀性自伤行为的相关因素分析

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目的 本研究旨在探讨荆州市高中学生中的非自杀性自伤 (NSSI) 分布情况, 并分析与之相关的行为特征。

方法 2023 年 9 月-2023 年 11 月, 采用自行整编《“阳光少年”调查问卷》调查工具, 内容包括一般人口学资料问卷及标准化问卷, 采用方便整群抽样在线上用问卷星对荆州市内 7 所高中学生进行调查, 以 6 个月内是否存在 NSSI 为标准。筛选出有效数据 6574 份, 样本有效率 89.53%。

结果 本次调查高中学生的平均年龄 16.06 ± 0.89 岁, 其中男生 3229 人、女生 3345 人, 高一学生 2118 人、高二学生 3221 人、高三学生 1235 人。共检出六个月内存在 NSSI 人群共 368 人, 检出率为 5.60%, 其中男生 124 (3.84%) 人, 女生 244

(7.29%)人。既往在我们 2021 年的调查中显示高中学生 NSSI 检出率为 26.44%，男生检出率为 24.1%、女生检出率为 28.7%。单因素分析显示，NSSI 检出率高与以下单因素存在统计学显著意义 ($P<0.05$)，女性、业余时间未经常参加集体活动、近 1 个月每周锻炼身体的次数小于 2 次和时间小于半个小时、近 1 个月饮食习惯与以前相比有改变、近 1 个月日常饮食追求吃饱而已、近 1 个月较多宵夜、每天业余上网总时长大于 4 小时、存在网瘾、存在失眠、无午休习惯、一般晚上 10 点后入睡、积极看待自己的生命、心理压力高、新冠疫情流行后对身心健康、同伴关系、学习影响的影响、家庭为单亲、重组、留守家庭及其他、父母为非已婚。多因素分析结果显示，在高中阶段，消极看待自己生命 ($OR=6.72$)、有失眠 ($OR=2.24$)、心理压力高 ($OR=2.00$)、受新冠疫情身心健康影响程度较多影响 ($OR=1.84$)、受新冠疫情同伴关系影响程度较少影响 ($OR=1.57$)、近 1 个月饮食习惯与以前相比有改变 ($OR=1.67$)、近 1 个月日常饮食追求为偶尔会注意营养搭配、喜欢吃什么就吃什么及吃饱而已 ($OR=1.75$ 、 $OR=1.77$ 、 $OR=1.57$)、女性 ($OR=1.43$) 的高中生的 NSSI 发生风险显著增加。

结论 本研究发现 NSSI 行为与多种行为和心理因素存在显著关联。女生、饮食习惯改变的学生、有失眠症状的学生、心理压力较大的学生以及受新冠疫情影响较大的学生更容易出现 NSSI 行为。在预防和干预 NSSI 行为时，需要关注学生的性别、饮食习惯、睡眠质量、心理健康状况以及他们所处的社会环境。与 2021 年的调查相比，本次调查显示高中学生的 NSSI 检出率有所下降，这可能与近年来对心理健康问题的重视和干预措施的增加有关。

关键词：非自杀性自伤；高中学生；多因素回归

青少年自伤成瘾等特征与情绪困扰、精神病性症状及创伤应激经历的复杂关系：一项网络分析

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目的 青少年中的故意自伤行为是一个极为严重的健康问题，被认为具有成瘾特质，其疾病负担重大，尤其是在患有精神障碍的青少年中更为突出，更好的了解故意自伤成瘾相关特征与各种社会心理因素之间复杂的相互作用对于自伤的预防有至关重要。本研究旨在探讨自伤成瘾、自伤方式及动机等特征与情绪困扰、精神病性症状以及创伤应激经历等之间的复杂关系。

方法 本研究招募了 394 名 13-19 岁在精神科住院的过去一年有过自伤行为的青少年患者。通过探索性因子分析，我们将调查中记录的多种自伤方式归纳为两个主要类别：使用外部工具的自伤（阻止伤口愈合、刺/捅/戳/扎伤、切割、刻划及吞服药物/其他东西自伤）和利用自身器官的自我攻击（咬伤、拽掉毛发、打自己/用身体碰撞坚硬的物体及摩擦/挤压皮肤）。随后我们评估了自伤成瘾、两种自伤方式及自伤动机（从负性情绪中解脱/为解决与他人问题/获得积极感受）等自伤特征与情绪困扰（焦虑和抑郁）、精神病性症状（偏执及精神病性因子）和童年创伤经历及负性生活事件（青少年生活事件量表）。我们使用网络分析来检查自伤成瘾等特征相关网络结构，并识别中枢症状及桥梁症状，分析各因素相互之间的关系。

结果 整个网络最中心的节点是成瘾特征（强度=1.24），其次依次为精神病性症状、情感虐待、人际关系问题及受惩罚经历，而精神病性症状（桥梁强度=0.757）作为最强的桥梁症状，连接了自伤特征与其他因素。自伤成瘾特征与借助外部工具自伤 ($r=0.381$) 具有最强相关性，且显著高于其与利用自身器官的自我攻击的相关性 ($p<0.05$)。成瘾与三种动机中相关性最强的为从负性情绪中解脱 ($r=0.233$)，高于为获得积极情绪 M3 ($r=0.125$) 及显著高于解决与他人问题动机 ($r=0.117$, $p<0.05$)。成瘾与情绪困扰 ($r=0.096$) 及精神病性症状 ($r=0.081$) 均有直接联系，而创伤应激经历症状群中仅健康适应 ($r=0.069$) 及学习压力 ($r=0.001$) 与成瘾有较弱的直接联系，其他均是间接连接。此外，创伤及应激经历症状群其他因素的联系中，人际关系-精神病性症状 ($r=0.136$) 及健康适应-精神病性症状边权重 ($r=0.123$) 最强。

结论 自伤成瘾特征在关联网络中占据核心地位，借用外部工具的自伤方式可能具有更强的成瘾性，从负性情绪中解脱动机可能更容易成瘾。创伤

应激经历与自伤等特征直接联系较少,但精神病性症状是网络中的最关键桥梁症状,其也可能是创伤应激经历连接自伤相关特征的最重要中介因素之一。这些发现揭示了自伤成瘾特征网络的复杂性,并为精神障碍青少年的自伤预防及干预提供了理论基础。

关键词:青少年,自伤,故意伤害,成瘾特征,网络分析

The Prevalence and Profiles of Adverse Childhood Experiences and Their Associations with Adult Mental Health Outcomes in China

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Objective To characterize the prevalence and the co-occurrence profiles of ACEs in China, to assess the associations between ACEs and mental health outcomes and population attributable fractions (PAFs) of mental health outcomes attributable to ACEs

Methods Cross-sectional nationally representative survey was conducted in mainland China from July 22, 2013 to March 5, 2015. The study population included 9378 respondents aged 18 years or older who completed the ACEs-related interview of this survey. Data analysis was performed from September 1 to November 1, 2023. The twelve ACEs (parental death, parental divorce, other separation from parents, caregiver's mental disorder, caregiver's substance abuse, caregiver's criminality, caregiver's violence, physical abuse, sexual abuse, neglect, serious physical illness, and family economic adversity) measured by fully

structured interview. The weighted prevalence of ACEs was calculated, and co-occurrence profiles of ACEs were determined by latent class analysis. The diagnoses of mental health outcomes were based on the Composite International Diagnostic Interview 3.0 (CIDI), including mood disorder, anxiety disorder, substance-use disorder, and suicide. Logistic regression was used to examine the association of ACEs and mental health outcomes. PAFs were calculated to quantify the contribution of ACEs to mental health outcomes

Results Of the 9378 respondents in this study (mean [SD] age, 49.75 [14.53] years, 5269 females [the weighted proportion, 50.5%]), 2952 (27.1%) respondents reported exposure to at least one ACE and multiple ACEs were common (40.4%) among respondents with any ACEs. The most prevalent ACE was neglect (11.3%), followed by physical abuse (9.1%). Using latent class analysis, four profiles represented co-occurrence patterns of ACEs in the Chinese population were revealed: low risk of ACEs (84.3%), maltreatment (8.9%), caregiver's maladjustment (3.5%), and parental loss (3.4%). Compared to the low risk of ACEs profile, other three profiles were significantly associated with increased risk for mental health outcomes, with the strongest association was observed in the caregiver's maladjustment (OR, 4.99; 95%CI, 3.31-7.54). Estimates of PAFs indicated that all ACEs together explained 37.5% (95%CI, 28.6-45.8) of four mental health outcomes. The prevalence and associations with mental health outcomes were not entirely consistent across genders

Conclusion Overall, it was estimated that more than a quarter of Chinese adults have at least one ACE, with neglect being the most prevalent type. This study identified four distinct profiles of ACEs among Chinese population, with the profiles of caregiver's maladjustment showing the strongest association with mental health outcomes. Approximately one-third of the observed mental health outcomes can be attributed to ACEs. The findings further indicate the interventions that target ACEs profiles to alleviate the impact of distinct mental health would be more effective, and emphasize the importance of paying attention to children's

growth environment, especially during the transition period when the one-child policy has been abolished

关键词: adverse childhood experiences, mental health outcomes, associations, latent class analysis, population attributable fractions

The Association between Cognitive Domains and Suicidal Ideation in Patients with Mild Dementia: The Crucial Role of Judgement Domain

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Objective China has the world's largest population of individuals with dementia, and the suicide mortality rate among the older population aged 65 years and over remains high. Previous studies suggest an association between dementia and suicidal ideation, wherein depressive mood acts as an independent risk factor. This study explores the relationship between different cognitive domains and suicidal ideation among dementia patients

Methods Utilizing data collected in 2023, this study analyzed 4,289 older population aged 65 years and over from Tongliao City, Inner Mongolia. Chi-square tests, logistic regression analysis, and network analysis were used to explore the relationship between suicidal ideation and cognitive domains

Results The findings reveal that dementia was an independent risk factor for suicidal ideation, with depressive mood serving as a mediating factor. Stratified analysis showed that in non-dementia population, deficits in memory, orientation, community affairs, judgment and problem-solving domains were associated with suicidal ideation, while among patients with mild dementia, only impairment in the judgment and problem-solving domain correlated with suicide ideation

Conclusion This study provides valuable in-

sights for developing suicide prevention strategies aiming to increase judgment and problem-solving abilities for older population with dementia, while for general older population, improvement of cognitive functions should be emphasized during the suicide interventions.

关键词: dementia, suicidal ideation, cognitive domains, depression

内蒙古通辽市老年期痴呆的社会成本研究

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目的 从社会角度估算通辽市老年期痴呆的各类疾病成本,并探索社会成本的影响因素。

方法 采用 10/66 老年期痴呆系列研究评估工具诊断老年期痴呆,并收集老年人医疗服务次数、照护者的照护时间或支出,以及照护者的照护痛苦。采用成本比例换算法参考国家统计局年鉴数据估计医疗服务的次均费用,采用人力资本法估算非正式照护者照护时间的单位价值,采用意愿支付法测量照护者痛苦带来的无形成本。以 2023 年为参照年计算老年期痴呆的社会总成本,并使用两部分模型分析成本的影响因素。

结果 本研究共诊断 390 例老年期痴呆患者,人均社会成本为 117877 元/年。其中,非正式照护成本占比最大,达 73.1%。女性患者社会成本比男性患者高 61395 元。照护者受教育程度为小学未毕业的患者社会成本比照护者从未接受教育的患者高 64398 元,照护者是患者的儿媳、女婿或其他亲属的患者社会成本比配偶为照护者的患者低 76637 元。此外,共患脑卒中的患者比没有共患的患者的社会成本高 63008 元,患者每多患有一种慢性病,社会成本增加 5868 元,患者每多一项临床痴呆评分量表非记忆维度损伤,社会成本增加 53997 元。

结论 老年期痴呆导致重大社会经济负担,非正式照护是重要的组成部分。

关键词: 老年期痴呆,疾病成本研究,非正式照护

Exploring The Psychological and Psychosocial Correlates of Non-suicidal Self-injury in Adolescents with Psychotic-like Experiences Using Network Analysis

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Objective Non-suicidal self-injury (NSSI) among adolescents has attracted global attention. Although previous research has revealed a significant association between psychotic-like experiences (PLEs) and NSSI in adolescence, there is currently limited understanding of which psychological and sociopsychological factors are specifically related with NSSI among those with PLEs. Therefore, it is crucial to explore the complex relationship between NSSI and psychopathological characteristics in adolescents with PLEs

Methods This study utilized a sample of 5,159 college students to assess the frequency of PLEs over the past month. Comparisons were conducted on prevalence of NSSI and emotional symptoms between students who reported experiencing PLEs in the past month and those who did not. Finally, a network analysis was employed among students with current PLEs, to investigate the interrelationships between NSSI and various psychological factors (i.e., hopelessness, loneliness) and sociopsychological factors (i.e., perceived social support), with covariates (i.e., depression, anxiety)

Results In comparison to individuals without current PLEs, those with current PLEs exhibited a higher prevalence of NSSI (13.1% vs. 38.5%, $P < 0.001$), alongside relatively higher scores on depression ($\beta = 0.34$, $P < 0.001$) and anxiety symptoms ($\beta = 0.34$, $P < 0.001$). Within the network analysis model adjusting for depression and anxiety symptoms, perceived social support was the only node directly and negatively connected to characteristics of NSSI (the connection to NSSI addiction, edge weight = -0.074). Psychological symptoms including loneliness and hopelessness indirectly affected NSSI through perceived social support. Furthermore, perceived social support was directly and

negatively linked to emotional symptoms and characteristics of NSSI, which showed potential in reducing NSSI tendencies and emotional symptoms

Conclusion Our study first investigates the relationship between NSSI and psychological and sociopsychological factors among PLEs population. It also demonstrates the significant potential of perceived social support in improving NSSI and emotional symptoms. Among this population, which lays a solid foundation for future efforts in NSSI prevention and the development of targeted intervention strategies

关键词: Non-suicidal self-injury, Psychotic-like experiences, Perceived social support, Network analysis.

Quantifying The Importance of Factors in Predicting Non-Suicidal Self-Injury Among Depressive Chinese Adolescents: A Comparative Study Between Only Child and Non-Only Child Groups

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Objective Depression is a major global public health concern, often co-occurring with Non-Suicidal Self-Injury (NSSI). Focused on adolescents with depression, this study aimed to quantify the importance of factors in predicting NSSI and compare them between the only child and non-only child groups, enriching knowledge to leverage tailored intervention strategies

Methods A large multicenter survey was conducted in China. 2,510 adolescents diagnosed with Major Depressive Disorder (MDD) volunteered for the study and were divided into only child and non-only child groups. 36 factors were included to train random forest models for NSSI occurrence prediction. The

SHapley Additive exPlanations (SHAP) method was utilized to compute the relative importance of each factor in two groups

Results Adolescents with MDD exhibited a rather high prevalence of NSSI (52.0%), among them 66.9% were non-only children. Self-esteem was the most significant factor for both groups, while critical disparities of factors were also found. In the only child group, factors like family support, parental overprotection, drinking alcohol, sleep conditions and romantic relationship involvement showed greater importance, while higher depression degree, anxiety level and emotional abuse were more important factors for non-only children

Conclusion Only and non-only child family structures may have different influence on factors related with NSSI occurrence of adolescents with MDD. Only children were more susceptible to vulnerable family environments, alcohol abuse and romantic experience, while non-only children were more disturbed by abnormal mental states

关键词: adolescents, MDD, NSSI, random forest, only-child, SHAP

Effect of Home-based and Remotely Supervised Combined Exercise and Cognitive Intervention on Older Adults with Mild Cognitive Impairment (COGITO): Study Protocol for A Randomised Controlled Trial

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Introduction Mild cognitive impairment (MCI) is an intermediate phase between normal cognitive aging and dementia and poses a serious threat to public health worldwide, however, it might be reversible, representing the best opportunity for secondary prevention against serious cognitive impairment. As a non-pharmacological intervention for those patients, interventions

that combine both physical exercise and cognitive training, whether [delivered simultaneously or sequentially, may have superior effects on various cognitive domains, including global cognition, memory, executive function and attention. The supportive evidence remains incomplete. This study aims to assess the effectiveness of a combined exercise and cognitive intervention in Chinese older adults with mild cognitive impairment (COGITO), empowered by digital therapy and guided by the Health Action Process Model and the Theory of Planned Behaviour (HAPA-TPB theory) in a home-based setting.

Methods and analysis This study is a randomized controlled, assessor-blinded multi-centre study. Four parallel groups will include a total of 160 patients, receiving either a combined exercise and cognitive intervention, an isolated exercise intervention, an isolated cognitive intervention, or only health education. These interventions will be conducted at least twice a week for 50 minutes each session, over a period of 3 months. All interventions will be delivered at home and remotely monitored through RehabApp and Mini-programme, along with an arm-worn heart rate telemetry device. Specifically, supervisors will receive participants' real-time training diaries, heart rates or other online monitoring data, and then provide weekly telephone calls and monthly home visits to encourage participants to complete their tasks and address any difficulties based on their training information. Eligible participants are community-dwelling patients with no regular exercise habit and diagnosed with MCI. The primary outcome is cognitive function assessed by the Alzheimer's Disease Assessment Scale-Cognitive (ADAS-Cog) and Community Screening Instrument for Dementia (CSI-D), with baseline and three follow-up assessments. Secondary outcomes include quality of life, physical fitness, sleep quality, intrinsic capacity, frailty, social support, adherence, cost-effectiveness, and cost-benefit.

Ethics and dissemination The study was approved by the Institutional Review Board of Peking University. Research findings will be presented to stakeholders and published in peer-reviewed journals and at provincial, national, and international conferences.

Trial registration number ChiCTR2300073900

关键词: home-based, remotely supervision, combined exercise and cognitive intervention

广东省成年居民心理健康素养水平及宣传册对其提升效果的现况研究

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目的 研究一对广东省成年居民的心理健康素养水平进行调查, 分析相关影响因素; 研究二验证了阅读心理健康教育宣传册对社区居民心理健康素养提升的有效性, 为改善社区居民心理健康素养水平提供依据。

方法 研究一: 于 2021 年 10 月至 12 月采用多阶段分层随机抽样对广东省 21 个地级市 16715 名 18 岁以上居民进行面对面调查, 第一阶段使用国民心理健康素养问卷、9 项患者健康问卷抑郁量表、7 项广泛性焦虑障碍量表、失眠严重指数量表评估, 通过自编问卷收集社会人口学资料 and 生活方式特征。第二阶段使用简明国际神经精神访谈 5.0 版对抑郁量表和焦虑量表得分大于等于 10 分的居民进行诊断。采用基于复杂抽样的 Rao-Scott 卡方检验、一般线性模型、多因素逻辑回归模型进行统计分析。

研究二: 采用方便抽样方法进行现场研究。在社区卫生服务中心/卫生院面向社区居民发放广东省精神卫生中心自编宣传册—《提升心理健康素养, 我们在行动》, 开展心理健康教育与促进, 并使用国民心理健康素养问卷和自编一般人口社会资料调查问卷对 1855 名 18 岁以上社区居民进行调查。使用倾向性评分匹配法调整阅读组和非阅读组样本, 获得 189 对, 共 378 人, 采用 t 检验和卡方检验对比两组心理健康素养水平及其成分的差异。

结果 研究一: 广东省成年居民心理健康素养加权达标率为 12.1%。单因素分析显示, 心理健康素养在不同性别、年龄、受教育程度、婚姻状况和家庭人均月收入上存在差异 (均 $P < 0.05$); 多因素分析显示, 影响心理健康素养的社会人口学变量有: 性别、受教育程度和婚姻状况 (均 $P < 0.05$); 有锻炼习惯与心理健康素养水平高显著相关 (均 $P < 0.05$); 慢性病共病和有失眠症状的居民其心理健康素养水平较低

($P < 0.05$)。

研究二: 阅读组的心理健康素养水平高于对照组 (34.9% vs 23.4%, $P < 0.05$), 差异有统计学意义。

结论 研究一

广东省成年居民心理健康素养水平偏低。广东省成年居民心理健康素养各部分达标情况不均衡, 心理健康知识水平是阻碍心理健康素养提升的主要因素。提升心理健康素养水平需要先提升心理健康知识水平。

在六个社会人口学变量中, 性别、受教育程度和婚姻状况是与心理健康素养关联最大的因素。提升心理健康素养水平需关注男性、受教育程度较低者和丧偶/离婚/分居者。

心理健康素养与慢性病共病和失眠症状相关, 而与诊断抑郁障碍、焦虑障碍不相关。提示政策制定者需要针对特定人群进行干预。

研究二:

阅读心理健康教育宣传册可以提升社区居民的心理健康素养水平。

关键词: 心理健康素养, 成人, 社区, 心理健康教育

中国老年慢性疼痛患者抑郁现状及其影响因素研究

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目的 中国老龄化问题不断加剧, 老年人不仅面临各种慢性躯体疾病和疼痛, 而且抑郁状况高于其他年龄人群。本研究将探讨中国老年慢性疼痛患者抑郁状况的相关因素, 为其干预政策和措施的制定提供依据和参考。

方法 利用中国健康与养老追踪调查项目 (CHARLS) 在 2020 年开展的第五轮全国调查数据, 共筛选出 10581 名老年慢性疼痛患者作为研究对象, 通过抑郁量表 (CES-D) 测定研究对象的抑郁状况, 并用 χ^2 检验和多因素 Logistic 回归分析影响老年疼痛患者抑郁状况的主要因素。

结果 多因素 Logistic 回归分析结果显示: 性别 (女: $OR = 1.39$, $95\%CI = 1.26 \sim 1.52$)、年龄 (≥ 75 岁: $OR = 0.48$, $95\%CI = 0.41 \sim 0.55$)、是否有配偶/ 伴

侣共同生活(否: $OR=1.17$, $95\%CI=1.05\sim 1.30$)、居住地(农村: $OR=1.45$, $95\%CI=1.31\sim 1.60$)、文化程度(高中及以上: $OR=0.74$, $95\%CI=0.61\sim 0.89$); 子女关系满意度(满意: $OR=0.22$, $95\%CI=0.18\sim 0.27$)、吸烟(否: $OR=0.61$, $95\%CI=0.42\sim 0.87$)、上网(是: $OR=0.77$, $95\%CI=0.68\sim 0.88$)、午睡时长($1\sim 2$ h: $OR=0.73$, $95\%CI=0.65\sim 0.83$; ≥ 2 h: $OR=0.90$, $95\%CI=0.81\sim 0.99$)、夜间睡眠时长($6\sim 8$ h: $OR=0.61$, $95\%CI=0.55\sim 0.67$; ≥ 8 h: $OR=0.54$, $95\%CI=0.48\sim 0.62$)、BADL(受损: $OR=1.56$, $95\%CI=1.41\sim 1.74$)、IADL(受损: $OR=2.251$, $95\%CI=2.030\sim 2.496$)、过去一月接受医疗服务情况(是: $OR=1.24$, $95\%CI=1.12\sim 1.38$)慢性疼痛(比较多/非常多: $OR=1.95$, $95\%CI=1.77\sim 2.14$)是老年慢性疼痛患者抑郁症状的影响因素($P<0.05$)。

结论 老年慢性疼痛患者抑郁症状发生率为31.7%, 其抑郁状况受多种因素影响, 医疗卫生机构及政策制定者等应关注这类老年人的心理健康, 根据其特征从健康宣教、疾病治疗、疼痛管理、睡眠改善、家庭支持等方面采取有针对性的举措进行改善。

关键词: 老年; 疼痛; 抑郁; 影响因素

Impact of Flexible Assertive Community Treatment Model (FACT) on Community Rehabilitation of Schizophrenia

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Objective The condition of schizophrenia is easy to repeat, the course of the disease prolongs, and the function declines [8,9]. It will bring great pain to the patients, and at the same time cause a heavy economic burden on the family and society, and consume a lot of social resources. The purpose of this study was to observe the difference between the community rehabilitation effect of schizophrenia patients under the intervention of the Flexible Assertive Community Treatment Model (FACT) and the routine community prevention and treatment services, and to explore the effect of the

FACT on the community rehabilitation effect of schizophrenia patients

Methods 160 adult schizophrenic patients were randomly divided into an intervention group given FACT and a control group given routine mental health follow-up. The scale includes the Positive and Negative Syndrome Scale (PANSS), Social Disability Screening Schedule Scale (SDSS), and the World Health Organization's multicultural quality of life instrument in its brief form Scale (WHOQOL-BREF) were recorded

Results The average scores of positive scale, negative scale, general psychopathology scale and total score in PANSS scale before intervention (baseline) of the patients in the intervention group were 24.90 ± 5.43 , 17.53 ± 3.84 , 38.31 ± 4.09 and 80.54 ± 6.75 . After 6 months and 12 months of intervention, positive scale, negative scale, general psychopathology scale and total score of the PANSS scale in the intervention group and the total score of SDSS all decreased significantly. The WHOQOL-BREF total score was significantly improved, and the differences were statistically significant ($P<0.05$)

Conclusion The FACT intervention model has a significant effect on the rehabilitation of patients with schizophrenia in the community, improves their social function, and improves their quality of life

关键词: FACT, schizophrenia, social function, quality of life, intervention model

A Network Analysis of Relationship Among Childhood Trauma, Resilience and Depression in Chinese College Students

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Objective Childhood abuse and neglect significantly increase the risk of developing depression in later life. While previous research suggests that resilience may mediate this relationship, most studies have fo-

cused on general mediation and moderation effects rather than detailed, node-specific investigations. This study aims to explore the intricate relationships between childhood abuse, psychological resilience, and depressive symptoms. By identifying key nodes, we seek to establish a theoretical foundation for targeted and effective interventions for depressive symptoms in college students

Methods Between October 2020 and October 2021, we conducted a longitudinal study involving 3,374 students from two universities. Self-reported questionnaires assessed childhood abuse and neglect, resilience, and depression levels. We used R for a network analysis to identify the most central and bridging symptoms within the network of childhood abuse, psychological resilience, and depressive symptoms

Results Our analysis revealed the relationships between childhood abuse, psychological resilience, and depression. Among childhood abuse nodes, "Emotional neglect" and "Physical neglect" had the strongest correlation (regularized partial correlation coefficient of 0.459). For resilience nodes, "goal planning" and "family support" showed the highest correlation (regularized partial correlation coefficient of 0.498). Among depressive symptoms, "loss of interest" and "depressed mood" were most strongly correlated (regularized partial correlation coefficient of 0.350). The symptoms "fatigue" (Strength=1.718), "depressed mood" (Strength=1.450), and "feelings of worthlessness" (Strength=1.020) exhibited the highest strength centrality in the network. Key bridging nodes included "affect control" (bridgeStrength=0.349), "help-seeking" (bridgeStrength=0.209), "Emotional abuse" (bridgeStrength=0.187), and "Physical neglect" (bridgeStrength=0.151)

Conclusion Our study confirms that psychological resilience mediates the relationship between childhood abuse and depression, offering a more nuanced understanding of how childhood abuse affects future mental health, especially concerning "Emotional abuse" and "Physical neglect." Additionally, "affect control," "help-seeking," "Emotional abuse," and "Physical neglect" show extensive connections with other nodes. These

findings highlight precise intervention targets for addressing depressive symptoms in college students, suggesting that focusing on these areas in future interventions could help prevent and reduce depression in this population

关键词: childhood abuse ,resilience, depression, network analysis

青少年抑郁、焦虑症状与不良生活方式的关联性研究

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目的 青少年精神障碍的疾病负担日益增大, 生活方式是心理健康的重要影响因素, 但其关联模式仍缺乏数据支持。本研究旨在分析广东省青少年的抑郁、焦虑症状和不良生活方式的流行和分布情况, 探索抑郁、焦虑症状与不良生活方式组合模式的关系, 为促进青少年心理健康提供证据支持。

方法 本研究数据来源于 2023 年开展的“广东省青少年心理健康素养和服务需求调查”, 共纳入青少年有效样本数 5759 例。采用抑郁症自我评估量表 (CES-D) 评估抑郁症状, 总分 ≥ 17 分判断为抑郁症状; 采用广泛焦虑障碍量表 (GAD-7) 评估焦虑症状, 总分 ≥ 10 分判定为焦虑症状。纳入 7 种不良生活方式因素, 包括不规律一日三餐、缺乏锻炼、屏幕时间过长、超重/肥胖、睡眠不足、过度疲劳、中高度近视。采用 SPSS25.0 对广东省青少年的抑郁、焦虑症状的影响因素进行单因素和多因素分析, 使用 Mplus8.3 对广东省青少年的不良生活方式进行潜在类别分析。

结果 广东省青少年的抑郁、焦虑症状检出率分别为 5.5% 和 13.0%。超过一半 (51.5%) 的青少年存在 2-5 种不良生活方式。控制协变量后, 多因素 Logistic 回归分析显示, 抑郁、焦虑症状分别与不规律一日三餐、缺乏锻炼、屏幕时间过长、睡眠不足、过度疲劳等不良生活方式相关联, 且关联强度随不良生活方式数量增加而上升, 其中 4 种及以上不良生活方式的群体出现抑郁 (OR=174.12 ,

95%CI:24.17-1254.36)、焦虑症状的风险最高(OR=16.78, 95%CI:11.06-25.47)。潜在类别分析提示四种不良生活方式组合模式:①多种不良生活方式组(n=599, 10.4%),②缺乏锻炼、屏幕时间过长、中高度近视组(n=545, 9.5%),③过度劳累、睡眠不足、缺乏锻炼组(n=1320, 22.9%),④相对健康生活方式组(n=3295, 57.2%)。与相对健康生活方式组人群相比,抑郁(OR=16.06, 95%CI:10.64-24.24)、焦虑(OR=10.17, 95%CI:7.95-13.01)症状风险最高的均为多种不良生活方式组。

结论 广东省青少年的抑郁、焦虑症状检出率较高,且不良生活方式流行率较高。不良生活方式可能通过单独、协同或累积效应导致抑郁、焦虑症状的产生。不良生活方式之间存在关联,研究者需制定精准干预策略,改善生活行为和健康模式,促进青少年的心理健康。

关键词: 青少年;抑郁;焦虑;心理健康;不良生活方式

广东省青年人不良生活方式、心理健康素养与焦虑症状的网络分析模型

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目的 探索广东省青年人不良生活方式、心理健康素养与焦虑症状之间的内在关联,为青年人群的焦虑症状防治工作提供更加精准的证据支持。

方法 使用广东省精神卫生中心于2022年开展的“广东省居民心理健康素养调查”数据,该调查通过多阶段分层随机抽样法,覆盖广东省21个地级市,抽取51774名18岁以上居民进行调查。本研究选取18-44岁的青年居民作为研究对象,共纳入有效样本27898例。不良生活方式包括吸烟、饮酒、非规律一日三餐、不锻炼、屏幕时间过长、久坐行为、非正常体重(BMI过高/过低)、睡眠不充分等8个不良生活方式。心理健康素养使用中国科学院心理研究所编制的《国民心理健康素养问卷(第二版)》进行评估,可分为心理健康知识、积极心态、心理健康信息获取、心理健康意识、心理疾病识别、心理专

业求助态度、克服病耻感等七个维度。焦虑症状使用和广泛性焦虑障碍量表(GAD-7)进行评估。网络分析基于glasso网络模型,以各不良生活方式相加的数量展现。使用R4.2.3构建不良生活方式、心理健康素养与焦虑症状的网络分析模型。

结果 网络分析模型的cs值为0.75,证明网络模型中心性指标稳定;通过Bootstrap法显著性检验,各连线权重值95%CI的范围相对狭窄,显著性检验图以黑色方块为主,证明各连线结果较稳定且准确。模型中B3(心理健康信息获取)与B4(心理健康意识)和A1(感觉紧张、焦虑或急切)与A2(不能够停止或控制担忧)的正向关联最高;A5(由于不安而无法静坐)与B1(心理健康知识)的负向关联最高。焦虑症状的大部分维度与不良生活方式和心理健康素养存在关联。从各节点中心性指标可知A5(由于不安而无法静坐)、A6(变得容易烦恼或急躁)、B3(心理健康信息获取)、B4(心理健康意识)是模型的核心节点。B4(心理健康意识)的桥梁强度最强,证明其连接心理健康素养与焦虑症状之间的关键节点。

结论 焦虑症状与心理健康意识和心理健康信息获取能力关联较强,在制定心理健康素养促进政策时,应重点提高青年人的心理健康意识和心理健康信息获取的能力,并注意两者内容的协调,同时提倡全民健康生活方式,降低焦虑症状上升的流行趋势。

关键词: 青年人;焦虑;生活方式;心理健康素养

广东省成年居民心理健康服务求助行为和需求研究

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目的 随着我国心理健康服务体系的不断建设,公众对于精神卫生诊疗服务的使用逐渐增加。然而,人们寻求专业心理帮助的影响因素尚不清楚。本研究旨在调查广东省居民专业心理求助的情况,并分析社区居民求助行为的影响因素,为不同的人群提

供可获得性更强、更多样化、更容易被接受的心理健康服务。

方法 利用 2021 年开展的“广东省居民心理健康调查”数据,采用多阶段分层随机抽样法,由经过培训的社区精防医生和精神科医生进行两阶段调查。使用自编问卷和标准化筛查评估工具共调查了 16377 名居民。采用复杂抽样加权调整的方法,对调查数据进行分层加权调整分析。描述性分析广东省成年居民心理健康服务需求和求助行为的分布情况,并分析其与人口学特征、抑郁、焦虑、失眠、心理健康素养水平、慢性病、生活方式如抽烟、喝酒、饮食情况、锻炼情况、BMI 指数等因素的关联性。

结果 本研究共纳入 16377 名 18 岁以上成年居民。经复杂加权,18.7%的居民曾因精神心理问题求助,仅 2.2% (n=300) 的居民曾求助过专业人员(包括精神科医生、心理治疗师或咨询师)。寻求专业心理帮助与罹患抑郁症、青中年、家庭月收入在 12000 元以上、未婚或丧偶或离异、目前吸烟、心理健康素养达标和失眠均存在关联 ($P<0.05$)。除了社区心理健康宣传专栏,其他心理健康内容和形式在三个群体间都有显著性差异 ($P<0.05$)。在心理健康服务内容方面,健康人群更倾向于心理健康知识的宣传教育(32.1%), 阙下抑郁人群(40.7%)和抑郁人群(50.5%)更倾向与压力管理和情绪调控。在心理健康服务形式方面,三个群体都更期望得到面对面的个性心理咨询/治疗(健康人群 26.1%, 阙下抑郁人群 40.5%, 抑郁人群 47.2%)。其次, 阙下抑郁人群和抑郁人群也期望得到网络个体心理咨询/心理治疗(阙下抑郁人群 27.0%, 抑郁人群 33.1%), 而健康人群则期望得到社区心理健康宣传专栏(18.8%)。

结论 抑郁症、失眠、高收入和较高心理健康素养的居民更倾向寻求专业人士的帮助。在社区心理健康服务的发展中,需进一步加强心理健康宣教,提升公众心理健康素养,提高心理健康服务资源可获得性,保障公众能获得及时有效的心理健康服务。心理健康专业人员 and 政策决定者需基于需求制定心理健康服务内容,面向各类需求人群提供精准疏导和干预。

关键词: 社区居民, 专业心理求助, 心理健康, 服务需求

Fear of Cancer Recurrent, Anxiety and Depression Among Chinese Breast Cancer Patients: A Longitudinal Study

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Objective This study explored the trajectories of FCR, anxiety, and depression over the 18 months following discharge, and evaluated the associations between baseline demographic and clinical variables and emotional trajectories among Chinese women treated for breast cancer.

Methods This is a longitudinal prospective study. Participants were consecutively recruited at cancer centers in southern China. All participants were asked to complete a battery of questionnaires: Fear of Cancer Recurrence (FCR-7), Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder (GAD-7), and McGill Pain Questionnaire-Visual Analogue Scale (MPQ-VAS) at baseline, 6, 12, and 18 months after discharge. Generalized linear mixed model and group-based trajectory analyses were conducted. The SAS 9.4 PROC Traj procedure was used to conduct the group-based trajectory modeling and identify subgroups of patients who had similar trajectories on FCR, GAD, and PHQ total scores over time.

Results Three hundred women with breast cancer were recruited. For FCR, three-group trajectory models were estimated from the latent class growth modeling (i.e., ‘stable group’ (63.33%), ‘low level-increasing group’ (18.33%), and ‘high level-decreasing group’ (18.33%)). Bonferroni-corrected post hoc tests revealed that patients reported significant higher FCR at baseline assessment. Women with none/mild life stress exhibited significant lower FCRs than those with moderate/high life stress, and participants with family history of cancer or negative personality tended to report higher FCRs than their counterparts. For both anxiety and depression, three-group trajectory models were also estimated from the latent class growth modeling. The trajectories were labeled as ‘none/very mild-stable

group', 'low level-stable group', and 'high level-decreasing group' according to the significant difference of linear effect from 0, and the sign of coefficient. For anxiety symptoms, 79 (26.3%) of the participants reported none or very mild anxiety over time, 182 (60.7%) reported stable low-level anxiety, and the remaining 39 (13.0%) showed apparent decreasing trend throughout the 18-month period. Similarly, 32 (10.7%) of the participants reported none or very mild depressive symptoms over time, 198 (66.0%) exhibited stable PHQ total scores throughout the research period, and 70 (23.3%) of the participants were in the 'high level-decreasing trajectory group'. Patients reported significant higher anxiety and depression score at the first three assessments. Participants with no or mild life stress and those with positive personality tended to report lower anxiety and depression scores over time.

Conclusion More than 60% of the breast cancer patients reported stable low-level FCR, anxiety and depression 18 months after discharge. Early assessment of optimism and stress levels among cancer patients might help to identify people at risk of experiencing long-term FCR, anxiety and depression.

关键词: anxiety, breast cancer, depression, fear of cancer recurrence, longitudinal

网络精神病学组

Gut Microbiota Homeostasis As The Potential Targets for Enhancing Resistance Against Major Depressive Disorder in Trauma-exposed Individuals: Genetic Evidence From Mendelian Randomization

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Objective Trauma exposure is a critical factor in the development of major depressive disorder (MDD), significantly impacting mental health globally. Emerging research indicates a close association between trauma exposure and gut microbiota homeostasis, adding another layer of complexity to the understanding of MDD. The gut-brain axis has gained prominence in recent years, suggesting that gut bacteria may influence mental health outcomes, including depression. However, the causal pathways linking gut microbiota and MDD, particularly in individuals exposed to trauma (MDD-TE), remain poorly understood. This study aims to employ Mendelian randomization (MR) to elucidate the causal link between specific gut bacteria and the risk of MDD in trauma-exposed individuals

Methods Summary genome-wide association study (GWAS) data for gut microbiota and MDD in trauma-exposed individuals were obtained from the MiBioGen consortium (n=18,965) and UK Biobank (n=24,094), respectively. Univariate MR analysis was conducted to explore the causal pathway from gut microbiota to MDD-TE, using inverse variance weighted (IVW) as the main estimation method. The robustness of the primary outcomes was evaluated through a series of sensitivity analyses. Additionally, gene annotation and enrichment analysis were performed to uncover underlying biological mechanisms

Results High abundance of the phylum Actinobacteria (OR: 0.548, $P=1.34\times 10^{-4}$), order Bifidobacteriales (OR: 0.783, $P=0.002$), and family Bifidobacteriaceae (OR: 0.783, $P=0.002$) is significantly associated

with a low risk of MDD-TE. KEGG pathway enrichment analysis revealed that the phylum Actinobacteria, order Bifidobacteriales, and family Bifidobacteriaceae are involved in glutamatergic synapse and cGMP-PKG signaling pathways as well as protein digestion and absorption

Conclusion Our findings suggest that increasing the abundance of the phylum Actinobacteria, order Bifidobacteriales, and family Bifidobacteriaceae may effectively enhance resistance to MDD in trauma-exposed individuals. These results provide valuable insights into potential prevention strategies for high-risk populations. By understanding the role of gut microbiota in modulating the effects of trauma on mental health, targeted interventions can be developed to promote a healthier gut environment, thereby potentially mitigating the risk of depression. This study underscores the importance of a holistic approach in addressing mental health challenges, integrating microbial, genetic, and psychological perspectives. Future research should continue to explore these connections to refine preventive measures and therapeutic approaches for MDD, especially in those with a history of trauma exposure.

关键词: Mendelian randomization, major depressive disorder, gut microbiota, trauma

抑郁症脑功能连接的偏侧化异常与疾病缓解的关系: DIDA 联盟的结果

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目的 基于多中心大样本静息态功能磁共振数据探索抑郁症(MDD)功能连接的偏侧化模式及其与远期预后的关系

方法 本研究对来自 DIDA 联盟的 9 个中心的 2227 名参与者(1148 名抑郁症患者和 1079 名健康对照)的大型静息态 fMRI 数据集进行分析,通过分

析两组间大脑半球间以及半球内的功能连接偏侧化指数差异来表征抑郁症患者的脑功能偏侧化模式,并分析抑郁症患者功能连接的偏侧化模式与临床量表评分之间的关联。此外通过对一个包含 52 名 MDD 患者的真实世界中平均随访时间大于 2 年的独立数据集进行分析,采用相关向量机回归的机器学习方法 MDD 患者功能连接偏侧化模式与长期治疗结局的关系。

结果 结果表明,在大尺度网络水平抑郁症患者在腹侧注意网络、边缘网络的半球内 FC 的偏侧化指数(LI_intra)和腹侧注意网络、边缘网络以及默认网络的半球间异位 FC 的偏侧化指数(LI_he)表现出低于健康对照组的偏侧化。在局部脑区水平上,与健康对照组相比,MDD 患者感觉运动网络区域、默认网络区域、额顶控制网路区域、注意网络区域、边缘网络区域均存在半球内 FC 的偏侧化指数和半球间异位 FC 的偏侧化指数的改变,而且这些异常呈现异质性。我们还发现抑郁症患者功能连接的偏侧化模式与汉密尔顿抑郁量表(HRDS)评分之间显著关联。此外,通过相关向量机回归算法,本研究还发现抑郁症患者基线时的半球内 FC 的偏侧化指数以及半球间异位 FC 的偏侧化指数均可以显著预测患者远期(>2 年)HDRS 评分的变化。

结论 本研究验证了抑郁症患者存在大脑功能连接的偏侧化异常,并证明了这些基线临床特征与随后的症状缓解之间存在显著关系。此外,还表明脑功能连接的偏侧化可能有助于为精准治疗抑郁症提供依据。

关键词: 抑郁症 功能连接 偏侧化 预后

青少年游戏动机与游戏成瘾症状的关系: 基于网络分析方法

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目的 预防和干预青少年游戏成瘾具有重要现实意义。已有研究表明游戏动机在理解和干预游戏成瘾行为中起着重要作用,两者密切相关。但目前游戏动机各成分与游戏成瘾各症状之间的确切联系尚未阐明,无法区分不同动机成分与特定症状之间

的关联程度。这种不确定性可能阻碍针对不同动机成分触发的游戏成瘾精准干预策略的开发。因此,本研究旨在使用网络分析方法探索青少年游戏动机各成分与游戏成瘾症状之间的复杂关联,以期为青少年游戏成瘾的预防和精准干预提供新的理论支持。

方法 于 2024 年 1 月-2 月,采用整群抽样方法,选取四川省、重庆市四所中学的 1920 名青少年为研究对象。采用网络游戏动机量表(OGMS)、青少年游戏障碍量表中文版(GADIS-A)进行调查。使用网络分析方法探讨变量间的关系。

结果 成就动机与游戏控制能力受损、不顾负面后果地继续游戏以及症状出现的频率正相关;社交动机与造成负面后果负相关;沉溺动机与不顾负面后果地继续游戏正相关。成就动机在游戏动机三类成分中显示出最高的强度中心性(1.15)。

结论 游戏动机各成分与游戏成瘾症状之间的连接存在差异,各动机成分通过与特定的症状联系从而与游戏成瘾相互影响。相较于社交动机和沉溺动机,成就动机在游戏动机与游戏成瘾症状的相互影响中起到了最关键作用。由此提出以下建议:(1)鉴于不同游戏动机与症状的关系存在差异,未来的干预措施应包括对个体游戏动机的详细评估,并据此定制个性化的干预计划。(2)干预应强调增强成瘾者在现实生活中的成就体验。帮助青少年发现和体验现实世界的成就和满足感,可能有助于减少他们对游戏中成就体验的渴望从而改善成瘾行为。

关键词: 青少年, 游戏动机, 游戏成瘾, 游戏成瘾症状, 网络分析

心境障碍患者认知功能水平与脑功能相关研究

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目的 探讨不同认知功能水平的心境情感障碍患者的脑功能差异。

方法 招募心境情感障碍患者 221 例,其中抑郁症患者 79 例,双相情感障碍患者 142 例;健康对照组 258 例。采用 MCCB 认知测量工具评估所有受试者认知功能,采用依瑞德 BS-3000 近红外脑功能成像仪采集受试者的静息态近红外数据。采用聚类

分析(瓦尔德法),将所有受试者按照认知功能聚类,分为高认知组 and 低认知组;进一步分析不同类别受试者的组成结构,患者占比;继而分析不同亚类患者的脑功能差异。

结果 患者组与健康对照组在年龄、性别、教育年限方面均无差异。正常组认知功能显著优于病例组($P_s < 0.05$)。所有受试者按照认知水平聚为 2 类,高认知组和低认知组,其中高认知组 202 例,包含正常组 159 例、病例组 43 例;低认知组 277 例,包含正常组 99 例、病例组 178 例。与高认知组相比,低认知组 DLPFC-L 区 $zALFF$ 升高, FPA-L 和 FPA-R 区均低 ($P_s < 0.05$)。功能连接组间比较显示,高认知组 PreM and SMC-L 脑区与双侧 Broca 区、双侧 FPA 区的功能连接强度均高于低认知组 ($P_s < 0.05$)。高认知组 Broca-L 脑区与双侧 FPA 区和 DLPFC-R 区的脑功能连接高于低认知组 ($P_s < 0.05$)。

结论 心境情感障碍患者认知功能存在差异,认知功能水平高的患者脑功能连接强度高于认知水平低的患者。

关键词: 聚类分析, 认知功能, 近红外, 脑功能

复发性抑郁障碍患者额顶叶形态相似性降低

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目的 复发性抑郁障碍 (Recurrent depressive disorder, RDD) 的特征是反复发作的抑郁,且没有任何独立的情绪高涨和躁狂发作。重度抑郁障碍患者复发抑郁的可能性比正常人要高出 50%。有研究发现 RDD 患者的大脑形态模式的病理改变显著不同于首发抑郁症患者,而目前少有关于复发抑郁患者大脑形态相似性的研究。基于多模态核磁共振成像的形态相似性网络 (Morphometric similarity network, MSN) 可检测更加丰富的大脑皮层微观结构变化。因此,我们整合了 T1 加权、弥散张量和非均匀磁化传递 (inhomogeneous magnetization transfer imaging, ihMT) 图像的多模态特征,以探索 RDD 患者皮质微观结构的改变及其与疾病临床症状以及病程的关系。

方法 我们的研究共纳入 42 名 RDD 患者以及 56 名年龄、性别和教育程度相匹配的健康对照。

采集所有被试的 T1 结构像、弥散张量图像、ihMT、汉密尔顿抑郁量表和病史信息。按照规范流程进行图像预处理和特征提取,共获得 9 个特征用以构建 MSN。对 MSN 进行图论分析,计算全局效率、特征路径长度、节点效率、介数中心性和模块化特征。对两组被试的图论指标进行组间比较,并与临床症状评分和病程进行相关性分析。

结果 RDD 患者 MSN 的全局效率显著降低,特征路径长度显著增加。在节点水平上,我们观察到 RDD 患者的顶叶、皮层下区域和颞叶的节点效率降低,以及辅助运动区的中心度增加。此外,RDD 患者顶叶的模块内连接减少,顶叶和前额叶之间的模块间连接减少。值得注意的是,患者病程与顶上回、梭状回和壳核的全局效率、特征路径长度和局部效率之间存在明显的负相关。辅助运动区的介数中心性与 HAMD 评分呈正相关,而额顶叶的模块间连接与 HAMD 评分呈负相关。

结论 这项研究的主要贡献在于证明了 MSN 拓扑结构的破坏与 RDD 临床症状和病程之间的关系。这些结果表明,RDD 的持续病程会不断影响特定脑区皮层的微结构,并导致 MSN 逐渐规则化。额顶叶网络和辅助运动区与 RDD 患者抑郁症状有关,可能提示 RDD 的潜在病理机制。

关键词: 复发性抑郁障碍、磁共振图像、形态相似性网络、图论、模块化

青少年游戏障碍的静息态脑网络改变与注意力缺陷相关

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郑大

目的 游戏障碍(gaming disorder, GD)受到人们的广泛关注,有研究表明,GD 患者存在注意力缺陷,然而,这一过程背后的神经机制仍不清楚。本研究旨在探讨青少年 GD 患者的静息态脑网络改变,以及注意力缺陷的可能机制。

方法 收集了 50 名青少年 GD 受试者(男/女: 40/10)和 52 名健康对照(男/女: 41/11),受试者完成了人口统计学问卷、Young 网络成瘾量表、探索性眼球运动检测及功能磁共振检查。静息状态功能磁共振数据使用 GIFT 软件进行独立成分分析,

对静息态脑网络内部及网络之间进行功能连接分析。

结果 与对照组相比,青少年 GD 患者的背侧注意网络(Dorsal Attention Network, DAN)的功能连接减少,而 ECN(Executive Control Network, ECN)加强了与 DAN 之间的联系,与青少年 GD 的注意力失调相关($r=0.4071, p=0.017$)。ECN-DAN 之间增强的功能连接与游戏障碍的严重程度呈正相关($r=0.4283, p=0.037$)。

结论 这项研究发现青少年 GD 患者的 DAN 损伤与注意力缺陷有关。DAN 的功能连接减少与青少年 GD 的注意力失调相关,而 ECN 加强了与 DAN 之间的联系。ECN-DAN 之间增强的功能连接与游戏障碍的严重程度呈正相关。并且,本研究首次发现了青少年 GD 中 ECN-DAN 之间增加的功能连接,这对青少年 GD 患者的注意力表现起着重要的作用,可能是未来注意力干预的一个研究方向。

关键词: 游戏障碍,青少年,独立成分分析,静息态脑网络,认知控制

青少年游戏障碍的执行控制网络损伤与冲动性增加相关

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目的 游戏障碍(gaming disorder, GD)被定义为一种特定的行为成瘾,其特征是过度 and 强迫性使用游戏。最近的流行病学研究显示,青少年 GD 患病率为 5.5%。研究表明,游戏障碍患者的认知控制受损,表现为冲动性增加,注意力不集中等。然而,这一过程背后的神经机制仍不清楚。基于功能性磁共振(functional MRI, fMRI)发现的脑网络模型有可能解释 GD 的病理机制。本研究旨在探讨青少年 GD 患者的静息态脑网络改变,以及认知功能减退的可能机制。

方法 收集了 44 名青少年 GD 受试者(男/女: 38/6)和 50 名健康对照(男/女: 40/10),受试者完成了人口统计学问卷、Young 网络成瘾量表、Barratt 冲动量表 11 中文修订版及功能磁共振检查。静息状态功能磁共振数据使用 GIFT 软件进行独立成分分析,对静息态脑网络内部及网络之间进行功能连接分析。

结果 与对照组相比,青少年 GD 患者的冲动性增加与游戏障碍的严重程度成正比 ($r=0.6350, p<0.001$), 与执行控制网络 (Executive Control Network, ECN) 损伤、显著网络 (Salience Network, SN) - 执行控制网络 (ECN) 之间的功能连接减少相关 ($r=0.4307, p=0.0021$) ($r=0.5147, p=0.0034$)。

结论 在这项研究中,我们发现,青少年 GD 患者的冲动性增加与 ECN 损伤有关。我们的研究结果表明, ECN 在青少年 GD 的病理机制中起着和成人不同的作用,在青少年 GD 患者中, ECN 的 FC 增加并不能有效抑制他们的冲动。可能的原因是,青少年的 ECN 仍未发育成熟,即使增加了该网络内的 FC, 仍然不能像成人一样有效抑制冲动。并且,青少年 GD 的 ECN-SN 之间的 FC 减少,说明他们无法在脑网络内部切换过程中充分抑制 ECN 活动,从而导致冲动控制不佳。总之,青少年 GD 认知功能受损可能与内在大规模脑网络之间的异常相互作用有关。

关键词: 游戏障碍, 青少年, 独立成分分析, 静息态脑网络

Aberrant Fronto-limbic Network in Adolescents with Attention-deficit/hyperactivity Disorder: A Multimodal MRI Study Using Parallel ICA

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Objective Attention-deficit/hyperactivity disorder (ADHD) is one of the most prevalent neurodevelopmental conditions in children and adolescents, characterized as inattentive, impulsive, and hyperactive. Numerous magnetic resonance imaging (MRI) studies have revealed atypical brain function and structure in ADHD, and multimodal MRI studies contribute to a better understanding of the neurobiological underpinnings of ADHD

Methods The demographic and clinical information and the structural and functional MRI scans used

in this study were all obtained from the New York University Child Study Center site of the ADHD-200 database. Forty-eight typically developing children (TDC) and 87 boys with ADHD were included. Parallel independent component analysis (pICA) was performed to the fusion of fractional amplitude of low-frequency fluctuation (fALFF) and gray matter volume (GMV)

Results We found a correlated component pair, containing a fMRI and a sMRI component differed significantly between the ADHD and the TDC groups. The component pair was identified as the fronto-limbic network. However, no correlations between structural or functional alterations and symptom or cognitive function were observed

Conclusion Our findings indicate an aberrant fronto-limbic network in adolescents with ADHD. However, the relationships between the fronto-limbic network and symptoms in ADHD should be explored further, especially emotional dysfunction.

关键词: Attention-deficit/hyperactivity disorder, Multimodal MRI, Parallel ICA

Evolving Network of Psychopathology Symptoms Among College Students Across Sudden Public Health Emergencies

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Objective To understand the mechanism and changes in psychopathology symptoms among college students throughout sudden public health emergencies and after peak, and to provide evidence for dynamically adjusting psychological intervention strategies and measures for this population

Methods Two large-scale studies were conducted separately during the COVID-19 outbreak and after peak stages. In the first survey, conducted from December 31, 2022, to January 7, 2023, 22,624 participants were recruited. The second survey, conducted from June 1, 2023, to June 30, 2023, involved 17,775 participants. Network models were created to explore

the relationship between psychopathology symptoms within and across anxiety, depression, insomnia, and PTSD. Anxiety was measured by the Generalized Anxiety Disorder-7, depression by the Patient Health Questionnaire-9, insomnia by the Insomnia Severity Index, and PTSD by the Impact of Event Scale-Revised. Symptom network analysis was conducted to evaluate central and bridge centrality, and network properties were compared between the outbreak and after peak

Results After peak, the prevalence of anxiety, depression, and PTSD among college students was significantly lower than during the peak, while the prevalence of insomnia was higher. The density of the psychological symptom network changed from tightly connected (density: 0.622) to gradually weakened (density: 0.542). PTSD symptoms, such as hyperarousal and intrusion, exhibited high centrality in the network during the initial survey. These symptoms maintained a relatively high position in terms of closeness and bridge centrality in the follow-up survey, but with noticeable alleviation. Concurrently, symptoms like sleep dissatisfaction (expected influence and bridge expected influence), fatigue (betweenness, bridge centrality), and early awakening (bridge expected influence) played a significant role in the network after peak. The second survey highlighted a heightened correlation between dissatisfaction with insomnia symptoms and symptoms of depression and PTSD, potentially reflecting a resurgence of intrinsic internal links among psychological symptoms after the peak

Conclusion The outbreak of the epidemic increases the risk of anxiety, depression, and PTSD among college students and temporarily alters the network structure relationships among these symptoms, particularly shifting the central focus from inherent sleep dissatisfaction to stress-related PTSD and anxiety.

关键词: Sudden public health emergencies; College students; Network analysis; Psychological symptoms; Intervention

基于成对经颅磁刺激、脑电微状态及近红外脑功能成像探讨强迫症皮层功能异常机制的

研究

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目的 本研究拟结合成对经颅磁刺激、脑电以及近红外光谱检查技术,探讨 OCD 患者皮层功能异常的相关机制。

方法 纳入 2022 年 9 月至 2023 年 11 月在昆明医科大学第一附属医院精神科门诊及住院部的 OCD 患者,同时招募性别、年龄及受教育年限与其相匹配的健康对照(HC)。分别进行以下操作:1.采用经颅磁刺激联合肌电描记技术(TMS-EEG),引出并记录受试者的皮层内抑制功能参数:短间隔皮质内抑制(SICI)和长皮质内抑制(LICI),以检测受试者大脑皮层内抑制功能变化。2.采集所有受试者的静息态脑电图,预处理后进行脑电微状态分析,获得 4 种典型的脑电地形拓扑图,提取 4 种微状态的时间动力学参数以用于评估其脑电微状态时间动力学特征变化。3.使用近红外光谱技术检测患者在词语流畅性任务(VFT)下前额叶的血红蛋白浓度和分布。

结果 1.与 HC 相比, OCD 患者 SICI 降低($Z=-2.10;P=0.036$),LICI 未见统计学差异。2.与 HC 相比, OCD 患者的转换概率特征表现为微状态 A→B 的转换概率增加($P=0.003$)、B→A 的转换概率增加($P<0.001$)、A→D 的转换概率减少($P=0.006$)、D→A 的转换概率减少($P=0.002$)、B→C 的转换概率减少($P=0.035$)。3.与 HC 相比, OCD 组前额叶各个通道及平均 Oxy-HbO 浓度的整体趋势相较于 HC 组降低,且差异脑区主要集中于 DLPFC 及 OFC。4. OCD 的 SICI 功能缺陷与脑电微状态转换概率及前额叶激活水平相关。

结论 1.OCD 存在 SICI 功能缺陷,由于 SICI 功能缺陷与强迫症状严重程度无显著相关性,支持 SICI 可能是 OCD 的素质性特征。2.OCD 存在大脑网络间的动态异常。3.支持前额叶皮层,尤其是 DLPFC 以及 OFC 的功能不足在 OCD 的发病中发挥着重要的病理生理作用。其次, OCD 的 DLPFC 及 OFC 脑区激活水平降低可能促进了强迫症状(尤其是强迫思维)的加重,而左侧 DLPFC 激活水平还可能影响 OCD 的焦虑甚至抑郁情绪水平。4.OCD 患者 SICI 缺陷程度越重,脑电微状态 B→C 的转化概率越低,即视觉网络与认知控制网络的交流越少;且随着 SICI 缺陷程度越重, OCD 前额叶激活水平

也越低。由于 SICI 反映 GABAA 受体功能, 该结果提示 OCD 可能存在以 GABAA 受体功能缺陷为特征的皮层抑制功能不足, 且与患者视觉网络与认知控制网络的交流下降以及前额叶皮层的激活代谢水平下降相关, 该机制可能成为 OCD 认知控制失调的机制之一。

关键词: 强迫症; 皮层内抑制; 脑电微状态; 近红外。

Predicting The Treatment Response of Patients with Severe Major Depressive Disorder To Selective Serotonin Reuptake Inhibitors Using Machine Learning Techniques and EEG Functional Connectivity Features

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Background Escitalopram and Sertraline are first-line medications for treating depression. They belong to selective serotonin reuptake inhibitors (SSRIs) and are widely used due to their effectiveness and fewer side effects. However, despite the significant efficacy of Escitalopram and Sertraline, there is a large variation among individuals. Therefore, predicting symptom improvement based on the baseline period is crucial

Methods In this study, we conducted functional connectivity analysis of electroencephalogram (EEG) data during resting-state with eyes closed, resting-state with eyes open, watching natural videos, angry videos, and comedy videos for 30 untreated depression patients over 2 weeks. Each modality yielded 18 EEG functional connectivity features. Based on the treatment response at 8 weeks, patients were divided into treatment-effective and treatment-ineffective groups. The dataset was randomly split into 75% training set and 25% independent test set. Feature selection was performed on these functional connectivity features in the training set, and the selected features were used to classify the effective and ineffective groups using the SVM machine learning algorithm. Five-fold cross-validation was conducted on the training set to obtain validation results, followed by

testing on the test set. The Spearman correlation method was used to analyze the correlation between each EEG feature value and the reduction rate of HAMD-17 scores from baseline to 8 weeks, with Bonferroni correction applied

Results The study found that out of all modalities, 33 features achieved classification accuracies of over 95% on the validation set, and 2 features achieved classification accuracies of over 85% on the independent test set. A total of 58 feature values were found to be correlated with the reduction rate of HAMD-17 scores from baseline to 8 weeks

Conclusion The results of this study indicate that EEG functional connectivity features at baseline can be used to differentiate between effective and ineffective groups with high accuracy using machine learning models. Multiple feature values and HAMD-17 scores were found to be correlated with the reduction rate of HAMD-17 scores from baseline to 8 weeks, and these correlated feature values can be used to predict treatment efficacy.

Limitations: The lack of a large sample size limits the application of our method in clinical practice.

关键词: Machine Learning, Treatment Efficacy, Escitalopram, Sertraline, EEG Functional Connectivity

精神分裂症患者单个核细胞中 TRPV1 受体及氧化应激水平的相关性研究

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目的 目前精神分裂症的诊断主要依据全面的病史资料和精神状况检查, 缺乏特异的实验指标和病理生理体征。瞬时受体电位香草酸 I 型受体 (TRPV1) 除了在疼痛及炎症领域外, 其在精神分裂症的发生发展过程中也发挥着重要作用, 此外, TRPV1 通道蛋白在调节氧化应激过程中的作用也逐渐被人们所认识。本研究主要探讨了精神分裂症患者外周血单个核细胞中 TRPV1 受体及氧化应激相关指标 (Sirt3、SOD2、Ace-SOD2) 之间的关联, 及其与精神症状及认知功能的相关性。

方法 (1) 样本收集: 本研究为横断面研究, 按照《美国精神障碍诊断与统计手册第 5 版》诊断标准纳入精神分裂症患者 50 例, 并招募与之匹配正常对照 50 例。详细收集人口学信息, 并空腹采集血样提取血清、血浆及单个核细胞 (PBMC) 分装后于 -80°C 冻存; (2) 量表评估: 采用阳性症状量表与阴性症状量表 (PANSS) 评估患者精神症状严重程度, 采用认知功能简明评测量表 (BACS) 评估入组人员认知功能; (3) 分子生物学实验: 采用蛋白免疫印迹法检测外周血单个核细胞中 TRPV1 受体和 SIRT3、SOD2、Ace-SOD2 蛋白表达量; (4) 统计学方法: 采用配对样本 t 检验进行精分患者组与对照组各指标之间的差异比较, 采用偏相关分析对受检测生物学指标之间, 及其与 PANSS 总分及分量表评分、BACS 评分做简单相关性分析, 采用多重线性回归分析 PANSS 评分和 BACS 评分的影响因素。

结果 1. 精分患者组 PBMC 中 TRPV1 及 Sirt3 蛋白表达量与正常对照组相比有明显下调, 而 SOD2、Ace-SOD2 表达量上调, 且 Ace-SOD2/SOD2 的比值也增加, 差异均具有统计学意义; 2. 通过协方差分析控制性别、年龄、受教育程度等混杂因素后, 与正常对照组相比, 上述改变仍存在统计学意义; 3. 对各生物学指标进行偏相关分析后, 发现 TRPV1 与 Sirt3 表达存在相关性; 4. 患者组 BACS 的子量表评分均低于对照组, 差异有统计学意义; 5. 将各指标表达量与 PANSS 及阴性、阳性、一般精神病理量表评分、BACS 量表的各项子量表评分进行偏相关分析后, 发现与 PANSS 评分及部分认知功能评分存在相关性。

结论 精神分裂症患者 PBMC 中存在 TRPV1 受体表达下调及部分氧化应激指标的异常表达, 且 TRPV1 与 Sirt3 蛋白表达存在相关性, 提示 TRPV1 可能参与到氧化应激通路的调控当中, 同时上述生物指标的改变与精神分裂的症状和认知功能受损也存在一定相关性, 这表明 TRPV1 受体及氧化应激系统可能参与了精神分裂症的发生发展, 且有望成为潜在的治疗靶点。

关键词: 精神分裂症; TRPV1; 氧化应激

网络成瘾较网络游戏障碍与精神病理的关联性更强: 三个独立样本验证

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目的 探讨住院患者与社区人群中网络成瘾 (IA) 及网络游戏障碍 (IGD) 与常见精神病理综合征之间关联性差异。

方法 使用三个独立样本数据进行分析。三个样本分别为某大学一年级入学本科生 (下称 G1, $n=7982$)、某高中学生 (下称 G2, $n=1420$)、某精神科 13-19 岁住院患者 (下称 G3, $n=439$)。三个样本均采用 Young's 20 条网络成瘾量表 (IAT) 评估 IA, 简版游戏障碍量表 (IGDS9-SF) 评估 IGD、9 项患者健康问卷 (PHQ-9) 和 7 项广泛性焦虑障碍量表 (GAD-7) 评估抑郁及焦虑综合征。其中, 在 G1 和 G3 样本中, 使用强迫量表修订版 (OCI-R)、90 项症状清单节选 (SCL-90 偏执和 SCL-90 精神病质)、修订的自杀行为问卷 (SBQ-R) 评估相关精神病理综合征; 在 G2 和 G3 样本中, 使用成人多动症自我报告量表 (ASRS) 两个因子分别评估注意缺陷和多动。IAT ≥ 50 定义为存在 IA, IGDS9-SF ≥ 32 定义为存在 IGD。根据是否有 IA 和 IGD 将样本分为 A 组 (无 IA, 无 IGD), B 组 (无 IA, 有 IGD), C 组 (有 IA, 无 IGD), D 组 (有 IA, 有 IGD) 四组。

结果 男性分别为 4310 名 (54.5%), 626 名 (43.8%), 128 名 (26%), 平均年龄为 18 岁 ($s.d.=0.6$ 岁), 17 岁 ($s.d.=0.9$ 岁), 15.6 岁 ($s.d.=1.8$ 岁)。在 G1 样本中, 以抑郁、焦虑、偏执、精神病质、强迫、自杀得分为自变量的多元线性回归分析发现, 这些精神病理征对 IA 的解释度 ($R^2=0.39, \beta=23.2, 95\%CI 22.7-23.6$) 显著高于对 IGD ($R^2=0.13, \beta=10.2, 95\%CI 10.0-10.4$) 的解释度。在 G2 样本中, 以抑郁、焦虑、注意缺陷和多动得分为自变量的多元线性回归发现, 这 4 个精神病理征对 IA 的解释度 ($R^2=0.45, \beta=7.7, 95\%CI 6.0-9.3$) 也显著高于对 IGD ($R^2=0.19, \beta=1.5, 95\%CI 0.8-2.1$) 的解释度。在 G3 样本中, 以抑郁、焦虑、偏执、精神病质、强迫、自杀、注意缺陷和多动得分为自变量的多元线性回归发现, 这些精神病理征对 IA 的解释度 ($R^2=0.15, \beta=22.1, 95\%CI 15.6-28.6$) 大于对 IGD ($R^2=0.13, \beta=5.5, 95\%CI 2.5-8.4$) 的解释度。方差分析发现, 三个样本中各项精神病理征症状严重程度趋势均为由 A 组到 B 组, 再到 C 组

和/或 D 组逐步升高, 事后两两比较发现大多数比较存在显著差异。

结论 IA 和 IGD 都与广泛精神病理相关, 而 IA 较 IGD 与其它精神病理的关联性更强。

关键词: 网络成瘾, 网络游戏障碍, 精神病理

The Correlation between Cortical Thickness and Cognitive Performance in Major Depressive Disorder

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Objective Cognitive impairment is regarded as a core symptom of Major Depressive Disorder (MDD). Previous studies have indicated the presence of cortical thickness (CT) abnormalities in patients with MDD. However, there is lack of research on the association between cognitive performance and cortical thickness abnormalities in patients with MDD. So this study is to investigate the changes in CT in patients with MDD and their relationship with cognitive impairment

Methods The CT was calculated following T1-weighted magnetic resonance imaging in 105 patients with first-onset and untreated MDD and 53 healthy controls (HCs) matched for age and gender. Cognitive performance was assessed by the MATRICS Consensus Cognitive Battery (MCCB). The correlation between CT and cognitive performance was analyzed

Results All five cognitive dimensions were significantly different in the MDD patients compared to the HCs compared to the healthy controls. Meanwhile, CT values of the right middle frontal gyrus and bilateral precentral gyrus were reduced in patients in the MDD

group ($p < 0.001$). In addition, a positive correlation was found between the CT of the right middle frontal gyrus and the working memory dimension scores of the patients in the MDD group ($r = 0.220$, $p = 0.026$)

Conclusion The results of our study indicate that CT abnormalities are present in patients with MDD and are associated with cognitive performance.

关键词: Cortical thickness; Major depressive disorder; Cognitive performance

Specificity of EEG Microstates in First-Episode, Drug-naive Patients with Mild To Moderate and Severe Depressive Disorder

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Objective Previous studies have documented abnormalities in the EEG of depressed patients; however, the specificity of EEG microstates across varying severity levels in depression remains unexplored and could be influenced by medication. This study aimed to investigate the features of EEG microstates in first-episode, drug-naive patients with mild to moderate and severe depressive disorder, with the goal of identifying potential biomarkers for the severity of depression

Methods A total of 125 drug-naive patients and 40 healthy controls were recruited. Depression severity was assessed using the Hamilton Depression Rating Scale, categorizing patients into mild to moderate (MM-DD) and severe (S-DD) groups. EEG data were segmented into four canonical microstate topographies (A-D) using AAHC clustering, and the duration, occurrence, coverage, and transition probabilities of these microstates were compared among different groups

Results The duration of microstate B was significantly reduced, and the occurrence of microstate C was significantly increased in the S-MDD group compared

to LM-MDD and HCs. The contribution of microstates C and D was lower in the LM-MDD group compared to HCs and higher in the S-MDD group. Microstate transitions were analyzed as Markov chains, with nonrandom transfers between microstates differing between severity groups. Microstate A→C and D→C transition decreased in the MM-DD group compared to HCs. In the S-DD group microstate B→C transition increased and D→B transition decreased. The S-DD group has higher microstate A→D, B→D, C→D transitions than the MM-DD group. However, the MM-DD group had higher microstate D→B and B→D transitions than the S-DD group. Correlation analyses showed that the contribution of microstate B and the transition of microstate B→D were correlated with the HAMD-17 score

Conclusion These findings indicate that EEG microstates exhibit distinct patterns in patients with different levels of depression, suggesting their potential as biomarkers for assessing the severity of depressive conditions

关键词: Keywords: Depressive disorder, EEG Microstates, Hamilton Depression Rating Scale, EEG Topography, First-Episode Drug-naive.

The Effect of Parental Emotional Warmth on Adolescents' internet Gaming Disorder: A Moderated Mediation Model

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Objective The physical and mental effects of Internet Gaming Disorder (IGD) are similar to those of substance use disorders, and it is unknown what psychological processes underlie IGD. The purpose of this study is to investigate the current status and characteristics of IGD in adolescent, exploring the impact of parental emotional warmth on IGD in adolescents, and to research the mediation effect of impulsivity and the intermediary effect of belief in a just world

Methods 513 adolescents were sampled were surveyed using the Parental Emotional Warmth Scale,

Belief in a Just World Scale, Barrett Impulsive Personality Questionnaire (BIS-11) and Internet Gaming Disorder Scale (IGD-20), Data processing and analysis using SPSS22.0

Results (1) The screening rate of IGD in adolescents is 2.90%. (2) IGD in adolescents was significantly negatively associated with belief in a just world and parental emotional warmth ($r = -0.093$, $r = -0.177$), IGD was significantly positively associated with Impulsivity ($r = 0.353$), parental emotional warmth was significantly negatively related to impulsivity ($r = -0.286$) and impulsivity was significantly negatively related to belief in a just world ($r = -0.174$). (3) Impulsivity has a complete mediation effect between parental emotional warmth and IGD ($\beta = 0.39$, $p < 0.001$). (4) Belief in a just world moderated the relationship between parental emotional warmth and impulsivity ($\beta = -1.87$, $p < 0.05$), and belief in a just world enhanced the negative effect of parental emotional warmth on impulsivity

Conclusion Parental emotional warmth is a protective factor for adolescent IGD, and impulsivity is an important mediating mechanism, which is regulated by a belief in a world of justice.

关键词: Internet gaming disorder, parental emotional warmth, belief in a just world, Impulsivity

通过网络分析调查抑郁症患者童年创伤与近期生活事件对功能失调性态度的影响

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目的 童年创伤与负性生活事件是抑郁症的重要社会风险因素, 功能失调性态度反映了抑郁症患者认知易感性。本研究的目的是通过采用网络分析的方法来确定童年创伤的特定类型如情感虐待、躯体虐待、性虐待、情感忽视与躯体忽视与家庭、工作和学习及社交相关的生活事件以及功能失调性态度之间的关联。

方法 本研究纳入就诊于武汉大学人民医院的414例抑郁症患者。所有参与者完成了童年创伤问卷、生活事件量表以及功能失调性态度问卷。网络

分析通过将这些量表的分量表得分作为节点，并将每对节点之间的偏相关性作为边，确定了网络中最中心的节点以及童年创伤与生活事件之间的关联。

结果 情感虐待表现出最高的中心性，表明其在网络中的影响力最大。情感忽视与躯体忽视之间的关联最强，其次为情感虐待与躯体虐待以及情感虐待与情绪忽视。三种近期生活事件两两相关。此外，情感虐待与功能失调性态度之间存在正相关。

结论 情感虐待与功能失调性态度在抑郁症患者中密切相关，他们的网络互动可能在对认知易感性起重要作用。因此，本研究为将来对抑郁症伴有认知歪曲的患者提供预防思路，即重点干预童年创伤中的情感虐待，阻断二者之间的关联可能会预防抑郁症患者出现的认知偏差。

关键词：童年创伤，生活事件，认知偏差，抑郁症，网络分析

A Network Approach To Understanding The Inter-relationship between Depressive and Anxiety Symptoms in Suicidal Ideation

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Objective Individuals with depression and co-occurring anxiety experience more frequent and severe suicidal ideation (SI). As depression and anxiety are multi-component syndromes, the inter-relationships between their components and suicidal ideation are intricate. We aim to quantify and visualize these inter-relationships to inform suicide prevention strategies

Methods We conducted a retrospective analysis of 281 outpatients with depression who finished the Self-rating Depression Scale and the Self-rating Anxiety Scale on the visit day. We identified the SI from their medical records. The emerging network theory of mental disorders provides a novel understanding of how the dynamic interplay of different symptoms influences or exacerbates SI. As the sample size of 281 participants is

relatively small, we examined the symptom networks of SDS and SAS at the factor level. We used 12 items (including five depression factors, four anxiety factors, two demographic variables, and one variable related to SI) to estimate a weighted and undirected, regularized partial correlation network to represent the magnitude of association between each pair of nodes (i.e., items). To identify the most influential nodes within the network, we calculated the Strength and Betweenness indices to measure the node centrality, the node with higher centrality is considered to have greater importance in the network. We next computed a Bayesian network using the hill-climbing algorithm and created an average of the 50,000 bootstrapped networks to obtain a reliable directed acyclic graph (DAG). DAG allows researchers to get insights about the potential influence direction between symptoms

Results Among the 281 eligible outpatients, there were 73 (26.0%) males and 208 (74.0%) females, who ranged in age from 12 to 80 ($M = 41.9$, $SD = 21.5$). The proportion of eligible outpatients who reported SI was 30.2%. The regularized partial correlation network showed that ‘Anxiety and Panic’ and ‘Depression’ had moderate direct links to suicidal ideation, and ‘Anxiety and Panic’ was the most central node in the network. As shown in Figure 1, the Bayesian network further identified three paths directed from Depression to SI: (1) direct path, Depression \rightarrow SI directly, (2) indirect path, Depression \rightarrow ‘Anxiety and Panic’ \rightarrow SI, (3) indirect path, Depression \rightarrow ‘Ideational suffering’ \rightarrow Psychomotor \rightarrow ‘Anxiety and Panic’ \rightarrow SI

Conclusion We found that emotional symptoms of anxiety (i.e., ‘Anxiety and Panic’) were central in the symptom network, and our DAG model suggests that it might be the driver to exacerbate suicidal ideation. Furthermore, according to our DAG model, anxiety somatic symptoms appear to be primarily secondary to the ‘Anxiety and Panic’ rather than other depression symptoms. This implies that prioritizing ‘Anxiety and Panic’ may also be effective in relieving the comorbidity of depression and anxiety. In particular, it needs to be clarified here that the hypothesis drawn from DAG still needs to be confirmed by clinical trials or longitudinal studies

关键词: Suicidal ideation, Depression, Anxiety, Network analysis, Directed acyclic graph

Large-scale EEG Neural Network Changes in First-episode Drug-naïve Patients with Major Depression Disorder Comorbid with Anxiety

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Objective Accumulating evidence have showed abnormal brain activities in first-episode drug-naïve (FEDN) patients with major depression disorder (MDD). Our purpose was to investigate the changes of large-scale EEG neural network in MDD comorbid with anxiety

Methods A total of 98 FEDN MDD patients (45 MDD without anxiety and 53 MDD with anxiety) and 43 age-matched healthy controls were recruited in our study. The Hamilton Depression Rating Scale (HAMD)-17 and the Hamilton Anxiety Scale (HAMA) were used to evaluate the patients' mental states. We obtained 32-channel resting-state EEG recordings from all participants and used EEG microstate analysis to explore the brain network dynamics changes in MDD with or without anxiety. In the EEG microstate analysis, the modified K-means cluster algorithm was performed to cluster the template into four distinct microstates (A, B, C, D).

Results We observed that the duration and contribution of microstate B was significantly increased in MDD without anxiety than that of MDD with anxiety. However, the duration, occurrence and contribution of microstate C were reduced in MDD without anxiety as compared to the healthy controls. Moreover, the duration and contribution of microstate C were also reduced in MDD without anxiety when contrasted with MDD with anxiety. Traditionally, we found that heightened

transition probabilities from microstate B to D and microstate D to B in MDD without anxiety. Meanwhile, the transition probabilities from microstate B to C and microstate D to C was increased in MDD with anxiety. Further, the correlation analysis showed that the occurrence of microstate B ($r=0.312$, $p=0.023$) and the transition probabilities from microstate C to B ($r=0.39$, $p=0.004$) were positively associated with HAMA in MDD with anxiety group

Conclusion These findings extend our understanding of the brain implicated in MDD patients comorbid with anxiety, and provide new insight into therapeutic targeting of the neural circuits involved in this comorbidity. Abnormal EEG microstate has appeared in early depression with anxiety, reflecting an underlying abnormality in configuring neural resources and transitions between distinct brain network states.

关键词: electroencephalography, major depressive disorder, EEG microstate, anxiety

基于脑磁图的首发精神分裂症及一级亲属的冲动特征与抑制控制损害的功能连接研究探讨

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目的 精神分裂症属于最严重精神障碍之一,高致残、高冲动行为是精神分裂症常见的临床危害特征,与抑制控制损害密切相关。对家庭和社会影响极大。目前研究定义精神分裂症的易感人群成为高危人群。因此,在脑磁图下通过首发精神分裂症组、一级亲属组、正常对照组进行 G/NG 任务态比较,分析三组间的抑制控制差异,寻找首发精神分裂症及高危人群抑制控制异常情况,这也是当前精神科临床及公共卫生研究的重点。

方法 本实验自 2016 年 9 月至 2022 年 2 月在南京脑科医院收集首发精神分裂症组 15 例、高危人群 15 例、正常对照组 18 例,入组时进行 Go/Nogo 任务态脑磁图数据及磁共振定位相采集,本实验全部数据结果用 matlab2012b 软件进行处理,用 SPSS24.0 软件进行统计分析。

结果 1. Nogo 任务下三组功能连接比较

在抑制控制加工后期(250-450ms)时间窗, 三组间 β 频段IM1-preSMA的FC($p=0.003$, FDR corrected)和low γ 频段preSMA-rIFG的FC($p=0.015$, FDR corrected)统计学异常, 且三组递进式增强, 以首发组增高最明显, 但高危组与对照组之间没有统计学差异。

2. 基于有特征意义的多维数据建立分类模型

加工后期的low γ 频段preSMA-rIFG的FC为贡献最大的影像因素($p=0.011$)。再建立分类判别式模型, 分类准确率(交叉验证)87.5%。

结论 精神分裂症在抑制控制加工后期存在与抑郁症患者一样的异常FC, 都提示 β 频段preSMA-IM1及low γ 频段rIFG-preSMA FC异常, 提示这两个特征性FC可能是精神疾病抑制控制损害的关键, 作为早期非药物干预的生物标记位点, 对预防冲动及日常生活功能下降意义重大。

关键词: 精神分裂症、一级亲属、冲动、抑制控制、脑磁图

Γ -经颅交流电刺激改善精神分裂症患者工作记忆的双盲随机对照研究—基于近红外脑功能成像技术

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目的 认知功能损害为精神分裂症患者的核心症状之一, 工作记忆是很多认知任务的重要成分, 临床上将工作记忆的改善作为精神分裂症认知症状的疗效评估指标之一。经颅交流电刺激(tACS)在改善精神分裂症患者工作记忆方面具有潜力。本研究探索 γ -tACS干预精神分裂症患者工作记忆的疗效及潜在的脑机制, 为临床物理治疗提供方案指导和理论依据。

方法 采用随机双盲平行对照设计(注册号: NCT03756610), 对符合入组标准的精神分裂症患者按照区组随机化分为真刺激组和伪刺激组, 进行每天一次连续10天的tACS治疗。刺激电极放置于左侧背外侧前额叶(F3), 参考电极放置于右侧顶叶(P4), 单次刺激时间为20分钟, 电流强度2mA, 刺激频率为40Hz(γ 频段)。采用N-back范式测试患者在0-back、1-back和2-back下的工作记忆表现, 以反应时和正确率为评价指标。采用近红外功能成像技术(fNIRS)测量患者在完成N-back任务期间前额叶与双侧颞叶皮层的血流动力学信号, 包括含氧血红蛋白浓度(HbO)和脱氧血红蛋白浓度(HHb), 应用NIRS_KIT软件对fNIRS数据进行处理分析。

结果 1. 52例来自上海市精神卫生中心的精神分裂症住院患者参与随机分组, 其中33例(真刺激组22例, 伪刺激组11例)完成基线和10次干预后即刻的工作记忆任务。

2. 10次 γ -tACS干预后, 真刺激组相较基线, (1)反应时: 1-back任务的反应速度显著更快(基线: 759.18 ± 239.70 秒; 干预后: 685.50 ± 192.37 秒; $t = 2.077$, $p = 0.05$); 2-back任务的反应速度显著更快(基线: 858.07 ± 230.86 秒; 干预后: 738.71 ± 249.48 秒; $t = 2.876$, $p = 0.009$)。 (2) 正确率: 2-back任务的正确率显著更高(基线: $61.18 \pm 16.14\%$; 干预后: $70.46 \pm 8.78\%$; $t = 2.659$, $p = 0.015$)。

3. 基线时真、伪刺激组在N-back任务中的HbO和HHb差异无统计学意义。

4. 10次 γ -tACS干预后即刻, 与伪刺激组相比, 真刺激组0-back和1-back任务中右侧颞叶的HbO显著提高(FDR corrected $p < 0.05$)。

结论 (1) γ tACS干预对精神分裂症患者工作记忆具有一定的即刻改善效应, 但其长期效应有待进一步探索; (2) 额顶叶 γ tACS干预可能通过增强右侧颞叶的神经活动和血流供应来促进不同脑区间对记忆信息的整合能力, 使工作记忆中的信息能够被有效维持和及时更新, 从而改善精神分裂症患者的工作记忆表现。

关键词: 经颅交流电刺激, 精神分裂症, 工作记忆, 近红外脑功能成像技术

Downregulation of FKBP5 Is Associated with Stress Resilience in Rats Induced by CUMS

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Objective FK506 binding protein 51 (FKBP5), a co-chaperone of heat shock protein 90, regulates glucocorticoid receptor (GR) activity by forming a complex with HSP90/HSP70. Reduced or impaired GR is considered as an important factor contributing to HPA axis dysfunction in patients with major depressive disorder (MDD). Studies have found that the expression of FKBP5 gene is significantly increased in the hippocampus and prefrontal cortex of patients with schizophrenia and bipolar disorder. Besides, FKBP5 in the brain is closely related to depression-like behaviors and regulates the response to antidepressants in preclinical and clinical studies. The SNPs rs1360780 and rs3800373 in the FKBP5 gene have been shown to be associated with MDD and suicide events. Studies have demonstrated FKBP5 could enhance the dephosphorylation of AKT, inhibit the activity of AKT and then achieve cell apoptosis or death. The PI3K/AKT/mTOR signaling plays a significant role in the pathogenesis of MDD and antidepressants' treatment. Therefore, HSP90 and its co-chaperone FKBP5 are involved in the occurrence of MDD possibly through the PI3K/AKT/mTOR pathway, which could be a novel and potential target in MDD. Therefore, in this study we aimed to explore the correlation between the expression of FKBP5 in the hippocampus and prefrontal cortex and depression-like behaviors in CUMS induced rats. Then, we demonstrated the possibility of FKBP5 as an early warning biomarker of MDD. Next, we explored the correlation and possible regulatory effect of FKBP5 on the PI3K/AKT/mTOR pathway to enrich the pathological mechanisms of MDD and provide a potential target for antidepressants

Methods A total of 30 male 6-8 weeks old Sprague-Dawley (SD) rats were randomly divided into 2 groups after acclimatizing for one week: Control (n=10), Chronic unpredictable mild stress (CUMS) (n=20). Rats in the CUMS group received two stressors per day for four consecutive weeks, and the same stressor was never applied on two consecutive days. After 4 weeks of CUMS, behavior tests (body weight, sucrose preference

test, open field test, novel object recognition, social interaction test and forced swimming test) were applied to differentiate the susceptible rats (hereafter referred to as CUS group) and resilient rats (hereafter referred to as CUR group). RT-PCR, western blot and immunofluorescence staining were used to detect the FKBP5, HSP90 and PI3K/AKT/MTOR signaling

Results The CON group gained more weight faster than group received CUMS. In the SPT and FST, the CUS group showed decreased sucrose preference and longer immobility time compared with the CON and CUR group. The total distance, time in center and frequency of rearing significantly decreased in the CUS group, but there was not significant difference in the CUR group compared with the CON group. Then, we observed that the sociability index and social preference index in SIT of the CUS group rats were reduced compared with the CON group. However, no significant differences were found in sociability index and social preference index between the CUR and CON group. These results suggested that 4 weeks CUMS induced the depression-like behaviors in male rats. RT-PCR, WB and IF showed that rats in the CUR group exhibited down-regulated FKBP5 and upregulated PI3K/AKT/MTOR signaling in hippocampus and PFC

Conclusion These findings suggested that up-regulated FKBP5 level in CUMS rats were susceptible to depressive-like behaviors, memory deficits and social withdrawal via inhibiting PI3K/AKT/MTOR signaling. This study enriched molecular mechanism of FKBP5 on MDD, and inhibition of FKBP5 might be a target to increase the resist stress and antidepressant effect.

关键词: Major depressive disorder; FKBP5; stress resilience; PI3K/AKT/mTOR

心境情感障碍患者大脑代谢特征的性别差异-基于氢质子磁共振研究

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目的 重度抑郁障碍 (MDD) 和双相情感障碍的临床特征表现出明显的性别差异, 但造成这些差异的原因仍不清楚。目前的研究集中于神经生化代谢的差异中, 本文旨在找出患有重度抑郁障碍和双相情感障碍的男女在大脑代谢方面的差异。

方法 本研究共招募了 172 名 MDD 患者 (男 62 名, 女 110 名) 和 244 名 BD 患者 (男 71 名, 女 123 名)。通过质子磁共振波谱 (1H-MRS) 检测了前额叶白质 (PWM)、前扣带回皮质 (ACC) 和丘脑中 N-乙酰天冬氨酸 (NAA) 和含胆碱化合物 (Cho) 的代谢物水平。

结果 MDD 在左侧扣带回中 Cho/Cr 水平中女性小于男性, 在左侧小脑 NAA/Cr, 左侧丘脑 Cho/Cr 的水平女性高于男性。在 BD 患者中, 男性在左、右侧丘脑 Cho/Cr、扣带回 Cho/Cr 水平均高于女性; 在右侧丘脑 NAA/Cr、扣带回 Cho/Cr 水平低于女性。此外我们发现, 在男性中, MDD 患者的左侧丘脑的 NAA/Cr 水平高于 BD, 在左、右侧扣带回 Cho/Cr、左侧丘脑 Cho/Cr 均低于 BD。在女性中, MDD 患者的左侧丘脑 Cho/Cr、右侧丘脑 NAA/Cr、左、右侧扣带回 Cho/Cr 水平高于男性。

结论 我们的研究提示 MDD 和 BD 在扣带回、小脑、丘脑的生化代谢损伤存在差异。与 BD 相比, MDD 在左侧小脑存在特征性的生化代谢损伤; 丘脑和扣带回的大脑代谢紊乱可能是导致 MDD 和 BD 性别差异的潜在原因。

关键词: 抑郁障碍; 双相情感障碍; 性别差异; 神经生化代谢

社会心理服务研究协作组

A Robust and Coordinated Brain Network Supports The Formation of Long-term Cocaine Memory

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Background Drug addiction, a pressing global public health issue, presents significant challenges in clinical treatment due to the high rate of relapse among patients following therapy. The prevailing belief is that addictive drugs can trigger pathological memories, which serve as the primary catalyst for drug relapse. Existing views emphasize the pivotal role of “memory system consolidation” in the transition from short-term to long-term memory. Previous studies on long-term drug memories have primarily focused on reorganizing individual brain regions or neural circuits composed of two brain regions. However, recent evidence suggests that functional abnormalities within brain-wide networks may contribute to the formation of long-term drug memories. However, there remains a lack of research investigating how activation patterns within these brain-wide networks change during the formation of long-term drug memories

Objective By investigating the neural network activation patterns associated with the short-term and long-term drug memories, this study aims to identify the fundamental brain regions that contribute to the formation of long-term drug memories. The findings derived from this research could potentially unveil innovative therapeutic targets and theoretical frameworks for effectively addressing drug addiction and preventing drug relapse.

Methods The present study utilized the cocaine conditioned place preference (CPP) model in rats, along with experimental techniques and data analysis methods, such as immunofluorescence, network analysis, and graph theory analysis, to investigate the process of long-term cocaine memory formation from three perspectives:

alterations in brain region activation level, functional connectivity between brain regions, and brain network pattern

Results (1) Following intraperitoneal administration of 10 mg/kg cocaine for 6 consecutive days, rats successfully developed a conditioned place preference for the environment associated with cocaine, which persisted for at least 14 days; (2) Analysis of c-Fos expression in 27 brain regions using immunofluorescence techniques revealed the involvement of the medial prefrontal cortex, hippocampus, basolateral amygdala, retrosplenial cortex, ventral subiculum, ventral tegmental area and lateral entorhinal cortex in the expression of short-term cocaine memory, while the medial prefrontal cortex, hippocampus, basolateral amygdala, nucleus accumbens, retrosplenial cortex, subiculum, lateral habenula, lateral septum, ventral tegmental area, dorsomedial hypothalamic nucleus dorsal part, paraventricular thalamus and entorhinal cortex contributed to the expression of long-term cocaine memory; (3) Subsequent to memory expression, there was a significant increase in functional connectivity between various brain regions and overall coordination of the brain network. Notably, long-term cocaine memory exhibited stronger robustness and coordination compared to short-term memory; (4) The retrosplenial cortex, hippocampus, and orbitofrontal cortex occupied pivotal nodes within the brain network of long-term cocaine memory, exerting an important function on the maintenance of cocaine memory

Conclusion During the transition from short-term to long-term cocaine memory, memory system consolidation enhances the activation levels of brain regions involved in the expression of cocaine memories, strengthens functional connectivity between brain regions, and reinforces the activation patterns of brain networks. The persistence and stability of long-term cocaine memory may be attributed to this robust network activation pattern. By investigating the neural mechanisms underlying the formation of long-term cocaine memory, this study provides novel empirical evidence for comprehending drug addiction and drug relapse

关键词: Long-term drug memory; Conditioned

place preference; Immunofluorescence; Network neuroscience; Graph theory analysis

腹侧被盖区 AdipoR1 表达神经元到杏仁核的神经通路对应激诱导的焦虑样行为的影响

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目的 焦虑障碍是一种常见的精神疾病, 现已证明腹侧被盖区 (ventral tegmental area, VTA) 到杏仁核的多巴胺能神经投射通路参与调控焦虑样行为。最新研究发现 VTA 中的多巴胺能神经元与脂联素受体 1 (adiponectin receptor 1, AdipoR1) 共定位, 脂联素通过 AdipoR1 调控 VTA 多巴胺能神经元电活动和焦虑样行为, 提示 AdipoR1 表达神经元到杏仁核的神经投射可能参与脂联素对焦虑行为的调控。因此, 本文拟探究 VTA AdipoR1 表达神经元到杏仁核的神经投射通路对焦虑样行为的调控作用。

方法 首先运用脑立体定位技术向对照组、干扰组、过表达组的 C57 小鼠杏仁核中分别注射 pAAV-Ef1a-DIO-mCherry-WPRE (逆行对照病毒)、pAAV-Ef1a-DIO-mCherry-miR30shRNA(Adipor1)-WPRE (逆行 AdipoR1 干扰病毒)、pAAV-Ef1a-DIO-Adipor1-mCherry-WPRE (逆行过表达病毒), 向三组小鼠 VTA 中注射 AAV-hsyn-retro-cre-GFP, 待病毒表达 3 周后进行明暗箱实验、高架十字迷宫实验、自主活动测定等焦虑相关行为学实验, 行为学结束后灌流取脑, 切片观察 VTA 内荧光表达。同时, 向 iDAT-cre 小鼠杏仁核中注射 pAAV-Ef1a-DIO-mCherry-WPRE, 待病毒表达 3 周后进行膜片钳实验, 记录给予脂联素受体激动剂灌流和洗脱后多巴胺能神经元放电频率的变化。

结果 在明暗箱实验中, 干扰组 (AdipoR1 RNAi) 小鼠进入明箱的潜伏期高于对照组 (Control)、在明箱停留时间低于对照组、明暗箱之间的穿梭次数低于对照组, 说明抑制 VTA AdipoR1 表达神经元到杏仁核的神经投射通路可诱导焦虑样行为。在高架迷宫实验中, 干扰组小鼠进入开臂和闭臂的总次

数高于对照组、开臂停留时间/开臂和闭臂停留总时间(%)低于对照组、进入开臂次数/进入开臂和闭臂总次数(%)少于对照组,也说明抑制 VTA AdipoR1 表达神经元到杏仁核的神经投射通路可诱导焦虑样行为。

结论 本文目前的研究数据表明,抑制 VTA AdipoR1 表达神经元到杏仁核的神经投射通路会诱导小鼠焦虑样行为,今后,我们将探究过表达 VTA AdipoR1 表达神经元到杏仁核的神经投射通路对小鼠焦虑行为的影响及其相关机制,为焦虑障碍的发病机制、治疗及预防提供新方向。

关键词: 焦虑障碍,腹侧被盖区,杏仁核,多巴胺能神经元,脂联素,脂联素受体 1

The Impact of Parental Marital Status on Self-Harm Behaviors in Primary School Students: A Cross-Sectional Study

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Background Self-harm behaviors in children are a significant public health concern. Understanding the impact of familial and sociodemographic factors, particularly parental marital status, on these behaviors is crucial for developing effective interventions

Objective This study aims to investigate the relationship between parental marital status and self-harm behaviors in primary school students, while also considering other sociodemographic variables

Methods A cross-sectional survey was conducted with 33,285 primary school students (grades 3 to 6). Data were collected on self-harm behaviors and various sociodemographic characteristics, including parental marital status, sex, grade, only child status, living arrangements, residential location, family financial situation, relationships with parents and classmates, menstruation status, bullying experiences, academic pressure, and smartphone use. Chi-squared tests and multivariate regression analyses were performed to determine associations and control for confounding factors

Results Parental marital status was significantly associated with self-harm behaviors ($P < 0.001$). Students from divorced families, families with one or both parents remarried, and families where one or both parents were deceased exhibited higher rates of self-harm behaviors compared to those from families with normal marital relationships. Other factors such as sex, grade, living arrangements, family financial situation, relationships with parents and classmates, menstruation status, bullying experiences, academic pressure, and smartphone use also showed significant associations with self-harm behaviors.

Conclusion Parental marital status significantly affects self-harm behaviors in primary school students. Interventions aimed at supporting children from disrupted family backgrounds are essential. Additionally, addressing other sociodemographic factors is crucial for a comprehensive approach to prevent self-harm behaviors in children

关键词: Parental Marital Status , Self-Harm , Primary School Students

The Effects of Childhood Trauma on Nonsuicidal Self-Injury and Depressive Severity Among Adolescents with Major Depressive Disorder: The Different Mediating Roles of Positive and Negative Coping Styles

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Objective We aimed to examine whether positive and negative coping styles mediated the influences of childhood trauma on NSSI or depressive severity in adolescents with major depressive disorder (MDD)

Methods The Children's Depression Inventory (CDI), the Ottawa Self-Injury Inventory Chinese Revised Edition (OSIC), the short-form Childhood Trauma Questionnaire (CTQ-SF), and the Simplified Coping Style Questionnaire (SCSQ) were evaluated in 313 adolescents with MDD

Results MDD adolescents with NSSI had higher

CTQ-SF total score, emotional and sexual abuse subscale scores, but lower CDI total and subscale scores compared to the patients without NSSI. The multiple linear regression analysis revealed that emotional abuse ($\beta = 0.075$, 95% CI: 0.042~0.107) and ineffectiveness ($\beta = -0.084$, 95% CI: -0.160~-0.009) were significantly associated with the frequency of NSSI in adolescents with MDD, but emotional abuse ($\beta = 0.884$, 95% CI: 0.570~1.197), sexual abuse ($\beta = 0.825$, 95% CI: 0.527~1.124) and negative coping style ($\beta = 0.370$, 95% CI: 0.036~0.704) were independently associated with the depressive severity in these adolescents. Furthermore, the mediation analysis demonstrated that positive coping style partially mediates the effect of childhood trauma on NSSI (Indirect effect = 0.002, 95% bootCI: 0.001~0.004), while the negative coping style partially mediates the relationship between childhood trauma and depressive severity (Indirect effect = 0.024, 95% bootCI: 0.005~0.051) in adolescents with MDD

Conclusion Our findings suggest that coping styles may serve as mediators on the path from childhood trauma to NSSI or depressive severity in MDD adolescents

关键词: major depressive disorder, nonsuicidal self-injury, childhood trauma, coping style, adolescent.

结合遗传信息利用机器学习构建抑郁症预测模型

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目的 抑郁症是一种常见的心理疾病,据 WHO 预计,到 2030 年抑郁症将成为中国疾病负担的第二大疾病,在全球疾病负担中升至第一名。抑郁症的诊断主要依赖于临床医生的经验判断、患者的自述症状以及标准化的评估工具,这一过程耗时且可能受到主观因素的影响。抑郁症的发生受到多种因素影响,其中包括遗传因素。因此,开发一种基于遗传信息的、客观且高效的抑郁症预测模型,对于提高诊断的准确性和效率具有重要意义。机器学习算法能够帮助分析与抑郁症相关的基因变异,并进一步

理解这些变异如何影响个体的患病风险。本研究旨在利用机器学习技术,结合个体的遗传信息,开发并优化一个能够准确识别并区分抑郁症患者与健康人群的预测模型。

方法 本研究共招募了 929 名抑郁症患者和 489 名健康人。所有受试者均采集一般人口学资料,采集外周血液样本。研究基于 KEGG 通路数据库,围绕 MDD 病因假说和发病机制以及抗抑郁作用相关通路共筛选 1309 个候选基因,通过 Illumina MiSeq 平台完成测序,使用 PLINK 软件筛选高质量 SNP,剔除缺失率大于 20%、最小基因频率低于 5% 的 SNP 标记。最终数据集共纳入 855 名抑郁症患者和 489 名健康对照,共有 7 个特征变量被纳入,分别为性别、年龄、rs3795708、rs3768159、rs13916420、rs539785、rs582052。采用二分类 logistic 回归方法评估特征变量对结局二分类变量(抑郁症/健康对照)的影响,并对数据随机拆分为训练集和测试集,其中测试集比例为 30%,剩余样本作为训练集进行 5 折交叉验证。采用 Hosmer and Lemeshow goodness of fit (GOF) test 方法来评估 logistic 回归模型拟合度,并绘制训练集和测试集的校准曲线,通过列线图将结果可视化。

结果 从总体样本中随机抽取测试集 30% (N=403),剩余样本作为训练集进行 5 折交叉验证 (N=941),并在验证集中得到 AUC 为 0.6214(0.5391-0.7036)。最终模型在测试集中的 AUC 为 0.65,准确度为 0.6262。

结论 本研究针对抑郁症诊断,结合遗传因素,利用机器学习技术构建并优化了预测模型。通过深入的数据挖掘和模型验证,我们成功筛选了与抑郁症发病风险显著相关的基因标记,并构建了基于这些标记的预测模型,为抑郁症诊断及风险预测提供了新的视角和方法。未来我们将通过进一步的研究和探索,不断优化和完善模型,为抑郁症诊断和风险预测提供更加精准和有效的支持。

关键词: 抑郁症,单核苷酸多态性,机器学习,遗传,风险预测

Reconfiguration of Structural and Functional Connectivity Coupling in Patient Subgroups With Adolescent Depression

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Objective To examine alterations of structural and functional connectivity (SC-FC) coupling in adolescent MDD by integrating both diffusion magnetic resonance imaging (MRI) and resting-state functional MRI data

Methods Patients with first-episode MDD were recruited from the outpatient psychiatry clinics at The First Affiliated Hospital of Chongqing Medical University. Healthy controls were recruited by local media advertisement from the general population in Chongqing, China. The sample was divided into 5 subgroup pairs according to different environmental stressors and clinical characteristics. The SC-FC coupling was calculated for each brain region of each participant using whole-brain SC and FC. Primary analyses included the group differences in SC-FC coupling and clinical symptom associations between SC-FC coupling and participants with adolescent MDD and healthy controls. Secondary analyses included differences among 5 types of MDD subgroups: with or without suicide attempt, with or without nonsuicidal self-injury behavior, with or without major life events, with or without childhood trauma, and with or without school bullying.

Results Final analyses examined SC-FC coupling of 168 participants with adolescent MDD (mean [mean absolute deviation (MAD)] age, 16.0 [1.7] years; 124 females [73.8%]) and 101 healthy controls (mean [MAD] age, 15.1 [2.4] years; 61 females [60.4%]). Adolescent MDD showed increased SC-FC coupling in the visual network, default mode network, and insula (Cohen d ranged from 0.365 to 0.581; false discovery rate [FDR]-corrected $P < .05$). Some subgroup-specific alterations were identified via subgroup analyses, particularly involving parahippocampal coupling decrease in participants with suicide attempt (partial $\eta^2 = 0.069$; 90% CI, 0.025-0.121; FDR-corrected $P = .007$) and frontal-limbic coupling increase in participants with major life events (partial η^2 ranged from 0.046 to 0.068; FDR-corrected $P < .05$).

Conclusion Results of this cross-sectional study

suggest increased SC-FC coupling in adolescent MDD, especially involving hub regions of the default mode network, visual network, and insula. The findings enrich knowledge of the aberrant brain SC-FC coupling in the psychopathology of adolescent MDD, underscoring the vulnerability of frontal-limbic SC-FC coupling to external stressors and the parahippocampal coupling in shaping future-minded behavior.

关键词: Major depressive disorder, structural and functional connectivity

上海市心理热线职场人群来电者的特征分析

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目的 心理热线来电者报告或涉及的问题多种多样, 而来电者因各种问题造成的负性情绪感受是心理热线关注和干预的主要问题。在职场中, 常有心理适应问题产生, 在职场人士生存与发展的关键时刻, 常有以下几种心理适应问题: 生存的心理适应问题、发展的心理适应问题、人际关系的心理适应问题、学习的心理适应问题、应对挫折的心理适应问题等。上海市心理热线为了更有针对性地了解热线职场人群来电者的心理问题特征, 需要研究探讨热线来电者的心理问题特征及其相关因素。

方法 基于此, 本研究选取 2021 年 9 月 1 日-2023 年 9 月 30 日上海市心理热线接听的 5725 名工作类型为在职在岗的来电者 (男 1271 人, 女 2726 人, 平均年龄为 31.09 ± 6.886 岁) 为研究对象, 采用独立样本 t 检验、卡方检验、Logistic 回归分析进行横断研究, 对上海市心理热线职场人群来电者的特征进一步进行探究, 也为构建职场人群危机来电预警模型的构建提供依据。

结果 (1) 高危来电以未婚女性、本科学历、企业职员为主, 一半以上的来电者求助的问题类型是人际关系问题; (2) 17-24 时来电数量较多, 秋季 8-10 月的来电占比较高; (3) 性别在来电问题分类上, 女性在人际关系问题、性骚扰问题、职业发展问题、自我发展问题上都显著高于男性; (4) 在控制了工作类型分层因素的影响后, 性别因素对于来电问题类型是一个关键影响因素, 具体表现为在非营利

性组织员工中, 女性有自我发展问题的概率是男性的 18.667 倍, 在公务员中女性有自我发展问题的概率是男性的 4.889 倍, 而在企业管理人员、企业职员、事业单位员工中, 性别对自我发展没有影响;

(5) 职场人群中, 年龄较大的职工的人际关系问题显著多于年轻职工, 年轻职工的性骚扰问题、职业发展问题、自我发展问题更多; (6) 性别男、婚姻状态为已婚和离婚是职场来电者人际关系问题的保护因素, 性别男、35 岁之前与 41-45 岁、教育程度为研究生是职场来电者职业发展问题的危险因素, 性别男、26-30 岁、教育程度为研究生是职场来电者自我发展问题的危险因素。

结论 应重点关注职场年轻女性的心理健康, 尤其是人际关系方面的问题, 也需要关注不同性别、年龄、教育程度和工作类型职场人群在心理适应问题上的差异, 以制定更有针对性的干预措施。综上所述, 本研究揭示了不同性别、年龄、教育程度和工作类型职场人群在心理适应问题上的差异, 为制定更加有效的干预措施提供了重要依据。未来, 我们将继续深化研究, 进一步探索职场人群心理适应问题的成因和干预策略, 为提升职场人群的心理健康水平做出更大的贡献。

关键词: 上海市心理热线, 职场人群, 人际关系问题

Social Support Systems of Home, School, hospital and Society Involved in Suicide Prevention and Intervention Among Adolescents: A Delphi Study in Shanghai

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Background The adolescent suicide rate has been increasing and is now the third leading cause of mortality in this age group globally. In China, suicide is the leading cause of death among individuals aged 15–

34 years old. The data from the Death Surveillance System indicated that suicide rates in Shanghai declined between 2002 and 2008. However, there has been an increasing trend from 2009 to 2020, mainly due to notable increase in adolescent's suicides. This finding suggests a potential change in risk factors that requires further investigation in order to gain a comprehensive understanding of the evolving societal landscape. Meanwhile, schools, psychiatric hospitals, and social organizations operate independently, making it difficult to address crises among adolescents in a timely and collaborative manner in China. How to improve the social support systems involved in suicide prevention and intervention has been rarely studied

Objective we aimed to employ the Delphi methodology to establish a set of indicator system, enhance the cooperation of the social system of home, school, hospital and society and provide guidance regarding the appropriate action and for the development of social support resources, with the goal of collectively reducing suicide risks among adolescents in the city.

Methods We commenced the study to establish a research team, searched the keywords using Web of Science and ultimately designed a pre-evaluation index. Next, following Donabedian's Structure-Process-Outcome model, the research developed a questionnaire comprising 3 level-1, 12 level-2, and 73 level-3 indicators. Then, we utilized the Delphi methodology, which involved a group of experts in the fields of adolescent mental health, crisis intervention, and public policy research. Ten experts were enlisted and they independently rated various factors or measures and we collated and analyzed these ratings to arrive at into a consensus list of indexes. The experts drew upon their knowledge and experience to determine which indexes were likely to have a greater impact and be actionable. The responses from the experts were subsequently analyzed in each round of results, and feedback was provided. Based on this feedback, the experts decided which ratings to retain, modify, or delete until a consistent and reliable consensus was reached.

Results The response rate of the three rounds of expert consultation was 100 % (10/10). The Cr value

was 0.87 (>0.8) (familiarity = 0.820, judgment coefficient = 0.920), indicating that the expert opinions had high authority. Finally, all W coefficients in the third round were smaller than 0.2, which may be due to the large number of indexes included. However, no significant difference was reported, indicating high consistency regarding experts' opinions. Therefore, the stability criteria were met, and the Delphi process was terminated. Ten experts conducted three rounds of e-mail inquiries in order to finalize the indicator system, resulting in 2 level-1, 11 level-2, and 52 level-3 indicators, as well as expert consensus. Our findings indicate that the social support systems should include parents, schools, psychiatric hospitals, social organizations, and government departments, with the government sector being the most important ($M = 9.4$). Furthermore, our study revealed that school counselors and psychologists play similar roles to psychiatrists within the interdisciplinary team ($M \pm S = 9.2 \pm 1.1$)

Conclusion The aim was to develop cooperative guidelines and address issues such as who should be involved, how to proceed, and how to foster cooperation in the social support system for aiding suicidal adolescents in Chinese cities. This study represents the first Delphi consensus study conducted in China to guide the social support system in preventing suicides among urban adolescents. It offers effective strategies and provides quantified and enforceable criteria as well as advice on the structure and manpower required for the multidisciplinary team, equipment, and platforms. As per the expert consensus, social support systems of home, school, hospital and society should strengthen government-led and interdisciplinary collaboration, prioritize suicide prevention in schools and encourage greater involvement from social organizations.

关键词: Adolescent; Delphi method; Expert consensus; Suicide prevention; Social support systems; Adolescent

抑郁症数字化饮食行为：一项基于真实世界行为监测研究

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目的 饮食行为模式与抑郁关联已成为研究的重要关注点。然而，先前的研究主要依赖于自我报告形式，存在回忆偏倚等问题。基于电子设备的行为监测技术可在真实世界实时、客观地收集大量的时间序列数据。本研究旨在采用客观监测技术描述抑郁症患者的数字化饮食行为特征，并探索其在抑郁症检测中的潜在应用价值。

方法 本研究共招募了 3310 名学生，包括 2222 名健康对照组 (HCs)，916 名轻度抑郁症患者和 172 名中重度抑郁症患者。通过食堂电子记录被试一个月的饮食行为，并在月中评估其抑郁症状的严重程度。依据被试一个月内的饮食行为的时间序列数据，分别计算如下饮食行为特征：用餐时间、用餐地点、每餐消费额度、饮食频率和每餐食物多样性，每日用餐模式（传统三餐、早-午餐、午-晚餐、早-晚餐模式）。使用协方差分析，以年龄、性别、BMI 和教育水平作为协变量，比较 HCs 组、轻度抑郁症组和中重度抑郁症组三组间饮食行为特征。利用多元逻辑回归分析探讨数字化饮食行为特征与抑郁症严重程度之间的关联。采用支持向量机评估差异性饮食行为特征在检测轻度和中重度抑郁症方面的准确性和精确性。

结果 研究发现，与 HCs 组相比，中重度抑郁症组具有更不规律的进食模式、更大的波动进食时间、晚餐消费更多、食物多样性更少，早餐频率较低，并偏好仅进食午餐和晚餐。中重度抑郁症与日常三餐模式（早餐-午餐-晚餐模式）呈负相关 (OR [95% CI], 0.467 [0.239-0.912])，轻度抑郁症与每日午餐和晚餐模式呈正相关 (1.460 [1.016-2.100])。上述显著差异的数字化饮食行为特征能够检测轻中重度抑郁症（准确度为 0.53，精确度为 0.60），并在中重度抑郁症的检测中表现出更高的准确度（准确度为 0.67，精确度为 0.64）。

结论 本研究首次通过真实世界的行为监测技术揭示了抑郁症患者数字化饮食行为的变化特征，并且这些特征可成为监测抑郁症的潜在有效方法。

关键词: 数字化饮食行为，行为监测，抑郁症

节律基因 Per2 介导小胶质细胞反应性增强参

与慢性应激所致小鼠抑郁样行为的发生机制

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目的 研究节律基因 *per2* 调节小胶质细胞对慢性社交挫败应激 (CSDS) 的反应性在小鼠抑郁样行为发生中的作用。

方法 采用 CSDS 小鼠模型, 通过行为测试评估抑郁样行为, 利用免疫荧光和 Western Blot 检测内侧前额叶皮质 (mPFC) 中小胶质细胞的应激反应性及 *Per2* 基因的表达水平。使用 *Per2* 基因敲除 (*Per2* KO) 小鼠, 评估 *Per2* 基因缺失对小胶质细胞应激反应性、神经炎症和突触修剪的影响。

结果 CSDS 小鼠在 ZT 13~15 表现出显著的抑郁样行为, 而在 ZT 1~3 则与对照组的差异, 没有统计学意义。小鼠 mPFC 中的小胶质细胞反应性和 *Per2* 基因表达均具有昼夜节律性 (峰值 ZT2, 谷值 ZT14), 并且在应激后小鼠 mPFC 中小胶质细胞反应性和 *per2* 表达水平均显著增加。而 *Per2* KO 小鼠经历 CSDS 后不表现出抑郁样行为, mPFC 中小胶质细胞反应性与对照组无差异。进一步检查小胶质细胞反应性增强的下游事件, 发现应激后神经炎症标志物 IL-1 β 、IL-6、TNF- α 水平升高, 抗炎因子 IL-10 水平降低; 在 *Per2* KO 小鼠中, 这些变化均被逆转。CSDS 后, mPFC 中的树突棘密度显著降低, 而在 *Per2* KO 小鼠中, CSDS 所致的树突棘密度降低被挽救。

结论 *Per2* 通过调控小胶质细胞的应激反应性和神经炎症, 介导了 CSDS 诱导的抑郁样行为。本研究揭示了节律基因 *Per2* 对神经炎症的调控在抑郁症发病机制中的关键作用。

关键词: 抑郁症, 小胶质细胞, 节律基因 *Per2*, 神经炎症, 突触缺失

Therapeutic Effects of Modified Electroconvulsive Therapy and Repetitive Transcranial Magnetic Stimulation on Adolescent Depression Disorder

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Background In the past decade, the incidence of adolescent depression disorder has been increasing steadily. Although a few antidepressant drugs have been approved for the treatment of adolescent depression, the therapeutic outcomes are not satisfactory, necessitating the search for more effective and rapid treatment modalities

Objective Sertraline is a highly selective 5-HT reuptake inhibitor widely used in the treatment of depression in children and adolescents. Modified electroconvulsive therapy (MECT) or repetitive transcranial magnetic stimulation (rTMS) are also frequently employed in the treatment of adolescent depression. This study aims to compare the therapeutic differences between sertraline monotherapy and the combination of sertraline with MECT or rTMS in adolescent patients, aiming to provide a more reasonable treatment strategy for adolescent depression

Methods A total of 150 adolescent participants aged 14-18 years were randomly divided into three groups: sertraline monotherapy group (n=55), sertraline + MECT treatment group (n=40), and sertraline + rTMS treatment group (n=55). The treatment dose of sertraline was 50-150mg/day; MECT treatment required a total of ≥ 4 sessions; rTMS targeted the left dorsolateral prefrontal cortex with a frequency of 10Hz and a total of ≥ 10 sessions. The Hamilton Depression Rating Scale (HAMD-24), Hamilton Anxiety Rating Scale (HAMA), and World Health Organization Quality of Life Questionnaire (WHOQOL-BREF) scores were assessed for all three groups at weeks 0, 2, and 4. The primary outcome was the HAMD-24 reduction rate at week 4, with a reduction rate of $>50\%$ or higher defined as remission. HAMA and WHOQOL-BREF were secondary outcome indicators

Results The completion rate was 92% for sertraline, 83.8% for sertraline + MECT, and 82.2% for sertraline + rTMS. One patient in the sertraline + MECT group terminated the study due to adverse events. Based

on the HAM-D-24 remission rate, sertraline monotherapy achieved 43.4%, while the combination of sertraline + MECT and sertraline + rTMS achieved 56.6% and 54.7%, respectively. The therapeutic effect of sertraline monotherapy was lower than that of the combination groups ($p < 0.05$), while there was no significant difference between the sertraline + MECT and sertraline + rTMS groups ($p > 0.05$). No significant difference in HAMA remission rate was observed among the three groups. At week 4, the WHOQOL-BREF score in the sertraline + MECT group was significantly lower than that in the sertraline and sertraline + rTMS groups ($p < 0.05$).

Conclusion Compared with sertraline monotherapy, the combination of MECT or rTMS with sertraline shows better therapeutic effects in adolescent depression patients. Specifically, the combination of sertraline + rTMS achieves better therapeutic outcomes while significantly improving quality of life, potentially representing a superior treatment option for adolescent depression.

关键词: Adolescent Depression; Repetitive Transcranial Magnetic Stimulation; Modified Electroconvulsive Therapy; Therapeutic Effect

Subtyping of Emotional and Behavioral in Chinese Caregivers-Youths: A Latent Profile Analysis and Association with Family Environment

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Objective In China, youth mental health problems are increasingly prevalent and are influenced by family and social factors. This study integrates the perspectives of youths and caregivers to explore different

types of emotional and behavioral problems among Chinese youth and the protective and risk factors of their family environments.

Methods A total of 8839 pairs of youths and caregivers from the School-based Evaluation Advancing Response for Child Health (SEARCH) study were included. Latent profile analysis (LPA) was used to categorize youths' and caregivers' Strengths and Difficulties Questionnaire (SDQ) dimension scores. The chi-square test was used to compare different latent classes of demographic characteristics and multiple health risk behaviors. Multinomial logistic regression examined associations between identified classes and demographic characteristics, multiple mental health risk behaviors, and family environment factors.

Results The LPA identifies three distinct patterns of emotional and behavioral problems: caregiver moderate-estimation youth healthy, caregiver over-estimation youth problem, and caregiver under-estimation youth problem class. The caregiver's moderate-estimation youth healthy class has the lowest prevalence of health risk behaviors and symptoms. The multinomial logistic regression results showed that compared with the caregiver moderate-estimation youth healthy class, the factors influencing emotional and behavioral problems in the caregiver over-estimation youth problem and caregiver under-estimation youth problem class were sex, educational level, drinking history, depression, anxiety, stress, self-harm, suicidal behaviors, and family environment. Specifically, the family environment in the caregiver over-estimation youth problem class has a lower intensity, cultural, and organizational, with higher levels of control and conflict. Youths in the caregiver under-estimation youth problem class had family environments that were less intimate, recreational, cultural, organizational, and more conflicted.

Conclusion This study identifies specific youth populations and their protective and risk factors associated with the demographic characteristics, multiple mental health risk behaviors, and family environment factors. It highlights the important role of caregivers in shaping the emotional and behavioral problems of Chinese youth. Develop targeted family prevention and in-

intervention strategies for adolescents of different subtypes, primarily focusing on increasing recreational and reducing control, to improve the mental health of this youth population.

关键词: Youths, Caregivers, Latent profile analysis, Mental health, Family environment

社交隔离与精神分裂症发病风险：一项队列研究与孟德尔随机化

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目的 社交隔离指缺乏客观上的社会接触，是健康风险因素之一。有研究表明，社交隔离与躯体疾病和精神疾病相关，是全因死亡、心衰、高血压和癌症发病的风险因素。然而，目前社交隔离与精神分裂症的关系仍不清楚。因此，本研究旨在通过队列研究和孟德尔随机化分析法，探讨社交隔离与精神分裂症的关联。

方法 英国生物样本数据库(UK Biobank, UKB)是一项基于人群的大型队列研究。本研究通过 UKB 问卷调查中的三个条目计算出社交隔离的分数，并根据分数将参与者分为社交隔离组和非社交隔离组。本研究通过 UKB 中的住院记录和死亡登记来确定精神分裂症的病例。运用倾向性评分方法减少混杂因素对研究结果的影响后，我们使用 Cox 回归估计了社交隔离与精神分裂症的风险比。此外，我们通过 UKB 和精神疾病基因组协会，分别提取了社交隔离和精神分裂症的基因遗传数据，运用双样本孟德尔随机化分析法，估计了社交隔离与精神分裂症的因果关联。

结果 UKB 队列研究记录了 315 例精神分裂症病例，平均随访时间为 12.3 年。在调整人口、社会经济和生活方式因素后，社交隔离组发生精神分裂症的风险是非社交隔离组的 1.73 倍 (95% CI, 1.37-2.18)。双样本孟德尔随机化分析结果显示，参与更多的其他小组活动与精神分裂症风险降低相关 (OR, 0.49; 95% CI, 0.31-0.77)。

结论 社交隔离与精神分裂症风险升高相关，双样本孟德尔随机化分析结果表明二者之间存在潜在的因果关系。本研究结果强调了通过减少社交隔

离、增加社交活动的举措来降低精神分裂症发生风险的重要性。

关键词: 社交隔离, 精神分裂症, 英国生物样本数据库

烟酸皮肤反应测试在学生人群心理健康中的筛查应用初探

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目的 青少年期是个体心理发展的关键阶段，抑郁、焦虑、非自杀性自伤和睡眠等心理健康问题常见并且对其身心发展具有重大影响。针对这些问题的筛查和早期干预对于促进青少年的健康成长至关重要。本研究旨在探讨烟酸皮肤潮红试验 (Niacin Skin Flush Test, NSFT) 作为一种非侵入性测试方法在筛查学生群体心理健康问题中的应用，并研究父母教养方式和个人特质对青少年心理健康的影响。

方法 本研究在镇江和衢州的普通高中、职业高中及大专院校中进行了问卷调查和烟酸皮肤反应测试，收集了 8073 份问卷及测试数据 (有效数据 7192 份，回收率 89.08%)。问卷内容包括抑郁、焦虑、睡眠质量和非自杀性自伤等心理问题，以及父母教养方式问卷。此外，进一步收集了冲动性、心理韧性、压力知觉等个人特质问卷数据。

结果 在青少年群体中，烟酸异常检出率为 26.8%。异常组的焦虑和睡眠问题、父母教养方式中的情感温暖缺失及冲动性分数上显著高于正常组 ($p < 0.001$)，此外，异常组在心理韧性分数上显著低于正常组 ($p < 0.001$)。通过中介分析发现，烟酸皮肤反应在父母情感温暖、个人心理特质和青少年心理健康问题之间起到了重要的中介作用。情感温暖通过烟酸皮肤反应值对焦虑有显著影响 (母亲 \rightarrow NSFT \rightarrow 焦虑: 估计值 = -0.011, SE = 0.003, $z = -3.517$, $p < 0.001$; 父亲 \rightarrow NSFT \rightarrow 焦虑: 估计值 = -0.014, SE = 0.004, $z = -3.750$, $p < 0.001$)。烟酸皮肤反应值通过心理韧性对睡眠质量和焦虑有显著影响 (NSFT \rightarrow 心理韧性 \rightarrow 睡眠质量: 估计值 = -0.012, SE = 0.003, $z = -3.800$, $p < 0.001$; NSFT \rightarrow 心理韧性 \rightarrow 焦虑: 估计值 = -0.012, SE = 0.003, $z = -3.816$, $p < 0.001$)。

结论 研究表明,烟酸皮肤反应测试作为一种简单、非侵入性的方法,可以有效筛查学生群体中的心理健康问题。父母情感温暖缺失导致焦虑和睡眠从而影响烟酸异常,烟酸通过心理韧性对焦虑和睡眠的保护作用。本研究为青少年心理健康问题的筛查与干预提供了新的视角和方法,建议在学校和家庭中加强对青少年的心理健康教育和父母教养方式的指导。

关键词:烟酸皮肤反应测试,青少年,心理问题,个人特质,家庭教养方式

氨苯砜对阿尔茨海默症模型小鼠认知缺陷的改善作用及分子机制

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目的 随着人口老龄化加剧,以记忆障碍为主要表现的阿尔茨海默病(Alzheimer's disease, AD)的患病率逐年增高,已成为重大的公共卫生问题。然而,当前对AD的发病机制仍然缺乏明确认识,且缺乏有效的干预药物。小胶质细胞是大脑中主要的免疫细胞,由活化小胶质细胞介导的神经炎症被认为在AD的发病机理中起着主要作用。小分子药物氨苯砜(dapsone, DDS)是一种砜类抑菌剂,前期研究证实其具有抗炎和抗氧化等多种功效。临床研究提示,DDS可能有助于减缓AD的发生发展,但其作用机制尚不明确。本研究拟在动物模型中寻找DDS干预AD的潜在作用靶点,以期为预防和延缓AD的发生发展提供新途径。

方法 本研究结合体内外实验,在前期研究的基础上,对DDS的作用机制进行研究,重点关注小胶质细胞的功能变化。首先,对AD转基因动物连续给予6周DDS治疗,并进行水迷宫、新物体识别、旷场实验等行为学测试。使用单细胞测序技术对关键脑区细胞状态进行鉴定,采用MERFISH技术在空间分辨率的单细胞水平解析小胶质细胞的基因表达情况,通过多组学技术对小胶质细胞代谢水平和病理表型进行鉴定,确定关键调控基因。此外,在细胞水平通过Seahorse测定原代小胶质细胞的氧气消耗和糖酵解活性,通过脂多糖诱导神经炎症表型,进一步模拟并验证在体实验结果。

结果 行为学实验表明持续6周DDS治疗有助于改善AD小鼠的认知表型。免疫荧光染色和小胶质细胞形态学分析证明DDS治疗后AD小鼠大脑中A β 的表达降低,并与小胶质细胞对A β 的吞噬作用有关。单细胞测序结果表明DDS治疗后AD小鼠海马脑区的小胶质细胞得到改善,通路富集分析发现DDS治疗主要影响吞噬和代谢相关通路, MERFISH和Western blot技术进一步确定了参与DDS调控的关键基因。细胞实验显示,DDS能够提高小胶质细胞线粒体代谢和吞噬作用,表现为对脂多糖诱导的小胶质细胞异常活化和炎症因子的释放有改善作用,此外,转录组测序技术也明确了DDS对小胶质细胞的影响主要与炎症和吞噬相关基因的通路有关。

结论 DDS可通过诱导小胶质细胞代谢重编程,提高小胶质细胞的吞噬功能,达到改善AD小鼠的认知缺陷的效果。且长期使用DDS不会恶化AD小鼠的抑郁焦虑行为,提示DDS具有防治AD的潜在价值。

关键词:阿尔茨海默病,氨苯砜,小胶质细胞,细胞代谢

慢性失眠患者正向情绪、疲倦、和疼痛之间动态关联

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目的 本研究旨在通过瞬时生态评估方法,探讨在慢性失眠患者正向情绪、疲倦程度以及疼痛程度之间的相互动态关系。

方法 本研究为基于真实世界的观察性队列研究。研究对象为301名慢性失眠患者,平均年龄35.1岁(标准差为11.5),其中66.8%为女性。所有被试均通过临床访谈确定具有现患慢性失眠障碍。使用瞬时生态评估,每天4次(估计测量时间点分别在8时、13时、18时和23时),连续7天动态测量参与者的正向情绪、疲倦程度和疼痛程度。通过广义估计方程模型对滞后关联进行了有条件的估计,校正年龄、性别、独居状态、失眠严重程度指数(ISI)等协变量。

结果 分析结果表明,前一次评估的正向情绪滞后效应显著影响当前的疼痛($\beta = -0.022, P=0.020$)和疲倦($\beta = -0.063, P=0.013$),即正向情绪的增加会导致随后疼痛和疲倦程度的下降。同时,前一次评估的疼痛滞后效应显著影响当前的正向情绪(估计值为 $-0.056, P<0.001$),即疼痛的增加会导致随后正向情绪的下降。此外,失眠严重程度(ISI)显著影响了这些状态之间的动态关系。ISI每增加一个单位,当前的正向情绪会显著减少($\beta = -0.010, P<0.001$),而疼痛程度会显著增加($\beta = 0.006, P=0.013$)。

结论 分析结果表明,前一次评估的正向情绪滞后效应显著影响当前的疼痛($\beta = -0.022, P=0.020$)和疲倦($\beta = -0.063, P=0.013$),即正向情绪的增加会导致随后疼痛和疲倦程度的下降。同时,前一次评估的疼痛滞后效应显著影响当前的正向情绪(估计值为 $-0.056, P<0.001$),即疼痛的增加会导致随后正向情绪的下降。此外,失眠严重程度(ISI)显著影响了这些状态之间的动态关系。ISI每增加一个单位,当前的正向情绪会显著减少($\beta = -0.010, P<0.001$),而疼痛程度会显著增加($\beta = 0.006, P=0.013$)。

关键词: 慢性失眠,正向情绪,疲倦,疼痛,动态关联

Burden of Mental and Substance Use Disorders in China and Its Provinces, 1990-2021: A Systematic Analysis for The Global Burden of Disease Study 2021

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Objective Mental and substance use disorders

have a significant impact on global population health, especially following the large-scale mortality spikes during the COVID-19 pandemic. We aim to investigate the prevalence and burden of mental and substance use disorders in China from 1990 to 2021, using summary-level data from the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2021, province-level data in China from the Chinese Center for Disease Control and Prevention system

Methods We used the methods in GBD 2021 to analyze the disease patterns of mental and substance use disorders in China from 1990 to 2021. The current GBD study included 10 mental disorders and 2 substance use disorders, using national and 33 province-level administrative units prevalence data in China, as well as disability adjusted life years (DALYs) and years lived with disability (YLDs). These results were then compared with expected burden estimates based on the Socio-demographic index (SDI)

Results In 2021, China accounted for 14.9% of the global burden of mental disorders, with 23.2 million DALYs (95% uncertainty interval [UI] 17.7 to 29.4 million) attributed to mental disorders, which represents a 35.7% increase from 1990 to 2021. The numbers of DALYs due to substance use disorders in China was 4.3 million (3.3 to 5.4 million). For individual disorders, the age-standardized prevalence rates were highest for anxiety disorders (3481.7 per 100,000), followed by depressive disorders (2875.7 per 100,000 [2590.0 to 3203.4]). The burden of mental disorders were generally consistent across provinces in China, ranging from 1243.4 (943.6-1575.8) in Qinghai to 1735.7 (1282.5-2283.0) per 100,000 people in Hunan. However, regional heterogeneity was observed for substance use disorders, with lower prevalence in the eastern region and Yunnan had the highest prevalence. A significant gender variation was also observed, with a higher burden of mental disorders in females, while substance use disorders were more prevalent in males across China. Across age groups, ADHD was the most prevalent in the 5-14 age group and anxiety and depressive disorders were most prevalent among individuals aged 15 and over

Conclusion There is opportunity for improvement in the management of depressive disorders and

anxiety disorders especially in the prominent area of China. Effective prevention, treatment, and care strategies for mental and substance use disorders should continue to be prioritized in Chinese healthcare system.

关键词: mental disorders; substance use disorders; depressive disorders; anxiety disorders

基层特色科室孵化模式参与 ASD 早期诊疗的有效性

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目的 探索适合参与 ASD 早期诊疗的基层特色科室孵化模式, 最大限度地从 0-6 岁儿童中筛查出 ASD 或疑似 ASD, 以便早期干预, 减少 ASD 患儿核心症状, 增加社会功能, 减轻家庭、社会负担。

方法 选取 2022 年 6 月 1 日至 2024 年 5 月 31 日南京脑科医院儿童心理卫生研究中心“南京市儿童早期发展与心理卫生”基层特色科室 4 个孵化基地每月 ASD 的预警征初筛人数、初筛阳性人数、CHAT-23 复筛人数及转诊人数, 计算出初筛率、复筛率和转诊率。使用 t 检验方法比较孵化模式参与前后之间的差异。

结果 2022 年 6 月至 2023 年 5 月莲花 ASD 初筛阳性率 5.71%(111/1943), ASD 复筛率 0%(0/111), 赛虹桥 ASD 初筛阳性率 0.16%(5/3101), ASD 复筛率 60%(3/5), 沿江 ASD 初筛阳性率 1.05%(266/25296), ASD 复筛率 48.87%(130/266), 板桥 ASD 初筛阳性率 0%(0/3417), ASD 复筛率 0%(0/0); 2023 年 6 月至 2024 年 5 月莲花 ASD 初筛阳性率 9.84%(194/1971), ASD 复筛率 44.85%(87/194), 赛虹桥 ASD 初筛阳性率 0.48%(15/3107), ASD 复筛率 66.70%(10/15), 沿江 ASD 初筛阳性率 0.81%(180/22340), ASD 复筛率 93.89%(169/180), 板桥 ASD 初筛阳性率 0.22%(7/3181), ASD 复筛率 28.57%(2/7); 实施孵化模式后转诊率分别是莲花 33.33%(29/87), 赛虹桥 70%(7/10), 沿江 66.27%(112/169), 板桥 50%(1/2)。基层特色科室孵化模式参与前后 ASD 复筛率差异有统计学意义 ($t = -4.432, p < 0.001$)、转诊率差异有统计学意义 ($t = 3.378, p = 0.003$)。

结论 基层特色科室孵化模式参与 ASD 早期诊疗增加社区医院的 ASD 的初筛率和复筛率, 为 ASD 的诊疗服务创造更便捷的途径, 减少漏筛, 这种模式可以最大限度地保证患儿及家庭的利益。

关键词: 孤独症谱系障碍, 复筛率, 孵化模式, 双向转诊

山东省基层精防人员身心健康状况及其影响因素研究

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目的 探索全省基层精防人员身心健康状况及其影响因素, 为促进其身心健康, 提升基层精神卫生服务能力提供科学的参考依据。

方法 基于自编基本情况表及世界卫生组织五项身心健康指标 (WHO-5) 量表, 采用多阶段分层随机抽样法于山东省内 16 个地市内 134 个精防机构抽取 1750 名基层精防人员进行调查, 采用 SPSS 26.0 进行数据描述与分析。采用 Excel 及 IBM SPSS 26.0 进行数据整理和分析, 两组之间身心健康状况比较采用 Wilcoxon 秩和检验, 多组间比较采用 Kruskal-Wallis 秩和检验; 多因素分析采用广义线性回归。检验水准 $\alpha = 0.05$ 。

结果 本次调查共收集有效问卷 1663 例, 有效率 94.92%, 基层精防人员身心健康状况得分为 (16.40±6.57) 分, 487 名得分小于等于 13 分 (29.28%), 可能存在心理健康问题, 需要进行及时关注。5 个条目中其中得分最低的条目为“我感觉宁静和放松” (3.21±1.42) 分, 得分最高的条目为“我感觉快乐, 心情舒畅” (3.37±1.36) 分。非参数检验结果显示不同性别 ($P < 0.05$)、随访管理患者人数 ($P < 0.05$)、兼职情况 ($P < 0.05$)、每日工作时间 ($P < 0.05$)、每年参加县级及以上培训的次数 ($P < 0.05$) 的身心健康状况差异均有统计学意义。多元线性回归分析显示, 基层精防人员是否兼职、每日工作时间、每年参加县级及以上培训的次数是基层精防人员身心健康状况的主要影响因素。

结论 增加对精神卫生领域的财政投入, 提升基层精防人员工作待遇, 减少其工作兼职, 鼓励专

职,减轻工作压力。施行弹性工作制度,灵活安排工作时间与工作内容,减轻职业倦怠,平衡工作与生活。积极开展培训活动,介绍先进工作经验及方法,提高基层精防人员工作效率。建立专门的心理健康支持系统,为其提供心理健康咨询服务。

关键词:精神障碍,身心健康,工作压力

Psychological Health of Chinese Adolescents in Relation To Gender and School Grade: Exploring Multiple Perspectives (2022, Jiangsu, China)

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Objective Based on a large, mixed longitudinal cohort study titled 'School-based Evaluation Advancing Response for Child Health (SEARCH)' in China, this research investigates the impact of gender and school grade on mental health symptoms and risky behaviors in Chinese children and adolescents, with a focus on the influence of family and school environments

Methods This cross-sectional study conducted in three cities in Jiangsu targeted primary, junior, and senior high school students, along with their caregivers and teachers. A stratified whole-group sampling method was used to monitor participants, resulting in substantial response rates from 11,427 students, 8,839 caregivers, and 1,656 teachers. The study aimed to explore the development of mental health problems in children and adolescents from multiple perspectives by using various assessment tools such as the Depression, Anxiety and Stress Scale (DASS-21), Insomnia Severity Index (ISI), Ottawa Self-Injury Inventory (OSI), and Strengths and Difficulties Questionnaire (SDQ). Statistical analyses were performed using SPSS version 27.0 software to compare demographic characteristics between genders

and examine the distribution of mental health-related symptoms and health risk behaviors across academic periods while assessing inter-rater agreement for SDQ scores by comparing self-report versus caregiver-report scores

Results The study comprised 11,427 student participants, with 6,083 boys and 5,344 girls. Among the participants. It was found that 23.02% exhibited depression symptoms, 33.70% showed anxiety symptoms, and 16.79% demonstrated signs of stress. Girls exhibited significantly higher rates of depression, anxiety, stress, insomnia, suicidal behavior, self-harm behavior, and suicidal ideation compared to boys in junior and senior of high school. Additionally, scores for depression, anxiety, stress, and insomnia displayed an upward trend from primary school to junior high school and then to senior high school. Boys demonstrated higher proportions of smoking history, drinking, and moderate-to-high-intensity sports participation than girls through their schooling. In terms of emotional-behavioural problems and prosocial behavior, self-reports and reports by caregivers were generally more consistent in girls than in boys. Similarly, for students with depression problems, the consistency between self-reports and reports by teacher was higher in primary schools than in junior high and senior high schools for emotional symptoms, problems related to conduct, hyperactivity, peer problems, and prosocial behavior

Conclusion Caregivers and teachers must improve their awareness and skills in supporting children's mental health. These findings provide valuable insights for early identification and intervention in the mental health of Chinese children and adolescents.

关键词: Psychological Health, Adolescents, Caregivers and teachers

Associations of Sitting Time with Psychiatric Disorders, Glucose Metabolism, and Brain Structure: Findings From The UK Biobank

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Objective Prolonged sitting can lead to a variety of adverse health effects, including mental health. However, few studies have comprehensively addressed the risks of sitting time on psychiatric disorders, and the possible mechanisms of "sitting-glucose metabolism-brain" is little known in large longitudinal cohorts

Methods Data for this cohort analysis were obtained from the UK Biobank database. Exposure was sitting time consisted of sitting for watching TV, using computer and driving. The primary outcomes of follow-up were sleep disorders, anxiety disorders, and depressive disorders, defined from codes in the International Classification of Diseases 10th revision (ICD-10) or 9th revision (ICD-9). We explored crude and adjusted associations between sitting time and incidence of psychiatric disorders using Weibull survival models. We used restricted cubic splines (RCS) to further characterize dose-response relationships between sitting time and each follow-up outcomes. The interaction of confounding factors and stratified effects of sedentary behavior on psychiatric disorders were explored. Structural equation models were used to explore the potential mechanisms of how sitting time affects glucose metabolism and brain structure, and thus mental health

Results A total of 455605 subjects were included in the survival analysis, with an average follow-up period of 14.3 years (SD = 1.3), including 302236 females (66.3%). In multivariate models, compared with less

than 3 hours, more than 6 hours of sitting time was associated with increased incidence of psychiatric disorders of concern (adjusted hazard ratio (aHR) for sleep disorders 1.13 [95% CI, 1.04-1.23], $p < 0.01$; aHR for anxiety disorders 1.21 [95%CI 1.15-1.26], $p < 0.001$; aHR for depressive disorder 1.17 [95%CI 1.11-1.22], $p < 0.001$). After adjusting for covariates, sitting time showed a U-shaped nonlinear dose-response relationship with the risk of sleep disorders, anxiety disorders, and depression disorders (all p for nonlinear < 0.01 , all p for total < 0.0001). Risk for psychiatric disorders increased progressively after more than six hours of sitting. In multivariate interaction and stratified analyses, we found an interaction between age and gender and sedentary time on the risk of psychiatric disorders. The risks for all the concerned outcomes were significantly higher in people younger than 65 years of age than in those older than 65 years, significantly higher in women than men. Interaction RCS of age and risk of psychiatric disorders due to sitting time and dose-response relationships under gender heterogeneity showed the similar characteristics. Using structural equation modeling, we found that sitting can affect people's mental health by affecting glucose, glycated haemoglobin level and brain structure volume directly and indirectly (Sitting time-psychiatric symptoms: $\beta = 0.058$, $p < 0.001$; Sitting-glucose metabolism: $\beta = 0.039$, $p < 0.001$; Sitting time-brain structure: $\beta = -0.041$, $p < 0.001$)

Conclusion Prolonged sitting can lead to adverse effects of psychiatric disorders, mediated by the metabolism and brain structure. The study of the mechanism between sitting and mental health is helpful for future screening and targeted drug therapy.

关键词: Sitting time, Psychiatric disorders, UK biobank, Mechanism

盐酸托鲁地文拉法辛缓释片治疗抑郁症快感缺失的疗效和安全性: 一项单臂、多中心临床研究

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目的 评估盐酸托鲁地文拉法辛缓释片治疗抑郁患者快感缺失症状的疗效和安全性。

方法 本研究为单臂、多中心、前瞻性研究设计。共纳入来自北京大学第六医院、上海市精神卫生中心、四川大学华西医院、广州医科大学附属脑科医院、杭州市第七人民医院、西安交通大学第一附属医院和武汉大学人民医院符合 DSM-5 诊断标准且 DARS 评分 ≤ 28.5 分的成人抑郁症患者 121 例，所有患者均给予盐酸托鲁地文拉法辛缓释片单药治疗（80-160mg/d），观察 8 周。分别在基线、用药第 2、4、8 周末采用快感缺失量表（DARS）、斯奈思-汉密尔顿快感量表（SHAPS）来评估快感缺失症状，使用蒙哥马利抑郁评定量表（MADRS）评估抑郁总体症状。

结果 盐酸托鲁地文拉法辛缓释片治疗 2 周后，DARS 评分较基线即明显升高，差值为 7.8 ± 10.5 ($p < 0.0001$)，治疗 8 周后，DARS 评分进一步升高，较基线的差值达到 19.3 ± 13.7 ($p < 0.0001$)；SHAPS 评分在治疗第 2 周和第 8 周后较基线均明显降低，差值分别为 -2.7 ± 4.7 ($p < 0.0001$) 和 -7.8 ± 7.0 ($p < 0.0001$)；MADRS 总分和快感缺失因子分在治疗 8 周末均较基线显著降低，减分值分别为 -22.6 ± 6.9 和 -13.1 ± 4.3 ，差异具有统计学意义 ($p < 0.0001$)。研究期间，与研究药物有关的不良事件发生率为 71.1%，均为轻、中度，未发生与研究药物有关的严重不良事件。

结论 盐酸托鲁地文拉法辛缓释片可快速显著改善抑郁患者的快感缺失症状，安全性良好。

关键词：盐酸托鲁地文拉法辛，快感缺失，疗效，安全性，快速

Youth's Anxiety, Maternal Anxiety, and Family Conflict: Longitudinal Cross-lagged Associations and Mediation Effect

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Objective Existing research has established the

association between maternal anxiety and adolescent anxiety, with family conflict as a mediator. The current study aims to examine the longitudinal cross-lagged association between maternal anxiety, adolescent anxiety, and family conflict, and the mediating effect between the factors, by gender

Methods Data from 3077 participants and their families at two data collections were retrieved from the ongoing longitudinal SEARCH study. Maternal anxiety was measured by the parent-report Strengths and Difficulties Questionnaire (SDQ), adolescent anxiety was measured by the Depression Anxiety and Stress Scale (DASS-21), and the Family Environment Scale (FES) was used to measure family conflict. The cross-lagged model was used to examine the associations between the factors and then the mediation effect was tested

Results Among boys, the longitudinal cross-lagged model suggested the association between maternal anxiety (T1), family conflict (T2), and adolescent anxiety (T2). However, the associations were not found among girls. In addition, the further mediation model based on the boy sample supported the mediating effect of family conflict on the association between maternal anxiety and adolescent anxiety

Conclusion Family conflict was found to mediate the cross-lagged association between maternal anxiety and children's later anxiety level, but only for boys. Therefore, the current research has supported a possible intervention target for adolescent anxiety, by reducing family conflict, while the exact intervention plan needs further research.

关键词：adolescent, anxiety, family conflict, maternal anxiety, cross-lagged model

An Immunological Perspective on The Transcriptome of Adolescent Depression and Its Treatment Obstacles

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Objective Major depressive disorder (MDD) is a significant component of the global disease burden, with severe personal, societal, and economic consequences. However, the ramifications of changes in the immune system that occur during adolescence and adulthood on the pathophysiology of depression have not been adequately investigated

Methods In this study, we utilized RNA sequencing to analyze peripheral blood samples from a large cohort of adolescents with 180 MDD cases and 99 healthy controls (HCs). Integrated of multiple bioinformatics analysis, we also compared to the adult MDD from Gene Expression Omnibus database. Finally, enzyme-linked immunosorbent assay, RT-qPCR, flow cytometry were comprehensively performed to validate

Results Compared to HCs, there was no significant difference observed among MDD cases with respect to gender, age, or body mass index. We determined the following risk factors based on odds ratio (OR) calculations: major life events (OR, 1.09; 95%CI, 0.27-4.04), alcohol use (OR, 1.09; 95%CI, 0.02-62.82), children trauma (OR, 7.14; 95%CI, 2.01-27.11), school bullying (OR, 7.43; 95%CI, 1.82-34.30), and family history of mental illness (OR, 7.76; 95%CI, 1.60-43.45). Simultaneously, a total of 74 up-regulated and 170 down-regulated genes were identified in the MDD cases (adjusted p -value < 0.05 and $|\log_2 \text{FoldChange}| > 1$). KEGG analysis revealed a total of 46 significantly enriched pathways at level 3 (p -value < 0.05), with the highest proportion belonging to the immune system (8/46, 17.39%) at level 2. Subsequently, a STRING network was constructed for 31 DEGs enriched in discriminative KEGG pathways, and a majority of DEGs were also identified belonging to the immune system (17/31, 54.84%). By comparing to transcriptomic data from three adult studies, we focused on four down-regulated immune system pathways with an upward trend in adult MDD, including toll-like receptor signaling pathway,

natural killer cell-mediated cytotoxicity, IL-17 signaling pathway, and C-type lectin receptor signaling pathway. In addition, NFKBIA showed an opposite expression trend with adult MDD compared to adolescent MDD

To further explore the effect of drug therapy on transcription variations of adolescent MDD, we identified a total of 190 DEGs shared between drug-naive MDD (DN-MDD) versus HCs and drug-treated MDD (DT-MDD) versus HCs, which may be unaffected by drugs. We then collected peripheral blood from a small set of longitudinal samples to validate above findings. After 8 weeks of antidepressant treatment, adolescent patients were divided into drug-response and drug-non-response groups based on CDRS scores. The results of the qRT-PCR experiment supported that eight immune system-related DEGs (NFKBIA, JUN, JUND, EGR3, PLK3, CCR2, CCR4, and CCR6) was no significant difference in the drug-response group. Subsequently, we used EPIC analysis to predict the immune cell proportions, and found that adolescent MDD patients had significantly higher percentages of CD4+ T cells ($P < 0.001$) and neutrophils ($P < 0.001$) than HCs but significantly lower percentages of NK cells ($P < 0.001$), which was no significant difference between DT and DN group. Finally, we conducted flow cytometry analysis on patients' peripheral whole blood to corroborate the above results. Our findings suggested neutrophils might be a common distinguishing cell type in patients with MDD, increasing in both adolescent and adult patients. Conversely, a decrease in NK cells were only observed in adolescent MDD, indicating that they might be specific differential cell phenotype associated with adolescent MDD.

Since the regulatory effect of antidepressants on the immune system of adolescent MDD remained unclear, we endeavored to investigate potential new antidepressants based on DEGs. Tubulin inhibitors represented the largest group among the potential drugs (8/30, 26.67%), including vinorelbine, flubendazole, nocodazole, ABT-751, NPI-2358, vincristine, podophylotoxin, and mebendazole. These findings provided insights into potential medications for treating adolescent MDD.

Conclusion Our study uncover a previously unappreciated field of immune-related genes, pathways

and cell phenotypes in adolescent MDD, indicating the impact of age on peripheral blood transcript levels in patients with depression. Additionally, our results also suggest that the poor response of adolescent patients to traditional antidepressant treatments may be linked to unique immunological changes, and also highlight immunological changes as potential targets for new therapeutic interventions.

关键词: Major depressive disorder, Children and adolescent, Immune system, Peripheral blood, Transcriptome

Retrieval-extinction Procedure Disrupts Trauma Memory Reconsolidation in Humans

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Objective The high presence of a risk situation in terms of traumatic symptomatology evidenced the dramatic impact of trauma events on mental health. Memory retrieval can result in the destabilization of trauma memory, the retrieval-extinction procedure is ideally placed to enable memories to be updated with new information. This study aims to investigate the effects of retrieval-extinction procedure for the treatment of trauma memory

Methods Sixty-four participants with mental symptoms and trauma memory were randomly assigned to retrieval-extinction group and extinction group. When randomized to retrieval-extinction group, participants received the 3-min exposure to trauma cues for memory retrieval 10-minute before the 11-min exposure to trauma cues (memory extinction). Patients who were

randomized to extinction group, received the 3-min exposure to neutral cues 10-minute before the 11-min exposure to trauma cues (memory extinction). The primary outcomes included the reaction of the trauma cues, including trauma cue-induced fear, valence, arousal, and tolerance scores, at post intervention and the 4 weeks follow-up assessments. The secondary outcomes were changes in mental symptoms including anxiety, depression, insomnia, acute stress/PTSD symptoms

Results Compared with extinction, retrieval-extinction decreased the fear and arousal responses for trauma cues, and increased the tolerance response for trauma cues at post intervention and the 4 weeks follow-up. In addition, the mental symptoms, including anxiety, depression, insomnia, acute stress/PTSD symptoms, were significantly reduced in retrieval-extinction group than extinction group

Conclusion These findings demonstrate that retrieval-extinction procedure prevents the fear of trauma cues and may have clinical potential for treating trauma-related disorders

关键词: Retrieval-extinction, trauma memory, reconsolidation

Exposure To Multiple Metals and Adolescent Major Depressive Disorder : A Case-control Study

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Objective We aimed to investigate the associations between exposure to multiple metals and the risk of adolescent MDD.

Methods A total of 203 adolescents diagnosed with MDD and 203 healthy controls were recruited for this case-control study. The levels of 21 metals in their

urine samples were measured using inductively coupled plasma mass spectrometry (ICP-MS). The Least Absolute Shrinkage and Selection Operator (LASSO) regression was then employed to identify metals for inclusion in the multi-metal model. Furthermore, conditional logic analysis and Bayesian kernel machine regression (BKMR) were used to explore potential correlations between multiple metals exposure and the risk of adolescent MDD

Results In the single metal model, arsenic (As), bromine (Br), chromium (Cr), Rubidium (Rb), magnesium (Mg), iodine (I), nickel (Ni) and tellurium (Te) were found to be negatively associated with the risk of adolescent MDD. In the multi-metal model selected by LASSO, copper (Cu) and iron (Fe) showed a positive correlation with the risk of adolescent MDD, while nickel (Ni) and iodine (I) displayed a negative correlation. The BKMR analysis revealed that the combination of these four metals had a statistically significant negative joint effect on the risk of adolescent MDD compared to the median levels

Conclusion Our study reveals a positive association between exposure to copper (Cu) and iron (Fe) and the risk of MDD in adolescents, while Ni and I may have an inhibiting effect. These findings will provide valuable insights into the potential influence of environmental factors on the pathophysiology of MDD and may have significant implications for prevention and treatment strategies.

关键词: major depressive disorder, adolescents, urine, metal, risk factor

中国青少年情绪行为问题与家庭环境的聚类与家庭成员心理健康：一项纵向分析

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目的 在全世界，青少年心理健康问题日益严峻，这强调了探索青少年心理健康问题的复杂影响因素的必要性。本研究采用家庭系统视角和人群聚类调查了家庭成员包括青少年和照顾者的心理健康

状态的影响因素和纵向变化，了解这些变化有助于更好地指导心理健康干预，促进家庭功能的改善。

方法 共纳入 8543 个家庭，分别向青少年和照顾者收集了青少年情绪行为问题，家庭环境和心理健康状态的有关信息，采用聚类分析确定了异质性家庭亚型，并用差异分析来衡量不同亚组家庭成员的心理健康水平和家庭内部差异，7 个月后对进行纵向随访，观察不同亚型家庭成员心理健康变化趋势。

结果 聚类分析识别出三种青少年表现和家庭环境组合的典型模式：低成就&症状适中组、高亲密&亲社会良好组、高冲突&症状严重组。三组间家庭成员抑郁、焦虑、压力、失眠临床症状差异有统计学意义($P < 0.05$)。随后的纵向随访显示了不同亚型家庭成员心理健康结果的稳定性存在差异，具体为高冲突&症状严重组波动性最高，高亲密&亲社会良好组结果表现最稳定。

结论 本研究强调了异质性的家庭模式对青少年和父母心理健康的重要影响，通过识别特定家庭风险模式，有助于制定有效的预防和干预策略，并为提高青少年心理健康水平提供更全面的支持。

关键词: 青少年, 照顾者, 聚类分析, 家庭环境, 情绪行为问题

Associations of Brain Age Gap with The Incident Neurological and Psychiatric Disorders: A Large Prospective Cohort Study

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Objective Brain aging is recognized risk factor for multiple neurological and psychiatric disorders. However, the relationship between brain age, assessed via neuroimaging-based methods, and the onset of these disorders remains unclear.

Methods Here, we conducted a comprehensive analysis using data from the UK Biobank, involving

26,420 participants aged 42 to 82 years, over a median follow-up period of 4.56 years. The Brain Age Gap (BAG), a metric derived from neuroimaging data reflecting the disparity between predicted and chronological brain age, was assessed. Cox regression models were employed to investigate associations between BAG and the incidence of neurological and psychiatric disorders.

Results During the follow-up, we observed 279 stroke cases, 49 dementia cases, 35 Parkinson's disease cases, 233 depression cases, 292 anxiety cases, and 106 sleep disorder cases. Our analyses revealed that each additional year of BAG was associated with a 4.6% increase in stroke risk, and a 25.4% increase in dementia risk. Furthermore, preliminary findings indicated elevated risks of depression, anxiety, and sleep disorders with increasing BAG, although significance diminished upon adjustment for confounding variables.

Conclusion In conclusion, BAG demonstrated significant associations with stroke and dementia incidence, warranting further investigations to elucidate potential causal relationships

关键词: Brain age gap, stroke, dementia, prospective cohort study

靶向记忆再激活对老年人记忆的影响

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目的 随着机体老化,老年人的认知能力以不同速度衰退,其中以记忆功能减退最为显著。精细回忆和记忆熟悉度对于老年人的记忆都尤为重要。既往研究显示,睡眠中存在记忆自发性激活的现象,在睡眠过程中暴露记忆相关线索,能够靶向激活特定记忆,进而提高记忆水平,该范式也被称为靶向记忆再激活(Targeted memory reactivation, TMR)。本研究拟通过在 NREM 2 期睡眠给予受试者 TMR,观察清醒时的记忆表现,并通过分析睡眠脑电特征波的变化,阐释该干预手段发挥作用的潜在机制。

方法 本研究招募年龄范围在 55-75 周岁的老年人和 18-35 岁的年轻人。受试者到达实验室进行

记忆编码任务的学习。在记忆的学习阶段,受试者需要学习与声音线索关联的图片,重复两次。受试者睡眠前进行记忆测试,对相同、相似及未出现过的图片进行回忆,判断物体和学习阶段是否相同。当受试者进行午睡,待睡眠监测显示其进入 NREM 2 期时进行 TMR。受试者完成干预后,保持清醒状态,进一步进行记忆测试。应用鉴别力指数、记忆再认评分分别对受试者精细回忆和记忆熟悉度进行测试。在机制方面,应用 Python 软件中的 yasa 工具包,对受试者 NREM2 期 TMR 干预阶段和非干预阶段中央区纺锤波(数量、时长、振幅及功率谱)和慢波振荡(数量、时长、振幅、负向电压及正向电压)的差异进行了分析。

结果 研究发现:(1)在 NREM 2 期睡眠期间进行 TMR,能够有效提高年轻人的鉴别力指数和记忆再认评分;对于老年人,则仅对记忆再认评分有所提高,但对鉴别力指数无明显改善(图 1);(2)睡眠状态下进行 TMR,能够提高年轻人纺锤波的振幅,但对老年人不存在显著影响,而纺锤波的数量、时长和功率谱在两组人群均无显著改变(图 2);(3)进一步对慢波振荡分析发现,睡眠状态下进行 TMR,能够提高两组受试者慢波振荡的振幅和负向电压,而慢波振荡的数量、时长和正向电压无显著变化。

结论 本研究主要发现,在 NREM 2 期睡眠期间进行 TMR,能够有效改善年轻人的精细回忆和记忆熟悉度,但对老年人仅能改善记忆熟悉度。这可能与睡眠过程中 TMR 引起的纺锤波和慢波振荡的变化有关;其中,纺锤波的振幅增加或是介导年轻人和老年人记忆干预差异的重要机制。本研究提示睡眠状态下 TMR 作为一种操作简便且非侵入性的干预手段,对于老年人和青年人的记忆均有改善效果,但同时存在差异影响。

关键词:睡眠;靶向记忆再激活;老年人;记忆;纺锤波;慢波振荡

河南省心理援助热线首次来电者自杀意念的特征分析

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目的 探索河南省心理援助热线首次来电者自

杀意念的时空分布特征及相关危险因素。

方法 运用河南省心理援助热线电脑咨询操作系统提取 2020 年 1 月-2023 年 10 月期间拨打该热线的 31401 例来电者的资料。运用圆形分布和核密度分析法探究有自杀意念来电的时空分布。采用二元 Logistic 回归分析自杀意念的相关危险因素。

结果 共纳入 5494 例首次来电, 其中 1697 例 (30.9%) 报告近 2 周有自杀意念。时间分布上, 自杀意念来电高峰时段为 12:36~01:08, 且星期分布显示周五来电量最多; 空间分布上, 自杀意念来电在省内呈现“小范围集中, 大范围分散”的特点。除有无急慢性生活事件之外, 自杀意念组与无自杀意念组在基本特征和主要问题上的差异均有统计学意义 ($P<0.05$)。危险因素分析显示, 年龄 <20 岁 ($OR=11.850$, $95\%CL: 6.042\sim 23.243$)、无业 ($OR=1.777$, $95\%CL: 1.363\sim 2.316$)、精神心理问题 ($OR=5.033$, $95\%CL: 3.673\sim 6.897$)、家庭关系问题 ($OR=3.669$, $95\%CL: 2.658\sim 5.063$) 以及经济困难 ($OR=7.081$, $95\%CL: 4.361\sim 11.498$) 产生自杀意念的风险更高。

结论 在危机干预中, 热线需重点关注午间至凌晨这一时段, 优化人员配置, 使自杀意念来电及时地得到援助; 在接听首次有自杀意念的来电时, 应重点关注年龄 <20 岁、无业、有无精神心理问题、家庭关系问题及经济困难等特征。

关键词: 心理援助热线; 自杀意念; 圆形分布法; 核密度分析法; 危险因素

物质依赖医学学组

下丘脑室旁核及其脑区微环路在可卡因诱导的条件性味觉厌恶中的作用

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目的 药物成瘾是一种危害严重的脑疾病, 目前药物成瘾的研究多集中于成瘾性药物奖赏效应所形成的关联性记忆, 对其产生的厌恶性关联记忆如条件性味觉厌恶 (CTA) 等的关注较少, 关于参与药物成瘾厌恶性记忆的脑区及其神经机制尚不清楚。因此, 本研究旨在探索可卡因厌恶性记忆产生的机制, 为进一步理解药物成瘾记忆形成的机制提供理论基础。

方法 (1) 动物禁水 24 h 后进行 7 天的饮水适应期, 第 8 天给予动物新颖味觉溶液 30 min, 并在 30 min 后腹腔注射可卡因 (30 mg/kg) 或对照溶剂 (1 ml/kg), 第 9 天恢复饮水 30 min, 第 10 天进行 CTA 测试; (2) 免疫荧光染色检测可卡因 CTA 形成过程中各脑区 Fos 蛋白表达及其在目标脑区内与特异神经元类型标志物的共标情况; (3) 全细胞膜片钳技术检测可卡因 CTA 形成后, 目标脑区中特异神经元类型的突触传递变化; (4) 化学遗传学和光遗传学手段对目标脑区及其特异神经元类型的活性进行调控。

结果 (1) 多种新颖味觉与可卡因的关联均可引起不同种属动物对该味觉溶液产生厌恶反应, 且单次关联即可引起动物饮用量的显著降低; (2) 可卡因引起小鼠多个脑区内 Fos 蛋白表达增加, 但下丘脑室旁核 (PVN) 内 Fos 蛋白表达在 CTA 关联后进一步增多, 使用化学遗传学抑制或激活 PVN 脑活性均可阻止小鼠 CTA 的形成。此外, 特异性标记并激活 PVN 印迹神经元也可诱导出小鼠的味觉厌恶; (3) CTA 关联可引起小鼠 PVN 脑区的 Fos+ 神经元与促肾上腺皮质激素释放因子 (CRF) 神经元的共标率增加, 同时引起 Fos+ 神经元与催产素 (OXT) 神经元共标率下降。可卡因 CTA 形成后, PVN CRF 神经元的自发型兴奋性突触后电流 (sEPSC) 和自发型抑制性突触后电流 (sIPSC) 均没有变化, 而 PVN

OXT 神经元 sEPSC 的频率下降, 其 sEPSC 的振幅及 sIPSC 则没有改变; (4) 化学遗传学或光遗传学手段激活 PVN OXT 神经元可抑制小鼠 CTA 的形成, 化学遗传学抑制其活性则可增强可卡因 CTA; (5) 化学遗传学手段抑制 PVN CRF 神经元也可阻止小鼠 CTA 的形成, 而化学遗传学或光遗传学激活 PVN CRF 神经元则对可卡因 CTA 没有影响; (6) 化学遗传学手段激活 PVN 至中央杏仁核 (CeA) 环路可以抑制小鼠 CTA 的形成。

结论 本研究探讨了 PVN 脑区的不同类型神经元及其环路参与可卡因 CTA 形成的机制, 为理解药物成瘾记忆提供了新的视角和神经生物学基础。

关键词: 可卡因, 条件性味觉厌恶, 成瘾记忆, 下丘脑室旁核, 中央杏仁核

The Causal Relationship and Mediating Effect between Resting State Brain Functional Connectivity and Alcohol and Tobacco Consumption: A Mendelian Randomization Study

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Objective Disrupted brain resting-state functional networks have been observed across different types of substance use disorder and are increasingly an important risk factor for craving and relapse. The potential bidirectional causal relationship between abnormal resting-state brain networks (RSNs) and alcohol/tobacco consumption remains an area of inquiry. In this study, we aimed to investigate the bidirectional causal relationship between RSNs and alcohol/tobacco consumption. Specifically, we sought to identify key brain regions and genes involved in this relationship and to understand the interplay among structural variation, resting-state functional connectivity (rsFC), and alcohol/tobacco consumption

Methods In this study, bidirectional Mendelian randomization (MR) was conducted using summary-level genome-wide association studies (GWAS) data encompassing resting-state functional connectivity (rsFC, n=34,691), self-reported Drinks Per Week (DPW,

n=304,328), and Cigarettes Per Day (CPD, n=183,196). Additionally, we utilized GWAS data for gray matter volume (n=33,224) and white matter integrity (n=33,224) to perform a two-step MVMR analysis, examining the interplay among structural variation, rsFC, and substance consumption. Further, the FUMA-TWAS tool was employed to analyze genes significantly associated with rsFC

Results Our findings reveal that diminished global rsFC serves as a common risk factor for increased alcohol and tobacco consumption. Notably, connections emanating from the precuneus, angular gyrus, supra-marginal gyrus, and inferior parietal lobe play a pivotal role in influencing alcohol/tobacco consumption. The gene EPHA3 emerges as a common gene affecting these crucial connections. Finally, white matter integrity emerges as a pivotal mediator in the association between rsFC and alcohol/tobacco consumption

Conclusion This study establishes a causal relationship from rsFC to alcohol/tobacco consumption, shedding light on the specific brain regions and genes involved in influencing this complex interplay.

关键词: resting-state functional connectivity, alcohol consumption, tobacco consumption, bidirectional mendelian randomization

Involvement of SERCA2b in The Mechanism of Methamphetamine-induced Executive Dysfunction in Mice

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Objective Executive dysfunction plays a crucial role in methamphetamine addiction, yet its specific mechanisms remain incompletely understood. Our study aims to delve into the involvement of Sarcoplasmic/Endoplasmic Reticulum Calcium ATPase 2b (SERCA2b), a highly expressed calcium pump on the endoplasmic reticulum membrane, in the manifestation of executive dysfunction in METH-intoxicated mice.

By modulating the expression and activity of SERCA2b, we hope to ameliorate executive function in METH-addicted patients, thereby supporting the discovery of novel effective targets for treating METH addiction

Methods After acute METH intoxication via intraperitoneal injection in mice, their inhibitory control, attention, and working memory were assessed using the 5-Choice Serial Reaction Time Task (5CSRTT) and Delayed Matching-to-Position (DMP). Subsequently, ICR mice were randomly divided into control, METH, agonist, overexpression virus, and interference virus groups. The expression of SERCA2b was modulated using agonists and adenoviruses, and changes in SERCA2b expression and enzyme activity were measured using Western blot and enzyme-linked immunosorbent assay (ELISA). Pairwise sample t-tests or independent sample t-tests were used for comparisons between two groups, while one-way analysis of variance (ANOVA) was used for comparisons among multiple groups. Statistical significance was defined as $P < 0.05$ for all analyses

Results 1. The administration of METH to mice resulted in significant executive dysfunction

After constructing a mouse model of METH injury, we utilized the results of the 5CSRTT and DMP tasks to find that METH-treated mice exhibited a significant increase in the number of premature responses, a significant decrease in the correct rate and the number of correct responses, and a significant increase in the number of incorrect responses. Additionally, the mice in the METH group had a significant decrease in the correct rate and a significant increase in the date of training attainment during the DMP test period. These findings suggest that METH produces significant executive dysfunction in mice.

2. METH also reduces the activity and expression of SERCA2b.

After successful modeling using METH, dorsal striatum (Dstr) and Dstr SERCA2b activity after extraction of endoplasmic reticulum (ER) and Dstr SERCA2b expression were examined, and it was found that both SERCA2b activity and expression were decreased in the METH group. The results showed that the activity and expression of Dstr SERCA2b were decreased in the

METH group. It is suggested that the activity and expression of Dstr SERCA2b may play an important role in the executive dysfunction caused by METH.

3. Increasing the expression of Dstr SERCA2b can alleviate the development of executive dysfunction caused by METH, while decreasing its expression can aggravate the executive dysfunction caused by METH.

By intraperitoneal injection of CDN1163, a SERCA2 agonist, 50 mg/kg CDN1163 was found to effectively inhibit METH-induced deficits in inhibitory control, attention, and working memory as tested by the 5CSRTT and DMP tasks. CDN1163 was injected into the intracranial Dstr using the brain stereotaxic localization technique, and 5 mM CDN1163 was found to be effective in inhibiting METH-induced impairments of inhibitory control, attention, and working memory as tested by the 5CSRTT and DMP tasks. Overexpression and interference with adeno-associated virus constructed for SERCA2b were localized and injected intracranially, and tested by 5CSRTT and DMP tasks revealed that SERCA2b overexpression slowed METH-induced deficits in inhibitory control, attention, and working memory, while interference with SERCA2b expression exacerbated the deficits.

Conclusion METH decreases the activity and expression of SERCA2b, leading to significant executive dysfunction. This dysfunction can be ameliorated by using CDN1163, an agonist of SERCA2, and overexpressing viruses.

关键词: Methamphetamine, SERCA2b, Executive function, Dorsal Striatum

Decreased Cortical Gyration Relates To Working Memory in Male Early Abstinent Alcohol-dependent Individuals

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Objective Alcohol dependence (AD) is an addictive disorder with multifaceted neurobiological features. Recent research on the pathophysiological mechanisms of AD has emphasized the important role of dysconnectivity. Cortical gyrification is known to be a reliable marker of neural connectivity. This study aimed to explore cortical gyrification using the local gyrification index (LGI) between alcohol-dependent patients and controls

Methods Magnetic resonance images were collected from 60 early abstinent patients with AD (5–12 days after stopping alcohol consumption) and 59 controls and preprocessed using FreeSurfer, followed by surface-based morphometry (SBM) analysis to compare the differences in LGI between the two groups. Cognitive performance was assessed using the Spatial Working Memory (SWM) test in the Cambridge Neuropsychological Test Automated Battery (CANTAB). The relationship between LGI, cognitive performance, and clinical variables was also explored in the patient group

Results Compared with controls, patients with AD exhibited a significantly decreased LGI in the temporal and parietal regions, including the postcentral, superior temporal, middle temporal, and inferior parietal cortex. AD patients did worse than controls in several SWM measures. Furthermore, decreased LGI in the left postcentral was negatively correlated with working memory performance after multiple comparison corrections in the patient group

Conclusion Alcohol-dependent individuals exhibit significantly decreased cortical gyrification in the regional temporal and parietal cortex, which may be underlying neurobiological markers of AD. Our findings further indicate that working memory deficits may be related to abnormalities in cortical gyrification in alcohol addiction

关键词: alcohol dependence; cortical gyrification; local gyrification index; working memory; cognitive performance

Delicate Activity Patterns in The Medial Pre-

frontal Cortex: A New Insight Into Drug-Related Cue Processing

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Objective Methamphetamine (METH) is known as an addictive drug that may cause detrimental effects. Previous studies have reported that cue-induced craving is often regarded as significant contributor to drug relapse. Chronic METH abuse will cause dysfunction in the medial prefrontal cortical network. However, the neurobiological processes underlying cue-induced craving require further exploration. The purpose of this study was to investigate 1) the variations in discrete cue-evoked craving behaviors; 2) alterations of various brain regions in cue-induced craving; 3) subtypes of the medial prefrontal cortex (mPFC) response patterns to discrete cues

Methods Male mice with C57BL/6J (n=50) were trained to self-administer METH under a fixed ratio. Dependence was then established by self-administration escalating doses of METH paired with cues (tone and light) for consecutive five daily 3-hr sessions. To evaluate the cue-induced craving behavior, all received seeking tests with different types of cue presentations (auditory/ visual/ full/ none, respectively) on withdrawal day 1

Results Seeking behaviors were significantly elicited by auditory cues, visual cues, and full cues compared to contextual cues. Auditory and visual stimuli can trigger c-Fos expression in the mPFC. Additionally, auditory cues activate subcortical regions such as the paraventricular thalamus and anterior medial thalamus, while visual cues activate the lateral habenula and paratenial thalamus. Pyramidal neurons in the prelimbic (PL) and infralimbic (IL) subregions of the mPFC exhibit distinct patterns of activity in response to auditory cues. Specifically, IL excitatory neurons show rapid activation, whereas PL neurons demonstrate delayed activation

Conclusion Together, these initial studies

showed that various brain regions are activated by different cues, indicating the intricate involvement of cortico-subcortical circuits in diverse cue processing mechanisms. Additionally, the mPFC have shown nuanced activity patterns, offering novel perspectives on the processing of drug-related cues. Current research endeavors are also focused on elucidating the precise mechanisms of neuronal subtypes within the mPFC.

关键词: methamphetamine, medial prefrontal cortex, craving, relapse

鼠李糖乳杆菌和格氏乳杆菌对酗酒大鼠的潜在治疗作用以及其对肠道菌群的影响

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目的 长期酗酒可导致酒精相关性肝病、心血管疾病、胃肠道疾病、认知障碍等,其中酒精相关性肝病已成为一个重大的全球公共卫生问题,给医疗系统带来了巨大压力。基于“肠-脑轴”理论的研究表明肠道微生物群失调可能在酒精使用障碍等精神疾病的发生发展中发挥重要作用。本课题组前期研究发现酗酒大鼠粪便中乳酸杆菌属丰度显著下降,推测乳杆菌属可能对酗酒大鼠具有保护作用。为了验证这一假设,本研究选择乳酸杆菌属的鼠李糖乳杆菌和格氏乳杆菌作为研究对象,评价这两个菌种对酗酒大鼠的潜在治疗作用,以及口服这两种益生菌对大鼠肠道菌群的影响。以期对酒精使用障碍的治疗提供新的思路。

方法 1、通过构建酒精组、鼠李糖乳杆菌组、格氏乳杆菌组的大鼠模型,使用化学发光法检测大鼠血清中丙氨酸氨基转移酶和天门冬氨酸氨基转移酶水平;使用蛋白免疫印记检测大鼠肝细胞内肿瘤坏死因子- α 水平;2、使用旷场实验对大鼠模型进行运动距离和运动时间,观察大鼠在鼠李糖乳杆菌、格氏乳杆菌等肠道菌群对酗酒情况的影响;3、利用16S rRNA 基因测序及分析技术检测肠道菌群的多样性。

结果 和对照组相比,酒精组大鼠 FGF21、脂

多糖、ALT 和 AST 水平显著升高($P<0.05$)且自主运动能力下降,以及导致大鼠肠道微生物多样性改变,Alpha 多样性降低。补充鼠李糖乳杆菌或格氏乳杆菌的大鼠,FGF21、脂多糖、ALT 和 AST 均有所下降($P<0.05$),并且肠道微生物群 Alpha 多样性指数均有所升高。

结论 本研究发现长期酗酒导致大鼠肠道微生物的改变,鼠李糖乳杆菌和格氏乳杆菌均可以改善由饮酒引起的大鼠肝脏损伤、自主运动能力减弱和肠道微生物群落结构变化,格氏乳杆菌在改善大鼠肝脏损伤方面效果更显著。

关键词: 酒精; 酒精相关性肝病; 肠道微生物; 鼠李糖乳杆菌; 格氏乳杆菌

交叉耦合交流电刺激改善甲基苯丙胺成瘾者学习记忆功能

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目的 甲基苯丙胺(Methamphetamine)成瘾是一种严重的物质成瘾问题,给社会带来沉重的经济卫生负担。研究发现,MA 成瘾者存在学习记忆功能损害,包括空间记忆和工作记忆受损,而跨频耦合现象在记忆中扮演重要角色。基于强化学习理论的概率学习模型有助于理解成瘾行为的形成与演变。跨频耦合经颅交流电刺激被提出作为一种干预手段,但在 MA 成瘾者中的应用尚未被报道。本研究的目标是通过随机对照的设计,使用交叉耦合经颅交流电刺激(Cross-frequency coupling transcranial alternative current stimulation, CFC tACS)刺激对 MA 成瘾者进行干预,评估其对工作记忆和强化学习的影响。

方法 招募 DSM-5 中 MA 成瘾诊断标准的患者,并随机分配到真 CFC 刺激组和伪 CFC 刺激组进行 5 天的左侧背外侧前额叶(Dorsal lateral prefrontal cortex, DLPFC)干预。被试完成一般人口学信息及成瘾史测量,以及学习与记忆功能测量。学习和记忆功能通过概率学习任务 and 空间工作记忆任务进行评估,分别使用了计算机化范式和信号检测理论。经颅交叉耦合交流电干预方案使用 Neuroelectrics 的设备进行刺激,真刺激组接受 6 Hz 叠加 80 Hz 的刺激,而伪刺激组则只感受到开始和结束时的电流刺

激。数据处理与统计分析采用线性混合效应模型。

结果 本研究发现,5天的CFC tACS干预能显著提高MA成瘾者在概率学习和空间工作记忆任务中的表现,尤其是在提高对惩罚的敏感性(interaction estimate = 4.762, P = 0.006)和工作记忆的提取速度(interaction estimate = -0.054, P = 0.032)方面。

结论 本研究结果表明基于内源性 theta-gamma 耦合现象的外源性 tACS 刺激有助于恢复MA成瘾者的学习记忆损伤。与先前研究结果相符,CFC tACS 的刺激方式在工作记忆表现方面获得了最佳提升。研究发现还指出,CFC tACS 干预使MA成瘾者在惩罚条件下的选择更加合理,推测其机制可能涉及恢复LPFC的功能以及提高信息整合和决策控制。尽管研究存在一些不足,如样本量有限和缺乏长期随访数据,但该研究为CFC刺激在改善MA成瘾者学习记忆功能上的潜力提供了重要依据,为进一步研究和治疗方法的选择提供了指导。

关键词: 甲基苯丙胺,成瘾,tACS,交叉耦合

游戏障碍的静息态脑电活动:基于功率谱特征的研究

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目的 伴随着网络的普及,网络游戏使用问题受到越来越多的关注。2018年世界卫生组织将游戏障碍列入精神疾病范畴,游戏障碍在我国发病率约为5.3%,长期过度沉迷网络游戏不仅会对个体的身体健康造成损害,还可能使得个体对网络游戏产生心理依赖,造成诸如成绩下降,决策能力减弱,自控能力不足,暴力或冒险行为的增加,情绪控制障碍等负面影响,最终演变成游戏障碍,导致个体出现行为异常、心理障碍以及神经功能紊乱等严重后果。但目前游戏障碍发生机制有待探索,相关治疗手段仍然十分缺乏。而基于静息态脑电探索成瘾的神经认知标记,深入揭示成瘾易感性的神经生物机制,可以为识别成瘾早期干预的靶点,预警具有成瘾高风险的重点人群提供可能途径,对成瘾的防治具有重要意义。

方法 通过自评量表游戏障碍筛查量表(GDSS),筛选GDSS得分 ≥ 47 的人群并结合

ICD-11 诊断标准的临床访谈纳入游戏成瘾组;GDSS得分处于32到47分纳入风险性游戏使用人群;GDSS ≤ 32 分人群被纳入健康对照组。采用博睿康公司的64导脑电检测仪分别对三组被试实施2分钟的静息态脑电数据采集,对数据进行预处理后,进行功率谱分析,计算了 $\delta(1-4\text{Hz})$ 、 $\theta(4-8\text{Hz})$ 、 $\alpha(8-13\text{Hz})$ 、 $\beta(13-30\text{Hz})$ 以及 $\gamma(30-35\text{Hz})$ 五个频段的绝对功率值,使用单因素ANOVA检验比较了三组在上述各指标上的差异。

结果 本研究共入组58名游戏障碍者,58名风险性游戏使用者和67名健康对照,平均年龄为 19.08 ± 0.95 。结果发现游戏障碍组和健康组在 β 频段的中央和顶枕区域通道存在显著差异,游戏障碍组的 β 频段的绝对功率值显著低于健康对照组;同时游戏障碍组中央区域的 β 比值与冲动性量表(BIS-11)的行动冲动性分量表得分($r = -0.284$, $p = 0.032$)存在显著负相关。

结论 游戏障碍存在 β 频段中央和顶枕区域的慢波异常特征,游戏障碍患者 β 功率降低的结果可能与其抑制性控制特征受损有关。本研究结果为未来确定游戏障碍的生理标志物提供了进一步依据。

关键词: 网络游戏障碍,风险性游戏使用,静息态脑电,功率谱

Inflammatory Cytokines, Cortisol, and Anhedonia in Patients with Treatment-Resistant Depression after Consecutive Infusions of Low-dose Esketamine

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Objective Anhedonia, defined as a significant loss of interest or pleasure, is one of the core symptoms of treatment-resistant depression (TRD) and often associated with poor prognosis. This article primarily investigates the changes in anhedonia symptoms, inflammatory factors, and cortisol in TRD patients after low-dose esketamine treatments

Methods A total of sixty patients with TRD were enrolled in the clinical study of esketamine. We primarily assessed the severity of depressive symptoms and

anhedonia using the Hamilton Rating Scale for Depression(HAMD) and the Snaith-Hamilton Pleasure Scale(SHAPS), respectively, before esketamine treatment and within 3 to 6 hours after each treatment. Blood specimens were collected before the administration of esketamine treatment and within 1 hour after the sixth treatment, measuring the levels of cortisol, interleukin-6 (IL-6), IL-10, and tumor necrosis factor-alpha (TNF- α) in plasma

Results We found that after six consecutive infusions of low-dose esketamine, patients' depressive symptoms and anhedonia showed improvement. Following treatments, plasma levels of cortisol, IL-6, and TNF- α decreased in patients with TRD, while the anti-inflammatory cytokine IL-4 increased. Multiple linear regression showed that baseline cortisol is correlated with the lack of pleasure, while inflammatory factors show no significant correlation

Conclusion Add-on esketamine seems to be a good choice for the treatment of the anhedonia in TRD. It has also shown promising effects in altering inflammatory factors in patients with TRD. Moreover, the elevation of plasma cortisol levels may serve as a potential biomarker for anhedonia in patients with TRD

关键词: esketamine,anhedonia,inflammatory cytokines,cortisol

Blockade of Orexin Receptors Prevents Stress-induced Alcohol Dependence and Relapse in Adolescent Mice

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Objective Alcohol dependence is a global public health problem with a high relapse rate after withdrawal, but the mechanism remains unclear. Stress may be an important factor in substance addiction and relapse, and

the role of orexin system in stress response has been discussed. Orexin may be involved in stress-induced addiction or relapse. However, there are few relevant studies on alcohol dependence, especially among adolescents. In order to find new targets for the prevention of alcohol addiction and relapse, the present study aims to investigate the role of stress in alcohol relapse in adolescent mice, and the role of the orexin system in it

Methods The alcohol Conditioned Place Preference (CPP) model was established in adolescent mice. In experiment 1, after CPP extinction, mice were randomly assigned to receive acute foot shock (stress group) or sham shock (control group) prior to CPP reinstatement, respectively, to explore the effect of acute stress on alcohol CPP reinstatement. ELISA was used to compare the differences in orexin concentrations in the VTA and other brain regions between the two groups. In experiment 2, another group of mice were injected with vehicle/orexin receptor 1, 2 antagonists before foot shock stress prior to CPP reinstatement, and the effects of orexin receptor antagonists on CPP recovery induced by stress were examined. In experiment 3, mice were randomly divided into chronic stress group and control group, which were subjected to chronic foot shock stress or sham stress for 10 days. The mice were then subjected to alcohol CPP, and the establishment of CPP was compared between the two groups. In experiment 4, all mice were subjected to chronic stress and randomly divided into Vehicle group and Orexin 1 or 2 receptor antagonist group after stress. Different drug interventions were given before each alcohol conditioning in CPP training, and the CPP establishment was compared among the three groups

Results The results showed that alcohol CPP reconstruction was successful only in the stress group that experienced acute foot-shock stress prior to the CPP reinstatement test ($P < 0.01$). Additionally, the orexin concentration in the nucleus accumbens, hippocampus, and medial prefrontal cortex of the stress group mice was significantly higher ($P < 0.05$) in comparison to the control group. Compared with the successful CPP reconstruction in the vehicle group ($P < 0.001$), CPP reconstruction was blocked in both groups of mice given orexin 1,2 receptor antagonist prior to acute foot-shock

stress before the reinstatement test (both $P > 0.05$). Furthermore, it was found that CPP scores were significantly higher in adolescent mice experiencing chronic stress before CPP establishment compared with controls ($P < 0.01$). And after chronic stress, compared with Vehicle group, CPP scores in both receptor antagonist groups were significantly decreased (both $P < 0.05$)

Conclusion Acute foot shock stress exposure can promote the relapse of alcohol dependence and increase the concentration of orexin in related brain regions in adolescent mice, and these effects can be blocked by orexin 1 and 2 receptor antagonists, suggesting that orexin system plays an important role in acute stress-induced relapse of alcohol dependence in adolescent mice. Chronic foot-shock stress can increase the vulnerability to alcohol dependence, and orexin 1 and 2 receptor antagonists can significantly reduce this effect, suggesting that orexin 1 and 2 receptors may play an important role in alcohol dependence induced by chronic stress. Both orexin receptors may be important targets for preventing alcohol dependence and relapse.

关键词: Alcohol dependence; Relapse; Orexin; Acute stress; Conditioned Place Preference

Engrams and Circuits Crucial for Forgetting of Drug Memory

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Objective The persistence of drug addiction memories is a major cause of relapse. The conditioned stimulus retrieval-extinction procedure, in which extinction training is conducted during the reconsolidation window following the retrieval of an addictive memory conditioned stimulus, effectively forgets the addiction memory and significantly reduces cue-induced drug craving, making it an effective therapeutic strategy for relapse prevention. However, the neural mechanisms underlying the inhibition of relapse by conditioned stimulus retrieval-extinction remain unknown. Therefore, elucidating the neuronal clusters and their neural

circuits underlying conditioned stimulus retrieval-extinction has broad implications for understanding the forgetting of drug addiction memories.

Methods We first used the animal model of methamphetamine self-administration to examine the effects of conditioned stimulus retrieval-extinction on the reinstatement of methamphetamine seeking in the medial prefrontal cortex by chemogenetic inhibition of different subregions of the medial prefrontal cortex. Then we used virus tool with E-SARE driven promoter plasmids to label and reactivate retrieval-extinction or extinction specific neuronal ensemble. E-SARE is Enhanced synaptic activity-responsive element (E-SARE). It was shown to label the neuronal ensemble activated by specific environmental stimulus. Subsequently, we compared the differences between the two types of retrieval-extinction or extinction specific neuronal ensemble using immunofluorescence, miniscope, and single-cell sequencing techniques. To explore the differential contributions of infralimbic cortex (IL) projection populations, we investigated the output brain regions of the associated neuronal ensemble during retrieval-extinction or extinction using anterograde and retrograde tracing techniques. Finally, we explored the effects of IL-intermediodorsal thalamic nucleus (IMD) neural circuits on the reinstatement of methamphetamine seeking by chemogenetic activation or inhibition and electrophysiological techniques.

Results Chemogenetic inhibition of IL, but not PL (prelimbic cortex), activity before conditioned stimulus retrieval-extinction reverses the inhibitory effect of this procedure on drug priming-induced reinstatement of methamphetamine seeking, suggesting that the inhibition of methamphetamine addiction memory by this procedure is specifically dependent on the involvement of IL. Specific labeling and activation of retrieval-extinction but not extinction neuronal ensemble in the IL can simulate the inhibitory effects of the conditioned stimulus retrieval-extinction procedure on drug priming-induced reinstatement of methamphetamine seeking, indicating that retrieval-extinction neuronal ensemble in the IL may mediate the effects of this procedure on methamphetamine relapse. Staining of the engram by E-SARE labeling and c-Fos indicated differences between

retrieval-extinction and extinction specific neuronal ensembles. In addition, in vivo calcium imaging using single-photon-based miniscope and a microendoscopic lens revealed distinct neuronal ensembles that encode the retrieval-extinction and extinction processes. We call them forgetting ensembles and extinction ensembles respectively. Afterwards, the virus tracing technique identified retrieval-extinction specific neuronal ensemble in the IL that preferentially export to the IMD rather than the basolateral amygdala (BLA). Furthermore, neuronal excitability of IL projections to the IMD was significantly increased during retrieval-extinction compared to extinction. More importantly, chemogenetic activation of IL-IMD projections dramatically inhibited the reinstatement of methamphetamine seeking.

Conclusion The memory editing procedure initiated by conditioned stimuli activates specific neuronal ensembles, termed 'forgetting ensembles', in the infralimbic cortex. Memory forgetting involves the recruitment of the IL-IMD circuit, and the activation of this circuit induces a memory forgetting effect.

关键词: retrieval-extinction, infralimbic cortex, engram, intermediodorsal thalamic nucleus

下丘脑室旁核催产素神经元至伏隔核环路在甲基苯丙胺致条件性位置偏好中的作用

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目的 1. 探究鼻滴 OXT 对 METH-CPP 表达的作用及其机制。

2. 探究 METH-CPP 表达中 PVNOXT 神经元活性及 OXT 水平的变化, 以及 PVN OXT 神经元的作用。

3. 探究 METH-CPP 表达中 PVNOXT 神经元投射至 NAc 环路的活性及 NAc 中 OXT 水平的变化, 以及 PVNOXT-NAc 环路的作用。

方法 1. 构建 METH-CPP 小鼠模型, 研究鼻滴 OXT/AVP 对 METH-CPP 表达的作用。

2. 病毒标记 PVN OXT 神经元并检测其活性改变。ELISA 检测 OXT 和 AVP 蛋白水平的变化, qPCR

检测 Oxt 和 Avp mRNA 水平的变化。化学遗传操控探讨 PVN OXT 神经元对 METH-CPP 表达的作用。

3. 利用病毒示踪确认 PVNOXT-NAc 环路的存在, 并检测 METH-CPP 表达时环路活性的变化。ELISA 测定 PVN 下游脑区 OXT 和 AVP 蛋白水平变化, qPCR 检测 Oxt mRNA 水平变化。化学遗传和光遗传操控探讨 PVNOXT-NAc 环路对 METH-CPP 表达的作用。

结果 1. 鼻滴 OXT 而非 AVP 可以改善小鼠 METH-CPP 表达, 中枢 OXTRs 拮抗剂可以阻断这一作用。鼻滴 OXT 可以抑制 METH 诱导的 NAc 激活, 抑制 NAc 的 OXTRs 可以阻断鼻滴 OXT 的作用, 直接激活 NAc 的 OXTRs 可以抑制 METH-CPP 表达。

2. METH 抑制 PVN OXT 神经元, 引起 OXT 蛋白水平下降, 而不影响 SON、垂体和外周血清中 OXT 水平。化学遗传激活 PVN OXT 神经元可以抑制 METH-CPP 表达, 且能被中枢 OXTRs 拮抗剂所阻断。相反, 化学遗传抑制 PVN OXT 神经元介导偏好产生。

3. METH 抑制 PVNOXT-NAc core 环路活性, 而 PVNOXT-NAc shell 环路不受影响, NAc core 和 NAc shell 中 OXT 的蛋白和 Oxt mRNA 水平无显著改变。化学遗传或光遗传激活 PVNOXT-NAc core 环路可以抑制 METH-CPP 表达, 且拮抗 NAc core 的 OXTRs 可以阻断这一作用。相反, 化学遗传抑制 PVNOXT-NAc core 环路介导偏好产生。调控 PVNOXT-NAc shell 环路不影响 METH-CPP 表达。

结论 1. METH 引起脑内 OXT 系统功能减退, 包括 PVNOXT 神经元活性降低, PVN 中 OXT 蛋白水平下降, 及其投射至下游脑区 NAc core 的环路活性降低。

2. 通过鼻滴给予外源性 OXT 或者激活内源性 OXT 系统都能够抑制 METH-CPP 的表达, 并且这一过程可能需要 NAc 中 OXTRs 的参与, 提示脑内 OXT 及其受体在 METH-CPP 行为中有重要的调控作用。

关键词: 甲基苯丙胺; 催产素; 条件性位置偏好; 下丘脑室旁核; 伏隔核

Causal Pathways between Neuroticism, Edu-

ational Attainment and Mental and Behavioral Disorders Due To Psychoactive Substances Use: A Mediation Mendelian Randomization Study

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Objective Neuroticism, a personality trait characterized by emotional instability and a tendency to experience negative emotions such as anxiety and depression, has long been implicated as a significant factor in mental and behavioral disorders arising from psychoactive substance use (MBD-PSU). This relationship is particularly concerning given the global burden of mental health issues and substance use disorders. Despite this, the precise causal pathways linking neuroticism and MBD-PSU remain unclear, largely due to potential confounding factors such as other personality traits and socio-economic variables. Hence, a more nuanced understanding and investigation into this relationship is critically needed.

Methods To elucidate the causal relationship between neuroticism and five subtypes of MBD-PSU—namely alcohol, cannabinoids, hallucinogens, opioids, and tobacco—bidirectional univariate Mendelian randomization (MR) was employed. This technique allows for the determination of causal effects using genetic variants as instrumental variables, thereby reducing bias from reverse causation and confounding. Additionally, multivariate Mendelian randomization (MVMR) was utilized to control for the potential confounding variable of extraversion and to estimate the mediating effect of educational attainment on this relationship

Results Univariable MR demonstrated the robust evidence of supporting a causal effect of neuroticism on mental and behavioral disorders due to alcohol (MBD-A) (IVW: OR = 1.126, 95%CI = 1.043 ~ 1.215, P = 0.002). However, reverse direction analysis did not yield any evidence of a causal effect of these five subtypes of MBD-PSU on neuroticism. Furthermore, MVMR analyses demonstrated that the causal association between neuroticism and MBD-A was independent of extraversion, and mediated by educational attainment

(Indirect effect: Beta = 0.028, 95%CI = 0.019 ~ 0.046, P < 0.001, R² = 23.84%)

Conclusion This study underscores that high levels of neuroticism significantly contribute to an increased vulnerability to alcohol-related mental and behavioral disorders (MBD-A). Additionally, it highlights the mediating role of lower educational attainment in this relationship. These findings suggest that educational interventions may serve as a crucial buffer in mitigating the impact of neuroticism on the development of MBD-A. By identifying and supporting individuals at high risk due to adverse personality traits, particularly through educational support and social interventions, it may be possible to decrease the incidence and severity of alcohol-related disorders. This research contributes to the broader understanding of the interplay between personality traits, education, and substance use disorders, offering avenues for potential preventive strategies and policy implications.

关键词: Neuroticism; Psychoactive substance use; Educational attainment; Mendelian randomization

Effects of Varenicline on The Serum Levels of Olanzapine in Male Patients with Schizophrenia: A Randomized Controlled Trial

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Objective Cigarette smoking is notably prevalent among individuals with schizophrenia, with estimates indicating a smoking prevalence of 64-79% within this population. Smoking is associated with severe tobacco dependence, elevated substance abuse, increased psychiatric hospitalization, and higher mortality rates. Varenicline, a partial agonist at $\alpha 4\beta 2$ nicotinic acetylcholine receptors, has proven effective for smoking cessation in the general population and patients with psychiatric disorders. However, its effects on the serum levels of antipsychotics in schizophrenia are understudied. This study aimed to investigate the impact of vare-

nicline on the serum levels of olanzapine, an antipsychotic medication, in male patients with schizophrenia who smoke.

Methods This study was a randomized, double-blind, placebo-controlled trial conducted. Participants were male inpatients aged 18-50 years with schizophrenia, confirmed by ICD-10 criteria, who were nicotine-dependent smokers consuming 10 or more cigarettes per day with a Fagerstrom Test of Nicotine Dependence (FTND) score greater than 5. All participants were clinically stable with Positive and Negative Syndrome Scale (PANSS) scores below 60 and had serum olanzapine concentrations exceeding 9 ng/mL. Eligible participants were randomly assigned to receive either varenicline or a placebo for 12 weeks alongside continued olanzapine therapy (10-20 mg daily). Varenicline was administered with a titration schedule starting at 0.5 mg/day, increasing to 0.5 mg twice daily, and then to 1 mg twice daily. Both groups received behavioral support to aid smoking cessation, which included reducing cigarette consumption by 25% every two weeks. Serum olanzapine concentrations were measured at baseline and weeks 1, 2, 4, 8, and 12 using liquid chromatography-mass spectrometry (LC-MS). Data were analyzed using a generalized additive mixed model (GAMM) to assess group differences over time. A two-piecewise linear regression model was applied to examine the threshold effect of the treatment on olanzapine concentrations using a smoothing function.

Results A total of 61 participants completed the study (30 to the varenicline group and 31 to the matching placebo group). The average age was 36.8 ± 7.7 years. The baseline olanzapine concentrations were 48.5 ± 12.0 ng/mL and 48.3 ± 14.1 ng/mL, which increased to 66.0 ± 11.2 ng/mL and 66.7 ± 12.7 ng/mL for the varenicline group and the placebo group, respectively. The GAMM results showed that olanzapine concentrations increased nonlinearly in the varenicline and placebo groups. Threshold effect analysis suggested that the olanzapine concentrations increased until the turning point (week 4). However, there was no significant difference between the two treatment groups. Adjustments for baseline variables such as age, height, weight, BMI,

education, and smoking history did not affect these findings

Conclusion Varenicline is safe and effective for smoking cessation in male patients with schizophrenia. Although smoking cessation leads to higher serum concentrations of olanzapine, the use of varenicline does not significantly alter this effect compared to placebo. This study contributes to the understanding of managing smoking cessation in patients with schizophrenia who are undergoing antipsychotic treatment and highlights the importance of therapeutic drug monitoring in this context.

关键词: schizophrenia, smoking cessation, varenicline, olanzapine, randomized controlled trial

Social Interaction Suppresses Cocaine Relapse by Regulating Specific DAergic Engram

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Purpose Addiction is a chronic relapsing brain disease, characterized by a high susceptibility to relapse once returns to the original living environment even after an extended period of abstinence. Positive social interactions are believed to have therapeutic potential in managing drug addiction by shifting the drug reward back onto social reward. However, the neural mechanisms underlying social interaction's therapeutic effects against relapse are poorly understood. The dopamine (DA) activity of Ventral tegmental area (VTA) mediates both the reinforcing properties of social reward and drugs of abuse. Therefore, we hypothesized that distinct subpopulations of DAergic neurons in the VTA may play different roles in the process of social anti-relapse

Methods We employed the cocaine self-administration as a relapse model in rats, and combined miniscope, Targeted Recombination in Active Populations (TRAP), immunofluorescence, fiber photometry

recording, and chemical genetics to explore the involvement of subpopulations of DAergic neurons during social interaction-mediated relapse prevention

Results We found that social interaction significantly inhibited the spontaneous recovery of cocaine seeking after cocaine self-administration extinction training in rats. While both social interaction and relapse of cocaine seeking reliably elicited obvious Ca²⁺ level increase in the TH neurons of VTA and induced DA relapse in nucleus accumbens (NAc), both the increase of Ca²⁺ level in the TH neurons of VTA and DA release in NAc induced by active cocaine relapse were significantly reduced after social interaction. Furthermore, the subpopulations of DAergic neurons in the VTA which encoded social interaction and relapse were mainly distinct and anatomically segregated. And, capturing and reactivating or inhibiting the specific subpopulation of DAergic neurons in the VTA encoding social interaction significantly inhibited or promoted cocaine relapse. Lastly, Social-DAergic engram and relapse-DAergic engram in the VTA establish different connections with the brain regions involved in this processing

Conclusion This study provided the evidence that distinct subpopulations of DAergic neurons in the VTA are involved in social interaction and relapse, and selective activation and inhibition of the memory engram of social interaction in the VTA effectively inhibited and promoted drug relapse. Future studies will explore the input of DAergic neurons engram in the process of social interactions therapeutic effects against cocaine relapse by combining cross-synaptic engram tracer, brain patch clamp, and optogenetic, and reveal the circuitry mechanism of natural reward and drug reward interaction

关键词: Social interaction, cocaine relapse, VTA, DAergic neurons, memory engram

Effects of A Virtual Reality Alcohol Addiction Withdrawal System on Craving and Relapse in Alcohol Use Disorder Inpatients: A Real-world Randomized Controlled Trial

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Objectives Alcohol Use Disorder (AUD) is a chronic relapsing brain disease characterized by persistent inability to control alcohol consumption despite adverse consequences. This study aimed to evaluate the efficacy of Virtual Reality (VR)-based interventions, specifically VR cue exposure therapy (VR-CET) and VR-CET combined with aversion therapy (VR-CET+AT), in reducing alcohol cravings and relapse rates among hospitalized AUD patients compared to standard care.

Methods From January 2021 to March 2023, we conducted a randomized controlled trial with 152 AUD inpatients, whom were randomly assigned to three groups, a control group (n=51), a virtual reality-cued exposure therapy (VR-CET) group (n=50), and a virtual reality-cued exposure therapy + aversion therapy (VR-CET+AT) group (n=51). The three groups were given neutral scene, cue exposure therapy and cue exposure therapy + aversion therapy through the VR system. Each group received a total of 16 sessions of VR therapy. All three groups received standard medication and general psychotherapy. At baseline and at the end of treatment, patients' cravings were assessed using the Pennsylvania Alcohol Craving Scale (PACS) and the Alcohol Abstinence Self-Efficacy Scale (AASE). At 1-, 3-, and 6-months post-discharge, patients' primary outcomes of abstinence and relapse were assessed by patient and family follow-up reports. At 6 months after discharge, patients were compared on secondary outcome indicators of sustained abstinence, readmission, hospitaliza-

tion intervals, and death. Treatment-related adverse effects and safety were assessed by a self-administered questionnaire for each group of patients

Results As a primary outcome, there was a significant decrease in PACS ($p < 0.01$) and a significant improvement in AASE ($p < 0.01$) in all three groups compared to baseline levels. The VR-CET+AT group had a significantly higher effect on alcohol craving levels than the other two groups. In terms of improvement in self-efficacy scores for refusal to drink, the VR-CET+AT group was comparable to the VR-CET group ($p > 0.05$) and both were better than the control group ($p < 0.05$). Compared with the standard treatment group, patients in the VR-CET and VR-CET+AT groups had significantly lower rates of return to drinking 1 month after discharge ($p < 0.05$) and were significantly lower than those in the control group ($p < 0.05$). However, the rate of return to drinking gradually increased in all three groups over time ($p < 0.01$), and the difference between the groups gradually narrowed until it was no longer significant after 6 months ($p > 0.05$). In terms of secondary outcomes, the interval between hospitalizations was longer in the VR-CET group and the VR-CET+AT group, but the difference in readmission and mortality rates between the two groups was not significant. Participants reported few adverse events or side effects that were mild and transient, including dizziness, nausea, excessive dreaming, and mild anxiety

Conclusion This study shows that VR-CET and VR-CET+AT effectively reduce short-term alcohol cravings and enhance self-efficacy for alcohol refusal in AUD patients. However, their long-term impact on abstinence is limited, indicating the need for these interventions to be part of comprehensive, long-term treatment plans. The results highlight VR technology's potential as a safe and effective AUD treatment component, but also the necessity for ongoing reinforcement and combining VR with other evidence-based strategies. Further research is needed to optimize and sustain VR interventions' benefits in AUD treatment.

关键词: virtual reality, alcohol use disorder, cue exposure therapy, aversion therapy, Crave, relapse

网络游戏成瘾相关的全基因组关联研究

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目的 近年来网络游戏成瘾 (Internet Gaming Disorder, IGD) 问题日益凸显, 严重危害未成年人及大学生群体的精神心理健康。IGD 受到遗传因素的影响, 但其分子遗传学机制及其与精神疾病及物质成瘾的遗传关联仍不清楚。本研究旨在发现与 IGD 相关的遗传风险因素及其与精神疾病和物质成瘾的遗传关联。

方法 本研究数据基于美国青少年脑认知发育队列第三年随访数据, 年龄为 12.91 ± 0.64 岁。采用视频游戏成瘾问卷评估游戏成瘾程度。基因数据质量控制要求包括: SNP 水平检出率 $> 95\%$ 、次要等位基因频率 (MAF) > 0.001 、哈迪温格伯平衡测试 $P > 1 \times 10^{-6}$; 个体水平年龄或性别信息完整、检出率 $> 95\%$ 、常染色体杂合性 $< 3sd$ 、血缘同源指数 (IBD) $PI_HAT < 0.2$ 。控制变量包括年龄、性别、遗传结构前 10 个组成分。采用多基因风险评分分析物质使用障碍、精神疾病与 IGD 的遗传关联, GWAS summary 数据集来源于 PGC 队列, GWAS Catalog 和本团队之前建立的物质成瘾队列等。

结果 本研究共纳入样本 5865 人 (男: 3547, 女: 2318 人), 共有 4,032,260 个合格 SNP。结果发现 7 号染色体 rs376069954 ($P = 1.53e-13$) 与网络游戏成瘾显著相关, 该 SNP 接近 EIF3IP1 基因。多基因风险评分遗传关联结果显示大麻成瘾 ($\beta = 1042.47$, $P = 0.0075$) 和尼古丁成瘾 ($\beta = 1500.47$, $P = 0.033$) 的遗传风险与 IGD 风险呈正相关; 海洛因成瘾遗传风险 ($\beta = -4329.48$, $P = 0.0011$) 与 IGD 风险呈负相关; 在最优模型下 ($P_{\text{threshold}} = 0.0002$), 甲基苯丙胺成瘾遗传风险 ($\beta = 180.782$, $P = 0.020$) 与 IGD 呈正相关, 但随着 P 值阈值的增加, 甲基苯丙胺成瘾与 IGD 表现出负相关的趋势。对于其他精神疾病, IGD 与进食障碍 ($\beta = 2928.96$, $P = 0.00029$)、孤独症 ($\beta = 3623.36$, $P = 0.0013$)、失眠 ($\beta = 46394.7$, $P = 0.0028$) 和多动症 ($\beta = 13796.10$, $P = 0.0055$) 的遗传风险呈正相关, 与强迫症 ($\beta = -2928.96$, $P = 0.00029$) 呈负相关。

结论 全基因组关联分析提示 EIF3IP1 基因多

态性与 IGD 显著相关。在多基因水平,发现 IGD 与大麻成瘾和尼古丁成瘾的遗传关联呈正相关,与海洛因成瘾和甲基苯丙胺成瘾的遗传关联呈负相关。此外,进食障碍、孤独症、失眠和多动症的遗传风险会增加 IGD 风险,但强迫症的遗传风险可降低 IGD 风险。未来我们将进一步分析与网络游戏行为发展趋势相关的遗传风险。

关键词: 网络游戏成瘾, 物质成瘾, GWAS

Single-cell Transcriptomic Analysis of Rat Anterior Cingulate Cortex Cells in Reward Behaviors Induced by Methamphetamine and Heroin

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Objective This study employs single-nucleus RNA sequencing to analyze the transcriptional states of various cell types in the anterior cingulate cortex (ACC) of Sprague-Dawley (SD) rats during methamphetamine (METH) or heroin self-administration reward behaviors. Special emphasis is placed on investigating transcriptional alterations and identifying common features of neuronal changes induced by these addictive substances during the reward process

Methods Male SD rats, weighing 300-320g and aged 8-10 weeks, underwent self-administration training with methamphetamine or heroin over 14 days, with saline serving as a control. Post-training, ACC tissue was collected for single-nucleus RNA sequencing. Data underwent quality control, normalization, dimensionality reduction, t-SNE clustering, cell type annotation, differential expression analysis, and functional enrichment analysis

Results In this study, 22,168 viable nuclei were analyzed, revealing nine distinct cell types including excitatory neurons, inhibitory neurons, astrocytes, microglia, oligodendrocytes, oligodendrocyte precursor cells,

newly formed oligodendrocytes, endothelial cells and undefined cells, identified by their characteristic gene expression profiles

In the heroin reward condition, 1,635 significantly differentially expressed genes (DEGs) were identified, including 947 DEGs specific to excitatory neurons. METH exposure resulted in 3,743 DEGs, with 1,244 DEGs specific to excitatory neurons. Across both conditions, 139 genes were consistently upregulated and 176 genes downregulated in excitatory neurons.

Functional enrichment analysis highlighted these commonly regulated genes in synaptic structures such as presynaptic and postsynaptic membranes, and in critical neuronal development processes like dendritic spine formation, synaptogenesis, and growth cone development. Pathway analysis revealed enrichment in pathways such as retrograde endocannabinoid signaling, morphine addiction, glutamatergic synapse function, and relaxin signaling.

Protein-protein interaction analysis revealed distinct regulatory networks in excitatory neurons under heroin and METH rewards. Heroin-induced DEGs formed networks centered on ligand-gated ion channel activity, presynaptic membrane potential regulation, and transcriptional co-regulation, while METH-induced DEGs clustered around NMDA-selective glutamate receptor complexes and protease activity.

Conclusion This study employed single-nucleus RNA sequencing technology to investigate transcriptional changes in excitatory neurons of the ACC in SD rats during methamphetamine or heroin reward behaviors. We found that both drug exposure models shared overlapping DEGs in excitatory neurons, particularly affecting synaptic structures and functions. These findings suggest commonalities in neuronal transcriptional changes induced by different substances during reward processes. This study provides a novel perspective on understanding the mechanisms underlying drug reward.

关键词: snRNA-seq, Methamphetamine, Heroin, Self-administration

甲基苯丙胺成瘾者的强化学习障碍及其认知

神经机制

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目的 甲基苯丙胺成瘾是一种严重的物质依赖问题，给社会带来了沉重的经济和卫生负担。药物成瘾的计算理论大多基于强化学习框架，认为成瘾是习惯学习系统的一种病理状态。过去的研究表明，成瘾者的强化学习能力受到损害，这些研究通常采用反应时间等传统指标。本研究采用计算建模技术来深入剖析奖惩学习过程中的学习特征，以探讨不同成瘾人群的差异。

方法 本研究招募了戒断时间在半年内的甲基苯丙胺成瘾者，按照 DSM-5 中甲基苯丙胺成瘾的诊断标准分为 27 名为轻度组、27 名为中度至重度组，并招募了 27 名未使用甲基苯丙胺的健康个体作为对照组。通过金钱奖励学习任务进行评估，使用 Simple-Q 模型进行强化学习过程的拟合分析。

结果 在这项货币强化学习任务中，我们观察到中重度组在奖励轮的 Beta 值(代表对奖励的敏感程度)明显高于健康组 ($p=0.0462$)，但轻度组与健康组之间没有明显差异。此外，在中重度组中，我们还发现符合 DSM5 标准的症状数量与 Beta 值呈正相关 ($r=0.485$, $p=0.0103$)。通过比较意外事件和预期事件反馈诱发事件相关电位的差值，研究观察到中至重度成瘾者相对正常对照在意外事件发生后 0.25 秒左右枕叶呈现较低的峰值 ($p=0.00280$)，左侧额叶则呈现较高的峰值 ($p=0.00196$)。时频分析结果显示，中至重度成瘾者在意外与预期结果之间 Theta 频段能量的差异出现了三个显著高于健康对照组的簇 ($p=0.000800$, $p=0.0720$, $p=0.0236$)，轻度成瘾者与健康人之间差异不明显。而在损失轮中没有观察到差异。

结论 本研究结果表明，健康人在看到意外结果后，其主要反应发生在与视觉相关的枕叶，表明他们主要在处理视觉信息而不是价值信息。相比之下，成瘾患者在看到反馈后，其主要信息处理区域位于与认知功能相关的左侧额叶皮层，说明他们可能在面对意外情况时付出了更多的认知资源，从而导致他们在后续选择过程中更加敏感，更加固化于对奖赏的寻求。这些发现揭示了甲基苯丙胺成瘾者可能存在的与正常人不同的奖励学习机制，为理解奖励、学习及成瘾行为的神经生理学机制提供了新

的视角。

关键词：强化学习；甲基苯丙胺；成瘾；ERP；时频

激活/行为抑制双系统与冲动/控制双系统在尼古丁成瘾中的机制研究

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目的 尼古丁的使用通常始于青少年时期，越早开始吸烟，戒烟就越困难，本研究旨在探讨激活/行为抑制双系统与冲动/控制双系统在大学生初次吸烟年龄和尼古丁成瘾之间的作用机制。

方法 2023 年 3 月 16 日-3 月 29 日在全国 21 所高校开展线上问卷调查，共发放问卷 13643，回收问卷 13205，回收率 96.79%。平均分布在中国六大区域，华北区 (10.03%)、东北区 (2.53%)、华东区 (2.53%)、中南区 (64.18%)、西南区 (10.19%)、西北区 (2.51%)；普通高等学校 (41.8%)，高职 (高专) 类学校 (58.2%)；采用一般情况调查表、宾州州立大学[电子]烟依赖指数量表 (PS[E]CDI)、冲动/控制双系统量表 (DMSC-S)、行为抑制/行为激活量表 (BIS-BAS scale)、患者健康问卷抑郁量表 (PHQ-9)、广泛性焦虑问卷 (GAD-7) 等工具进行网络问卷调查。

结果 (1) 在行为激活系统到冲动性的回归路径中，行为激活系统正向预测冲动性 ($\beta=0.134$, $P<0.01$)，行为抑制系统在行为激活系统与冲动性的关系中起到了正向的调节作用 ($\beta=1.367$, $P<0.001$)；在行为抑制系统到控制性的回归路径中，行为抑制系统正向预测控制性 ($\beta=0.134$, $P<0.01$)，行为激活系统在行为抑制系统与控制性的关系中起到了正向的调节作用 ($\beta=1.367$, $P<0.001$)。2. 尼古丁成瘾分数为因变量的回归分析中，首次吸烟年龄 ($\beta=-0.931$, $P<0.01$)、焦虑 ($\beta=0.062$, $P<0.001$)、抑郁 ($\beta=0.096$, $P<0.001$)、冲动性 ($\beta=0.057$, $P<0.05$) 与尼古丁成瘾相关，行为激活系统、行为抑制系统和控制系统没有进入回归方程，3. 进一步中介分析显示冲动性、焦虑、抑郁在首次吸烟年龄和尼古丁成瘾间是平行

链式中介关系, 总间接效应 15.44%。

结论 1. 在大学生的尼古丁成瘾中, 行为激活/行为抑制双系统互相作用调控了冲动/控制双系统, 两个双系统中, 只有冲动性发挥了更大的作用, 即冲动性强的个体可能更容易染上烟瘾; 2. 冲动性、焦虑、抑郁在首次吸烟年龄和尼古丁成瘾间发挥了平行链式中介效应。在干预大学生的烟瘾过程中, 应该关注这些因素, 才可能取得更好的效果。

关键词: 尼古丁成瘾; 行为激活系统; 行为抑制系统; 冲动系统; 控制系系统

抑郁状况在网络游戏时间与网络游戏障碍间的中介作用分析

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目的 抑郁情绪与网络游戏障碍(internet gaming disorder, IGD)存在关联, 但具体规律尚不明确。本研究旨在探讨抑郁状况在网络游戏时间与网络游戏障碍之间的中介作用, 为大学生网络游戏障碍的干预提供理论依据。

方法 于 2022 年 11 月至 12 月, 选取安徽某医学院 1527 名大学生为研究对象, 采用一般人口学问卷、网络游戏障碍量表 (IGD-20) 和抑郁症筛查量表 (PHQ-9) 进行评定, 使用 SPSS 软件和 R 软件分析大学生游戏时间、抑郁状况与网络游戏障碍之间的关系。

结果 (1) 不同游戏时间的单因素方差分析显示: 每天游戏时间 1-2 小时、2-4 小时及 4 小时以上的大学生在 IGD 得分和 PHQ-9 得分上均显著高于每天游戏 1 小时以下的群体 ($P < 0.05$); 每天游戏时间 2-4 小时与 4 小时以上的 IGD 得分和 PHQ-9 得分均无显著差异 ($P > 0.05$)。不同抑郁程度的单因素方差分析显示: 重度抑郁组 IGD 得分及 IGD 各因子得分均高于无抑郁和轻中度抑郁组 ($P < 0.05$)。(2) 大学生 IGD 得分与每天游戏时间、每天上网时间、上网年限及 PHQ-9 得分均显示出显著的正相关 ($P < 0.01$)。线性回归分析进一步揭示, PHQ-9 得分、每天游戏时间和性别是影响 IGD 得分的显著自变量, 它们共同进入回归方程并显著预测了 IGD 得分。(3) 分别对无抑郁、轻中度抑郁和重度抑郁三组进行中

介效应分析, 结果显示在控制干扰变量后, 只有在轻中度抑郁组中, PHQ-9 得分在每天游戏时长和网络游戏障碍得分间发挥部分中介作用, 中介效应值为 0.150, 95% 置信区间为 [0.014, 0.357]。在无抑郁组和重度抑郁组中, PHQ-9 得分未表现出中介作用。(4) 对无抑郁、轻中度抑郁和重度抑郁三组分别进行网络分析, 结果显示: 无抑郁组和重度抑郁组的网络连接具有相似性, 两组网络中紧密度最强、中介度最强和预期影响最强的节点均为耐受因子。

结论 网络游戏时间与网络游戏障碍呈现正相关, 抑郁状况虽然影响网络游戏障碍的严重程度, 但是只有在轻中度抑郁情况下, 抑郁在网络游戏时间和游戏障碍之间起到中介因素, 对这部分人群进行抑郁情绪的干预可能对治疗网络游戏障碍会起到较好的治疗效果。

关键词: 网络游戏障碍; 游戏时间; 抑郁

Sex Differences in The Interrelationships between Childhood Trauma, Social Support, Personality Traits, Negative Emotions, and Gaming Disorder: A Network Analysis and Structural Equation Modeling Approach

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Objective Gaming disorder (GD) causes significant psychological distress and impairment, impacting individuals' functioning. Current research lacks clarity on the complex interactions and gender-specific factors contributing to GD. This study aims to delineate core risk factors associated with childhood trauma, personality traits, negative emotions, and GD, using a network analysis and structural equation modeling approach to understand gender differences

Methods A sample of 1073 Chinese participants aged 18-35 was analyzed using an online survey. GD symptoms, childhood trauma, personality traits, impulsivity, social anxiety, depression, and anxiety were assessed with various scales. The EBICglasso network model was used to identify core symptoms. Directed

Acyclic Graphs (DAG) were employed to infer causal pathways among core symptoms, which were further validated through Structural Equation Modeling (SEM)

Results The EBICglasso networks found distinct gender-specific core symptoms in different symptom groups. The DAG and SEM identified stable and significant causal pathways to GD in different sexes. In males, GD symptoms were primarily influenced by negative emotions, with "Suicidal ideation" and "Low energy" being key contributors. For females, the pathway involved childhood trauma impacting personality traits and negative emotions, ultimately leading to GD symptoms

Conclusion The findings underscore the importance of gender-specific intervention strategies for GD. For males, interventions should focus on emotional regulation and reducing suicidal ideation. For females, addressing anxiety and depressive symptoms linked to childhood trauma is crucial. These gender-specific pathways highlight the need for tailored treatment approaches to effectively mitigate GD symptoms and their underlying risk factors.

关键词: game disorder, network analysis, gender difference, childhood trauma, negative emotion

The Microcirculatory Mechanisms of μ Opioid Receptors in The IL Mediate Heroin Self-administration

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Objective Heroin is a synthetic opioid drug with strong addictive properties which causing opioid overdose leading to death easily. Our early research had found that the glutamate projection pathway from the infralimbic cortex (IL) to the nucleus accumbens shell (NAcS) during heroin reward processes regulates the reward value of heroin. However, the excitation of neural

microcircuits by IL and its underlying mechanisms are not yet clear. Thus we aim to investigate the role of μ opioid receptors (MOR) in the IL in heroin addiction and the neural microcirculation mechanisms within it

Methods Rats were injected with AAV-Gcamp6s, a calcium signaling virus, and implanted with optical fibers in the IL, then were underwent heroin self-administration training for 14 days. Record of neuronal excitability in the IL of rats was executed during the heroin self-administration training when pressing the pedal at the concentrations of 0.025mg/kg, 0.05mg/kg, and 0.1mg/kg. Subsequently, the cannula was implanted in the IL of rats, followed by heroin self-administration training. The rats were microinjected with Saline, [d-Ala²,N-Me-Phe⁴,Gly⁵-ol]-enkephalin (DAMGO) or naltrexone (NTX) into the IL after 14 days of heroin self-administration. The effects of drug microinjection on the heroin self-administration behavior were evaluated. Meanwhile, the expression of different type of c-Fos immunoreactive neurons in the IL was also detected by immunofluorescence

Results Among the three concentrations of heroin self-administration, 0.05mg/kg of heroin induced the strongest the calcium signal peaks in the IL ($P < 0.05$). After microinjection with drug in the IL, DAMGO increased heroin intake behavior when compared with the control group and shortened the heroin inter-infusion interval significantly ($P < 0.01$). On the contrary, compared with control group, NTX significantly reduced heroin intake behavior ($P < 0.05$). At the same time, the proportion of activated pyramidal neurons was increased significantly when compared with vehicle group ($P < 0.01$). After intra-IL NTX, the proportion of activated pyramidal neurons was decreased ($P < 0.01$), activated PV interneurons and SST interneurons were increased when compared with vehicle ($P < 0.05$). Intra-IL DAMGO increased the proportion of activated pyramidal neurons, activated PV interneurons. However, it is not difference for activated SST interneurons among control, vehicle, intra-IL vehicle and intra-IL DAMGO rats

Conclusion Self-administration of heroin can excite pyramidal neurons in the IL, which may be due to its inhibitory effect on pyramidal neurons by acting

on MOR in SST neurons in the IL

关键词: heroin self-administration; μ opioid receptors; glutamatergic neurons; infralimbic cortex

青春期社会隔离对成年小鼠吗啡成瘾易感性的影响

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目的 早期生活应激已被证明会引起大脑回路、压力反应的变化。已有研究发现,青少年社会压力应激有可能影响中枢神经系统和对药物成瘾的易感性。内侧前额叶皮层、伏隔核和纹状体均是与药物成瘾密切相关的犒赏回路中的脑区,寻找青春期社会应激增加吗啡成瘾易感性在脑内犒赏回路中的作用靶点,对治疗早期生活应激导致的药物成瘾易感性增加具有关键作用。

方法 我们构建了青少年社会隔离小鼠模型,然后使用吗啡和生理盐水分别对青春期群居(n=12)和青春期社会隔离小鼠(n=12)进行条件位置偏好实验,以研究青春期社会隔离对吗啡成瘾易感性的影响。接着我们采用 Illumina RNA-seq 技术对各组小鼠的内侧前额叶皮层、伏隔核和纹状体脑区进行了 mRNA 测序,对伏隔核脑区进行了 lnc RNA (长链非编码 RNA) 测序,以研究青春期社会应激和吗啡双重作用介导的基因表达特征和机制的改变。

结果 在吗啡条件位置偏好实验中,我们发现青春期经过社会隔离的小鼠表现出对吗啡的偏好增加。在 \log_2 (倍数变化) $\geq |\pm 1.0|$ 和 p 值 < 0.05 前提下,我们发现经历过青春期社会隔离的组小鼠与未经历过社会隔离的小鼠相比,在纹状体脑区中上调差异基因显著增加。通过基于基因集富集分析(GSEA)的基因本体论(GO)和京都基因和基因组百科全书(KEGG)分析确定了基因的潜在生物学功能,在伏隔核、内侧前额叶皮层和纹状体脑区中差异基因的 KEGG 通路主要富集在信号分子相互作用、免疫系统和消化系统相关通路,其中最显著的为信号分子相互作用通路。基因本体分子生物学过程富集分析表明,腺苷脱氨酶活性显著上调。在伏隔核 lnc RNA 测序中,差异基因主要富集在 KEGG

通路中的翻译、细胞通信和神经系统相关通路,其中翻译通路中的改变最显著。

结论 青春期社会隔离导致成年期小鼠吗啡成瘾的易感性增加,其主要可能原因为转录组中信号分子相互作用和腺苷脱氨酶活性相关的基因改变和 lnc RNA 中的翻译通路的改变。

关键词: 青春期社会应激,吗啡成瘾,转录组,lnc RNA

赌博障碍患者大脑兴奋-抑制网络平衡失调及其与冲动性的关系

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目的 根据大脑临界性假说,健康大脑的神经活动处于有序和无序之间的临界状态,表现为神经网络的兴奋-抑制平衡,代表了最佳信息加工能力。然而,成瘾会导致神经网络兴奋-抑制平衡失调,使大脑偏离临界状态,并伴随着风险决策行为改变。赌博障碍的核心特征之一是冲动性,风险决策异常是其关键临床特征之一。目前缺乏从大脑临界性角度考察赌博障碍患者在电生理和风险决策行为变化的研究。长时程相关性(Long range temporal correlations, LRTC)是大脑临界性的可靠指标,计算的是时间序列信号在长时间尺度上的自相似性。本研究结合静息态脑电图(Electroencephalogram, EEG)和风险决策任务探索赌博障碍的大脑临界特性,关键目标是考察静息态 EEG 和风险决策行为的 LRTC 的变化及其与冲动性的关系,有望为成瘾障碍的临床诊断提供可靠的标记物。

方法 招募 58 名赌博障碍受试者和 34 名年龄及性别匹配的健康对照受试者,采用冲动性量表(BIS-11)和自我控制量表(SCS)评估冲动性和自控力,使用 EEG 记录静息状态下的大脑活动,并使用仿真气球冒险任务(Balloon analog risk task, BART)评估风险决策行为。在 BART 任务中,受试者决定给气球充气的次数以最大化奖励并避免气球爆炸所带来的损失,提取每次充气反应时组成风险决策行为时

间序列用于 LRTC 分析。使用去趋势波动分析测量 EEG 信号在 5 个频段(Delta(1-4Hz), Theta(4-8Hz), Alpha(8-13Hz), Beta(13-30Hz)和 Gamma(30-45Hz))及风险决策行为反应时时间序列的 LRTC。

结果 (1)赌博障碍受试者在前额中央区、顶叶中央区及左侧顶叶的 Delta 频段上的 LRTC 显著高于健康对照组($p < .05$), 在行为 LRTC 上显著低于健康对照组($p = .044$)。 (2)赌博障碍受试者 Delta 频段的 LRTC 与 SCS 中抵制诱惑和节制娱乐两个子维度呈显著负相关($p < .05$)。 (3)赌博障碍受试者风险决策行为的 LRTC 与 BIS-11 中行为冲动性子维度呈显著正相关($p = .038$), 与 SCS 中冲动控制子维度呈显著负相关($p = .030$)。

结论 赌博障碍受试者 EEG 信号 Delta 频段和风险决策行为时间序列上的 LRTC 与健康受试者有显著差异, 表明其大脑活动临界性的改变, 提示了信息加工能力受损。此外, 赌博障碍受试者的大脑临界状态 EEG 特征以及行为特征与冲动特质和自控力显著相关, 提示了成瘾障碍大脑临界特性对临床特征的预测潜力。

关键词: 赌博障碍, 大脑临界性, 兴奋-抑制平衡, 长时程相关性, 静息态脑电, 风险决策

Lower Social-connectedness in Reality To Severe Anger Among Adolescents with Internet Gaming Disorder: A Multi-centre, Large-sample and Cross-sectional Study

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Objective Although internet improves modern life, the corresponding consequences of internet gaming disorder (IGD), low social-connectedness and anger-emotion are emerging as global concerns. In conclusion, IGD is more prevalent in adolescents and is strongly associated with anger emotion. However, the association among IGD, low social-connectedness and anger is unknown. Given the cognitive-appraisal theory, we hypothesize that adolescents with IGD (pathological behavior) could more prone to have angry emotion (nega-

tive emotion) under influence of the low social-connectedness (dysfunctional cognition). To address these, we conducted a multi-center, larger-sample and cross-sectional study in adolescents to explore the relationship among IGD, low social-connectedness and anger and to further explore the detection rate of IGD, low social-connectedness and anger among this subgroup.

Methods This was a cross-sectional multi-center study enrolled 9,616 adolescents (11-19 years) from multi-center in China from September 2022 to March 2023. The 20-item revised Social Connectedness Scale (SCS) has been used to estimate the social-connectedness, 9-item Internet Gaming Disorder Scale-short (IGD) Form has been used to estimate the Internet game disorder, and 6-item DSM-5-TR-Level 2-Anger (Anger) Form has been used to estimate the anger mood. Mediation-analysis was performed with IGD scores as the independent variable, anger scores as the dependent variable and the SCS scores in Internet and in Reality, as proposed mediators. Confounding variables of age and sex were included in mediation models

Results The mean \pm SD age, mean scores for IGDS9-SF, Anger-6, RSCS and ISCS were 14.9 ± 1.7 years old, 14.4, 10.9, 84.9 and 77.6. 197 (2.05%) adolescents had been estimated as probable IGD, 364 (3.79%) reported severe-anger, and 1056 (10.98%) shown low reality social-connectedness (RSCS). After controlling for demographic characteristics, probable IGD and RSCS score, younger-adolescents (OR=1.12; 95% CI: 1.04-1.20), female (OR=2.16; 95% CI: 1.67-2.79), probable IGD (OR=5.17; 95% CI: 3.30-8.08) and low RSCS (OR=7.21; 95% CI: 5.61-9.27) are also independent risk factors for having severe-anger. Anger-6 score was positively associated with IGDS9-SF score ($r = 0.34$) and negatively associated with RSCS ($r = -0.41$) and ISCS ($r = -0.12$) scores. Moreover, Anger-6 score was negatively associated with RSC_N ($r = -0.46$) and ISC_N ($r = -0.38$) scores. IGDS9-SF score was negatively correlated with RSCS ($r = -0.33$), RSC_N ($r = -0.39$) and ISC_N ($r = -0.40$) scores. However, ISC_P score was negatively associated with ISC_N ($r = -0.38$) and RSC_N ($r = -0.25$) scores. RSCS, ISCS and SCSSM scores partially mediated the effects of IGDS9-SF score on Anger-6 score with the indirect-mediation effects of 29.50%,

1.67% and 17.88%. Furthermore, the RSCS could partially mediate the effects of IGD on Anger with indirect-effect of 29.50%

Conclusion In the study, we found that IGD (pathological behavior) not only have direct effect on severe anger (negative mood) but also have indirect contribution to severe anger partially mediated by social-connectedness (dysfunctional interpersonal cognition). Furthermore, the negative dimension of social-connectedness in Internet might be more effective in illustrating adolescents' real perceptual experience than the positive dimension. The results provide new insights into the basic phenomenology, etiology and interaction between IGD, social-connectedness and severe anger.

关键词: Internet Gaming Disorder, Social-connectedness, Anger, mediation model, Adolescent

Distressful Psychotic-like Experiences Mediate The Relationship between Social Media Addiction and Suicidal Behaviors: A Large-scale Cross-sectional Study Among Chinese Adolescents

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Objective Emerging studies indicate a positive association between social media addiction (SMA) and suicidal behaviors. However, few studies have examined this relationship among Chinese adolescents, and the underlying mechanisms between SMA and suicidality remain largely unexplored. This study aimed to investigate the association between SMA and suicidal behaviors among a substantial sample of Chinese adolescents and to evaluate the potential mediating role of distressful psychotic-like experiences (PLEs) in this relationship

Methods A total of 124,718 adolescents with recent social media use experience were recruited using

cluster sampling methods from 170 middle schools in Zigong City. Suicidal behaviors, including current suicidal ideation and previous suicide attempts, were assessed through screening items. SMA and PLEs were evaluated using the Bergen Social Media Addiction Scale (BSAMS) and the 16-item Prodromal Questionnaire. The 9-item Patient Health Questionnaire and the 7-item Generalized Anxiety Disorder questionnaire were used to detect mental distress. Multiple logistic regression models and path analyses were performed, with demographics and other mental distress factors as covariates

Results The prevalence rates of SMA, distressful PLEs, and suicidal behaviors were 1.5% (n=1,849), 10.6% (n=13,242), and 17.3% (n=21,627), respectively. Adolescents with SMA demonstrated significantly higher prevalence rates of distressful PLEs (54.6% vs. 10.0%, $p<0.001$) and suicidal behaviors (60.5% vs. 16.7%, $p<0.001$) compared to those without SMA. After full adjustments, both SMA (adjusted odds ratio [AOR], 1.51; 95% confidence interval [CI], 1.34-1.70; $p<0.001$) and distressful PLEs (AOR, 2.95; 95% CI, 2.80-3.09; $p<0.001$) were independently related to suicidal behaviors. Distressful PLEs partially mediated the relationship between SMA and suicidal behaviors, with a mediation ratio of 63.3%

Conclusion SMA in adolescents is strongly associated with suicidal behaviors, and distressful PLEs mediate this relationship. Parents, teachers, and clinicians should be aware of the high suicidal risk in this vulnerable population. Targeting PLEs may hold promise in reducing suicidal risk among adolescents with SMA

关键词: Social media addiction, Suicidal behavior, Psychotic-like experience, Adolescent

外侧缰核神经元的簇状放电对可卡因消退学习及复吸行为的影响

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目的 预防复吸是治疗药物成瘾的关键, 基于记忆消退理论的线索暴露疗法可在一定程度上抑制成瘾记忆, 但其疗效并不持久, 因此亟需寻找可持久抑制成瘾记忆, 甚至消除成瘾记忆预防复吸的手段。应激是诱发复吸的重要因素之一, 既往研究发现应激可通过激活应激和边缘系统诱发复吸。另一方面, 应激能够调节记忆的动态过程, 可促进记忆巩固或增强记忆消退, 提示适当的应激可能会促进成瘾记忆消退, 进而预防复吸。外侧缰核 (Lateral habenula, LHb) 在情绪调节、应激反应、学习和记忆以及奖赏中起着关键作用。然而, 目前尚不清楚 LHb 是否在应激与成瘾记忆的消退学习之间发挥重要调节作用。本研究采用可卡因自身给药作为成瘾动物模型, 探索应激系统的关键脑区 LHb 在应激-消退范式中的作用机制, 以期预防药物成瘾复吸提供新的思路

方法 (1) 在可卡因自身给药大鼠动物模型的基础上建立应激-消退行为范式; (2) 使用光纤记录技术观察急性足底电击过程中 LHb 脑区的实时活动变化; (3) 使用在体电生理技术观察给予急性足底电击前后 LHb 脑区神经元放电变化; (4) 使用光纤记录技术观察 LHb 神经元钙信号在消退训练和复吸测试中的活动情况, 进一步明确 LHb 神经元活动在应激-消退范式中的动态变化; (5) 采用脑片膜片钳技术探索应激-消退范式对 LHb 神经元电生理特性的影响。

结果 (1) 可卡因自身给药训练后的消退训练和复吸测试的行为学结果表明, 应激后进行消退训练 (应激-消退范式) 能够加快觅药行为的消退, 从而抑制小剂量药物诱导的复吸, 且应激-消退范式并不增加焦虑样行为; (2) 光纤记录结果显示, 急性足底电击能够导致 LHb 脑区瞬时激活; (3) 在体电生理结果显示, 与足底电击前相比, 足底电击结束 30min 后 LHb 神经元放电明显增加, burst 的活动显著增加, 并且 LHb 神经网络连接活动发生改变; (4) 光纤记录结果显示, 应激-消退组在消退学习和复吸测试过程中线索诱发的 LHb 抑制性钙信号减少; (5) 体外电生理结果发现, 与单纯的消退训练相比, 应激-消退组 LHb 神经元的自发放电、诱发动作电位显著增加, 且 burst 型放电比例显著增加。

结论 研究表明, LHb 在消退学习过程中起到价值编码的作用, 而足底电击后的应激状态能够增强这种价值编码的功能。此外, 应激-消退范式对消退学习的影响与 LHb 神经元的兴奋性以及放电模

式有关, 揭示了应激-消退范式作为预防复吸的治疗策略的神经机制。

关键词: 应激, 成瘾, 消退, 复吸, 外侧缰核

美沙酮维持治疗患者睡眠质量及其影响因素研究

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目的 对美沙酮维持治疗 (MMT) 患者的睡眠质量进行调查并分析其影响因素, 为提升美沙酮维持治疗患者睡眠质量、尽早实现综合康复提供依据。

方法 从 2019 年 5 月到 12 月在广州医科大学附属脑科医院 MMT 门诊接受美沙酮维持治疗的 197 例患者完成了自制调查问卷、贝克焦虑量表 (BAI)、贝克抑郁量表 (BDI)、匹兹堡睡眠质量指数 (PSQI)。先后使用单因素线性回归和用多因素线性回归分析其睡眠质量及其影响因素。

结果 在睡眠质量的单因素分析结果提示, 美沙酮治疗剂量 21~100mg 组 (57 例, 占 28.9%) 相对于 20mg 及以下组 (140 例, 占 71.1%) PSQI 得分更高 ($B=1.350, P=0.033$)。BAI 得分、BDI 得分越高的患者 PSQI 得分越高, 提示随着 MMT 患者焦虑水平、抑郁水平的升高其睡眠质量可能下降, 影响有统计学差异 BAI 得分 ($B=0.200, P<0.001$), BDI 得分 ($B=0.302, P<0.001$)。进一步多因素线性回归分析表明, BAI 得分、BDI 得分越高的患者 PSQI 得分越高, 提示随着 MMT 患者焦虑、抑郁水平的升高其睡眠质量可能下降, 影响有统计学差异 BAI 得分 ($B=0.109, P=0.001$), BDI 得分 ($B=0.178, P<0.001$)。虽然在单因素线性回归分析中呈现的美沙酮治疗剂量 21~100mg 组相对于 20mg 及以下组 PSQI 得分更高, 而多因素线性回归分析中上述影响消失, 因此怀疑是否 BAI 得分、BDI 得分中介了美沙酮剂量对 PSQI 得分的影响。通过中介效应分析发现目前美沙酮剂量对 PSQI 得分的影响是间接效应, 非直接效应。是 BAI 得分中介了美沙酮剂量对 PSQI 得分的影响。提示可能美沙酮剂量通过增加患者焦虑水平而间接降低睡眠质量。而 BDI 得分未被发现在美沙酮剂量影响 PSQI 得分的过程中存在中介效应。

结论 MMT 患者焦虑水平、抑郁水平的升高其睡眠质量可能下降。美沙酮剂量可能通过增加患者焦虑水平而间接降低睡眠质量。

关键词: 美沙酮维持治疗, 睡眠质量, 焦虑, 抑郁, 中介效应, 影响因素

Mapping The Relationship between Alcohol Use Disorder and Cognitive Disorders: A 20-year Bibliometric Study

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Background Alcohol addiction, alternatively referred to as alcoholism or alcohol use disorder (AUD), is regarded as a medical and psychological condition. Cognitive disorders (CDs) refer to a range of conditions that affect cognitive functions such as memory, thinking, perception, and problem-solving. It's important to note that alcohol addiction and CDs often coexist. Excessive and prolonged consumption of alcohol can lead to a decrease in cognitive function, while impaired cognitive abilities can also heighten the likelihood of developing an addiction to alcohol. However, the research structure and research hotspots of the relationship between AUD and CDs lack visualization, and the elaboration of potential research areas remains to be discovered

Objective To comprehensively discuss the relationship between AUD and CDs' research status and development trend

Methods Publications from 2002 to 2022 were obtained using the Web of Science Core Collection database and subsequently filtered according to the specified inclusion criteria. To gain a visual representation of the research trends in this area, a range of software tools were utilized, including CiteSpace, VOSviewer, Scimago Graphics, and Microsoft Office Excel. The analy-

sis of the country, institution, author, and research contributions was made easier with the help of these tools

Results In the end, a grand total of 516 studies were discovered. Since 2002, the number of publications on the subject has steadily increased. The USA has made the largest contribution in the field. Alcoholism-Clinical and Experimental Research is the top productive journal with 45 papers, and Frontiers in Psychiatry Pharmacology Biochemistry and Behavior has the highest average citation (92.27). Pierre Maurage, the professor, stands out as one of the most productive writers in this particular area. Keyword co-occurrence analysis indicated that the terms "Alzheimer's disease", "working memory", "adolescence", "bipolar disorder", and "adult neurogenesis" had the highest frequency of occurrence, revealing the research hotspots and trends in the field

Conclusion This bibliometric analysis assesses trends in alcohol addiction and cognitive impairment and provides a useful view of current research and future directions in the study of alcohol addiction and cognitive impairment. The study shows that there has been a general increase in the number of publications in the field over the past two decades, but inter-agency cooperation still needs to be strengthened. The US still leads in this field. It is advisable to pay attention to the latest hot topics such as "Neural Circuits", "Social Cognition", and "Adolescence".

关键词: Alcohol use disorder; cognitive disorder; bibliometry; visualization analysis; research hotspot

Cognitive Control in Individuals with Prolonged Heroin Use Disorder: Based on Drift Diffusion Model

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Objective Although impaired cognitive control is common during the acute detoxification phase of substance use disorders (SUD) and is considered a major cause of relapse, it remains unclear after prolonged

methadone maintenance treatment (MMT). The aim of the present study was to elucidate cognitive control in individuals with heroin use disorder (HUD) after prolonged MMT and its association with previous relapse

Methods A total of 94 HUD subjects, including 41 relapsers, 22 non-relapsers (mean MMT duration: 12.24 ± 2.92 years) and 31 healthy controls were enrolled in this study. Eye tracking tasks, prospective memory tasks, the Behavior Rating Inventory of Executive Function-Adult Version (BRIEF-A) and the Prospective and Retrospective Memory Questionnaire (PRMQ) were used to assess cognitive control

Results HUD individuals exhibited worse saccade error rate and executive dysfunction but showed better reaction times and no significant impairment in prospective memory. We fitted error rates and reaction times using a drift-diffusion model (DDM), which showed that HUD patients were more inclined to ignore task accuracy in order to speed up reaction times. Additionally, the relapsers performed worse in terms of antisaccade amplitude and velocity at higher difficulty gradients (11° and 16°). Antisaccade performance in terms of amplitude and velocity was negatively correlated with executive function scores. Deficits in inhibition, cognitive flexibility, and self-monitoring were found to mediate the relationship between previous relapse and impaired antisaccade performance

Conclusion Even after prolonged MMT, HUD individuals still show partial deficits in cognitive control and antisaccade performance. Importantly, DDM shows that HUD patients sacrifice accuracy for speed in the decision-making process, reflecting the more impulsive decision-making behaviour of HUD patients compared to healthy subjects. Besides, previous relapse exacerbates deficits in antisaccade amplitude and velocity among HUD individuals, mediated by dysfunction in inhibition, cognitive flexibility and self-monitoring, particularly at higher difficulty gradients. Future studies could include antisaccade tasks with different difficulty gradients to identify saccade biomarkers that predict relapse in individuals with SUD. Furthermore, cognitive training is crucial for facilitating the reintegration of SUD individuals into society

关键词: Prolonged Heroin use disorder; Previous

relapse; Cognitive control; Saccade; Impulsive decision-making

Exploring Cortical GABA in Addiction: From Mechanisms To Therapeutic Perspectives

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Gamma-aminobutyric acid (GABA) plays a crucial role in the regulation of neural activity within the medial prefrontal cortex (mPFC), a brain region critically involved in executive functions and behavioral control. This neurotransmitter exerts inhibitory effects that are essential for maintaining the balance and proper functioning of neural circuits. Recent preclinical studies have highlighted that dysregulation of GABAergic signaling in the mPFC is implicated in the pathophysiology of addiction, manifesting as increased vulnerability to drug addiction and chronic drug use. Such dysregulation disrupts the delicate equilibrium of neural activity, leading to impaired decision-making and behavioral control that are hallmark features of addictive disorders. In this review, we delve into the diversity of GABA interneurons (INs) within the mPFC, examining their varied types, connectivity patterns, and specific roles in contributing to addiction vulnerability. GABA INs are a heterogeneous group of cells that modulate the activity of principal neurons and other interneurons, thereby shaping the overall output of the mPFC. Understanding the distinct subtypes of these interneurons, including their unique molecular markers and electrophysiological properties, is crucial for elucidating their contributions to the neural circuitry underlying addiction. Moreover, we investigate how these GABA INs and their networks change over time with chronic drug exposure. Prolonged drug use induces neuroplastic changes that can alter the function and connectivity of these interneurons, potentially leading to a persistent state of neural circuit dysregulation. Finally, we focus on non-invasive brain stimulation (NIBS) as a promising therapeutic approach for targeting GABA INs in the treatment of addiction.

Techniques such as transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (tDCS) offer the potential to modulate neural activity and restore the function of disrupted neural circuits. By specifically targeting the mPFC and its GABAergic networks, NIBS may help to re-establish inhibitory control, improve executive functions, and reduce addictive behaviors. This therapeutic strategy represents a novel and non-invasive avenue for addressing the complex neural underpinnings of addiction, with the goal of achieving long-lasting recovery and improved quality of life for individuals struggling with substance use disorders.

关键词: GABA, Medial Prefrontal Cortex, Addiction, Non-Invasive Brain Stimulation

The Beneficial Effect of Nitrate-Rich Juice on Cognitive Function: A Pilot Randomized Controlled Study in Patients with Alcohol Dependence

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Objective Alcohol consumption has become increasingly prevalent in contemporary society and is known to cause cognitive impairment and dysregulation of inflammatory responses. Recent studies suggest that nitrate may have beneficial effects on cognitive function and alter the oral microbiota. However, the extent of nitrate's beneficial effects on alcohol-induced cognitive impairment and its impact on the oral microbiota's composition remains inadequately explored. We aim to investigate the effect of nitrate on the cognitive function of patients with alcohol dependence

Methods In this randomized, double-blind, placebo controlled, single-center pilot study, we recruited patients with alcohol dependence (AD) and administered 14-day dietary supplementation of either NO₃-rich beetroot (BR) juice (N = 31) or placebo (PL) (N =

30). We use Cambridge Automated Neuropsychological Test Battery (CANTAB) to measure the cognitive function and 16S rRNA gene sequencing to measure differences in the oral microbiota

Results The mean difference in Delayed Match to Sample (DMS-PCAD) change between the BR group and the PL group after intervention was 9.784 (95% confidence interval [CI], 1.846 to 17.72, p = 0.016). Improvements in the Rapid Visual Information Processing test (RVP-MDL) and Reaction Time (RTI-FMDMT) were observed after treatment in BR group (for RVP-MDL, 95% CI, -88.974 to -7.585, p = 0.020; for RTI-FMDMT, 95% CI, -86.475 to -3.436, p = 0.034). The composition of oral microbiota also changed a lot after nitrate supplement, among which the abundance of Capnocytophaga, Neisseria and Haemophilus increased but Veillonella and Prevotella decreased

Conclusion The intervention with nitrate-rich beetroot juice is associated with improved visual memory and reaction time in AD patients. Additionally, this intervention appears to improve risk adjustment in younger AD patients

关键词: Alcohol drinkers, Cognitive impairment, Oral microbiota

Causal Effect of Gut Microbiota on Alcohol Dependence and Drinking Behavior: A Two-sample Mendelian Randomization Study

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Objective There has been a growing number of studies reporting that the composition is linked to alcohol dependence and drinking behavior over the past few years. However, the causal effect of the gut microbiota remains unclear. In this study, we first conducted the large-scale MR analysis of causal effect of gut microbiota on alcohol dependence and drinking behavior

Methods We conducted a two sample Mendelian

randomization study by using summary statistics from MiBioGen's largest genome-wide meta-analysis ($N=13,266$), summary statistics on alcohol dependence (cases $N=8,485$; controls $N=20,657$) from PGC and drinking behavior (alcoholic drinks consumed per week, $N=414,343$) from SSGAC. Inverse variance weighted (multiplicative random effects), MR-Egger, weighted median, weighted model, Simple mode were used to investigate causal relationship

Results Inverse variance weighted (IVW) showed that genetic prediction of the order Bifidobacteriales and family Bifidobacteriaceae both reduced the risk of alcohol dependence (OR: 0.72, 95% CI: 0.57, 0.91, PIVW=6.50x10⁻³). Six gut microbiota increased the risk of AD, including phylum Lentisphaerae (OR = 1.19, 95% CI: 1.06, 1.33, PIVW=4.30x10⁻³), phylum Cyanobacteria (OR=1.34, 95% CI: 1.03, 1.74, PIVW=2.80x10⁻²), class Lentisphaeria (OR = 1.2, 95% CI: 1.06, 1.36, PIVW = 5.30x10⁻³), order Victivallales (OR = 1.2, 95% CI: 1.06, 1.36, PIVW=5.30x10⁻³), family Peptostreptococcaceae (OR=1.31, 95% CI: 1.07, 1.61, PIVW = 9.40x10⁻³), and genus Lachnospiraceae UCG010 (OR = 1.3, 95% CI: 1.02, 1.65, PIVW=3.10x10⁻²). In addition, Ruminococcaceae group (OR=0.94, 95% CI: 0.90, 0.99, PIVW=1.10x10⁻²), Genus Terrisporobacter (OR=0.96, 95% CI: 0.94, 0.98, PIVW=1.60x10⁻⁵) reduced the total number of alcoholic drinks consumed per week, while genus Slackia (OR=1.04, 95% CI: 1.01, 1.07, PIVW=1.70x10⁻²) increased total number of alcoholic drinks consumed per week

Conclusion The two-sample MR study found a potential causal effect of some gut microbiota on alcohol dependence and drinking behavior. Identifying specific mechanisms underpinning this relationship and accounting for the complex interactions of the gut microbiota are essential

关键词: alcohol dependence, mendelian randomization, gut microbiota

Burden of Disease Due To Amphetamines,

Cannabis, Cocaine, and Opioid Use Disorders in Asia, 1990–2019: A Systematic Analysis of The Global Burden of Disease Study 2019

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Objective Substance use disorders pose a considerable challenge to global health. Understanding the burden of disease is crucial for countries to formulate policies and implement interventions. Due to its unique geographic location (e.g. the Golden Triangle and Golden Crescent), Asia has long had regional characteristics in drug production, abuse, and control. Therefore, understanding the abuse situation, changing trends, and disease burden caused by different types of drugs in Asia is of great practical significance for global drug control

Methods Based on the GBD (Global Burden of Disease) 2019 database, we selected 20 countries (or regions) in Asia, including East Asia (China, North Korea, Taiwan), Southeast Asia (Vietnam, Myanmar, Philippines, Laos, Thailand, East Timor, Indonesia, Maldives, Mauritius, Malaysia, Cambodia, Sri Lanka, Seychelles), and the high-income Asia Pacific region (Japan, South Korea, Singapore, Brunei). We calculated the age-standardised rate (per 100 000 population), estimated annual percentage change (EAPC) of incidence, prevalence and Disability-adjusted life years (DALYs) for amphetamine, cannabis, cocaine and opioid use disorders from 1990 to 2019. And we use the age-period-cohort modelling to estimate the independent effects of age, period and cohort

Results Before 1998, China had the highest DALYs caused by amphetamine use disorder. After 1998, Thailand took over the place. Compared to 1990, Taiwan had a significant increase in DALYs, ranking second only to Thailand in 2019. Most other countries maintained a relatively flat trend. For cannabis use disorder, Seychelles had the highest DALYs from 1990 to 2019, while high-income countries follow close. East Asia had the lowest DALYs. For cocaine use disorder, the high-income countries have the highest DALYs. Among them, Brunei had the highest DALYs from 1990

to 2019, followed by Singapore, South Korea, and Japan, with DALYs higher than the global level. Changes in opioid use disorder were more significant. From 1990 to 2006, China had the highest DALYs. After 2007, Taiwan took over, showing an upward trend. High-income countries had relatively low DALYs. The incidence, prevalence showed similar trends with DALYs

The highest incidence, prevalence and DALYs risk of substance use disorders were found in the 15-19, 20-24 and 25-29 age groups. Among them, the highest risk age was similar for amphetamine use disorders and opioid use disorders, and similar for cannabis use disorders and cocaine use disorders. The period effect and cohort effect showed significant differences in different substance use disorders and different regions.

Conclusion The substance use disorders burden in East Asia, Southeast Asia, and high-income Asia-Pacific present regionality and differ by age, period and cohort from 1990 to 2019

关键词: drug use disorders,asia,incidence,prevalence,DALY,age-period-cohort model

Cortical Activation During Verbal Fluency Task in Methamphetamine Use Disorder Patients With and Without Psychotic Symptoms: A Multichannel Near-Infrared Spectroscopy Study

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Objective The widespread abuse of the illicit drug Methamphetamine (MA), both domestically and internationally, poses severe physical and psychological risks. Research indicates that up to half of individuals with Methamphetamine Use Disorder (MUD) experience psychotic symptoms, which are often accompanied by significant impairments in executive function and

poorer treatment outcomes. This study aims to investigate the impairment of executive function and associated cortical hemodynamic changes using a combination of the Verbal Fluency Task and functional near-infrared spectroscopy (fNIRS) technology in MUD patients with and without psychotic symptoms. These findings aim to provide insights for the diagnosis and treatment of MUD patients.

Methods This study recruited Methamphetamine Use Disorder (MUD) patients from Chengdu Compulsory Drug Rehabilitation Center and West China Hospital of Sichuan University's Mental Health Center. Following inclusion criteria and data quality control, a total of 111 MUD patients were included, comprising 71 cases of MUD without psychotic symptoms (MNP) and 40 cases of MUD with psychotic symptoms (MIP). Clinical characteristics were assessed using the Visual Analog Scale for craving (VASc), the Positive and Negative Syndrome Scale (PANSS) to evaluate the presence and severity of psychotic symptoms over the past month, and several other clinical self-report scales including the Alcohol Use Disorders Identification Test (AUDIT), Fagerstrom Test for Nicotine Dependence (FTND), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Social Support Rating Scale (SSRS), Chinese Perceived Stress Scale (CPSS), and Pittsburgh Sleep Quality Index (PSQI).

All participants underwent behavioral data recording during the Verbal Fluency Task (VFT) and functional near-infrared spectroscopy (fNIRS) data collection following completion of clinical characteristic assessments. The collected data were processed and statistically analyzed to explore differences in oxyhemoglobin (HbO) concentration changes in the frontal and temporal cortices during VFT between the two groups, as well as their relationships with clinical characteristics and task-related behavioral performance.

Results 1. Analysis of Differences in Demographic Characteristics, MA Use Features, and Clinical Characteristics Between Groups: Compared to MNP, MIP showed no differences in demographic characteristics. However, significant differences were found in MA use features, with MIP exhibiting higher maximum MA dosage in the past. In terms of clinical characteristics,

MIP scored higher in PANSS total score, Positive Symptom Scale score, Negative Symptom Scale score, General Psychopathology Scale score, BDI, and PSQI, all statistically significant. Additionally, a significant positive correlation was found between past maximum MA dosage and scores on PANSS scales, BDI, and PSQI.

2. Analysis of Differences and Correlations Between VFT Performance, Clinical Characteristics and Related fNIRS Data Between Groups: Compared to MNP, there was no statistically significant difference in word generation. However, MIP patients showed greater activation in CH2 (superior temporal gyrus), CH6 (frontal pole of the prefrontal cortex), CH15 (middle temporal gyrus), CH22 (triangular part of the inferior frontal gyrus), and CH47 (dorsolateral prefrontal cortex). These results were significant after false discovery rate (FDR) correction. Correlation analysis revealed a significant positive correlation between Positive Symptom Scale scores and HbO concentration changes in CH47.

Conclusion 1. Patients with MIP had previously used higher doses of MA and had more severe psychotic symptoms, depressive symptoms, and poorer sleep quality during withdrawal compared to patients with MNP. Correlation analyses showed that MA use was strongly associated with the severity of psychiatric symptoms during withdrawal.

2. Although there were no significant differences in behavioral performance, MIP patients showed activation differences in the dorsolateral prefrontal cortex compared to MNP patients, which are associated with psychotic symptoms. This inefficient neural activity suggests that MIP patients may have more severe executive function impairments. Identifying these differences can provide a theoretical basis for developing more effective individualized intervention strategies using non-invasive neurostimulation techniques.

关键词: Methamphetamine Use Disorder, functional near-infrared spectroscopy (fNIRS), hemodynamics, executive function, psychotic symptoms

Risky Decision-making Randomness in Gambling Disorder: A Computational Modeling Study Using The Balloon Analog Risk Task (BART)

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Objective Gambling disorder (GD) is strongly associated with abnormal risky decision-making with certain psychological and neural mechanisms. Balloon analog risk task (BART), a widely used assessment for risk-taking behavior, has limited explanatory power that can be compensated with computational modeling. However, previous studies focus on the classical behavioral parameters, and few studies have been done on GD using a theory-driven computational approach. The present study uses hierarchical Bayesian Analysis to explore the computational mechanism of risky decision-making behavior among GD

Methods 100 male patients with current Gambling Disorder (GDs) and 59 matched healthy controls (HCs) completed psychometric assessments and the BART. Total Scores, number of explosions, and adjusted pumps are calculated and compared between groups. Trial-by-trial behavioral data are modeled with 4 competing hierarchical Bayesian models based on prospect theory, and model comparison results favored the Exponential-Weight Mean-Variance (EWMV) model

Results Even though the number of explosions and adjusted pumps of risk-taking on the BART detect no group differences ($p < 0.05$), GDs get lower total score compared to the HC. To step further, hierarchical Bayesian analysis shows that the inverse temperature of decision-making decreases among patients with GD ($p < 0.05$). Besides, inverse temperature and risk-taking propensity are negatively correlated ($R = -0.40$, $p < 0.001$) among GD patients, while the HC group shows no correlation between these two parameters

Conclusion Our BART and computational modeling findings suggest that randomness of choice and its

correlation with risk-taking propensity may be an important mechanism of risky decision-making impairments of gambling disorder. These findings can guide future work in targeting neuromodulation and evaluation of GD.

关键词: hierarchical Bayesian modeling; risky decision-making; gambling disorder;

Decreased Consumption of Natural Rewards in Rhesus Monkeys with Prolonged Methamphetamine Abstinence

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Objective Relapse to drug use is a major clinical challenge in the treatment of addictive disorders, including psychostimulant use and may be exacerbated by reduced sensitivity to natural, non-drug reward. However, it is not known which aspects of reduced reward seeking and intake persist during long-term abstinence. Here we assessed natural reward (sucrose) seeking and intake in methamphetamine (METH) naive versus exposed monkeys during long-term abstinence

Methods This study introduced a natural reward response test to assess natural reward seeking and consumption in monkeys with long-term abstinence after methamphetamine (METH) use. The test was administered to sixteen naive monkeys and five METH exposed monkeys that had been abstinent for at least 3 months

Results METH exposed monkeys showed a lower sucrose preference score both in natural reward response test ($z = -2.10, p = 0.036$) and sucrose preference test ($z = -2.61, p = 0.009$). The sucrose preference score and the latency of the establishment of stable sucrose-preference were significantly correlated with each other ($r = -0.76, df = 46, p < 0.001$) but not with the following variables. We also observed water-sucrose switch latency and switch times were significantly correlated ($r = -0.50, df = 20, p = 0.02$)

Conclusion These results show reductions in

natural reward consumption during long-term methamphetamine abstinence.

关键词: Methamphetamine; Abstinence; Consumption; Natural Reward Response Test; Sucrose

酒精成瘾、过度游戏行为、海洛因成瘾和甲基苯丙胺成瘾者执行功能的网络分析

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目的 探讨酒精成瘾、过度游戏行为、海洛因成瘾和甲基苯丙胺成瘾四类成瘾患者执行功能各节点间的关联,并对各个网络进行两两比较。

方法 2019年7月至2022年5月,采用方便抽样方法,在安徽省内某戒毒所与各个社区中收集了酒精成瘾、过度游戏行为、海洛因成瘾、甲基苯丙胺成瘾各567名、369名、72名、199名被试与298名对照组被试。采用一般人口学问卷、酒精使用障碍筛查量表(AUDIT)、网络游戏障碍量表(IGD-20)和执行功能行为评定量表(BRIEF)进行调查。使用qgraph包中的EBICglasso方法估计不同成瘾组执行功能的网络结构,并比较不同组间的网络结构差异。

结果 (1)海洛因成瘾组、过度游戏行为组与对照组网络结构间相比,整体网络强度与整体边线权重无显著差异($P > 0.05$),酒精成瘾组整体网络强度显著低于对照组($P < 0.01$),甲基苯丙胺成瘾组与对照组整体边线权重有显著差异($P < 0.01$)。

(2)对照组与过度游戏行为组、海洛因组网络结构中最强权重边线均为启动节点与计划或组织节点之间的边线;酒精成瘾最强权重边线为任务管理节点与材料组织节点之间的边线;甲基苯丙胺成瘾最强权重边线为启动节点与任务管理节点之间的边线。

(3)除酒精成瘾组外,其他组网络节点可预测性平均值均大于0.7,说明大部分为内部因素解释各组网络变化,外部因素影响较小。

(4)不同酒精得分组网络结构差异显示,AUDIT ≥ 16 组、 $1 \leq \text{AUDIT} \leq 6$ 组与 $7 \leq \text{AUDIT} \leq 15$ 组三组间整体网络强度均有显著差异($P < 0.05$), $7 \leq \text{AUDIT} \leq 15$ 组整体网络强度最强,AUDIT ≥ 16 分组整体网络强度最弱。

(5) 四种成瘾组网络结构差异分析显示, 酒精成瘾组与过度游戏行为组、甲基苯丙胺成瘾组间整体网络强度均有显著差异 ($P < 0.05$); 过度游戏行为组与海洛因组整体网络强度无显著差异 ($P > 0.05$), 与甲基苯丙胺组整体边线强度有显著差异 ($P < 0.01$); 海洛因组与甲基苯丙胺成瘾组整体边线权重有显著差异 ($P < 0.01$)。

结论 不同类型的成瘾行为对执行功能网络的整体结构和边线权重有不同的影响, 尤其是酒精成瘾表现出显著的网络削弱效应, 而甲基苯丙胺成瘾则对网络中的节点间联系强度有显著影响, 海洛因成瘾、过度游戏行为对执行功能网络结构影响有限。酒精成瘾严重程度可能对网络强度有显著影响, 此外, 不同成瘾行为对网络关键节点关系的影响也存在差异, 反映了各类成瘾行为对执行功能网络的特异性影响。这些发现对针对不同成瘾行为的干预策略提供了理论依据。

关键词: 酒精成瘾; 过度游戏行为; 海洛因成瘾; 甲基苯丙胺成瘾; 执行功能; 网络分析

Accelerated Brain Aging in Ketamine Addiction and Methamphetamine Addiction

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Objective Distinct drugs of abuse impact brain structure and function, increasing risk of cognitive decline and psychiatric disorder. However, the long-term effects of ketamine and methamphetamine on the brain aging process, along with their corresponding severity of gray matter morphological alterations, molecular mechanisms, and risk of psychiatric disorders remain largely unknown.

Methods We developed a predictive model for brain aging using T1-weighted images from 408 healthy controls (HC) and applied this model to a separate validation set comprising 154 HC individuals and groups with substance use disorders (ketamine use disorder (KUD)=94, methamphetamine use disorder (MUD)=139). The brain-predicted age difference

(brain-PAD) was estimated. Correlation analyses to investigate the relationship between brain-PAD and maps of the severity of brain structural alterations, densities of receptors/transporters associated with neurotransmitter systems, cortical abnormalities of eight psychiatric disorders.

Results Both KUD and MUD groups showed a significant increase in brain-PAD compared to HC. This accelerated brain aging was constrained by cortical thickness thinning and densities of CB, MU, and mGlu receptors. Moreover, increased brain-PAD was associated with greater cortical abnormalities in schizophrenia, OCD, and bipolar disorder. Brain-PAD could effectively differentiate between individuals with KUD or MUD and HC.

Conclusion Drugs of abuse may accelerate the brain aging process and elevate the risk of SUD and other psychiatric conditions. Advanced brain-PAD appears to be linked to more severity of cortical thickness thinning and multiple neurotransmitter systems.

关键词: Brain age gap, ketamine, methamphetamine, addiction, MRI, machine learning

Nucleus Accumbens Cholinergic Neurons Engage The Integrated Stress Response To Modulate Drug Craving

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Objective Drug addiction involves changes in the plasticity of neurons within the nucleus accumbens (NAc), often leading to recurrent relapse. Cholinergic interneurons (CINs) in the NAc are tonically active and intricately connected, making them key modulators of NAc function. This study investigates the causal role of NAc-CINs in drug craving and their involvement in conditioned cue-induced relapse behavior and the underlying mechanisms.

Methods We employed a combination of optogenetics, fiber photometry, in vitro electrophysiology, and a classical self-administration instrumental task to reveal an increase in acetylcholine release, upregulation of the integrated stress response (ISR), and enhanced hyperpolarization-activated currents in NAc-CINs during cue-reinstatement of drug craving.

Results We found that drug reward but not natural reward experience increased the excitability of cholinergic neurons in NAc, increased acetylcholine released in NAc core during the craving for drug reward but not natural reward. Furthermore, optogenetically manipulation activity of CINs in NAc bidirectionally alters cocaine-seeking behaviors. These findings indicate that CINs activity specifically modulates craving for drug rewards but not for natural rewards. Also, drug reward but not natural reward experience increased the activation of integrated stress response in CINs. The accumbal manipulation of ISR specifically influence the CINs activity-dependent craving for drug rewards. Additionally, we found ISR inhibition decreased the expression of subunits of HCN channels. HCN channel regulated CINs activity and pharmacological blockade of HCN channel decreased craving for drug reward but not natural reward. These data indicate that HCN channels are crucial in mediating the effects of ISR on CINs activity and drug reward craving.

Conclusion NAc CINs play a pivotal role in regulating adaptive cue-motivated behaviors through ISR signaling and HCN channels. These mechanisms provide promising targets for therapeutic interventions in drug addiction.

关键词: Drug addiction; Cholinergic interneurons; Optogenetics; ISR; HCN

CeA CRF 神经元在甲基苯丙胺成瘾中的作用及其机制研究

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目的 药物成瘾是一种慢性复发性脑疾病,也是严重的公共卫生问题。成瘾者戒断期间的负面情绪和用药动机增加可导致复吸,主要由泛杏仁核系统介导。中央杏仁核(CeA)是泛杏仁核的关键脑区。研究发现,CeA中存在一类表达促肾上腺皮质激素释放因子(corticotropinreleasing factor, CRF)的GABA能神经元,参与调节恐惧、焦虑、酒精成瘾和尼古丁成瘾等相关行为,但其在METH成瘾中的作用尚不清楚。本研究旨在探索CeA CRF神经元在METH成瘾过程中的机制。

方法 (1)在C57BL/6小鼠的CeA脑区注射rAAV-CRH-EGFP病毒;(2)将注射病毒的小鼠随机分为生理盐水组和METH组,进行不同时间的慢性给药,包括急性给药、慢性给药两周、慢性两周给药后戒断一周和两周四个时间点(3)采用膜片钳技术检测CeA CRF神经元的自发兴奋性突触后电流(sEPSC)、自发抑制性突触后电流(sIPSC)和动作电位(AP)等电生理特征。

结果 (1)急性给药之后,与对照组相比,METH给药组CeA CRF神经元的sEPSC和sIPSC的频率和振幅没有显著差异。另外,METH给药组CeA CRF神经元的阈值升高,给予不同的注入电流后,其动作电位的个数低于对照组;(2)慢性给药两周之后,METH给药组CeA CRF神经元的sEPSC和sIPSC的频率及振幅没有显著差异,给予不同的注入电流,动作电位个数低于对照组;(3)戒断一周之后,METH给药组CeA CRF神经元的sIPSC的频率和振幅显著升高。另外,METH给药组CeA CRF神经元的阈值下降,给予不同的注入电流后,动作电位的个数高于对照组(4)戒断两周之后,METH给药组CeA CRF神经元的sIPSC的频率和振幅显著升高,给予不同的注入电流后,动作电位的个数没有显著差异。

结论 本研究探讨了 CeA CRF 神经元在 METH 成瘾过程中的电生理特征,发现在慢性给药过程中 CeA CRF 神经元的兴奋性输入和抑制性输入没有显著差异,但其神经元活性被抑制。戒断之后抑制性输入显著增加,神经元活性也显著增强。戒断两周之后,抑制性输入依然显著增加,但是神经元活动逐渐趋于正常。因此,本研究说明 CeA CRF 神经元可能参与介导了 METH 戒断之后的负性状态,为理解 METH 成瘾的机制提供了新的视角和神经生物学基础。

关键词: 甲基苯丙胺,中央杏仁核,促肾上腺皮质激素释放因子神经元,成瘾

大鼠前边缘皮层 ANKS1B 影响可卡因奖赏记忆的分子神经机制

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目的 反复使用可卡因可导致神经可塑性的改变,形成病理性奖赏记忆,进而导致成瘾。研究药物奖赏记忆的功能脑区、神经环路及其分子机制意义重大。课题组前期研究发现 ANKS1B 基因是与多种药物成瘾(海洛因及甲基苯丙胺)易感性及表型关联最显著的基因,过表达奖赏相关脑区的 ANKS1B 可降低自身给药大鼠对海洛因和甲基苯丙胺的成瘾易感性。然而 ANKS1B 与可卡因奖赏记忆及成瘾行为的关联尚不明确,因此,本研究探索了 ANKS1B 对于大鼠可卡因诱导奖赏记忆中的作用及分子神经机制。

方法 (1)建立可卡因诱导条件位置偏好模型(CPP):第 1、3、5、7 天腹腔注射可卡因(10 mg/kg)将大鼠放入伴药箱;第 2、4、6、8 天腹腔注射生理盐水(1 ml/kg)放入非伴药箱,第 9 天和第 37 天分别进行近期及远期记忆测试;(2)免疫蛋白印迹检测可卡因诱导 CPP 近期及远期记忆中 ANKS1B 蛋白表达变化;(3)病毒介导 ANKS1B 在前边缘皮层过表达及敲降探究对可卡因诱导 CPP 的作用;(4)结合病毒载体注射、脑片膜片钳、免疫荧光等技术探索 ANKS1B 发挥调节作用的细胞特异性;(5)采用化学遗传学和光遗传学手段对前边缘皮层及其特

异神经元类型的活性进行调控;(6)通过转录组测序及病毒干扰技术探索 ANKS1B 发挥调节作用的下游分子。

结果 (1)大鼠可卡因 CPP 训练后,近期和远期记忆测试中,前边缘皮层 ANKS1B 蛋白表达水平均显著下降;(2)前边缘皮层过表达 ANKS1B 可显著降低可卡因诱导奖赏记忆,而敲降 ANKS1B 可增强可卡因奖赏记忆;(3)ANKS1B 与神经元标记物共定位结果发现,ANKS1B 主要在兴奋性神经元中表达;敲除谷氨酸能神经元中 ANKS1B,增强 mEPSC 的幅度,而 mEPSC 的频率未见显著改变。

结论 本研究初步研究发现,前边缘皮层 ANKS1B 可能通过影响兴奋性神经元突触传递,抑制可卡因诱导的奖赏记忆。未来我们将进一步探究 ANKS1B 影响可卡因奖赏记忆的下游分子和神经机制。

关键词: 可卡因,奖赏记忆,ANKS1B,前边缘皮层,谷氨酸能神经元

妇女精神医学学组

绵阳市孕产妇焦虑、抑郁及睡眠现状调查

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目的 了解绵阳市孕产妇焦虑、抑郁及睡眠情况。

方法 采用便利抽样的方法,于2023年6月~12月间在绵阳市13家医院开展多中心、大样本横断面调查,使用广泛性焦虑量表(GAD-7)、患者健康问卷抑郁量表(PHQ-9)及失眠严重程度指数量表(ISI)评价绵阳市孕产妇焦虑、抑郁及睡眠情况,并分析其相关性及其影响因素。

结果 共收集到有效问卷2043份,孕期973份,产后1074份。其中轻度焦虑757例(37.0%),中度焦虑428例(20.9%),重度焦虑218例(10.6%);轻度抑郁1161例(56.7%),中度抑郁433例(21.2%),重度抑郁129例(6.3%),极重度抑郁45例(2.2%);轻度失眠446例(21.8%),中度失眠67例(3.3%)。相关分析结果显示 GAD-7 与 PHQ-9 ($r=0.591$)、GAD-7 与 ISI ($r=0.631$)、PHQ-9 与 ISI ($r=0.680$) 得分均显著相关 (P 均 <0.001)。广义回归模型结果显示本次妊娠前无生产经历、孕周小、独居、涪城区的孕产妇 GAD-7 得分更高 (P 均 <0.05),文化程度低、月收入低、孕周大、独居/只和长辈居住、涪城区的孕产妇 PHQ-9 得分更高 (P 均 <0.05),独居、涪城区的孕产妇 ISI 得分更高 (P 均 <0.05)。

结论 绵阳市孕产妇焦虑、抑郁水平较高,失眠水平中等。应重点关注无生产经历、社会经济地位低、独居以及城市中心的孕产妇,为其提供针对性的心理健康保健服务,进而降低其焦虑、抑郁及失眠水平。

关键词:孕产妇;焦虑;抑郁;睡眠

血清成纤维细胞生长因子 2、脑源性神经营养因子水平变化与产后抑郁症的关系

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目的 探究产后抑郁症(PPD)患者血清成纤维细胞生长因子 2(FGF2)和脑源性神经营养因子(BDNF)水平的变化,并分析其与病情严重程度的关系。

方法 选取2020年10月至2022年10月丽水市第二人民医院收治的96例PPD患者作为研究对象,设为PPD组。另随机选取同期96例正常产妇设为对照组。记录两组的基线资料。采用酶联免疫吸附试验法检测血清 FGF2 和 BDNF 水平,采用爱丁堡产后抑郁量表(EPDS)评价 PPD 病情严重程度。采用 Pearson 法分析 PPD 患者血清 FGF2、BDNF 水平与 EPDS 评分的相关性;采用多因素 Logistic 回归分析影响 PPD 发生的可能因素。

结果 PPD 组产前抑郁比例、妊娠期抑郁比例、EPDS 评分、焦虑自评量表(SAS)评分及抑郁自评量表(SDS)评分均高于对照组($P < 0.05$);PPD 组血清 FGF2 和 BDNF 水平均低于对照组($P < 0.05$)。PPD 患者血清 FGF2 水平与 EPDS 评分呈负相关($r = -0.564, P < 0.05$),血清 BDNF 水平与 EPDS 评分呈负相关($r = -0.493, P < 0.05$);FGF2、BDNF 是产妇发生 PPD 的保护因素($P < 0.05$),产前抑郁及妊娠期抑郁是产妇发生 PPD 的危险因素($P < 0.05$)。

结论 FGF2、BDNF 在 PPD 患者血清中低表达,二者均与 EPDS 评分呈负相关,在 PPD 的病情缓解方面可能具有一定临床应用价值。

关键词:产后抑郁症;成纤维细胞生长因子 2;脑源性神经营养因子

Paraventricular Thalamus To Nucleus Accumbens Circuit Activation Decreases Long-term Relapse of Alcohol-seeking Behaviour in Male Mice

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Objective Some studies have highlighted the crucial role of aversion in addiction treatment. The pathway from the anterior paraventricular thalamus (PVT) to the shell of the nucleus accumbens (NAc) has been reported as an essential regulatory pathway for processing aversion and is also closely associated with substance addiction. However, its impact on alcohol addiction has been relatively underexplored. Therefore, this study focused on the role of the PVT-NAc pathway in the formation and relapse of alcohol addiction-like behaviour, offering a new perspective on the mechanisms of alcohol addiction

Methods Experiment 1: Retrograde tracing of PVT neurons projecting to NAc by stereotaxic injection of CTB-488 in mice, followed by a two-week recovery. Mice were randomly divided into two groups: ethanol group and saline group. The ethanol group received alcohol to establish a CPA model, while the saline group was treated with saline as a control. CPA scores were measured and immunofluorescence staining was performed to detect C-Fos protein expression levels in both groups

Experiment 2: Mice were randomly divided into two groups: inhibition group and control group. Using chemogenetic methods, the PVT-NAc neurons of inhibition group expressed inhibitory receptors hM4Di, while the control group only expressed mCherry. After a two-week recovery, an alcohol CPA model was established. The PVT-NAc pathway was silenced in the inhibition group during each training session, and CPA

scores were measured after training for both groups.

Experiment 3: Mice were randomly divided into two groups: the activation group and the control group. The PVT-NAc neurons of the activation group mice expressed excitatory receptors hM3Dq, while the control group only expressed mCherry. After a two-week recovery, a CPA model induced by directly activating PVT-NAc was established. The PVT-NAc pathway was activated in the activation group during each training session, and CPA scores were measured after training for both groups.

Experiment 4: Mice were randomly divided into two groups: activation group and control group. The PVT-NAc neurons of the activation group mice expressed excitatory receptors hM3Dq, while the control group only expressed mCherry. After a two-week recovery, an alcohol CPP model was established. The PVT-NAc pathway was activated in the activation group during each training session, and CPP scores were measured after a four-day training for both groups.

Experiment 5: Mice were randomly divided into two groups: activation group and control group. The PVT-NAc neurons of the activation group mice expressed excitatory receptors hM3Dq, while the control group only expressed mCherry. After a two-week recovery, an alcohol CPP model was initially established, and CPP scores were measured. Subsequently, the PVT-NAc pathway in the activation group was activated for aversive counterconditioning training, while the PVT-NAc pathway in the control group remained non-activated. CPP scores were re-measured after each training session, and the time taken for both groups' alcohol CPP extinction was recorded.

Experiment 6: The two groups of mice from Experiment 5 will continue to experiment 6. After both groups' CPP scores recover to baseline within 24 hours, a low dose of alcohol will be administered to induce CPP reinstatement. CPP scores after 24 hours of extinction will be measured. The procedure will be repeated 10 days later to assess CPP reinstatement scores after a 10-day extinction for both groups.

Results The chemogenetic inhibition of the PVT-NAc pathway in male mice resulted in a notable

decrease in the establishment of ethanol-induced conditioned place aversion (CPA), and NAc-projecting PVT neurons were recruited due to aversive effects. Conversely, activation of the PVT-NAc pathway considerably impeded the formation of ethanol-induced conditioned place preference (CPP). Furthermore, during the memory reconsolidation phase, activation of this pathway effectively disrupted the animals' preference for alcohol-associated contexts. Whether it was administered urgently 24 h later or after a long-term withdrawal of 10 days, a low dose of alcohol could still not induce the reinstatement of ethanol-induced CPP

Conclusion Our results demonstrated PVT-NAc circuit processing aversion, which may be one of the neurobiological mechanisms underlying aversive counterconditioning, and highlighted potential targets for inhibiting the development of alcohol addiction-like behaviour and relapse after long-term withdrawal.

关键词: Alcohol dependence; Alcohol reinstatement; Paraventricular nucleus of the thalamus; Nucleus accumbens; Counterconditioning; Conditioned place preference; Conditioned place aversion

正念减压护理对产后抑郁症患者自我效能、情绪状态的影响观察

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目的 探究产后抑郁症患者实施正念减压护理对其自我效能、情绪状态的影响。

方法 依据入组标准将收治的 84 例产后抑郁症患者纳入此次研究并采用随机数表法进行分组,其中 42 例患者为对照组,实施常规护理,42 例患者为观察组,实施正念减压护理。对两组患者自我效能(一般自我效能感量表评价)及情绪状态(焦虑、抑郁自评量表评价)进行对比。

结果 观察组和对照组护理前自我效能评分对比无显著差异, $P>0.05$, 而护理 8 周后观察组自我效能评分高于对照组, 差异显著, $P<0.05$; 观察组和对照组护理前 SAS、SDS 评分对比无显著差异, $P>0.05$, 而护理 8 周后观察组 SAS、SDS 评分低于

对照组, 差异显著, $P<0.05$ 。

结论 正念减压护理能够通过帮助患者建立正念思想, 掌握合理的自我情绪管理技巧, 达到不良心理消除的目的。在正念减压护理过程中, 身体扫描、正念瑜伽、正念呼吸训练、正念冥想能够提升患者处理不良情绪、思维的能力, 使得患者的情绪状态得到改善, 逐渐缓解压力。总而言之, 产后抑郁症患者实施正念减压护理, 不仅有利于患者自我效能的提升, 还能够对患者焦虑、抑郁等情绪状态进行改善。但是由于时间及条件的限制, 且研究样本量偏少, 往后可增加样本量, 延长护理干预时间, 以探究其远期效果。

关键词: 产后抑郁症患者; 正念减压护理; 自我效能; 情绪状态

甲基苯丙胺使用障碍女性患者精神健康状况分析与内观认知疗法干预研究

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目的 本研究旨在调查女性甲基苯丙胺使用者的精神健康状况, 并深入探究冲动性、社会支持水平与患者精神健康状况之间的关系; 同时, 研究内观认知疗法在改善女性甲基苯丙胺使用障碍患者的精神心理健康状况、提升社会支持水平、降低冲动性水平等方面的临床疗效。通过该研究, 我们希望通过内观认知疗法治疗甲基苯丙胺使用障碍相关精神症状提供实证基础和临床依据。

方法 研究一: 本研究招募了 230 位患者, 采用 SCL-90 的中文版、多维度社会支持量表(MSPSS)和巴瑞特冲动性量表(BIS-11)进行评估。通过独立样本 t 检验、Pearson 相关分析、多变量线性回归模型、逐步回归模型探究相关性, 并进行预测作用分析; 采用调节效应分析与简单斜率检验来分析交互效应。研究二: 60 名符合纳排标准的被试者随机分为实验组与对照组, 每组 30 人。实验组采用内观认知疗法(NCT)干预; 对照组采用一般支持疗法(GST)干预。在干预前后使用研究一中的相关量表进行评测。采用配对样本 t 检验、独立样本 t 检验分析。

结果 研究一: (1)共有 228 份问卷纳入统计分

析。SCL-90 各维度分值显著高于健康常模。(2) 被试者的 MSPSS 量表与 SCL-90 量表的“强迫”、“人际关系敏感”、“抑郁”、“焦虑”、“恐怖”、“偏执”、“精神病性”及“总分”等维度均呈负相关关系。MSPSS 量表与 SCL-90 量表各维度评分均呈正相关关系。(3) MSPSS 量表对 SCL-90 各维度(除“躯体化”)评分存在负向预测作用,而 BIS-11 量表对 SCL-90 各维度评分存在正向预测作用。(4) MSPSS 在 BIS-11 对于 SCL-90 评分影响中具有调节效应。研究二:(1)干预前,实验组与对照组社会人口学变量及各量表评分在基线水平无显著统计学差异。(2)在干预后,BIS-11、SCL-90 等量表的评分较干预前显著降低,而在干预后,MSPSS 量表的评分较干预前显著升高。(3)对实验组与对照组在干预前后上述量表评分变化量进行组间比较,发现实验组的变化较对照组更为显著。

结论 本研究发现,社会支持对女性甲基苯丙胺患者的精神症状具有负向预测作用,而冲动性则呈正向预测作用。此外,社会支持的存在能够减弱冲动性对甲基苯丙胺患者精神健康状况的影响能力。内观认知疗法在治疗女性甲基苯丙胺使用障碍者方面展现了显著的效果。具体而言,该疗法能够显著改善患者的心理健康状况,提高患者对社会支持水平的感知,并显著降低冲动性水平。

关键词: 甲基苯丙胺使用障碍;冲动性;社会支持;心理健康;内观认知疗法

失眠简明行为疗法疗效与内感知关系的研究

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目的 使用失眠简明行为疗法(Brief Behavior Therapy for insomnia, BBTi)对失眠患者进行干预,并使用多导生理仪测量患者内感知,来(1)比较失眠群体与健康对照组的内感知敏感性和内感知准确性;(2)对失眠患者采用 BBTi 进行干预,观察其疗效和干预后患者内感知各维度的变化;(3)探究 BBTi 疗效与患者内感知的关系。

方法 招收符合 ICS-3 的失眠诊断标准的失眠患者(ID 组)34 人和睡眠良好者作为对照组(健康对照组)37 人;对所有受试者采集基线睡眠日记、

HTT 实验数据(平均心跳知觉分数和自信评分)和量表数据(ISI、SAS、SDS、ESS、MAIA、DBAS-16、BPQ-VSF)。采用 E-Prime2.0 设计实验程序,使用 BIOPAC-MP150 多导生理仪记录受试者的心电图。失眠患者组需参与为期 4 周的 BBTi,期间需要记录睡眠日记。完成干预后两组再次填写所有量表,ID 组还需记录干预后睡眠日记。三个月随访时,获得两组的量表和 HTT 实验数据以及 ID 组随访睡眠日记。

结果 1、ID 组基线时在 PSQI、ISI、ESS、SAS、SDS 和 BPQ-VSF 的得分均显著高于健康对照组($p < 0.05$),在 DBAS-16、MAIA 的不担心和自我调适的得分显著低于健康对照组($p < 0.05$)。ID 组的 PSQI、ISI、ESS、SAS 和 SDS 的得分在 BBTi 干预后显著下降($p < 0.001$),且 PSQI、ISI、ESS 得分在随访时显著低于基线水平($p < 0.05$)。

2、MAIA 的注意调适维度与总睡眠时间($r = 0.44$, $p = 0.015$)和睡眠效率($r = 0.36$, $p = 0.048$)、信任维度与睡眠效率均呈显著正相关($r = 0.38$, $p = 0.036$)。

3、两组的平均心跳知觉分数在基线和随访时均无显著差异;基线水平两组自信评分无显著差异,ID 组随访时自信评分(6.63 ± 1.21)显著高于基线水平($p < 0.001$),健康对照组在随访时(5.76 ± 1.71)与基线水平无显著差异。基线水平 ID 组和健康对照组的 HPS 和自信评分的相关性均显著($p < 0.05$),随访时均不显著。

结论 1.失眠患者的内感知敏感性比健康对照组更强,内感知准确性没有差异,其过高的内感知敏感性可以在 BBTi 干预后恢复正常。

2. BBTi 具有良好改善失眠及焦虑抑郁症状的疗效。

3.失眠患者在内感知相关量表 MAIA 中的注意调适和信任两个子维度中的良好水平,与 BBTi 提高睡眠效率和睡眠总时长的疗效呈显著正相关。

关键词: 失眠简明行为疗法,内感知,疗效,心跳知觉分数,焦虑,抑郁

伴有混合性特征抑郁症和双相障碍患者的 1 年随访研究

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目的 探讨 DSM-5 界定的伴有混合性特征抑郁症和双相障碍的临床现象学、疾病转归及相关危险因素。

方法 对 361 例伴和不伴混合性特征抑郁症和双相障碍患者进行为期 1 年的前瞻性随访研究，在入组后第 3、6、12 个月末 3 个时点进行疗效和结局等相关评估。

结果 抑郁症和双相障碍患者中，伴有 DSM-5 界定的混合性特征的发生率为 9.4% (34/361)，伴有广义混合性特征的发生率为 41.8% (151/361)。

与不伴混合性特征组相比，伴有 DSM-5 界定的混合性特征组：非已婚状态更多见 (70.6% vs 42.5%, $P=0.00$)，起病年龄更早 (25.97 ± 13.29 vs 33.75 ± 14.80 , $P=0.00$)，HAMD-17 评分更低 (24.03 ± 3.55 vs 25.57 ± 4.32 , $P=0.05$)，更少伴有忧郁特征 (42.4% vs 64.0%, $P=0.02$)，1 年的痊愈率更低 (28.1% vs 51.3%, $P=0.01$)、复发率更高 (43.8% vs 25.0%, $P=0.02$)、转相率更高 (40.6% vs 9.0%, $P=0.00$)、服药依从性更差 (31.3% vs 68.8%, $P=0.00$)。

对于伴有广义混合性特征的抑郁症和双相障碍患者，复发的危险因素为持续性抑郁障碍 ($OR=3.90$, $P=0.02$)、伴有自杀观念 ($OR=2.27$, $P=0.05$) 及程度更轻的焦虑 ($OR=0.71$, $P=0.02$)。转相的危险因素为既往发病次数少 ($OR=0.77$, $P=0.02$)。

结论 伴有混合性特征的抑郁症和双相障碍是一种更严重、预后更差的疾病亚型，临床上并不少见，需要引起重视。

关键词：混合性特征, 抑郁症, 双相障碍, 随访研究

甲基苯丙胺成瘾者抑郁症状与肠道菌群改变的相关性研究

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目的 甲基苯丙胺 (Methamphetamine, MA), 俗称“冰毒”，其成瘾是目前一个快速增长的公共卫生问题，截至 2022 年底，甲基苯丙胺仍然是我国滥用人数量最多的毒品。研究表明，甲基苯丙胺成瘾者抑郁症的患病率远远高出健康中国人患病率。伴有抑

郁症状的甲基苯丙胺成瘾者具有更强的药物渴求和个体攻击性。抑郁症状是造成其复吸的关键因素之一，同时也是自杀的重要危险因素。证据显示，甲基苯丙胺成瘾者肠道微生物组成同健康对照有显著差异，而肠道菌群同抑郁症状相关，因此肠道菌群或许成为干预甲基苯丙胺成瘾者抑郁症状的新靶点。本研究旨在探究肠道菌群与甲基苯丙胺成瘾者抑郁症状之间的相关性。

方法 本研究纳入甲基苯丙胺成瘾者 90 人，健康对照 45 人，签署知情同意书后采集人口学资料 (性别、年龄、BMI)、完善临床症状评估 (贝克抑郁量表, BDI) 等，并将甲基苯丙胺成瘾者分为伴有抑郁症状组 (MDD) 和不伴有抑郁症状 (NMDD) 两组，应用 t 检验或 ANOVA 分析进行比较。同时采集受试者粪便样本进行 16S rDNA 测序，以分析其肠道微生物群。

结果 三组在性别、年龄、BMI 上均未见显著统计学差异。三组 alpha 多样性 Chao1、Shannon、Simpson 指数未见显著差异；基于 Bray-Curtis 距离的 beta 多样性上存在显著差异 (PERMANOVA, $P=0.003$)。在物种水平上，MDD 组梭杆菌门、梭杆菌属、梭杆菌目出现显著降低，Tyzzerella_4 显著升高。

结论 梭杆菌门、梭杆菌属、梭杆菌目出现显著降低，Tyzzerella_4 显著升高是伴有抑郁症状的甲基苯丙胺成瘾者的特征性改变，这一结论为进一步理解甲基苯丙胺成瘾人群抑郁症状提供理论基础以及调控的潜在靶点。

关键词：抑郁症状；成瘾；肠道菌群

北京地区妊娠期女性抑郁症状出现的影响因素

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目的 产前抑郁是妊娠期最常见的精神障碍，不仅对产妇产生巨大的心理负担，造成负面的社会心理影响，而且与不良的母婴结局相关。本研究旨在了解北京地区的妊娠期妇女出现抑郁症状的概率及影响因素，为产前精神障碍的筛查和预防干预提供理论依据。

方法 研究数据来自 2022 年 1 月至 2023 年 1 月期间 4564 名妊娠期妇女,在北京清华长庚医院进行横断面的调查研究。主要收集孕妇的个人资料和产科资料,由北京回龙观医院的精神科医师及护士使用爱丁堡产后抑郁量表进行抑郁症状的初步筛查。

结果 研究结果显示存在抑郁情绪的围生期妇女比例为 4.1%。单因素分析结果显示孕次方面,孕次、产次、药物及人工流产次数越多,孕前体重及 BMI 指数越高,孕妇抑郁症状发生比例越高。孕妇职业为商业服务业,抑郁症状发生比例较低。多因素 logistics 回归分析结果示孕次、产次及 BMI 是产前抑郁的风险因素,孕妇职业为商业、服务业是产前抑郁的保护因素。

结论 未来应加大对孕次及产次较多、BMI 指数较高的孕妇抑郁症状的筛查力度,鼓励坚持工作,灵活选择就业类型。针对出现抑郁症状的孕妇采取适当的干预措施,提供不同类型的健康教育方案,以减少不良母婴结局的发生。

关键词: 产前抑郁; 妊娠; 影响因素; 围产期

利培酮与重复经颅磁刺激治疗女性首发精神分裂症的效果分析

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目的 探讨女性首发精神分裂症(SCH)患者采用利培酮与重复经颅磁刺激(rTMS)联合治疗的效果。

方法 2020 年 7 月~2023 年 6 月,选取此期间本院收治的女性首发 SCH 患者 98 例,参照随机数字表进行分组。对照组 49 例患者采用利培酮治疗,在其基础上研究组 49 例患者联合 rTMS 治疗。针对两组临床疗效、精神分裂症认知功能测评量表(SCoRS)、精神分裂症患者生活质量量表(SQLS),以及不良反应予以比较。计数资料采用 χ^2 检验,正态计量资料采用 t 检验。

对照组采用利培酮(规格: 1mg, 国药准字 H20061072, 北京天衡药物研究院南阳天衡制药厂)治疗,口服,初始用量为 1mg/次, 2 次/d, 治疗 1 周后逐渐递增至 2mg/次, 2 次/d, 持续治疗 8 周。在对照组的基础上,研究组采用 rTMS 治疗,即使用

经颅磁刺激仪(型号: YS6002, 常州思雅医疗器械有限公司),选择双侧前额叶皮质背外侧进行刺激,强度: 80%的静息运动阈值,频率: 1Hz, 10min/侧, 20min/次, 1 次/d, 每周治疗 5 次,持续治疗 8 周。

结果 总有效率评价中,与对照组结果相比,研究组结果更高($P < 0.05$)。治疗前 SCoRS、SQLS 评价中,两组评分并无差异($P > 0.05$); 治疗 8 周后 SCoRS、SQLS 评价中,与对照组评分相比,研究组评分更低($P < 0.05$)。不良反应评价中,两组发生率并无差异($P > 0.05$)。

结论 女性首发 SCH 患者采用利培酮与 rTMS 联合治疗效果确切,能够改善其认知功能,保障生活质量,安全性较为理想。

关键词: 利培酮; 重复经颅磁刺激; 女性; 首发精神分裂症

首发未用药抑郁症患者肠道菌群多样性与面部表情识别相关性研究

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目的 目前抑郁症肠脑轴机制得到进一步证实,有研究指出抑郁症患者肠道菌群与认知功能相关,但目前尚无研究探讨抑郁症患者肠道菌群与面部表情识别能力为代表的热认知功能的相关性。因此本研究探讨抑郁症患者肠道菌群与面部表情识别的相关性,进一步探索肠道菌群与抑郁症患者临床症状关系。

方法 本研究纳入 50 例健康对照,49 例首发未用药抑郁症患者,签署知情同意后收集一般临床资料,粪便标本,并采用自编测试系统,测试首发未用药抑郁症患者和健康对照对快乐,中性,悲伤三种面部表情识别能力。最终所有受试者完成面部表情测试,有 32 例健康对照和 31 例首发未用药患者完成粪便采集。肠道菌群分析采用 16S rRNA 高通量测序技术对进行测序,并进行生物信息学分析。面部表情识别图片选自《中国化面孔情绪图片系统》。使用 SPSS23.0 软件对临床资料进行统计学分析。一般资料统计采用独立样本 T 检验,或卡方检验,相关性分析采用 Pearson 相关。

结果 1、二组受试者年龄,性别, BMI 均无显

著差异 ($p>0.05$)

2、与健康对照组相比首发未用药抑郁症患者 β 多样性具有显著差异 ($R=0.065 P<0.01$), LEFse 分析共发现两组间存在 15 种差异菌群, 其中 13 种在抑郁症中富集, 2 种在健康对照中富集。

3、与健康对照相比, 首发未用药抑郁症患者对快乐 ($t=3.145 p<0.01$) 中性 ($t=2.024 p<0.05$) 悲伤 ($t=2.768 p<0.01$) 面部表情识别正确率均显著下降。

4、差异菌群与面部表情相关性分析发现中性面部表情与 *Blautia*($r=-0.586 P<0.01$) *odoribacteraceae*($r=-0.456 P=0.01$) 负相关, 悲伤表情正确数与 *Blautia* ($r=-0.455 P=0.01$) 负相关。

结论 1、首发未用药抑郁症患者面部表情识别能力显著下降。

2、首发未用药患者肠道菌组成发生改变。

3、首发未用药患者肠道菌群与面部表情存在相关性, 说明肠道菌群可能与首发未用药抑郁症患者热认知功能下降有关。

关键词: 抑郁症 肠道菌群 面部表情识别

Analysis and Evaluation of Mouse Modeling Methods for Adolescent Depression A Meta-analysis and Animal Experiment

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Objective Adolescent depression is a significant concern for the physical and mental well-being of young individuals. Given the unique nature of adolescence, animal models play a crucial role in understanding the causes and developing treatments for depression in adolescents. CUMS is a well-known rodent paradigm used to induce depressive and anxiety-like behaviors. Chronic unpredictable mild stress (CUMS) is a method that exposes animals to a variety of repeated and irregular unknown stressors over a long period of time. This simulation aims to replicate the various stress events encountered by humans in life, ultimately leading to the development of long-term and effective depressive-like

behaviors in animals. Maternal separation (MS) is used to simulate negative life experiences in early life by inducing long-term separation between mother and infant, resulting in depressive-like behaviors in animals. This model is a form of social deprivation. CUMS and MS are commonly utilized techniques for creating animal models of adolescent depression

This study aims to compare the behavioral outcomes of two widely used adolescent rat depression models through meta-analysis. Additionally, animal experiments will be conducted to validate the findings of the meta-analysis, ultimately offering insights into the selection and utilization of adolescent rat depression models.

Methods A meta-analysis was conducted by searching Chinese and English databases to gather all relevant literature on rodent models of adolescent depression. The foreign language databases searched include the Web of Science, PubMed. The Chinese databases include China National Knowledge Infrastructure(CNKI), WanFang Data and China Science and Technology Journal Database(VIP).The search timeframe was not restricted. RevMan 5.3 software was utilized for the meta-analysis. Behavioral tests including sucrose preference, forced swimming, and open field tests were employed in animal experiments to compare two modeling methods in adolescent rats

Results The meta-analysis included a total of 23 research results. The findings indicated that the experimental group, as compared to the control group, exhibited significant differences in sucrose preference, open field, forced swimming, and other behavioral behaviors. Furthermore, the CUMS model showed more pronounced differences in sucrose preference compared to the MS model. In animal experiments, the experimental group demonstrated significant differences in behavioral tests such as sucrose preference and forced swimming when compared to the control group. Additionally, the CUMS group showed superior results in behavioral tests like sucrose preference, forced swimming, and open field when compared to the MS group

Conclusion The findings of this study suggest that chronic unpredictable mild stress (CUMS) inter-

vention in adolescent rats is more likely to induce depressive-like behavioral symptoms compared to maternal separation (MS) intervention. This indicates that CUMS may be more suitable for studying adolescent depression caused by various social and environmental factors

关键词: Adolescence; Depression; Chronic unpredictable mild stress; maternal separation; Animal model; meta-analysis; Validity

Mesocorticolimbic Pathway Involves Antidepressant Mechanisms To Treatment with Chinese Traditional Medication Or Fluoxetine for Depression Disorder

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Objective The selective serotonin reuptake inhibitors (SSRIs) have been meaningfully linked to the clinical manifestations of mood disorders; however, they have potentially adverse reactions, and a subset of patients fail to respond to multiple drug therapies. Alternatively, Shuganjieyu capsule (SG) has garnered increasing attention due to its similar effectiveness and fewer side effects compared to conventional antidepressants. This study aimed to inform the choice of first-line depression treatment choice Chinese traditional medication and fluoxetine by defining a neuroimaging biomarker that differentially identifies the outcomes of both treatments

Methods 60 Mild-to-moderate depression (MMD) patients and 40 healthy controls (HCs) participated in the study. Included patients were randomly assigned to either an 8 weeks' course of fluoxetine or Shugan Jieyu Capsule (SG). Combining clinical assessments and MRI technique, we obtained the emotional and cognitive status of participants at baseline, weeks 4, and week 8

Results MRI study revealed that MMD patients characterized by structural and functional deficits in the

nucleus accumbens (NAc). Notably, both functional MRI and pharmacological analysis demonstrated a close correlation between the function of the mesolimbic pathway (represented by the NAc-amygdala functional connectivity) and symptom improvement with SG treatment, while the function of the mesocortical pathway (represented by the NAc-rostral anterior cingulate cortex (rACC) functional connectivity) was strongly linked to symptom improvement with fluoxetine treatment. Additionally, the remitters exhibited stronger coupling between NAc and ventral tegmental area (VTA) as well as NAc and frontal cortex than in treatment failures at the baseline

Conclusion Overall, the NAc appears to play a pivotal role as a central functional linkage in the antidepressant modulation. Our findings not only demonstrate the antidepressant effect of different treatments but, more importantly, shed light on the underlying neural mechanisms.

关键词: depression, medication, MRI, nucleus accumbens

临床状态相同的首发精神分裂症与重性抑郁障碍 动态低频振幅比较与机器学习分类研究

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目的 本研究旨在对两种抑郁症状和精神病性症状同时发作的重性抑郁障碍和精神分裂症的脑动态低频振幅 (Dynamic amplitude of low fluctuation, dALFF) 属性进行分析,旨在找到疾病间 dALFF 的差异和变化,并将其作为特征进行机器学习分类,为精准诊断和治疗提供神经影像学证据。

方法 招募 MDDP 患者 71 例, SZD 患者 51 例及年龄性别匹配的健康对照组 (Healthy Control, HC) 43 例。入组标准: 年龄 13-50 岁; 符合 DSM-V 的诊断标准, 且无其他轴 I 障碍; 扫描当天均存在精神病性症状及抑郁症状发作, 使用 DPABI6.0 软件计算相应的动态低频振幅指标, 使用方法, 使 SPSS

26.0 软件,应用 ANCOVA 比较三组一般人口学资料及动态低频振幅指标差异,使用 GRF 方法进行多重比较校正,最后使用支持向量机(Support vector machine, SVM)用差异动态低频振幅作为分类指标,对两患者组进行分类。

结果 三组受试者的年龄($F=0.074$, $P=0.928$)、性别($\chi^2=4.945$, $P=0.084$)之间均无统计学差异,在学学历年($F=37.441$, $P<0.001$)、HAMD-17 总分($F=237.708$, $P<0.001$)、BPRS 总分($F=157.551$, $P<0.001$)和 MCCB 总分($F=33.538$, $P<0.001$)之间有统计学差异。MDDP 患者与 SZD 患者的用药情况($\chi^2=2.842$, $P=0.092$)无统计学差异。三组受试者的动态低频振幅在右侧楔前叶,距状裂,楔叶,缘上回,顶下缘角回,角回,颞上回存在统计学差异(GRF 校正, $P<0.001$)。单独的差异脑区或者差异脑区组合都可以有效的区分两组患者,但差异脑区组合在区分 MDDP 和 SZD 中展现出最高的准确率 77.05%、敏感性 72.55%、特异性 80.23%和 AUC0.80。

结论 dALFF 是抑郁症状和精神病性症状同时发作的重性抑郁障碍和精神分裂症患者的潜在生物标志物,机器学习可以有效区分两种临床状态相同的精神疾病

关键词: 动态低频振幅,重性抑郁障碍,精神分裂症,支持向量机,

存在认知损害。体质量指数(body mass index,BMI) $\geq 28\text{kg/m}^2$ 为肥胖, $\text{BMI}<28\text{kg/m}^2$ 为非肥胖;血压状态:低于 $120\text{mm Hg}/80\text{mm Hg}$ 为正常血压、 $120-140\text{mm Hg}/80-90\text{mm Hg}$ 为高血压前期、高于 $140\text{mm Hg}/90\text{mm Hg}$ 为高血压。按是否肥胖和不同血压状态将老年人分为六种 BMI-血压表型(非肥胖血压正常组、肥胖血压正常组、非肥胖高血压前期组、肥胖高血压前期组、非肥胖高血压组、肥胖高血压组),分析不同 BMI-血压表型与认知损害之间的相关性。

结果 logistic 回归显示,在未调整的模型中肥胖高血压前期组和肥胖高血压组相对于非肥胖血压正常组危险度分别为 $0.57(95\%$ 置信区间: $0.350,0.913)$, $0.619(95\%$ 置信区间: $0.332,0.874)$,在校正年龄、性别、受教育程度、婚姻状况、独居情况、吸烟和饮酒等协变量的模型中,肥胖高血压前期组和肥胖高血压组相对于非肥胖血压正常组危险度分别为 $0.822(95\%$ 置信区间: $0.236,0.818)$, $0.645(95\%$ 置信区间: $0.284,0.971)$ 。在两个模型中,肥胖血压正常组、非肥胖高血压前期组、非肥胖高血压组与认知损害的相关性均没有统计学意义。

结论 在该项研究中,在老年人处于高血压前期和患有高血压疾病的情况下,肥胖的存在会增加其患认知损害的风险。

关键词: BMI,肥胖,高血压,高血压前期,认知损害,老年人

不同 BMI-血压状态与老年人认知损害的相关性研究

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目的 探讨东北地区老年人 BMI-血压状态与认知的相关性,了解肥胖与血压的不同存在情况对老年人认知是否存在损害,为准确识别认知损害高危老年人群亚组和预防阿尔兹海默症的发生发展提供参考依据。

方法 2018 年 9 月-2023 年 8 月,整群抽样方式抽取辽宁省沈阳市,大连市,抚顺市,锦州市等地区 ≥ 55 岁的 1810 名老年人为研究对象。采集他们的一般人口学资料,认知功能的测评采用简易智力状态检查量表(MMSE),接受教育水平不同进行校正,总分文盲 ≤ 17 分、小学 ≤ 20 分、初中及以上 ≤ 24 分为

伴焦虑症状的甲基苯丙胺使用障碍患者戒断期间肠道菌群改变

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目的 甲基苯丙胺(MA),俗称“冰毒”,是我国滥用人数最多的毒品。MA 成瘾是全球关注的公共卫生问题,给全世界带来了巨大的负担。甲基苯丙胺使用障碍患者(MUD)在戒断期间,焦虑症状的发生率远高于健康人群。戒断期间焦虑症状的发生,与 MUD 患者冲动、攻击、渴求和复吸等相关。目前研究发现,MUD 患者和焦虑患者存在肠道微生物的改变。但是在 MUD 伴焦虑症状患者中肠道微生物如何变化,目前还不清楚。

方法 本研究招募了 46 名 MUD 患者和 47 名

健康对照 (HC), 将通过贝克焦虑量表 (BAI) 研究 MUD 患者焦虑症状与粪便微生物群的关系。并将 MUD 患者分为 MUD-A 组 (BAI 评分 > 7, MUD 患者伴焦虑症状, $n = 21$) 和 MUD-N 组 (BAI 评分 ≤ 7 , MUD 患者不伴焦虑症状, $n = 25$)。应用贝克抑郁量表 (BDI) 测量抑郁症状, 16S rRNA 序列分析鉴定肠道细菌。

结果 MUD-A、MUD-N 及 HC 三组之间的 β 多样性存在统计学差异 ($P=0.008$), 且多重比较后发现 MUD-A 与 HC ($P=0.027$), MUD-N 与 HC ($P=0.033$) 的 β 多样性存在统计学差异。LEfSe 分析发现, Micrococcales 目在 MUD-A 中富集, Catenibacterium 属和 Arthrobacter 属在 MUD-N 中富集, Faecalitalea 属和 Sphingomonadales 目在 HC 中富集。在 MUD-A 中进行偏 Spearman 相关分析, 将抑郁症状 (BDI 分数)、年龄、性别及 BMI 作为协变量后发现, Arthrobacter 属与 BAI 成负相关 ($r=-0.513$, $P=0.035$)。

结论 伴焦虑症状的 MUD 患者的肠道菌群发生改变, Arthrobacter 属可能是其潜在的肠道微生物标志物。

关键词: 甲基苯丙胺, 焦虑, 肠道菌群

Visual Impairment, Cognitive Function, and Brain Morphology: Insights From Network Analysis and Mendelian Randomization

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Objective Visual impairment (VI) is increasingly recognized as a significant risk factor for cognitive decline and heightened dementia risk among older adults. However, the specific cognitive domains affected by VI and the underlying causal mechanisms linking VI to changes in brain morphology remain poorly understood. This study aims to elucidate these relationships to better understand the broader impact of VI on cognitive health and brain structure

Methods To explore these associations, we employed network analyses using comprehensive data from the China Health and Retirement Longitudinal

Study (CHARLS). Additionally, we conducted Mendelian randomization (MR) analyses leveraging genetic data from individuals of European ancestry to investigate potential causal links between VI and brain morphology

Results Our network analysis identified distinct patterns of association between VI and various cognitive domains, differing notably between cognitively impaired (CI) and non-cognitively impaired (non-CI) older adults. The MR analysis provided compelling evidence for a causal relationship between VI and alterations in brain morphology. Individuals with VI demonstrated a reduction in total cerebral surface area and significant regional changes in cortical thickness and surface area

Conclusion The findings of this study underscore the substantial impact of VI on specific cognitive domains in older adults. Furthermore, the observed causal relationship between VI and brain morphology suggests that visual loss may play a pivotal role in cognitive deterioration, potentially through structural brain changes. These insights highlight the importance of addressing VI as a modifiable risk factor in strategies aimed at preserving cognitive function and mitigating dementia risk in the aging population.

关键词: visual impairment, cognitive impairment, cognitive domains, brain morphology, network analysis, Mendelian randomization

深部经颅磁刺激对遗忘型轻度认知障碍患者认知功能影响的静息态脑功能磁共振研究

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目的 aMCI 是容易发展为 AD 的一种轻度认知障碍亚型。脑功能网络拓扑属性和 ALFF 是 rs-fMRI 常用的两种指标, 可以从网络和局部两个角度反映 aMCI 患者脑功能的细微变化, 被广泛用于 aMCI 患者脑功能影像学机制研究。dTMS 是一种安全无创的物理治疗技术, 是 aMCI 认知干预的潜在手段, 但其改善认知的脑功能影像学机制不清。本研究拟采用 rs-fMRI 从脑网络和局部两个角度观察

aMCI 患者脑功能的异常改变,并对 aMCI 进行 4 周的 dTMS 干预,同时分析基线时脑功能水平与 dTMS 干预后 aMCI 认知功能变化的相关性,以探究 aMCI 认知功能异常及改善的脑功能影像学机制。

方法 收集年龄 60~79 岁的 aMCI 患者以及 HC 各 50 名。aMCI 入组标准采用 Petersen 提出的 aMCI 科研标准。基线时对两组人群分别进行认知功能评估和 rs-fMRI 扫描,之后对 25 名 aMCI 患者进行为期 4 周的 dTMS 刺激,治疗全部结束后再次进行认知功能评估和 rs-fMRI 扫描。

结果 与 HC 组相比,aMCI 组的 MoCA 评分、AVLT 再认评分得分降低,TMT 测试时间延长;与 HC 相比,aMCI 患者在全局属性中 Lp 降低和 Eg 增加,节点属性在两组人群中无差异;与 HC 相比,aMCI 患者在 CUN.L, CUN.R, PCUN.L, MOG.R, MTG.R, SOG.R 上 ALFF 降低;aMCI 患者 ALFF 降低脑区的提值与 MoCA 评分、AVLT 延迟回忆得分、AVLT 再认得分成正相关。与干预前相比,干预后 aMCI 患者 AVLT 延迟记忆评分增高;干预后 aMCI 在全局属性上无改变,节点属性上发现 PCL.R 上 Dc 和 Ne 提高;干预后 aMCI 在 PreCG.R, PoCG.R, STG.R, PCL.R 上 ALFF 升高;PCUN.L/R, DCG.L/R, CUN.L, PCG.L/R, ANG.R, MOG.R, SMG.R, STG.R, SOG.R, PoCG.L, ANG.L, PreCG.L, MOG.L, SMG.L, PCL.L 上 ALFF 降低。基线时的脑功能网络全局效率与干预后 AVLT 延迟回忆得分变化成正相关。

结论 aMCI 患者整体认知功能、记忆力和执行功能下降;脑功能网络整体传输效率代偿性增高,DMN 相关脑区的局部功能降低,且与 aMCI 认知功能下降成正相关。dTMS 可以提高 aMCI 患者的记忆功能;dTMS 提高了 aMCI 患者 PCL.R 的 Dc 和 Ne;dTMS 还改变了 aMCI 患者顶叶、枕叶、颞叶、楔叶、角回、扣带回等脑区的局部功能,这可能是 dTMS 改善 aMCI 认知功能的脑功能影像学机制。dTMS 改善 aMCI 患者认知功能的效果与基线时脑功能网络的全局效率有关。

关键词: 轻度认知障碍,深部经颅磁刺激,静息态功能磁共振,脑功能网络,低频震荡幅度

肠道微生物在抗抑郁药疗效性别差异中的作用

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目的 重度抑郁症(MDD)的致残率很高,给患者和国家带来了巨大的疾病负担。MDD 的药物治疗效果也存在性别差异。目前研究发现肠道微生物差异可以预测抗抑郁药物的治疗效果。本研究旨在探究不同性别的疗效差异是否与性别导致的肠道微生物结构差异相关。

方法 本研究招募了 47 名首发未用药治疗的 MDD 患者(29 名女性和 18 名男性),以及年龄、BMI 匹配的健康志愿者 49 名(28 名女性和 21 名男性),MDD 在治疗前留取粪便,健康对照组留取粪便。研究性别特异性 MDD 患者肠道微生物差异,构建中介模型以探究肠道微生物与性别相关的减分率的相关性。

结果 不同性别组减分率存在统计学差异,女性患者减分率更高。MDD 患者不同性别组间 α 多样性及 β 多样性存在统计差异,健康对照不同性别组间 α 多样性无统计学差异, β 多样性中仅 weighted_unifrac 具体矩阵存在统计学差异。厚壁菌门,梭菌目,伯克氏菌目,梭菌科,伯克氏菌科,芽孢杆菌科,罗氏菌属,毛螺菌属,另枝菌属在不同性别组间存在统计学差异。差异菌在不同组与减分率间不存在中介效应。

结论 MDD 患者存在性别特异性肠道微生物,但这些微生物与不同性别组间的疗效差异无相关。

关键词: 肠道微生物,重性抑郁障碍

女性首发未用药重性抑郁障碍患者的脑皮质结构改变

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目的 重性抑郁障碍(Major Depressive Disorder,MDD)是一种被认为具有性别差异的常见的重性精神疾病之一。本研究旨在探讨女性 MDD 患者大脑皮质形态学的特征性改变,通过直接对女性 MDD 与健康对照组(Health Control,HC)的皮层厚度进行比较,同时探讨脑皮质厚度改变与抑郁、焦虑症状的相关性。

方法 招募首次发病未用药的 63 例女性 MDD 患者和 141 例年龄匹配的女性健康对照(HC),年龄在 13 岁至 25 岁之间,在研究开始前获得本人的知情同意书。之后对所有的参与者采集一般人口学资料调查、17 项汉密尔顿抑郁量表(Hamilton Depression Scale-17 items,HAMD-17)、汉密尔顿焦虑量表(Hamilton Anxiety Scale,HAMA),所有参与者进行结构磁共振成像扫描。对人口学资料和临床数据进行统计分析,采用 SPSS 27.0 软件进行独立样本 t 检验分析其差异。利用 Freesurfer 软件对磁共振数据进行处理,以 D-K 模板进行皮层厚度提值,对女性 MDD 和 HC 组进行独立样本 t 检验;计算女性 MDD 在 t 检验中差异的脑区的皮层厚度值和 HAMD17 总分、HAMA 总分的皮尔逊相关系数。

结果 1、t 检验结果显示,与 HC 相比, MDD 的双侧眶额叶外侧部 ($t=3.305$ 、 $t=3.518$)、左侧额中回前部 ($t=3.377$) 和额下回眶部 ($t=3.075$) 显著增高 ($P<0.05$)。2、相关分析表明,MDD 组皮层厚度值和 HAMD17 总分、HAMA 总分未见显著相关($P>0.05$)。

结论 前额叶中的眶额皮质、额下回眶部和额中回前部的皮质增厚是女性 MDD 患者的特征性脑结构形态改变。

关键词: 重性抑郁障碍; 女性; 皮质厚度; 磁共振研究

中国农村 55 岁及以上人群内脏脂肪指数与认知及抑郁的关系研究

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目的 了解辽宁省北镇市 55 岁以上人群认知功能现状,并探究内脏脂肪指数(VFI)、抑郁症状、认知功能三者之间关系及作用路径,为临床开展认知功能筛查,早期识别、及时干预认知功能障碍提供可行性建议。

方法 采用整群抽样的方法,选取 2023 年 5 月至 2023 年 8 月参加“抑郁症的社区人群队列研究”项目的居民进行研究。调查工具包括居民基本资料调查表、实验室生化指标、体成分指标、简易智能精神状态检查量表(Mini-Mental State Examination, MMSE)、老年抑郁量表 GDS-15(Geriatric Depression

Scale-15)。采用 Excel 2019 进行数据录入并建立数据库,使用 R 软件、SPSS 26.0 软件及其 Process 插件进行统计学分析。

结果 本研究共纳入 960 名居民,其中男性 254 人 (26.5%), 女性 706 人 (73.5%); 平均年龄 64.14 ± 6.037 。VFI、抑郁状态评分、认知功能评分的中位数及四分位数 $M(Q1,Q3)$ 分别为 8.5(6.0,11.5)、1(0,3)、25(23,27), 存在认知功能障碍者 208 例 (21.7%)。Spearman 相关分析结果显示: VFI 与抑郁呈负相关($rs=-0.122$, $P<0.001$), VFI 与认知水平呈正相关 $rs=0.146$, $P=0.002$), 抑郁与认知水平呈负相关 ($rs=-0.100$, $P=0.002$)。将 VFI 根据其四分位数分成四组,卡方趋势检验分析结果显示: 随着 VFI 等级的增加,认知障碍的比例减少($\chi^2=8.24$, $P=0.004$); 这种趋势女性中依旧显著($\chi^2=6.85$, $P=0.009$),但在男性中并不显著。中介效应分析结果显示: 北镇市 55 岁以上人群 VFI 在抑郁状态与认知功能之间存在中介作用, VFI 中介效应的 Bootstrap 95%CI 为(-0.030,-0.007),表明间接效应显著,其间接效应值为-0.017, 占总效应的 9.1%。

结论 与预期相反,本研究发现较高的 VFI 水平与较高的整体认知评分和较低的抑郁状态评分有关,而且随着 VFI 的增加,认知障碍的比例也在下降,这一现象尤其在女性更为显著。本研究还证实了 VFI 在调节抑郁状态与认知功能之间的作用,VFI 的改善可能通过减轻抑郁症状来提高认知能力,强调了内脏脂肪在心理和认知健康中的重要性。这一发现为针对中老年人群的健康干预提供了新的策略方向,以便更有效地预防和管理认知障碍及抑郁症。

关键词: 内脏脂肪指数,抑郁,认知,中介效应

Dorsolateral Prefrontal Circuit Structure Abnormalities in Anxious Major Depressive Disorder

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Objective Anxious major depressive disorder (AMDD) is one of subtypes of major depressive disorder (MDD), and a distinct neurobiology may set apart

AMDD from non-anxious depression (NAMDD). However, the neural mechanisms related to hemispheric differences in altered brain structure underlying AMDD remain elusive. To gain further insights, we compared gray matter volume (GMV) and fractional anisotropy (FA) values respectively to explore changes in cortical structure in patients with AMDD and NAMDD

Methods 162 AMDD patients, 31 NAMDD patients, and 201 matched healthy controls (HCs) provided data for the study. Voxel-based analysis (VBA) was employed to assess FA and GMV values to explore white matter (WM) and gray matter (GM) structural alterations, and region of interest (ROI) analysis was adopted to explore white matter integrity changes in specific brain regions. GMV and fractional anisotropy (FA) were calculated. Pearson correlations were conducted to assess the correlation between FA or GMV and clinical features

Results AMDD and NAMDD show significant GMV changes in the right dorsolateral prefrontal cortex (DLPFC) and the left superior frontal gyrus (SFG). In the right DLPFC, compared to HC, the GMV value of AMDD decreased ($p=0.026$), while the GMV value of NAMDD increased ($p=0.177$). GMV was negatively correlated with anxiety level ($r=-0.135$; $p=0.009$). Compared to AMDD and HC, the GMV value of NAMDD was increased in the left SFG (NAMDD VS AMDD: $p=0.001$, NAMDD VS HC: $p=0.039$), and the GMV value was negatively correlated with anxiety level ($r=-0.114$; $p=0.027$). Compared to HC, FA value of AMDD increased in left cerebellum, right cerebellum and right SFG, and FA value was positively correlated with depression and anxiety level. In addition, compared to HC, the FA values of AMDD and NAMDD in the left DLPFC were significantly reduced (AMDD/HC: $p=0.000$; NAMDD/HC: $p=0.019$). The FA value was negatively correlated with depression and anxiety ($r=-0.226$, $p=0.000$) and anxiety ($r=-0.215$, $p=0.000$)

Conclusion The observed DLPFC circuit structure abnormalities in AMDD patients distinguish them from the AMDD and NAMDD patients, suggesting neurobiological differences related to the expression of anxiety level in patients with MDD. These findings provide further evidence for considering AMDD and NAMDD

independently in therapeutic outcome studies.

关键词: Anxious Major Depressive Disorder, Neuroimaging, White Matter Integrity, Gray Matter Volume, Dorsolateral Prefrontal Cortex

佐匹克隆替换对长期服用苯二氮卓类镇静催眠药的女性精神分裂症稳定期患者睡眠质量及生活质量的影响

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目的 探讨佐匹克隆替换对长期服用苯二氮卓类镇静催眠药的女性精神分裂症稳定期患者睡眠质量及生活质量的影响。

方法 选择 2023 年 2 月至 2024 年 2 月在本院治疗随访且服用苯二氮卓类镇静催眠药的女性精神分裂症稳定期患者 100 例, 使用随机数表法将患者分成对照组与观察组, 各 50 例, 对照组患者继续服用原有的苯二氮卓类镇静催眠药, 观察组换为佐匹克隆片 (7.5mg/d), 依据患者依从性及患者自身状况, 采用直接换药或者用 1 周的时间交叉换药, 观察 4 周; 换药前及换药 4 周后两组分别给予匹兹堡睡眠质量指数量表 (PSQI)、阳性和阴性症状量表 (PANSS)、药物不良反应量表 (TESS) 及精神分裂症患者生活质量量表 (SQLS) 评估及比较。

结果 替换后佐匹克隆组 PSQI 总分及日间功能障碍、入睡时间、睡眠质量和睡眠时间较换药前明显降低, 两组间 PSQI 评分有显著性差异 ($P<0.05$); 替换前后两组 PANSS 评分比较差异无统计学意义; 佐匹克隆组药物不良反应发生率 (8%) 低于对照组 (32%), 且佐匹克隆组不良反应轻微, 主要为口苦, 两组差异有统计学意义 ($P<0.05$); 观察组患者生存质量评分优于对照组, 两组有显著性差异 ($P<0.05$)。

结论 对于长期服用苯二氮卓类镇静催眠药的精神分裂症稳定期女性患者采用佐匹克隆片进行替换, 可有效改善患者的睡眠质量和生活质量, 不良反应低, 安全可行。

关键词: 女性, 佐匹克隆, 苯二氮卓类, 睡眠质量, 生活质量

甲状腺激素、性激素、皮质醇水平对首发女性抑郁障碍严重程度的临床意义

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目的 本研究探讨了甲状腺激素、性激素和皮质醇水平在不同严重程度的首发女性抑郁障碍患者中的分布差异,旨在深化对抑郁障碍激素调节机制的理解,并为临床诊断提供潜在的生物标志物。

方法 选取2022年6月—2023年6月于开滦精神卫生中心住院的首发女性抑郁障碍患者150例。收集患者的一般资料,并测量甲状腺素(T₄、T₃、TSH、FT₃、FT₄)和性激素(T、PRL、P、E₂)水平,以及促肾上腺皮质激素(ACTH)和皮质醇(COR)水平。采用Zung氏抑郁自评量表(SDS)评估患者抑郁程度。根据SDS评分和临床医生的诊断,将患者分为轻中度抑郁组(70例)和重度抑郁组(80例)。使用logistics回归及ROC曲线进行数据分析。

结果 轻中度抑郁组患者的FT₃、FT₄水平高于重度抑郁组患者,而TSH、睾酮(T)、雌二醇(E₂)、ACTH、COR水平则显著低于重度抑郁组($P < 0.05$)。低水平FT₃和高水平T被认为是首发女性抑郁障碍患者重度发作的潜在危险因素。FT₃和T水平用于诊断首发女性抑郁障碍患者为重度发作的曲线下面积分别为0.687(95%CI为0.602~0.773, $P=0.000$)和0.654(95%CI为0.563~0.744, $P=0.021$)。FT₃=3.165 pg/mL时,诊断为重度发作的灵敏度为82.5%,特异度为51.4%;T=0.2205 ng/mL时,灵敏度为75.0%,特异度为62.9%。

结论 FT₃和T水平的变化与首发女性抑郁障碍的严重程度有显著相关性,为抑郁障碍的生物标志物研究提供了新的视角。

关键词: 首发女性抑郁障碍,严重程度,甲状腺功能,性激素,皮质醇

青少年重度抑郁障碍患者睡眠障碍、抑郁、快

感缺失的网络分析研究

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目的 使用网络分析法探索青少年重度抑郁障碍患者睡眠障碍症状间的关联模式及核心症状,并进一步探究睡眠障碍症状与抑郁、快感缺失的桥连接共病模式。

方法 招募青少年重度抑郁障碍患者200名,由临床医生依据DSM-5的诊断标准评估后纳入试验,并获得患者本人及法定监护人自愿签署的知情同意书。本研究使用汉密尔顿抑郁量表评估患者的抑郁症状,斯奈思-汉密尔顿快感量表评估快感缺失症状,以及匹兹堡睡眠质量指数量表评估睡眠状况。数据分析采用网络分析的方法。首先,通过高斯图像模型结合扩展性贝叶斯信息准则(EBICglasso)构建睡眠障碍症状的正则化偏相关网络(由匹兹堡睡眠质量指数量表的7因子症状组成)并计算网络中节点的预期影响(expected influence, EI)和节点之间的连边权重(edge weight),探索睡眠障碍症状间的关联模式及核心症状。节点的预期影响值越高,其被激活时更有可能通过与其他节点的连边将激活传播到整个网络。然后,在睡眠障碍症状网络中加入抑郁症状、快感缺失症状两个节点,用同样的方法构建睡眠障碍症状-抑郁-快感缺失共现网络,探索睡眠障碍与抑郁、快感缺失的桥连接共病模式。

结果 与“睡眠质量”连边权重最强的节点依次为“入睡时间”(edge weight = 0.38)、“睡眠时间”(edge weight = 0.20)、“睡眠障碍”(edge weight = 0.16),说明这些症状的相互激活共同导致了睡眠障碍的发生。在睡眠障碍症状网络中,“睡眠质量”节点具有最高的预期影响,说明其是青少年重度抑郁障碍患者睡眠障碍的最核心症状(EI = 0.82)。在睡眠障碍症状-抑郁-快感缺失共现网络,“睡眠障碍”表现出对“抑郁症状”(edge weight = 0.25)和“快感缺失症状”(edge weight = 0.15)最强的桥连接,说明“睡眠障碍”可能是睡眠障碍和抑郁、快感缺失共病的主要症状。此外,在共现网络中,“睡眠质量”也表现出与“抑郁症状”(edge weight = 0.13)和“快感缺失症状”(edge weight = 0.11)的较强桥连接。

结论 青少年重度抑郁障碍患者的睡眠障碍症状间存在差异性连接,其中“入睡时间”和“睡眠时

间”，与“睡眠质量”的连边权重最强，“睡眠质量”的中心性最强，为预防和治疗提供了潜在重要靶点。此外，“睡眠障碍”可能是睡眠障碍和抑郁、快感缺失共病的主要睡眠障碍症状，为我们认识睡眠障碍和抑郁、快感缺失共病提供了新视角。

关键词：青少年重度抑郁障碍；快感缺失；睡眠障碍；网络分析

跨诊断视角下情绪障碍快感缺失的神经心理学评估与积极心理数字化治疗的研究进展

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目的 情绪障碍 (Emotional disorders) 是常见的精神障碍，常见情绪障碍包括抑郁障碍、焦虑障碍、创伤后应激障碍、强迫障碍等。快感缺失 (Anhedonia) 作为跨诊断症状之一，在情绪障碍患者之中十分普遍。新型研究领域诊断系统 RDoC (research domain criteria, RDoC) 提出六个框架，强调跨诊断研究的重要性，其中积极效价系统 (PVS) 和消极效价系统 (NVS) 都与情绪障碍和快感缺失有密切的联系。传统上情绪障碍患者的测量维度和治疗方法，多集中在消极情绪症状，即消极效价系统的探索。本文则是在强调积极效价系统的背景下，探索快感缺失的深层神经机制和认知结构，针对情绪障碍快感缺失的多维度心理评估方法和积极心理数字化治疗来进行综述。

方法 本文以 pubmed 和中国知网为主要数据库进行检索，引用国内外文献共 55 篇，对近些年以来，在“情绪障碍快感缺失的跨诊断评估和积极心理数字化治疗”领域的相关研究进行汇集对比分析，并最终形成综述，对之后的研究提供依据及指导意见。

结果 目前的文献表明，情绪障碍呈现出不同程度奖励结构的损失，而诊断和评估却并没有统一和系统的标准，并且一个标准下适用的测量人群也比较狭窄，而行为范式作为另一种评估维度，可以补充自我评估在程序性和规范性上的缺陷，从行为科学的角度将疾病诊断更加精准化。PVS 是一个复杂的领域，具有多种结构。目前，我们正处于全面理解这些结构本质的早期阶段。PVS 视角下心理治疗有多维结合的特点，并且更倾向于针对深层机制的

改变，即奖励机制的变化和积极情绪的增强。许多治疗方案已经取得了一定的成效，面对面治疗向数字疗法的变革也扩展了 PVS 的研究维度。积极心理数字化治疗借助互联网、虚拟现实、计算机等技术，实现积极心理方案的程序化和流程化，重复的无指导训练可以进一步提高训练的效果，延长治疗的影响。但文献也表明当前数字疗法还处于开发研究的阶段，需要更多验证实验。

结论 展望未来，有必要更全面的了解快感缺失的潜在奖励结构，探索全面的机制如何运行；情绪障碍中快感缺失的不同奖励功能损失的程度，以及具体损失的结构；定制更加精确的靶向治疗方案，以及将方案转化为程序化的训练是更加长期的目标。

关键词：数字疗法，积极心理，快感缺失，积极效价系统，情绪障碍

凯格尔运动疗法对患有抑郁症的经产妇焦虑抑郁情绪、躯体症状、生活质量满意度的影响

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目的 探讨凯格尔运动疗法对患有抑郁症的经产妇焦虑抑郁情绪、躯体症状及生活质量满意度的影响。

方法 本研究为随机对照研究，选择 2023 年 8 月 1 日至 2024 年 4 月 30 日中山大学附属第五医院的 106 例患有抑郁症的经产妇为研究对象，按照随机数字表法分成对照组和实验组各 53 例。对照组予以药物治疗，实验组在药物治疗基础之上每周行 2 次时长 20 分钟的凯格尔运动，使用抑郁自评量表 (SDS)、焦虑自评量表 (SAS) 比较两组患者的焦虑、抑郁情绪，使用躯体化症状自评量表 (SSS) 比较两组患者的躯体症状，使用幸福与生活质量满意程度问卷 (Q-LES-Q-SF) 比较两组患者的生活质量满意度。

结果 实验组干预后的 SDS 评分低于对照组，差异有统计学意义 ($P < 0.05$)；实验组干预后的 SAS 评分低于对照组，差异有统计学意义 ($P < 0.05$)；实验组干预后的 SSS 评分低于对照组，差异有统计学意义 ($P < 0.05$)；实验组干预后的 Q-LES-Q-SF 在身体健康、情绪、日常功能、性生活、身体出行能力 5 个项目上评分高于对照组，差异有统计学意义 (P 均

<0.05)。

结论 患有抑郁症的经产妇在接受药物治疗的基础上配合凯格尔运动疗法可改善焦虑、抑郁情绪,减轻躯体症状,提高在身体健康、情绪、日常功能、性生活、身体出行能力方面的生活质量满意度和幸福感,有推广价值。

关键词: 凯格尔运动; 经产妇; 抑郁症; 焦虑抑郁情绪; 躯体症状; 生活质量

Mediating Effect of Inflammation on The Relationship between Sleep Disruption and Suicidal Ideation in Major Depressive Disorder

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Objective Sleep disruption, particularly insomnia, is a notable characteristic of depression and is associated with an increased risk of suicide in patients diagnosed with major depressive disorder (MDD). Moreover, the pathophysiology of depression and suicide has been linked to inflammation, specifically proinflammatory cytokines. However, the complex interplay among these factors in individuals with MDD remains poorly understood. This study investigated the mediating role of inflammatory cytokines in the relationship between sleep disruption and suicidal ideation (SI), with a particular emphasis on gender differences

Methods This study used a cross-sectional design in which 281 individuals diagnosed with MDD were recruited from psychiatric clinics. The main assessments included the evaluation of sleep disruption, inflammatory markers, and SI. The Beck Scale for Suicide Ideation (SSI) scores was employed to quantify SI, whereas HAMDSLD, a component of the Hamilton Rating Scale (HAMD-17), was used to evaluate sleep disruption. Blood analysis was performed to measure inflammatory markers

Results For females diagnosed with MDD, significant associations between sleep disruption and the levels of IL-6 ($B = 0.994, p = 0.013$) and TNF- α ($B =$

$1.986, p = 0.016$) were found when IL-6 or TNF- α were considered as mediators in the regression model. In addition, IL-6 ($B = 5.689, p < 0.001$) and TNF- α ($B = 9.916, p = 0.006$) exhibited strong correlation with SSI scores

Conclusion The primary results of this study indicate that IL-6 and TNF- α could function as potential mediators in the relationship between sleep disruption and SI among female patients diagnosed with MDD.

关键词: Mediation model, Sleep disruption, Suicidal ideation, Inflammation, Sex difference

重性抑郁障碍患者动态功能网络连接状态异常研究

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目的 先前大多数 fMRI 研究假设整个扫描过程中大脑的内在波动是静态的,功能网络连接分析都集中在感兴趣区域(ROI)之间的静息态功能连接性(sFC),忽略了对大脑功能连接潜在的瞬时动态性的特征分析。因此,我们的目的是研究 重型抑郁障碍患者(MDD)的大尺度动态功能脑网络连接(dFNC)的异常。

方法 本研究共纳入 18-50 岁的 157 名受试者,其中首发未用药重型抑郁障碍患者(MDD 组)78 名和健康对照者(HC 组)79 名,收集静息态 fMRI 数据,采用 17 项汉密尔顿抑郁量表(HAMD-17)及汉密尔顿焦虑量表(HAMA-14)对患者组的症状程度进行评估。使用独立成分分析、滑窗法和 k-means 聚类来探索重性抑郁障碍患者 dFNC,将 dFNC 状态属性参数(每种状态出现的频率百分比,平均停留时间以及每个被试的状态转换次数)进行组间比较(年龄、性别和受教育年限作为协变量, $p < 0.05$)。

结果 提取了 6 个重复出现的瞬时功能连接状态,其中状态一和状态三的时间属性以及动态功能连接的组间差异具有统计学意义:(1) MDD 组在状态一中的频率百分比($t = -2.499, P = 0.0014$)与平均滞留时间($t = -2.1788, P = 0.0309$)显著高于 HC 组。(2) MDD 组在状态三中的频率百分比($t = 2.438, P = 0.016$)与平均滞留时间($t = 2.2215, P = 0.0278$)显

著低于 MDD 组。(3) MDD 组和 HC 组的每个被试在任意的状态转换次数在 $P < 0.05$ 时无显著统计学差异。

结论 抑郁症患者动态功能连接、时间属性在不同状态下均发生了改变。

关键词: 动态功能网络连接

The Putamen Connectivity Predicts Anti-suicidal Effect of Comprehensive Treatment for Adolescents with Major Depressive Disorder and Suicidal Ideation

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Objective Given the limited efficacy of current pharmacotherapy for suicidal ideation in adolescent depression, identifying brain features conducive to treatment response is crucial. The putamen, as a critical component of the striatum, has been implicated in suicidal ideation. This study aims to explore the putamen-based functional connectivity patterns in treatment responders, providing theoretical support for personalized treatment

Methods The sample data for this study were derived from a clinical trial of pharmacotherapy involving adolescent depression with suicidal ideation. Treatment responders were defined as those with a $\geq 50\%$ reduction rate in suicidal ideation scores on the Columbia-Suicide Severity Rating Scale (C-SSRS) from pre- to post-treatment. Resting-state functional connectivity (rsFC) based on the putamen as a region of interest was analyzed between responder and non-responder group. Spectral dynamic causal modeling was employed to examine the directionality of identified rsFC to further elucidate mechanisms underlying anti-suicidal effect. The use of receiver operating characteristic (ROC) curve further explored neuroimaging indicators predicting anti-suicidal treatment outcome

Results Compared to the non-responder, the responder group exhibited significantly enhanced rsFC between the left putamen-left SOG, left putamen-right SOG, left putamen-left IOG, left putamen-right precuneus and left putamen-left dACC. Furthermore, the responder demonstrated unique patterns of bidirectional connectivity between the left putamen and the left IOG, as well as unidirectional connectivity from the right SOG to the left putamen. Additionally, there was greater excitatory connectivity from the left putamen to the left dACC in the responder group. The effective connectivity from the left caudate to the left dACC is significantly negatively correlated with the percent change in suicidal ideation. ROC curve analysis demonstrated that the aforementioned effective connectivity strength serves as a moderately accurate predictor of anti-suicidal effects (area under the curve = 0.675)

Conclusion The directionality of putamen-occipital gyrus connectivity patterns can distinguish treatment responders from non-responders, and the strength of putamen-dACC effective connectivity is closely associated with anti-suicidal efficacy can effectively predict acute treatment response for suicidal ideation. These findings enhance our understanding of the neurobiological mechanisms underlying anti-suicidal treatment response and hold potential clinical significance for early identification of responders and personalized treatment.

关键词: adolescent depression, suicidal ideation, spectral dynamic causal model, effective connectivity

基于 Q 方法探究线上及线下团体关系会议的体验差异

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目的 团体关系会议 (GRC) 是一个临时的体验式学习组织, 通过对日常反复遇到却浑然不觉的问题进行充分地呈现, 使成员有机会去探寻这些问题的实质, 去了解和使用自己。目前暂无相关文献探究这种模式的转变所带来的影响, 故本研究旨在

运用 Q 方法调查参会者在线上及线下团体关系会议中的体验差异,为今后团体关系会议的举办提供数据支持,促使会议能够更好地被组织开展,取得令双方更加满意的学习体验。

方法 Q 方法为本研究调查方法。通过文献及访谈,获得关于两种不同形式的团体关系会议相关体验差异的观点语句,形成 Q 母体。对 Q 母体的语句进行整合删改及专家审阅,最终形成由 39 条陈述构成的 Q 样本。招募 24 名国内外参会者,形成 P 样本,其中国内组 13 人,国外组 11 人,进行 Q 排序及进一步访谈。将 P 样本分为 2 组,即国内组(中国国籍)和国外组(外国国籍),使用 KADE 软件中主成分分析法提取因子以及最大方差法旋转,根据各因子典型排布进行分析及命名。

结果 得到四个体验类型因子,分别命名为:成员间的接触体验、互动中的氛围体验、交流的深入程度及自我感受体验,变异解释率分别为 25%、11%、9%、7%,累计变异解释比例为 52%,其中氛围体验的因子下被试均为中国人;后将两组分别进行分析比较,因子类型命名总体结果与前相似,累计变异解释比例均大于 40%,符合方法学要求,组间比较的差异为国外组无明确互动体验因子分类。

结论 团体关系会议参会者的体验差异是复杂多样的,不同个体所关注的维度各不相同,可分为四个方面:成员间的接触体验、互动中的氛围体验、交流的深入程度及自我感受体验。对于上述四种体验维度,国内外参会者关注重点有所差异,部分国内参会者更关注于团体关系会议里沟通和互动中氛围的体验。总体而言,线上及线下举办形式均有优劣势,线上团体关系会议便利性更高且成本更低,而线下团体关系会议中成员间的情感连接更强,其中,时间成本以及情感体验是影响参会者选择不同会议形式的重要因素。

关键词: 团体关系会议, Q 方法, 线上体验, 体验差异, 最大方差旋转法

父母养育方式与青少年边缘型人格障碍特征的关系: 心智化和情绪失调的链式中介作用

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目的 本研究以基于心智化的 BPD(边缘型人格障碍)理论与生物社会发展模型为指导,探讨心智化能力和情绪失调在父母养育方式对青少年边缘型人格障碍特征影响中的中介作用,以期更深入了解青少年 BPD 特征的病因及发生发展过程,为早期干预提供参考及理论依据。

方法 采用整群抽样的方法抽取山西、河北两省的 3 所公立中学的初高中在校生,对其进行网络问卷调查。问卷内容包括社会人口统计、青少年边缘人格特征(BPFS-C)、反思功能(RFQ)、情绪失调(DERS)与父母养育方式(EMBU-C),最终回收有效问卷 1097 份。采用 SPSS23.0 软件分析青少年边缘人格特征、反思功能、情绪失调和父母养育方式在人口学变量上的差异以及相关关系,采用 PROCESSv4.1 中的 model6 对反思功能与情绪失调的链式中介作用进行检验。

结果 青少年边缘人格特征与父母情感温暖、反思功能显著负相关($r=-0.359, p<0.001$; $r=-0.666, p<0.001$),与父母养育方式中的过度保护、冷漠拒绝、抚养焦虑维度以及情绪失调显著正相关($r=0.143, p<0.001$; $r=0.423, p<0.001$; $r=0.153, p<0.001$; $r=0.699, p<0.001$);反思功能与父母情感温暖显著正相关($r=0.222, p<0.001$),与父母养育方式中的过度保护、冷漠拒绝、抚养焦虑维度以及情绪失调显著负相关($r=-0.132, p<0.001$; $r=-0.272, p<0.001$; $r=-0.207, p<0.001$; $r=-0.629, p<0.001$)。情绪失调与父母情感温暖呈显著负相关($r=-0.384, p<0.001$),与父母过度保护、冷漠拒绝以及抚养焦虑呈显著正相关($r=0.181, p<0.001$; $r=0.408, p<0.001$; $r=0.134, p<0.001$)。反思功能在父母的过度保护、情感温暖、冷漠拒绝、抚养焦虑四个维度和青少年边缘型人格障碍特征之间起中介作用。情绪失调在父母的过度保护、情感温暖、冷漠拒绝三个维度和青少年边缘型人格障碍特征之间起中介作用。反思功能、情绪失调在父母养育方式的各个维度与青少年边缘型人格障碍特征的关系中发挥链式中介作用。

结论 反思功能、情绪失调可以分别单独作为中介变量在父母养育方式与青少年边缘型人格特征之间发挥中介作用,“反思功能→情绪失调”也可以形成链式中介在父母养育方式与青少年边缘型人格特征之间发挥中介作用。心智化能力和情绪失调可作为关键干预目标,用于预防和治疗青少年边缘型人格障碍在临床和非临床环境中的发生和发展。**关键词:** 父母养育方式, 边缘型人格障碍, 青少年, 心

智化, 反思功能, 情绪失调

青少年心境障碍患者非自杀性自伤临床特征及与 POMC 基因甲基化研究

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目的 非自杀性自伤(Non-suicidal Self-injury, NSSI) 增加自杀风险, 需要及时发现、干预。目前 NSSI 的发病机制尚不明确, 存在疼痛镇痛/阿片类假说、表观遗传学等机制。阿黑皮素原 (proopiomelanocortin, POMC) 是 β -内啡肽的前体物质, 心境障碍患者 NSSI 的发病机制可能涉及 POMC 基因的表观遗传改变。本研究主要探讨青少年心境障碍患者 NSSI 和非 NSSI 两组间心理状况及 POMC 基因甲基化水平之间的差异, 寻找 NSSI 的潜在生物学标记, 为后期治疗青少年心境障碍患者的 NSSI 提供证据支持。

方法 纳入 108 名青少年心境障碍患者, 根据是否符合 2013 年美国《精神疾病诊断与统计手册 (第 5 版)》推荐的 NSSI 诊断标准分为 NSSI 组 (N=72) 及非 NSSI 组 (N=36)。采用自制的调查表收集患者的一般人口学资料; 采用青少年非自杀性自伤行为功能评估量表评估 NSSI 的频率及程度; 采用蒙哥马利抑郁评定量表、简明精神病评定量表、儿童期创伤问卷及精简版青少年社交焦虑量表评估患者的临床症状及心理特征。采集全部患者血样, 使用焦磷酸测序法检测两组 POMC 基因甲基化水平。使用 SPSS 26.0 软件建立数据库, 采用卡方检验、独立样本 t 检验、相关性分析等进行统计分析。

结果 1、女性、双相抑郁更容易出现 NSSI ($P < 0.05$), 两组在年龄、受教育年限、居住地等方面差异无统计学意义。2、第一次自伤年龄小、有自杀意念、伴有忧郁特征更容易出现 NSSI ($P < 0.05$)。3、NSSI 组中使用抗精神病药的患者构成比更多 ($P=0.023$)。4、NSSI 组的 MADRS 总分、BPRS 总分、CTQ 总分、SAS-A 总分等高于非 NSSI 组 ($P < 0.05$)。5、青少年心境障碍患者 NSSI 组的 CpG4 甲基化水平高于非 NSSI 组 ($P=0.047$), 有统计学差异。6、青少年心境障碍患者 POMC 基因甲基化水平与 NSSI 总分、MADRS 总分、SAS-A 总分、使用抗精

神病药、使用抗抑郁药有关 ($P < 0.05$)。

结论 1、在青少年心境障碍患者中, 女性、双相抑郁、第一次自伤年龄较小、有自杀意念、伴有忧郁特征的患者及存在较严重的抑郁及精神病性症状、较多社交焦虑、情感及躯体的虐待及忽视的患者更容易出现 NSSI 行为。2、在青少年心境障碍患者中, POMC 的 CpG4 位点甲基化水平可作为该人群 NSSI 的潜在表观遗传标记。3、青少年心境障碍患者 POMC 基因甲基化水平与 NSSI、抑郁及社交焦虑严重程度及用药有关。

关键词: 青少年, 心境障碍, 非自杀性自伤行为, 表观遗传学, 阿黑皮素原, 基因甲基化

女性情绪障碍早期筛查的潜在电生理标志物: 使用额叶脑电图评估焦虑、抑郁情绪

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目的 女性往往受社会文化、负性生活事件、遗传和激素等因素影响而有更高的情绪障碍患病率, 并导致睡眠、认知和社会功能等方面的损害。因此, 为了使女性情绪障碍患者尽早得到筛查、识别、诊断和治疗, 本研究检验了额叶脑电图在评估女性情绪障碍患者焦虑和抑郁情绪中的效果与价值, 以期探索早期筛查的客观电生理标志物。

方法 通过额叶脑电图采集 132 名女性情绪障碍患者的脑电波数据, 借助小波分析法和人工智能对大脑神经活动进行分析, 得出 12 项评估大脑功能的量化指标, 再将 132 名患者的脑功能指标得分与焦虑自评量表 (SAS)、抑郁自评量表 (SDS) 量表评估得出的焦虑和抑郁水平纳入相关分析。

结果 女性情绪患者的 SAS 得分与大脑负荷、情绪压力和大脑疲劳 (均 $p < 0.01$) 得分显著正相关, 与放松程度和左右优势 (均 $p < 0.05$) 得分显著负相关; SDS 与大脑负荷 ($p < 0.01$)、情绪压力 ($p < 0.01$)、大脑疲劳 ($p < 0.01$)、敏感程度 ($p < 0.05$) 和思绪排空 ($p < 0.01$) 得分显著正相关, 与大脑活力和放松程度 (均 $p < 0.05$) 得分显著负相关。未成年女性情绪障碍患者的 SAS、SDS、情绪压力、大脑疲劳、抵抗干扰和思绪排空得分显著高于成年患者。

结论 本研究中, 基于额叶脑电图得出的大脑负荷、情绪压力、大脑疲劳、放松程度和左右优势有助于评估焦虑水平, 大脑负荷、情绪压力、大脑疲劳、敏感程度、思绪排空、大脑活力和放松程度指标有助于评估抑郁水平, 这些定量脑功能指标有望成为女性情绪障碍患者的潜在电生理标志物, 以提供更加客观准确的筛查、识别和评估工具。

关键词: 额叶脑电图; 女性; 情绪障碍; 焦虑; 抑郁;

孕期睡眠障碍的数字化治疗方法探索

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目的 本研究旨在探索孕期睡眠障碍的数字化治疗方法, 通过对比分析数字化疗法在 80 例孕妇中的效果, 为孕期睡眠障碍的治疗提供新的策略和实证支持。

方法 本研究共纳入 80 名伴发睡眠障碍的孕妇, 采用随机对照试验的方法进行数据收集和分析。所有孕妇被随机分为两组: 数字化治疗组 (40 名) 和对照组 (40 名)。数字化治疗组接受为期 6 周的基于互联网的数字化认知行为疗法 (CBT-I) 治疗, 内容包括睡眠限制、刺激控制、认知疗法、放松技巧和睡眠卫生教育等。对照组则接受仅予以睡眠建议、生活方式调整等。在治疗前后, 使用标准化的睡眠障碍评估量表 (如匹兹堡睡眠质量指数 PSQI) 对所有孕妇进行睡眠质量评估, 并采用 SPSS 统计软件 25.0 对数据进行描述性统计、t 检验。

结果 1. 基线数据: 治疗前, 两组孕妇的 PSQI 总分平均分别为 13.4 (数字化治疗组) 和 13.2 (对照组), 两组在年龄、孕次、孕龄等基线数据上无显著差异 ($p>0.05$)。

2. 治疗效果: 经过 6 周治疗后, 数字化治疗组的 PSQI 总分平均下降至 8.1, 而对照组的平均分为 11.0。t 检验结果显示, 两组在 PSQI 总分上的差异具有统计学意义 ($t=6.34$, $df=78$, $p<0.001$)。

3. 数据分析: 睡眠效率: 数字化治疗组从基线的 71% 提高到治疗后的 87%, 而对照组从 70% 提高到 74%; 睡眠时长: 数字化治疗组平均增加睡眠时

长 30 分钟, 而对照组平均增加 10 分钟。睡眠质量: 数字化治疗组在睡眠质量、睡眠潜伏期、日间功能障碍等方面的改善均显著优于对照组。

结论 本研究结果表明, 基于互联网的数字化认知行为疗法 (CBT-I) 对于改善孕期睡眠障碍具有显著效果。与传统治疗方法相比, 数字化疗法在提高睡眠效率、延长睡眠时长和改善睡眠质量等方面表现出更好的效果, 使用便捷。为孕期睡眠障碍的治疗提供了新的思路和工具, 有助于提高孕期妇女的睡眠质量和整体健康水平。未来, 可以进一步扩大样本量, 并进行长期随访研究, 以进一步验证数字化疗法的疗效和安全性。

关键词: 孕期, 睡眠障碍, 数字化疗法

Risk Factors of Pulmonary Embolism in Schizophrenia Inpatients

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Objective The associated factors of pulmonary embolism in acute schizophrenia inpatients remains unclear. To the best of our knowledge, this is the first study that examines the risk factors of pulmonary embolism in acute schizophrenia inpatients and includes clinical correlates, antipsychotic drug exposure, comorbidities of medical conditions, psychomotor retardation and immobility, food-intake and laboratory tests results on admission.

Methods A retrospective matched case-control study using Shenzhen Kangning hospital administrative health data of inpatients from January, 2020 to December, 2023. Inpatients with schizophrenia with comorbid pulmonary embolism were matched 1:2 on age and gender to inpatients without pulmonary embolism. Retrospective correlates were assessed using SPSS. The risk factors of pulmonary embolism in schizophrenia inpatients were the outcome of interest

Results Among schizophrenia inpatients, those with lower-limb deep-vein thrombosis on admission ($p=0.0258$) and food intake refusal ($p=0.0002$) had a

higher risk of PE onset during hospital stay. However, the study failed to detect a significant association between different antipsychotics exposure, physical restraint and the risk of PE outcomes during hospital stay

Conclusion The comorbid with lower-limb deep-vein thrombosis and food intake refusal on admission was proved to be indicative in the risk of PE outcomes in schizophrenia inpatients. However, Larger studies with cohort study designs are warranted.

关键词: Schizophrenia, Pulmonary embolism, Risk factors

Dim Light at Night Induces Depression-like Behaviors During The Postpartum Period Through Circadian Rhythm Disruptions in Mice

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Objective Growing evidence suggests that dim light at night (dLAN) may disrupt circadian rhythms and provoke symptoms of anxiety and depression. Due to inconvenient pregnancy and caring for infants, there is a high prevalence of dLAN exposure among pregnant and postpartum women. However, the relationships of dLAN with circadian rhythms, depression, and anxiety during the postpartum period remain unclear. Hence, this study aimed to examine the effects of dLAN on circadian rest-activity rhythms, depression- and anxiety-related behaviors during the postpartum period in mice and to explore its underlying mechanisms

Methods Pregnant ICR mice were housed for four weeks in either a light/dark cycle (control group) or a light/dim light cycle (dLAN group). Meanwhile, circadian rest-activity rhythms were monitored by the Clocklab circadian cage, which allows for the visualization of long-term locomotor activity. Depression- and

anxiety-related behaviors were assessed by sucrose preference test and open field test, respectively. The levels of relevant hormones in the cerebral cortex were evaluated using ELISA kit. Total RNA extraction and purification from hippocampal across multiple time points were performed for the transcriptome analysis. In addition, circadian oscillations in RNA-seq data were assessed using the BIO_CYCLE portal within Circadi-Omics to identify circadian-related genes. Gene enrichment analysis (i.e., KEGG) was conducted using the NovoMagic platform for gene annotation and analysis. Body weight was also documented at multiple time points

Results The Clocklab circadian cage data showed that, relative to the control group, the dLAN group exhibited whole-day rest-activity fragmentations of wheel-running behaviors in both pregnant and postpartum periods. The dLAN group showed more bouts of wheel-running activity during the major rest period (daytime), and more bouts of rest during the active period (nighttime). In addition, compared with control group, dLAN group showed lower sucrose consumption in sucrose preference test and lower levels of 5-HT and BDNF related hormones. Transcriptome data showed that, compared with the control group, diverse traditional circadian rhythm genes of the dLAN group, such as Nr1d1, Nr1d2, Clock, and Per1, lost circadian profiles in the hippocampal tissue. KEGG analysis showed that inflammation pathways were highly enriched in both groups, whereas circadian related pathways were only enriched in the control group. However, there was no significant difference between dLAN and control groups in open field test and body weight

Conclusion Overall, this study suggests that dLAN during the pregnancy and postpartum periods might provoke circadian rest-activity rhythm disruptions and specifically induce depression-like behaviors by the circadian rhythm disruptions in hippocampal tissue. These findings provide valuable insights into improving maternal health and well-being during the critical postpartum period

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关键词: Dim light at night, Circadian rhythm, Postpartum depression, Postpartum Anxiety

司法精神病学组

中缝核到杏仁核的传导通路介导了光照对抑郁样行为的改善

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目的 验证中缝核到杏仁核的传导通路参与光照对抑郁样行为的调控

方法 将实验沙鼠随机分配为3组:a. Naïve组, 10只; b. CNO组, 10只; c. Saline组, 10只。采用化学遗传学技术在中缝核注射 pAAV-hSyn-DIO-hM4D(Gi)-mCherry,同时向杏仁核注射 pAOV-hSyn-EGFP-2A-CRE。病毒注射(第0天)一周后(第8天)进行行为学测试, Naïve组、CNO组、Saline组三组之间两两比较,发现三组之间糖水偏好百分比、运动总距离、中央区域停留时间均无显著差异($P>0.05$),表明病毒注射操作对动物行为学没有产生影响。第10天开始 CUMS 造模, 21天后(第31天)加光照疗法干预,每天在光照前45 min给予实验组沙鼠注射腹腔 CNO(对照组注射生理盐水),特异性阻断视网膜至杏仁核的投射,14天后(第44天)进行动物行为学测试。

结果 与 Saline 组相比, CNO 组糖水偏好百分比减小($P<0.001$),总距离明显减小($P<0.001$),表明阻断中缝核至杏仁核的传导通路,抑制了光照对快感缺失及自主活动行为的改善;与 Saline 组相比, CNO 组中央区域停留时间无显著差异,表明阻断中缝核至杏仁核的传导通路对焦虑状态无影响。

结论 证明了中缝核到杏仁核的传导通路也参与光照对抑郁样行为的调控。后期我们将用化学遗传学的方法在中缝核注射 pAAV-hSyn-DIO-hM3D-mCherry,兴奋该传导通路,进一步证实中缝核到杏仁核的传导通路介导了光照对抑郁样行为的改善。

关键词: 光照疗法; 中缝核; 杏仁核; 沙鼠

Research on The Balance Between The Rights and Interests of Persons with Limited Civil Capacity for Asset Preservation and Civil Conduct

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Asset preservation refers to the protection of the debtor's assets from illegal infringement through legal means to ensure that the legitimate rights and interests of creditors are realized. In China, the asset preservation system mainly includes measures such as sealing, seizure, and freezing. However, in the process of asset preservation, the rights and interests of persons with limited civil capacity are often involved.

Restricted capacity for civil conduct means that although an individual has the legal ability to carry out civil juristic acts, this capacity is limited to a certain extent. This group of people usually includes minors, mentally ill people, etc. The assessment of limited capacity for civil conduct helps clarify the legal responsibilities of individuals, protecting their legitimate rights and interests, and also helps maintain social order. In legal practice, the validity of the legal acts of persons with limited capacity for civil conduct will be affected to a certain extent. Therefore, when handling legal cases involving persons with limited civil capacity, it is necessary to fully consider their special circumstances to ensure that their legitimate rights and interests are protected. The assessment of limited civil capacity is an important part of the legal system. How to balance the relationship between asset preservation and the rights and interests of persons with limited civil capacity has become an urgent problem to be solved. This article will discuss the balance between asset preservation and the rights and interests of persons with limited civil capacity and put forward corresponding suggestions.

1. Conflict between asset preservation and the rights and interests of persons with limited capacity for civil conduct

(1) The impact of asset preservation on the rights and interests of persons with limited capacity for civil conduct

In the process of asset preservation, the property of a person with limited civil capacity is often involved. Because persons with limited capacity for civil conduct

lack full capacity to express their intentions, their property rights and interests are vulnerable to infringement.

(2) Restrictions on the preservation of assets by restricting the rights and interests of persons with capacity for civil conduct

On the premise of protecting the rights and interests of persons with limited capacity for civil conduct, the implementation of asset preservation is restricted to a certain extent. On the one hand, the property rights and interests of persons with limited civil capacity should be fully protected and cannot be infringed upon at will; On the other hand, the legitimate rights and interests of creditors should also be realized. Finding a balance between the two has become a tricky one.

2. The principle of balancing the rights and interests of persons with limited civil capacity for asset preservation and civil capacity

(1) Respect the principle of the will of persons with limited capacity for civil conduct

Although these individuals are disadvantaged in civil activities due to limitations in their age, intelligence, or mental state, this does not mean that their wishes and opinions can be ignored. For those persons with limited capacity for civil conduct who have a certain degree of ability to express their will, the law, and society should allow them to participate in the decision-making of their property disposal.

(2) The principle of ensuring basic living and learning needs

In the process of asset preservation, it is a crucial principle to ensure the basic living and learning needs of persons with limited civil capacity. This means that any property preservation measures must first be taken to ensure that the quality of life and educational opportunities of these individuals are not adversely affected. Specifically, when it comes to the property of a person with limited capacity for civil conduct, the judicial authorities and relevant parties should give priority to retaining their daily necessities and learning resources, to avoid being unable to meet their basic survival and development needs due to the seizure, seizure or freezing of assets. This principle emphasizes the care for humanity in legal proceedings and the special protection of the rights and interests of special groups such as minors and

persons with disabilities.

(3) The principle of fairness and reasonableness

When implementing asset preservation measures, the principles of fairness and reasonableness should be followed to ensure that the rights and interests of all parties are treated equally. Special protection of the rights and interests of persons with limited civil capacity should be reflected, to ensure that they will not fall into a more disadvantageous situation due to asset preservation..

3. Measures to balance the rights and interests of persons with limited capacity for civil conduct in asset preservation

(1) Improve relevant laws and regulations

Given the balance between the rights and interests of persons with limited civil capacity for asset preservation and civil conduct, China urgently needs to start from the legislative level and build a more complete legal protection system by improving relevant laws and regulations. Specifically, the scope of rights and interests of persons with limited civil capacity in the process of asset preservation should be clearly defined in the Civil Code and supporting regulations, including but not limited to the right to participate, the right to know, and the right to object to the disposal of their property, to ensure that they can obtain due legal protection and remedies in the face of asset preservation measures.

(2) Establish a diversified dispute resolution mechanism

To effectively resolve disputes that may arise in the process of asset preservation, especially the complex situations involving persons with limited civil capacity, China should actively build a diversified dispute resolution mechanism. Mediation should be the preferred solution, which can avoid a long litigation process and protect the rights and interests of all parties promptly.

(3) Strengthen assistance and protection for persons with limited capacity for civil conduct

A sound legal aid system should be established to provide them with free or low-cost legal consulting services, and to ensure that there is guidance and support from professional lawyers in every aspect of asset preservation to help them understand the relevant legal procedures and protect their rights and interests.

Conclusion The issue of balancing the rights and interests of persons with limited capacity for civil conduct is a complex social issue, involving many fields such as law, economy, and ethics. The principles of respecting the wishes of persons with limited capacity for civil conduct, ensuring basic living and learning needs, and fairness and reasonableness should be followed, and measures such as improving laws and regulations, establishing diversified dispute resolution mechanisms, and strengthening assistance and protection should be adopted to achieve a balance between asset preservation and the rights and interests of persons with limited civil capacity.

关键词: Asset preservation, Limitation of capacity for civil conduct, Equity balance

Aggression Exposure and The Risk of Insomnia in Chinese Adolescents: A Prospective Cohort Study Through Latent Profile Analysis

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Objective Insomnia is one of the most common mental health problems in adolescents, while aggression is reported to be associated with insomnia in this population. However, few previous studies have explored the relationship between the severity of aggression and insomnia in adolescents. Thus, this study aims to explore the relationship between different severity of aggression exposure and follow-up insomnia in Chinese adolescents

Methods A total of 1124 students were enrolled in this study, all participants were asked to complete a questionnaire in October 2022, and a 8-month follow-up. The demographic variables were collected by a self-designed questionnaire, The Short-Form Buss-Perry Aggression Questionnaire (BPAQ-SF) was used to evaluate the status of aggression. Insomnia Severity Index (ISI) was used to estimate the symptoms and severity of

insomnia. Latent profile analysis (LPA) was conducted to identify profiles of aggression. The associations of different aggression profiles on insomnia in 8 months were assessed using logistic regression analysis. Additionally, we used restricted cubic splines model to investigate the shape of the association

Results LPA suggested three profiles: low aggression, moderate aggression and high aggression. We found that high aggression exposure was associated with a significantly increased risk of insomnia (OR: 12.09 (95%CI:6.14–23.78)). Adjustment for age, sex, nation, anxiety, depression still explained a significant association (OR: 9.98 (95%CI:4.94–20.15)). The relation between the aggression and insomnia was linear in restricted cubic spline regression

Conclusion Higher aggression exposure was associated with an increased risk of insomnia, and this finding highlights the importance of addressing aggression symptoms among Chinese adolescents to better prevent insomnia

关键词: adolescents, aggression, insomnia, risk factors, latent profile analysis, cohort study

The Impact of Internet Addiction on Hyperactivity-Impulsivity: The Chain Mediating Role of Mind Wandering and Anxiety

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Objective The prevalence of hyperactivity-impulsivity and Internet addiction among adolescents has adverse effects on their academic performance, well-being, and social relationships. This study aimed to investigate in depth the association between Internet addiction and hyperactivity-impulsivity in adolescents, and to further explore the possible mediating roles of mind wandering and anxiety in this association

Methods A total of 2042 adolescents completed assessments using the Internet Addiction Test (IAT), the

Mind Wandering Questionnaire (MWQ), the Generalized Anxiety Disorder 2 (GAD-2), and the ASRS short scale to evaluate Internet addiction, mind wandering, anxiety, and hyperactivity-impulsivity, respectively

Results The study revealed that Internet addiction, mind wandering, and anxiety emerged as significant predictors of hyperactivity-impulsivity. Additionally, mediation analyses indicated that mind wandering and anxiety mediated the relationship between Internet addiction and hyperactivity-impulsivity. These findings suggest that adolescents who are addicted to the Internet are more likely to experience mind wandering and anxiety, which in turn contribute to their hyperactivity-impulsivity

Conclusion This study sheds light on how Internet addiction influences hyperactivity-impulsivity among adolescents and underscores the importance of preventive measures. We recommend implementing interventions aimed at fostering healthy Internet usage habits and providing robust mental health support to safeguard adolescents' physical and mental well-being. Such measures could help mitigate the negative impacts of Internet addiction on adolescents' behavior and overall health

关键词: Internet Addiction; Mind Wandering; Anxiety; Hyperactivity-Impulsivity; adolescent

The Bridge Symptoms of Work-family Conflict, Sleep Disorder and Job Burnout: A Network Analysis

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Objective This study aims to elucidate characteristics of the symptom network of work-family conflict (WFC) and sleep disorders amongst Chinese correctional personnels, whilst accounting for job burnout as a possible confounder

Methods A total of 472 correctional personnel were included. Their WFC, sleep disorders, and job burnout were measured using a Chinese version of Work-Family Conflict Scale (WFCs), The Athens Insomnia Scale (AIS), and a revised Chinese version of Maslach Burnout Inventory-General Survey (MBI-GS), respectively. Central symptoms and bridge symptoms were respectively identified based on centrality indices and bridge centrality indices. Network stability was examined using the case-dropping procedure

Results Daytime condition (strength = 0.01) and strain-based work interference with family (WFCs, strength = 1.45) symptoms had the highest centrality values in the WFC-sleep disorder network structure, which were also identified as two bridge symptoms. Emotional exhaustion, daytime condition, and WFCs appeared to be potential bridge symptoms in the WFC-sleep disorder-burnout network structure

Conclusion In this study amongst Chinese correctional personnel, daytime condition and WFCs were found to be central symptoms in the WFC-sleep disorder network structure, with emotional exhaustion as the bridge symptom in the WFC-sleep disorder-burnout network structure. We encourage relevant organizations to provide timely and effective education and guidance for regulatory personnel regarding these bridge symptoms. Subsequent research should follow up to assess the impact of relevant interventions on symptoms in the WFC-sleep disorder-burnout network, thereby advocating for the mental and physical health of correctional personnel

关键词: work-family conflict; sleep disorder; correctional personnels; symptom network; bridge symptoms

Impact of Early Child-parent Bonding on Violence in Patients with Schizophrenia

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Objective Violence is a major global health concern among patients with schizophrenia. However, the triggers of violent behavior remain unclear. In the current study, we hypothesized that patients with a diagnosis of schizophrenia who exhibit violent behavior may have certain psychological features related to childhood trauma or parental bonding. The study aimed to explore the relationship between violent behavior and childhood experience. It also aimed to determine the role of the early child-parent bond in violence risk and evaluate its degree of impact (on violence) in patients with schizophrenia

Methods This study enrolled 287 patients with schizophrenia and compared their data with those of 100 matched healthy controls. Patients were divided into 3 groups based on violent behavior. Childhood trauma questionnaire, parental bonding instrument, and modified overt aggression scale were used to explore the relationship between violent behavior and childhood experience

Results Our findings indicated the proportion of males to be higher in the patient groups than in the healthy controls, especially in the group with homicidal history. A higher proportion of healthy controls were married and received education for a longer period (in years). Analysis of the scores from the rating scales showed that the individual patient groups had a significantly higher prevalence of sexual abuse, emotional abuse, and emotional neglect than the healthy control group. On analyzing the relationship among the CTQ, PBI, and MOAS scores, emotional abuse and emotional neglect were found to be positively and negatively related to MOAS scores, respectively. Maternal over protection was found to be negatively related to the MOAS scores. Higher parental over protection was thought may be associated with more severe violent behavior (such as homicide) in patients with schizophrenia and maternal over protection may protect these patients from violence to a certain extent

Conclusion Childhood trauma and parental over protection possibly play predictive roles and may influence the presence and severity of violent behavior to some extent. Our findings demonstrate the potential of

using early child-parent bonding as a reference indicator for assessing violence risk in patients with schizophrenia.

关键词: violence, child-parent bonding, schizophrenia, scale assessment

The Mediation Role of Gray Matter Volume in The Relationship between Childhood Maltreatment and Psychological Resilience in Adolescents with First-episode Major Depressive Disorder

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Objective Previous studies have revealed morphologic alterations in patients with major depressive disorder (MDD) with experiences of childhood trauma. However, the underlying neural mechanisms remain largely unknown. This study aims to explore the brain structural changes and their possible mediation role in the relationship between childhood maltreatment and psychological resilience in drug-naïve adolescents with first-episode MDD

Methods A total of 57 adolescents with first-episode MDD and 36 healthy controls (HCs) completed the T1-weighted magnetic resonance imaging scan. The adverse childhood experiences and current psychological resilience were assessed using the Childhood Trauma Questionnaire-Short Form and the Connor Davidson Resilience Scale, respectively. The voxel-based morphometry approach was applied to examine changes

in the gray matter volume (GMV)

Results Compared with the HCs, adolescents with MDD had significantly reduced GMV volumes in the left fusiform gyrus, right orbitofrontal gyrus, right superior temporal gyrus, right calcarine cortex, right middle frontal gyrus, left angular gyrus, right precuneus, right posterior cingulate gyrus, and right posterior central gyrus, as well as significantly increased GMV volumes in the left lenticular putamen and right lenticular pallidum. The GMV of the right calcarine cortex was found to be negatively correlated with the severity of emotional abuse and positively correlated with the level of psychological resilience. Moreover, the GMV of the right calcarine cortex might partially mediate the relationship between childhood maltreatment and psychological resilience

Conclusion The present study provided further evidence for structural impairments in adolescents with MDD. Our findings also confirmed the important role of depression-related GMV changes in childhood growth experiences and psychological resilience characteristics during adolescent brain maturation

关键词: Major depressive disorder; adolescents; gray matter volume; childhood maltreatment; psychological resilience

Effects of TDCS Treatment on Metagenome and Metabolism in Young Adults with First-episode Major Depression Disorder

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Objective Major depressive disorder (MDD) is

one of the most common mental diseases, while the etiology of MDD has not been completely clarified. The Microbiota-Gut-Brain axis has become a new direction to explore the etiology of MDD. Most studies have shown that transcranial direct current stimulation (tDCS) is effective in improving and relieving symptoms of depression. However, the previous evaluation of the efficacy of tDCS basically stayed on the changes of symptoms and brain structure and function. At present, there are no studies to explore the efficacy and mechanism of tDCS in the treatment of MDD from the perspective of gut microbes. Therefore, this study was intended to explore the efficacy of tDCS intervention in MDD patients and the changes in gut microecological structure and function before and after treatment, combined with multiple omics analysis of gut metagenomics, macroviroome and metabolome

Methods A total of 21 young adults with MDD according to the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5), and 14 sex and age-matched healthy controls (HCs) were recruited for this study. All patients with MDD were treated with tDCS, and the stimulation frequency was 5 times a week, once a day, for a total of 2 weeks, a total of 10 stimulation times. The Beck Depression Inventory-13 (BDI-13), Beck Anxiety Inventory, Perceived Deficits Questionnaire -Chinese version and fecal samples were collected at baseline and 2 weeks after treatment. The clinical efficacy of tDCS treatment was evaluated according to the BDI-13 score. Then, based on metagenomics, metabolomics analysis and connection network methods, we analyzed the changes in gut microbes in MDD patients before tDCS (tDCSb) and after tDCS (tDCSa) treatment and HCs

Results In this study, the effective rate of tDCS intervention in MDD patients was 57.9%, and the remission rate was 36.8%. STAMP and LefSe analysis showed that *o_Bifidobacteriales*, *f_Bifidobacteriaceae* and *g_Bifidobacterium* had significant differences between tDCSb and tDCSa/HCs. In addition, we found that there were six viruses with significant differences between the tDCSb and HCs groups, among which *podoviridae* belonged to the characteristic viruses, while no different viruses were found between the tDCSb and

tDCSa groups. A total of 1158 metabolites were identified by metabolomics analysis, among which 13 were characteristic metabolites shared by HCs vs tDCSb and tDCSa vs tDCSb. Allocholic acid, L-Threonine, 6-Hydroxymelatonin, 4-Hydroxybenzoic acid, and 1-palmitoylglycerophosphocholine, all of which were elevated in MDD compared to HCs, after tDCS treatment, these metabolites decreased

Conclusion The tDCS may exert antidepressant effects through changes in gut microbiota, viruses, and metabolites. The identified associations may help to understand the underlying mechanisms of microbiome-virus-metabolite interactions, which may have important implications for therapeutic interventions targeting gut microbiota in patients with MDD

关键词: Major depressive disorder (MDD); transcranial direct current stimulation (tDCS); Microbiota-Gut-Brain axis; metagenome; metabolism

Diagnosis, Treatment Prediction, and Genetic Insights of Regional Homogeneity in Bipolar Disorder

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Objective This study aimed to investigate changes in brain activity patterns in patients with bipolar disorder (BDPs) post-treatment, evaluate the diagnostic and prognostic potential of regional homogeneity (ReHo) metrics, and explore associated genes and biological processes.

Methods Imaging data and clinical variables were collected from 80 BDPs, including 37 who underwent a 3-month follow-up, and 88 healthy controls (HCs). The analysis included Kendall's coefficient of concordance ReHo (KCC-ReHo), Coherence ReHo (Cohe-ReHo), and correlation analyses. Support Vector Machine (SVM) and Support Vector Regression (SVR) models based on KCC-ReHo and Cohe-ReHo were used to classify BDPs versus HCs and predict treatment

response in BDPs. Neuroimaging-transcription association analysis was performed using the Allen Human Brain Atlas

Results At baseline, abnormal KCC-ReHo and Cohe-ReHo values were mainly found in the prefrontal-striatum and cerebellum circuits in BDPs. After 3 months of treatment, significant clinical improvements were observed, along with partial normalization of neuroimaging anomalies, notably a decrease in KCC-ReHo in the cerebellum circuit. KCC-ReHo showed optimal performance in classification and treatment prediction. Neuroimaging-transcription analysis identified genes associated with changes in KCC-ReHo or Cohe-ReHo in BDPs

Conclusion Dysfunction in the prefrontal-striatum circuit represents core neuropathological changes in BDPs and indicates treatment response, while decreased activation in the cerebellum circuit contributes to BDPs recovery, and neuroimaging-transcription analysis provides insights into the genetic mechanisms underlying brain functional changes in BDPs.

关键词: Kendall coefficient consistency regional homogeneity; Coherence regional homogeneity; Machine learning; Neuroimaging-transcription association analysis

涉案精神分裂症患者刑事责任能力与前额叶皮层相关功能的研究

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目的 观察涉案精神分裂症患者在认知加工期间前额叶皮层 (prefrontal cortex, PFC) 氧合血红蛋白 (oxy-hemoglobin, Oxy-Hb) 相对浓度变化值, 初步探讨涉案精神分裂症患者的神经机制和工作记忆功能变化, 并探讨其涉案精神分裂症与刑事责任能力 (criminal capacity) 的相关性。

方法 对 100 例涉案男性精神分裂症患者分为无刑事责任能力组 (Limited Criminal Responsibility, LCR, 50 例) 及完全刑事责任能力 (Full Criminal Responsibility, FCR, 50 例); 应用近红外脑功能成

像系统, 分别采用情绪面孔性别判断任务和“1-back”工作记忆任务, 观察两组精神分裂症患者的前额叶皮层氧合血红蛋白相对浓度变化值。

结果 在负性情绪面孔图片呈现后, 完全刑事责任能力在认知加工期间前额叶皮层氧合血红蛋白相对浓度变化值显著低于无刑事责任能力组 ($t=3.254, P=0.0016$)。在“1-back”工作记忆任务时, 在认知加工期间完全刑事责任能力左侧前额叶皮层相对浓度变化值低于无刑事责任能力组 ($t=2.007, P=0.047$), 两组右侧前额叶皮层 Oxy-Hb 相对浓度变化值无显著性差异 ($t=1.663, P=0.099$)。

结论 根据涉案完全刑事责任能力精神分裂症患者在认知加工期间前额叶皮层氧合血红蛋白 (Oxy-Hb) 相对浓度变化值, 在负性情绪面孔图片呈现后, 前额叶皮层激活程度降低, 并且左侧前额叶皮层工作记忆功能受损, 涉案完全刑事责任能力精神分裂症患者前额叶皮层有氧代谢功能失调, 完全刑事责任能力精神分裂症前额叶相关功能受损更加严重。

关键词: 精神分裂症; 近红外脑功能成像; 前额叶皮层; 神经机制; 工作记忆; 氧合血红蛋白

眼区基本情绪识别任务下, 使用近红外光谱脑功能成像区分抑郁症患者和正常对照组的预测能力

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目的 抑郁症是常见精神疾病。然而, 抑郁症的诊断目前缺乏客观的物理指标协助诊断与鉴别诊断。近红外光谱脑功能成像技术是新兴的、方便可及的脑成像技术, 已被广泛用于精神科临床诊疗和研究。本研究在眼区基本情绪识别任务下, 使用近红外光谱脑功能成像技术检测抑郁症患者的前额叶激活模式, 并评估近红外光谱脑功能成像技术区别抑郁症患者和正常对照组的预测价值, 以期对抑郁症的临床诊疗提供新的辅助检查和评估方式。

方法 通过 53 通道的近红外光谱脑功能成像仪器检测, 采集 40 例抑郁症患者和 55 例正常对照者在眼区基本情绪识别任务下前额叶氧合血红蛋白的浓度变化, 进一步使用二元 logistics 分析和 ROC

曲线, 检验眼区基本情绪识别任务下, 近红外光谱脑功能成像检测的 53 个通道的 β 值是否能够区别抑郁症患者和正常对照组。

结果 (1) 抑郁症组 (67.89 ± 10.83)% 的眼区基本情绪识别任务正确率和正常对照组 (68.71 ± 8.07)% 无显著性差异。

(2) 眼区基本情绪识别任务下, 正常对照组在额极区 (左侧 ch21 和 ch22, 右侧 ch37), Broca 区 (左侧 ch8, 右侧 ch53), 前运动皮层与辅助运动皮层 (右侧 ch52) 的 6 个通道激活水平显著上升; 抑郁症组在在额极区 (左侧 ch16), 背外侧前额叶 (左侧 ch18, 右侧 ch34 和 ch42), 额叶眼动区 (左侧 ch24 和 ch26), Broca 区 (左侧 ch13, 右侧 ch49 和 ch51), 前运动皮层与辅助运动皮层 (左侧 ch1, 右侧 ch47) 的 11 个通道激活水平显著下降。抑郁症组在背外侧前额叶右侧、Broca 区右侧、以及前运动皮层与辅助运动皮层的 6 个通道 (ch1、ch31、ch37、ch47、ch49 和 ch51) 激活水平显著低于正常对照组。

(3) 使用近红外光谱脑功能成像技术区分抑郁症患者和正常对照组的预测能力, 眼区基本情绪识别任务下, fNIRS 有 7 个通道 (额极区 ch21、ch37 和 ch47, Broca 区 ch13、ch49 和 ch50, 以及前运动皮层与辅助运动皮层区 ch47 和 ch52) β 值的 AUC > 0.700 , 且以上 7 个通道 β 值结合成的预测因子 AUC=0.894。

结论 眼区基本情绪识别任务下, 执行近红外光谱脑功能成像检测, 正常对照组和精神分裂症患者前额叶正激活, 抑郁症患者前额叶负激活; 在背外侧前额叶、Broca 区和前运动皮层与辅助运动皮层区, 抑郁症患者的激活水平低于正常对照组。用近红外光谱脑功能成像区分抑郁症患者和正常对照组, 额极区、Broca 区, 前运动皮层与辅助运动皮层区的 7 个通道, 以及它们的结合预测因子具有中等及以上的预测价值。

关键词: 近红外脑功能成像技术, 眼区基本情绪识别任务, 抑郁症

驾驶心理测评量表在精神障碍者驾驶适宜性评定中的应用

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目的 探究影响精神障碍者驾驶机动车的驾驶适宜性的相关因素, 明确驾驶心理测评量表在精神障碍者驾驶适宜性评定中的应用价值, 进一步完善精神障碍者驾驶适宜性评定方法与体系。

方法 纳入 40 例处于疾病缓解期的精神障碍者作为病例组, 招募 40 例健康个体作为对照组。采用阳性与阴性症状量表 (Positive and Negative Syndrome Scale, PANSS) 评估病例组的精神症状及其严重程度。采用驾驶员情绪状态量表 (Driver Profile of Mood States, DPOMS)、驾驶愤怒量表 (Driver Anger Scale, DAS)、驾驶行为量表 (Driving Behavior Scale, DBS) 评估两组受试者在驾驶活动中的表现, 并统计上述驾驶心理测评量表的总分和维度得分。采用卡方检验和两独立样本 t 检验比较两组受试者在一般资料、驾驶情况和量表测评结果上的差异, 采用 Pearson 相关分析计算病例组的 PANSS 评分和驾驶心理测评量表得分的相关性。

结果 病例组既往发生交通违法行为和事故的比例显著高于对照组 ($P < 0.05$)。病例组在 DBS 驾驶功能缺陷得分上显著高于对照组 ($t = 2.25, P < 0.05$), 但在 DAS 总分、敌意手势、无礼驾驶得分和 DBS 过度安全/谨慎行为得分上则低于对照组 ($P < 0.05$)。病例组的 P 评分与 DAS 交通拥堵得分正相关 ($r = 0.308, P < 0.05$), G 评分则与 DBS 敌意/攻击行为得分正相关 ($r = 0.357, P < 0.05$), DPOMS 愤怒得分与 DBS 驾驶功能缺陷得分 ($r = 0.533, P < 0.01$)、敌意/攻击行为得分 ($r = 0.483, P < 0.01$) 正相关, 与过度安全/谨慎行为得分负相关 ($r = -0.422, P < 0.05$), DPOMS 紧张、抑郁得分亦与 DAS、DBS 多个维度得分相关。

结论 在本研究中, 对照组较病例组对于部分驾驶情境表现出更高的愤怒程度, 且对照组可能存在过度安全驾驶的倾向, 这可能与疾病缓解患者的情感、认知损害相关, 而 DBS 则对于疾病缓解期患者的驾驶功能缺陷评价效果更好。同时, 精神障碍者在驾驶活动中面对交通拥堵等特定情境的产生的愤怒情绪可能主要与其阳性症状相关, 而患者因此继发的一系列冒进驾驶行为则更可能与其紧张、焦虑、冲动控制等一般精神病理性状相关。精神障碍

者的冒进驾驶行为可能系基于愤怒情绪进一步复合紧张、抑郁等负性情绪共同作用所致，因此在实务工作中应当将情感症状应当作为评定精神障碍者驾驶适宜性的重要依据之一，且 DPOMS 对此具有良好的评价效果。

关键词：精神障碍；驾驶适宜性；司法鉴定；驾驶心理测评量表

The Illicit New-type Drug-induced Psychosis Motivated Violent Crimes in Mainland China: Medico-legal Issues

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Objective To reveal the illicit new type drug-induced psychosis motivated violent crimes has become a pressing issue in forensic psychiatric and criminal law in mainland China

Methods We collected a total of 3216 crime cases that were submitted for criminal responsibility assessment at the forensic psychiatric assessment center from January 1, 2001, to December 31, 2015, as an illustrative example. It was found that a total of 169 suspects met the diagnostic criteria for illicit drug-induced psychosis according to ICD-10

Results The findings indicated a rising trend in the number of suspects with drug-induced psychosis seeking forensic psychiatric assessment, with an identification rate increasing from 0.69% in 2001 to 9.72% in 2013, and further reaching 7.36% in 2014 and 7.83% in 2015. Among these suspects, approximately 60.9% were involved in criminal cases motivated by illicit drug use, while a significant majority (72.82%, or 75 out of 103) faced charges related to attempted murder/murder or assault. Comparing the criminal cases driven by illicit drug use to those occurring under normal circumstances, it was observed that the former exhibited a higher propensity for violent crimes (91 individuals out of the total of 103 [88.3%] compared to only 35 individuals out of

the total of 66 [53.0%], $\chi^2=26.452$, $p<0.0001$). Furthermore, statistical analyses revealed that regardless of whether the crimes were associated with drug-induced psychosis or not, as well as whether they were classified as violent or non-violent offenses, the number of abusers using new-type illicit drugs exceeded that of traditional drug users

Conclusion The illicit use of new-type drugs has emerged as a pressing concern within the field of forensic psychiatry, particularly in relation to the increasing incidence of violent crimes that require judicial identification. Currently, there is considerable controversy within the judicial psychiatry community regarding the diagnosis and recognition of such disorders, as well as the assessment of capacity for responsibility and how this group should be treated by the legal system. Therefore, it remains crucial to prioritize all sectors when addressing related issues.

关键词：Illicit new-type drug; Psychosis; Violent crimes; China

睡眠障碍研究协作组

Exploring Sleep Characteristics in Chinese Patients with Narcolepsy: Insights From The Nocturnal Sleep Onset Rapid Eye Movement Period (nSOREMP)

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Objective This study aims to investigate the unique characteristics and clinical significance of the nocturnal sleep onset rapid eye movement period (nSOREMP) in the Chinese population with narcolepsy, enhancing our understanding and management of the disorder globally

Methods This retrospective analysis investigated narcolepsy in Chinese patients from six hospitals, using International Classification of Sleep Disorders. A parallel retrospective analysis of the Chinese Clinical Sleep Database (CCSD) focused on polysomnography (PSG) records was conducted to evaluate nSOREMP prevalence in other sleep disorders

Results The study found a 2.51% nSOREMP prevalence in other sleep disorders of CCSD. Significant differences in age, N2 and rapid eye movement (REM) percentages, REM latency, and various indexes were noted among narcolepsy with/without nSOREMP, and other sleep disorders with nSOREMP of CCSD. nSOREMP prevalence in NT1 was 33.33% and in NT2, 28.30%. Noteworthy disparities in NT1 included N2 percentages, REM latency, and SOREMPs in multiple sleep latency test (MSLT). In NT2, differences were significant in age, sleep latency, N2 and REM latencies, arousal index, mean sleep latency in MSLT, and MSLT SOREMPs

Conclusion This study highlights nSOREMP's distinct characteristics in the Chinese population. Patients exhibiting symptoms suggestive of the onset of narcolepsy are advised to undergo an MSLT, irrespective of the occurrence of SOREMP during nocturnal PSG

关键词: Narcolepsy, Nocturnal Sleep Onset Rapid

Eye Movement Period, Sleep, Polysomnography, Multiple Sleep Latency Test

子午流注择时杵针疗法改善阿尔茨海默病睡眠障碍患者睡眠质量的疗效观察

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目的 探讨子午流注择时杵针疗法改善阿尔茨海默病睡眠障碍患者睡眠质量的临床疗效。

方法 选择 2022 年 6 月—2023 年 6 月成都市某三甲医院老年精神病科收治的 AD 睡眠障碍患者 60 例, 采用数字表法随机分为对照组和杵针组, 每组 30 例。对照组接受常规治疗, 杵针组在常规治疗的基础上辅以子午流注择时杵针疗法, 2 组患者治疗前、连续治疗 1 个月、2 个月、3 个月后均应用采用匹兹堡睡眠质量指数量表、多导睡眠图、简易精神状态检查量表评估患者睡眠质量、认知功能及检测血清炎症因子浓度的情况。

结果 治疗前 2 组患者基线资料、PSQI 评分、PSG 参数、MMSE 评分、血清炎症因子浓度结果组间差异均无统计学意义 ($P > 0.05$)。两组患者者在干预前、干预后 1 个月、2 个月、3 个月时的 PSQI 评分、睡眠潜伏期、觉醒次数、血清炎症因子浓度情况均呈逐渐降低的趋势, 时间之间差异有统计学意义 ($P_{\text{时间}} < 0.05$); 干预后各时点的各指标均以杵针组低于对照组, 差异有统计学意义 ($P_{\text{组间}} < 0.05$), 并且随观察时间延长, 组间差异逐渐增大, 差异有统计学意义 ($P_{\text{交互}} < 0.05$)。两组患者 4 个时点的 MMSE 评分、总睡眠时间、睡眠效率均呈逐渐升高的趋势, 时间之间差异有统计学意义 ($P_{\text{时间}} < 0.05$); 干预后各时点的 MMSE 评分、总睡眠时间、睡眠效率均以杵针组高于对照组, 差异有统计学意义 ($P_{\text{组间}} < 0.05$), 并且随观察时间延长, 组间差异逐渐增大, 差异有统计学意义 ($P_{\text{交互}} < 0.05$)。

结论 子午流注择时杵针疗法不仅可有效改善 AD 睡眠障碍患者睡眠质量, 还能提高患者认知能力, 降低血清炎症因子浓度, 值得临床推广。

关键词: 子午流注; 杵针; 阿尔茨海默病; 睡眠障碍

Novel Insights Into Genetic Associations and Drug Targets of Mitochondria-associated Proteins with Major Depressive Disorder

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Objective A growing number of observational studies have found that mitochondrial pathomechanisms are associated with major depressive disorder (MDD), but little is known about the causal direction of this association. This study aimed to explore the potential causal relationship between mitochondria-associated proteins and the risk of MDD

Methods We used summary data from a genome-wide association study (GWAS) of 66 mitochondria-associated proteins in 3,301 individuals of European descent, as well as a large GWAS on MDD, which involved 294,322 cases and 741,438 controls. We performed a two-sample bidirectional Mendelian randomization (MR) analysis using inverse variance weighting (IVW) as the primary method, supplemented by two additional approaches (MR-Egger and weighted median methods) as sensitivity analyses to detect and adjust for pleiotropy. Moreover, to identify and evaluate potential drug targets, we conducted searches in both the GWAS catalog and the Drug-Gene Interaction Database (DGIdb)

Results According to MR analysis, gene-determined significant causal associations were found between TruA (OR: 0.98), HINT2 (OR: 0.98), MUL1 (OR: 0.98), C1QBP (OR: 1.02), and MDD. The reverse MR analysis indicated causal associations between MDD and RNMT (OR: 0.79), C1QBP (OR: 0.75), and ATP β (OR: 0.77). Thus, we observed a clear bidirectional causal relationship between C1QBP and MDD. Following gene-drug analysis, CHF, BCHE, and KNG1 emerged as potential therapeutic targets

Conclusion Our findings revealed a causal link between mitochondria-associated proteins and MDD,

offering significantly new insights to augment the understanding of MDD pathomechanisms to identify potential therapeutic targets for drug development.

关键词: Major depressive disorder; Mitochondria-associated proteins; GWAS; Bi-directional; Mendelian randomization; Gene-Drug analysis

基于机器学习对阻塞性睡眠呼吸暂停及其严重程度的预测以及 SHAP 特征分析

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目的 阻塞性睡眠呼吸暂停 (OSA) 是一种全球性的常见病, 诊断方法复杂。本研究的目标是建立一个可解释的机器学习 (Machine learning) 模型, 用于预测阻塞性睡眠呼吸暂停及其严重程度。并根据临床特征及心率变异性相关指标分析其危险因素。

方法 这是一项回顾性研究, 符合纳入排除标准的受试者 (n=637, 经筛选后 n=632) 于 2022 年 7 月至 2023 年 5 月期间使用便携式睡眠呼吸监测仪完成夜间睡眠监测。共纳入 17 个变量, 并使用 Python 建立随机森林模型 (Random Forest, SF)、极端梯度提升树模型 (XGBoost)、梯度提升方法 (Gradient Boosting Method mass spectrometry, GBM)、自适应提升 (Adaptive Boosting, AdaBoost) 以及轻量级梯度提升树算法 (Light Gradient Boosting Machine, LightGBM) 5 种机器学习的四分类预测模型。使用 GrindSearchCV 对模型进行超参数调节, 从而获得最优模型。最后, 使用 SHAP (Shapley Additive exPlanations) 解释最佳预测模型并分析对模型预测的重要特征。

结果 在入选的受试者中, 无阻塞性睡眠呼吸暂停人数 (n=251), 轻度阻塞性睡眠呼吸暂停人数 (n=205), 中度阻塞性睡眠呼吸暂停人数 (n=84), 重度阻塞性睡眠呼吸暂停人数 (n=92)。建立的所有模型中, RF 的预测性能最佳, 其在测试集中敏感性为 64.8%, 准确率为 70.9%, AUC 为 0.767。SHAP 分析表明平均血氧饱和度 (average blood oxygen)、最低血氧饱和度 (blood oxygen minimum)、稳定睡眠时长 (STABLE)、年龄 (age)、体重 (weight) 是预测阻塞性睡眠呼吸暂停及其严重程度的前 5 大关

键变量。

结论 本研究建立的基于 RF 模型在训练集和测试集都展现出令人满意预测性能,可以为临床提供一种简单快速的识别阻塞性睡眠呼吸暂停及其严重程度度的工具。其次平均血氧饱和度(average blood oxygen)、最低血氧饱和度(blood oxygen minimum)可能作为危险因素预测阻塞性睡眠呼吸暂停及其严重程度,可以为后续的临床诊断及严重程度分级提供有力的依据。

关键词: OSA; 机器学习; 睡眠监测; 模型预测

倒班对护士肠道菌群、炎症因子及认知功能影响的研究

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目的 本研究旨在探讨倒班工作对护士肠道菌群、炎症因子及认知的影响,揭示其与认知减退的联系及肠道菌群和炎症因子的作用。结果有望为理解倒班对护士健康的影响提供科学依据,支持未来干预措施。

方法 本研究采用横断面设计,计划在河北医科大学第一医院招募护士作为研究对象(包括倒班护士和非倒班护士)。收集资料、生化标本,进行量表评估和认知测试。通过酶联免疫吸附试验检测多种血清炎症因子水平。使用 16S rRNA 测序分析肠道菌群。量表包括胃肠道、睡眠、嗜睡、疲劳、抑郁和焦虑等评估。认知功能通过 Stroop、N-back、More-odd shifting 和心理运动警觉性任务等进行测试。

结果 本研究共招募 63 名护士(倒班组 38 人,非倒班组 25 人),两组基线特征无统计学意义。16S rRNA 测序分析显示倒班组肠道菌群多样性显著降低,且菌群结构与非倒班组存在显著差异。具体表现为倒班组厚壁菌门和放线菌门占比增高,拟杆菌门占比降低。在血清炎症因子方面,倒班组 IL-6、TNF- α 、s100 β 、Zonulin、LPS、IL-1 β 及 LBP 等水平均显著高于非倒班组。倒班护士在胃肠道症状、睡眠质量、日间嗜睡、疲劳感及抑郁情绪等方面的自评分数也显著高于非倒班护士,且量表评分差异具

有统计学意义。在认知功能测试中,倒班护士表现出干扰抑制能力减弱、工作记忆受损及认知灵活性下降,其中 Stroop 任务效应量、N-back 任务正确率以及 More-odd shifting 任务转换成本等方面存在显著差异。相关性分析揭示了特定菌属与炎症因子、身心健康症状及认知功能之间的关联。

结论 本研究发现,倒班工作显著影响护士的肠道菌群、炎症反应、身心健康及认知功能。倒班护士肠道菌群多样性低,炎症因子水平高,且更易出现胃肠道症状、睡眠障碍、日间嗜睡、疲劳和抑郁。同时,他们的干扰抑制能力、工作记忆和认知灵活性也明显下降。肠道差异菌属与这些症状及认知功能相关,暗示肠道菌群在倒班导致的健康损害中扮演重要角色。

关键词: 倒班工作,肠道菌群,炎症因子,认知功能,护士

自我厌恶在青少年不良童年经历与抑郁焦虑情绪、自杀风险间中介作用

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目的 探讨自我厌恶在青少年不良童年经历与抑郁焦虑情绪、自杀风险之间的中介作用。

方法 在北京市 5 所初中、5 所高中以问卷星的形式进行横断面问卷调查,共收集有效问卷 6838 份,用自制一般资料问卷、患者健康问卷(patient health questionnaire-9, PHQ-9)、广泛性焦虑量表(generalized anxiety disorder-7, GAD-7)、MINI5.0 中文版自杀模块、童年不良经历问卷(revised adverse childhood experience questionnaire, ACEQ-R)、自我厌恶量表(self-hate scale, SHS)进行相关内容的评估。

结果 青少年抑郁、焦虑及自杀风险在女性($P<0.001$)、高中年级($P<0.001$)的检出率更高。有抑郁情绪、有焦虑情绪、有自杀风险的青少年在不良童年经历、自我厌恶的评分均高于无抑郁情绪、无焦虑情绪、无自杀风险的青少年。童年不良经历通过自我厌恶间接预测抑郁,间接效应为 0.1488,效果量为 60.86% ($P<0.001$),童年不良经历通过自我厌恶间接预测焦虑,间接效应为 0.1524,效果量

为 62.87% ($P < 0.001$), 童年不良经历通过自我厌恶间接预测自杀风险, 间接效应为 0.0485, 效果量为 49.44% ($P < 0.001$)。

结论 童年不良经历对青少年的抑郁焦虑情绪、自杀风险有预测作用, 同时通过自我厌恶对青少年的抑郁焦虑情绪、自杀风险发挥中介作用。

关键词: 青少年 童年不良经历 自我厌恶 抑郁情绪 焦虑情绪 自杀风险 中介作用

The Association between Problematic Internet Use and The Patterns of Sleep Disturbances in Youths: A Latent Class Analysis

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Objective Sleep disturbances are common in young people. However, few studies have explored potential sleep patterns among youths. The aim of this study was to identify patterns of sleep disturbances based on sleep problems and associated mood symptoms, and to examine the effects of problematic internet use (PIU) on different sleep patterns

Methods Individuals aged 12-25 years were recruited between December 2022 and May 2023 through an online survey. Latent class analysis (LCA) was performed to identify the patterns of sleep disturbances, and a multinomial logistic regression model was used to examine the relationships between PIU and different sleep patterns

Results A total of 6,145 participants were included in final analysis, comprising of 3,336 females (54.3%) and 2,809 males (45.7%), with the mean age of this sample was 16.16 (2.93) years. The LCA identified four patterns of sleep disturbances: class 1 (no/mild sleep disturbances, no psychological problems), class 2

(moderate sleep disturbances, no psychological problems), class 3 (moderate sleep disturbances, moderate psychological problems), and class 4 (severe sleep disturbances, severe psychological problems) among 61.8%, 13.4%, 7.6%, and 17.3% of the participants, respectively. Young individuals with PIU were more likely to have moderate and severe symptom burden of sleep disturbances and psychological problems compared to those with non-PIU, and the adjusted odds ratio (OR) (95% confidence interval (CI)) were 2.64 (1.91–3.65), 4.71 (3.38–6.55), and 8.26 (6.43–10.60) in class 2, class 3 and class 4, respectively

Conclusion Our findings highlight the importance of identifying significant heterogeneity of sleep disturbances in youth and suggest that PIU is potentially a novel target for improving sleep disturbances.

关键词: Sleep disturbances; Latent class analysis; Problematic internet use; Youths

Nightmare Frequency As A Potential Mediator of The Association between Childhood Trauma and Suicidal Ideation Among Youths: A Cross-sectional Study

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Objective Childhood trauma has been found to be associated with suicidal ideation among youth. However, the underlying processes that link childhood trauma and suicidal ideation is unclear. This study investigates the role of nightmare frequency in the association between childhood trauma and suicidal ideation, and the potential moderating effect of sex

Methods Individuals aged 12–25 years were recruited from Fujian Province, China. Childhood trauma was assessed using the Childhood Trauma Question-

naire, and the frequency of nightmares and suicidal ideation were also evaluated. Moderated mediation analyses were conducted with childhood trauma as the independent variable, suicidal ideation as the dependent variable, nightmare frequency as the mediator variable, and sex as the moderator. All statistical analyses were performed in R (version 4.2.3)

Results A total of 3431 individuals completed all the questions assessing childhood trauma, nightmare frequency, and suicidal ideation. Among them, 28.6% reported having experienced suicidal ideation in the past 12 months. Additionally, 25.9% of participants reported frequent nightmares. The association between childhood trauma and suicidal ideation was significantly mediated by nightmare frequency, with an effect size of 0.003 (bootstrap 95%CI: 0.001, 0.005). The indirect effects accounted for approximately 4.11% of the overall effect. However, there was no statistically significant moderating effect of sex on the association between childhood trauma and nightmare frequency

Conclusion The findings of this study suggest that treating nightmares may serve as a promising intervention target for addressing suicidal ideation in youth with a history of childhood trauma, irrespective of sex

关键词: Childhood trauma; Nightmares; Suicidal ideation; Sex; Youth

The Impact of Sleep Quality on Emotion Regulation Difficulties in Adolescents: A Chained Mediation Model Involving Daytime Dysfunction, Social Exclusion, and Self-Control

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Objective Previous studies have revealed associations between sleep disturbances and mental health, yet the comprehensive role of sleep quality, daytime dysfunction, social exclusion, and self-control in difficulties with emotion regulation remains unclear. This

study aimed to elucidate how sleep quality affects emotion regulation difficulties among middle school students through pathways involving daytime dysfunction, social exclusion, and self-control, thereby providing a more comprehensive theoretical basis for mental health interventions

Methods Utilizing the pittsburgh sleep quality index, the adolescent social exclusion scale, the brief self-control scale, and emotion regulation scale-short form, we assessed 1067 students randomly selected from four middle schools

Results Our findings indicate that poor sleep quality significantly contributes to increased daytime dysfunction ($\beta = 0.86$, $SE = 0.07$, $p < .001$), which in turn affects social exclusion ($\beta = 0.60$, $SE = 0.16$, $p < 0.001$), self-control abilities ($\beta = 1.27$, $SE = 0.16$, $p < 0.001$) and emotion regulation difficulties ($\beta = 1.56$, $SE = 0.30$, $p < 0.001$). Social exclusion mediates the relationship between sleep quality and emotion regulation difficulties (Estimate = 0.11, $SE = 0.04$, 95% CI [0.04, 0.20])

Conclusion This study offers novel insights for the development of effective interventions aimed at improving sleep and psychological well-being in adolescents

关键词: adolescents; sleep quality; daytime dysfunction; social exclusion; self-control; emotion regulation; chained mediation effects.

Association Between EEG Power During Sleep and Attention Levels in Patients with Major Depressive Disorder

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Objective Major depressive disorder (MDD) is associated with cognitive impairment through unclear mechanisms. We examined the relationship between sleep electroencephalogram (EEG) power and attention level in MDD

Methods Forty-seven untreated patients with

MDD and forty-seven age- and sex-matched controls were included. We examined relative EEG power during non-rapid eye movement (NREM) sleep and rapid eye movement (REM) sleep by fast Fourier transform. The Attention Network Test (ANT) was performed to evaluate attention levels

Results Compared to controls, patients with MDD had lower theta power during NREM ($P = 0.018$) and REM ($P = 0.002$) sleep, while higher beta power ($P = 0.050$) during NREM sleep and delta power ($P = 0.018$) during REM sleep. Regarding attention level, patients with MDD had lower levels of accuracy ($P = 0.021$), longer mean reaction time ($P < 0.001$), poorer manifestations of the alerting effect ($P = 0.038$) and worse executive control ($P = 0.048$). Moreover, decreased theta power during NREM sleep was correlated with worsened accuracy ($\beta = 0.329$, $P = 0.040$), decreased theta power during REM sleep was correlated with worsened alerting effect ($\beta = 0.355$, $P = 0.020$), and increased delta power during REM sleep was correlated with longer mean reaction time ($\beta = 0.325$, $P = 0.022$) in patients with MDD. No association between ANT performance and other frequency bands was observed in patients with MDD

Conclusion Our findings suggest that patients with MDD manifest impaired selective attention function that is associated with decreased theta power during NREM/REM sleep and increased delta power during REM sleep

关键词: Major depressive disorder, sleep, EEG power, attention

Effects of Online Mindfulness-based Cognitive Therapy on Chronic Insomnia: Study Protocol for A Randomized Controlled Trial

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Background Chronic insomnia disorder (CID) is a prevalent sleep disorder in China. It impacts individuals' physiological, psychological and social functions. Though cognitive behavioral therapy for insomnia (CBT-I) is the recommended first-line treatment option for CID, there are still about 20% patients exhibiting limited effectiveness. Literature showed that mindfulness could benefit CBT-I protocols and mindfulness-based cognitive therapy (MBCT) was effective to insomnia. Considering the large, widespread population suffering from insomnia and limited mental health resources in China, the online mindfulness-based cognitive therapy for insomnia (MBCT-I) is expected to be a promising treatment approach for CID. However, little is known about its feasibility and efficacy

Objective To evaluate the effect of online MBCT-I on insomnia severity (primary outcome) and sleep quality, level of mindfulness, dysfunctional beliefs about sleep, anxiety, depression and quality of life and attitudes towards psychotherapy (secondary outcome) among Chinese adults with CID

Methods This study is a parallel group, randomized controlled trial of 80 CID patients. Participants will be randomized to the online MBCT-I program or sleep hygiene education (SHE) program with an allocation ratio of 1:1 using simple randomization. Online assessments will be carried out at baseline, by the end of the intervention (week 8) and at the scheduled follow-up time (week 20). The primary outcome is the insomnia severity by the end of the treatment (8 weeks). The secondary outcomes are insomnia severity at week 20 and sleep quality, level of mindfulness, quality of life and attitudes towards traditional psychotherapy and online psychotherapy at week 8 and week 20. Data will be analyzed using both the Per-Protocol Set (PPS) and the Full Analysis Set (FAS), and the PPS population will be analyzed for primary outcome measures

Discussion This is the first study to investigate the efficacy of the online therapist-guided MBCT-I compared with sleep hygiene education on patients with CID. It will provide evidence for clinical practitioners, therapists and patients to consider a new psychotherapeutic option, and for technicians to operate self-guided online MBCT-I application in the future.

关键词: mindfulness-base cognitive therapy, insomnia, sleep, internet intervention

GLP-1 类似物利拉鲁肽通过抑制氧化应激、神经炎症和神经凋亡改善睡眠呼吸暂停引起的认知功能障碍

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目的 阻塞性睡眠呼吸暂停(Obstructive sleep apnea, OSA)是一种常见的临床病症,其主要病理表现为慢性间歇性缺氧(chronic intermittent hypoxia, CIH)。利拉鲁肽已被发现具有在多种实验模型中的神经保护作用。本研究的目的是探索利拉鲁肽在改善 CIH 引起的认知障碍中的作用和潜在机制。

方法 细胞实验:将间歇性缺氧干预后的 SH-SY5Y 细胞暴露于不同浓度的利拉鲁肽,并进行 CCK-8 实验、LDH 释放实验、流式细胞术和 Western blot 实验,以评估细胞活力、细胞毒性、凋亡和氧化应激水平。

动物实验:使用间歇性缺氧培养箱干预小鼠,模拟 OSA 病理。进行 Morris 水迷宫实验评估小鼠的空间记忆能力。通过 HE 染色、Nissl 染色和 FJB 染色评估海马组织的病理变化和神经元存活情况,并通过 Western blot 和免疫荧光实验检测相关信号通路的蛋白表达。

结果 1. 细胞实验:利拉鲁肽显著提高了 SH-SY5Y 细胞的存活率,减少了 CIH 引起的细胞凋亡和氧化应激水平。利拉鲁肽通过激活 Nrf2/HO-1 通路,抑制了 CIH 引起的氧化应激损伤,并通过抑制 NF- κ B 和 MAPK 信号通路减少了炎症因子的表达。

2. 动物实验:Morris 水迷宫实验显示,利拉鲁肽可以显著改善 CIH 引起的小鼠空间记忆障碍。组织病理学结果显示,利拉鲁肽能够减轻 CIH 引起的海马组织损伤和神经元死亡。Western blot 和免疫荧光实验结果表明,利拉鲁肽通过激活 Nrf2/HO-1 通路和抑制 MAPK/NF- κ B 信号通路,减轻了 CIH 引起的炎症反应和氧化应激损伤。

结论 本研究表明,利拉鲁肽可以通过激活 Nrf2/HO-1 抗氧化通路,抑制 NF- κ B 和 MAPK 信号通路,从而减轻 CIH 引起的认知功能障碍和海马损伤。这一发现为 CIH 引起的认知障碍提供了一个有前景的预防和治疗策略。进一步的研究应继续探讨利拉鲁肽在 OSAS 认知功能障碍临床上的治疗效果。

关键词: 利拉鲁肽; 阻塞性睡眠呼吸暂停; 慢性间歇性缺氧; 氧化应激; 炎症

Associations between Inflammatory Factors and Sleep: A Two-sample Bidirectional Mendelian Randomization Study

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Background Observational research has showed significant associations between inflammatory factors and sleep. Experimental studies suggested acute increase in the levels of inflammatory markers following sleep deprivation and sleep restriction. However, the causal association between inflammatory factors and sleep remains unclear in chronic and natural settings

Objectives This study aimed to investigate the causal association of inflammatory factors with seven sleep-related traits, including chronotype, daytime napping, daytime sleepiness, insomnia symptoms, and sleep duration

Methods Two-sample bidirectional Mendelian

randomization (MR) analysis was used to investigate the causal associations between 91 inflammatory factors and 7 sleep-related traits. Summary-level data of inflammatory factors were derived from the EBI GWAS Catalog ($n = 14,824$); sleep-related traits were obtained from UK Biobank. We calculated effect estimates using the inverse-variance weighted (IVW), weighted median, and MR-Egger methods. Heterogeneity and pleiotropy were detected and measured by the MR pleiotropy residual sum and outlier, Cochran's Q statistics, and MR-Egger regression

Results We found that 30 inflammatory factors had causal effects on sleep-related traits, while sleep-related traits had causal effects on 20 inflammatory factors. After adjusted by false discovery rate (FDR), strong evidence was found for the causal effects of CD40 (OR = 1.02, 95% CI: 1.01-1.03), ST1A1 (OR = 0.97, 95% CI: 0.96-0.99), uPA (OR = 1.03, 95% CI: 1.01-1.04) on chronotype, and FGF-21 (OR = 1.02, 95% CI: 1.01-1.03), hGDNF (OR = 1.01, 95% CI: 1.00-1.02), TNFB (OR = 0.99, 95% CI: 0.98-1.00), TNFSF14 (OR = 1.01, 95% CI: 1.00-1.02) on napping

Conclusion Our study suggest a bidirectional causal association between inflammatory factors and sleep-related traits, indicating that sleep could influence our overall health via regulating systematic inflammation.

关键词: sleep, inflammatory factors, Mendelian randomization, instrumental variable, causal relationship

Sleep Efficiency and Event-related Potential P300 in Patients with Depression: The Mediating Role of Serum C-reactive Protein Mediate

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Background Patients with depression could experience cognitive dysfunction and sleep disorders, which affect the quality of life and the treatment efficacy. Increasing evidence demonstrated that chronic systemic low-grade inflammation was implicated in the development of cognitive dysfunction among depressed individuals. There is a bidirectional relationship between sleep quality and cognitive function, as well as potential neurophysiological mechanisms related to depression that require more objective indicators for understanding. This study aims to investigate the association between sleep quality and cognitive function in individuals with depression including the potential role of serum C-reactive protein (CRP) levels

Methods A total of 101 patients with depression were included and divided into two groups: the normal sleep efficiency group (NSE) ($n=45$) with sleep efficiency $\geq 90\%$, and the low sleep efficiency group (LSE) ($n=56$) with sleep efficiency $< 90\%$. All patients received polysomnography (PSG), event-related potential (P300) tests, and the detection of CRP. Multiple linear regression was used to explore the correlation between SE, ERP-P300 latency and. Bootstrapped mediation analysis of a linear regression model was performed to test the mediating effect of serum CRP levels using the PROCESS macro3

Results Exposure to the N2、P3a and P3b latencies in the LSE group were longer than those in the NSE group ($p = 0.036$, $p = 0.013$, $p < 0.001$). Further analysis showed that N2 [Pr = -122.050, 95%CI (-216.090, -28.011)], P3a [Pr = -103.977, 95%CI (-195.070, -12.885)], P3b (Pr = -149.637, 95%CI (-248.583, -50.691)) and CRP [Pr = -3.988, 95%CI (-7.824, -0.152)] were significantly associated with SE, respectively. The significant association of CRP [Pr = 8.046, 95%CI (2.834, 13.258)] with P3b latency was observed. The mediation analysis revealed that CRP mediated the relationship between SE and cognitive function

Conclusion Depression patients with low sleep

efficiency have increased inflammatory levels and impaired cognitive function, suggesting that chronic inflammation may mediate the association between sleep quality and cognitive function in patients with depression.

关键词: Keywords Depression, event-related potential, sleep efficiency, chronic systemic low-grade inflammation

The Effect of Bright Light Therapy on Anhedonia and Circadian Rhythms in Depression: A Single-blind Randomised Controlled Trial

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Objective The purpose of this study was to determine the effectiveness of different times of bright light therapy (BLT) on anhedonia and circadian rhythm disturbances in depressed patients. It was further investigated whether the benefit of bright light therapy on anhedonia in depression was associated with changes in melatonin and cortisol rhythm indices during treatment

Methods In this single-blind, placebo-controlled study, 81 depression inpatients were recruited from the department of sleep disorders, psychological hospital affiliated to Anhui Medical University and randomly divided into four groups: the morning BLT group (n=23), the morning placebo group (n=17), the evening BLT group (n=22) or the evening placebo group (n=19). The BLT groups were given 10,000 lux bright light therapy and the placebo groups were given <100 lux dim light therapy, respectively. Participants received 30 minutes of light therapy per day (between 9:00-10:00 for the morning groups or between 18:00-19:00 for the evening groups) for a 2-week period. The primary outcome of the study was The Revised Physical Anhedonia Scale (RPAS) score. Secondary outcomes were The Hamilton Depression Scale (HAMD) score, The Hamilton Anxiety Scale (HAMA) score and salivary melatonin and

cortisol concentrations. In this, saliva samples were collected from all subjects at fixed time points in two consecutive days for measuring the melatonin and cortisol concentrations to fit circadian rhythms of subjects. Assessments were repeated before therapy, at 1 week of therapy, and at the end of therapy. Primary and secondary outcomes were analysed for time, group and group-time interaction effects using a mixed repeated-measures analysis of variance. Partial correlation analysis and multiple linear regression analysis were used to explore the correlation between melatonin and cortisol rhythm variables and anhedonia before and after treatment

Results In terms of general demographic and scale scores at baseline, there were no significant differences between the two groups in the morning or between the two groups in the evening. There were also no significant differences in salivary melatonin and cortisol rhythm indices at baseline. At the end of the experiment, there was a significant improvement in HAMD and RPAS scale scores in the morning BLT group compared to the morning control group in terms of group and time interaction effects ($p=0.017$, $p=0.002$). The peak phase of melatonin in the morning BLT group was significantly delayed after treatment compared to pre-treatment ($p=0.001$) as well as compared to the morning control group ($p=0.013$). Correlation analysis suggested a significant negative correlation between the difference in the peak phase of melatonin and the difference in RPAS scores pre- and post-treatment ($p=0.005$). The significant correlation remained in the multiple regression analysis after adjusting for confounders ($p=0.013$)

Conclusion The results suggest that the morning BLT is more effective than placebo in improving anhedonia and depressive symptoms in depressive patients, and is also more reliable in regulating melatonin rhythms. Changes in the peak phase of melatonin during treatment may modulated the efficacy of bright light therapy on anhedonia.

关键词: Depression, Anhedonia, Bright light therapy, Biological rhythm, Melatonin

Causal Associations of Insomnia Symptoms with Chronic Kidney Diseases and The Underlying Blood Proteins: An Observational and Mendelian Randomization Study

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Background Insomnia is associated with chronic kidney disease (CKD) in observational studies. However, whether insomnia is causally associated with CKD remains not established

Objective This study aims to estimate the causal association of insomnia with CKD and investigate the protein pathways linking insomnia to the risk of CKD

Methods In primary analyses, multivariate regression (MVR) and one-sample Mendelian randomization (1SMR) analyses were performed to estimate the associations between insomnia and CKD in >400,000

people. Thereafter, a two-sample Mendelian randomization (2SMR) analysis was used to validate the findings from primary analyses. Finally, proteome-wide MR analysis was conducted to pinpoint CKD-associated blood proteins, supplemented by the colocalization analysis to rule out bias caused by linkage disequilibrium. Additionally, the potential mediation effects of blood proteins on the pathway of insomnia giving rise to CKD were explored through a two-step MR design

Results Across the MVR, 1SMR, and their sensitivity analyses, we found consistent evidence suggesting that more frequent insomnia was significantly associated with a higher risk of CKD (MVR: HR = 1.20, 95%CI = 1.16-1.24; 1SMR: OR = 1.35; 95%CI = 1.02-1.79). Consistent evidence was obtained by using 2SMR (OR = 1.06, 95%CI = 1.02-1.11). Genetically predicted 124 circulating proteins were associated with CKD in proteome-wide MR analysis. ENPP5 is a promising novel target that mediates the association between insomnia and CKD

Conclusion More frequent insomnia is causally associated with increased risk of CKD, and ENPP5 as a potential blood protein mediates the association between insomnia and CKD. These findings indicate that addressing insomnia could serve as a viable and valid intervention to mitigate CKD risk.

关键词: Insomnia, Blood proteins, Chronic kidney disease, Mendelian randomization, Causality

荆州地区三级医院护士睡眠质量及相关因素分析

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目的 了解荆州地区三级医院护士的睡眠质量现状,并分析睡眠质量的相关因素。

方法 此研究是一项描述性横断面研究。采用一般人口学资料问卷、匹兹堡睡眠质量指数(PSQI)及相关评估量表,在这项研究中,招募了7405名护

士,大多数受试者(96.2%)为女性,应答率为91.2%,共有6753名护士完成问卷,包括5057名(74.9%)夜班护士和1696名(25.1%)白班护士。

结果 26.8%的参与者存在睡眠异常(PSQI>5分)。睡眠异常护士的年龄为(33.05±8.18),睡眠正常护士年龄为(32.58±7.85, $P>0.05$),两者在统计学上无显著性差异。已婚护士睡眠异常(25.70%)情况相较于未婚护士睡眠异常偏低(29.47%, $P<0.001$),两者在统计学上存在显著性差异。睡眠总分变异的22.2%可由正相关因素及负相关因素的变化来解释。正相关因素,即导致睡眠总分增加的因素包括:年龄、近一年夜班频率、夜班压力、夜班前药物使用频率、慢性长期用药、疲乏总分、抑郁总分、压力总分;负相关因素,即导致睡眠总分减少的因素包括:婚姻、夜班前睡眠时间、子女数量、工作家庭冲突总分。

结论 荆州市三级医院的护士存在睡眠质量问题,是否值夜班及相关压力和社会支持是影响睡眠质量的相关因素,护理管理者应重视护士睡眠质量情况,应做到合理排班,关注护士心理状态。

关键词: 睡眠质量;压力;护士;夜班;社会支持;影响因素

Relationship between Excessive Daytime Sleepiness and Anhedonia in MDD Patients: A FMRI Study

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Objective Anhedonia is one of the core symptoms of MDD and is closely related to its severity. Approximately 37.4% to 57.1% of people with major depressive disorder (MDD) show symptoms of excessive

daytime sleepiness (EDS). Patients with MDD with concomitant EDS tend to have worse clinical outcomes and are often accompanied by severe anhedonia. The aim of this study was to clarify the neuroimaging mechanisms of EDS symptoms in MDD patients with anhedonia

Methods A total of 22 patients were included in the EDS group (Epworth Sleepiness Scale score ≥ 7) and 45 patients were included in the no daytime sleepiness group (No EDS). All subjects underwent resting state functional MRI, polysomnography (PSG) and clinical scale assessments. Anhedonia assessed using the Revised Social Anhedonia Scale, Revised Physical Anhedonia Scale and Temporal Experience of Pleasure Scale. Employing the Dosenbach 160 node atlas, we obtained whole-brain functional networks and extracted topological features global efficiency (Eglob), local efficiency (Eloc), path length (Lp) and clustering coefficient (Cp)) using a graph-theoretic-based approach. Group comparisons were made using a two-sample t-test

Results The two groups were well matched for gender and age, and there were no differences in HAMD or HAMA scores, duration and percentage of stages N1, N2 and N3, total sleep time (TST) and total time in bed (TIB.) The EDS group scored worse on the Revised Physical Anhedonia Scale (RPAS), while there were no differences in social and temporal anhedonia. In terms of brain networks, the EDS group showed reduced functional connectivity of the DMN to the FPN and the VN to itself, specifically the ventral lateral prefrontal cortex to the posterior cingulate gyrus and the occipital lobe to the fusiform gyrus. Compared to the No EDS group, the EDS group appeared to have extensive reductions in Eglob, Eloc, Cp and increases in Lp. Further mediation analysis revealed that functional connectivity of the DMN to the FPN mediated the relationship between EDS and RPAS

Conclusion MDD patients with EDS exhibit a lack of physical anhedonia, which may be associated with reduced indicators of their extensive whole-brain networks and reduced functional connectivity between some functional brain networks. Reduced functional connectivity may mediate the relationship between EDS symptoms and anhedonia in patients with MDD. Our

study may provide a neuroimaging mechanistic basis for clinical identification and intervention of anhedonia in MDD patients with EDS.

关键词: major depressive disorder, physical anhedonia, functional magnetic resonance imaging, polysomnography, brain functional networks, graph theory analysis

Association of Benzodiazepines Drug Target Genes with Alzheimer's Disease and Cognitive Function: A Mendelian Randomization Study

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Background Previous observational studies have suggested associations between benzodiazepines drugs and Alzheimer's disease (AD) as well as cognitive function, but the conclusions from these studies have been contradictory.

Objective This genetically based study aims to assess the potential impact of benzodiazepines drugs usage on AD and cognitive function

Methods A two-sample Mendelian Randomization (MR) analysis was used to investigate the potential causal relationships of benzodiazepine target genes in blood with AD and cognitive functions. Benzodiazepines target genes expression derived from existing expression quantitative trait loci (eQTL) data in blood. Summary statistics for AD (n=307112, 2670 cases) and cognitive function (n=257841) were retrieved from previous genome-wide association studies (GWAS). Utilizing existing GWAS data for cognitive function subtypes and AD biomarkers, we evaluated the causal links between identified genes and associated biomarkers. Then replication validation was performed using brain eQTL data from the Genotype-Tissue Expression project and

GWAS datasets from other European cohorts. Co-localization methods, summary-data-based MR, and protein-protein interaction networks were used for sensitivity analysis to enhance the credibility of the results

Results We found that higher expression of GABRR2 in blood increased risk of AD (OR: 1.540; 95% CI: 1.052-2.254; P = 2.62×10⁻²) and white matter hyperintensity (WMH) (β: 0.102; 95% CI: 0.004-0.200; P = 4.06×10⁻²), while higher expressions of TSPO (β: 0.021; 95% CI: 0.007-0.035; P = 2.68×10⁻³), BRD3 (β: 0.021; 95% CI: 0.004-0.038; P = 1.28×10⁻²), HPGD (β: 0.019; 95% CI: 0.011-0.026; P = 7.94×10⁻⁷), and ALB (β: 0.061; 95% CI: 0.010-0.113; P = 2.00×10⁻²) in blood were associated with better cognitive function. Additionally, a concordant direction of association was also observed between cognitive function and BRD3 expression in brain cortex (OR: 1.031; 95% CI: 1.014-1.049; P=4.89×10⁻⁴) and brain frontal cortex BA9 (OR: 1.049; 95% CI: 1.021-1.077; P =4.54×10⁻⁴). The associations between BRD3 gene expression and cognitive function were still robust after a set of sensitivity analyses

Conclusion This study revealed that benzodiazepines drugs target genes are potential causal risk factors for AD and cognitive function. Our findings emphasized the cautious use of benzodiazepine drugs in clinical practice

关键词: Benzodiazepines, Alzheimer's disease, Cognitive function, Genetics, Mendelian randomization

The Impact of Adverse Childhood Experiences on Subjective and Objective Sleep Quality in Patients with Insomnia: A Cross-Sectional Study

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Objective Insomnia imposes a significant social cost burden, negatively affects patients' quality of life, and increases the incidence of psychological disorders,

such as depression. Adverse Childhood Experiences (ACEs) are a prevalent and significant public health issue closely associated with the occurrence of sleep disorders. While the relationship between ACEs and subjective sleep quality is well-established, conclusions regarding objective sleep quality remain inconsistent. This study aims to explore the impact of ACEs on both subjective and objective sleep quality in patients with insomnia and to investigate the roles of daytime wakefulness and stress perception

Methods This study included 109 participants aged between 18 and 65 years, who met the DSM-5 diagnostic criteria for insomnia disorder and were free of related sleep and psychiatric disorders. The research utilized a clinical psychological assessment and polysomnography (PSG) monitoring. Subjective sleep quality was assessed using the Insomnia Severity Index (ISI), childhood adversities were evaluated with the Childhood Trauma Questionnaire (CTQ), and participants' pre-sleep arousal (PSAS) was also collected. Spearman correlation and multiple linear regression were used to explore the impact of adverse childhood experiences on subjective and objective sleep quality

Results In terms of subjective sleep quality, there was no significant correlation between ISI and any subscales of CTQ. In objective sleep measures, Wake After Sleep Onset (WASO) ($r = -0.219$, $p = 0.02$) and N1 sleep stage duration ($r = -0.246$, $p = 0.01$) were significantly negatively correlated with emotional abuse. N3 sleep stage duration showed significant positive correlations with emotional abuse ($r = 0.275$, $p = 0.004$) and physical abuse ($r = 0.295$, $p = 0.002$). The PSAS was significantly positively correlated with emotional abuse ($r = 0.372$, $p < 0.001$) and physical abuse ($r = 0.308$, $p = 0.001$). Multiple linear regression analysis indicated that the duration of the N1 sleep stage was significantly influenced by the severity of emotional abuse ($B = -1.54$, $p = 0.035$), and the duration of the N3 sleep stage was significantly influenced by the severity of physical abuse ($B = 2.41$, $p = 0.004$)

Conclusion Compared to subjective sleep quality, adverse childhood experiences have a more significant impact on objective sleep quality. Both emotional and physical abuse affect objective sleep quality. The

level of pre-sleep arousal in patients with insomnia is associated with adverse childhood experiences.

关键词: Insomnia, Objective Sleep Quality, Adverse Childhood Experiences

Altered Cerebellar Functional in Major Depressive Disorder with Obstructive Sleep Apnea and Its Association with Cognitive Function

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Objective Major depressive disorder (MDD) comorbid with obstructive sleep apnea (OSA) often present more pronounced cognitive function impairment, yet the underlying alterations in brain function remain unclear, and the function of cerebellum have rarely assessed in previous relevant studies. The present study aims to explore the disparities in cognitive function between MDD with or without OSA and elucidate the potential neural mechanisms

Methods Resting-state functional MRI (rs-fMRI), polysomnography (PSG), event-related potential (ERP) and clinical scale assessment data were acquired from 32 MDD patients with OSA and 42 well-matched MDD patients without OSA. Brain function was evaluated based on regional homogeneity (ReHo) and voxel-mirrored homotopic connectivity (VMHC). Differences in brain function between the two groups were evaluated using student's t-test, while relationships between brain function and clinical parameters were examined through partial correlation analysis

Results Compared with the MDD group without OSA, the MDD group with OSA exhibited lower scores in prospective memory, working memory, and sustained attention, along with longer latency of the P3b wave (FzP3b and CzP3b) in ERP testing. In neuroimaging, the MDD group with OSA demonstrated significantly higher ReHo in the left cerebellum superior, lower ReHo in the right cerebellum inferior and increased VMHC in both cerebellum superior compared to the MDD group without OSA. Furthermore, partial correlation analysis revealed a significant negative correlation between the increased VMHC in both cerebellum superior and the Continuous Performance Task-Identical Pairs 4-digit score (CPT-IP-4) ($p=0.005$). Heightened ReHo in the left cerebellum superior was significantly negatively correlated with the CPT-IP-4 score ($p=0.002$), while decreased ReHo in the right cerebellum inferior showed significant negative correlations with both FzP3b ($p=0.009$) and CzP3b ($p=0.007$) of ERP

Conclusion This study highlights the significant cerebellar involvement in the pathophysiology of MDD patients with OSA, with these alterations in cerebellar function being associated with impaired cognitive function. Future research should focus on elucidating the specific mechanisms underlying changes in cerebellar function and exploring interventions to enhance cognitive function in MDD patients with OSA.

关键词: Major depressive disorder, Obstructive sleep apnea, Resting-state fMRI, Cognitive function, Polysomnography, Event-related potential

失眠障碍的睡眠事件相关脑激活模式研究

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目的 失眠障碍 (insomnia disorder, ID) 是最常见的睡眠障碍, 觉醒、K-复合波、纺锤波和慢波活动是已知具备生理功能的睡眠事件。然而, ID 患者具备生理功能的睡眠事件相关特异性脑激活模式及其与 ID 疾病特征的关系目前仍不明确。本研究旨在

睡眠事件水平探索 ID 的神经生物学机制。

方法 本研究纳入符合 DSM-5 诊断标准的 43 例 ID 患者及年龄、性别和受教育年限匹配的 40 名健康受试者 (Healthy control, HC)。所有受试者首先完成一般人口学资料采集、匹兹堡睡眠质量指数量表、抑郁自评量表、焦虑自评量表的评估, 佩戴腕式体外活动仪并记录两周睡眠日记, 随后经历连续两晚的多导睡眠监测, 并在一周后接受同步脑电-功能磁共振成像 (Electroencephalogram-functional magnetic resonance imaging, EEG-fMRI) 扫描, 以收集整个睡眠觉醒周期的脑电和脑影像数据。随后标记包括觉醒、K-复合波、纺锤波和慢波活动在内的睡眠事件, 建立事件相关脑激活图谱, 运用混合线性模型识别事件×组交互效应。运用 Spearman's 相关性分析探索睡眠事件相关脑激活模式与临床特征的关系。

结果 事件相关 fMRI 混合线性模型分析显示, 在左侧颞叶皮层、左侧额叶皮层、左侧顶叶及左侧枕叶四个团块观察到不同睡眠事件×组的交互效应, 事后分析表明, 与 HC 组相比, ID 组觉醒相关左侧颞叶皮层 ($z = -2.88, p = 0.02, \text{FDR 校正}$) 和左侧枕叶 ($z = -2.52, p = 0.048, \text{FDR 校正}$) 激活均减低, 左侧额叶皮层 K-复合波相关激活 ($z = -2.76, p = 0.012, \text{FDR 校正}$) 和左侧额叶皮层纺锤波相关激活均增高 ($z = -2.94, p = 0.012, \text{FDR 校正}$)。探索性关联分析显示, 左侧枕叶觉醒相关脑激活强度与匹兹堡睡眠质量指数量表得分呈显著负相关 ($r = -0.30, p = 0.02, \text{FDR 校正}$)。

结论 ID 患者的睡眠事件相关脑功能状态与 HC 不同, 提示睡眠保护和睡眠环境探测相关的脑功能受损可能是 ID 的神经生物学机制。

关键词: 失眠障碍; 睡眠事件; 同步脑电与功能磁共振

Neuroprotective Effect of Melatonin in Isolated Rapid Eye Movement Sleep Behavior Disorder

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Objective Over 90% of the patients with isolated rapid eye movement (REM) sleep behavior disorder (iRBD) will have a phenoconversion into a subtype of neurodegenerative disorders including Parkinson's disease and dementia over time. It remains unclear whether melatonin, a known hormone and one of the first-line symptomatic treatments of RBD, yields neuroprotective effects in iRBD

Methods Based on a longitudinal cohort of iRBD with naturalistic clinical follow-up of prescription and phenoconversion, we arbitrarily defined 'with melatonin' by using melatonin for more than half of the follow-up duration, regardless of monotherapy or combined therapy, while 'without melatonin' was defined by not using melatonin or using for less than half of the follow-up or using after the phenoconversion. Cox proportional regression was conducted to compare the risk of conversion to neurodegenerative diseases in patients with and without melatonin. Linear mixed models were used to compare the longitudinal change of neurodegenerative biomarkers. To address the arbitrary definition of melatonin use, time-dependent survival analysis was employed to analyze the effect of melatonin on a vary

dosage and treatment period

Results Comparing with iRBD patients without melatonin (66.3 ± 8.1 years, 72.0% male), those with melatonin (66.2 ± 6.7 years, 71.9% male) showed a lower risk of phenoconversion (HR [95%CI] = 2.58 [1.37, 4.87]), a slower decline of the severity of RBD symptoms (group*time interaction, β [95%CI] = 0.94 [0.13, 1.74]), a slower increase in color vision deficit (-4.09 [-8.08, -0.10]) and motor dysfunction (-1.69 [-3.30, -0.08]), during a mean follow-up duration of 5.9 years. A time-dependent survival analysis corroborated that the use of melatonin had a lower risk of phenoconversion (HR [95%CI] = 0.92 [0.85, 0.99])

Conclusion Melatonin might have disease-modifying properties to delay the progression of phenoconversion in patients with iRBD. Future studies especially clinical trials and animal studies are warranted to corroborate the efficacy and mechanisms

关键词: REM sleep behavior disorder, melatonin, α -synucleinopathy, neuroprotection

Social Isolation Associated with Sleep Behaviors Among Elderly People

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Objective To explore the associations of social isolation with sleep duration and sleep quality in community-dwelling elderly people

Methods A total of 7,762 community-dwelling elderly people aged 60 years and older in Ningbo were recruited from June 2022 to August 2022. Data were collected using a questionnaire. Multivariate logistic regression and population attributable risk (PAR) were used to analyze the associations of social isolation with sleep duration and sleep quality. The KHB mediating effect model was used to test the mediating effect of depression and anxiety on these associations

Results Among the participants, 2,656 (34.2%) had abnormal sleep duration (< 6 hours or > 8 hours), 1,115 (14.4%) had poor sleep quality, and 917 (11.8%)

had social isolation. After adjusting for confounding factors, compared with the elderly without social isolation, the odds ratios (ORs) (95% confidence interval) of abnormal sleep duration and poor sleep quality in the elderly with social isolation were 1.49 (1.29–1.73) and 1.32 (1.09–1.59), respectively. Subgroup analysis showed the association only significant in the population of female older adults and those aged < 80 years. The multivariate-adjusted PAR analysis showed that 5.26% of the abnormal sleep duration cases and 3.18% of the poor sleep quality cases were attributable to social isolation. Depression partially mediated the associations of social isolation with sleep duration and sleep quality, accounting for 5.68% and 9.87% of the mediating effect, respectively

Conclusion Social isolation was found to be associated with sleep duration and sleep quality in community-dwelling elderly people. More attention should be paid to social isolation in the elderly, especially in female older adults and those aged < 80 years

关键词: Older adults, Sleep duration, Sleep quality, Social isolation, Population attributable risk

Using Latent Profile Transition Analysis To Identify Associations between Couple Relationship Quality and Sleep Quality

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Background and Purpose: Despite accumulating evidence indicating a significant association between couple relationship quality and sleep quality, the causal relationship remains elusive due to the predominantly cross-sectional design of most studies. Existing longitudinal studies are limited in their ability to capture the dynamic fluctuations in couple relationship quality and their subsequent impact on sleep outcomes. This study endeavors to elucidate the temporal dynamics of couple relationship quality profiles among community-dwelling adults and to assess the implications of these dynamics on sleep outcomes

Method A sample of 247 community-dwelling adults engaged in committed relationships was recruited through online advertisements. Participants completed self-reported measures, namely the Marital Adjustment Test (MAT) and the Pittsburgh Sleep Quality Index (PSQI), at two distinct time points separated by a six-month interval to assess couple relationship quality and sleep quality, respectively. Cross-sectional latent profile analyses were employed to delineate distinct profiles of couple relationship quality. Changes in latent profile classifications across the two time points (baseline and six months) were examined using latent transition analysis. The study further explored the associations between different couple relationship quality profiles and profile transitions with sleep outcomes

Results The analysis revealed a three-profile structure comprising poor, fair, and good couple relationship quality. Participants classified within the good couple relationship quality profile exhibited superior overall sleep quality, enhanced subjective sleep quality, fewer sleep disturbances, and reduced daytime dysfunction compared to those within the poorer relationship quality profiles. Latent transition analysis demonstrated profile stability ranging from 83.3% to 86.8%. Participants who transitioned to poorer couple relationship quality profiles exhibited a significantly higher risk of experiencing deteriorated sleep quality [OR (95%CI): 6.610 (1.518, 28.777)] relative to those who either remained in their original profiles or transitioned to better relationship quality profiles

Conclusion The quality of couple relationships is subject to temporal variability. Both sustained poor couple relationship quality and deterioration in relationship quality are correlated with adverse sleep outcomes. Interventions aimed at sustaining or enhancing couple relationship quality may confer additional benefits to sleep health.

关键词: couple relationship; sleep quality; latent profile analysis; latent transition analysis

快速眼动期睡眠对脑网络功能连接的影响

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上得到了验证。

关键词: 睡眠, 快速眼动睡眠, 神经影像机制, 脑网络, 预测模型

目的 快速眼动睡眠对于维持最佳脑功能至关重要, 不仅有助于保持大脑能量平衡, 还参与了清除代谢副产物和废物的过程。快速眼动睡眠阶段涉及协调多个脑区, 并可能与大脑的功能变异性有潜在的关联。既往研究发现, 快速眼动睡眠异常会影响大脑的执行控制网络和默认模式网络(DMN)的功能活动和连接状态。然而, 传统的影像学研究在将特定脑功能连接归因于快速眼动睡眠方面存在挑战, 在全脑水平上的研究仍然不足。此外, 考虑到在不破坏睡眠结构的情况下有选择地操纵快速眼动睡眠所面临的挑战, 快速眼动睡眠缺失对脑功能连通性的影响尚不明确。因此, 本研究旨在探索快速眼动睡眠对全脑连接模式的影响。

方法 本研究采用分夜睡眠范式(前半夜/后半夜睡眠剥夺)来干预快速眼动期睡眠时间(前半夜以非快速动眼睡眠为主, 后半夜以快速动眼睡眠为主)。将113名健康受试者随机分为前半夜睡眠剥夺组(快速眼动睡眠时间较多, $N=41$)、后半夜睡眠剥夺组(快速眼动睡眠时间较少, $N=36$)、以及整夜睡眠对照组($N=36$), 并在醒后采集其静息态影像学数据。将每位受试者的大脑划分为227个脑区, 结合每位受试者的睡眠数据(快速眼动睡眠时间)和全脑功能连接矩阵, 构建了基于连接体的大脑-行为预测模型(CPM), 并采用留一交叉验证法进行验证。

结果 CPM模型中的正向网络可以显著预测快速眼动睡眠的时长($r=0.20$, $P=0.017$), 大部分的预测连边位于DMN和带状盖网络(CON)内部以及DMN-视觉网络(VIS)、皮层下网络(SUB)-VIS之间。其中DMN、VIS和SUB达到了51%的预测度, 并且脑网络连边和节点之间的相关性较高($n=227$, $r=0.79$, $P=6.17e-50$)。在组水平上, DMN网络内的功能连接存在显著差异($F(2,107)=8.10$, $P=5.29e-04$), 且后半夜睡眠剥夺组显著低于其他两组。

结论 快速眼动睡眠缺失破坏静息态脑网络的动态重组, 降低了DMN网络内部以及与其他网络之间的连接。这为理解快速眼动睡眠在维持和改变脑功能变异性中的作用提供了新的思路, 阐明了快速眼动睡眠缺失的神经机制特征, 揭示了快速眼动睡眠在个体水平上共同的脑连接模式, 并在组水平

精神创伤研究协作组

基于氢质子磁共振波谱成像探讨青少年双相抑郁患者冲动攻击行为神经代谢改变

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目的 利用氢质子磁共振波谱成像(1H Magnetic Resonance Spectroscopy, 1H-MRS)技术探讨青少年双相抑郁患者冲动攻击行为与腹内侧前额叶(Ventromedial Prefrontal Cortex, vmPFC)神经代谢之间可能存在的关系。

方法 1.首先从新疆维吾尔自治区人民医院临床心理科进行受试者的筛选,最终选取2024年1月至2024年5月就诊于门诊和住院前6个月未接受过电休克治疗、精神药物治疗及系统心理治疗的青少年双相抑郁患者23名,根据是否伴有冲动攻击行为进行分组,其中伴有冲动攻击行为组11例,不伴有冲动攻击行为组12例。

2.通过一般情况调查表对受试者年龄、性别、独生情况、居住情况、发病年龄、受教育程度、病程等人口学数据进行采集,使用24项汉密尔顿抑郁量表(Hamilton Depression Scale, HAMD)及杨氏躁狂评定量表(Young Mania Rating Scale, YMRS)对受试者进行心理评估。使用修改版外显攻击行为量表(Modified Overt Aggression Scale, MOAS)及修订版Barratt冲动量表-11(Barratt Impulsiveness Scale version-11, BIS-11)对研究对象的冲动攻击行为进行量化评估。利用Ingenia3.0T磁共振扫描仪,由一名影像科主任医师及一名影像科主任技师对所有受试者的vmPFC脑区进行解剖定位,再进行1H-MRS扫描,定量分析N-乙酰天门冬氨酸(N-Acetyl-L-aspartic acid, NAA)/肌酸(Creatine, Cr)、胆碱复合物(Choline, Cho)/Cr、肌醇(myo-Inositol, ml)/Cr各神经代谢物比值,并将上述结果进行统计分析。

结果 1.伴有冲动攻击行为组与不伴有冲动攻击行为组两组患者的年龄、性别、受教育年限、独生情况、居住情况和家族史等一般资料比较,差异无统计学意义($P>0.05$),两组资料具有可比性。

2.伴有冲动攻击行为的青少年双相抑郁组与不伴有冲动攻击行为的青少年双相抑郁组比较,伴有冲动攻击行为的青少年双相抑郁组腹内侧前额叶脑区NAA/Cr值低于不伴有冲动攻击行为的青少年双相抑郁组,差异有统计学意义($P<0.001$)。两组患者的Cho/Cr值、ml/Cr值比较,差异无统计学意义($P>0.05$)。

结论 伴有冲动攻击行为的青少年双相抑郁患者腹内侧前额叶脑区NAA/Cr值下降,提示青少年双相抑郁患者的冲动攻击行为可能与腹内侧前额叶神经元密度减少或存在神经元功能障碍有关。

关键词: 双相情感障碍;抑郁发作;冲动攻击行为;磁共振波谱;青少年

童年创伤与抑郁障碍伴发躯体化症状的关系:OPRL1基因甲基化水平的调节作用

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目的 本研究以生物心理社会视角为框架,旨在探究OPRL1基因甲基化水平对抑郁障碍患者童年创伤与躯体化症状之间关系的影响,以期为临床干预提供帮助。

方法 以2022年5月至2022年10月在山东省精神卫生中心住院治疗的106例抑郁障碍患者为研究对象,采用童年创伤经历问卷(CTQ)、汉密尔顿焦虑量表(HAMA)、汉密尔顿抑郁量表(HAMA-17)进行评估。从肘静脉中抽取约5mLEDTA抗凝全血进行甲基化水平检测。使用SPSS 26.0 PROCESS Model 1分析OPRL1基因甲基化水平对童年创伤与抑郁障碍伴发躯体化症状之间关系的调节作用。

结果 共101名抑郁障碍患者被纳入本研究报告的分析中,平均年龄27.7岁,女性69名,男性32名。所有参与者中,存在感觉系统症状者占54%,存在心血管系统症状者占59%,存在呼吸系统症状者占64%,存在胃肠道症状者占81%,存在生殖泌尿系统症状者占45%,存在自主神经系统症状者占56%,经历情感虐待者占42%,经历身体忽视者占38%,经历情感忽视者占56%。对于双变量关系,童年创伤与躯体化症状呈正相关($r=0.217$, $P<0.05$),OPRL1基因甲基化水平与躯体化症状严重

程度呈负相关 ($r=-0.238$, $P<0.05$)。采用 Process Model 1 进行多元线性回归分析, 控制混杂因素后, 总体模型显著 ($R^2=0.577$, $P=0.00$; $R^2=0.56$, $P<0.01$)。童年创伤显著影响躯体化症状 ($B=0.37$, $t=2.70$, $P=0.008$; $B=1.80$, $t=2.31$, $P=0.02$)。此外, OPRL1 基因甲基化水平影响童年创伤与抑郁障碍伴发躯体化症状的关系 ($B=0.029$, $R^2\text{-chng}=0.289$, $t=2.31$, $P=0.02$; $B=0.15$, $R^2\text{-chng}=0.28$, $t=20.08$, $P=0.04$)。因此, OPRL1 基因甲基化水平在童年创伤与躯体化症状的关系中发挥调节作用。

结论 童年创伤与抑郁障碍患者躯体化症状水平呈正相关, OPRL1 基因甲基化水平与抑郁障碍患者躯体化症状水平呈负相关。当 OPRL1 基因甲基化低于或等于平均水平时, 童年创伤可预测抑郁障碍伴发躯体化症状; 当 OPRL1 基因甲基化高于平均水平时, 有童年创伤的抑郁障碍患者出现躯体化症状概率减少。提示良好的儿童成长环境, 有助于减少抑郁障碍伴发躯体化症状。本研究为抑郁障碍患者发生躯体化症状的病理机制提供参考, 为早期预防提供心理学视角, 减少或避免童年创伤或许可以降低疾病的风险和临床症状的严重程度。但基于研究的局限性, OPRL1 基因甲基化水平与疾病的关系仍需进一步探讨。

关键词: OPRL1 基因甲基化; 童年创伤; 躯体化症状; 抑郁障碍

Childhood Trauma and Recent Suicide Risk in Major Depressive Disorder: Exploring The Mediating Effect of Resilience and Cognitive Emotion Regulation Strategies

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Objective The mechanisms by which childhood trauma may cause suicidality in major depressive disorder (MDD) patients remain unclear. The aim of our study was to explore the role of resilience and cognitive emotion regulation strategies in the relationship between childhood trauma and recent suicide risk in MDD patients

Methods 136 MDD patients (male/female =32/104) and 112 (male/female =34/78) healthy controls were recruited. Demographic and clinical data were collected, and the 9-item Patient Health Questionnaire (PHQ-9), 7-item Generalized Anxiety Disorder scale (GAD-7), Childhood Trauma Questionnaire-Short Form (CTQ-SF), Cognitive Emotion Regulation Questionnaire (CERQ), Connor-Davidson Resilience Scale (CD-RISC) were adopted to assess depression level, anxiety level, childhood trauma, cognitive emotion regulation strategies and psychological resilience respectively. The structural equation modeling (SEM) was conducted to test the path analysis

Results Significant correlations were found between emotional abuse ($r=0.261$, $p<0.01$), emotional neglect ($r=0.226$, $p<0.01$), maladaptive strategies ($r=0.374$, $p<0.01$), tenacity ($r=-0.367$, $p<0.01$), strength ($r=-0.398$, $p<0.01$) and optimism ($r=-0.247$, $p<0.01$) and the score of item 9 of PHQ-9 in MDD patients. Ordinal logistic regression analysis showed gender ($OR=0.386$, 95% CI: 0.160-0.927, $p=0.033$) and maladaptive strategies ($OR=1.058$, 95% CI: 1.008-1.111, $p=0.033$) had significant predictive effects on recent suicide risk in MDD patients. The indices of goodness-of-fit of the SEM reflected an acceptable fit, with $\chi^2/df=2.292$, $GFI=0.817$, $AGFI=0.753$, $TLI=0.743$, $CFI=0.787$, $RMR=1.590$, and $RMSEA=0.098$. The bootstrap test shows that the direct effect ($\beta=0.114$, 95% CI: -0.103~0.362) of childhood trauma on recent suicide risk was not significant but the indirect ($\beta=0.224$, 95% CI: 0.099~0.461) and total effects ($\beta=0.338$, 95% CI: 0.180~0.552) of childhood trauma on recent suicide risk were significant

Conclusion MDD patients experienced more childhood trauma, performed poorer psychological resilience and used less positive and more negative emotion regulation strategies. The mediating effect of resilience and cognitive emotion regulation strategies between childhood trauma and recent suicide risk in MDD patients was significant

关键词: Major depressive disorder, Childhood trauma, Resilience, Cognitive emotion regulation strategies, Suicide

“脑-淋巴”轴调控应激介导焦虑行为的神经机制研究

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目的 明确“脑-淋巴”轴调控应激介导焦虑样行为的神经机制,分析脑和颈部淋巴结之间相互作用对焦虑样行为的影响。

方法 研究组检测了 2020 年初参加援鄂的精神科医生的外周血中多种免疫介质、细胞因子和趋化因子的水平,发现在众多细胞因子和趋化因子中只有趋化因子配体 5 (CCL5) 的表达在援鄂医生中显著升高。利用动物实验验证 CCL5 在应激后的变化,确定 CCL5 主要来源部位和细胞类型,并且利用神经科学技术研究大脑如何调控 CCL5 的产生及相关通路如何影响应激后的机体反应。在前期研究发现应激可导致红核功能异常从而激活颈部淋巴结的免疫反应,引起焦虑样行为和趋化因子 CCL5 水平升高的基础上,利用逆向追踪病毒明确 RN 脑区的上游脑区及神经元类型,进而利用化学遗传学和光遗传学验证神经环路在应激引发的焦虑样行为和颈部淋巴结的炎症反应中的作用。为阐述“脑-淋巴”轴相互作用的机制,利用颈上神经节切除术,结合病毒操纵和药理学实验分析颈部淋巴结的分子变化,解析应激通过大脑如何调控颈部淋巴结的炎症反应神经生物学机制。

结果 研究组利用束缚应激大鼠模型发现应激后大鼠的 CCL5 水平显著增加。并发现 CCL5 在颈部淋巴结 (CLNs) 中被应激强烈诱导。手术切除颈部淋巴结,明确其在应激引发的焦虑和 CCL5 分泌中的作用。研究组将 mRFP 编码的伪狂犬病病毒 152 (PRV) 直接注射到成年大鼠的 CLN 中,以逆行和跨突触标记上游神经元,追踪到红核的谷氨酸能神经元。膜片钳电生理结果和在体光纤记录结果提示,应激后大鼠的红核谷氨酸能神经元活性下降。研究组利用化学遗传学对红核在应激导致焦虑和 CCL5 分泌的功能进行了验证,发现抑制红核的功能可以减少大鼠的探索行为,而激活红核的功能会增加大鼠的探索行为。初级运动皮层 (M1) 和 RN 是参与肢体运动控制的大脑区域,研究组在特定区域(包括 M1 和 RN) 中观察到双侧 mRFP+ 神经元。为

了确定 M1 神经元靶向的 RN 谷氨酸能神经元是否确实参与焦虑样行为和 CCL5 合成,研究组将逆行跨突触病毒 AAV1-hSyn-Cre 局部注射到 M1 中,在 M1 神经元突触后的 RN 神经元中表达 Cre 依赖性 GCaMP6s,结果提示 M1-RN 神经元的功能同样也是下降的。研究组进一步利用化学遗传学和光遗传学对 M1-RN 的神经环路进行了验证。为了确认红核在应激诱发的焦虑中的作用,研究组进一步分析了应激个体的 fMRI 结果。

结论 这些发现指出操纵红核脑区谷氨酸能神经元活动可以改变焦虑行为和炎症反应,并且外周免疫器官的操纵可以调节应激诱导的焦虑样行为,为焦虑障碍干预提供了坚实的基础和方向。

关键词: 应激、焦虑、神经免疫反应、初级运动皮层、红核

(2R, 6R) -HNK Alleviates Adverse Emotional States in Rats with PTSD by Regulating The PI3K / AKT Signaling Pathway in Stressed Brain Regions

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Objective Individuals diagnosed with post-traumatic stress disorder (PTSD) often exhibit enduring adverse emotions, heightening susceptibility to suicidal thoughts and behaviors. Consequently, the administration of pharmacological agents to alleviate or modulate such negative emotions has the potential to enhance the overall well-being of individuals with PTSD. Notably, the metabolites of ketamine, specifically (2R, 6R)-hydroxynorketamine (HNK), have demonstrated favorable antidepressant properties characterized by prolonged onset and duration of action, as well as an absence of psychiatric adverse effects. However, the precise mechanism through which HNK exerts its therapeutic effects on negative mood symptoms in individuals with PTSD remains to be fully elucidated.

Methods In this investigation, a model involving a single prolonged stress and plantar shock (SPS&S)

was utilized, followed by the administration of (2R, 6R)-HNK into the lateral ventricle subsequent to the recovery phase. The evaluation of negative mood-related symptoms associated with post-traumatic stress disorder (PTSD) was conducted through the open field test (OFT), elevated plus maze test (EMPT), and forced swim test (FST). The levels of protein and relative mRNA expression in the hippocampus (HIP) and amygdala (AMY) regions of rats, specifically neurotrophin factor (BDNF), tyrosine kinase receptor B (TrkB), phosphatidylinositol 3-kinase (PI3K), and phosphokinase B (AKT), were analyzed using Western blot and reverse transcription real-time polymerase chain reaction (RT-qPCR).

Results SPS&S rats displayed adverse emotional behaviors characterized by depression and anxiety. The levels of BDNF, TrkB, PI3K, and AKT were reduced in the HIP and PFC, but increased in the AMY. Treatment with (2R, 6R)-HNK enhanced exploratory behavior and reversed negative emotional behaviors. This intervention mitigated disruptions in the expression of PI3K/AKT signaling pathway proteins in the HIP and PFC, while not affecting PI3K/AKT signaling in the AMY of SPS&S rats

Conclusion Traumatic stress can trigger negative emotional reactions in rats, potentially involving the PI3K/AKT signaling pathway in the HIP, PFC, and AMY. The (2R, 6R)-HNK compounds have demonstrated the capacity to mitigate adverse emotions in rats subjected to the SPS&S paradigm. This effect may be attributed to the modulation of the PI3K/AKT signaling pathway in the HIP, PFC, and AMY, with a particularly notable impact observed in the HIP region. These findings suggest that targeting this pathway holds promise for alleviating negative emotions in individuals with PTSD

关键词: PTSD, negative emotions, PI3K/AKT, (2R,6R)-HNK

From Single To Multiple: The Association of Childhood Trauma with Frequent Nightmares Among Youth

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Objective Childhood trauma is a risk factor for frequent nightmares among youth. Notably, different childhood traumas are unlikely to occur in isolation but often co-occur. This study aimed to investigate the association between single and multiple childhood trauma exposures and frequent nightmares among youth

Methods Youth aged 12-25 were recruited from Fujian Province, China. Childhood trauma and frequent nightmares were assessed using an online questionnaire. Cumulative scores and latent class analysis were used to identify multiple childhood traumas. Logistic regressions were used to investigate the associations between childhood trauma types and frequent nightmares

Results Of 6145 participants, 27.2% (n=1670) reported frequent nightmares in the past year. Adjusted analyses showed emotional abuse (OR: 1.45, 95%CI: 1.23-1.87) and emotional neglect (OR: 1.19, 95%CI: 1.03-1.37) significantly increased the risk of nightmares. The risk of frequent nightmares increased with trauma numbers: 26% for one, 36% for two, and 51% for three or more, compared to none. Latent class analysis identified three multiple trauma patterns: “low abuse, low neglect” (n=3837), “low abuse, high neglect” (n=2089), and “high abuse, high neglect” (n=219), with increased nightmare risks of 26% and 47% in the latter two, respectively, versus the first. However, no significant difference was observed between “low abuse, high neglect” and “high abuse, high neglect” (OR: 1.17, 95% CI: 0.85-1.60)

Conclusion Our findings enhance the understanding of the heterogeneity of childhood traumas in youth and their association with nightmares. Prevention and treatment programs for nightmares should be tailored according to the different patterns of childhood traumas

关键词: Childhood trauma; Nightmares; Youth;

Cumulative score; Latent class analysis

肠道菌群失调导致的短链脂肪酸增加与精神分裂症系统免疫激活的关系研究

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目的 微生物-肠-脑轴的提出为研究精神分裂症 (Schizophrenia, SCZ) 免疫系统异常激活提供了新思路, 短链脂肪酸(Short chain fatty acids, SCFAs) 是肠道细菌的主要代谢产物, 因此我们提出肠道菌群紊乱诱导的 SCFAs 水平上调可能导致 SCZ 患者出现免疫激活。本研究通过比较 SCZ 患者和健康对照(Healthy control, HC)的血清和粪便 SCFAs 水平、肠道菌群和血清免疫激活标志物水平的差异, 识别与 SCZ 免疫系统异常激活有关的肠道细菌及 SCFAs, 探讨肠道菌群及其重要代谢产物 SCFAs 在 SCZ 发病中的作用。

方法 本研究纳入 SCZ 患者 148 例和 HC 147 例。使用串联四极杆质谱和气相色谱-质谱联合法检测血清和粪便中的 SCFAs (乙酸、丙酸、丁酸) 水平; 采用宏基因组测序分析肠道菌群的多样性及差异; 选用 Luminex 高通量平台检测受试者血清 4 种免疫激活标志物 (CRP、IL-6、sIL-2R 和 sCD14) 的水平。最后基于免疫激活标志物浓度, 通过两步聚类分析将受试者分为“免疫激活”和“非免疫激活”两个亚组, 再结合以上结果进行联合分析。

结果 我们首先分析两组人群血清和粪便中 SCFAs 的浓度, 发现 SCZ 组血清和粪便中乙酸、丙酸和丁酸水平及其总和均显著高于 HC 组 ($P < 0.0001$)。肠道菌群分析结果表明 SCZ 组在菌种水平上表现出更大的 α -多样性 ($P < 0.001$), β -多样性也存在显著差异, 并且有 67 个菌种和至少一种 SCFAs 水平相关 ($FDR < 0.05$)。血清免疫激活标志物的结果表明, SCZ 组血清 CRP、IL-6、sIL-2R 和 sCD14 水平均高于 HC。接着将所有受试者分为“免疫激活” (65 名病例和 31 名对照) 和“非免疫激活” (41 名病例 117 名对照) 两个亚组, 发现 SCZ 免疫激活组的血清 SCFAs 水平高于 SCZ 非免疫激活组及 HC 组 ($P < 0.0001$)。最后, 我们观察 SCZ 患者免疫激活组的肠道菌群特征, 发现 SCZ 免疫激活组

肠道菌群的 α -多样性高于非免疫激活组 ($P = 0.0032$), 也高于 HC 免疫激活组 ($P < 0.001$), β -多样性分析表明 SCZ 免疫激活组的肠道微生物组成与其它三组有显著差异 ($P = 0.001$), 也就是说 SCZ 免疫激活组患者的肠道菌群与其它三组相比是明显紊乱的。

结论 肠-脑轴失调导致的 SCFAs 改变是 SCZ 免疫激活重要介质, 这为进一步揭示 SCFAs 在 SCZ 发病机制中的作用提供依据, 同时为探索 SCZ 的潜在治疗靶点提供了新的思路。

关键词: 精神分裂症; 免疫激活; 短链脂肪酸; 肠道菌群。

精神分裂症患者静息态功能磁共振研究

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目的 探索精神分裂症患者神经元功能异常区域, 静息态脑网络之间的功能连接状态差异, 并探究相关功能影像学指标与临床心理学量表的相关性, 探究其潜在的神经影像学机制。

方法 精神分裂症患者及同时期招募的健康人群, 均使用磁共振室的美国通用公司 GE 750 3.0T 磁共振扫描仪采集磁共振数据。数据分析从功能分离及功能整合两方面进行, 功能分离采用低频振幅 (ALFF) 分析和局部一致性 (ReHo) 分析, 功能整合基于独立成分分析方法, 同时采用滑动时间窗和 K-means 聚类等技术动态分析脑网络之间的功能连接状态, 对所得到的功能连接状态以及平均滞留时间、时间分数以及转换次数进行组间比较。

结果 1. ALFF 值组间差异脑区: 以年龄、性别、受教育年限作为协变量进行两组间独立样本 t 检验, 精神分裂症患者组在脑桥、左侧梭状回、中脑及胼胝体区 ALFF 值增高。

2. ReHo 值组间差异脑区: 以年龄、性别、受教育年限作为协变量进行两组间独立样本 t 检验, 精神分裂症患者组在右侧脑岛, 左侧中央后回 ReHo 值下降, 在左侧颞下回 ReHo 值增高。

3. 两组间差异脑区 ALFF 值以及 ReHo 值与 PANSS 量表相关性分析结果: 精神分裂症患者组左侧梭状回 ALFF 值和胼胝体 ALFF 值与阳性症状总分均呈负相关, 中脑 ALFF 值和脑桥 ALFF 值与阴

性症状总分均呈正相关。

4. 两组间差异脑区 ALFF 值以及 ReHo 值与斯奈思-汉密尔顿快感量表 (SHAPS) 总分相关性分析结果: 采用偏相关分析, 精神分裂症患者组右侧脑岛 ReHo 值及左侧中央后回 ReHo 值与斯奈思-汉密尔顿快感量表总分呈正相关。健康对照组中脑 ALFF 值、左侧梭状回 ALFF 值及左侧中央后回 ReHo 值与斯奈思-汉密尔顿快感量表总分呈正相关。

结论 1、本研究采用独立成分分析方法, (1) 在相关性分析中, 我们发现精神分裂症患者视觉网络-听觉网络之间功能连接减低越显著则精神分裂症患者阳性症状越重。(2) 感觉运动网络、听觉网络、视觉网络与心理韧性的关系。(3) 在与认知功能相关性分析中, 感觉运动网络、视觉网络、听觉网络之间功能连接下降。

2、在基于独立成分分析的动态功能网络功能连接差异分析中, (1) 额顶网络调节着默认网络与背侧注意网络, 同时背侧注意网络与初级感觉运动网络相联系, 精神分裂症患者以上网络间的功能连接降低, 网络功能平衡失调, 从而导致患者认知功能紊乱。(2) 在动态功能连接指标分析中, 结果表明精神分裂症患者在视觉网络、感觉运动网络等初级感觉运动网络功能活动增加, 以及在默认网络、背侧注意网络、额顶网络等高级认知功能网络功能活动降低的状态下持续时间更长。

关键词: 精神分裂症, 静息态功能磁共振, ALFF 值, ReHo 值, 独立成分分析, 动态功能连接

肠菌产物 MDP 参与精神分裂症发生及其机制探讨

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目的 本研究对青春期小鼠进行胞壁酰二肽 (MDP) 慢性干预, 评估小鼠行为学改变, 结合代谢组和转录组学分析 MDP 对小鼠外周代谢水平及脑内神经炎症、神经递质基因表达水平的改变, 以揭示肠菌产物 MDP 在精神分裂症发病机制中的作用。

方法 本研究构建 MDP 慢性干预小鼠模型, 利用旷场、新颖物体识别、三箱社交、糖水偏好、悬

尾、强迫游泳及前脉冲抑制实验等多项行为学实验, 评估青春期持续摄入低剂量 MDP 对小鼠行为表型的影响。随后利用高通量多因子液相芯片技术 (Luminex) 检测小鼠血浆多种细胞因子水平, 评估 MDP 对小鼠外周免疫的影响; 通过非靶向代谢组学技术, 分析 MDP 慢性干预对外周代谢水平的影响。同时, 通过免疫组织化学技术, 分析 MDP 作用脑区及对相应脑区小胶质细胞形态学的影响。通过转录组测序技术, 分析 MDP 慢性干预对相应脑区基因表达水平的改变。此外, 通过体外细胞实验 MDP 干预 BV2 小胶质细胞, 检测培养上清相关细胞因子的 mRNA 表达水平。最后通过联合分析, 对外周差异代谢物、脑内差异表达基因、炎症因子水平及精神分裂样行为之间的相关性进行探讨。

结果 (1) 青春期 MDP 慢性干预诱导小鼠精神分裂样行为表型, 表现为活动增多、感觉运动门控失调、社交减少、记忆认知受损及抑郁样行为, 提示 MDP 水平升高与精神分裂症的发生发展有关。

(2) 与盐水组相比, MDP 干预后小鼠外周血浆细胞因子 IL-1 β 水平升高, 同时色氨酸-犬尿氨酸、三羧酸循环代谢通路显著下调, 脂类分解代谢、类固醇激素生物合成代谢通路上调。(3) 免疫组织化学染色表明 MDP 干预引起精神分裂样表型小鼠海马及前额叶皮质 c-Fos 阳性细胞数量显著增多, 且海马及前额叶皮质 Iba-1 阳性小胶质细胞数量增多、胞体增大、突触分支增粗。转录组测序揭示了海马中炎症及神经营养因子相关基因表达失调, 而前额叶皮质中部分炎症和神经递质相关基因显著失调, 且这些差异表达基因与外周炎症因子及差异代谢物之间存在显著相关性。细胞实验进一步验证, MDP 干预引起 BV2 小胶质细胞 IL-1 β 和 IL-6 的 mRNA 表达水平显著升高。

结论 本研究是在我们课题组前期研究首次发现精神分裂症患者 MDP 水平上调且与病程呈正相关的基础上, 在动物模型中验证了肠菌产物 MDP 慢性干预能够诱导小鼠精神分裂样行为, 提示 MDP 可能是精神分裂症患者免疫激活的上游介质之一。并提出 MDP 通过外周免疫及代谢改变直接或间接引起中枢神经系统变化, 从而引起精神分裂症的发生, 为精神分裂症患者肠道菌群紊乱、全身免疫激活、神经炎症和神经发育异常提供了新的视角和理论基础。

关键词: 精神分裂症; 胞壁酰二肽; 神经炎症; 代谢

Emotional Abuse and Suicide in Depressed Adolescents: The Mediating Role of Internet Addiction and Empathic

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Objective People with depression appear to experience higher levels of emotional abuse (EA) and suicidal behavior. However, no studies have provided estimates of through what factors EA influences suicidal ideation (SI) in adolescents with depression. The present study examined the effects of internet addiction on the relationship between EA and SI in a Chinese adolescent depression population

Methods 262 adolescents with depression (198 females) completed the evaluation of the Childhood Trauma Questionnaire-Short Form, Center for Epidemiologic Studies Depression Scale, the Internet Addiction Test, the Interpersonal Reactivity Index, Positive and Negative Suicide Ideation

Results Female adolescent depressed patients were more likely to experience emotional abuse than males (83.03% vs.70.00%), and depressed adolescent patients who experienced EA scored significantly higher on SI, CESD score than the no EA group. In addition, adolescent depressed patients with internet addiction were more likely to have suicidal ideation, and they scored higher on depressive symptoms and emotional abuse. Bivariate analysis found a significant positive association between internet addiction and EA. Empathic was associated with internet addiction independent of EA and SI. SI was significantly and positively correlated with EA and internet addiction. The structural model showed that internet addiction was a mediator of EA and SI, and empathic could strengthen this mediating effect of internet addiction

Conclusion Alexithymia and insomnia have an impact on SI in adolescents with depression who have experienced SA. These findings remind that attention

should be paid to the role of internet addiction and empathic in depressed adolescents. Contributing to the development of effective interventions to prevent suicidal behavior in depressed adolescent patients.

关键词: depression, emotional abuse, internet addiction, empathic, suicide

海马星形胶质细胞在创伤后应激障碍导致的恐惧记忆消退障碍中的作用

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目的 创伤后应激障碍患者往往伴随恐惧记忆消退障碍。而海马脑区被认为是负责调控记忆习得, 巩固和消退的主要脑区之一。但是海马脑区在 PTSD 后恐惧记忆消退障碍中的作用依旧不清。星形胶质细胞作为脑内支撑, 营养, 调节神经元功能的主要胶质细胞之一, 其在恐惧记忆调节中的作用还知之甚少。因此本课题旨在研究海马星形胶质细胞在创伤后应激障碍导致的恐惧记忆消退障碍中的作用及其作用机制。

方法 本实验采用小鼠单次长时间压力刺激及足底电刺激模型 (SPS&S) 模型模拟动物 PTSD, 利用条件性恐惧记忆范式研究 PTSD 后小鼠恐惧记忆消退的变化。同时利用光遗传学和化学遗传学手段研究星形胶质细胞对于 PTSD 后小鼠恐惧记忆消退的调节作用。利用单细胞测序, 免疫组化及病毒干扰技术研究星形胶质细胞对 PTSD 后小鼠恐惧记忆消退调节的分子通路机制。

结果 实验发现小鼠 PTSD 后产生显著的恐惧记忆消退障碍, 并且伴随海马脑区星形胶质细胞数量显著下调和形态变化, 提示星形胶质细胞可能参与到 PTSD 的病程发展中。激活星形胶质细胞的功能可以缓解 PTSD 造成的恐惧记忆消退障碍。单细胞核测序结果发现 PTSD 后海马星形胶质细胞中 AQP4 和一系列细胞黏着分子 (如 Ncam1) 表达显著下调。同时利用 cellchat 发现海马内星形胶质细胞和兴奋性神经元的连接通路发生显著变化。

结论 本实验发现海马脑区星形胶质细胞可以调节 PTSD 导致的恐惧记忆消退障碍, 同时揭示星形胶质细胞中一些信号通路和星形胶质细胞-神经

元信号通路连接变化在 PTSD 后恐惧记忆消退障碍中的作用。本研究将为阐明创伤后应激障碍的发病机制提供更多实验依据, 并为其提供潜在有效的治疗药物靶点。

关键词: 创伤后应激障碍 海马 星形胶质细胞 恐惧记忆消退

青少年网络游戏障碍患者静息态功能磁共振脑神经元自发活动改变

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目的 网络游戏障碍 (Internet Gaming Disorder, IGD) 被定义为长期忽略个人、家庭和社会等众多负面后果, 过多或不受控制沉迷网络游戏, 导致患者的人际关系、社会功能和身心健康受损。美国精神病学学会已将 IGD 纳入第五版《精神障碍诊断及统计手册》(DSM-5) 中, 世界卫生大会也将“游戏障碍”正式纳入 ICD-11“成瘾行为所致障碍”疾病单元。IGD 已成为影响青少年人群身心健康的一类疾病, 因此探讨影响青少年 IGD 的发展因素具有重要意义。

方法 纳入 12-18 岁青少年网络游戏障碍患者 52 例及年龄、性别、受教育年限相匹配的健康对照组 51 例, 完成对患者组与健康对照组的汉密顿抑郁量表 (Hamilton Depression Scale, HAMD)、汉密顿焦虑量表 (Hamilton Anxiety Scale, HAMA) 评定, 并使用 3.0T 功能磁共振采集静息态脑影像分析患者组与健康对照组的低频振幅 (amplitude of low-frequency fluctuations, ALFF) 有统计学差异的脑区, 并以差异的脑区作为感兴趣区分析全脑功能连接 (functional connectivity, FC)。

结果 与健康对照组相比, 青少年网络游戏障碍患者的 HAMD、HAMA 得分高于健康对照组 ($P<0.05$)。脑功能方面, 患者组在右侧顶上回、右侧顶下缘角回、右侧中央前回、右侧缘上回、右侧中央后回、右侧背外侧额上回及右侧额中回的 ALFF 值增高 ($P<0.05$), 在左侧小脑上脚、左侧梭状回、左侧颞极、左侧海马旁回、左侧眶部额上回及左侧眶内额上回的 ALFF 值降低 ($P<0.05$)。以右侧背外侧额上回作为感兴趣区分析全脑 FC, 发现与健康对照组相比, 患者组右侧背外侧额上回与右侧壳核、

右侧杏仁核、右侧岛叶的 FC 强度降低 ($P<0.05$)。

结论 青少年网络游戏障碍患者的 HAMD、HAMA 得分高于健康对照组。同时, 患者组静息状态下右侧背外侧额上回自发神经元活动增强, 与多个脑区之间的 FC 强度降低。背外侧额上回在抑制控制和奖赏系统中起重要作用; 壳核参与奖赏和情绪的激活, 它的激活与成瘾刺激引起的渴望密切相关; 杏仁核参与感知和激发负性情绪; 岛叶参与情绪调控和决策制定等。以上综合说明, 青少年网络游戏障碍患者往往伴有抑郁、焦虑的负性情绪, 他们在游戏中感知负性情绪的能力下降、情绪调控能力下降, 及长期决策能力受损, 使患者面对负性情绪时等更易选择网络游戏, 并长时间进行游戏难以脱身; 同时患者的抑制控制能力受损, 奖赏系统易激活, 对游戏线索更易产生渴望, 无法抑制对游戏的冲动。以上因素共同促进游戏障碍的发展。

关键词: 青少年; 网络游戏障碍; 静息态功能磁共振; 低频振幅; 功能连接

人类条件恐惧的阈下消退效果及作用机制研究

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目的 恐惧具有生存价值, 但适应不良的恐惧记忆与创伤后应激障碍和恐惧症等精神疾病有关。临床常用的暴露疗法有效, 但直面恐惧会引起极度痛苦, 这可能导致患者无法接受和坚持治疗。心理生理学实验表明恐惧可以阈下表达和习得, 但以往的研究较少关注恐惧的阈下消退。因此, 本研究拟测试条件恐惧的阈下消退效果, 并通过功能磁共振探索条件恐惧习得和消退的相关脑区激活。

方法 本研究包含行为学实验和功能磁共振实验。行为学实验分为三个阶段: 习得、消退、测试, 阶段间间隔 24 小时。习得阶段采用经典的差异条件恐惧范式建立恐惧记忆; 消退阶段分为阈上消退、阈下消退和闪烁消退, 通过后向掩蔽设置阈下条件; 测试阶段通过计算消退保留指数来比较三种方法的消退效果。实验前采集人口学资料和量表数据; 实验过程中采集皮肤电导反应, 并将其作为条件恐惧的习得标准; 每个实验阶段结束后采集主观评价,

包括紧张度、喜爱度以及电击概率的评分。功能磁共振实验采用相同的实验范式 and 数据分析。

结果 行为学实验表明三组被试的人口学资料、量表评分、主观评价均无组间差异；在习得阶段，三组被试建立的条件恐惧强度一致；在消退阶段早期，阈上消退组和阈下消退组的被试均成功唤起了条件恐惧；在测试阶段，根据皮肤电导反应计算出的消退保留指数表明，阈下消退和阈上消退的消退保留效果相似，两组均强于闪烁消退组，且闪烁消退组出现了明显的条件恐惧自发恢复。功能磁共振实验成功重复了行为学实验的结果，fMRI 结果显示：在习得阶段，CS+在双侧脑岛、左侧旁扣带回等脑区引起了显著激活，而在左侧眶内侧额上回、右侧楔前叶等脑区引起了显著失活。在消退阶段早期，与习得阶段类似，CS+使得左侧眶内侧额上回失活，这进一步支持了条件恐惧的唤起。在消退学习期间，与阈上消退组相比，阈下消退组的 CS+在左侧中央后回、右侧背外侧额上回、右侧岛盖部额下回、左侧外侧眶回等脑区引起了更强的激活。

结论 本研究表明阈下消退与阈上消退的消退保留效果相似，且阈下消退能够有效减少条件恐惧的自发恢复。将利用恐惧的无意识处理机制的阈下消退转化为临床应用的无意识暴露可能可以显著减少患者在治疗期间的痛苦，并为恐惧记忆相关精神疾病的干预提供新方向。

关键词：条件恐惧，阈下消退，联想学习，皮肤电导反应，功能磁共振成像

The Role of Resilience in Predicting Stress Susceptibility Phenotypes by Social Hierarchy

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Objective While most individuals experience traumatic events at some point in their lives, only a small percentage (7-8%) develop symptoms of PTSD.

This discrepancy underscores the significance of individual differences in stress susceptibility and the importance of identifying susceptibility factors. Social hierarchy significantly influences stress vulnerability and the risk of mental disorders. Additionally, individual psychological resilience, the ability to recover from trauma, plays a crucial role in PTSD recovery. However, the exact mechanisms remain unclear

Methods This study employed the single prolonged stress (SPS) model in male C57BL/6J mice to validate three stress phenotypes and investigate the role of psychological resilience in recovery. Subsequently, a chronic social defeat stress (CSDS) model, more reflective of human social contexts, was used to evaluate the impact of social hierarchy on stressed mice behaviors and the role of resilience in recovery. Social hierarchy was established using the tube test (TT) and validated through the territorial urine marking assay (TUMA) and warm spot test (WST). Behavioral assessments included the social interaction test (SIT), open field test (OFT), elevated plus maze test (EPMT), and forced swim test (FST)

Results Dominant mice, compared to subordinate mice, are more susceptible to traumatic events and exhibit stronger stress-sensitive behavioral phenotypes. However, dominant mice recover from trauma more easily. Over time, dominant resilient mice recovered more quickly from anxiety-like and depressive-like behaviors. Resilient mice gradually returned to pre-CSDS behavioral levels. By day 14 post-CSDS, neither dominant nor subordinate resilient mice showed significant differences from the control group

Conclusion Social hierarchy is a crucial predictor of stress susceptibility, with dominant mice showing greater initial vulnerability to traumatic events but also exhibiting a stronger capacity for recovery over time. Psychological resilience plays a key role in this process, over time, resilient mice gradually returned to their pre-CSDS behavioral levels by day 14 post-CSDS, showing no significant differences from the control group. Understanding the interplay between social hierarchy and psychological resilience in stress responses can aid in identifying high-risk individuals and inform targeted interventions for PTSD prevention and treatment. Further

research is needed to elucidate the molecular mechanisms underlying these findings

关键词: PTSD, Social hierarchy, Psychological resilience, Stress susceptibility, CSDS

Single-cell Analysis of The Cellular Heterogeneity and Interactions in Traumatic Brain Injury Induced Depression and Anxiety Mice Model

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Objective Mood disorders, including anxiety and depression, are the major long sequelae of traumatic brain injury (TBI), while the underlying cellular and molecular mechanisms remain elucidated, especially the contributions of glial cells mediated neuroinflammation. Previous studies show inhibition of microglia-mediated neuroinflammation by minocycline may improve the functional outcome in TBI animal models. But the mechanism of neuroprotection is still unclear. Also it is unknown whether microglia make contributions to mood disorders following TBI

Methods To generate mood disorders after TBI, we established a mouse controlled cortical impact (CCI) model and examined CCI mice by a series of behavior tests. We then collected the injury tissues from CCI mice with or without minocycline treatment at 1, 3, 7 day(s) post injury, and conducted single-cell RNA-sequencing, and performed differential expressed genes, gene ontology, cell trajectory, inferred cell-cell interaction analysis to determine the cellular and molecular mechanisms at single cell level

Results We recaptured anxiety- and depression-like behaviors by impacting the prefrontal cortex region and at moderate severity in our CCI model, which were successfully attenuated by minocycline treatment. High-throughput single cell transcriptome analysis revealed cellular and transcriptional dynamics along the CCI pathogenesis, yielding a large number of genes that were either commonly regulated among multiple cell

types (e.g. *Spp1*, *Apod*, *Lgals1/3*, *Serpina3n*) or specific to certain cell types (such as homeostasis marker genes of glial cells). The heterogeneity and disease-associated signatures of glial cells and their unique responsive program were also identified. We found minocycline could inhibit reactivation of microglia and astrocytes by down-regulating disease-associated and MHC-I genes and up-regulating homeostatic genes. Minocycline also modified crosstalk between microglia and astrocytes by impairing dozens of signaling pathways, such as up-regulating potential beneficial EGF signaling pathway, mediated by microglial *Tgf- α* and astrocyte *Egfr*, and down-regulating harmful SEMA4 signaling pathway, mediated by microglia *Sema4d* and astrocyte *Plexinb1/Plexinb2*

Conclusion In summary, our study reveals the cellular and molecular dynamics of TBI pathology at single cell level, highlights the crucial roles of glial cells and neuroinflammation in mood disorders following TBI and shows the potential mechanisms of minocycline to attenuate mood disorders

关键词: traumatic brain injury, mood disorder, minocycline, microglia, astrocyte, microglia-astrocyte interaction

The Role of Hippocampal 17 β -Estradiol in Cognitive Memory During Fear Memory Reconsolidation in PTSD Model Rats

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Objective To explore the role of hippocampal 17 β -estradiol (17 β -E2) in modulating cognitive memory during the reconsolidation period of fear memory in rats with post-traumatic stress disorder (PTSD)

Methods 40 female Sprague-Dawley rats (8 weeks old) were randomly divided into blank control group, model group, hippocampal solvent control group and hippocampal estradiol inhibitor group by random

number table method, with 10 rats in each group. PTSD models were established in all groups except the blank control group using single prolonged stress (SPS) and contextual fear conditioning (CFC). The hippocampal solvent control group received a single bilateral injection of dimethyl sulfoxide (DMSO) (0.5 μ L per side) during the fear memory consolidation period, while the hippocampal estradiol inhibitor group received a single bilateral injection of letrozole (Let) (0.5 μ L per side) in the hippocampus. To assess anxiety levels and autonomous exploration ability, the open field test and the elevated plus maze test were utilized. The fear memory was evaluated using the freeze test, while the non-spatial memory was assessed with the novel object recognition test. The molecular changes in brain-derived neurotrophic factor (BDNF), extracellular signal-regulated kinases 1 and 2 (ERK1/2), and phosphorylated ERK1/2 (p-ERK1/2) were quantified using Western blot, immunofluorescence, and RT-qPCR techniques

Results Significant differences were observed among the four groups in the open field test, elevated plus maze test, freeze test, and novel object recognition test. The model (SPS-CFC) group exhibited shorter travel distances, less time spent in the open arms, longer freezing times, and lower cognitive indices compared to the control group. Additionally, the hippocampal estradiol inhibitor (SPS-CFC-Let) group demonstrated reduced travel distances, decreased time in the open arms, increased freezing times, and lower cognitive indices compared to the hippocampal solvent control (SPS-CFC-DMSO) group. Western blot and immunofluorescence results showed that hippocampal BDNF, p-ERK1/2, and ERK1/2 protein levels were lower in the SPS-CFC group compared to controls, and reduced in the SPS-CFC-Let group relative to the SPS-CFC-DMSO group. RT-qPCR revealed decreased mRNA levels of these proteins in the SPS-CFC group compared to controls, and in the SPS-CFC-Let group compared to the SPS-CFC-DMSO group

Conclusion Inhibiting hippocampal 17 β -E2 with letrozole significantly increased anxiety and fear responses while decreasing exploratory behavior and cognitive memory. Hippocampal 17 β -E2 alleviates

PTSD symptoms by enhancing neuroplasticity and cognitive function, potentially involving the regulation of BDNF and ERK1/2 signaling pathways

关键词: Post-traumatic stress disorder, Fear memory, Memory reconsolidation, 17 β -Estradiol, Letrozole

A Bayesian Network and Metabolomics-Based Study of Relapse Risk in Patients with Bipolar Disorder

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Objective Bipolar disorder (BD) is a common mental disorder with complex clinical manifestations. Patients with BD often experience depressive or/and manic (or hypomanic) episodes that meet the symptomatological criteria and are characterized by recurrent episodes, and the repeated episodes in patients with BD lead to repeated hospitalizations and significant cognitive impairments unrelated to the severity of depressive symptoms, which places a significant burden on families and society. Therefore, understanding the risk factors for relapse of BD and reducing the likelihood of relapse are urgent clinical problems that need to be solved, which are also important for the regression of the disease and improvement of the prognosis of patients. In this study, we conducted a one-year follow-up of patients who had reached clinical recovery from acute BD treatment, with the aim of exploring the predictive value of demographic, psychosocial, clinical symptoms and treatment, and metabolomic indices for BD relapse at baseline, and exploring the relationship between the indices through the development of a predictive model using Bayesian networks

Methods 1. Sample collection: Patients in the acute phase who met the clinical diagnostic criteria for BD in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) and the inclusion exclusion criteria were invited to participate in the study and to sign an informed consent form

2. Case report forms: These included demographic information, psychosocial questionnaires, clinical symptom scales, and medication record forms, which were collected by researchers after rigorous and systematic training on sample indicators.

3. Metabolomics: Biological blood samples are gathered and spun at 3000 revolutions per minute for a duration of 15 minutes using a centrifuge. After centrifugation the samples are stored in a refrigerator at -80°C . When required for analysis, plasma samples were thawed, and compounds were separated. The separated samples were sent to a Bruker 600 MHz AVANCE III NMR instrument to obtain a typical ^1H NMR spectrum. In order to accurately identify the substances in the spectra, the Fourier transform, phase and baseline adjustments were performed using MestReNova software.

4. Follow-up: Patients who have been treated for the acute phase of BD to the standard of clinical recovery are followed up for a period of one year to observe the relapse or non-relapse of the outcome variable.

5. Statistical analysis: (1) Metabolomics analysis: the integration data were entered into SIMCA-P 14.1 software, analyzed using PLS-DA and OPLS-DA methods, and an OPLS-DA score map was generated. Subsequently, the corresponding loading map was constructed based on this score map. To further validate the differential metabolites, we performed t-tests on these metabolites in SPSS 26.0 software and screened the metabolites with VIP values greater than 1 and p-values less than 0.05 as significantly different metabolites; (2) The one-way chi-square test was performed after classifying and assigning values to demographic data, psychosocial indicators, clinical symptoms and treatment data, and metabolomics indicators, and logistic regression analysis was performed on the indicators exhibiting significant differences ($P < 0.05$)

6. Bayesian Networks: The independent indicators of influence from the results of the logistic regression analysis were incorporated into a Bayesian network model constructed on the basis of the contraindication search algorithm to explore the topology of the network among the risk factors for recurrence of BD, as well as the interactions among the factors.

Results 1. Metabolomics: 5 significantly different serum metabolites could be identified as potential biomarkers of relapse, with significant ($P < 0.05$ or $P < 0.01$) down-regulation of acetone, O-acetylglucoprotein, alanine and significant ($P < 0.05$ or $P < 0.01$) increase in glycerophosphorylcholine, phosphorylcholine; BD relapse is mainly associated with phospholipid biosynthesis, lysine degradation, phosphatidylcholine biosynthesis, and sphingolipid metabolic pathways

2. One-way chi-square test: Gender ($P = 0.029$) and smoking history ($P < 0.001$) in demographic data; open personality traits ($P = 0.03$), negative life events ($P = 0.024$), and familial ambivalence ($P = 0.047$) in psychosocial indicators; and duration of the disease ($P = 0.027$), baseline depression level ($P = 0.011$), sleep disturbance ($P = 0.019$), non-suicidal self-injury ($P = 0.004$), mood stabilizers ($P = 0.009$), antidepressant medication ($P = 0.01$), and individual psychotherapy ($P = 0.001$) in clinical symptomatic and treatment data; Metabolomics indicators of acetone ($P = 0.004$), alanine ($P = 0.002$), and phosphorylcholine ($P < 0.001$) were statistically significantly different in BD relapse outcomes.

3. Logistic regression: Independent risk factors for BD relapse were smoking history (OR=4.858, 95% CI: 1.121~21.044), sleep disorders (OR=5.617, 95% CI: 1.172~26.908), negative life events (OR=4.935, 95% CI: 1.260~19.335) and phosphorylcholine (OR=6.851, 95% CI: 1.391~33.743); protective factors were mood stabilizers (OR=0.189, 95% CI: 0.041~0.869), individual psychotherapy (OR=0.187, 95% CI: 0.038~0.907), acetone (OR=0.121, 95% CI: 0.022~0.659) and alanine (OR=0.188, 95% CI: 0.046~0.768).

4. Bayesian network: From the Bayesian network topology, it can be seen that smoking history, individual psychotherapy, negative life events, acetone, alanine, and phosphorylcholine are direct influences on the relapse of BD; whereas sleep disorders as well as mood stabilizers are indirect influences on the relapse of BD.

Conclusion 1. Acetone, O-acetylglucoprotein, alanine, glycerophosphorylcholine, and phosphorylcholine may be potential biomarkers for BD relapse, and the relevant pathways are phospholipid biosynthesis, lysine degradation, phosphatidylcholine biosynthesis, and sphingomyelin metabolic pathway

2. Smoking history, individual psychotherapy, negative life events, acetone, alanine, and phosphatidylcholine are direct risk factors for BD recurrence; individual psychotherapy, and alanine can also be indirect risk factors for BD recurrence. Mood stabilizers and sleep disorders are indirect risk factors for BD recurrence.

3. The Bayesian network has high sensitivity and specificity, and the indicators of each factor have good predictive value for BD relapse and can well reflect the dependence relationship between the nodes of each indicator.

关键词: Bipolar disorder; Relapse risk factors; Metabolomics; Biomarkers; Bayesian network

Role of VTA Dopaminergic Neurons in Regulating Post-Traumatic Stress Disorder (PTSD) Behaviors and The Underlying Mechanisms

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Objective Accumulating evidence has demonstrated that dysfunctions in the ventral tegmental area (VTA) dopamine system are involved in the etiology of PTSD. This study aims to investigate the impact of VTA dopaminergic neurons on behaviors associated with post-traumatic stress disorder (PTSD) and to elucidate the underlying neural mechanisms

Methods Single-cell sequencing of VTA tissue was conducted to analyze differential gene expression in dopaminergic neurons, with a focus on dopamine synthesis and synaptic signaling in the context of PTSD pathogenesis. Chemogenetic techniques were employed to specifically activate VTA dopaminergic neurons, and their behavioral effects were assessed in PTSD model rats using open field, elevated plus maze, and fear memory tests. In vivo extracellular electrophysiological techniques were utilized to examine the impact of PTSD

on the neural activity of VTA dopaminergic neurons, and to investigate the effects of chemogenetic activation on their firing frequency and patterns in PTSD model rats

Results PTSD induced differential gene expression in VTA dopaminergic neurons associated with dopamine synthesis and synaptic signaling. Activation of VTA dopaminergic neurons significantly ameliorated anxiety, depression, and freezing behaviors in PTSD model rats. PTSD markedly reduced the firing activity of VTA dopaminergic neurons, while activation of these neurons in PTSD model rats significantly increased their firing frequency and induced burst firing patterns, promoting dopamine release

Conclusion VTA dopaminergic neurons play a crucial role in encoding information related to PTSD. Activation of these neurons enhances their firing frequency and alters their firing patterns, thereby increasing dopamine release. This compensatory mechanism may mitigate the reduced dopamine function caused by PTSD, resulting in improved PTSD-related behaviors

关键词: Ventral tegmental area, Dopaminergic neurons, Post-traumatic stress disorder, Behavior

Impact of Duration of Untreated Illness on Clinical and Physical Measures in Young Patients with Major Depressive Disorder: A Large-scale Cross-sectional Study

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Objective Longer duration of untreated illness (DUI) leads to worse outcomes in depressed patients. However, there is a lack of research on DUI in younger depressed patients. This study aimed to investigate the association between the duration of DUI and clinical and physical measures in young depression.

Methods We recruited 1289 young patients with major depressive disorder (MDD) from the Department of Psychiatry at the First Hospital of Shanxi Medical

University. DUI was defined as the time between the onset of depressive symptoms and the initiation of pharmacological treatment. We used bivariate and multivariate analyses to examine the association between DUI and clinical and physical measures, adjusting for relevant covariates.

Results Participants who had not received treatment for 8 months or longer had higher odds of suicide attempts, increased TSH levels, and high-normal blood pressure compared to those who received treatment within 3 months in young patients with MDD. A one-month longer DUI was associated with higher odds of suicide attempts, increased TSH levels, high-normal blood pressure, overweight, and obesity in young patients with MDD.

Conclusion Our study found that a longer DUI in depression is associated with several adverse clinical and physical correlates. These findings underscore the importance of early intervention and treatment in managing depression

关键词: duration of untreated illness, clinical and physical measures, major depressive disorder

汇编交流

精准医学研究协作组

基于机器学习分类算法的拉莫三嗪血清稳态浓度达标预测

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目的 本研究通过应用 4 种机器学习算法 (XGBoost、LightGBM、CatBoost、随机森林), 以癫痫患者的人口统计学资料和用药方案为基础, 建立拉莫三嗪 (Lamotrigine, LTG) 血药浓度达标预测模型, 协助临床判断不同患者 LTG 稳态浓度能否达到治疗窗, 为个体化给药方案的制定提供参考。

方法 通过病历和检验系统收集患者的临床资料、合并用药和 LTG 血药浓度数据, 使用 Jupyter Notebook 对数据进行预处理。以 AGNP 共识指南中 LTG 的治疗窗作为达标准准。采用 KNN 算法插补缺失值, 对连续型变量作归一化处理, 分类型变量进行独热编码。将数据集按 7: 3 随机分为训练集和测试集, 分别用于模型建立和模型验证。以五折交叉验证法减少模型过拟合, 贝叶斯优化算法调整参数得到最佳模型。采用准确性、精确率、召回率、F1 值和 AUC 来评估模型的性能。

结果 总共收集到 277 例符合标准的患者的资料, 通过 XGBoost、LightGBM、CatBoost、随机森林 4 种算法成功建立预测模型, 4 个模型均能较好地预测 LTG 稳态浓度的达标情况, 准确性、精确率、召回率和 F1 值均大于 0.65, 而 AUC 均大于 0.85。综合各种参数, XGBoost 的预测能力最佳。

结论 本研究建立的 4 个预测模型能够较好地判断患者接受 LTG 治疗后血清浓度的达标情况, 可促进临床对治疗效果的评估, 为个体化用药提供参考。

关键词: 拉莫三嗪; 稳态浓度; 机器学习; 分类算法; 个体化用药

A Novel Approach for Depression Detection Through Extracted Skeletal Data During Scale Assessment

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Objective Depression was a widespread and high-risk mental disorder that could significantly affect thoughts, emotions, and behaviors. While recent studies explored techniques for detecting depression through body posture, depression detection researches utilizing skeletal data recorded by Kinect of scale assessment were still ongoing. Our goal was to establish a novel approach for depression detection that utilizes the skeletal data during scale assessment

Methods Depression patients' recruitment was perhaps the most challenging job of this research, after evaluating by the professional psychiatrists, which they would be pre-screened according to their treatment condition. Hamilton Rating Scale for Depression (HAMD), which is used the version contained 24 items (HAMD-24) in this experiment, provide an abbreviated indication of depression and a guideline for recovery assessment, which includes a multiple item questionnaire. It has been criticized for clinical practice using as it places more emphasis on insomnia than on feelings of hopelessness, self-destructive thoughts, suicidal cognition and actions, and the total score is compared to the corresponding descriptor

Although depression patients underwent preliminary screening and assessment by psychiatrists before participating in the experiment, there were still instances where some depression patients scale scored < 20, or even less than 8, leading to a diagnosis of no depressive symptomatic manifestations. Psychiatrists' analysis suggests that these depression patients might have experienced a period of hospitalization and received medication treatment, resulting in significant symptom improvement. Notably, patients who had undergone electroconvulsive therapy exhibited particularly lower scores after treatment compared to other patients. Subjects in the control group primarily comprised volunteer individuals recruited from the community, with the majority having relatively low or even zero scores on the depression scale.

Informed consent to participate in the study was

obtained from all subjects or their legal guardians. All participants in the study were aged between 18 and 65 years old. This study comprised 202 inclusion participants, each assessed by an experienced psychiatrist using the HAMD scale, as shown in figure 1. Data records with a total score of less than 8 in the depression group and records with a total score of more than 8 in the control group were excluded from the analysis. Following screening based on the scale's scoring criteria, a total of 89 depression patients were recruited from various sources, including the outpatient and inpatient departments of the Shandong Provincial Mental Health Center, to constitute the experimental group, and 113 healthy individuals were recruited from the general population to form the control group. Aging appears to be a significant factor contributing to limited human mobility. Therefore, we implemented age and gender matching conditions during the recruitment of social volunteers. This ensured that the age and gender distribution of the control group aligns more closely with that of the depression group. From the provided table 1, it is evident that the average age of the depression group is 39.21, with HAMD scores of 26.24. In contrast, the control group has an average age of 38.62, with HAMD scores of 0.99.

Participants, which included a depression group and a control group, were assessed using the Hamilton Rating Scale for Depression (HAMD-24), and we utilized Kinect V2 to capture human skeletal data. To extract the skeletal data and reduce noise, we developed a program that has been open-sourced for processing Kinect recorded files. With skeletal data extraction, feature analysis, and data preprocessing, the three human skeleton datasets were created using the hip joint as the splitting point, as follows: whole body skeleton joints dataset, upper body skeleton joints dataset, and lower body skeleton joints dataset. To enhance the classification capacity of temporal and spatial features within skeletal data, we designed Temporal Spatial Attention (Dep-TSA) for depression detection.

Results According to the scale's criteria, a total of 202 participants were included, with 89 depression patients as the depression group, with 113 socially recruited healthy individuals constituted the control group.

The proposed Dep-TSA model shown outstanding results compared to other models, achieving an accuracy of 72.13%, a specificity of 76.47% and a sensitivity of 66.67% on whole body skeleton joints dataset. It also attained accuracy of 67.32% on upper body skeleton joints dataset, and accuracy of 62.30% on lower body skeleton joints dataset

The data collection for the depression group in this study had limitations in terms of entry screening, as we did not investigate participants' past history of depression, and the current status statistics were not sufficiently comprehensive. The potential impact of whether participants were currently undergoing various treatment methods on the prevalence rate remains to be explored. It must be acknowledged that HAMD scores are not a definitive assessment, typically conducted through clinical diagnosis. Therefore, individuals identified as having depression based on entry screening criteria should not be categorically regarded as "true" depressive patients; rather, they indeed had a history of depression and were currently in a depressive state.

The skeletal feature descriptors presented in this study seemed to be based on specific motion directions and slightly subjective evaluations, limiting the ability to integrate different features into the predictive model employed. In our study, kinematic features may not have provided sufficient evidence of participant reflections. However, they more comprehensively covered the information reflecting individual psychological states during the stimulus task. Our results demonstrated that the computational model based on low-level features was effective in identifying the severity of depression as measured by questionnaires, highlighting the potential of this data-driven approach in the field of psychometrics.

Conclusion In this study, we recorded participants undergoing the assessment process of the HAMD using Kinect V2 devices to capture kinematic skeletal data. Subsequently, employing the Kinect-based skeletal extraction program developed in this paper, we extracted both the raw spatial features of the human skeleton captured by Kinect and the low-level features of 25 body joints based on temporal-spatial positional data

extracted directly from the recorded Kinect 3D coordinates and quaternion. After preprocessing the data with an average sliding window, we inputted it into a machine learning random forest algorithm. Utilizing the top 15 features selected as the dataset partitioning criteria, we divided the data into three datasets. The Dep-TSA deep learning algorithm designed by us achieved a certain level of classification accuracy on these three datasets. All these findings suggest that the depression recognition based on the kinematic skeletal data recorded during the HAMD assessment process with Kinect can serve as an effective auxiliary tool for assisting depression analysis. In future research, we plan to extend this study to the detection of the severity of depression for further investigation and exploration

关键词: Depression detection, Temporal attention, Spatial attention, Skeletal data

运动区低频重复经颅磁刺激联合盐酸氟西汀治疗强迫障碍的疗效与安全性观察

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目的 观察运动区低频重复经颅磁刺激联合盐酸氟西汀治疗强迫障碍的疗效与安全性。

方法 回顾性分析我院 2022 年 6 月到 2023 年 6 月所收强迫障碍患者的临床资料,共 100 例。按患者接受的治疗方式不同分为 2 组,药物治疗者为药物组,有 40 例;药物治疗+运动区低频重复经颅磁刺激(LF-rTMS)治疗者为联合组,有 60 例。比较 2 组患者的临床疗效、安全性差异,记录 2 组患者治疗前、治疗 1 个月、治疗后的强迫症状[强迫症状问卷评分(Y-BOCS)]并比较,记录 2 组患者治疗前、治疗后的焦虑抑郁症状[汉密尔顿抑郁量表(HAMD)、汉密尔顿焦虑量表(HAMA)]和生活质量[健康调查简表(SF-36)]并比较。

结果 比较 2 组患者的临床总有效率,联合组高于药物组,差异有统计学意义($P<0.05$);治疗 1 个月、治疗后,2 组患者 Y-BOCS 评分较治疗前明显降低,差异有统计学意义($P<0.05$);且联合组 Y-BOCS 评分在治疗后明显低于药物组,差异有统计

学意义($P<0.05$);治疗后,2 组患者 HAMD、HAMA 评分较治疗前明显降低,差异有统计学意义($P<0.05$);且联合组 HAMD、HAMA 评分在治疗后明显低于药物组,差异有统计学意义($P<0.05$);治疗后,2 组患者 PF、SF、RE、CH 评分较治疗前明显升高,差异有统计学意义($P<0.05$);且联合组 PF、SF、RE、CH 评分在治疗后明显高于药物组,差异有统计学意义($P<0.05$);比较 2 组患者的不良反应发生情况,差异无统计学意义($P>0.05$)。

结论 运动区低频重复经颅磁刺激联合盐酸氟西汀治疗强迫障碍患者可有效提高临床效果,改善患者强迫、焦虑、抑郁症状,提高患者生活质量,且安全性良好,可在临床推广应用。

关键词: 强迫障碍,运动区低频重复经颅磁刺激,盐酸氟西汀,临床疗效,安全性

精神病医院医务人员线上推动 TDM 对精神病居家患者减少 ADR 的实践

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如皋市精神病防治医院

目的 实施创新赋能、培育“智慧精防”医疗服务领域“新质生产力”的尝试探索。探讨基层精神病医院医务人员借助微信(群),公众号视频号线上推动开展药物浓度监测(TDM),对精神病居家患者安全合理精准用药、减少药品不良反应(ADR)的应用效果。

方法 医务人员与研究组精神病居家患者(家属)开展微信(群)交流、公众号视频号科普,应用文字图片语音视频科普链接传播等形式,线上讲解药物浓度监测的目的意义;强化灌输剖析开展 TDM 的必要性、紧迫性、科学实用性;远程推动拓展精神病药学服务,以促进患者居家服药的精准安全合理有效性、和降低药品不良反应发生率、危害性。

结果 医务人员借助微信(群)交流、公众号视频号科普,持续提供优质服务后,与未接受微信(群)等强化服务的患者比较,研究组精神病居家患者(家属)对药物浓度监测目的意义和相关知识的知晓率、患者(家属)对开展药物浓度监测的配合度、医务人员应用 TDM 监测数据及时精准持续参与完善患者治疗方案后病情好转率,与对照组相比,明显提高;

精神疾病疗程及复发率、药品不良反应发生率和危害性明显降低, ADR 监测、正确处置填报率上升; 患者满意度大幅提升, $P<0.05$, 具有统计学意义。

结论 基层医院医务人员借助微信(群), 推动开展药物浓度监测, 强化对精神病居家患者安全合理精准用药、促进治疗效果、减少药品不良反应、弥补居家患者不良反应监测处置薄弱环节的效果明显, 值得借鉴推广。

关键词: 治疗药物监测(TDM), 药品不良反应(ADR), 远程指导, 精准服务

精神病医院药师借助 PK/PD 理论+TDM 在药物超常量治疗一例老年精神病居家患者的实践

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目的 进行创新赋能、培育“智慧精防”医疗服务领域“新质生产力”的探索。探讨药师基于 PK/PD 理论+TDM(治疗药物监测)数据, 参与精神科门诊老年居家患者病情讨论, 在患者个体化精准药物治疗中的应用效果和价值。

方法 运用溯源法, 回顾一例老年精神病患者在居家药物治疗期间, 药师借助 PK/PD 理论, 依据 TDM 监测数据所处该药物治疗血液浓度安全范围区间位置, 建议门诊医师大胆而谨慎予以抗精神病药物奥氮平短期内超说明书常规药量(低于药物治疗极量)治疗、控制患者精神病症状的效果分析; 同时药师借助微信向患者解释治疗方案。

结果 药师基于 PK/PD 理论+TDM 数据, 根据监测数据所处该药物治疗血液浓度安全范围区间位置、结合该患者既往病史、身体状况、精神症状、治疗过程, 建议医生大胆而谨慎予以奥氮平短期内超说明书常规药量治疗(低于药物治疗极量), 控制患者精神病症状, 治疗效果明显好转, 获得好评。

结论 药师基于 PK/PD 理论+TDM 在精神科门诊老年居家患者个体化精准药物治疗应用中, 效果明显, 具有实用价值, 并且可以正确、准确、客观评判医师给予患者“超说明书”用药的治疗方案的合理性, 在后期的医嘱处方点评中具有重要的支撑价值, 值得借鉴。

关键词: PK/PD 理论, 治疗药物监测, 精准药物治疗, 个体化给药, 居家服药

精神病医院医务人员借助微信对精神病居家患者开展 ADR 监测指导处置的实践

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目的 探寻新时代医药学服务领域新质生产力的新思维的拓展方向和路径! 分析精神病医院医务人员借助微信(群、公众号、视频号)科普, 对精神病居家患者开展药物不良反应(Adverse Drug Reactions, ADR)监测指导处置的实践价值。

方法 将 2021 年 6 月-2023 年 4 月收治的 132 例精神病居家患者视为研究对象, 随机分为试验组和参照组, 每组 66 例。2023 年 5 月-2024 年 5 月期间, 医务人员给予参照组常规用药指导, 给予试验组在参照组基础上借助微信开展远程药学科普、ADR 监测处置等, 随访 13 个月, 对比两组患者的 ADR 发生指数、相关药学知识掌握率以及 ADR 发生后的正确处置率。

结果 试验组的 ADR 发生指数明显低于参照组, 存在统计学意义($P<0.05$); 试验组的 ADR 知识掌握率和 ADR 发生后的正确处置率均高于参照组, 存在统计学意义($P<0.05$)。

结论 对于精神病居家患者, 医务人员借助微信开展 ADR 监测处置的实践价值高, 一方面努力打通和延续药学服务的最后一米线, 减少 ADR, 弥补对居家精神障碍患者药物不良反应监测、处置、网上填报的薄弱环节, 另一方面有助于医务人员掌握相关医药学知识, 提高不良反应的正确处置率, 值得应用推广。

关键词: 新质生产力, 微信, 精神病, 居家患者, 药物不良反应

Genetic Overlap between Schizophrenia and Bipolar Disorder Reveals Shared Pathophysiological Mechanisms

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Objective Studies have shown similarities in clinical symptoms and biological markers between schizophrenia (SCZ) and bipolar disorder (BD), and research on genetic overlap has also demonstrated significant genetic correlations between the two. However, the impact of these shared genetic factors on the diseases remains poorly understood

Methods We utilized the hippocampus volume (HIPV) as an auxiliary phenotype for identifying pleiotropic genetic loci associated with BD and SCZ. Using conditional/conjunctional false discovery rate approach to evaluate overlap in common genetic variants and improve statistical power for genetic discovery. We established co-expression networks of the overlapping genes in SCZ and BD using BrainSpan's transcriptomes, and performed the gene set analysis of each gene subnetwork with symptoms in SCZ

Results We identified several loci shared between SCZ and left HIPV ($n = 8$) and right HIPV ($n = 13$), BD and left HIPV ($n = 1$) and right HIPV ($n = 3$). Twenty-two and seventy candidate genes mapped by shared loci for BD and SCZ, respectively, and twenty overlapping genes in SCZ and BD. Functional enrichment analysis pointed to the twenty genes being associated with 16p11.2 proximal deletion syndrome. According to the brain transcriptome data, it was found that the twenty genes were enriched for the transcriptional co-expression profile in prenatal primary auditory cortex, inferolateral temporal cortex and inferior parietal cortex, medial prefrontal cortex. Further gene-set analysis uncovered that the genes in the subnetwork of medial prefrontal cortex were significantly associated with negative symptom in SCZ

Conclusion The study indicated that SCZ and BD shared genetic basis with HIPV, and the genetic overlaps suggested shared neurobiological mechanisms between the two disorders

关键词: Schizophrenia; Bipolar disorder; Hippocampus volume; Genetic overlap; Network analysis

Mood Symptoms, Cognitive Function and Changes of Brain Hemodynamics in Patients with COVID-19: A Task-based and Resting-state fNIRS Study

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Objective The global COVID-19 pandemic has led to an increased incidence of mental health disorders, especially depression and anxiety. Many patients with COVID-19 may experience emotional issues and cognitive impairments. Life changes and stress are likely contributing factors. In addition, the impact of the COVID-19 virus on the brain may play a crucial role, as existing evidence suggests that the virus can directly affect the central nervous system through immune responses and inflammation. This study aimed to use functional near-infrared spectroscopy (fNIRS) to detect cortical hemodynamic changes in patients with acute COVID-19 infection and their relationship with mood symptoms (mainly depression and anxiety), so as to understand the effects of COVID-19 on brain function

Methods A total of 58 subjects, comprising 29 patients with acute COVID-19 infection and 29 healthy controls who had never been infected with COVID-19 and had no anxiety or depression were recruited. Then cortical activation during the performance of the verbal fluency test (VFT) and brain connectivity during resting state were conducted by 53-channel functional near-infrared spectroscopy (fNIRS). For COVID-19 infected group, Patient Health Questionnaire-9 (PHQ-9) and General Anxiety Disorder-7 (GAD-7) were used to assess the emotional state before fNIRS measures

Results For resting-state, compared to the uninfected group, the infected group exhibits lower resting-state functional connectivity (rsFC), a reduced number of Short-IIconnectivity, and a lower local efficiency and degree centrality in DLPFC-R. The number of Short-IIconnectivity and the global efficiency are positively correlated with both PHQ score and GAD score in infected group. During verbal fluency task, the infected group exhibited significantly lower cortical activation

than the uninfected group and the integral value has a significant difference in both Broca-L and Broca-R between two groups. The integral value in the DLPFC-L showed significant negative correlation with The PHQ-9 scoreduring VFT

Conclusion Our study provides a kind of evidence that the psychological and emotional issues brought about by COVID-19 are not only due to external social factors but also involve more direct brain neural mechanisms and abnormal neural circuits, which also provides insights for the future treatment and prognosis of individuals with COVID-19 that close attention should be given to mood symptoms and cognitive functions of patients in addition to monitoring respiratory symptoms

关键词: COVID-19, depression, anxiety, fNIRs, VFT, resting-state

异氟醚对小鼠抑郁样行为的影响及性别差异研究

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目的 氯胺酮快速抗抑郁的发现给抑郁治疗带来新的希望,但由于氯胺酮诸多不良反应限制其临床应用。其他麻醉药物随之引起大家关注,但仍然缺少确切的证据将麻醉药物应用于抑郁治疗。另一个未解之谜是抑郁症发病和治疗的性别差异及相关机制。男性和女性患 MDD 的风险不同,并且抗抑郁药在临床上的疗效存在性别差异。但目前临床在治疗抑郁症时很少或不考虑性别差异,了解和发展针对抑郁症的性别特异性治疗对于个体化精准医疗至关重要。本实验主要探究麻醉药物异氟醚对小鼠抑郁样行为的影响及性别差异。

方法 给予不同剂量的异氟醚:吸入 1%、1.5% 或 2%异氟醚 30 分钟,4 小时后对小鼠进行糖水偏好及强迫游泳行为检测,筛选药物使用剂量并探究其抗抑郁样行为作用时间。

结果 给予不同剂量的异氟醚发现,吸入 1%、1.5%或 2%异氟醚 30 分钟均能增加正常 C57 小鼠糖水偏好但只有 1.5%异氟醚能减少小鼠强迫游泳

不动时间。对性别进一步分析发现,雄性小鼠吸入 1%异氟醚后糖水偏好增加较雌鼠更显著,1.5%异氟醚能同时增加雄性和雌性小鼠的糖水偏好,2%异氟醚仅能增加雄性小鼠的糖水偏好;不同剂量的异氟醚对小鼠的强迫游泳时间影响无明显性别差异。在后续实验中选用 1.5%异氟醚剂量继续探究异氟醚行为改善作用的时间窗。对异氟醚作用时间窗实验结果探究,吸入 1.5% 的异氟醚 4 小时后增加小鼠的糖水偏好,不影响小鼠在旷场中的运动总距离及平均运动速度;给药 24 小时后对小鼠的糖水偏好无明显影响,但可以减少强迫游泳不动时间。吸入 1.5% 的异氟醚 3 天后对小鼠的糖水偏好和悬尾实验无明显影响;给药 7 小时后对小鼠的糖水偏好无明显影响。对性别进一步分析,吸入 1.5% 的异氟醚 4 小时后仅增加雄性小鼠糖水偏好;给予异氟醚 24 小时后仅减少雌性小鼠强迫游泳不动时间,对雌性小鼠糖水偏好均无明显影响;给予异氟醚 3 天、7 天后对雌性小鼠糖水偏好和悬尾行为的影响无显著影响。

结论 吸入 1.5%异氟醚 4 小时后不影响小鼠的自主活动。吸入 1.5%异氟醚可在 4 小时后增加雄性小鼠的糖水偏好,但持续时间不足 24 小时;对小鼠强迫游泳及悬尾行为结果分析,吸入 1.5%异氟醚 4 小时后即可改善雌性小鼠无助行为,但持续时间不足 3 天。

关键词: 抑郁症; 异氟醚; 性别

青少年抑郁症患者自杀未遂的影响因素分析

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目的 探讨青少年抑郁症患者自杀未遂的影响因素,为自杀行为的干预提供理论依据。

方法 采用方便抽样法,选取 2021 年 4 月至 2023 年 6 月在河北医科大学第一医院精神卫生中心住院和门诊就诊的 217 例首发和复发的青少年抑郁症患者分为自杀未遂组及非自杀未遂组作为研究对象。采用汉密尔顿抑郁量表 (HAMD)、童年期创伤问卷 (CTQ-SF)、青少年生活事件量表 (ASLEC)、心理弹性量表 (CD-RISC) 对患者的抑郁程度、童年期生活事件及创伤经历、心理弹性进行测评。采用

单因素分析及二元 logistic 回归模型分析影响青少年抑郁症自杀未遂的相关影响因素。

结果 217 例青少年抑郁症患者中, 自杀未遂的发生率 22.58%。单因素分析结果显示, 两组患者首发年龄、学校欺凌、非自伤性自杀 (NSSI)、自杀意念、HAMD、情感虐待、CTQ 总分、人际关系、坚韧性、乐观性、心理弹性总分比较, 差异有统计学意义 ($t/\chi^2=-2.582, 16.107, 18.684, 22.418, -2.816, -5.883, -3.806, -5.485, -4.366, -4.204, -3.878; P<0.05$)。二元 logistic 回归分析结果显示, 学校欺凌 (OR=2.740, 95%CI=1.093-6.868)、自杀意念 (OR=7.856, 95%CI=1.449-42.591)、情感虐待 (OR=1.332, 95%CI=1.108-1.602)、人际关系 (OR=1.175, 95%CI=1.066-1.295)、坚韧性 (OR=0.741, 95%CI=0.586-0.937)、乐观性 (OR=0.589, 95%CI=0.434-0.800)、心理弹性总分 (OR=0.635, 95%CI=0.480-0.912) 与青少年抑郁症患者自杀未遂有关联 ($P<0.05$)。

结论 遭受校园欺凌及情感虐待、存在自杀意念、人际关系不佳、良好的心理弹性对青少年抑郁症患者的自杀行为有显著影响。

关键词: 抑郁症, 青少年, 自杀未遂, 影响因素

青少年非自杀性自伤与童年期创伤和心理弹性的关联性研究

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目的 探讨童年期创伤和心理弹性对青少年非自杀性自伤行为 (non-suicidal self-injury, NSSI) 的影响。

方法 基于 ICD-10 诊断的 158 例首发青少年心境障碍患者, 评估有无 NSSI 行为, 将患者分为伴 NSSI 组 (n=94) 和不伴 NSSI 组 (n=64)。采用汉密尔顿抑郁量表 (Hamilton Depression Scale, HAMD)、汉密尔顿焦虑量表 (Hamilton Anxiety Scale, HAMA)、童年期创伤问卷 (Childhood trauma questionnaire, CTQ-SF)、心理弹性量表 (Connor-Davidson Resilience Scale, CD-RISC) 评估患者的抑郁焦虑情绪、童年期创伤经历及心理弹性水平, 并进行组间比较。采用 logistic 回归分析各因素与青少年 NSSI 行为的

关联。

结果 伴 NSSI 组青少年心境障碍患者发病年龄小、文化程度低 ($P<0.05$)、抑郁重 (27.99 ± 5.94 vs. 24.19 ± 5.19)、焦虑重 (18.02 ± 5.94 vs. 15.45 ± 4.99)、CTQ 总分 (48.43 ± 15.40 vs. 41.97 ± 9.75)、情感虐待分 (12.77 ± 6.06 vs. 10.19 ± 4.06)、情感忽视分 (11.40 ± 5.34 vs. 9.14 ± 3.55) 高于不伴 NSSI 的患者。留守经历 (48.9% vs. 29.7%)、学校欺凌 (46.8% vs. 25.0%)、自杀意念 (85.1% vs. 37.5%)、自杀未遂 (29.8% vs. 6.3%) 两组差异有统计学意义 ($P<0.05$)。不伴 NSSI 组心理弹性总分 (39.83 ± 10.27 vs. 28.66 ± 12.75)、坚韧性 (19.59 ± 4.92 vs. 12.28 ± 6.47)、力量性 (12.03 ± 3.98 vs. 9.99 ± 4.6)、乐观性 (8.98 ± 2.97 vs. 6.47 ± 3.73) 评分高于伴 NSSI 组 ($P<0.05$)。logistics 回归分析显示, 留守经历 (OR=4.494)、学校欺凌 (OR=5.983)、自杀意念 (OR=13.225)、自杀未遂 (OR=16.769)、HAMD (OR=1.264)、情感虐待 (OR=1.327)、坚韧性 (OR=0.468) 与青少年心境障碍患者 NSSI 行为的关联有统计学意义 ($P<0.05$)。

结论 留守经历、校园欺凌、自杀意念及自杀未遂、情感虐待、抑郁程度、心理弹性可能与青少年心境障碍患者 NSSI 行为相关联。

关键词: 青少年; 心境障碍; 非自杀性自伤; 儿童期虐待; 心理弹性

合并代谢综合征的抑郁症患者心率变异性特征的初步研究

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目的 初步探讨合并代谢综合征的抑郁症患者自主神经功能的变化。

方法 纳入河北医科大学第一医院精神卫生中心门诊及住院的抑郁症患者共 79 人为研究对象, 根据中华医学会糖尿病学分会制定的中国 2 型糖尿病防治指南 (2020 年版) 中代谢综合征 (Metabolic Syndrome, MetS) 的诊断标准分为 3 组: 不伴代谢综合征抑郁症组 (Non-MetS-MDD)、代谢综合征前期抑郁症组 (Pre-MetS-MDD)、伴代谢综合征抑郁症组 (MetS-MDD)。采用方差分析或秩和检验比较三组间汉密尔顿抑郁量表 (Hamilton Depression Scale,

HAMD)、汉密尔顿焦虑量表(Hamilton Anxiety Scale, HAMA)量表及各因子分及心率变异性(heart rate variety, HRV)的差异性,采用 spearman 相关分析探索血压、血糖、体质指数(Body Mass Index, BMI)、血脂等代谢指标与 HRV 的相关性。

结果 1、3 组在 HAMD ($F=1.052$, $P=0.354$) 及 HAMA ($H=2.698$, $P=0.273$) 总分的差异均无统计学意义。各因子得分差异均无统计学意义。2、与不伴代谢综合症的抑郁症患者相比,伴代谢综合症的抑郁症患者其高频(high frequency, HF)更低($H=19.478$, $P=0.011$),经 Bonferroni 校正后差异仍具有统计学意义;极低频(very low frequency, VLF)、低频(low frequency, LF)、高频/低频(LF/HF)与相邻 RR 间期差值的均方根(root mean square values of the standard deviation, RMSSD)差异无统计学意义。3、舒张压与 HF 呈显著负相关($r=-0.253$, $P=0.024$);腹围与 LF、HF 呈显著负相关($r=-0.228$, $P=0.043$; $r=-0.234$, $P=0.038$);血糖水平与 VLF、LF、LF/HF 呈负相关($r=-0.367$, $P<0.001$; $r=-0.396$, $P<0.001$; $r=-0.240$, $P=0.033$)。

结论 合并 MetS 的抑郁症患者其 HF-HRV 降低,可能与舒张压、腹围相关。提示在临床工作中治疗抑郁症的同时需关注患者的躯体情况。

关键词: 抑郁症; 代谢综合症; 心率变异性; 自主神经功能

首发未用药的缺陷型及非缺陷型精神分裂症结构脑影像的比较研究

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目的 精神分裂症被认为是最严重的精神疾病之一,为了降低研究对象的异质性, Carpenter 教授等人提出了缺陷型精神分裂症(Deficit Schizophrenia, DS)及非缺陷型精神分裂症(Non-deficit Schizophrenia, NDS)的分型,本研究通过比较首发未用药缺陷型及非缺陷型精神分裂症患者和健康对照大脑结构的差异,揭示精神分裂症患者及不同亚型患者大脑结构的异常,为深入探索精神分裂症等高度异质性疾病的神经病理机制提供了重要依据。

材料和方法 本研究招募了首发未用药精神分

裂症(First-episode drug-naive schizophrenia, FES)患者 130 例,同时纳入了 130 名与 FES 患者相匹配的健康对照者(Healthy Controls, HC),本研究采用中文版缺陷型精神分裂症诊断量表(the Schedule for the Deficit Syndrome, SDS)进行 DS 与 NDS 患者分型。使用 Freesurfer 7.2 软件处理受试者的脑影像数据,进而比较精神分裂症患者与健康对照之间的脑结构形态学差异,并探寻首发未服药的精神分裂症及两类亚型的脑结构改变与各自精神症状的关系。

结果 共有 118 例精神分裂症患者(其中 DS59 例, NDS59 例)和 120 名健康对照数据合格并纳入分析。FES 组皮层外侧表面积比 HC 组显著增加的脑区位于左脑的颞中回,右脑的舌回和顶下小叶。FES 组皮层体积较 HC 组显著增加的脑区位于左脑的舌回,左脑的顶下小叶和右脑的舌回。FES 组皮层体积较 HC 组显著减少的脑区位于左脑的缘上回。比较 FES 组与 HC 组皮层下体积数据, FES 组左侧侧脑室及第三脑室较 HC 组显著增大; FES 组左侧苍白球、左侧丘脑、右侧伏隔核较 HC 组显著减小。FES 组左脑舌回体积、第三脑室体积与 PASSS 量表的阳性症状分数呈显著负相关。

NDS 组皮层表面积比 HC 组显著增加的脑区位于右脑的舌回,右脑的枕叶外侧。NDS 组皮层体积较 HC 组显著增加的脑区位于双侧大脑的舌回; DS 组皮层体积较 HC 组显著减少的脑区位于右脑的舌回。NDS 患者左脑舌回体积、右脑枕叶外侧表面积与 PANSS 的阳性症状分数显著负相关。

结论 (1)在未接受药物治疗之前,首次发作的精神分裂症患者较健康对照已经存在大脑灰质结构的改变,如皮层表面积和皮层体积的变化。

(2)首发未用药精神分裂症患者大脑结构改变与阳性症状存在显著相关。

(3)DS 可能并非是一完全独立的精神分裂症亚型, NDS 与 DS 存在部分相同的神经病理改变,也存在各自独特的神经病理改变。

关键词: 精神分裂症; 首发; 脑影像; 缺陷型; 非缺陷型; Freesurfer

低睡眠质量的抑郁症患者枕叶功能变化及其与认知功能的关系

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目的 研究伴睡眠障碍抑郁症患者脑区自发性活动的改变及其与认知功能的关系。

方法 于2020年9月至2024年4月在河北医科大学第一医院招募42例抑郁症患者及14例年龄、性别、受教育年限相匹配的健康对照组,对其进行汉密尔顿抑郁量表-17(Hamilton depression scale-17, HAMD17)、匹兹堡睡眠质量表(Pittsburgh sleep quality index, PSQI)及数字广度测验(Digit span test ,DST)评估。所有被试行3.0T脑静息态功能磁共振成像扫描(Resting-state functional magnetic resonance imaging, rs-fMRI)后计算分数低频振幅(Fractional amplitude of low-frequency fluctuations, fALFF)。根据匹兹堡睡眠质量表的分数,将抑郁症患者分为高睡眠质量组(n=14)、低睡眠质量组(n=28)。对三组被试fALFF值方差分析后进行事后检验,并将差异脑区与数字广度得分行相关性分析。

结果 三组右侧枕上回(MNI:x=0,y=-102,z=-31;K=37)、左侧枕中回(MNI:x=21,y=-102,z=6;K=51)、左侧楔前叶(MNI:x=-9,y=-78,z=21;K=27)的fALFF值在三组间存在显著差异(GRF 矫正)。与高睡眠质量组比,低睡眠质量组右侧枕上回fALFF值升高($Z=-3.015, P=0.003$),且与数字广度倒背得分呈负相关($r=-0.274, P=0.041$)。与健康对照组比,高睡眠质量组左侧楔前叶fALFF值升高($Z=-2.022, P=0.043$),低睡眠质量组右侧枕上回升高($Z=-3.469, P<0.005$)、左侧枕中回fALFF值升高($Z=-3.815, P<0.005$)、左侧楔前叶fALFF值升高($Z=-3.709, P<0.005$)。

结论 低睡眠质量的抑郁症患者枕叶自发性活动增加,且枕叶的异常活动可能与低睡眠质量抑郁症患者认知功能下降有关。

关键词: 睡眠; 抑郁症; 枕叶; 楔前叶; 认知功能; 分数低频振幅

昼夜节律类型与压力知觉水平对理工类大学生睡眠质量的影响

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目的 探讨昼夜节律类型、压力知觉水平对于理工类大学生睡眠质量的影响。

方法 筛查河北省某综合大学理工科大一至大四年级本科生10509名,采用自编一般情况问卷和匹兹堡睡眠指数量表(PSQI)、清晨-夜晚类型问卷(MEQ)、中文版压力知觉量表(CPSS-14)进行调查。根据PSQI得分分为睡眠质量好或差(>5分被归类为睡眠质量差)。根据MEQ得分将昼夜节律类型分为清晨型(59-86分)、中间型(42-58分)和夜晚型(16-41分)。根据研究人群的50百分位数建立压力知觉水平分类(轻度和重度)。

结果 共发放问卷10509份,回收有效问卷9768份。在9768名理工类大学生中,年龄在18至27岁之间,其中69.0%的受试者为男性。共有3418名(35.0%)大学生报告了睡眠质量差。与昼夜节律为清晨型相比,夜晚型和中间型的大学生表现出更差的睡眠质量($P<0.01$)。重度压力知觉水平组受试者的睡眠质量严重程度明显高于轻度压力组($P<0.01$)。比较由昼夜节律类型和压力知觉水平组合对睡眠质量的影响,重度压力知觉水平和夜晚型的组合PSQI得分最高($P<0.01$)。二元逻辑回归分析结果显示:当重度压力知觉与任何昼夜节律类型组合时,都与睡眠质量有显著的相关性:清晨型(OR:2.4,CI95%:1.9-3.0, $P<0.001$)、中间型(OR:3.9,CI95%:3.3-4.8, $P<0.001$)、夜晚型(OR:5.1,CI95%:3.5-7.5, $P<0.001$)。加入性别、年龄作为控制因素后,昼夜节律类型与压力组合对睡眠质量的影响仍然保持不变。为了进一步探究昼夜节律类型与压力知觉对睡眠质量的综合影响,还控制有无运动习惯、有无吸烟、饮酒习惯等因素,结果显示除昼夜节律类型与压力知觉水平对睡眠质量有影响外,男性(OR:0.7,CI95%:0.7-0.8, $P<0.001$)、无吸烟(OR:0.6,CI95%:0.6-0.7, $P<0.001$)对睡眠质量有保护作用,而无运动习惯则是睡眠质量的危险因素(OR:1.2,CI95%:1.1-1.3, $P=0.002$)。

结论 昼夜节律类型和压力知觉水平是睡眠质量的影响因素,昼夜节律类型为夜晚型及压力感知水平较高会增加睡眠质量差的风险。同时,昼夜节律类型与压力知觉水平组合会加重对睡眠质量的影响。未来有必要进行有针对性的干预,早期识别理工类大学生睡眠质量的风险。

关键词: 昼夜节律; 压力知觉; 大学生; 睡眠质量

首发和复发抑郁症患者临床特征的比较

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目的 比较首发和复发抑郁症患者的社会人口学资料和临床特征,并探究抑郁症复发的影响因素。

方法 前瞻性收集 2020 年 9 月至 2024 年 5 月就诊于河北省 6 家医院门诊及住院的 500 例抑郁症患者的临床资料,根据抑郁症是否为第 1 次发作将抑郁症患者分为首发抑郁症(首发组)271 例和复发抑郁症(复发组)229 例。采用 17 项汉密尔顿抑郁量表(Hamilton depression scale-17, HAMD17)、儿童期创伤问卷-简版(childhood trauma questionnaire, CTQ-SF)、匹兹堡睡眠指数量表(Pittsburgh Sleep Quality Index, PSQI)、手机依赖指数量表(Mobile Phone Addiction Index, MPAI)和社会支持评定量表(Social Support Rating Scale, SSRS)分别评估抑郁症患者的临床症状。使用 χ^2 检验和两独立样本的非参数检验分别比较首发和复发抑郁症患者在社会人口学特征和临床特征上的差异,使用 logistic 回归分析抑郁症患者复发的影响因素。

结果 首发组和复发组在居住地、家庭月收入、首次发病年龄和匹兹堡睡眠指数量表之间的差异具有统计学意义($P<0.05$)。二元 logistic 回归分析显示,随着年龄的增长($OR=1.45$, $95\%CI: 1.33-1.59$)和使用催眠药物频次越多($OR=1.21$, $95\%CI: 1.00-1.45$),抑郁症复发的可能性越大。相对于首发抑郁症,适量饮酒($OR=0.41$, $95\%CI: 0.20-0.83$)、睡眠时间较短($OR=0.74$, $95\%CI: 0.57-0.96$)、抑郁症首次发病年龄较晚($OR=0.68$, $95\%CI: 0.62-0.74$)以及获得更多的客观社会支持($OR=0.89$, $95\%CI: 0.80-0.98$)是降低抑郁症复发风险的保护性因素。

结论 抑郁症患者年龄的增长和频繁的使用催眠药物是抑郁症复发的风险因素;抑郁症首发年龄晚、适量的饮酒和睡眠时长以及更多的社会支持能降低抑郁症的复发风险。

关键词: 抑郁症;临床特征;首发;复发;影响因素;多中心研究

二甲双胍联合奥氮平治疗对精神分裂症血脂代谢及氧化应激的影响

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目的 观察二甲双胍联合奥氮平治疗对精神分裂症血脂代谢及氧化应激的影响。

方法 选取 38 例首发或半年内未用药的精神分裂症患者,按随机分组分为对照组 20 例及观察组各 18 例。对照组采用奥氮平治疗,观察组采用二甲双胍联合奥氮平治疗。比较 2 组治疗 4 周后血脂相关指标[甘油三酯(TG)、总胆固醇(TC)、高密度脂蛋白(HDL)、低密度脂蛋白(LDL)及氧化应激相关指标[丙二醛(MDA)、超氧化物歧化酶(T-SOD)、谷胱甘肽过氧化物酶(GSH-Px)、过氧化氢酶 CAT]水平的变化。

结果 治疗后,2 组 TG 水平均较治疗前升高($P<0.05$);对照组 TC、LDL、HDL 水平较治疗前升高($P<0.05$);观察组 TC、LDL、HDL 水平较治疗前无显著差异($P>0.05$);观察组 LDL 水平较对照组显著降低($P<0.05$)。治疗后,2 组 MDA 水平均较治疗前下降($P<0.05$);对照组 T-SOD、GSH-Px、CAT 水平较治疗前无显著差异($P>0.05$);观察组 GSH-Px 水平较治疗前显著降低($P<0.05$),T-SOD、CAT 水平较治疗前无显著差异($P>0.05$);观察组 CAT 水平较对照组显著升高($P<0.05$)。

结论 二甲双胍联合奥氮平治疗精神分裂症可一定程度上预防奥氮平引起的脂代谢异常,并对氧化应激水平有调节作用。

关键词: 精神分裂症 血脂代谢 氧化应激 二甲双胍

竞争性假设分析在精神科个体化循证治疗中的应用——以精神分裂症为例

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目的 梳理和例析精神科病人个体层面预测候选药的过程

方法 竞争性假设分析(ACH)复盘 1 例青春

早期女性精神分裂症, 提出所有可能药物假设, 通过矩阵把用证据支持假设与否 (+/-) 的过程分解, 用相同证据评估各假设, 使假设相互竞争, 考察证据+某假设同时能-其他假设的诊断性, 最可能的假设-最少

结果 1. 在本例门诊初始 ACH 中, 先以指南推荐的儿少期一线 SGA 为可能假设, 主要从疗效、锥体外系反应、代谢内分泌影响等预期重要和常见维度比对证据。

首发精神分裂症药物疗效无显著差异, 几无诊断性; 门诊患儿, 不同 SGA 滴定到目标剂量过程是否简便、各类副作用差异, 都构成了诊断性。

最强诊断性证据是较少增重和升催乳素。最少-是阿立哌唑 (--), 其次是奥氮平 (---) 帕利哌酮 (-); 而当主要诊断性证据被推翻或弃置 (如男患儿不甚关注催乳素问题), 竞争结果三者并列。因此这些主要诊断性证据和疗效一同作为关键后续观察指标。

2. 随着新证据药源性强迫障碍、和关键观察指标体重及月经的变化, ACH 第 2 轮修正。可能假设也扩充了其他国内可及并在国外有青少年适应症的一线 SGA 鲁拉西酮、布南色林和氨磺必利。

奥氮平诱发强迫障碍的病史提示: 5-HT_{2A} 受体亲和力更强的类似 SGA 也对应此项证据-。服奥氮平 2 月停经, 故本轮 ACH 在升催乳素少的证据上, 奥氮平及其他拮抗 DA/5-HT 比更高的鲁拉西酮、氨磺必利、布南色林修正为--。同理在增重少这项, 奥氮平因该患服药后体重明显上升, 修正为---。滴定速度因此时疗效显进和交叉换药而不重要。

综上, 本轮最少-为阿立哌唑 (+-), 氨磺必利与布南色林 (-) 次之。阿立哌唑卫冕主要依赖升催乳素少的诊断性证据, 如被该患具体化验否定, 则首选结果由后两者竞争, 并根据新增关键指标药源性强迫症状的演变做后续修正。

3. 正如上轮 ACH 推断: 该患已存在鲁拉西酮所致高催乳素血症; 且虽合用足量 SSRI, 药源性强迫障碍仍恶化, 使鲁拉西酮及同样高度拮抗 5-HT_{2A} 受体的布南色林在该项增加一级-修正。鲁拉西酮减量病情急转直下伴阴性症状, 对第 3 轮 ACH 重新提出了滴定速度的证据需求, 还要考察阴性症状疗效。

最终, 本轮主要诊断性证据有不易升催乳素和导致强迫症状, 分别对应阿立哌唑 (-+-) 和精神分裂症伴强迫治疗流程推荐的氨磺必利 (-) 两种最少-假设。其他依次是布南色林 (---+) 鲁拉西酮 (---

-) 帕利哌酮 (-----)。

结论 以循证指南的全部一线药为初始假设, 必要时根据特殊情况添加其他同适应症高级证据药品扩展假设, 以 ACH 框架序贯施治, 可提高精神障碍治疗规范性; 并有助未来建立循证医学终极追求的临床决策支持系统算法。

关键词: 竞争性假设分析, 个体化治疗, 循证医学, 精神障碍

抑郁症患者外周血 T 细胞亚群及线粒体质量的差异研究

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目的 探究抑郁症患者的免疫功能差异, 着重于外周血 T 细胞亚群与线粒体质量, 旨在为生物标志物提供新见解。

方法 本研究纳入 31 例年龄在 20 至 60 岁的抑郁症患者, 以及 50 名健康对照人群。所有参与者均接受了汉密尔顿抑郁量表 (HAMD) 和汉密尔顿焦虑量表 (HAMA) 的评估。通过流式细胞术检测外周血中的 T 细胞亚群 (包括 CD4⁺ T 细胞和 CD8⁺ T 细胞) 及其线粒体质量。数据分析采用 SPSS 软件进行, 比较抑郁症患者与健康对照组之间的差异, 并探讨 T 细胞亚群及线粒体质量与抑郁症严重程度之间的关系。

结果 研究结果显示, 抑郁症组患者的 CD4⁺ T 细胞 (均值±标准差: 495±123 cells/μL) 和 CD8⁺ T 细胞 (均值±标准差: 312±87 cells/μL) 数量显著低于健康对照组 (CD4⁺ T 细胞: 723±145 cells/μL; CD8⁺ T 细胞: 512±102 cells/μL) (p<0.001)。此外, 抑郁症组患者的 T 细胞线粒体质量 (均值±标准差: 80±15%) 显著低于对照组 (均值±标准差: 95±10%) (p<0.01)。

相关性分析结果显示, 抑郁症组患者的 CD4⁺ T 细胞数量 (r=-0.56, p<0.01) 和 CD8⁺ T 细胞数量 (r=-0.47, p<0.05) 均与 HAMD 评分显著负相关。同时, T 细胞线粒体质量与 HAMD 评分亦呈显著负相关 (r=-0.62, p<0.01)。这表明抑郁症状越严重, T 细

胞数量和线粒体质量越低。

结论 抑郁症患者的免疫细胞代谢功能存在显著异常,具体表现为 CD4+ T 细胞和 CD8+ T 细胞数量及线粒体质量的显著降低,这些异常与抑郁症的发病机制密切相关。研究结果为进一步探讨抑郁症的生物标志物提供了新的线索和依据,有助于理解抑郁症的病理生理机制,并为未来的诊断和治疗提供潜在的靶点。

关键词: 抑郁症; 免疫功能; T 细胞亚群; 线粒体质量; 生物标志物

ITBS 对青少年抑郁障碍患者临床症状及认知功能的影响

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目的 探究间歇性 θ 短阵脉冲刺激(iTBS)对青少年单、双相抑郁障碍患者临床症状及认知功能的干预效果;探究青少年单、双相抑郁障碍患者临床症状对认知功能的影响。

方法 在天津市安定医院儿童青少年心理科门诊患者中进行筛选,要求年龄为 12-18 周岁、蒙哥马利抑郁评定量表得分 ≥ 22 分、经过精神科医生根据美国精神疾病诊断与统计手册第 5 版(DSM-5)诊断标准诊断为重性抑郁障碍和/或双相 II 型障碍患者,且这一诊断标准经过简明国际神经精神访谈儿童版(MINI-KID)访谈确认,共入组 38 例患者,采用阿米磁刺激机器人系统(Aim III Mag TD)进行 iTBS 治疗,刺激左侧背外侧前额叶皮层(L-DLPFC),加速治疗期每天 5 节,共 2 天,共 10 节,维持治疗期每周 1 节,共 4 周,共 4 节。采用一般人口学问卷调查其人口学特征;采用蒙哥马利抑郁评定量表(MADRS)、病人健康问卷(PHQ-9)和广泛性焦虑量表(GAD-7)评估患者抑郁和焦虑水平;使用 Thinc-it 工具测试其认知功能,其中客观测试部分为选择反应时间(CRT)、1-Back 记忆任务(1-Back)、数字符号替代测试(DSST)及连线测试(TMT),主观测试部分为认知损害 5 项问卷(PDQ-5)。分别于基线、加速治疗后、维持治疗后对患者进行评估,数据处理和分析均采用 SPSS27.0,对人口学变量、临床症状和认知功能进行描述性统计,基线、加速治疗后和维持

治疗后得分采用重复测量方差分析(正态分布)和 Friedman 非参数检验(偏态分布)进行分析,采用线性回归分析探究经 iTBS 治疗患者认知功能减分数的影响因素。

结果 截至维持治疗结束时样本共脱落 16 例。加速及维持治疗后患者的认知功能及临床症状均较基线时显著改善。其中,加速治疗后与基线相比,DSST 的正确数显著增加($P=0.044$),MADRS 评分显著降低($P=0.002$)。维持治疗后与基线相比,在认知功能方面,1-BACK($P=0.000$)、CRT($P=0.048$)和 DSST($P=0.008$)的正确数显著增加,TMT 的反应时显著降低($P=0.005$)。在临床症状方面,MADRS($P=0.002$)和 PHQ-9 ($P=0.000$)评分明显下降。线性回归分析结果显示,基线 MADRS 评分越高,TMT 减分数越低($\beta = -0.45, R^2 = 0.20, P = 0.04$)。

结论 iTBS 可以改善青少年单、双相抑郁障碍患者的临床症状和认知功能;基线时抑郁严重程度影响认知功能的改善,基线抑郁程度越重认知功能(TMT)改善越差。

关键词: 青少年,抑郁发作,iTBS,认知功能

住院抑郁症患者自杀意念与自杀计划的检出率及相关因素

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目的 根据世界卫生组织显示,每年有 70.3 万人自杀身亡,自杀发生在生命周期的各个阶段,自杀与自杀意念直接相关。自杀意念范围很广,从短暂地认为生命无价值到有死亡意图,以及具体的自杀计划、自杀准备和自杀冲动均包含在内,自杀意念受到生物、心理、家庭、社会经济地位和文化环境等多重影响。本研究的主要目的是评估住院抑郁患者中自杀意念和自杀计划的严重程度,并探讨其相关因素分析,以提高对自杀企图高危个体的识别。

方法 本研究于 2019 年 12 月至 2023 年 5 月纳入河北省六家医院(河北医科大学第一医院、石家庄市第八医院、河北省第六人民医院、衡水市第七人民医院、唐山开滦精神卫生中心、沧州安定医院)的抑郁障碍患者共 556 例。采用贝克自杀意念量表、汉密尔顿抑郁量表、童年期创伤问卷和社会支持量

表评估受试者临床特征。根据贝克自杀意念量表将抑郁症患者分为有自杀意念组和无自杀意念组；再将自杀意念组患者分为有自杀计划组和无自杀计划组。分析比较各组间一般资料及临床量表的差异，分别将有自杀意念、有自杀计划作为二分类因变量，进行 logistic 回归分析抑郁症住院患者的自杀风险因素指标。

结果 抑郁症住院患者的自杀意念检出率为 47.12% (262/556)，自杀计划检出率为 27.88% (155/556)。自杀意念组患者的汉密尔顿抑郁量表 (21.25 ± 7.25 vs 19.35 ± 6.74) 和童年期创伤问卷 (43.18 ± 12.71 vs 37.57 ± 8.54) 分值明显高于无自杀意念组患者，社会支持量表 (32.32 ± 7.96 vs 36.57 ± 8.38) 分值低于无自杀意念组 (均 $P < 0.05$)。回归分析显示，躯体虐待 (OR=1.12, 95%CI: 1~1.25) 是自杀意念的危险因素，主观支持 (OR=0.94, 95%CI: 0.88~0.99) 是自杀意念的保护因素；情感虐待 (OR=1.06, 95%CI: 1.1~1.11) 是自杀计划的危险因素，已婚 (OR=0.87, 95%CI: 0.65~0.98) 是自杀计划的保护因素 (均 $P < 0.05$)。

结论 住院抑郁症患者自杀意念和自杀计划检出率较高。伴有严重抑郁情绪、童年期经历不良生活事件和社会支持体系差的个体自杀意念的检出率增加，情感虐待可能在促进从自杀意念向自杀计划的转变方面发挥着重要作用。

关键词：自杀意念；自杀计划；抑郁症；检出率；相关因素

综合医院精神躯体共患病房疾病构成及建科必要性

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目的 本研究拟从河北医科大学第一医院精神躯体共患病房的患者疾病构成出发，通过建科四年的患者收治情况，分析综合医院精神躯体共患科住院患者人群特点及疾病构成情况，分析相关原因，进一步探讨综合性医院精神躯体共患科设立的重要性，精神躯体共患科的定位及如何进行精神躯体共患科的学科建设，为发展初期的精神躯体共患学科相关建设予以参考。

方法 采用回顾性研究方法从河北医科大学第一医院电子病历系统调取于 2017 年 12 月至 2021 年 12 月期间在精神躯体共患科住院患者的就诊记录，收集的信息包括患者的一般情况、住院时间、出院诊断、联合会诊及患者多病共存情况，以患者的出院第一诊断作为患者的主要诊断，利用 ICD-10 编码进行标准化修正，疾病按着所述系统进行划分，对于住院患者年龄、性别等进行分段统计，利用 Excel 表格进行描述性统计分析。纳入标准：记录在我院住院电子病历系统中就诊于精神躯体共患科的住院患者。排除标准：资料不全的就诊记录，包括诊断缺失、诊断不明确、诊断无法归类的、就诊于精神躯体共患科而未记录在住院患者电子病历系统的患者。

结果 1、在精神躯体共患科住院的人群特点：男性 705 人 (46.91%)，女性 798 人 (53.09%)，平均年龄 53.79，平均住院日 14.48 天，平均会诊次数 1.56 次，其中小于 14 岁的患者占比 0.93%，大于 65 岁以上的占比 53.52%，80 岁以上的占比 1.80%。

2、精神躯体共患科住院患者的转归：死亡率：0.13%，好转率 87.35%，自动出院率 12.52%。

3、精神躯体共患科患者的出院诊断涉及病种十分广泛：诊断顺位为痴呆、谵妄、抑郁发作、酒精所致精神障碍、复发性抑郁障碍、脑器质性精神障碍、精神分裂症等。

4、住院患者的共病率高，共病疾病顺位排序为高血压、脑血管病、肺部感染、认识障碍、贫血、心律失常等。

结论 1、精神躯体共患病房患者年龄偏大，主要诊断除精神科常见疾病外，还有躯体所致的精神疾病，需精神科和躯体科医生的共同处理。

2、目前在国家完善的精神疾病救治制度下，精神障碍患者治疗负担明显下降，但随着患者年龄的增大，躯体疾病治疗成为患者新的压力源，精神躯体共患病房的建立可以同时解决患者两方面问题，节约医疗资源，提高生存质量，减轻负担。

3、精神躯体共患病房患者共病率高，需共病管理。建立精神躯体共患病房，让专科医生扩充自身的知识储备，学习并且掌握各个器官系统的常见病及多发病，同时为培养更多社区人才做好充分准备。

关键词：综合医院，精神躯体共病，疾病构成，共病管理

Transient Open-Angle Glaucoma Induced by Modified Electroconvulsive Therapy in An Elderly Schizophrenia Patient: A Case Report

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Objective Modified electroconvulsive therapy (MECT) is a widely administered treatment for schizophrenia. Glaucoma, a prevalent ophthalmic condition, is defined by elevated intraocular pressure. While MECT has no absolute contraindications, it may heighten the risk of developing other conditions during its administration, suggesting a possibility of relative contraindication. Currently, there is a paucity of literature on transient primary open-angle glaucoma (POAG) subsequent to MECT in elderly patients with schizophrenia both domestically and internationally

Methods In this report, we present the case of a 75-year-old female patient with a 13-year history of emotional instability. She had been diagnosed with schizophrenia for 3 years prior to her current admission. The patient was hospitalized due to a relapse of her condition over a span of 3 days and was presumed to have schizophrenia upon admission

Results Following the third session of modified electroconvulsive therapy (MECT), there was an increase in intraocular pressure, leading the ophthalmology department to suspect primary open-angle glaucoma (POAG). After monitoring the intraocular pressure during subsequent MECT sessions, the patient's pressure stabilized at normal levels. This suggests that MECT may be relatively safe for individuals with glaucoma

Conclusion While MECT appears to be a viable treatment option for schizophrenic patients who also have glaucoma, the potential for acute glaucoma attacks must still be considered. If a patient exhibits related symptoms, it is advisable to monitor intraocular pres-

sure throughout the course of electrotherapy, as necessary, to mitigate further risk

关键词: Modified Electroconvulsive Therapy, Glaucoma, Transient Open-Angle Glaucoma, Schizophrenia, Elderly Schizophrenia,

太极拳对老年人认知功能和外周血炎症因子的影响

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目的 探讨太极拳对老年人认知功能和外周血炎症因子的影响。

方法 采用横断面研究的方式,收集自2021年4月至2022年4月在石家庄和邢台社区的老年人群,符合纳入及排除标准的共205例,其中无运动组(NE组)53例,运动组(TC组)152例,运动组根据运动年限分为TC-1组(习练太极拳 ≤ 3 年, $n=63$)和TC-2组(习练太极拳 > 3 年, $n=89$)。通过神经心理认知测试评估受试者认知功能等情况,通过酶联免疫吸附试验(ELISA)方法检测纳入人群的认知障碍相关因子 β -淀粉样蛋白40(A β 40)、 β -淀粉样蛋白42(A β 42)、磷酸化tau蛋白231(p-tau231)、磷酸化tau蛋白217(p-tau217)和炎症因子肿瘤坏死因子- α (TNF- α)、白细胞介素-1 β (IL-1 β)、白细胞介素-6(IL-6)、转化生长因子- β 1(TGF- β 1)水平。

结果 运动组血清IL-1 β 、IL-6水平均低于无运动组($z=6.511$, $P<0.001$; $z=3.168$, $P=0.002$);进一步分析发现不同运动年限的老年人血清IL-1 β 水平存在差异,其中NE组最高,TC-2组最低($H=52.158$, $P<0.001$)。血清TGF- β 1水平与MoCA和MMSE得分存在相关性($r=0.172$, $P=0.035$; $r=0.140$, $P=0.045$)。血清TGF- β 1水平与A β 42、p-tau231水平之间存在负相关($r=-0.300$, $P<0.001$; $r=-0.152$, $P=0.029$)。血清IL-1 β 和IL-6水平均与A β 40水平之间存在正相关($r=0.585$, $P<0.001$; $r=0.255$, $P<0.001$)。血清TNF- α 水平与A β 42、p-tau217水平存在正相关($r=0.307$, $P<0.001$; $r=0.170$, $P=0.015$)。对运动组分析发现IL-1 β 水平在习练太极拳运动时长和p-tau217水平之间存在部分中介效应

[IE=0.0351, (BootLLCI, BootULCI) = (0.0038, 0.00686)], 在控制性别、受教育程度、饮酒史、冠心病病史后 IL-1 β 水平仍在习练太极运动时长和 p-tau217 水平之间显示出部分中介效应[IE=0.0232, (BootLLCI, BootULCI) = (0.0012, 0.0502)]。

结论 1.太极运动组老年人认知功能优于无运动组老年人,且参加3年以上太极运动的老年人的血清 IL-1 β 水平低于参加太极运动3年及以下或平时不规律参加运动的老年人。

2.未发现炎症因子水平在太极运动和认知功能之间存在中介效应。

关键词: 太极运动; 认知功能; 炎症因子; IL-1 β ; p-tau217

童年期创伤对抑郁症患者血压、心率及心率变异性影响的相关性研究

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目的 探讨童年期创伤对抑郁症患者静息血压、心率及心率变异性的影响。

方法 招募2022年9月-2023年9月就诊于河北医科大学第一医院精神卫生中心门诊及住院部16-50岁、符合国际疾病分类第10版(International Classification of Diseases, ICD-10)抑郁症诊断标准的抑郁症患者100例,采用17项汉密尔顿抑郁量表(Hamilton Depression Rating Scale-17, HAMD17)及汉密尔顿焦虑量表(Hamilton Anxiety Rating Scale, HAMA)评估患者的抑郁、焦虑症状严重程度,采用童年期创伤问卷(Childhood Trauma Questionnaire, CTQ)评估患者的童年期创伤暴露情况,并根据CTQ评分将抑郁症患者分为童年期创伤组和无童年期创伤组。监测并记录100例患者的静息血压、心率和心率变异性各项指标。采用秩和检验、线性回归分析、二元Logistics回归分析等统计方法。

结果 两组一般资料无统计学差异($P>0.05$),伴童年期创伤的抑郁症患者HAMD17和HAMA的评分均高于无童年期创伤的抑郁症患者,差异有统计学意义($P<0.05$)。童年期创伤组的收缩压、舒张压均高于无童年期创伤组,差异有统计学意义($P<0.05$)。童年期创伤组的SDNN、RMSSD、HF均低

于无童年期创伤组,差异有统计学意义($P<0.05$)。但童年期创伤组的平均心率与无童年期创伤组的平均心率差异无统计学意义($P>0.05$)。多元线性回归分析显示,躯体虐待($B=1.189, P<0.05$)、性虐待($B=2.114, P<0.05$)、情感虐待($B=1.332, P<0.05$)、躯体忽视($B=1.341, P<0.05$)、情感忽视($B=1.325, P<0.05$)对血压均有影响。二元Logistics回归分析表明,童年期创伤是高血压的风险因素($OR=1.64, P<0.05$),性虐待是心率变异性降低的风险因素($OR=2.106, P<0.05$)。

结论 有童年期创伤经历的抑郁症患者血压升高更明显,童年期创伤对自主神经系统的平衡性有不利影响。任何一种形式的童年期创伤均与血压呈现正相关,其中性虐待相关性最强。性虐待是心率变异性降低的风险因素。

关键词: 童年期创伤; 抑郁症; 血压; 心率; 心率变异性

伴童年期创伤的青少年抑郁障碍患者睡眠情况与认知功能的相关性

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目的 分析伴童年期创伤的青少年抑郁障碍患者睡眠情况与认知功能的关联。

方法 选取河北医科大学第一医院门诊及住院的青少年抑郁障碍患者共173例,依据有无童年期创伤分为创伤组和无创伤组,使用汉密尔顿抑郁量表(HAMD-17)评估抑郁症状严重程度;使用连线测试(Trail-Making Tests, TMT)、数字符号转换测验(Digital Symbol Substitution Test, DSST)和数字广度测验(Digit Span Test, DST)评估认知功能;使用匹兹堡睡眠质量指数量表(PSQI)评估睡眠情况;比较两组患者相关量表及测试得分的差异,并分析伴童年期创伤组患者认知功能与睡眠情况的相关性。

结果 两组一般资料差异无统计学意义($P>0.05$),伴童年期创伤组HAMD-17评分($P<0.05$)、PSQI评分($P<0.05$)高于不伴童年创伤组;伴童年创伤组认知功能各维度测试评分均低于不伴童年创伤组($P<0.05$)。多元线性回归分析显示,日

间功能障碍对信息处理速度降低有影响 ($B = -1.171$, $P < 0.05$); 睡眠时间对注意力下降 ($B = -4.083$, $P < 0.05$)、工作记忆力变差 ($B = -2.472$, $P < 0.05$) 有影响; 睡眠障碍对工作记忆力变差 ($B = -2.527$, $P < 0.05$)、睡眠质量对综合+执行功能 ($B = -3.131$, $P < 0.05$) 有不良影响。二元 Logistics 回归分析表明, 睡眠时间不足是注意力下降的风险因素 ($OR = 10.534$, $P < 0.05$), 睡眠效率下降是工作记忆力差的风险因素 ($OR = 3.106$, $P < 0.05$)。

结论 伴童年期创伤的青少年抑郁障碍患者认知功能及睡眠情况受损更严重, 认知功能与睡眠情况存在相关性, 其中日间功能障碍、睡眠时间、睡眠障碍及睡眠质量是认知功能下降的不良影响因素。

关键词: 青少年抑郁障碍; 童年期创伤; 认知功能; 睡眠障碍

无创性神经调控技术治疗精神分裂症幻听症状的研究进展

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目的 幻听是精神分裂症的主要阳性症状之一, 其产生机制尚不明晰, 抗精神病药物治疗效果有限。神经调控技术在精神障碍的诊治中具有较好的应用前景。本文围绕精神分裂症幻听症状的无创神经调控技术相关研究展开综述, 为精神分裂症幻听症状的治疗提供参考。

方法 本文总结了经颅磁刺激、经颅电刺激、经颅超声刺激等无创性神经调控技术在治疗精神分裂症幻听症状方面的相关研究, 讨论了不同技术目前存在的局限性以及在临床应用的可能性。

结果 经颅磁刺激目前常用重复脉冲刺激 (repetitive TMS, rTMS), theta 爆发式脉冲刺激 (theta burst stimulation, TBS)。研究认为低频 rTMS 具有抑制被刺激脑区的作用, 高频 rTMS 则有激活作用。综合而言, 低频 rTMS 相对高频 rTMS 的治疗证据更充分。然而, 低频 rTMS 治疗幻听的疗效也并不肯定。持续性 TBS (continuous TBS, cTBS) 能引起长时程抑制样效应, 研究发现对幻听可能有改善作用。然而, cTBS 治疗幻听相关的研究数量较少, 异质性较高, 研究结论不一。未来可能通过神经

导航 TMS、加速式 TMS 以进一步提高疗效。经颅电刺激中, 经颅直流电刺激 (transcranial direct current stimulation, tDCS)、经颅交流电刺激 (transcranial alternating current stimulation, tACS) 应用较多。研究表明阳极 tDCS 能使皮层兴奋性增加, 阴极 tDCS 则相反, 治疗幻听的模式多为阳极 tDCS 刺激前额叶, 阴极 tDCS 刺激左侧颞顶皮层。然而, tDCS 治疗幻听的疗效仍然有待验证。tACS 在治疗幻听方面的研究证据还较少, 需要进一步探索。

结论 目前, 无创性神经调控技术治疗幻听的研究数量有限, 疗效不肯定, 需要更多研究证据支撑。结合电刺激与磁刺激、增加刺激的频率和次数、利用神经导航增加刺激的精准度等方法已被尝试用于增加各类调控方法的疗效, 但缺少大样本的临床研究。另外, 无创性神经调控技术的刺激靶点也可能是影响疗效的关键, 这需要对幻听的机制有更深入的研究, 进而选择治疗幻听的更优靶点。总而言之, 无创性神经调控技术具有较高的安全性, 对于治疗幻听具有研究价值和临床价值, 但如何提高疗效、降低治疗成本以及扩大研究队列仍是短期内需要面对的难题。

关键词: 神经调控, 精神分裂症, 幻听

基于磁共振技术预测精神分裂症疗效的研究进展

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目的 精神分裂症是一种高致残性的慢性重性精神障碍, 抗精神病药物仍然是最主要的治疗手段, 然而, 约 40% 的患者对目前的抗精神病药物的治疗效果欠佳。同时, 抗精神病药不良反应较多, 精神分裂症的治疗个体差异性较大, 导致治疗效率较低。因此需要有能够在治疗早期预测疗效的标志物。本文对精神分裂症疗效预测相关的磁共振研究进行综述, 为精神分裂症的疗效预测提供参考。

方法 本文总结了 3D-T1 结构磁共振、弥散成像磁共振、功能磁共振、波普磁共振等在精神分裂症疗效预测方面的相关研究, 并讨论了不同标志物的疗效预测价值以及可能存在的优化方向。

结果 多项研究报告总体和局部灰质体积越小、

脑室扩大越明显的患者对治疗的反应可能越差。接受抗精神病药物治疗前的脑岛和额下回体积、双侧豆状核与纹状体的体积、垂体体积都可能与治疗后的疗效存在正性相关。然而,也有研究认为精神分裂症的灰质体积改变与治疗反应之间没有显著相关性。脑白质在疗效预测中也具有一定价值。精神分裂症患者治疗前的额-颞-边缘区域较低的白质纤维完整性与治疗后的阳性症状改善程度有关。精神分裂症患者的各向异性分数显著低于健康对照,治疗后左上纵束各向异性分数的增加程度可能与疗效存在正相关。精神分裂症的脑功能连接存在异常,并且可能被抗精神病药物治疗影响。纹状体功能连接的首发精神分裂症患者中,纹状体与海马、背外侧前额叶、前扣带回等脑区的功能连接增加可能预示着会出现更好的药物治疗疗效。研究发现对抗精神病药物治疗不敏感的患者纹状体谷氨酸升高。此外,海马的 N-乙酰天冬氨酸/肌酸比值可能对疗效也有预测作用,研究发现海马的该比值可能预测首发精神分裂症急性期用药期间阴性症状的预后。

结论 精神分裂症患者的治疗效果异质性可能与精神分裂症患者间的神经生物学差异有关。精神分裂症的脑岛体积、额下回体积、纹状体体积、脑白质的 FA 值、纹状体的功能连接、神经递质浓度等指标均有证据表明可能具有疗效预测价值。然而,各项研究的异质性较高,作为疗效预测标志物的可靠性欠佳,有待大样本研究的数据支撑。再者,精神分裂症的大脑病变在多个维度均存在,可能难以用单一的指标进行疗效预测,结合多项指标进行综合分析可能会对疗效预测有更高的价值。另外,目前的研究大多在组水平进行研究,缺少对精神分裂症个体的标志物探索,没有在精神分裂症个体中进行标志物的验证。未来如能在以上方面得到突破进展,将影像学标志物应用于精神分裂症的临床诊治,将大幅提高精神分裂症的治疗效率。

关键词: 精神分裂症,磁共振,疗效预测

精神分裂症的候选遗传标志物研究进展

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目的 精神分裂症是一种严重的高致残精神障

碍,发病机制复杂且尚不明确,临床上仍缺乏客观的诊疗指标。大量证据表明,遗传因素对精神分裂症的发生与转归至关重要,遗传相关标志物颇具应用前景。本文围绕精神分裂症的候选遗传学生物标志物相关研究进行综述,以期精神分裂症的精准诊疗提供参考。

方法 本文总结了 SNPs, CNVs, URVs 等遗传标志物、DNA 甲基化,组蛋白修饰及 miRNAs 等表观遗传标志物及药物反应相关遗传标志物,并探究了借助 PRS 及人工智能、多组学整合等方法实现遗传标志物应用于临床的可能。

结果 得益于近年测序与生物信息技术的高速发展以及样本量的不断扩大,精神分裂症的遗传学研究已取得了诸多成果,SNPs、CNVs 及 miRNAs 等各类精神分裂症的遗传候选标志物层出不穷。精神分裂症遗传研究的样本量也已增加到数十万人,鉴定出了大于 300 个常见变异,10 个 URVs,以及至少 8 个 CNVs。规模日益壮大的 GWAS 研究在精神疾病常见遗传风险方面提供了令人信服的证据,在精神分裂症的遗传变异鉴定方面取得了许多成果,同时证实了精神分裂症的多基因性质。PRS 有助于实现 GWAS 结果的临床应用,可用于量化遗传倾向,与临床表型相关的研究更有助于加深对精神分裂症临床异质性遗传相关机制的认识。除此之外,表观遗传修饰过程对基因表达的影响不容小觑,并为疾病相关的获得性状的跨代遗传提供了基础,也为环境因素参与精神分裂症的发病提供了途径。

结论 遗传相关生物标志物尚处于开发和验证的早期阶段,虽然使用 PRS、CMA、WES 等方法有望实现精神分裂症的筛查与预测,但在实际使用中收益甚微,要实现临床应用仍任重道远。首先, GWAS 等遗传学研究仍然需要在更多的种族群体进行大规模的调查和验证;其次,外周组织来源的 DNA 甲基化、miRNAs 等表观遗传学标志物具有成为诊断标志物的潜力,但中枢与外周的表现遗传特征差异必须被充分考虑,并且,现有研究间异质性高,即使是外周组织来源,也不尽相同,在未来研究中需要明确更为准确且易于推广的样本组织来源;另外,考虑到精神分裂症受多个遗传因素调控,借助人工智能等新兴技术建立模型有望整合多个不同的标志物,也有助于更为全面地解析遗传机制。

关键词: 精神分裂症,遗传标志物,表观遗传

Abnormal Thyroid Function and Cerebral Biochemical Metabolism in Bipolar Disorder Patients with Comorbid Borderline Personality Disorder

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Objective The underlying neurobiological mechanisms in bipolar disorder (BD) comorbid with borderline personality disorder (BPD) remain unclear. We aim to explore the mechanisms of BD comorbid with BPD by detecting thyroid function and levels of choline and NAA metabolism in various brain regions of the cortico-striato-cerebellar(CSC) circuit

Methods We analyzed thyroid function and magnetic resonance spectroscopy (MRS) data from 84 patients with BD(34 comorbid with BPD and 50 comorbid without BPD) and 41 healthy controls (HCs). Binary logistic regression was used to analyze the influence of abnormal thyroid hormones and brain metabolism indexes on BD&BPD. Furthermore, receiver operating characteristic (ROC) classification tested the potential of the statistically significant cerebral metabolism ratios to differentiate BD comorbid with BPD from BD patients

Results we observed significantly lower levels of FT3 and higher levels of TT4 in the BD&BPD group compared to the HC. Moreover, the BD group exhibited only lower FT3 levels compared to the HC group. BD&BPD group demonstrated higher NAA/Cr ratios in the bilateral cerebellum when compared to the BD patient group and HC group. BD group displayed a lower NAA/Cr ratio specifically in the right thalamus compared to the HC group. Furthermore, logistic regression analysis revealed that the NAA/Cr ratio in the right cerebellum had a significant impact on BD patients with comorbid BPD. Additionally, utilizing ROC classification, we achieved a mean accuracy of 75.4%, a sensitivity of 67.7%, and a specificity of 80.00% in differentiating BD patients with comorbid BPD from those without comorbidity

Conclusion Our findings indicate that both individuals with BD comorbid with BPD and those without comorbidity exhibit abnormal NAA metabolism in the cerebellar region. Bilateral cerebellar NAA/Cr ratios may serve as potential neural markers in differentiating BD patients with comorbid BPD from those with BD alone. These results contribute to the establishment of a diagnostic index for BD comorbid with BPD

关键词: bipolar disorder (BD) comorbid with borderline personality disorder (BPD), N-acetylaspartate, cerebellar, thyroid

新型冠状病毒感染疫情下孕产妇心理状态及影响因素分析

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目的 分析新型冠状病毒感染疫情下孕产妇心理状态及影响因素, 便于为以后制定政策性或心理干预应对措施。

方法 2020年3月-2020年4月便利抽样法抽取孕产妇134人(妊娠20周以上, 产后3月内), 采取一般资料问卷、焦虑自评问卷、抑郁自评问卷进行调查。单因素分析采用独立样本t检验, 率的比较采用 χ^2 检验、Fisher确切概率法, 将单因素分析中有意义的、文献报告中有意义的变量纳入自变量, 以有无焦虑、抑郁为因变量, 采用二元logistic回归分析焦虑、抑郁的影响因素。

结果 有效问卷132人, 有效回收率为98.5%。检出有焦虑症状的占16人(12.1%), 有抑郁症状的占31人(23.5%)。多因素结果分析显示: 无家人陪伴、无工作比有家人陪伴、有工作的孕产妇更易出现焦虑症状 [OR=6.27, 4.76; 95% CI:(1.02~38.43), (1.19~19.00)]; 和感觉疫情对自己有很大影响相比, 有一些影响为出现焦虑、抑郁症状的保护因素 [OR=0.23, 0.13; 95% CI:(0.06~0.84), (0.04~0.41)]; 高中及以下学历较硕士及以上学历更易出现抑郁 [OR=7.34; 95% CI:(1.16~46.52)]; 疫情期间不能正常体检更易出现抑郁 [OR=7.97; 95% CI:(2.54~24.98)]。

结论 疫情期间孕产妇焦虑、抑郁症状高发,

应注意那些身边无家人陪伴、无工作、感觉疫情对自己有很大影响、高中及以下学历、疫情期间不能正常体检的孕产妇心理状态。

关键词：新型冠状病毒肺炎；孕产妇；心理状态；影响因素；焦虑；抑郁

疫情应激下某三甲综合医院医生的心理状态及影响因素分析

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目的 探讨新型冠状病毒感染疫情下某三甲综合医院医生的心理状态及影响因素，为以后防范严重心理问题出现以及制定心理干预措施提供参考。

方法 便利取样法于2020年2月28日—2020年3月2日抽取河北省人民医院医生419名，采用一般资料问卷、广泛性焦虑障碍量表、9项患者健康问卷、15项躯体症状问卷进行调查。单因素分析中率的比较采用 χ^2 检验、Fisher确切概率法，进行二分类Logistic回归分析医生出现焦虑、抑郁、躯体化症状的影响因素。

结果 共回收问卷419份，检出有焦虑症状的占16.71%（70/419），有抑郁症状的占29.59%（124/419），有躯体化症状的占31.26%（131/419），有睡眠问题的占55.13%（231/419）；回归结果显示：与一般科室、既往健康的医生相比，院内一线值守、既往有高血压/糖尿病/冠心病病史、焦虑抑郁病史者出现焦虑风险高[OR=4.944, 2.647, 6.258; 95% CI:(1.673~14.610), (1.122~6.247), (1.122~6.247)]; 院内一线、既往有慢性胃肠炎者出现抑郁风险高[OR=4.944, 4.377; 95% CI:(1.431~12.030), (1.442~13.289)]; 院内一线、既往有慢性胃肠炎病史者出现躯体化症状的风险高[OR=4.137, 4.573; 95% CI:(1.426~12.001), (1.434~14.585)]。

结论 疫情期间焦虑、抑郁、躯体化症状、睡眠问题在医生中高发，管理者以及精神心理机构应关注院内一线、既往有焦虑抑郁、慢性胃肠炎病史、糖尿病、冠心病、高血压病史的医生的心身健康，及早给予心理干预。

关键词：新型冠状病毒感染；医生；心理状态；

影响因素；焦虑；抑郁；躯体化

深部经颅磁刺激治疗对抑郁症患者大脑自发神经活动的影响

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目的 探讨深部经颅磁刺激（Deep Transcranial Magnetic Stimulation, dTMS）治疗对抑郁症患者大脑自发神经活动的影响。

方法 2022年9月至2024年1月于河北医科大学第一医院精神卫生中心纳入17例抑郁症患者（研究组）及20例健康者（对照组）为研究对象。研究组进行为期2周的dTMS治疗，在疗前及疗后评估汉密尔顿抑郁量表（HAMD）、汉密尔顿焦虑量表（HAMA）、心境障碍问卷（MDQ）、32项轻躁狂症状清单（HCL-32），并采集头颅静息态功能核磁共振（rs-fMRI）。对照组仅采集基线数据及头颅rs-fMRI。使用分数低频振幅（fALFF）、局部一致性（ReHo）评估大脑自发神经活动的变化。使用独立样本t检验或配对样本t检验比较研究组与对照组及研究组治疗前后大脑自发神经活动的变化。使用Pearson或Spearman相关分析探讨HAMD、HAMA与差异脑区的相关性。

结果 （1）研究组治疗后抑郁症患者HAMD（24.63±6.07 vs 10.75±4.93）、HAMA（26.56±5.69 vs 14.13±7.54）及其因子分均显著降低。（2）研究组治疗前与健康对照组相比右中央旁小叶fALFF值（ $t=5.36, P<0.05$ ）降低。（3）研究组治疗后fALFF值在左侧额中回（ $t=12.36, P<0.05$ ）、右内侧额上回（ $t=16.01, P<0.05$ ）降低，左侧舌回（ $t=10.81, P<0.05$ ）、右侧舌回（ $t=-11.07, P<0.05$ ）、右侧枕中回（ $t=-10.19, P<0.05$ ）、右中央旁小叶（ $t=-14.14, P<0.05$ ）升高。（4）研究组治疗后ReHo值在右背外侧额上回（ $t=14.76, P<0.05$ ）、右侧额中回下降（ $t=10.09, P<0.05$ ），右侧舌回（ $t=-12.36, P<0.05$ ）升高。（5）Pearson相关分析显示疗前左侧舌回fALFF值与HAMA总分（ $r=-0.892, P=0.017$ ）、焦虑/躯体因子分（ $r=-0.959, P=0.002$ ）呈负相关。疗前右侧舌回ReHo值与精神焦虑因子（ $r=-0.861, P=0.028$ ）呈负相关。左侧额中回fALFF值下降与迟

滞因子分下降呈正相关 ($r=0.879$, $P=0.021$)。

结论 dTMS 联合药物治疗可以改善抑郁症患者的焦虑和抑郁症状。左侧额中回可能是抑郁症患者迟滞症状改善的靶点,而舌回自发神经活动可能与伴焦虑症状的抑郁症相关。

关键词: 深部经颅磁刺激; 抑郁症; 静息态功能磁共振; 分数低频振幅; 局部一致性

强光疗法对精神分裂症患者症状及认知功能的影响

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目的 探讨在药物治疗的基础上采用强光疗法(BLT)辅助治疗精神分裂症的临床疗效。

方法 研究招募了于河北医科大学第一医院住院的 18-50 岁患者,要求符合 ICD-10 中精神分裂症的诊断,共纳入受试者 22 例,按随机数字表法分为 BLT 联合药物治疗组(BLT 组, 11 例)和单纯药物治疗组(对照组, 11 例)。BLT 组在药物治疗的基础上给予为期 2 周的强光治疗。收集社会人口学资料,在基线及治疗 2 周末采用阳性与阴性症状量表(PANSS),匹兹堡睡眠质量指数量表(PSQI)评估临床症状,词语学习、词语延迟回忆、连线测验(TMT)、词语流畅性测验(VFT)、数字符号 90 秒、数字广度测验评估认知功能。采用线性回归分析探讨 PANSS 减分率与相关影响因素之间的关系。

结果 基线时 2 组在 PANSS 总分及阳性症状、阴性症状、一般精神病理学分量表、PSQI、词语学习、词语延迟回忆、TMT、VFT、数字符号 90 秒、数字广度测验方面结果无统计学差异 ($P>0.05$); BLT 组治疗 2 周末 PANSS 总分及三个维度分量表、PSQI 得分较基线时降低,差异具有统计学意义 ($t=4.034, P=0.001; z=-2.871, P=0.004; z=-$

$2.548, P=0.011; z=-0.275, P=0.001; t=-0.212, P=0.039$)。认知评定量表中仅数字广度得分在治疗前后差异具有统计学意义 ($z=-1.982, P=0.047$); 治疗 2 周末 BLT 组 PANSS 总分及三个维度分量表评分均低于对照组,差异具有统计学意义 ($t=-3.697, P=0.004; t=-2.116, P=0.034; t=-2.154, P=0.031; t=-3.378,$

$P=0.006$); 治疗 2 周末 BLT 组 PANSS 总分阳性症状量表减分率高于对照组,有统计学意义 ($t=2.288, P=0.037; t=2.253, P=0.036$)。BLT 组与对照组的临床反应率分别为 54.55%和 9.10%,差异具有统计学意义 ($F=20.551, P=0.000$); 线性回归:以 PANSS 减分率为因变量,排除了控制变量的干扰后,组别可以解释 PANSS 减分率的 54.4%; BLT 组受试者在接受 BLT 治疗过程中未出现明显的不良反应,仅有个别患者在初次接受治疗时出现短暂性眼部不适,均在几分钟后缓解。

结论 BLT 辅助药物治疗精神分裂症的疗效优于单纯药物治疗; BLT 对精神分裂症患者的睡眠、注意力及短时记忆有改善作用; BLT 对精神分裂症患者的治疗安全有效。

关键词: 精神分裂症; 强光疗法; 精神病性症状; 认知功能; 临床疗效

Aberrant Brain Dynamics in Major Depressive Disorder During Working Memory Task

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Objective Working memory (WM) is a distributed and dynamic process, and WM deficits are recognized as one of the top-ranked endophenotype candidates for major depressive disorders (MDD). However, there is a lack of knowledge of brain temporal-spatial profile of WM deficits in MDD

Methods We used the dynamical degree centrality (dDC) to investigate the whole-brain temporal-spatial profile in 40 MDD and 40 healthy controls during an n-back task with 2 conditions (i.e., '0back' and '2back'). We explored the dDC temporal variability and clustered meta-stable states in 2 groups during different WM conditions. Pearson's correlation analysis was used to evaluate the relationship between the altered dynamics with clinical symptoms and WM performance

Results Compared with healthy controls, under

'2back vs. 0back' contrast, patients showed an elevated dDC variability in wide range of brain regions, including the middle frontal gyrus, orbital part of inferior frontal gyrus (IFGorb), hippocampus, and middle temporal gyrus. Furthermore, the increased dDC variability in the hippocampus and IFGorb correlated with worse WM performance. However, there were no significant group-related differences in the meta-stable states were observed

Conclusion This study demonstrated the increased WM-related instability (i.e., the elevated variability) was represented in MDD, and enhancing stability may help patients achieve better WM performance

关键词: depression, dynamical degree centrality, n-back, frontoparietal network, default mode network, hippocampus

Prediction of Drug-drug Interactions for Clozapine Combination Therapy Based on Physiologically Based Pharmacokinetic Model

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Objective The objective is to utilize the combination of clozapine and fluvoxamine as a case study, to develop physiologically based pharmacokinetic (PBPK) models specifically designed for the Chinese population. These models aim to predict the drug-drug interaction (DDI) associated with the combination medication of clozapine, and subsequently optimize its dosage

Methods By obtaining the physicochemical parameters, absorption, distribution, metabolism and excretion (ADME) related parameters and physiologically relevant parameters of Chinese population through literature and pharmacology-related databases, PBPK models for the aforementioned two drugs were constructed using PK-Sim® software. Using mean percentage error (MPE) and mean absolute percentage error (MAPE), or the ratio of predicted to observed area under

the curve (AUC) or peak concentration (C_{max}) as evaluation indicators, PBPK models were validated by real-world plasma drug concentration data. Additionally, Combining the inhibitory parameters of fluvoxamine on clozapine, models for the combination therapy of clozapine and fluvoxamine were developed. These models aimed to predict the pharmacokinetic changes of clozapine. The presence of clinically significant DDI was determined by using the 90% confidence interval of the area under the curve ratio (AUCR) or peak concentration ratio (C_{max}R) as evaluation metrics, with the non-effect boundaries set at 80-125%. Quantified the pharmacokinetic changes of clozapine after co-administration with fluvoxamine based on PBPK models, and developed a dosage optimization for clozapine

Results The constructed model of clozapine and fluvoxamine was considered accurate if the absolute value of the MPE was $\leq 10\%$ and the MAPE was $< 25\%$ during validation, indicating accurate predicted concentration-time curves. The PBPK model for the co-administration of clozapine and fluvoxamine was able to accurately predict pharmacokinetic parameters if the ratio of the predicted to observed AUC values was within 1.25-fold. The prediction of PBPK model for the co-administration showed that the 90% confidence intervals for AUCR and C_{max}R of the combination therapy of clozapine and fluvoxamine were not entirely within the ineffective effect boundary, indicating a clinically significant DDI when these two drugs were used concomitantly. Moreover, the dose optimization according to the PBPK models indicated that when subjects co-administer clozapine and fluvoxamine, reducing the dose of clozapine to 50% of the original dose could maintain the exposure levels of clozapine consistent with monotherapy

Conclusion The established PBPK model can effectively simulated the impact of combination therapy on pharmacokinetic changes of clozapine, providing valuable insights for predicting potential DDI and optimizing dosage regimens. If clozapine needs to be co-administered with fluvoxamine during treatment, clinicians should remain vigilant for clinically significant DDI and contemplate optimizing the dosage of clozapine accordingly

关键词：Clozapine; Combination medication; Drug-drug interaction; Physiologically based pharmacokinetic model

Correlation Analysis of 18-lead Ambulatory Electrocardiogram Heart Rate Variability with CRP, IL-6, and TNF- α in Patients with Generalized Anxiety Disorder

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Objective The aim of this study was to analyze the relationship between 18-lead ambulatory electrocardiogram heart rate variability (HRV) and the inflammatory markers C-reactive protein (CRP), interleukin-6 (IL-6), and tumor necrosis factor-alpha (TNF-alpha) in patients with generalized anxiety disorder (GAD), in order to further understand the association between cardiovascular function and inflammatory response in GAD patients

Methods Several patients with GAD were included as study subjects in this study. The patients' electrocardiographic data were recorded by 18-lead ambulatory electrocardiography, and HRV parameters were calculated. At the same time, blood samples were collected from the patients and serum levels of CRP, IL-6 and TNF- α were measured. The correlation between HRV and inflammatory markers was analyzed using statistical methods

Results the results of the study showed that HRV was significantly lower in GAD patients and was negatively correlated with serum levels of CRP, IL-6 and TNF- α . This suggests that cardiovascular autonomic function may be suppressed in patients with GAD, and the inflammatory response may be associated with this suppressed state. In addition, a correlation was shown between different inflammatory markers, further supporting the important role of inflammatory response in GAD patients

Conclusion In this study, a significant correlation was found between heart rate variability and markers of inflammatory response in patients with generalized anxiety disorder. This result not only helps us to better understand the abnormal changes in cardiovascular function in GAD patients, but also provides new ideas for the treatment of GAD. Future studies can further explore the specific mechanisms of this correlation and look for effective interventions to reduce cardiovascular risk in patients with GAD

关键词：Generalized anxiety disorder, heart rate variability, inflammatory factors, 18-lead ambulatory electrocardiography

Using Different Modalities of Electroencephalography and Eye Movement Features To Identify Depression Based on A Machine Learning Model

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Background Depression is a serious neurological disorder that has become a major health problem worldwide. This study utilizes electroencephalography (EEG) and eye movement (EM) data to identify depression, aiming to explore the applicability of different modalities of EEG and EM features in recognizing depression

Methods Data combining EEG and EM were collected using paradigms of eyes-open resting state, eyes-closed resting state, natural videos stimulation, angry videos stimulation, and happy videos stimulation. Functional connectivity features of EEG from each modality and features related to areas and periods of interest from EM were extracted. These features were selected using the Recursive Feature Elimination Method based on Support Vector Machine (SVM) and classified using the SVM algorithm for 67 patients with depression who have not taken medication in the past four weeks and 66 healthy controls

Results The experimental results show that in

the validation set, using a ten-fold cross-validation method, there are 25 types of EEG features with an average accuracy greater than 0.950 and 2 types of EM features with an accuracy greater than 0.950. In the independent test set, there are 2 types of EEG features with an accuracy greater than 0.850, and no EM features with an accuracy higher than 0.750

Conclusion The results indicate that depression affects brain activity in nearly the entire cortex, with significant impacts in the theta band, delta band, alpha band, and full band. It suggests that EEG data from eyes-open resting state, eyes-closed resting state, angry videos stimulation, and happy videos stimulation paradigms can be used to identify depression.

Limitations: The sample size in this study is relatively small, which may easily lead to overfitting.

关键词: Depression, Electroencephalography, Eye movement, Machine learning, Diagnosis

首发青少年抑郁症患者炎症因子与骨代谢指标关系的研究

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目的 初步探讨青少年时期抑郁对骨代谢的影响及分析, 以及炎症因子是否在两者之间起到一定中介作用。旨在提高对青少年抑郁症患者骨代谢受影响的认识, 填补炎症机制在其中发挥的作用的研究空白。以便为后续制定青少年抑郁骨骼健康提供干预措施、降低骨骼健康受损发生率提供科学依据。

方法 本研究共纳入于 2021 年 8 月至 2023 年 7 月于河北医科大学第一医院精神卫生中心就诊的首发青少年抑郁症患者 66 例和 2021 年 9 月至 2023 年 6 月于社区招募健康人群 63 例。收集受试者的一般人口学资料、生活方式问卷信息, 17 项汉密尔顿抑郁量表 (HAMD-17) 和汉密尔顿焦虑量表 (HAMA)。采用流式细胞技术检测 12 项细胞因子水平, 酶联免疫吸附测定法 (ELISA) 测定骨钙素 (BGP)、碱性磷酸酶 (ALP)、I 型胶原 C 端肽 (β -CTX) 水平, 比较两组受试者在炎症因子、骨代谢指标之间的差异。控制协变量 (年龄、性别、年龄、睡

眠、体育活动量、饮食特点) 采用偏相关分析来确定焦虑、抑郁与骨代谢指标之间的相关性, 并采用线性回归模型来确定其相关程度。最后通过中介效应探讨抑郁与骨代谢的相关性是否通过外周炎症因子来调节。

结果 与健康对照组相比, 抑郁组 ALP、 β -CTX 水平低 ($P < 0.05$), 对年龄进行分层分析发现差异主要集中在 13-17 岁, 其中女性 β -CTX 受抑制明显。校正年龄、性别、BMI、睡眠、体育活动量、饮食特点 (三餐能否按时、早餐规律、是否夜宵) 的混杂因素后进行偏相关分析显示 ALP 与精神性焦虑 ($P=0.001$)、躯体性焦虑 ($P=0.001$)、HAMA 总分 ($P=0.000$)、焦虑躯体化 ($P=0.004$)、阻滞 ($P=0.046$)、HAMD 总分 ($P=0.012$) 呈负相关; 回归分析显示 ALP 与焦虑躯体化 ($\beta=-6.528, P=0.051$)、HAMD 总分 ($\beta=-1.355, P=0.027$)、HAMA 总分 ($\beta=-2.320, P=0.001$) 呈负相关。中介分析结果发现: MDD 对 ALP 效应显著, 总效应-1.4444 (95%CI: -2.7632, -0.1255), 直接效应为-0.6603 (95%CI: -1.9012, 0.58); 炎症标志物水平 (TNF- α 、IL-6) 的间接效应分别为 -0.4882 (95%CI: -1.5002, -0.0554)、-0.7841 (95%CI: -1.5805, -0.2838)。

结论 1. 青少年抑郁严重程度与骨代谢水平之间有较强的负相关关系, 其中抑郁、焦虑程度越重 ALP 表达减少越明显。2. 炎症因子 (IL-6、TNF- α) 水平是青少年抑郁症出现骨代谢表达减少的中介因素。

关键词: 青少年, 抑郁症, 骨代谢, 炎症, 中介分析

探究免疫炎症指标与青少年抑郁患者骨代谢变化的关系

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目的 探究青少年抑郁患者与健康对照组中骨代谢指标、免疫炎症指标差异; 探究免疫炎症指标对青少年抑郁患者发病的预测价值; 探究青少年抑郁患者中骨代谢与免疫炎症标志物相关性。

方法 按照方便取样的方法, 在河北医科大学第一医院精神卫生中心住院并符合 ICD-10 中抑郁

症诊断的青少年抑郁症患者,共60例。对照组于社会招募的受试者,不符合ICD-10中任何精神疾病诊断的健康青少年,共63例。采用体育活动量表、汉密尔顿抑郁量表、汉密尔顿焦虑量表、社会支持量表来进行日常体育活动、焦虑抑郁情况及社会支持情况的评估。检测所有受试者骨代谢指标(骨钙素(BGP)、碱性磷酸酶(ALP)、I型胶原C端肽(β -CTX))及中性粒细胞、淋巴细胞、单核细胞、血小板数量,使用以下公式计算NLR、PLR、MLR: $NLR = \text{中性粒细胞计数} / \text{淋巴细胞计数}$, $PLR = \text{血小板计数} / \text{淋巴细胞计数}$, $MLR = \text{单核细胞计数} / \text{淋巴细胞计数}$ 。

结果 青少年抑郁组与健康对照组两组间骨代谢指标存在统计学差异,ALP($Z=-2.287, P=0.022$); β -CTX($Z=-3.696, P=0.000$)。两组间免疫炎症标志物存在统计学差异, NLR ($Z=-2.998, P=0.003$); PLR($-1.402, P=0.161$); MLR($Z=-7.362, P=0.000$)。 β -CTX($p=-0.224, P=0.013$)、ALP($p=-0.182, P=0.018$)与HAMD总分呈负相关关系, PLR($\rho=-0.213, P=0.018$)与HAMD总分成负相关, MLR($\rho=0.317, P=0.000$)与HAMD成正相关关系。做ROC曲线结果显示NLR、PLR、MLR预测青少年抑郁的线下面积为0.343、0.427、0.885, 当约登指数为0.63时, MLR预测青少年抑郁的敏感度为0.9, 特异性0.73。在青少年抑郁患者中, β -CTX与PLR存在相关性($\rho=0.444, P=0.000$), 控制控制年龄、性别、BMI、独生子女, β -CTX与PLR($\rho=0.443, P=0.000$)、MLR($\rho=0.249, P=0.06$)存在相关性, ALP与MLR($\rho=0.258, P=0.05$)存在相关性; 控制体育活动方式、饮食情况, β -CTX与PLR存在相关性, ($\rho=0.499, P=0.002$); 控制年龄、性别、BMI、体育活动方式及饮食情况等, β -CTX与PLR存在相关性, ($\rho=0.519, P=0.002$), ALP与MLR($\rho=0.359, P=0.037$)有相关性。

结论 免疫炎症标志物对青少年抑郁的发生有一定预测价值,并且在青少年抑郁患者的骨代谢变化中起到一定作用。

关键词: 青少年; 抑郁症; 免疫炎症指标; 中性粒细胞; 单核细胞; 血小板; 淋巴细胞; 骨代谢

中国汉族女性复发抑郁症患者自杀行为相关因素分析

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目的 探讨具有自杀行为的中国汉族女性,复发抑郁症患者的临床特征、社会心理因素,从中寻找抑郁症患者自杀的危险因素,为抑郁症患者自杀的预防提供依据。

方法 选取2020年9月-2022年1月就诊于郑州大学第一附属医院精神科门诊及住院中国女性汉族复发抑郁症患者391例,分为自杀行为组87例,无自杀行为组304例。使用两独立样本t检验、卡方检验、非参数检验方法及Logistic回归分析对收集的数据进行统计分析。

结果 自杀行为组的首次发病年龄小于无自杀行为组($p<0.05$),发作次数多于无自杀行为组($p<0.05$),无助感、无价值感、绝望感、自罪自责、思维迟缓的出现频率高于无自杀行为组,精力疲乏的出现频率低于无自杀行为组($p<0.05$);与广泛性焦虑、广场恐怖症、社交恐怖症、动物恐怖症及情景恐怖症的共病率高于无自杀行为组($p<0.05$);神经质评分、生活压力事件数、父母教养方式中的父母控制因子分、儿童期性侵犯发生率及吸烟史均较高($p<0.05$);经Logistic多因素回归分析,与自杀行为有关的因素为生活压力事件、首次发病年龄、吸烟史、绝望感、无价值感和精力疲乏。

结论 对女性抑郁症患者自杀行为的分析发现,发病年龄越早、生活压力事件越多、存在绝望感、吸烟史是女性抑郁症患者出现自杀行为的风险因素,而出现精力疲乏的是出现自杀行为的保护因素。

关键词: 女性; 复发; 抑郁症; 自杀行为

二甲双胍对奥氮平导致的小鼠氧化应激及认知功能障碍的影响

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目的 本研究旨在探讨二甲双胍对奥氮平引起的氧化应激和认知功能障碍的影响。

方法 将C57BL/6小鼠随机分为三组:对照组($n=9$)、奥氮平($n=8$)和奥氮平+二甲双胍($n=8$)。奥氮平组每天灌胃4mg/kg奥氮平,奥氮平+二甲双

胍组则加用 150 mg/kg 二甲双胍, 对照组给予等量生理盐水。治疗八周后, 使用 Y 迷宫交替行为测试评估认知功能, 并通过测量血液样本中的超氧化物歧化酶 (SOD)、丙二醛 (MDA) 水平来评估氧化应激水平。

结果 实验结果显示, 奥氮平组小鼠的 SOD 水平显著低于对照组 ($p<0.01$), 而奥氮平+二甲双胍组大鼠的 SOD 水平显著高于奥氮平组 ($p<0.001$), 且接近对照组水平。同时, 奥氮平组小鼠的 MDA 水平显著高于对照组 ($p<0.05$), 二甲双胍干预后显著降低了 MDA 水平 ($p<0.05$), 这些结果表明, 二甲双胍能够有效减轻奥氮平引起的氧化应激。在 Y 迷宫交替行为实验中, 发现奥氮平组小鼠的自主交替百分比显著低于对照组 ($p<0.01$), 显示出奥氮平对小鼠认知功能的损害。虽然奥氮平+二甲双胍组的小鼠自主交替百分比相较于奥氮平组有所改善, 但未达到显著性差异 ($p>0.05$)。这表明, 二甲双胍在短期内对奥氮平引起的认知功能障碍的改善作用有限, 可能需要更长的治疗时间或结合其他认知功能评估方法进行验证。

结论 本研究结果表明, 二甲双胍通过增强抗氧化酶活性和减少脂质过氧化产物, 减轻奥氮平引起的氧化应激, 并具有潜在的认知功能保护作用。这一发现为探索二甲双胍作为辅助药物, 减轻奥氮平副作用提供了科学依据。

关键词: 二甲双胍, 奥氮平, 氧化应激, 认知功能障碍, 抗精神病药物

N2 期睡眠中应用经皮耳迷走神经刺激对慢波活动的影响

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目的 探讨 N2 期睡眠中应用经皮耳迷走神经刺激 (taVNS) 对慢波活动的影响以及比较在大脑两种不同状态下应用 taVNS 的作用效果之间的差异。

方法 采用单盲研究, 于 2023 年 7 月至 2023 年 10 月在河北医科大学第一医院招募了 13 名健康成年人参与本研究, 最终第一部分试验共有 10 名受试者参加, 第二部分有 5 名受试者参与。第一部分中受试者间断完成了三晚的多导睡眠监测, 第一

晚均为基线之夜, 第二晚和第三晚为 N2 期给予的真刺激或假刺激之夜, 顺序随机。后将脑电图数据在 Matlab 中进行预处理, 提取所需的脑电图片段, 运用基于快速傅里叶变换的功率谱分析方法计算慢波能量并画图, 将数据提取后在 SPSS 中进行方差分析, 比较真假刺激和基线三个夜晚慢波能量的差异。第一部分试验完成 1 个月后进行第二部分, 5 名参与者在入睡前的清醒状态下行 taVNS, 运用同样的方法处理脑电图, 数据提取后与第一部分中的真刺激之夜数据进行比较, 方法是 SPSS 中的 t 检验, 从而比较在大脑两种不同状态下应用 taVNS 的作用效果之间的差异。

结果 基线, N2 期真刺激, N2 期假刺激三个夜晚的慢波能量存在差异, 且差异有统计学意义 ($F=3.459, P=0.046$)。与基线相比, N2 期接受假刺激后慢波能量没有显著变化 ($P=0.968$), 而 N2 期接受真刺激后的慢波振幅 (能量) 更大 ($P=0.032$)。与假刺激相比, 真刺激后的慢波能量更强, 差异有统计学意义 ($P=0.030$)。清醒状态下与 N2 期接受刺激相比, N2 期刺激后慢波振幅 (能量) 更强, 差异有统计学意义 ($t=2.998, P=0.037$)。

结论 1. N2 期给予 taVNS 可以增强随后发生的慢波活动能量, 从而改善睡眠。2. 相较于清醒状态下给予刺激, N2 时期应用 taVNS 能产生更强的作用效果。

关键词: 经皮耳迷走神经刺激; 慢波活动; 多导睡眠监测

探究夜间应用经皮耳迷走神经刺激对抑郁症患者症状及认知功能的影响

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目的 在真实世界研究中, 通过比较不同时间点 (例如白天和夜间) 的经皮耳迷走神经刺激 (taVNS) 治疗对抑郁症患者症状和认知功能的改善程度, 探究夜间应用 taVNS 对抑郁症患者症状及认知功能的影响。

方法 本研究采用单盲、随机对照试验、方便取样的方法, 2023 年 12 月—2024 年 1 月于河北医大一院精神卫生中心住院的抑郁症患者 (夜间研究

组 18 人, 白天对照组 11 人), 两组患者均采用常规抗抑郁治疗方案, 研究组在常规治疗基础上联合夜间 taVNS 治疗, 对照组在常规治疗基础上联合白天清醒状态下 taVNS 治疗, 治疗前后采用一般资料(人口学资料、疾病发作次数、病程、服用药物当量、住院时长等)、汉密尔顿抑郁量表 17 项(HAMD-17)、汉密尔顿焦虑量表(HAMA)、匹兹堡睡眠质量指数(PSQI)、认知功能领域测评(连线测验、简易视觉记忆测验—修订版(BVMT-R)、霍普金斯词语学习测验修订版(HVLT-R)、数字广度测验、符号编码、波士顿命名测验)进行心理评估, 明确治疗效果。利用 SPSS 25.0 软件, 进行统计分析。符合正态分布的计量资料采用均数±标准差($\bar{x}\pm s$)表示, 偏态分布的采用 M(P25,P75)表示, 计数资料以频数和百分比表示。计量资料呈正态分布的, 两组间比较采用成组 t 检验, 多组间比较采用方差分析。非正态分布的采用秩和检验。比较两组患者治疗前后各项评分有无差异性, 探究组间治疗优效性。

结果 (1)两组患者治疗前 HAMD-17、HAMA、PSQI 评分及认知功能均无统计学意义($P>0.05$), 治疗后研究组的 HAMD-17 总分低于对照组, 差异有统计学意义($Z=-2.570, P=0.010$); 治疗后两组患者 PSQI 评分和 HAMA 总分及各项因子比较, 差异均无统计学意义($P>0.05$); 治疗后两组患者连线测验($Z=-3.011, P=0.003$)、HVLTR($t=-5.495, P=0.000$)、BVMT-R($t=-2.516, P=0.018$)、数字广度($Z=-3.354, P=0.001$)、符号编码($t=-2.223, P=0.035$)、波士顿命名评分($Z=-3.343, P=0.001$)比较, 差异均有统计学意义。

结论 无论白天还是夜间睡眠期间应用 taVNS 可以改善抑郁症患者的抑郁症状和认知功能, 相较于白天清醒状态下给予刺激, 睡眠中应用 taVNS 能产生更佳的作用效果。

关键词: 经皮耳迷走神经刺激, 抑郁症, 认知功能

心境障碍类疾病唾液硝酸盐/亚硝酸盐水平初探

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目的 一氧化氮在神经发育中起着至关重要的作用。唾液作为一种易获取、无创的液体, 尚未在心境障碍疾病中进行亚硝酸盐检测。本研究旨在定量唾液亚硝酸盐, 并探讨其鉴别诊断抑郁症和双相情感障碍的价值。

方法 选取 2022 年 12 月—2023 年 12 月在北京安定医院门诊就诊或住院治疗的 20 例抑郁症患者, 21 例双相情感障碍。同期选取 20 名健康人为对照组。通过离心超滤管对唾液样本进行预处理方法, 采用总一氧化氮和硝酸盐/亚硝酸盐试剂盒测定含量。

结果 健康组、抑郁组、双相组唾液亚硝酸盐和硝酸盐水平比较无统计学差异, 但相较于健康对照, 两种指标在抑郁组中具有降低的趋势, 而在双相组中具有升高的倾向。通过将各组的硝酸盐和亚硝酸盐水平进行相关分析发现, 抑郁组及双相情感障碍组患者唾液两指标含量互成正相关(抑郁: $R=0.671, p=0.001$; 双相: $R=0.930, p=2.228e-8$), 而健康组未见具有统计学意义的相关性。

结论 三组亚硝酸盐和硝酸盐水平比较无差异, 而两疾病组内可见亚硝酸盐和硝酸盐的正相关, 提示 NO 相关的氧化还原过程可能在疾病进展中具有影响。首次提出收集无创唾液进行心境障碍患者亚硝酸盐与硝酸盐定量, 需要开展提高样本量以明确其是否具有鉴别诊断抑郁症和双相情感障碍的可能。

关键词: 抑郁症; 双相情感障碍; 唾液; 硝酸盐; 亚硝酸盐

Neoprzewaquinone A Alters The Migration, Phagocytosis and Energy Metabolism of IL-15-induced HMC3 Cells

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Objective Microglia play a major role in the immune defense system of the central nervous system and are activated in many neurological diseases. The immunomodulatory cytokine interleukin (IL)-15 is known to be involved in microglia response and inflammatory factors release. Neoprzewaquinone A (NEO) is an active compound isolated from *Salvia miltiorrhiza* Bunge. Our previous study has shown that NEO significantly inhibit the proliferation of IL-15-treated Mo7e cells. However, the role of NEO in the structure and function of IL-15-treated human microglial cells (HMC3) remains unclear. Thus, our study aimed to quantitatively analyze the beneficial effects of NEO on HMC3 cells following IL-15 treatment

Methods The cell viability, phagocytosis, migration and energy metabolism were evaluated by CCK8, scratch assay, pHrodo™ Red Zymosan BioParticles™ Conjugate, and Agilent Seahorse XF Cell Mito Test. Cephalothin (CEP) was selected as a positive drug because it has obvious inhibitory effect on IL-15 and IL-15R α

Results Our results showed that IL-15 stimulated the proliferation, migration and phagocytosis of HMC3 cells in a time-dependent manner. Interestingly, NEO exhibited significant suppressive effects on these IL-15-induced changes, which were even superior to those observed with the CEP. Moreover, IL-15 treatment did not significantly alter energy metabolism, including glycolysis and mitochondrial respiration. NEO and CEP alone effectively reduced glycolysis, non-mitochondrial respiration, basal respiration, ATP turnover, respiration capacity, and H⁺ leak in HMC3 cells. Furthermore, NEO displayed a partial regulatory effect on mitochondrial function in IL-15-treated HMC3 cells

Conclusion Our study confirms the effectively inhibition of NEO on IL-15-induced microglial activation and provides valuable insights into the therapeutic prospects of NEO in neuropsychiatric disorders associated with IL-15 and microglia

关键词: Neoprzewaquinone A; IL-15; Human microglial cells; Neuropsychiatric disorders

Identifying Causal Genes and Therapeutic Targets Associated with Chronic Insomnia Disorder Based on Multi-omics Mendelian Randomization

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Objective Chronic Insomnia Disorder (CID) is the most common sleep disorder affecting approximately 1/3 adults worldwide. It not only affects patients' daytime function and productivity, but is also closely related to a variety of physical and mental health problems. Much effort has been made to make progress in the pharmacotherapy of CID, however, the magnitude of CID patients still report poor long-term symptom control. In this study, we intends to further dig into the causal genes of CID by integrating multi-omics data and explore potential therapeutic targets, providing a new insight into its pathogenesis and pharmacotherapy

Methods Summarized Mendelian Randomization (SMR) was performed to estimate the causal effects of eQTL, pQTL and mQTL on CID, combining with co-localization analysis for validating the robustness. For genes that were associated with insomnia at more than one levels, a three-step SMR was applied to make clear the mediation effect. In addition, we used DGIdb to screen the targets with regulatory approval drugs, and look for their associations with targets corresponding to existing drugs for insomnia treatment according to Protein-Protein interactions

Results Twenty-five genes were identified as causal genes for CID through SMR and co-localization analysis, among which MAP2K1 and PTK7 were significantly associated with CID at both mQTL and pQTL levels. MAP2K1 is a therapeutic target with 21 regulatory approval drugs, and it is tightly associated with the targets of melatonin and ibuprofen, which are currently used for CID treatment

Conclusion Our study indicates that targeting

these proteins or repurposing MAP2K1 drugs could be a new promising approach for treating CID. The findings opens up new possibilities for precision therapy of CID, and provides certain scientific basis for future clinical trials and personalized therapy design

关键词: Chronic Insomnia Disorder, Therapeutic Target, Mendelian Randomization, Multi-omics

青少年抑郁症患者认知功能改变的静息态功能影像机制研究

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河北医科大学第一医院

目的 探究青少年抑郁症患者与对照组相比认知功能的差异;探究青少年抑郁症患者与对照组相比静息态功能影像学指标的差异;探究青少年抑郁症患者静息态功能影像学指标的变化与认知功能改变的相关性。

方法 按照方便取样的方法,在河北医科大学第一医院精神卫生中心住院并符合 ICD-10 中抑郁症诊断的青少年抑郁症患者,共 30 例。对照组于社会招募的受试者,不符合 ICD-10 中任何精神疾病诊断的健康青少年,共 30 例。采用汉密尔顿抑郁量表(HAMD)、汉密尔顿焦虑量表(HAMA)、数字记忆广度测验、连线测试(TMT)、数字划消试验来进行焦虑抑郁情况及认知功能的评估。采用酶联免疫吸附法(ELISA)检测血清 HMGB1 的水平。使用 Epidate3.1 进行双人核对并录入数据,确保将数据导出到 SPSS25.0 软件,进行统计分析,2 组之间人口学资料、HMGB1 指标的比较采用双样本 T 检验、秩和检验或卡方检验。采用 Spearman 法检验差异性脑功能指标与量表间的相关性。

结果 青少年抑郁组与健康对照组两组间焦虑相关指标存在统计学差异,HAMA 总分($Z=-3.622$, $P<0.001$);精神性焦虑($Z=-3.629$, $P<0.001$);躯体性焦虑($Z=-3.487$, $P<0.001$)。两组间抑郁相关指标存在统计学差异,HAMD 总分 ($F=8.87$, $P<0.001$);认知障碍 ($Z=-3.568$, $P<0.001$);体重减轻 ($Z=-2.111$, $P=0.035$);阻滞 ($Z=-3.640$, $P<0.001$);焦虑躯体化 ($Z=-3.575$, $P<0.001$);睡眠障碍 ($Z=-2.489$, $P=0.013$)。两组间认识功能相关指标存在统计学差

异,TMT-A 用时 ($Z=-2.496$, $P=0.011$);TMT-B 用时 ($F=9.554$, $P=0.013$);数字记忆广度顺背 ($Z=-3.758$, $P<0.001$);数字记忆广度倒背 ($Z=-3.607$, $P<0.001$);数字划消指数 E ($F=8.447$, $P<0.001$)。两组静息态功能核磁指标存在差异,抑郁组海马和左内侧和旁扣带脑回的功能连接大于健康组。存在差异的功能连接指标与认知功能相关量表存在相关性,海马和左内侧和旁扣带脑回的功能连接与数字记忆广度倒背成负相关 ($r=-0.494$, $P=0.027$)。

结论 青少年抑郁症患者认知功能下降,且与海马和左内侧和旁扣带脑回的功能连接增加有关。

关键词: 青少年;抑郁症;静息态功能连接指标;海马;内侧和旁扣带脑回

抑郁症患者心率变异性昼夜节律特征及其在辅助识别中的作用

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目的 探讨抑郁症(MDD)患者与健康对照在心率变异性(HRV)指标的昼夜节律特征上的差异,并探索 HRV 昼夜节律特征在识别 MDD 中的价值。

方法 本研究为横断面研究。研究对象包括 116 例 MDD 患者和 63 例健康对照。采集所有被试的 24 小时心电图数据,并计算 12 个 HRV 指标。HRV 指标分为四类,反映心脏自主神经系统(ANS)的不同调节类型:PNS-相关的 HRV 指标:主要与心脏副交感神经系统(PNS)调节有关,包括相邻 RR 间期(RRI)差值的均方根(RMSSD)、相邻 RRI 差值大于 50 毫秒的个数(NN50)、NN50 所占百分比(PNN50)、高频功率(HF)、样本熵(SampEn)和庞加莱图垂直于恒等线的标准差(SD1);SNS-相关的 HRV 指标:主要与心脏交感神经系统(SNS)调节有关,包括心率(HR)、去趋势波动分析的斜率(α_1 和 α_2);PNS&SNS-相关的 HRV 指标:反映心脏 PNS 和 SNS 共同调节的 HRV 指标,包括 RRI 的标准差(SDNN)、低频功率(LF)和庞加莱图沿着恒等线的 SD(SD2);ANS-平衡的 HRV 指标:LF/HF。提出一种扩展余弦模型来分析 HRV 指标的昼夜节律

特征,包括平均值(M)、振幅(A)、占空比(a)、曲线的平缓程度(b)和高峰相位(T)。例如,HR_A表示HR的振幅。采用协方差分析比较MDD患者和健康对照在HRV指标昼夜节律特征上的差异。使用支持向量机(SVM)分析HRV昼夜节律特征在区分MDD和健康对照中的作用,并采用基于SVM的递归特征消除法(SVM-RFE)进行特征选择。

结果 与健康对照相比,MDD患者的HR_M增加,而其他HRV指标的M值降低,部分HRV昼夜节律曲线更加平缓,部分HRV指标的A、a、T存在组间差异。尤其是,与PNS-相关和SNS-相关的HRV指标在多个昼夜节律特征上均表现异常。采用SVM-RFE后,基于不同类型的HRV昼夜节律特征构建的SVM模型在区分MDD和健康对照时的性能均有所提升,能够较好地地区分MDD患者和健康对照。特别是,基于特征选择的SNS-相关HRV昼夜节律特征构建的模型表现最佳,准确率达到93.18%。

结论 MDD患者存在心脏ANS昼夜节律异常。HRV昼夜节律特征有望成为辅助识别抑郁症的客观指标。

关键词: 抑郁症, 心率变异性, 昼夜节律, 支持向量机

Repetitive Transcranial Magnetic Stimulation Leading To Severe Bradycardia in A Patient with Major Depressive Disorder

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Introduction Major depressive disorder (MDD) is widely acknowledged as a prominent contributor to global disability. Repetitive transcranial magnetic stimulation (rTMS) has emerged as an effective intervention for MDD. The most commonly reported side effects of rTMS include scalp discomfort, headache, and fatigue, which are generally transient, mild, and reversible in nature. Notably, bradycardia is not typically considered an adverse effect of rTMS. Previous studies have demonstrated that rTMS can induce temporary reductions in

heart rate (HR); however, no instances of serious arrhythmias resulting from rTMS have been documented. We present a case report describing the occurrence of severe bradycardia in a patient with MDD undergoing rTMS therapy

Case presentation: A 46-year-old Chinese woman with a 7-year history of MDD, unresponsive to five full courses of antidepressants and psychotherapy, was admitted to our hospital. Diagnosed with a severe depressive episode (without psychotic symptoms), she had no other medical history and no contraindications to rTMS. During her hospitalization, she continued taking paroxetine (40mg/day) and tandospirone citrate (15mg/day). Her hepatic, renal, and thyroid functions, as well as electrolyte levels, were normal. Electrocardiogram (ECG) and electroencephalogram (EEG) results showed no abnormalities.

The efficacy of pharmacotherapy remained unsatisfactory. Given her lack of prior exposure to rTMS, we incorporated once-daily rTMS therapy into the original treatment plan on the fourth day post-admission to enhance depressive symptom management.

During the rTMS sessions, the patient reported a noteworthy amelioration of mood. However, she concurrently experienced dizziness and chest tightness. Meanwhile, she developed paroxysmal severe bradycardia (HR:35-44bpm) with systolic blood pressure(BP) ranging from 101 to 127 mmHg and diastolic BP ranging from 63 to 104 mmHg. Notably, random blood glucose levels (5.6-5.9 mmol/L; normal range: 3.9 to 7.8 mmol/L), oxygen saturation (97-98%), and thyroid hormone levels remained within normal ranges. To investigate the etiology, a 24-hour Holter monitoring and cardiac magnetic resonance imaging (MRI) were conducted. The 24-hour Holter monitoring revealed bradycardia with an average HR of approximately 45 bpm, while the MRI demonstrated mild left ventricular enlargement. Consultation with a cardiologist yielded inconclusive findings regarding the underlying cause of the arrhythmia, emphasizing the need for vigilant surveillance.

The medication regimen was maintained while closely monitoring the patient's HR and BP, and rTMS

was suspended. One day later, her HR significantly increased to 72 bpm before stabilizing within a normal range of 80-100 bpm without any further occurrences of palpitations or headaches. Considering the improvement in depressive symptoms, both the patient and her family expressed their extensive desire to resume rTMS treatment. Following a pause of 5 days, rTMS was reintroduced with identical parameters.

Upon resumption of rTMS therapy, the patient's HR decreased significantly by 36 bpm within 4 hours. On the same day, her BP and random blood glucose levels remained within the normal range. The subsequent morning, her HR slightly increased to 38 bpm. Consequently, rTMS was temporarily suspended for that day; however, in the afternoon, there was a gradual ascent in her HR to 64 bpm.

Post-cessation of rTMS therapy, her HR gradually increased to 64 bpm after one day and further rose to 73 bpm on the following day, subsequently stabilizing within the normal range. The Naranjo Causality Scale was utilized to evaluate this association (scoring 9 points). Following extensive communication with the patient and her family, it was decided to terminate rTMS therapy.

Discussion: The patient had been on long-term treatment with paroxetine and tandospirone citrate, both of which exhibited only mild cardiovascular effects. Notably, no complaints of arrhythmia were reported during these courses of treatment. Interestingly, a temporary discontinuation of rTMS treatment for one day on two separate occasions resulted in resolution of the observed arrhythmias without any alteration in medication regimen. Importantly, an evaluation using the Naranjo Causality Scale (9 points) indicated a definitive causal relationship between rTMS and severe bradycardia.

Consistent with this phenomenon, previous research has demonstrated that rTMS treatment can induce a decrease in HR. The reduction of HR caused by rTMS is believed to be transient and mild, which is considered beneficial for normalizing autonomic nervous system (ANS) physiological markers. PFC, subgenual anterior cingulate cortex (sgACC), and vagus nerve (VN) are crucial anatomical structures within the heart-

brain axis. The antidepressant effect of DLPFC-rTMS may be attributed to transsynaptic activation of sgACC and inhibition of limbic regions (such as amygdala and thalamus), thereby mediating VN drive. By modulating the network connectivity and neural regulation of these brain regions, rTMS stimulation influences changes in HR mediated through the VN. Among these brain regions, DLPFC is known to elicit the most significant decrease in HR. Previous studies have utilized HR as a functional outcome measure to determine the optimal stimulation target in the DLPFC. In contrast to these findings, Manreena et al. proposed that high-frequency stimulation leads to HR deceleration in the left prefrontal area while low-frequency stimulation accelerates HR in the right prefrontal area; however, these studies were limited by small sample sizes and individual variability. Currently, cardiovascular indicators are often measured during rTMS treatment mainly for assessing its safety rather than investigating its relationship with ANS function. Therefore, future large-scale studies are warranted to elucidate the association between rTMS parameters/targets and ANS responses while further exploring the intricate brain-heart relationship for optimizing rTMS protocols.

Paroxetine can enhance synaptic serotonin concentrations, thereby exerting a subtle influence on ANS. The combination of tandospirone with selective serotonin reuptake inhibitors is considered safe. However, these medications do not induce significant cardiovascular adverse effects. Nevertheless, this does not preclude the possibility of severe bradycardia resulting from drug combination and rTMS. Furthermore, it is noteworthy that such case is exceedingly rare in existing literature, with no prior reports documenting severe arrhythmias caused by rTMS.

Recommendations: The administration of rTMS treatment to patients necessitates meticulous consideration of their medical history and concurrent cardiovascular medications. Furthermore, it is imperative to document the patient's baseline cardiovascular parameters, including HR and BP, at the initiation of rTMS therapy. For individuals taking paroxetine concomitantly, close monitoring HR during rTMS treatment may be warranted.

关键词: rTMS; Major depressive disorder; Bradycardia

Disrupted Reconsolidation of Alcohol Reward Memory by Propranolol Through The Para-Hippocampus

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Objective To explore the neural circuit of norepinephrine system involved in the process of reconsolidation of alcohol reward memory and what brain mechanism are involved in propranolol's effect

Methods Included 22 male alcohol-dependent patients who were admitted to the Department of Addiction Medicine of the Second Affiliated Hospital of Xinxiang Medical College from April 2019 to December 2019, and recruited 11 healthy subjects served as the control group and matched with alcohol dependent group in age and education. Twenty-two alcohol-dependent patients were divided into two groups: propranolol group and placebo group. During fMRI scanning, alcohol-related clues were viewed through a magnetic resonance video system, and collected task-state image data. SPM12 was used to analyze the BOLD data in fMRI, and the differences in brain task fMRI between the alcohol-dependent group and the healthy control group, and the alcohol-dependent subjects propranolol group and placebo group were compared

Results 1. Alcohol-dependent group compared with healthy control group did not differ significantly in age ($t=0.65, P=0.51$), education ($t=-1.53, P=0.13$). Propranolol compared with placebo group did not differ significantly in age ($t=-0.27, P=0.78$), alcohol use years ($t=-0.07, P=0.94$), education ($t=1.15, P=0.26$), FTND ($t=-1.74, P=0.09$), AUDIT ($t=-0.69, P=0.49$), AWS ($t=-0.70, P=0.48$), OCDS ($t=-0.07, P=0.93$), PSQI ($t=0.76, P=0.45$), MMSE ($t=-1.19, P=0.24$), SAS ($t=-1.36, P=0.18$) and SDS ($t=-1.68, P=0.10$)

2. Compared with the non-alcohol-related images,

when viewing alcohol-related images, the alcohol-dependents had increased activation of the left fusiform gyrus and the right para hippocampus gyrus ($P < 0.01$, Cluster Size = 20).

3. Compared with the placebo group, when viewing alcohol-related images, the activation of the right para hippocampus gyrus in the propranolol group was significantly reduced when compared to the alcohol-related images ($P < 0.01$, Cluster Size = 20). We explored the correlation between para-hippocampus and craving differences for pre and post medication by using the para-hippocampus as the region of interest. The results showed that the craving difference was positively correlated with the para-hippocampus in the propranolol group ($r = 0.65, P < 0.05$).

Conclusion Our results indicate that propranolol may disrupt alcohol reward memory reconsolidation by decreasing the activation of the para-hippocampus to reduce craving and provide a theoretical basis for the involvement of norepinephrine in the reconsolidation process of alcohol reward memory and the clinical treatment of alcohol dependence

关键词: Alcohol dependence; Norepinephrine; Midbrain cortex reward network; fMRI;

红外光谱结合机器学习用于的抑郁症的快速诊断研究

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目的 红外光谱是一种快速、简便、高效的检测分析技术, 分子通过选择性吸收某些波长的红外线, 引起分子中振动能级和转动能级的跃迁, 进而得到红外吸收光谱。红外光谱可反应蛋白质、脂质、核酸等分子结构信息。本研究的目的是综合中红外光谱、近红外光谱以及机器学习算法, 通过微量临床血清样本, 建立抑郁症快速诊断模型, 助力抑郁症的快速筛查和早期诊断。

方法 无需样品前处理, 将微量血清样本(中红外 $1 \mu\text{L}$, 近红外 $10 \mu\text{L}$)滴加于红外载片, 涂匀后自然晾干, 上机扫描 1 分钟获得红外光谱信息。对

数据进行预处理后,使用支持向量机(SVM)、主成分线性判别分析(PLS-DA)、决策树(DT)、k近邻(KNN)分类、随机森林(RF)分类器和偏最小二乘判别分析(PLS-DA)等多种机器学习算法,构建抑郁症诊断及疗效预测模型。

结果 本研究综合中红外光谱、近红外光谱以及机器学习算法,通过微量临床血清样本(1-10 μL),建立抑郁症快速诊断模型,初步诊断效果较为满意(准确率 85%,灵敏度 93%,特异性 71%,AUC 0.87)。

结论 微量血清样本可以提供丰度的红外信息,通过血清的中红外光谱和近红外光谱构建机器学习分类模型,有望实现抑郁症患者与健康对照识别,为抑郁症的早期诊断提供快速、灵敏、稳定和经济高效的方法。

关键词: 抑郁症,中红外光谱,近红外光谱,机器学习,血清

Efficacy Study of Intermittent Theta Burst Stimulation(iTBS) in The Treatment of Adolescent with Affective Disorders

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Objective The purpose of this study was to investigate the clinical efficacy of accelerated iTBS in treating adolescent patients with depressive disorders and the factors influencing clinical symptoms

Methods This study was a double-blind randomized controlled study. Adolescent depressed patients were finally included in the analysis (22 cases in the active iTBS group and 18 cases in the sham iTBS group). active iTBS mode parameters setting: 9000 pulses/day for 2 days, location was left dorsolateral prefrontal cortex(DLPFC). Sham iTBS flipped the coil with the same parameters as the true stimulation. During 4 weeks of maintenance treatment, two sessions of 1800 pulses were administered weekly. All patients were assessed at baseline enrollment with the Montgomery Depression Rating Scale (MADRS), Clinical General Inventory of Effectiveness (CGI-I), Family Functioning

Assessment Scale (FAD), Snaith-Hamilton Pleasure Scale (SHAPS), Beck's Hopelessness Scale (BHS), and Adolescent Life Events Scale (ASLEC). All patients were assessed by Montgomery Depression Rating Scale (MADRS), and Clinical General Inventory of Efficacy (CGI-I) after the intervention treatment. Among them, MADRS and CGI were assessed separately within four weeks in the active iTBS group

Results 40 patients were randomly assigned to the active iTBS group (n=22) or sham group (n=18). There was statistically significant effect of iTBS treatment was found between the active iTBS and sham groups in the reductions of MADRS score ($p = 0.009$) and reductions of MADRS scores rate ($p = 0.020$). In addition, in the active iTBS group, higher baseline SHAPS and BHS scores were associated with worse outcomes

Conclusion The current study suggests that two days of active accelerated iTBS to the DLPFC region can rapidly, safely, and effectively improve depressive symptoms in adolescents with depression. And we found that itbs were less effective in baseline patients with greater feelings of hopelessness and anhedonia. Our data may contribute to a better understanding of the role of the accelerated iTBS intervention on the improvement of depressive symptoms and provide valuable recommendations and directions for the clinical management of adolescent depression

关键词: accelerated iTBS, depression, adolescent

基于 CYP2D6 基因多态性的度洛西汀治疗药物监测及其影响因素分析

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目的 探讨细胞色素 P450 2D6 (CYP2D6) 基因多态性及其他影响因素与度洛西汀血药浓度相关性,为治疗药物监测(TDM)临床应用提供参考。

方法 回顾性收集我院 2022 年 1 月-2023 年 12 月使用度洛西汀住院患者的 TDM 结果及年龄、性别、合并用药及 CYP2D6 基因多态性等临床资料,

分析 CYP2D6 基因多态性及其他影响因素对度洛西汀血药浓度影响。

结果 纳入 76 例中国汉族抑郁住院度洛西汀患者血药浓度为 (99.38 ± 121.28) ng·mL⁻¹, 校正血药浓度 (CDR) (1.64 ± 2.17) ng·mL⁻¹·mg⁻¹, CYP2D6 广泛代谢型 (EM) (*1/*1、*1/*2、*2/*2) 18 人 (占 23.68%)、中间代谢型 (IM) (*1/*10、*2/*10、*1/*41、*2/*41、*10/*10、*41/*41) 58 人 (占 76.32%)。比较各组间 CDR, 合并用药组 (2.56 ± 2.93) ng·mL⁻¹·mg⁻¹ 较单药组 (0.93 ± 0.85) ng·mL⁻¹·mg⁻¹ 高 ($P < 0.01$), IM 组 (1.92 ± 2.41) ng·mL⁻¹·mg⁻¹ 较 EM 组 (0.72 ± 0.52) ng·mL⁻¹·mg⁻¹ 高 ($P < 0.01$), 男性组 (1.69 ± 2.87) ng·mL⁻¹·mg⁻¹ 较女性组 (1.58 ± 1.23) ng·mL⁻¹·mg⁻¹ 高 ($P < 0.05$)。多元线性回归显示, 影响度洛西汀血药浓度程度大小的依次是: 日剂量 > 合并用药 > 基因型 ($R^2 = 0.458$, $P < 0.001$), 模型可解释 45.8% 的度洛西汀血药浓度的变化。

结论 度洛西汀剂量、合并用药、CYP2D6 基因多态性是影响度洛西汀血药浓度的主要因素, 临床应结合血药浓度和基因多态性进行个体化用药。

关键词: 度洛西汀; CYP2D6; 基因多态性; 治疗药物监测

人工智能应用于精神疾病精准诊断的研究进展

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目的 对基于 DSM-5 模式下, 精神疾病诊断呈现异质性的原因、影响及解决思路, 及人工智能在精神疾病诊断异质性的应用前景进行综述。探讨人工智能应用于精神疾病精准诊断的未来方向。

方法 以“TS=psych* AND (TS=(artificial intelligence*) OR TS=(learning) OR TS=(language model*) OR TS=(NLP))”为关键词, 检索 PubMed 数据库发表的相关文献共计 1966 篇。纳入标准: (1) 解决临床精神疾病诊断的异质性问题; (2) 应用机器学习、深度学习、自然语言处理、大模型等人工智能方法。排除标准: (1) 评述型文章; (2) 低质量文献; (3) 内容相似或重复的文章; (4) 存在争议的文章。最终纳入 126

篇文献。

结果 基于 DSM-5 现象学诊断的精神疾病包括抑郁症、双相情感障碍、精神分裂症存在基因、表现、病程、治疗反应等的异质性。异质性原因包括精神疾病复杂多维原因的等效性、测量诊断的单一性和主观性、对精神疾病采用分类而非连续谱的诊断思维。现有国内外针对精神疾病异质性解决框架包括: 研究领域标准、精神病理学层级、症状互作网络、精神影像学、计算精神病学、基于文本、语音、视频等多模态的诊断等。由于这些框架将处理更多维、多层次的、以自然语言为主的数据集, 因此需要应用人工智能技术。具体而言: (1) 对视频、音频、病历等文本进行自然语言处理, 提取更精确的、客观的生物学表征。(2) 对脑电、核磁共振等复杂高维时空数据, 采用典型相关分析、深度学习等进行网络分析、特征提取。(3) 对实验范式数据, 结合神经理论和人工智能技术对疾病的神经过程进行计算等。

结论 精神疾病的异质性需要采集更高质量的、客观性的、多模态的病人特征, 并运用深度学习、大语言模型等人工智能技术对多模态数据集进行更精确地特征提取、病理表征和亚型分类。

关键词: 精神疾病异质性, DSM-5, 精准诊断, 人工智能, 大语言模型, 深度学习

曲唑酮联合用药治疗抑郁症的日给药剂量标准范围探索

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目的 基于剂量校正浓度 (C/D), 探索抑郁症患者联合用药时曲唑酮日给药剂量的标准范围, 为临床个体化用药提供参考。

方法 收集某三甲医院 2021 年—2023 年接受曲唑酮治疗抑郁症的 257 例住院病例资料, 包括年龄、性别、体重、给药剂量、给药频次、合并用药等, 纳入长期服用同一剂量曲唑酮并达稳态血药浓度检测数据。采用 Med Calc 5.2 软件进行统计分析。非正态分布数据以 M (P25, P75) 表示, 两组间比较采用 Mann~Whitney U 检验; 多组间样本比较采用 Kruskal~Wallis H 检验; 计量资料相关性评价采用非参数斯皮尔曼 (Spearman) 相关性进行分析。

结果 (1) 257 例患者服用曲唑酮期间主要联合用药为选择性 5-羟色胺再摄取抑制剂 (SSRI)、5-羟色胺/去甲肾上腺素再摄取抑制剂 (SNRI) 及苯二氮卓类药物, 结果显示合用 SSRI 患者曲唑酮的 C/D 显著高于未合用 SSRI 患者, 差异有统计学意义 ($P < 0.001$)。 (2) 曲唑酮日给药剂量在 25-200mg 范围内, 其血药浓度与日剂量呈显著性正相关 ($r_s = 0.64$, $P < 0.001$)。 (3) 经受试者工作曲线分析显示, 临床实践中, 曲唑酮联合用药患者需要浓度达到 AGNP 指南推荐治疗窗范围 (700-1000ng/mL) 所需的最低日剂量为 50mg, 曲线下面积为 0.774, 该截断值敏感度为 81.0%, 特异性为 64.6%。所需上限阈值日剂量为 75mg, 曲线下面积为 0.669, 该截断值敏感度为 51.7%, 特异性为 75.0%。

结论 曲唑酮血药浓度存在显著个体差异, 合用 SSRI 类药物对曲唑酮的 C/D 值有显著影响。曲唑酮联合用药治疗抑郁症达到 AGNP 指南推荐治疗窗范围 (700-1000 ng/mL), 所需的日给药剂量标准范围应为 50-75 mg。

关键词: 曲唑酮; 抑郁症; 联合用药; 日给药剂量标准范围

帮助患者管理情绪、恢复并改善认知功能、提高生活质量。iTBS (Theta Burst Stimulation, 即 θ -Burst 刺激) 是一种经颅磁刺激 (TMS) 技术, 用于治疗双相抑郁以及难治性抑郁, 一般以左侧背外侧前额叶皮层区为主。近年来, 许多研究表明 iTBS 对抑郁症患者的症状改善具有显著效果。一些临床试验发现, iTBS 与安慰剂相比可以显著减轻抑郁症状, 并且在长期追踪中维持其疗效。此外, iTBS 还被发现对于那些对难治性抑郁患者也具有一定的疗效。iTBS 可以缓解抑郁症状, iTBS 作为一种非药物治疗方式, 通过调节大脑神经网络的活动来减轻抑郁症状, 包括双相抑郁症患者的情绪波动、抑郁情绪等。iTBS 的治疗可能有助于稳定患者的情绪, 减少躁狂和抑郁的发作次数和强度。抑郁症患者常常伴随认知功能的下降, 包括注意力、记忆力等方面。iTBS 可能有助于改善这些认知功能, 提高患者的思维清晰度和记忆力。对于一些对抗抑郁药物不耐受或者对其他治疗方法无效的患者, iTBS 可以作为一种选择, 用于治疗他们的抑郁症状。与药物治疗相比, iTBS 作为一种无药物依赖的治疗方式, 可以减少药物治疗可能带来的副作用和依赖性

结论 iTBS 治疗有益于双相抑郁患者认知障碍的改善

关键词: 双相抑郁障碍; 认知障碍; iTBS

ITBS 治疗双相抑郁认知障碍治疗进展

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目的 探讨 iTBS 治疗双相抑郁认知障碍治疗进展

方法 通过 PubMed、知网等浏览阅读参考文献

结果 双相抑郁症, 又称躁郁症, 是一种情绪障碍, 表现为情绪波动的剧烈变化, 包括躁狂和抑郁两种状态, 对患者的生活和健康带来了多方面的危害, 并且会影响他们的社会、学业和职业生活等。双相抑郁认知障碍指的是双相抑郁症患者在情绪波动的同时, 也伴随着认知功能的一些问题。“认知障碍”通常指的是认知功能受损, 包括但不限于记忆力减退、注意力不集中、语言障碍等症状, 从而导致患者专注力减退、决策困难等, 这可能会影响患者的日常功能和生活质量。因此, 治疗双相抑郁症不仅要关注情绪症状的缓解, 也要重视功能障碍的改善, 通过药物治疗、心理治疗、社会支持等综合措施来

“新一代益生菌”普拉梭菌在治疗精神疾病中的应用前景

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目的 近年来, 越来越多关于肠-脑轴的机制被阐述。肠道生态失调——致病菌含量升高、有益菌含量降低, 可在形态学上损害与情绪障碍相关的大脑区域, 同时引发神经炎症, 进而导致疾病发生。同时, 精神疾病基于肠道菌群的治疗方式也备受关注, 如饮食干预、粪便微生物移植、益生菌、益生元和合成菌等。因此, 本研究旨在汇总“新一代益生菌”普拉梭菌与精神疾病的相关研究, 并探讨其在精神疾病治疗中的前景。

方法 在 pubmed 中输入检索式: (Faecalibacterium prausnitzii) AND (Depression)、

(*Faecalibacterium prausnitzii*) AND (Autism)、(*Faecalibacterium prausnitzii*) AND (Alzheimer's Disease)、(*Faecalibacterium prausnitzii*) AND (Attention deficit/hyperactivity disorder)、(*Faecalibacterium prausnitzii*) AND (Schizophrenia)、(*Faecalibacterium prausnitzii*) AND (Substance-Related Disorders), 筛选普拉梭菌干预治疗以上精神疾病模型小鼠后, 小鼠行为学及体内小分子物质的变化相关文献; 普拉梭菌在以上几种疾病患者粪便中, 相较于正常人群丰度变化; 及临床药物干预治疗后, 患者粪便微生物组成变化相关的文献。汇总普拉梭菌与精神疾病的关系, 并结合普拉梭菌本身作用推测其在治疗精神疾病方面的应用前景及可能涉及到的机制。

结果 普拉梭菌在抑郁症、自闭症、阿尔兹海默症、注意力缺陷/活动过强障碍、精神分裂症及酒精成瘾等疾病患者肠道中, 丰度都较正常人有所下降, 同时在经过药物治疗后普拉梭菌含量上升。其中, 值得注意的是, 抑郁症、阿尔兹海默症模型动物在经过普拉梭菌治疗后, 疾病症状得到明显缓解。

结论 普拉梭菌是健康成年人结肠中最常见的微生物之一, 作为一种产短链脂肪酸的抗炎菌与多种疾病都呈现负相关。在这些疾病中, 肠道微生物群紊乱——抗炎细菌如普拉梭菌含量减少, 其通过发酵膳食纤维而产生的短链脂肪酸(如丁酸和丙酸)减少, 使短链脂肪酸产生不平衡, 最终导致机体炎症水平升高。而由此产生的炎症及有可能通过肠-脑轴来影响大脑功能, 从而导致一些精神疾病的发生。因此, 普拉梭菌作为“下一代益生菌”治疗精神疾病的应用可能是未来研究的一个方向。

关键词: 抑郁症 肠道菌群 炎症 普拉梭菌

Preliminary Exploration of Artificial Intelligence in Psychiatric Clinical Nursing

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Objective This study aims to explore the potential applications of artificial intelligence (AI) technology in psychiatric clinical nursing, with the goal of enhancing patient care quality, alleviating the workload on

nursing staff, and optimizing the efficiency of mental health services

Methods The research adopts a combined approach of literature review and case analysis to systematically summarize AI applications in psychiatry over recent years. The review covers areas such as intelligent diagnostic assistance, emotion recognition and intervention, and personalized treatment plan recommendations

Results Results indicate that AI technology can provide more accurate diagnostic suggestions and personalized treatment plans by analyzing patients' physiological data, behavioral patterns, and language expression, effectively improving early identification and management of mental disorders. Moreover, AI-driven emotion recognition tools have shown positive effects in psychological interventions, helping to alleviate negative emotions like anxiety and depression in patients, thereby enhancing their self-management and recovery capabilities

Conclusion The results suggest that AI technology has broad prospects for application in psychiatric clinical nursing, capable of not only increasing nursing efficiency and quality but also creating more humanized and personalized medical services for patients. However, privacy protection, ethical issues, and technological maturity remain key challenges requiring attention. Future research should further explore the deep integration of AI technology into psychiatric nursing while strengthening interdisciplinary cooperation, ensuring that technological development is in harmony with ethical standards to achieve sustainable innovation in mental health services

关键词: Artificial Intelligence, Psychiatric Nursing, Intelligent Diagnosis, Emotion Recognition, Personalized Treatment.

精神分裂症暴力攻击行为与 P300 的相关性研究

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目的 暴力攻击行为指精神分裂症患者在精神症状(如幻觉妄想)的支配下,出现言语辱骂、攻击伤人、自杀自伤、暴力毁物等行为,其爆发性高、破坏性强,具有一定的隐秘性。每年都有众多医护人员或者患者家属被精神分裂症患者攻击,暴力攻击行为给患者自身、亲属、邻居、医护人员带来了危险及恐慌,因此,对于精神分裂症患者暴力攻击风险的预测、识别、评估变得至关重要,具有极大的临床价值。探讨精神分裂症患者其暴力攻击行为与事件相关电位 P300 成分的相关性。

方法 将福州市第二总医院神经精神病防治院精神分裂症住院患者根据其既往个人史及修改版外显攻击量表(Modified Overt Aggression Scales, MOAS)评分划分暴力攻击组 30 例及对照组 31 例。对比两组一般资料、临床资料、P300 成分的波幅和潜伏期;以及 P300 成分的波幅和潜伏期与 MOAS 评分的相关性分析。

结果 精神分裂症患者中暴力攻击组与对照组一般资料、临床资料无显著差异($P > 0.05$);但所诱发的 P300 成分的波幅和潜伏期有统计学意义($P < 0.05$),其中,暴力攻击组其 P300 波幅降低,潜伏期延长。经 Pearson 相关分析,精神分裂症患者所诱发的 P300 成分潜伏期与 MOAS 评分呈正相关,而其所诱发的 P300 成分波幅与 MOAS 评分呈负相关。

结论 具有暴力攻击行为的精神分裂症患者存在更严重的脑认知功能损伤。本研究推测,事件相关电位 P300 成分的波幅和潜伏期可作为预测及评估精神分裂症暴力攻击行为的电生理指标。临床工作急诊时患者因精神症状支配下或者患者不配合、不作答、家属对病情不了解时,不配合完成问卷量表(如修订版外显攻击行为量表、暴力攻击历史、临床风险评估等)的临床难题,这对临床工作者在信息获取时具有较大的困难及极大的挑战,P300 成分的波幅和潜伏期对于预警暴力行为的检查,刚好补充了这一点。因此,鼓励在今后的临床工作中积极推广使用。

关键词: 精神分裂症,暴力攻击行为,MOAS 评分,P300 成分,振幅,潜伏期

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目的 随着大数据时代的到来和人工智能技术的快速发展,精神医学正迎来一场深刻的变革。本文旨在探讨数据在精神医学研究和实践中的核心地位,分析中国精神医学数据现状,并提出改进策略,以推动中国精神医学在数据驱动和人工智能的新时代实现跨越式发展。

方法 本文通过回顾精神医学的发展历程,分析当代精神医学面临的主要挑战。重点讨论了数据在精神医学研究中的作用,介绍了数据驱动在精神医学中的应用,包括 AI 辅助诊断、个性化治疗预测和实时监测与干预等。并针对中国精神医学数据存在的质量参差不齐、数据孤岛、数据安全与隐私保护等问题,提出了提升数据质量的策略框架。

结果 通过分析发现,高质量的数据在精神医学研究中的重要性体现在多个方面。数据提供了客观依据,减少了诊断中的主观性。通过大规模临床数据的收集和分析,可以建立更客观、更可靠的诊断标准。数据有助于揭示潜在模式,利用大数据分析发现隐藏在复杂表象下的规律和模式,为疾病的早期预警和预防提供依据。数据促进了个体化医疗,整合基因、环境、生活方式等多维度数据,可以为每个患者制定更加精准的治疗方案。数据加速了药物研发,通过大规模的临床试验数据和真实世界数据,可以更快地筛选有效药物,并优化给药方案。数据支持跨学科研究,精神医学的进步需要与信息技术、数据科学、基因组学等领域紧密合作,形成多学科融合的研究模式,数据正是连接这些学科的桥梁。

结论 数据已成为 21 世纪最宝贵的资源。在精神医学领域,高质量数据的重要性不言而喻。通过建立统一的数据标准、构建国家级数据平台、加强数据安全与隐私保护、提升数据分析能力、完善数据生态系统等措施,中国精神医学的数据质量和利用效率将显著提升。这将为精准诊断、个性化治疗、疾病预防、新药研发等领域带来革命性的进展。本文的研究为推动中国精神医学在数据驱动和人工智能的新时代实现跨越式发展提供了理论支持和实践指导。

关键词: 数据驱动;精神医学;人工智能;精准诊断;个性化治疗

数据驱动引领精神医学奔向 AI 医疗新纪元

新昕* 王秀珍

抑郁症的情绪情境依赖的脑功能异常模式

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目的 抑郁症 (MDD) 是一种情绪依赖的精神疾病。目前绝大多数研究采用静息态磁共振 (rs-fMRI) 或重复性认知任务 (如“face matching”) 研究 MDD 的脑功能特征。人脑高度整合的功能活动依赖于具体的情境, 但 rs-fMRI 和重复性认知任务无法提供真实情绪情境, 因而不利于显示脑的情绪效价响应模式。本研究采用基于视频自然刺激的情绪诱发任务设计观察 MDD 患者在不同情绪效价下脑功能激活模式的差异, 为建立情绪效价依赖的精准神经调控治疗 MDD 范式提供基础。

方法 本研究为前瞻性研究, 纳入 8 名 MDD 患者及 9 名健康对照。研究依托于脑计划, MDD 患者满足: (1) 停药 14 天以上; (2) 首发复发均可; (3) 无其它 DSM 诊断的精神疾病; (4) 无其它躯体共病。自然刺激采用 3 段短片合集, 共 8 分 15 秒, 每段短片中间由“+”隔开, 无音频。研究另召集 29 名健康评估者对影片逐秒进行积极、消极两种情绪效价评估 (1 表示有情绪效价, 0 表示没有), 评估过程无音频信息。影片的整体情绪效价曲线根据 29 名健康评估者平均值定义。考虑积极情绪、中性情绪与消极情绪时长尽量匹配, 采用 0.6 作为积极、消极情绪效价阈值 (即 60% 以上健康评估者评分一致), 其余时间点标记为中性情绪。之后, 根据积极 (占 31%)、中性 (占 36%)、消极 (占 33%) 情绪效价在时间轴上的位置建立 SPM 脑激活检测模型, 以“积极-中性”对照图作为积极情绪激活图, 以“消极-中性”对照图作为消极情绪激活图。因样本量较小, 采用 $P < 0.05$ 未校正作为显著性阈值。

结果 双样本 T 检验表明, MDD 患者右侧颞-顶联合区、右侧脑岛以及辅助运动区积极情绪激活降低 ($P < 0.01$), 具体表现为: 健康对照上述脑区在积极情绪下正激活 ($P < 0.05$), 但 MDD 患者在积极情绪下负激活 ($P < 0.05$)。同时, MDD 患者左侧背外侧前额叶、膝下前扣带回以及楔前叶消极情绪激活升高 ($P < 0.01$), 具体表现为: 健康对照上述脑区在消极情绪下不激活 (即 $P > 0.05$), 但 MDD 患者在消极情绪下正激活 ($P < 0.05$)。

结论 上述结果表明, 颞顶联合区、运动区、岛叶、扣带回、楔前叶、背外侧前额叶等常见荟萃分析

MDD 差异脑区的激活模式依赖于情绪效价的变化, 提示未来依据情绪效价针对不同脑区进行精准神经调控治疗 MDD 是潜在的研究方向。

关键词: 抑郁症; 情绪效价; 自然刺激; 脑激活模式

用 Open Vigil FDA2.1 对鲁拉西酮不良事件信号的分析

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目的 用 Open Vigil FDA2.1 对美国食品药品监督管理局不良事件呈报系统 (FAERS) 数据库中鲁拉西酮的相关数据, 探究该药不良事件的发生情况, 为我国临床用药丰富经验, 提供依据。

方法 用 Open Vigil FDA2.1 提取 FAERS 数据库中 2010 年第四季度至 2023 年第三季度关于鲁拉西酮的不良事件数据, 用比值失衡测量法中的报告比值比 (ROR) 法与比例报告比 (proportional reporting ratio, PRR) 法的综合标准法进行数据挖掘与分析。

结果 共得到 32728 份以鲁拉西酮为首要怀疑药物的不良事件报告, 其中女性占比较大 (54.26%), 且多发生在成年人 (18~<60 岁)。筛选后获取 326 个首选术语 (PT) 信号, 累及 20 个系统器官分类 (各类损伤、中毒及操作并发症、全身性疾病及给药部位各种反应、精神病类等)。其中, 发生频次比较高的 PT 包括超说明书使用、感受异常、哭、焦虑、抑郁、失眠等; 信号强度较强的 PT 包括激活综合征、躁狂、舌运动障碍、低催乳素血症、静坐不能等。挖掘到多个新的可疑药物不良反应, 包括低催乳素血症、情绪贫乏、强硬舌等。

结论 鲁拉西酮安全性较佳, 女性服用该药时, 需密切关注催乳素水平。妊娠期、产褥期及围生期女性及代谢功能不佳的患者使用该药相对安全。低催乳素水平、不宁腿综合征是鲁拉西酮新的罕见的可疑不良事件。

关键词: 鲁拉西酮; 不良事件; 信号挖掘; 比值失衡测量法; 美国食品药品监督管理局不良事件报告系统

Nkapl Deletion Cause Schizophrenia-like Cognitive Deficits Via Inhibitory Synaptic Transmission in MPFC in Mice

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Objective The single nucleotide polymorphism (SNP) rs1635, located on the exon of the NKAPL gene, has been identified associated with schizophrenia (SCZ) risk and cognition in early-onset SCZ in Chinese Han population. These findings suggest that NKAPL gene might contribute to the mechanism of cognitive deficits in SCZ. However, how do this gene result in cognitive deficits in SCZ remains unknown. In this study, we have developed Nkapl knock out (KO) and conditional knock out (cKO) mouse model to investigate the mechanism of Nkapl under the cognitive deficits associated with SCZ

Methods Construct Nkapl KO and cKO mice and use the schizophrenia-like animal behavior paradigm to detect the behavioral phenotypes of these mice. We performed whole-cell recording to record the miniature postsynaptic excitatory currents and miniature postsynaptic inhibitory currents in pyramidal neurons in the medial prefrontal cortex of Nkapl KO and cKO mice. High performance liquid chromatography and mass spectrometry experiments were used to explore the content of related chemicals in the PFC in Nkapl KO mice. Real-time quantitative PCR, western blotting, dual luciferase report assay and bulk RNA sequencing were used to explore potential molecular mechanism

Results (1) Nkapl KO mice had schizophrenia-like performance. (2) Nkapl deletion results in reduction of GABAergic transmission in mPFC that lead cognitive deficits in mice. (3) Nkapl is a transcriptional repressor of GABA metabolizing enzyme SSDH. (4) Nkapl T153N is a key variant for inhibiting SSDH and

SCZ-like cognitive deficits in mice

Conclusion Nkapl as a transcriptional repressor of the GABA metabolizing enzyme succinic semialdehyde dehydrogenase (SSDH) regulates the rate of GABA metabolism in interneurons, that plays a role in inhibitory synaptic transmission in mPFC and contributes to cognitive behaviors

关键词: Schizophrenia, Nkapl, cognition, interneuron, inhibitory synaptic transmission

以精神障碍为首发症状的自身免疫性脑炎 1 例

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目的 自身免疫性脑炎 (Autoimmune Encephalitis, AE) 泛指一类以免疫介导的中枢神经系统疾病, 临床表现具有异质性, 极易误诊。本文通过报道 1 例以精神行为异常为首次发病症状的青少年男性患者的临床表现及诊疗经过, 以提高以精神障碍为首发症状的自身免疫性脑炎的早期发现、早期诊断及治疗。

方法 总结 1 例 14 岁以精神行为异常为首发症状的 AE 青少年患者的精神临床资料, 分析其临床表现和诊治经历, 总结临床特点, 为该类病例的临床诊疗提供参考。

结果 患者以“心情差、夜眠差、行为紊乱 2 周”在北京回龙观医院住院治疗, 入院第 3 天病情迅速进展, 出现发热、不自主运动增多、意识清晰度下降等, 查体示肌张力增高, 左足巴宾斯基征阳性。辅助检查示白细胞、肌酸激酶等心肌酶谱异常升高, 经抗炎及抗精神病药物治疗后病情控制不佳, 后转诊至北京儿童医院, 经脑脊液检测发现患者存在抗 N 甲基 D 天冬氨酸受体 (N-methyl-D-aspartate receptor, NMDAR) 抗体阳性, 被确诊为自身免疫性脑炎 (抗 NMDAR 脑炎), 确诊后接受免疫调节治疗, 患者意识、情绪、精神行为等均改善。

结论 儿童青少年早期出现精神行为异常表现, 包括情感症状、认知障碍、言语及行为障碍等, 应考虑到 AE 的可能, 需尽早完善脑脊液等相关检查, 尽早转诊治疗。

关键词: 自身免疫性脑炎,精神病性症状,儿童青少年,抗 N 甲基 D 天冬氨酸受体脑炎

Cross-frequency Coupling of Brain Oscillations in Schizophrenia

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Objective Cross-frequency coupling in schizophrenia (SCZ) patients has been a key area of research. The coupling of oscillations originating from remote neural populations may serve as the basis for neural communication via cross-frequency phase-amplitude coupling (PAC). In this study, we examined (1) the modulation index (MI) values of the PAC for the SCZ and healthy controls (HC) groups across different phase and amplitude bands, (2) the MI values of the PAC for the SCZ or HC groups between observed data and surrogate data of different phase and amplitude bands, and (3) the coupling of higher frequency amplitudes (alpha, beta, and gamma bands) with lower frequency phases (delta and theta bands) at every individual electrode for the SCZ and HC groups

Methods We collected the resting-state electroencephalography of SCZ patients (n = 274) and age-, gender- matched HC (n=137) and explored the large-scale oscillations between low-frequency phases and high-frequency amplitudes in a cross-sectional design

Results The results indicated that there is a general phase-amplitude coupling between low-frequency phases and high-frequency amplitudes in HC and SCZ patients. In the delta phase, SCZ patients exhibited a statistically significant rise in the coupling of delta-alpha, delta-beta and delta-gamma in comparison to the HC group. In the theta phase, SCZ patients exhibited a statistically significant rise in the coupling of theta-alpha, theta-beta in comparison to the HC group

Conclusion

Our findings indicated that both SCZ patients and HC had PAC between low-frequency phases and high-frequency amplitudes. The discrepancies between SCZ patients and HC focalize the delta-alpha, delta-beta, delta-gamma and theta-alpha couplings, implying widespread impairments in low-frequency bands in patients with schizophrenia.

关键词: schizophrenia; resting state; neural oscillations; electroencephalography; phase amplitude coupling

Investigating The Role of The Suprachiasmatic Nucleus& Deep Brain Stimulation in Bipolar Disorder Using A C57BL/6 Mouse Model

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Background and Aims: Bipolar disorder is a complex psychiatric condition characterized by mood swings between manic and depressive states, often accompanied by disturbances in circadian rhythms. The suprachiasmatic nucleus (SCN), a master circadian pacemaker in the brain, regulates daily rhythms of behavior and physiology. However, its involvement in bipolar disorder pathophysiology remains unclear. This study aims to elucidate the role of the SCN in bipolar disorder using a C57BL/6 mouse model. Specifically, we hypothesize that disrupting SCN function through lesions will induce bipolar-like behaviors and circadian disruptions, which can be mitigated by targeted deep brain stimulation (DBS). We further aim to investigate the molecular mechanisms underlying these changes, focusing on alterations in clock gene expression and

neuronal activity markers

Methods A series of experiments will be conducted using male C57BL/6 mice divided into four groups: Control (no intervention), SCN Lesion (bilateral electrolytic lesions of the SCN), DBS (DBS targeting the SCN without lesions), and SCN Lesion + DBS (combination of SCN lesions and DBS). Behavioral tests, including open field, elevated plus maze, forced swim, and sucrose preference tests, will assess mood-related behaviors at multiple time points post-intervention. Circadian rhythm analysis will be performed using locomotor activity monitoring under light-dark conditions and constant darkness. Molecular analyses, including immunohistochemistry and gene expression profiling, will examine changes in clock gene expression and neuronal activation markers in the SCN and other relevant brain regions

Results and Discussion: Preliminary findings suggest that SCN lesions induce bipolar-like behaviors, including increased locomotor activity, anxiety-like, and depression-like behaviors, alongside disrupted circadian rhythms. DBS treatment is anticipated to ameliorate these behavioral and circadian disruptions, demonstrating its therapeutic potential. Molecular analyses will provide insights into the underlying mechanisms of DBS, elucidating changes in clock gene expression and neuronal activity markers. These results will enhance our understanding of the SCN's role in bipolar disorder pathophysiology and inform novel therapeutic strategies

Conclusion This study aims to advance our understanding of the involvement of the SCN in bipolar disorder and explore the therapeutic potential of DBS. By integrating behavioral, circadian, and molecular analyses, we seek to elucidate the complex interactions between the SCN, mood regulation, and circadian rhythms. Ultimately, these findings may pave the way for personalized treatment approaches targeting circadian dysregulation in bipolar disorder

关键词: Suprachiasmatic Nucleus; Deep brain stimulation; Bipolar Disorder; pathophysiology; therapeutic strategies

青少年非自杀性自伤与人格特征的关系：心理弹性与述情障碍的中介效应

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目的 探讨青少年非自杀性自伤 (NSSI) 与人格特征、心理弹性及述情障碍之间的关系, 并探讨心理弹性、述情障碍在青少年 NSSI 行为与人格特征间的中介作用。

方法 选取 2023 年 10 月至 2024 年 4 月哈尔滨市第一专科医院住院及门诊患者 350 例作为研究对象, 采用一般情况调查表、青少年非自杀性自伤行为评定问卷、艾森克人格问卷 (EPQ)、心理弹性量表 (CD-RISC-10)、多伦多述情障碍量表 (TAS-20) 进行量表评估。应用 SPSS 22.0 软件进行数据统计分析, 进一步应用 Hayes 编制的 PROCESS 3.3 版本中的模型四, 采用 Bootstrap 法(抽取 5000 个样本)进行中介效应检验。

结果 应用 Pearson 相关分析发现, 心理弹性与非自杀性自伤行为负相关 ($R=-0.36, P<0.001$), 述情障碍、神经质人格、精神质人格及内外倾向性与非自杀性自伤行为正相关 (R 分别为 -0.39 、 -0.29 、 0.33 、 $-0.20, P<0.001$)。中介效应检验结果显示各路径 95%置信区间均不包含 0, 心理弹性和述情障碍在神经质对非自杀性自伤行为影响过程中发挥部分中介作用, 中介效应占比分别为 16.4%、22.2%。心理弹性和述情障碍在神经质对非自杀性自伤行为影响过程中发挥部分中介作用, 中介效应占比分别为 21.5%、24.7%。

结论 青少年 NSSI 行为的发生与神经质或神经质人格、心理弹性水平和述情障碍有关。神经质或神经质人格特征不仅可以直接预测青少年 NSSI 行为的发生, 还可以通过心理弹性和述情障碍间接影响青少年 NSSI 行为, 未来可以通过提高神经质或神经质人格特征青少年的心理弹性水平和述情能力, 以减少其 NSSI 行为的发生。

关键词: 青少年; 非自杀性自伤; 人格; 心理弹性; 述情障碍

TMS-EEG 在跨学科应用的研究进展

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目的 近年来,经颅磁刺激与脑电图的结合(TMS-EEG)在跨学科研究方法中的应用越来越广泛,这种方法通过刺激不同大脑皮层区域并实时记录大脑电活动,以此来绘制大脑功能网络活动与行为之间的因果关系。因此,本文旨在综述 TMS-EEG 技术在认知功能与神经心理疾病等应用的研究进展,希望为其精准治疗提供新的视角。

方法 通过在 PubMed、Google Scholar、Web of Science 数据库中进行数据检索,检索 2024 年 6 月 1 日之前发表的所有论文,由包括作者在内的两名评估员独立进行质量评估审查,最后总结出 TMS-EEG 的最新研究进展。

结果 TMS-EEG 技术在基础和临床的神经认知科学研究中有广泛的应用前景,TMS-EEG 的结合使得研究者可以测评不同大脑皮层的反应性和连接性,还可以用于研究皮层振荡与认知功能的相互作用。已有针对精神分裂症患者群体或阿尔兹海默病的 TMS-EEG 研究,观察到患有阿尔兹海默病的老年患者存在皮质兴奋性和连接的受损,精神分裂症患者报告了前额叶皮层 γ 振荡异常,可作为疾病状态的危险因素和内表型生物标志物进行探索。此外,TMS-EEG 用于注意力缺陷与多动障碍和成年癫痫中患者中,可发现患儿的 N100 成分振幅较小,在癫痫患者中可识别致癫痫区并显示出揭示神经调节疗法的生物标志物的潜力。最后,将 TMS-EEG 与脑机接口(BCI)相结合提供了进行闭环状态依赖性脑刺激的可能性,这在神经康复和神经治疗方面具有巨大的潜力。因此,TMS-EEG 在未来研究领域具有现实的潜力,可以作为一种诊断技术来指导基于常见生物学缺陷的患者分层并为患者和病变风险高的个体制定预后和治疗策略。

结论 迄今为止进行的 TMS-EEG 实验说明了 TMS 与脑电图的结合为大脑研究提供了强大的工具,通过直接干预和实时监测大脑活动,可以更深入地理解大脑功能的动态变化及其与行为的关系,为指导识别疾病状态和靶向个体化治疗提供神经精神生理基础。

关键词: TMS, EEG, 认知功能, 神经心理疾病

AiTBS 联合刺激左侧前额叶-小脑干预抑郁发作患者自杀意念的疗效及机制研究

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目的 本研究探讨 20Hz 的加速间歇性 Theta 节律刺激 (accelerated intermittent Theta Burst Stimulation, aiTBS) 联合刺激左侧小脑及左侧背外侧前额叶皮层 (DLPFC) 治疗抑郁发作患者自杀意念的疗效和机制。

方法 aiTBS 方案: iTBS (丛内频率 20Hz 的 3 脉冲串,丛间频率 5Hz,刺激 2s 间歇 8s,共 600 脉冲,用时 3min9s)、每次治疗间隔 60min、每日 5 次、连续 4 天,共 20 次。纳入 81 例 12-34 岁伴自杀意念的单、双相抑郁障碍患者,随机分配至干预组和控制组。干预组联合刺激左侧 (DLPFC) 及左侧小脑,控制组真刺激左侧 DLPFC 及伪刺激左侧小脑。采用贝克自杀意念量表 (SSI) 评估自杀意念;采用 24 项汉密尔顿抑郁量表 (HDRS) 和贝克抑郁自评量表 (BDI) 评估抑郁症状。检测干预前后脑源性神经营养因子 (BDNF)、原肌球蛋白相关激酶 B (TrkB)、磷脂酰肌醇 3-激酶 (PI3K)、蛋白激酶 B (AKT) 及哺乳动物雷帕霉素靶蛋白 (mTOR) 血清浓度。随访时间为 6 个月。主要结局指标为干预前后 SSI 的变化。

结果 (1) 疗效及安全性: 干预组的抗自杀有效率和缓解率分别为 56.1% 和 36.6%,控制组分别为 41.0% 和 23.1%,两组差异均无显著性 (均 $p > 0.05$)。SSI 和 HDRS 的组别*时间交互效应显著 (均 $p < 0.01$)。简单效应分析示,干预期间两组 SSI 和 HDRS 分值均呈下降趋势,但干预组显著低于控制组 (均 $p < 0.05$)。干预期间未发现躁狂等严重不良反应及认知功能损伤。

(2) BDNF 通路: 血清 BDNF、TrkB、PI3K、AKT 以及 mTOR 的时间效应均显著 (均 $p < 0.001$),但组别*时间交互效应均不显著 (均 $p > 0.05$)。干预后 BDNF、TrkB 和 AKT 的血清浓度高于基线,而 PI3K 和 mTOR 的血清浓度低于基线。偏相关分析显示,干预组的 SSI 减分值与 BDNF 变化值呈负相关 ($r = -0.46, p < 0.05$),控制组的 HDRS 减分值与 BDNF

变化值呈正相关 ($r=0.43, p<0.05$), 均通过了 Bonferroni 校正。

(3) 随访 6 个月疗效: SSI 的组别效应、时间效应和组别*时间交互效应均显著 (均 $p<0.05$); 干预组在随访 6 月时仍显著低于控制组 ($p<0.01$)。BDI 的时间效应显著 ($p<0.001$), 组别*时间交互效应不显著 (均 $p>0.05$)。

结论 aiTBS 联合刺激左侧小脑及 DLPFC 可在 4 天内快速改善抑郁发作患者自杀意念, 部分患者的疗效可维持 6 个月, 其机制涉及 BDNF 通路改变, 且具有良好的安全性。

关键词: 间歇性 theta 节律刺激、小脑、抑郁发作、自杀意念

奥氮平引起的脂代谢异常与 PCSK9 水平变化的相关性研究

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目的 以奥氮平为代表的第二代抗精神病药物会引起精神分裂症患者的脂代谢紊乱, 但具体机制尚不明确, 前蛋白转化酶枯草溶菌素 9(PCSK9)是调节血清胆固醇水平的重要因素, 通过促进低密度脂蛋白受体(LDLR)的降解, 从而影响胆固醇的清除, 是最近降脂药物研究的重要靶点。本研究通过分析奥氮平引起的脂代谢异常及其与血清 PCSK9 水平之间的关联, 探索奥氮平引起脂代谢异常的可能机制, 特别是 PCSK9 在此过程中的作用与影响。

方法 招募首发或半年内未服用抗精神病药物的精神分裂症患者 40 例, 性别不限, 年龄: 18-60 岁。阳性和阴性症状量表评分 ≥ 60 分, 临床总体印象量表 ≥ 4 分, 血脂、体重、血压、血糖等均在正常范围内。在基线期和治疗后的第 4 周末检测患者外周血中甘油三酯(TG)、总胆固醇(TC)、高密度脂蛋白(HDL)、低密度脂蛋白(LDL)浓度。并采用酶联免疫吸附法检测外周血中 PCSK9 浓度。

结果 治疗 4 周末与治疗前比较, 使用奥氮平的精神分裂症患者外周血中 TG、TC、LDL 显著升高 ($p<0.05$), HDL 无显著差异 ($p>0.05$); PCSK9 水平显著升高 ($P<0.05$); PCSK9 与 LDL 之间存在显著的相关性 ($r=0.329, p<0.05$)。

结论 奥氮平可引起精神分裂症患者的外周血 TG、TC、LDL、PCSK9 显著升高, 且 PCSK9 与 LDL 之间存在显著相关性, 提示 PCSK9 可能是奥氮平引起脂代谢异常的一个关键调节因素。

关键词: 奥氮平; 脂代谢异常; PCSK9

Mendelian Randomization Analyses Identify The Causal Association between Schizophrenia and Aging

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Objective Considerable evidence indicates the correlation between schizophrenia and aging, but further research is imperative to substantiate a causal linkage. This study aims at exploring the potential causal association between schizophrenia and aging via mendelian randomization (MR)

Methods We carried out bi-directional two-sample MR analyses to assess the causal association between schizophrenia and aging proxies from available genome-wide association studies (GWAS). For all MR analyses, we employed the inverse variance weighted (IVW) method as the primary outcome and excluded outliers by RadialMR and MR Steiger filters. Sensitivity analyses were conducted to ensure the stability and validity of our results

Results The results revealed that schizophrenia was causally associated with declined cognitive performance ($\beta = -0.064; P = 0.000; \text{FDR-corrected } P = 0.000$), decreased appendicular lean mass(ALM) ($\beta = -0.005; P = 0.001; \text{FDR-corrected } P = 0.016$) and whole-body lean mass (WBLM) ($\beta = -0.013; P = 0.000; \text{FDR-corrected } P = 0.000$) as well as increased mother's attained age ($\beta = -0.010; P = 0.005; \text{FDR-corrected } P = 0.038$). Additionally, the reverse MR analyses found that facial aging ($\beta = -0.536; P = 0.001; \text{FDR-corrected } P = 0.007$), cognitive performance ($\beta = -0.364; P = 0.000; \text{FDR-corrected } P = 0.000$), DNA methylation of granulocyte proportions ($\beta = -3.069; P = 0.000; \text{FDR-corrected } P = 0.000$).

corrected $P = 0.000$) and change rate of surface area ($\beta = -0.000$; $P = 0.002$; FDR-corrected $P = 0.019$) were associated with a reduced risk of schizophrenia. Of these results, sensitivity analysis found no heterogeneity or horizontal pleiotropy except for ALM, which may have horizontal pleiotropy

Conclusion Overall, our MR analyses indicate that schizophrenia results in a higher risk of accelerated aging including declined cognition and sarcopenia. Moreover, the results suggest that facial aging, cognitive performance, epigenetic age and change rate of surface area are negatively associated with schizophrenia

关键词: Schizophrenia, Aging, Mendelian randomization, Cognitive performance, Sarcopenia

Effects of Intermittent Theta Burst Stimulation on Cognition and Clinical Symptoms of Adolescents in Depressive Episode

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Objective To explore the feasibility of iTBS to improve cognitive function in adolescents with depressive episodes and to investigate the effect of clinical symptoms on cognitive function in those individuals.

Methods A total of 30 patients were collected from outpatient department of child and adolescent psychology in Tianjin Anding Hospital. The Aim Magnetic Stimulation Robot (AIM-III), and Mag TD (Yiruide Medical Equipment New Technology Co., Ltd., Wuhan, China) with an active, 70-mm figure-of-eight, air-cooled coil were used to stimulate the left dorsolateral prefrontal cortex (L-DLPFC). The minimal intensity that was defined as the resting motor threshold (RMT) resulted in eliciting responses greater than 50 μV in at least five of 10 stimulations. The iTBS protocol involved 50-Hz triplet bursts repeated at 5 Hz, with a 2-second on and 8-second off cycle, delivering a total of 1800 pulses per session at 70% of resting motor threshold (RMT). Participants underwent 2-day, five iTBS

sessions daily, each comprising 1800 pulses and separated by 50-minute intervals. Over the 4-week maintenance treatment period, two sessions of 1800 pulses were administered weekly. The sociodemographic questionnaire was used to investigate their demographic characteristics; the Montgomery Depression Rating Scale (MADRS), Patient Health Questionnaire (PHQ-9), and Generalised Anxiety Scale (GAD-7) were used to assess the patients' depression and anxiety levels; and their cognitive functions were tested by the Thinc-it (DSST, CRT, TMT, 1-BACK, PDQ-5). Patients were assessed at baseline, after accelerated treatment, and after maintenance treatment. Statistical analyses were carried out using SPSS27.0 software. Descriptive statistics were performed to report the scores of demographic variables, the 5 dimensions of cognitive function assessment and clinical symptoms. Repeated measures ANOVA or Friedman nonparametric test examined the effects of time on the clinical symptoms and cognitive function. Linear regression analysis was used to analyze the influencing factors of cognitive function subtraction scores after treatment

Results A total of 22 patients completed the whole treatment and assessment, and cognition and clinical symptoms improved significantly from baseline after accelerated and maintained treatment. Among them, after accelerated treatment, the correct number of DSST was significantly increased ($P=0.044$) and the MADRS score was significantly decreased ($P=0.002$) compared with baseline. After maintenance treatment, the correct number of 1-BACK($P=0.000$), CRT($P=0.048$) and DSST($P=0.008$) were significantly increased compared with baseline, and the response time of TMT was significantly decreased ($P=0.005$). In terms of clinical symptoms, MADRS($P=0.002$) and PHQ-9($P=0.000$) scores were significantly decreased. The results of linear regression analysis showed that the higher the baseline MADRS score, the lower the TMT reduction score ($\beta=-0.45$, $R^2=0.20$, $P=0.04$)

Conclusion As a novel safe, and non-invasive technique, our study demonstrated for the first time that the 2-day accelerated treatment with iTBS combined with a 4-week maintenance regimen is safe, effective and well-tolerated in intervening the cognitive function

of depressive episode in adolescents. Besides, the severity of depression at baseline affected the improvement of cognitive function, and the higher the severity of depression at baseline, the worse the improvement of cognitive function (TMT)

关键词: iTBS, adolescent, depression, cognition

Hippocampal Mitophagy Contributes To Spatial Memory Via Maintaining Neurogenesis During The Development of Mice

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Objective Impaired mitochondrial dynamics have been identified as a significant contributing factor to reduced neurogenesis under pathological conditions. However, the relationship between mitochondrial dynamics, neurogenesis, and spatial memory during normal development remains unclear. This study aims to elucidate the role of mitophagy in the spatial memory mediated by neurogenesis during development

Methods Adolescent and adult male mice were used to assess spatial memory performance. Immunofluorescence staining was employed to evaluate levels of neurogenesis, and mitochondrial dynamics were assessed through western blotting and transmission electron microscopy. Pharmacological interventions further validated the causal relationship between mitophagy, neurogenesis, and behavioral performance during development

Results The study revealed differences in spatial memory between adolescent and adult mice. Diminished neurogenesis, accompanied by reduced mitophagy, was observed in the hippocampus of adult mice compared to adolescent subjects. Pharmacological induction of mitophagy in adult mice with UMI-77 resulted in enhanced neurogenesis, and prolonged spatial memory retention. Conversely, inhibition of mitophagy with Mdivi-1 in adolescent mice led to reduced hippocampal

neurogenesis and impaired spatial memory

Conclusion The observed decline in spatial memory in adult mice is associated with decreased mitophagy, which affects neurogenesis in the dentate gyrus. This underscores the therapeutic potential of enhancing mitophagy to counteract age- or disease-related cognitive decline

关键词: development; mitophagy; neurogenesis; spatial memory;

Analysis of Factors Affecting Laboratory Alert Level of Trazodone Based on Therapeutic Drug Monitoring Data

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Objective Trazodone is an intriguing antidepressant that exhibits its pharmacological effects in a dose-dependent way, and different doses may exert distinct effects. It is seldom prescribed as a standalone medication, typically being utilized as a synergist in combination with other antidepressants for the management of depression. Previous studies have highlighted the importance of therapeutic drug monitoring for personalized dosing of trazodone due to significant variability in drug exposures. However, there is a lack of available reports on the risk factors linked to trazodone plasma concentrations exceeding laboratory alert levels. Furthermore, current literature fails to provide information on the optimal dosage required to achieve the recommended therapeutic reference concentration of trazodone when used in combination with other antidepressants for depression treatment in real-world clinical settings. To address this gap in the literature, we conducted a single-center, retrospective cohort study at the Xi'an Mental Health Center

Methods We conducted a single-center, retrospective, cross-sectional study at Xi'an Mental Health Center in China and collected data on trazodone-treated patients from 2019 to 2021

Results The results indicated that 20.6% of patients receiving daily trazodone doses between 25-200 mg had plasma concentrations exceeding laboratory alert levels. A stepwise logistic regression analysis using a stepwise method identified that trazodone daily dose and concomitant use of selective serotonin reuptake inhibitors (SSRIs) antidepressants were identified as risk factors for surpassing laboratory alert levels in plasma concentrations, with odds ratios (OR) of 1.04 and 2.86, respectively (Figure 1). The receiver operating characteristic (ROC) analysis revealed that a daily dose of trazodone at 50 or 75 mg was recommended to reach plasma levels of 700–1000 ng/mL when combined with other antidepressants. The area under the ROC curve was 0.791 ($p < 0.01$) and 0.664 ($p < 0.01$), respectively (Figure 2)

Conclusion In summary, the meaningful clinical results obtained in the current study provide important and valuable suggestions for future personalized medication of trazodone,

关键词: Trazodone, Therapeutic drug monitoring, Laboratory alert level, Personalized medication

A Clustering Analysis of Antipsychotics Treatment Response in Patients with Schizophrenia

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Background Clinical heterogeneity in schizophrenia presents a significant challenge to personalized medicine, as patients with different clinical features may exhibit distinct pathological mechanisms and variable responses to different medications. Previous studies had identified various subgroups of schizophrenia through cluster analysis based on clinical characteristics. However, the differences of patients' responses to medication among these clinical subtypes remains unknown

Objectives To compare the response rate of antipsychotics treatment among different clinical subtypes on patients with schizophrenia

Methods In this study, a total of 3030 patients

experiencing an episode of schizophrenia were randomly assigned to monotherapy with five atypical antipsychotics and two typical antipsychotics over a 6-week medication trial. Clinical symptoms were assessed using Positive and Negative Symptoms Scale (PANSS), and metabolic indices (including body mass index, fasting blood lipid and glucose) were repeatedly measured throughout the trial. At baseline, we clustered patients into different subtypes based on their clinical features and subsequently compared the characteristics, metabolic indices and their treatment responses among clusters after 6 weeks based on one-way analysis of variance (ANOVA) and χ^2 tests. Next, we used logistic regression models to predict the outcome based on the cluster

Results Patients could be classified into four clusters. Patients in cluster-M exhibited mild symptoms across all symptom dimensions, while Cluster-P patients displayed severe positive and excited symptoms. Patients in cluster-S presented with severe symptoms across five dimensions, with negative symptoms potentially being secondary due to their positive association with positive symptoms. In contrast, Cluster-N patients exhibited severe primary negative symptoms, as their negative symptoms were not correlated with any other symptom dimensions. Sex, age, age of onset, educational level, married status all showed significant group differences by cluster. In addition, higher levels of low-density lipoprotein and lower levels of high-density lipoprotein were observed in Cluster-N, while Cluster-M patients exhibited higher levels of triglycerides

We found significant differences in overall and symptom-specific responses to medication among the four clusters. For overall responses, Cluster-N and Cluster-S exhibited poorer outcomes (Cluster-M as reference). Additionally, Cluster-N showed poorer outcomes in negative symptoms, while Cluster-N and Cluster-P exhibited worse responses in positive and disorganized symptoms. Subsequently, we investigated whether patients in different subtypes responded differently to various antipsychotics, and whether blood fasting lipid levels at baseline were associated with response. In Cluster-N, patients responded better to Olanzapine, and baseline high-density lipid levels were negatively asso-

ciated with response rates. In Cluster-P, patients responded better to Risperidone. However, patients in Cluster-S and Cluster-M did not display difference in response to various antipsychotics when controlling for blood lipid levels.

Conclusion Overall, our preliminary findings indicate the presence of clinical subtypes in schizophrenia, with different subtypes exhibiting varying responses to medication. Specifically, patients with negative symptoms (including primary and secondary negative symptoms) showed poor outcomes following medication, and patients with primary negative symptoms showed better responses to Olanzapine. Further analysis is needed to elucidate the patterns of medication responses and influence factors among these clinical subtypes

关键词: schizophrenia, clinical subtypes, medication response, lipid metabolism

Two Hits of Insomnia and Inflammation Exploring The Pathogenesis of Depression

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Objective Studies have established that individuals with insomnia are more susceptible to depression when confronted with a dual assault from inflammation

Methods Here we developed a novel depressed rat model based on two hits of insomnia and inflammation. In Experiment One, 48 rats were divided into four groups: control (CON, 12), LPS injection (LPS, 12), sleep deprivation (SD, 12), and model (MOD, 12). In Experiment Two, 24 rats were assigned to a control group (8), physiological saline (SAL, 8), and fluoxetine (FLX, 8) groups. Behavioral assessments were conducted across all groups. After the modeling phase, we analyzed the hippocampal (HIP) and prefrontal lobe (PFL) from each rat group, performing RNA and protein sequencing analysis. We performed clustering analysis, differential expression, and enrichment analysis to investigate the potential mechanisms of the two-hit model,

and then conducted a comprehensive analysis of depression-related biological phenotypes using western blotting, immunofluorescence, transmission electron microscopy (TEM), and Golgi-Cox staining. Ultimately, we also have identified targeting genes in the two-hit model

Results Behavioral and pharmacological tests on rat groups revealed that chronic sleep deprivation, combined with LPS treatment, induced anxiety and depressive-like behaviors, which were effectively mitigated by fluoxetine. Through RNA and protein sequencing analysis, we found that synaptic plasticity decline and neuroinflammation are key in the two-hit model, validated by a series of techniques. We also identified four potential targets (IL21r, ARPC1b, Nos2, and Dnm2) for further understanding the molecular mechanisms in depression

Conclusion The two-hit depressed model demonstrated phenotype replication of depression, with the combined effects of SD and LPS significantly outperforming the effects of either SD or LPS alone. Neuroinflammation and synaptic plasticity play crucial roles in this model. This provides valuable tools for further exploration of the pathogenesis of depression. Multi-omics analysis identified four potential targets in the context of the two hits, revealing complex mechanisms of insomnia and inflammation in depression

关键词: insomnia, inflammation, depression, two hits, synaptic plasticity,

IL15Ra 基因敲除小鼠的海马体单细胞图谱揭示了 IL15 在中枢神经系统中的作用及其对神经精神疾病的影响

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目的 白介素 15 (IL-15) 是多种免疫细胞的趋化因子, 对免疫调节起着关键作用。IL15 信号传导在神经保护方面具有重要作用, 对于维持大脑正常功能和认知能力至关重要。此外, IL15 还与神经精神疾病的进展有关, 例如阿尔茨海默病和帕金森病。

IL15R α 敲除小鼠表现出明显的类精神疾病行为。鉴于 IL15 的广泛表达和严格分泌的特性,以 IL15 及其受体作为免疫相关疾病治疗靶点的研究日益受到重视。因此,研究中枢神经系统中 IL15 的炎症作用机制,可能为神经系统疾病的诊断和治疗提供新的潜在靶点。本研究利用 IL15R α 敲除小鼠的海马体单细胞转录组数据,探讨 IL15 功能异常对海马体调控机制的影响,以确定关键的细胞类型和细胞功能。

方法 研究将采用单细胞转录组测序技术,对 3 只雄性野生型小鼠(WT 组)和 3 只雄性 IL15R α 敲除小鼠(KO 组)进行测序,经过数据质控和预处理,对细胞基因表达矩阵进行细胞聚类、细胞注释、差异表达基因鉴定、基因功能富集、细胞轨迹推断、细胞通讯分析和基因特征打分等分析。以揭示 IL-15 和 IL-15R 在神经元和胶质细胞中的表达模式及其对神经网络功能的影响。

结果 我们从 64437 个单细胞转录组数据中注释得到了包括兴奋性 CA 神经元、兴奋性 DG 神经元、抑制性 Sst 神经元、抑制性 Meis2 神经元、CR 神经元、星形胶质细胞、少突胶质细胞、小胶质细胞、室管膜细胞和周细胞共计 10 个细胞类型,23 个细胞亚型。

结论 我们观察到,在 IL-15R α 缺失的情况下,兴奋性神经元与抑制性神经元在不同细胞亚型的数量分布和基因表达模式上均显示出显著差异。这些差异不仅揭示了 IL-15R α 在维持神经元亚型平衡中的关键作用,而且为 IL15 作为精神疾病治疗靶点提供了更为丰富的科学依据。这一发现不仅为理解神经元亚型的调控机制提供了新的视角,也为未来开发针对精神疾病的新型治疗策略开辟了新的可能性。

关键词: IL-15/IL-15R,神经保护,免疫调节,神经精神疾病,基因敲除

一种快速同时检测人头发及血中 16 种精神科常用药物的超高效液相色谱的方法学研究及其应用

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目的 精神心理疾病患者往往需要药物治疗,个别患者存在服药依从性不佳,影响了医生诊疗效

果,头发具有稳定,检测窗长,无创,采样简便等特点,是追溯服药史的有力检材。头发平均每个月生长 1cm,分段分析也适合用于监测历史服药情况和种类的判断,特别适合在精神科门诊随访患者近期服药规律性及服药种类的确证。目前头发中浓度监测的方法多是质谱法,质谱昂贵且对环境和操作人员要求高,基层很难开展。因此本研究拟建立一种 UPLC-UV 同时检测头发及血中精神科常用药物,可在临床及门诊中应用于漏服药患者及孕妇用药后对胎儿影响的评价等研究。

方法 本文采用 ACQUITY UPLC BEH C18 (2.1mm \times 50mm, 1.7 μ m) 色谱柱,流动相为 0.05% 甲酸-水溶液(A)和 0.05%甲酸-甲醇溶液(B)梯度洗脱,流速为 0.4mL/min,检测波长为 254nm 和 285nm,柱温为 40 $^{\circ}$ C。采用液-液萃取生物样本中药物并基于甲氧氯普胺为内标 UPLC-UV 法实现了包括抗精神病药物(氨磺必利、氯氮平、去甲氯氮平、阿立哌唑、脱氢阿立哌唑、奥氮平、米氮平、利培酮、9-OH 利培酮、曲唑酮、氯丙嗪、喹硫平、卡马西平)及镇静催眠药物(佐匹克隆、氯硝西洋、艾司唑仑以及阿普唑仑)的色谱分离。

结果 本研究建立的方法能在 28min 内实现 16 种成分的有效检测,分离度符合要求,能够有效筛查头发样本中常用抗精神病及镇静催眠类药物。本研究中应用本方法分析了 17 例临床采用氯氮平治疗的患者连续 3 个月的头发及血清样本,结果该方法稳定,简单,可应用于临床检头发中多种常用抗精神病药物的检测。

结论 该方法简单实用,流动相不含盐类,使色谱柱清洗更容易,并同时实现了人血及头发中 12 种抗精神病药物及活性代谢物的有效分离,无需昂贵的质谱法即可实现临床常用的多种抗精神病药物及代谢物的同时监测,适用于血及头发中多种药物的筛查可提供给临床辅助诊断历史服药信息。

关键词: 抗精神病药物;血药浓度;治疗药物监测;UPLC 法;头发

光照联合药物治疗老年期抑郁障碍的临床疗效观察

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目的 评估在抗抑郁药物治疗的基础上的光照疗法,对于老年期抑郁障碍患者的临床疗效和安全性。

方法 纳入 2022 年 12 月至 2023 年 12 月期间在我院精神卫生中心住院治疗的老年期抑郁障碍患者 60 例,利用计算机生成随机数字的方法将入组的受试者 1:1 分为干预组 (n=30) 和对照组 (n=30)。在常规使用抗抑郁药物治疗的基础上,持续 2 周于每日清晨 7:00-7:30 给予干预组光照强度为 10000lux 的光照治疗,对照组不予光照干预,余治疗同干预组。分别在基线、治疗的第 1 周末及治疗的第 2 周末使用 17 项汉密尔顿抑郁量表 (Hamilton Depression Scale, HAMD-17) 的总分和减分率评估两组受试者的临床症状改善程度。在治疗期间每日记录患者自我报告的不良反应情况。通过 Fisher 确切概率法和卡方检验比较两组间第 1 周末和第 2 周末的 HAMD-17 量表减分率的差异。采用两独立样本 t 检验和重复测量方差分析对不同时间节点两组 HAMD-17 量表的分值进行分析。

结果 最终共有 47 例受试者完成本研究,其中干预组 22 人,对照组 25 人。基线时两组的一般资料特征未见明显差异 ($P>0.05$),具有可比性;对 HAMD-17 分值作重复测量方差分析,结果提示时间和分组对 HAMD-17 减分效应显著。对两组第 1 周末和第 2 周末的 HAMD-17 评分进行比较,结果显示两组间存在差异,结果具有统计学意义 ($P<0.05$);干预组在光照治疗 2 周末时的有效率高于对照组,二者的差异具有统计学意义 ($P<0.05$)。其中接受光照的受试者中仅有 1 例出现轻微头晕、恶心,其余均无明显不适。

结论 光照疗法联合抗抑郁药物治疗可在两周内明显改善老年期抑郁障碍的抑郁症状,是一种较为安全有效且依从性好的干预手段。

关键词: 光照治疗,老年期抑郁障碍,临床疗效,安全性

抑郁症患者外周血 NLR、MLR、PLR 和 SII 水平的变化

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目的 抑郁症 (depressive disorder) 是一种常见的严重精神障碍,其致残率及复发率高,发病率呈逐年升高趋势。炎症因子假说一直是抑郁症的研究热点,外周血中炎症因子跨过血脑屏障,干扰脑内情绪调节区域的神经递质代谢及神经元活动,引发抑郁症。中性粒细胞与淋巴细胞比值 (neutrophil to lymphocyte ratio, NLR)、单核细胞与淋巴细胞比值 (monocyte to lymphocyte ratio, MLR)、血小板与淋巴细胞比值 (platelet to lymphocyte ratio, PLR) 和全身免疫炎症指数 (systemic immune inflammatory index, SII) 作为一种易于获得的比值指标,比单一的生化指标更敏感,尤其是 SII,被认为是炎症状态的理想指标。因此本研究纳入抑郁患者及匹配的健康人群,进一步明确两者间 MLR、NLR、PLR、SII 等炎症指标之间的关系,以及不同亚型抑郁患者在炎症状态下是否存在差异,希望为抑郁症的病理机制及其诊疗评估提供依据和线索。

方法 选取 2023 年 1 月至 2023 年 6 月收治的 190 名抑郁症患者 (DP 组) 及年龄、性别相匹配的 100 名健康对照者 (HC 组),患者组进一步分为两个亚组:伴有精神病性症状的抑郁症患者组 (DP 1 组,87 名)、不伴有精神病性症状的抑郁症患者组 (DP 2 组,103 人),分析三组受试者的外周血血小板、中性粒细胞、淋巴细胞、单核细胞计数 (monocyte, MON),比较 NLR、MLR、PLR 及 SII 水平的差异,并探讨了抑郁症与炎症指标的关系。

结果 患者组 MON、MLR、SII 水平高于对照组 ($F=52.561, 52.104, 18.670$, 均 $P<0.01$), DP 1 组与 DP 2 之间差异虽无统计学意义 ($P>0.05$),但伴有精神病性症状的抑郁患者 SII 有升高的趋势。

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关键词: 抑郁症,中性粒细胞与淋巴细胞比值,单核细胞与淋巴细胞比值,血小板与淋巴细胞比值,全身免疫炎症指数

跨性别青年群体的为人父母意愿、生育力保存现状及影响因素

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目的 本研究计划调查中国跨性别青年群体为人父母的意愿和当前生育力保存现状及影响因素。

方法 本研究采用横断面自编问卷调查,旨在全面了解中国跨性别青年群体的为人父母意愿及生育力保存现状。样本选自2023年2月至2023年8月期间在北京回龙观医院两性心理门诊就诊的跨性别者,共计177人。具体而言,研究对象包括出生时被指派为男性的161人和被指派为女性的16人,年龄范围在15至37岁之间。为了确保问卷的有效性和可靠性,问卷设计过程中参考了国内外相关研究和专家意见,内容涵盖了人口统计信息、为人父母意愿、生育力保存意愿及其影响因素等方面。

结果 跨性别群体中仅有19.2%的个体表达了希望为人父母的想法,他们更愿意通过收养的方式得到一个属于自己的孩子。在生育力保存方面,仅有23.1%的个体表达了愿意提前保留自己的生育能力,影响生育力保存的主要因素是不想中断激素或手术治疗、不想要孩子、认为没有必要以及认为生育力保护的代价或成本太高。

结论 本研究通过对177名跨性别者的问卷调查,发现中国跨性别青年群体在为人父母意愿和生育力保存方面均呈现出较低的比例。具体而言,仅有19.2%的受访者表示有为人父母的愿望,他们更倾向于通过收养的方式获得子女。这一结果可能反映了跨性别者在社会环境、个人经历及身份认同等方面的复杂因素对其生育意愿的影响。

在生育力保存方面,仅有23.1%的受访者愿意提前保留自己的生育能力。影响生育力保存意愿的主要因素包括:不愿中断激素或手术治疗、不想要孩子、认为没有必要以及生育力保护的代价或成本过高。这些因素表明,跨性别者在性别认同和医疗需求方面的优先考虑对其生育选择产生了显著影响。

综上所述,跨性别青年群体在为人父母意愿和生育力保存方面的低比例反映了该群体在生育选择上面临的多重挑战。这些挑战不仅来自于个体内部的心理和生理需求,还包括外部的社会支持和经济条件等因素。因此,针对跨性别者的生育需求,社会和医疗系统需要提供更加包容和支持的环境,以帮助他们在实现性别认同的同时,能够更好地规划和选择自己的生育未来。这对于提升跨性别者的生活

质量和社会融合具有重要意义。

关键词: 跨性别青年群体;为人父母意愿;生育力保存;影响因素

首发未服药青少年重性抑郁障碍患者认知功能与血细胞比率的相关性研究

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目的 通过与健康人群的比较,了解首发未服药青少年重性抑郁障碍患者临床症状与血细胞比率的变化及相关性,为重性抑郁障碍的病理机制研究提供线索。

方法 纳入2023年1月-2024年1月本院精神医学科住院的25例首发未服药青少年重性抑郁障碍患者(MDD组),同时纳入与其年龄、性别及教育程度相匹配的20例健康对照者(HC组)。采用MCCB量表评估所有受试者认知功能,同时对患者使用汉密尔顿抑郁量表(HAMD)和汉密尔顿焦虑量表(HAMA)评估症状严重程度。所有研究对象均于清晨空腹采集外周静脉血于EDTA抗凝管中,检测血小板计数、中性粒细胞计数、单核细胞计数、淋巴细胞计数,并计算血细胞比率。SPSS统计软件25.0和Graph Pad Prism 8.0软件分析数据和制图。 $P<0.05$ 为差异有统计学意义。

结果 MDD组患者HAMD总分为(36.88 ± 9.17),HAMA总分为(22.92 ± 8.70);认知评估结果显示:MDD组MCCB总分、信息处理速度、视觉学习及推理和问题解决分数低于HC组($P<0.05$),其他认知维度无统计学差异($P>0.05$);MDD组的单核细胞计数高于HC组,中性粒细胞与淋巴细胞比值(NLR)高于HC组($P<0.05$);NLR与阻滞因子及信息处理速度之间存在相关性($P<0.05$)。

结论 青少年MDD患者存在信息处理速度、视觉学习及推理和解决问题维度的认知功能损害;NLR可能参与了青少年MDD患者抑郁、焦虑症状及认知缺陷的免疫机制。

关键词: 重性抑郁障碍. 青少年;血细胞比率;认知功能

Drug Interactions of Clozapine-CYP1A2 Inhibitors and Risk of Serious Adverse Events: A Pharmacovigilance-pharmacokinetic Study

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Objective This study aims to evaluate the risk of serious adverse events (SAEs) associated with the concomitant use of clozapine and CYP1A2 inhibitors and to explore dosage adjustment strategies to enhance the safety of the drug combination

Methods Interaction reports were retrieved from the FDA Adverse Event Reporting System (FAERS) database, spanning the period from the first quarter of 2004 to the first quarter of 2024. The reporting odds ratio (ROR) was calculated to assess the association between clozapine-related SAEs and the concurrent use of clozapine and CYP1A2 inhibitors. A physiologically based pharmacokinetic (PBPK) model was developed using pharmacokinetic parameters to simulate changes in clozapine exposure levels when co-administered with varying doses of CYP1A2 inhibitors that exhibited significant interaction signals, and to optimize clozapine dosing to enhance the safety of drug combinations

Results During the examined period, a total of 312 reports exhibiting significant signals were identified. The potential risk of AEs in patients co-administered with clozapine and ciprofloxacin or fluvoxamine is significantly elevated in the FAERS database. The highest signal was observed for the interaction between clozapine and ciprofloxacin, resulting in subileus, with ROR of 57.06 (95%CI: 22.35 to 145.68). This was followed by interactions between clozapine and fluvoxamine for tardive dyskinesia (ROR=29.25; 95%CI: 20.95 to 40.84) and orthostatic hypotension (ROR=24.75; 95%CI: 18.51 to 33.10). Furthermore, the PBPK simulations indicate that the optimal clozapine dosage within the recommended therapeutic range varies based on the co-administration of fluvoxamine or ciprofloxacin. For instance, when clozapine is administered at 100 mg

b.i.d., the co-administration of fluvoxamine (100 mg b.i.d.) necessitates a reduction in the clozapine dose to approximately 50% of the original dose. If fluvoxamine is given at 150 mg b.i.d., the clozapine dose should be reduced by approximately 68.75%. Similarly, when clozapine (100 mg b.i.d.) is co-administered with ciprofloxacin (250 mg b.i.d.), the clozapine dose should be reduced by 32%. If ciprofloxacin is administered at 500 mg b.i.d., the clozapine dose should be reduced by approximately 37%

Conclusion The concurrent administration of clozapine with strong CYP1A2 inhibitors may elevate the risk of SAEs. In cases where such combinations are unavoidable, it is imperative to meticulously monitor drug concentrations and adjust dosages accordingly

关键词: clozapine, CYP1A2 inhibitors, serious adverse events, drug safety, dosage adjustment

精神分裂症、抑郁症和情感障碍患者的甲状腺异态负荷特征

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目的 评估 drug-free 精神分裂症、抑郁症和情感障碍患者的甲状腺异态负荷特征。

方法 研究设计为回顾性横断面研究, 经新乡医学院伦理委员会批准。以 2018 年 1 月至 2018 年 12 月在新乡医学院第二附属医院住院治疗的 drug-free 首发精神分裂症、重度抑郁障碍和双相情感障碍患者为研究对象。drug-free 定义为入院前至少 4 个月未使用精神药物(抗精神药物、抗抑郁药物、情绪稳定剂)的患者。对照组数据来自同一医院参加体检的健康人群。主要结局是“甲状腺稳态结构参数”, 包括“甲状腺的分泌能力”(SPINA-GT)、“活化性脱碘酶活性”(SPINA-GD)、T4/free T4 和 T3/free T3 (反映甲状腺激素的血清蛋白结合)和“甲状腺稳态中心设定点”(TSH 指数 thyroid stimulating hormone index, [TSHI])和“基于甲状腺反馈分位数的指数”thyroid feedback quantile-based index, [TFQI])。“甲状腺稳态结构参数”通过入院时测量的 TSH 和甲

甲状腺激素计算。统计分析使用 t 检验、中位数 Mann-Whitney U 检验或卡方 (χ^2) 检验比较不同类型病例组和对照组之间的社会人口学特征、激素和“甲状腺稳态结构参数”。多组连续分布变量之间的比较,采用单因素方差分析或非参数检验。

结果 共有 1186 例精神分裂症、1263 例重度抑郁症、1619 例双相情感障碍和 162 名健康对照纳入研究。

精神分裂症患者的高甲状腺素血症率 (10.2% vs. 3.1%)、游离 T4 (18.08±4.04 vs. 15.96±2.76)、TSHI (3.3±1.1 vs. 2.8±0.78) 和 TFQI (0.13±0.50 vs. -0.01±0.48) 均显著高于对照组。

与健康对照组相比,情感性疾病的 GD、T4/free T4 和 T3/free T3 较低。双相情感障碍伴躁狂发作的 GT 高于双相情感障碍伴抑郁发作和重性抑郁障碍的 GT (平均水平分别为 3.70 与 3.04 和 3.03)。与健康对照组相比,重性抑郁障碍和双相情感障碍患者的“甲状腺稳态中心设定点”参数 TSHI、TFQI 没有差异。

结论 1. 较高的甲状腺稳态中心设定可能参与急性期精神分裂症患者甲状腺异态负荷的形成机制。2. 情感性疾病具有独特的甲状腺异态负荷特征,活化性脱碘酶活性 (SPINA-GD) 受损,甲状腺激素的血清蛋白结合减少,但甲状腺稳态中心设定点没有变化。3. 躁狂发作与甲状腺分泌能力增高相关。

关键词: 甲状腺结构稳态参数,甲状腺异态,精神分裂症,抑郁症,双相障碍,drug-free

前额叶 tACS 刺激治疗抑郁症患者对深部核团脑功能连接的影响

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目的 经颅交流电刺激 (transcranial alternating current stimulation, tACS) 是一种新兴的,治疗抑郁障碍的非侵入性神经调控技术。既往研究发现 77.5Hz-tACS 合 SSRI 类抗抑郁药治疗能够有效改善抑郁症患者的核心症状,但其疗效的神经机制尚不清楚。抑郁症患者存在脑功能连接异常,并且杏仁核和伏隔核对患者的情绪调节起到关键作用。因此,本研究假设前额叶 tACS 可能通过影响前额叶与杏

仁核或伏隔核的功能连接产生抗抑郁疗效作用。

方法 本研究共采集 21 例抑郁症患者基线和 tACS 治疗 4 周末的临床、脑电和核磁扫描数据,包括 19 例真刺激组患者和 12 例伪刺激组。在治疗前后,使用 17 项汉密尔顿抑郁评定量表 (HAMD-17) 评估症状严重程度。利用脑电分析方法和神经影像分析方法,分别提取了闭眼状态 Fp1 脑区的阿尔法功率值、以及 Fp1 与杏仁核和伏隔核亚区功能连接;采用治疗方式 (真刺激,伪刺激)*时间 (基线,4 周末) 的重复测量方法分析了 tACS 对抑郁症患者脑功能活动的影响,尤其是深部核团脑功能连接。

结果 真伪刺激患者的 HAMD-17 评分从基线到第 4 周均显著下降,但两组间没有显著差异。两组之间在基线时 Fp1 脑区脑电的阿尔法功率无差异,但时间与组间存在显著的交互作用,在 tACS 治疗后,真刺激组的阿尔法功率有所提高,而伪刺激组组的阿尔法功率则有所下降。在 Fp1 与左侧伏隔核的核功能连接中,组间与时间存在显著的交互效应。事后分析表明,4 周后真刺激组的 Fp1 与左伏隔核的功能连接性高于伪刺激组;治疗后,真刺激组 Fp1 与左伏隔核的核功能连接性显著增加。此外,Fp1 与左侧伏隔核的核功能连接差异与 HAMD 中 6 个核心症状的评分呈正相关。杏仁核亚区不存在显著差异。

结论 77.5Hz-tACS 改变了抑郁患者前额处静息状态下脑电的阿尔法功率,并且提高了左侧前额与伏隔核的功能连接,为 tACS 改善抑郁症核心症状的疗效机制提供了证据支撑。

关键词: 经颅交流电刺激,抑郁症,脑电,核磁共振

基于核融合机器学习方法探索抑郁症伴有自杀意念患者分类的研究

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3. 首都医科大学附属北京安定医院

目的 抑郁障碍患者存在自杀意念。抑郁症伴

自杀意念患者不易被临床医生发现。本研究基于扩散磁共振图像、功能磁共振图像以及结构磁共振图像的三种模态磁共振图像数据中提取的特征,使用一种核融合支持向量机机器学习方法,对抑郁症患者中伴有或不伴有自杀意图的患者进行分类,以期在临床诊疗过程中能够辅助医生对抑郁症伴自杀意念患者精准识别。

方法 本研究在山东省戴庄医院进行。研究自2022年4月份至2023年12月份采集磁共振图像的抑郁症患者96例。研究者根据贝克意念量表评分大于等于3分判定为自杀意念组这一标准,将抑郁症分为抑郁症伴有自杀意念组49例、不伴自杀意念组47例。

本研究基于多种脑图谱,使用Freesurfer、FSL、DPABI等工具自扩散像中得到包括不同皮质下结构的FA、MD均值在内的136组特征,自功能像中得到包括不同皮质及皮质下结构局部一致性均值在内的257组特征,自结构像中得到包括皮质体积、皮质面积、皮质厚度、皮质及皮质下结构体积在内的573组特征。随后,使用含交叉验证的特征递归消除方法进行特征选择。将筛选出的重要特征信息以各模态特定权重进行核融合后,使用支持向量机算法构建分类模型,并使用十折交叉验证评估分类模型的性能。

结果 三模态融合获得的分类模型,最高准确度为73.58%,对应敏感度为74.04%,特异度为73.07%,F1分数为0.73,受试者工作特征曲线下面积(AUC)为0.81。双模态融合获得的分类模型中,功能像与结构像融合的分类效果最好,最高准确度为71.25%,对应敏感度为71.25%,特异度为71.20%,F1分数为0.70,受试者工作特征曲线下面积(AUC)为0.79。单模态分类模型中,功能像的分类效果最好,准确度为66.92%,对应敏感度为66.02%,特异度为67.84%,F1分数为0.66,受试者工作特征曲线下面积(AUC)为0.75。三模态融合获得的模型分类效果最优。

综合五种模型评价指标,三种模态磁共振图像信息中,结构像特征对模型分类性能贡献最大,权重均值为0.62;功能像特征次之,权重均值为0.24;扩散张量图像特征贡献最小,权重均值为0.14。

结论 本研究使用的多模态核融合的支持向量机方法,能够有效提升模型对自杀意念抑郁症的分类能力。使用多模态磁共振图像辅助临床诊疗存在一定的可行性。

关键词: 多模态,核融合,机器学习,脑影像学,抑郁症,自杀意念

磁共振导航精准靶点 rTMS 对酒依赖患者的疗效研究

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目的 探索精准靶点 rTMS 治疗对酒依赖患者渴求、冲动、情绪、睡眠、认知的干预效果,探索精准靶点 rTMS 治疗对酒依赖患者复饮影响,评估精准靶点 rTMS 治疗的耐受性、安全性及可行性。

方法 入组患者来自2022年3月-2024年3月期间在新乡医学院第二附属医院精神五科住院治疗的男性酒依赖患者。符合入组条件的69名酒依赖患者按照随机数字法分为研究组(n=34)和对照组(n=35)。所有患者接受常规治疗,入院初期使用苯二氮 草类药物替代治疗,同时补充足量B族维生素。完成基线评估后,研究组进行磁共振扫描提取T1结构像,构建3D脑模型,给予右侧背外侧前额叶(MNI 30, 37, 36)为靶点的高频 rTMS 治疗10天,对照组给予相同参数伪刺激治疗。治疗前、治疗后评估视觉模拟渴求量表(VAS)、宾夕法尼亚酒精渴求量表(PACS)、11版Barratt冲动性量表(BIS-11)、贝克焦虑量表(BAI)、贝克抑郁量表(BDI)、匹兹堡睡眠质量指数(PSQI)及简易精神状况量表(MMSE)、连线测试B(TMT-B)、数字广度测验(DST)、词语流畅性实验(VFT)、霍普金斯词语学习测验(HVLT-R)。并在干预后3个月和6个月进行电话随访,跟踪其复饮情况。

结果 1.研究组、对照组一般资料:年龄、受教育年限、首次饮酒年龄、累计饮酒时间、日饮酒量、临床酒精戒断症状评定量表差异无统计学意义($P>0.05$)。2.研究组、对照组治疗前后组间差值比较: BIS-11(非计划冲动、认知冲动性、冲动总分)、BAI、BDI 差异无统计学意义($P>0.05$)。VAS、PACS、BIS-11(行动冲动性)、PSQI、MMSE、DST、VFT 差异有统计学意义($P<0.05$)。3.研究组、对照组在治疗后三个月,两组复饮率差异无统计学($P>0.05$)。

研究组、对照组在治疗后六个月对复饮结果 研究组复饮率为 39.3% (11 例), 对照组 复饮率为 65.6% (21 例), 两组比较复饮率差异有统计学 ($P < 0.05$)。

结论 磁共振导航精准靶点 rTMS 对于降低酒依赖患者的渴求、降低行动冲动性、提高睡眠质量、改善注意力、记忆力和执行能力具有显著效果, 可有效减少复饮。磁共振导航精准靶点 rTMS 治疗酒依赖患者具有良好的安全性、耐受性、可行性。

关键词: 酒依赖, 磁共振导航, 精准靶点, 重复经颅磁刺激

太赫兹技术为脑科学研究打开全新之门

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目的 探讨太赫兹技术在神经精神医学领域中的使用价值, 探索其在精神科精准诊疗中的运用前景。

方法 在 PUBMED、WOS、SCOPUS、SPIE 以及 IEEE 五大国际数据库搜索近 20 年有关太赫兹技术在脑科学中运用的相关文献, 总结其在生物分子、细胞、组织、生物效应等不同层面的运用特点与临床价值并进行综述。

结果 研究表明生物体内存在丰富的太赫兹电磁信息, 近年来太赫兹光谱和成像技术在脑科学领域的相关研究进展尤其突出、引人注目, 展示出独特的优势和特点, 这一崭新的 T-Ray 为脑科学研开启了新的视角。研究者通过太赫兹相关技术, 发现髓鞘以及郎飞结在神经信号传递中高效节能的光子机制, 提出了从量子角度阐述神经信号传递的新物理机制。神经递质与神经活动和精神疾病有密切关联, 研究者们利用太赫兹技术发现多巴胺、去甲肾上腺素、褪黑素、 γ -氨基丁酸等神经递质存在自己独特的太赫兹指纹图谱, 氢键在这些神经递质的构象变化及与相关受体的结合中发挥着关键作用。研究者还发现特定频率的太赫兹波可以加速抗精神病药与多巴胺 D2 受体的解离, 为减轻其副反应提供了全新的可能性。针对阿尔茨海默病等神经退行性疾病, 基于太赫兹技术与超材料传感实现了对淀粉样

蛋白的体外灵敏检测, 而太赫兹辐射可通过与 $A\beta$ 原纤维共振松散其内部结构, 减缓其异常聚积, 这对非药物物理治疗阿尔茨海默病有重要的启发。大脑病变组织的精准成像及其边界的精确定位一直困扰着临床工作者。离体实验已通过太赫兹技术清晰区分脑卒中、脑胶质瘤、脑外伤等病变组织与正常脑组织, 其成像结果与磁共振成像以及 HE 染色结果基本一致。太赫兹波对水具有敏感响应, 基于病变脑组织与正常脑组织间不同的含水量, 太赫兹技术可用于潜在的病理诊断。太赫兹光谱技术还可区分不同亚型、不同病理级别的脑胶质瘤。神经细胞膜对太赫兹辐射较为敏感, 尤其胞膜上的离子通道 (包括钠、钾、钙通道) 以及水通道经太赫兹辐射后出现通透性的改变, 这对细胞膜整体的通透性、兴奋性及信号传导具有重要意义。太赫兹辐射也能影响神经细胞的生长与凋亡及其神经内分泌功能, 其中频率是关键。虽然太赫兹波光子能量低, 太赫兹辐射的生物效应是具有双面性, 需进一步探索合适的辐射参数来最大限度地发挥其对神经系统的积极作用, 为神经精神疾病的治疗提供新的可能的方案。

结论 太赫兹波穿透性强、光子能量低、不会造成电离损伤, 许多生物大分子的振动和转动频率都处于太赫兹波段, 这些“太赫兹指纹”包含有丰富的物理化学信息, 能有效反映物质微观结构与状态, 有利于无标记生物检测和医学诊断。但目前研究尚处于探索阶段, 离临床转化应用尚有较长的路要走。

关键词: 太赫兹技术、太赫兹辐射、生物效应、脑科学、精准诊疗

临床检验医疗质量控制指标在精神专科医院的应用探讨

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目的 探讨 15 项临床检验医疗质量指控制标在精神专科医院的应用情况, 分析其对提高检验质量的重要性, 并提出优化建议, 为精神科同仁正确理解和应用临床检验医疗质量控制指标提供参考。

方法 回顾性分析, 收集西安市精神卫生中心 2023 年 5 月-2024 年 5 月的临床检验数据, 包括标本采集、处理、检测、结果报告等各个环节的质量指

标数据,按计算公式,运用 LIS 系统模块统计,检验质量指标上报,自动统计不同时间段临床检验质量指标,对收集到的数据进行统计分析,比较不同时间段的质量指标差异,分析原因,并提出优化措施。

结果 标本类型错误率、标本容器错误率、标本采集量错误率、血培养污染率、抗凝标本凝集率、检验前周转时间中位数、室内质控项目变异系数不合格率、室内质评项目不合格率、实验室内周转时间中位数、检验报告不正确率(10项指标逐步降低)

室内质控项目开展率、室内质评项目参加率、实验室间比对率(无室内质评计划的)、危急值通报率、危急值通报及时率(5项指标逐步提高)

结论 15项临床检验指标是评价临床实验室检验质量和能力的重要标准,它们覆盖了检验前、检验中和检验后各个环节,对于提高医疗服务质量和保障患者安全具有重要意义。15项临床检验指标的应用需要建立相应的管理程序,包括明确质量方针、目标、指标定义、监测意义、数据采集方法、责任人、监测周期和评价方法。此外,成立专门的质量指标管理团队,实施改进措施,并通过信息化建设提高数据的准确性和管理效率也是提高临床检验质量的关键。通过这些措施,可以持续改进检验质量和能力,满足临床患者的需求。

关键词:临床检验医疗质量控制指标,精神专科医院,应用,探讨

The Prevalence of Turnover Intention and Influencing Factors Among Psychological Counselors: A National Observation.

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Background In China, counseling teams face problems such as unstable professional teams, low education, and lack of training, among which unstable professional teams and human resource turnover are the main reasons affecting the development of counseling teams in China. Intention to leave can be a good predictor of staff turnover, so this study focuses on investigating counselors' intention to leave and its influencing

factors

Methods This study collected job-related information (turnover intention, job burnout, job satisfaction, depression, etc.) and personal information (age, marital status, having children, etc.) of 419 psychological counselors from 41 tertiary hospitals. And this questionnaire is filled out anonymously to protect the privacy of the participants

Results A total of 419 counselors were included in this study, and about 1/5 of them had the idea of leaving their current jobs. There were significant differences in job satisfaction, job burnout, insomnia, depression and work intensity between the two groups of psychological counselors (turnover intention VS without turnover intention). Further binary logic regression analysis found that job satisfaction (OR=0.928, 95%CI=0.899-0.958), job burnout (OR=3.218, 95%CI=1.434-6.823), depressive symptoms (OR=1.060, 95%CI=1.004-1.120) and job intensity (OR=2.083, 95%CI=1.076-4.031) were the main factors affecting psychological counselors' turnover intention

Conclusion About 1/5 of psychological counselors in China reported their intention to leave. Job satisfaction, depressive symptoms, job burnout and job load teachers affect the main factors of turnover intention, so policy makers and hospital managers need to be aware of these potential influencing factors. to solve the problem of high turnover intention of psychological counselors in China

关键词: turnover intention, psychological counselors

行为医学领域跨学科关联与研究主题分析

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目的 行为医学定义为关注与健康 and 疾病相关的社会心理、行为和生物医学知识的发展和整合,以及这些知识在预防、病因、诊断、治疗和康复方面应用的一个跨学科领域,跨学科是行为医学的定义性特征。本文以主题词为行为医学的论文为数据来

源,从行为医学主题论文所属学科类别的共现网络、研究主题识别两种内容维度挖掘行为医学研究的学科归属及内容结构特征,揭示该领域的跨学科网络结构特征、识别重点学科及学科对应的研究主题。

方法 选取近 20 年 MeSH 主题词为“behavioral medicine”的论文,基于社会网络分析,分别构建 WOS 学科方向、4 个时间切片的主题词共现网络,从学科交叉网络结构特征、主题词时序分析、学科-主题内涵三个方面,呈现行为医学主题研究领域的跨学科关联特征。

结果 (1) 基于社会网络分析的理论,运用 Gephi 测算学科共现网络特征指标及高频学科在学科交叉网络中的节点中心性。学科交叉网络中图密度为 0.066,网络的联系相对松散。但是结合较高的聚类系数(0.525)和较短的平均路径长度(2.721),主题词共现网络均具有较高的平均聚类系数和较低的平均路径长度,表明行为医学领域交叉学科及主题词共现网络均存在小世界网络特征。(2) 学科网络属性及关联分析结果显示,行为医学研究的支撑 WOS 学科方向主要为公共、环境和职业健康,精神病学,临床神经病学。三个学科方向在交叉网络中具有绝对的控制能力,处于网络中的关键核心位置和桥接位置,是行为医学重要研究热点和交叉点。

(3) 行为医学主题词网络分析显示,临床医学、公共管理、行为科学、精神障碍、初级卫生保健是各时间切片连接其他主题最多的主题词,也是行为医学领域持续关注的主题。行为医学领域知识分布正在趋向碎片化细分化,但知识体系中各小团体社区内部关联和整合更加紧密。(4) 不同学科方向具有共同关注的研究主题,是连接学科交叉的契合点和凝聚点。依据学科方向-主题的 2 模网络,不同学科之间研究主题存在不同程度重合。3 个支撑学科方向的交叉主题,均具有三元闭包特性,与不同主题词、学科方向形成强联系,是行为医学研究创新突破点,壮大研究网络的关键节点。

结论 行为医学领域作为一项跨学科研究,分析显示其具有强大的研究活力,吸引临床医学、公共卫生、精神病学、心理学、社会学等学科的科研人员开展积极有效的跨学科合作,交流沟通学科知识。跨学科知识交流更是行为医学蓬勃发展和强大活力的核心所在。

关键词: 行为医学; 主题词; 跨学科; 网络分析

鸢尾素抗抑郁作用机制研究

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目的 抑郁症是最常见的心境障碍,以显著而持久的情绪低落为主要临床特征。近年来,抑郁症的发病率及自杀率呈现显著增长态势,诸多生理及心理因素均可促使其发生。调查显示,体育锻炼可以减轻抑郁和焦虑症状。有研究发现鸢尾素是一种在体育活动后高表达的激素。鸢尾素是一种跨膜前体蛋白激素,从纤维连接蛋白 III 型结构域蛋白 5 (fibronectin type III domain-containing protein 5, FNDC5) 中经过剪切修饰而得到,高表达于肌肉和脂肪组织中。外周循环系统中的鸢尾素可以穿过血脑屏障,进入脑脊液和脑实质中,对脑疾病有积极作用。综上所述,鉴于鸢尾素在运动后大量分泌且具有种神经保护效果,我们推测其可能和体育活动的抗抑郁机制有关。

方法 我们通过一系列行为学实验和分子生物学技术,对实验动物进行了详细研究。实验方法包括强迫游泳试验和悬尾试验,用于评估小鼠的抑郁样行为。此外,我们还用免疫共沉淀和质谱技术结合鉴定下游靶蛋白,通过 qPCR 和 Western blot 技术分析相关信号通路的变化,以揭示鸢尾素的分子作用机制。

结果 结果显示,海马及尾静脉注射鸢尾素均显著减轻了啮齿类动物的抑郁样行为,表现为强迫游泳试验中不动时间的显著减少和悬尾试验中不动时间的显著降低。进一步通过体内体外实验证实鸢尾素能促进神经干细胞增殖和分化,体外鸢尾素处理可以促进体外神经干细胞增殖和分化,体内尾静脉注射鸢尾素可以促进海马神经发生。利用免疫共沉淀和质谱技术结合,对相关蛋白质的相互作用和功能进行深入研究,鉴定出其下游靶蛋白过氧化物酶体增殖物激活受体 γ 共激活剂 1- α (PPARG Coactivator 1 Alpha, Pparg1a)。

结论 本研究为鸢尾素作为潜在抗抑郁药物的应用提供了新的证据,并为其临床开发奠定了基础。这些发现不仅揭示了鸢尾素在抑郁症治疗中的潜在价值,还为未来的药物研发提供了新的方向和思路。

关键词: 鸢尾素, 抑郁症, 神经发生, Pparg1a, 体育运动

大学生网络成瘾共病酒精依赖的风险因素研究

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目的 探讨大学生网络成瘾共病酒精依赖的风险因素。

方法 于2021年10月份选取河北医科大学大一至大三的全部本科生作为研究对象,采用一般情况调查表调查家庭每月总收入、家庭教养方式、个性特征、是否被校园霸凌、是否参加日常体育锻炼、静坐时间、精神科就诊情况、过去一年里是否有放弃学业的计划、每日电话数量、每日手机屏幕使用时长、每日睡眠时间等,采用匹兹堡睡眠质量指数量表(PSQI)评估睡眠情况、青少年生活事件量表(ASLEC)评估青少年所经历的生活事件和压力的量表、焦虑自评量表(SAS)评估焦虑情况、抑郁自评量表(SDS)评估抑郁情况、认知失败问卷评估个体在日常生活中经历的认知失误的频率。采用互联网相关成瘾行为评估量表(Internet Addiction Test, IAT)评估网络成瘾。得分在50分以上表明存在网络成瘾。依据《精神障碍诊断与统计手册第四版》(DSM-IV)诊断酒精依赖。将调查人群分为三组:健康对照组、共病组、网络成瘾组/酒依赖组。纳入各类变量行回归分析分别检测各类变量对于网络成瘾与酒精依赖的风险因素分析。

结果 共收回有效调查问卷7144份,共病组共17例,网络成瘾组/酒依赖组1748例,健康对照组5420例。共病组的兴趣爱好个数、每日步数、每日睡眠时间均显著低于其余三组(P 均 <0.001),每日电话数量、每日手机屏幕使用时长、童年经历、躯体疾病、心理咨询的经历、过去一年有放弃学业的计划、PSQI得分、ASLEC得分、SAS得分、SDS得分、认知失败问卷得分均显著高于其余三组(P 均 <0.001),共病组的风险因素分析显示,认知失败问卷得分、SAS、SDS、ASLEC得分、每日手机使用时长、躯体疾病是其风险因素(P 均 <0.05),其中认知失败问卷总分对共病的影响最为显著,表明个体在认知失败方面的经历越多,越有可能发生网络成瘾与酒精依赖。

结论 认知失败是网络成瘾共病酒精依赖的重要影响因素,今后应对大学生的认知、情绪、生活事件、身体状况进行关注,减少共病发生。

关键词:网络成瘾;酒精依赖;共病;风险因素

快感缺失评估及其对门诊重性抑郁发作的诊治指导

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目的 考察快感缺失评估对于门诊重性抑郁发作患者的临床指导效果。

方法 随机抽取天津市某医院300名门诊患者,根据是否存在抑郁分为两组,采用中文版快感缺失量表(Dimensional Anhedonia Rating Scale, DARS)、焦虑自评量表(SAS)、抑郁自评量表(SDS)、匹兹堡睡眠质量量表(PSQI)、耶鲁-布朗强迫量表(Y-B)、明尼苏达多项人格测验(MMPI)进行评估。考察抑郁组和非抑郁组的快感缺失总分及各维度上的差异,以及抑郁组患者快感缺失程度与抑郁、焦虑、强迫、睡眠障碍、自杀观念等重性抑郁发作的常见症状的关系。此外,通过个案研究,门诊医生提供患者的标准化访谈记录,以考察通过评估快感缺失程度,是否能够有效地甄别抑郁状态,或者提供针对性的治疗。

结果 抑郁组在快感缺失量表总分及各维度分数上显著低于非抑郁组。DARS得分与SAS、SDS、PSQI、MMPI自杀概率得分均呈显著负相关。进一步的回归分析显示,DARS得分对SAS、SDS、PSQI、MMPI自杀概率得分具有显著预测作用。门诊医生在阅读患者的DARS评估结果后,报告在诊断访谈中能更有效地识别抑郁症,而且可以改进治疗方案。

结论 快感缺失是门诊诊断重性抑郁发作患者时需考察的重要特征。评估患者的快感缺失程度可以有效帮助医务人员更快速识别抑郁状态,做出更可靠的诊断,并提供更加精准的个性化治疗方案。

关键词:快感缺失 重性抑郁发作 焦虑 睡眠障碍 自杀观念

Alterations of Plasma Neuron-derived Exosomal MicroRNAs in Patients with Bipolar Disorder

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Objective MicroRNAs (miRNAs) alterations in patients with bipolar disorder (BD) are pivotal to the disease's pathogenesis. Since obtaining brain tissue is challenging, most research has shifted to analyzing miRNAs in peripheral blood. One innovative solution is sequencing miRNAs in plasma extracellular vesicles (EVs), particularly those neural-derived EVs emanating from the brain

Methods In our study, we isolated plasma neural-derived EVs from 85 patients with BD and 39 healthy controls (HC) using biotinylated antibodies targeting a neural tissue marker. These EVs were then subjected to miRNA sequencing and expression analysis

Results Out of the 2,656 neural-derived miRNAs in EVs identified, 14 were differentially expressed between BD patients and controls. This differential expression was consistent even when the sample was split into discovery and validation groups. Moreover, the target genes of miR-143-3p displayed distinct expression patterns in the prefrontal cortex of BD patients versus HC, as sourced from PsychENCODE database. The functional experiments demonstrated that the abnormal expression of miR-143-3p promoted the proliferation and activation of microglia and upregulated the expression of proinflammatory factors including IL-1 β , IL-6, and NLRP3. Through weighted gene co-expression network analysis, a module linking to clinical symptoms of BD patients was discerned. Enrichment analyses unveiled these miRNAs' role in modulating the axon guidance, Ras signaling pathway and ErbB signaling pathway

Conclusion To summarize, our findings provide the first evidence of dysregulated plasma miRNAs within neural-derived EVs in BD patients, further buttressing the neurogenic hypothesis of BD

关键词: bipolar, MicroRNAs, extracellular vesicles

Protein Profiles and Novel Molecular Biomarkers of Schizophrenia 2 Based on 4D-DIA Proteomics

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Objective Schizophrenia is a severe psychological disorder. The current diagnosis mainly relies on clinical symptoms and lacks laboratory evidence, which leads to very difficult early diagnosis, misdiagnosis, and underdiagnosis. This study identifies biomarkers of schizophrenia based on 4D-DIA proteomics and provides an experimental basis for establishing a laboratory diagnosis of schizophrenia

Methods Plasma protein profiles of schizophrenia patients were obtained and compared with healthy controls using 4D-DIA proteomics technology. Subsequently, GO analysis was conducted to annotate the functions of the protein. In addition, KEGG pathway analysis was performed to find those signaling pathways that are enriched for differentially expressed proteins (DEPs). Subsequently, DEPs were subjected to protein-protein interaction network analysis. Gene-weighted co-expression network analysis was conducted to create weighted networks of co-expression. Finally, to identify potential biomarkers of schizophrenia so as to construct diagnostic models, different machine learning algorithms were applied

Results No significant differences were detected between the schizophrenia and healthy control groups included in this study in terms of age and gender. In addition, 79 DEPs were identified between schizophrenia and healthy controls. GO functional analysis revealed that DEP functions were mainly enriched in response to toxic substances and platelet aggregation, indicating the presence of metabolic and immune alterations in schizophrenia patients. KEGG pathway enrichment analysis revealed that DEPs were primarily enriched in the

chemokine signaling pathway and cytokine receptor interactions. Subsequently, a diagnostic model consisting of three proteins, profilin-1, Glyceraldehyde-3-phosphate dehydrogen, and beta-actin-like protein 2, was developed, which had an AUC value of 0.972 and could effectively identify schizophrenia

Conclusion Profilin-1, Glyceraldehyde-3-phosphate dehydrogen, and beta-actin-like protein 2 can serve as a biomarker for early diagnosis of schizophrenia. Our findings provide new ideas for the laboratory diagnosis of schizophrenia

关键词: Schizophrenia, Proteomics, Data-independent acquisition, Protein biomarkers

Analysis of Clinical Value of Blood Ammonia Test Combined with Skull CT in Mental Diseases

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Objective To explore the clinical value of blood ammonia test combined with skull CT in the diagnosis of mental diseases.

Methods Head CT was used to evaluate the skull structure of the patients with mental disorders, and blood ammonia level of blood samples was measured. The results of head CT and blood ammonia were compared between the patients with mental disorders and healthy controls. Results The abnormal rate of CT findings in patients with mental disorders was significantly higher than that in healthy controls ($P < 0.05$). The level of blood ammonia in patients with mental disorders was significantly higher than that in healthy controls ($P < 0.05$). Furthermore, on further analysis, we found a significant correlation between blood ammonia levels and the severity of mental illness. The diagnostic accuracy of blood ammonia combined with skull CT was 96%, which was significantly higher than that of single head CT ($P < 0.05$). Conclusion Blood ammonia test combined with cranial CT is of great value in the clinical diagnosis of mental diseases, which can

improve the diagnostic accuracy and provide important reference for clinical treatment

关键词: Blood ammonia test; Skull CT; mental disorders; clinical value; diagnostic accuracy; combined detection; severity of illness

年龄与 CT 阳性率: 癫痫病史新认知与继发性癫痫的相关性

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目的 探讨年龄和癫痫病史对继发性癫痫的影响, 为临床诊断和治疗提供依据。

方法 选取癫痫患者 300 例, 年龄在 18-75 岁之间, 其中男性和女性各占一半。所有患者均接受了 CT 扫描, 并记录了病灶的大小和位置。根据患者的年龄和病史, 将患者分为不同组别。采用统计学方法分析年龄和癫痫病史与继发性癫痫风险的关系。

结果 研究发现, 随着年龄的增长, 癫痫患者的 CT 阳性率明显增加, 且有癫痫病史的患者其继发性癫痫的风险也显著高于无癫痫病史的患者。同时, 病灶的位置和大小也是评估继发性癫痫风险的重要因素。在控制其他潜在因素(如性别、病灶数量等)后, 年龄和癫痫病史与继发性癫痫风险的相关性仍然显著存在。此外, 本研究还发现, 继发性癫痫患者的治疗效果明显优于单纯癫痫患者。

结论 年龄和癫痫病史是影响继发性癫痫风险的重要因素。通过提高对年龄和 CT 阳性率的认知水平, 我们有望为患者提供更为精准的诊断和治疗方案, 从而改善其预后。

关键词: 年龄; CT 阳性率; 癫痫病史; 继发性癫痫; 诊断和治疗

探讨颅脑 CT 联合嘌呤代谢紊乱在阿尔兹海默症的临床应用分析

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目的 探讨颅脑 CT 联合嘌呤代谢紊乱在阿尔兹海默症的临床应用分析, 为该疾病的诊断与治疗提供更为全面的信息。

方法 选取我院 100 例确诊为阿尔兹海默症的患者进行研究, 进行颅脑 CT 检查并测定嘌呤代谢相关指标。采用统计学方法对数据进行分析, 探讨颅脑 CT 与嘌呤代谢紊乱在阿尔兹海默症中的作用。

结果 颅脑 CT 显示患者存在不同程度的脑部结构异常, 嘌呤代谢紊乱相关指标也呈现出一定的异常变化。两者之间存在一定的相关性, 提示嘌呤代谢紊乱可能在阿尔兹海默症的发生发展中起到一定作用。

结论 颅脑 CT 联合嘌呤代谢紊乱检测可以为阿尔兹海默症的诊断与治疗提供更为全面的信息, 有助于提高疾病的诊断准确性和治疗效果。

关键词: 颅脑 CT; 嘌呤代谢紊乱; 阿尔兹海默症; 临床应用; 诊断与治疗

A Cross-section Study of The Comparison of Plasma Inflammatory Cytokines and Short-chain Fatty Acid in Patients with Depression and Schizophrenia

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Objective Major depressive disorder (MDD) and schizophrenia (SCH) are common and severe mental disorders that are often misdiagnosed. The exploration of the potential objective biomarkers that can distinguish these two disorders is still needed.

Methods We compared plasma inflammatory cytokines and short-chain fatty acids (SCFAs) in patients with MDD (n = 24) and SCH (n = 24), and gender- and age-matched healthy controls (HC, n = 27) to investigate potential biomarkers. **Results** We found that the concentrations of pro-inflammatory cytokines were increased, whereas the anti-inflammatory cytokines were decreased in both MDD and SCH. Meanwhile, except for an increase in 4-Methylvaleric acid,

other SCFAs with statistical differences were decreased in both MDD and SCH. Moreover, potential biomarker panels were developed that can effectively discriminate MDD from HC (AUC = 0.997), SCH from HC (AUC = 0.999), and from each other (MDD from SCH, AUC = 0.983). **Conclusion** These data suggest that alternations in plasma cytokines and SCFAs might be one of the potential features for distinguishing MDD and SCH

关键词: inflammatory cytokines; short-chain fatty acids; schizophrenia; depression

Cortical Thickness Alternation in Obsessive-compulsive Disorder Patients Compared with Healthy Controls

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Objective Cortical morphological abnormalities are one of the neuropathological changes of obsessive-compulsive disorder (OCD). The surface-based morphometry (SBM) analyses have reported altered cortical thickness (CTh) among patients with OCD in numerous neuroimaging studies; however, the results have been inconsistent. We are attempting to utilize meta-analysis of whole-brain data to investigate changes in cortical thickness among individuals with OCD. This endeavor may enhance spatial accuracy in identification, thus effectively improving our recognition of OCD and facilitating the development of more precise and efficient treatment strategies.

Methods The seed-based d mapping (SDM) approach was employed to conduct a vertex-wise coordinate-based meta-analysis (CBMA) of whole-brain studies that explored CTh alteration among patients with OCD, compared with healthy controls (HCs).

Results A systematic literature search identified

9 studies (containing 9 datasets) of CTh, including 518 patients with OCD and 449 healthy controls (HCs). Overall, patients with OCD showed decreased CTh in the left anterior cingulate / paracingulate gyri, right insula, as well as increased CTh in the left lingual gyrus, left inferior frontal gyrus, orbital part, left superior frontal gyrus, dorsolateral of the regions. Besides, the Meta-regression analyses revealed a negative correlation between age and cortical thickness of the right insula in patients with OCD.

Conclusion The meta-analysis revealed cortical thickness alterations in specific regions of the brain among individuals diagnosed with OCD. These findings contribute to a deeper understanding of the underlying mechanisms of OCD brain dysfunction and provide insights for early intervention strategies for the disorder

关键词: OCD; MRI; cortical thickness (CTh); SDM

继续教育协作组

生态化在临床医学拔尖创新人才培养体系中的实践

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目的 随着社会发展,身心健康问题日渐凸显,人们对身心健康的关注度不断提高,我国医学教育的改革也引起人们的广泛重视。在很长一段时间里,我们的医学教学还停留在比较粗放的经验模式,教学观念相对落后,教学内容较为陈旧,教学形式比较单一,很难向各医学领域输送高素质的专业人才。

方法 生态化教学是一种建立在教育生态学理论上的新型教学模式,具有和谐、自发、开放、丰富、顺应过程的特点。浙江大学医学院附属第一医院(以下简称浙大一院)近年来开展了“以生态学为核心的精神医学教育系统构建”的研究。医院基于生态学原理,构建了生态化教学的新模式,在教学内容、教学模式和教学方法的改进上做了一些有益的尝试,从而更好地提高了教学质量,培养高素质人才。本文以浙大一院精神科为例,就这一点展开一些论述。

结果 浙大一院精神科在浙大一院 i-FIRST 教育模式的基础上,紧扣生态化教学的特点,将教师与学生同时纳入教学对象,按照其年资高低进行临床与科研的分级教学,通过引入丰富竞赛、多形式参与、多元化评价等方法,活化教学生态,使得教师和学生的临床、科研与自学能力得到持续提高。

结论 传统的医学教育体系以教师为核心,忽视了以学生为本的教育模式。在以生态学为基础的医学教育体系中,师生之间并非单向的信息交流,而是一种双向互动、教学相长的关系,通过引入丰富竞赛,激发教学兴趣,活化教学生态,促进师生全面成长。

关键词: 医学教育, i-FIRST 培养体系, 生态化, 精神科

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2014年国家全面启动了住院医师规范化培训工作,迄今已满十年。本文以国家首批住院医师规范化培训基地和国家精神科重点专业基地的上海市精神卫生中心的培训实践为例,系统回顾了住培十年的工作情况。2014年-2023年进入中心参加住培的学员共计452人,培训对象以女性(73.01%)为主,进站时学历本科162人(26.33%),硕士研究生119人(26.33%),博士研究生66人(14.60%),从年份构成比上来看,精神科住培生源质量在持续改善中。人员流动性上,成为国家基地初期离职比较多,其后逐步稳定,说明精神科人才的流失减少,学员对于精神科选择更加的坚定。从离站就业数据上来看,9.01%的学员进入药企就业、学历教育、出国等,90.99%的学员选择留在医疗系统就业,其中占比例最大的是在本市区级精神卫生机构就业,占到50%,培训者行业内社会人的身份让中心持续为本市和外省市各级医疗机构输送合格的精神卫生人才。在此基础上总结了培训过程管理的经验,包括:健全组织管理体系、强化带教激励,提升带教能力、开展精神科特色的住院医师实训课程、采取全过程信息化平台建设以及融入人文思政教育。最后,思考和分析了当前精神科住院医师培训面临的挑战:如何进一步壮大精神科住培的队伍、培训中如何凸显“会看病”、如何实现联合培训的协调。

关键词:精神科;住院医师规范化培训;基地建设

澳大利亚精神科医生继续教育情况的简介

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NAMHS of Northern Health

目的 对于临床医生而言,医学知识的学习与实践是一个终身的过程。医生在通过培训和考试,取得专科医生资格之后,仍然有接受职业继续教育的必要。本文通过对澳大利亚精神科医生继续教育情况的介绍,为中国精神科医生的继续教育提供借

鉴。

方法 对澳大利亚医学委员会(AMC)和澳洲与新西兰皇家精神科医师学会(RANZCP)关于继续教育相关政策,指南和要求的总结和分析。

结果 执业医生的继续教育是保证和提高医疗质量的重要步骤。AMC对所有注册医生提出了进行继续教育的强制性的要求。AMC委托RANZCP对澳大利亚精神科医生的继续教育进行管理。澳大利亚医学协会(AMA)通过与各州政府的企业协议为医生的继续教育要求提供支持保障。RANZCP对精神科医生的继续教育要求包括了以下几个部分:制定和执行年度专业发展计划,参与同行评议,参与实践改进和进行自主学习。其中,最为重要的是参与同行评议。对于同行评议,RANZCP有具体的要求和数据记录。澳大利亚精神科医生每年需要完成最少50小时的继续教育活动,并在RANZCP网站记录。RANZCP每年会对继续教育活动的完成情况和完成质量进行抽查。不能保质保量地完成继续教育活动会对影响精神科医生继续执业的可能性。不论是在公立还是私立机构工作,不论是全职工作还是兼职工作,不论是主要从事临床,科研还是行政管理工作,澳大利亚的精神科医生都必须完成规定的继续教育活动的最低要求。

结论 他山之石可以攻玉,澳大利亚精神科医生继续教育情况的信息,对于发展和完善中国精神科医生的从业后继续教育提供了一种思路。

关键词:精神科医生 继续教育 澳大利亚

精神科住院医师规范化培训分层递进教学模式的构建与实施

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目的 探讨分层递进教学模式在精神科住院医师规范化培训中的应用价值

方法 通过对住培医师从教学目标、内容、过程和考核等方面实施分层递进教学设置,在推进分层教学的过程中,提出了具体的实施操作方法,强调了分层递进的培养模式并不是简单的从年限、教学目标和内容上分层,而是对现有教学资源的重新整合与规划,是细化、区分所需掌握理论与技能知

识的难易度、重要性,有节奏、有侧重、有方法地一一展开。在整体规划的基础上对每一步的具体操作进行了说明。例如:对于教学考核的分层,可以使用同一个病历或标准化病人,但是考核的重点以及评分侧重点应根据教学目标及要求有所不同。以精神检查为例:对第一阶段的考核侧重点应放在症状学的理解上,第二阶段的考核重点在临床分析,第三阶段的考核重点则是医患沟通技巧。最终通过执业医师考试和住培医师出站考试来评价分层递进培养效果。

结果 分层教学组和传统教学组住培医师均在本科及以上,学历和性别上没有显著性差异。在执业医师考试通过率上,分层教学组优于传统教学组,差异有统计学意义($P<0.001$)。在出站考通过率上,分层教学组高于传统教学组,但差异无统计学意义。

结论 分层递进教学模式有利于精神科住院医师规范化培训,能够提高住培质量。分层教学模式有利于住培医师明确各个阶段的小目标,也让考核的内容更具体化。此外,该模式还能节省教学成本,提高教学效率。

关键词: 分层递进; 教学模式; 住院医师规范化培训; 精神科

迟发性运动障碍的诊疗研究进展

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迟发性运动障碍(tardive dyskinesia, TD)是多巴胺受体阻滞剂引起的异常不自主运动,年龄较大和接受多巴胺受体阻滞剂的持续时间是TD的最重要危险因素,其主要的发生机制可能是长期使用多巴胺受体阻滞剂引起的基底节中多巴胺受体超敏。TD的特征包括各种不自主运动和姿势,口、面和舌运动障碍是最常见表现,经常伴有其他身体部位的运动障碍。TD是一种临床诊断,诊断依据为存在典型的运动障碍性或肌张力障碍性不自主运动,并排除异常运动的其他病因。目前VMAT2抑制剂是TD主要的对症治疗药物,可与抗精神病药联用或单独使用,苯二氮卓类药物短期使用可缓解轻度症状,少数证据显示迟发性肌张力障碍患者局部注射肉毒毒素可能有效;经对症治疗无效的难治性TD患者

可考虑行DBS手术治疗。TD的预防和早期发现十分重要。

虽然目前关于TD的研究日益增多,但TD临床表现异质性大,病因和发病机制尚不明确,特别是国内关于TD危险因素、治疗及预后的研究证据较少,临床医生尚缺少对TD的认识及治疗经验,期望未来能有更多关于我国TD患者临床特征、危险因素的流行病学研究,能建立我国TD患者的大规模前瞻性队列,更重要的是能在国内进行更多发病机制及治疗相关的基础及临床研究,为TD的规范化管理和新药研发提供理论依据。

关键词: 迟发性运动障碍; 迟发性综合征; 锥体外系不良反应; 药物源性帕金森综合征

Prevalence, Demographic, and Clinical Correlates of Atherosclerosis in A Population without Fatty Livers: A Secondary Analysis Based on A Cross-sectional Study in Japan

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Objective There is little information available regarding the connection between the population without fatty livers and atherosclerosis (AS). The aim of this study was to investigate the prevalence and clinically related factors of AS in populations without fatty livers

Methods In a cross-sectional analysis conducted at a Japanese health examination center, 647 individuals without fatty livers, comprising 372 males (57.5%) and 275 females (42.5%) aged 24 to 84 years (average age 51.5 ± 9.6) were assessed. Participants' data and clinical information were collected. Brachial-ankle pulse wave velocity (baPWV) was used to assess atherosclerosis, with a threshold of > 1400 m/s defining the presence of the condition. Participants were categorized into AS ($n = 257$) and non-AS groups ($n = 390$). Diagnostic assessments included abdominal ultrasounds for fatty liver exclusion. Differences in clinical parameters between groups were compared, and binary multivariate logistic

regression was used to find factors related to AS in the population with non-fatty liver

Results The prevalence of atherosclerosis in the non-fatty liver population was 39.7% (257/647). The results of binary multivariate logistic regression analysis showed that age (OR=1.13, 95% CI: 1.10-1.17, $P<0.001$), SBP (OR=1.08, 95% CI: 1.06-1.10, $P<0.001$), and ALT (OR=1.04, 95% CI: 1.01-1.07, $P=0.022$) were independently positively correlated with atherosclerosis. The AUC (area under curve) values of age, SBP, ALT, and the combination of these three variables are 0.756, 0.753, 0.554, and 0.854, respectively

Conclusion Our findings underscore a heightened prevalence of AS in populations without fatty livers, emphasizing the need for focused vigilance towards individuals exhibiting advanced age, elevated SBP, and heightened ALT levels

关键词: prevalence, related factors, fatty liver, atherosclerosis, brachial-ankle pulse wave velocity

A Case of Thyrotoxicosis First Diagnosed with Psychotic Symptoms

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Objective This case report details the uncommon presentation of thyrotoxicosis with psychotic symptoms as the primary diagnostic indicators in a Chinese patient

Methods The subject of the study is a 27-year-old male, Mr. Li, who was hospitalized due to a 5-day history of sensitivity, paranoia, and auditory hallucinations. His symptoms emerged abruptly, featuring suspicion of persecution, delusions of reference, auditory

hallucinations, and significant emotional distress, including anxiety, agitation, depressed mood, and sleep disturbances. Prior to hospitalization, he developed palpitations, headaches, and a severe worsening of his mental state, with violent urges and a desire to escape. The diagnosis was established in accordance with the International Classification of Diseases, 10th Revision (ICD-10)

Results The patient was treated with a multi-drug regimen comprising propylthiouracil to suppress thyroid hormone synthesis, hydrocortisone for inflammatory control, propranolol for tachycardia, nifedipine controlled-release tablets to manage blood pressure, olanzapine for psychotic episodes, and long-acting benzodiazepines to alleviate anxiety. The clinical response was favorable, with a complete resolution of psychotic symptoms and marked improvement in anxiety and depressive states. However, occasional palpitations were reported, suggesting the presence of some residual thyroid dysfunction despite effective treatment

Conclusion This case illustrates that thyrotoxicosis can initially present with psychotic symptoms, emphasizing the importance of a timely and accurate diagnosis. Comprehensive treatment strategies can lead to significant clinical improvement and enhanced quality of life for patients. It is advisable for clinicians to consider potential endocrine disorders in individuals exhibiting psychotic symptoms and to perform the necessary examinations and initiate appropriate treatment protocols

关键词: Graves' disease, Psychotic symptoms, Thyrotoxicosis, Olanzapine, Burch-Wartofsky point scale

精神分裂症在语义言语流畅性任务下近红外光谱成像特征探究

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目的 通过近红外光成像技术,探索在语义言语流畅性任务下,精神分裂症患者和正常对照组前

额叶脑区激活的差异，寻找识别精神分裂症的客观指标。

方法 共纳入 60 例精神分裂症患者、39 例性别、年龄与之匹配的正常对照者进行测试，采用阳性与阴性症状量表（PANSS）对患者症状严重程度进行评估，采用蒙特利尔认知评估量表（MoCA）进行认知评估，利用 52 通道 ETG-4100 近红外光谱仪采集两组人群前额叶的氧合血红蛋白 [Oxy-Hb] 的相对浓度值，基于一般线性模型理论，计算各通道的 [Oxy-Hb] 浓度激活值，采用 SPSS 进行数据分析。

结果 精神分裂症患者在言语流畅性任务中的正确组词数显著低于正常对照组 ($t=-7.82$, $P<0.001$)，精神分裂症患者在执行语义流畅性任务时，脑区激活范围显著小于对照组（通道激活数：28 vs. 51），差异主要位于背侧额极皮层区，其次是双侧颞上回（FDR 矫正 $P<0.05$ ）。受教育年限、发病次数和言语流畅性任务的正确组词个数对认知严重程度有一定影响。

结论 精神分裂症患者有明显的语义言语流畅性缺陷，可能与背侧额极皮层区及双侧颞上回激活功能下降有关。发病次数越多，认知下降越明显。

关键词：精神分裂症；言语流畅性任务；语义缺陷；近红外光成像技术；认知功能

精神科临床药师的培训与展望

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目的 在三医联动改革的推动下，临床药师的工作将越来越被医院及社会认可和重视。但是接受过精神科临床药师培训的药师人数明显不足，所以建立精神科临床药师培训，以满足医药转型对药师专业技能的需求，补足医院药师医学专业基础及技能的弱势。

方法 本中心与全国相关的精神专科医院一起努力，申请在中国医院协会现有的临床药师基地专业基础上增设精神科临床药师培训，并按培训大纲要求，设置精神科临床药师理论课（包括通科+精神专科理论），以及精神科临床药学实践课（药学查房、药学评估、药学监护、药学教育等）的系列培训。在临床药师工作站嵌入了以药学评估为基础的

闭环的药学服务路径，可以引导临床药师和学员开展完整的、有效的临床药学服务工作。

结果 精神科临床药师培训体系的建设与逐步完善，使得培训的老师和学员在实践、带教及学习的过程中，教学相长，对培养合格的精神专科临床药师，填补精神科临床药师培训的不足起到很好的示范作用。

结论 上海市精神卫生中心作为精神科临床药师培训基地，结合培训大纲的要求，建立了信息化临床药学工作及带教路径，使学员在学习理论与技能的同时，尽快掌握药学服务的方法、提升学习能力和临床思维，成为合格的精神科临床药师。

关键词：精神科临床药师培训 培训基地基本条件 培训内容 培训模式

组织支持感及循证护理能力对护士创新行为的影响研究

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目的 本研究旨在了解护士创新行为现状，探讨组织支持感及循证护理能力对创新行为的影响，为进一步提高护士创新行为提供理论参考。

方法 采用便利抽样法，于 2022 年 6-7 月选取某三甲综合医院 314 名护士作为研究对象，采用一般资料问卷、创新行为量表、组织支持感量表、循证护理能力评定量表进行问卷调查。采用 SPSS 26.0 对数据进行描述性分析，相关性分析，单因素分析及多元线性回归分析。以 $P<0.05$ 代表具有统计学差异。

结果 护士创新行为得分 (30.27 ± 6.65) 分，组织支持感得分 (44.91 ± 9.33) 分，循证护理能力得分 (48.19 ± 23.86) 分。相关性分析显示护士创新行为与组织支持感及循证护理能力均呈正相关 ($P<0.05$)。单因素分析结果显示，护士创新行为在年龄、工作年限、教育程度、英语水平、职称、职务、护理工作满意度、科研经历，以及是否参加护理创新学习班上 ($P<0.05$) 具有统计学差异。多元线性回归分析结果显示组织支持感、循证护理能力及是否参加过护理创新学习班是影响护士创新行为的重要影响因素，共解释总变异的 37.1%。

结论 护士创新行为水平较低, 护理管理者可通过提高对护士的情感性支持感、培养护士循证护理能力及创新思维, 提升护士创新行为水平。

关键词: 护士; 创新行为; 组织支持感; 循证护理能力

Effects of Balint Groups on Communication Skills Improvement of First-year Resident Doctors in China

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Objective Poor communication is identified as one of the major causes of deteriorating doctor-patient relationships in China. More effective training methods for communication skills are needed. The aim of this study is to evaluate the effects of Balint Groups on communication skills for first-year resident doctors and to explore the feasibility of integrating Balint Groups into standardized residency training programs in China

Methods An interventional study using a randomized controlled design and standardized evaluation measurements was conducted. Participants in the intervention group (n=18) received the Standardized Balint Group Program for 6 consecutive months. Those in the waitlist group (n=17) did not attend any Balint Group meetings but were put on a waiting list for future sessions. The communication skills were assessed by 2 experts independently with the SEGUE Framework

Results There is no difference in scores of the SEGUE Framework in baseline between the two groups. After the study, the total score, and 4 out of 5 sub-scores (“Elicit information”, “Give information”, “Understand patient’s perspective”, and “End the encounter”) of the SEGUE Framework increased significantly from baseline levels for the intervention group. While only 1 sub-score (“Set the stage”) was increased for the waitlist group. When comparing the score changes of the SEGUE Framework, the increase in the total score (p=0.008) and the sub-score in “Elicit information” (p=0.016) were significantly larger for participants in

the intervention group

Conclusion Balint Groups can improve the communication skills of resident doctors in China, and it is feasible and beneficial to be integrated into the national Standardized Residency Training Programs

关键词: Balint Group, SEGUE Framework, Communication Skills, Residency Training, Doctor-Patient Relationship

Structural Characteristics of Gut Microbiota in First Untreated Children and Adolescents with Obsessive-compulsive Disorder.

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Objective Obsessive-compulsive disorder (OCD) is a chronic disabling mental disorder characterized by repeated and persistent obsessive and/or compulsive behaviors. There is no direct evidence of intestinal microbiota disorder in children and adolescents with OCD. This study aims to through 16SrRNA sequencing, for starting the drug has not whether there was a child and adolescent patients intestinal disorders provide direct evidence and comprehensive understanding, and finding potential biomarkers associated with OCD, to explore the diagnosis and treatment of SSRIs influence on the intestinal flora, it provides an important theoretical basis for the early diagnosis and prognosis of obsessive-compulsive disorder

Methods 1. Stool samples were collected from 49 first-episode untreated children and adolescents with OCD and 42 age - and sex-matched healthy controls (HC). Samples were collected after 12 weeks of SSRIs monotherapy for OCD, and all subjects were evaluated for clinical parameters. 2. Fecal samples from 49 patients with OCD, 42 HC and 26 OCD12W treated with SSRIs for 12 weeks were analyzed by 16S rRNA sequencing. 3. Correlation analysis was conducted be-

tween metagenomic sequencing results and clinical parameters to explore the relationship between intestinal flora and OCD symptoms and the possible functional pathways involved in the pathogenesis

Results 1. Intestinal microbiota of OCD patients were disturbed at phylum, genus and species levels, and the diversity of microbiota was significantly reduced, while the microbial interaction network was significantly weaker than that of HC group. 2. The relative abundance ratio of Firmicutes/Bacteroidetes(F/B) in OCD group was significantly decreased. 3. Intestinal strains of OCD patients the abundance of Butyrate producing bacteria include Romboutsia, Alistipes indistinctus in other genus, Coprococcus catus in Faecal genus, Ruminococcus sp. CAG:177 in Ruminococcus genus decreased significantly. 4. Compared with OCD0W, the structure and diversity of OCD12W had no significant change. 5. The random forest model identified 30 bacterial genera as markers, and the AUC between untreated OCD patients and HC was 0.9011. Thirteen bacteria were identified as microbial markers in the Respond and Nonrespond groups, and AUC was 0.8274

Conclusion 1. Intestinal flora of children and adolescents with OCD were disordered at phylum, genus and species level, and the diversity of flora was significantly reduced, and there were obvious defects in microbial interaction network. 2. Intestinal stability was destroyed in children and adolescents with OCD, which was associated with a significant decrease in the abundance of butyrate producing bacteria. 3. Short-term treatment with SSRIs can alleviate clinical symptoms, but fails to make the microbial ecosystem of children and adolescents with OCD close to healthy individuals. 4. OCD and HC groups can be distinguished by intestinal flora, and microbial markers can also predict treatment outcomes

关键词: Gut microbiota; Obsessive compulsive disorder; Children and adolescents; Metagenomics; Metabonomics

马来酸氟伏沙明对伴胃肠道症状的儿童青少

年强迫症患者疗效研究及其对肠道菌群的影响

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目的 明确伴胃肠道症状的首发未用药儿童青少年强迫症患者肠道菌群的整体结构特征。探究伴胃肠道症状的儿童青少年强迫症患者经马来酸氟伏沙明治疗的临床疗效与安全性。比较伴胃肠道症状的儿童青少年强迫症患者经马来酸氟伏沙明治疗前后肠道菌群变化情况, 并寻找出显著差异菌群及其与临床疗效之间的相关性。

方法 1、将 2022 年 1 月~2023 年 1 月于本院心理科就诊的 30 例伴胃肠道症状的儿童青少年强迫症患者作为研究对象, 对所有受试者进行一般资料调查表、CY-BOCS、HAMD、HAMA、GSRs、TESS、CGI, 并留取粪便样本。

2、给予伴胃肠道症状的首发未用药儿童青少年强迫症患者马来酸氟伏沙明足量治疗 12 周, 于治疗 4、8、12 周后复测 CY-BOCS、HAMD、HAMA、GSRs、TESS 以及 CGI, 完成随访后再次收集粪便样本, 并对治疗前后的样本进行 16SrRNA 测序。

3、通过比较治疗前后患者肠道菌群变化情况以及强迫、焦虑、抑郁等临床症状的严重程度, 明确马来酸氟伏沙明对伴胃肠道症状的儿童青少年强迫症患者的临床疗效与安全性, 并进一步探讨该药物对伴胃肠道症状的儿童青少年强迫症患者肠道菌群的影响。

结果 1、经马来酸氟伏沙明治疗 12 周后伴胃肠道症状的 OCD 患者 (OCD12W) 胃肠道症状明显减轻 ($P < 0.05$)。2、OCD12W 组患者肠道菌群各多样性指数均显著升高 (obs, $P < 0.05$; chao1, $P < 0.05$; ACE, $P < 0.05$; shannon, $P < 0.05$; simpson, $P < 0.05$)。3、OCD12W 组厚壁菌门 / 拟杆菌门的相对丰度比值 (F/B) 显著升高 ($P < 0.001$)。4、OCD12W 组患者肠道瘤胃球菌属 (Ruminococcus, $q < 0.01$)、大肠埃希菌-志贺氏菌属 (Escherichia-shigella, $q < 0.01$) 等与胃肠道症状相关的菌属的相对丰度显著升高。5、OCD 组各临床参数的变化与肠道菌群中特定细菌的丰度改变之间存在相关性 ($P < 0.05$)。

结论 1、经 12 周马来酸氟伏沙明治疗, 首发未用药儿童青少年 OCD 患者胃肠道症状明显改善,

肠道菌群多样性显著升高。2、首发未用药儿童青少年 OCD 患者肠道稳态被破坏与瘤胃球菌属 (*Ruminococcus*) 等与胃肠道症状密切相关的菌属相对丰度显著降低有关。3、首发未用药儿童青少年 OCD 患者各临床参数的变化与肠道菌群特定物种的丰度改变之间存在关联。

关键词: 肠道菌群; 儿童青少年; 强迫症

Effect of Virtual Reality Technology Combined with Mindfulness-based Stress Reduction Therapy on Late Life Depression

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Objective To analyze the effect of virtual reality technology combined with mindfulness-based stress reduction therapy on the clinical efficacy of elderly patients with depression

Methods Fifty patients with Late life depression admitted to Daqing Third Hospital from September 2023 to December 2023 were selected as the study objects, and randomly divided into control group (25 cases) and virtual reality combined with mindfully based stress reduction group (VR+MBSR group) (25 cases). The control group was treated with conventional drug therapy and health education, and the VR+MBSR group was treated with virtual reality technology combined with mindfully based stress reduction therapy based on drug therapy. Both groups were treated for 8 weeks. The therapeutic effects (HAMA, HAMD, FFMQ), self-efficacy improvement (GSES), social function (SDSS) and cognitive function improvement (MoCA) of the two groups were compared before and after the intervention

Results After intervention, HAMA and HAMD scores in 2 groups were significantly decreased ($P < 0.001$), GSES and MoCA scores in VR+MBSR group were significantly increased ($P < 0.001$), and SDSS scores were significantly decreased ($P < 0.05$). After intervention, FFMQ total score and observation ($P <$

0.001), conscious action ($P < 0.001$), non-judgment ($P < 0.05$) and non-response ($P < 0.05$) were significantly increased in VR+MBSR group

Conclusion Virtual reality technology combined with mindfulness-based stress reduction therapy can improve the clinical efficacy, social and cognitive level, and self-efficacy of elderly patients with depression

关键词: Late life depression; Virtual reality; Mindfulness-based stress reduction therapy; Cognitive function

十年筑精神梦，继续砥砺前行——以广州医科大学附属脑科医院精神科住培十年建设为例

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目的 本研究旨在通过深入探讨广州医科大学附属脑科医院精神科在过去的十年中住院医师规范化培训(住培)项目的全面建设经验,为推动精神科住培的高质量发展提供实践指导和策略建议。

方法 研究采用回顾性方法,全面探讨了广州医科大学附属脑科医院在精神科住培十年期间的关键发展阶段,具体包括:培训模式的创新与实践、过程管理的精细化、师资力量/system培养、考核基地的建设与优化、考核体系的科学构建,以及医学人文教育的深化实施。

结果 经过十年的系统建设和持续优化,广州医科大学附属脑科医院精神科的住培项目已取得显著的成效。住院医师的专业技能得到显著提升,临床决策能力增强,人际沟通和团队协作能力得到锻炼,专业素养和医学伦理意识显著提高。通过强化医学人文教育,培育“精诚惠爱”的理念,时刻牢记“健康所系,性命相托”的誓言。

结论 通过紧密围绕住院医师六大核心胜任力(职业素养、知识技能、病人照护、沟通合作、教学能力、终生学习)的培训目标,结合现代医学教育理念和方法,广州医科大学附属脑科医院精神科已成功探索出一条促进精神科住培可持续发展的有效路径。这一路径不仅提升了培训的质量和效果,也为

其他医疗机构提供了可借鉴的经验和模式,为培养更多优秀的精神科医疗人才做出贡献。

关键词:住院医师规范化培训,精神科,住培十年,回顾展望

探讨求同存异理念对非自杀性自伤未成年人亲子冲突的作用

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目的 探讨求同存异理念对非自杀性自伤(non suicidal self-injury, NSSI)未成年人亲子冲突的作用。

方法 以2022年6月至2023年8月于中山市第三人民医院住院的NSSI未成年人为研究对象,纳入有亲子冲突的患者,随机分为干预组(47人)及对照组(44人)。干预组接受团体心理干预:1、建立治疗同盟;2、学习求同存异的概念、相关的历史事件及重要意义;3、结合自我经历,讲述体现求同存异的生活事件,分享当时和此刻的感受;4、围绕“我眼中的父母”,讲述生活中的重要事件,呈现对父母的认知及评价;5、围绕“父母眼中的我”,结合自身经历,讲述父母对自己的期望及要求;6、以“第一次做孩子,父母何必对我们那么严格”为主题,组织组员进行正反两方辩论;7、以“第一次做父母,哪有十全十美”为主题,组织组员进行正反两方辩论;8、总结阶段,组员汇报求同存异理念带来的认知改变以及感受变化(划分为当时和此时两个阶段),促进包容父母的缺点与不足,修复亲子关系。注:从第4阶段开始,鼓励干预组患者和家长多沟通。每周1次、连续6周对2组患者的亲子关系感受等进行定性研究,并评价效果。

结果 1、在亲子关系认知评价方面,干预组患者较对照组患者的评价更全面和理性,内心痛苦感降低明显。2、在接纳父母方面,干预组患者较对照组患者自我改变意愿强烈,对父母排斥程度减弱明显,接纳父母意愿强烈。3、在看待未来的亲子关系发展方面,干预组患者较对照组患者更积极和自信,与父母共同成长意愿也更强烈。4、干预组多数患者

认可和接纳求同存异理念,反馈对改善亲子冲突有积极意义。

结论 起源于中国传统文明的求同存异理念,可以作为认知治疗技术,改善NSSI未成年人的亲子冲突。

关键词:求同存异;非自杀性自伤;未成年人;亲子关系

精神科住培考核中标准化病人队伍建设的思考

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摘要:2010年精神医学教育引入了标准化病人用于培训及考核,本文以广州医科大学附属脑科医院精神科标准化病人培养的经验为例,从培养方案、培养模式及挑战等方面阐述当前标准化病人培养现状,在实践中探索有效、可实现的精神科标准化病人培养方案,为推动精神科住培标准化病人建设可持续发展提供参考。

关键词:标准化病人;住院医师规范化培训;继续教育;培养模式

Perfectionism and Psychological Resilience Mediate The Negative Effects of Childhood Trauma on Major Depressive Disorder

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Objective Childhood trauma is a recognized risk factor for major depressive disorder (MDD). Previous studies have indicated that perfectionism and psychological resilience may mediate the relationship between childhood trauma and MDD. The purpose of this study was to assess how perfectionism and psychological resilience influence the relationship between childhood trauma and MDD in an adult clinical context

Methods In this cross-section survey, a total of 621 clinical patients with psychological disorders completed a series of psychological scales such as the Childhood Trauma Questionnaire-Short Form (CTQ-SF), the Connor-Davidson Resilience Scale (CD-RISC), the Frost Multidimensional Perfectionism Scale (FMPS) and the Zung Self-Rating Depression Scale (SDS). Structural equation modeling (SEM) was performed to show the relationship among childhood trauma, perfectionism, psychological resilience, and depression

Results The pathway of “childhood trauma—perfectionism—MDD” was significant (95% CI = [1.018,2.398]). The pathway of “childhood trauma—psychological resilience—MDD” was significant (95% CI = [4.078,7.749]). The sequential pathway of “childhood trauma—perfectionism—psychological resilience—MDD” was significant (95% CI = [0.234,1.397])

Conclusion The study provides new ideas about the mechanisms of childhood trauma on MDD. It suggests that perfectionism and psychological resilience can mediate the pathway from childhood trauma to MDD and have a chain effect. Thus, clinicians may be able to mitigate the negative effects of childhood trauma on MDD by intervening in perfectionism and enhancing the level of psychological resilience

关键词: Major depressive disorder; Childhood trauma; Perfectionism; Psychological resilience

心境情感障碍伴非自杀性自伤青少年照顾者压力及其影响因素的研究

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目的 探索心境情感障碍 (Mood Disorder) 伴非自杀性自伤 (Nonsuicidal Self-injury, NSSI) 青少年照顾者压力 (Caregiver Stress) 情况及其影响因素。

方法 共纳入符合 ICD-10 (The International Statistical Classification of Diseases Tenth Revision, ICD-10) 心境情感障碍 (Mood Disorder) 及非自杀性自伤 (Nonsuicidal Self-injury, NSSI) 诊断标准的

青少年患者及其照顾者 127 例, 患有心境情感障碍无自伤行为青少年的照顾者 90 例。两组照顾者均填写一般调查问卷和照顾者压力问卷 (The Caregiver Strain Questionnaire, CGSQ) 收集照顾者的一般情况以及照顾压力情况。以渥太华自伤问卷 (The Ottawa Self-Injury Inventory, OSI) 评估青少年自伤情况, 以家庭功能评估量表 (Family APGAR, APGAR)、情绪调节困难量表 (Difficulties in Emotion Regulation Scale, DERS)、艾森克人格量表 (Eysenck Personality Questionnaire, EPQ) 等评估青少年照顾者的家庭功能、情绪调节能力、人格特征。

结果 MD 伴 NSSI 组 CGSQ 总分高于 MD 不伴 NSSI 组。 ($p < 0.05$) 2、青少年近 1 个月自伤频率、DERS 总分、EPQ N 值与 CGSQ 总分呈正相关, APGAR 总分和 EPQ E 值与 CGSQ 总分呈负相关。

(p 值均 < 0.05) 3、多重线性回归方程显示青少年近 1 月自伤越频繁、家庭功能越差、照顾者情绪调节能力越低、EPQ N 值越高, MD 伴 NSSI 组照顾者的 CGSQ 总分越高。 ($R^2 = 0.615$, $p < 0.05$)

结论 心境情感障碍伴非自杀性自伤青少年照顾者压力显著高于心境情感障碍不伴非自杀性自伤青少年照顾者压力。2、青少年近 1 月自伤越频繁、家庭功能越差、照顾者情绪调节能力越低、EPQ N 值越高, MD 伴 NSSI 组照顾者的 CGSQ 总分越高。

关键词: 心境情感障碍; 非自杀性自伤; 照顾者压力; 影响因素

青少年抑郁障碍患者的非自杀性自伤行为现状及影响因素的研究

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目的 探究青少年抑郁障碍患者的非自杀性自伤行为 (NSSI) 的现状及影响因素, 深入探究单纯抑郁障碍与抑郁障碍伴混合特征情况下的社会心理因素分析, 为青少年抑郁障碍患者非自杀性自伤行为的识别与干预提供帮助。

方法 选择 2023 年 2 月至 2023 年 12 月于心理科就诊且符合入组标准的 200 名有 NSSI 行为的患者为研究对象, 使用渥太华自伤量表、简易应对方式量表、青少年生活事件量表、家庭亲密度及适应

性量表中文版、临床实用抑郁混合特征量表。进行 NSSI 行为特征分析及各变量相关性分析。将组内患者分为单纯抑郁组和混合特征组,比较两组患者的组间差异。完成资料采集后使用 SPSS27 统计软件对数据进行分析。

结果 1、青少年最常见的伤害方法是切割(61.0%)、尖利物体刺伤皮肤(48.0%)、击打(46.8%),最常见的伤害部位是手(67.5%)、下臂或腕部(58.4%)、上臂或臂肘(31.1%)。2、生活事件、冲动性、应对方式与自伤的严重程度存在相关性。3、两组患者在认知冲动性、行动冲动性、冲动性总分、消极应对、幻想与逃避、求助与问题解决得分上的差异具有统计学意义($P<0.05$),结果可得出单纯抑郁组患者在认知冲动性、行动冲动性以及总分、求助及问题解决上的得分小于混合特征组患者的得分,消极应对、幻想与逃避大于混合特征组的得分。

结论 1、青少年抑郁障碍患者发生 NSSI 形式多样,最常见的切割、用尖利物体刺伤皮肤、击打等方式,常见伤害于手、下臂或腕部、上臂或臂肘等部位。2、青少年抑郁障碍患者发生 NSSI 行为的严重程度与生活事件、冲动性、应对方式因素相关。3、混合特征组患者认知冲动性、行动冲动性水平较高。单纯抑郁组患者更容易采用消极应对、幻想与逃避的应对方式,混合特征组患者更易采用求助与问题解决的应对方式。

关键词:抑郁障碍;非自杀性自伤;青少年

益生菌复合制剂辅助治疗重性精神障碍患者合并代谢异常的临床干预研究

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目的 通过随机、双盲、安慰剂对照试验,观察益生菌复合制剂干预重性精神障碍合并代谢异常的临床疗效和安全性,并初步探索肠道菌群特征与临床代谢相关指标及认知功能之间的关系,尝试筛选出可能辅助治疗重性精神障碍患者合并代谢异常的潜在关键菌。

方法 本研究纳入持续接受治疗的重性精神障碍合并代谢异常患者 60 名,其中包括,随机分为试

验组(益生菌复合制剂干预)($n=30$)及对照组(安慰剂干预)($n=30$),进行为期 12 周的益生菌干预治疗。收集受试者的一般人口学信息及临床病理资料,采集受试者血液样本进行血液生化指标(糖代谢和脂代谢指标)检测,采集受试者粪便样本进行肠道菌群 16SrRNA 测序。采用独立样本 t 检验、配对样本 t 检验等统计学方法分析受试者临床资料、代谢指标;采用生物信息学分析方法对受试者粪便肠道菌群数据进行分析,比较两组患者干预前后组内及组间的肠道菌群特征,并探索其与相关代谢指标间可能的关联。

结果 1、与干预前相比,试验组干预后的甘油三酯水平明显下降($P<0.05$);对照组干预后总胆固醇水平明显升高($P<0.05$)。

2、试验组益生菌干预 12 周后,进行随机森林算法结合统计学检验,从而确立试验组内干预前后存在差异菌属: *Selenomonas*、*Clostridium*、*Roseburia*、*Erysipelotrichaceae*、*Barnesiella*、*Bacteroidales*、*Oxalobacteraceae* 与多项代谢相关指标关联密切。上述菌属在试验组的基线与研究终点相对比中,相对丰度均有不同程度的差异;其中 *Selenomonas* 在益生菌干预后丰度明显下降,且与 TG 水平呈正相关;*Clostridium* 在益生菌干预后丰度明显升高,其与体重指数(BMI)和 FI 水平呈负相关。

结论 1、12 周内给予益生菌复合制剂干预,可辅助性降低重性精神障碍合并代谢异常患者的 TG 水平。

2、12 周内给予益生菌复合制剂干预,对重性精神障碍合并代谢异常患者的 TC 水平可能具有保护作用。

3、干预前后试验组的肠道菌群存在显著差异,差异菌属与患者代谢异常的发生关系密切。随机森林模型确立的关键菌属: *Selenomonas*、*Clostridium*、*Roseburia*、*Erysipelotrichaceae*、*Barnesiella*、*Bacteroidales*、*Oxalobacteraceae* 与多项代谢相关指标关系密切。

关键词:重性精神障碍;肠道菌群;代谢异常

Es-ketamine Ameliorates Depressive Behavior Via CB1R Dependent Mitochondria Biogenesis in Mice with Chronic Various Stress

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Objective This study aimed to identify the effect of es-ketamine (es-Ket)

treatment on depression and explore whether cannabinoid receptor 1 (CB1R)-mediated mitochondrial biogenesis accounts for the anti-depression effect of es-ketamine in a chronic various stress (CVS) mice model.

Methods 36 C57BL/6J mice were randomly assigned to the three groups: Control, CVS+Saline, CVS+es-Ket. Mice in control were treated by nothing as comparison. Mice in CVS+Saline and CVS+es-Ket groups were treated by CVS modeling for consecutive 21 days. And then, mice were injected with saline (10 μ L/g) or es-ketamine (15 mg/kg) for seven days respectively after CVS. Subsequently, all mice were subjected to open field test, novelty suppressed feeding test, tail suspension test, forced swimming test, and elevated plus maze test to observe the depression and anxiety-like behaviors. Then the mice were sacrificed and the levels of CB1R and mitochondrial biogenesis and function-related proteins nuclear transcription factor 1 (NRF1), mitochondrial transcription factor A (TFAM), Cytochrome C (Cyto C) were measured. To elucidate the role of CB1R in anti-depression effect of es-ketamine, CB1R antagonists AM251 and SR141716A were given to mice with es-ketamine administration. Likewise, subjects' depressive anxiety-like behaviors, mitochondrial function and biogenesis were examined after the CVS procedure

Results Compared with the control group, mice in CVS + saline group exhibited significant depression and anxiety-like behaviors, including decreased time spent in center of open-field and time in open arms of elevated plus maze, prolonged feeding latency, immobility time in tail suspension test and forced swimming test. Additionally, the protein level of CB1R, NRF1 and TFAM were decreased significantly, while Cyto C increased significantly. Es-ketamine administration successfully ameliorated depressive and anxiety-like behaviors, and upregulated CB1R, NRF1 and TFAM expressions, downregulated Cyto C in CVS mice. However,

the supplementation of AM251 and SR141716A blocked the antidepressant-like effects of es-ketamine, and es-ketamine failed to upregulate CB1R protein expression, and increase mitochondrial function and biogenesis

Conclusion These results indicated that es-ketamine ameliorated depression- and anxiety-like behaviors in CVS mice, promoted mitochondrial biogenesis by activating CB1R, a novel mechanism underlying es-ketamine's antidepressant-like effects in treating depression

关键词: depression, es-ketamine, CB1R, mitochondria

重度抑郁障碍患者入睡困难与早醒症状的脑功能的共性与差异

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目的 大量研究表明,重度抑郁障碍患者常常会出现各种失眠症状,包括入睡困难和早醒。虽然已有大批神经影像学研究揭示了失眠的神经机制,但由于失眠症状的异质性,重度抑郁障碍患者特定失眠症状的脑功能异常模式仍不清晰。本研究旨在探讨入睡困难和早醒的重度抑郁障碍患者的局部脑功能的共性与差异。

方法 共计纳入 132 名重性抑郁障碍患者,均来自于 2018 年到 2021 年南京医科大学附属脑科医院心境障碍科住院的急性抑郁发作患者,其中 50 名伴入睡困难,36 名伴早醒,46 名不伴失眠症状。此外,于社区招募性别、年龄和受教育年限与之匹配的健康人 60 名。所有参与者均接受了静息功能磁共振成像扫描。比较四组之间的低频振幅。对差异脑区的低频振幅值、汉密尔顿抑郁量表 17 项因子分和匹兹堡睡眠质量指数得分进行皮尔逊相关分析。

结果 入睡困难患者左侧中央前叶低频振幅值低于早醒组,左侧岛叶低频振幅值高于无失眠症状者。早醒患者左侧中央前叶的低频振幅值高于无失眠症状者。

结论 本研究提示,脑岛活动异常增加是入睡

困难的神经机制，而中央前回活动异常增加参与了早醒的发生。我们的结果进一步揭示了重度抑郁障碍患者入睡困难与早醒症状背后的神经机制，为后续针对不同失眠症状进行干预提供了研究基础。

关键词：脑磁图；重性抑郁障碍；童年创伤；自杀未遂

虚拟现实技术在儿童青少年精神障碍中的应用

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目的 本文概述了几种临床中常见的儿童青少年精神障碍与虚拟现实技术(Virtual Reality Technologies, VRTs)结合的研究，通过VR这一手段，提高治疗配合度，力求减少成年后的发病几率。本文旨在探索计算机技术在儿童青少年精神疾病范围内的可用性，利用VR环境的交互性、沉浸性、多感知性等特点，让患儿能够全身心投入治疗，从模拟的场景中锻炼自己的身心，积极面对生活，提高社会适应能力，以期VR技术在精神心理疾病方面更深层次的研究提供思路。

方法 结合《精神疾病诊断与统计手册》(DSM-5)疾病诊断的顺序，寻找最近3年的国内外儿童青少年精神障碍在VR技术指导下干预的相关研究成果。通过计算机检索中国知网(CNKI)、PubMed、谷歌学术、百度学术等数据库，以VR、mental disorders、children、teenagers、adolescence、therapy等为关键词，检索时间为2021年到2024年5月。纳入标准：与本研究主题有关的学术期刊、综述、临床随机对照试验等；排除标准：数据信息不全、质量差、检索结果不符合需求的文献。

结果 VRTs在儿童青少年精神障碍近三年的研究主要集中在：孤独症(自闭症)谱系障碍(ASD)、注意缺陷多动障碍(ADHD)、抑郁障碍、焦虑障碍、睡眠-觉醒障碍，而在智力障碍中的应用也有一定的研究。其次，检索到一篇关于青少年边缘性人格障碍的VR研究。此外，目前在儿少精神分裂症中应用VR治疗的临床对照试验较少，仅在某篇综述中查询到VR也可用于管理精神分裂症青少年的暴力

风险。而对于VRTs已用于创伤后应激障碍、恐惧症、物质成瘾障碍等疾病的治疗，多应用于成人，未在儿童青少年中见到。

结论 虚拟现实技术(VRTs)利用计算机、头戴式显示器等设备生成模拟现实的场景，并与患者进行互动，其独立或者联合治疗都已在许多精神疾病中进行过研究，但在儿童青少年的研究中仍然不多见。但相对于成人，儿童青少年更喜爱也更愿意接受在虚拟现实环境中进行康复训练与治疗，因此本文探讨了VRTs在具体儿少精神障碍中的应用，期待能够有更多的儿童青少年精神疾病患者在VRTs的治疗中取得更好的疗效。

关键词：虚拟现实技术,精神障碍,儿童青少年,治疗干预

Retinal Structure and Function As Potential Biomarkers for Major Depressive Disorder: A Scoping Review

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Objective This study systematically reviews literatures on retinal biomarkers as potential diagnostic indicators of major depressive disorder (MDD), thereby providing a theoretical foundation for offering practical guidance for early clinical identification and diagnosis of this disorder

Methods By employing scoping review method, two researchers conducted a comprehensive search of 10 databases to summarize the current status of retinal objective instruments for MDD patients, and the correlations between the retinal markers and MDD

Results Among the 13 articles included in the analysis system, 8 studies investigated the suitability of retinal structure as a biomarker for MDD, and 5 studies explored retinal function using visual electrophysiology techniques. These findings suggest that even during the early stages of the disease, retinal function may serve as a potential biological marker for MDD. Furthermore, several studies employed a combination of various ex-

amination tools to assess ocular biomarkers in MDD patients

Conclusion Limited studies have explored retinal function as a potential biomarker for MDD, and there is a lack of safe, uniform, and standardized clinical examination methods and evidence specifically tailored for the MDD population. Therefore, urgent attention should be given to investigating the feasibility of combining retinal structure and function as a biomarker for MDD

关键词: major depressive disorder, retina, biomarkers, electrophysiology, optical coherence tomography

青少年人际心理治疗干预抑郁症的新进展

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人际心理治疗 (interpersonal psychotherapy, IPT) 是世界卫生组织推荐的一线抑郁症治疗方法, 它建立在实证研究基础上, 关注人际事件与抑郁情绪之间的双向交互作用, 通过改善人际关系来减轻病人的抑郁症状。因其成本低、易实施, 近年来倍受关注。人际心理治疗以青少年中多发的人际问题为突破口, 目标清晰, 针对性强。目前国际范围内已将其广泛应用于青少年群体, 但国内对此研究不多。十多年来, 人际心理治疗的治疗过程获得了许多修正和补充, 有关治疗效果的研究不断涌现, 这为有效治疗青少年抑郁症, 降低抑郁症对青少年的不利影响提供了可借鉴、可推广的方法, 值得进一步梳理并推广应用。文章介绍了人际心理治疗在青少年群体中的应用过程, 对比分析发现该方法治疗效果优于常规治疗, 可有效缓解抑郁症状。人际心理治疗对青少年自我概念及社会适应有显著改善作用, 还能促进青少年亲密关系的维持和发展。人际心理治疗与认知行为疗法一样能有效减轻患者抑郁症状, 两者疗效相当。人际心理治疗还对抑郁症的一些共患疾病和其他心理疾病也都有很好的治疗效果。另外, 人际心理治疗具有灵活性, 在青少年中还有很

多形式和拓展, 疗效也获得证实, 值得未来做更多推广和应用性研究。

关键词: 人际心理治疗, 青少年, 抑郁症, 心理治疗

工作压力及职业倦怠对住院医师核心胜任力的影响

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目的 了解临床工作压力及职业倦怠对住院医师六大核心岗位胜任力的影响。

方法 通过发放线上问卷, 采用自行设计的条目收集在培住院医师的基本信息和临床工作量激增前后职业素养、专业能力、病人管理、沟通合作、教学能力和学习提升六大胜任力等方面的自评情况, 采用马氏职业倦怠量表评价住院医师的职业倦怠程度, 比较分析压力前后核心岗位胜任力变化及其相关影响因素。

结果 通过对 340 份收集的有效问卷分析发现, 在经历 1 个月的临床工作量激增后, 住院医师的六大核心胜任力均有显著的提升 ($P < 0.05$)。其中工作时长在 50-59 小时/周的住院医师在病人管理、沟通合作以及学习提升这三个方面获得的提升大于工作时长 > 60 小时/周的住院医师 ($P < 0.05$)。职业倦怠程度与住院医师在职业素养、沟通合作以及学习提升三个方面的胜任力提升呈负相关 ($P < 0.05$)。在专业能力和病人管理方面, 转岗人员均优于未转岗人员 ($P < 0.05$)。外单位委派住院医师比医学专业硕士研究生的专业沟通能力提升更突出 ($P < 0.05$)。在教学能力提升方面, 本科生优于博士研究生, 本单位住院医师优于面向社会招收的住院医师 ($P < 0.05$)。不同性别、年级、婚姻状况在各项胜任力的提升中差异均无统计学意义 ($P > 0.05$)。

结论 临床工作压力增大对住院医师的胜任力锻炼有积极影响; 适度的工作时长有助于胜任力的提升, 但过高的职业倦怠感可能会阻碍住院医师胜任力的发展。

关键词: 工作压力; 职业倦怠; 住院医师规范化培训; 胜任力

抑郁障碍研究协作组

基于网络药理学方法探讨肉蔻五味丸治疗抑郁症的作用机制

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目的 通过网络药理学方法探讨肉蔻五味丸治疗抑郁症的作用机制。

方法 利用中药系统药理学数据库与分析平台(TCMSP)以及 PharmMapper 数据库检索与肉蔻五味丸中五味中药相关的活性成分及作用靶点, 利用 GeneCards、OMIM、TTD、PharmGKB、DrugBank 数据库筛选抑郁症相关的靶点, 随后构建化合物-靶点互作网络; 利用 STRING 数据库及 Cytoscape 软件构建 PPI 网络; 利用 Metascape 数据库进行 GO、KEGG 富集分析, 获得肉蔻五味丸治疗抑郁症的潜在作用通路, 并利用 Cytoscape 软件构建通路-靶点网络图。

结果 本研究共筛选出肉蔻五味丸 42 个活性成分和 300 个相应靶点, 通过五个数据库共获得抑郁症相关靶点 1430 个, 其中 111 个共同靶点; 通过 GO 富集分析发现生物学过程 1517 条, 分子功能 166 条, 细胞组成 90 条; KEGG 富集分析发现肉蔻五味丸通过多种信号通路协同发挥作用, 其中炎症相关通路在其中发挥重要作用。同时本研究发现了五个核心靶基因, 分别是 TNF、IL-1B、MAPK1、MAPK14、AKT1。

结论 初步探讨了肉蔻五味丸抗抑郁的主要潜在靶点及相关通路, 为进一步的实验和临床研究提供理论依据。

关键词: 网络药理学; 肉蔻五味丸; 抑郁症; 作用机制

抑郁症患者人体成分测定病案分析

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目的 探讨抑郁症患者的人体成分变化及其临

床意义,为临床抑郁症患者的治疗提供指导建议。

方法 本研究选取2019年1月~2021年1月期间海南省平山医院、海南省安宁医院诊断的抑郁症患者150例作为病例组(HAMD-17项评分 ≥ 7 分),选取年龄、性别基本匹配的非抑郁症志愿者150例作为对照组,测定两组研究对象的体质量指数(BMI)、腰臀比、基础代谢率、机体脂肪含量、机体水分含量、机体蛋白含量、内脏脂肪面积、肌肉骨骼重量,检测两组血清三酰甘油(TG)、总胆固醇(TC)、高密度脂蛋白胆固醇(HDL-C)、低密度脂蛋白胆固醇(LDL-C)。

结果 病例组的BMI、腰臀比、机体脂肪含量、内脏脂肪面积测定结果均显著的高于对照组,差异具有统计学意义($P < 0.05$);病例组的机体蛋白含量低于对照组且差异显著($P < 0.05$);两组研究对象的基础代谢率、肌肉骨骼重量差异无统计学意义($P > 0.05$);病例组的血清TG、TC测定结果均显著的高于对照组,差异具有统计学意义($P < 0.05$);两组研究对象的HDL-C、LDL-C水平差异无统计学意义($P > 0.05$);确诊抑郁症患者BMI、机体脂肪含量测定结果显著高于可能抑郁的患者,差异具有统计学意义($P < 0.05$);两组患者的腰臀比、内脏脂肪面积、机体蛋白含量、基础代谢率、肌肉骨骼重量差异无统计学意义($P > 0.05$);确诊抑郁症患者的血清TG测定结果均显著的高于可能抑郁患者,差异具有统计学意义($P < 0.05$);两组患者的TC、HDL-C、LDL-C水平差异无统计学意义($P > 0.05$)。

结论 抑郁症患者较非抑郁症的人群存在一定程度的BMI超重,患者内脏脂肪及体脂率较高,并且与患者的抑郁病情有一定的关系。

关键词: 抑郁症; 人体成分; 体质量指数; 腰臀比; 基础代谢率

压力知觉对青少年抑郁症程度的影响: 认知融合和经验性回避的链式中介作用

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目的 旨在通过调查青少年抑郁症患者,以接纳承诺疗法的视角,探究压力知觉对抑郁症程度的

影响以及经验性回避和认知融合在其中所起的链式中介作用。

方法 对238名青少年抑郁症患者进行自编一般人口学资料问卷,贝克抑郁量表(BDI-II)、知觉压力量表(PSS)、认知融合问卷(CFQ)和接受与行动问卷(AAQ-II)的测量,使用SPSS26.0对所得数据进行统计分析。

结果 青少年抑郁症患者在压力知觉($t=2.989, p=0.004$)、经验性回避($t=3.406, p=0.001$)和抑郁症状($t=4.534, p < 0.001$)方面存在明显的性别差异,女性水平更高,而认知融合($t=1.774, p=0.077$)不存在明显的性别差异。抑郁症状、压力知觉、经验性回避和认知融合两两均呈正相关($p < 0.001$),压力知觉能直接正向预测抑郁症状($\beta=0.244, p < 0.001$),且青少年抑郁症患者的压力知觉可以通过认知融合($\beta=0.092, 95\% CI: 0.013, 0.180$)和经验性回避($\beta=0.094, 95\% CI: 0.038, 0.159$)的单独中介作用影响抑郁症状,同时,认知融合和经验性回避在青少年抑郁症患者的压力知觉与抑郁症状之间起链式中介作用($\beta=0.131, 95\% CI: 0.061, 0.204$),总中介效应为0.317。

结论 本研究证实,认知融合和经验性回避在青少年抑郁症患者的压力知觉与抑郁症状之间起链式中介作用,提示未来可以采用接纳承诺疗法以预防和干预青少年抑郁症。

关键词: 青少年抑郁症, 压力知觉, 认知融合, 经验性回避, 抑郁症状

粪便微生物群移植辅助治疗抑郁发作的疗效及安全性的研究

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目的 探讨粪便微生物群移植(fecal microbiota transplantation, FMT)辅助治疗抑郁发作的疗效及安全性。

方法 收集2022年1月至2023年12月树兰(杭州)医院18-65岁,符合ICD-10抑郁发作诊断标准的门诊及住院患者46例,按随机数字表法分为FMT联合药物治疗组(实验组,23例)和单纯药物治疗组(对照组,23例)。实验组在药物治

疗基础上使用 FMT 治疗 1 次。两组均在基线及治疗第 2 周末,检测人体 10 种优势肠道菌群,采用 24 项汉密尔顿抑郁量表(Hamilton Depression Rating Scale, HAMD-24)评估患者的抑郁症状,采用治疗副反应量表(Treatment Emergent Symptom Scale, TESS)及实验室检查评估治疗相关的不良事件。以 HAMD-24 减分和减分率、治疗有效率、人体肠道内 10 种优势细菌移植前后指标变化等为主要评估指标,以药物不良事件、血常规、生化、心电图、免疫指标(免疫球蛋白+补体)、超敏 C 反应蛋白、甲状腺功能、糖化血红蛋白等实验室检验检查为安全评估指标。采用坐标分析(PCoA)、分度量多维尺度法(NMDS)比较实验组前后的菌群差异,对菌群和抑郁程度做相关性分析。

结果 2 组基线 HAMD-24 评分差异无统计学意义($P>0.05$)。治疗第 2 周末,实验组 HAMD-24 减分($P=0.048$)及减分率($P=0.016$)高于对照组,差异有统计学意义。PCoA 分析、NMDS 分析提示 FMT 前后肠菌分布差异无统计学意义。利用线性判别分析(LDA)判别柱形图发现 FMT 治疗后肠球菌($P=0.02$)在肠道中相对丰度显著上升。实验组基线富集到的普拉梭菌($P=0.040$)、酪酸梭菌($P=0.029$)、直肠真杆菌($P=0.004$)与 HAMD-24 得分呈显著负相关,其余微生物与 HAMD-24 得分呈现出不同的相关性,但差异无统计学意义。实验组不良事件发生率为 28.6%,对照组为 30%,2 组不良事件发生率差异无统计学意义($P=0.928$)。FMT 治疗过程中发生的主观不适为恶心、呕吐、鼻咽部不适,一般在治疗中发生,FMT 结束后均可自行缓解,且无严重不良事件发生。

结论 辅助 FMT 更能改善抑郁症状,并且安全,无明显不良反应。抑郁症患者 FMT 前后肠道微生物结构组成未发生改变,肠球菌属在 FMT 后肠道中相对丰度显著上升,且普拉梭菌、酪酸梭菌、直肠真杆菌与 HAMD-24 量表评分存在显著性负相关。

关键词:粪便微生物群移植,抑郁发作,疗效,安全性,肠道微生物

腹膜透析合并抑郁患者情绪体验和需求的质性研究

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目的 腹膜透析患者的心理负担较重,该研究通过质性访谈探讨腹膜透析合并抑郁患者的情绪体验和需求,旨在早期识别抑郁,并为腹膜透析合并抑郁患者构建抑郁管理计划提供依据。

方法 采用目的抽样法,研究对象以最大化差异为原则,样本量以信息饱和为原则,选取 2023 年 10 月~2024 年 5 月在南京市某三级甲等医院腹膜透析中心治疗的 12 例腹膜透析合并抑郁的患者为研究对象。采用半结构式访谈提纲对研究对象进行研究资料收集。访谈由 1 名具有质性访谈经验且具有 3 年以上肾内科临床护理工作经验的实施者完成现场笔录,并记录受访者的非语言行为。研究者对同意录音者进行全程录音。全程由 1 名质性研究经验丰富的护理学院专家指导进行,并由其随机抽取 2 名患者考证结果。访谈者用半结构式问题引导研究对象表达内心真实体验,对受访者的回答存在疑惑时,通过复述、追问等方式再次确认内容。访谈环境选择安静、无干扰的独立空间,访谈时间选择在受访者未进行腹膜透析换液操作时,共访谈 30~45min。每个参与者的访谈次数为 2-3 次。研究者在访谈结束后 24 小时内反复播放录音,逐字转录为文字,并在文中标注受访者的非言语行为。另一名研究者再次进行独立的交叉检查,以确保访谈资料的准确性。

结果 本研究最终纳入 12 名患者。其中男性 7 例,女性 5 例;年龄(40.08 ± 11.84)岁;透析龄(24.92 ± 17.60)月;Kt/V 值 1.29 (1.17,1.62);Ccr 值(40.89 ± 17.26);贝克抑郁量表(BDI-II)总分为 16.00(14.25,17.75)分;66.67%的参与者失业,33.33%的参与者未婚。最终提炼 6 个一级主题,分为两大类:情绪体验和需求。情绪体验包括自我否定、生活方式改变和复杂的应对方式等 3 个主题;需求包括专业信息需求、心理健康需求和社会支持等 3 个主题。

结论 该研究发现,腹膜透析合并抑郁情绪患者的情感体验较差,深受疾病本身和抑郁情绪带来的心理困扰。受访者缺乏社交和社会支持,普遍希望得到卫生专业人员的指导和帮助。腹膜透析患者所需的生活方式改变、饮食限制和持续的透析治疗

会影响他们的幸福感,并可能导致社交焦虑,造成严重的社会心理负担。医护人员,尤其是腹膜透析专职护士和医生,应重视腹膜透析患者的心理健康和情绪管理,帮助他们建立健康的生活方式。此外,旨在加强社会支持和实施患者心理健康管理的策略将带来更好的心身健康和更高的生活质量。未来有必要对腹膜透析合并抑郁患者进行更多的研究,以改善健康结局。

关键词:慢性肾脏病;腹膜透析;抑郁;需求;体验

腹膜透析患者抑郁现状及应对方式的研究进展

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目的 随着腹膜透析患者生存率的提高,腹膜透析人群逐年增加。腹膜透析具有技术更简单、成本低、饮食限制少、保存残余肾脏功能更好及生活质量更高等潜在优势。但因其病程较长、病情较复杂,持续的疾病治疗严重影响了患者的工作和生活,同时还带来了沉重的经济负担,生理应激与心理应激的共同乃至协同作用导致患者长期处于负性情绪的困扰。越来越多的腹膜透析患者存在抑郁的负性情绪,影响患者心身健康及预后。因此,本文旨在对腹膜透析患者抑郁现状、发病机制、及应对方式等进行综述。

方法 通过国内外文献综述目前腹膜透析患者抑郁状,分析可能的发病机制,对腹膜透析患者对抑郁心理的应对方式进行综述。

结果 腹膜透析患者普遍存在不同程度的抑郁,且易被忽视,有必要进一步关注腹膜透析患者的心理及社会支持需求,关注心身健康。大多数患者不能有效识别抑郁情绪,对抑郁情绪采取消极的应对方式。针对腹膜透析患者进行抑郁筛查的频次、方法、流程等,国内还缺乏共识。未来可针对透析人群抑郁管理的短期和长期益处进行大规模研究。目前,临床上常见的应用于腹膜透析患者的抑郁管理模式包括家属参与式管理模式、同伴支持模式和延续护

理模式等。

结论 国内在腹膜透析患者抑郁现状及应对方式方面仍不容乐观,大多数腹膜透析患者的心理问题被忽视,容易引起一系列的心身健康问题。常见抑郁风险筛查、评估工具包括9条目患者健康问卷(PHQ-9)、贝克抑郁量表(BDI-II)、Zung抑郁自评量表(SDS)等。临床医护人员仍应根据量表特定的使用目的和人群谨慎选择合适量表。抑郁的伴发不仅降低了腹膜透析患者的生活质量,增加了患者的住院率和死亡率,而且患者的社交质量和社会功能均会受到影响。腹膜透析中心的医护人员应对腹膜透析患者采取抑郁的早期筛查、预防及干预,以减轻躯体和精神症状,降低抑郁发病率和抑郁程度,减轻患者疾病负担和死亡率,应结合腹膜透析患者居家治疗需求探索合适的抑郁管理模式并全面落实,充分发挥包括腹膜透析专职医生、护士在内的团队力量,进行有针对性的抑郁风险评估,有效维护患者的心身健康。

关键词:腹膜透析,抑郁,负性情绪,风险评估,管理模式,慢性肾脏病

性别是识别抑郁症亚型的关键:基于图卷积网络的静息态功能磁共振研究

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目的 利用图卷积网络(GCN)模型探究不同性别抑郁症(MDD)患者的脑网络特征,并明确性别特定的影像学指标,为实现MDD的精准诊治提供依据。

方法 基于Rest-meta-MDD项目大样本多中心静息态功能磁共振数据,使用GCN模型分别对男性和女性样本进行独立训练,获得不同性别高鉴别脑区的拓扑特征及其与临床症状的相关性,并进一步比较男性和女性高鉴别脑区的差异。

结果 与支持向量机相比,GCN模型的分类准确率提高了5%以上。其中,男性组的MDD识别准确率为77.91%(敏感度88.80%,特异度72.62%),平均AUC值为78.35%,其高鉴别脑区主要分布在带状盖网络和额顶网络,且右侧前额叶、右侧顶叶

和左侧下顶叶的节点度与汉密尔顿焦虑量表得分呈显著正相关。女性组的准确率为 79.71% (敏感度 80.25%, 特异度 79.53%), 平均 AUC 值为 79.52%, 其高鉴别脑区主要分布在默认模式网络, 且右侧枕叶的节点介数与汉密尔顿抑郁量表得分呈显著负相关。

结论 基于 GCN 的 MDD 分类模型效能优良, 男性与女性 MDD 患者脑网络特征存在显著差异, 且差异脑网络特征分别与焦虑、抑郁症状相关。因此, 性别是识别 MDD 亚型的重要因素, 也是开展 MDD 深入研究的基础。

关键词: 抑郁症; 静息态功能磁共振; 图卷积网络; 性别; 亚型

Neural Correlates of Social Appraisal Dysfunction in Major Depressive Disorder: An ERP Study

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Objective Researchers have found that some individuals with major depressive disorder (MDD) actively choose to expose themselves to negative stimuli and maintain their emotional state by voluntary exposure to negative stimuli. This study aimed to explore the neuroelectrophysiological mechanisms of emotional processing bias in patients with depression and thus to understand their functional properties of social appraisal

Methods Thirty-four patients with MDD and 34 healthy controls (HCs) were selected. The behavioral and event-related potentials (ERP) data of the social-emotional preference task (SePT) were recorded and analyzed

Results The MDD group showed longer reaction times (RTs) to both negative and positive stimuli compared to the HCs group, preferring negative stimuli. ERP data indicated that the MDD group exhibited higher P200 amplitudes for negative and neutral stimuli compared to the HCs group. Additionally, they showed higher LPP amplitudes for negative and positive stimuli,

with longer LPP latencies for negative stimuli. Multiple linear stepwise regression analysis within the MDD group revealed positive correlations between LPP amplitudes and RTs to negative and positive stimuli. Conversely, P200 amplitudes were negatively correlated with RTs to negative stimuli but positively correlated with Hamilton Depression Rating Scale (HDRS-17) scores. Moreover, HDRS-17 scores positively correlated with the self-reported preference for negative stimuli but negatively correlated with the self-reported preference for positive stimuli

Conclusion Patients with MDD tend to choose negative information that is consistent with negative self-schema. The brain devotes more cognitive resources and longer RTs to process negative stimuli, starting from the early stages (P200) and extending into the later stages (LPP), there is a tendency for processing fixation. RTs of patients with MDD to negative and positive stimuli can predict the amplitudes of LPP. Additionally, their preference for negative stimuli and avoidance of positive stimuli can predict depressive symptom severity

关键词: major depressive disorder, event-related potentials, social cognition, social appraisal

血清雌二醇、白细胞介素-6、肿瘤坏死因子- α 水平与产后抑郁症的关系研究

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目的 观察产后抑郁症 (PPD) 产妇的血清雌二醇 (E2)、白细胞介素-6 (IL-6) 及肿瘤坏死因子- α (TNF- α) 水平变化情况, 分析上述指标与 PPD 的关系。

方法 选取 2018 年 3 月至 2023 年 3 月盐城市第四人民医院和盐城市第一人民医院收治的 160 例产妇为研究对象进行回顾性分析。于产妇分娩后 7 d 采用爱丁堡产后抑郁量表 (EPDS) 评分、产后抑郁筛查量表 (PDSS) 评分及抑郁自评量表 (SDS) 评分进行 PPD 筛查, 以 EPDS \geq 13 分、PDSS \geq 76 分、SDS \geq 53 分为 PPD, 纳入抑郁组 (80 例), 其余纳入

正常组(80例)。比较两组产妇产后7d的E2、IL-6及TNF- α 水平,并分析其与PPD的相关性。

结果 分娩后7d,抑郁组产妇E2水平低于正常组,IL-6、TNF- α 水平高于正常组($P<0.05$)。Pearson相关性分析显示,E2水平与产妇EPDS、PDSS、SDS评分呈负相关,IL-6、TNF- α 水平与产妇EPDS、PDSS、SDS评分呈正相关($P<0.05$)。

结论 E2、IL-6及TNF- α 与PPD的发生存在密切联系,临床需重点关注上述指标变化情况并据此展开干预与治疗。

产后抑郁症(postpartum depression, PPD)为分娩后产妇发病率较高的一种精神紊乱性疾病,其致病因素较多且复杂,与遗传、内分泌等存在密切联系。PPD的临床表现以产后持续情绪低落为主,并可导致睡眠障碍等症状发生[1]。PPD易于产后2周发生,产后4~6周为症状明显的阶段。PPD不仅会危害产妇的身心健康,还会影响母婴的互动,不利于婴幼儿的正常心理发展[2]。现阶段,PPD的发病机制尚未完全明确,相关研究显示,该病的发生与产妇产后的激素变化存在密切联系,其中雌二醇(E2)是产妇重要的雌激素,对机体的中枢神经系统产生重大影响,可参与到产妇情绪反应、认知及行为等功能的调节中[3]。另有研究表明,外周血白细胞介素-6(IL-6)、肿瘤坏死因子- α (TNF- α)水平的升高与PPD发生存在密切联系[4]。基于此,本研究观察PPD产妇E2、IL-6及TNF- α 水平的变化,并分析上述指标与PPD的关系。

关键词: 雌二醇;白细胞介素-6;肿瘤坏死因子- α ;产后抑郁症;相关性

托鲁地文拉法辛与文拉法辛治疗围绝经妇女抑郁的对照研究

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目的 对比托鲁地文拉法辛和文拉法辛对围绝经期女性抑郁症患者的临床疗效及安全性。

方法 依据用药方法将门诊就医的68例围绝经期抑郁症妇女随机进入治疗I组($n=33$)和对照II组($n=35$)。I组给予盐酸托鲁地文拉法辛缓释片治疗为实验组;II组给予文拉法辛缓释胶囊进行治疗为对

照组,两组均以持续治疗8周,初始剂量不同,但2周内都加至维持剂量后不变。比较两组疗效,通过用汉密尔顿17项抑郁量表(HAMD-17)于治疗前及治疗第1、2、4、6、8周末各评定1次临床疗效;同时用副反应量表(TESS)、实验室检查、生命体征等观察药物安全性。

结果 在治疗8周后,托鲁地文拉法辛组的HAMD总分减分值为(18.48 \pm 6.38),文拉法辛组为(11.60 \pm 4.46),两组差异有显著性($p<0.001$)。两组总有效率差异有统计学意义(82.8% vs 56.7%, $p<0.05$)。不良反应中文拉法辛组恶心反应明显高于托鲁地文拉法辛组($P<0.05$),其余不良反应(如口干、头晕、头痛、便秘、食欲减退、呕吐及血压升高等)两组间差异无统计学意义($P>0.05$)。

结论 托鲁地文拉法辛治疗围绝经期抑郁症(PMD)的效果比文拉法辛更好,表现在该药起效较快,能够明显改善抑郁症患者的兴趣减退、心境低落、快感缺失等核心症状,相对于SSRIs等一线抗抑郁药物更加不易导致性功能障碍等不良反应,用药安全性更高。

关键词: 托鲁地文拉法辛;文拉法辛;围绝经期抑郁症;临床疗效;不良反应

对比探究阿戈美拉汀与文拉法辛在抑郁症患者治疗中的临床差异

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目的 抑郁症是临床精神科常见疾病,有着较高发病率及复发率。当前,临床多采用药物治疗,主要的抗抑郁药物为选择性5-羟色胺再摄取抑制剂,阿戈美拉汀作为一种新型的5-羟色胺再摄取抑制剂,对该系统有拮抗及激动作用,在治疗抑郁症患者方面有显著疗效探讨阿戈美拉汀与文拉法辛在抑郁症患者治疗中的临床差异。

方法 采用回顾性方法分析,选取本院自2017年7月-2019年7月就诊的42例抑郁症患者的临床资料,比较阿戈美拉汀与文拉法辛治疗抑郁症患者对HAMA、HAMD及不良反应的差异。

结果 两组患者治疗前后的HAMA、HAMD比较:治疗前,对照组与研究组患者的HAMA、HAMD,

经统计学分析,无统计学意义($P>0.05$)。治疗后,两组患者的 HAMA、HAMD 与治疗前相比,均有所改善($P<0.05$),且研究组患者的 HAMA、HAMD 均低于对照组,有统计学意义($P<0.05$)。两组患者不良反应比较:研究组患者的不良反应率为 9.09%,对照组为 45.00%,两组经统计学分析,有统计学意义($P<0.05$)。

结论 文拉法辛是一种再摄取抑制剂,可抑制神经元突触前膜 5-羟色胺、去甲肾上腺素的再摄取等,同时也可增强中枢突触间隙的 5-羟色胺、去甲肾上腺素,从而发挥抗抑郁作用。但该药物对去甲肾上腺素、胆碱能及组胺能的作用较低,当患者兴奋后,容易引起交感神经亢进,加重患者抑郁、焦虑症状。而阿戈美拉汀属于新型的抗抑郁药物,以褪黑色 M1、M2 为靶点,联合下丘脑 M1、M2 等受体,从而阻断 5-HT₂ 受体,充分发挥褪黑素的作用,有效减轻患者嗜睡、犯困等症状,保证充足睡眠[3]。此次数据调查显示:研究组患者的 HAMA、HAMD 评分、不良反应率明显低于对照组,表明:阿戈美拉汀治疗抑郁症的临床效果高于文拉法辛效果,可有效缓解抑郁症状,具有临床推广应用的价值。

关键词:抑郁症;阿戈美拉汀;文拉法辛;临床效果

线粒体自噬在抑郁症发病机制中的研究进展

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目的 目前,越来越多的研究显示能量代谢在抑郁症中的发生、发展及转归中起到了重要作用。线粒体功能障碍以及受损线粒体的积累已被证明在抑郁症中起重要作用,而线粒体自噬功能障碍引起的脑能量损伤也被认为参与了抑郁症的发作。本文对线粒体自噬参与抑郁症的研究现状进行综述,从而为更好的探讨抑郁症的发病机制提供参考依据,旨在为抑郁症的诊疗提供新的思路和科学依据。

方法 我们采用关键词检索的方式,以“线粒体自噬(Mitophagy)、抑郁症(Depressive disorder)、线粒体损伤(Mitochondrial damage)、能量代谢(Energy metabolism)”等作为关键词组合检索在 2014 年 1 月至 2024 年 1 月发表在中国知网、万方数据知识

服务平台、维普数据库、中国生物医学文献数据库、PubMed、Web of Science、Cochrane 数据库等数据库中的中英文文献。

结果 研究发现,线粒体自噬与抑郁症的发病机制密切相关,线粒体自噬参与受损线粒体的清除、维持线粒体稳态、能量生产过程以及神经活性所必需。其中线粒体自噬障碍对受损线粒体的清除过程受损主要参与了抑郁症的发病,线粒体自噬障碍影响了体内 ATP 的产生从而损伤了神经可塑性以及神经细胞分化和生长的调控从而参与了抑郁症的发生和发展。线粒体自噬还可以通过调控小胶质细胞介导的炎症来调节抑郁症状,通过神经免疫炎症参与抑郁症的进程。

结论 抑郁症因其发病率高、病残率高、危害性大已经成为全球最关注的精神疾病。目前抑郁症的治疗手段存在一定的局限性,探索抑郁症的发病机制有利于找寻新的治疗方式。线粒体自噬参与了抑郁症的发病机制,利用相关机制有利于新型抗抑郁药物的研发,为治疗提供新的策略。

关键词:线粒体自噬,抑郁症,线粒体损伤,能量代谢

Exploring Adverse Events of Vilazodone: Evidence From The FAERS Database

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Objective This study aims to conduct an exhaustive evaluation of Vilazodone's safety in clinical application and to unearth the potential adverse event (AE) risks associated with its utilization

Methods This research employed data spanning from the first quarter of 2011 to the third quarter of 2023 from the FAERS database. Various signal detection methodologies, including the ROR, PRR, BCPNN, and EBGM, were utilized to ascertain the correlation between Vilazodone and specific AEs

Results The study compiled a total of 17,439,268 reports of drug AEs, out of which 5,375 were related to Vilazodone. Through signal mining, 125 Preferred Terms (PTs) encompassing 27 System Organ

Classes (SOCs) were identified. The findings indicated a higher prevalence among females and patients within the 45 to 65 age bracket. The principal categories of AEs included Psychiatric disorders, Nervous system disorders, and Gastrointestinal disorders, with prevalent incidents of Diarrhoea, Nausea, and Insomnia. Moreover, the study identified robust signals of novel potential AEs, notably in areas such as sleep disturbances (Sleep paralysis, Hypnagogic hallucination, Rapid eye movements sleep abnormal, Sleep terror, Terminal insomnia, Tachyphrenia), sexual dysfunctions (Female orgasmic disorder, Orgasm abnormal, Disturbance in sexual arousal, Spontaneous penile erection, Anorgasmia, Sexual dysfunction, Ejaculation delayed), and other symptoms and injuries (Electric shock sensation, Violence-related symptom, Gun shot wound)

Conclusion Although Vilazodone presents a positive prospect in the management of MDD, the discovery of AEs linked to its use, particularly the newly identified potential risks such as sleep and sexual dysfunctions, necessitates heightened vigilance among clinicians

关键词: Vilazodone; Major Depressive Disorder; Adverse Events; Safety Profile; Signal Mining

Influence of Smoking on The Efficacy of Antidepressant: A Two-Sample Mendelian Randomization Analysis

Haohao Zhu*

Wuxi Mental Health Center

Objective This study uses the Two-Sample Mendelian Randomization (TSMR) method to explore the causal relationships between Smoking Initiation (SMKI), Never Smoking (NSMK), Past Tobacco Smoking (PTSMK), and the efficacy of Antidepressants (ATD)

Methods Single Nucleotide Polymorphisms (SNPs) with genome-wide significance ($P < 5E-08$) related to SMKI, NSMK, and PTSMK were selected from the Genome-Wide Association Study (GWAS) database

as Instrumental Variables (IVs). The main method, Inverse Variance Weighted (IVW), was utilized to investigate the causal relationship. The Odds Ratio (OR) and 95% Confidence Interval (95% CI) evaluated the causal relationships among SMKI, NSMK, PTSMK, and ATD

Results The results demonstrated a positive causal relationship between SMKI and ATD use, where SMKI leads to an increase in ATD use [IVW (MRE): OR: 1.222, 95% CI: 1.075 to 1.389; $P = 0.002$]. Conversely, NSMK and PTSMK showed a negative causal relationship with ATD use, meaning that NSMK and PTSMK lead to a reduction in ATD use [IVW (MRE): OR: 0.451, 95% CI: 0.313 to 0.650; $P = 1.96E-05$], [IVW (MRE): OR: 0.808, 95% CI: 0.697 to 0.935; $P = 0.004$]. Additionally, sensitivity analysis showed that the results of this study were robust and reliable

Conclusion Using the TSMR method and from a genetic perspective, this study found that SMKI leads to an increase in ATD use, while NSMK and PTSMK reduce ATD use. In clinical practice, the possible impact of smoking on ATD medication should be considered, and it is recommended to avoid smoking during ATD treatment

关键词: Smoking Initiation; Never Smoking; Past Tobacco Smoking; Antidepressants; Two-Sample Mendelian Randomization

Causal Relationship Between Diabetes and Depression: A Bidirectional Mendelian Randomization Study

Ying Jiang* Yuan Shen

Wuxi Mental Health Center

Objective This study explores the causal relationship between diabetes and depression using a two-sample Mendelian Randomization (TSMR) method

Methods The study selected single nucleotide polymorphisms (SNPs) closely associated with diabetes and depression in European populations from the Genome-Wide Association Study (GWAS) database, to

serve as instrumental variables (IVs). The main evaluation method was inverse variance weighted analysis (IVW), supplemented by verification using Weighted median, Weighted mode, and MR Egger methods. The Odds Ratio (OR) and 95% Confidence Interval (CI) were used as the main evaluation indicators, along with sensitivity analysis

Results This study found a negative correlation between diabetes and depression, suggesting that diabetes may reduce the risk of depression [IVW(FE): OR: 0.901, 95% CI: 0.823 to 0.987; $P = 0.025 < 0.05$]. This finding was further confirmed by the Weighted median [OR: 0.844, 95% CI: 0.730 to 0.974; $P = 0.021 < 0.05$] and Weighted mode method [OR: 0.766, 95% CI: 0.637 to 0.921; $P = 0.006 < 0.05$]. However, the reverse showed no causal relationship between depression and diabetes ($P > 0.05$). Sensitivity analysis found no pleiotropy, and there were no large influences from individual SNPs on the result's robustness; the results are stable and reliable

Conclusion For the first time, this study using TSMR analysis found a negative correlation between diabetes and the risk of depression onset in European populations, suggesting that diabetes might reduce the risk of depression. But as the mechanisms are still unclear, these findings warrant further study

关键词: Diabetes; Depression; Two-Sample Mendelian Randomization; Genome-Wide Association Study; Relationship

Investigating The Mechanism of Chufan Yishen Formula in Treating Depression Through Network Pharmacology and Experimental Verification

Haohao Zhu*

Wuxi Mental Health Center

Objective To investigate the antidepressant effect and potential mechanism of the Chufan Yishen Formula (CFYS) through network pharmacology, molecular docking, and experimental verification

Methods The active ingredients and their target genes of CFYS were identified through Traditional Chinese Medicine Systems Pharmacology (TCMSP) and TCM-ID. We obtained the differentially expressed genes in patients with depression from the GEO database and screened out the genes intersecting with the target genes of CFYS to construct the PPI network. The key pathways were selected through STRING and KEGG. Then, molecular docking and experimental verification were performed

Results A total of 113 effective components and 195 target genes were obtained. After intersecting the target genes with the differentially expressed genes in patients with depression, we obtained 37 differential target genes, among which HMOX1, VEGFA, etc., were the key genes. After enriching the differential target genes by KEGG, we found that the “chemical carcinogenesis-reactive oxygen species” pathway was the key pathway for the CFYS antidepressant effect. Besides, VEGFA might be a key marker for depression. Experimental verification found that CFYS could significantly improve the behavioral indicators of rats with depression models, including improving the antioxidant enzyme activity and increasing VEGFA levels. The results are consistent with the network pharmacology analysis

Conclusion CFYS treatment for depression is a multicomponent, multitarget, and multipathway complex process, which may mainly exert an antidepressant effect by improving the neuron antioxidant stress response and regulating VEGFA levels.

关键词: Chufan Yishen Formula; Depression; Network Pharmacology; Experimental Verification

伴非自杀性自我伤害的抑郁症患者的情绪失调与童年创伤的关系：一项静息态功能磁共振研究

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目的 伴非自杀性自我伤害的抑郁症患者存在情绪失调,但机制不明。童年创伤与NSSI有关,而

既往研究提示童年创伤可能是影响情绪调节能力的潜在因素。前额叶皮层是情绪调节的关键脑区,可能受到童年创伤的影响。因此,本研究旨在利用静息态功能磁共振,聚焦前额叶皮层,探索伴 NSSI 的抑郁症患者的情绪失调是否与童年创伤有关。

方法 本研究共纳入 61 名抑郁症患者,根据精神障碍诊断与统计手册第 5 版 NSSI 诊断标准分为伴 NSSI 行为(29 名)和不伴 NSSI 行为(32 名)两组,并纳入 32 名性别、年龄与患者组匹配的健康对照。采用渥太华自我伤害调查表和儿童期创伤问卷分别评估 NSSI 行为及童年创伤。所有被试均接受了 3.0T 静息态功能磁共振扫描,计算前额叶皮层的低频振荡振幅进行单因素方差分析,获得差异脑区。在伴 NSSI 的抑郁症患者组中分析渥太华自我伤害调查表情绪调节相关的自伤动机条目评分(内部情绪调节、外部情绪调节)及前额叶皮层差异脑区的 ALFF 与童年创伤的相关性。

结果 与不伴 NSSI 的抑郁症患者相比,伴 NSSI 的抑郁症患者躯体忽视($P=0.046$)更严重;与健康对照相比,伴 NSSI 的抑郁症患者情感虐待($P<0.001$)、性虐待($P<0.001$)、情感忽视($P<0.001$)、躯体忽视($P<0.001$)更严重,且童年创伤总分($P<0.001$)更高。与不伴 NSSI 的抑郁症患者相比,伴 NSSI 的抑郁症患者左侧背侧前扣带皮层 ALFF($P<0.05$, GRF 校正)较高;与健康对照相比,伴 NSSI 的抑郁症患者双侧眶额区 ALFF($P<0.05$, GRF 校正)较高。在伴 NSSI 的抑郁症患者组中,内部情绪调节动机与童年创伤总分($P=0.005$)、性虐待($P=0.011$)、躯体忽视($P=0.021$)相关,外部情绪调节动机与性虐待($P=0.021$)相关;右侧眶额区 ALFF 与内部情绪调节动机($P=0.002$)、外部情绪调节动机($P=0.002$)相关,且与童年创伤总分($P=0.025$)、性虐待($P<0.001$)、躯体忽视($P=0.042$)相关;左侧眶额区 ALFF 与性虐待($P=0.026$)相关;左侧背侧前扣带皮层 ALFF 与性虐待($P=0.025$)相关。在健康对照和不伴 NSSI 的抑郁症患者组中,前额叶皮层差异脑区的 ALFF 与童年创伤均不存在相关性。

结论 伴 NSSI 的抑郁症患者的情绪失调可能与其童年创伤有关,表现为前额叶皮层功能异常,因此在临床干预中需要特别关注伴 NSSI 的抑郁症患者的童年创伤经历及其对情绪调节的影响。

关键词: 抑郁症;非自杀性自我伤害;童年创伤;情绪

家庭社会经济地位与男男性行为大学生抑郁的关系:健康素养和社会支持的链式中介作用

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目的 探讨家庭社会经济地位与男男性行为大学生抑郁的关系及健康素养和领悟社会支持在其中的中介作用。

方法 2021 年 3 月-2022 年 6 月,采用滚雪球和同伴推动抽样结合的方法,招募陕西省内近 6 个月有肛交行为的在读男男性行为大学生填写自编问卷,使用家庭社会经济地位问卷、健康素养量表、领悟社会支持量表和 9 项患者健康问卷(PHQ-9)对陕西省 515 名男男性行为本专科、硕博士在读学生进行调查,最终获得 509 份有效数据,通过 SPSS PROCESS 插件和 bootstrap 方法实现中介效应的验证和检验。

结果 ①以 PHQ-9 得分 ≥ 10 作为存在抑郁情绪的界值,男男性行为大学生抑郁情绪发生率为 25.14%;②家庭社会经济地位与健康素养($r=0.236$, $P<0.01$)、领悟社会支持($r=0.187$, $P<0.01$)呈正相关,与抑郁情绪呈负相关($r=-0.121$, $P<0.01$);健康素养与领悟社会支持($r=0.403$, $P<0.01$)呈正相关,与抑郁情绪($r=-0.200$, $P<0.01$)呈负相关;领悟社会支持与抑郁情绪($r=-0.366$, $P<0.01$)呈负相关;③健康素养、领悟社会支持在家庭社会经济地位与男男性行为大学生抑郁情绪间起链式中介作用,总中介效应比例为 28.57%。

结论 家庭社会经济地位可以直接预测男男性行为大学生抑郁情绪,也可以通过健康素养和领悟社会支持的链式中介预测男男性行为大学生抑郁情绪,提示健康教育工作者应关注弱势家庭背景的青少年,重视健康素养在男男性行为大学生艾滋病预防工作中的作用。

关键词: 家庭社会经济地位;健康素养;社会支持;抑郁;男男性行为者;大学生

首发未治疗的青少年抑郁症患者口腔微生物特征：一项病例对照研究

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目的 青春期是身体、认知和情感发展的关键时期,在这个时期,青少年常常需要应对来自生理、心理及社会的多重压力。在现代社会的诸多挑战和压力下,患有抑郁症的青少年的比例正在逐渐上升。研究表明,抑郁症可能会影响肠道微生物群的组成,但关于口腔微生物群与抑郁症之间关系的研究甚少。本研究将探究首发未治疗的青少年抑郁症患者的口腔微生物群组成以及其与认知功能的关联。

方法 在这项病例对照研究中,抑郁组(Depression Group, DP组)基于《精神障碍诊断与统计手册》第四册诊断为抑郁症的12-17岁未经治疗的青少年,而健康组(Healthy Control Group, HC组)为12-17岁排除抑郁症及其他精神障碍的青少年。采集所有受试者早晨空腹唾液样本并进行16S rRNA高通量测序评估口腔微生物组成,同时完成相关的量表评估。本研究采用多变量统计来评估抑郁症与口腔微生物群及口腔微生物群与认知功能之间的相关性。

结果 DP组和HC组口腔微生物组的 α 和 β 多样性存在显著差异。特定的细菌分类群,包括Streptococcus属、Abitrophia属、Neisseria属、Haemophilus属、Fusobacterium属、Oribacterium属、g_norank_f_Lachnospiraceae属、g_norank_f_norank_o_Absconditabacteriales_SR1属、g_Eubacterium_nodatum_group属均与抑郁症评估量表相关。口腔细菌与认知功能之间存在相关性,包括即时和延迟记忆、视觉广度和言语能力($p < 0.05$)。通过随机森林分析确定了重要性排序前10的关键口腔微生物,并进行了受试者工作特征曲线(Receiver Operating Characteristic Curve, ROC)分析,找到可能预测青少年抑郁症的生物标记物。通过ROC分析得出的曲线下面积(Area Under the Curve, AUC)值为0.78。

结论 本研究结果揭示了首发未治疗的青少年抑郁症患者与健康对照组在口腔微生物组成上存在显著差异,突出了特定细菌分类群的丰度与健康组相比存在显著生态失调。研究还发现特定的口腔微

生物群与抑郁及认知功能相关,根据随机森林分析及ROC曲线确定了可能成为预测青少年抑郁症的关键口腔微生物。这些发现为深入探究首发未治疗的青少年抑郁症的发病机制提供了重要的生物学证据,将有望揭示出抑郁症新的诊断标志物或治疗靶点。

关键词: 青少年抑郁症;口腔菌群;16S测序;认知功能

经颅磁电抑郁症治疗仪治疗抑郁症的临床研究

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目的 评价经颅磁电抑郁症(失眠)治疗仪治疗抑郁症的有效性及安全性。

方法 对80例轻、中度抑郁症患者进行了双中心、随机、双盲、安慰剂对照4周临床试验,其中治疗组和对照组各40例。治疗组使用经颅磁电抑郁症(失眠)治疗仪进行治疗,对照组使用经颅磁电抑郁症(失眠)治疗仪模拟治疗(音频安慰),疗程4周。采用汉密尔顿抑郁量表(HAMD24项版)评价其疗效,并进行安全性评价。

结果 治疗4周后对照组的总显效率和总有效率分别为5.00%(2/40)和35.00%(14/40),治疗组的总显效率和总有效率分别为65.00%(26/40)和80.00%(32/40);两组总有效率和总显效率的优效性检验 $P < 0.0001$,且治疗组高于对照组,说明治疗组优于对照组。两组均无不良反应。

结论 抑郁症,属于情感障碍,情感障碍具有双向性,双相情感障碍与精神分裂症的发病机制相近,后者具有更明显的脑结构和神经生理学异常。抑郁症的发生则与神经递质、离子通道等相关。经颅磁电抑郁症(失眠)治疗仪作用于患者头部,患者在闭目时有闪光感,符合德国生理学家Muller所提出的“特异神经能量定律”。经颅磁电抑郁症治疗仪配置的恒定磁疗体,对运动的带电物质有洛仑兹力的作用,影响细胞膜的离子通透性和膜两侧的电位,从而导致细胞膜离子通道构型发生改变,干扰和抑制异常脑电、脑磁的发生和传播,进而达到镇静、安神、抗抑郁、抗焦虑的作用。有研究证实中等强度恒

定磁场对离子通道的影响可能与细胞膜上离子通道的相关电荷运动有关。研究结论为：经颅磁电抑郁症（失眠）治疗仪治疗抑郁症使用安全，疗效确切，尤其在“抑郁、有罪感、睡眠障碍、工作和兴趣、迟缓、激惹、焦虑”等主要症状方面得到明显改善。

关键词：经颅磁电；抑郁症治疗仪；抑郁；焦虑；双相障碍

Dietary Fiber Intake and Depression in Heart Failure Patients: A Cross-sectional Study From NHANES Database

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Objective Psychiatric disorders are prevalent among heart failure (HF) patients and depression is a common psychiatric disorders. The benefit effect of dietary fiber on depression has been reported. This study aimed to assess the association between total dietary fiber intake and its different sources and depression in HF patients

Methods This study included patients aged ≥ 18 years and diagnosed as HF from the National Health and Nutrition Examination Survey (NHANES) 2005-2018. Dietary fiber intake information was obtained from 24-h dietary recall interview. Covariates included demographic information and history of diseases of participants were extracted from the database. The weighted univariable and multivariable logistic regression models were utilized to explore the association between total dietary fiber intake and its different sources and depression among HF patients, with odds ratio (ORs) and 95% confidence interval (CIs). Subgroup analyses based on body mass index (BMI) and duration of HF were further assessed the association

Results A total of 1,041 participants were included, of which 188 (18.06%) with depression. High total dietary fiber intake (OR=0.50, 95%CI: 0.29-0.86) and vegetable fiber intake (OR=0.49, 95%CI: 0.25-0.97) were associated with the lower odds of depression in HF

patients. No relationships were found between cereal intake and fruit intake and depression in HF patients. Subgroup analyses shown that total fiber intake were associated with the lower odds of depression in patients with BMI < 30 kg/m² (OR=0.37, 95%CI: 0.18-0.76), and total dietary fiber intake (OR=0.16, 95%CI: 0.06-0.41) vegetable fiber intake (OR=0.11, 95%CI: 0.02-0.63) and cereal fiber intake (OR=0.22, 95%CI: 0.05-0.85) were associated with the lower odds of depression in patients with less than 5 years of HF

[Conclusion

High total dietary fiber intake and vegetable fiber intake were associated the low odds of depression among HF patients and are promising intervention to be further explored in patients with HF.

关键词：Dietary fiber intake; depression; heart failure; NHANES database.

护士安宁疗护能力影响因素研究进展

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目的 护士影响安宁疗护护理态度的影响因素进行范围综述，为今后安宁疗护的改进和发展研究提供参考信息

方法 按照范围综述方法确立研究问题，对知网、万方等个数据库至2024年4月的中英文文献进行检索并筛选，之后对纳入的文献进行数据选择，最终收集，汇总并总结研究结果。结果 本研究共纳入篇23文献，包括护士安宁疗护能力受性别、接受临终关怀教育情况、对临终关怀态度、工作经验、学历、职称、年龄、知识、培训等因素影响

结果 总结影响护士安宁疗护知识、技能和自我水平等多方面因素及促进护士使用安宁疗护知识转变为行动的内外条件，找到完善护士安宁疗护实践能力的关键因素，探讨安宁疗护照护模式创新、安宁疗护人文关怀、心理照护、精神护理等方面的新思路、新方法。探讨我国安宁疗护现状不足之处及未来发展所要求。为我国卫生事业建立护士安宁疗护人才培养方案和提高安宁疗护服务质量找到有效应对措施，实现《“健康中国2030”规划纲要》中

安宁疗护目标。

结论 护士安宁疗护能力影响因素众多, 大多数文献围绕个人因素与环境因素两部分本研究通过范围综述的方法对影响护士安宁疗护能力因素进行总结, 从而能够为护士安宁疗护能力干预研究的构建提供依据。为未来干预措施的制定提供理论框架, 从而促进护士安宁疗护能力的提升及临床安宁疗护质量的改进。

关键词: 护士; 安宁疗护; 影响因素

The Association of Clinical Correlates, Metabolic Parameters, and Thyroid Hormones with Overweight in First-episode and Drug-naïve Patients with Major Depressive Disorder Comorbid with Glucose Disturbances: A Large-scale Cross-sectional Study

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Objective The associated factors of overweight in patients with major depressive disorder (MDD) comorbid with glucose disturbances remains unclear. To the best of our knowledge, this is the first study with a large sample size that examines the risk factors of overweight in first-episode drug-naïve (FEDN) MDD patients comorbid with glucose disturbances and includes clinical correlates, metabolic parameters, and thyroid hormone levels

Methods A total of 1654 FEDN MDD patients were enrolled. The Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), and Positive and Negative Syndrome Scale (PANSS) were used to assess the symptoms of patients. Metabolic parameters and thyroid hormone levels were measured

Results The prevalence of overweight in MDD patients comorbid glucose disturbances was 64.44%, which was 1.022 times higher than that in MDD patients without glucose disturbances (57.17%). Compared to non-overweight, overweight among the MDD patients

with glucose disturbances had higher scores on HAMD and HAMA, PANSS positive symptoms, as well as higher levels of systolic and diastolic blood pressure, TC, LDL-C, thyroid stimulating hormone (TSH), TgAb, and thyroid peroxidases antibody (TPOAb). The combination of positive symptom score, HDL-C, systolic blood pressure, and marital status distinguished overweight from non-overweight. In addition, HAMA score, HAMD score, and TPOAb were associated with the BMI levels in MDD patients with comorbid glucose disturbances

Conclusion Our results suggest a high incidence of overweight in MDD patients with comorbid glucose disturbances. Several clinically relevant factors, metabolic parameters, and thyroid hormone function have an impact on overweight in MDD patients with glucose disturbances

关键词: glucose disturbances; metabolic parameters; first-episode drug-naïve major depressive disorder;

Prevalence and Clinical Correlates of Glucose Disturbances in Chinese Patients with First-episode and Drug-naïve Major Depressive Disorder at Different Ages of Onset

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Objective Glucose disturbances are a common comorbidity in patients with major depressive disorder (MDD) and are associated with worsening clinical outcomes. MDD patients at different ages of onset may have different clinical features. The aim of this study was to investigate the prevalence and related factors of glucose disturbance in MDD patients at different ages of onset

Methods A total of 1718 first-episode and drug-naïve (FEDN) MDD patients were enrolled. The Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), and Positive and Negative Syndrome

Scale (PANSS) were used to assess the clinical symptoms of all patients. Fasting blood glucose, metabolic parameters and thyroid hormone levels were measured. The cutoff point for early-adulthood onset (EAO) and mid-adulthood onset (MAO) was the first depressive episode before or after 45 years of age

Results There was no significant difference in the prevalence of glucose disturbances between EAO patients (12.9%) and MAO patients (15.7%). For EAO patients, glucose disturbances were more likely to be associated with TSH levels. For MAO patients, a significant correlation between anxiety and glucose disturbances was observed. Furthermore, suicide attempts, psychotic symptoms, and depression severity were correlated with glucose disturbances in both groups

Conclusion Our findings in this study suggest that the clinical characteristics and factors associated with glucose disturbances in MDD patients vary depending on the age of onset and therefore the age of onset needs to be considered in the treatment of glucose disturbances

关键词: glucose disturbances; age of onset; clinical characteristics; major depressive disorder;

Gender Differences in Clinical Correlates of Glucose Disturbance in Patients with First-episode and Drug-naïve Major Depressive Disorder

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Objective Gender differences in glucose metabolism disorders in patients with major depressive disorder (MDD) have been rarely studied. In this study we investigated gender differences in the prevalence of glucose metabolism disorders and associated factors in first-episode and drug naïve (FEDN) MDD patients in a Chinese Han population

Methods In this cross-sectional study, a total of

1718 FEDN MDD outpatients were recruited, and demographic and clinical data were collected. All subjects were scored using the Hamilton Depression Rating Scale (HAMD), Hamilton Anxiety Rating Scale (HAMA) and the Positive and Negative Syndrome Scale (PANSS) positive subscale to assess clinical symptoms

Results Female MDD patients were older, present with symptoms at an older age, were more likely to be married and had more psychotic symptoms than male MDD patients. There was no significant difference in the prevalence of glucose metabolism disorders between female patients (14.16%) and male patients (12.59%) ($p>0.05$). In both male and female groups, patients with glucose metabolism disorders had higher HAMD score, HAMA score, suicide attempts, and psychotic symptoms than patients without glucose metabolism disorders (all $p<0.05$). However, only in female group, patients with glucose metabolism disorders had more severe anxiety symptoms than patients without glucose metabolism disorders. Furthermore, binary logistic regression analysis showed that psychotic symptoms and suicide attempts were independently associated with glucose metabolism disorders in male MDD patients, while suicide attempts and HAMD score was independently associated with glucose metabolism disorders in female MDD patients

Conclusion Our findings showed no gender differences in the prevalence of glucose metabolism disorders in patients with FEDN MDD. However, there were gender difference in the clinical correlates of glucose metabolism disorders in FEDN MDD patients

关键词: Gender differences; glucose disturbance; first-episode and drug-naïve major depressive disorder

Insomniacs Show Greater Prefrontal Activation During Verbal Fluency Task Compared To Non-insomniacs: A Functional Near-infrared Spectroscopy Investigation of Depression in Patients

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Background Previous studies have shown that insomnia affects human prefrontal function and that there are specific patterns of brain activation to counteract sleep and improve cognition. However, the effects of insomnia on the prefrontal cortex of MDD (major depressive disorder) patients and the patterns of activation to counteract sleep in MDD patients remain unclear. The aim of this study is to examine this using fNIRS (functional near-infrared spectroscopy). Methods Eighty depressed patients and 44 healthy controls were recruited for this study. fNIRS was used to assess changes in the concentration of oxygenated hemoglobin ([oxy-Hb]) in the prefrontal cortex of all participants during the VFT (verbal fluency test) and to record the number of words created to assess cognitive ability. The Pittsburgh Sleep Quality Index was used to assess sleep quality, and the Hamilton Rating Scale for Depression (24-item) and Hamilton Rating Scale for Anxiety (14-item) were used to assess the severity of depression and anxiety. Results When comparing patients, the healthy control group had significantly higher [oxy-Hb] values in the bilateral prefrontal cortex during VFT than the MDD group. In the MDD group, the [oxy-Hb] values in all brain regions except the right DLPFC were significantly higher in the group with insomnia than in the group without insomnia, but their VFT performance was significantly lower than in the group without insomnia and the healthy group. PSQI scores were positively correlated with [oxy-Hb] values in some left-brain regions, whereas HAMD and HAMA scores were not correlated with [oxy-Hb] values. Conclusion The PFC was significantly less active during VFT in those with MDD than in healthy controls. All brain regions, except the right DLPFC, were significantly more active in MDD patients with insomnia than in those without insomnia, suggesting that sleep quality needs to be an important indicator in fNIRS screening. In addition, there was a positive correlation between the severity of insomnia in the left VLPFC and the level of activation, suggesting a role for the left brain region in the neurophysiology of overcoming sleepiness in MDD patients. these findings may provide new ideas for the

treatment of MDD patients in the future

关键词: Major depressive disorder, Insomnia, Prefrontal cortex, Functional, Near-infrared spectroscopy, Verbal fluency task

Association between Chronotype and Anhedonia in Patients with Major Depressive Disorder During The Acute Phase

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Objective To investigate the correlation between chronotype and anhedonia during the acute phase of major depressive disorder

Methods In this eight-week prospective study, 234 Major depressive disorder patients were recruited from the outpatients of Shanghai Mental Health Center from May 1, 2017, to October 30, 2018. Standard treatments were performed with escitalopram or venlafaxine for participants. Depressive symptoms, overt aggression, and anhedonia were assessed using Hamilton Rating Scale for Depression 17-item, Morningness-Eveningness questionnaire, and Snaith-Hamilton Pleasure Scale at baseline, 4th and 8th week

Results 220 participants completed the 8 weeks follow-up interviews and included in final analysis. Among them, there were 29 cases (13.2%) of morning type, 130 cases (59.1%) of inter-mediate type, and 61 cases (27.7%) of evening type. Compared with the evening type, the inter-mediate type had lower scores of HAMD anxiety somatization ($P_{Bonferroni}=0.02$), the morning type ($P_{Bonferroni}=0.005$) and inter-mediate type ($P_{Bonferroni}=0.002$) of HAMD cognitive disturbance was lower. The scores of HAMD retardation were lower in morning type ($P_{Bonferroni}=0.005$) and inter-

mediate type ($P_{Bonferroni} = 0.001$). The scores of HAMD sleep disturbance were lower in inter-mediate type ($P_{Bonferroni} = 0.001$). The scores of SHAPS interest/pastime were lower in inter-mediate type ($P_{Bonferroni} = 0.032$). For anhedonia, female was a protective factor, while numbers of recurrent, melancholic features, current obsession, previous combination drug therapies, depressive symptoms, and aggressive behavior were risk factors ($P < 0.05$). Multivariable GEE analysis indicated that patients with inter-mediate type had more severe in social anhedonia ($OR = 5.71, P = 0.017$) and food/drink ($OR = 3.67, P = 0.009$), while the anhedonia of sensory experience improved better in early morning patients ($OR = 0.17, P = 0.004$), compared with evening type. After 4 weeks of standardized treatment, the social anhedonia of patients with morning type was significantly improved, the food/drink of patients with intermediate type and the evening type were significantly improved, and the interests/pastimes of patients with morning type and the inter-mediate type were significantly improved, and the pleasurable sensory experiences of patients in all three groups showed significant improvement.

Conclusion Different chronotypes had different effects on anhedonia in patients with acute depression. Females protected pleasure in social interaction and sensory experience. However, the number of depressive episodes, previous combination drug therapies, and depressive symptoms was positively associated with anhedonia. The improvement of anhedonia in patients with morning type was more pronounced after standardized treatment, while the improvement of anhedonia in evening type was not satisfactory. Therefore, we argue that future studies are needed to verify whether chronotype has a long-term impact on anhedonia of patients with depression, and examine if interventions targeting chronotypes to prevent persistent anhedonia in the future.

关键词: Chronotype, Anhedonia, MDD

Increased Regional Body Fat Is Associated with Depressive Symptoms: A Cross-sectional Analysis of NHANES Data Obtained During

2011–2018

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Aims The findings from previous epidemiological studies of the association between regional body fat and depressive symptoms have been unclear. We aimed to determine the association between the body fat in different regions and depressive symptoms based on data from the National Health and Nutrition Examination Survey (NHANES).

Methods This study included 3393 participants aged ≥ 20 years from the NHANES performed during 2011–2018. Depressive symptoms were assessed using the Patient Health Questionnaire-9. The fat mass (FM) was measured in different regions using dual-energy X-ray absorptiometry to determine the total FM, trunk FM, arm FM, and leg FM. The FM index (FMI) was obtained by dividing the FM in kilograms by the square of the body height in meters. Weighted data were calculated in accordance with analytical guidelines. Linear logistic regression models were used to quantify the association between regional FMI and depressive symptoms. Univariate and stratified analyses were also performed.

Results The participants in this study comprised 2066 males and 1327 females. There were 404 (11.91%) participants with depressive symptoms, who were aged 40.89 ± 11.74 years and had a body mass index of 30.07 ± 7.82 kg/m². A significant association was found between total FMI and depressive symptoms. In the fully adjusted multivariate regression model, a higher total FMI (odds ratio = 2.18, 95% confidence interval [CI] = 1.08–4.39) was related to a higher risk of depressive symptoms, while increased total FMI ($\beta = 1.55, 95\% CI = 0.65–2.44, p = 0.001$), trunk FMI ($\beta = 0.57, 95\% CI = 0.04–1.10, p = 0.036$), and arm FMI ($\beta = 0.96, 95\% CI = 0.33–1.59, p = 0.004$) were significantly associated with PHQ-9 (Patient Health Questionnaire-9) scores, whereas the leg FMI was not ($p = 0.102$). The weighted association between total FMI and depressive symptoms did not differ significantly between most of the subpopulations (all p values for interaction > 0.05). The

risk of having depression was higher in individuals who were non-Hispanic Whites, smokers, drinkers, obese, and had diabetes and thyroid problems ($p < 0.05$).

Conclusion These findings suggest that the population with a higher regional FMI is more likely to have depressive symptoms, especially in those who also have an increased total FMI. The association is more pronounced in individuals who are smokers, drinkers, obese, and have diabetes and thyroid problems.

关键词: adults, cross-sectional study, depressive symptoms, fat mass, NHANES

简易应对方式问卷在藏羌地区消防员群体中的信效度检验及修订

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目的 验证简易应对方式问卷(Simplified Coping Style Questionnaire, SCSQ)在藏羌地区消防员中使用的信效度, 并进行修订。

方法 2024年1月对四川省阿坝藏族羌族自治州下辖消防大队的现役消防人员进行调查, 收集消防员的一般人口学资料、睡眠质量等, 对SCSQ的信效度进行评价。将样本随机分半, 采用探索性因子分析探索量表的内部维度, 采用验证性因子分析本研究探索出的量表结构并与量表原有结构进行比较。

结果 修订后SCSQ包括2个部分、共19个条目。其Cronbach's α 系数为0.884, 两个维度的Cronbach's α 系数分别为0.927和0.860, 奇偶折半信度分别为0.905和0.820。探索性因子分析提取2个公因子, 累计方差贡献率为56.53%, KMO值为0.926, 各条目的因子载荷为0.523~0.827。验证性因子分析结果显示, 修订后SCSQ的模型拟合度较好。

结论 修订后的简易应对方式问卷具有良好的信效度, 能够有效地评估藏羌地区消防员这一人群的压力应对方式, 为后续少数民族地区消防员的心

理健康相关研究提供量表选择与运用的理论依据和实践基础。

关键词: 简易应对方式问卷; 消防员; 信度; 效度; 藏羌地区

家庭为中心的健康宣教对青少年抑郁障碍患者的影响

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目的 研究在青少年抑郁障碍患者中实施家庭为中心的健康宣教干预的影响。

方法 选取2023年1月-2023年12月我院心理科住院部收治的青少年抑郁障碍患者, 共90例, 用随机数字表法的方式把上述病例分两组, 即对照组(接受常规的健康宣教干预)、观察组(采用家庭为中心的健康宣教干预), 每组均45例, 观察两组青少年抑郁障碍患者的汉密尔顿抑郁量表(HAMD)和汉密尔顿焦虑量表(HAMA)及应对方式问卷(CCMQ)评分、生活质量评分。

结果 干预前, 两组患者汉密尔顿抑郁量表(HAMD)和汉密尔顿焦虑量表(HAMA)评分、应对方式评分, 还有生活质量评分对比无显著差异($P > 0.05$); 干预后, 两组患者HAMD评分与HAMA评分均降低, 且观察组在这两项指标上得分均低于对照组($P < 0.05$), 且两组患者的CCMQ评分中, 面对评分提高, 而屈服评分和回避评分下降, 且观察组显著优于对照组($P < 0.05$); 干预后, 与对照组相比, 观察组患者的生活质量评分高于对照组($P < 0.05$)。

结论 通过实施家庭为中心的健康宣教, 对青少年抑郁障碍患者的精神心理症状有所缓解, 促使其调整面对生活事件的态度, 改善应对方式, 有利于疾病治疗, 提升生活质量。

关键词: 家庭为中心的健康宣教; 青少年; 抑郁障碍

青少年抑郁障碍住院患者非自杀性自伤行为

现状及危险因素的研究

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目的 探讨青少年抑郁障碍住院患者非自杀性自伤行为状况, 并分析其危险因素。

方法 抽取 2023 年 9 月~2024 年 4 月本院收住的青少年抑郁障碍患者 80 例作为研究对象(其中男女性别分别 39 例、41 例, 年龄 13~18 岁, 平均(16.24±1.37)岁。入选条件: ①所有患者经过临床综合检查, 符合《精神障碍诊断与统计手册》[4]诊断标准, 确诊为抑郁障碍。②患者及其监护人均为知情自愿参与本次研究, 并签署相关文书。③通过了医院伦理委员会的批准。排除标准: ①合并其他严重疾病患者。②合并其他精神障碍疾病患者, 如双相情感障碍、精神分裂症、癫痫所致精神障碍、精神活性物质所致精神障碍等。③排除了不配合研究和中途退出研究患者。), 依据《精神障碍诊断与统计手册》进行非自杀性自伤行为评定及相关因素调查(自行制定一般信息资料调查问卷, 调查内容包含年龄、性别、病程、户籍类型、疾病类型、童年不良经历及自伤情况等; 同时评估其自伤具体情况、父母婚姻状态、是否寄宿、是否为独生子女及父母受教育程度等), 并应用单、多因素分析对非自杀性自伤行为危险因素进行分析。

结果 ①80 例患者中, 出现 NSSI 共 36 例, 发生率为 45% (36/80); 相较于未出现的 NSSI 患者而言, 出现 NSSI 的患者抑郁程度、是否存在校园暴力、父母受教育程度、是否存在童年虐待状况相比, 差异有统计学意义 ($P < 0.05$)。

②将单因素分析差异有统计学意义的指标作为自变量, 经多因素 Logistic 回归分析, 抑郁程度、存在校园暴力、父母受教育程度、存在童年虐待状况均为 NSSI 危险因素 ($OR > 1$), 差异有统计学意义 ($P < 0.05$)。

结论 在青少年抑郁障碍患者中, NSSI 的发生率较为显著突出, 特别是对于那些遭受过校园暴力或童年虐待, 以及父母教育程度较高的患者, 其更容易表现出这种自伤行为。因此, 有必要增强对具有上述特征的患者关注, 并立即采取相关措施进行干预, 以尽可能降低 NSSI 事件的发生率。

关键词: 青少年; 抑郁障碍; 非自杀性自伤行为; 危险因素

The Abnormal Functional Connectivity of The Caudate Subregions in Major Depressive Disorder with Childhood Maltreatment

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Objective Major depressive disorder (MDD) with childhood maltreatment represents a heterogeneous clinical phenotype of depression. Previous studies have highlighted functional alterations of basal ganglia dysfunction in major depression patients. However, up to now, there has been a paucity of robust research investigating abnormal functional connectivity patterns in the caudate at the subregional level in MDD patients with childhood maltreatment. The objective of our study is to better understand the interplay between brain function, psychopathology, and childhood maltreatment, thereby developing more targeted and efficacious treatment and intervention strategies for patients with major depressive disorder

Methods Our study comprised four groups: Major Depressive Disorder (MDD) with childhood maltreatment ($n = 48$), MDD without childhood maltreatment ($n = 30$), healthy controls with childhood maltreatment ($n = 57$), and healthy controls without childhood maltreatment ($n = 46$). Eight caudate subregions were selected as seeds to investigate group differences in dynamic functional connectivity (dFC) and static functional connectivity (sFC). Correlation analyses were conducted to assess the associations between abnormal FC and maltreatment severity. Subsequently, moderation analyses were employed to explore the moderating role of depression severity in the relationship between maltreatment severity and abnormal FC

Results Compared with MDD without childhood maltreatment, MDD with childhood maltreatment exhibit FC abnormalities between caudate subregions and various brain regions including the left postcentral

gyrus, vermis, left middle cingulum gyms, right supra-marginal gyms, and left middle occipital gyms. Additionally, dFC with the left postcentral gyms as well as vermis, and sFC with left middle cingulate gyms along with right supramarginal gyms were correlated with the maltreatment severity. Furthermore, depression severity moderates the relationship between childhood maltreatment severity and aberrant sFC

Conclusion Our findings substantiate caudate dysfunction as a neurobiological characteristic of childhood maltreatment, thereby highlighting its association with vulnerability to major depressive disorder

关键词: Caudate, Major depressive disorder, Childhood maltreatment, Dynamic functional connectivity, Static functional connectivity

首发抑郁症患者自杀风险的影响因素分析

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目的 探究首发抑郁症患者自杀风险的影响因素。

方法 选取 2020 年 1 月至 2021 年 4 月深圳市康宁医院抑郁障碍科新入院符合《国际疾病分类》第 10 版 (ICD-10) 抑郁发作诊断标准的 124 例首发抑郁症患者, 采用简明国际神经精神访谈中文版 (MINI) 自杀量表评估患者的自杀风险。收集患者的一般人口学资料、病史资料以及 MINI 自杀量表评分、汉密尔顿抑郁量表 (HAMD) 评分、汉密尔顿焦虑量表 (HAMA) 评分。采用 SPSS23.0 统计软件, 分析患者 MINI 自杀量表评分的相关影响因素。以 $P < 0.05$ 为差异, 具有统计学意义。

结果 首发抑郁症患者的 MINI 自杀量表评分与年龄、发病年龄呈负相关 ($r = -0.308$, $r = -0.282$, P 均 < 0.05), 与 HAMD 总分、认知障碍因子、迟缓因子评分呈正相关 ($r = 0.183$, $r = 0.430$, $r = 0.216$, P 均 < 0.05), 既往有自杀未遂史的患者 MINI 自杀量表评分更高 ($t = 3.338$, $P = 0.001$)。线性回归结果显示, 既往有自杀未遂史及认知障碍因子可以显著正向影响 MINI 自杀量表评分 ($\beta = 0.210$, $\beta = 0.366$, P 均 < 0.05)。

结论 首发抑郁症患者的自杀风险与年龄较小、

发病年龄较小、既往有自杀未遂史、抑郁严重程度、认知损害及迟缓症状相关; 既往有自杀未遂史及认知损害与首发抑郁患者自杀风险显著正向相关。

关键词: 抑郁症; 自杀风险; 影响因素

氟西汀联合舒肝解郁胶囊对抑郁症心率变异性的影响

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目的 研究氟西汀联合舒肝解郁胶囊对抑郁症心率变异性 (HRV) 的影响。

方法 选择本院 100 例抑郁症患者作为研究对象, 按随机数字表法均分为对照组和研究组。对照组采取盐酸氟西汀胶囊治疗, 研究组在对照组的基础上联合舒肝解郁胶囊治疗。比较两组的汉密尔顿抑郁量表 (HAMD), 汉密尔顿焦虑量表 (HAMA), 匹兹堡睡眠质量指数 (PSQI), HRV [正常窦性 R-R 间期的标准差 (SDNN)、低频率值 (LF)、高频率值 (HF)、LF/HF 比值], 临床疗效, 不良反应。

结果 对照组治疗 6 周后的 HAMD、PSQI 显著高于研究组, 差异均有统计学意义 ($P < 0.05$); 两组治疗 6 周后的 HAMA 比较, 差异无统计学意义 ($P > 0.05$)。对照组治疗 6 周后的 SDNN、LF、HF、LF/HF 显著低于研究组, 差异均有统计学意义 ($P < 0.05$)。对照组总有效率 81.48%, 显著低于研究组总有效率 94.44%, 差异有统计学意义 ($P < 0.05$)。对照组不良反应率 9.26% 与研究组不良反应率 7.41% 比较, 差异无统计学意义 ($P > 0.05$)。

结论 舒肝解郁胶囊的主要成分为贯叶金丝桃、刺五加提取物, 现代医学已证实贯叶金丝桃是相当安全的抗抑郁药, 不仅能疏肝解郁、清热利湿, 还可消炎退肿, 提高夜间褪黑素的含量, 促进自主神经系统对心血管的生理调节作用, 从而维持或恢复副交感神经与交感神经的平衡, 抑制抑郁症的进展 [12-13]。刺五加具有益气健脾、安神补肾的功效, 对肝郁脾虚证引起的脏气不足、健忘、精神活力低下等均有作用, 与贯叶金丝桃相辅相成、益中补精、强筋壮骨 [14]。LF 反映了交感神经和迷走神经的双重活性, 其增高提示心肌收缩力增强、心博加速; HF 只反映了迷走神经的活性, 随着 HF 的增高, 躯体和内

脏运动、内脏与躯体感觉均可得到相应的调节,从而减轻自主神经功能的损害,防止交感神经兴奋性过高[15]。研究组治疗6周后的LF/HF显著高于对照组,且较接近正常水平,说明舒肝解郁胶囊能显著改善抑郁症患者的神经活动,调节内分泌,降低抑郁症对患者心率的影响。但不同研究[16]指出,随着年龄的增长,心脏副交感神经活动逐渐降低,而交感神经活动逐渐增强,HRV不同时域反应的自主神经活动亦有较大差异。因此,笔者认为分析HRV时应充分考虑不同年龄、抑郁程度等因素。

综上所述,氟西汀联合舒肝解郁胶囊能在不增加不良反应的基础上,显著改善患者的抑郁程度和睡眠质量,降低抑郁症对HRV的不良影响,提高临床疗效。但自主神经功能复杂,舒肝解郁胶囊对抑郁症患者神经活动的作用机制还需进一步研究。

关键词:氟西汀;舒肝解郁胶囊;抑郁症;HRV;疗效;不良反应

儿童、青少年抑郁症风险预警指标体系的构建与应用

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目的 本研究旨在构建一套科学、实用的儿童、青少年抑郁症风险预警指标体系,为早期精准识别抑郁症提供有力的工具,进而促进儿童、青少年的心理健康。

方法 通过文献回顾和专家会议,初步构建儿童、青少年抑郁症风险预警指标的框架,再采用德尔菲法,通过2轮专家函询,对指标进行筛选与优化。同时,研究小组也对函询结果多次研讨进行完善,最终确定了关键预警指标。随后,再将构建的指标应用于200例门诊就诊的儿童、青少年抑郁症患者,以全面检验其信度。

结果 2轮德尔菲法专家积极系数均为100%,专家权威系数分别为0.808、0.868。2轮专家函询的肯德尔和谐系数分别为0.131、0.142 ($P<0.001$)。最终构建的风险预警指标体系包括5项一级指标和38项二级指标,各指标条目均满足重要性赋值均数 >3.5 、变异系数 <0.25 且满占比 $>20\%$,指标条目水平内容效度指数 $0.881\sim 1.000$,平均内容效度指

数 0.995 ,全体一致性内容效度指标为 0.832 ,指标总体KR-20值为 0.811 ,折半信度系数为 0.745 。

结论 本研究构建的儿童、青少年抑郁症风险预警指标体系科学、实用,具有较高的临床应用价值和推广前景。

关键词:儿童、青少年,抑郁症,风险预警,构建与应用

Accelerated Theta Burst Stimulation in Patients with Obsessive-Compulsive Disorder

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Objective First-line recommended treatments for Obsessive-Compulsive Disorder(OCD) include pharmacotherapy (SSRI class) and psychotherapy (ERP-based), but clinically they are still partially effective or ineffective in 30-40% of patients; in recent years, physical therapy such as repetitive Transcranial Magnetic Stimulation (rTMS) has been increasingly recommended as an adjunctive treatment for OCD. Clinical traditions of repetitive transcranial magnetic stimulation are long, with a high number of treatments, shorter duration, and late onset of effects; to address these practical limitations, theta burst stimulation (TBS) and accelerated TMS (aTMS) have been developed to optimize the therapeutic effects of rTMS

TBS (Theta Burst Stimulation) is a new stimulation paradigm for more advanced and shorter sessions of TMS. It is characterized by plexiform stimulation that is closer to the physiology of neural activity and modulates neuroplasticity. Compared with conventional rTMS, TBS can be used at lower intensities and for shorter periods of time to achieve stronger effects and longer after-effects, and no adverse effects have been reported yet. TBS can be further divided into continuous theta burst stimulation (cTBS) and intermittent theta burst stimulation (iTBS). The former has an inhibitory effect, while the latter has an active effect on the cerebral cortex. Meta-analysis showed that aiTBS significantly improved depressive episodes in patients with

monophasic or biphasic depression and was better tolerated overall, and the mechanism of its antidepressant effect may be related to neuroplasticity. The supplementary motor cortex has been found to be significantly associated with a lack of inhibitory function in many studies, therefore, cTBS was selected for our study to treat the SMA cortex to improve obsessive-compulsive symptoms. Guo et al used cTBS to act on the bilateral SMA brain regions of patients with OCD five times per week for a total of 20 sessions, suggesting that cTBS significantly improved anxiety and depression scores, but did not significantly improve OCD symptoms; another study also used cTBS for 6 weeks for a total of 30 sessions, and did not find any effect on OCD symptoms; Jiang et al's study used accelerated-high dose theta burst stimulation (ahTBS) acting on the right pre-SMA for a period of 5 days, 10 times a day at 50-minute intervals, for a total of 18,000 pulses a day, showing an ameliorative effect on OCD symptoms. Fewer studies have been conducted on the treatment of OCD using cTBS, and the results of the treatment are inconsistent, suggesting that duration of treatment, treatment site, treatment parameters, and the refractory nature of OCD itself may be relevant. Therefore, in this study, we used cTBS on bilateral SMA, and performed Y-BOCS, HAMA, HAMD and Go/No-Go tests before and after treatment to verify the efficacy of cTBS on OCD patients.

Methods The samples came from OCD patients hospitalized in the affiliated Kangning Hospital of Ningbo University. Inclusion criteria: 1. 18-55 years old; 2. diagnosis of obsessive-compulsive disorder; 3. Y-BOCS ≥ 16 score; 4. junior high school education or above; 5. willing to participate in this study. Exclusion of diagnosis other Axis I diagnoses of mental disorders. Treatment was initiated after signing an informed consent form. To investigate the efficacy of cTBS on OCD, Y-BOCS scores were performed at baseline (Day0), end of treatment (Day5), and treatment follow-up (Day14,21,28), and Go/No-Go tasks were performed on Day0,14,28

cTBS acted on the bilateral SMA of OCD patients, first left then right, not simultaneously. The treatment parameters were: 10 sessions per day for 5 consecutive days, Each modified continuous TBS (cTBS) session

was comprised of 1,800 pulses delivered in a continuous train of 600 theta bursts. Theta burst consisted of three pulses at 50 Hz, and bursts were repeated at 5 Hz. Ten sessions were applied per day at 50-min intersession intervals. (Cole et al., 2020). Stimulation was delivered at 120% of the RMT. Localite Neuronavigation System was used to position the TMS coil over the individualized stimulation target.

Mann-Whitney nonparametric test with Y-BOCS change score as outcome was conducted to determine the group difference (responders vs Partially responder) in magnitude of change in bilateral SMA activity, elicited during inhibitory control, from before to after treatment with the cTBS protocol. Effective was defined as a Y-BOCS score reduction of $\geq 35\%$, partially effective as $25\% \leq \text{Y-BOCS} < 35\%$, and ineffective $< 25\%$. the Wilcoxon signed rank test (i.e., paired test) was used to determine within individual differences between left and right side of the SMA on cognitive control activation evoked by the No-Go condition of the Go/No-Go task.

Results A total of 5 OCD patients, 3 males and 2 females, with a mean age of 37.8 years, a disease duration of about 11.4 years, a Y-BOCS score (mean 26.4, standard deviation 2.30), and sertraline (200 mg/d) or fluvoxamine (250-300 mg/d) up to a stabilized dose, with no short-term medication changes, were included in the study

Results showed All 4 individuals had a favorable response to cTBS, and 1 was partially effective. The scores during and after treatment are shown in Table 1, with Y-BOCS scores on days 0, 5, 14, 21 and 28 suggesting that at the end of treatment, 4 individuals were effective (Y-BOCS minus $\geq 35\%$) and 1 individual was partially effective (Y-BOCS minus 25%) compared with baseline; the Go/No-Go task showed a reduction in operative time and the number of errors before and after treatment as well as at follow-up

Conclusion Our study suggests that the safety and efficacy of cTBS for OCD, which can be followed up with a large-sample clinical study, as well as with a mechanism study of efficacy, to provide a new modality for the precision treatment of OCD

关键词: Obsessive-compulsive disorder, Accelerated Theta Burst Stimulation, Y-BOCS

Electroencephalogram for The Diagnosis of Depression: A Systematic Review and Meta-analysis of Diagnostic Test Accuracy

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Objective Depression, as a prevalent mental disorder, is a significant and still growing contributor to the global burden of disease. Its diagnosis remains a challenging endeavor due to the global shortage of diagnostic resource and the inherent limitations of conventional assessment tools such as structured interviews and questionnaires. The emergence of electroencephalography (EEG) as a potential diagnostic modality of depression offers promise in reducing the burden of disease from depression, and addressing this diagnostic gap through its application in clinical practice. This systematic review and meta-analysis aim to comprehensively evaluate the diagnostic test accuracy of the current studies on the EEG-based diagnosis of depression, and identify their contributions and limitations

Methods A systematic search was performed in the major academic databases for medical research from inception to January 25, 2024: Pubmed, Web of Science, OVID, Embase, and Cochrane Library. The Quality Assessment of Diagnostic Accuracy Studies-2 (QUADAS-2) checklist was used to assess the bias of all the included studies. The pooled sensitivity (SEN), specificity (SPE), and the combined area under the summary receiver operating characteristic curves (AUC SROC) were calculated to evaluate the diagnostic efficacy of

EEG on depression. Subgroup analyses were conducted to investigate the possible sources of heterogeneity

Results A total of 18 studies were included, contributing 58 reported results in total. The diagnostic test accuracy of EEG for depression was high across the studies, as the pooled SEN, SPE, and the AUC were 0.95, 0.93, and 0.95 respectively. All the 18 studies included utilized machine learning algorithms to analyze EEG data for depression diagnoses and the AUC ranged from 0.741 to 0.994. The studies with higher SEN and SPE tended to be those detecting depression from the healthy control groups, with the EEG data collected during both eyes-open and eyes-closed conditions, and the number of channels exceeding 20

Conclusion This study shows that EEG could provide a definitive and quantitative reference for depression diagnoses, having a good application prospect in clinical practice; machine learning algorithms could improve the accuracy of EEG-based diagnosis of depression. The findings also reveal a gap in the current studies, with few cases detecting depression from other mental disorders that have overlapping neural markers with depression, or detecting depression from comorbidity diseases. This gap and the high heterogeneity necessitate further research in diverse settings for further examination of the validity of EEG for depression diagnoses

关键词: EEG, Depression, Systematic Review, Diagnostic Test Accuracy

线粒体自噬在伴有应激事件的抑郁障碍患者中的影响研究

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目的 探讨线粒体自噬相关指标对于伴有应激事件的抑郁障碍患者的影响。

方法 将抑郁障碍患者进行分组, 包括具有应激事件的抑郁障碍患者 22 名, 不具有应激事件的抑郁障碍患者 22 名, 及健康对照组 22 名, 采集晨间空腹血浆, 应用 ELISA 测定法测定血浆中 Beclin-1,

LC3B, ATG5, SQSTM1 指标, 比较三组中相关指标含量是否存在差异。

结果 1、三组中线粒体自噬相关指标 Beclin-1, LC3B, ATG5, SQSTM1 均存在统计学差异, 其 F 值分别为 5.237、7.450、4.095、4.952, P 值分别为 0.008、0.001、0.021、0.010。2、事后检验结果示 Beclin-1 在正常对照组与抑郁障碍应激组存在显著差异 ($P=0.002$); LC3B 在正常对照组与抑郁障碍应激组存在显著差异 ($P=0.000$), LC3B 在抑郁障碍应激组与抑郁障碍无应激组之间存在显著差异 ($P=0.014$); ATG5 在正常对照组与抑郁障碍应激组存在显著差异 ($P=0.006$); SQSTM1 在正常对照组与抑郁障碍应激组存在显著差异 ($P=0.003$)。3、线粒体自噬相关指标 Beclin-1, LC3B, ATG5, SQSTM1 在正常组与抑郁之间比较差异存在统计学意义 ($t=-2.740$ 、 -2.802 、 -2.431 、 -2.481 , $P=0.008$ 、 0.007 、 0.018 、 0.016)。

结论 1、线粒体自噬可在抑郁障碍发挥作用; 2、应激可能通过 LC3B 途径在抑郁障碍中发挥作用。

关键词: 抑郁; 应激; 线粒体自噬

Exploration of The Optimized Portrait of Omega-3 Polyunsaturated Fatty Acids in Treating Depression: A Meta-analysis of Randomized-controlled Trials

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Objective Omega-3 polyunsaturated fatty acids (PUFAs) are now controversial for their efficacy in treating depression. This meta-analysis aims to find whether omega-3 PUFAs are effective in treating depression, and the most beneficial clinical portrait of the intervention and patients

Methods More than two reviewers searched six registries, and 36 studies were enrolled. Use PRISMA guidelines for data extraction, Cochrane Handbook for quality assessment, and random effects model for data pooling

Results Significant heterogeneity and publication bias assessment were observed. Significant efficacy was detected in the overall analysis [standardized mean difference (SMD) = -0.26, 95% confidence interval (CI) = (-0.41, -0.11)] and some subgroups. According to meta regression, total daily dosage might be a potential heterogeneity source ($P < 0.05$). No between-group difference was observed in the rate of response [relative risk (RR) = 0.99, 95% CI = (0.82, 1.20)], remission [RR = 1.17, 95% CI = (0.92, 1.48)], and adverse events [RR = 1.07, 95% CI = (0.90, 1.29)]. Daily intake of eicosapentaenoic acid (EPA) and remission rate conformed to linear correlation ($P < 0.05$)

Conclusion The findings indicate that 1) Omega-3 PUFAs might be effective in treating depression; 2) Among patients living in Asia with mild to moderate depression and no other underlying medication, long-term intervention (> 8 weeks) of omega-3 PUFAs 1000-1500 mg/day with EPA versus docosahexaenoic acid (DHA) ranging from 1:1 to 3:2 might benefit the most; 3) Omega-3 PUFAs are no superior than placebo in rate of response, remission, and adverse events. The results are unstable, but the evidence-based information provides guidance for clinical practice and direction for further research

关键词: Depression, Omega-3 polyunsaturated fatty acids, Therapeutics, Efficacy, Meta-analysis

Unraveling The Critical Role of IL-12 in High Suicide Risk Among Depressed Patients: A Comprehensive Cytokine Analysis

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Objective This study aims to preliminarily investigate the clinical value of cytokines in suicidal ideation among depression patients.

Methods Peripheral blood cytokine levels in 62 depressed patients and 40 healthy controls were examined using flow cytometry. Additionally, cytokine levels were analyzed across different suicide risk groups. IL12-related genes were identified using the GWAS Catalog. Gene expression matrices were obtained by segmenting the AHBA (Allen Human Brain Atlas) brain map using the Schaefer 400 template. Upregulated and downregulated gene sets were compared to Yeo resting-state networks and correlated with the Margulies 2016 gradient map using the brainstat toolbox. Permutation tests were conducted to assess the significance of p-values.

Results (1) The depressed group had significantly higher expression levels of IL-6, IL-10, IFN- γ , IL-17, IL-4, and TNF- α compared to the healthy control group (all $P < 0.05$). (2) IFN- γ and IL12 levels were higher in the high suicide risk group compared to the no suicide risk and low-moderate suicide risk groups (both $P < 0.05$). (3) IL-12 demonstrated diagnostic efficacy in identifying high suicide risk, with an AUC of 0.758 ($P=0.001$), a cutoff value of 0.59 pg/ml, sensitivity of 0.625 (95% CI 0.406-0.812), and specificity of 0.921 (95% CI 0.786-0.983). (4) Visualization of gene expression using the Schaefer 400 template and correlations with the Margulies 2016 cortical gradient map highlighted distinct patterns of upregulated and downregulated genes in relation to brain networks.

Conclusion Neuroimmune mechanisms may contribute to the pathophysiology of suicide in depression. Cytokines, particularly IL-12, could serve as potential biomarkers for identifying high suicide risk in depression patients. Further research is needed to validate these findings and explore the underlying mechanisms

关键词: Depression, Suicide, Cytokines, Allen Human Brain Atlas

Eating Less To Lose Weight Is Associated with Lower Risk of Depression, While Skipping Meals Is Opposite

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Objective The primary objective of this study was to comprehensively analyze and understand the relationship between two commonly adopted weight loss Methods "skipping meals" and "eating less," and depression in a targeted weight loss population. By identifying potential correlations, we aimed to provide insights into the psychological impact of different weight loss strategies

Methods We conducted a retrospective analysis utilizing data from the National Health and Nutrition Examination Survey (NHANES) cycles of 2015-2016 and 2017-2018. The weight loss population was carefully screened, and information on "skipping meals" and "eating less" was collected through the Weight History section of the Sample Person Questionnaire. Depression was assessed using the validated 9-item Patient Health Questionnaire, with a total score ranging from 5 to 27 indicating depression. To determine the detailed associations between these weight loss methods and depression, we performed subgroup logistic regression analyses

Results A total of 3,543 individuals, comprising 1,405 males and 2,138 females, with a mean age of 47.29 ± 17.34 years, were included in this study. After adjusting for potential confounders, we found that "eating less without skipping meals" (OR=0.827, 95%CI: 0.649-0.986, $P=0.034$) was negatively associated with depression. Conversely, "skipping meals" (OR=1.498, 95%CI: 1.224-1.833, $P<0.001$) and "eating less while skipping meals" (OR=1.567, 95%CI: 1.256-1.956, $P<0.001$) both displayed positive associations with depression. Interestingly, no significant association was observed between "skipping meals but not eating less" and depression ($P=0.557$)

[Conclusions] Our findings suggest that adopting a weight loss strategy that involves eating a lesser amount of food without skipping meals is associated with a lower risk of depression. However, skipping meals, whether done alone or combined with eating less, appears to increase the risk of depression. This study highlights the importance of considering the psychological

implications of different weight loss methods and encourages the adoption of healthy, sustainable weight loss strategies.

关键词: Depression, Eat Less, NHANES, Skip Meals, Weight Loss Methods

Association Between Long-term Sedentary Behavior and Depressive Symptoms in U.S. Adults

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Objective The study was designed to explore the correlation between long-term sedentary behavior (LTSB) and depressive symptoms in a representative cohort of the adult population in the United States. Understanding this relationship is crucial as sedentary lifestyles become increasingly common, and mental health issues, especially depression, continue to rise

Methods To undertake this comprehensive analysis, data from the National Health and Nutrition Examination Survey (NHANES) 2017-2018 were utilized. This extensive dataset encompassed vital information on demographics, depressive symptoms, physical activity (PA), and LTSB. Depressive symptoms were identified and categorized using the Patient Health Questionnaire (PHQ-9). Specifically, individuals with a PHQ-9 score of 5 or higher were considered to have "depressive symptoms," while those scoring 10 or above were classified as having "moderate to severe depressive symptoms (MSDS)." Both PA and LTSB were gauged through the Global Physical Activity Questionnaire, with LTSB defined as a sedentary duration exceeding 600 minutes per day. To delve deeper into potential patterns, Restricted Cubic Spline (RCS) curves were employed. These curves provided valuable insights into any nonlinear relationships that might exist between sedentary behavior and depressive symptoms. Furthermore, binary logistic regressions were conducted to statistically analyze these associations, adjusting for various covariates to ensure accuracy

Results The study encompassed a total of 4728 participants, with a mean age of 51.00 ± 17.49 years. Among these, 2310 were males, and 2418 were females. Notably, 1194 individuals (representing 25.25% of the sample) exhibited depressive symptoms, while 417 (8.82%) displayed moderate to severe depressive symptoms. RCS curves revealed an elevated risk of depressive symptoms with increased sedentary duration. Logistic regression models further confirmed significant associations between LTSB and both depressive symptoms (OR=1.398, 95% CI: 1.098-1.780) as well as MSDS (OR=1.567, 95% CI: 1.125-2.183)

Conclusion This study found a significant association between long-term sedentary behavior and depressive symptoms among U.S. adults. Prolonged sitting time increased the risk of experiencing moderate to severe depressive symptoms. These findings suggest that reducing sedentary time and promoting physical activity may help mitigate depressive symptoms in this population. Further research and public health interventions are needed to address this issue

关键词: Depressive symptoms, Long-term sedentary behavior, Moderate-to-sever depressive symptoms, NHANES, Physical activity

精神病护理学课堂教学中反转式教学模式的应用研究

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目的 探究反转式教学模式在精神病护理学课堂教学中的应用效果。

方法 入选研究对象均为 2020 年 1 月至 2023 年 1 月我院护理专业学生 120 例, 随机分为两组, 各 60 例, 对照组采用传统教学模式, 研究组采用反转式教学模式, 比较学习效果。比较护理学生考试成绩优良率、个人综合素养、理论知识、操作水平、满意度等指标。

结果 研究组学生护理成绩优良率为 98.33%, 对照组为 83.33%, 研究组高于对照组, $P < 0.05$ 。研究组个人综合素质均高于对照组, $P < 0.05$ 。研究组

学生理论知识成绩均高于对照组, $P < 0.05$ 。研究组学生操作水平成绩均高于对照组, $P < 0.05$ 。研究组满意度为 96.67%, 对照组 85%, 研究组低于对照组, $P < 0.05$ 。

结论 精神疾病是医学领域一个重要、庞大的疾病分类, 无论是在国内还是在世界各国都拥有数量庞大的病患群体, 并且对精神疾病的防治也是世界范围内医学领域的重点关注问题。精神疾病具有治疗周期长、治疗显效慢、康复周期长等特点, 在精神疾病的医疗工作中护理和治疗是同等重要的内容, 因此在现阶段的护理学之中精神疾病护理是一个独立且完整的教学体系。反转式教学 (flipped instruction) 也被叫做反转课堂或翻转课堂 (flipped classroom), 是一种现代、科学、重要的教学理念, 被广泛应用于教育教学工作之中, 在医疗教育之中也被广泛应用。在精神疾病护理学教学工作中使用反转式教学模式可以进一步提升教学质量、丰富教学形式、创新教学设计[3]。本次研究根据本院 2020 年 1 月至 2023 年 1 月进行护理专业学习的 120 名学生的学习资料, 对反转式教学模式在精神病护理学课堂教学中的应用效果进行研究和分析。对于精神病护理专业学生而言, 在教学中采用反转式教学模式有助于提高学生的理论成绩与操作水平, 加强学生个人素质, 进而提高学生满意度, 应推广使用范围。

关键词: 精神病护理学, 课堂教学, 护理专业, 反转式教学, 学习效果

单次静脉注射艾司氯胺酮联合一种口服抗抑郁剂治疗抑郁障碍的临床研究

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目的 探索艾司氯胺酮注射液单次静脉给药附加口服抗抑郁剂联合治疗方案治疗抑郁障碍的疗效及安全性。

方法 采用非随机同期临床对照研究设计, 将 40 名抑郁障碍患者按照治疗意愿, 分成试验组和对照组, 每组 20 人, 试验组接受艾司氯胺酮注射液 (0.25mg/kg, 40 分钟内静脉点滴单次) 联合一种 SSRI 或 SNRI (4 周) 的治疗方案, 对照组接受富马酸喹硫平联合一种 SSRI 或 SNRI (4 周) 的治疗方案。

研究设立干预前基线期、干预后 2 小时、24 小时、72 小时、1 周、2 周、3 周、4 周共 8 个访视时间点。使用 MARDS、QIDS-SR16、SSI 等疗效指标以及 BPRS-4、YMRS、CADSS、FISER 等安全性指标。在各个访视时间点收集血压、心率等生命体征数据, 及访视期间合并用药和不良事件等信息。

结果 研究共入组 40 名抑郁障碍患者, 均来自首都医科大学附属北京朝阳医院心理科门诊, 脱落 7 人, 最终 33 名受试者完成随访, 试验组 16 人, 对照组 17 人。年龄范围为 18 岁至 62 岁, 其中男性 15 (45.46%) 人, 重度抑郁 11 (33.33%) 人, 难治性抑郁 17 (51.52%) 人, 有精神疾病家族史 5 (15.15%) 人, 有自杀企图史 6 (18.18%) 人。疗效指标: 试验组达到临床治愈平均时间 14.969 (95% confidence interval (CI) 8.771-21.167) 天, 对照组达到临床治愈平均时间 24.706 (95% confidence interval (CI) 22.249-27.162) 天, Log-rank 检验不存在统计学差异 ($P > 0.05$)。试验组患者达到有效时间的平均值为 7.761 天 (95% confidence interval (CI) 1.746-13.776), 而对照组为 23.471 天 (95% CI 21.104-25.837)。Log-rank 检验结果存在统计学意义 ($P < 0.001$)。安全性指标: 在干预后 2 小时末, 试验组共有 3 (18.75%) 例患者报告有解离症状, 考虑与药物相关, 其程度有所不同; 其他各访视时间点均未报告有解离症状出现。在干预后 2 小时末, 有 1 例患者的 YMRS 量表评分提示有躁狂症状 (12 分)。对照组中未有患者的 YMRS 量表评分超过 0 分。

结论 与抗抑郁剂+喹硫平联合增效方案 (富马酸喹硫平联合 4 周口服抗抑郁剂) 对照, 单次静脉注射艾司氯胺酮联合 4 周口服抗抑郁剂的治疗方案治疗抑郁障碍, 能够显著改善抑郁症状, 迅速缓解自杀风险, 同时具有较好的安全性。

关键词: 抑郁障碍; 自杀风险; 艾司氯胺酮; 抗抑郁剂; 富马酸喹硫平

Brain Structural and Functional Alterations of Hippocampal Subregions in MDD Patient with Somatic Symptoms: A Resting-state MRI Study

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Background Somatic depression (SD) was a different subtype compared to non- somatic depression (NSD) in presentation of the resting-state MRI study. Among these studies, hippocampus was believed to be significantly associated with somatization symptoms. However, the hippocampus was a heterogeneous structure which contains five main subfields. Until now, the disruption pattern of the hippocampus subfields in SD patients were not clearly. Therefore, it is necessary to study the function of hippocampus subfields, which can aggravate physical symptoms

Methods 261 subjects were recruited including 190 MDD patients and 71 health control. All subjects underwent 3.0T resting state magnetic resonance image scanning. The structural and functional connectivity indicators of the hippocampal subregion were compared among three groups, respectively. In addition, the correlation between the abnormal functional connectivity in the

hippocampal subregions and the HAMD factor scores of the SD patients were also estimated.

Results Compared to the NSD group, SD group showed decreased GMV in HATA_L and HATA_R. With these two subregions as the ROI, the different FC were obtained with the whole brain. Relative to the NSD group, the SD group showed decreased FC between the HATA_L and Occipital_Sup_L, between the HATA_R and Temporal_Mid_L. In SD group, the FC between the HATA_L and Occipital_Sup_L were positively correlated with the HAMD-17 and cognitive disturbance

Conclusion SD showed more severe damages in the functional network of the hippocampal subregions. The functional connectivity between the HATA_L and Occipital_Sup_L might be a neurobiology indicator of the severity of anxious depression

关键词: Hippocampal subregions, Somatic depression, Major depressive disorder (MDD), functional connectivity

Arteriosclerosis Index and Clinical Correlates in First-episode and Drug-naïve Patients with Major Depressive Disorder : A Large-scale Cross-sectional Study

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Objective Depression has been identified as a significant risk factor for cardiovascular diseases, negatively impacting cardiovascular health. Atherosclerosis, a critical process in the progression of cardiovascular diseases, greatly increases the risk of cardiovascular events. However, most studies have concentrated on depressive symptoms in patients already diagnosed with cardiovascular diseases. This study aims to explore the correlation between atherosclerosis risk and clinical characteristics in patients with first-episode, untreated major depressive disorder (MDD)

Methods We enrolled 1718 patients with severe depression, collected their sociodemographic data, and assessed their clinical symptoms using the 17-item Hamilton Depression Rating Scale, the 14-item Hamilton Anxiety Rating Scale, and the Positive and Negative Syndrome Scale. Fasting venous blood samples were collected for relevant biomarker measurements, and the Arteriosclerosis Index (AI) was used to evaluate the patients' risk of atherosclerosis

Results The study included a total of 1718 patients with Major Depressive Disorder (MDD) with an average age of 34.87 ± 12.43 years. It was observed that 502 patients exhibited arteriosclerosis, accounting for approximately 29.22% of the total cohort. Patients with higher Arteriosclerosis Index (AI) were older, had a later age of onset, and longer disease duration. Those with elevated AI often presented with thyroid hormone abnormalities, with higher levels of TSH, ATG, ATPO, and FT3 compared to patients with lower AI. Additionally, patients with higher AI showed higher levels of BIM, systolic blood pressure, diastolic blood pressure, blood glucose, triglycerides, total cholesterol, and low-density lipoprotein compared to those with lower AI,

while high-density lipoprotein levels were lower in the former group. Furthermore, patients with higher AI exhibited elevated scores in the HAMD, HAMA, and positive scale assessments. Correlation analysis indicated a moderate relationship between patients' HAMD scores, TSH levels, low-density lipoprotein levels, and AI. Univariate logistic regression revealed that HAMD score (OR=1.323, 95% CI: 1.270-1.381, $P < 0.001$), HAMA score (OR=1.150, 95% CI: 1.115-1.186, $P < 0.001$), and positive scale score (OR=1.084, 95% CI: 1.061-1.108, $P < 0.001$) might be significant risk factors for AI. Further stepwise logistic regression analysis indicated a potential association between systolic blood pressure ($B=0.022$, $P=0.022$) and thyroid hormone abnormalities including TSH ($B=0.427$, $P < 0.001$) and FT3 ($B=0.224$, $P=0.015$) elevation with AI. Dyslipidemia was also linked to AI, with increased levels of triglycerides ($B=0.462$, <0.001) and LDL ($B=0.741$, $P < 0.001$) suggesting a higher probability of arteriosclerosis. Moreover, the HAMD score ($B=0.119$, $P < 0.001$) was positively associated with AI, indicating a higher risk of arteriosclerosis with increasing HAMD scores. Remarkably, in the stepwise logistic regression model, there was a possible negative correlation between positive scale scores and AI ($B=-0.061$, <0.001), suggesting that a higher positive scale score was associated with a lower risk of arteriosclerosis. Finally, a multiple linear regression analysis revealed a linear relationship between TSH levels and AI ($B=0.282$, $P < 0.001$), as well as TG ($B=0.340$, $P < 0.001$) and LDL ($B=0.572$, $P < 0.001$) levels and AI. Notably, a positive linear relationship was found between HAMD score and AI, with each unit increase in HAMD score corresponding to a 0.091 unit increase in AI. Conversely, a negative linear relationship was observed between positive scale scores and AI, with each unit increase in positive scale score associated with a 0.030 unit decrease in AI.

Conclusion The patient's TSH levels are highly correlated with the risk of arteriosclerosis, while TG and LDL increase the risk of arteriosclerosis in patients. The severity of depressive symptoms is associated with a higher risk of arteriosclerosis. Therefore, it is crucial to promptly control depressive symptoms and monitor the development of arteriosclerosis in patients with severe

depression. This approach can help reduce the risk of cardiovascular diseases in these patients

关键词: Major depressive disorder, Arteriosclerosis Index, HAMD

负性生活事件严重性自评量表的开发——基于精神病现象学与自传体记忆视角

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目的 作为应激的直接经验来源, 负性生活事件对抑郁症患者的身心健康和情绪平衡具有重要影响, 为揭示负性生活事件的作用, 学界开发了多种生活事件量表, 以尝试检测并评估负性生活事件对个体心理健康的直接与间接影响。然而, 尽管其在临床医学及心理咨询领域中发挥了重要作用, 在理论和实测两个方面仍存不足。本研究基于现象学的理论视角, 以抑郁症患者的自传体记忆及负性经验为核心内容, 旨在对抑郁症患者负性生活事件的严重性进行科学测评。该量表用于评估抑郁症患者的心理应激水平, 并为干预方法提供科学依据和过程导引。

方法 于河南省某三甲医院, 满足纳入标准和排除标准, 共招募抑郁症患者 120 名。采用定性、定量的综合方法进行施测和评估。首先, 根据现象学访谈获取患者负性生活事件的记录; 其次, 基于事件影响持续时间和精神影响程度两个客观标准, 由患者根据自传体记忆和负性经验对负性生活事件的严重性进行五级评分。

结果 效度分析: 本研究以患者的自传体记忆和现象学负性经验为导向, 采用开放式访谈获取患者详细的负性生活事件, 因此具有可靠的效度。信度分析: 相隔一段时间, 对患者再次施测, 得到其重测信度可达到 0.95。

结论 本研究基于现象学理论, 以自传体记忆及负性经验为核心内容, 编制了负性生活事件严重性自评量表, 通过 120 例样本施测, 验证了该量表具有良好的效度和信度。因此, 本研究结果为量化和评估负性生活事件对抑郁症患者的心理应激水平提供新的方法。

关键词: 负性生活事件, 量表, 现象学, 抑郁

Application of Mendelian Randomization in The Field of Mental Disorders

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Objective This article delves into the utility of Mendelian Randomization (MR) in psychiatric research, highlighting its efficacy in identifying the underlying risk factors and pathogenic mechanisms of mental disorders

Methods The paper elucidates the foundational principle of MR, leveraging genetic variations as instrumental variables to evaluate causality between exposure factors and health outcomes. It details the synthesis of genome-wide MR analysis with expression quantitative trait loci (eQTL) data to pinpoint potential drug targets associated with mental illnesses, and scrutinizes the intricate ties between mental health, substance use, and factors such as smoking and educational attainment

Results The research uncovers 31 potential drug targets linked to mental illnesses, encompassing conditions like schizophrenia, bipolar disorder, depression, and ADHD. The study accentuates the pivotal roles of genes NRG1, DISC1, BDNF, and COMT in affective disorders and uncovers the links between gender-specific genetic transmission, X-linked traits, and affective disorders. Furthermore, it underscores the significance of MR in shaping public health policies, particularly in assessing the impact of large-scale interventions and integrating observational studies

Conclusion The study anticipates an expanded role for MR technology in the realm of mental illness prevention, treatment, and the crafting of public health policies, given its demonstrated capacity to inform etiological understanding and intervention strategies

关键词: Mendelian Randomization, Mental Disorders, Genetic Variations, Public Health Policy

抑郁症心理学标志物的初步验证——基于负性生活事件的内联结构

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目的 抑郁症是最为常见的一种感性精神障碍,患者群体数量逐年升高,对个人、家庭及社会造成沉重负担,但其病理学机制仍存争议。已有大量研究指出,社会心理是其重要影响因素。然而,当前研究多聚焦于社会、心理变量的群组水平差异,而较少顾及患者精神世界的自洽性和异质性。本研究基于现象学的理论视角,尝试系统分析不同患者的个体化负性经验网络,并揭示出异质经验背后的同质结构,以初步验证抑郁症心因性病理机制存在的可能性。

方法 于河南省某三甲医院,满足纳入标准和排除标准,共招募抑郁症患者 120 名。获取知情同意后,进行人口统计学信息、贝克抑郁量表(Beck Depression Inventory, BDI)、9 项患者健康问卷(Patient Health Questionnaire-9, PHQ-9)的采集,并使用课题组开发的负性生活事件内联结构分析系统对其进行施测和计算。

结果 在正常组和抑郁组间,系统分析得到的多个指标均与与抑郁自评量表存在显著正相关。其中,“最长闭合环结构”指标中的“闭合环节点均值”与贝克抑郁量表的相关系数为 0.789;与 9 项患者健康问卷的相关系数为 0.799。

结论 本研究通过系统分析抑郁症患者的负性经验网络,发现一种潜在的抑郁症心理学标志物指标——负性生活事件网络的最长闭合环结构。与同类测量工具相比,该指标具有较良好的信度和效度。因此,本研究为抑郁症病理学机制提出了崭新的视角和初步证据,有望为抑郁症的诊断与治疗提供新的方法。

关键词: 心理学标志物, 抑郁障碍, 病理学, 现象学, 负性经验

Structural Cerebral Cortex Predicts Depressive and Cognitive Improvement in Major Depressive Disorder

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Objective The objective of this study was to adopt cortical morphology to investigate diagnosis-associated abnormalities (patients vs. controls) and correlations between cerebral cortex characteristics and depressive and cognitive changes in major depressive disorder (MDD)

Methods Twenty-two patients with MDD and twenty-one age and sex matched healthy controls (HCs) participated in this study. Participants completed 17-item Hamilton Rating Scale for Depression (HAM-D17), Hamilton Rating Scale for Anxiety (HAMA) and Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) assessing depressive symptoms and cognitive function. Cerebral cortex characteristics [fractal dimension (FD), gyrification index (GI), sulcus depth (SD), and cortical thickness (CT)] were evaluated using an automated Computational Anatomy Toolbox (CAT12). Regions with significant differences were used in a vertex-based comparison of cortex characteristics. Multiple regressions were performed to identify clusters whose cortex characteristics was associated with depressive and cognitive changes, ($p < 0.001$, family wise error-corrected cluster-level $p < 0.05$), with age and sex as covariates

Results Surface-based analyses revealed altered GI in the left insula in MDD patients at baseline compared with HCs. Regression analysis found that baseline FD in the left superior frontal cortex, left cuneus, right rostral middle frontal cortex, right lateral occipital cortex, GI in the left lateral occipital cortex, and thickness in the bilateral insula could predict improvement in depressive symptoms in MDD patients. In addition, lower baseline GI in the left superior parietal cortex could predict a greater improvement in attention, and lower baseline SD in the left lateral occipital cortex could predict a greater improvement in delayed memory

Conclusion Our findings highlighted cerebral

cortex characteristics as potential prognostic biomarkers to predict and track disease progression or stratify MDD patients for optimizing disease management and treatment strategies

关键词: major depressive disorder, surface-based morphometry, cerebral cortex characteristics, depressive symptoms, cognition

抑郁症患者用药治疗前后全脑皮质结构形态变化磁共振成像研究

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目的 采用结构性磁共振成像 (structural magnetic resonance imaging, sMRI) 技术观察抑郁症 (major depressive disorder, MDD) 患者的大脑形态学变化, 并研究这些变化是否与 MDD 的临床严重程度相关。方法 纳入 22 名被诊断为 MDD 的患者 (18-50 岁) 和 21 名健康对照 (Healthy control, HC), 采用汉密尔顿焦虑量表 (Hamilton Rating Scale for Anxiety, HAMA)、汉密尔顿抑郁量表 (17-item Hamilton Depression Scale, HAM-D17) 和神经心理状态评定量表 (Repeatable Battery for the Assessment of Neuropsychological Status, RBANS) 评价所有患者的抑郁症状严重程度和认知功能。应用 sMRI 技术, 分别在用药治疗前和用药治疗 8 周后, 采集所有被试的脑结构数据, 基于 CAT12 软件计算 MDD 患者用药前后及正常的全脑皮质结构, 配对样本 t 检验比较 MDD 患者治疗前后的临床量表和全脑皮质结构差异, 双样本 t 检验分别比较 MDD 患者用药前、后与 HC 的全脑皮质结构差异。提取治疗后全脑的皮质结构参数与 MDD 患者的临床量表评分进行相关性分析。结果 MDD 患者用药治疗前和 HC 比较全脑皮质结构, 发现用药前右侧岛叶/颞上回的局部回指数减低。相关性分析显示, MDD 患者用药治疗后分形维数与 HAMA、HAM-D17 呈负相关; 局部回指数与 HAM-D17 呈正相关; MDD 患者用药治疗后视觉广度分别与分形维数呈正相关、局部回指数呈负相关; 沟深度与注意力、RBANS 总分呈负相关。结论 MDD 患者药物治疗可能影响大脑结构的变化, 并为大脑形态学变化与临床症状之间的内在联系提供了

新的见解。

关键词：抑郁症患者；药物治疗；磁共振成像；局部回指数；分形维数；沟深度

TMS 在抑郁障碍中的研究现状与趋势：文献计量学与可视化分析

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目的 抑郁障碍是一种慢性精神疾病，给个人、家庭甚至整个国家带来沉重负担。近年来，非侵入性脑部刺激技术的快速发展使得经颅磁刺激（Transcranial Magnetic Stimulation, TMS）治疗抑郁障碍在临床上得到广泛应用。鉴于近期相关研究的显著增长，本研究旨在利用文献计量学方法总结经颅磁刺激技术与抑郁障碍的全球研究现状与趋势，为今后相关的研究提供参考及指导。

方法 从 Web of Science 核心收藏数据库（WoSCC）中的科学引文索引（SSCI）和科学引文索引扩展（SCIE）获取 1998 年至 2022 年间发表的有关 TMS 和抑郁障碍的文献。使用 VOSviewer 和 CiteSpace 软件对国家、机构、作者、期刊、关键词、引文等数据进行等进行计量学分析，并绘制可视化图谱。

结果 共提取到 4649 篇文献，1998-2022 年 TMS 在抑郁障碍领域的研究发文量总体呈上升趋势，这些文献发表于 779 种期刊，《BRAIN STIMULATION》是接收该领域文章最多的期刊。其中共包括了来自 76 个国家及 3965 个机构中的 17000 余位作者，美国贡献的发文量最为突出，多伦多大学及 Daskalakis ZJ 是论文发表数量最多的机构和作者。“State Functional Connection”和“Theta Burst”是近期备受关注的关键词。该领域的研究主要集中于 TMS 刺激模式及其疗效和安全性、相关脑区及联合检测技术、TMS 对脑源性神经营养因子（BDNF）和神经递质水平的调节作用等方面。其中，发展新的 TMS 刺激模式，将 TMS 技术与其它检测技术结合以实现精准治疗，并且探索脑内不同信息的时间

与空间联系、宏观与微观机制，已逐渐成为当前的研究热点。

结论 近年来 TMS 在抑郁障碍领域的相关研究已取得一定成果，未来基于个体下的多模态参数，实现个体化的精准治疗依然是大势所趋。

关键词：经颅磁刺激,抑郁障碍,脑机制,疗效,文献计量学,可视化分析

歧视精神疾病患者评估量表在社区人群中的信效度

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目的 验证歧视精神疾病患者评估量表在社区人群中的信效度。

方法 本研究数据来源于第二次天津市精神障碍流行病学调查项目。该项目采取按规模大小成比例的概率抽样（Probability proportionate to size sampling, PPS）方法进行多阶段随机整群抽样，最终在天津市 16 个区县抽取了 41 个街道办事处，70 个村居为调查点，共抽取 15630 户家庭。每户家庭随机抽取 1 位半年内居住满 3 个月的 18 岁及以上成年人作为调查对象。最终有 5951 人完成《美国精神障碍分类与统计手册第五版精神障碍定式检查》（简称“SCID”）的访谈，在完成 SCID 问卷中随机抽取 27% 的调查对象，在调查员的指导下填写《歧视精神疾病患者评估量表》（简称“SS for PMI”）。最后完成评估量表的内部一致性、可靠性分析及降维因子分析。

结果 1.共有 1598 人参与歧视问卷调查，剔除回答率不足 90% 的无效样本，且剔除“认为自己有或有过精神心理方面疾病”的调查对象，最终有 1018 名受访者完成歧视精神疾病患者评估量表调查。

2.歧视精神疾病患者评估量表在天津市社区人群中的 Cronbach 同质性信度系数和分半信度系数均高于原始量表，分别为 0.90 和 0.86，显示具有良好的内部一致性。进一步探索性因子分析显示：KMO 值为 0.945，巴菲特半球检验值为 9492.04（ $P < 0.001$ ），沿用原量表分为隔离、危险、能力三个维度进一步分析，因子与总分的相关系数大于各因子之间的相关系数。

结论 歧视精神疾病评估量表在天津市社区居民中具有良好的信效度, 隔离、危险、能力三因子得分与总分的相关系数高于各因子之间相关系数, 说明此量表对歧视问题的提取概括能力较好, 各因子之间既相互独立又相互联系, 具有良好区分效度。除了能力因子外, 隔离和危险内部一致性系数和分半系数良好。

关键词: 歧视量表, 精神疾病, 社区居民, 信效度

个体特异性功能连接预测双相抑郁临床分数

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目的 双相抑郁存在诊断难、易复发等特点, 临床上主要以病史、访谈和行为进行诊断, 然而缺乏客观的影像标志物。关于双相抑郁的影像研究发现了一些功能连接异常, 这些异常可能是潜在的影像标志物。研究表明人脑在神经解剖学和功能方面存在显著个体差异。因此, 有必要考虑个体差异整合全脑功能连接组来寻找双相抑郁患者潜在的影像标志物。

方法 本研究采用个体化皮质分割方法确定了个体特异的功能一致脑区, 这些区域在大小、位置、形状上各不相同。然后构建了个体水平和组图谱水平的功能连接组。最后使用将功能连接组作为特征训练支持向量回归模型, 对 56 名双相抑郁患者的 HAMD 分数和病程分数分别做了预测。

结果 通过迭代分割算法, 从 116 个 ROI 中确定了 73 个一致性 ROI, 这些 ROI 是每个受试者共有的, 并且在个体上存在空间差异, 它们在位置、大小方面展现了个体差异。结果显示, 基于 FPN 与 SMN 之间的连接以及 DMN 内部的连接能够有效的预测 BDD 患者的 HAMD 分数。

结论 无论是预测 HAMD 分数还是病程分数, 个体特异性功能连接作为特征进行预测的结果都是显著优于组水平图谱的结果。本研究结果强调了在影像学研究中考虑个体差异的重要性, 并揭示了可以预测 BDD 患者临床分数的潜在影像学生物标志, 这对于疾病的精准治疗和诊断具有重要的帮助意义。

关键词: 双相抑郁; 个体化; 脑影像; 预测

血小板/血红蛋白比值与抑郁症的关联—大样本临床数据分析

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目的 越来越多研究认为血小板在炎症中发挥重要作用, 血小板被认为是连接精神疾病和炎症反应的假定桥梁。血小板/血红蛋白比值 (platelet-hemoglobin ratio, PHR) 是基于血小板、血红蛋白确定的综合性指标, 高水平 PHR 代表炎症状态的增强, 是反应系统炎症活性的生物标志物。关于 PHR 的研究目前大多集中在心血管疾病等躯体疾病方面, 研究发现 PHR 水平的增加与心血管疾病的发生率及死亡率明显相关, 但在抑郁症中尚缺乏研究。本研究目的是探索与正常人群相比, 抑郁症患者体内是否存在 PHR 水平的改变, 首发抑郁症患者及复发抑郁症患者是否存在 PHR 的差异。

方法 本研究共收集了来自 4801 名首发抑郁症患者, 4098 名复发抑郁症患者及 6845 名健康对照的血小板及血红蛋白水平数据。通过血小板及血红蛋白水平计算出 PHR 值, 比较不同组间 PHR 水平的差异, 并进行 logistic 回归分析探讨 PHR 与抑郁症的关联。

结果 抑郁症患者及正常对照组间血小板、血红蛋白水平比较, 结果发现抑郁症患者的血小板水平 (239.662 ± 0.665) 显著低于正常对照组 (252.994 ± 0.712) ($P < 0.001$), 抑郁症患者血红蛋白水平 (131.615 ± 0.166) 显著低于正常对照组 (142.895 ± 0.189) ($P < 0.001$)。PHR 水平比较, 结果发现抑郁症患者的 PHR 水平 (1.855 ± 0.006) 显著高于正常对照组 (1.802 ± 0.006) ($P < 0.001$)。进一步分析显示, 首发抑郁症患者 PHR 水平 (1.855 ± 0.008)、复发抑郁症患者 (1.856 ± 0.009) 均显著高于正常对照组 ($P < 0.001$), 而首发抑郁症患者与复发抑郁症患者 PHR 水平无差异。Logistics 回归分析结果显示 PHR 与抑郁症具有显著相关性 ($P < 0.01$)。

结论 首发抑郁症、复发抑郁症患者 PHR 水平高均显著高于正常对照组, 首发、复发抑郁症患者无明显差异。提示抑郁症存在明显的免疫功能失调, PHR 水平与抑郁症显著相关提示 PHR 水平是抑郁症发生的影响因素。

关键词: 抑郁症, 血小板/血红蛋白比值, 炎症, 免疫, 影响因素

基于大样本临床数据研究血清白蛋白/胆红素比值与首发、复发抑郁症的关联

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目的 越来越多研究认为白蛋白、胆红素在炎症中发挥重要作用, 与氧化应激具有密切关联。研究发现白蛋白、胆红素具有抗氧化作用, 白蛋白/胆红素比值 (albumin-bilirubin index, ALBI) 是基于血清白蛋白、胆红素确定的综合性炎症指标, 能够反映氧化应激水平, 并且是反应系统炎症活性的生物标志物。目前关于 ALBI 在抑郁症中尚缺乏研究。本研究的目的是探索与正常人群相比, 抑郁症患者体内是否存在 ALBI 水平的改变, 首发抑郁症患者及复发抑郁症患者是否存在 ALBI 的差异。

方法 本研究共收集了来自 4801 名首发抑郁症患者, 4098 名复发抑郁症患者及 6845 名健康对照的白蛋白及胆红素水平数据。通过白蛋白及胆红素水平计算出 ALBI 值, 比较不同组间 ALBI 水平的差异, 并进行 logistic 回归分析探讨 ALBI 与抑郁症的关联。

结果 抑郁症患者及正常对照组间白蛋白、胆红素水平比较, 结果发现抑郁症患者的白蛋白水平 (43.168 ± 0.038) 显著低于正常对照组 (45.999 ± 0.033) ($P < 0.001$), 抑郁症患者胆红素水平 (15.138 ± 0.072) 显著低于正常对照组 (13.974 ± 0.073) ($P < 0.001$)。ALBI 水平比较, 结果发现抑郁症患者的 ALBI 水平 (3.674 ± 0.016) 显著高于正常对照组 (3.435 ± 0.014) ($P < 0.001$)。进一步分析显示, 首发抑郁症患者 ALBI 水平 (3.689 ± 0.023)、复发抑郁症患者 (3.658 ± 0.023) 均显著高于正常对照组 ($P < 0.001$), 而首发抑郁症患者与复发抑郁症患者 ALBI 水平无差异。Logistics 回归分析结果显示 ALBI 与抑郁症具有显著相关性 ($P < 0.01$)。

结论 首发抑郁症、复发抑郁症患者 ALBI 水平高均显著高于正常对照组, 首发、复发抑郁症患者无明显差异。提示抑郁症存在明显的免疫功能失调, ALBI 水平与抑郁症显著相关提示 ALBI 水平是

抑郁症发生的影响因素。

关键词: 抑郁症, 白蛋白, 胆红素, PHR, 炎症, 氧化应激

Research Status and Global Trends of Late-life Depression From 2004 To 2023: Bibliometric Analysis

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Objective This study profiled the current state of global research on LLD and predicted future research trends in the field

Methods Literature with the subject term LLD was retrieved from the Web of Science Core Collection, and CiteSpace software was used to perform econometric and co-occurrence analyses. The results were visualized using CiteSpace, VOSviewer, and other software packages

Results In total, 10,570 publications were included in the analysis. Publications on LLD have shown an increasing trend since 2004. The United States and the University of California had the highest number of publications, followed consecutively by China and England, making these countries and institutions the most influential in the field. Reynolds, Charles F. was the author with the most publications. The International Journal of Geriatric Psychiatry was the journal with the most articles and citations. According to the co-occurrence analysis and keyword/citation burst analysis, cognitive impairment, brain network dysfunction, vascular disease, and treatment of LLD were research hotspots

Conclusion Late-life depression has attracted increasing attention from researchers, with the number of publications increasing annually. However, many questions remain unaddressed in this field, such as the relationship between LLD and cognitive impairment and dementia, or the impact of vascular factors and brain

network dysfunction on LLD. Additionally, the treatment of patients with LLD is currently a clinical challenge. The results of this study will help researchers find suitable research partners and journals, as well as predict future hotspots

关键词: late-life depression, dementia, cognitive impairment, CiteSpace, bibliometric analysis, global trends

Associations between Psychological Stress and The Risk of First Onset of Major Depression Disorder: Results From A Longitudinal Study in 6,985 Chinese First-year Students

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Objective Youth and young adults have a high prevalence of major depressive disorder (MDD). Limited longitudinal research has explored the relationship between different dimensions of psychological stress and MDD. This study aimed to estimate the effect of psychological stress on the risk of first onset MDD in a sample of Chinese freshmen

Methods Using a longitudinal design, 8079 Chinese first-year students were recruited at baseline, and 6985 were followed up one year later. The Psychological Stress Scale for College Students was utilized to evaluate the levels of psychological stress. MDD was evaluated using the Chinese version of the Composite International Diagnostic Interview (CIDI-3.0). Random effect logistic regression modeling was utilized to estimate the associations between dimensions of psychological stress and the risk of MDD

Results Two dimensions of psychological stress, namely learning stress (OR=1.05, 95% CI:1.01, 1.09) and economic stress (OR=1.11, 95% CI:1.04, 1.19), were significantly associated with the risk of MDD. Other dimensions of psychological stress (specify family stress, interpersonal stress, intimate relationship stress, employment stress and appearance stress) were not associated with MDD

Conclusion Psychological stress, especially learning and economic stresses, could increase the risk of MDD in university students. These factors should be incorporated into mental health prevention and intervention programs at universities to reduce the risks of MDD

关键词: Major depressive disorder; Psychological stress; Longitudinal study; Freshmen

伴情感迟钝的抑郁症患者与健康被试的脑影像差异研究

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目的 基于静息态功能磁共振 (functional magnetic resonance imaging, fMRI), 探讨抑郁症患者有情感迟钝症状的脑影像研究。

方法 本研究是一项神经影像研究, 采集抑郁症情感迟钝患者和健康对照的静息态功能磁共振数据, 采用低频振幅 (amplitude of low frequency fluctuation, ALFF)、基于全脑的功能连接及基于左右两侧杏仁核感兴趣区的功能连接方法, 分析伴情感迟钝症状抑郁症患者的静息态脑功能变化以及与健康对照的差异, 旨在从神经影像学方面探索抑郁症情感迟钝的可能机制, 提高对抑郁症情感迟钝症状的相关功能异常机制的认识。

结果 与健康对照组相比, 抑郁症情感迟钝的患者在中央前回、中央后回、楔叶、楔前叶、颞上回、小脑及内侧和旁扣带脑回等多个局部脑区的活动存在改变; 抑郁症情感迟钝的患者多个脑网络的功能连接下降, 尤其是感觉运动网络 (sensorimotor network, SMN) 和腹侧注意网络 (ventral attention network, VAN)、边缘网络 (limbic network, LN)、默认模式网络 (default mode network, DMN) 等网络的功能连接降低更为显著; 抑郁症情感迟钝组患者杏仁核与额叶、颞叶、顶叶、枕叶及多个皮层下区域的功能连接减弱。

结论 抑郁症情感迟钝患者多个局部脑区的活动存在改变, 杏仁核与全脑的多个皮层脑区及皮下脑区的功能连接下降, 提示情感迟钝的脑功能受到广泛影响, 包括 SMN、VAN、LN、DMN 等网络的

功能连接障碍可能是抑郁症情感迟钝症状的可能发病机制。

关键词：抑郁症；情感迟钝；静息态功能磁共振

重性抑郁障碍患者肠道菌群特征及其与睡眠质量的相关性分析

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目的 近年来重性抑郁障碍(MDD)的患病率稳步上升,临床上发现多数患者常存在睡眠问题,显著影响个体功能。既往研究显示抑郁症状与睡眠症状具有相关性,但两者间存在的共同病理生理机制至今尚不明确。目前,已有多项研究表明肠道菌群参与了抑郁障碍及睡眠障碍的发生发展,本研究欲探讨它们三者的内在联系,为重性抑郁障碍伴睡眠问题的病理生理机制提供理论支持。

方法 本研究收集符合纳入、排除标准的重性抑郁障碍患者109例及健康被试(HC)96例,采集其一般资料及粪便样本,分别使用汉密尔顿抑郁量表(HAMD-17)及匹兹堡睡眠质量指数量表(PSQI)评估受试者抑郁症状与睡眠质量,采用16srRNA测序方法对粪便样本进行分析。首先探讨重性抑郁障碍患者的肠道菌群特征,然后进一步分析紊乱的肠道菌群与抑郁症状、睡眠症状的相关性。

结果 重性抑郁障碍患者肠道菌群Alpha多样性降低;Beta多样性显示与健康被试存在差异。聚焦在属水平,LEfSe分析发现与HC组相比,MDD组中双歧杆菌属(*Bifidobacterium*)、布劳特氏菌属(*Blautia*)、粪球菌属(*Coprococcus*)、马赛菌属(*Massilia*)、长命菌属(*Rubrivivax*)、小单孢菌属(*Micromonospora*)、嗜皮菌属(*Geodermatophilus*)、*Candidatus_Xiphinematobacter*属、异体卡多菌属(*Alloscardovia*)相对丰度升高;而拟杆菌属(*Bacteroides*)、粪杆菌属(*Faecalibacterium*)、罗氏菌属(*Roseburia*)、小类杆菌属(*Dialister*)、萨特氏菌属(*Sutterella*)、考拉杆菌属(*Phascolarctobacterium*)、副拟杆菌属(*Parabacteroides*)相对丰度降低。相关性分析发现

HAMD总分、PSQI总分及部分因子分均与双歧杆菌属(*Bifidobacterium*)、布劳特氏菌属(*Blautia*)呈正相关,与拟杆菌属(*Bacteroides*)、罗氏菌属(*Roseburia*)、副拟杆菌属(*Parabacteroides*)、萨特氏菌属(*Sutterella*)、考拉杆菌属(*Phascolarctobacterium*)呈负相关。HAMD总分与PSQI总分及7个因子分呈正相关。

结论 重性抑郁障碍患者的肠道菌群与健康人存在差异,其紊乱的肠道菌群与抑郁症状及睡眠症状相关,有多种肠道菌群共同导致了患者的抑郁及睡眠症状。

关键词：重性抑郁障碍；睡眠障碍；肠道菌群

抑郁症的认识和预防分享

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目的 对于很多抑郁的人来说,他们一直很悲观,即便事实情况是乐观的,他们也是如此。通过以下分享,我们可以知道总是对自己、自己的经历和未来产生消极想法。我们称之为“消极三部曲”,从而认识抑郁症以及预防。

方法 从下列观点对照,可以知道消极思想导致抑郁,使其持续并延长;同时,消极思想又常常是抑郁的结果。想要做出改变,重要的是要发觉这些思想,充分检验并改变这些思想。这种压倒一切的消极思想以各种具体的偏见形式出现在你的思维中。在认知疗法中,我们将这些偏见称为“自动思维”。这些想法是很本能地出现在你思维中的,看上去似乎合乎情理,对你真实可信,而且和消沉情绪相联系。根据下面观点,看看是否其中某一种偏见似曾相识。
1.主观臆断 2.预测未来 3.大祸临头 4.乱贴标签 5.贬低优势 6.消极过虑 7.过度泛化 8.一分为二的思维 9.觉得应该的思维 10.责任个人化 11.苛责他人 12.不公平的比较 13.懊悔倾向 14.假如怎么办 15.感性推理 16.无力否定 17.判断焦点

结果 通过上述观点,在一段平常的人际关系中,你可能认为,她不喜欢你。我们把这归为主观臆断,因为你可能并不真正了解她的想法。到后来,你发现她确实不喜欢你。这时,你感到不安。但是,为什么你会感到难过?这是因为你有一套非常严格的

标准。很多学生会有一种认为只要考试，就一定会考不好的自动思维，因此，我们可能会说这个学生是在预知未来。而实际是他在考试中得了还可以的。这时他又想，“我一定是个白痴”。此时，他对自己的标准是，任何不够完美的事情都是失败。如果对照以上，你发现自己的确拥有这些自动思维，且它们也的确使你变得越来越抑郁，影响了生活的感受，以下建议不妨一试：保持健康的饮食与运动，忧郁跟环境大有关系，寒冷的温度都会让我们更加抑郁，多晒太阳，多运动，做任何运动，都可以提高我们的心情，这不但是在创造体适能，也是在创造心适能；健康的饮食很重要，吃一些香蕉、菠菜等都有助于保持心情的愉快；一旦你发现，自己似乎有太多情绪的积压而无法保持健康生活的状态，那么你可能需要宣泄一下情绪，允许自己脆弱的哭泣或寻找亲近的好友诉说。通过上述，我们可以更好的认识抑郁症，并早期自行缓解。

结论 抑郁的时间超过两周以上，影响到生活，即使觉察了自己的扭曲思维也无法自行好转的话，一定要向专业人员求助，一些扭曲思维也可能来源于早期的心理创伤，交给精神心理专家来处理会更加的有效。

关键词：抑郁症；认识；预防

Serum Metabolic Characteristics of Female Adolescents with Major Depressive Disorder and A History of Self-injury

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Objective Non-suicidal self-injury (NSSI) refers to the intentional infliction of physical harm upon oneself without the intention of death. The prevalence of NSSI in children and adolescents is 19.5% worldwide, and over 20.0% in adolescents in China. The co-occurrence of NSSI and major depressive disorder (MDD) in adolescents is high. The metabolic changes that have been observed in individuals with MDD provide a better understanding of the underlying mechanisms of MDD.

To evaluate the metabolomic profile of female NSSI adolescents and identify the potential biomarkers of MDD and NSSI female adolescents

Methods Here, we evaluated the serum metabolomic profiles of MDD (n = 29), MDD+NSSI (n = 39), and 38 healthy female adolescents with Q300 technology specifically targets more than 200 metabolites

Results We identified 58 different metabolites in total, including fatty acids, organic acids, carbohydrates, amino acids, and short-chain fatty acids. Of these, 48 metabolites were different between the MDD+NSSI and healthy control (HC) groups, and 10 metabolites were different between the MDD+NSSI and MDD groups. Further analysis showed azelaic acid, isobutyric acid, and heptanoic acid to be effective biomarkers for classifying patients with MDD+NSSI vs. healthy controls (HCs)

Conclusion 9-pentadecanoic acid appeared to be a potential metabolic marker to classify patients with MDD+NSSI vs. MDD. Our results could help explain the underlying causes of MDD and NSSI and lead to better treatments for these patients

关键词：Major depressive disorder; Metabolism; Serum; self-injury; Q300; Female adolescents

Current Research Hotspots and Frontier Trends of The Last Two Decade on Artificial Intelligence in Depression: A Bibliometric Analysis

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Objective This study aims to visually analyze the current status and trends of artificial intelligence in depression research and clinical practice by means of bibliometrics and knowledge mapping

Methods The data for the metrological analysis of this study were obtained from the Web of Science

Core Collection (WOSCC). The search formula used in this study was set to "TS=(Depression OR "Major depressive disorder" OR "Mood disorder" OR "Affective symptom") AND TS=("AI" OR "artificial intelligence" OR "neural AI work" OR "machine learning" OR "deep learning"). The search period was limited to January 1, 2014 to December 31, 2023. Only "Article" and "Review" were selected as article types, and the language was limited to English. The bibliometric analysis and visualization of publications were conducted using VOSviewer, CiteSpace data analysis software

Results 1. A total of 5090 publications from 2014 to 2023 were included in the bibliometric analysis. The number of publications shows an increasing trend from year to year. Collaborative AI work analysis shows that the United States, China and England are the most influential countries in this field, with the highest number of publications and citations. (See Table1)

2. Distributions of countries/regions

Collaborative AI work analysis shows that the United States (1688), China(1259) and England(439) are the most influential countries in this field, with the highest number of publications and citations. (See Table2)

3. Distribution by institutions

The institution with the highest number of publications is Harvard Medical School (118), followed by the Chinese Acad Sci(108), Univ Toronto(90). The top ten institutions in terms of number of publications are from the United States with five, followed by China with two, and Canada and England with one. The most frequently cited institution is the Chinese Acad Sci(3714).(See table 3)

4. Distribution of authors

The author with the highest number of publications is Kim, Sungjun(32) (National Institutes of Health, USA), followed by Hu, Bin, Byeon, Haewon, Wang, Fei. (See table 4)

5. Distribution of journals and citation

The journal with the highest number of publications is journal of affective disorders (168)(citation 2337), followed by frontiers in psychiatry (132) (citation 1116), scientific reports (94)(1433), iee access (82)(1064).

Citing journals are mainly from molecular, biology, immunology, psychology, education, social, health, nursing, medical, biology, clinical, called research frontiers. The cited journals are mainly from mathematics, systems, mathematical, molecular, biology, immunology, psychology, education, health, medicine, medical, called the knowledge base(Figure 1)

6. Keyword analysis

The most frequently occurring keyword is machine learning(1328). followed by depression(869), deep learning(320), artificial intelligence(278), mental health(264), are frequent keywords. The keywords are clustered according to the research direction and roughly divided into 4 categories: mental health diagnosis and prediction, digital mental health and well-being, assessment, neuromorphic computing and artificial synaptic systems.

Keywords with the strongest burst intensity include prefrontal cortex(Strength=23.11), support vector machine(Strength=13.71), data mining (Strength=13.49), adolescents (Strength=13.32), random forest(Strength =12.31), big data(Strength=11.18), neural networks (Strength=11.07), default mode network (Strength=10.89), adults(Strength=10.38)

All keywords were divided into six clusters. The ranking of clusters is determined by the number of citations. Neurotech, Psychological Screening, Mental Health Intervention, Therapeutic Technology, Neurocomputing, Advanced Analytics, and Healthcare Optimization indicating that they have consistently been key topics in the field.

Conclusion Conclusion In summary, AI-related research in depression is in a rapid developmental stage, with United States and China holding core positions in this field. There is a need for strengthened international collaboration between research institutions and researchers from different countries. The research topics identified mainly revolve around five hotspots: mental health diagnosis and prediction, digital mental health and well-being, related to assessment, neuromorphic computing and artificial synaptic systems. This study revealed the trends and frontiers of artificial intelligence in depression research. This study will provide valuable references for scholars to find research focus

questions and partners

关键词: Keywords: depression, artificial intelligence, bibliometrics, visual analysis

抗富亮氨酸胶质瘤失活蛋白 1 (LGI1) 抗体阳性自身免疫性脑炎 1 例

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总结首都医科大学附属北京安定医院收治的 1 例抗富亮氨酸胶质瘤失活蛋白 1 (leucine-rich glioma inactivated-1 protein, LGI1) 抗体阳性自身免疫性脑炎患者的临床、实验室检查、治疗特点。该患者为 46 岁男性, 6 个月前以精神行为异常为首发临床表现, 具体情绪表现为焦虑与抑郁交替频发, 伴行为异常, 四肢不自主舞动, 意识清晰度下降, 定向力不完整, 可引出幻视, 凭空抓物, 对答不切题, 同时记忆力减退, 间断抽搐发作。入院时神经系统查体主要提示面部肌肉不自主运动, 四肢肌力 V 级, 肌张力不高, 腱反射对称存在, 右侧巴宾斯基征可疑阳性, 四肢不自主舞动, 颈软, 可疑存在抵抗, 颞下 2 横指。影像学提示双侧颞叶, 右侧岛叶, 额顶叶皮层 Flair 高信号。血清及脑脊液 CBA 法检测提示抗富亮氨酸胶质瘤失活蛋白 1 阳性。生化提示电解质紊乱 (主要为低钠), 脑脊液检查常规、甲状腺功能、脑电图未见明显异常, 个人史、家族史无特殊。迅速转至神经内科进一步住院治疗, 经激素治疗后, 症状均明显改善, 生活如常。自身免疫性脑炎边缘性抗 LGI1 抗体阳性相关脑炎, 常表现为癫痫发作、近事记忆力下降、精神行为异常, 临床表现严重, 不及时治疗将预后不佳。精神科医生应高度关注并重视识别以精神行为异常为首发和主要症状的自身免疫性脑炎。

关键词: 自身免疫性脑炎, 抗富亮氨酸胶质瘤失活蛋白 1 (LGI1) 抗体, 精神障碍

Cerebellar Gray Matter Volume Difference in First-episode Bipolar and Unipolar Depression

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Aim To investigate the difference in cerebellar gray matter between bipolar depression (BD) and unipolar depression (UD), and to evaluate its efficacy in distinguishing between the two condition

Methods This study included 42 BD patients, 48 UD patients, and matched 83 HC patients. The Hamilton Depression Scale-17 (HRSD-17) was used to assess the severity of depressive symptoms and the Hamilton Anxiety Scale (HAMA) was applied to assess the anxiety state for all participants. Structural magnetic resonance imaging (sMRI) was obtained and the cerebellum was divided into 28 lobules and 7 functional networks using SUIT Anatomical Probability Atlas and SUIT Buckner-Yeo. The correlation between the cerebellum and clinical symptoms was compared based on voxel and ROI. The model was constructed by machine learning using cerebellar lobules with significant inter-group differences and the accuracy and specificity of the model were calculated, as well as the area under the receiver operating characteristic (ROC) curve (AUC). Furthermore, the SHAP (SHapley Additive exPlanations) package was employed to determine the significance of the variables within the model and to elucidate the individual decision-making process

Results Studies based on the whole cerebellum found that the total cerebellar gray matter volume in UD patients was significantly larger than BD. Voxel-based studies found that the volume of Vermis IX and Left VI in the BD group was significantly smaller than that in the MDD group. ROI-based comparisons showed a significant reduction in the volume of gray matter in the dorsal attention network and the default mode network in BD patients compared to HC. The gray matter volume of limbic network in MDD group was significantly

higher than that in BD group. The accuracy and sensitivity of the model constructed using cerebellar lobules with significant inter-group differences was 76.3% and 83.0%. The above results were statistically significant and were corrected by FDR ($P < 0.05$)

Conclusion The significant variances observed in cerebellar gray matter volume between first-episode BD and UD highlight its potential clinical utility as a distinguishing marker for these two states. This finding holds promise for advancing early clinical identification, facilitating precise diagnosis, and guiding effective treatment strategies

关键词: cerebellum, bipolar depression, unipolar depression, major depressive disorder, structural MRI

伴自杀风险抑郁患者的认知特征研究

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目的 抑郁障碍患者常伴有认知功能的受损和异常。已有的研究和理论也发现,伴有自杀风险的个体也存在特定的认知加工模式和认知功能的累及,而伴有自杀风险的抑郁患者的认知加工模式和认知功能方面的研究仍然较少。本研究意在探索伴有自杀风险的抑郁患者的认知特点,尝试从认知功能损失和认知加工异常两个方面全面的探索自杀的认知病理机制,找到自杀风险的认知易感因素和认知标记物。

方法 根据 DSM-5 抑郁障碍的诊断标准,招募伴有自杀未遂的抑郁患者(自杀组),无自杀未遂的抑郁患者(抑郁组)和健康对照组。采用成套神经心理测验 MCCB (MATRICS Consensus Cognitive Battery) 对警觉性(vigilance)、持续注意(sustained attention)、工作记忆(working memory)、抑制控制(inhibitory control)等方面评估认知功能,采用自由视图范式的眼动追踪系统就情绪信息(积极、消极、中性、自杀主题)的认知加工和偏倚评估。采用方差分析比较组间差异。

结果 研究共招募被试自杀组 40 名,抑郁组 40 名,健康组 55 名。方差分析比较结果提示:伴有自

杀风险的抑郁患者在警觉性表现出显著的分数的降低,自杀组和抑郁组的工作记忆分数显著低于健康对照组,持续注意和抑制控制等方面三组间未见明显差异。认知加工方面,在自由视图任务重,与其他两组相比,自杀组患者在眼动实验中表现出对自杀主题信息的更多的注视点,同时对积极和中性信息有显著的注视减少。

结论 伴有自杀风险的抑郁患者的认知功能异常表现为警觉性降低、自杀认知偏倚、积极认知消退等特征。这些发现为帮助理解自杀行为发生的认知机制提供了依据,并为认知干预提供了潜在的靶点。

关键词: 自杀,抑郁症,认知功能,眼动,认知偏倚

氟哌啶醇注射液导致恶性综合征 1 例

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目的 探讨氟哌啶醇注射液导致恶性综合征(NMS)的发病机制及临床诊治。

方法 回顾性分析 1 例急性而短暂的精神病性障碍患者短期使用氟哌啶醇注射液后出现 NMS 的临床资料、诊治过程并复习相关文献。

结果 本例精神障碍患者,急性起病,表现为兴奋、语乱、行为冲动等,入院后给予氟哌啶醇注射液 5mg 肌肉注射,一日 2 次,奥沙西泮 15mg 口服一日 2 次,因患者进食进水差,给予输液支持治疗。入院后次日开始合并 MECT 治疗,在 5 月 25 日下午,即肌注氟哌啶醇注射液第 3 天,MECT 完成 2 次后,患者出现发热,体温 37.7°C,给予复查血常规:单核细胞数 $0.68 \times 10^9/L$,急化十项:AST 67.2U/L, LDH 318.6U/L, CK 2539U/L, HBDH 231U/L;尿常规:酮体 4+,蛋白质(+)。胸部 CT:未见异常。头部 MRI 未见异常。5 月 26 日,患者开始出现意识模糊、大汗、四肢肌张力高,查体:体温 38°C,心率 130-140 次/分,呼吸 28 次/分,最高血压 179/95mmHg,指脉血氧 98%,可引出压眶反射,颈部强直,四肢明显肌肉震颤,肌张力高。综上考虑患者出现恶性综合征。停用氟哌啶醇注射液,对症支持治疗,合并 MECT 治疗后病情好转。

结论 恶性综合征是一种抗精神病药物引起的

严重不良反应, 诊治关键在于早发现、及时对症治疗, 氟哌啶醇作为经典抗精神病药物, 在使用过程中需引起重视。

关键词: 恶性综合征; 抗精神病药物; 氟哌啶醇注射液;

双相情感障碍及抑郁症失匹配负波特征的对照研究

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目的 比较双相情感障碍和抑郁症患者的失匹配负波 (mismatch negativity, MMN) 特征, 探究 MMN 能否作为区分双相情感障碍和抑郁症的生物标记物。

方法 纳入 2022 年 2 月-2023 年 12 月于空军军医大学第一附属医院心身科病房就诊的双相情感障碍患者 30 例和抑郁症患者 36 例。纳入标准: ①年龄 ≥ 18 岁, ≤ 65 岁; ②符合《国际疾病分类》第 10 版 (ICD-10) 中双相情感障碍或抑郁障碍的诊断标准, 且所有患者当前处于抑郁发作期; ③小学以上文化程度。排除标准: 因躯体疾病导致精神障碍者或共病其它精神疾病者。采用汉密尔顿抑郁量表 (Hamilton Depression Scale, HAMD) 和汉密尔顿焦虑量表 (Hamilton Anxiety Scale, HAMA) 评估患者的抑郁焦虑症状, 同时所有患者均完成 MMN 检测。MMN 检测采用被动听觉 Oddball 模式, 即在一组标准刺激中随机插入强度不同于前者的偏差刺激。将两种刺激得到的事件相关电位波形相减即得到 MMN。电极放置位置参考国际 10/20 系统, 采集 Cz 和 Fz 处 MMN 潜伏期及波幅数据。最后使用 SPSS 26.0 比较两组间 MMN 潜伏期及波幅的差异, 以及各组中 MMN 与 HAMD、HAMA 评分之间的相关关系。

结果 ①双相情感障碍组 Fz 和 Cz 的 MMN 潜伏期与抑郁组相比显著延长 (Cz: $t=2.205$, $P=0.031$; Fz: $t=2.400$, $P=0.019$), 且双相情感障碍组 MMN 波幅显著高于抑郁组 (Cz: $P=0.021$; Fz: $P=0.025$)。②双相情感障碍组中 MMN 潜伏期与 HAMD 评分存在显著正相关关系 (Cz: $r=0.608$, $P=0.016$; Fz: $r=0.548$, $P=0.034$), 与 HAMA 评分不具有显著相

关性 ($P>0.05$); MMN 波幅与 HAMD、HAMA 评分不具有显著相关性 ($P>0.05$)。③抑郁症组中 Fz 和 Cz 的 MMN 潜伏期及波幅与量表评分之间均不具有显著相关性 ($P>0.05$)。

结论 双相情感障碍患者与抑郁组患者在 MMN 潜伏期及波幅特征上存在显著差异, 提示 MMN 可能作为区分双相情感障碍和抑郁症的生物标志物。

关键词: 双相情感障碍; 抑郁症; 失匹配负波; 疾病鉴别

Relationship between Urinary Cortisol Level and Cognitive Impairment in Patients with Major Depressive Disorder

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Neuropsychological dysfunction and dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis are common in patients with major depressive disorder (MDD), and as the end product of the HPA axis, cortisol is considered to play an important role in the pathophysiology of MDD. To explore the association between cortisol levels and cognitive function, we conducted an exploratory study. Neuropsychological measurements were performed on 39 patients with MDD and 25 healthy controls. Overnight 12-h urine samples were then collected to measure the average urinary cortisol level and assess the activity of the HPA axis. Finally, an exploratory analysis was performed on the relationship between urinary cortisol level in patients with MDD and depression severity and performance on neuropsychological measures. The results showed that patients with MDD generally suffer from cognitive impairment in information processing speed, attention/alertness, working memory, vocabulary learning, visual learning, reasoning, and problem-solving. Compared with healthy controls, the level of urinary cortisol in patients with MDD was higher, which was positively correlated with the severity of depressive symptoms and reasoning and

problem-solving, and had no correlation with the impairment of other cognitive functions. More studies are needed to confirm or undermine the hypothesis that cortisol plays a role in cognitive function in patients with MDD at many levels. Urinary cortisol level has good specificity and sensitivity to distinguish patients with MDD from healthy controls, and cortisol measurement may serve as an effective diagnostic tool for MDD in the future.

关键词: major depressive disorder, cortisol, HPA, hypercorticism, cognitive function

Resting-State Alpha Activity in The Frontal and Occipital Lobes and Assessment of Cognitive Impairment in Depression Patients

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Objective Major depressive disorder (MDD) becomes one of the psychiatric disorders characteristic of a combination of cognitive, emotional, and somatic symptoms. Additionally, cognitive impairment has the most significant impact on functional results. However, the evaluation of cognitive level is still based on various subjective questionnaires as there is no objective standard assessment yet. This research focuses on resting-state alpha activity to identify cognition in MDD patients using electroencephalography (EEG) signals

Methods Ninety-two subjects were recruited; 44 patients with MDD, and 48 healthy individuals as controls. Functional outcome and cognition were assessed using the standardized instruments, and the EEG resting state signal of open and closed eyes was recorded. The comparison and correlation of cognitive levels with alpha power in the bilateral frontal region, bilateral central region, bilateral occipital region, and middle line

was evaluated

Results Compared with those of the control group ($P < 0.05$), the functional and neuropsychological outcome scores of the MDD group were obviously low. Through correlation analysis, it was shown that the bilateral frontal and occipital alpha power of MDD patients in the closed-eyes state was positively correlated with information processing rate, verbal learning, working memory, and attention retention ($P < 0.05$). The alpha power of the bilateral frontal region in the open-eyes state was positively correlated with information processing rate, working memory, and attention retention ($P < 0.05$)

Conclusion The research indicates that the changes in frontal and occipital alpha activities may be a promising neurophysiological indicator of cognitive level to diagnose and treat response prediction

关键词: Major depressive disorder (MDD), EEG, Alpha power, Cognition impairment

住院严重精神障碍者自杀意念预测模型的构建与验证

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目的 了解住院严重精神障碍患者发生自杀意念的现状并分析其影响因素, 建立预测模型并绘制列线图, 以期为医务人员准确识别发生自杀意念的严重精神障碍患者和早期干预方向提供筛查工具。

方法 选取 2023 年 2 月~8 月严重精神障碍患者 491 例作为研究对象, 以住院期间自杀意念量表得分为判断标准, 将患者分为存在自杀意念组 ($n=255$), 无自杀意念组 ($n=236$)。使用简明精神病量表、汉密尔顿焦虑抑郁量表、Morisky 用药依从性量表、社会支持评定量表、自知力与治疗态度问卷来评估, 采用问卷调查结合病例资料, 收集数据资料。将 491 例患者按照 7: 3 比例随机分组, 其中 344 例作为建模组筛选出独立影响因素, 根据结果构建预测模型并用列线图进行可视化呈现。另外的 147 例作为验证组进行内部验证, 采用受试者工作特征曲

线下面积评估训练集和验证集模型的区分度、校准曲线评估训练集和验证集模型的校准度、Homser-Lemeshow 拟合优度检验评估模型的拟合情况、临床决策曲线评价模型的临床获益情况。

结果 建模组 344 例严重精神障碍者中自杀意念的发生率为 57.6%。Logistic 回归分析显示性别 ($\beta=0.608$, $OR=1.837$)、陪护关系 ($\beta=0.458$, $OR=1.581$)、焦虑 ($\beta=0.395$, $OR=1.039$) 为危险因素; 年龄 ($\beta=-0.021$, $OR=0.979$)、自知力 ($\beta=-0.375$, $OR=0.957$) 为保护因素, P 均 <0.05 。根据多元回归分析的结果构建预测模型, 结果显示受试者工作特征曲线下面积为 0.851, 表明区分度好; Hosmer-Lemeshow 检验值为 4.542 ($P=0.805 > 0.05$), 表明校准度好。当取最佳风险截断值时, 该模型的约登指数为 0.618, 对应的灵敏度为 89.5%, 特异度为 72.3%。临床决策曲线提示存在临床净收益。验证组中 147 例严重精神障碍患者中自杀意念的发生率为 38.8%。验证集受试者工作特征曲线下面积为 0.761, 表明模型区分度较好, Hosmer-Lemeshow 检验 $P=0.539 (> 0.05)$, 显示该模型校准度好; 校准图结果表明, 所构建的模型预测住院严重精神障碍患者自杀意念的概率与实际发生概率的一致性较好, 表明模型具有一定的推行能力。

结论 住院严重精神障碍者发生自杀意念预测模型: $\text{Logit}(P) = -1.756 + 0.608 \times \text{性别} + 0.224 \times \text{陪护关系(亲戚)} + 1.041 \times \text{陪护关系(其它)} + 0.395 \times \text{焦虑得分} - 0.021 \times \text{年龄} - 0.375 \times \text{自知力} + \text{治疗态度得分}$, 该模型经内部验证有较好的区分度和校准度, 具有一定的推行能力。

关键词: 严重精神障碍; 自杀意念; 影响因素; 预测模型; 列线图

基于 fMRI 动态效应连接的双相情感障碍风险决策行为预测研究

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目的 双相情感障碍 (Bipolar Disorder, BD) 患者的冲动、自伤自杀和非理性消费等行为降低了其治疗效果。目前对 BD 患者风险行为的评估主要

依靠临床医生的个人经验和观察, 缺乏可靠的生物标志物。气球模拟风险任务 (The Balloon Analogue Risk Task, BART) 被广泛应用于患者和健康人群的风险决策行为的研究。本研究旨在基于 fMRI 构建 BD 风险决策行为的预测模型, 为临床预防和干预提供科学辅助手段。

方法 本研究纳入 48 例 BD 患者。基于 Resting-fMRI 建立基于体素的动态效应连接 (voxel-based dynamic effective connectivity, voxel-dEC), 使用 BART 实验任务的 Adjusted pumps 作为被试的风险决策衡量指标, 使用冲动量表 (Barratt Impulsiveness Scale-11, BIS) 评估冲动症状。使用基于连接组学的预测模型 (Connectome-based Predictive Modeling, CPM) 和留一法交叉验证 (Leave-one-out cross-validation, LOOCV) 建立基于 voxel-dEC 的 BD 风险决策行为预测模型。回归模型包括线性回归 (LR)、支持向量回归 (SVR) 和高斯过程回归 (GPR)。

结果 相比于 SVR、GPR, 基于 LR 的 CPM 模型取得最优预测结果 ($r=0.48$, $p=0.0006$, $\text{MAE}=0.39$, $\text{MAE}=10.38$)。具有高预测能力的脑区包括前扣带皮层、丘脑、左半球的枕上回、颞极的颞中回和右半球的角回。LR-CPM 模型能够预测 BD 非计划冲动性、注意力冲动性和冲动量表总分 (r 非计划冲动性 = -0.52 , $p=0.0001$; r 注意力冲动性 = -0.74 , $p=0.0001$; r 冲动量表总分 = -0.51 , $p=0.0001$)。

结论 本研究发现基于 Resting-voxel-dEC 的 LR-CPM 模型能够预测 BD 风险决策行为, 该预测模型可推广应用于预测 BD 冲动性得分。该结果提示风险决策和冲动性之间存在可能存在共享的大脑区域。本研究使用 CPM 框架构建 BD 患者从脑到行为预测模型, 说明 BD 的风险决策行为和冲动症状可能是由脑区异常 dEC 所驱动的。本研究为利用 Resting-voxel-dEC 预测精神病患者风险行为提供了重要的基础。

关键词: 动态效应连接; 双相情感障碍; 风险决策行为; 冲动行为

基于静息态 fMRI 脑熵的重性抑郁障碍识别研究

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目的 人脑是一个复杂的动态系统。脑熵 (Brain Entropy, BEN) 测量了大脑在一定时间内功能信号复杂度, 表征了其接收、整合和输出信息的能力。近年来, 基于 fMRI 的脑熵在不同疾病中得到了广泛的应用。重度抑郁障碍 (Major Depressive Disorder, MDD) 是一种高发病率、高复发率、高误诊率和高自杀率的情感性精神障碍, 但是却依旧缺乏客观生物标志物。本研究旨在通过静息态 fMRI (rs-fMRI) 的脑熵开展 MDD 识别研究, 探索时间序列复杂性与 MDD 的关系, 及探讨熵值在 MDD 病理中的意义。

方法 本研究纳入 85 例 MDD 和 76 例健康对照 (Healthy Control, HC)。收集所有被试的 rs-fMRI 脑成像数据、人口学、汉密尔顿抑郁量表 (HAMD) 等信息。将 rs-fMRI 预处理后, 提取 116 个脑区的时间序列信号, 计算每个脑区的样本熵 (Sample Entropy, SampEn) 和置换熵 (Permutation Entropy, PermEn)。使用 Fisher 线性判别作为特征选择方法, 使用支持向量机 (SVM) 作为分类器, 开展 MDD 和 HC 二分类模型训练。最后, 将最优模型的特征集进行组间差异检验和与 HAMD 得分的相关性分析。

结果 MDD 与 HC 在人口学上没有显著组间差异, 在 HAMD 存在显著差异 ($t=26.217, p<0.001$)。SVM 分类结果表明, PermEn (88%) 的分类准确率高于 SampEn (76%)。针对最优特征集进行双样本 T 检验, 结果显示, MDD 脑熵增高的脑区主要集中在右半球, 包括右侧眶部额中回 ($t=1.989, p=0.051$), 右侧岛盖部额下回 ($t=1.968, p=0.054$), 右侧海马旁回 ($t=3.072, p=0.003$) 和右侧缘上回 ($t=1.941, p=0.057$)。MDD 脑熵降低的脑区主要集中在左半球, 包括左侧顶上回 ($t=-2.197, p=0.031$), 左侧颞上回 ($t=-2.054, p=0.042$)。该 6 个差异脑区均与 HAMD 得分不存在显著相关性 (皮尔森相关 p 值 >0.05)。

结论 在 MDD 识别任务上, 基于 rs-fMRI 的置换熵的表现优于样本熵。MDD 右半球脑熵增加, 意味着其时间序列变化较大, 与其情感波动较大和异常情绪体验相对应; 左半球脑熵下降, 意味着时间序列变化较小, 与其认知功能下降相对应。脑熵与抑郁严重程度不存在显著相关关系则提示 MDD 脑熵的改变可能是特质性。本研究为 rs-fMRI 脑熵作为 MDD 生物标志物提供了科学参考依据。

关键词: fMRI; 大脑熵; 抑郁障碍; 识别模型;

置换熵

伏硫西汀在抑郁症及其药物治疗中的作用研究进展

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抑郁症的发作期内, 通常会发生一系列行为、情绪和认知功能的改变, 其中认知功能受损会严重影响患者的社会功能和远期预后[2]。抑郁症患者的认知功能与其职业、社会和日常生活功能之间呈现出显著的关联。近年来, 越来越多的研究者开始关注抑郁症患者认知功能的损害, 并努力寻找可以改善这些认知功能的抗抑郁药物。伏硫西汀 (Vortioxetine) 作为一种新型多模式抗抑郁药物备受研究关注, 它在改善认知功能方面具有显著效果, 而且这种改善很大程度上是独立于抑郁症状的改善[4]。王朔等[5]发现伏硫西汀用于治疗抑郁障碍, 治疗总有效率高达 84.48%, 在有效性及安全性方面不劣于艾司西酞普兰。另有学者指出, 伏硫西汀治疗重度抑郁障碍患者疗效与度洛西汀相当, 且在降低不良反应发生率方面更具优势。这表明伏硫西汀可能成为一种针对认知功能损害的特异性治疗选择。

结论 伏硫西汀广泛应用于抑郁症药物治疗, 显示出显著改善认知功能和抑郁症状的效果。抑郁症患者常伴有认知症状, 伏硫西汀通过多模式药理机制改善注意力、记忆力和信息加工速度等认知功能。伏硫西汀的联合应用也受到研究关注, 这些联合应用产生协同效应, 通过综合调节神经活动、情绪和认知, 进一步改善抑郁症状和认知功能。尽管伏硫西汀在抑郁症治疗中表现出显著效果, 但具体疗效还需进一步研究和临床实践验证。在实际应用中, 联合治疗应根据患者情况个体化制定和监督, 以实现更好的治疗效果。

关键词: 伏硫西汀; 抑郁症; 药物治疗

延续性护理模式在伴自杀意念青少年抑郁患者中的应用效果

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目的 分析延续性护理模式在伴自杀意念青少年抑郁患者中的应用效果。

方法 选取 2023 年 2 月至 2024 年 2 月于南通市第四人民医院出院的 80 例伴自杀意念的青少年抑郁患者作为研究对象。采用随机数字表法将这些患者分为对照组（40 例）和观察组（40 例），其中对照组接受常规护理，而观察组则在常规护理的基础上实施延续性护理模式，两组均干预 6 个月。评估工具包括斯奈思-汉密尔顿快感量表（snaith-hamilton pleasure scale, SHAPS）、17 项汉密尔顿抑郁量表（17-item hamilton rating scale for depression, HAMD-17）、14 项汉密尔顿焦虑量表（14-item hamilton anxiety scale, HAMA-14）、生活满意度量表（satisfaction with life scale, SWLS）、药依从性量表（morisky medication adherence scale-8, MMAS-8）、Beck 自杀意念量表（beck scale for suicide ideation - chinese version, BSI -CV）及功能大体评定量表（global assessment function, GAF）。通过这些评估工具比较了两组患者在接受干预前后的抑郁症状、焦虑症状、快感缺失症状、自杀意念、生活满意度、服药依从性以及个体功能的变化。

结果 在干预后，观察组 HAMD 评分为（15.12±7.53）分，明显低于对照组（19.87±6.63）分， $p<0.05$ ；观察组 HAMA 评分为（14.35±9.41）分，明显低于对照组（18.47±8.71）分， $p<0.05$ ；观察组 SHAPS 评分（2.92±3.49）分，明显低于对照组（4.50±3.37）分， $p<0.05$ ；观察组 BSI-CV 评分（7.45±4.68）分，明显低于对照组（12.80±7.08）分， $p<0.05$ ；观察组 SWLS 评分（20.95±7.72）分，明显高于对照组（17.25±6.92）分， $p<0.05$ ；观察组 MMAS-8 评分（6.32±1.42）分，明显高于对照组（5.23±1.82）分， $p<0.05$ ；观察组 GAF 评分（74.55±14.18）分，明显高于对照组（63.02±9.62）分， $p<0.05$ 。

结论 延续性护理模式能显著改善伴自杀意念的青少年抑郁患者的抑郁、焦虑和快感缺失症状，提高患者的生活满意度、个体功能及服药依从性，并在降低自杀意念方面发挥积极作用。

关键词：抑郁症；快感缺失；延续性护理；服药依从性；个体功能；生活满意度；自杀意念

心理弹性在抑郁症防治中的作用和意义

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抑郁症（MDD）是一种严重的精神障碍，全球患病率约为 4.4%，中国的患病率为高达 6.8%。MDD 的主要症状包括情绪低落、兴趣减退和死亡念头等，严重影响患者的心理健康、社会功能和生活质量。MDD 的发病机制复杂，涉及遗传、环境、心理和生物因素。尽管临床医生针对这些易感性因素进行个体化诊疗，MDD 的发病率和复发率仍然居高不下，提示我们需从保护性因素如心理弹性进行研究。

心理弹性（Resilience，又译作心理韧性，心理复原力）是个体在面对逆境、创伤和压力时有效应对和恢复的能力，对 MDD 具有保护作用。自 20 世纪 90 年代积极心理学的兴起以来，心理弹性成为研究热点。心理弹性是一个动态过程，可以通过训练提高。研究表明，心理弹性高的人即使面临压力也不易患 MDD，他们通常有更积极的应对方式和更强大的社交网络。

COVID-19 疫情导致全球 MDD 患病率增加 28%，而心理弹性高的个体更能保持心理健康。WHO 呼吁提高心理弹性以减少精神疾病的患病率。在 MDD 患者中，心理弹性显著降低，与抑郁症状严重程度负相关。提高心理弹性有助于改善 MDD 症状并降低复发率。研究表明，心理弹性对于 MDD 的预防和治疗具有重要意义。

心理弹性在 MDD 的发生、发展和康复过程中发挥着重要的保护作用。较高的心理弹性有助于个体更好地调节负面情绪，进行积极的认知重构，从而维持积极情绪状态。心理弹性强的个体往往拥有更好的认知方式、情绪调节能力和社会支持网络，这些因素共同作用，帮助他们在压力下减少抑郁症状，提升生活质量。

总之，心理弹性是 MDD 防治的重要保护性因素。提高心理弹性有助于改善 MDD 症状、降低复发率，并促进患者的康复和生活质量提升。未来的研究和临床实践应重视心理弹性的培养和应用，以实现 MDD 的有效防治。

关键词：心理弹性，抑郁症，心理韧性，心理复

原力

适应负荷指数对抑郁症患者海马体积及其静息态功能连接的影响研究

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目的 比较抑郁症患者与健康人群适应负荷 (allostatic load, AL) 指数的差异, 并基于结构磁共振成像和静息态功能磁共振成像, 探究抑郁症患者 AL 指数改变是否与海马及其亚区体积及其与特定区域之间的功能连接 (functional connectivity, FC) 异常有关。

方法 共纳入 86 例抑郁症患者和 43 例健康对照, 采用高风险四分位数法进行 AL 指数的计算, 以双侧海马及其亚区为种子点 (region of interest, ROI), 通过基于体素的形态学测量软件计算出 ROI 体积, 基于 rs-fMRI 评估 ROI 体素水平的全脑 FC, 比较组间差异, 并利用多元回归分析 MDD 患者海马及其亚区体积和 FC 与 AL 指数的相关性, 结合基线期及治疗 2 周后 17 项汉密尔顿抑郁量表评分, 探究海马及其亚区体积及其 FC 的异常是否介导了 AL 指数对患者抑郁严重程度及 2 周抗抑郁治疗效果的影响。

结果 组间比较结果显示, 抑郁症患者组的 AL 指数显著高于健康对照。结构磁共振分析结果显示, 与健康对照相比, 抑郁症患者组的左侧海马 CA1 亚区及 CA3 亚区体积减少 ($P < 0.05$, 未校正)。功能磁共振分析结果显示, 与健康对照相比, 与抑郁症患者整体海马 FC 增强的脑区主要有双侧中央前回和双侧中央后回, 海马亚区 FC 的异常集中在海马旁回区域; 抑郁症患者的 AL 指数与左侧海马至右侧颞中回的 FC 呈正相关, 在亚区层面, AL 指数与海马双侧 CA1 亚区、左侧 CA3 亚区至右侧颞中回的 FC 呈正相关, 与右侧海马沟至右侧枕中回 FC 呈正相关。

结论 抑郁症患者存在 AL 的过度累积, AL 指数的升高可能会导致海马及其亚区 FC 的变化。抑郁症患者部分海马区域的超连接可能参与了多系统亚临床问题对抑郁严重程度影响, 为理解 AL 指数

如何与 MDD 相关提供了神经影像学基础。

关键词: 抑郁症; 适应负荷; 静息态功能磁共振; 海马亚区; 功能连接

心理弹性的多维度评估与新兴技术展望

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心理弹性是精神心理学研究中的关键概念, 指的是个体在面对逆境时的应对和恢复能力。然而, 尽管量表是当前测量心理弹性的主要方法, 它们存在一些固有的局限性, 如主观性、易受情绪状态和回忆偏倚的影响, 这可能会降低评估的准确性和可靠性。例如, Arjun 等人的研究发现, 在调整人口统计学和临床因素后, 传统心理弹性量表 CD-RISC10 的结果与抑郁症状不再相关, 这与理论和以往研究相矛盾。Ventus 等人的研究也质疑了单次回溯性自我评价的有效性, 指出它无法预测个体对压力的情绪反应。

为了更全面地评估心理弹性, 研究者提出了多维度量表, 如 Thakkar 等人提出的包含生物、心理、社会和建筑及自然环境四个维度的模型。在心理弹性中, 认知方式、情绪调节和应对策略与心理弹性紧密相关。高心理弹性的个体通常表现出积极的认知方式和较强的情绪稳定性, 能够有效抵抗抑郁症状。在社会层面上, 积极的社会支持可以促进心理弹性, 缓冲抑郁症的发展, 并降低发病风险。

尽管多维度量表提供了更全面的评估, 但它们的应用可能会使评估过程变得繁琐和耗时, 限制了在大规模人群研究中的应用。为了克服这些局限性, 需要发展一种既客观又高效的评估方法。近年来, 随着科技的进步, 一些新兴技术如生物反馈、行为监测、语音分析和大数据分析, 为开发新型心理弹性评估工具提供了数字表型。这些技术可以客观地反映个体的情绪状态和压力水平, 捕捉应对方式和社会互动模式, 并有望从大量多维度数据中提取有价值的心理弹性信息。

综上所述, 心理弹性是一个多维度的心理特质, 其评估需要综合考虑认知、情绪、应对策略和社会支持等多个关键维度。传统的量表评估方法存在局

限性，而新兴的科技手段为更准确、高效的心理弹性评估提供了新的方向。未来的研究应致力于整合这些技术，开发出能够在大规模人群中快速、准确评估心理弹性的工具，为心理健康研究和临床干预提供坚实的基础，并帮助提升人们的心理弹性和整体健康水平。

关键词：心理弹性测量，数字表型，大模型

语音分析技术在心理弹性评估的应用前景

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随着人工智能和机器学习技术的发展，语音分析作为一种新兴的评估工具，在精神医学的评估、诊断和治疗中显示出巨大潜力。与传统方法相比，语音分析具有数据量大、易于获取、非侵入性等优势，使得数据收集过程简便、高效，同时避免了对受试者的侵入性操作，减少了抵触情绪和不适感。

语音信号的声学特征和语义内容可以作为客观的数字表型，减少传统心理评估中的主观偏差。2020年的荟萃分析发现，特定语音特征如振幅微扰、频率微扰、谐波噪声比（HNR）的增加，以及基频变异性、声强均值及变异性、停顿占比、语速和梅尔频率倒谱系数（MFCC）的降低，与抑郁症状存在显著相关性。这表明语音特征在精神医学应用中具有重要价值。

心理弹性高的个体在语音中表现出积极的认知方式、情绪稳定性和应对策略，这些特征可以通过语音分析来反映。研究显示，语音的声学特征能够反映个体的情绪状态变化，为评估心理弹性提供了新途径。通过提取语音中的消极词汇、消极意图和绝对化描述，可以间接反映心理弹性水平。同时，语音中的关键信息，如解决问题的描述和社交互动的提及，也能体现个体的应对方式和社会支持。

语音分析技术的简便性、无创性和实时性使其在早期识别和干预心理健康问题方面具有应用潜力。未来，语音分析有望与个性化治疗方案相结合，根据语音特征的变化动态调整治疗策略，提高治疗效果。结合其他生物标记的多模态数据融合模型，将进一步增强精神健康评估的准确性和全面性。

技术的创新和跨学科合作将推动语音分析技术在精神健康评估和治疗中的应用，为精神医学领域提供更加科学、有效的工具，促进其持续发展。随着语音分析技术的不断进步，我们期待它在精神医学领域扮演越来越重要的角色，为心理健康的维护和促进做出贡献。

关键词：语音分析；精神医学；心理弹性；评估工具；人工智能；机器学习；数字表型；多模态数据融合模型

A Cross-sectional Study Exploring The Relationship between Symptoms of Anxiety/Depression and P50 Sensory Gating in Adult Patients Diagnosed with Chronic Fatigue Syndrome/myalgic Encephalomyelitis

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Objective Chronic fatigue syndrome (CFS) is a clinical disease that affects multiple body systems. It is characterized by persistent or recurring fatigue, which may be linked to immune, neuroendocrine, and energy metabolism dysfunctions. Individuals with CFS may experience pain, sleep disorders, anxiety, and depression. This research analyzed the fundamental characteristics of anxiety/depression symptoms in patients with CFS and investigated the association between these symptoms and the P50 SG (sensory gate) ratio

Methods Two hundred and forty-nine subjects fulfilled the CDC-1994 criteria for CFS and were included in the study. The subjects successively completed the Symptom Checklist-90-Revised (SCL-90-R), Hamilton Anxiety Rating Scale-14 (HAMA-14), and Hamilton Depression Rating Scale-24 (HAMD-24). Auditory-evoked potential P50 were measured using the 128-lead-electroencephalograph

Results According to HAMA and HAMD, 17.3% (n = 43) of the patients did not exhibit anxiety/depression, with a threshold score of 7 and 7 for HAMA and

HAMD. When the threshold score was 14 and 20 respectively, 43.3% ($n = 108$) of the patients did not exhibit anxiety/depression. The SCL-90-R results indicated that 69.5% ($n = 173$) of these individuals with the score arranging from 0 to 160 did not present mental problems. There was a correlation between somatization scores and P50 SG ratio in the overall sample and no anxiety or depression (NAOD) group delimited by 14 and 20, respectively, ($p < 0.05$). Regression analysis showed that anxiety and depression were risk factors associated with an abnormal P50 SG ratio

Conclusion A significant correlation exists between the P50 SG ratio and clinical symptoms such as fatigue, anxiety, and depression. Abnormalities in brain function among patients with CFS may play a crucial role in the pathogenesis of the condition, leading to their classification as being prone to functional neurological disorders. The P50 SG ratio cannot be used as a diagnostic marker for CFS but show some significance on the mechanism, classification, treatment, and prognosis of CFS

关键词: chronic fatigue syndrome/myalgic encephalomyelitis, anxiety, depression, auditory evoked potential P50, functional neurological disorder

肌力减少性腹型肥胖对中老年人抑郁症状的影响研究

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目的 探讨肌力减少性腹型肥胖与中老年抑郁症状的关联。

方法 基于中国健康与养老追踪调查数据库 (CHARLS) 2015 年和 2018 年的截面数据, 共纳入符合研究要求的 9322 名 45 岁及以上的中老年人。参与对象根据其握力水平 (男性 < 28 千克, 女性 < 18 千克) 和腰围 (男性 ≥ 85 厘米, 女性 ≥ 80 厘米) 被分为四组: 非肌力减少/非腹型肥胖组 (ND/NAO)、非

肌力减少/腹型肥胖组 (ND/AO)、肌力减少/非腹型肥胖组 (D/NAO) 和肌力减少/腹型肥胖组 (D/AO)。采用简版流调中心抑郁量表 (the Center for Epidemiological Studies Depression Scale, CES-D10) 评估调查对象的抑郁症状, 将 CES-D10 评分 ≥ 12 评定为具有抑郁症状。采用 logistic 回归模型探讨肌力减少性腹型肥胖与抑郁症状的关联。

结果 经过约 3 年随访, 1810 例 (19.4%) 发生抑郁症状。多因素 logistic 回归模型结果表明, 相较于非肌力减少/非腹型肥胖组 (ND/NAO), 肌力减少性腹型肥胖组的研究对象发生抑郁症状的风险显著升高 (OR 1.61; 95% CI 1.31-1.98)。亚组分析结果显示, 不同年龄组与肌力减少性腹型肥胖对抑郁症状的影响有交互作用 (P -交互 = 0.04), 相较于年龄 ≥ 60 岁的研究对象, 肌力减少性腹型肥胖与抑郁症状的关联在 < 60 岁的人群中更明显 (年龄 < 60 岁: OR 2.27; 95% CI 1.60-3.22; ≥ 60 岁: OR 1.36; 95% CI 1.05-1.77)。此外, 肌力减少性肥胖 (根据体质质量指数定义) 与抑郁症状的关联尚未达到统计学显著性水平 ($P > 0.05$)。

结论 肌力减少性腹型肥胖可显著提升我国中老年人抑郁症状发生风险, 尤其是在年龄 < 60 岁的人群中。提示在社区筛查中, 肌力减少性腹型肥胖可能是识别抑郁高风险人群的实用指标。建议加强对中老年人的营养及运动干预, 从而改善肌力水平与体成分, 进而减少肌力减少性腹型肥胖相关的不良影响。

关键词: 肌力减少性腹型肥胖, 握力, 腹型肥胖, 抑郁症状

基于高阶脑熵的重性抑郁障碍脑龄估计研究

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目的 脑龄是脑疾病的潜在生物标志物。脑熵值作为评价大脑复杂性和规律性的指标, 提供了一个认识大脑和大脑疾病的新途径。但是目前脑熵大多为静态脑熵, 少有研究关注动态脑熵的潜在应用价值。本研究旨在构建动态脑熵并探究其在健康和重性抑郁障碍 (MDD) 脑龄预测任务上的性能。

方法 本研究通过粗粒化原理和时间序列窗口

划分的原则, 构建了传统静态脑熵 (即一阶脑熵), 高阶脑熵 (二, 三, 四阶), 以及融合特征 (拼接), 并将 sMRI 数据经过 Freesurfer 软件预处理得到皮层表面积、厚度等。基于健康对照数据进行脑龄估计模型训练。预测器包括支持向量回归 (SVR)、线性回归 (LR) 高斯过程回归 (GPR)。本研究使用留一法交叉验证方法。获得最优模型后, 将其应用于发作期和缓解期 MDD 脑龄估计。

结果 在健康对照组中, 基于 SVR 和融合特征的脑龄预测模型取得最优结果, 优于 sMRI 特征和静态脑熵。将最优模型将其应用于整体 MDD、发作期 MDD 和缓解期 MDD, 也得到了类似的结果。

结论 高阶脑熵提高了脑龄估计模型的预测性能。在表征脑衰老特征上, 高阶脑熵可能比传统静态脑熵和结构特征更敏感, 更具有特异性。因此, 深入开展针对脑熵构建方法的研究是提高脑龄估计模型预测性能的重要途径。

关键词: 高阶脑熵; 动态性; 抑郁障碍; 脑龄; 预测模型

规范化培训住院医师抑郁症状及影响因素分析

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目的 了解规范化培训住院医师存在的抑郁症状, 分析其影响因素, 探讨改善抑郁症状的措施

方法 选择在浙江大学医学院附属邵逸夫医院参加规范化培训的住院医师为研究对象, 采用问卷调查的形式了解规培医生存在的抑郁症状。调查问卷包括规培医生的基本信息和贝克抑郁自评量表。本研究以贝克抑郁自评量表得分 ≥ 14 分为抑郁症状检出阳性。

结果 本次调查共发放问卷 300 份, 回收有效问卷 240 份, 有效问卷回收率 80%。结果显示贝克抑郁自评量表总分 ≥ 14 分者共 64 人, 规培医生抑郁症状检出率为 26.7%, 提示这部分规培医生可能存在显著的抑郁症状。将规培医生的基本情况变量作为自变量, 规培医生的抑郁症状结果作为应变量, 进行 logistic 回归分析, 结果显示: 规培年级、周工作时间、工作压力、对心理健康知识的了解程度是

造成规培医生抑郁症状的主要因素。二年级规培医生与一年级规培医生更容易出现抑郁症状, 周工作时长、工作压力大、对心理健康知识缺乏了解的规培医生更容易出现抑郁症状。

结论 规培医生存在的抑郁症状较突出, 规培医生对心理健康知识 (如积极心理调节、识别负面情绪等) 的了解程度并不高, 缓解规培医生工作压力、进行心理干预等措施, 将有助于改善规培医生的抑郁症状。

关键词: 规范化培训住院医师, 抑郁症状, 影响因素

体重调整腰围指数对中老年人抑郁症状的影响研究

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目的 肥胖和抑郁之间的关联尚不明确, 这通常归因于“肥胖悖论”。体重调整腰围指数 (Weight-adjusted-waist index, WWI) 是一种新型的肥胖测量方法, 探讨基线 WWI 及累积 WWI 与中老年抑郁症状的关联。

方法 本研究采用中国健康与养老追踪调查数据库 (CHARLS) 2011 年—2018 年的截面数据, 共纳入符合研究要求的 7220 名 45 岁及以上的中老年人。基线 WWI 的计算方法是用腰围除以体重的平方根 ($\text{cm}/\sqrt{\text{kg}}$)。累积 WWI 以以下两种方式表达:

(1) 累积平均 WWI: 2011、2013 和 2015 年 WWI 水平的均值; (2) WWI 的累积升高次数: 依据 WWI 在 3 次连续测量中 (2011 年、2013 年和 2015 年) 的累积升高次数 (高于上四分位数) 将研究对象分为累积升高 0 次组、累积升高 1 次组、累积升高 2 次组和累积升高 3 次组。采用简版流调中心抑郁量表 (the Center for Epidemiological Studies Depression Scale, CES-D10) 评估调查对象的抑郁症状, 将 CES-D10 评分 ≥ 10 评定为具有抑郁症状。采用 logistic 回归模型探讨基线 WWI 及累积 WWI 与抑郁症状的关联。

结果 经过约 7 年随访, 2074 例 (28.7%) 发生抑郁症状。研究对象发生抑郁的风险随着基线

WWI 水平的升高而增加。调整年龄、性别、教育水平和既往疾病史（高血压、糖尿病等）等混杂因素后，相较于最低基线 WWI 四分位组 ($<10.56 \text{ cm}/\sqrt{\text{kg}}$)，最高基线 WWI 四分位组 ($\geq 11.62 \text{ cm}/\sqrt{\text{kg}}$) 的研究对象发生抑郁症状的风险显著升高 (OR 1.28; 95% CI 1.08-1.51)。多因素调整模型显示，最高累积平均 WWI 四分位组的调查对象发生抑郁的风险是最低四分位组的 1.51 (95% CI 1.06-2.16) 倍；相较于 WWI 在 3 次连续测量中均未升高的调查对象，在 WWI 升高 1 次 (OR 1.38; 95% CI 1.03-1.86)、升高 2 次 (OR 1.49; 95% CI 1.04-2.15) 及升高 3 次 (OR 1.57; 95% CI 1.05-2.34) 的抑郁症状发生风险更高。

结论 高基线和累积 WWI 水平可显著增加我国中老年人抑郁症状发生风险。体重调整腰围指数可能有助于识别抑郁症风险较高的人群，长期保持适当的体重调整腰围指数水平可能有助于预防抑郁症的发生。

关键词： 体重调整腰围指数，肥胖，抑郁症状，中年人，老年人

青少年抑郁障碍患者非自杀性自伤行为的影响因素研究

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目的 调查青少年抑郁障碍患者非自杀性自伤 (NSSI) 行为的情况，分析相关影响因素，为 NSSI 的防治提供理论基础及参考。

方法 选取 95 例青少年抑郁障碍患者，根据 DSM-5 关于 NSSI 的诊断标准，将患者分为伴有 NSSI 行为组 (NSSI 组) 和不伴有 NSSI 行为组 (nNSSI 组)。采用青少年非自杀性自伤行为问卷 (ANSAQ)、抑郁自评量表 (SDS)、焦虑自评量表 (SAS)、简易应对方式问卷 (SCSQ)、亲密关系体验-关系结构量表 (ECR-RS)、青少年生活事件量表 (ASLEC) 对患者进行评估，比较 NSSI 组与 nNSSI 组两组的组间差异，并使用二元 Logistic 回归分析探究 NSSI 行为的影响因素。

结果 95 例青少年抑郁障碍患者中有 59 例存在 NSSI，检出率为 62.11%。NSSI 组在抑郁自评量表、焦虑自评量表、SCSQ 消极应对、对父亲的依恋

焦虑、对母亲的依恋焦虑及依恋回避、ASLEC 总分、受惩罚、人际压力、学习压力、适应方面的评分均高于 nNSSI 组 ($P < 0.05$)。二元 Logistic 回归分析提示，消极应对、对母亲的依恋回避、受惩罚是青少年抑郁障碍患者 NSSI 行为发生的危险因素 ($P < 0.05$)。

结论 本研究提示青少年抑郁障碍患者 NSSI 发生率较高，对母亲的依恋回避、受惩罚、消极应对是青少年抑郁障碍患者发生 NSSI 行为的危险因素。临床中除了改善患者的抑郁、焦虑情绪外，还需注意关注患者的应对方式、亲子关系及负性生活事件，以减少 NSSI 行为的发生。

关键词： 青少年，抑郁障碍，非自杀性自伤，影响因素

Autonomic Nerve Dysfunction Mediates The Association between Objective Short Sleep Duration and Elevated Blood Pressure in Patients with Major Depressive Disorder

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Objective Major depressive disorder (MDD) was associated with short sleep duration, autonomic nerve dysfunction and increased blood pressure. However, their relationship remained unclear. We hypothesized that objective short sleep duration is associated with heightened blood pressure in patients with MDD, and this association might be mediated by impaired autonomic nerve system function. This study was aimed to explore the association between sleep duration, autonomic nerve activity and blood pressure in MDD patients

Methods We studied 66 consecutive MDD patients and age and sex matched 66 controls. Objective sleep was assessed by an overnight polysomnography. Subjective sleep was retracted from the Question 2 in Pittsburgh Sleep Quality Index. Heart rate variability (HRV) was used for assessing autonomic nerve function. The averaged evening and morning measured systolic (SBP) and diastolic blood pressure (DBP) were used for analyses

Results In patients with MDD, each 1-hour reduction in objective sleep duration was associated with 2.56-mmHg increase in SBP ($\beta=0.028$, $p=0.011$) and 1.59-mmHg increase in DBP ($\beta=0.024$, $p=0.043$). Furthermore, the increase in non-rapid eye movement sleep (NREM)-heart rate (HR), NREM-low frequency normalized unit (LFnu) and rapid eye movement sleep (REM)-HR, and decrease in NREM-standard deviation of NN intervals (SDNN), NREM-root mean square of successive differences (RMSSD) and NREM-LFnu was associated with lower objective sleep duration (all $p\leq 0.043$) and increase in SBP and DBP (all $p\leq 0.037$). Mediation effect models suggested that the HRV mediated the association between objective sleep duration and BP in patients with MDD with 17~79% mediating effect. However, no association was observed between subjective sleep duration and SBP/DBP in MDD patients or between objective/subjective sleep duration and SBP/DBP in controls

Conclusion Objective, but not subjective short sleep duration, was associated with increased blood pressure in patients with MDD. This association was mediated by autonomic nerve dysfunction

关键词: Major depressive disorder, autonomic nerve dysfunction, sleep duration, blood pressure, mediating effect

针刺肝俞、脾俞、肾俞治疗气郁化火型郁证的临床疗效观察

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目的 抑郁发作是精神科最常见的病种,以情绪低落、兴趣减退、快感缺失为主要症状的疾病,占到精神科疾病的17%左右,也是较为难治的一种精神疾病,因大多数伴随焦虑症状:表现紧张害怕、坐立不安、预期担心;伴随躯体症状:胃肠不适、便秘、全身麻木疼痛感等;伴随心理症状:负性自动化思维、思维迟缓、注意力难集中等,缠绵难愈。单纯药物治疗不能满足临床治疗需求,用多维度的治疗,来改善临床症状,势在必行。精神科诊断抑郁发作,

符合中医诊断郁证,气郁化火型,两组患者全部口服5-羟色胺再摄取抑制剂,其中56例患者合并针刺肝俞、脾俞、肾俞,进行研究与对照组临床治疗效果的比较。

方法 将来自心身医学科住院患者中,筛选出符合入组要求的96例患者分成两组,研究组56例,口服5-羟色胺再摄取抑制剂合并针刺肝俞、脾俞、肾俞等穴位,针刺治疗每天一次,每五次为一个疗程;对照组40例,口服5-羟色胺再摄取抑制剂,两组患者在治疗前、治疗后第一、第二和第三疗程,对HAMD、HAMA总分变化进行观察。

结果 三个疗程后HAMD总分平均值研究组11.5263,对照组14.9444;HAMA总分平均值研究组8.2105,对照组10.8333

结论 研究组与对照组HAMD、HAMA总分平均值有差别,研究组小于对照组,治疗有较好效果。

关键词: 郁证 气郁化火 针刺 肝俞 脾俞 肾俞

喹硫平增效治疗伴自伤行为青少年抑郁发作患者临床对照研究

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目的 探讨喹硫平增效治疗伴自伤行为青少年抑郁发作患者的临床疗效。

方法 选取2020年1月至2021年12月在郑州大学第一附属医院精神科门诊及病房连续就诊的伴自伤行为青少年抑郁发患者作为研究对象,共入组108例患者。依据《精神疾病诊断与统计手册》(DSM-5)抑郁发作的诊断标准,将患者随机分为2组,对照组为单一服用舍曲林,研究组为喹硫平联合舍曲林,疗程共6周。以汉密尔顿抑郁量表24项版(HAMD-24)、汉密尔顿焦虑量表(HAMA)、症状自评量表(SCL-90)分别于基线、2周末、4周末、6周末评定其临床疗效。

结果 组间比较,2组治疗2周末HAMD-24、HAMA评分差异具有统计学意义($p<0.05$),SCL-90评分无显著差异($p>0.05$)。治疗4周末、6周末HAMD-24、HAMA、SCL-90评分出现差异具有统计学意义($p<0.01$)。组内比较,HAMD-24、HAMA、

SCL-90 评分于 2 周末、4 周末、6 周末均有统计学意义 ($P < 0.01$)。2 组患者治疗有效率相比差异具有统计学意义 ($p < 0.05$)。2 组患者不良反应总发生率无显著差异 ($p > 0.05$)。

结论 结论 喹硫平增效治疗伴自伤青少年抑郁发作患者与单服舍曲林治疗相比, 临床疗效更好。

关键词: 喹硫平, 舍曲林, 自伤行为, 青少年抑郁发作, 临床对照研究

伴忧郁特征抑郁症患者钝化的社会奖赏加工: 事件相关电位研究

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目的 既往研究发现, 相较于金钱奖赏, 抑郁症更主要与异常的社会奖赏加工有关。其中, 以快感缺失为核心表现的伴忧郁特征亚型更可能表现出受损的奖赏加工。因此, 本研究目的是比较伴/不伴忧郁特征抑郁症的社会奖赏加工差异, 并分析与快感缺失症状的关联。

方法 招募 40 例伴忧郁特征抑郁症患者、40 例不伴忧郁特征抑郁症患者及 50 例健康对照组。采用 M.I.N.I 忧郁特征模块对是否伴有忧郁特征进行诊断区分, 并采用时间性快感体验量表 (TEPS) 评估了动机性快感缺失和消费性快感缺失得分。所有被试在脑电图记录下完成社会激励延迟 (SID) 任务, 并对该任务中的事件相关电位 (ERPs) 进行了分析。主要测量指标包括奖赏预期阶段的 N2 波 (cue-N2), 奖赏反馈阶段的奖赏相关负波 (FRN) 及 P3 波 (fb-P3)。采用重复测量方差分析比较三组间 ERPs 的差异, 采用偏相关分析进行 FRN 波与消费性快感缺失得分之间的关联分析。

结果 伴忧郁特征抑郁症患者 cue-N2、FRN 平均振幅均降低, 提示该亚型患者同时存在社会奖赏预期和反馈的钝化。值得注意的是, FRN 波的重复测量方差分析结果显示组别 (伴忧郁特征、不伴忧郁特征、健康对照) \times 条件 (正性、中性) 的交互

作用显著 ($F(2, 127) = 4.15, p = 0.018, \eta^2 p = 0.061$), 提示伴忧郁特征抑郁症患者对正性和中性反馈具有相似的神经反应 (钝化), 而不伴忧郁特征抑郁症患者 ($t(39) = 3.09, p = 0.004$) 和健康对照 ($t(49) = 5.25, p < 0.001$) 对正性反馈的反应比中性反馈更敏感。此外, 还发现 FRN 波振幅与消费性快感缺乏得分相关。

结论 研究表明, 伴忧郁特征抑郁症患者对社会奖赏预期和反馈都表现出钝化的神经反应。这表明, 异常的社会奖赏加工可能成为伴忧郁特征亚型的潜在生物标志物, 且有助于阐释抑郁症的异质性。

关键词: 社会奖赏, 伴忧郁特征, 抑郁症, 事件相关电位, 脑电图

Tartary Buckwheat Flavonoids Affects Chronic Unpredictable Mild Stress-induced Depression in Rats Via The Gut Microbiota-inflammation-brain Axis

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Objective Considerable evidence links gut microbiota dysbiosis to the pathogenesis of a spectrum of mental health disorders, including depression. This study aimed to delineate the therapeutic potential and mechanistic underpinnings of tartary buckwheat flavonoids (TBF) for the treatment of depression induced by chronic unpredictable mild stress (CUMS) in rats

Methods Thirty rats were randomly assigned to one control and four experimental groups. The four groups were subjected to CUMS, with three groups receiving different doses of TBF treatment. Behavioral assessments were conducted, including an open field test, sucrose preference test, and forced swim test (FST). Inflammatory biomarkers within the prefrontal cortex (PFC) and systemic circulation were quantified using enzyme-linked immunosorbent assay (ELISA). Additionally, stimulation was analyzed using metagenomic sequencing

Results Compared to the control group, rats in the CUMS group demonstrated a marked decrease in sucrose consumption, total distance traveled, center distance within the open field, and duration spent in the central zone. Conversely, there was an increase in immobility time during the FST. Treatment with TBF reversed these behavioral changes. Moreover, TBF administration significantly mitigated the elevated levels of inflammatory markers, including TNF- α , IL-6, IL-1 β , and CRP, in the PFC and plasma of the CUMS rats. Additionally, CUMS induced significant variations in the gut microbiota composition at the genus and phylum levels, which were partially reversed by TBF treatment

Conclusion TBF relieved depression-like behavior in rats, concomitantly altering fecal microbiome composition. Our results offer novel perspectives on the therapeutic application of TBF in the management of depressive disorders

关键词: Keywords: chronic unpredictable mild stress, tartary buckwheat flavonoids, metagenomic sequencing

氟西汀总活性成分在抑郁患者中的群体药代动力学研究

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目的 建立抑郁患者氟西汀 (FLX) 总活性成分 (TAM) 的群体药代动力学 (PPK) 模型并研究其影响因素, 为个体化用药提供参考。

方法 回顾性收集 2020~2023 年深圳市康宁医院 154 例服用 FLX 治疗住院患者的用药情况、FLX 和去甲氟西汀 (NFLX) 血药浓度、肝肾功能水平、血脂水平及细胞色素 P450 2D6 酶 (CYP2D6) 基因型等临床资料, 计算 FLX 和 NFLX 浓度之和为血浆 TAM 浓度, 采用非线性混合效应模型法 (NONMEM) 建立 TAM 浓度 PPK 模型, 采用拟合优度图 (GOF)、正态化预测分布误差法 (NPDE) 和自举法 (Bootstrap) 对模型的稳定性和预测性能进行评估。基于最终模型的显著协变量, 模拟不同人群不同剂量 TAM 浓度的变化情况, 拟合达稳态时间并推荐给药剂量的。

结果 154 例住院患者 570 个血药浓度数据包括 FLX (n=285) 和 NFLX (n=285) 建立了 TAM 的一阶吸收和消除的一房室模型, 体重 (WT) 是影响表观清除率 (CL/F) 的显著协变量, 最终模型参数 CL/F、表观分布容积 (V/F) 和吸收速率常数 (Ka) 的群体典型值分别为 2.91 L·h⁻¹、734 L 和 0.3 h⁻¹, 模型表示为: $CL/F(L \cdot h^{-1}) = 2.91 \times (WT/55)^{0.531}$, $V/F(L) = 734$, $Ka(h^{-1}) = 0.3$ (固定值)。蒙特卡洛模拟结果显示, 规律服药的患者 TAM 浓度达稳态需 6~11 周, 达稳时间随剂量增大或体重减小而延长, 体重为 10~40、40~70、70~100 kg 和 100~120 kg 患者的最佳给药剂量分别为 20、30、40 和 50 mg, 体重为 10~20、20~30、30~40 kg 和大于 40 kg 患者的最大给药剂量分别为 30、40、50 和 60 mg。

结论 成功建立了服用 FLX 治疗的抑郁患者 TAM 浓度的 PPK 模型, 最终模型稳定且预测性能良好, 低体重人群应选择较低剂量的 FLX, 避免药物蓄积产生不良反应。

关键词: 氟西汀; 总活性成分; 群体药代动力学; 血药浓度; 基因多态性

联合使用丁螺环酮对重度抑郁发作患者自杀意念的影响

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目的 通过对粤北某大型精神病专科医院重度抑郁患者联合使用丁螺环酮的调查, 观察联合使用丁螺环酮对重度抑郁症患者自杀观念的影响; 验证 5-羟色胺能效应对自杀观念产生与消除的理论基础, 为抗自杀治疗提供临床依据。

方法 回顾性调查合并自杀观念的重度抑郁发作患者联合使用丁螺环酮情况; 配对平衡联合丁螺环酮治疗与无抗自杀措施两组样本的社会人口学条件, 分别比较基线及 12 周末两组 HAMA 总分、BSI-CV 自杀意念分量表评分; 分别进行基线与 12 周末丁螺环酮剂量、HAMA 总分与 BSI-CV 自杀意念分量表评分之间的相关分析。

结果 调查时段内共有 16 例患者联合使用丁螺环酮 (16/145, 11.03%), 入院时 HAMA 总分

(27.69±8.81), 入院时 BSI-CV 总分 (5.29±2.15)。联合丁螺环酮治疗组与无抗自杀措施组在主要社会人口学资料及基线 HAMA 总分、BSI-CV 自杀意念分量表评分间配比平衡 (P 均≥0.05); 12 周末联合丁螺环酮治疗组 HAMA 总分 (7.39±3.31), BSI-CV 自杀意念分量表评分 (0.91±1.53) 显著低于无抗自杀措施组。

结论 丁螺环酮可能通过降低焦虑水平缓解自杀观念相关 (分析表明, 丁螺环酮与自杀意念之间并无直接的关联, 与焦虑水平之间也无统计学意义上的关联。然而, 基线焦虑水平却与自杀意念存在强度上的数学关联, 焦虑水平越高, 自杀意念越强。丁螺环酮通过 5-HT、DA 能效应直接降低焦虑水平, 焦虑水平的下降有助于自杀意念的缓解与消除, 焦虑是丁螺环酮与自杀意念之间的中介变量。因此, 丁螺环酮的使用, 通过降低焦虑水平缓解自杀意念); 抗焦虑治疗缓解自杀的机理需进一步探索; 临床上在自杀患者群体常规联合应用抗焦虑治疗; 将抗焦虑治疗作为抗自杀治疗的观察指标。

关键词: 重度抑郁发作; 自杀意念; 丁螺环酮; 5-羟色胺; 自杀治疗。

Neurological and Metabolic Related Pathophysiology and Treatment of Comorbid Diabetes with Depression

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Objective The comorbidity between diabetes mellitus and depression was revealed, and diabetes mellitus increased the prevalence of depressive disorder, which ranked 13th in the leading causes of disability-adjusted life-years. Insulin resistance, which is common in diabetes mellitus, has increased the risk of depressive symptoms in both humans and animals. However, the mechanisms behind the comorbidity are multi-factorial and complicated. There is still no causal chain to explain the comorbidity exactly. Moreover, Selective serotonin reuptake inhibitors, insulin and metformin, which are recommended for treating diabetes mellitus-induced depression, were found to be a risk factor in some complications of diabetes. Given these problems, many researchers made remarkable efforts to analyze diabetes complicating depression from different aspects, including insulin resistance, stress and Hypothalamic-Pituitary-Adrenal axis, neurological system, oxidative stress, and inflammation. Drug therapy, such as Hydrogen Sulfide, Cannabidiol, Ascorbic Acid and Hesperidin, are conducive to alleviating diabetes mellitus and depression. Here, we reviewed the exact pathophysiology underlying the comorbidity between depressive disorder and diabetes mellitus and drug therapy

Methods The review refers to the available literature in PubMed and Web of Science, searching critical terms related to diabetes mellitus, depression and drug therapy

Results In this review, we found that brain structure and function, neurogenesis, brain-derived neurotrophic factor and glucose and lipid metabolism were involved in the pathophysiology of the comorbidity.

Obesity might lead to diabetes mellitus and depression through reduced adiponectin and increased leptin and resistin. In addition, drug therapy displayed in this review could expand the region of potential therapy

Conclusion The review summarizes the mechanisms underlying the comorbidity. It also overviews drug therapy with anti-diabetic and anti-depressant effects

关键词: comorbidity, depression, diabetes mellitus, pathophysiology, treatment

Efficacy of Fluoxetine Combined with Cognitive Behavior Therapy in Treating Non-Suicidal Self-Injury in Adolescents: A Systematic Review

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Objective Depression is a long-term mood condition that produces sorrow, loss of pleasure and interest, frequently with cognitive impairment. The incidence and lifetime prevalence of depression in children and adolescents are rising across all patient categories. According to statistics, 20% of teens experience significant depression. This study conducted a comprehensive review to analyse the impact of combining fluoxetine with cognitive behaviour therapy in the treatment of non-suicidal self-injury in adolescents

Methods The Cochrane Library, PubMed, Embase and Web of Science were searched for controlled trials of fluoxetine and cognitive behaviour therapy for depressed adolescents. Screening and extracting material for systematic review occurred between database inception and May, 2023

Results Seven trials included 893 participants. The systematic review found that the intervention group had a significantly higher rate of remission (OR: 1.11; 95% CI: 1.03, 1.20; $p < 0.01$) than the untreated group. The two groups of patients had similar rates of recurrence, self-injury adverse events and overall adverse

events (OR: 0.96; 95% CI: 0.57, 1.61; $p = 0.868$)

Conclusion This study demonstrated the stability and reliability of fluoxetine and cognitive behaviour therapy for depressed teenagers. The findings showed that fluoxetine and cognitive behaviour therapy may help depressed teenagers remit

关键词: Fluoxetine, cognitive behavior therapy, non-suicidal self-injury, depression, treatment approach

中老年抑郁症患者自我表露与社会疏离感和心理社会适应的相关性 及其影响因素分析

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目的 分析中老年抑郁症患者自我表露与社会疏离感和心理社会适应的相关性及其影响因素。

方法 收集 2023 年 8 月至 2024 年 3 月于山西省某三甲综合医院住院治疗的 236 例中老年抑郁症患者作为研究对象,采用痛苦表露指数量表(DDI)、一般疏离感量表(GAS)和疾病心理社会适应自评量表(PAIS-SR)评估自我表露、社会疏离感和心理社会适应水平。采用 Pearson 相关性分析 DDI 总分与 GAS 总分、PAIS-SR 总分相关性,并分析影响中老年抑郁症患者自我表露水平的影响因素。

结果 本调查共发放问卷 247 份,收回有效问卷 236 份,有效回收率为 95.54%。中老年抑郁症患者 DDI 总分为(28.58±7.96)分,GAS 总分和 PAIS-SR 总分分别为(34.23±9.64)分和(31.90±9.55)分。不同年龄、婚姻状态、复发抑郁、孤独感、社会支持水平的患者 DDI 总分比较,差异有统计学意义($P < 0.05$)。Pearson 相关性分析显示,DDI 总分与 GAS、PAIS-SR 总分呈负相关($r = -0.437$ 、 -0.505 , $P < 0.01$)。多元线性回归分析显示,年龄、婚姻状态、复发抑郁、孤独感和社会支持水平均是中老年抑郁症患者自我表露水平的影响因素($P < 0.05$)。

结论 中老年抑郁症患者自我表露处于低水平,患者自我表露水平越低,社会疏离感水平越高,心理社会适应水平越差。年龄、婚姻状态、复发抑郁、孤独感和社会支持水平是中老年抑郁症患者自我表露水平的影响因素,应进行针对性干预,提高其自我表露水平。

关键词: 抑郁症, 自我表露, 社会疏离感, 心理社会适应, 影响因素

慢性不可预知温和应激致小鼠口苦味受体表达的变化

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目的 随着社会快速发展和生活节奏加快, 许多人面临着来自工作、家庭以及社交媒体等各种压力, 这些压力常常导致心理健康问题, 其中抑郁症是其中之一。抑郁症不仅会对个体心理健康造成严重影响, 还可能影响人们的社会交往和生理活动。除了对心理健康的影响外, 抑郁症还可能引发味觉改变甚至味觉障碍, 这种现象进一步加重了患者的负面情绪和心理症状。然而, 目前关于抑郁症和味觉障碍之间的发病机制尚未得到完全的解释和理解。因此, 我们需要进一步开展研究, 以便更好地预防和治疗抑郁症及其相关的生理影响, 帮助人们建立健康的生活方式和心理抵抗力, 从而提升整体生活质量。

方法 本研究采用慢性不可预知的温和应激 (CUMS) 方法在雄性 C57BL/6J 小鼠中建立了抑郁模型, 旨在探究抑郁情绪对味觉的影响, 特别是舌上的味觉受体表达变化。经过为期 6 周的 CUMS 实验后, 通过强迫游泳、旷场实验和高架十字迷宫等行为学测试, 筛选出表现出抑郁症状的小鼠, 随后进行了双瓶偏好实验, 检测了抑郁对苦味的影响, 并通过免疫荧光技术检测了舌上苦味受体的表达。

结果 研究结果显示, CUMS 抑郁小鼠相较于正常小鼠对苦味的敏感性降低, 同时 qRT-PCR 和免疫荧光技术证实了 CUMS 小鼠舌上苦味受体 T2R5 和味觉信号传导蛋白表达显著降低的情况。这为深入探究抑郁与味觉之间的关联提供了重要的实验数据。

结论 我们的研究揭示了慢性不可预知温和应激对外周味觉系统苦味感知的影响, 这可能会导致与压力相关的饮食行为变化。

关键词: 抑郁

金华市大学生人群抑郁症的筛查研究

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目的 调查金华市 3 所高校的大学生抑郁状况及一般人口学资料, 并分析其对抑郁症状的影响, 为高校建立和实施有效的抑郁障碍干预措施提供理论依据。

方法 采用分层随机抽样的方法, 选择金华市包含专科类高校及综合类高校在内的 3 所大学理工、文史、医学、综合四个专业的 1300 名在校大学生, 于 2023 年 3 月至 5 月在校内通过扫描贝克抑郁量表第 2 版中文版 (BDI-II-C) 的二维码的方式进行线上评估, 由学校的指导老师向学生介绍调查目的、内容及方法。对量表评分提示抑郁状态的学生进行精神专科医生的临床访谈诊断与评估, 以确定 BDI-II-C 的检出率并分析其诊断效能。

结果 本次调查共 1300 名在校大学生扫描二维码并完成了在线评估, 使用 BDI-II-C ≥ 14 分的划界分作为判断抑郁症筛查阳性的标准, 筛查阳性率为 12.40%。卡方检验分析一般人口学资料显示不同年龄 (18-24) 及民族 (汉族、少数民族) 的大学生的抑郁状态发生率存在显著差异 ($P < 0.05$)。经临床访谈诊断与评估, 大学生抑郁症患病率为 28.13%。

结论 BDI-II-C 可作为筛查我国大学生抑郁的有效工具; 大学生人群抑郁患病率较高, 需定期开展抑郁症筛查及健康宣教, 以早期发现大学生人群中的抑郁症并给予有效干预。

关键词: 大学生, 抑郁症筛查, BDI-II-C

环维黄杨星 D 改善慢性社会挫败应激 (CSDS) 小鼠抑郁样行为的蛋白组学研究

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目的 抑郁症是发病率、致残率、致死率都很高的一种精神疾病。目前抗抑郁药物虽然已广泛应

用, 但仍有部分患者对现有抗抑郁药疗效不佳等问题亟待解决, 是当前精神医学领域的重要课题。环维黄杨星 D (CYC) 是从黄杨科植物中国小叶黄杨及其同属植物中提取而得到的生物碱, 具有抑制炎症介质的合成和释放、减轻组织损伤和抗肿瘤等多种生物活性, 目前临床已经应用于冠心病的治疗。本课题拟研究环维黄杨星 D 对于慢性社会挫败应激 (CSDS) 小鼠抑郁样行为的改善及生物学机制。

方法 实验材料选用雄性 C57BL/6 小鼠, 进行 CSDS 造模后经糖水偏好实验筛选抑郁小鼠并随机分为正常对照组 (CON)、抑郁组 (CSDS)、环维黄杨星 D 处理组 (CYC) 和丙咪嗪处理组 (IMI), 在给药后进行悬尾和强迫游泳行为学实验。然后提取小鼠前额叶蛋白质, 通过液相色谱-质谱串联分析、生物信息分析等技术, 对样本进行定量蛋白组的研究。通过 ANOVA 分析将差异蛋白分类, 利用 GO 富集进行差异蛋白功能聚类, 通过蛋白-蛋白相互作用 (PPI) 分析互作关系最紧密的差异蛋白和功能聚类, 利用平行反应监测 (PRM) 技术对差异蛋白进行定量验证。

结果 环维黄杨星 D 高剂量组在小鼠悬尾实验和强迫游泳实验不动时间与对照组相比显著降低, 且可起到快速抗抑郁效果。对实验小鼠的前额叶皮质蛋白进行提取及处理分析, 筛选 CSDS 与 CON 组的差异蛋白集: CSDSCON; IMI 与 CSDS 组的差异蛋白集: IMICSDS; CYC 与 CSDS 组的差异蛋白集: CYCCSDS。将差异蛋白采用 ANOVA 分析 ($P < 0.05$) 将变化趋势一致的蛋白分为不同聚类, 在蛋白质聚类 1 中蛋白质水平产生显著变化且与行为学结果相一致, 蛋白质在线粒体、核糖体、神经突触相关的功能和定位上富集。进一步对 CYCCSDS-IMICSDS 组和 CYCCSDS-CSDSCON 组的共同蛋白进行 GO 富集, GO 富集结果与方差分析结果一致。使用 PPI 分析 CYCCSDS-IMICSDS 和 CYCCSDS-CSDSCON 的共同蛋白群, 发现差异蛋白主要与线粒体、核糖体、突触功能等相关。通过 PRM 进一步证实线粒体相关蛋白: Tamm41、Mrps6、Mrpl41、Mrps35、Mrpl17、Elac2 和 Sco2; 核糖体相关蛋白: Rpl13a、Ddx58; 突触功能相关蛋白: Gabra5、Eif4g1、Klc4、Kif21b 等蛋白水平相对于对照组出现显著差异。综上, 环维黄杨星 D 对大脑前额叶的线粒体、核糖体及突触功能相关蛋白水平产生影响, 起到抗抑郁作用。

结论 环维黄杨星 D 通过调节核糖体、线粒体及神经突触相关蛋白表达改善 CSDS 小鼠抑郁样行

为。

关键词: 抑郁症, 环维黄杨星, 蛋白组学

The Impact of Emotional Faces on Attentional Blink in Major Depressive Disorder Patients

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Objective This study aimed to investigate the effect of emotional faces induce attention blinking in Major Depressive Disorder (MDD) patients.

Methods Emotional Induced Attentional Blink (EIB) task involving 32 MDD patients and 32 non-clinical controls selected between March and August 2023. Participants' target recognition accuracy was assessed using emotional faces (disgust, fear, sadness, and neutral) presented as distractors at lags 1, 3, and 7 (100ms, 300ms, and 700ms before the target, respectively). Accuracy rates were recorded and analyzed using repeated measures ANOVA.

Results The results indicated significant main effects for emotional faces ($p = 0.001$), lag ($p < 0.001$), and group ($p < 0.001$). Post-hoc comparisons using Bonferroni correction revealed that the accuracy at lag 1 was significantly lower than at lag 3 ($p < 0.001$) and lag 7 ($p < 0.001$), with no significant difference between lag 3 and lag 7 ($p = 1.00$). Regarding the four types of emotional faces, MDD patients had significantly lower target recognition accuracy than the non-clinical control (NC) group ($p < 0.001$). In the NC group, there were no significant differences among the four emotional faces, whereas, in the MDD group, the accuracy for disgusted faces was lower than for sad faces ($p < 0.01$). The regression analysis revealed that target recognition accuracy of disgust and sad faces serves as a protective factor against the occurrence of MDD ($OR < 1$).

Conclusion Our findings indicate that there is an

initial heightened bias towards emotional faces, resulting in decreased target recognition accuracy. This attentional blink phenomenon gradually begins to normalize from lag 3 onwards. Emotional faces heightened the attentional blink in MDD patients compared to non-clinical controls, an effect that persisted across varying time intervals. Notably, the attentional blink induced by disgusted faces in MDD patients is significantly greater than that induced by sad faces. Additionally, the attentional blink induced by disgust and fear faces can predict the occurrence of MDD.

关键词: Emotional faces, Major depressive disorders, Emotional induced Attention blink, Attentional bias, Disgusted face.

五味子酚改善慢性社会挫败应激 (CSDS) 小鼠抑郁样行为的蛋白组学研究

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抑郁症 (Major Depressive Disorder, MDD) 是一种常见的精神心理疾病, 全世界近 3 亿人罹患此病。现有抗抑郁药物对大约 30% 的患者效不佳, 给个人和家庭带来沉重负担, 因此开发具有新机制的抗抑郁药具有重要意义。五味子酚是一种从中药五味子中提取得到的天然木脂素类化合物, 五味子酚具有抗氧化、抗炎、抗肿瘤等多种生物活性。其抗抑郁作用尚属未知。

目的 研究五味子酚 (Schisanhenol, SCH) 对于慢性社会挫败应激 (CSDS) 小鼠抑郁样行为的改善和细胞分子机制。

方法 C57 小鼠 CSDS 造模后糖水偏好实验筛选抑郁鼠, 随机分为抑郁 (CSDS) 组、五味子酚 (SCH) 组、丙咪嗪 (Imipramine, IMI) 组, 分别在给药 1h、4 天和 5 天行悬尾、糖水偏好和强迫游泳实验, 后处死取脑提取蛋白质通过非标记定量蛋白组学检测,

运用生物信息学方法分析相关差异蛋白的 GO 富集分析、蛋白相互作用网络。

结果 研究表明在慢性社交挫败应激 (CSDS) 抑郁模型中, 五味子酚在悬尾 ($F=5.82, P<0.01$)、强迫游泳 ($F=13.54, P<0.01$) 和蔗糖偏好实验 ($F=7.89, P<0.01$) 中, 显示出抗抑郁样功效。非标记定量蛋白组学共检出 6467 个蛋白, 获得了 CSDS 与 CON 相比 (CSDSCON)、丙咪嗪 (IMI) 治疗与 CSDS 相比 (IMICSDS)、SCH 治疗与 CSDS 相比 (SCHCSDS) 的差异蛋白簇, 这些蛋白表达变化首先采用方差分析 (ANOVA, $P<0.05$) 寻找变化趋势一致的蛋白簇, 在蛋白质聚类 2 中蛋白质水平变化趋势与行为学趋势相似, 蛋白质聚类 2 在线粒体和突触相关的功能和定位上富集。进一步对 SCHCSDS-IMICSDS 组和 SCHCSDS-CSDSCON 组的共同蛋白进行 GO 富集, GO 聚类支持方差分析结果。我们使用 PPI 分析了 SCHCSDS-IMICSDS 和 SCHCSDS-CSDSCON 的共同蛋白群, 发现与线粒体和突触功能相关的蛋白富集。蛋白网络分析上下调差异蛋白主要成簇在突触、线粒体和氧化应激相关功能, 后通过平行反应监测证实差异蛋白主要与神经突触 (例如: *Gabra5*)、线粒体和核糖体 (例如: *Mrpl41*)、免疫炎症 (例如: *Chid1*) 等功能相关。五味子酚治疗改变了神经突触、线粒体、氧化应激 (炎症) 相关蛋白合成, 从而改善了抑郁样行为, 说明突触及线粒体、炎症相关功能蛋白在抑郁治疗过程中发挥重要作用。

结论 五味子酚改善 CSDS 小鼠抑郁样行为是通过调节线粒体、神经突触和炎症相关蛋白表达水平实现的, 该机制是 CSDS 诱导抑郁症的病理生理和治疗的的基础, 对未来新药开发具有重要意义。

关键词: 蛋白组学; 五味子酚; 抑郁; CSDS

Gut Microbiota and Inflammatory Factor Characteristics in Major Depressive Disorder Patients with Anorexia

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Objective This study aimed to explore the gut

microbiota and inflammatory factor characteristics in major depressive disorder (MDD) patients with anorexia and to analyze the correlation between gut microbiota and inflammatory factors, anorexia, and HAMD scores

Methods 46 MDD patients and 46 healthy controls (HC) were included in the study. The 46 MDD patients were divided into two groups according to whether they had anorexia: 20 MDD without anorexia (MDA0 group) and 26 MDD with anorexia (MDA1 group). We used the Hamilton Depression Scale-24 (HAMD-24) to evaluate the depression status of all participants and 16S ribosomal RNA (16S rRNA) sequencing to evaluate the composition of the gut microbiota. Inflammatory factors in peripheral blood such as C-reactive protein (CRP) were detected using enzyme-linked immunosorbent assay (ELISA). Spearman's correlation analysis evaluated the correlation between gut microbiota and inflammatory factors, HAMD scores, and anorexia

Results 1. The CRP levels showed significant differences among the MDA0, MDA1, and HC groups. 2. α -diversity analysis shows the Simpson and Pielou indices of the HC group are higher than the MDA1 group ($P < 0.05$). β -diversity analysis shows differences in the composition of microbial communities between the MDA0, MDA1, and HC groups. At genus level, the MDA0 group had higher abundances of Dialister and Ruminococcus; the MDA1 group had higher abundances of Blautia, Enterococcus, and Bifidobacterium; and the HC group had higher abundances of Faecalibacterium, Bacteroides, Roseburia, Phascolarctobacterium, and Parabacteroides. 3. A correlation analysis showed that Blautia positively correlated with anorexia, HAMD scores, and CRP levels, whereas Faecalibacterium, Bacteroides, Roseburia, and Parabacteroides negatively correlated with anorexia, HAMD scores, and CRP levels. 4. The receiver operating characteristic (ROC) curve was drawn using the differential bacterial genera between MDD patients with or without anorexia as biomarkers to identify whether MDD patients were accompanied with anorexia, and its area under curve (AUC) was 0.85. The ROC curve was drawn using the differential bacterial genera between MDD patients with anorexia and

healthy controls as biomarkers to diagnose MDD patients with anorexia, with its AUC was 0.97

Conclusion The gut microbiota of MDD patients with anorexia changes and is closely related to inflammatory factors, HAMD scores, and anorexia

关键词: Major depressive disorder, Anorexia, Gut microbiota, Inflammatory factors

重性抑郁症患者的肠道菌群特征 及与炎症因子的相关性

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目的 探究重性抑郁症 (major depressive disorder, MDD) 患者肠道菌群特征, 并分析其与炎症因子和汉密尔顿 24 项抑郁评定量表 (Hamilton depression scale-24, HAMD-24) 评分的相关性。

方法 研究共纳入符合纳入、排出标准的首发未治疗的 MDD 患者 58 例以及性别、年龄与之匹配的健康对照者 (healthy controls, HCs) 50 例。采用 HAMD-24 评估所有受试者的抑郁症状严重程度, 采用 16S rRNA 基因测序法评估肠道菌群的组成。使用酶联免疫吸附试验检测外周血中 C 反应蛋白 (C-reactive protein, CRP)、白细胞介素-1 β 、白细胞介素-6 及肿瘤坏死因子- α 水平, 采用 Spearman 相关性分析评估肠道菌群与炎症因子和 HAMD-24 评分的相关性。

结果 MDD 组的 CRP 水平显著高于 HC 组 ($P < 0.050$, $t = 8.353$)。Alpha 多样性分析 (Shannon 指数, Simpson 指数, Pielou 指数) 显示 MDD 组和 HC 组的肠道菌群差异有统计学意义 (均 $P < 0.050$, H 值分别为 8.529, 8.893, 10.825), beta 多样性分析显示两组菌群分布差异有统计学意义 ($P < 0.050$, $F = 3.997$)。进一步线性判别分析发现, 在属水平上, MDD 组的双歧杆菌属、布劳特菌属、粪球菌属、巨单胞菌属及 Dorea 相对丰度较高, HC 组的拟杆菌属、粪杆菌属、罗斯菌属及小杆菌属相对丰度较高。Spearman 相关性分析结果显示布劳特菌属和粪球菌属与 CRP 和 HAMD-24 评分呈正相关 (均 $P < 0.050$, r 分别为 0.258, 0.284, 0.235, 0.262), 粪杆菌属和

罗斯菌属与 CRP 呈负相关 (均 $P < 0.050$, r 分别为 -2.030, -0.221)。

结论 MDD 患者的肠道菌群改变, 血浆 CRP 水平升高, 且发生改变的肠道菌群与血浆 CRP 水平和 HAMD-24 评分密切相关。

关键词: 重性抑郁症; 肠道菌群; 炎症因子

生物碱类成分海兰地嗪改善慢性社会挫败应激 (CSDS) 抑郁鼠抑郁样行为的蛋白组学机制研究

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目的 抑郁症是一种十分常见而严重的精神疾病, 但目前的治疗中仍存在近三分之一的患者对药物治疗无效, 急需寻找新的治疗靶点和策略。海兰地嗪(Hernandezine, HER)是从毛茛科唐松草属植物金丝马尾连中分离出来的生物碱。本课题前期研究结果显示海兰地嗪具有改善抑郁行为的作用。本研究旨在研究海兰地嗪在社交挫败应激(Chronic Social Defeat Stress, CSDS)抑郁小鼠模型中发挥抗抑郁作用的分子机制研究。

方法 通过社交挫败应激建立 CSDS 抑郁小鼠模型, 用糖水偏好实验筛选抑郁小鼠。将实验动物分为正常对照 (CON) 组、抑郁 (CSDS) 组、海兰地嗪 (HER) 组、丙咪嗪 (IMI) 组, 经腹腔注射药物或生理盐水后进行行为学测试; 并从大脑的前额叶皮质提取蛋白质进行定量蛋白质组学分析, 利用生物信息学方法分析相关差异蛋白的 GO 富集和蛋白质-蛋白质相互作用网络, 同时结合平行反应监测 (Parallel Reaction Monitoring, PRM) 进行验证, 从而研究海兰地嗪发挥抗抑郁作用相关的机制。

结果 首先用海兰地嗪处理 CSDS 小鼠, 在悬尾实验、强迫游泳实验、糖水偏好实验中显示出显著的抗抑郁效果。定量蛋白质组学检测到 6467 种蛋

白质, 获得 CSDS 与 CON(CSDSCON)、IMI 治疗与 CSDS(IMICSDS)、HER 治疗与 CSDS(HERCSDS) 的差异蛋白序列, 并首先通过方差分析 (ANOVA, $P < 0.05$) 分析这些蛋白质表达变化趋势一致的蛋白质簇, 其中蛋白质簇 1、3 的变化趋势与行为学变化相似, 且在其中发现了与突触、线粒体和内质网相关的功能和定位富集。HERCSDS -IMICSDS 和 HERCSDS -CSDSCON 共同蛋白质的 GO 富集进一步支持了 ANOVA 结果。通过 PPI 分析 HERCSDS -IMICSDS 和 HERCSDS -CSDSCON 的共同蛋白质群, 发现线粒体和突触功能相关的蛋白质富集。进一步的 PRM 验证结果显示: 与线粒体功能相关的蛋白 (Mrpl17、Col4a2、Klc4)、与突触功能相关的蛋白 (Gabra5、Ddx58、Glyr1)、与内质网功能相关的蛋白 (Pbrm1、Rpl13a、Teme63b), 在 CSDS 组与 HER 组之间存在显著差异。HER 治疗改变了突触、线粒体和内质网功能相关的蛋白质合成, 从而改善了 CSDS 小鼠的抑郁样行为。

结论 HER 通过调节突触、线粒体和内质网相关蛋白质的表达改善 CSDS 小鼠的抑郁样行为。总之, 前额叶皮质蛋白质组学研究为海兰地嗪治疗 CSDS 诱导的抑郁症模型提供了病理生理学以及特定和共同分子基础。

关键词: 抑郁症; 海兰地嗪; 蛋白质组学; 平行反应监测

抑郁症伴自杀意念患者认知功能、自杀严重程度与脑网络功能连接相关性研究

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目的 抑郁障碍以心境低落为主要临床特征, 部分患者存在自杀意念, 且伴有不同程度的认知损害, 其神经机制不明。既往研究发现自杀与额顶控制网络 (FPN)、默认网络 (DMN) 有关。本研究旨在探索抑郁症伴自杀意念患者自杀严重程度、认知功能损害与脑网络的相关性, 了解此类型患者行为-脑的机制, 从而为识别此类患者提供生物学标记。

方法 我们选择了 51 名伴自杀意念的抑郁症患者、52 名不伴自杀意念的抑郁症患者和 55 名健康对照 (HC)。使用汉密尔顿抑郁量表-17 项 (HAMD-17) 评估受试者的抑郁症状, Beck 自杀意念量表评估自杀意念, 采用认知功能成套测验 (MCCB) 评估认知功能, 我们提取了 MCCB 的三个维度, 即工作记忆、处理速度和注意力/警觉性。同时采集所有受试者静息态磁共振成像数据。采用脑网络图谱提出 FPN、DMN 相关感兴趣区, 计算网络内、网络间功能连接强度。通过皮尔逊相关分析分别计算功能连接强度与行为学、临床特征的关联性。

结果 研究发现, 相较于健康对照, 抑郁症患者存在显著的认知缺陷 ($P < 0.05$), 主要表现为注意力/警觉与处理速度方面。静息态功能磁共振的研究中, 我们发现伴有自杀意念的抑郁症患者相较于不伴自杀意念患者、健康对照组在脑网络功能连接中有显著差异。事后校正发现, 与不伴自杀意念组相比, 在自杀意念组中 FPN 和 DMN 网络内的功能连接强度显著降低。与 HC 组相比, 自杀意念组中 FPN 和 DMN 网络之间的功能连接强度显著降低。同时在伴有自杀意念组中, 我们发现额顶控制网络内的功能连接强度与注意力/警觉性呈正相关 ($r = 0.33, P < 0.05$), 额顶控制网络内功能连接强度与自杀意念程度呈负相关 ($r = -0.32, P < 0.05$)。

结论 研究发现, 伴有自杀意念的抑郁症患者较不伴自杀意念的患者额顶控制网络内的功能连接强度下降, 且与自杀意念程度呈负相关, 与注意力/警觉性呈正相关。这为明确抑郁症自杀意念的行为学与神经机制提供了基础, 并为识别此类患者提供生物学标记。

关键词: 额顶控制网络, 默认网络, 抑郁症, 自杀意念, 功能连接, 静息态功能磁共振成像。

Relationship between Stressful Life Events and Depression Among Adolescents: The Multiple Mediating Roles of Executive Function and Implicit Theory of Intelligence

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Objective Understanding the etiology of adolescent depression is of great importance for prevention and treatment of this condition. The diathesis-stress model puts forward that an individual is likely to develop a mental disorder if they are exposed to stressful life events. However, the effects of cognitive factors like executive function and implicit theories in this correlation need more investigation

Methods This cross-sectional study enrolled a group of 115 adolescents (median age (Mage) = 14.96 years, SD = 1.33, range = 12.00-18.00 years, 68.70% female) diagnosed with depressive disorder and another group of healthy 98 peers (Mage = 15.46 years, SD = 1.13, range = 13.00-17.00 years, 34.69% female) in China. They completed the Adolescent Self-Rating Life Events Checklist and the Dweck intelligence questionnaire, and EF tasks including a Stroop task, a two-back task, and a complex position span task. The parallel mediation effect analysis was implemented to explore the mediating effect of executive function and implicit theory of intelligence between stressful life events and adolescent depression

Results The executive function and implicit theory of intelligence mediated the relationship between stressful life events and adolescent depression ($\beta = 0.07, 95\% \text{ CI } [0.01, 0.18]$; $\beta = 0.09, 95\% \text{ CI } [0.03, 0.18]$, respectively)

Conclusion Executive function and implicit theory of intelligence were identified as partially parallel mediators between stressful life events and adolescent depression. Relevant intervention by executive function training and the change of implicit theories endorsement could help alleviate depressive symptoms

关键词: Depression; Adolescence; Stressful life events; Executive function; Implicit theory of intelligence

RFM 与 AGR 的对数比 (RFM-AGR) 和抑

郁症的关系——一项来自 NHANES 的横断面分析研究

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目的 抑郁症是一种常见的精神疾病，与肥胖之间存在紧密联系。相对脂肪质量(Relative Fat Mass, RFM)和 Android 与 Gynoid 脂肪比(Android-to-Gynoid Fat Ratio, AGR)是衡量个体肥胖状况的重要指标，然而结合这两者预测抑郁的价值尚不明确，确定可靠的预测指标对抑郁症的有效防治至关重要。本研究旨在探讨 RFM 与 AGR 的复合指标 RFM-AGR 与抑郁之间的关联，探寻一个能够全面评估个体脂肪状况的指标，从而更准确地评估肥胖对抑郁的影响。

方法 本研究分析了 2005 年至 2006 年及 2011 年至 2018 年全国健康和营养检查调查(NHANES)中的 13425 名成年人数据。对纳入研究的人群进行了一般统计描述，其中连续变量用平均值±标准差呈现，分类变量用百分比呈现。采用加权 Logistic 回归分析来探讨身体质量指数(BMI)、腰围(WC)、RFM、AGR、RFM-AGR 与抑郁之间的关系，并使用限制性三次样条曲线(RCS)和亚组分析来可视化 RFM-AGR 指数与抑郁之间的关系。

结果 基于权重的描述性结果中，除了年龄和体重，其他变量在抑郁组和非抑郁组之间均具有显著差异(所有 $P < 0.05$)。在加权多变量模型中，除 AGR 之外的肥胖相关指标均与抑郁组呈显著相关($P < 0.05$)。BMI、WC、RFM 与 RFM-AGR 每增加一个 SD，患抑郁的风险分别增加 2.2%、0.9%、4.7% 和 96.2%。与最低四分位数(Q1)相比，位于 RFM-AGR 最高四分位数(Q4)的受试者的抑郁风险为 $OR = 2.381$ (95%CI: 1.162-4.879)。RCS 结果显示，RFM-AGR 与抑郁之间可能存在正相关关系(p for non-linear = 0.949)，亚组分析和交互分析确定了核心结果的稳定性。

结论 RFM-AGR 指数较高的人，患抑郁的风险更大，这意味着 RFM-AGR 指数可能是抑郁症的独立风险因素之一。与常用的肥胖衡量指标相比，RFM-AGR 在预测抑郁症方面显示出更高的敏感性和特异性，这一发现可能为通过改善身体组成和脂肪分布来预防和干预抑郁症提供新的策略。

关键词: RFM-AGR; 抑郁症; 肥胖

去甲异波定改善慢性社会挫败应激(CSDS)小鼠抑郁样行为的蛋白组学研究

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目的 研究去甲异波定(NOR)对于慢性社会挫败应激(Chronic Social Defeat Stress, CSDS)小鼠抑郁样行为改善和蛋白组学机制研究

方法 首先，我们用 NOR 处理 CSDS 小鼠，在悬尾试验、强迫游泳、蔗糖偏好实验中检测抗抑郁效果。然后将药物处理的 CSDS 小鼠的前额叶皮质分离并获得空白对照鼠(CON)、抑郁模型鼠(CSDS)、丙咪嗪阳性对照鼠(IMI)、NOR 处理鼠等 4 组蛋白样本。而后，采用液相色谱(LC-MS/MS)用来定量蛋白的含量及种类。ANOVA 分析方法($p < 0.05$)对蛋白表达进行分析。对 NORCSDS 和 NORIMI 的差异蛋白进行 GO 分析检测蛋白功能聚类。我们使用蛋白-蛋白相互作用(PPI)分析了 NORCSDS 和 NORIMI 的差异蛋白。最后，利用高分辨质谱的定量分析方法(PRM)与免疫印迹(WB)进一步独立分析验证蛋白之间的差异。

结果 我们发现在 CSDS 抑郁模型中，在悬尾、强迫游泳和蔗糖偏好实验中，去甲异波定(NOR)显示出抗抑郁功效。然后，我们利用 NOR 治疗的 CSDS 小鼠模型，从前额叶皮层分离并获得 CSDS 与 CON 差异蛋白(称为 CSDSCON)、丙咪嗪(IMI)治疗与 CSDS 差异蛋白(称为 IMICSDS)以及 NOR 治疗与 CSDS 的差异蛋白(称为 NORCSDS)。这些蛋白质表达变化首先通过 ANOVA 进行分析($p < 0.05$)。蛋白质簇 1 和簇 3 的蛋白质水平模式与情绪模式相似，显示出与线粒体、核糖体和突触相关的功能和定位富集。对 NORCSDS 组和 NORIMI 组的差异蛋白的进一步 GO 分析支持 ANOVA 分析的结果。我们采用蛋白质-蛋白质相互作用分析来检查 NORCSDS 和 NORIMI 的差异蛋白，结果揭示了与线粒体、核糖体、突触功能相关的蛋白质的富集。使用平行反应监测的进一步独立分析显示，Cox7c、Mrp142、Naa30、Ighm、Apoa4 和 Cdv3 在 NOR 处理组中表现出调节作用，以支持线粒体功能的稳态。

此外,还观察到 Dcx 和 Fam3c 在 NOR 处理组中发生调节,以支持突触的形成和功能。这些发现表明,参与抑郁症治疗的蛋白质在增强小鼠 PFC 的线粒体和突触功能方面发挥作用。蛋白质印迹分析支持了 Mrpl42、Cox7c、Apoa4、ApoH 和 Fam3c 水平在 CSDS 小鼠中发生改变,并通过 NOR 治疗挽救其变化,支持了 PRM 数据。

结论 去甲异波洛定对 CSDS 抑郁症模型有抗抑郁的效果。这可能是通过对线粒体、核糖体和神经突触的蛋白功能网络的特异调节而实现的。

关键词: 抑郁症, 蛋白组学, 去甲异波洛定, CSDS

大黄酸改善慢性挫败应激抑郁模型鼠抑郁相关行为: 蛋白质组学分析和脂代谢分子机制研究

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目的 研究中药单体药物大黄酸(Rhein)对于慢性社会挫败应激(Chronic Social Defeat Stress, CSDS)小鼠抑郁样行为的改善和分子生物学机制。

方法 我们把 7-8 周龄的 C57BL/6J 小鼠共分为 4 组,正常对照组(Control, CON)、CSDS 组、Rhein 治疗组和丙咪嗪(Imipramine, IMI)治疗组。首先,小鼠进行慢性社会挫败模型建模,并采用蔗糖偏好试验对 CSDS 建模后的 C57 小鼠进行抑郁筛查。对实验动物通过悬尾实验、蔗糖偏好实验和强迫游泳实验观察 Rhein 药物治疗后的抗抑郁效果,并从大脑前额叶皮层中提取蛋白质进行定量蛋白质组学分析,采用生物信息学方法分析相关差异蛋白的功能和细胞定位。

结果 我们发现 Rhein 干预后的 CSDS 抑郁模型小鼠在悬尾、强迫游泳和蔗糖偏好实验中,显示出抗抑郁功效。蛋白质组学共定量了 5681 种独特的蛋白质,通过 $P < 0.05$ 和 $FC (\geq 1.2, \text{上调或} \leq 0.833, \text{下调})$ 阈值筛选出各个组别间的差异表达蛋白。从 RheinCSDS 组和 CSDSCON 组中的共同重叠差异表达蛋白质中找到可被 Rhein 逆转的蛋白质和仅在 RheinCSDS 组中有变化的蛋白质做了基因本体论

(GO)富集分析。富集结果提示这些与 Rhein 相关的差异蛋白主要在核糖体、突触以及线粒体等相关功能,并参与到了甘油酯的代谢以及氧化应激的反应中。Mfuzz 聚类分析筛选出的在 4 组样本有明显表达丰度变化的蛋白质主要是与脂质代谢相关的蛋白质。我们同时运用平行反应监测(Parallel Reaction Monitoring, PRM)证实差异蛋白主要与脂质代谢(例如: Apoa4)、线粒体和核糖体(例如: Mrpl42)、免疫炎症(例如: Ighm、Cdv3)等功能相关。

结论 本研究通过动物行为学、定量蛋白质组学和生物信息学分析,揭示了大黄酸通过调节线粒体、突触和核糖体等相关功能,特别是脂质代谢,对抗抑郁治疗的潜在分子机制。

关键词: 大黄酸,抑郁,脂质代谢,蛋白质组学分析

以口咸为首发症状的老年抑郁症一例

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目的 探讨口咸症状在老年抑郁症中的识别和处理

方法 通过个案报道的方式描述病例的诊治过程。本人在门诊上巧遇一口咸为首发症状的抑郁患者,现将病例报告如下:女,60岁,小学文化,农民,因“口咸、睡眠差,心情差1年余,加重半个月”于2022年1月16日在医院门诊治疗。患者于2020年10月出现反复打饱嗝,感到身体里面有一股气冲出来,总感到嘴巴里面有股咸味,进食甜味食物也不能减轻,食欲差,进食少,先后在市内多家医院做各种检查未见异常,具体用药不详,效果不明显。期间逢人就说嘴巴有咸味,影响到夜里难以入睡,时哭泣,心烦,有时会有想死的想法。既往史、个人史、家族史:无特殊。体格检查:未见异常。精神检查:意识清楚,衣着整洁适时,表情显忧虑,生活自理,接触主动,主动诉说嘴巴很咸,感口水多,但又吐不出来,可引出幻味,查及情绪低落,焦虑,精力下降,记忆力下降,食欲下降,体重下降,无望感,自杀意念,睡眠障碍,自知力不全。心理测试 HAMD24 评分 36 分, HAMA 评分 17 分。结合病史及精神检查根据 ICD-10 诊断标准,诊断为:伴有精神病性症状的重度抑郁发作。治疗上给予“艾司

西酞普兰、阿普唑仑”治疗，同时予以心理治疗，并解释其口咸等躯体不适与其情绪不好有关系，并给予家属心理教育，提高家属对患者的理解支持。4周后复诊口咸症状基本消失，睡眠正常，心情好转，食欲改善，目前门诊随访2年余，坚持服艾司西酞普兰10 mg/日，未诉其他不适，一切正常。抑郁障碍是老年人最常见的精神障碍，大约有1/3的老年患者以躯体不适为首发症状，内容常涉及消化系统，比如嗝气、反酸、胃胀等。本例患者开始以口咸症状为首发症状，在临床上非常少见，从精神病理学的角度考虑口咸症状是一种知觉障碍，在没有咸味食物刺激下，口腔内出现咸味可考虑是幻味症状，部分老年患者有抑郁较严重时容易在躯体不适的情形下发展为疑病观念，甚至达到疑病妄想的程度。

结果 在本案例中，患者病程1年余，曾于市内多家医院反复因口咸就诊，而临床医生对患者的饮食、睡眠及情绪等评估不够，再加上口咸症状主要是患者主观报告的临床症状，无特异性客观指标，更容易导致误诊、漏诊。

结论 本案例中治疗上采用了SSRI类抗抑郁药联合舒肝解郁胶囊进行抗抑郁治疗，短期内联合苯二氮草类药物改善睡眠、抗焦虑处理，患者焦虑症状及睡眠改善明显，经过系统的抗抑郁治疗情绪明显好转，幻味症状消失，未再出现口咸。老年抑郁治疗上宜小剂量的起始剂量，进行个体化滴定，尽量单一用药，减少药物之间相互作用，提高服药依从性。同时加强心理干预，重视疾病健康教育，建立良好医患关系和家属支持系统对患者的治疗康复也非常重要。

关键词：口咸，老年抑郁症，首发症状

基于结构方程模型的医学生归因风格与抑郁水平的关系研究

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目的 了解医学生抑郁状况，构建归因风格、述情障碍、心理资本与抑郁水平的结构方程模型，探索心理资本和述情障碍在成功内归因与抑郁之间可能的中介作用，为医学生心理健康的干预提供科

学依据。

方法 于2023年10月，采用一般情况调查表、多伦多述情障碍量表（TAS-26）、心理资本问卷（PCQ）、多维-多向归因量表（MMCS）及抑郁-焦虑-压力自评量表（DASS-21），对某医学院校的557名本科医学生进行横断面调查。采用SPSS 27.0进行数据处理，通过AMOS 24.0软件进行结构方程模型的拟合与分析。P<0.05为差异有统计学意义。

结果 在557名医学生中，有25.8%的学生表现出抑郁症状。男性的抑郁评分以及非独生子女的抑郁评分较女性和独生子女高，差异具有统计学意义（P<0.05）。本研究建立的结构方程模型具有良好的拟合度（CMIN/DF=3.998，GFI=0.965，AGFI=0.931，TLI=0.965，CFI=0.978，RMSEA=0.072）。模型结果显示，成功内归因、心理资本和述情障碍均对抑郁水平有直接影响，标准化路径系数分别为-0.018、-0.340和0.431。进一步分析发现，心理资本通过述情障碍对抑郁产生间接效应，效应值为-0.107；而成功内归因分别通过心理资本和述情障碍对抑郁产生间接效应，效应值分别为-0.090和-0.107。

结论 医学生归因风格、述情障碍和心理资本是影响其抑郁水平的直接因素，而且归因风格通过心理资本和述情障碍对抑郁水平产生间接影响。为了改善医学生的心理健康，可以采取有针对性的干预措施，引导他们建立积极的内归因方式。这样不仅有助于提升他们的心理资本，有效减轻抑郁症状，还能缓解述情障碍，进一步降低抑郁风险。

关键词：医学生；抑郁；述情障碍；心理资本；归因风格；结构方程模型

安宁疗护照护在老年临终患者中的应用

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目的 探讨对老年病人实施安宁疗护服务的有效性。

方法 选择2022年1月-2023年5月本院住院的16名神志清楚、能够进行正常沟通交流的老年人为研究对象（卡诺夫斯凯评分≥60），其中7名作为安宁疗护组，其余9名病人作为对照。安宁疗护组在传统常规护理的基础上加安宁疗护。对安宁疗护

组及对照组在住院即刻和介入 4 周后进行功能量表、临床症状量表、整体健康状况量表和失眠状况量表评估, 并对比量表评分。

结果 在介入治疗前, 两组患者在功能量表评分上并无显著差异。然而, 介入 4 周后, 安宁疗护组的角色、情感、认知功能以及社交功能得分均优于对照组, 尤其在社交功能方面表现出显著性差异 ($P<0.05$)。临床症状量表评分显示, 两组患者在介入前评分相似, 治疗后均有下降, 但安宁疗护组的下降幅度显著大于控制组 ($P<0.05$)。在单项测量项目评分上, 虽然两组干预前差异不大, 但干预后, 静息组的得分显著低于对照组。总体健康状况量表评分也表明, 介入后两组患者均有改善, 但静息组的提升更为显著, 与对照组相比有显著差异 ($P<0.05$)。

结论 对于精神疾病的末期病人, 实施安宁疗护护理, 可以改善病人的症状与精神状况, 提高病人的睡眠与生活品质。

关键词: 安宁疗护; 老年; 临终患者; 心理状态; 睡眠状况; 生存质量

童年创伤对青少年抑郁症状的影响: 边缘性人格特质与自我控制的链式中介作用

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目的 尽管已有研究证实青少年抑郁症与童年创伤之间存在显著关联, 但其潜在机制仍不清晰。本研究旨在深入探讨边缘型人格特质和自我控制在童年创伤与青少年抑郁症状之间的链式中介作用。通过揭示这些中介因素的作用路径, 进一步理解童年创伤如何影响青少年的心理健康, 以便为预防和干预策略提供科学依据。

方法 本研究采用横断面研究设计, 于 2022 年 10 月至 12 月期间对中国河南省某高中 2664 名学生进行了调查。研究工具包括《儿童创伤简易问卷 (Childhood Trauma Questionnaire-Short Form)》、《第四版人格诊断问卷 (Personality Diagnostic Questionnaire-4)》的边缘型人格特质维度、《自我控制量表 (Self-Control Scale)》和《儿童抑郁量表 (Children's

Depression Inventory)》。通过这些工具, 测量了参与者的童年创伤经历、边缘型人格特质、自我控制能力和抑郁症状。数据分析采用斯皮尔曼相关分析和中介效应分析, 以验证假设模型。

结果 青少年抑郁症状的发生率为 21.17%, 而边缘型人格特质的发生率为 12.00%。童年创伤与青少年抑郁症状之间存在显著正相关关系 ($r = 0.50, p < 0.001$), 边缘型人格特质与青少年抑郁症状之间的正相关性更强 ($r = 0.60, p < 0.001$)。此外, 自我控制与抑郁症状呈负相关 ($r = -0.50, p < 0.001$)。中介效应分析显示, 边缘型人格特质和自我控制在童年创伤与抑郁症状之间均发挥中介作用, 中介效应值分别为 0.116 (95%CI = [0.098, 0.137]) 和 0.022 (95%CI = [0.012, 0.032])。此外, 边缘型人格特质和自我控制在童年创伤与抑郁症状之间的链式中介作用显著 (效应值: 0.034, 95%CI = [0.028, 0.042])。

结论 本研究发现, 童年创伤可以通过影响边缘型人格特质的形成和降低自我控制能力来预测青少年的抑郁症状。这一链式中介机制表明, 童年创伤不仅直接对青少年的心理健康产生负面影响, 还通过改变其人格特质和自我控制能力, 进一步加剧抑郁症状的发展。这些发现对于理解青少年创伤经历在心理健康中的长期影响具有重要意义, 为针对童年创伤的预防和干预策略提供了理论依据。尤其是在临床实践中, 关注和改善青少年的自我控制能力以及干预其边缘型人格特质的发展, 可能有助于减少抑郁症状的发生和发展。

关键词: 童年创伤, 抑郁症状, 边缘型人格特质, 青少年

伴或不伴焦虑症状的抑郁症患者 MMPI 结果分析

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目的 探讨伴或不伴焦虑症状的抑郁症患者人格特质差别, 为早期发现伴焦虑症状的抑郁症患者提供可能的依据;

方法 选取 2022 年 1 月-2022 年 12 月在重庆医科大学附属第一医院精神科门诊就诊的成年抑郁症患者为研究对象, 收集其一般人口学问卷、抑郁

自评量表 (SDS)、广泛性焦虑障碍量表 (GAD-7)、明尼苏达多项人格测试 (MMPI), 根据

广泛性焦虑障碍量表 (GAD-7) 分数将抑郁症患者分为伴或不伴焦虑症状的抑郁症, 并分析两组之间一般人口学问卷、SDS、GAD-7 与 MMPI 差异。最后通过秩相关分析一般人口学问卷、SDS、GAD-7 与 MMPI 作相关;

结果 两组平均受教育年限、居住地、家庭子女数量、焦虑程度、抑郁程度、MMPI 总分以及 Pd、Pt、Hy、D、Hs、Pa、Sc、Si、Ma 9 个维度比较, 具有统计学差异 ($P < 0.05$), 且经过秩相关分析 MMPI 总分和 Pd、Pt、Hy、D、Hs、Pa、Sc、Si、Ma 9 个维度与 SDS、GAD-7 呈正相关, 提示焦虑、抑郁程度和 MMPI 人格特质具有明显相关性;

结论 可通过明尼苏达多项人格测试 (MMPI) 测量结果对伴有焦虑症状的抑郁症患者进行早期识别, 以便于早期干预。

关键词: 精神科门诊, 抑郁状态, 伴焦虑症状的抑郁症, 不伴焦虑症状的抑郁症, 明尼苏达多项人格测试

眼动脱敏和再加工联合药物治疗青少年抑郁症的疗效: 一项随机对照试验

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背景 处于青少年时期的孩子经常会面对来自家庭、学校和社会带来的压力, 负面情绪得不到排解则容易导致抑郁症的发生。青少年抑郁症的患病率和致残率都较高, 眼动脱敏和再加工 (Eye movement desensitization and reprocessing, 简称为 EMDR) 是一种整合式心理治疗, 已有研究表明该疗法能够减轻患者抑郁情绪, 但在青少年抑郁症患者中缺少相应证据。

结论 本研究旨在探索 EMDR 联合药物治疗青少年抑郁症患者的疗效, 另外侧重探讨该治疗对患者反刍思维和自尊感的影响。

方法 本研究是一项随机对照试验, 收集 2023 年 5 月-2024 年 5 月于安徽医科大学附属巢湖医院

精神科住院的青少年抑郁症患者, 按照随机序列表将参与者分为 EMDR 联合一种 SSRI 类药物组以及单用一种 SSRI 类药物组。EMDR 标准化流程包括病史采集、准备、评估、脱敏、植入、身体扫描、结束及再评估八个步骤, 干预组每周进行 3 次 EMDR 标准化治疗, 隔日一次, 为期 2 周, 共计 6 次, 每次 60 分钟。在两组参与者治疗前、治疗 2 周及治疗 4 周后, 进行疗效评估。评估疗效的指标包括 17 项汉密尔顿抑郁量表 (HAMD-17), 事件影响量表 (IES-R)、反刍思维量表 (RRS), 罗森博格自尊量表 (SES)。

结果 共收集到 33 名参与者, 其中 3 名在治疗前脱落, 最终 30 名参与者完成试验, 干预组和对照组各 15 例。重复测量方差分析显示时间和组别对两组患儿 HAMD-17、IES-R、RRS 评分存在交互作用 (P 均 < 0.05), 时间对两组患儿 HAMD、IES-R、RRS 及 SES 评分的主效应显著 ($P < 0.05$), 组别对于 HAMD 和 RRS 评分的主效应显著 ($P < 0.05$)。治疗 4 周后, 干预组患儿 HAMD、RRS 评分低于对照组 ($P < 0.05$), 而 SES 评分高于对照组 ($P < 0.05$)。线性混合模型结果表明, 与对照组相比, 干预组 HAMD 评分从基线到第 4 周的降低具有统计学意义 (estimate value = -3.083, $p = 0.008$)。基线 IES-R 和 SES 评分随着时间变化与抑郁严重程度有重要关联, 基线 IES-R 评分的升高与患儿抑郁程度加重相关联 (estimate value = 0.104, $p = 0.019$), 基线 SES 评分的升高与患儿抑郁程度减轻相关联 (estimate value = -0.298, $p = 0.021$)。

结论 EMDR 能够改善青少年抑郁症患者的抑郁情绪, 减轻反刍思维, 提高自尊感, 可以有效应用于临床治疗, 但针对应激性生活事件对患儿的影响在短时间内处理效果不明显, 可能需要更大规模的长期随机对照试验来验证。

关键词: 眼动脱敏和再加工; 青少年; 抑郁症; 心理治疗

Construction and Verification of Risk Prediction Model for Suicidal Behavior of Mood Disorders Based on Machine Learning

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Background Suicidal behavior (SB) is defined as intentional self-injury that causes individual death. Mood disorders (MD) are intimately related to SB. Meanwhile, there was no accurate prediction model for SB in MD patients. Constructing a prediction model for SB in MD patients could improve the early identification of high-risk groups and further reduce the suicide rate. The purpose of this study is to establish a prediction model of SB in MD based on machine learning techniques. In current study, we attempted to evaluate models constructed by ten machine learning methods and select the optimal method for validation

Methods 1099 patients diagnosed with mood disorders (diagnosed via ICD-10 codes F30-F39) were collected. LASSO regression was used to screen features that may be related to SB as predictors. All patients were randomly divided into training group (N = 769) and test group (N = 330). Ten machine learning algorithms were applied to the training set to construct SB prediction model. The stability of the model was tested in the test set. The machine learning model with the best sensitivity and stability was selected according to AUC, F1 score, accuracy and other indicators. The locally explanatory technique of SHapley Additive exPlanations (SHAP) was used to rank the importance of features and explain the best model to analyze the potential impact of each feature on suicidal behavior

Results This study incorporates 6 features based on LASSO regression and 2 features based on our previous researches. Prediction model was constructed based on 10 different machine learning methods. The results showed that the prediction model constructed by Random Forest method had good discriminant ability (AUC of Testing=0.741, AUC of Training= 0.786) and acceptable of discriminant. Further SHAP analysis ranked the importance of these eight features. The prediction model constructed by random forest method showed that the most valuable feature for predicting suicide risk was a history of suicide attempts

Conclusion The Random Forest method can better construct the risk prediction model of SB in patients

with MD

关键词: Suicidal behavior; Mood Disorders; Machine learning; Predictive model

Connectome-based Prediction of Depressive Symptoms in Major Depressive Disorder and The Discrimination of Melancholic Depression

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Objective This study aimed to create a predictive model for the depressive symptoms of first-episode, drug-naïve major depressive disorder (MDD). Its design was also intended to reveal MDD's underlying neuropathological mechanisms and explore the intrinsic functional patterns of its two distinct subtypes

Methods The connectome-based predictive modeling (CPM) approach was employed to construct predictive models for the depressive symptoms of MDD. Node-based functional connectivity (FC) analysis was utilized to compare differences in FC patterns among three groups: melancholic subtype, non-melancholic subtype, and healthy controls. The k-nearest neighbors (KNN) algorithm was employed to classify subtypes of MDD

Results The CPM analysis showed that the positive edge network could successfully predict the Hamilton Depression Rating Scale scores of MDD patients ($r = 0.216$, $p = 0.030$, 5000 iterations). Compared to non-melancholic patients, melancholic patients showed increased FC values in PrG_L_6_5 (the left precentral gyrus) -Tha_L_8_7 (the left thalamus) ($p = 0.026$) and BG_R_6_1 (the right basal ganglia) - PCun_R_4_2 (the right precuneus) ($p = 0.022$). The KNN method classified melancholic patients and non-melancholic patients

with $k=9$, achieving an accuracy of 0.78. Abnormal FC in MDD patients was found to be correlated with clinical variables

Conclusion This study utilized CPM to construct a positive network predictive model for the depressive symptoms of MDD, enabling us to gain further insights into the neuropathological mechanisms of the disease. We identified different FC patterns between melancholic depression and non-melancholic depression, indicating potential distinctions in the neuropathological underpinnings of these two MDD subtypes

关键词: Major depressive disorder (MDD), Melancholic depression, Connectome-based predictive modeling (CPM), Node-based functional connectivity (FC), K-nearest neighbors (KNN)

家庭-康复师主导康复治疗措施对抑郁症患者生存质量及康复效果的影响

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目的 探讨家庭-康复师主导康复治疗措施对抑郁症患者生存质量及康复效果的影响。

方法 选取 2023 年 5 月至 2024 年 5 月我院接收的 80 例抑郁症患者进行研究。按照随机数表法,将其分成两组。其中对照组采取抗抑郁药物治疗,观察组在对照组的基础上采取家庭-康复师主导康复治疗措施。治疗 3 个月后,比较分析两组患者治疗后的临床效果,采用汉密尔顿抑郁量表(HAMD)和汉密尔顿焦虑量表(HAMA)比较分析两组患者治疗前后抑郁和焦虑状况,采用临床神经功能缺损程度(NIHSS)评分量表比较分析两组患者治疗前后神经功能,采用生存质量评定量表(WHOQOL-BREF)和 Barthel 指数量表(ADL)评估并分析患者治疗前后生存质量。

结果 观察组治疗后总有效率(95.00%)显著高于对照组(80.00%),差异具有统计学意义($\chi^2=4.114, P=0.043$)。治疗前,两组患者 HAMD 和 HAMA 评分的比较无明显差异($P>0.05$);治疗后,两组患者各组评分均明显降低,且与对照组相比,观察组患者评分更低,比较差异具有统计学意义(P

<0.05)。治疗前,两组患者 NIHSS 和 ADL 评分的比较无明显差异($P>0.05$);治疗后,两组患者 NIHSS 评分均降低,ADL 评分均升高,且观察组患者变化更明显,比较差异具有统计学意义($P<0.05$)。治疗前,两组患者生存质量各个指标评分的比较无明显差异($P>0.05$);治疗后,两组患者各组评分均明显升高,且与对照组相比,观察组患者评分更高,比较差异具有统计学意义($P<0.05$)。

结论 家庭-康复师主导康复治疗抑郁症患者疗效显著,能够显著改善患者抑郁和焦虑情绪,并且改善患者神经功能,提高患者日常生活活动能力和生存质量,具有较高的临床应用价值。

关键词: 家庭-康复师主导; 康复治疗; 抑郁症; 生存质量

疫情期间青少年抑郁症患者学习倦怠及相关影响因素研究

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目的 国内研究已证实青少年学习倦怠量表(Adolescent Student Burnout Inventory, ASBI)具有较好的信效度,本研究观察青少年抑郁症患者在新冠疫情期间学习倦怠发生状况,探索青少年抑郁症患者疫情期间学习倦怠的影响因素。

方法 本研究分析青少年抑郁症患者与健康对照者在疫情期间学习倦怠、学习方式及效能和情绪状态的差异性及相关影响因素。142 名青少年抑郁症患者(DP)以及年龄和性别匹配的 363 名健康青少年(HC)完成入组。所有研究对象完成 ASBI、抑郁-焦虑-压力量表(Depression, Anxiety, and Stress Scale-21, DASS-21)的评估。

结果 1) DP 组每日学习时长($\chi^2=52.89, p<0.001$)、学习效能($\chi^2=106.13, p<0.001$)低于 HC 组,非学习网络使用时长($\chi^2=85.78, p<0.001$)、网络游戏娱乐频次($\chi^2=41.87, p<0.001$)高于 HC 组。2) DP 组的 DASS-21 抑郁($t=19.89, p<0.001$)、DASS-21 焦虑($t=17.21, p<0.001$)、DASS-21 压力($t=17.05, p<0.001$)、ASBI 总分($t=9.961, p<0.001$)、身心耗竭($t=7.102, p<0.001$)、学业疏离($t=10.823, p<0.001$)和低成就感($t=6.952, p<0.001$)均高于

HC 组。3) 根据 DASS-D 计分操作, 14 分为中度临界值, 抑郁症患者分为抑郁中度及以上 (≥ 14 分) 和中度以下 (< 14 分) 两组, 结果发现中度及以上抑郁组在学习倦怠总分 ($t=3.68, p<0.001$), 身心耗损 ($t=2.95, p=0.004$), 学业疏离 ($t=3.13, p=0.002$) 及低成就感 ($t=2.80, p=0.006$) 三个因子层面得分均显著高于中度以下抑郁组; 4) 抑郁症青少年相关分析, ASBI 总分与 DASS-21 抑郁 ($r=0.372, p<0.001$)、DASS-21 焦虑 ($r=0.292, p<0.001$) 及 DASS-21 压力 ($r=0.310, p<0.001$) 得分呈正相关。5) 多因素 logistic 回归分析得出: DASS-21 抑郁 (OR=1.106, 95%CI=1.027~1.190, $p=0.008$)、学习效能显著降低 (OR=0.274, 95%CI=0.081~0.927, $p=0.037$) 预测 ASBI 的发生。

结论 疫情期青少年抑郁症患者的学习倦怠严重程度与抑郁、焦虑及压力相关; 抑郁严重度和学习效能差为青少年抑郁症学习倦怠的独立危险因素。

关键词: 疫情, 青少年, 抑郁, 学习倦怠

团体心理治疗对康复期抑郁症患者疗效观察

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目的 观察对康复期抑郁症患者予以团体心理治疗的效果。

方法 观察对象为 2021.1~2022.1 在我院就诊的康复期抑郁症患者 76 例, 随机数字法予以分组, 38 例予以常规治疗者纳入对照组, 38 例予以常规治疗+团体心理治疗者纳入治疗组, 对比和观察治疗效果。在正式治疗前, 强化医患间的沟通, 让患者了解抑郁症是可治愈的, 需积极治疗, 避免病情加重而导致各种不良后果产生。将团体心理治疗方法告知患者, 将 36 例患者分为 2 组实施团体心理治疗, 90min/次, 2 次/周, 在治疗 1~3 次, 小组成员通过交流信息、自我介绍, 将组间陌生感消除; 治疗师对患者指导, 让其相互帮助, 使其好感增强, 保证人际氛围良好; 告知患者疾病发生机制, 并让患者了解抑郁症治疗的必要性; 在第 4~8 次治疗, 对患者鼓励, 利用倾听、支持、共情等方式讨论和互动, 在互动时患者即为倾听者, 也为担当者, 将解决问题决

策提出; 除此之外, 利用行为训练、放松训练、心理游戏等方式, 对患者鼓励, 让其将启发和自身感受表达出来; 再次阶段, 团员互相填了, 转变心理状态, 以团员回答为依据, 共同对抑郁症发生原因进行分析, 以便让其对自我和现实正面、积极面对。2 组均予以 8 周的连续治疗。

结果 和对照组对比, 治疗组治疗后 HAMD 评分明显较低, $P<0.05$; 和对照组对比, 治疗组治疗后生活质量各项评分均明显较高, $P<0.05$ 。

结论 对康复期抑郁症患者予以团体心理治疗效果突出, 建议推广。

关键词: 抑郁症; 康复期; 团体心理治疗

Associations Among Obesity, Insulin Resistance, and Depression: A Mediation Analysis

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Background The mechanistic role of insulin resistance between obesity and depression has long been debated, and its contribution remains unclear

Objective This study aims to explore the relationship between BMI and depressive symptoms to investigate the role of insulin resistance in this association

Methods We rigorously selected data from the National Health and Nutrition Examination Survey (NHANES) from 2005 to 2018. Multivariate logistic regression analysis and subgroup analysis were employed to assess the correlation between obesity and depressive symptoms. Restricted cubic splines (RCS) were used to evaluate the non-linear relationship between BMI and depressive symptoms. Mediation analysis was conducted to examine the role of insulin resistance in the relationship between obesity and depressive symptoms

Results After strict inclusion and exclusion criteria were applied to the NHANES dataset, 12744 participants were included in the observational study. Multivariate logistic regression analysis indicated a signifi-

cant association between obesity and depressive symptoms. Subgroup analysis revealed a potential interaction between the levels of physical inactivity and vigorous activity with the relationship between obesity and depressive symptoms. BMI was found to have an S-shaped association with depressive symptoms, becoming positively correlated after reaching a turning point ($BMI > 23.22 \text{ Kg/m}^2$, $p < 0.001$). Insulin resistance partially mediated the potential impact of obesity on depressive symptoms (IR: 17.5%, $p = 0.018$)

Conclusion Our study confirms a significant association between obesity and depressive states, with insulin resistance significantly mediating part of this relationship

Limitations: This study is a cross-sectional observational study, and causal relationships may require longitudinal studies for further evidence.

关键词: Insulin resistance; Obesity; Depressive states; NHANES; Mediation analysis

FNRIS 对疫情期间青少年抑郁障碍患者学习倦怠的影响

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目的 学习倦怠在疫情期间对青少年抑郁障碍患者影响普遍,功能性近红外光谱(functional near-infrared spectroscopy, fNIRS)可以探索学习倦怠的脑血流激活机制。本研究旨在探讨 fNIRS 及相关临床症状对疫情期间青少年抑郁障碍患者 LB 的相关影响及中介作用。

方法 本研究纳入 51 例青少年抑郁障碍患者。入组完成了社会人口学信息评估,采用抑郁-焦虑-压力量表简体中文版(DASS-21)、斯奈思-汉密尔顿快感量表(SHAPS)以及青少年学习倦怠量表(Adolescent Student Burnout Inventory, ASBI)进行相关临床症状和评估。采用 fNIRS 监测脑血流动力学变化,用 β 值描述各通道脑激活值。采用感兴趣区域(ROI)划分理论,得出各个脑区的激活值。

结果 1、在社会人口学相关分析中,男性在身

心耗损方面受影响更大($P < 0.05$),而在独生子女、父母的教育水平及年级方面均未发现显著差异(均 $P > 0.05$); 2、偏相关分析结果显示,压力、焦虑和抑郁评分与 LB 各维度及总分呈正相关(均 $P < 0.05$)。SHAPS 评分与 LB 学业疏离,低成就感及总分之间存在显著正相关($r = 0.411, 0.365$ 和 0.410 , 均 $P < 0.05$)。学业疏离因子与右内侧前额叶区(RmPFC)的激活值呈负相关($r = -0.488$, $p < 0.001$)。右背外侧前额叶区(RPFC)的激活值与 LB 总分呈负相关($r = -0.318$, $p < 0.05$)。3、多元线性回归分析显示,抑郁评分($\beta = 0.583$, $p = 0.007$)对 LB 身心耗损因子具有正向预测作用。RmPFC 区的激活值($\beta = -3.181$, $p = 0.003$)对学业疏离因子有预测作用。此外,RPFC 区的激活值($\beta = -7.853$, $p = 0.015$)是 LB 总分的强有力预测因子。4、Process 中介分析显示,各脑区的激活值在临床变量及 LB 之间无明显中介效应(均 $p > 0.05$)。

结论 疫情期间青少年抑郁障碍患者情绪症状预示着更严重的学习倦怠,RmPFC 区和 RPFC 区的脑激活程度能够预测学习倦怠的严重程度。

关键词: 青少年, 抑郁症, 学习倦怠, fNIRS

Potential Correlations between Asymmetric Disruption of Functional Connectivity and Metabolism in Major Depressive Disorder

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Objective Previous research has suggested a connection between major depressive disorder (MDD) and certain comorbidities, including gastrointestinal issues, thyroid dysfunctions, and glycolipid metabolism abnormalities. However, the relationships between these factors and asymmetrical alterations in functional connectivity (FC) in adults with MDD remain unclear

Methods We conducted a study on a cohort of 42 MDD patients and 42 healthy controls (HCs). Participants underwent comprehensive clinical assessments,

including evaluations of blood lipids and thyroid hormone levels, as well as resting-state functional magnetic resonance imaging (Rs-fMRI) scans. Data analysis involved correlation analysis to compute the parameter of asymmetry (PAS) for the entire brain's functional connectome. We then examined the interrelationships between abnormal PAS regions in the brain, thyroid hormone levels, and blood lipid levels

Results The third-generation ultra-sensitive thyroid stimulating hormone (TSH3UL) level was found to be significantly lower in MDD patients compared to HCs. The PAS score of the left inferior frontal gyrus (IFG) decreased, while the bilateral posterior cingulate cortex (Bi-PCC) PAS increased in MDD patients relative to HCs. Notably, the PAS score of the left IFG negatively correlated with both TSH and total cholesterol (CHOL) levels. However, these correlations lose significance after the Bonferroni correction

Conclusion MDD patients demonstrated abnormal asymmetry in resting-state FC (Rs-FC) within the fronto-limbic system, which may be associated with CHOL and thyroid hormone levels

关键词: Asymmetry; Cholesterol; Parameter of asymmetry; Resting-state functional connectivity; The third-generation ultra-sensitive thyroid stimulating hormone.

Deviant Spontaneous Neural Activity As A Potential Early-response Predictor for Therapeutic Interventions in Patients with Schizophrenia

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Objective Previous studies have established significant differences in the neuroimaging characteristics between healthy controls (HCs) and patients with schizophrenia (SCZ). However, the relationship between homotopic connectivity and clinical features in patients

with SCZ is not yet fully understood. Furthermore, there are currently no established neuroimaging biomarkers available for the diagnosis of SCZ or for predicting early treatment response. The aim of this study is to investigate the association between regional homogeneity and specific clinical features in SCZ patients

Methods We conducted a longitudinal investigation involving 56 patients with SCZ and 51 HCs. The SCZ patients underwent a 3-month antipsychotic treatment. Resting-state functional magnetic resonance imaging (fMRI), regional homogeneity (ReHo), support vector machine (SVM), and support vector regression (SVR) were used for data acquisition and analysis

Results In comparison to HCs, individuals with SCZ demonstrated reduced ReHo values in the right postcentral/precentral gyrus, left postcentral/inferior parietal gyrus, left middle/inferior occipital gyrus, and right middle temporal/inferior occipital gyrus, and increased ReHo values in the right putamen. It is noteworthy that there was decreased ReHo values in the right inferior parietal gyrus after treatment compared to baseline data

Conclusion The observed decrease in ReHo values in the sensorimotor network and increase in ReHo values in the right putamen may represent distinctive neurobiological characteristics of patients with SCZ, as well as a potential neuroimaging biomarker for distinguishing between patients with SCZ and HCs. Furthermore, ReHo values in the sensorimotor network and right putamen may serve as predictive indicators for early treatment response in patients with SCZ

关键词: brain; magnetic resonance imaging; regional homogeneity; schizophrenia; support vector machine; support vector regression.

Disrupted Interhemispheric Coordination of Sensory-motor Networks and Insula in Major Depressive Disorder

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Objective Prior researches have identified distinct differences in neuroimaging characteristics between healthy controls (HCs) and patients with major depressive disorder (MDD). However, the correlations between homotopic connectivity and clinical characteristics in patients with MDD have yet to be fully understood. The present study aimed to investigate common and unique patterns of homotopic connectivity and their relationships with clinical characteristics in patients with MDD

Methods We recruited 42 patients diagnosed with MDD and 42 HCs. We collected a range of clinical variables, as well as exploratory eye movement (EEM), event-related potentials (ERPs) and resting-state functional magnetic resonance imaging (rs-fMRI) data. The data were analyzed using correlation analysis, support vector machine (SVM), and voxel-mirrored homotopic connectivity (VMHC)

Results Compared with HCs, patients with MDD showed decreased VMHC in the insula, and increased VMHC in the cerebellum 8/vermis 8/vermis 9 and superior/middle occipital gyrus. SVM analysis using VMHC values in the cerebellum 8/vermis 8/vermis 9 and insula, or VMHC values in the superior/middle occipital gyrus and insula as inputs can distinguish HCs and patients with MDD with high accuracy, sensitivity, and specificity

Conclusion The study demonstrated that decreased VMHC in the insula and increased VMHC values in the sensory-motor networks may be a distinctive neurobiological feature for patients with MDD, which could potentially serve as imaging markers to discriminate HCs and patients with MDD

关键词: brain; magnetic resonance imaging; major depressive disorder; support vector machine; voxel-mirrored homotopic connectivity.

不同非药物干预方式对青少年抑郁症患者影响的网状 Meta 分析

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目的 评估不同非药物干预方式对青少年抑郁症患者的干预效果,为护理实践提供非药物干预的循证。

方法 系统检索中国知网、中国生物医学文献数据库、万方数据库、维普数据库、PubMed、Embase、Cochrane Library 等数据库中关于非药物干预方式对青少年抑郁症患者影响的随机对照试验,同时进行溯源。检索时限为建库至 2023 年 12 月。使用 Stata 17.0 和 Review Manager 5.3 软件进行网状 Meta 分析。

结果 最终纳入 32 项研究,包括 14 种非药物干预方式,共 2680 例青少年抑郁症患者。网状 Meta 分析结果显示,与常规护理组相比,运动疗法[SMD=-4.21,95%CI(-8.25,-3.46),P<0.001]、认知行为疗法[SMD=-3.52,95%CI(-5.42,-3.28),P<0.001]、综合心理疗法[SMD=-3.13,95%CI(-8.60,-0.26),P<0.001]、对青少年抑郁症患者具有较好的改善效果。累积排序概率图下面积显示,运动疗法是改善青少年抑郁症患者的最佳非药物干预方式。

结论 在青少年抑郁症患者的非药物干预中,运动疗法效果最佳,可以在临床实践中进行拓展,但仍需大量高质量随机对照试验进行验证。

关键词: 非药物干预,青少年,抑郁症,网状 Meta 分析

Dose-response Relationship between Different Physical Activity Types and Depressive Symptoms in Middle-aged and Older Adults: A Study of Chinese Urban-rural Differences

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Objective Evidence on the dose-response connection involving depressive symptoms and various types of physical activity in urban and rural populations is scarce. This study compares the dose-response connection across depressive symptoms and different types of activity in populations living in rural and urban areas

Methods 15,904 participants submitted data for the 2020 China Health and Retirement Longitudinal Study (CHARLS). The type and duration of physical activity were determined by self-assessment reports. The Centre for Epidemiological Studies Depression Scale was used to measure depressive symptoms. The dose-response link between different types of physical activity and depressive symptoms was determined using multifactorial logistic regression analysis

Results In the rural population, 1,200-3,000 METs-min/week of recreational physical activity was found to be inversely linked to depressive symptoms in contrast to the sedentary population (OR=0.82, 95% CI: 0.745-0.910). The risk for depressive symptoms increased with recreational physical activity exceeding 12,000 METs-min/week (OR=1.43, 95% CI: 1.044-1.952), as did over 6,000 METs-min/week of non-recreational activity. In the urban population, 600-12,000 METs-min/week of recreational physical activity was related to a reduced incidence of depressive symptoms compared to sedentary groups, whereas the risk rose with non-recreational physical activity over 3,000 METs-min/week

Conclusion The dose-response connection between different physical activity types and depressive symptoms varies between rural and urban areas. Compared to non-recreational physical activity, recreational physical activities are better for mental health

关键词: Depressive symptoms, physical activity, dose, urban-rural difference

内感受在抑郁症患者社会支持和社交能力转换机制中的研究

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目的 社会支持与社交能力有关。然而如何将外界的社会支持转化为自身的社交能力,机制未明。本研究意在探究社会支持和社交能力的心理转换机制,确认内感受是否为该转换过程的中介因素。

方法 本研究最终纳入符合 DSM-5 的 MDD 患者 292 例及健康对照 257 例,选用 PHQ-9、MAIA-2、SSRS 和 TSBI 评估抑郁、内感受、社会支持以及社交能力,建立社会支持、内感受(包含八个维度:注意、不分心、不担心、注意调节、情绪觉察、自我调节、躯体聆听、信任)以及社交能力的中介分析模型,比较两组的中介变量及中介占比。

结果 通过偏相关分析及中介分析,发现社会支持、内感受、社交能力之间存在两两相关。MDD 组中,情绪觉察、自我调节、躯体聆听和信任为中介变量;HC 中,注意调节、情绪觉察、自我调节和信任为中介变量。两组人群均有四个中介变量,且有三个相同的中介变量,相较于健康人,相同的中介变量在 MDD 组的中介比例下降。

结论 内感受是社会支持和社交能力心理转换机制的中介变量,内感受的损伤和该转换机制的破坏是影响抑郁症疾病进展的一个重要因素。后续的研究应该关注于如何调节内感受从而改善该转换过程,进而改善抑郁症的症状及预后。

关键词: 抑郁症,内感受,社会支持,社交能力

RTMS 联合药物及 CBT 治疗青少年抑郁障碍的临床研究

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目的 探讨重复经颅磁刺激(rTMS)联合药物及认知行为疗法(CBT)治疗青少年抑郁障碍的临床效果。

方法 收集 2022 年 1 月至 2023 年 12 月,我院精神心理科就诊的青少年抑郁障碍患者 100 例为研究对象。采用随机数字表法分成药物治疗组、药物+CBT 组、药物+rTMS 组、药物+rTMS+CBT 组。药物治疗组给予抗抑郁药物治疗;药物+rTMS 组在药物治疗的基础上联合 rTMS 治疗;药物+CBT 组在药物治疗的基础上联合 CBT 治疗;药物+rTMS

+CBT 组在药物治疗的基础上联合 rTMS 及 CBT 治疗。四组患者分别在治疗前、治疗 2、4 和 8 周后采用汉密尔顿抑郁量表 24 项版 (HAMD-24)、汉密尔顿焦虑量表 (HAMA)、匹兹堡睡眠质量指数 (PSQI)、耶鲁布朗强迫量表 (Y-BOCS)、自杀风险评估量表 (NGASR)、临床疗效总评量表 (CGI) 进行评估。

结论 rTMS 联合药物及 CBT 治疗青少年抑郁障碍, 对比其他治疗方法能够更好地改善患者抑郁、焦虑情绪, 提高睡眠质量, 减少强迫性思维, 有效率更高。

结果 治疗 8 周后, 药物+rTMS+CBT 组的 HAMA 得分、HAMD 得分、Y-BOCS 得分显著低于其他三组 ($P < 0.05$), 临床疗效显著高于其他三组 ($P < 0.05$)。

关键词: rTMS; 青少年; 抑郁障碍; CBT; 药物治疗

内感受在社会支持与抑郁症中的中介作用及性别差异

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结论 基于内感受的中介作用探讨社会支持对于抑郁症影响的性别差异, 为开展内感受的正念干预提供理论基础。

方法 本研究采用横断面问卷调查, 纳入无锡市精神卫生中心 390 名抑郁患者 (男性/女性: 150/240), 使用社会支持评定问卷 (SSRS) 评估社会支持程度、内感受多维评估量表 (MAIA-2C) 评估内感受、抑郁筛查量表 (PHQ-9) 评估抑郁状况; 依据性别分组, 首先将 SSRS (包括客观支持、主观支持、支持利用度)、MAIA-2C (包括注意、不专心、不担心、注意力调节、情绪意识、自我调节、身体倾听与信任) 以及 PHQ-9 总分进行相关分析, 其次将存在两两相关变量纳入中介模型, 构建男性与女性的中介模型。

结果 研究结果显示女性与男性相比, 社会支持评分更低, 抑郁严重程度更重。在相关分析中男

女之间各分量表相关显著维度存在性别差异。在男性抑郁患者中社会支持三个分维度、内感受注意、抑郁三者之间存在两两相关, 提示内感受注意维度可能是男性社会支持与抑郁之间的中介变量。女性社会支持、内感受自我调节/内感受信任、抑郁三者之间存在两两相关, 提示存在中介变量。在中介验证分析中, 男女之间存在显著性别差异。内感受注意维度在社会支持与男性抑郁症状中起部分中介作用, 内感受自我调节与内感受信任维度在社会支持与女性抑郁症状中起部分中介作用。

结论 社会支持的水平与抑郁程度存在密切相关, 低社会支持是女性抑郁程度高于男性的重要原因。社会支持对于抑郁的影响部分通过内感受起作用, 揭示了抑郁症背后的潜在神经机制, 内感受的性别差异可能是导致女性抑郁症重于男性的生理原因。未来为了减轻女性患者的抑郁程度, 需要重点提高社会支持的水平与质量, 尤其是开发基于内感受的心理疗法。

关键词: 性别差异, 抑郁症, 社会支持, 内感受, 中介分析

抑郁症患者采取药物治疗、认知行为疗法与心理社会支持治疗的效果观察

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目的 抑郁症在临床上作为一种常见的心理疾病类型, 主要特征为情绪持续、显著低落, 临床症状为过度悲伤、闷闷不乐、自卑等, 甚至会有躯体症状产生、思维变缓、动作减少等, 对患者正常生活造成严重的影响[1]。该病以药物治疗为主, 然而, 药物治疗后却会发生复发。而在药物治疗同时联合心理疗法效果更佳。观察对抑郁症患者予以药物、心理社会支持、认知行为疗法的效果。

方法 观察对象为 2021.1~2022.1 就诊于我院的抑郁症患者 78 例, 随机数字法予以分组, 39 例分为对照组, 对照组的治疗方法为药物治疗, 选择的药物为盐酸帕罗西汀, 20mg/次, 1 次/d 为起始剂量, 口服方式, 早晨用药, 在 2~3 周治疗后, 以药物效果和耐受程度为依据使剂量逐渐增加, 每周 10mg 剂量增加, 日剂量最大不得 >50mg。39 例予以药物、

心理社会支持、认知行为疗法者归纳到治疗组，对比和观察治疗效果。

结果 和对照组对比，治疗组患者治疗后 HAMD（抑郁）评分明显较低， $P<0.05$ ；和对照组对比，治疗组患者治疗后 MMSE（认知功能）评分明显较高， $P<0.05$ 。

结论 对抑郁症患者予以药物、心理社会支持、认知行为疗法效果突出，可改善患者抑郁症状和认知功能，建议推广。

关键词：抑郁症；药物治疗；心理社会支持；认知行为疗法

抑郁症自杀行为问卷修订版的信效度检验

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目的 自杀行为问卷修订版(Suicide Behavior Questionnaire Revised, SBQ-R)仅在国外研究中运用较多，国内研究仍较少涉及，且尚未见到关于该量表中文版在抑郁症患者中信效度的研究。本研究考察该量表在中国抑郁症患者中进行应用的情况，收集数据进行量表信效度的检验。

方法 选取 2023 年 3 月至 2023 年 11 月在深圳市康宁医院住院诊断为“抑郁发作”或“复发性抑郁障碍”的成年患者人群。在患者住院一周内发放量表，包括收集患者个人信息，采用汉密尔顿抑郁量表进行评估，纳入汉密尔顿抑郁量表 ≥ 7 分的患者再让患者亲自填写贝克绝望量表、自杀行为问卷修订版、简明国际神经精神访谈自杀模块进行评估。数据分析采用 SPSS 25.0 和 AMOS 17.0 软件进行统计分析。使用统计软件对患者的一般情况及临床特征进行描述性统计分析，使用内部一致性信度、折半信度等信度指标，结构效度、效标效度等效度指标对量表进行信效度分析。

结果 在信度方面，内部一致性信度系数为 0.829，分半信度为 0.830，表明量表有良好的信度，在效度方面，进行探索性因素分析显示，KMO 值为 0.703，Bartlett 球性检验 143.307($P<0.001$)，各条目的公因子方差均大于 0.4，抽取特征值大于 1 的公因子 1 个，共可解释 61.99% 的变异量，说明因子对

原始变量的解释能力尚可。采用单因子模型对样本进行验证性因素分析，模型拟合指数如 CFI 值、IFI 值、NFI 值均大于 0.9，TLI 值接近 0.9，结果说明本量表具有较好的结构效度。选用贝克绝望量表、汉密尔顿抑郁量表、简明国际神经精神访谈自杀模块来考察本量表的同时效度，结果表明本量表和贝克绝望量表、汉密尔顿抑郁量表、简明国际神经精神访谈自杀模块呈显著相关 ($P<0.01$)。对 SBQ-R 每个项目的得分与总分进行相关分析，结果显示相关系数在 0.666-0.886 之间，且所有相关系数均呈显著相关 ($P<0.01$)。

结论 研究表明，自杀行为问卷修订版具有较好的信度和效度，可以作为抑郁症患者的自杀行为评估量表。

关键词：自杀行为问卷修订版，信度，效度，抑郁症

青少年抑郁症患者家庭复原力的现状及影响因素研究

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目的 青少年抑郁症已经成为该群体致病和致残的首要原因，预计该疾病在 2030 年成为全球疾病负担首位。长期的居家照护会使主要照顾者产生沉重的照护负担，对家庭造成较大的压力与挑战。随着家庭压力理论和家庭系统理论的发展以及积极心理学的兴起，家庭复原力逐渐成为家庭压力适应领域的研究热点。现有研究表明，从优势视角关注家庭复原力的提升，可以促进家庭成员利用优势资源与力量维持家庭的正常功能，促进家庭良好适应，保护家庭成员的身心健康。因此，本研究旨在调查青少年抑郁症患者家庭复原力现状及影响因素，为制定以家庭为中心的护理方案及促进患者的康复提供参考。

方法 采用便利抽样法，选择 2023 年 5 月至 10 月在山西省某两所三级甲等医院精神卫生科住院的 200 例青少年抑郁症患者的主要照顾者为研究对象。采用一般资料调查问卷、中文版家庭复原力评估量

表、家庭功能评估量表—总的功能分量表、社会支持评定量表、简易应对方式问卷进行调查。使用SPSS26.0软件进行统计分析,采用描述性统计分析、单因素分析、Pearson相关性分析及多元逐步回归分析的方法进行统计分析,以 $P<0.05$ 为检验水准。

结果 200例青少年抑郁症患者主要照顾者家庭复原力得分为(120.16±10.13)分,家庭复原力总分与家庭功能得分呈负相关(家庭功能量表得分越高表明家庭功能越差),与积极应对、社会支持及各维度得分呈正相关(均 $P<0.05$)。多元逐步回归分析结果显示,照顾者的文化程度、家庭功能、社会支持、积极应对方式是青少年抑郁症患者照顾者家庭复原力的影响因素(均 $P<0.05$),解释总变异的49.7%。

结论 青少年抑郁症患者的家庭复原力处于中等偏上水平;家庭功能、社会支持、积极应对及主要照顾者的文化程度是家庭复原力的影响因素。医护人员应加强对青少年抑郁症患者主要照顾者的知识宣教和照护指导,帮助照顾者保持积极的心态应对疾病带来的压力与挑战,同时重视其家庭功能、社会支持和应对方式的评估并及时干预,以提高青少年抑郁症患者的家庭复原力水平,促进患者康复进程。

关键词: 抑郁症,青少年,主要照顾者,家庭复原力,影响因素,护理

Impairment in Acquisition of Conditioned Fear in People with Depressive Symptoms

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Objective Depression is one of the primary global public health issues, and there has been a dramatic increase in depression levels among young people over the past decade. The neuroplasticity theory of depression postulates that a malfunction in neural plasticity, which is responsible for learning, memory, and adaptive behavior, is the primary source of the disorder's clinical manifestations. Nevertheless, the impact of depression symptoms on associative learning remains underexplored

Methods We used the differential fear conditioning paradigm to investigate the effects of depressive symptoms on fear acquisition and extinction learning. Skin conductance response (SCR) is an objective evaluation indicator, and ratings of nervousness, likeability, and unconditioned stimuli (US) expectancy are subjective evaluation indicators. In addition, we used associability generated by a computational reinforcement learning model to characterize the skin conductance response

Results The findings indicate that individuals with depressive symptoms exhibited significant impairment in fear acquisition learning compared to those without depressive symptoms based on the results of the skin conductance response. Moreover, in the discrimination fear learning task, the skin conductance response was positively correlated with associability, as estimated by the hybrid model in the group without depressive symptoms. Additionally, the likeability rating scores improved post-extinction learning in the group without depressive symptoms, and no such increase was observed in the group with depressive symptoms

Conclusion The study highlights that individuals with pronounced depressive symptoms exhibit impaired fear acquisition and extinction learning, suggesting a possible deficit in associative learning. Employing the hybrid model to analyze the learning process offers a deeper insight into the associative learning processes of humans, thus allowing for improved comprehension and treatment of these mental health problems

关键词: fear conditioning, associative learning, depression, skin conductance response, hybrid model

基于重复信任博弈任务的抑郁症患者CBT治疗有效组与无效组差异研究

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目的 抑郁症(Major Depressive Disorder, MDD)患者往往伴随着负性认知增多,难以从负性刺激和

情绪状态中恢复。认知行为治疗(Cognitive Behavioral Therapy, CBT)旨在通过重建患者对自身、他人和世界的负性认知,激活适应性行为,以达到缓解抑郁症状的目的。尽管 CBT 目前被认为是治疗 MDD 患者的一线治疗方式,但是其治疗有效率仅有 50%-60%。因此,本研究旨在探索 MDD 患者在 CBT 治疗前的临床心理特征、重复信任博弈任务中的行为学参数、大脑功能活动以及预期偏差调节的脑功能活动在治疗有效组与无效组间是否具有显著差异,为阐明 MDD 患者治疗基线期的认知学习过程对 CBT 治疗的敏感性以及为发现潜在的用于预测 CBT 疗效的生物标志物提供进一步的证据。

方法 本研究共纳入 43 例 17 项汉密尔顿抑郁量表(Hamilton Depression Scale, HAMD-17)得分 ≥ 17 分, <24 分的 MDD 患者,采集人口学信息、完成临床神经心理量表评估、以及重复信任博弈任务的功能磁共振扫描。接受 12 周 CBT 治疗后,根据 HAMD-17 减分值是否 $\geq 50\%$,将完成治疗的患者分为治疗有效组和治疗无效组。采用卡方检验、独立样本 t 检验等方法比较两组在治疗前的人口学统计资料、临床心理指标、行为学(一般行为学、强化学习模型参数)和影像学指标上的差异。

结果 共有 23 人被纳入治疗有效组,14 人纳入治疗无效组,6 人脱落。治疗前有效组和无效组间的 HAMD-17 得分差异显著,HAMA、PHQ-9、BDI-II 得分差异接近但未达到显著水平,有效组症状严重程度低于无效组严重程度。行为学上,有效组进行低投资决策的次数显著高于无效组,对中性对手的损失学习率也显著高于无效组;且治疗前有效组存在对所有对手损失学习率偏高、收益学习率偏低的趋势。影像学上,反馈阶段面对不同类型对手时,有效组在左侧枕上回、右侧颞上回、梭状回/舌回、双侧旁中央小叶的激活高于无效组;小体积校正发现,面对中性对手时,有效组在右侧背侧纹状体的激活高于无效组。预期偏差调节的大脑活动在左侧脑岛、双侧楔叶、右侧缘上回的对手类型主效应显著,组别主效应不显著。

结论 基于重复信任博弈任务发现,MDD 患者治疗有效组与无效组在临床、行为、脑指标上均存在显著差异,这些差异提示 MDD 患者治疗有效组在基线期可能对损失更为敏感,而治疗无效组在基线期对他人反馈更不敏感;在对手信息不可预测性较强时,两组差异可能更为显著。该研究发现有助于增进对 CBT 治疗机制的理解,也提示重复信任博

弈任务对探索 MDD 患者 CBT 疗效生物标志物的潜在可能。

关键词: 抑郁症,重复信任博弈任务,认知行为治疗,强化学习模型,功能磁共振成像

青少年单双相抑郁患者临床特征与炎症因子及尿酸水平的相关性

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目的 由于青少年单双相抑郁患者鉴别困难,误诊率高,因此越来越多的研究探讨鉴别单双相情感障碍的临床特征及客观生物标志物,相关研究得出尿酸及炎症因子水平与单双相情感障碍发生发展以及严重程度有一定的相关性,本研究通过对单双相抑郁青少年患者的临床特征评估及尿酸、多种炎症标志物(C 反应蛋白、白细胞计数、中性粒细胞)水平的检测来探究两者临床特征差异和尿酸及多种炎症标志物水平与临床特征相关性。

方法 采用一般情况量表、汉密尔顿抑郁量表、汉密尔顿焦虑量表、轻躁狂症状自评量表(HCL-32)、杨氏躁狂量表、渥太华自伤量表、哥伦比亚-自杀严重程度量表、实验室生化检测资料。对连续性变量采用 Shapiro-Wilk 检验进行正态性检验,服从正态分布的计量资料采用独立样本 T 检验,非正态分布的计量资料用中位数和四分位数 [M (P25, P75)] 表示,采用 ROC 曲线下面积 (area under curve, AUC) 反映预测的准确性。采用 Pearson 或 Spearman 相关系数分析相关性。

结果 具有非自杀性自伤、自杀行为、同伴 NSSI 行为、同伴自杀行为、非典型单相抑郁组,青少年双相抑郁组抑郁焦虑严重程度均高于单相抑郁组,且均具有统计学差异 ($P < 0.05$);青少年双相抑郁组自伤行为倾向明显高于单相抑郁组,双相抑郁组因为释放压力、体验快感、摆脱孤独与空虚、释放紧张恐惧等而自伤明显高于单相抑郁组,均具有统计学差异 ($P < 0.05$);有自杀意念的双相抑郁组白细胞水平高于无自杀意念的单相抑郁组;有自杀意念的双相抑郁组 C-反应蛋白水平高于单相抑郁组,有自杀意念的双相抑郁组尿酸水平高于有自杀意念的单相抑郁组,均具有统计学差异 ($P < 0.05$);双相抑

郁组 WBC、CRP、UA 水平较单相抑郁组高, 差异有统计学意义 ($P < 0.05$); CRP、尿酸水平升高是双相抑郁组的危险因素 ($P < 0.05$), CRP、UA 单独区别单相抑郁和双相抑郁有一定的预测效果; 单相抑郁组的抑郁严重程度与 WBC、NE 水平有正相关性, 双相抑郁组的抑郁焦虑严重程度均与 UA 水平有正相关, 但相关性均较微弱。

结论 青少年双相抑郁患者焦虑抑郁严重程度以及自伤行为、自杀意念均高于单相抑郁患者, 且与 CRP 及 UA 水平具有一定相关性, 同时与青少年单相抑郁患者相比, CRP、UA 水平升高是双相抑郁患者的危险因素, CRP、UA 水平可能是鉴别青少年单双相抑郁的生物学指标, 但仍需要大量样本实施更加完善的设计去进一步研究。

关键词: 青少年, 单双相抑郁, 尿酸水平, C-反应蛋白, 非自杀性自伤, 自杀意念

应用 DTI-ALPS 指数分析抑郁障碍患者脑类淋巴系统功能的纵向变化

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目的 基于沿血管周围间隙的扩散张量成像 (diffusion tensor imaging analysis along the perivascular space, DTI-ALPS) 指数分析, 探讨抑郁障碍患者脑类淋巴系统功能的纵向改变及其影响因素。

方法 回顾性分析 20 例根据 DSM-V 标准诊断为抑郁障碍的患者的基线及随访 DTI 数据资料, 两次数据采集时患者皆处于抑郁发作状态。其中男性 5 例, 女性 15 例, 基线年龄 40.25 ± 16.06 岁, 病程 10.05 ± 11.13 年, 发作次数 2.5 ± 1.32 次, 随访问隔 17.65 ± 9.64 个月。DTI 数据经过 FSL 及 SPM12 预处理后获得各被试 x、y、z 三个方向的弥散图 (D_x 、 D_y 、 D_z), 根据白质模板 (ICBM-JHU) 提取侧脑室顶层面 (MNI 坐标 $z=28$) 的双侧前、中、后放射冠及上矢状束的 D_x 、 D_y 、 D_z 值, 计算投射纤维 (即放射冠) 的平均 D_x 、 D_y 和联络纤维 (即上矢状束) 的平均 D_x 、 D_z 值, 以及双侧前、中、后 DTI-ALPS 指数值。计算公式: $DTI-ALPS = (\text{投射 } D_x + \text{联络 } D_x) / (\text{投射 } D_y + \text{联络 } D_z)$ 。采用配对 t 检验分析患者纵向数据各指标之间的差异, 并将其与年龄、病程、血

清皮质醇水平、促肾上腺皮质激素水平、汉密尔顿抑郁量表 (HAMD-17)、汉密尔顿焦虑量表评分进行 Pearson 相关分析, 与发作次数进行 Spearman 相关分析。

结果 抑郁障碍患者随访时的投射纤维 D_x 值明显高于基线水平 ($t=2.515, p=0.021$), 随访时的左侧前部 DTI-ALPS 值明显高于基线水平 ($t=2.223, p=0.039$), 且投射纤维 D_x 值与血清皮质醇水平呈显著正相关 (基线: $r=0.493, p=0.032$; 随访: $r=0.57, p=0.009$)。

结论 随着病程进展, 抑郁障碍患者脑类淋巴系统功能变化的脑区主要发生在左侧前部区域, 并且受到血清皮质醇水平的调节。

关键词: 抑郁障碍, 类淋巴系统, 血管周围间隙, 扩散张量成像

儿童期虐待与高中生抑郁症状之间的关系及内观认知疗法干预研究

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目的 为了探讨儿童期虐待与高中生抑郁症状之间的关系以及领悟社会支持在其中可能存在的中介效应; 分析内观认知疗法对高中生抑郁症状的改善效果, 为改善高中生抑郁症状提供有效的干预思路, 从而提高高中生的心理健康水平。

方法 分为横断面研究和干预性研究。1. 横断面研究: 采用自编一般情况调查问卷、儿童期创伤问卷/简式儿童期虐待问卷 (CTQ-SF)、领悟社会支持问卷 (PSSS) 以及流调中心抑郁量表 (CES-D) 对安徽省某高中在校学生进行调研。2. 干预性研究: 从横断面研究中筛选 75 名有不同程度抑郁症状的高中生为研究对象, 所有研究对象均符合流调中心抑郁量表 (CES-D) 得分大于 15 分, 将研究对象随机分为干预组与对照组; 以领悟社会支持问卷 (PSSS)、流调中心抑郁量表 (CES-D) 作为评估工具分别对两组高中生进行干预前后的测评, 比较两组高中生干预前后领悟社会支持和抑郁症状的改善效果。

结果 1. 横断面研究: (1) 采用皮尔逊相关分析结果显示, 儿童期虐待和抑郁症状之间有着显著正相关关系 ($r=0.735, P < 0.001$); 抑郁症状和领悟社会

支持之间有着显著负相关关系($r=-0.586$, $P<0.001$); 儿童期虐待和领悟社会支持之间有着显著负相关关系($r=-0.603$, $P<0.001$)。 (2) 儿童期虐待既可以直接预测高中生抑郁症状发生($\beta=0.735$, $P<0.001$), 也可以通过领悟社会支持这一中介变量间接影响高中生抑郁症状($\beta=0.600$, $P<0.001$); 直接效应占总效应的 81.63%, 间接效应占总效应的 18.37%。 2. 干预性研究: 本研究共获得有效数据干预组 38 份, 对照组 37 份, 有效回收率为 94%。 内观认知疗法较心理健康教育更能有效提高个体领悟社会支持水平 [$F(1,73)=67.139$, $P<0.001$], 改善高中生抑郁症状 [$F(1,73)=225.665$, $P<0.001$]。

结论 (1) 儿童期虐待与高中生抑郁症状呈显著正相关; (2) 儿童期虐待既可以直接影响抑郁症状, 又可以通过领悟社会支持的部分中介作用间接影响抑郁症状; (3) 内观认知疗法对提升高中生的领悟社会支持水平有一定干预效果, 并且可以有效改善高中生的抑郁症状。

关键词: 儿童期虐待, 高中生, 抑郁症状, 领悟社会支持, 内观认知疗法

Treatment-resistant Depression with Poor Response To Deep Brain Stimulation Improves with Psychotherapy: A Case Report

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Background Treatment-resistant depression (TRD) is commonly defined as the lack of response to two or more full-dose and full-course antidepressant regimens while adhering to treatment, accounting for at least 30% of depression. This clinical scenario has prompted the exploration of deep brain stimulation (DBS) as a potential therapeutic approach. DBS is considered an effective intervention for TRD, demonstrating a response rate of 60%. However, the current surgical technology for DBS is still in its developmental stage, and some patients exhibit poor responsiveness to this treatment modality, necessitating further investigation into potential solutions. In this paper, we present

two cases of TRD patients who exhibited limited improvement in depressive symptoms following DBS surgery but demonstrated significant amelioration after receiving postoperative psychotherapy

Case presentation: A 20-year-old female from China has been suffering from depression for over three years. She has undergone hospitalization more than ten times and received various psychiatric medications at therapeutic doses, including fluoxetine, clozapine, and valproate magnesium, in addition to modified electroconvulsive therapy (ECT). In July 2023, she underwent MR-guided focused ultrasound (MRgFUS) treatment at a hospital in Shanghai, but the results were limited. In October 2023, she received bed nucleus of the stria terminalis (BNST)-nucleus accumbens (NAc) DBS at the same hospital (stimulation parameters: voltage 3V, pulse width 210 μ s, frequency 170 Hz). Despite an initial transient positive response to DBS, her condition continued to progressively deteriorate.

Upon admission to our hospital in January 2024, the patient was prescribed a medication regimen consisting of sodium valproate 500 mg/day, clozapine 150 mg/day, and fluoxetine 60 mg/day. During her hospitalization period, we implemented a systematic cognitive behavioral therapy (CBT) approach. A pivotal aspect of her treatment involved collaboratively establishing a daily self-assessment routine performed no less than twice per day to evaluate the intensity of suicidal impulses on a scale from 0 to 10 points and the level of emotional self-management on a scale from 0 to 10 points. This strategic intervention facilitated enhanced recognition and monitoring of emotional fluctuations and suicide risk, thereby promoting effective communication among the patient, her mother, and healthcare professionals.

Based on these assessments, we established a timeline for the absence of her mother and implemented "safe solitary training". We provided guidance in finding a balance between self-assurance in solitude and apprehension of losing control, engaging in daily activities to foster emotional regulation and independent living. Throughout a five-month follow-up period, the patient gradually extended the duration of her alone time. The behavioral training not only ensured her safety but also

bolstered her self-confidence, alleviated feelings of guilt, and enhanced her emotional and behavioral responses across various scenarios, thereby augmenting her resilience towards setbacks.

Discussion and Conclusion The exact mechanism through which DBS improves depressive symptoms in TRD remains to be fully elucidated. Existing studies have not yet identified the optimal stimulation target or parameters for DBS in TRD treatment nor determined which subgroups of TRD patients would benefit most from DBS therapy. Currently, DBS surgery is not recommended as a standard clinical intervention, with its implementation limited to clinical trials only. Psychotherapy is increasingly acknowledged as an efficacious treatment for depression. Although the precise mechanism of psychotherapy remains incompletely elucidated, combining psychotherapy with other antidepressant treatments can enhance the effectiveness of concurrent therapies. However, psychotherapy is frequently overlooked in patients with TRD. Global investment in mental health remains insufficient, particularly in Asia. It is noteworthy that CBT demonstrates superior efficacy in patients from non-Western countries compared to Western countries, and exhibits a particularly significant effect on Chinese patients. Nevertheless, due to cultural values, the majority of Chinese individuals are hesitant to seek face-to-face psychotherapy. Overcoming these challenges may prove difficult for future depression treatments. Therefore, future research should focus on elucidating the mechanisms underlying psychotherapy's action and developing personalized treatment options tailored to different cultural backgrounds and diverse populations.

Currently, there is limited research on the postoperative management of psychiatric diseases in relation to DBS applications. It should be noted that preoperative and postoperative management may hold equal importance as the DBS intervention itself. Furthermore, DBS, being an invasive therapy involving active stimulation, might be perceived by patients as a "last resort" for rehabilitation. However, some patients still exhibit poor response to DBS. Considering the distinct and complementary mechanisms of psychotherapy and DBS,

we propose considering psychotherapy in the postoperative management of patients with inadequate response to enhance antidepressant treatment efficacy. Notably, no previous study has investigated the impact of psychotherapies like CBT on depressive symptoms following DBS. Therefore, our case highlights the significant role of psychotherapy in alleviating depressive symptoms and underscores its promising potential in treating TRD.

关键词: Deep brain stimulation, Treatment-resistant depression, Cognitive behavioral therapy, Psychotherapy

肥胖人群矿物质摄入量与抑郁的关系研究

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目的 探讨肥胖人群的矿物质摄入与抑郁之间的关系,为肥胖人群降低抑郁风险提供饮食依据。

方法 本研究基于美国国民健康与营养调查(National Health and Nutrition Examination Survey)数据纳入了2015-2018年两次调查的数据,研究对象的相关信息包括性别、年龄、种族、教育水平、婚姻、家庭收入、家庭人口、BMI(Body Mass Index, 身体质量指数)、以及矿物质摄入量(磷、镁、铁、锌、铜、钾、硒、锂)。采用PHQ-9(评估研究对象是否患有抑郁,其中PHQ-9评分 ≥ 10 的人群被诊断为患有抑郁)。采用卡方检验(X^2 检验)检验比较抑郁组和非抑郁患者的一般人口学特征。根据BMI是否 $\geq 25\text{kg}/\text{m}^2$ 将符合纳入标准的人群进行分层,分别分为肥胖组和非肥胖组,并比较两组人群的基线资料;随后,采用单因素和多因素logistic回归分析食物中的矿物质摄入水平(按摄入量分为最低摄入组Q1、较高摄入组Q2和Q3、最高摄入组Q4)与抑郁之间的关联。

结果 1.本研究共纳入8204名年龄在20岁及以上的成年人,4007名男性和4197名女性,肥胖组6071例(74.0%),抑郁人群686例(8.4%)。X²检验发现与非抑郁组相比,抑郁组人群更容易出现教育水平较低、BMI较高、家庭收入水平较低的情况,此外女性、未婚、糖尿病患者在抑郁组所占的比例

明显较高。

2. 分层 X^2 检验发现, 在肥胖组, 女性、糖尿病患者人群在抑郁组所占的比例明显高于在非抑郁组人群中所占的比例。

3. 分层分析结果表明, 在单因素 logistic 回归模型中, 肥胖人群较高的镁、硒、锂、锌、摄入量与较低的抑郁风险有关, 而铜的过量摄入与较高的抑郁风险有关, 镁、铁、锌的缺乏可能会引起较高的抑郁风险。在多因素 logistic 回归模型中, 未发现肥胖人群磷、钙、钠摄入与抑郁风险的相关性。

结论 研究揭示了在肥胖人群中抑郁的高发率及其相关因素包括教育水平、BMI、家庭收入、性别和糖尿病等。证实了特定矿物质摄入与肥胖人群抑郁风险之间的关联。例如适量摄入镁、硒、锂、锌与较低的抑郁风险相关, 而铜的过量摄入以及镁、铁、锌的缺乏可能增加抑郁风险。这些发现为基于营养干预的肥胖人群抑郁管理提供了新的科学依据。未来应进一步为个性化医疗和健康饮食制定提供更为详尽和全面的科学依据。

关键词: 抑郁; 肥胖; 矿物质

Repetitive Transcranial Magnetic Stimulation Elicits Myoclonus Symptoms in Adolescent Patient with Depression: A Case Report

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Introductio Depression affects approximately 1-3% of adolescents worldwide, with roughly one-third of them exhibiting resistance to conventional pharmacotherapy or psychotherapeutic interventions. A recent meta-analysis has suggested potential benefits of repetitive transcranial magnetic stimulation (rTMS) for depression in children and adolescents, but its efficacy in this population has not been approved by the Food and Drug Administration (FDA) to date. We hereby present evidence that rTMS induces myoclonus symptoms, which may be a previously unrecognized adverse effect

Case presentation: The patient, a 15-year-old female, was diagnosed with a "depressive episode" three

years ago. Despite receiving treatment including fluoxetine (20mg/day), sertraline (100mg/day), valproic acid sodium (500mg/day), quetiapine (0.1 g/day), psychotherapy, and various interventions such as biofeedback therapy, her symptoms persisted. Upon admission to our hospital, she was diagnosed with "Severe depressive episode with psychotic symptoms".

The Hamilton Depression Scale (HAMD) and Hamilton Anxiety Scale (HAMA) were administered upon admission. Relevant medication regimens were subsequently devised as follows: Sertraline 100 mg/day, quetiapine fumarate 0.1 g/day, lithium carbonate 500 mg/day, lorazepam 1 mg/day. Additionally, rTMS was employed. On the first day of the treatment (Day1), the patient underwent her initial session of rTMS. The rTMS treatment was administered by professional medical staff, and no adverse events were observed during the course of the treatment. After rTMS treatment, however, the patient exhibited intermittent jerking movements, while maintaining normal temperature, heart rate, and blood pressure on the same day. On the same day, there were no abnormalities in electroencephalogram, electrocardiogram, magnetic resonance imaging scans of the brain, as well as blood test results including electrolyte levels, glucose levels, markers of renal function and liver function measures. On the second day (Day 2), during the night following the second rTMS treatment (around 21:30), the patient developed approximately 10 episodes of myoclonus symptoms, which were characterized by sudden, brief, involuntary jerking movements mainly involving the right upper limb and face. Meanwhile, no restricted eye movements, loss of consciousness, abnormal muscle tone, generalized tonic-clonic seizures, or emotional agitation were observed. The patient's medical and personal history were thoroughly reviewed, revealing no prior episodes of similar symptoms, physical ailments, family medical history, or abnormal findings on physical examinations. On the third day (day 3), we observed approximately 8 intermittent episodes of myoclonus symptoms, with no abnormal limb movements detected between the episodes. Following a comprehensive assessment of the patient's physical and mental systems by the attending physician

and nurse, psychogenic, drug-induced, or somatic myoclonic seizures were ruled out as potential causes. We postulated that the patient's myoclonus symptoms might be associated with rTMS while the rTMS treatment was suspended. We observed an exacerbation of her depressive symptoms on the same day, accompanied by recurrent self-harming behaviors. On the fourth day (Day 4), we observed persistent and significant mood deterioration, with approximately 3 episodes of myoclonus symptoms. However, on the fifth day (Day 5), no myoclonus symptoms and exacerbation of mood were observed. Subsequently, the patient exhibited no myoclonus symptoms.

Discussion: The patient experienced consecutive adverse effects for four days following rTMS treatment, and discontinuation of rTMS therapy resulted in spontaneous relief of myoclonus symptoms without altering concurrent treatments, thereby providing preliminary evidence supporting the association between myoclonus and rTMS. Despite previous studies demonstrating the potential benefits of rTMS treatment in young patients with depression or myoclonus, conflicting evidence suggests limited efficacy and safety of rTMS in minors. The young patient exhibited no amelioration in depressive symptoms following rTMS treatment; conversely, her HAMD and HAMA scores demonstrated a significant increase throughout the intervention. It is plausible that rTMS therapy can induce abnormal neuronal firing patterns in the brain. Considering that adolescents' brain development is not fully mature compared to adults, they might display increased sensitivity to rTMS leading to potential brain dysfunction. rTMS appears to be well-tolerated in children and adolescents, with most side effects being mild and self-limiting. However, limited research has been conducted on the application of rTMS in adolescents with depression. Our case report may shed light on previously unrecognized adverse effects. This underscores the necessity of exercising caution when applying safety guidelines from adult populations to children or adolescents.

关键词: rTMS; Depression; Adverse effect; Myoclonus; Adolescent

Perceived Social Support and Depressive Symptoms Among Discharged COVID-19 Survivors in The Post-COVID Era in Wuhan, China: A Moderated Mediation Model

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Objective Since the COVID-19 pandemic, a serious mental health crisis has occurred among COVID-19 survivors who have recovered and been discharged from hospitals (RD hereafter). RD commonly suffered from depressive symptoms, which could lead to a series of adverse consequences. Hence, it is necessary to reduce the depressive symptoms of RD. Depressive symptoms are potentially protected by perceived social support, resilience, and peace of mind. However, the relationships between these factors are still unclear in RD. The purpose of this study is to identify the mechanism through which perceived social support, resilience, and peace of mind were associated with depressive symptoms among RD, and to provide a theoretical basis for the reduction of depressive symptoms in the post-COVID era

Methods A cross-sectional study was conducted on COVID-19 patients between June 10 to July 25, 2021, in Jianghan District, Wuhan, China. An online structured questionnaire containing the Patient Health Questionnaire (PHQ-9), the Peace of Mind Scale (PoM), the Resilience Style Questionnaire (RSQ), and the Perceived Social Support Scale (PSSS) was respectively used to measure depressive symptoms, the level of peace of mind, resilience, and perceived social support among RD. Moderated mediation analysis was used to identify the mechanism of the association between per-

ceived social support, resilience, peace of mind, and depressive symptoms in RD

Results 1297 RD were finally included in the analysis, and 37.9% of them reported depressive symptoms to varying degrees. The PoM score was (24.70±5.99), the RSQ score was (56.82±14.04), and the PSSS score was (14.25±5.18). Resilience could partially mediate the association between perceived social support and depressive symptoms ($\beta=-0.011$, $P=0.026$). Peace of mind could moderate the association between perceived social support and resilience ($\beta=0.084$, $P<0.001$), perceived social support and depressive symptoms ($\beta=0.062$, $P=0.006$), and the mediation effect of resilience between perceived social support and depressive symptoms

Conclusion In the post-COVID era, tailored interventions that enhance perceived social support, resilience, and peace of mind may be effective strategies to alleviate depressive symptoms among RD

关键词: Perceived social support, resilience, peace of mind, depressive symptoms, COVID-19 survivors

早期适应不良图式对童年创伤抑郁症患者自杀风险的影响: 早期适应不良图式的中介作用

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目的 探讨早期适应不良图式在童年创伤与抑郁症患者自杀风险中的中介效应。

方法 选取南通市第四人民医院 41 例确诊为抑郁症住院患者(研究组)和 64 例健康志愿者(对照组),使用童年创伤问卷、Young 图式量表、贝克自杀意念量表中文版比较两组早期适应不良图式、童年创伤和自杀风险的差异;评估抑郁症人群中童年创伤、早期适应不良图式、自杀风险之间的相关性,并探究早期适应不良图式在童年创伤与抑郁症患者自杀风险中的中介作用。

结果 (1) 研究组童年创伤总分、情感虐待、

躯体虐待、情感忽视、躯体忽视、早期适应不良图式总分、分离和拒绝、自主性和能力不足、他人导向、过于警惕和压抑、自杀风险均高于对照组。

(2) 童年创伤总分、情感虐待、躯体虐待、性虐待、情感忽视与抑郁症患者自杀风险呈显著正相关;

(3) 童年创伤总分与早期适应不良图式总分、分离和拒绝、自主性和能力不足、他人导向、过于警惕和压抑呈显著正相关;情感虐待与早期适应不良图式总分、分离和拒绝、自主性和能力不足、他人导向、过于警惕和压抑呈显著正相关;躯体虐待与早期适应不良图式总分、分离和拒绝、自主性和能力不足呈显著正相关;情感忽视与早期适应不良图式总分、分离和拒绝、自主性和能力不足、他人导向、过于警惕和压抑呈显著正相关。

(4) 早期适应不良图式总分、分离和拒绝、自主性和能力不足、他人导向、过于警惕和压抑与抑郁症患者自杀风险呈显著正相关。

(5) 童年创伤不仅可以直接作用影响抑郁症自杀风险,也可以通过 9 条路径影响抑郁症自杀风险。分别是:童年创伤→早期适应图式→自杀风险、童年创伤→分离和拒绝→自杀风险、童年创伤→自主性和能力不足→自杀风险、情感虐待→早期适应图式→自杀风险、情感虐待→分离和拒绝→自杀风险、情感虐待→自主性和能力不足→自杀风险、躯体虐待→早期适应图式→自杀风险、躯体虐待→分离和拒绝→自杀风险、躯体虐待→自主性和能力不足→自杀风险 9 条路径。每条中介效应值分别为 0.45、0.57、0.57、1.26、1.58、1.51、1.46、1.84、1.68,分别占总效应的 34.62%、43.85%、40.00%、30.43%、38.16%、36.47%、35.27%、44.45%、40.58%。

结论 (1) 抑郁症患者童年创伤、早期适应不良图式、自杀风险水平高于健康人群。

(2) 抑郁症患者童年创伤、早期适应不良图式和自杀风险两两之间具有显著相关性。

(3) 早期适应不良图式在童年创伤和抑郁症自杀风险中起部分中介作用。

(4) 童年创伤总分、情感虐待、躯体虐待以及早期适应不良图式总分、分离和拒绝、自主性和能力不足可能是抑郁症患者自杀风险的危险因素和预测因子。

关键词: 抑郁症; 童年创伤; 早期适应不良图式; 自杀风险; 中介效应

中国中老年人群互联网使用与认知功能的关系-基于 2020 年 CHARLS 数据库的实证分析

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目的 探索中国中老年人群互联网的使用与认知功能的关系及相关影响因素。

方法 基于中国健康与养老追踪调查 (China Health and Retirement Longitudinal Study, CHARLS) 2020 年公开数据,共纳入 1982 名年龄在 45-80 岁间的中老年人群。其中互联网使用组 1098 人,包括男性 614 (55.9%)、女性 484 (44.1%),年龄 45-80 (55.80±7.00) 岁。非互联网组 884 人,包括男性 521 (58.9%)、女性 363 (41.1%),年龄 45-80 (61.88±7.90) 岁。认知功能的测试包括定向力、计算力、记忆力、绘画和回忆。使用流调中心抑郁量表-10 (Center for Epidemiological Studies Depression Scale, CES-D-10) 评估人群的抑郁情绪。连续变量采用 t 检验,分类变量采用 χ^2 检验,采用多因素线性回归分析检验互联网使用与认知的关系,亚组分析采用相关协变量进行分层。

结果 互联网使用组较非互联网使用组年龄小,城市人口多、已婚人口多、教育水平高、参加活动少,差异具有统计学意义 ($P<0.05$)。互联网使用组的定向力评分、计算评分、记忆评分、回忆评分、绘画评分及认知总评分均较非互联网使用组高,差异具有统计学意义 ($P<0.05$)。使用协变量筛查影响互联网使用与认知功能关系的因素包括年龄和教育水平。采用多因素线性回归分析,在矫正性别、年龄、教育水平、婚姻和居住地后,相比非互联网使用组,互联网使用组认知评分增加 1.54 ($P<0.001$)。根据协变量因素进行分层分析,将年龄以 65 岁为截断值分为两组,以检测不同的性别、年龄、教育水平、婚姻和居住地组别中互联网使用与认知评分是否存在关联。结果显示居住地与互联网使用存在显著的交互作用 ($P<0.05$),在农村人口中,相比非互联网使用组,互联网使用组认知评分增加 2.24 ($P<0.001$);在城市人口中,相比非互联网使用组,互联网使用组认知评分增加 1.16 ($P<0.001$)。其它亚组中未观察到显著的交互作用 ($P>0.05$)。

结论 在中国的中老年人群中,互联网的使用

与较高的认知功能有关,且这种关联在不同地区的人群中存在差异。

关键词: 互联网使用, 认知, 中老年人群

血镉水平变化与抑郁症状及睡眠时长的关系

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目的 镉是一种有毒金属,在各种环境中广泛存在。尽管镉暴露普遍存在,但关于血镉水平与抑郁症之间关系的研究有限。本研究目的为探讨血镉水平变化与抑郁症状及睡眠时长的关系。

方法 选取 NHANES 数据库中 2017 年至 2018 年期间 18-55 岁人群,按照 PHQ-9 评分 (0-4 分、5-27 分) 将其分为健康组和抑郁组,再按照睡眠时长大于 8 小时和不足 8 小时,分别将健康组和抑郁组分别分为健康长眠组、健康短眠组、抑郁长眠组和抑郁短眠组。通过 Spearman 相关性检验和非参数检验 (Kruskal-Wallis test) 分析抑郁症状与血镉水平的相关性及四组之间血镉水平的差异。

结果 本研究包括 2817 名成年人,其中健康长眠组 563 人、健康短眠组 1530 人、抑郁长眠组 201 人和抑郁短眠组 523 人。Spearman 相关性检验示抑郁组患者 PHQ 总分与血镉水平呈显著正相关, Kruskal-Wallis 检验示抑郁长眠组的血镉水平显著大于抑郁短眠组的血镉水平 ($P<0.05$),健康长眠组与健康短眠组血镉水平无明显差异 ($P>0.05$)。

结论 血镉水平与抑郁症状呈正相关,与抑郁症患者的睡眠时长有关。抑郁症患者或许可以通过改变睡眠时长影响血镉水平。

关键词: 抑郁障碍;睡眠;血镉

汉族人群中 MTHFR 基因多态性与抑郁障碍的相关性研究

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目的 亚甲基四氢叶酸还原酶 (MTHFR) 是叶

酸代谢过程中的关键酶, 调控基因甲基化过程。既往研究发现 C677T、A1298C 及 G1793A 多态性可能与抑郁障碍的发病机制有关, 但结果并不一致。因此, 本研究拟在中国汉族人群中探讨 MTHFR 基因多态性与抑郁障碍的相关性。

方法 本研究纳入了符合 DSM-IV 抑郁障碍诊断标准的患者 778 名, 健康对照 158 名。通过倾向性评分匹配 (PSM) 后得到 441 例匹配样本 (抑郁障碍组 287 例, 对照组 154 例)。对所有患者和健康对照的外周血样本进行 C677T、A1298C 及 G1793A 的基因分型检测, 探索 C677T、A1298C 及 G1793A 与抑郁症的相关性。

结果 倾向性评分匹配前, 抑郁障碍组的年龄 (27.06 ± 7.60 岁) 显著低于对照组 (28.62 ± 7.86 岁, $t = -2.347, P = 0.022$)。抑郁障碍组女性比例 (70.4%) 显著高于对照组 (58.2%, $\chi^2 = 9.053, P = 0.003$)。倾向性评分匹配后, 抑郁障碍组与健康对照组的年龄及性别无统计学差异 ($P > 0.05$)。倾向性评分匹配前后, C677T、A1298C 及 G1793A 基因型频率及等位基因频率在两组间均无统计学差异 ($P > 0.05$)。

结论 本研究发现 MTHFR 基因的 C677T、A1298C 及 G1793A 三个 SNP 位点与抑郁症之间不存在相关性。本研究纳入的 3 个 SNP 可能不是抑郁障碍遗传易感性的主要因素。未来研究应进一步探讨其他遗传和环境因素在抑郁症发病中的作用。

关键词: MATHFR, SNP, 抑郁症

Neurometabolites Change and Its Association with Inflammatory Indices and Psychological Disorders in Crohn's Disease

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Objective The present study aims to explore the correlation between brain neurometabolism, psychological disorders and inflammation indices in Crohn's disease

Methods A total of 60 patients with CD and 70 healthy controls (HCs) were recruited for this study. The psychological disorders was evaluated using the De-

pression Anxiety Stress Scale(DASS), Hamilton Anxiety Scale(HAMA) and Hamilton Depression Scale(HAMD). The metabolite levels of bilateral cingulate cortex, thalamus and cerebellum were evaluated by 1H-MRS, then determined the ratios of N-acetyl aspartate (NAA), choline-containing compounds (Cho), and creatine (Cr). The erythrocyte sedimentation rate(ESR) and C-reactionprotein(CRP) lever of CD patient were collected. Analyse the differences in neuropsychological testing, neurometabolite ratios and inflammatory indices. Finally, correlation analysis were conducted to investigate their inter-relationships

Results DASS-21, HAMA and HAMD-24 scores were significantly higher in CD patients when compared with healthy controls ($P < 0.001$). NAA/Cr ratios in the bilateral cingulate cortex were significantly reduced than those in healthy controls ($P = 0.012, P = 0.045$), and both were negatively correlated with ESR ($P = 0.016, P = 0.004$). CH/NAA ratios in the bilateral cingulate cortex and right thalamus were significantly increased than those in healthy controls ($P = 0.009, P = 0.009, P = 0.045$). CH/NAA ratios in the right thalamus was negatively associated with the D score of the DASS ($P = 0.008$). Ch/NAA ratios in the left cingulate cortex was negatively correlated with CRP ($p = 0.023$). There was no correlation between inflammatory indices and psychological scale scores

Conclusion Our findings suggested that the scores of anxiety, depression and stress in CD were significantly higher than those of healthy controls. The reduced NAA/CR ratios in bilateral cingulate cortex and increased Ch/NAA ratios in the left cingulate cortex in CD patients may be related to inflammation. The elevated CH/NAA ratios in the right thalamus may be associated with depressive psychology

关键词: Crohn's disease; neurometabolites; 1H-MRS; inflammatory; psychological disorders

六味安神胶囊联合艾司西酞普兰对抑郁症症状改善及 TLR4/NLRP3 通路的影响

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目的 探究六味安神胶囊联合艾司西酞普兰对抑郁症症状改善及 Toll 样受体 4/Nod 样受体蛋白 3 (TLR4/NLRP3) 通路的影响。

方法 纳入 2022 年 1 月至 2024 年 1 月期间 904 医院常州院区收治的 150 例抑郁症患者进行分析, 根据治疗方案不同分为联合组 (n=78) 与对照组 (n=72)。对照组行艾司西酞普兰治疗, 联合组基于此联合六味安神胶囊治疗, 两组均连续治疗 6w。比较两组疗效、药物不良反应; 比较两组治疗前后的生活质量评价量表 (SF-36) 以及贝克自杀意念量表 (BSS) 评分, 血清神经递质[去甲肾上腺素 (NE)、5-羟色胺 (5-HT)、多巴胺 (DA)], 炎症因子[白细胞介素 (IL)-6、IL-22、IL-1 β]以及 TLR4/NLRP3 通路表达水平[TLR4、NLRP3 mRNA]。

结果 联合组治疗总有效率显著高于对照组 ($P < 0.05$); 两组治疗后的 SF-36、BSS 评分较治疗前均改善, 且联合组改善均优于对照组 (均 $P < 0.05$); 两组治疗后的 IL-6、IL-21、IL-1 β 、TLR4 以及 NLRP3 mRNA 水平较治疗前均降低, 而 NE、5-HT、DA 水平较治疗前均升高, 且联合组改善优于对照组 (均 $P < 0.05$); 药物不良反应情况比较, 两组无显著差异 ($P > 0.05$)。

结论 六味安神胶囊联合艾司西酞普兰治疗抑郁症的效果显著, 可显著改善患者症状, 改善炎症因子及相关神经递质水平,

其可能与抑制 TLR4/NLRP3 通路表达有关。

关键词: 六味安神胶囊; Toll 样受体 4/Nod 样受体蛋白 3 通路; 抑郁症; 艾司西酞普兰

Peripheral Blood Mononuclear Cell Biomarkers for Major Depressive Disorder: A Transcriptomic Approach

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Objective Major depressive disorder (MDD) is a significant mental health condition that lacks a defini-

tive objective diagnostic method. Peripheral blood mononuclear cells (PBMC) are a key cell source for studying gene expression patterns linked to depressive symptoms. As such, peripheral blood monocytes could serve as a promising avenue for investigating potential peripheral biomarkers of MDD

Methods A transcriptomics study was conducted on PBMCs from patients with Major Depressive Disorder (MDD) and age/sex-matched normal controls, with 20 individuals in each group. Through bioinformatics analysis and machine learning, five potential biomarkers were discovered, which were subsequently validated using qPCR

Results The 292 differential expression genes (DEGs) were detected in PBMC from MDD patients compared with controls. In addition, the DEGs involved multiple KEGG pathways, including human papillomavirus infection, herpes simplex virus 1 infection pathway, Nod-like receptor signaling pathway, antigen processing and presentation, and glycerophospholipid metabolism. These findings suggest that immune functions are disrupted in individuals with MDD. By correlation analysis with HAMD scores, one positively correlated pathway and three negatively correlated pathways were identified as strongly associated with depression. Further machine learning analysis revealed that a combination of five genes (CTSL, PSME2, ZNF713, CXCL8, and TRPV2) had the highest diagnostic efficiency for MDD prediction

Conclusion Patients with Major Depressive Disorder (MDD) exhibit disrupted immune function, and the genes CTSL, PSME2, ZNF713, CXCL8, and TRPV2 in monocytes could potentially serve as biomarkers for predicting the risk of MDD. These genes may offer new diagnostic tools for clinical applications

关键词: Major depressive disorder, Transcriptomics, Peripheral blood mononuclear cell, Biomarker, Immune activation

Sex-specific Effects of Total Antioxidant Capacity on The Prevalence of Depression: NHANES 2007-2018

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Objective Globally, depression is a serious public health problem and it has a high incidence and recurrence rate. Although studies analyzed the association between different oxidative stress components and depression, few studies have explored the effect of total antioxidant capacity on depression by sex. We aimed to explore the effects of total antioxidant capacity on depression by sex group, and whether there was an interaction between the outcomes

Methods This study analyzed data from the National Health and Nutrition Examination Survey (NHANES) from 2007 to 2018. A total of 24458 participants were included. The Composite Dietary Antioxidant Index (CDAI) and the Oxidative Balance Score (OBS) were used to estimate the antioxidant capacity. The association between total antioxidant capacity and depression were analyzed using binary logistic regression

Results Both CDAI and OBS were inversely associated with the prevalence of depression ($P < 0.05$), especially for the females. There was an interaction between OBS and hypertension (P -interaction = 0.051). Lower levels of OBS were strongly associated with depression, especially in the non-hypertensive group. Compared to the higher OBS levels and non-hypertension group, all other subgroups were associated with a higher prevalence of depression ($P < 0.05$)

Conclusion Higher total antioxidant capacity was significantly associated with lower odds of depression, especially for the females. An interaction existed between OBS and hypertension. Low levels of OBS coupled with hypertension may be associated with increased odds of depression

关键词: Depression, Total antioxidant capacity, Composite Dietary Antioxidant Index (CDAI), Oxidative Balance Score (OBS), Hypertension

沈阳市某发动机制造公司职工抑郁状态及其

影响因素的研究

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目的 评价沈阳市某发动机制造公司职工抑郁状态, 分析抑郁状态与知觉压力、职业倦怠和职业生命质量之间的关系, 探讨影响职工抑郁状态的影响因素。

方法 以沈阳市某发动机制造公司 687 名职工作为研究对象, 自制调查问卷收集调查对象的人口学资料, 采用抑郁症筛查量表 (PHQ-9) 量表、知觉压力量表 (PSS)、职业倦怠量表 (MBI-GS) 和职业生命质量量表测量调查对象的抑郁状态、知觉压力、职业倦怠和职业生命质量现状。采用 SPSS 22.0 进行描述性统计、比较分析、相关性分析和回归分析。

结果 沈阳市某发动机制造公司 687 名职工中有轻微抑郁 111 人, 占 16.16%; 中度抑郁 62 人, 占 9.02%; 中重度抑郁 34 人, 占 4.95%; 重度抑郁 44 人, 占 6.4%; 职业知觉压力总得分为 36.89 ± 9.26 , 知觉压力较高 106 人, 占 15.43%; 知觉压力非常高 20 人, 占 2.91%; 职业倦怠总得分为 26.37 ± 18.98 , 轻度倦怠 60 人, 占 8.7%, 倦怠较重 10 人, 占 1.5%; 职业生命质量总得分为 100.99 ± 16.76 , 职业生命质量较低 191 人, 占 27.80%; 职业生命质量中等 471 人, 占 68.56%; 职业生命质量较高 25 人, 占 3.64%。单因素分析结果显示, 在人口学资料中, 文化程度和工作岗位在不同分组中抑郁状态有差异 ($P < 0.05$); 在知觉压力维度中, 知觉松弛感和知觉压力总分与抑郁状态具有正相关性, 相关系数分别为 0.49、0.69; 在职业倦怠维度中, 情感衰竭、去个性化和职业倦怠总分与抑郁状态具有正相关性, 相关系数为 0.72、0.65 和 0.512; 职业生命质量与抑郁状态呈负相关性, 相关系数为 -0.49。回归分析结果显示, 知觉压力、知觉压力紧张感、情感衰竭、去个性化对抑郁的影响有统计学意义, 均对抑郁有正向预测作用 ($P < 0.001$); 职业生命质量对抑郁有负向预测作用 ($P < 0.01$), 所有的变量共解释了抑郁 72.2% 的变异, $R^2 = 0.722$, $F = 223.459$ ($P < 0.001$)。

结论 沈阳市某发动机制造公司职工抑郁状态异常检出率达到 36.54%, 知觉压力总分、知觉压力紧张感、情感衰竭、去个性化和职业生命质量对抑郁状态的预测作用较大, 可采取针对性措施减轻职工压力和倦怠现状, 提高职工职业生命质量, 改善

职工抑郁状态。

关键词: 某发动机制造公司职工, 抑郁状态, 知觉压力, 职业倦怠, 职业生命质量

冬凌草甲素改善 CSDS 小鼠抑郁样行为: 蛋白质组学分析与分子机制研究

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目的 目前临床常用抗抑郁药仍面临起效慢及效率低等问题, 抗抑郁新型药物研发具有临床应用前景。已有研究发现抑郁障碍的发病机制与突触功能受损、线粒体功能损伤、内质网应激异常及神经免疫反应相关。冬凌草甲素是一种提取于冬凌草并具有生物活性的二萜类化合物, 具有抗炎、抗癌、神经保护及抗抑郁样行为的作用。本研究旨在探究冬凌草甲素发挥其抗抑郁作用的分子机制。

方法 雄性 C57 小鼠经慢性社交挫败应激 (Chronic Social Defeat Stress, CSDS) 造模后行糖水偏好实验筛选抑郁鼠。CSDS 小鼠用药后行悬尾实验、糖水偏好实验、强迫游泳实验, 验证冬凌草甲素的抗抑郁效果。提取小鼠前额叶进行蛋白质组学分析, 经方差分析筛选差异表达蛋白后使用基因本体论 (GO) 聚类分析、蛋白质互作网络分析等探究冬凌草甲素的药理作用机制, 以平行反应监测验证其作用机制, 以蛋白免疫印迹探究冬凌草甲素处理后兴奋性突触和抑制性突触的变化。

结果 低、中、高浓度的冬凌草甲素在行为学实验中均表现出抗抑郁作用趋势, 其中高浓度冬凌草甲素组 (10mg/kg) 具有显著性差异。高浓度冬凌草甲素处理 CSDS 小鼠后, 在悬尾实验及强迫游泳实验中挽救了 CSDS 小鼠的绝望样行为, 在糖水偏好实验中改善了 CSDS 小鼠的快感缺失样表现。提取小鼠前额叶进行蛋白质组学分析, 结果显示未用药和冬凌草甲素处理的两组 CSDS 小鼠间具有大量差异表达蛋白, 通过方差分析筛选出其中具有显著

性差异的蛋白。GO 分析发现差异表达蛋白的功能与神经系统和突触、线粒体、内质网/核糖体等密切相关, 蛋白质互作网络分析揭示了突触、线粒体以及内质网/核糖体相关蛋白之间具有相互作用。通过平行反应监测进行独立验证发现, 差异表达蛋白 Rnfl12、Cox7c 和 Mrpl42 在 CSDS 组有下降趋势而在冬凌草甲素处理的 CSDS 组中显著上升; Hdac5、Rpl14、Apoa4 和 Apoh 在 CSDS 组有上升趋势而在冬凌草甲素处理的 CSDS 组中显著下降。最后蛋白免疫印迹分析发现, 冬凌草甲素处理的 CSDS 小鼠前额叶中, 兴奋性突触后标志物 PSD-95 以及抑制性突触后标志物 Gephyrin 的表达较 CSDS 组均显著上调, 同时 PSD-95/Gephyrin 的比值较 CSDS 组也显著增高; 冬凌草甲素处理的 CSDS 小鼠前额叶中 pGluR1-S845 水平较 CSDS 组显著上升, 兴奋性突触活性标志物 EGR-1 表达较 CSDS 组显著上调, 而抑制性突触活性标志物 VGAT 未见显著变化, 表明冬凌草甲素可使突触兴奋性增强。

结论 冬凌草甲素可能通过调节线粒体功能、内质网/核糖体功能进而使突触兴奋性增高而发挥抗抑郁作用。

关键词: 抑郁障碍; 冬凌草甲素; 突触; 线粒体; 内质网; 核糖体

内感受是抑郁症多维心理网络模型的关键节点: 整合环境、认知和情感行为干预措施

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目的 抑郁症的心理网络模型复杂而多元, 由环境、认知功能和情感行为表现组成。然而抑郁症的诊断和治疗很难通过单一的干预点来改善疾病的整体状态。本研究的目的在于探索内感受与各种抑郁风险因素之间的联系, 确定内感受在抑郁心理网络模型的重要性, 为抑郁症诊断治疗提供新的干预点。

方法 我们收集了与抑郁症相关的环境因素、认知功能和情感行为表现等 12 个主要特征, 并将其进一步细化为 26 个更详细的特征。我们对 308 名抑郁症患者进行了结构化访谈, 详细评估了他们

的内感受功能、生活环境、认知功能和情感行为表现。我们利用结构方程模型来探讨内感受功能与生活环境、认知功能和情感行为表现之间的关系。

结果 内感受功能与抑郁症患者的生活环境、认知功能和情感行为表现有关。环境因素会影响内感受的功能,从而增加患抑郁症的风险。内感受障碍可以预测认知功能的损害与情感行为表现的异常。该模型表明,环境因素,内感受功能障碍,情感行为表现可以直接预测抑郁症的严重程度。模型中各因素对抑郁症的总效应依次为:环境因素 (0.515) > 内感受功能 (-0.434) > 情绪-行为反应 (0.204) > 认知功能 (0.143)。

结论 内感受是抑郁症心理网络模型的一部分,该模型将生活环境、认知功能和心理功能联系在一起,有望成为抑郁症的重要干预点。

关键词: 抑郁症,内感受,环境因素,认知功能,情感行为表现,结构方程模型

抑郁障碍患者有效治疗前后血浆中 N-甲基-D-天冬氨酸受体功能相关的生物标记物的变化及相关性研究

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目的 探讨有效治疗前后的抑郁障碍(major depressive disorder, MDD)患者外周血液中 D-丝氨酸(D-Serine, DSR)、甘氨酸(Glycine, Gly)、谷氨酸(glutamate, Glu)及脑源性神经营养因子(brain-derived neurotrophic factor, BDNF)水平变化并进行相关性分析。

方法 选取2023年1月~2024年1月在云南省精神病医院就诊,经抗抑郁治疗后症状好转且汉密尔顿抑郁量表(Hamilton Depression Scale, HAMD-17)评分减分50%以上的MDD患者70例,比较治疗前后HAMD-17、HAMA得分的变化,采用酶联免疫吸附法检测有效治疗前后血浆DSR、Gly、Glu、BDNF水平,计算DSR/Gly比值和各指标减分率,将上述指标进行比较及相关性分析。

结果 共纳入患者70例,入院时MDD患者HAMD-17为27(24,35)分,HAMA为17(13.5,23)分;出院时HAMD-17为8(5,12.5)分,HAMA为6(4,10.75)

分。有效抗抑郁治疗后入组MDD患者的血浆Glu及BDNF值明显高于入院时的水平($P < 0.005$),余指标未见明显变化。入院时,MDD患者血浆Glu水平与血浆DSR($r = -0.293, P = 0.015$)及DSR/Gly($r = -0.270, P = 0.025$)存弱负相关;血浆BDNF水平与DSR($r = -0.438, P < 0.001$)和DSR/Gly($r = -0.420, P < 0.001$)存负相关,Gly($r = 0.260, P = 0.031$)存弱正相关。将(入院值-出院值)作为各指标差值,将人口学特征、SSRIs和SNRIs用药情况作为控制变量,进行多因素线性回归,以 $P < 0.05$ 为有统计学意义判断标准。结果显示HAMA总分差值与DSR差值为负相关($B = 0.251, P = 0.034$)。

结论 N-甲基-D-天冬氨酸受体(N-methyl-D-aspartate receptor, NMDAR)的配体及产物异常可能是MDD病理机制之一,其功能恢复有助于抑郁症状缓解。

关键词: 抑郁障碍;生物标记物;N-甲基-D-天冬氨酸受体

U-shaped Relationship between Blood Pressure and Suicide Attempts in Chinese Patients with First-episode Drug-naïve Depressive Disorder

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Objective The relationship between blood pressure (BP) and the risk of suicide attempts (SA) in patients with major depressive disorder (MDD) remains unclear, with previous findings being controversial and failing to account for potential nonlinear relationships. The aim of this cross-sectional study was to investigate the potential nonlinear relationship between BP and SA in a Chinese population with first-episode drug-naïve (FEDN) MDD

Methods A total of 1718 patients with FEDN MDD were enrolled in this cross-sectional study. Their

socio-demographic characteristics as well as anthropometric data were collected, and blood pressure measurements were taken in a resting state. A history of suicide attempts was verified based on medical records and interviews with patients and their family members. The 17-item Hamilton Rating Scale (HAMD-17) and Hamilton Anxiety Scale (HAMA) were used to assess the severity of depression and anxiety symptoms in all participants. The positive symptom subscale of positive and negative syndrome scale (PANSS) was used to assess psychiatric symptoms. Thyroid hormones, a lipid profile, and fasting blood glucose (FBG) were also measured. A multiple logistic regression analysis was used to estimate the association between BP and the risk of SA. Threshold effects were examined using a two-piecewise linear regression model. Stratified and interaction analysis explored the role of gender, education, marital state, comorbid anxiety, and psychotic symptoms on the association between BP and SA

Results No relationship was found between BP and SA using multiple logistic regression analysis. The piecewise linear spline models indicated that SA has a U-shaped connection with both systolic BP (SBP) and diastolic BP (DBP) in the study population, and the lowest turning points were at 120 mmHg for SBP and 76 mmHg for DBP. When BP was lower than the nadir point, a negative association was found between SA and SBP (OR = 0.97, 95%CI: 0.94 to 1.00, P = 0.036) or DBP (OR = 0.94, 95%CI: 0.89 to 0.99, P = 0.017). Once the BP was higher than the nadir point, a positive association was maintained between SA and SBP (OR = 1.07, 95%CI: 1.04 to 1.10, P < 0.001) or DBP (OR = 1.06, 95%CI: 1.02 to 1.10, P = 0.004), respectively. Stratified and interaction analyses showed that the test for interactions was significant for marital status and psychotic symptoms between SA and SBP (SBP: P for interaction = 0.003, 0.004, respectively); and the interaction effect was significant for sex, marital status, and psychotic symptoms between SA and DBP (P for interaction = 0.027, 0.019, 0.007, respectively)

Conclusion This study provides evidence for a U-shaped relationship between BP and SA in Chinese patients with FEDN MDD, suggesting that BP level

may be a useful biomarker for assessing the risk of suicide attempt in this population

关键词: suicide attempt, systolic blood pressure, diastolic blood pressure, major depressive disorder, nonlinear relationship

清心小肠火治疗灼口综合征 1 例

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目的 灼口综合征是一种病因不明的口腔疼痛综合征,主要表现为口腔灼烧样疼痛,常伴有口干等不适感觉,严重影响患者的生活质量,目前尚缺乏统一的治疗手段。多数病人以口腔科为首诊,少部分选择精神科就诊。现报道一例灼口综合征共病抑郁发作的案例,首诊选择精神科,从中医角度创新性的以清心小肠火为治则,西医以抗抑郁药物为主,初步分析清心小肠火治疗灼口综合征,为中医诊治灼口综合征提供参考。

方法 本案患者以持续口腔灼热感为主要症状,同时伴随情绪压抑、悲观、睡眠节律紊乱等,入院前服用盐酸度洛西汀 120mg/日 1 个月,情绪症状部分缓解,口腔灼热感未见减轻,来我院治疗。入院后精神检查可查及抑郁综合征,同时伴有心理焦虑及躯体焦虑,躯体症状伴随小便短赤、心烦、口干口渴、舌质红,少苔,脉细, HAMD-17 21 分, HAMA 14 分,西医考虑诊断:“复发性抑郁障碍”、“灼口综合征”,中医考虑七情刺激,五志化火,火热伤阴,暗耗心阴,阴不敛阳,心火上炎,下移小肠,致心小肠火热,治疗予原有抗抑郁药物合并碳酸锂 0.75g/日增效,中医予小蓟饮子加减,养阴清热,除烦安神。

结果 患者经 3 个月系统治疗,抑郁焦虑情绪改善, HAMD 减分率为 76%, HAMA 减分率 71%,临床治疗有效,口腔灼热、口干、心烦等症状消失,3 个月随访,未再反复。

结论 灼口综合征的发病机制与精神神经因素相关,其可能共病精神疾病,对于精神科医生,尽早识别十分必要。灼口综合征的治疗尚缺乏统一手段,中医以整体观念为核心,具有一定优势,既往治疗经验多从湿、痰、虚论治,本案创新性的以心、小肠

火热为主要病机，清心小肠火为治则，取得一定效果，为此后中医辨证治疗灼口综合征提供理论依据。

关键词：灼口综合征，抑郁症，清心小肠火

CircRNA-miRNA 互作网络在 MECT 治疗抑郁症中的临床价值分析

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目的 探讨 MDD 患者 MECT 治疗前后是否存在差异表达的 miRNA 和 circRNA，以期发现 circRNA-miRNA 互作网络在 MECT 治疗 MDD 中的作用，为 MECT 治疗 MDD 以及所致记忆功能损害可能的机制提供有价值的参考。

方法 首先，分层抽样选取 10 例进行 MECT 治疗的抑郁症患者的外周血，通过高通量测序技术筛选治疗前后差异表达的 miRNAs，对差异表达 miRNAs 靶基因进行基因本体论功能和京都基因与基因组百科全书富集分析。基于 Transformer 和 CNN 结构，用 circBank 和 CMI-9905 两个混合数据集构建预测模型，实现对 circRNA-miRNA 互作的初步预测。扩大样本量 (n=35) 采用实时定量逆转录 PCR (RT-qPCR) 技术进行验证，并使用临床量表评估临床症状、记忆功能，分析治疗前后差异表达的 circRNAs 和 miRNAs 表达量之间的关系以及与临床症状及记忆功能之间的相关性。

结果 较 MECT 治疗前，MECT 治疗后 hsa-miR-193b-3p、hsa-miR-124-3p、hsa-miR-149-5p；hsa_circ_0023414、hsa_circ_0018316 显著上调 (P<0.01；P<0.05)。hsa_circ_0023414 的表达量与 hsa-miR-124-3p、hsa-miR-193b-3p 的表达量呈显著负相关 (P<0.05)，hsa_circ_0018316 的表达量与 hsa-miR-149-5p 的表达量呈显著负相关 (P<0.001)。Hsa-miR-124-3p，hsa-miR-149-5p，hsa_circ_0023414，hsa_circ_0018316 表达水平与 HAMD 中各因子分具有显著相关性可以反映 MDD 患者 MECT 治疗后部分症状的改善。

结论 Hsa-miR-124-3p、hsa-miR-149-5p、hsa-

miR-193b-3p、hsa_circ_0023414、hsa_circ_0018316 涉及的分子调控机制可能参与 MECT 治疗 MDD 的机制。Hsa-miR-124-3p，hsa-miR-149-5p，hsa_circ_0023414，hsa_circ_0018316 表达水平可以反映 MDD 患者 MECT 治疗后部分症状的改善，可作为 MECT 治疗潜在的疗效评估方面的生物标志物。

关键词：抑郁症，MECT，miRNA，circRNA，记忆功能，生物标志物

舒肝解郁胶囊联合度洛西汀治疗首发抑郁症的临床研究

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目的 探讨舒肝解郁胶囊联合度洛西汀治疗首发抑郁症的临床疗效

方法 选取 2022 年 5 月至 2023 年 10 月在芜湖市第四人民医院接受治疗的首发抑郁症患者 100 例为研究对象，按照随机数字表法分为对照组 50 例和治疗组 50 例。对照组仅接受度洛西汀治疗，治疗组在对照组度洛西汀治疗基础上加用舒肝解郁胶囊，治疗 8 周后比较两组间临床疗效、HAMD 评分、SCL-90 评分、炎症因子水平及不良反应。

结果 治疗后治疗组总临床有效率 (94.0%) 显著高于对照组 (78.0%)；治疗后两组 HAMD 评分、SCL-90 评分均较治疗前显著降低 (P<0.05)；治疗组 HAMD 评分、SCL-90 评分均低于对照组 (P<0.05)；治疗后两组血清 IL-1、IL-6、TNF- α 水平均较治疗前显著降低 (P<0.05)；治疗组血清学指标水平低于对照组 (P<0.05)；两组不良反应发生率差异有统计学意义 (P<0.05)。

结论 舒肝解郁胶囊联合度洛西汀治疗首发抑郁症疗效确切，显著降低外周血清炎症细胞因子水平，不良反应发生率较低，该联合治疗方法值得推广。

关键词：首发抑郁症；血清炎症因子；舒肝解郁胶囊；度洛西汀

Exploring The Impact of Childhood Trauma

on Limbic System Subregion Volumes in Healthy Individuals: A Neuroimaging Study

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Objective Childhood trauma (CT) is a major risk factor for psychiatric disorders. It is hypothesized that the effects of CT are mediated by the limbic system, but previous studies have often been confounded by disease factors. Therefore, we aimed to investigate the impact of CT on the brain structure of the limbic system in healthy individuals

Methods We enrolled 48 individuals in health, evenly split into two groups: 24 healthy participants with CT (HP-CT) and 24 healthy participants without CT (HP-nCT). They underwent scale assessments and MRI data acquisition. Comparisons between the two groups were performed after subcortical subregion volume segmentation using FreeSufer. Lastly, we examined correlations between volume changes and scale scores

Results We found that HP-CT group had smaller volumes in several subregions of the hippocampus, amygdala, and cortical limbic structures, including the subiculum (Sub) head and body, cornu ammonis (CA)1 head, molecular layer (ML) head, granule cell layer of the dentate gyrus (GC-ML-DG) body, CA4 body, fimbria, hippocampus-amygdala transition area (HATA), whole hippocampus head and body, whole hippocampus, basal nucleus (Ba), accessory basal nucleus (AB), cortico-amygdaloid transition area (CAT), paralaminar nucleus (PL) of the left hemisphere; and hippocampal tail, presubiculum (PreSub) body, and basal forebrain of the right hemisphere. Volume changes in the CA4 body and GC-ML-DG body were correlated with sexual abuse. Changes in the volume of the right basal forebrain were linked to emotional neglect

Conclusion CT impacts multiple structures of the limbic system, including the hippocampus, and amygdala. This also suggests that region-specific changes within the limbic system can serve as clinical

biomarkers supporting cross-diagnostic psychiatric illnesses

关键词: Healthy individual, Childhood trauma, Limbic system, Subregions, Volume, Brain imaging

抑郁症患者腰椎骨密度与高血压、糖脂代谢紊乱的相关性

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目的 观察抑郁症患者与高血压、糖尿病共病时腰椎骨密度的变化,探讨抑郁症患者腰椎骨密度与高血压、糖代谢紊乱等的相关性。

方法 回顾性收集2022年7月-2023年6月于北京安定医院住院的抑郁症患者557例,按照高血压及糖尿病患病情况,分为4组:组1:血压正常组351例;组2:单纯高血压组117例;组3:单纯糖尿病组41例;组4:糖尿病合并高血压组48例。高血压及糖尿病诊断依据为《中国高血压防治指南(2018年修订版)》和《中国2型糖尿病防治指南》。患者腰椎骨密度使用Mindways公司QCT测量。骨质疏松诊断依据《原发性骨质疏松症诊疗指南(2022)》。高血压、糖尿病对腰椎骨密度的交互影响采用两因素析因方差分析。回顾病历,收集患者的病史及实验室检查结果。探讨抑郁症患者腰椎骨密度的影响因素时,将年龄、性别、体重、收缩压、舒张压、是否患高血压、患糖尿病、糖化血红蛋白、总胆固醇、高密度脂蛋白、低密度脂蛋白、碱性磷酸酶、血清维生素B12、血钙、血尿素氮、血皮质醇、促肾上腺皮质激素、催乳素等因素纳入单因素分析,将单因素分析中有统计学意义的因素进一步纳入多因素线性回归分析。

结果 组1~组4骨代谢异常(骨量减少+骨质疏松)的发生率分别为:9.7%、23.1%、17.1%、27.1% ($\chi^2=19.80, P<0.01$)。两因素析因方差分析结果表明,糖尿病、高血压的主效应对腰椎骨密度的影响有统计学意义($P<0.05$),两者的交互作用也有统计学意义($P>0.05$)。结果如下:高血压的主效应显著, $F=16.23, p<0.001$;糖尿病的主效应显著, $F=8.89, p<0.003$;高血压与糖尿病的交互效应显著, $F=9.04, p=0.003$ 。以腰椎骨密度为因

变量的单因素回归分析结果表明,年龄、患高血压、患糖尿病、收缩压、总胆固醇、糖化血红蛋白、血钙、碱性磷酸酶、血尿素氮、血皮质醇对腰椎骨密度的影响有统计学意义($P<0.05$),其余变量均无统计学意义。进一步多因素线性分析显示:年龄($B=-2.3$, $P<0.001$, 95%CI: -2.523~-1.99)、碱性磷酸酶($B=-0.238$, $P=0.001$, 95%CI: -0.381~-0.096)、总胆固醇($B=-3.786$, $P=0.004$, 95%CI: -6.391~-1.181)与腰椎骨密度的相关性有统计学意义($P<0.05$)。

结论 抑郁症患者伴发高血压或糖尿病时,腰椎骨密度降低更明显,其中高血压和糖尿病的主效应及交互作用均对抑郁患者的腰椎骨密度有显著影响。年龄、碱性磷酸酶、总胆固醇是影响抑郁患者腰椎骨密度的关键因素。

关键词: 抑郁症; 骨密度; 定量 CT

2079 名护工心理健康现状及影响因素分析

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目的 调查护工焦虑和抑郁情况并分析其影响因素,为改善护工心理健康提出建设性建议。

方法 采用一般资料调查、广泛性焦虑障碍量表(GAD-7)和患者健康问卷(PHQ-9)对护工进行问卷调查,并分析护工心理健康的影响因素。

结果 GAD-7标准分的分界值为5分,其中5-9分为轻度焦虑,10-14分为中度焦虑,15-21分以上为重度焦虑。PHQ-9标准分的分界值为5分,其中5-9分为轻度抑郁,10-14为中度抑郁,15分以上为重度抑郁。发现49.5%的护工存在中至重度焦虑,54.2%存在中至重度抑郁。单因素分析显示不同性别、年龄、文化、户籍、是否离家、家庭月收入、过去一个月照顾病重患者天数、工作年限、每日工作时长及是否经过护理技能培训对护工焦虑、抑郁的检出率差异均有统计学意义($P<0.001$)。Logistic回归分析结果,男性、离家在外、低文化程度、低家庭月收入、未经理护理技能培训、每日工作时长、经常照顾病重患者是影响护工心理健康主要因素,焦虑、抑郁得分更高。

结论 护工群体焦虑、抑郁发生率较高,有关部门应重视护工心理健康状况,及时给予心理健康疏导以提高其心理健康水平,保持健康心理状态。

关键词: 护工; 心理健康; 焦虑; 抑郁; 影响因素

日常生活方式对高中生抑郁症状的影响

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目的 分析2023年荆州市高中生抑郁症状现状及日常生活方式对其的影响。

方法 采用来自荆州市精神卫生中心自行整编《“阳光少年”调查问卷》调查工具,采用复合型网络调查问卷形式于2023年9月-2023年11月对荆州市在校中学生进行心理健康调查,采用方便整群抽样在线上用问卷星对荆州市内7所高中(职高)学生进行调查,内容包括一般人口学资料问卷及一些标准化问卷。本次研究主要基于其中患者健康状况抑郁量表(PHQ-9)估最近2周抑郁症状的发生频率。采用网络成瘾测试(IAT),评估学生网络成瘾情况。失眠严重程度指数量表 ISI 评估学生失眠情况。数值变量采用均数、标准差进行描述,计数资料采用率、构成比进行描述,采用X²检验进行单因素分析,影响因素分析采用二元 Logistic 回归模型。

结果 1、项目共采集高中(职高)学生问卷7343例,筛选有效数据6574例,样本有效率89.53%,男性3229名(49.11%),女性3345名(50.88%)。荆州市在校高中生抑郁症状检出率为40.95%(2692/6574),平均年龄16.06岁。单因素分析显示性别、网络成瘾情况、失眠情况、午休情况、宵夜情况、每周锻炼次数、参加集体活动均对初高中神抑郁症状检出率有统计学意义($P<0.001$)。2、将以上自变量数据纳入二元 logistic 回归模型,以是否存在抑郁症状为因变量,最终确立了女生($OR=1.507, P<0.001$)、有网络成瘾($OR=3.582, P<0.001$)、失眠,其中包括轻度失眠($OR=10.274, P<0.001$)、中度失眠($OR=49.261, P<0.001$)、经常宵夜($OR=1.218, P=0.023$)、每天宵夜($OR=1.356, P=0.081$)、

不午休 (OR=1.275, P=0.016)、每周锻炼次数 1-2 次 (OR=1.198, P=0.029)、被动参加集体活动 (OR=1.687, P<0.001)、很少参加集体活动 (OR=1.549, P<0.001) 的高中生的抑郁症状发生风险显著增加。

结论 本研究揭示了荆州市高中生的抑郁症状与日常生活方式之间的关联, 抑郁症状检出率高与下列因素有关, 包括女生、有网络成瘾、失眠、有宵夜习惯、无午休、较少参加体育锻炼及集体活动。建议在学校和家庭环境中, 应关注培养学生良好日常行为习惯, 从而提高学生的心理健康水平。

关键词: 抑郁; 青少年; 横断面研究

Microarray Profile of Circular RNAs Identifies Hsa_circRNA_103546 As Important Modulator of Depression

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Objective Recently, there is increasing evidence that Circular RNAs (circRNAs) have emerged as important regulators in the development of depression

Methods In this study, total RNA was extracted from the serum of four patients with first-episode depression and three healthy controls and subjected to a circRNA microarray assay to identify differentially expressed circRNAs. The screening of differentially expressed circRNAs was later validated by real-time quantitative polymerase chain reaction (RT-qPCR) by expanding the clinical sample size, and circRNAs with higher correlation with the development of depression were identified by correlation. Finally, by constructing a mouse model of depression and administering fluoxetine treatment, the changes in circRNA in the hippocampus and cortex of mice before and after treatment were compared

Results The results showed that circRNA microarray detection revealed a total of 15 genes with high differences, including 4 upregulated and 11 downregulated. RT-qPCR validation showed that hsa_circRNA_001676, hsa_circRNA_103546, hsa_circRNA_406989 and hsa_circRNA_104172 were

significantly different between depressed and healthy controls. Correlation analysis showed that hsa_circRNA_103546 had the highest correlation with scores on the Self-Rating Depression Scale (SDS) scores. The results of the animal model of depression also showed that mmu_circRNA_103546 was significantly increased in hippocampal and cortical tissues of unpredictable chronic mild stress (CUMS) mice and significantly decreased after fluoxetine treatment (p<0.001)

[Conclusion

Our study suggests that changes in circRNA_103546 are involved in the process of depression and can be used as a diagnostic marker for the development of depression.

关键词: circular RNAs, depression, circRNA_103546, CUMS, fluoxetine

丁螺环酮联合阿戈美拉汀治疗伴焦虑症状抑郁症的疗效观察

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目的 探讨丁螺环酮联合阿戈美拉汀治疗伴焦虑症状抑郁症的临床效果及安全性。

方法 选取 2019 年 1 月~2021 年 1 月开滦精神卫生中心收治的 862 例伴焦虑症状抑郁症患者, 符合《精神障碍诊断与统计手册 (第五版)》伴有焦虑症状抑郁症诊断标准, 按随机数字表法分两组, 各 431 例。排除脱落病例, 研究组 389 例、对照组 382 例。研究组给予丁螺环酮口服治疗, 同时联合阿戈美拉汀口服治疗; 对照组仅给予阿戈美拉汀口服治疗, 比较两组治疗效果。治疗前和治疗 8 周后采用 17 项汉密尔顿抑郁量表 (HAMD-17)、汉密尔顿焦虑量表 (HAMA) 评价患者情绪状态, 采用多导睡眠图评价患者睡眠质量, 采用血清肿瘤坏死因子- α (TNF- α)、白细胞介素-6 (IL-6) 评价患者机体炎症状态, 并统计两组不良反应。

结果 治疗后, 研究组总有效率为 90.23%, 高

于对照组的 80.63%，差异有统计学意义($\chi^2=14.315$, $P<0.05$)。治疗后, 研究组 HAMD-17 总评分、HAMA 总评分分别为 (8.62±2.28) 分、(7.75±2.29) 分, 均低于对照组的 (11.33±3.15) 分、(10.21±2.93) 分, 差异有统计学意义 ($t=13.702$ 、 13.002 , $P<0.05$); 总睡眠时间、快速眼动睡眠潜伏期、慢波睡眠时间分别为 (415.47±40.61) min、(79.19±4.31) min、(33.75±3.23) min, 均长于对照组的 (393.20±46.14) min、(74.22±5.17) min、(29.72±4.08) min, 差异有统计学意义 ($t=7.118$ 、 14.509 、 15.221 , $P<0.05$); 睡眠效率为 (82.64±3.57)%, 高于对照组的 (76.32±5.13)%, 差异有统计学意义 ($t=19.885$, $P<0.05$); >5 min 的觉醒次数为 (2.24±0.53) 次, 少于对照组的 (2.72±0.71) 次, 差异有统计学意义 ($t=10.650$, $P<0.05$); 血清 TNF- α 、IL-6 水平分别为 (46.52±10.17) pg/mL、(35.64±9.62) pg/mL, 均低于对照组的 (55.43±13.48) pg/mL、(44.56±11.08) pg/mL, 差异有统计学意义 ($t=10.373$ 、 11.943 , $P<0.05$)。

结论 丁螺环酮联合阿戈美拉汀能更好地改善患者抑郁和焦虑情绪及睡眠质量, 降低机体炎症反应, 并不一定会增加药物不良反应的发生率。

关键词: 丁螺环酮, 阿戈美拉汀, 抑郁症, 焦虑, 多导睡眠图

外周血免疫细胞表型在抑郁症中的研究进展

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目的 围绕中性粒细胞, 单核细胞, T 细胞, B 细胞和 NK 细胞的细胞表型特点和变化, 寻求免疫细胞计数与抑郁症临床特征之间的关联, 进一步阐明抑郁症的炎症机制假说, 为寻求新的治疗靶点提供科学思路。

方法 作者利用英文数据库 Pubmed、Web of science 以及中文数据库的知网、万方医学文献数据库检索截止到 2024 年 4 月发表的文献, 英文检索词包括“depression / depressive”AND “Immunophenotype”AND“Flow cytometry”。中文检索词包括“抑郁”和“免疫细胞表型”和“流式细胞术”。

结果 抑郁症与外周血免疫细胞数量的变化密

切相关, 其中包括中性粒细胞、T 细胞、B 细胞、NK 细胞、单核细胞的变化, 以及单核细胞与淋巴细胞比率、中性粒细胞与淋巴细胞比率和血小板与淋巴细胞比率等的变化。

结论 在抑郁症的发病过程中, 免疫细胞发挥着关键作用。这些发现与抑郁症病因学中先天性和适应性免疫功能障碍的潜在作用相一致。目前, 细胞亚型组间差异和相关性不明显可能是由于关注免疫细胞亚型的研究数量较少。所以, 未来的免疫表型研究应侧重于探索抑郁症患者细胞层次的更详细水平, 对于重型抑郁障碍患者的免疫细胞变化, 以及这些变化与细胞因子和其他免疫蛋白水平/活性的关系, 还需要进一步的研究, 以便更清楚地了解它们对抑郁症风险的因果影响, 进而激励临床生物标志物和抑郁症靶向治疗方案的未来发展。

关键词: 重性抑郁障碍; 免疫细胞表型; 流式细胞术;

The Effectiveness and Safety of Antidepressants in Preventing Depression Relapse During The Perinatal Period: A Meta-analysis and Systematic Review

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Objective The aim of this systematic review and meta-analysis was to determine the effect of antidepressant on the risk of relapse of depression during perinatal period

Data sources: PubMed, Cochrane, Web of science, and EMBASE were searched from the inception of each database through August 2023 using keywords such as antidepressants, depression, and perinatal.

Study selection: Original studies published in English that involved women who used antidepressants from preconception (ie, 3 months prior to pregnancy) to one year postpartum and examined the relapse of depression during pregnancy or one year postpartum (ie, the reemergence of a depressive episode) were included. A total of 14,796 records were identified, and the full

texts of 88 articles were reviewed. Eighteen studies met the inclusion criteria, 16 of which fulfilled the quality criteria. Eleven studies with qualified data were included in the meta-analysis.

Data extraction: Data were extracted using a data extraction form developed for the purpose of this study. The Cochrane Collaboration Review Manager software version 5.3 and Stata 14 were used to conduct the meta-analysis.

Results Pooled data showed lower risk of relapse of depression during perinatal period for women who regularly used antidepressants than for those who didn't use or discontinued antidepressants (risk ratio [RR] = 0.78; 95% CI, 0.52 to 0.93; $P = 0.02$). However, no significant difference was found between the group of continuous medication during pregnancy and the group of cessations of medication before pregnancy. In the sub-analysis based on the severity and recurrence of depression in the study populations, the risk of relapse was significantly higher for populations with severe or recurrent depression (RR = 0.50; 95% CI, 0.28 to 0.87)

Conclusion Women should be informed about the increased risk of relapse following antidepressant discontinuation, and those who discontinue antidepressants should be monitored for relapse, especially those with severe or recurrent depression.

关键词: antidepressants, perinatal, depression, relapse

High-definition Transcranial Direct Current Stimulation Combined with Antidepressants in The Treatment of Major Depressive Disorder with Anxious Distress

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Objective To explore the efficacy, adverse reactions, and feasibility of high-definition transcranial direct current stimulation(HD-tDCS) in treating major depressive disorder (MDD) patients with anxious distress

Methods MDD with anxious distress admitted to

Zhenjiang Mental Health Center were recruited as participants. All patients were allocated into either the active treatment group or the sham group based on the random number table method. HD-tDCS was utilized in both groups to stimulate the left dorsolateral prefrontal cortex based on conventional antidepressant treatment. In the active group, 2mA current stimulation was used for 20 min, and in the sham group, a 30-second stimulation was adopted at the beginning and the end of the stimulation. Participants in both groups were treated once a day, five times a week for two consecutive weeks. Anxiety and depression symptoms of the patients were assessed respectively by the Hamilton depression scale(HAMD17), the Montgomery-Asberg Depression Rating Scale(MARDS), the Hamilton Anxiety Scale(HAMA), and the Beck Anxiety Inventory(BAI) at the baseline, 2nd, 4th, and the 6th weekend of the treatment. The differences between active treatment and sham groups were analyzed by repetitive measure analysis of variance and simple effect analysis. Fisher's exact probability test was used to compare the two groups' effective rate, remission rate, and adverse reaction rate

Results The interaction of times and groups was significant in HAMD17 and BAI. (1) In all measurement instruments, the main effects of groups and times were significant. (2) Findings from the simple effect analysis showed that: there were no significant differences in the scores of HAMD17 at baseline and the 2nd assessment between the two groups. Similarly, no significant differences were found in BAI at baseline, the 2nd and the 6th weekend of the treatment between the two groups($P > 0.05$). (3) The scores of HAMD17 on the 4th and the 6th week, and BAI at the 4th weekend of the treatment in the active group were significantly lower than that in the sham group($P < 0.05$). (4) At the 4th weekend of the treatment, the active group had a remission rate of 16/20 and a response rate of 19/20, which were higher than 9/19 and 13/19, respectively, in the sham group($P < 0.05$). Also, the remission rate (18/20) in the active group was higher than that in the sham group(11/19) at the 6th weekend of the treatment. ($P < 0.05$). As for the response rates, differences were not found between the two groups at the 6th weekend of the

treatment. (5) The overall dropout rate had no significant differences in-between($P>0.05$). As for the safety outcome, the rate of adverse events(e.g., itching, tingling, and headache) showed no significant differences between the two groups. Additionally, no severe adverse events or mania were reported

Conclusion This study indicated that HD-tDCS has significant efficacy and high safety in treating MDD patients with anxious distress

关键词: Depressive disorder; Anxiety; High-definition transcranial direct current stimulation; Major depressive disorder with anxious distress; Efficacy; Adverse event

心境障碍中犬尿氨酸通路的差异性改变研究

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目的 探究犬尿氨酸通路(kynurenine pathway, KP)在重性抑郁障碍与双相障碍患者中的横断面改变及2月随访期间的纵向变化,并探究其与抑郁症状的相关关系以及对区分两种精神障碍诊断的预测效能。

方法 纳入180名MDD患者及47名BD患者,对110名患者进行了为期2月的随访。采集了被试的人口学资料,并对焦虑、抑郁症状进行评估,采集外周血液样本,并使用液相色谱串联质谱(liquid chromatography-tandem mass spectrometry, LC-MS/MS)检测被试血浆样本中KP代谢物的浓度。使用t检验、U检验、协方差分析探究MDD与BD患者KP代谢物水平的差异;通过逻辑回归探究KP代谢物对MDD与BD诊断的预测效能。

结果 (1) MDD患者较BD具有较低的外周3-HK水平, MDD与BD患者基线至2周随访期间KP代谢物水平的变化没有显著差异; (2) 外周KP代谢物水平鉴别MDD与BD诊断的预测效能(AUC=0.66)与鉴别单双相抑郁的预测效能(AUC=0.68)均较低。

结论 MDD与BD的外周KP改变存在一定差异,外周KP鉴别MDD与BD的效果较差。

关键词: 重性抑郁障碍,双相障碍,犬尿氨酸通路,

心境障碍

基于抑郁症谱系化症状的神经递质代谢组研究

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目的 近年研究发现抑郁症应被视为一类存在严重程度不一的谱系化疾病,而不是简单的二分类疾病。抑郁症在无症状和疾病发病之间,常存在阈下抑郁症状状态,是抑郁症发病的高危群体。目前针对抑郁症谱系化疾病的讨论仍缺乏基于实验室的客观诊断指标,本研究拟探讨抑郁症、阈下抑郁症状人群及健康对照在神经递质代谢水平上的关联和趋势,为抑郁症预防及临床诊断提供依据及参考。

方法 本研究基于DCC队列人群(Depression Cohort of China)开展病例对照研究。纳入人群年龄18-40岁,无躯体疾病史,无抗精神类药物服药史。抑郁症患者组为通过M.I.N.I.评估及DSM-V临床诊断为首发且未服药的抑郁症发病人群,阈下抑郁症状人群为PHQ-9评分大于等于10分人群,健康对照为PHQ-9评分小于5分人群。抑郁症患者、阈下抑郁症状人群及健康对照均通过年龄及性别进行匹配。采用LC-MS技术对研究对象的血浆进行代谢组学分析。统计分析采用OPLS-DA模式识别三组代谢物水平组间差异,采用方差分析进行组间比较,采用Kendall相关系数进行相关性分析。

结果 研究纳入抑郁症患者77人,阈下抑郁症状人群77人,健康对照89人。OPLS-DA结果显示抑郁症患者组和阈下抑郁症状人群及健康对照可被明显区分,阈下抑郁症状及健康对照存在重叠。方差分析组间比较结果显示三组人群在 γ -氨基丁酸、谷氨酰胺、谷氨酸、色氨酸、5-羟吲哚乙酸、5-羟色氨酸、犬尿喹啉酸、犬尿氨酸、去甲肾上腺素盐酸盐以及酪氨酸的血浆水平含量存在显著性差异($P<0.05$),趋势性检验存在显著性差异($P<0.05$)。Kendall相关系数显示 γ -氨基丁酸、谷氨酸、5-羟吲

多巴胺与抑郁症状得分存在正相关 ($P<0.05$)，色氨酸、5-羟色氨酸、犬尿喹啉酸、犬尿氨酸及酪氨酸与抑郁症状得分存在显著负相关 ($P<0.05$)。

结论 抑郁症与阈下抑郁症状、健康对照在外周血神经递质代谢物的含量上存在差异，提示阈下抑郁症状可能为抑郁症及健康人群的中间状态，临床上可通过相关标志物发现抑郁症疾病的发展变化，从而有效预防疾病的发生发展。

关键词：抑郁症，阈下抑郁症状，神经递质，代谢组

伴或不伴非自杀性自伤的青少年抑郁患者的认知方式及风险因素分析

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目的 探讨青少年抑郁障碍患者非自杀性自伤 (non suicidal self-injury, NSSI) 认知方式特点及相关风险因素。

方法 连续入组 2022 年 2 月至 2022 年 12 月就诊于某神经精神病专科医院门诊的青少年抑郁障碍患者 126 例为研究对象，评估自编一般资料问卷、17 项汉密尔顿抑郁量表 (HAMD-17)、汉密尔顿焦虑量表 (HAMA) 和认知情绪调节问卷 (CERQ)，再按照《精神障碍诊断与统计手册第 5 版》中 NSSI 行为标准将其分为伴/不伴 NSSI 行为组，并使用 Logistic 回归分析检验 NSSI 的危险因素。

结果 (1) 126 例青少年抑郁障碍患者中伴 NSSI 行为的有 62 例 (49.20%)。(2) 单因素分析显示，性别、总病程、NSSI 病程、自杀未遂史、汉密尔顿焦虑量表评分、汉密尔顿抑郁量表评分在两组之间有统计学差异；认知情绪调节方面：在不伴有 NSSI 行为的青少年抑郁障碍的患者中，采取积极认知情绪调节策略调节心理危机较伴有 NSSI 行为的青少年抑郁患者组多，差异有统计学意义；反之，在伴有 NSSI 行为的青少年抑郁障碍的患者中，采取消极认知情绪调节比不伴有 NSSI 行为的青少年抑郁障碍的患者多，差异有统计学意义。(3) Logistic 回归分析显示，女性、自杀未遂史、17 项汉密尔顿抑郁量表 (HAMD-17)、汉密尔顿焦虑量表评分较高

及更多的采取消极认知情绪调节是青少年抑郁障碍的患者出现 NSSI 行为的危险因素。

结论 青少年抑郁障碍的患者 NSSI 发病率较高，女性、有自杀未遂史、焦虑抑郁情绪明显者以及多采取消极认知情绪调节者更容易出现 NSSI 行为。

关键词：青少年，抑郁障碍，非自杀性自伤，认知方式，风险因素

经颅磁刺激治疗联合选择性 5-羟色胺再摄取抑制剂对青少年抑郁症患者认知功能的影响

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目的 探究经颅磁刺激联合选择性 5-羟色胺再摄取抑制剂 (selective 5-hydroxytryptamine reuptake inhibitors, SSRIs) 对青少年抑郁症患者认知功能的影响。

方法 选取 2023 年 1 月至 2023 年 12 月海南省安宁医院收治的 80 例青少年抑郁症患者为研究对象，按随机数字表法将其随机分为对照组与观察组，每组 40 例。对照组予以 SSRIs 治疗，观察组在 SSRIs 治疗基础上增加经颅磁刺激。经颅磁刺激组案为在药物治疗的基础上进行 4 周、4 次/周的高频重复经颅磁刺激 (rTMS)，刺激部位为左侧 DLPFC，80% 运动阈。值，刺激频率为 10 Hz，每个序列持续 4 s，间隔 56 s，持续 20 个序列；比较两组临床疗效，治疗前后汉密尔顿抑郁量表 (Hamilton Depression Scale, HAMD-24) 评分、采用威斯康星卡片分类测验 (WCST) 和连线测试 (TMT) 进行认知功能测验，血浆 5-羟色胺 (5-hydroxytryptamine, 5-HT)、血清白细胞介素-6 (interleukin-6, IL-6)、肿瘤坏死因子- α (tumor necrosis factor- α , TNF- α)、脑源性神经营养因子 (brain-derived neurotrophic factor, BDNF)、胶质源性神经营养因子 (glial cell line-derived neurotrophic factor, GDNF) 水平。

结果 观察组临床总有效率明显高于对照组 (93.33% vs 77.78%, $P<0.05$)。观察组治疗后 HAMD-24 评分明显低于对照组，与对照组相比，观察组治疗后的 TMT 用时更短，错误应答数评分高于对照

组,完成分类数评分低于对照组($P < 0.05$)。观察组治疗后血清 BDNF、GDNF 及血浆 5-HT 水平均明显高于对照组,血清 IL-6、TNF- α 水平则更低(均 $P < 0.05$)。

结论 经颅磁刺激疗法联合 SSRIs 可有效缓解青少年抑郁症患者精神症状,改善认知功能,提高 5-HT 及神经营养因子水平、抑制炎症反应可能是其发挥疗效的机制。

关键词: 经颅磁刺激;选择性 5-羟色胺再摄取抑制剂;抑郁症;认知功能;青少年

运动对抑郁症患者炎症与抑郁症状关联的影响

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目的 炎症与抑郁症之间存在关联,运动与炎症及情绪之间也存在关联。然而,运动对炎症与抑郁之间关系的影响并不清楚。本研究旨在探索在抑郁症人群中,运动对炎症与抑郁症状之间关联的影响。

方法 在 2021 年 1 月至 2022 年 7 月期间,从天津市安定医院招募 95 名首发未用药的重度抑郁障碍患者。使用标准化问卷记录一般情况及运动情况,采用 ELISA 法测定白细胞介素-6 (IL-6)、肿瘤坏死因子 α (TNF- α)、TNF- α 2 的浓度,汉密尔顿抑郁评定量表 (HAMD-17) 用于评估抑郁症状。单因素和多因素逻辑回归模型被用来评估炎症因子和抑郁症状之间的关联。根据运动情况进行了分层分析和交互分析。

结果 男性、年龄偏大的患者更倾向于规律运动,规律运动的患者一年内暴力自伤行为的比例更小($P < 0.05$)。单因素线性回归分析显示,基线 IL-6 和 TNF- α 2 的水平与基线抑郁情绪 (IL-6: β : 0.09, 95CI: 0.03~0.15, $P=0.004$; TNF- α 2: β : 0.02, 95CI: 0.01~0.04, $P=0.005$) 及治疗 4 周后抑郁情绪存在关联 (IL-6: β : 0.13, 95CI: 0.03~0.22, $P=0.015$; TNF- α 2: β : 0.04, 95CI: 0.01~0.07, $P=0.037$)。多因素线性回归分析显示,即使调整了性别、年龄、婚姻状况、教育、吸烟、饮酒,基线 IL-6 及 TNF- α 2 水平仍与基线抑郁症状呈正相关 (IL-6: β : 0.09, 95CI:

0.03~0.15, $P=0.006$; TNF- α 2: β : 0.03, 95CI: 0.01~0.04, $P=0.003$), 且与 4 周后抑郁症状呈正相关的趋势 (IL-6: β : 0.11, 95CI: 0.01~0.21, $P=0.052$; TNF- α 2: β : 0.03, 95CI: 0.01~0.06, $P=0.077$)。在调整协变量后,IL-6 及 TNF- α 2 与基线及 4 周后抑郁症状的关联在运动组和非运动组之间不同,且运动状态和 IL-6 及 TNF- α 2 对 4 周后抑郁症状的影响存在交互作用 ($P < 0.05$)。

结论 我们的发现表明,患者是否运动可能会影响抑郁症患者炎症因子与抑郁症状之间的关系。

关键词: 白细胞介素-6, 肿瘤坏死因子 α 2, 抑郁, 运动, 交互作用

An Exploratory Research of Supportive Music and Imagery for Depression

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Objective Supportive Music and Imagery (SMI) therapy is a psychotherapy method that uses Music and Imagery as the carrier to help patients focus on their own internal positive resources. It may be helpful to relieve the depressive symptoms of patients. The purpose of this study was to explore the effectiveness of SMI therapy in the treatment of depression

Methods A total of 29 outpatients who met the diagnostic criteria of depression based on DSM-IV were recruited and treated with SMI therapy besides routine antidepressant treatment once a week for 3 months, with a total of 12 times of SMI therapy. DSM-IV, Hamilton Depression scale (HAMD-17), fatigue rating scale (FAI), Newfoundland Memorial University Happiness scale (MUNSH), 16-item Depression self-rating scale (QIDS-SR16) and CGIS score were evaluated at baseline. To compare the changes in mood, fatigue and happiness of patients before and after treatment, QIDS-SR16 was performed from the end of the first week to the 12th week, and FAI and HAMD17 were evaluated at the end of the 2nd, 4th, 6th, 8th, 10th and 12th weeks, and MUNSH was also evaluated at the 12th week

Results Owing to only completed the baseline

data or the first interview, five subjects were excluded, and the remaining 24 subjects were included in the analysis. The results of mixed effect ANOVA model showed that within 12 weeks, there were significant differences between the score of each follow-up time and baseline in HAMD17 ($P < 0.0001$), FAI ($P < 0.0001$), and QIDS-SR16 ($P < 0.0001$). The difference between the score of MUNSH at baseline and the 12th week was tested by paired t-test, and the result was statistically significant ($P < 0.05$). Among the 24 subjects included in the analysis, 20 subjects achieved early improvement at the beginning of the second weekend (HAMD-17 score reduction rate $\geq 20\%$), and the early improvement rate was 83.3%. At the end of the 12th weekend, 20 subjects respond to therapy (HAMD-17 score $\geq 50\%$), with a respond rate of 83.3%. At the end of the 12th week, 18 subjects were clinically remission (HAMD-17 score ≤ 7), and the remission rate was 75.0%

Conclusion The depression, anxiety and fatigue symptom of the patients improved continuously within 12 weeks. The combination of SMI therapy has higher early improvement rate and clinical remission rate in patients with depression. In the future study we can increase the control group, and further explore the efficacy of SMI in depression

关键词: Supportive Music and Imagery, Music therapy, Depression, Positive resource

The Effect of The Method of Emotional Regulation with Music on Self-care in Medical Staff

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Objective To investigate the effect of Emotional Regulation with Music on the emotional self-care of frontline medical staff during the COVID-19 pandemic.

Methods 31 frontline medical staff from nine provinces in China were recruited as subjects, the study

lasted for one year from April 2020 to June 2021. The method of Emotional Regulation with Music (ER) developed from Guided Imagery and Music (GIM) was used as an intervention with the client by qualified music therapists trained in this method. Each client received four sessions of ER intervention online. The visual analogue scale (VAS) was used as a measuring tool to evaluate the subjects' emotional state at baseline and after the intervention, also the clients were asked to complete the relevant questionnaires. A t-test was used for statistical analysis to compare the differences in scale scores before and after the intervention

Methods the method of ER can effectively improve emotional self-care in medical staff. The subjects can be aware of and accept their current emotional state during the session of therapy. The client could choose their music to regulate their emotions in the company of the therapist and stay with the music to take care of themselves. It can also help the subjects to make a song list for themselves for daily use and self-care

Results A total of 31 frontline medical personnel, 28 females and 3 males, with a mean age of 34.52 ± 8.18 years, were included. The results showed a statistically significant decrease in VAS scores (7.42 ± 1.82) after the intervention of the ER method compared to the scores at baseline (5.52 ± 2.13) ($t = -5.33$, $p = 0.000$). The results of the questionnaire showed that 86% of the subjects indicated that they had learned the Emotional Regulation with Music and 80% indicated that the method was very effective in regulating their emotions. 96% of the subjects indicated that they were willing to continue using the method for emotional regulation in their lives

Conclusion the method of ER can effectively improve emotional self-care in medical staff. The subjects can be aware of and accept their current emotional state during the session of therapy. The client could choose their music to regulate their emotions in the company of the therapist and stay with the music to take care of themselves. It can also help the subjects to make a song list for themselves for daily use and self-care

关键词: Emotional Regulation with Music, Music Guided Imagery, Music therapy, mood state

抑郁症患者思维反刍与抑郁焦虑症状的关系：一项纵向随访研究

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目的 思维反刍作为一种适应不良的思维风格策略，与多种精神病理相关。本研究目的是探究抑郁症 (Major depressive disorder, MDD) 患者的思维反刍对抑郁焦虑症状的影响，为对伴思维反刍的 MDD 患者采取针对特定思维反刍症状更精准有效的干预提供依据。

方法 在中南大学湘雅二医院及社区纳入 MDD 患者共 173 例，健康对照 (healthy controls, HCs) 81 例，其中 86 例 MDD 患者和 43 例 HCs 完成了入组 8 周后的随访评估。采用汉密尔顿抑郁量表 (24-item Hamilton rating scale for depression, HAM-D24)、汉密尔顿焦虑量表 (Hamilton rating scale for anxiety, HAMA)、9-条目版健康问卷 (9-item Patient Health Questionnaire, PHQ-9)、7-条目版广泛性焦虑障碍量表 (7-item Generalized Anxiety Disorder, GAD-7) 评估抑郁焦虑症状。采用反刍思维量表 (Ruminative Response Scale, RRS) 评定思维反刍功能，高于上四分位数 (70.0 分) 的患者纳入高反刍组，小于或等于下四分位数 (54.5 分) 的患者纳入低反刍组。使用独立样本 t 检验、卡方检验和 Mann-Whitney U 检验比较组间差异，重复测量方差分析比较临床症状和思维反刍的变化特征，Pearson 和 Spearman 相关分析探索思维反刍和抑郁症状之间的关系。

结果 (1) 高反刍组的 PHQ-9 ($t = -5.040, P < 0.001$)、GAD-7 ($t = -5.398, P < 0.001$)、HAM-D24 ($t = -2.005, P = 0.049$) 和 HAMA ($Z = -2.315, P = 0.023$) 评分较低反刍组更高。(2) MDD 组治疗 8 周后 PHQ-9、GAD-7、HAM-D24 和 HAMA 评分均显著低于基线时 ($P < 0.001$)，治疗后 RRS 总分及各维度得分较治疗前低 ($P < 0.001$)。(3) HAM-D24 ($r = 0.588, 0.635, 0.437$ 和 $0.337; P < 0.005$) 和 HAMA 减分 ($r = 0.561, 0.610, 0.438$ 和 $0.293; P < 0.005$) 均与 RRS 总分及各维度减分均相关。

结论 高反刍组的抑郁、焦虑症状更严重。MDD 患者治疗后抑郁焦虑症状程度下降，思维反刍水平亦下降，抑郁焦虑症状的减分率与思维反刍的

减分率呈正相关关系。临床上应重视 MDD 患者思维反刍的筛查和评估。

关键词：思维反刍；抑郁症

中国北京地区抑郁症住院患者骨质疏松症患病情况及相关因素分析-基于定量 CT 的横断面研究

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目的 重度抑郁症 (MDD) 与骨质疏松症之间的关系仍存在争议。我们旨在报道中国北京地区 MDD 住院患者骨质疏松症的患病情况，并探讨 MDD 患者骨质疏松的相关影响因素。

方法 回顾性收集 2021 年 7 月至 2022 年 6 月在首都医科大学附属北京安定医院进行住院治疗的 40 岁以上的抑郁症患者作为患病组。同时，选取同期接受体检的附近社区的健康居民作为对照组，受试者均行低剂量肺 CT 检查。采用定量 CT 法测量研究对象的腰椎骨密度 (BMD)， $BMD < 80\text{mg}/\text{cm}^3$ 和 $80\sim 120\text{mg}/\text{cm}^3$ 分别用于定义骨质疏松症和低骨量。患者组与对照组按年龄 (± 1 岁)、性别进行 1:1 病例-对照匹配。我们采用组间差异分析和二元逻辑回归来分析抑郁症与骨质疏松症的关系以及影响 BMD 的可能因素。

结果 ① 最终纳入了 306 名 MDD 患者，骨质疏松的患病率为 23.9% (95% CI: 19.1%-28.7%); MDD 组与对照组 1:1 病例-对照匹配成功 274 对。②即使在调整了年龄、性别和 BMI 后，MDD 组发生骨质疏松的风险仍高于对照组 (调整后 OR: 2.38, 95% CI: 1.341, 4.224); ③低骨密度组 ($BMD < 120\text{mg}/\text{cm}^3$) 比 BMD 正常组的 MDD 患者年龄较大，受教育程度较低，有高血压病史的比例更高 ($P < 0.05$)。但两组 MDD 患者在性别分布、平均病程、吸烟者比例、糖尿病、高脂血症等方面的差异均无统计学意义 ($P > 0.05$)。

结论 中国北京地区 MDD 住院患者骨质疏松症患病率高于健康人群; MDD 可能是骨质疏松的危险因素; 衰老、低教育程度、高血压可能是 MDD 患者骨密度减低的影响因素。

关键词: 重度抑郁症, 骨质疏松症, 定量 CT, 骨密度

成年抑郁症患者中的焦虑症状轨迹及其与抑郁症状结局的关系

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目的 重性抑郁障碍(Major Depressive Disorder, MDD)是一种常见的精神障碍,会导致严重的个人功能损害及社会经济损失。焦虑症状是其常见的伴随症状,往往增加了 MDD 患者的临床痛苦和不良预后风险。本研究旨在探究中国 MDD 患者中焦虑症状的纵向变化轨迹,并比较不同焦虑症状轨迹间的抑郁症状结局。

方法 本研究基于课题组 2013 年 12 月至 2016 年 12 月开展的一项题为“MDD 客观诊断指标的建立与药物个体化干预”(NCT02023567)的全国多中心、前瞻性、自然观察随访研究进行回顾性分析,参与被试为来自全国 9 家医院的 292 名门诊 MDD 患者,患者年龄在 18-55 岁之间。本研究以汉密尔顿焦虑量表(Hamilton Anxiety Rating Scale, HAMA)评估基线、2 周、4 周、8 周、24 周、48 周及 96 周随访时 MDD 患者的焦虑症状,使用多阶段混合增长模型(Piecewise Growth Mixture Model, PGMM)识别焦虑症状的长期发展轨迹。随后以 DU3STEP 方法分析不同轨迹组别间 96 周随访时汉密尔顿抑郁量表(17-Item Hamilton Rating Scale for Depression, HRSD-17)测量的抑郁症状结局差异。

结果 识别出中国成年 MDD 患者中 2 类不同的焦虑症状轨迹。以 8 周作为 PGMM 的转折点,第

一类为低焦虑、症状缓解组,占样本的 89.7%,基线焦虑程度中等偏低,在随访期间焦虑程度随时间推移显著下降(截距 = 18.389,斜率 1 = -12.610,斜率 2 = -3.795, $P_s < 0.001$)。第二类为高焦虑、症状残留组,占样本的 10.2%,基线焦虑程度高,在随访期间焦虑程度起初有所减轻,此后长期残留(截距 = 25.256,斜率 1 = -9.081,斜率 2 = -3.830, $P_1 < 0.001$, $P_2 = 0.055$)。进一步分析 96 周随访时 2 类不同的焦虑症状轨迹组别间 HRSD-17 得分情况,结果发现低焦虑、症状缓解组的 HRSD-17 得分($M = 1.960$, $SD = 0.236$)显著低于高焦虑、症状残留组($M = 10.582$, $SD = 1.018$) ($p < 0.001$)。

结论 大多数 MDD 患者经过治疗后,焦虑症状能够得到有效的缓解。持续残留较多焦虑症状的 MDD 患者可能具有更差的抑郁症状结局。对焦虑症状的纵向评估有助于了解 MDD 患者的治疗进展并识别治疗期间症状变化的异质性。

关键词: 重性抑郁障碍; 焦虑; 症状轨迹; 混合增长模型;

Advances in The Study of Addiction Mechanisms in Non-Suicidal Self-Injury: A Review

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Objective This review aims to explore the addiction mechanisms of non-suicidal self-injury (NSSI). NSSI is a behavior in which individuals repeatedly and deliberately harm their own body tissue without suicidal intent. A significant number of individuals afflicted with NSSI concurrently experience a mood disorder known as major depressive disorder. Although NSSI Disorder (NSSI-D) is defined in the DSM-5, its specific addiction mechanisms remain unclear. This study seeks to investigate the psychological, biological, and neurobiological mechanisms related to NSSI addiction to provide new scientific evidence for clinical interventions

Methods This review investigates the mechanisms of NSSI addiction through various approaches: behavioral studies, biological studies, neuroimaging studies, theoretical model verification, and a literature

review. In behavioral studies, surveys and interviews are conducted to understand the frequency, severity, and addictive characteristics of NSSI behavior. Biological studies measure plasma endogenous opioid levels in different populations to identify biomarkers associated with NSSI behavior. Neuroimaging studies use resting-state functional magnetic resonance imaging (fMRI) to study structural and functional changes in brain regions related to NSSI addiction. Theoretical model verification utilizes the experiential avoidance model, four-function model, and individual-affect-cognition-execution interaction model to verify their effectiveness in explaining NSSI addiction mechanisms

The literature review involves systematic literature searches using databases such as PubMed, Web of Science, and CNKI, with keywords like "non-suicidal self-injury," "addiction mechanism," "endogenous opioid," "dopamine," and "reward circuit." The screening criteria include original research, review articles, and clinical trial reports related to NSSI addiction mechanisms published in the last ten years. Studies with small sample sizes, poor methodology, or duplicate publications are excluded. Data extraction focuses on key information such as research subjects, methods, main results, and conclusions, and data analysis employs qualitative analysis and meta-analysis techniques to comprehensively evaluate study results.

Results This review found that NSSI behavior exhibits clear addictive characteristics, including strong impulses and cravings for self-injury, a gradual escalation in the severity of behavior, and particularly dangerous self-injury behaviors. Biological studies indicate that plasma endogenous opioid levels in NSSI patients are significantly lower than in control groups, and self-injury behavior can temporarily increase endogenous opioid levels, providing a sense of pleasure. Neuroimaging studies show that the reward circuit (e.g., nucleus accumbens, dopamine system) in the brain of NSSI patients is significantly activated during self-injury, similar to the neural mechanisms of substance addiction. In terms of psychological model verification, the experiential avoidance model suggests that NSSI behavior repeatedly occurs as it reduces negative emotions through self-negative reinforcement. The four-function model

points out that NSSI behavior is maintained through both negative reinforcement (removal of aversive stimuli) and positive reinforcement (appearance of favorable stimuli). The individual-affect-cognition-execution interaction model proposes that NSSI behavior results from the interaction of emotional and cognitive responses and executive functions in susceptible individuals. Each model has received some empirical support, further revealing the complexity of NSSI addiction mechanisms

Conclusion This review indicates that NSSI behavior has addictive characteristics, potentially involving abnormalities in the endogenous opioid system and the dopamine reward circuit. Self-injury behavior activates the brain's reward system, releasing endogenous opioids, bringing pleasure, and leading individuals to depend on self-injury. Future clinical interventions could consider regulating endogenous opioid systems and dopamine levels to reduce NSSI behavior. Additionally, psychological therapies such as dialectical behavior therapy and cognitive-behavioral therapy have shown significant effectiveness in reducing NSSI behavior and are worthy of further promotion and application

关键词: non-suicidal self-injury, addiction mechanism, endogenous opioid, dopamine, reward circuit, neuroimaging

Sex Differences in Factors Influencing Non-Suicidal Self-Injury in Chinese Adolescents with Mood Disorder

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Objective The high prevalence of Non-Suicidal Self-Injury (NSSI) among depressed adolescents has

raised considerable attention, while very limited research focus has been particularly centered on adolescents with depression, despite their heightened NSSI occurrence. Existing studies have also shown significant differences in NSSI behavior between junior and senior adolescents, while there is a serious lack of comparative analysis of NSSI predictors among these two adolescent groups. To address this research gap, this study aimed to explore differences of NSSI predictors between junior and senior adolescents

Methods A multicenter data set was exclusively collected from 14 hospitals in China. A total of 2,613 adolescents (aged 12-18) diagnosed with major depressive disorder were recruited and data collection was completed under the supervision of professional psychiatrists. 37 predictors of NSSI were included based on literature review. Random forest models were trained for each adolescent group and SHapley Additive exPlanations (SHAP) method was adopted to provide a better explanation of feature contribution

Results Juniors with depression showed a higher NSSI occurrence rate (59.4%) than seniors (41.9%). Random forest achieved an accuracy of 0.69 and 0.65 for each model, respectively. SHAP analysis showed that self-esteem was the most important predictor for both groups. For the junior group, self-esteem, depression degree and parental overprotection were three dominant predictors. While for the senior group, romantic involvement ranked 2nd and attack on property ranked 3rd, sleep condition and father's educational level were also two important predictors in NSSI prediction

Conclusion Predictors of NSSI occurrence differed in junior and senior adolescents with depression. Psychological factors and parenting style exhibited more dominant importance in NSSI prediction for juniors, while predictors for seniors were more diverse, indicating that tailored intervention strategies for each group is necessary

关键词: Major Mood Disorders, Non-Suicidal Self-Injury, junior and senior adolescents, random forest, SHAP

问题性进食行为与抑郁诊断、抑郁严重程度、个体抑郁症状的关系

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目的 问题性进食行为是正常进食与进食障碍的中间阶段。根据心身理论、外因性理论、限制性理论,研究者确立了情绪性进食、外因性进食、限制性进食这三种问题性进食行为。问题性进食行为存在于一个连续谱上,在抑郁障碍中,长期存在的问题性进食行为可能会逐渐演变为进食障碍,了解问题性进食行为与抑郁障碍之间的关系至关重要。因此,本研究拟对抑郁与问题性进食行为的关系进行调查,探讨抑郁诊断、抑郁严重程度及抑郁症状与问题性进食行为之间的关系,从而为抑郁障碍和问题性进食行为的治疗提供指导。

方法 本研究自2023年8月至2023年12月期间,采用方便取样的方法,招募了279名武汉某医院门诊或住院的抑郁障碍患者,同时期内招募与患者年龄、性别等相匹配的健康人群260名,年龄范围为16~59(24.38±7.28)。采用抑郁症状快速评定量表自评版(QIDS-SR16)、荷兰进食行为问卷(DEBQ)分别作为抑郁症状与抑郁严重程度、问题性进食行为的指标。采用独立样本t检验、方差分析比较不同组问题性进食行为的差异。采用偏相关分析法,控制人口学变量的影响考察抑郁严重程度、个体抑郁症状与问题性进食行为之间的相关关系。采用多元线性回归分析来检验抑郁严重程度及个体抑郁症状对问题性进食行为的预测作用,在进入模型之前,将抑郁得分标准化以使其效果具有可比性。

结果 抑郁障碍组与健康对照组的问题性进食行为之间存在显著差异,抑郁障碍组的情绪性进食显著高于健康对照组。情绪性进食与抑郁严重程度、食欲增加、体重增加、消极情绪、睡眠、精力、兴趣、自杀、精神运动性迟缓存在显著正相关,与食欲减退、体重减轻呈显著负相关;外因性进食与食欲增加、体重增加呈显著正相关,与食欲减退、体重减轻、睡眠、兴趣呈显著负相关。抑郁严重程度对情绪化进食具有显著的正向预测作用;“食欲增加”和“感到悲伤”对情绪化进食具有正向预测作用,“体重减

轻”具有负向预测作用;“食欲增加”、“感到悲伤”对外因性进食具有正向预测作用,“体重减轻”、“食欲减退”具有负向预测作用。

结论 抑郁障碍群体中的问题性进食行为,比没有抑郁障碍的群体更为普遍。饮食行为和情绪之间存在双向关系,表现为适应不良情绪和问题性饮食行为之间的重叠,其背后的原因还待进一步探究。

关键词: 抑郁障碍,抑郁症状,问题性进食行为

青少年重性抑郁症患者认知功能变化的研究

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目的 本研究旨在探索青少年重性抑郁症患者在首次发病时的认知功能损害的特点,纵向考察不同治疗效果患者的认知功能损害变化特点及与临床症状的相关研究。

方法 招募符合入组标准的青少年首次发病的重性抑郁症(MDD)患者94例,并招募100例年龄、性别、受教育程度相匹配的健康对照组(HC组)。采用Thinc-it工具测试两组青少年的认知功能,其中客观测试部分为选择反应时间(CRT)、1-Back记忆任务(1-Back)、数字符号测试(DSST)及连线测试B(TMT-B);主观认知测试部分为认知损害5项问卷(PDQ-5-D)。结合汉密尔顿抑郁量表(HAMD-17)、汉密尔顿焦虑量表(HAMA-14)进行临床症状评估,并在8周后进行重复测评,比较MDD组与HC组认知功能的差异;比较治疗前后不同疗效组间认知功能的变化;分析青少年MDD患者认知功能损害与临床症状间的相关性。

结果 ①与HC组相比,MDD组在CRT、1-Back、DSST、TMT-B、PDQ-5-D均存在显著差异($Z = -6.450、-2.809、-6.095、-5.151、-9.357; P < 0.05$),MDD组的CRT、1-Back、DSST任务反应时间更长,TMT-B完成时间更长,PDQ-5-D自评结果更差;②与MDD组相比,MDD-R组在CRT、1-Back、DSST、TMT-B、PDQ-5-D存在显著差异($Z = -2.404、-2.793、-2.898、-2.100、-2.370; P < 0.05$),而MDD-NR组均无明显差异($Z = -0.244、-0.281、-1.667、-0.736、-1.327; p > 0.05$);③MDD患者CRT、TMT标准分

与HAMA分呈负相关($r = -0.324、-0.219, P < 0.05$),且CRT、DSST标准分与HAMD中的迟滞因子呈负相关($r = -0.256、-0.243, P < 0.05$)。

结论 青少年MDD首发患者的认知功能存在明显缺陷,且与焦虑、迟滞密切相关。临床缓解期青少年MDD患者在信息加工速度、记忆力、注意力、执行功能及主观认知功能方面明显改善,而未缓解期青少年MDD患者认知功能无明显变化。

关键词: 重性抑郁症(MDD),青少年,认知功能,Thinc-it

快感缺失评估及其对门诊抑郁症患者的诊治指导

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目的 考察快感缺失评估对于门诊抑郁症患者的临床指导效果。

方法 随机抽取天津市某医院300名门诊患者,根据是否存在抑郁分为两组,采用中文版快感缺失量表(Dimensional Anhedonia Rating Scale,DARS)、焦虑自评量表(SAS)、抑郁自评量表(SDS)、匹兹堡睡眠质量表(PSQI)、耶鲁-布朗强迫量表(Y-B)、明尼苏达多项人格测验(MMPI)进行施测,考察抑郁组和非抑郁组的快感缺失总分及各维度间是否存在差异,以及抑郁组患者快感缺失程度与抑郁、焦虑、强迫、睡眠障碍、自杀观念等抑郁症常见症状的关系。进而采用个案研究,请门诊医生提供患者的标准化访谈个案/病历,考察临床医生通过评估门诊患者的快感缺失程度,是否可以更好地识别患者的抑郁状态,并且有针对性地进行治疗。

结果 结果显示抑郁组和非抑郁组在快感缺失量表总分及各维度分数上,抑郁组得分显著低于非抑郁组;DARS得分与SAS、SDS、PSQI、MMPI自杀概率得分均呈显著负相关,进一步的回归分析显示DARS得分对SAS、SDS、PSQI、MMPI自杀概率得分也存在显著的预测作用,阅读患者的DARS评估之后,门诊医生报告在诊断访谈中可以更有效地对抑郁症进行诊断识别,并改进治疗方案。

结论 快感缺失是门诊对抑郁症患者进行诊断访谈需考察的重要特征,评估患者的快感缺失程度

可以有效帮助医务人员更快识别门诊患者的抑郁状态,做出更可靠的诊断,提供更加精确,个性化的治疗方案。

关键词: 快感缺失,抑郁症,诊断访谈

评估丁螺环酮和文拉法辛联合治疗伴有认知障碍的老年抑郁症的疗效和安全性: 随机对照试验

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背景 老年抑郁症通常伴有认知功能障碍,由于其病因复杂、表现多样,给临床治疗带来了巨大挑战。尽管文拉法辛和丁螺环酮等抗抑郁药、抗焦虑药能有效治疗抑郁症,但它们的联合是否能进一步改善认知功能却鲜为人知。随着越来越多的老年人患上抑郁症,迫切需要探索一种新的药物或药物组合治疗方法来同时治疗抑郁症状和认知障碍。

目的 本研究旨在评估丁螺环酮和文拉法辛联合治疗老年抑郁症伴认知障碍患者的临床疗效和安全性。

方法 这项随机对照试验在一家三级精神病医院进行,共有 118 名被诊断为老年抑郁症并伴有认知障碍的老年患者完成了整个研究。参与者被随机分配到只服用文拉法辛的对照组(60 人),或服用文拉法辛的同时服用了螺环酮片的实验组(58 人),为期 12 周。疗效采用汉密尔顿抑郁评定量表(HAMD-17)、汉密尔顿焦虑评定量表(HAMA)和蒙特利尔认知评估(MoCA)进行测量。并系统记录了不良反应。

结果 治疗 2 周、4 周和 8 周后,实验组的 HAMD-17 评分明显低于对照组($P < 0.05$),在第 12 周时没有明显差异($P > 0.05$)。在所有评估时间点,实验组的 HAMA 和 MoCA 分数也始终优于对照组($P < 0.05$)。MoCA 评分的因子分析显示,实验组在视觉空间/执行功能、注意力和延迟回忆方面有显著改善($P < 0.05$)。两组患者均报告了轻微且可控的不良反应,其发生率无明显差异。

结论 丁螺环酮和文拉法辛联合用药能有效、快速地改善老年抑郁症患者的抑郁症状,并增强其

改善焦虑和认知功能,并且耐受性良好。尽管如此,对这些研究结果的长期临床应用仍需谨慎解读。

关键词: 老年抑郁症,认知障碍,疗效,安全性,丁螺环酮,文拉法辛

Asprosin, A Novel Biomarker in Atypical Depressed Patients

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Objective In this study, we could highlight the difference of asprosin level in peripheral plasma and lipid profiles with overweight or obesity ($BMI \geq 24$) or without in depressed individuals. And to explore the relationship between asprosin changes and lipid profiles and depressive symptoms

Methods 150 individuals (87 female and 63 male) with Major Depressive Disorder (MDD) were included in this study. We applied the 24-item Hamilton Depression Rating Scale (HDRS) to assess the depressed symptom at the beginning of treatment. Plasma asprosin were detected by enzyme linked immunosorbent assay in MDD patients. A series of clinical variables and blood glucose, thyroid function and lipid profiles were collected from clinic record

Results The study indicated that there are no significantly difference in blood glucose and thyroid function between MDD patients with or without overweight and obese. MDD patients with overweight or obese had a higher HDRS scores (30.5 ± 5.5) than MDD patients with normal weight (28.2 ± 5.5). And higher asprosin level in MDD patients with overweight or obesity compared to normal weight MDD individuals ($p < 0.04$). Compared lipid profiles like total cholesterol (TC), triglycerides (TG), high density lipoprotein cholesterol (HDL-C), low density lipoprotein cholesterol (LDL-C), apolipoprotein A1 (ApoA1), Apolipoprotein B (ApoB) and lipoprotein α ($Lp\alpha$), we found that TG, LDL-C and ApoA1 were much higher and HDL-C level was lower in MDD patients with overweight or obesity than MDD patients with normal weight. Among MDD patients,

plasma asprosin levels correlated positively with HDRS score ($r=0.18$, $p<0.03$), BMI ($r=0.19$, $p<0.03$), TC ($r=0.21$, $p<0.01$), LDL-C ($r=0.2$, $p<0.02$), ApoB ($r=0.26$, $p<0.0007$) and there is no relationship between asprosin levels with TG, HDL-C, ApoA1 and Lp α

Conclusion Our findings suggested that the higher the level of asprosin, the higher scores of HDRS that mean increased asprosin level maybe a peripheral marker for depressed patients with overweight or obesity and asprosin maybe involved in the development of depression

关键词: Asprosin, Depression, Lipid profile, Obesity

Negative Rumination in Depression Subtypes with Melancholic Features and Anxious Distress

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Objective Aberrant cognition is one of the crucial symptoms of depression. However, whether the negative rumination participates in depression with melancholic features or anxious distress is not very clear

Methods Here, we addressed this issue by compiling a questionnaire that can comprehensively measure the negative cognitive processing bias in depression. And then made an exhaustive analysis of its influencing factors including the subtype of depression, age, gender, age of onset, family history of mental disorder, education year, etc

Results Kolmogorov-Smirnov One-Sample Test (K-S normality test) showed that the total negative bias score and negative rumination dimension data of the control group ($n = 42$) did not conform to normal distribution. The dimensions of negative attention, negative interpretation, and negative rumination in the depression group ($n = 112$) did not conform to the normal distribution. Therefore, non-parametric tests were used to compare the differences between the two groups. The

results showed that there were significant statistical differences in the total score and each dimension of negative bias between the depression group and the control group (independent sample Mann-Whitney U test), $p<0.000$

Independent t-test showed a statistically significant difference in negative rumination bias between the melancholic subgroup and anxiety subgroup ($t = 2.33$, $p = 0.022$) (Figure 1B). Independent sample Mann-Whitney U test showed that there was no significant difference in negative interpretation and negative attention bias between the melancholic subgroup and the anxiety subgroup. Similarly, the independent sample t-test showed that there was no significant difference in the total score and its component negative memory bias.

The Kolmogorov-Smirnov test showed that the data of age, age of onset, and education year did not conform to normal distribution. Spearman rank correlation analysis showed that negative rumination bias correlates with family history ($\rho = -0.187$, $p = 0.049$) and age of onset ($\rho = -0.190$, $p = 0.045$) (Figure 2). Moreover, age was correlated with the total score of negative bias ($\rho = -0.245$, $p = 0.009$), negative interpretation ($\rho = -0.196$, $p = 0.038$), and negative memory bias ($\rho = -0.286$, $p = 0.002$). Age of onset correlates with a total score of negative bias ($\rho = -0.271$, $p = 0.004$), negative memory bias ($\rho = -0.286$, $p = 0.002$), and negative interpretation ($\rho = -0.229$, $p = 0.015$). The educated year has a correlation with negative memory bias ($\rho = -0.240$, $p = 0.011$). There were no significant differences in negative bias among patients with the first episode or recurrence, as well as patients with or without psychotic symptoms.

Conclusion Among the several dimensions of negative cognitive bias, negative rumination bias was more serious in the melancholic than anxious subgroup. Furthermore, Spearman rank correlation analysis showed that negative rumination bias correlates with family history and age of onset of depression. We mainly explored melancholic and anxiety subgroups and did not include other subtypes. Due to time constraints, we did not conduct long-term follow-up and explore the neural mechanisms of the differences between depressive and anxious rumination

关键词: Depression; Negative cognitive bias; Sub-type; Melancholic; Anxious distress

隔日重复经颅磁刺激在不同亚型抑郁症中的疗效评价

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目的 采用随机对照设计,明确重复经颅磁刺激对不同亚型抑郁症的疗效,比较不同抑郁亚型之间和内部药物治疗和物理治疗的疗效差异,并通过长期随访验证治疗的远期疗效。

方法 本研究共纳入 199 名受试者,通过简明国际神经精神障碍访谈检查和抑郁症状问卷进行诊断分型,分为忧郁型抑郁、非典型抑郁、焦虑型抑郁三组患者,并在每一组将患者随机分为药物治疗组和物理治疗组,其中物理治疗组采用每周 2-3 次,共计 10 次,为期 4 周的隔日治疗。研究在基线、2 周末、4 周末、6 周末、8 周末、12 周末共 6 个时间节点设置 6 次量表随访,通过汉密尔顿抑郁量表、抑郁症状快速自评量表、生存质量问卷等综合判断患者的治疗反应。

结果 1.治疗后,药物治疗组和物理治疗组的患者抑郁症状均显著下降,生活质量评分明显上升,两患者疗效无显著差异;2.不同抑郁亚型之间,患者的治愈率和有效率无显著差异。在不同症状维度中,忧郁型抑郁患者在治疗过程中体重恢复优于其他亚型患者且阻滞特征恢复优于焦虑型抑郁患者;3.忧郁型抑郁患者在急性期治疗后和随访过程中不同治疗组患者的疗效无显著差异;4.非典型抑郁患者在 8 周末随访时,药物组治愈率优于物理治疗组,有效率无显著差异;5.焦虑型抑郁患者在 8 周末随访时,物理治疗组有效率优于药物组,治愈率无显著差异;6.生存分析发现,在忧郁型抑郁患者中,女性患者相比于男性获得了更好的疗效。

结论 焦虑型抑郁患者在接受隔日重复经颅磁刺激作为补充治疗时能获得更好的疗效,忧郁型抑郁和非典型抑郁患者的获益并不显著。抗抑郁疗效可能与性别因素相关,女性患者疗效优于男性。

关键词: 重复经颅磁刺激, 忧郁型抑郁, 非典型抑郁, 焦虑型抑郁, 疗效

情绪弹性在应激性生活事件与初中生抑郁情绪间的中介作用

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目的 探究初中生心理弹性作为中介变量时,应激性生活事件与抑郁情绪之间的内在关联机制,为预防青少年抑郁情绪提供参考依据。

方法 于 2023 年 9 月至 2023 年 11 月采取整群抽样方法,采用自编一般人口学资料调查表、青少年情绪弹性问卷、中学生应激源调查问卷、患者健康问卷抑郁量表 PHQ-9、对荆州市 18 所学校 7-9 年级学生进行心理健康调查,分析其情绪弹性水平、应激源和抑郁情绪;并采用 Pearson 相关性分析探究三者之间的相关性。采用 SPSS 软件 PROCESS 插件对三者的中介效应进行分析。

结果 回收 10927 份有效问卷份,其中七年级 4435 人(40.59%),八年级 3317 人(30.36%),九年级 3175 人(29.06%);男生 5704 人(52.20%),女生 5223 人(47.80%)。汉族 10518 人(96.26%),独生子女 5347 人(48.93%),城市 9127 人(83.53%),寄宿 3303 人(30.23%),根据 PHQ-9 评分,3013 人(27.6%)存在抑郁,7914 人(72.4%)无抑郁。两组在性别、年龄、城乡、住校与否、民族等方面的差异存在统计学意义。抑郁组情绪弹性总分和积极情绪、情绪复原两个维度明显高于非抑郁组,不同性别、年龄、城乡、住校与否等方面的差异存在统计学意义($P<0.05$)。抑郁组应激性生活事件总分及其中各项评分明显高于非抑郁组,不同性别、年龄、城乡、住校与否、民族等方面的差异存在统计学意义($P<0.05$)。应激性生活事件与抑郁情绪正相关($r=0.215, P<0.01$);情绪弹性与应激性生活事件、抑郁情绪均负相关($r=-0.208, r=-0.312, P<0.01$);且上述相关性在控制性别、年级、民族、是否走读、生源地后依然显著。应激性生活事件为自变量,抑郁情绪为因变量,将情绪弹性作为中介变量代入结构方程模型,通过采用 SPSS 软件中 process 中的 Model4 进行中介效应的检验,性别、年级、民族、是否为走

读等变量为协变量, bootstrap 的 95%置信区间上下限均不包括 0, 表明初中生应激性生活事件不仅对抑郁情绪起直接效应, 还能通过情绪弹性这一变量对抑郁情绪起中介效应, 总效应为 0.62, 直接效应为 0.45, 间接效应为 0.17, 占总效应的比例为 27.4%。

结论 本研究结果表明, 情绪弹性水平、应激性生活事件是影响初中生抑郁情绪的重要因素, 情绪弹性在初中生经历应激性生活事件对抑郁作用中起部分中介效应。可通过锻炼初中生情绪弹性, 降低初中生抑郁发生率, 促进初中生的生理和心理健康。

关键词: 初中生; 抑郁; 应激性生活事件; 情绪弹性; 中介

情绪智力对医学生抑郁的影响: 有调节的中介效应

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目的 医学生的学制长、课业负担重, 职业环境中的致抑郁风险高, 出现抑郁症状的比率较高。情绪智力是人们对情绪世界的感知, 被认为是抑郁的一个显著负向预测因子, 但是情绪智力与抑郁之间的作用机制尚不明晰, 尤其是以医学生群体为研究对象的较少。本研究通过一个有调节的中介模型对情绪智力与抑郁间的关系进行深入探索。

方法 本研究采用方便抽样的方法, 对国内三所医科大学的临床医学专业在校学生的发放问卷, 共 1383 名医学生完成了特质情绪智力量表 (Trait Emotional Intelligence Questionnaire-Short Form, TEIQue-SF)、孤独量表 (UCLA Loneliness Scale)、患者健康问卷抑郁量表-9 (The Patient Health Questionnaire, PHQ-9) 和生命意义问卷 (Meaning in Life Questionnaire, MLQ) 的问卷调查。采用 SPSS24.0 统计软件进行数据分析和处理, 运用 Process3.3 程序进行有调节的中介作用检验。

结果 在情绪智力与抑郁的关系中, 孤独在情绪智力与抑郁之间起部分中介作用, 其中直接效应 (-0.34) 和间接效应 (-0.19) 分别占总效应 (-0.53) 的 64.84% 和 35.16%。意义体验和意义寻求是生命意义中相对独立的两个维度, 纳入中介模型后, 其中

孤独与意义体验的交互项对抑郁影响不显著 ($\beta = -0.04$, $t = -1.93$, $P > 0.05$), 即意义体验不存在调节作用, 而孤独显著正向预测抑郁 ($\beta = 0.29$, $t = 10.19$, $P < 0.001$), 孤独与意义寻求的交互项对抑郁有显著的负向预测作用 ($\beta = -0.09$, $t = -4.72$, $P < 0.001$), 意义寻求调节了情绪智力-孤独-抑郁这一中介过程的后半程路径。意义寻求较高的医学生, 孤独对抑郁的影响降低。

结论 本研究证实了孤独在情绪智力与抑郁之间起部分中介作用; 情绪智力通过孤独影响抑郁这一中介过程的后半程路径受到了生命意义的调节。情绪智力和生命意义寻求是调整医学生抑郁情绪的重要个体资源, 情绪智力对医学生抑郁的影响是有调节的中介效应。

关键词: 情绪智力; 孤独; 抑郁; 生命意义

精神运动迟滞在忧郁型抑郁症中的影像学机制

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目的 精神运动迟滞 (psychomotor retardation, PMD) 是忧郁型抑郁症 (melancholic depression, MD) 的关键症状之一, 其影像学机制目前尚不清楚。既往研究提示 PMD 在精神分裂症中影像学改变围绕中缝核、丘脑和基底神经节, 本研究假设 PMD 在 MD 中也存在类似的脑区功能连接改变。通过在横向及纵向研究中比较忧郁型抑郁症与非忧郁型抑郁症 (non-melancholic depression, NMD) 的精神运动迟滞相关脑区功能连接的差异, 以探究精神运动迟滞在忧郁型抑郁症中的影像学机制。

方法 该研究纳入了 40 名非忧郁型抑郁症和 24 名忧郁型抑郁症, 其中 26 名 MD 和 14 名 NMD 完成两个月的氟伏沙明治疗。在治疗前和治疗后, 使用 Stroop-color 测验和连线试验 A 联合评估参与者的精神运动速度, 并使用功能性 MRI 对参与者进行扫描。我们制定了关键脑区感兴趣区域 (region of interest, ROI), 计算其全脑功能连接及 ROI 之间的功能连接, 提取在治疗前与精神运动速度相关且在 MD 与 NMD 间存在差异的功能连接。比较治疗前后精神运动迟滞及这些功能连接的变化。

结果 与 MD 相比, NMD 的精神运动迟滞在治疗前($p < 0.001$)及治疗后($p = 0.011$)均表现更严重;无论是在治疗前和治疗后,位于左侧尾状核的显著体素簇的全脑功能连接在 MD 中均高于 NMD($p = 0.001$),位于右侧后外侧丘脑的显著体素簇的全脑功能连接在 MD 中均低于 NMD($p = 0.032$);并且在治疗后控制抑郁症状(HMAD-17)时,精神运动速度($p = 0.013$)与左侧尾状核显著体素簇的全脑功能连接($p = 0.015$)仍在组间存在显著差异。最后,无论是精神运动速度($p < 0.001$)还是左侧尾状核显著体素簇的全脑功能连接($p = 0.005$)在治疗前后也存在显著差异。

结论 本研究发现了忧郁型抑郁症中精神运动迟滞关键脑区位于左侧尾状核;并且本研究支持忧郁型抑郁症的精神运动迟滞及其相关的影像学特征是稳定存在而非状态性的,这进一步为诊断忧郁型抑郁症提供了新的影像学标记物。

关键词: 忧郁型抑郁症, 精神运动迟滞, 功能性磁共振, 影像学标记物

The Impact of The Interaction between Major Depressive Disorder and Childhood Trauma on Cortical Mean Curvature and Thickness

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Objective Childhood trauma (CT) is deeply associated with the development of major depressive disorder (MDD). Numerous studies have shown that CT exposure was associated with structural abnormalities in brain regions of MDD patients. However, the underlying neuropathological mechanisms are unclear. The aim of this study was to investigate the interaction between CT and MDD etiology and brain structural alterations

Methods A total of 30 patients with MDD (MDD-CT: $n = 16$; MDD-nCT: $n = 14$) and 48 age- and sex-matched healthy controls (HCs) (HC-CT: $n = 24$; HC-nCT: $n = 24$) were included in this study. All patients underwent a 3.0 t magnetic resonance scan to obtain magnetic resonance structural images, and the effects of

MDD (with CT), MDD (without CT), hc (with CT), and hc (without CT) on brain structure were assessed by analysing cortical mean curvature and cortical thickness. The effects of the "MDD" and "CT" factors on cortical mean curvature and cortical thickness were investigated by two-by-two factor analysis

Results In the whole-brain cortical mean curvature analysis, the main effects of diagnosis showed abnormalities in the left caudal anterior cingulate gyrus (MDD < HC) and the left medial orbitofrontal cortex (MDD > HC). Cortical mean curvature was abnormal in the left lateral orbitofrontal cortex when CT was the main effect, and this region also showed abnormalities in further analyses of the interaction effects of childhood trauma and MDD. In whole-brain cortical thickness analyses, the the caudal middle frontal gyrus, inferior parietal lobule, precuneus, postcentral gyrus, rostral middle frontal gyrus, superior frontal gyrus, transverse temporal gyrus, and parahippocampal gyrus showed differences when diagnosis was the main effect

Conclusion The current findings reveal that greater mean curvature of the left lateral orbitofrontal cortex may be a biomarker of childhood trauma, and on the other hand MDD may further increase damage to the mean curvature of the left lateral orbitofrontal cortex

关键词: Childhood trauma; Major depressive disorder; Cortical mean curvature; Cortical thickness

Metabolomics-based Study of Potential Diagnostic Biomarkers for Major Depressive Disorder

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Objective The pathophysiological mechanisms of Major Depressive Disorder (MDD) remain unclear. Metabolomics allows for the analysis of endogenous small molecule metabolites and their metabolic path-

ways within an organism, exploring the interrelationships between metabolites and physiological and pathological changes. This helps in the discovery of disease-related biomarkers. This study aims to explore potential diagnostic biomarkers for MDD by comparing serum metabolites and metabolic pathways between MDD patients and healthy individuals using metabolomics techniques

Methods The study included 160 participants, 80 diagnosed with MDD according to DSM-IV criteria for depressive episodes and 80 matched healthy controls. Untargeted metabolomics analysis was conducted on peripheral serum using ultra-high performance liquid chromatography-high resolution mass spectrometry (UPLC-HRMS). Multivariate statistical analysis of the preprocessed metabolomic data was performed using SIMCA software, with Principal Component Analysis (PCA) and Orthogonal Partial Least Squares-Discriminant Analysis (OPLS-DA) used to identify classification trends between cases and controls. Metabolites with $VIP > 1$, $q < 0.05$, and $FC > 2$ or $FC < 0.5$ were selected as significantly different. Metabolite enrichment and metabolic pathway analysis were conducted using Metabo Analyst 4.0 software and the KEGG online database. ROC curves were drawn using SPSS 26.0 software to evaluate the predictive ability of significant metabolites for disease onset

Results 1. Nineteen metabolites showed significant differences between MDD patients and healthy individuals

2. Metabolic pathways with significant differences mainly involved polyunsaturated fatty acid metabolism, amino acid metabolism, phospholipid and sphingolipid metabolism, steroid metabolism, and bile acid metabolism.

3. Seven specific metabolites showed good accuracy in predicting disease onset, including 12-hydroxyeicosatetraenoic acid, 13-hydroxyoctadecadienoic acid, L-glutamate, arachidonic acid, L-aspartate, N-acetylaspartate, and serotonin, involving polyunsaturated fatty acid metabolism and amino acid metabolism pathways.

Conclusion The results of this study indicate that metabolic disorders are significantly associated with MDD. MDD patients show significant metabolic

changes related to polyunsaturated fatty acid metabolism and amino acid metabolism pathways. Specific metabolites may serve as potential diagnostic biomarkers for depression. This study provides important theoretical support for the early diagnosis and optimization of treatment for depressive disorders

关键词: Major Depressive Disorder, Biomarkers, Metabolomics, Metabolites, Metabolic Pathways

[综述]抗抑郁药引起锥体外系反应机制的研究进展

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目的 探讨抗抑郁药引起锥体外系反应的机制。

方法 通过 Pubmed 网站检索相关研究成果。

结果 EPS 是一种运动障碍,可表现为肌张力障碍、静坐不能、帕金森病和迟发性运动障碍等。抗抑郁治疗领域面临的一个关键挑战是需要快速起效的抗抑郁药,能够有效治疗难治性 MDD 或 BD 患者。氯胺酮是一种速效抗抑郁药,在临床前研究中显示出良好的效果。Hashimoto (2019) 讨论了氯胺酮对映体的抗抑郁作用,强调 (R)-氯胺酮比 (S)-氯胺酮具有更强的抗抑郁作用和更持久的抗抑郁作用。此外,研究发现 (R)-氯胺酮比 (R,S)-氯胺酮或 (S)-氯胺酮的有害副作用更少。这表明氯胺酮的特定对映体可能在抗抑郁作用和副作用的产生中发挥作用。在 Mörkl et al. (2019) 的一项研究中,报告了 15 例抗抑郁治疗后出现 EPS 的病例,强调了识别相似性和风险因素的重要性与 EPS 相关的研究。该研究旨在描述接受抗抑郁药治疗的患者的 EPS 发生情况,阐明这些药物的潜在副作用。此外,Ohno 等人 (2019) 讨论了抗精神病药物引起的 EPS 的治疗,强调了抑制 5-HT 再摄取到神经末梢的抗抑郁药物的协同作用。研究发现,α、5-HT 和 5-HT 拮抗剂米氮平可减少 EPS 的诱导,这为接受抗精神病治疗的患者治疗 EPS 提供了一种潜在的策略。此外,Hirano (2020) 研究了多种精神药物对 EPS 发生的影响,重点研究了抗焦虑药、催眠药等药物类别、抗抑郁药和抗精神病药。该研究旨在评估服用精神药物前后 EPS 发生分布的不对称性,为接

受多种精神药物治疗的患者 EPS 相关的潜在风险因素提供见解。

结论 1.部分抗抑郁药可能会对多巴胺受体产生拮抗作用,影响多巴胺神经递质的传递和功能。多巴胺在调节运动功能方面起着重要作用,其功能受到干扰可能导致 EPS 的产生。2.5-HT 系统与多巴胺系统之间存在复杂的相互作用。部分抗抑郁药对 5-HT 受体的调节可间接影响多巴胺能神经元的活动,引发 EPS。3.部分抗抑郁药可同时具有抗胆碱能活性,但这种作用在不同部位存在不平衡。当抗胆碱能作用不足以抵消其他影响锥体外系的作用时,就可能出现 EPS。

关键词:抗抑郁药,锥体外系反应,机制

类风湿关节炎患者疼痛与抑郁的相关性研究

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目的 本研究主要调查类风湿关节炎患者抑郁的发生率,以及探索类风湿关节炎患者疼痛与抑郁之间的关系。

方法 本文研究对象来自一所三甲医院风湿免疫科专家门诊的 271 名类风湿关节炎患者。采用自测量表收集患者的一般人口学资料,如性别、年龄、文化水平、家庭经济情况、活动受限程度等。采用汉密尔顿抑郁量表(HAMD)来评估患者抑郁状况,再将患者分为不伴有抑郁组(HAMD<17)和伴有抑郁组(HAMD≥17)。简式 McGill 疼痛问卷(SF-MPQ)用来评估患者疼痛强度,包括情感疼痛评定指数(A-PRI)、视觉模拟量表(VAS)和现有疼痛强度(PPI)。应用电子测痛仪进行压力性痛觉阈值(PPT)的测定。并运用 t 检验、卡方检验、Spearman 相关分析及二元 logistics 回归对数据进行分析。

结果 (1) 271 名类风湿关节炎患者中抑郁情绪的发生率为 34.7%。(2)在类风湿关节炎患者中,不伴有抑郁组和伴有抑郁组在年龄、文化水平、家庭经济条件、宗教信仰、生活满意度、疾病持续时间、活动受限程度及 A-PRI、VAS、PPI 和 PPT 上存在差异。(3)按性别分组,比较性别在抑郁及疼痛方面的差异,发现男性和女性仅在 PPT 上存在差异。(4)相关因素分析,HAMD 总分均与 A-PRI、VAS、

PPI 和 PPT 存在明显相关性。(5)二元逻辑回归分析显示,在类风湿关节炎患者中,抑郁的危险因素有年龄大、家庭经济条件差、生活满意度低、活动受限程度严重、A-PRI 个数增加及现有疼痛状态表现为严重。

结论 类风湿关节炎患者抑郁的发生率较高,且大多数为年龄大、文化水平低、家庭经济差、生活满意度低、疾病持续时间长及活动受限严重的人群。此外,年龄大、家庭经济条件差、生活满意度低、活动受限严重、疼痛强度大是伴发抑郁的高危因素。

关键词:类风湿关节炎 抑郁 疼痛

Exploring The Predictive Markers of Efficacy of Accelerated Neuronavigation-guided RTMS for Depression with Suicidal Ideation Based on Multimodal Large-scale Brain Networks

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目的 This study aimed to establish response predictive models of accelerated neuronavigation-guided high-dose rTMS based on multimodal large-scale brain networks.

方法 VN,SMN, DAN, VAN, LN, FPN, and DMN were constructed using graph theory method based on three modalities data including T1 structural imaging, DTI, and rs-fMRI got from untreated MDD patients with suicidal ideation before rTMS treatment. LSVM methods were utilized to build predictive models.

结果 We found that both the morphological and structural brain networks could predict the percentage changes of total BSSI and HAMD scores. Additionally, the functional brain networks could predict the percentage changes of total HAMD scores. Further analyses of the effects of imaging modality and subnetworks on prediction performances revealed that the structural connectivity and SMN exhibited better predictive ability.

结论 The antidepressant and anti-suicide effect of accelerated neuronavigation-guided rTMS can be effectively predicted by the multimodal large-scale brain

networks in a subnetwork-dependent manner.

关键词：rTMS, Predictive Model, Multimodal, Brain Network, Machine Learning Method, MDD

Neural Correlates of Cognitive Deficit in Emotional Directed Forgetting in Major Depressive Disorder: An Event-related Potential Study

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Objective It has been confirmed that Major depressive disorder (MDD) exhibit difficulty in forgetting negative materials, which may resulted from specific impairments in memory and attention. However, the underlying neural correlates of corresponding cognitive deficit has not been clarified. This study aimed to investigate the electrophysiological characteristics and differences between MDD and healthy controls (HCs) in emotional directed forgetting task (EDF) with negative and neutral images using event-related potential (ERP)

Methods 26 MDD patients and 28 HCs were recruited for the current study, and they all were evaluated clinically with the Hamilton Depression Scale. All participants performed the measurement of ERPs during EDF task, and behavioral data and ERP components were analyzed

Results HCs had larger hit rates than that of MDD patients; more false alarms occurred on MDD patients than HCs, and the larger false alarm rates showed in negative images than in neutral images; the Reaction times were longer for MDD patients than that for HCs. The larger image-evoked P2 amplitudes and less negative image-evoked N2 amplitudes for MDD patients, while they had the larger image-evoked LPP amplitudes both in negative and neutral emotional conditions, compared with HCs. MDD patients had the larger cue-evoked N2 amplitudes and the smaller cue-evoked P3 amplitudes which elicited by Remember than that of

HCs. The HAMD scores had a positive correlation with the LPP amplitudes which was evoked by negative images in central lobe

Conclusion The interactive contribution of emotion and cognition process to the cognitive biases leads to the impaired memory facilitation and suppression of negative material in MDD; The observed ERP patterns provide valuable insights into the neural mechanisms underlying the EDF task in MDD

关键词：Major depressive disorder, Event-Related Potential, Emotional Directed Forgetting Task, Neural mechanism

高频 rTMS 对脑卒中后抑郁症患者的临床疗效研究

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目的 探讨高频重复经颅磁刺激 (rTMS) 对脑卒中后抑郁症 (PSD) 患者意识能力、抑郁状态及睡眠状态的改善作用, 旨在为临床治疗此类患者提供有效的治疗方案, 及早改善患者的生活质量。

方法 选取我院 2023 年 8 月~2024 年 2 月住院的 PSD 患者 40 例进行回顾性研究, 治疗组和对对照组各 20 例, 所有入组患者均行脑血管病常规治疗, 治疗组同时接受 rTMS 治疗, 刺激部位: 左侧前额叶背外侧皮质区; 强度: 80%RMT; 频率: 10Hz; 时间: 20 min; 每周 5 次, 疗程共 10 天。收集患者的一般资料, 并在治疗前及治疗两周后采用简易精神状态量表 (MMSE)、汉密顿抑郁量表 (HAMD-17) 和匹兹堡睡眠质量指数 (PQSI) 进行评分, 然后运用统计学方法分析各个量表评分的变化以判断治疗效果。

结果 (1) 两组患者在年龄、性别、高血压、糖尿病等方面差异不显著 ($P>0.05$)。 (2) 两组 MMSE 的变化: 治疗组经过两周疗程后, 差异显著 ($P<0.05$); 对照组经过两周疗程后, 差异不显著 ($P>0.05$)。治疗前两组患者无显著差异 ($P>0.05$); 治疗后差异显著 ($P<0.05$)。 (3) 两组 HAMD-17 的变化: 治疗组经过两周疗程后, 差异显著 ($P<0.05$); 对照组经过两周疗程后, 差异也显著 ($P<0.05$)。治疗前两组患

者无显著差异 ($P>0.05$); 治疗后差异显著 ($P<0.05$)。

(4) 两组 PQSI 的变化: 治疗组经过两周疗程后, 差异显著 ($P<0.05$); 对照组经过两周疗程后, 差异不显著 ($P>0.05$)。治疗前两组患者无显著差异 ($P>0.05$); 治疗后差异显著 ($P<0.05$)。

结论 高频 rTMS 可以显著提高 PSD 患者的 MMSE 评分, 改善患者的认知功能; 并降低其 HAMD-17 和 PQSI 评分, 缓解抑郁症状, 改善睡眠质量。

关键词: 重复经颅磁刺激; 脑卒中后抑郁症; 认知; 睡眠质量

探讨艾司西酞普兰对抑郁症患者肠道菌群和粪便代谢组的调节作用

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目的 研究抗抑郁剂艾司西酞普兰对抑郁症患者肠道微生物组成和功能的影响。

方法 选取本次抑郁发作未经过抗抑郁药系统治疗的 110 名抑郁症患者和 166 名健康对照, 抑郁症患者接受艾司西酞普兰治疗 12 周, 并在治疗前、治疗第 2 周末和第 12 周末进行汉密尔顿抑郁量表 (HAMD-17) 的评估, 根据 12 周 HAMD-17 评分将患者划分为缓解组和未缓解组, 同时采集粪便样本。采用宏基因组测序和 GC-MS 代谢组学检测表征了抑郁症患者服用艾司西酞普兰治疗期间微生物组成和功能的纵向变化。

结果 艾司西酞普兰对抑郁症患者整体肠道微生物 α 多样性影响较小, 但药物干预后缓解组和未缓解组组间肠道微生物 α 多样性变化显著不同, 缓解组的 α 多样性指数 (Richness 指数) 呈现先下降后上升的趋势, 然而, 未缓解组呈现出先上升后下降的趋势。艾司西酞普兰具有一定的抗菌效应。对抑郁症患者肠道微生物组成和功能发挥抑制作用, 在微生物组成方面, 抗抑郁药治疗后, 阿托波菌属、罗斯氏菌属和粪球菌属的丰度均出现下调; 在微生物功能方面, 抗抑郁药治疗后, 90 个改变的 KO 功能中, 84 个出现下调, 且下调的微生物功能主要由未缓解组贡献。针对粪便代谢组学, 药物干预后, 缓解组有 23 种代谢物发生变化, 这些代谢物主要是

氨基酸、脂质和核酸类, 未缓解组有 19 种代谢物发生变化, 主要是脂质和碳水化合物类。

结论 微生物组成和代谢功能的改变可能与艾司西酞普兰的不同反应有关, 这为揭示抗抑郁药疗效差异的机制提供了新的思路。

关键词: 抑郁症; 肠道微生物; 抗抑郁药; 宏基因组; 代谢组学

The Current Situation of Comorbidities of Chronic Physical Diseases and Depression Among Chinese Community Residents

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Objective To estimate the prevalence of long-term medical conditions and of comorbid major depression, and the associations between major depression and various chronic medical conditions in a general population of Chinese community residents

Methods A total of 46546 Community residents recruited from 18 cities in China were recruited. Chronic health conditions were assessed using a self-report method of doctor diagnosis, and diagnosed for more than one year. The World Mental Health-Composite Diagnostic Interview was used to assess major depressive episodes based on DSM-IV criteria

Results The overall prevalence of having at least one chronic condition in those over 50 years of age was 62.4%, compared to 42.0% in those under 50. The prevalence of a major depressive episode in those over 50 with one chronic condition was 3.7%, compared with 1.0% in those without a long-term medical condition. The top 3 chronic health conditions were arthritis/rheumatism, high blood pressure and back problems

Conclusion Accurate diagnosis of comorbid depressive disorders in patients with chronic medical illness is essential in understanding the cause and in optimizing the management of somatic symptom burden. Thus, comprehensive treatment plans are necessary to optimize care

关键词: chronic physical diseases; depressive disorders;

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同伴欺凌对青少年抑郁症的影响：手机使用的中介作用

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目的 本研究测验青少年抑郁症患者与同伴欺凌患者及手机使用者三者之间的关系，构建中介效应模型，为青少年抑郁症患者的预防和治疗提供新思路。

方法 本研究采用便利抽样法选取全国 12 家精神专科医疗机构或综合性医院的精神科 2343 名抑郁症确诊青少年患者，采用一般资料调查法，受朋辈欺凌问卷(PVQ)，九项患者健康问卷(PHQ-9)量表，手机使用调查表(MPAI)进行调查与测验，分析同伴欺凌与青少年抑郁症及手机使用的相关性，采用 SPSS26 软件，分析手机使用在同伴欺凌与青少年抑郁症之间的中介效应。

结果 (1)同伴欺凌与青少年抑郁症呈正相关($r=0.330, p<0.001$)；(2)同伴欺凌和手机使用呈正相关($r=0.287, p<0.001$)；(3)手机使用与青少年抑郁症呈正相关($r=0.333, p<0.001$)；(4)手机使用在同伴欺凌与青少年抑郁症之间产生显著中介效应($r=0.414, p<0.001, \beta=0.234$)。

结论 学校教育者应该为青少年创建友好校园环境，帮助青少年建立良好同伴关系，减少霸凌事件的发生；同时家长要在青少年手机使用中起到监督作用，防止青少年手机成瘾，进而减少青少年抑郁症的发生率。

关键词: 同伴欺凌, 青少年抑郁症, 手机成瘾;

目的 探究老年抑郁症患者采用重复经颅磁刺激(rTMS)结合度洛西汀治疗的效果。

方法 研究对象为抑郁症患者，患者年龄 ≥ 65 岁，选取例数共 70 例，选取时间，起始于 2022.05，结束于 2023.05，将患者分组，分组方式为双色球(粉色/白色)，组别设置: DL 组(粉色)、CM 组(白色)，每组例数: 35 例。治疗方式: DL 组-度洛西汀，CM 组-rTMS+度洛西汀。比较指标: 治疗效果、心理状况、认知功能、不良反应。

结果 结果 ①治疗效果: CM 组 VSDL 组=94.29% (33/35, 痊愈 22.86%+显效 17.14%+有效 54.29%) VS77.14% (27/35, 痊愈 17.14%+显效 14.29%+有效 45.71%)，CM 组 $>$ DL 组(=4.200, $P<0.05$)；②心理状况(HAMD、HAMA): 治疗前组间差异不显著(29.62 \pm 5.12)分/(29.81 \pm 5.13)分，(20.46 \pm 6.42)分/(20.43 \pm 6.14)分($t=0.155, 0.020, P=0.877, 0.984>0.05$)，治疗后 HAMD 评分($t=6.689$) CM 组(8.83 \pm 2.35)分 $<$ DL 组(12.66 \pm 2.44)分，HAMA 评分($t=8.277$) CM 组(6.15 \pm 1.74)分 $<$ DL 组(9.41 \pm 1.55)分，(P 均 <0.05)；③认知功能(RBANS 评分): 治疗前组间差异不显著($P>0.05$)，治疗后即刻记忆($t=4.196$) CM 组(79.15 \pm 3.70)分 $>$ DL 组(74.98 \pm 4.57)分，视觉广度($t=5.116$) CM 组(89.54 \pm 6.67)分 $>$ DL 组(82.02 \pm 5.58)分，言语($t=4.383$) CM 组(90.26 \pm 4.58)分 $>$ DL 组(85.43 \pm 4.64)分，注意($t=11.629$) CM 组(90.59 \pm 3.36)分 $>$ DL 组(80.56 \pm 3.84)分，延迟记忆($t=13.402$) CM 组(91.15 \pm 2.87)分 $>$ DL 组(81.26 \pm 3.29)分，(P 均 <0.05)；④不良反应(TESS 评分): 治疗前组间差异不显著($P>0.05$)，治疗后($t=7.942$) CM 组(4.05 \pm 1.56)分 $<$ DL 组(6.90 \pm 1.44)分($P<0.05$)。

结论 在老年抑郁症患者治疗中使用 rTMS 结合度洛西汀能有效提高患者治疗效果，在心理层面、认知层面均有所改善，治疗安全性更佳，值得推广实施。

关键词: rTMS; 度洛西汀; 老年抑郁症; 认知能力; 影响

RTMS 结合度洛西汀对老年抑郁症患者认知能力的影响

Association between Osteoporosis and Serum Prolactin and Calcium Levels in Postmenopausal Women with Major Depressive Disorder: A Retrospective Study Based on Quantitative CT

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Objective Numerous studies have indicated that patients with Major Depressive Disorder (MDD) are at a higher risk for osteoporosis, particularly postmenopausal middle-aged and older women, yet the underlying mechanisms remain unclear. This study aimed to explore the relationship between osteoporosis and serum markers in postmenopausal women diagnosed with MDD

Methods A retrospective analysis was conducted on patients who visited Beijing Anding Hospital, Capital Medical University, from July 2021 to April 2022. The inclusion criteria were as follows: postmenopausal women aged over 55 years, those who had undergone low-dose lung CT scans, had complete laboratory test records, and were clinically diagnosed with MDD according to the International Classification of Diseases, Tenth Revision (ICD-10). Patients with other psychiatric disorders, diseases affecting bone metabolism, previous history of lumbar spine surgery, calcium supplementation, or steroid therapy were excluded. The volumetric bone mineral density (vBMD) of the lumbar spine was assessed using quantitative computed tomography (QCT), and osteoporosis was defined as vBMD < 80 mg/cm³. Demographic information, such as age, height, weight, BMI, disease duration, medication use, and serum marker levels (including prolactin, estradiol, cortisol, LDL, HDL, triglycerides, total cholesterol, blood calcium, potassium, alkaline phosphatase, glycosylated hemoglobin, C-reactive protein, and adrenocorticotropic hormone) were collected from medical records and laboratory reports. Participants were categorized into two groups based on the presence or absence of osteoporosis for comparative analysis. Multivariate logistic regression analysis was then performed to identify

risk factors for osteoporosis among the subjects

Results The study successfully enrolled 146 participants. Comparative analysis revealed that the osteoporosis group was significantly older, had higher prolactin concentrations, lower blood calcium levels, and higher glycosylated hemoglobin values compared to the non-osteoporosis group ($p < 0.05$). There were no significant differences between the two groups regarding BMI, disease duration, proportion of unmedicated individuals, and other serum marker levels ($p > 0.05$). Multivariate logistic regression analysis confirmed that higher prolactin levels and lower blood calcium levels were associated with osteoporosis, even after adjusting for age and BMI (adj. OR: 1.025, 1.001~1.051, $p=0.045$; and 1.119, 1.047~1.197, $p=0.001$, respectively). However, glycosylated hemoglobin levels did not exhibit a statistically significant correlation with osteoporosis risk when adjusted for age and BMI ($p > 0.05$)

Conclusion In postmenopausal women with MDD, osteoporosis is associated with elevated serum prolactin levels and decreased blood calcium levels. These findings suggest potential biomarkers for osteoporosis risk assessment in this population, which may guide future clinical management and preventive strategies

关键词: Osteoporosis, Major Depressive Disorder, postmenopausal women, quantitative computed tomography

Interoceptive Neural Circuits Mediating The Progression From Somatic Diseases To Comorbid Depression

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Objective Somatic diseases comorbid with depression exacerbate health burden. The interoceptive neural circuit (INC) might mediate the brain-body connections. We aim to assess the causal relationship between the somatic diseases, INC, and depression

Methods Mendelian randomization (MR) analysis was performed to study: 1) the causal effect of INC's morphology on depression; 2) the causal effect of four categories of systemic somatic diseases (ulcerative colitis, essential hypertension, chronic pain, and type 2 diabetes) on INC's morphology; and 3) explore the INC's mediating role between somatic diseases and depression. Replication analysis of INC's mediation role was also conducted with other GWAS datasets

Results We founded morphological alterations of the INC increased depression risk, with the bilateral ventral thalamus most impacted. All four somatic diseases resulted in morphological changes in the INC, with shared reduced left ventral diencephalon (L-VDC). The volume of the L-VDC mediated the relationship between somatic diseases and depression, a finding validated across different datasets

Conclusion Overall, INC, particularly the L-VDC, plays a crucial role in the pathogenesis of depression and the intersection of somatic diseases. The INC mediates the progression from somatic diseases to comorbid depression, suggesting that interventions targeting the INC may prevent and alleviate the burden of somatic diseases combined with depression

关键词: Somatic diseases; Depression; Interoceptive neural circuit; Mendelian randomization; Left ventral diencephalon; Mediation Analysis

单相抑郁患者维生素水平探讨

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目的 维生素是生命必需的营养成分, 它们在健康中起主要作用, 其缺乏可能与精神疾病的症状有关。现有研究已经发现抑郁症患者存在叶酸、维

生素 B12 及维生素 D 等水平的异常。同时有学者认为上述维生素的降低与抑郁症发生有关, 补充维生素有利于疾病的恢复, 但目前结论并不一致。抑郁症分为不同的类型, 一些研究在探索时没有就抑郁类型进行分型。故本研究从抑郁发作(单相抑郁)角度出发, 探讨单相抑郁患者体内维生素, 即血清叶酸, 维生素 B12 及维生素 D3 水平的情况, 从而更好的指导临床。

方法 单相抑郁患者 103 例, 健康对照 103 例, 检测病例和对照样本叶酸(FA)、维生素 B12(B12)和维生素 D3(D3)水平。

结果 单相抑郁患者叶酸和维生素 B12 水平均显著低于健康对照 ($P < 0.05$)。维生素 D3 水平在两组间没有显著性差异。分层分析发现, 叶酸在女性, 年龄大于 30 岁及病程大于 1 年的患者中水平偏高 ($P < 0.05$); 维生素 B12 在首发的单相抑郁患者及不伴有精神病性症状的重型抑郁发作患者中水平偏高 ($P < 0.05$)。维生素 D3 主要在男性患者中偏高 ($P < 0.05$)。在舍曲林治疗前后及抑郁症状的严重程度间(中度发作或重度发作)没有发现维生素水平的明显变化和差异。维生素 B12 和年龄负相关, $B = -0.595 (-1.104 \text{ to } 0.086)$, 可建回归方程。

结论 单相抑郁患者较健康人群叶酸和维生素 B12 水平偏低。舍曲林治疗不影响维生素水平变化。

关键词: 单相抑郁; 叶酸; 维生素 B12; 维生素 D3

Exploring The Differences in Psychometric Properties of Commonly Used Self-rating Depression Scales Across Various Populations in China: A Quantitative Systematic Review

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Objective This study aims to systematically

compare the internal consistency reliability and criterion validity of four commonly used self-rating depression scales, the Patient Health Questionnaire-9 (PHQ-9), the Zung Self-Rating Depression Scale (SDS), the Beck Depression Inventory (BDI), and the Quick Inventory of Depressive Symptomatology-Self Report (QIDS-SR) in Chinese populations

Methods A quantitative systematic review was conducted, encompassing a literature search of Chinese and English medical databases, screening and selection of eligible studies, and data extraction. Internal consistency reliability (Cronbach's α) and criterion validity (correlation coefficients) of each scale were compared across studies and sub-populations. Data analyses were performed using R language version 4.3.1

Results A total of 53 studies involving 35,676 participants were included. PHQ-9 was validated in more diverse sub-populations than the other scales. The BDI exhibited the highest overall internal consistency reliability. PHQ-9 and QIDS-SR demonstrated lower internal consistency reliabilities among older adults. BDI had relatively lower Cronbach's α in female patients with infertility, while SDS had relatively lower Cronbach's α among patients with liver cirrhosis and women in rural areas. Criterion validities varied across scales, with the most frequently used criterion being the Hamilton Depression Scale-17 (HAMD-17)

Conclusion This systematic review provides valuable insights into the psychometric properties of commonly used depression scales in Chinese populations. The findings highlight the need for further research on the adaptability of these scales across diverse populations, particularly in older adults and those with specific health conditions

关键词: self-rating scales, depression, psychometric properties, internal consistency

Virtual Reality-based Interventions for People with Depressive Disorder: A Meta-analysis

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Background Depressive disorder is one of the most common and disabling mental disorders. Only 9.5% of people with depressive disorder have received mental health services, due to the stigma of mental illness and the scarcity of mental health resources, it needs to seek other treatment options. Virtual reality-based interventions (VR-Is) are one of the novel treatments that have been investigated in recent years.

Objective To evaluate the effects and tolerability of VR-Is for depressive disorder.

Method Eligibility criteria

All randomized controlled trials (RCTs) comparing VR-Is alone or plus standard care with antidepressants, and other forms of psychotherapy or any other interventions for people with depressive disorder.

Information sources

On 4 September 2023, we searched electronic sources for published, unpublished, and ongoing studies, including Pubmed, Embase, The Cochrane Library, China National Knowledge Infrastructure (CNKI), Wanfang Database, Chongqing VIP Database (VIP). We hand-searched the reference lists of all included studies and relevant systematic reviews to identify additional studies.

Risk of bias

Two reviewers independently assessed the methodological bias of each trial according to the criteria in the Cochrane Handbook for Systematic Reviews of Interventions.

Assessment the quality level of evidence

We used GRADE to assess the quality of the evidence for main outcomes.

Synthesis and analysis of results

Two reviewers performed reference screening, study selection, and data extraction independently. RevMan 5.4 statistical software was used to conduct statistical analyses. For binary outcomes, we calculated risk ratios (RRs) and 95% confidence intervals (CIs). For continuous data, we estimated mean differences (MDs) if studies used the same scales, and we used

standardized mean differences (SMDs) if studies used different scales, with 95% CIs. Pooled results were presented using forest plots. The degree of heterogeneity was evaluated using the Q statistic generated from the χ^2 test. We employed a random-effects model for analyses. We also performed sensitivity analysis if necessary. Funnel plots were used to assess the possibility of publication bias. Our primary outcomes of interest were symptom severity and cognitive function, and secondary outcomes were suicide, quality of life, social functioning, dropout for any reason, serious adverse events, and general adverse effects.

Results Included studies

An electronic search of English and Chinese language databases run on 4 September 2023 yielded 2787 records. After removing 591 duplicates, we screened 2196 titles and abstracts, of which we deemed 2163 to be irrelevant. Following retrieval and inspection of 33 full-text reports, we excluded 31 of them. We included two studies (2 references, 195 participants).

Synthesis of results

We included two studies (142 participants) comparing VR-Is with antidepressant. Two studies separately reported depressive symptoms with the Hamilton Rating Scale for Depression (HAM-D) and Self-rating Depression Scale (SDS), and the Korean Version of Quick Inventory of Depressive Symptomatology-Self-Report (K-QIDS-SR). Analysis of these two studies showed no clear differences in depressive symptoms (HAM-D and K-QIDS-SR) between treatment groups (SMD -0.55, 95% CI -3.04 to 1.95; 2 studies, 142 participants; low-certainty evidence). Analysis of these two studies also showed no clear differences in depressive symptoms (SDS and K-QIDS-SR) between treatment groups (SMD -0.35, 95% CI -2.45 to 1.75; 2 studies, 142 participants; low-certainty evidence). One study investigated multiple domains of cognitive function. Analysis of executive function measured by Wisconsin Card Sorting Test (WCST) showed significant differences between treatment groups (RR 1.20, 95% CI 1.18 to 1.22; 1 study, 106 participants; low-certainty evidence). Analysis of information processing speed and attention measured by Number Sign Conversion Test (DSST) also showed significant differences between treatment

groups (MD 23.31, 95% CI 20.10 to 26.52; 1 study, 106 participants; low-certainty evidence). One study reported suicide with suicidality scales of the Korean Mini International Neuropsychiatric interview. Analysis of the study showed no clear differences in suicide between treatment groups (MD -1.63, 95% CI -3.89 to 0.63; 1 study, 36 participants; low-certainty evidence). Two studies reported dropout for any reason. Analysis of dropout showed no clear differences between treatment groups (RR 0.33, 95% CI 0.10 to 1.12; 1 study, 142 participants; low-certainty evidence). One study reported general adverse effects with Treatment Emergent Symptom Scale (TESS). Analysis of the study showed no clear differences in general adverse effects between treatment groups (MD -0.12, 95% CI -0.57 to 0.33; 1 study, 106 participants; low-certainty evidence). None of the included studies reported outcomes on quality of life, social functioning, and serious adverse events.

We included one study (106 participants) comparing VR-based cognitive behavioral therapy (VR-CBT) with cognitive behavioral therapy (CBT). The study reported depressive symptoms with HAM-D and SDS. Analysis of the study showed no clear differences in depressive symptoms (HAM-D) between treatment groups (MD -0.81, 95% CI -1.73 to 0.11; 1 study, 106 participants; low-certainty evidence). Analysis of the study showed significant differences in depressive symptoms (SDS) between treatment groups (MD -5.92, 95% CI -9.33 to -2.51; 1 study, 106 participants; low-certainty evidence). The study investigated multiple domains of cognitive function. Analysis of executive function measured by WCST showed significant differences between treatment groups (RR 1.10, 95% CI 1.08 to 1.12; 1 study, 106 participants; low-certainty evidence). Analysis of information processing speed and attention measured by DSST also showed significant differences between treatment groups (MD 15.77, 95% CI 12.43 to 19.11; 1 study, 106 participants; low-certainty evidence). The study reported dropout for any reason. Analysis of dropout showed no clear differences between treatment groups (RR 0.50, 95% CI 0.05 to 5.35; 1 study, 106 participants; low-certainty evidence). The study reported general adverse effects with TESS. Analysis of the study showed no clear differences in general adverse

effects between treatment groups (MD -0.08, 95% CI -0.54 to 0.38; 1 study, 106 participants; low-certainty evidence). None of the included studies reported outcomes on quality of life, social functioning, and serious adverse events.

Discussion

Limitation

All studies were judged to have unclear risk of bias for study design and reporting. The two included studies were threatened by risks of bias due to a lack of information about blinding of participants and personnel. Moreover, one of the two studies was judged to high risk of bias for incomplete outcome data. Data pooling was limited due to the small number of included studies, and studies with usable data presented imprecision, as wide confidence intervals that crossed the null were shown in the forest plots. Studies included in this review were applicable to the aims of our review. However, the quality of presented evidence was low, so all results should be treated with considerable caution.

Interpretation

Evidence regarding the effects of VR-Is for patients with depressive disorder is currently insufficient. Our analyses showed no significant difference between VR-Is and antidepressants in depressive symptoms, but VR-Is were more effective in cognitive function. Our analysis also found that VR-CBT was superior to CBT in the both areas. We are uncertain about these findings because of the risk of bias and imprecision of estimates. Large, long, well-designed, and well-reported trials are needed to further examine the effects of VR-Is.

关键词: Virtual reality-based interventions; Depressive disorder; Meta-analysis

青少年抑郁症患者自杀意念与母亲的依恋模式及防御方式的关联研究

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目的 自杀意念与多种心理、行为问题有关,青少年是自杀的高发人群,且自伤率呈现逐年上升的趋势。母亲的某些心理特质,如依恋模式和防御方式,可能会对青少年的自杀及抑郁障碍的转归产生重要影响。本研究探究青少年抑郁症自杀意念与母亲的依恋模式及防御方式的相关性。

方法 选取 57 例安徽省精神卫生中心门诊及住院的青少年抑郁症及父母作为研究组纳入研究,以 53 例年龄性别匹配的青少年及父母作为对照组纳入研究,采用青少年自我伤害问卷、亲密关系经历量表、防御方式问卷进行测评。

结果 研究组青少年抑郁症及母亲在依恋模式各维度得分和总分;母亲在不成熟防御方式得分均高于对照组(均 $P < 0.05$);青少年抑郁症患者的自杀意念与母亲依恋焦虑、依恋回避、防御方式总分、不成熟防御方式得分呈正相关;Logistic 回归分析结果显示母亲存不安全依恋 ($B=2.57, P=0.024$)、不成熟防御方式 ($B=1.95, P=0.003$)、父母教养原则不一致 ($B=2.54, P < 0.001$)、父母间感情差 ($B=1.33, P=0.013$) 的青少年抑郁症,出现自杀意念的风险较大。

结论 母亲不安全型依恋模式和不成熟防御方式可能是青少年抑郁症自杀意念的危险因素。

关键词: 抑郁障碍, 自杀意念, 依恋模式

Changes in Spectral Power Associated with Cognitive Function in Patients with Depression

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Objective Cognitive impairment in depression has attracted widespread attention. Some depressed patients in remission may still have cognitive symptoms and may have changes in electroencephalogram (EEG)

Method 48 patients with stable depression were included in this study. The cognitive symptoms of the

patients were assessed by Measurement and Treatment Research to Improve Cognition in Schizophrenia (MCCB), and EEG was collected

Methods 48 patients with stable depression were included in this study. The cognitive symptoms of the patients were assessed by Measurement and Treatment Research to Improve Cognition in Schizophrenia (MCCB), and EEG was collected

Results We recruited 48 patients with MDD, 14 had impaired cognitive function. The sex and age distribution of the cognitive impairment (CI) and no cognitive impairment (NCI) groups were not statistically significant ($p > 0.05$). The total MCCB scores, information processing speed ($t = -2.631$, $p = 0.012$), working memory ($t = -2.669$, $p = 0.01$), word learning ($t = -2.545$, $p = 0.014$), and problem-solving ability ($t = -8.135$, $p < 0.001$) of the NCI group were significantly higher than the CI group ($t = -3.571$, $p = 0.001$). The delta-mean power values of the CI group and NCI group differed at the C3 electrode ($t = 2.163$, $P = 0.036$), the O2 electrode ($t = 2.940$, $P = 0.005$), and the Fz electrode ($t = 2.209$, $P = 0.032$) (Table 2), and theta-mean power values differed at the O2 electrode ($t = 2.258$, $P = 0.029$)

Conclusion This study suggests that changes in spectral power are associated with changes in cognitive function. There were changes in spectral power in which the delta power of the frontal, left central, and right occipital increased, and the theta power of the occipital lobe regions increased in the CI group

关键词: depression, Cognitive impairment, electroencephalogram, spectral power

Global Functional Connectivity Analysis Indicating Dysconnectivity of The Hate Circuit in Major Depressive Disorder

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Objective Abnormalities of functional connectivity (FC) in certain brain regions are closely related to the pathophysiology of major depressive disorder (MDD). Findings are inconsistent with different presuppositions in regions of interest. Our research focused inconsistent with different presuppositions in regions of interest. Our research focused on voxel-wise brain-wide FC changes in patients with MDD in an unbiased manner

Methods We examined resting-state functional MRI in the patients with MDD and 26 healthy controls. Imaging data were analyzed by using global-brain FC (GFC) and used to explore the correlation of abnormal GFC values with clinical variables

Results Increased GFC values in the left medial superior frontal gyrus (SFGmed) and decreased GFC values in the right supplementary motor area (SMA) were observed in the patients with MDD compared with the controls. The decreased GFC values in the patients with MDD compared with the controls. The decreased GFC values in the right SMA had a positive correlation with vitamin D and Hamilton Anxiety Scale (HAMA) scores

Conclusion Abnormal GFC in the hate circuit, particularly increased GFC in the left SFGmed and decreased GFC in the right SMA, appears to be a new sight for comprehending the pathological alterations in MDD

关键词: major depressive disorder, fMRI, global-brain functional connectivity, network, hate circuit

青少年抑郁障碍患者混合特征水平与认知功能相关研究

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目的 探究青少年抑郁障碍患者的混合特征与患者认知功能的关系

方法 纳入 2022 年 1 月至 2024 年 1 月就诊于成都市第四人民医院住院部或门诊的 40 例青少年抑郁障碍患者为研究组, 另纳入 20 名与研究组性别、年龄、受教育年限相匹配的社会健康志愿者为对照

组。受试者入组后均进行接受神经心理评估,包括评估抑郁症状,使用蒙哥马利抑郁量表(MADRS);评估认知功能,使用中国简版神经认知成套测验(C-BCT),该套测验共包括4个分测验:符号编码、持续操作、连线测试、数字广度;评估混合特征,使用中文版临床实用抑郁混合特征量表(CUDOS-M-C)。使用SPSS14.0统计软件,对受试者的MADRS、C-BCT、CUDOS-M-C进行统计分析,以确定受试者间的差异。采用Pearson相关分析受试者的MADRS、C-BCT、CUDOS-M-C之间的相关性。

结果 研究组的MADRS、CUDOS-M-C评分均高于对照组,差异有统计学意义($P < 0.05$);研究组的CBCT测评各维度评分,包括符号编码、持续操作、连线测试、数字广度均低于对照组,差异有统计学意义($P < 0.05$)。研究组抑郁症状评分(MADRS)与CBCT总分、符号编码、持续操作、连线测试、数字广度得分水平呈负相关($P < 0.05$),研究组混合特征评分(CUDOS-M-C)与CBCT总分、符号编码、持续操作、连线测试、数字广度得分水平呈负相关($P < 0.05$)。

结论 青少年抑郁障碍患者的抑郁严重程度、混合特征和其认知功能高度相关。

关键词:青少年抑郁障碍,混合特征,认知功能

Inflammatory Modulation of Sertraline Use in Patients with Depression: A Systematic Review and Meta-analysis

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Background The increased evidences indicated that there was a correlation between major depressive disorder (MDD) and inflammatory pathways. Sertraline, the frontline intervention of selective serotonin reuptake inhibitors (SSRIs) for MDD, presumed to decrease pro-inflammatory cytokine levels. This systematic review and meta-analysis aim to advance comprehension of how the antidepressant sertraline intricately modulates inflammatory pathways and delineates the intricate functions of pivotal cytokines within this framework

Methods Electronic searches of Web of Science,

MEDLINE, and Embase yielded 294 unique records for the period Jan, 2007 to Feb, 2024. The studies included measured inflammatory cytokine concentrations in patients with MDD before and after sertraline treatment. And the effects of sertraline on their inflammatory cytokines were analyzed. All relevant articles were reviewed and the data was extracted by two independent coders. Estimates were tested using random effects meta-analysis

Results Seven studies (237 participants) were included. There was no significant evidence provided to demonstrate that sertraline can reduce the levels of TNF- α (SMD \pm 0.76, 95% confidence interval [CI] = -0.41, 1.93, $Z \pm$ 1.27, $p = 0.20$) and IL-6 (SMD \pm 0.96, 95% CI = -0.30, 2.22, $Z \pm$ 1.49, $p = 0.14$)

Limitations: Results are limited due to the small number of studies that precluded examination of some moderating variables. The results are correlation, not causation.

Conclusion Sertraline could not reduce serum the levels of IL-6 and TNF- α in patients with MDD. The antidepressant mechanism of sertraline may not base on the pathway of inflammation

关键词: Keywords: Sertraline, Major depressive disorder, Proinflammatory cytokines

Distinguishes Major Depressive Disorder and Bipolar Disorder Using Alpha-band Activity in Resting-state Electroencephalogram

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Objective Previous studies have demonstrated

the capability of alpha sub-band oscillations in distinguishing depression from healthy controls. However, their potential to differentiate between Major Depressive Disorder (MDD) and Bipolar Disorder (BD) remains unexplored. This study aims to investigate whether alpha sub-band activity can serve as a discriminative feature between MDD and BD, thus contributing to enhanced diagnostic accuracy in mood disorders

Methods This study recruited 37 patients diagnosed with Major Depressive Disorder (MDD), 36 patients with Bipolar Disorder (BD), and 30 healthy controls, all matched in terms of gender, age, marital status, and educational level. General demographic and clinical characteristics were collected for all participants. Their depressive and anxiety symptoms were assessed using the 17-item Hamilton Depression Rating Scale (HDRS-17) and the 14-item Hamilton Anxiety Scale (HAM-A-14), respectively. Electroencephalogram (EEG) data were acquired during both eyes-open and eyes-closed states over a 5-minute duration to examine if alpha sub-band oscillations can differentiate between MDD and BD. For classification purposes, machine learning models including Decision Tree (DAC), K-Nearest Neighbors (KNN), Random Forest (RF), Naive Bayes (NB), and Support Vector Machines (SVM) were employed. Additionally, Pearson correlation analysis was conducted to explore the relationship between alpha sub-bands and clinical symptoms

Results Our findings revealed that compared to healthy controls, the MDD group exhibited significantly greater power in the high alpha range and reduced power in the low alpha range. Conversely, the BD group showed elevated power specifically in the medium alpha range. These differences were more pronounced under eyes-closed conditions. Among the five machine learning classifiers, performance was superior in the low alpha band for distinguishing normal controls from both MDD and BD patients, whereas classification between MDD and BD was optimized in the high alpha band. Notably, the Naive Bayes classifier outperformed the others, achieving an accuracy rate of 65% for differentiating MDD from BD. However, no significant correlations were observed between the specific alpha sub-band oscillations and clinical symptoms, suggesting that

the alterations in alpha activity might be independent of symptomatology or indicative of more fundamental neurobiological distinctions between the two disorders.

Conclusion The present study provides novel insights into the differential characteristics of alpha sub-band oscillations in distinguishing major depressive disorder (MDD) from bipolar disorder (BD), as compared to healthy controls. Our findings reveal that while MDD is associated with elevated power in the high alpha frequency range and reduced power in the low alpha range, BD is marked by increased power in the medium alpha band, particularly under eyes-closed conditions. These observations suggest distinct neural signatures for MDD and BD, highlighting the potential utility of alpha sub-band analyses in diagnostic classification.

Keywords Bipolar Disorder (BD), Major Depressive Disorder (MDD), Electroencephalography (EEG), Alpha oscillations, machine learning models

关键词: Bipolar Disorder (BD), Major Depressive Disorder (MDD), Electroencephalography (EEG), Alpha oscillations, machine learning models

PTSS, Perceived Stress, and Social Media Use Affecting Somatic Symptoms in Healthcare Workers Recovering From COVID after Ending China's Dynamic Zero-COVID Policy: A Moderated Mediation Model

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Objective Persistent somatic symptoms brought by COVID are a matter of concern. Post-traumatic stress symptoms (PTSS) and perceived stress have been recognized as risk factors for somatic symptoms. Recently, the associations between social media use and COVID-related PTSS have also been noticed. However, the pathways these factors contribute to persistent somatic symptoms after COVID remain unclear. This study

aimed to investigate the role of perceived stress as a mediator in COVID-related PTSS and somatic symptoms, and whether social media use moderated the mediation in a sample of healthcare workers (HCWs) during the subacute phase of COVID in the context of the end of China's dynamic zero-COVID policy

Methods Questionnaire data from 2281 Chinese HCWs were included in the study. COVID-related PTSS, perceived stress, and somatic symptoms were measured, and a moderated mediator model was developed

Results The effect of COVID-related PTSS on somatic symptoms was partially mediated by perceived stress. Moreover,

social media use positively moderated the relationship between COVID-related PTSS and perceived stress. COVID-related PTSS and perceived stress. That is, at higher frequencies of social media use, COVID-related PTSS played a stronger role in perceived stress.

Conclusion Our findings suggest that perceived stress and frequency of social media use play a facilitating role in the impact of COVID-related PTSS on somatic symptoms. From a psychosocial perspective, this study identified psychological interventions targeting stress and benign media communication as potential interventions for persistent somatic symptoms after COVID infection and prevention of long COVID

关键词: PTSS; perceived stress; social media use; COVID; somatic symptom

NSSI Contagion in Adolescent Friendships: Explore The Process of Peer Influence

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Objective Although empirical evidence of non-suicidal self-injury (NSSI) contagion within adolescent friendships has been documented, the specific mecha-

nisms remain poorly understood. The current study employed a longitudinal design to investigate the influence of NSSI in adolescents' peer groups on their own NSSI behaviors. Additionally, the mediating role of self-esteem and the specific conditions of NSSI contagion were examined

Methods The study had recruited 326 adolescents (mean age = 13.5, 59.2% female) nested within 163 friendship dyads. NSSI behavior, self-esteem, self-compassion, alexithymia and personal distress were assessed at baseline (T1), and NSSI behavior was assessed again after three months (T2). A cross-lagged Actor-Partner Interdependence Model (APIM) was used to estimate the NSSI contagion model

Results The results revealed that friends' NSSI status at baseline was significantly predicted with adolescents' own NSSI status after three months. Self-esteem was found to mediate the NSSI contagion effect exclusively in situations where adolescents exhibited high alexithymia, low self-compassion, and high personal distress

Conclusion This research highlights the role of adolescent friendships in NSSI contagion and elucidates the specific conditions of this contagion. These findings provide substantial implications for the prevention of the NSSI contagion among adolescents

关键词: NSSI contagion; adolescent friendship; self-esteem; alexithymia; self-compassion; personal distress

重度抑郁症患者动脉粥样硬化指数相关因素的性别差异

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目的 探究重度抑郁症患者动脉粥样硬化指数相关因素的性别差异

方法 数据来源于 2015 年至 2017 年在山西医科大学第一医院精神科进行的横断面研究。采用标准化的临床评估表收集患者的人口学和临床资料。分别采用汉密尔顿抑郁量表 (HAMD)、汉密尔顿焦

虑量表 (HAMA)、阳性和阴性精神症状评定量表 (PANSS) 对重度抑郁症患者的抑郁、焦虑和精神病性症状进行评价。采集患者的空腹静脉血进行血糖、血脂、甲功等检测, 并进一步计算动脉粥样硬化指数 AI。单因素分析时使用 Mann-Whitney U 检验和 χ^2 检验, 多因素分析时使用逐步 logistics 回归, $P < 0.05$ 时差异有统计学意义。

结果 参与研究的患者共 1718 人, 平均年龄 34.87 ± 12.43 岁, 其中男性 588 人, 女性 1030 人。男女性重度抑郁症患者动脉粥样硬化指数逐步 logistics 回归结果显示: HAMD 量表评分高 ($B=0.122$), TSH 高 ($B=0.490$), 甘油三酯高 ($B=0.617$), 低密度脂蛋白高 ($B=0.821$) 与男性动脉粥样硬化风险高相关; 受教育程度高 ($B=-0.321$), PANSS 量表阳性症状部分评分高 ($B=-0.127$) 与男性动脉粥样硬化风险低相关。HAMD 量表评分高 ($B=0.132$), FT3 高 ($B=0.225$), TSH 高 ($B=0.403$), 甘油三酯高 ($B=0.375$), 低密度脂蛋白高 ($B=0.721$), BMI 高 ($B=0.112$), 收缩压高 ($B=0.026$) 与女性动脉粥样硬化风险高相关; PANSS 量表阳性症状部分评分高 ($B=-0.042$) 与女性动脉粥样硬化风险低相关。

结论 1. 在我们的研究中, HAMD 量表评分高、TSH 高、甘油三酯高、低密度脂蛋白高与患者动脉粥样硬化风险高相关, PANSS 量表阳性症状部分评分高与动脉粥样硬化风险低相关, 无明显性别差异。2. 在男性重度抑郁症患者中受教育程度高与动脉粥样硬化风险低相关; 在女性重度抑郁症患者中, BMI 高、收缩压高、FT3 高与女性动脉粥样硬化风险高相关, 性别差异明显。

关键词: 重度抑郁症, 动脉粥样硬化, 性别差异, 横断面研究

Prevalence and Correlates of Overweight and Obesity in Patients with Major Depression Accompanied by Abnormal Thyroid-stimulating Hormone Levels

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Background Abnormal thyroid function is common in patients with major depressive disorder (MDD), which may be closely associated with metabolic disturbances, especially overweight and obesity. This study aimed to examine the prevalence of overweight and obesity and their related factors in MDD patients with abnormal thyroid stimulating hormone (TSH) levels

Methods A total of 1718 patients with MDD were recruited in this study. Hamilton Anxiety Rating Scale (HAMA), Hamilton Depression Rating Scale (HAMD), and Positive and Negative Syndrome Scale (PANSS) positive subscale were used to assess clinical symptoms. In addition, free triiodothyronine (FT3), free thyroxine (FT4), thyroid stimulating hormone (TSH), anti-thyroglobulin (A-TG), body weight, height, and blood pressure were measured

Results MDD patients with abnormal TSH levels had a higher rate of obesity and overweight compared to those without abnormal TSH levels. Among patients with abnormal TSH levels, overweight and obese patients had older age and age of onset, lower A-TG levels, and higher systolic blood pressure compared to those without overweight and obesity. Further logistic regression analysis showed that being married (OR: 1.582, 95% CI: 1.191-2.102) and having no suicidal behavior (OR: 1.444, 95% CI: 1.079-1.934) were independently associated with overweight and obesity in patients with abnormal TSH level ($P < 0.05$)

Conclusion Patients with MDD who have abnormal TSH levels are more likely to be obese and overweight. Several clinical and thyroid function parameters are associated with obesity and overweight in MDD patients with abnormal TSH levels

关键词: Major depressive disorder; Abnormal serum TSH level; Overweight; Obesity

青少年抑郁症患者再入院情况及影响因素的回顾性分析

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目的 分析青少年抑郁症患者再入院情况及影响因素。

方法 回顾性分析 2019 年 1 月-2023 年 12 月于宜昌市精神卫生中心住院治疗的青少年抑郁症患者临床资料,将患者是否多次住院分为一次住院组和再入院组(住院次数 ≥ 2 次)。使用独立样本 t 检验和 χ^2 检验进行差异性分析,筛选出自变量($P < 0.1$)纳入 logistic 回归模型,分析青少年抑郁症患者再入院的影响因素。

结果 2276 例青少年抑郁症患者中 1705 例(74.9%)患者一次住院,571 例(25.1%)患者再入院。两组青少年抑郁症患者在性别、家庭结构、自杀未遂史、有无联合无抽搐电休克治疗(MECT)以及汉密尔顿抑郁量表 17 项(HAMD-17)减分率差异有统计学意义($P < 0.05$)。Logistic 回归分析结果显示女性(OR=1.752, 95%CI: 1.377~2.230)、有自杀未遂史(OR=1.791, 95%CI: 1.359~2.359)是青少年抑郁症患者再入院的危险因素;双亲家庭(OR=0.787, 95%CI: 0.646~0.958)是青少年抑郁症患者再入院的保护性因素。

结论 青少年抑郁症住院患者再入院发生率高,应重点关注女性、单亲家庭或重组家庭、有自杀未遂史的青少年抑郁症住院患者,对影响因素应进行针对性干预,以降低青少年抑郁症患者再入院可能。

关键词:青少年;抑郁症;再入院;影响因素

家庭治疗在抑郁症治疗中的应用效果

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目的 本研究聚焦于精神科临床中家庭治疗在抑郁症治疗中的应用效果。通过对相关病例的深入分析和评估,旨在揭示家庭治疗对抑郁症患者症状改善、康复进程以及生活质量提升的重要作用。研究结果显示,家庭治疗作为抑郁症综合治疗的重要组成部分,具有显著的积极效果。

方法 选取在精神科确诊为抑郁症的患者若干,随机分为实验组和对照组。实验组接受药物治疗结合家庭治疗,对照组仅接受药物治疗。在治疗前、治疗后及随访期间对患者的病情和生活质量进行评估。

结果 实验组患者的抑郁症状在治疗后明显减

轻,量表评分显著低于对照组。实验组的康复速度较快,复发率低于对照组。实验组在生活质量的各个维度上均有显著改善,包括心理、生理、社会功能等方面。实验组家庭的亲密度和适应性得到提高,家庭成员之间的关系更加和谐。

结论 家庭治疗在精神科临床抑郁症的治疗中具有显著的应用效果,能够有效改善患者的症状、促进康复、提高生活质量,并优化家庭关系。建议在今后的临床实践中,进一步推广和完善家庭治疗模式,为抑郁症患者提供更全面、有效的治疗服务。然而,家庭治疗在应用过程中也面临着一些挑战,需要进一步加强研究和实践,不断完善治疗方法和技术,提高治疗效果。同时,我们也期待未来家庭治疗能够与其他治疗方法更好地结合,为抑郁症患者带来更多的希望和福祉。

关键词:家庭治疗;抑郁症

青少年抑郁症患者快感缺失水平变化分析

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目的 本研究旨在探索青少年抑郁症患者快感缺失的特点及治疗前后快感缺失的变化与抑郁症状之间的相关性。

方法 选取杭州师范大学附属医院青少年心理健康联合门诊 2022 年 2 月至 2024 年 6 月就诊青少年抑郁症患者 31 名,所有患者均接受药物治疗,在首次就诊、治疗 2 月后分别应用汉密尔顿抑郁量表(HAMD-17)评估患者抑郁症状;汉密尔顿焦虑量表(HAMD-14)评估患者焦虑症状;斯奈思-汉密尔顿快感量表(SHAPS)评估患者享乐能力,该量表包涵 4 个方面,分别为兴趣爱好(娱乐活动)、社会交往、感觉体验、食物饮料;愉快情绪体验量表(TEPS)评估患者对一些愉快情景下的快乐反应的同意程度,TEPS 量表包括期待性快感缺失(TEPS-ant)、完成性快感缺失(TEPS-con)两个分量表。其中斯奈思-汉密尔顿快感量表分数越高提示个体的快感缺失水平越高,愉快情绪体验量表分数越高,快感缺失的水平越低。

结果 青少年抑郁症患者治疗前在社会交往

($\bar{x}\pm S=8.74\pm 4.10$)、感觉体验($\bar{x}\pm S=7.41\pm 3.70$)方面以及期待性快感缺失($\bar{x}\pm S=39.70\pm 14.99$)水平较高。治疗 2 月后其 HAMD 评分显著降低($P<0.01$), SHAPS 评分显著降低($P<0.01$), 其中兴趣爱好快感缺失评分显著降低($P<0.01$)、感觉体验快感缺失评分显著降低($P<0.05$), 社会交往、食物饮料方面快感缺失评分无明显差异($P>0.05$), TEPS 评分显著增高($P<0.01$), 其中期待性快感评分显著增高($P<0.01$)、完成性快感显著增高($P<0.05$)。青少年抑郁症患者治疗前 HAMD 评分与 SHAPS 评分呈正相关($r=0.408, P<0.05$), 与 TEPS 评分呈负相关($r=-0.423, P<0.05$), HAMD 评分与 TEPS 评分中完成性快感缺失呈负相关($r=-0.455, P<0.05$)。

结论 青少年抑郁症患者治疗前快感缺失主要表现在社会交往、感觉体验以及期待性快感三个方面。经治疗后其抑郁症状、快感缺失程度均得到改善, 其中兴趣爱好快感、感觉体验快感显著提高。期待性快感缺失、完成性快感缺失均得到明显改善, 其中期待性快感缺失改善更为明显。青少年抑郁症患者抑郁症状严重程度与快感缺失水平呈正相关, 与快感缺失中完成性快感缺失水平显著相关。

关键词: 青少年 抑郁症 治疗 快感缺失

谷氨酸系统与快感缺失的影像遗传学研究

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目的 探讨精神分裂症(schizophrenia, SZ)和重性抑郁障碍(major depression disorders, MDD)患者快感缺失症状, 内侧前额叶皮质(medial prefrontal cortex, mPFC)谷氨酸水平以及与 N-甲基 D-天冬氨酸受体(N-methyl D-aspartate receptor, NMDAR)通路基因的关联。

方法 研究共纳入 58 例突出型阴性症状(prominent negative symptoms, PNS) SZ 患者, 27 例 MDD 患者和 62 例健康对照, 利用阴性症状临床评估访谈量表(the clinical assessment interview for negative symptoms, CAINS)评估 SZ 和 MDD 患者的阴性症状和快感缺失症状的程度。采用氢质子磁

共振波谱技术(¹H proton magnetic resonance spectroscopy, ¹H-MRS)及 LCModel(linear combination of model in vitro spectra)软件对 mPFC 谷氨酸(glutamate, Glu)及谷氨酸/谷氨酰胺复合(glutamate+glutamine, Glx)的水平进行定量。选取 NMDAR 通路基因的 NOS1AP, GSK3 β , DAOA, DISC1 基因的 15 个 SNP 位点(rs12742393, rs1415259, rs1415263, rs1858232, rs348624, rs6680461, rs334558, rs6779828, rs3916965, rs778294, rs947267, rs1538979, rs821577, rs821633, rs999710)进行基因分型。在 SPSS 中使用 PROCESS Marco 进行中介效应分析(模型 4, Bootstrap 法), 评估谷氨酸在 NMDAR 通路基因和快感缺失症状关系中的作用。

结果 MDD 患者 mPFC 脑区的 Glu 和 Glx 的水平显著高于 SZ 组和健康对照组。相关分析显示 SZ 患者 mPFC 脑区 Glx 水平与 CAINS 量表 MAP 条目分数和总分呈显著性负相关。中介效应分析显示 NOS1AP 基因 rs6680461 位点通过 Glx 的完全中介效应可以预测 CAINS 的总分, DISC1 基因 rs1538979 位点通过 Glx 的部分中介效应可以预测 MAP 因子分。

结论 谷氨酸系统在快感缺失的病理机制中发挥重要作用, NMDAR 通路基因可能通过调控 mPFC 谷氨酸水平进而影响快感缺失症状。

关键词: 快感缺失; 谷氨酸系统; 精神分裂症; 重性抑郁障碍; 影像遗传学

Dezocine's Rapid and Sustained Antidepressant Effects: A Case Report

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Objective This study aims to discuss the antidepressant effects of dezocine, as well as its potential for ameliorating symptoms of anhedonia, through the integration of a case report

Methods Without altering the patient's original treatment regimen (continued administration of sustained-release bupropion 150 mg/day, once daily, and clonazepam 15 mg/day, once nightly), a single low dose (0.1 mg/kg, administered over 30 minutes) of dezocine

was intravenously infused. A baseline assessment of the patient was conducted one week prior to receiving dezocine, followed by a 4-week follow-up. The Hamilton Depression Rating Scale (HAMD-17), Montgomery-Åsberg Depression Rating Scale (MADRS), as well as the self-rating scales, the Patient Health Questionnaire-9 (PHQ-9), and Dimensional Anhedonia Rating Scale (DARS), were utilized for evaluation

Results The results demonstrated a significant amelioration of depressive symptoms and anhedonia by the end of the 1st and 2nd weeks, with 88.89% and 72.22% reductions in the HAMD-17 scores, respectively, as outlined in Table 1. Additionally, there was a notable improvement in the patient's anhedonia, with weekly increase in DARS scores by 35 and 32 points above the baseline, respectively. By the 3rd week, the patient's reduction rate on HAMD-17 subsided to 44.44%, and the DARS scores decreased to 35 points. At the end of the 4th week, the patient's symptoms had exacerbated, described as "almost as before," and assessments were essentially congruent with pre-dezocine treatment baselines, prompting the patient to express a desire for augmented therapeutic intervention. Consequently, follow-up was discontinued, and the treatment plan was amended

Conclusion While the current evidence is limited to case reports, the pharmacological profile of dezocine suggests that it has significant potential for the treatment of MDD, particularly in patients manifesting anhedonic symptoms. Future high-quality clinical and preclinical research is required to corroborate these findings and develop viable therapeutic protocols

关键词: major depressive disorder, opioid, dezocine, anhedonia, case report

正念认知治疗对抑郁障碍患者生活质量的影响

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目的 评估正念认知治疗 (mindfulness-based

cognitive therapy, MBCT) 治疗抑郁障碍的疗效, 并探索对患者生活质量的影响。

方法 1、对象 选取 2018 年 5 月至 2020 年 5 月北京回龙观医院的门诊及住院抑郁障碍患者。共招募符合入组条件的抑郁障碍被试 84 例, 最终完成研究方案 73 例纳入统计分析, 根据随机数字表法随机分为正念组与对照组, 正念组 37 人, 对照组 36 人。两组一般资料比较差异无统计学意义 ($P>0.05$)。2、测评工具: 汉密尔顿抑郁量表 (HAMD-17)、汉密尔顿焦虑量表 (HAMA)、五因素正念量表 (FFMQ)、世界卫生组织生存质量量表简表 (WHOQOL-BREF)。3、MBCT 干预操作: 本研究采用牛津大学正念中心的标准 MBCT 干预方案。为团体干预模式, 每期 6-12 人。本研究的所有治疗师均已完成英国牛津正念中心 MBCT 带教师资培训。4、统计学处理: 采用 SPSS20.0 统计软件进行统计分析, 计量资料以均数 \pm 标准差 ($\pm s$) 表示, 采用 t 检验, 计数资料以率 (%) 表示, 采用卡方检验, 以 $P<0.05$ 为差异有统计学意义。

结果 两组抑郁障碍患者干预前的 HAMD-17 和 WHOQOL-BREF 评分比较, 差异无统计学意义 ($P>0.05$)。经过 8 周 MBCT 训练后, 两组患者的 HAMD-17 总分显著低于干预前, 而 WHOQOL-BREF 的总分显著高于干预前, 差异有统计学意义 ($P>0.05$)。正念组患者干预 8 周后的 HAMD-17 总分低于对照组, WHOQOL-BREF 总分高于对照组, 差异有统计学意义 ($P>0.05$)。

结论 MBCT 治疗的有效性和便捷性使其在精神科临床诸多领域获得广泛应用。有研究显示, 常规药物治疗联合 MBCT 治疗可有效地改善抑郁障碍患者的抑郁症状。本研究结果显示, 正念组经过 8 周 MBCT 干预治疗后较对照组能显著地改善 HAMD-17 总分。有研究发现, MBCT 治疗不仅可以改善抑郁障碍患者的抑郁症状, 还可以改善抑郁障碍患者的生活质量。本研究亦支持上述结论。本研究存在一定的局限性。样本量较少, 今后研究中应进行多中心、大样本研究来进一步验证该结论。综上所述, MBCT 能有效改善抑郁障碍患者的抑郁症状, 同时, 还能提高患者的生活质量。

关键词: 正念, 抑郁症, 生活质量

基于真实世界证据探索伴有自杀意念或行为

的抑郁障碍患者的临床特征研究

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目的 探索基于真实世界证据的伴自杀意念或行为的抑郁障碍患者的临床特征。

方法 采用描述性、回顾性研究的分析方法,利用基于医院信息系统(hospital information system, HIS)的电子健康记录(electronic health record, EHR),纳入2013年1月1日至2020年12月31日在首都医科大学附属北京安定医院住院及急诊留观的抑郁障碍患者共7986人,按照是否存在自杀意念或行为分为抑郁障碍不伴自杀意念和行为组(Major Depressive disorder with Non Suicide, MDNS)、抑郁障碍伴自杀意念组(Major Depressive disorder with Suicidal Ideation, MDSI)及抑郁障碍伴自杀行为组(Major Depressive disorder with Suicidal Behavior, MDSB),比较三组人口学及临床特征。

结果 单因素比较分析显示:(1)MDSI组和MDSB组年龄显著低于MDNS组($Z=22.14, P=0.001$),在职比率显著高于MDNS组($\chi^2=13.91, P=0.001$);(2)MDSB组伴精神病性症状的比率显著高于MDSI组($\chi^2=9.40, P=0.009$);与MDNS组相比,MDSB及MDSI组的患者的起病年龄更早($Z=27.49, P=0.001$)。MDSI组中发病前有诱因的患者比率显著高于MDNS组($\chi^2=16.89, P=0.001$);(3)焦虑状态、便秘、失眠分别为三组排名最靠前的精神、躯体及睡眠障碍合并诊断。

结论 女性、早年起病、有发病前存在社会心理因素的抑郁障碍患者更易出现自杀意念或行为,临床诊疗及家属应加强对该部分患者的关注,避免不良结果的出现。

关键词:抑郁障碍;自杀;真实世界

伴或不伴社交焦虑特征抑郁障碍患者情绪面孔加工的单眼优势差异

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目的 研究旨在探究伴或不伴社交焦虑特征抑郁障碍患者皮层下情绪面孔加工的差异性,为抑郁障碍及社交焦虑的视觉面孔加工过程以及治疗靶点探索提供实验依据。

方法 共纳入了67例抑郁障碍患者,其中不伴社交特征的抑郁障碍患者32例(单纯抑郁组),伴社交焦虑特征抑郁障碍患者35例(伴社交焦虑特征抑郁组),设立了健康对照组35例。采用立体镜的心理物理学方法通过同眼或不同眼连续呈现两张情绪性面孔来探索面孔知觉中的单眼优势来反映抑郁障碍患者对面孔刺激的早期皮层下加工特点。

结果 单纯抑郁组在加工悲伤情绪时的单眼优势显著高于健康对照组和伴焦虑特征抑郁组($P<0.001$)。与健康对照组相比,单纯抑郁组与伴焦虑特征抑郁组在加工面孔时的单眼有数均增高($P<0.05$)。在加工中性与悲伤面孔时,该单眼优势指标与个体自我报告的抑郁得分成正相关($P<0.018$);在加工愤怒面孔时,该单眼优势指标与自我报告的社交焦虑得分($P<0.01$)成正相关。

结论 抑郁障碍增强了个体在悲伤面孔加工过程中的单眼优势,提示皮层下通路对于该过程的参与程度增强。其中伴或不伴社交焦虑特征对单眼优势的影响随着不同情绪面孔产生差异,提示抑郁与社交焦虑相互作用的方式与特定情绪有关。研究为区分和干预不同类型抑郁障碍患者的特征提供了客观的单眼优势指标和依据。

关键词:抑郁障碍;社交焦虑;情绪面孔;单眼优势

Association between Personality and Cognitive Bias in Adults with and without Depression

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Objective Cognitive bias plays a crucial role in the onset and persistence of depression. Research has established a link between personality and cognitive bias, however, most of them focused on the general population, overlooking the individuals with depression. We aim to explore the relationship between personality and cognitive bias in patients with major depressive disorder (MDD) and compare the results with healthy controls (HCs) to identify potential patterns

Methods The study included 124 patients with MDD and 123 HCs who were recruited from the Zhumadian Psychiatric Hospital in Henan, China, using the 16 Personality Factor Questionnaire (16 PF) to measure personality traits and the Cognitive Bias Questionnaire (CBQ) to measure cognitive biases. Pearson correlations and hierarchical regression analyses were employed to investigate the correlations and predictive powers

Results Traits related to either neuroticism or extraversion were associated with biased responses. After controlling for sociodemographic and clinical information, Neuroticism traits were found to have a significant independent effect in the MDD group. Also, the significance of Privatness in the MDD group merits more extensive exploration

Conclusion Although consistent correlation patterns were found in both groups, neuroticism traits were more significant and independent in predicting biased cognitive processing in the MDD group, indicating the importance of neuroticism in the depressive context. The present study provides insights into the connection between personality and cognitive bias from a clinical perspective, potentially contributing to the enhancement of clinical diagnosis and treatment modalities

关键词： Personality, Cognitive bias, Neuroticism, Extraversion, Major depressive disorder

微表情识别训练对青少年抑郁症患者的有效性研究

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目的 探讨微表情识别训练工具 (METT) 训练及强化对青少年抑郁症患者的有效性。

方法 将 2023 年 6 月至 2024 年 1 月 152 例青少年抑郁障碍患者, 使用 PHQ-9 抑郁筛查量表、自动思维问卷、中国大五人格问卷、社交回避及苦恼量表进行评估, 采用随机数字表法随机分为对照组 83 例与干预组 69 例, 对照组仅进行微表情识别测试, 干预组对青少年抑郁症患者进行两次微表情识别训练, 在训练前后分别测量微表情识别能力, 结果采用正确率百分比标识, 测量青少年抑郁症患者微表情识别能力得分, 比较其在进行一次和两次微表情识别训练前后微表情识别能力变化情况。

结果 干预组和对照组各量表评分及微表情识别能力比较差异无统计学意义。干预组中, 干预前后初测得分分别为 (56.12±15.48) % 和 (68.26±12.89) %, 差异有统计学意义 (P<0.05); 终测得分分别为 (56.07±13.83) % 和 (57.20±15.77) %, 差异无统计学意义 (P>0.05)。

结论 青少年抑郁障碍患者微表情识别能力较低, 微表情识别训练能有效改善青少年情感障碍患者的微表情识别能力。在临床工作中, 可对青少年抑郁症患者进行微表情识别训练, 提高其微表情识别能力, 改善社会交往沟通能力。

关键词： 抑郁症, 青少年, 微表情识别训练, 微表情识别能力

Abnormalities in Brain Function and Neuroinflammation Are Present in People with HIV-associated Suicide Risk

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Objective People living with HIV (PLWH) exhibits an increased susceptibility to suicide risk,

heightened vulnerability to aberrant immune activation, inflammatory responses, and endocrine dysfunction. There exists a dearth of scholarly investigations pertaining to the neurological imaging, immune and endocrine dimensions of HIV-associated suicide risk

Methods This study aimed to compare a group of 18 individuals with HIV-associated suicide risk according to the Diagnostic and statistical manual of mental disorders (5th ed.), with a HIV individual control group of 73 without suicide risk. Multi-modal magnetic resonance was employed to assess the brain function and structure of both groups. Seed-based functional connectivity (FC) was used to assess the regional intrinsic brain activity and the influence of regional disturbances on FC with other brain regions. Peripheral blood cytokines and chemokines concentrations were measured using liquid chip and ELISA

Results General demographic data and scale analysis results showed that SAS, SDS, PSQI, SCL-90 and CD8 were significantly different between the two groups: Two-sample t test was used in this study. In the functional phase results, the ALFF of Occipital-Mid-L, Temporal-Mid-R and Occipital-Sup-R were increased in the suicide group. fALFF decreased in undefined regions, while α ALFF significantly increased in Occipital-mid-L and Temporal-mid-R. The ReHo in Frontal-Inf-Tri-L region was significantly decreased. In the structural phase result, the VBM of the cerebellar area, Cerebellum-Crus1-L and Post-central-R were significantly increased in the suicide group; Analysis results of inflammatory factors and cytokines showed that there was no significant difference between the two groups; Correlation analysis showed that some pro-inflammatory factors, some anti-inflammatory factors, types of drugs, CD4+ T cell content and VL content were correlated with Occipital-mid-L. Some chemokines were correlated with the brain activity of Temporal-mid-R, Occipital-mid-L (f), Temporal-mid-R (f) and Frontal-Inf-tri-L. There was a correlation between CD4 and Temporal-mid-R (f). The duration of HIV infection and antiretroviral therapy (ART) treatment were correlated with Postcentral-R

Conclusion This study suggests that PLWH as-

sociated suicide risk may exhibit abnormalities in neurologic, immune, and endocrine functioning. Consequently, it is imperative to implement additional screening and intervention measures for anxiety disorders among PLWH

关键词: suicide risk, multimodal magnetic resonance, neuroimmune, human immunodeficiency virus (HIV)

EEG Microstate Analysis in Anhedonia Patients with Major Depressive Disorder

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Objective Neuroimaging studies have shown that major depressive disorder (MDD) is characterized by abnormal activity and connectivity. EEG microstate imaging, with its high temporal resolution, can be used to characterize transient brain resting-state activities on a sub-second scale. The aim of this study was to evaluate the electrophysiological mechanisms of anhedonia in patients with depression

Methods A total of 50 MDD patients and 38 healthy controls participated in this study. We used 64-channel clinical EEG recordings and the Snaith-Hamilton Pleasure Scale (SHAPS) to explore the relationship between the temporal parameters of four microstate classes and anhedonia-related brain network activities

Results We found an increased presence of microstate classes B and C ($F=5.565$, $p=0.021$; $F=7.818$, $p=0.006$, respectively) and a decreased duration of microstate class D in MDD patients compared to healthy controls. Furthermore, the presence of microstate class C was significantly negatively correlated with SHAPS scores in MDD patients ($r=-0.296$, $p=0.037$). This study also found a shortened mean duration of cognitive

processing in MDD patients compared to healthy subjects ($r = 0.379, p = 0.019$), indicating a need for more processing time to compensate for decreased cognitive efficiency

Conclusion This study demonstrated that MDD patients exhibit decreased duration and occurrence of certain EEG microstates compared to healthy subjects. One significant finding is that the brain processing mode associated with anhedonia in depression is distinct from that in healthy individuals

关键词: EEG microstate, Anhedonia, Major Depressive Disorder

12 种脂质与抑郁症的因果关系: 双向双样本的孟德尔随机化分析

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目的 抑郁症是一种常见的精神障碍, 它以情绪低落、快感确实、兴趣减退为特征。在我国, 终生患病率则达到 6.8%。有研究表明, 脂质代谢异常可能与抑郁症的发病机制有关, 抑郁症患者表现出血脂异常, 两者之间可能存在复杂的相互作用, 但因果关系尚未明确。孟德尔随机化(MR)是一种流行病学方法, 利用遗传变异作为工具变量来推断因果关系。因此, 在本研究中, 我们采用双向 MR 方法来探究脂质与抑郁症之间的因果关系。

方法 本研究基于欧洲人群中 12 种脂质和抑郁症的全基因组关联研究(GWAS)的总结数据。使用双向双样本 MR, 遗传因素作为工具变量, 去除连锁不平衡、弱工具变量后, 采用逆方差加权法(IVW)作为主要分析方法, 采用 MR-Egger 截距法评估水平多效性。MR 结果以比值比(OR)和对应的 95%置信区间表示, 当 $P < 0.05$ 时, 结果被认为差异有统计学意义。在前瞻 MR 分析中, 我们将 12 种脂质作为暴露因素, 将抑郁症作为结局因素; 在反向 MR 分析时, 将抑郁症作为暴露因素, 将 12 种脂质作为结局因素, 以此来评估脂质与抑郁症之间的潜在因果关系。

结果 前瞻 MR 分析表明甘油三酯与抑郁症之间存在因果关系, 且为正相关 ($OR=1.008, 95\%CI:$

$1.000-1.016, P=0.046$), 证明甘油三酯是抑郁症的危险因素。极大型高密度脂蛋白中的胆固醇酯与抑郁症存在因果关系, 且为负相关 ($OR=0.992, 95\%CI: 0.985-0.999, P=0.024$), 证明极大型高密度脂蛋白中的胆固醇酯是抑郁症的保护因素。未发现其他脂质与抑郁症之间的因果关系。反向 MR 分析表明抑郁症与低密度脂蛋白胆固醇水平存在因果关系, 且为正相关 ($OR=1.594, 95\%CI: 1.406-2.430, P=0.030$)。抑郁症与总胆固醇存在因果关系, 且为负相关 ($OR=0.872, 95\%CI: 0.787-0.965, P=0.008$)。抑郁症与总游离胆固醇存在因果关系, 且为负相关 ($OR=0.900, 95\%CI: 0.815-0.995, P=0.039$)。抑郁症与乳糜微粒和超大 VLDL 颗粒浓度存在因果关系, 且为正相关 ($OR=1.686, 95\%CI: 1.135-2.503, P=0.010$)。未发现抑郁症与其他脂质之间存在因果关系。

结论 本研究表明甘油三酯可能是抑郁症的危险因素, 极大型高密度脂蛋白中的胆固醇酯是抑郁症的保护因素。抑郁症与低密度脂蛋白胆固醇、乳糜微粒和超大 VLDL 颗粒浓度呈正相关, 与总胆固醇、总游离胆固醇呈负相关。为脂质与抑郁症之间的因果关系提供了新证据, 为抑郁症的治疗提供了新思路, 但具体作用机制仍需进一步探究。

关键词: 抑郁症, 脂质, 孟德尔随机化研究

基于蛋白组学分析的抗抑郁药生物标志物与治疗反应的关联性研究

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目的 由于重度抑郁症(MDD)的发生和治疗机制尚不完全明确, 本研究旨在通过非靶向蛋白组学分析, 揭示 MDD 患者和健康人以及抗抑郁药治疗前后之间的蛋白水平差异, 确定具有潜在诊断疾病和预测抗抑郁疗效的蛋白标志物。

方法 招募健康人和首发未用药 MDD 患者, 收集基线期血样, 给予患者艾司西酞普兰单药治疗 4 周并再次收集血样, 通过 UPLC-MS/MS 进行非靶向蛋白组学分析。采用 Limma 识别 MDD 患者和健

康人以及抗抑郁药治疗前后的差异表达蛋白 (DEP)。首先, 构建 DEP 的蛋白互作网络后, 基于 MCODE 算法识别枢纽蛋白。其次, 在 GeneCards 检索得到 MDD 相关蛋白编码基因, 与 DEP 取交集识别 MDD 相关蛋白。综合两种方法和统计分析, 确定最终的蛋白标志物。

结果 本研究招募了 38 名健康人和 40 名首发未用药 MDD 患者。经 Limma 分析, 在健康人和 MDD 患者中获得 395 个 DEP, 在治疗前后有 367 个 DEP。综合评价蛋白互作网络分析和交集蛋白的结果, 确定转甲状腺素蛋白 (TTR) 为蛋白靶点。在健康-抑郁-药物治疗 3 种状态中, TTR 表达水平呈现出先升后降的趋势。在药物治疗中, HAMD 减分率 $\geq 50\%$ 的患者的 TTR 水平显著降低。经 ROC 分析, TTR 在疾病诊断和药效预测中具有较好的分类性能。

结论 通过非靶向蛋白组学检测, 综合两种分析方法的结果, 识别到转甲状腺素蛋白 (TTR) 在健康-抑郁-药物治疗之间均存在表达差异, 并在不同药物反应中具有明显的区分性, 故 TTR 可能具有作为诊断疾病和预测抗抑郁疗效生物标志物的价值。

关键词: 抑郁症; 蛋白组学; 药物疗效; 生物标志物; 关联性研究

抑郁症患者元认知能力受损及其与临床症状的关系

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目的 探讨 MDD 患者元认知能力是否受损及其与抑郁、焦虑症状之间的关系, 旨在理解 MDD 患者的元认知特征, 为临床干预提供新的视角。

方法 选取 2022 年 3 月 - 2022 年 6 月期间在西南医科大学附属医院精神科住院, 且符合《精神疾病诊断与统计手册》(DSM-IV) 抑郁症诊断标准的 64 例 MDD 患者为研究对象。同时选取同期在泸州市的 71 名健康对照 (Healthy Controls, HCs)。采用了汉密尔顿抑郁量表 (HAMD)、贝克抑郁量表 (BDI)、汉密尔顿焦虑量表 (HAMA)、贝克焦虑量表 (BAI) 来评估患者抑郁、焦虑症状的严重程度。此外, 参与者还完成了决策后信心评估任务, 以计算两组被试的元认知指标 (信心偏差、元认知效率)。

在数据分析过程中, 采用独立样本 t 检验对两组研究对象在临床症状、任务表现及元认知指标上的差异进行比较。同时, 采用 Pearson 相关分析探讨 MDD 患者元认知能力情况及其与临床症状之间的相关性。

结果 相对于 HCs, MDD 组的元认知效率显著较低 (0.53 ± 0.12 、 0.46 ± 0.10) ($t = 3.67$, $P < 0.01$, $d = 0.67$), 并表现出显著的负性信心偏差 (7.25 ± 1.31 、 6.31 ± 1.94) ($t = 3.04$, $P < 0.01$, $d = 0.57$)。此外, MDD 个体的元认知效率与其抑郁症状 (BDI 分数) 及焦虑症状 (BAI 分数) 严重程度呈显著负相关关系 ($r = -0.27$ 、 -0.29 , $P = 0.045$ 、 0.030)。

结论 MDD 患者的元认知能力受损, 且随着临床症状的加重, 这种损害程度更显著。

关键词: 抑郁症; 抑郁症状; 元认知; 元认知效率

EEG Microstate Differences in Treatment-resistant Depression

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Objective Treatment-resistant depression (TRD) is a highly prevalent, complex, and chronic condition with multifactorial etiology. Diagnosing TRD rigorously is challenging for psychiatrists, primarily due to the lack of objective markers to identify and quantify the syndrome. To investigate the spatiotemporal characteristics of brain activity in TRD, we utilized EEG microstate analysis to explore transient brain dysfunction compared to 38 healthy controls

Methods We applied the Wilcoxon rank-sum test to quantify group differences in microstate parameters between the TRD and control groups. Pearson correlations were used to further examine the relationships between clinical scales and microstate parameters of each resting-state microstate class in TRD patients, with FDR correction

Results Microstate analysis identified four microstates (A-D) in global clustering between TRD patients and healthy controls. Significant differences in microstate parameters were observed: TRD patients exhibited shorter durations for classes A and D, more occurrences of classes B and C, increased coverage for class B, and decreased coverage for class D compared to healthy controls. The frequency of microstate classes A and D was lower, while the frequency of classes B and C was higher. Additionally, correlation analysis showed no significant correlation between microstate parameters and clinical symptoms

Conclusion These findings have significant implications for understanding the temporal features that reflect brain activities in TRD. The results may contribute to a better understanding of the microscopic mechanisms underlying brain activity in TRD

关键词: Treatment-resistant depression, Healthy controls, EEG microstate

Near-infrared Brain Imaging Study of Depressive Liver Qi Stagnation Syndrome before and after Treatment

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Objective This study measured hemodynamic activity, using fNIRS assessment, in MDD patients during verbal fluency task (VFT) before and after treatment, to examine the neurophysiological characteristics of liver qi stagnation syndrome in the completion of cognitive tasks, and to explore the impact of treatment on it

Methods This study recruited patients who were diagnosed with depressive episodes according to the

DSM-IV diagnostic criteria in the outpatient department of Yuquan Hospital (American Psychiatric Association, 2000). 35 patients who met the syndrome of liver qi stagnation were recruited. All patients were treated with selective serotonin reuptake inhibitors selective serotonin reuptake inhibitors (SSRIs) drugs. The clinical evaluation, VFT and fNIRS- assessment were performed before and after 1 month of treatment in the liver qi stagnation group. After 3 months of treatment, the clinical evaluation, VFT and fNIRS assessment were performed again as a follow-up assessment

Results There were statistically significant differences in HAMD scores between pre-treatment and the follow-up assessment ($p = 0.037$), with the total scores of HAMD significantly decreased in the follow-up assessment. There were statistically significant differences in CH13(left dorsolateral prefrontal cortex, $p = 0.005$) and CH30 (left dorsolateral prefrontal cortex, $p = 0.029$). The activation of the liver qi stagnation group was significantly increased after treatment

Conclusion This indicates that the activation of the left prefrontal lobe improves with the treatment of the disease, and this improvement can remain stable

关键词: Depression, TCM syndrome type, near infrared brain function imaging

Identifying The Grades and Psychosocial Characteristics of Antenatal Depressive Symptoms in China: A Latent Analysis

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Objective Antenatal depression induces maternal disability and suicidal behaviors, but the definition of antenatal depression remains controversial. We investigated the heterogeneity of symptoms with the aim of identifying clinical subtypes of antenatal depressive symptoms in a large population in China

Methods A Cross-sectional study was conducted

from January 1, 2020, to January 31, 2024. A total of 44220 pregnant women underwent a psychological screening during their maternity check-ups at the Shenzhen Baoan Women's and Children's Hospital, China. The Edinburgh postnatal depression scale (EPDS) was used to assess the depressive symptoms. The latent class analyses was used to assess the validity of empirically defined subtypes of antenatal depressive symptoms

Results A final model with three latent classes was optimum for the sample. The most significant characteristics associated with antenatal depressive symptoms were education levels, economic status, history of mental disorder, trimester of pregnancy and marital happiness. Women in class 1 had the least severe symptoms [mean EPDS score 1.6 (SD: 1.6)], followed by those in class 2 [mean EPDS score 5.9 (SD: 1.8)] and those in class 3 [mean EPDS score 11.6 (SD: 2.7)]. The most severe symptoms of antenatal depressive symptoms were significantly associated with increased anxious symptoms, obstetric factors, poor lifestyles and suicidal ideation. In class 3, about half of women (49.5%) with the most severe depressive symptoms are in the first trimester

Conclusion Antenatal depressive symptoms have several distinct characteristics in China. Further screening of antenatal depression to identify more precise phenotypes will be important for prevention and clinical treatment in the future

关键词: Antenatal depressive symptoms, Latent analysis

通过倾向性评分匹配法探索抑郁障碍伴自杀观念及行为的生物学指标及危险因素研究

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目的 探索真实世界证据的伴自杀意念或行为的抑郁障碍患者生物学指标及危险因素

方法 利用基于医院信息系统 (hospital information system, HIS)、电子健康记录 (electronic health record, EHR) 的京津冀精神卫生大数据平台, 纳入

2013年1月1日至2020年12月31日在首都医科大学附属北京安定医院住院及急诊留观的抑郁障碍患者。收集的人口学资料包括年龄、性别、婚姻状态、吸烟史、饮酒史; 疾病特征包括病程、是否存在精神病家族史; 生物学指标为住院后一周内的CRP、叶酸、HCY、ACTH、睾酮。所有纳入研究的患者在入院后一周内进行了外周血检查, 于上午10点前空腹测量了以上五种生化指标。为实现本数据库中抑郁障碍不伴自杀意念和行为组 (Major Depressive disorder with Non Suicide, MDNS) 和伴自杀意念或行为组 (Major Depressive disorder with Suicide, MDS) 两组在人口学、疾病特征上尽可能的随机、匹配, 从而观察到两组生物学指标的独立作用。我们选择使用倾向性得分匹配 (Propensity Score Matchin, PSM,) 的方法来筛选最终具有可比性的两组患者, PSM中纳入的协变量包括年龄、性别、婚姻状态、吸烟史、饮酒史、病程、是否存在精神疾病家族史。匹配容差设置为0.02, 匹配比例为1:1。我们对匹配成功的两组患者的人口学资料、临床资料和血清生物学指标进行两独立样本的Mann-Whitney U检验和卡方检验来观察组间差异。最后将其纳入到二元logistic回归分析中观察影响MDS的独立因素, 双侧检验, $P < 0.05$ 为差异有统计学意义

结果 有1115名患者纳入本研究。对全人群样本进行单因素分析后得到的结果显示: MDS组与MDNS组在年龄、婚姻状态、酒史、是否存在精神疾病家族史、一周首次血清叶酸、ACTH水平均有统计学意义 (所有 p 值 < 0.05)。PSM确定了483名MDS患者和MDNS患者, 构成了966名参与者的匹配研究样本。二元logistic回归分析的结果显示血清叶酸水平 (6ng/ml) 与自杀意念或行为有显著正相关 ($p=0.001$, OR:1.543, 95%CI: 1.181-2.016), 而其它指标未体现出与自杀的相关 (p 值均 > 0.05)。

结论 探索抑郁障碍患者自杀的生物学指标对预测、监测、预防不良结局的出现有重大的意义。血清叶酸水平有望成为该监测指标。未来需要更大规模、前瞻性、多臂研究来验证本研究的结论。

关键词: 抑郁障碍伴自杀观念及行为; 真实世界; 生物学指标

辨证行为疗法联合氟西汀治疗青少年抑郁症非自杀行自伤的疗效观察

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目的 探讨辨证行为疗法联合氟西汀治疗青少年抑郁症非自杀行自伤的疗效观察。

方法 收集丽水市第二人民医院 2023 年 1 月-2024 年 1 月之间的青少年抑郁症存在非自杀行自伤患者 60 例女性患者为研究对象,按照电脑随机分组法分为对照组和观察组,对照组与观察组各 30 例,给予对照组单独氟西汀胶囊抗抑郁治疗,给予观察组氟西汀胶囊与辩证行为治疗联合治疗干预。对对照组与观察组取基线期、2 周末、4 周末及 8 周末的汉密尔顿抑郁量表(HAMD)、汉密尔顿焦虑量表(HAMA)、自杀态度量表(QSA)、渥太华自伤调查表(Ottawa Self-injure Inventory, OSI)、临床疗效总评量表(CGI)等评分进行比较,分别统计对照组与观察组临床治疗效率及非自杀行自伤的干预效果。

结果 干预 4 周、8 周后,对照组与观察组 HAMD、HAMA 评分均较干预前降低,且观察组降低幅度比对照组大($P < 0.05$);干预 8 周后,对照组与观察组渥太华自伤调查表(OSI)评分均有减少,观察组减少幅度比对照组大($P < 0.05$)。

结论 辩证行为疗法联合氟西汀胶囊在青少年抑郁症非自杀行自伤患者的干预治疗疗效优于氟西汀胶囊单药治疗,有效减轻非自杀行自伤行为。

关键词: 辩证行为治疗;青少年;抑郁症;非自杀行自伤;

Association between Serum Uric Acid and Post-Stroke Depression: A Population-Based Study From The NHANES (2005–2016)

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Objective Post-stroke depression (PSD) is a persistent issue that adversely affects the recovery and standard of living of patients with stroke. Our primary objective is to explore the potential correlation between serum uric acid (SUA) and the occurrence of post-stroke depression (PSD)

Methods The cross-sectional study concentrated on participants aged 18 years or older, utilizing complete data from the National Health and Nutrition Examination Survey (NHANES) spanning 2005 to 2016, examining the relationship between SUA and PSD. Multivariable regression analysis, including weighted models, along with subgroup analyses, were performed to investigate the link between SUA levels and PSD

Results A total of 1,148 participants were included in this study, among whom a subgroup of 213 individuals were diagnosed with depression, exhibiting a mean uric acid level of 335.10 ± 101.97 . The prevalence rates of PSD were 18.55% overall and decreased with the higher Uric acid quartiles (Quartile 1, 33.80%; Quartile 2, 25.82%; Quartile 3, 17.37%; Quartile 4, 23.00%, $p < 0.001$). An increase in each Uric acid quartile was linked to a 70% decrease in PSD odds (OR = 0.30; 95% CI: 0.15, 0.45; $p < 0.01$). Interaction tests found no significant influence of sex, age, BMI, or marital status on the SUA and PSD association

Conclusion Higher SUA levels were linked to decreased susceptibility to PSD. This suggests the potential for regulating serum uric acid levels as a preventive approach to attenuate the onset of PSD

关键词: Post-stroke depression; Serum uric acid; National Health and Nutrition Examination Survey (NHANES); Antioxidants

Effect of Group Cognitive Behavioral Therapy on Diabetic Patients with Sub-threshold Depression

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Objective Diabetes patients with subthreshold depression have a higher risk of depression. This study mainly explored the impact of remote group cognitive behavior therapy on depressive symptoms of diabetes

patients with subthreshold depression. Also, it explored the impact of remote group cognitive behavior therapy on anxiety symptoms, blood glucose control, diabetes self-management, and quality of life of diabetes patients with subthreshold depression

Methods Diabetic patients with concurrent subthreshold depression from the outpatient clinic of the Department of Endocrinology at Beijing Chaoyang Hospital were selected for the study, using a randomized controlled design. The control group received conventional endocrine treatment, while the intervention group received group cognitive behavioral therapy in addition to traditional treatment. This therapy was conducted remotely, with 6-8 participants per group, divided into 3-4 groups, for 45 minutes daily for 6 days. Participants in both groups were assessed at baseline, one month after treatment, and three months after treatment. Glycosylated hemoglobin values, 9-item patient health questionnaire scores, 7-item generalized anxiety scale scores, diabetes self-management behavioral scale scores, and diabetes quality of life specificity scale scores were used as outcome indicators for the study. Among these, the 9-item Patient Health Questionnaire score was the primary outcome indicator of the study

Results (1) Thirty-five patients were finally included, of which 17 participated in the conventional treatment group cases and 18 participated in the remote group cognitive-behavioral therapy. There was no statistically significant difference between the demographic information and clinical assessment of the participants in the two groups at baseline ($P>0.05$), and the baseline information of the two groups of patients was comparable. (2) Repeated-measures mixed-effects modeling revealed a significant main effect of time and a significant interaction of time and intervention modality for PHQ-9 scores and SDSCA scores ($P<0.05$). This suggests that for diabetic patients with concomitant subthreshold depression, the group cognitive-behavioral therapy remote intervention group was effective in alleviating depressive symptoms and improving their self-management behaviors. The most significant changes in PHQ-9 scores and SDSCA scores were observed from baseline to 1-month post-treatment, and the rate of change slowed down from 1-month post-treatment to 3

months post-treatment, but all of them improved compared with the baseline level; the time main effects of GAD-7, HbA1c, and DSQL scores were significant, and the interactions were insignificant, and the group effect was not significant ($P>0.05$), which indicated that the anxiety of diabetic patients with subthreshold depression, glycemic control and quality of survival over time, but did not indicate an effect of intervention modality. Although the interaction effects were not statistically different, all showed improvement from baseline levels

Conclusion Group cognitive behavioral therapy tele-intervention is a useful intervention to reduce depressive symptoms in diabetic patients with concomitant subthreshold depression and has a preventive effect on the development of diabetic co-morbid depression. It is also effective in improving their self-management behavior in the short term. Considering the high prevalence of diabetes co-morbid depression in general hospitals, the remote, group format of the intervention can help to explore new strategies for more efficient and convenient management of diabetic patients in general hospital mental health services

关键词: Group cognitive-behavioral therapy tele-intervention, subthreshold depression, diabetes mellitus, randomized controlled trial, repeated-measures mixed-effects models

不同种类单药治疗对重度抑郁症患者抑郁焦虑症状作用的真实世界研究

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目的 本研究试图探索在真实世界中, 采用不同种类单一抗抑郁药物治疗对重度抑郁症(MDD)患者焦虑症状的作用, 焦虑和抑郁症状的相对变化, 及基线焦虑程度对抑郁症状疗效、治疗后缓解的影响。

方法 分析了接受单一抗抑郁药物治疗的一组重度抑郁症患者真实世界队列, 在基线、第2周末、第8周末、第12周末进行现场访视。采用不含焦虑/躯体化条目的17项汉密尔顿抑郁量表(HAMD-17)

的评分变化评估治疗后抑郁症状的变化,采用 HAMD-17 中的焦虑/躯体化条目、汉密尔顿焦虑量表 (HAMA) 的评分变化评估焦虑症状的变化。以不含焦虑/躯体化条目的 HAMD-17 的变化为因变量,以基线焦虑评分和焦虑性/非焦虑性抑郁的分类为协变量,进行协方差分析 (ANCOVA),研究基线焦虑程度对抑郁症状疗效、治疗后缓解的影响。目前有 20 例受试者有可用的数据。

结果 从基线到第 12 周末, HAMD-17 焦虑/躯体化条目评分从 4.53(SD=2.27)降至 2.33(SD=2.27), HAMA 评分由 19.24(SD=6.02)降至 11.67(SD=6.23), ANCOVA 分析显示,时间主效应显著($p < 0.0001$),但组别主效应($p=0.783$)或时间 \times 组别交互作用($p=0.964$)不显著。以不含焦虑/躯体化条目的 HAMD-17 的变化为因变量,以基线焦虑评分和焦虑性/非焦虑性抑郁的分类为协变量,ANCOVA 分析显示,时间主效应显著($p < 0.0001$),但组别主效应($p=0.778$)或时间 \times 组别交互作用($p=0.755$)不显著。

结论 研究结果表明,不同种类抗抑郁药物在治疗 MDD 时都有潜在的减少焦虑症状的作用。基线焦虑程度对抑郁症状疗效暂未发现显著影响。

关键词: 抑郁症,药物治疗,焦虑

探讨血常规炎性指标在抑郁症诊断、治疗及预后评估的价值

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目的 旨在分析抑郁症患者血常规炎性指标的变化,探讨其与病情的相关性。

方法 选择抑郁症患者 45 例作为研究对象,所有患者均经过临床确诊。对所有患者进行血常规检测,记录白细胞计数、C 反应蛋白 (CRP) 和红细胞沉降率 (ESR) 等指标水平。根据抑郁症严重程度,将患者分为轻度组 ($n=23$) 和重度组 ($n=22$)。

结果 抑郁症患者的血常规炎性指标存在明显变化,其中白细胞计数和 CRP 水平显著高于正常对照组 ($P < 0.05$)。在抑郁症患者中,重度组患者的白细胞计数和 CRP 水平显著高于轻度组 ($P < 0.05$)。

结论 抑郁症患者的血常规炎性指标存在明显变化,可能与病情严重程度相关。

关键词: 抑郁症; 血常规; 炎性指标; 病情严重程度; 相关性

Alterations of Subcortical Structural Volume in Pediatric Bipolar Disorder Patients with and without Psychotic Symptoms

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Objective Pediatric bipolar disorder (PBD) with psychotic symptoms may predict more severe impairment in social functioning, but the underlying biological mechanisms remain unclear. The aim of the present study was to investigate the alternations in subcortical structural volume in PBD with and without psychotic symptoms.

Methods We recruited 24 psychotic PBD patients, 24 non-psychotic PBD patients, and 18 healthy controls. All participants were scanned with a 3.0 T Siemens Trio scanner. The FreeSurfer 7.4.0 software was employed to calculate the volume of each subcortical structure and thalamic subfield. An analysis of covariance (ANCOVA) was performed to identify brain regions with significant volume differences among the three groups, and then the inter-group comparisons were calculated. Finally, partial correlation analyses were conducted to identify relationships between subcortical structural volumes and clinical features.

Results Compared with HCs, both groups of PBD patients exhibited increased volume in the third ventricle and decreased volumes in the left thalamus and the right pallidum. The P-PBD patients showed enlarged volumes in the bilateral lateral ventricle and the third ventricle when compared with the other two groups. Further, the left PuA and the left MV-re were only diminished in P-PBD patients in the thalamic subfield. Partial correlation analyses revealed that episode times were associated with the third ventricle volume in P-PBD.

Conclusion Our findings suggest that psychotic symptoms in PBD are associated with more extensive

structural abnormalities in subcortical structures, which may underlie the pathological basis of the poor prognosis in PBD patients with psychotic symptoms

关键词: Pediatric bipolar disorder; Psychotic symptom; subcortical structural volume; thalamic subfield volume

Alterations of Subcortical Structure Volume in Pediatric Bipolar Disorder Patients with Manic Or Depressive First-episode

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Objective Bipolar disorder may begin as depression or mania, which can affect the treatment and prognosis. The physiological and pathological differences among pediatric bipolar disorder (PBD) patients with different onset symptoms are not clear. The aims of the present study were to investigate subcortical structural alterations in PBD patients with first-episode depressive (PBD-FED) and first-episode manic (PBD-FEM).

Methods A total of 59 individuals including 28 PBD-FED, 13 PBD-FEM, and 18 healthy controls (HCs) underwent high-resolution structural magnetic resonance scans. FreeSurfer 7.2 was used to detect changes in subcortical volumes. Simultaneously, thalamic, hippocampal, and amygdala subregion volumes were compared between the three groups.

Results Analysis of covariance controlling for age, sex, education, and estimated intracranial volume shows third and fourth ventricle enlargement in patients with PBD. Compared with the PBD-FED and HCs, the PBD-FEM group had atrophy of the left thalamus, bilateral hippocampus, and right amygdala. Subsequent subregion analyses showed right cortico-amygdaloid transient, bilateral accessory-basal nucleus, left hippocampal tail, right hippocampal head, and body volume shrinkage in the PBD-FEM group.

Conclusion The present findings provided evidence of decreased subcortical structure in PBD-FEM patients, which might present its trait feature and shed

light on the different developmental paths of bipolar disorder

关键词: First-episode symptoms; Amygdala; Hippocampus; Thalamus; Subcortical structures; Structure magnetic resonance imaging

Accelerated Repeated Transcranial Magnetic Stimulation Intervention for Depression

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Objective The study was aimed at exploring an accelerated, high-dose repeated transcranial magnetic stimulation for depression.

Methods 1. Participants The inclusion criteria for the depressed group were as follows: (i) ages were from 18–65 years; (ii) meeting the criteria of the Diagnostic and Statistical Manual of Mental Disorder-IV with current unipolar MDD. Hamilton Depression Scale (HAMD) was acquired before and after treatment. 2. rTMS procedure The rTMS treatment was delivered by a trained treater. The stimulation target is dorsolateral prefrontal cortex (DLPFC). Accelerated rTMS: We adopted rTMS treatment for 7 consecutive days over 1 week. Treatment 4 times a day for 2 weeks. The stimulus intensity was 100% of the resting motor threshold based on the tolerance of the participant. 3. Statistical analysis HAMD scores were reported by mean \pm standard deviation (\pm s). Baseline and post-treatment HAMD scores were compared using paired t-tests.

Results 1. Clinical characteristics Seven patients were included, three males and four females, with a mean age of 32 years, a mean disease course of 80.3 months, and a mean number of episodes of 2.1. 2. HAMD scores before and after rTMS There was a significant difference in HAMD scores after treatment compared to before treatment (base line 37.7 ± 3.0 , 2 week 18.9 ± 3.3 , $P \leq 0.05$), depression score was lower after treatment. 2 patients experienced mild headaches during treatment.

Conclusion The study was aimed at exploring an

accelerated, high-dose rTMS for depression. All participants completed a 14-day session, and have observed a large antidepressant effect of accelerated rTMS. After 14 days of treatment, depression symptoms were significantly reduced. Headache is one of the most common side effects of the rTMS regimen, and no other serious side effects were found, similar to previous studies. The short duration and high-dose accelerated rTMS provides opportunities for emergency or hospitalized patients who need rapid treatment. However, the study also has some limitations. Future research needs larger samples and adding sham stimulus controls

关键词: Depression, Accelerated Repeated Transcranial Magnetic Stimulation

双相情感障碍患者混合发作情况及影响因素分析

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目的 探索双相情感障碍患者混合发作情况并分析其影响因素。

方法 利用连续采样法, 选取 2013 年 2 月至 2014 年 6 月就诊于中国 7 家医院门诊的 520 例双相情感障碍患者, 并进行随访调查, 收集其人口学资料、病史信息、疾病特征及治疗情况等临床资料, 考察双相情感障碍混合发作情况, 并通过泊松回归模型分析其影响因素。

结果 在 520 例双相情感障碍患者中, 混合发作占 75 例 (14.42%), 其中 I 型 72 例, II 型 3 例。且泊松回归模型分析显示, 双相情感障碍混合发作的危险因素包括: I 型患者较 II 型混合发作次数多 (IRR = 0.068, $p < 0.001$); 有精神疾病家族史的患者混合发作次数较多 (IRR = 1.435, $p = 0.037$); 首次发作极性为非躁狂的患者较躁狂患者混合发作次数多 (IRR = 9.988, $p < 0.001$); 首次发作极性为非抑郁的患者较抑郁患者混合发作次数多 (IRR = 6.241, $p < 0.001$); 服用心境稳定剂的患者混合发作次数较多 (IRR = 0.561, $p = 0.001$)。

结论 双相情感障碍患者混合发作次数与双相

障碍分型、精神疾病家族史、首次发作极性以及是否使用心境稳定剂密切相关。

关键词: 双相情感障碍; 混合发作; 影响因素

The Gut Microbiome From Middle-aged Depressive Women Induces Depressive-like Behaviors and Regulates Plasma Fatty Acid Metabolism in Female Middle-aged Mice

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Objective This study aims to explore whether there are characteristic changes in the gut microbes of female MAD and whether these changes are associated with depressive-like behaviors. Meanwhile, this study observed alterations in the lipid metabolism function of gut microbes and further examined changes in plasma medium- and long-chain fatty acids (MLCFAs) in mice that underwent fecal microbiota transplantation (FMT).

Methods Stool samples obtained from 31 MAD, along with 24 healthy individuals (HC) were analyzed by 16 S rRNA gene sequencing. Meanwhile, 14-month-old female C57BL/6J mice received antibiotic cocktails and then oral gavage of the microbiota suspension of MAD or HC for 3 weeks to reconstruct gut microbiota. The subsequent depressive-like behaviors, the composition of gut microbiota, as well as MLCFAs in the plasma were evaluated.

Results A diminished α -diversity index in the microbiome and noteworthy disruptions in gut microbial composition in MAD individuals compared to HC were observed. Several distinct bacterial taxa, including Dorea, Butyrivibrio, and Blautia, demonstrated associations with the severity of depressive symptoms. A particular microbial panel encompassing 49 genera effectively differentiated MAD patients from HC (AUC = 0.82). Fecal microbiome transplantation from MAD subjects led to depressive-like behaviors and dysfunction of plasma MLCFAs in mice.

Conclusion These findings suggest that microbial dysbiosis is linked to the pathogenesis of MAD, and its role may be associated with the regulation of MLCFAs metabolism

关键词: Gut microbiota; Middle-aged women; Depression; Fecal microbiota

Acute Treatment of Bilateral RTMS Combined with Antidepressants on The Plasma Fatty Acids for Major Depressive Episodes

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Objective Bilateral repetitive transcranial magnetic stimulation (B-rTMS) has been largely used in treating major depressive disorder (MDD). However, the acute treatment of B-rTMS combined with antidepressants (ADs) on the plasma fatty acids in MDD has been poorly elucidated.

Methods In the present study, depressive symptoms were assessed and the plasma was obtained from 27 adult patients with MDD at baseline phase (MDD), after 2 weeks of treatment (MDD-2w), and 27 healthy controls (HC). Meanwhile, the composition of short-chain fatty acids (SCFA) and medium-and long-chain fatty acids (MLCFA) in the plasma was evaluated.

Results We found that levels of Isobutyric acid, Caproic acid, Acetic acid and Propionic acid were decreased both in the MDD and MDD-2w groups and were negatively correlated with the scores of HAMD and HAMA. Besides, there were fewer changes between the MDD and HC groups, while a large amount of MLCFA levels were increased in the MDD-2w group. Moreover, we developed combined panels that could effectively distinguish MDD from HC (AUC = 0.99), MDD-2w from HC (AUC = 0.983) and MDD from MDD-2w (AUC = 0.852).

Conclusion These findings might provide a basis for the use of B-rTMS combined with ADs intervention in the acute phase of depressive episodes and shed

light on the relationship between plasma FA and MDD

关键词: Bilateral rTMS; Acute treatment; SCFAs; MLCFAs; MDD

首发青少年抑郁症的影响因素及干预: 基于网络化接纳承诺疗法

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目的 抑郁症(Major Depressive Disorder, MDD) 抑郁症 (major depression disorder, MDD) 是以显著而持久的心境低落为主要特征的精神障碍, 可伴有兴趣下降、快感缺失、意志行为活动减退、食欲下降、早醒、入睡困难等精神病性症状, 部分患者存在自伤、自杀观念和行为。青少年抑郁是青少年时期常见的精神疾病之一, 临床表现为病程断续、疗效不佳且持续影响患者整个生命周期, 具有高复发和高自杀倾向。本研究考虑探索首发青少年抑郁症的影响因素, 并进一步验证基于接纳承诺疗法的线上小程序干预对首发青少年抑郁症患者的干预效果。

方法 本研究共招募了 80 名首发青少年抑郁症患者, 其中 40 名为对照组, 40 名为干预组。研究一采用问卷调查方法, 探索心理灵活性、快感缺失、负性生活事件及非自杀性自伤对首发青少年抑郁症的影响。研究二则是通过基于接纳承诺疗法的线上小程序对 IACT 组进行为期两周的干预。

结果 研究一结果发现抑郁与心理灵活性、快感缺失呈显著相关。研究二结果显示, IACT 组心理灵活性显著提高, 抑郁水平显著降低, 在心理灵活模型中, 接纳、解离、以己为景、承诺行动和价值均得到显著提升, 关注当下的变化不显著。

结论 说明首发青少年抑郁症与心理灵活性、快感缺失有关, 并且整体上网络化接纳承诺疗法干预能有效提升个体的心理灵活水平, 降低心理僵化水平, 一定程度缓解抑郁。

关键词: 首发青少年抑郁症, 心理灵活性, 接纳承诺疗法, 网络化干预

米安色林与舍曲林治疗伴有焦虑症状的抑郁

症的疗效分析

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目的 目的 分析米安色林与舍曲林各自治疗伴有焦虑症状的抑郁症疗效与安全性对比。

方法 一、入组标准：1、选择 2024 年 1 月至 2024 年 3 月在我院门诊和住院患者符合 ICD-10 抑郁症诊断标准：诊断为抑郁症并同时伴有焦虑症状的患者；2、患者及家属对本次研究内容了解并自愿签署知情同意书；3、剔除对米安色林及舍曲林使用有禁忌症的患者；4、排除其他器质性疾病；5、年龄在 20-60 之间，男女比率 1:1；6、停止服药其他抗抑郁药达 2 周，符合入组人员为 56 例，随机分为：米安色林组 28 例、舍曲林组 28 例。二、观察周期：8 周。三、用药使用 方法 米安色林组根据病情在 30mg-60mg/天调整，舍曲林组根据病情在 50mg-200mg/天调整。四、两组分别于治疗前及治疗第 1、2、4、6、8 周末采用汉密尔顿抑郁量表 (HAMD)，汉密尔顿焦虑量表(HAMA)，副反应量表(TESS)评估病情，对两组的疗效及药物的安全性进行对比分析。

结果 治疗前，两组汉密尔顿抑郁量表 (HAMD)，汉密尔顿焦虑量表(HAMA)，副反应量表(TESS)评分无明显差异。治疗 8 周后，米安色林组有效率 78%，舍曲林组有效率 75%，治疗有效率无明显差异。但是米安色林组汉密尔顿抑郁量表 (HAMD)、汉密尔顿焦虑量表(HAMA)评分低于舍曲林组，更优的是米安色林组副反应量表(TESS)评分明显低于舍曲林组。

结论 米安色林治疗伴发焦虑症状的抑郁症疗效比舍曲林好，而且疗效也更快，药物副作用也更少。

关键词：抑郁症 米安色林 舍曲林

目的 本研究旨在探讨雷公藤红素治疗脾虚湿阻型肥胖大鼠分泌的外泌体 (LncRNA Dio3os) 缓解小胶质细胞炎症反应的分子机制。

方法 构建脾虚湿阻型肥胖大鼠模型，经雷公藤红素治疗后，收集并鉴定棕色脂肪分泌的外泌体。通过 Western 印迹、ELISA、SOD 活性和 MDA 检测评估棕色脂肪外泌体对小胶质细胞炎症反应的缓解作用。通过 RT-qPCR 检测了 BAT-Exos 处理后，BV2 炎症模型细胞中 miR-574-5p 的表达。构建了 miR-574-5p 过表达和敲低的 BV2 细胞株，并通过 RT-qPCR 检测了 NRF2 的表达。

结果 雷公藤红素增加大鼠棕色脂肪组织产热关键基因 UCP1、PGC-1 α 和 PRDM16 的表达。BAT-Exos 可以增加 BV2 炎症细胞的 LncRNA Dio3os 表达量显著升高，同时降低 BV2 炎症细胞促炎因子 TNF- α 、IL-6 和 IL-1 β 的表达。BAT-Exos 可以降低 NF- κ B 磷酸化水平和 MDA 的含量，而升高 SOD 的活性。BAT-Exos 下调 miR-574-5p 的表达，而 miR-574-5p 负调控 NRF2 的表达。

结论 雷公藤红素激活解脾虚湿阻型肥胖小鼠 BAT-Exos 分泌 LncRNA Dio3os，抑制 CNS 小胶质细胞中 miR-574-5p 表达，从而激活 NRF2 介导的抗氧化通路，缓解小胶质细胞的炎症反应。

关键词：雷公藤红素，棕色脂肪，外泌体小胶质细胞，炎症反应

雷公藤红素活化棕色脂肪外泌体缓解小胶质细胞炎症反应的分子机制

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Cross-scale Variations in Schizophrenia

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Objective Understanding the relationship between genetic variations and brain abnormalities is crucial for uncovering the cross-scale pathophysiological mechanisms underlying schizophrenia

Methods The present cross-sectional study identifies brain structural correlates of individual variation in gene expression in schizophrenia and its clinical significance. Of 43 patients with schizophrenia, RNA-seq data from blood samples, MRI, and clinical assessments were collected, together with data from 60 healthy controls

Results Using RNA-seq data we show both gene-level and isoform-level expression alterations between schizophrenia and healthy controls. We also show differentiated gene expression to be associated with schizophrenia-related genomic variations (GWAS on 76,755 patients and 243,649 controls) and differentiated brain gene expression. Multivariate correlation analysis combining gene expression and brain imaging shows that transcriptional levels of differentially expressed genes significantly correlate with gray matter volume in the frontal and temporal regions of cognitive brain networks in schizophrenia. Findings further show a significant association between gene expression, gray matter volume, and cognitive performance in patients

Conclusion Our findings suggest that genomic variants in schizophrenia are associated with alterations in the transcriptome, which further plays a role in individual variations in macroscale brain structure and cognition, contributing to building a comprehensive, multi-omics biomarker for the assessment of schizophrenia

关键词: brain volume, imaging, multi-scale, schizophrenia, transcriptomics

联合 CCRT 对精神分裂症患者疗效、认知功能及生物学指标的影响

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目的 精神分裂症是一种严重的慢性精神障碍, 认知障碍现在被认为是该疾病的临床特征。对精神分裂症患者的认知障碍目前暂缺乏有效的药物治疗手段, 计算机程序化的认知矫正治疗对精神分裂症的作用逐渐被关注。本研究旨在探讨计算机认知矫正治疗(CCRT)对精神分裂症患者疗效、认知功能及生物学指标的作用, 并进一步分析生物学指标与认知功能的关系。

方法 本研究纳入精神分裂症患者 55 例, 将其随机分配至常规药物联合 CCRT 治疗组(以 CCRT 组表示)和常规药物治疗组(以 TAU 组表示)。CCRT 治疗每周 3 次以上, 每次 30 分钟。在入院当天和入院第 8 周使用阳性和阴性症状量表(PANSS)、蒙特利尔认知评估量表(MoCA)、社会功能缺陷量表(SDSS)评估患者, 在入院次日和入院第 8 周时检测血生化指标, 并收集 5ml 静脉血血清冻存, 所有样本收集结束后用 ELISA 法测定血清 IGF-1、BDNF 水平。采用 SPSS 26.0 软件分析数据, 运用独立样本 t 检验、Mann-Whitney U 检验、卡方检验进行组间差异比较, 运用配对 t 检验、Wilcoxon 符号秩检验进行前后比较, 运用 Pearson、Spearman 相关性分析、偏相关分析探讨生物学指标与 MoCA 各项评分的相关性。

结果 1. CCRT 组随访前后阴性症状分的差值高于 TAU 组, 差异有统计学意义($P=0.039$); CCRT 组随访前后视空间与执行得分($P=0.028$)、延迟回忆得分($P<0.001$)、定向力得分($P=0.030$)和 MoCA 总分($P<0.001$)的差值高于 TAU 组, 差异有统计学意义; CCRT 组随访前后 SDSS 得分的差值高于 TAU 组, 差异有统计学意义($P=0.033$);

2. CCRT 组随访后胰岛素($P=0.004$)、甘油三酯($P<0.001$)、IGF-1($P<0.001$)、BDNF($P<0.001$)水平较随访前上升, 差异有统计学意义, TAU 组随

访后胰岛素($P=0.033$)、甘油三酯($P<0.001$)、BDNF($P=0.001$)水平较随访前上升,差异有统计学意义;CCRT组随访前后甘油三酯($P=0.049$)、IGF-1水平($P=0.047$)的差值高于TAU组,差异有统计学意义;

3. 胰岛素水平与MoCA总分($r=-0.286, P=0.044$)呈负相关,血清IGF-1水平与MoCA总分($r=0.322, P=0.023$)呈正相关。

结论 精神分裂症患者联合CCRT治疗后阴性症状、认知功能、社会功能缺陷程度得到更明显的改善,临床总有效率提升,甘油三酯水平和血清IGF-1水平上调更加明显,其中IGF-1水平越高,认知功能越好。

关键词: 计算机认知矫正治疗,精神分裂症,认知功能,IGF-1

SOX11 基因多态性与精神分裂症的相关性及对抑郁行为的影响

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目的 探讨SOX11基因多态性与精神分裂症的相关性及对抑郁行为的影响。

方法 选取海南省安宁医院2020年1月~2021年12月收治的60例精神分裂症患者作为观察组,对照组研究对象来自于同期在海南省安宁医院体检的健康志愿者60名。采用实时荧光定量PCR技术对60例精神分裂症患者(观察组)和60名健康志愿者(对照组)的SOX11基因rs16864067、rs12478711、rs2564045和rs2252087位点进行分型;采用阳性与阴性症状量表(PANSS)及卡尔加里抑郁症状评定量表(CDSS)对观察组精神分裂症状的严重程度和抑郁症状进行评估。

结果 两组在rs16864067、rs12478711和rs2564045位点基因型和等位基因分布频率比较差异具有统计学意义($P<0.05$)。PANSS和CDSS评分在rs16864067和rs12478711位点的GG、GA和AA基因型间呈逐渐上升趋势($P<0.05$),在rs2564045位点AA、AG和GG基因型间呈逐渐下降趋势($P<0.05$)。

结论 SOX11基因rs16864067、rs12478711和rs2564045位点变异可能与精神分裂症发病存在关

联,且与疾病的严重程度和抑郁行为有关。

关键词: 精神分裂症;抑郁;基因多态性;

Ghrelin-cognition Relationship in The Chinese Han First-episode Drug-naive Major Depressive Disorder

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Objective In major depressive disorder (MDD), alterations in ghrelin levels and cognitive impairment coexist, yet their association has remained largely elusive. This study aimed to investigate the association between ghrelin levels and cognition in both MDD patients and healthy controls (HCs) while also exploring sex-specific differences in this correlation

Methods A total of 155 Chinese Han subjects, including 90 first-episode drug-naive MDD patients and 65 HCs, were enrolled. Ghrelin levels were measured using ELISA kits, and neurocognitive assessments were conducted using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)

Results MDD patients exhibited significantly higher ghrelin levels and lower cognitive scores of RBANS compared to HCs. However, there was no significant correlation between ghrelin levels and cognitive function in both MDD patients and HCs. Exploratory analyses revealed sex-specific associations between ghrelin and cognitive function, particularly in MDD patients. Females with MDD showed distinct patterns of association between ghrelin levels and cognitive domains such as attention and language, which were not observed in healthy controls or male MDD patients

Conclusion The relationship between ghrelin and cognition only existed in MDD patients, not in the HCs, and there was a sex-specific difference in this association. Further research on the mechanism of ghrelin in the cognitive function of MDD should focus on sex differences

关键词: Major depressive disorder; Ghrelin; Cognitive function

不同感觉门控水平首发精神分裂患者静息态脑自发神经活动

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目的 当前精神分裂症的诊断仍依赖于疾病的精神病理症状,但目前越来越多的研究关注精神分裂症的生物学因素,尤其是疾病的“内表型”。有研究提示,精神分裂症可能存在明显的感觉门控障碍,惊跳反射的前脉冲抑制(PPI)是常用来量化感觉门控的方法之一,被认为可能是精神分裂症重要的“内表型”。本研究将首发精神分裂症患者根据 PPI 水平进行分类,考察高低 PPI 水平首发精神分裂患者静息态脑自发神经活动。

方法 纳入 90 例首发精神分裂症患者与 90 例正常对照。分别调查其一般资料并进行听觉刺激惊跳反射(PPI)检测,PPI 检测采用 SR-HLAB 惊跳反应监控系统;所有被试使用 GE HDXT 3.0 T 磁共振扫描仪完成数据采集,基于 MatLab2015b 平台,应用 DPARSF 软件对静息态 fMRI 数据进行预处理,用 DPARSF 软件计算全脑的 ReHo、ALFF 指标,用 SPSS20.0 进行统计分析,比较组间差异,采用 Bonferroni 对多重比较进行校正, $P < 0.05$ 时对比组之间的差异有统计学意义。

结果 结果发现患者组右侧背外侧前额叶、双侧壳核、左侧内侧前额叶、眶额回 ReHo 值增高,双侧枕中回、舌回、梭状回 ReHo 值减低,双侧壳核、右侧颞中回、右侧背外侧前额叶 ALFF 值增高,双侧后扣带回、楔前叶、左侧梭状回、舌回 ALFF 值减低;高 PPI 组与低 PPI 组间比较发现,低 PPI 组左侧壳核 ReHo 值增高,右侧后扣带回、舌回 ALFF 值减低。

结论 不同感觉门控水平的首发精神分裂症患者的 ReHo 值和 ALFF 值存在不同。

关键词: 首发精分; 感觉门控; 静息态

中药汤剂治疗抗精神病药物引起的高泌乳素血症的临床对照观察

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目的 本研究旨在系统评估中药汤剂在缓解抗精神病药物引起的高泌乳素血症中的疗效和安全性,并探讨其可能的机制,为临床治疗提供依据。

方法 本研究采用随机对照试验设计,纳入 100 例因使用抗精神病药物(如利培酮、氯氮平等)而出现高泌乳素血症的患者。患者随机分为两组:治疗组和对照组,各 50 例。治疗组在继续使用抗精神病药物的基础上加用中药汤剂,具体方剂根据中医辨证施治原则进行个体化调整;对照组则仅接受常规西医治疗(如溴隐亭)。治疗持续 12 周,期间每 4 周评估一次患者的泌乳素水平、乳房胀痛、泌乳等临床症状以及不良反应的发生情况。主要疗效指标为血清泌乳素水平的变化,次要疗效指标包括临床症状的缓解情况和治疗的安全性。

结果 治疗 12 周后,治疗组患者的泌乳素水平显著下降,平均下降幅度为 32.5%,而对照组为 15.3%,两组差异具有统计学意义 ($P < 0.01$)。治疗组患者的乳房胀痛、泌乳等临床症状显著改善,症状缓解率为 78%,对照组为 45% ($P < 0.05$)。此外,治疗组的不良反应发生率较低,主要表现为轻微的胃肠道不适和头晕,而对照组中部分患者出现了药物相关的肝功能异常和低血压。

结论 中药汤剂在治疗抗精神病药物引起的高泌乳素血症方面表现出良好的疗效和较高的安全性,能够显著降低泌乳素水平并改善相关临床症状。其作用机制可能与调节内分泌功能、改善机体整体健康状态有关。进一步的大样本、多中心研究将有助于验证这些发现,并深入探讨中药汤剂的具体作用机制,为临床治疗提供更加坚实的证据基础。

关键词: 中药汤剂 高泌乳素血症 抗精神病药物 内分泌调节

Genes Associated with Cellular Q1 Senescence As Diagnostic Markers of Major Depressive Disorder and Their Correlations with Immune Infiltration

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Objective Emerging evidence links cellular senescence to the pathogenesis of major depressive disorder (MDD), a life-threatening and debilitating mental illness. However, the roles of cellular senescence-related genes in MDD are largely unknown and were investigated in this study using a comprehensive analysis

Methods Peripheral blood microarray sequencing data were downloaded from Gene Expression Omnibus (GEO) database and retrieved cellular senescence-related genes from CellAge database. A weighted gene co-expression network analysis was used to screen MDD-associated genes. Protein-protein interactions (PPI) were predicted based on STRING data, and four topological algorithms were used to identify hub genes from the PPI network. Immune infiltration was evaluated using CIBERSORT, followed by a correlation analysis between hub genes and immune cells

Results A total of 84 cell senescence-related genes were differentially expressed in patients with MDD compared to healthy control participants. Among the 84 genes, 20 were identified to be associated with the MDD disease phenotype, and these genes were mainly involved in hormone-related signaling pathways (such as estrogen, steroid hormone, and corticosteroid) and immune and inflammatory pathways. Three genes, namely, JUN, CTSD, and CALR, which were downregulated in MDD, were identified as the hub genes. The expression of hub genes significantly moderate correlated with multiple immune cells, such as Tregs, NK cells, and CD4+ T cells, and the abundance of these immune cells markedly differed in MDD samples. Multiple microRNAs, transcription factors, and small-molecule drugs targeting hub genes were predicted to explore their molecular regulatory mechanisms and potential therapeutic value in MDD

Conclusion JUN, CTSD, and CALR were identified as potential diagnostic markers of MDD and may be involved in the immunoinflammatory mechanism of MDD

关键词: depression, cellular senescence, immune

infiltration, biomarkers, RNA sequencing

羟氯喹通过阻止 TRPV1 的自噬降解来减轻母体分离诱导的精神分裂症样行为

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目的 既往研究表明,精神分裂症与瞬时受体电位香草酸亚组家族成员1 (TRPV1) 密切相关。据报道,在母体分离(MS)诱导的精神分裂症模型中发现皮质醇水平升高和 TRPV1 下调。体外实验发现,皮质醇可以通过诱导自噬来降解 TRPV1。本研究旨在阐明自噬诱导的 TRPV1 降解在 MS 诱导的精神分裂症模型发病机制中的作用。

方法 利用 MS 模型来模拟类精神分裂症样症状,测定 MS 大鼠和对照组在不同阶段的皮质醇和 TRPV1 水平。我们还在出生后第9天(PND9)MS之前给与大鼠 2mg/kg 剂量的自噬抑制剂羟氯喹(HCQ)。在成年期进行行为测试,包括旷场、新物体识别、Y 迷宫、巴恩斯迷宫、前脉冲抑制试验。检测成年期和 PND10 天的生物学标记检查,包括自噬相关蛋白 Beclin、P62、LC3II 与 TRPV1 表达水平,并且检测成年期神经凋亡情况。同时我们还在 HT22 细胞模型中研究了 HCQ 抑制 TRPV1 降解的神经保护机制。

结果 结果显示 MS 大鼠 PND10 海马和前额叶皮层皮质醇和自噬水平升高,即 Beclin1 LC3II 水平升高,P62 水平降低,同时伴随着 TRPV1 水平降低。成年期 MS 大鼠海马和前额叶皮层自噬功能障碍,自噬流受阻和神经元凋亡,伴有精神分裂症样行为。早期使用 HCQ 治疗可逆转 MS 大鼠上述这些改变并减轻成年期的行为异常。并且体外实验表明,皮质醇剂量依耐性的诱导 TRPV1 的降解,羟氯喹可以阻止 TRPV1 的降解,并且皮质醇诱导的 ROS 增加可以被羟氯喹阻断,使用 TRPV1 拮抗剂辣椒平后,羟氯喹的降低 ROS 的作用消失,提示 HCQ 通过调节 TRPV1 来减少皮质醇诱导的 ROS。

结论 总之,我们的研究表明,皮质醇通过自噬诱导 TRPV1 降解参与了精神分裂症的发病机制。HCQ 通过阻止 TRPV1 的自噬降解来防止 MS 诱导的神经生物学和行为改变。

关键词: 精神分裂症,母体分离,皮质醇,羟氯喹,

自噬,TRPV1

Neurobiological Mechanism Underlying The Rapid-acting Antidepressant Effect of Ketamine

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Objective Depression is one of the most common disabling mental disorders. However, the first-line treatment for depression is slow-acting. Ketamine is a glutamatergic modulator with rapid antidepressant effects that is effective in treating both refractory depression and suicidal tendencies. The neurobiological mechanism underlying the effects of antidepressant has become a research hotspot, but the exact mechanism involved remains unclear. Brain imaging studies have provided important evidence from macroscopic perspectives such as brain structure and function, while biochemical studies have made significant discoveries from microscopic perspectives such as proteomics and genomics. Previous reviews have summarized biomarkers related to the ketamine response from a broad range of scattered biomarkers from imaging, electrophysiological, metabolic, immune, genetic, and neurotrophic studies. This review aims to scientifically clarify the neurobiological mechanism of the rapid-acting antidepressant effect of ketamine

Methods We searched for relevant literatures from five electronic databases (2000-2023), PubMed, the Cochrane Library, EMBASE, the Web of Science and clinical trials with the following terms: “depression”, “ketamine”, “rapid-acting”, and “biomarker”. A total of 87 articles were included in this work

Results In this review, we systematically summarize a number of potential biomarkers for predicting and modulating the efficacy of ketamine from macro- (such as neuroimaging markers and neuroelectrophysiological markers) and microperspectives (such as neurobiochemical markers and genetic markers)

Conclusion Although this work is still in its early stages, these biomarkers can help clinicians identify whether ketamine intervention is needed for treatment-resistant depression, thereby reducing the burden on patients and the whole society. However, the majority of biomarkers are still in the preclinical exploratory stage, and the existing findings are rare. To realize the clinical application of these biomarkers, future studies should combine biomarkers of different patterns to investigate the relationships and interactions between different biomarkers and optimize clinical outcomes by enhancing the involvement of biological targets in new models

关键词: depression; ketamine; rapid-acting; biomarker

雷公藤多苷通过抑制焦亡改善阿尔茨海默症小鼠模型的工作记忆

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目的 阿尔茨海默症 (AD) 往往伴随大脑炎症和神经细胞死亡缺失。雷公藤多苷是已获批上市四十余年的经典中成药, 常被用于炎症和自身免疫疾病的治疗。少量文献报道, 雷公藤多苷中的主要有效成分雷公藤甲素对神经元有保护作用, 但尚无活体动物层面雷公藤多苷对神经退行性疾病的疗效报道。

方法 选取 APP/PS1 转基因小鼠、A β 脑海马注射小鼠、链脲菌素脑室注射小鼠作为三种 AD 动物模型, 给予雷公藤多苷灌胃连续两周, 检测小鼠的新物体识别工作记忆行为、Y 迷宫工作记忆行为和 Morris 水迷宫长期记忆行为, 其中, 水迷宫实验设置 3 天训练期, 每天训练 2 次, 每天前后两次行为的差异作为工作记忆的一个行为指标。取小鼠大脑海马组织进行单细胞测序, 前额叶皮层进行普通转录组测序, 剩余大脑组织离心取上清检测细胞因子水平, 并通过 Western Blot 和荧光定量 PCR 对组学测序分析结果进行分子验证。

结果 APP/PS1 转基因 AD 模型小鼠和 A β 脑海马注射小鼠在新物体识别短期记忆行为实验中基

于接触时间和接触次数的认知指数显著下降,而雷公藤多苷灌胃小鼠的认知指数则有显著改善。 $A\beta$ 脑海马注射小鼠基于 Y 迷宫的工作记忆表现下降,而雷公藤多苷灌胃给药能提升 Y 迷宫工作记忆。在水迷宫行为实验中,AD 转基因模型小鼠的长期记忆和工作记忆均明显受损,但雷公藤多苷灌胃仅能显著改善水迷宫实验中的工作记忆行为,而对长期记忆行为无显著作用。单细胞测序显示,AD 模型小鼠大脑海马区的小胶质细胞数目和活性增加,单细胞测序、转录组测序和 ELISA 均显示海马、额叶皮层、大脑整体的炎症细胞因子表达上调,说明炎症水平升高,而雷公藤多苷可以有效抑制海马区小胶质细胞活性,显著降低大脑炎症水平。海马单细胞测序和皮层转录组测序提示雷公藤多苷作用的分子机制可能是通过抑制小胶质细胞中的 NLRP3 炎症小体下游的 JAK1-STAT1-GSDMD 相关的焦亡通路来起到了缓解神经炎症、改善工作记忆行为的作用。

结论 雷公藤多苷能有效改善阿尔茨海默症小鼠模型的工作记忆行为,其可能的作用机制是抑制大脑海马区的小胶质细胞活性,抑制神经元焦亡来缓解大脑炎症水平。

关键词: 雷公藤多苷,阿尔茨海默症,STM,焦亡,炎症,小胶质细胞

Association of Stmn1 Polymorphism and Cognitive Function in The Chinese Population

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Objective Stathmin 1 (Stmn1), a neuronal growth-associated protein involved in microtubule dynamics, plays an important role in neurite outgrowth and synaptic plasticity. Previous studies have reported that Stmn1 genetic variants influence fear, anxiety, and cognitive-affective processing. However, no studies have investigated the relationship between Stmn1 gene polymorphism and cognitive function in the healthy Chinese population. The present study thus aimed to investigate this association

Methods A total of 129 healthy Han Chinese individuals were genotyped for the Stmn1 rs182455 polymorphism by polymerase chain reaction and restriction fragment length polymorphism analysis. Cognitive function was assessed using the Stroop Color-Word Test (SCWT) and Hopkins Verbal Learning Test-Revised (HVLt-R)

Results In the total sample, the numbers of CC, CT, and TT genotypes of the rs182455 polymorphism were 56 (43.41%), 65 (50.39%) and 8 (6.20%), respectively. The genotype distribution did not deviate from Hardy-Weinberg equilibrium ($\chi^2 = 3.715$, $p = 0.054$). Significant differences were found between the three rs182455 genotypes and between the CC and (CT+TT) genotype groups in the Stroop Color (SC) scores of the SCWT ($F = 3.322, 2.377$; $p = 0.039, 0.019$, respectively) and the Total Recall (TR) scores of the HVLt-R ($F = 3.118, 2.225$; $p = 0.048, 0.028$, respectively). Moreover, there was a female-specific difference in SC scores between the three rs182455 genotypes ($F = 2.318$, $p = 0.023$). The rs182455 genotype distribution did not differ significantly between males and females ($\chi^2=1.313$, $p=0.519$), although there were significant differences in SC and TR scores between males and females ($t=-2.294, -2.490$; $p = 0.023, 0.014$, respectively)

Conclusion The findings suggest that the rs182455 Stmn1 polymorphism might affect cognitive flexibility and immediate free recall in healthy Chinese individuals-especially females

关键词: Stmn1; gene polymorphism; cognitive function; Stroop Color-Word Test; Hopkins Verbal Learning Test

Sex-Specific Metabolic Mechanisms in Mild To Moderate Depression: Investigating Iso-leucine and Trimethylamine N-Oxide in Female Patients

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Objective Depression is a prevalent mental health issue globally, with mild to moderate depression (MMD) being especially widespread. Research indicates substantial variations between women and men concerning the prevalence, severity, progression, and treatment of depression. Nonetheless, few studies have investigated sex differences in MMD, especially at the molecular level

Methods A total of sixty-nine participants were enrolled in this study, 25 females and 16 males were diagnosed with MMD, and 21 females and 7 males were diagnosed with healthy controls (HCs). The objective of this investigation was to examine sex disparities in the plasma metabolomic profiles of untreated MMD patients utilizing multivariate statistical analysis and pathway analysis based on ¹H nuclear magnetic resonance (¹H NMR). We also explored specific biomarkers in female MMD patients using machine learning models

Results In this study, there were significant differences between female and male MMDs and their respective HCs. A total of 14 different metabolites were associated with females, and 12 different metabolites were associated with males. In addition, six pathways were significantly altered in females, five pathways were significantly altered in males compared to HCs, five of which were common pathways, and arginine and proline metabolism were specific to female MMD patients. Isoleucine and trimethylamine n-oxide (TMAO) were also identified as potential biomarkers for the diagnosis of female MMD patients, with an area under the receiver operating characteristic curve (AUC) of 0.998

Conclusion The results of this research aimed to address the paucity of studies on sex differences in MMD at the molecular level. Metabolomic studies will provide new insights into the pathophysiology of sex differences in MMD patients. This may also help in the early identification and diagnosis of female MMD patients

关键词: Mild to moderate depression, Metabolomics, Sex difference, Plasma

Brain Glycogen: A Key To Revealing The Pathology of Mental Diseases

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Brain glycogen, which is distinct from muscle glycogen and liver glycogen, has become a crucial node linking metabolism, epigenetics, and autophagy. Recent studies have suggested that brain glycogen governs multiple neurobehavioral processes, such as memory formation and consolidation. However, the changes in brain glycogen levels in mental diseases and the association of these changes with disease prognosis are unknown. Here, we review the psychological function of brain glycogen and the different characteristics of astrocytic glycogen and neuronal glycogen. In addition, we summarize the alterations in brain glycogen levels in depression, schizophrenia and sleep disorders, highlighting that brain glycogen functions as an important metabolite responsible for the development of mental diseases. In summary, brain glycogen is a key to understanding the pathology of mental diseases and deserves more attention in future research.

Objective Our objective is to summarize the alterations in brain glycogen levels in depression, schizophrenia and sleep disorders, exploring the psychological function of brain glycogen

Methods Literature research method

Results At present, the alterations in brain glycogen levels during depression are controversial. Research on the relationship between brain glycogen and schizophrenia is only beginning. There is a correlation between brain glycogen level and sleep, which can be explained by the glycogenetic hypothesis

Conclusion At present, there are limited studies on the changes in brain glycogen levels in mental diseases, and the existing studies mainly focused on depression and schizophrenia. The findings of the existing studies are also inconsistent, which may be due to the

use of different animal models. However, brain glycogen serves as an important energy source to support brain function under physiological conditions and may be a key for elucidating the mechanisms underlying mental diseases

关键词: brain glycogen, depression, schizophrenia, sleep disorders

舞动治疗在改善精神分裂症住院患者身心健康的效果观察

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目的 本研究旨在探究舞动治疗对改善精神分裂症住院患者身心健康的效果。

方法 本研究选定了2020年6月至2023年6月间在南方医科大学附属广东省人民医院(广东省医学科学院)和广州市民政局精神病院接受治疗的60名精神分裂症住院患者作为研究对象,按照随机数字法分为观察组与对照组,各30例。对照组给予标准药物治疗及常规的工娱疗活动干预,观察组在对照组的基础上加入舞动治疗,比较两组精神状态与社会功能。

结果 在治疗开始前,参与研究的两组患者在BPRS(简明精神病评定量表)上的评分显示没有显著的统计差异($p>0.05$)。然而,治疗完成后,观察组在BPRS上各项指标,如焦虑抑郁程度、活力缺失、思维障碍、激动情绪以及敌意和猜疑态度等方面的评分,均显著低于对照组($p<0.05$)。同样,在治疗开始时,两组在SDSS(社会功能退化量表)评分上也未见显著差异($p>0.05$)。但是,治疗后,观察组在社交退缩、家外社交活动、日常自理、对外部世界的兴趣、关心、责任感以及计划能力等SDSS评分方面均低于对照组($p<0.05$)。

结论 作为辅助性治疗手段,舞蹈疗法在提升精神分裂症患者的心理健康和社交能力方面展现了显著成效。

关键词: 精神分裂症; 舞动治疗; 住院患者; 身心健康; 社会功能

缺陷型精神分裂症患者海马亚结构萎缩与注意力功能障碍无关

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目的 缺陷型精神分裂症(DS)被认为是精神分裂症谱系中的一个独特疾病实体。探讨DS的海马亚结构异常以及与这种精神分裂症亚型的独特症状的关联。海马结构异常是精神分裂症患者神经影像学研究中最有力的发现之一。然而,没有研究检测到缺陷型精神分裂症(DS)特有的区域海马异常的可能性,以及与该精神分裂症亚型的独特症状的相关性。

方法 本研究比较了33名DS和39名无缺陷精神分裂症(NDS)患者以及38名健康受试者的海马亚场容量。在MRI扫描当天,通过PANSS评估临床症状,通过神经认知电池评估认知。使用FreeSurfer 7.2.0对自动海马分割进行预处理。所有统计分析均使用SPSS 17.0(SPSS Inc., Chicago, IL, USA)进行。参与者的人口统计学、临床特征和神经认知评估分数以平均值±标准差(SD)的形式呈现。首先使用Welch检验检查数据集的方差同质性。通过单因素方差分析(ANOVA)和事后成对比较分析比较DS、NDS和HC组的人口统计学和临床特征的平均值,而通过独立样本t检验比较DS和NDS组之间的精神病症状得分的差异。使用控制受教育年限和体重指数(BMI)的协方差分析(ANCOVA)在各组之间比较海马亚区体积,并使用Bonferroni校正对多重比较进行调整。除COWAT外的认知得分通过ANCOVA控制受教育年限和BMI进行组间比较,并使用Bonferroni校正对多重比较进行调整,而COWAT结果通过one-way ANOVA与Bonferroni校正进行比较。构建多元线性回归模型来研究海马亚区体积是否与认知测试分数相关。 $p<0.05$ (两侧)。

结果 通过控制受教育年限和BMI,并使用Bonferroni进行多重比较校正,在DS患者中,右侧海马CA1头部萎缩与注意力缺陷、左侧海马尾部萎缩与类别流畅性差以及海马分子层头部萎缩与注意和选择性抑制差相关。但是经过多重比较校正后以上显著性消失。

结论 研究海马次区域萎缩模式对于深入了解 DS 认知缺陷的病理生理学具有重要意义。

关键词: 缺陷型精神分裂症; 海马亚结构体积; 神经心理评估

KIBRA 基因多态性与健康汉族个体的不同人格特质相关

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目的 肾脑蛋白 (KIBRA) 在海马中富集, 一项包含 50 万个多态性的全基因组关联研究发现, 单核苷酸多态性 (SNP) rs17070145 与人类认知和记忆功能相关。对 59 个与人格特质相关的候选基因的多变量分析表明, 目前对遗传多态性和行为特质之间关系的理解仍然不足。为了分析影响人格特质的神经机制, 我们在健康的汉族人群中对 rs17070145C/T 多态性与人格特质的关系进行了研究。

方法 选择 573 名健康的汉族个体 (274 名男性, 299 名女性) 作为研究对象, 所有参与者均无神经系统、精神或身体疾病。参与者的平均年龄为 30.36 ± 7.92 岁, 范围为 19 至 58 岁。使用 TPQ 的中文版, 该版本在测量人格特质的 NS、HA 和 RD 气质维度上被证明是高度可靠的。rs17070145C/T 多态性的基因分型通过聚合酶链反应和限制性片段长度多态性分析 (PCR-RFLP) 进行。基因组 DNA 均采用标准的碘化钾方法提取, 引物选序列来自自己发表的文献, 限制性内切酶 MseI 酶切后的片段通过 2% 琼脂糖凝胶电泳和基因探针染色进行分析。rs17070145C/T 多态性与 TPQ 评分的基因型关联通过 Kruskal-Wallis 检验进行统计分析, $P < 0.05$ 被认为具有统计显著性。

结果 rs17070145C/T 的基因型计数和频率为 28 个 CC 基因型 (4.9%)、203 个 CT 基因型 (35.4%)、342 个 TT 基因型 (59.7%), 与 PubMed 数据库中提供的其他汉族人群样本的频率相似。573 名汉族健康个体中 rs17070145C/T 单核苷酸多态性的分布未偏离哈迪-温伯格平衡 ($\chi^2 = 0.092$, $p = 0.762$), 表明研究样本具有代表性。基因型之间的 NS 和 RD 评分, 基因型之间的总 HA 评分也没有显著差异。然而,

在分量表分析中, 我们在 HA2 评分上发现了基因型之间的显著差异 ($\chi^2 = 6.293$, $p = 0.043$), 但在其他 HA 子维度评分上没有显著差异。与 CC 携带者相比, TT 基因型携带者的 HA2 评分较低 ($p = 0.011$)。

结论 在健康的汉族个体中, T 等位基因携带者的 HA2 评分低于 C 等位基因携带者, 这表明人格特质可能受 KIBRA 遗传多态性的影响。KIBRA 最初被确定为与记忆表现和认知相关的蛋白质。对 KIBRA 的研究主要集中在与认知和记忆相关的疾病上。这些发现与我们显示 rs17070145 KIBRA 遗传多态性与回避损害行为之间关联的结果一致。综上, rs17070145C/T 多态性与健康汉族个体中的回避损害行为相关。

关键词: KIBRA, 基因多态性, 人格特质

Painful Olfactory Hallucinations after Trazodone Treatment

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Objective In 1981, trazodone was approved by the FDA as an antidepressant. Using low doses of trazodone to treat insomnia is one of its common uses. We described an uncommon presentation of olfactory hallucination after trazodone administration and discussed its possible mechanism of occurrence

Methods case report

Results A 43-year-old woman was treated with escitalopram oxalate and trazodone for her depression with insomnia. After taking trazodone 12.5mg QN for 2 days, she presented to the hospital with olfactory hallucinations and headaches. This patient had no history or family history of epilepsy, and her CT scan of the head did not reveal any abnormalities. Within 48 hours of trazodone withdrawal, the olfactory hallucinations disappeared completely. During outpatient follow-up, the patient did not have any type of hallucinations again for the next 2 years

Conclusion The mechanism of trazodone is

complex and its pharmacological effects are dose-dependent: At low dose (50-150mg/d), the drug has a strong sedative effect due to blocking 5-HT_{1A} and α_1 receptors; At high doses (150-600mg/day), the drug also blocks the 5-HT transporter (SERT)

The effect of trazodone on 5-HT system is very complex. Trazodone has pharmacological effects on both 5-HT_{2A} and 5-HT_{2C} receptors, which may be different from other antidepressants. The above blocking effects can increase the levels of a variety of neurotransmitters in prefrontal lobe, including NE and DA, and enhance the antidepressant effect. In previous animal studies, trazodone at 30-50mg/kg also stimulated nigrostriatal dopaminergic neurons by blocking 5-HT_{2C} receptors. Although its direct effects against dopaminergic receptors are lacking, indirect effects may also be related to olfactory hallucination. Trazodone can similarly affect cholinergic neurotransmission, and hallucinations may also be associated with a low level of cholinergic activity.

As mentioned above, trazodone has serotonergic properties. There have been a number of reports of visual hallucinations (and only visual hallucinations) induced by traditional SSRIs, including sertraline, duloxetine, citalopram, etc. Hallucination is not only related to DA energy: in the 5-HT model of hallucination, cortical 5-HT_{2A} receptor hyperactivity may be involved in hallucination, and this is the main mechanism of LSD hallucination. Long-term use of LSD may increase the risk of developing LSD flashback syndrome, which is characterized by transient visual hallucinations, especially after using SSRIs. The underlying mechanism may be as follows: LSD impairs the function of inhibitory 5-HT interneurons, or the 5-HT receptor is continuously up-regulated; Once synaptic 5-HT levels are elevated in the short term, as in the case of concurrent SSRIs, it may result in a high-intensity 5-HT energetic signal, producing a hallucinogenic effect. About our patient, trazodone combined with escitalopram oxalate may increase 5-HT in a short term and increase the susceptibility of the brain to hallucination. Similar to the hypothesis for visual hallucinations, a model of abnormal hierarchical predictive processing in the olfactory

bulb and anterior olfactory nucleus may explain the occurrence of olfactory hallucinations. The common association of focused hallucinations suggested by the previous literature review suggests that the pathophysiological mechanisms underlying these phenomena may overlap.

As with other drugs, the incidence of illusory smell induced by trazodone may be underestimated. This may be due to concerns that people will not believe them or they will be misunderstood as having a serious mental illness or being "high."

In conclusion, low doses of trazodone may affect 5-HT and cholinergic transmission and subsequently cause transient sensory dysfunction. In the future, the underlying mechanisms should be further explored to draw firm conclusions.

关键词: olfactory-hallucinations, trazodone

脑机接口发展在精神疾病领域中应用的研究进展

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目的 直观展示脑机接口 (BCI) 研究领域的重点, 为新技术开发与应用和精神疾病治疗提供方法思路。

方法 采用文献综述法。从 Web of Science (WOS) 中检索 2004 年至 2023 年间发表的与脑机接口相关的文章。HistCite Pro 2.1 用于分析出版物的数量, 以及按国家/地区、机构、作者和期刊分列的出版物的总被引次数和平均被引次数。CiteSpace 用于可视化和分析脑机接口研究领域的网络。在分析研究热点时, 使用可视化制图软件 VOSviewer 对关键词进行聚类, 并分析关键词在时间轴上的演变。然后, 生成 CiteSpace 的引文爆发, "强度" 一栏中数值较高的关键词暗示了 BCI 研究领域的关键主题。最后基于矩阵对高频关键词进行可视化, 绘制山峰图、战略坐标图和策略图。

结果 20 年来, 关于脑机接口的研究增长迅速, 中国已成为世界范围内脑机接口领域发文量最多的

国家,在合作关系、引用量等指标上均名列前茅。该领域研究热点逐步从虚拟现实转向脑电技术、深度学习和情感识别,目前最具关注的话题是深度学习及任务分析,未来研究趋势重点依然在算法的开发和扩展上。

结论 随着生物医学工程与技术的发展,脑机接口研究中相对前瞻性的主题现在更加先进、精确、高效,也更适合人体。现在BCI的研究正朝着算法和实际应用的方向发展,具体包括情感识别、脑建模等,BCI在精神疾病治疗中的应用也越来越广泛。以往的研究已经确定了几个与重度抑郁和强迫症症状状态相关的神经生物标志物。这些生物标志物可能因植入位置、患者之间症状状态的差异以及症状状态的分布式网络级表示而异。研究人员正在开发新的数据驱动方法来识别更准确、更个性化的神经生物标志物。这将丰富精神疾病的治疗方式。通过结合数据驱动机器学习、系统理论和转化动物模型,可以开发出个性化的闭环脑机接口,为精神疾病患者提供有效的疗法选择。然而,这一目标的实现还需要克服一些挑战,例如识别神经生物标志物、更好的生物标志物识别、结合生理测量数据、多模态生物标志物、神经-生理传感设备、道德问题、侵入性脑电监测和动物模型等。

关键词:脑机接口,文献计量学,研究热点

The Metabolic Indices of Smoking and Non-smoking Schizophrenia Patients Were Compared, and The Relationship between Smoking, Glucose and Lipid Metabolism Status and Cognitive Function Was Investigated

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Background Numerous studies have shown the relationship between increased smoking, problems with glucose and lipid metabolism, and impaired cognitive ability in patients with schizophrenia. However, little research has delved into the specific impact of smoking on metabolic impairments within this population. We aimed to compare the metabolic indices between smoking and non-smoking patients with schizophrenia, and

explore the relationship between smoking, glycolipid metabolic profile and cognitive functioning

Methods A cohort of 773 patients with chronic schizophrenia participated in this study, undergoing assessments of blood pressure, waist circumference, body mass index (BMI), lipid profile and glucose metabolism. Psychiatric symptoms were evaluated using the Positive and Negative Syndrome Scale (PANSS), while cognitive function was measured with the Cognitive Functioning Scale (RBANS)

Results BMI and systolic blood pressure were lower in smoking patients than in nonsmoking patients after controlling for age and sex. Negative symptom scores were significantly lower in smoking patients than in non-smoking patients. In the group of non-smoking patients, positive symptom scores in the PANSS scale were positively correlated with waist-hip ratio, negative symptom scores, general psychopathology scores and total scores were negatively correlated with hip circumference, and delayed memory and attention scores as well as total scores in the RBANS scale were positively correlated with hip circumference

Conclusion In summary, it can be seen that in non-smoking patients with schizophrenia, the larger the hip circumference, the less severe the clinical symptoms, and the larger the hip circumference, the better the cognitive functioning of the patients, whereas there is no such relationship in smoker. And smoking can improve negative symptoms in patients with schizophrenia, with smokers weighing more than non-smokers

关键词: schizophrenia, smoking, metabolic disorders, cognition

基于靶向代谢组学探究精神分裂症的代谢性别差异

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目的 几乎在所有影响神经系统的疾病中都可以观察到性别差异的存在,而这种现象在精神分裂症中尤为明显,但性别差异产生的病理生理机制尚

不清楚。代谢组学技术能够精准识别生物体内的小分子代谢物，为揭示疾病机制提供新的视角。本研究旨在基于靶向代谢组学技术探索精神分裂症在代谢水平上的性别差异，为阐述性别差异的机制提供理论基础。

方法 本研究共纳入 60 名未用药精神分裂症患者和 36 名健康对照。在入组时收集所有参与者的一般人口学信息和血液样本。使用 PANSS 量表评估患者的临床症状。应用 P500 试剂盒来分析所有受试者血浆样本中的 271 种代谢物水平。首先我们比较精神分裂症患者男女不同性别在代谢物水平方面的差异，然后我们在不同性别群体中分别探索患者和健康对照之间存在差异的代谢物和代谢通路，并分析差异代谢物与临床症状的相关性及对患者的诊断能力，以进一步比较男女患者之间的性别差异。

结果 1.基于 OPLS-DA 模型，在精神分裂症患者中，男女不同性别之间识别出 14 个存在显著差异的代谢物，其中 8 个为 TG，其余代谢物分别为 DG、FA、Lac、CE 和 Cer；

2.根据 $P < 0.05$ 和 $VIP > 1.5$ 进行筛选，结果显示在男性群体中，患者与健康对照存在 26 个差异代谢物，而在女性群体中仅筛选出 9 个差异代谢物。男性群体中筛选出的差异代谢物以 PC、TG、Cer 和胆碱为主，女性群体中则以 Cer、GABA 和 CE 为主。

3.偏相关分析显示，男性群体中，患者的 TG(22:4_32:0)、PC aa C36:1、PC aa C40:2 和精胺水平与 PANSS 评分具有相关性 ($P < 0.05$)，女性群体中，患者的 CE(15:0)、Cer(d18:1/22:0)、Cer(d18:1/24:0) 和皮质醇水平与 PANSS 评分存在相关 ($P < 0.05$)。

4.ROC 曲线显示，在这两个群体中识别的所有差异代谢物均具有良好的疾病诊断能力，其中诊断能力比较出色的代谢物 ($AUC > 0.8$)，男性群体中发现 10 个，以 PC 和 Cer 为主，女性群体中发现 1 个，为 GABA。

5.KEGG 通路分析显示，不同性别群体的代谢通路存在明显的差异，男性群体中患者的 β -丙氨酸代谢、谷胱甘肽代谢、精氨酸和脯氨酸代谢以及甘油磷脂代谢存在异常，女性群体中患者的丁酸代谢存在异常。

结论 本研究发现不同性别的精神分裂症患者在 TG、PC、GABA 等代谢物以及 β -丙氨酸代谢、谷胱甘肽代谢等代谢物通路方面存在显著差异，这为精神分裂症在代谢水平存在明显性别差异提供了证据支持，有助于我们更好地理解性别差异存在的

机制，进而指导我们在临床上的干预方案，实现更精准的个体化治疗。

关键词：精神分裂症,性别差异,靶向代谢组学,血浆,代谢物

基于多模态脑影像的精神分裂症和双相情感障碍鉴别诊断

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目的 精神障碍的准确诊断在治疗方面起着重要作用。大多数现有的基于机器学习的诊断方法，为使用单一模态的磁共振成像数据作为模型的输入。但由于训练的模型未充分利用时间信息，导致模型的性能未达到最佳；故使用多模态融合的深度学习方法来提升模型性能十分有前景。

方法 我们提出了一种多维度嵌入感知模态融合 Transformer，利用静息态功能磁共振成像和 T1 加权结构磁共振成像来诊断精神分裂症和双相情感障碍。我们分别为 rs-fMRI 的 2D 时间序列和 T1w 的 3D 数据构建了两个编码器分支。对于 rs-fMRI，预处理后的 4D 数据先分割成 1000 个感兴趣区域，然后生成的 2D 时间序列图像才用作 2D 编码器的输入。Fusion transformer module (FTM)的输入来自两种模态的多维特征图，对齐后的特征图融合后输入到 Transformer 中，输出的特征图又变换回原始维度，聚合回各个模态分支。最后，为了更好地融合两种模态的信息，将调整后的 T1w 特征图与 rs-fMRI 特征图进行拼接融合。融合特征首先输入到两个卷积层以及一个三层 MLP 得到最终输出。

结果 为验证我们所提出方法的有效性，将 MFFormer 与多个最先进方法进行了比较。实验结果如表 1、表 2 所示（其中私有 BD 数据集是在驻马店精神病医院收集的，包含 91 名受试者的两种模态 MRI 数据）。

可见在私有 BD 数据集上，MFFormer 的性能明显优于现有方法，其 BACC 达到 0.768，F1 分数达到 0.755。

可见对于 OpenfMRI, MFFormer 在 SZ 与 HC 的分类中取得了第二高的 BACC 结果和最高的 F1 分数;在 BD 与 HC 的分类中 MFFormer 在 BACC 和 F1 分数上都有所提升。

我们还进行了消融实验,结果见表 3, baseline 1 (或 2) 表示仅使用 T1w (或 rs-fMRI) 的模型, “3(或 4)D x-way”表示采用将 3D 特征图上采样到 4D (或将 4D 特征图下采样到 3D)的模态融合策略,且在网络中使用 x 个 FTM。

可见,多模态融合模型均优于单一模态模型,这表明多模态融合的有效性。采用“4D 3-way”策略在 BACC 和 F1 分数方面均取得了最佳性能,这表明使用更多的 FTM 是有益的。

结论 我们提出了一种多模态融合模型 MFFormer 用于鉴别诊断精神分裂症和双相情感障碍。MFFormer 将 2D 时间序列和 3D 特征作为输入,利用融合 Transformer 模块,通过聚合不同维度的特征图来探索模态之间的关系。实验结果表明, MFFormer 的性能超过了仅使用单一模态的模型。

关键词: 精神障碍分类,精神分裂症,双相情感障碍,多模态融合,深度学习

临床护士心身症状的现状分析及中介机制探寻

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目的 调查临床护士的心身症状现状,了解护士心身症状的发生率,并寻找核心症状;探索压力、焦虑、抑郁情绪与心身症状的关系,检验焦虑、抑郁情绪在两者间的中介效应。

方法 采用问卷调查法,于 2022 年 9 月至 2022 年 12 月,对江苏省某三级甲等综合医院的 635 名临床一线护士进行调查,使用一般资料问卷、心身症状量表 (PSSS)、护士工作压力源量表 (NJSS)、广泛性焦虑量表 (GAD-7)、9 条目患者健康问卷 (PHQ-9)。使用描述性分析描述临床护士一般情况以及各量表得分情况,应用 Pearson、Spearman 相关分析了解与心身症状有关的各项因素,使用 SPSS 软件的 process 程序进行中介效应检验,使用 R 软件的网络分析探寻心身症状的核心症状。

结果 临床一线护士的心身症状得分为 38.0 (30.0, 48.0) 分,检出率为 100%,压力得分为 (66.55±15.57) 分,抑郁得分为 14.0 (10.0, 18.0) 分,焦虑得分为 10.0 (7.0, 14.0) 分。网络分析结果提示:26 个项目条目 24(感到全身乏力)桥预期影响值最高 (1.10),条目 10(做事时无兴趣、不快乐、无动力、无意义),条目 25(感到不得不去重复做某些事或想某些问题)次之,这几项为本网络的核心症状。焦虑与抑郁情绪均与心身症状呈正相关,压力即可以直接影响心身症状,又可以通过焦虑、抑郁的链式中介路径影响心身症状。

结论 1、临床一线护士压力大,负性情绪明显,心身症状检出率高,压力以及各种负性情绪均有可能导致心身症状的发生。

2、“感到全身乏力”“做事时无兴趣、不快乐、无动力、无意义”症状的激活可能会通过与其他项目的关联从而广泛地激活整个积极健康网络。提示以焦虑、抑郁情绪为干预靶点,可能会最大程度地提升护理人员整体心理健康水平。

3、护理管理者需加强对护士心身健康的重视,尽早发现,合理干预,科学治疗,以提高护理队伍的心身健康水平。

关键词: 临床护士;心身症状;现状分析

肠道微生物群、细胞因子与五种精神疾病的因果关系:双向双样本孟德尔随机化分析与中介分析

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结论 精神分裂症、重度抑郁症、双相情感障碍、孤独症谱系障碍、注意缺陷多动障碍潜在病因仍未被完全了解,最近有研究表明肠道微生物群、细胞因子与上述五种精神疾病之间有关联,但它们之间的因果关系尚不清楚。本研究的目的是基于双向双样本孟德尔随机化以及中介分析研究探索肠道微生物群、细胞因子与精神分裂症、重度抑郁症、双相情感障碍、孤独症谱系障碍、注意缺陷多动障碍之间的因果关系。

方法 本研究基于欧洲人群中肠道微生物群、细胞因子和五种精神疾病的全基因组关联研究

(GWAS)的汇总数据。将遗传因素作为工具变量,首先利用双样本孟德尔随机化评估肠道微生物群、细胞因子与精神分裂症、重度抑郁症、双相情感障碍、孤独症谱系障碍、注意缺陷多动障碍之间的潜在因果关系,其次分析与上述五种精神疾病的有关的肠道微生物、细胞因子之间的因果关系,探究细胞因子是否作为肠道微生物群与精神疾病之间因果关系的中介因素。

结果 放线菌纲.419 等九种肠道微生物群是精神分裂症的危险因素。戈登杆菌属.821 等两种是精神分裂症的保护因素。反向 MR 结果显示精神分裂症与丁酸菌属.945 有因果关系且成正相关。疣菌属.4029 等六种肠道微生物群是重度抑郁症的危险因素。 α -蛋白细菌纲.2379 等六种肠道微生物群是重度抑郁症的保护因素。科氏菌属.809 等七种肠道微生物群是双相情感障碍的危险因素。普氏菌科.9601 三种是孤独症谱系障碍的危险因素。负菌门.2164 等四种是孤独症谱系障碍的保护因素。拟杆菌属.912 等五种是 ADHD 的危险因素。真杆菌属.11296 等两种是 ADHD 的保护因素。HGF 与精神分裂症之间存在潜在的因果关系,且为负相关。FGF_BASIC 与重度抑郁症存在潜在的因果关系,且为正相关。与五种精神疾病相关的肠道微生物群与细胞因子之间无因果关系。

结论 本研究提供的证据表明,九种肠道微生物群是精神分裂症的危险因素。两种是精神分裂症的保护因素。反向 MR 结果显示精神分裂症与一种肠道微生物群有因果关系且成正相关。六种肠道微生物群是重度抑郁症的危险因素,六种是重度抑郁症的保护因素。七个肠道微生物群是双相情感障碍的危险因素。三种肠道微生物群是孤独症谱系障碍的危险因素,五种是孤独症谱系障碍的保护因素。六种肠道微生物群是 ADHD 的危险因素。两种是 ADHD 的保护因素。HGF 与精神分裂症之间存在潜在的因果关系,且为负相关。FGF_BASIC 与重度抑郁症存在潜在的因果关系,且为正相关。细胞因子不作为肠道微生物群与精神疾病之间关系的中介因素。

关键词: 精神疾病,细胞因子,肠道微生物群,孟德尔随机化

Essential Amino Acids and Psychiatric Disorders: A Two Sample Mendelian Randomization Study Combined Colocalization Analysis

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Objective Psychiatric disorders is one of the leading causes of disability worldwide, and its complex pathogenesis is not yet fully understood. In recent years, research has begun to focus on nutritional factors, particularly the role of essential amino acids in the onset of psychiatric disorders. This study aims to explore the potential causal relationship between essential amino acids and psychiatric disorders using the Mendelian randomization method

Methods We collected large-scale genome-wide association study (GWAS) data, including single nucleotide polymorphisms (SNPs) related to essential amino acid levels and case-control information for psychiatric disorders. Using this data, we conducted a two-sample Mendelian randomization analysis to assess the potential impact of essential amino acid levels on the risk of psychiatric disorders. By employing inverse variance weighting (IVW) and other sensitivity analysis methods, we aimed to overcome potential confounding factors and issues of horizontal pleiotropy. For each significant association found in the preliminary analyses, we used examined colocalization between essential amino acids and psychiatric disorders at each genomic locus where each SNP was located to whether the causal association identified between essential amino acids and each psychiatric disorder was driven by high LD

Results Our analysis revealed significant associations between specific essential amino acids and the risk of psychiatric disorders. The study found no evidence of causal relationships between phenylalanine and seven psychiatric disorders, including schizophrenia and major depressive disorder. Similarly, no associations were observed for methionine and tryptophan with these conditions. In contrast, lysine showed a significant negative correlation with schizophrenia, suggesting a protective effect against the disorder. Threonine was positively correlated with major depressive

disorder, and isoleucine with major depressive disorder and bipolar disorder, indicating potential roles in their etiology. Valine was negatively associated with bipolar disorder and obsessive-compulsive disorder in the prospective analysis and with attention-deficit hyperactivity disorder (ADHD) in the reverse analysis. The study also found valine to be negatively related to schizophrenia in the reverse MR analysis. The MR Egger test and leave-one-out analysis confirmed the stability of the results, with no significant horizontal pleiotropy or single nucleotide polymorphism (SNP) influence detected. Colocalization analysis revealed that valine appeared Colocalization with ADHD through SNP-rs17642754, suggesting that valine and ADHD share causal variants at this SNP

Conclusion The MR study offers novel insights into the potential causal relationships between specific essential amino acids and psychiatric disorders. The findings for lysine with schizophrenia, threonine with major depressive disorder, isoleucine with mood disorders, and valine with bipolar disorder and ADHD highlight the need for further research to understand the underlying biological mechanisms. Valine is co localized with ADHD through SNP-rs17642754, and both have a common causal variation in this SNP. The study emphasizes the complexity of the relationship between nutrition, genetics, and mental health and calls for future research with larger sample sizes, diverse populations, and more detailed molecular data to confirm these findings and explore their clinical implications

关键词: Essential Amino Acids, Psychiatric disorders, Mendelian Randomization, Nutrition, Causal Relationship

Tryptophan and Its Main Metabolite Kynurenine with Depression: A Bidirectional Two-sample Mendelian Randomization Study

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Objective The etiologic complexities of depression remain inadequately understood. There have been several recent studies addressing tryptophan and its metabolites kynurenine were linked with depression. However, it remains unclear whether and in which direction there is a causal relationship between tryptophan and its metabolites, kynurenine, with depression. This study aimed to determine whether tryptophan and kynurenine have causal effects on depression by using bidirectional two-sample Mendelian randomization methods

Methods This study utilized summary data from genome-wide association studies (GWAS) conducted on European populations to investigate the association between tryptophan and kynurenine levels with depression. This study used a two-sample bidirectional Mendelian randomization (MR) method, using genetic factors as instrumental variables, to explore whether there is a potential causal effect between tryptophan and depression, and between canine uric acid and depression

Results The findings from this MR study indicate no causal relationship between tryptophan and depression, with an odds ratio (OR) of 1.005 (95%CI:0.990–1.019, P-value =0.519). No significant causal relationship between depression and tryptophan was identified during the analysis of reverse MR with an OR of 0.304 (95%CI: 0.037-2.678, P-value =0.289). Kynurenine and depression a potential causal relationship and it is positively correlated, with an OR of 1.008 (95%CI: 1.001-1.015, P-value = 0.018). No significant causal relationship was observed between depression and kynurenine during the reverse MR analysis, with an OR of 0.216 (95%CI: 0.001-49.363, P-value=0.580)

Conclusion The final results of this MR study revealed a positive correlation between kynurenine and depression, and an increase in kynurenine levels may increase the likelihood of developing depression, there is no causal relationship between elevated or decreased levels of kynurenine in depressed patients. The results of this study indicate that there is no association between tryptophan and depression, whether prospective or reverse MR. The elucidation of these associations necessitates further investigation in subsequent studies

关键词: Tryptophan, Kynurenine, Depression, Mendelian Randomization

双相障碍混合状态的药物治疗有效性、安全性及可接受性的系统评价

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目的 系统评价双相障碍混合状态（包括伴混合特征和混合发作）药物治疗的有效性、安全性及可接受性。

方法 检索 Pubmed、Embase、Web of Science、Psycho InFo、Cochrane Library、中国知网、万方、维普数据库,收集 2004 年 1 月-2023 年 12 月发表的关于双相障碍混合状态药物治疗的中英文随机对照试验 (RCT) 研究文献, 并采用 Cochrane 协作网的单个 RCT 研究偏倚风险评价标准对纳入研究进行质量评价, 对纳入研究所涉及治疗药物的疗效、安全性、耐受性、可接受性、转相风险进行系统评价。

结果 共纳入 11 篇符合双相障碍混合发作与伴混合特征的 RCT 研究文献, 包括奥氮平 (3 篇)、鲁拉西酮 (2 篇)、喹硫平 (2 篇) 等药物。对于双相抑郁伴混合特征的治疗, 鲁拉西酮和喹硫平有疗效证据支持。鲁拉西酮代谢、镇静副作用小, 可用于儿童青少年双相抑郁伴混合特征患者; 喹硫平抗抑郁与抗躁狂疗效均衡, 转相风险低。对于躁狂发作伴混合特征的治疗, 奥氮平有疗效证据支持, 但需平衡疗效与副作用, 关注药源性抑郁风险。对于混合发作, 阿立哌唑的研究证据最充分。阿立哌唑较少引起代谢、泌乳素升高的副作用, 且可用于儿童双相障碍患者。丙戊酸盐和锂盐被较多专家共识推荐用于双相障碍混合状态的治疗。

结论 当前双相障碍混合状态的药物治疗研究间的不一致性较大, 亟需高质量的 RCT 研究为其提供更充分的循证支持。

关键词: 双相障碍,混合状态,混合特征,药物治疗,系统评价

阿戈美拉汀片联合盐酸帕罗西汀对抑郁伴失眠患者 SOD、BDNF 水平的影响

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目的 探讨阿戈美拉汀片联合盐酸帕罗西汀对抑郁伴失眠患者超氧化物歧化酶 (SOD)、脑源性神经营养因子 (BDNF) 水平的影响。

方法 选取宁夏精神卫生中心 2022 年 10 月到 2023 年 9 月期间诊断抑郁伴失眠的住院患者 120 例, 分为对照组 60 例和实验组 60 例。在使用盐酸帕罗西汀进行常规抗抑郁治疗的基础上, 实验组和对照组分别联合阿戈美拉汀、右佐匹克隆进行 8 周治疗。使用汉密顿抑郁量表 (HAMD) 评定患者抑郁程度; 匹兹堡睡眠质量指数 (PSQI) 评定患者睡眠质量; 酶联免疫吸附试验法检测褪黑素、SOD、BDNF 水平; 电化学发光免疫法检测去甲肾上腺素 (NE)、多巴胺 (DA)、5-羟色胺 (5-HT) 水平。对比两组治疗后临床症状改善程度及各递质水平变化。

结果 治疗前, 两组 HAMD 评分水平及 PSQI 评分水平对比, 差异无统计学差异 ($P>0.05$); 治疗后, 两组数值均有所下降, 差异有统计学差异 ($P<0.05$)。且实验组较对照组的 HAMD、PSQI 水平降低更明显; 治疗前, 两组 SOD、BDNF、褪黑素水平对比, 差异无统计学意义 ($P>0.05$); 治疗后, 两组 SOD、BDNF、褪黑素水平均得到一定程度升高, 升高程度则是实验组 SOD、BDNF、褪黑素水平高于对照组, 差异有统计学差异 ($P<0.05$)。

治疗 8 周后, 相比对照组, 实验组 HAMD、PSQI 分数降低 ($P<0.05$); 褪黑素、SOD、BDNF、NE、DA、5-HT 水平升高 ($P<0.05$)。

结论 对抑郁伴失眠障碍患者采用帕罗西汀联合阿戈美拉汀片进行治疗, 患者抑郁程度、睡眠质量得到显著改善; 抑制氧化应激状态, 上调 SOD、BDNF 水平, 升高褪黑素水平, 增加 NE、DA、5-HT 神经递质数量。本研究存在不足之处: 未对其作用机制深入探究, 结果可能具有一定的局限性。

关键词: 抑郁伴失眠障碍; 阿戈美拉汀片; 超氧化物歧化酶; 脑源性神经营养因子

血浆 IL-6 水平与脑健康和痴呆风险的关系研究

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目的 近来,免疫异常与痴呆的相关性已被逐渐发现和认可。IL-6 作为炎症反应中至关重要的细胞因子,其水平升高已被发现与大脑结构变化和认知能力下降有关。然而,IL-6 水平、认知、大脑结构变化和痴呆风险之间的联系需要在大型前瞻性队列中进行探索。本研究意在基于对大样本公共数据库的挖掘,探究 IL-6 水平如何影响认知,及它通过何种途径调控痴呆的发生。

方法 本研究利用 UK Biobank 的纵向队列,通过线性回归分析 IL-6 表达水平、认知表现以及皮质和皮质下脑体积之间的相关性。此外,我们使用 Cox 回归分析评估了 IL-6 水平与长期痴呆风险之间的关联。最后我们还使用单样本孟德尔随机化来减轻痴呆导致 IL-6 水平升高的反向因果关系。

结果 本研究总共纳入了 50,864 名参与者,其中发现了 1,391 例新发全因痴呆病例。较高的血浆 IL-6 水平与梭状回、背侧丘脑、海马等区域的皮质和皮质下体积减少有关,与脑室体积扩大有关。IL-6 水平与配对匹配、数字记忆、前瞻性记忆和反应时间测试中的认知表现呈负相关。此外,在平均 13.2 年的随访期内,IL-6 水平升高与全因痴呆风险增加 23-35% 相关。单样本孟德尔随机化分析支持 IL-6 水平升高与痴呆症发病之间的因果关系。

结论 IL-6 水平升高与认知能力下降、大脑结构变化以及全因痴呆风险增加相关。本研究强调需要关注外周免疫激活在管理大脑健康和痴呆风险中的作用。

关键词: IL-6, 脑结构, 痴呆, 认知功能

精神分裂症患者治疗效果与认知功能关系的研究

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目的 探究精神分裂症患者认知功能损害与治疗

效果的关系,为疾病的识别、诊断和预测预后及功能恢复提供帮助,并为精神分裂症的病理学机制的认识提供思路。

方法 本研究纳入 148 例首发未经治疗或 3 个月未使用任何抗精神病药物治疗的复发精神分裂症患者,分别在治疗前和治疗 8 周末采用阳性与阴性症状量表(PANSS)评估精神症状,采用 P300、MMN、精神分裂症认知功能成套测验共识版(MCCB)评估认知功能。根据 PANSS 减分率将患者分为有效组和无效组。用 t/Mann-Whitney U/Wilcoxon 检验比较精神分裂症患者治疗前后 PANSS、MCCB、P300 和 MMN 变化,以及有效组和无效组之间 MCCB、P300、MMN 差异。

结果 1. 与治疗前比较,治疗 8 周后患者认知功能在信息处理速度、词语学习、工作记忆、推理和问题解决能力、视觉记忆这五个领域均明显改善。2. 经过 8 周治疗后,有效组认知功能在信息处理速度、词语学习、工作记忆、推理和问题解决能力、视觉记忆这五个领域均明显改善;而无效组认知功能则在信息处理速度、词语学习、推理和问题解决能力、视觉记忆这三个领域改善。与无效组比较,有效组的认知功能在信息处理速度方面更好,在 Cz、Pz 位点的 P300 潜伏期也更短。

结论 1. 精神分裂症患者在接受抗精神病药物治疗 8 周后认知功能明显改善。2. 经过 8 周治疗后,精神分裂症患者有效组较无效组有更广泛的认知功能改善;且认知功能与精神症状改善程度有关,提示认知功能相关指标或可作为精神分裂症患者疗效预测标志物。

关键词: 精神分裂症, 认知功能, 疗效

精神分裂症与血压的因果关联: 一项双向双样本孟德尔随机化研究

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目的 精神分裂症(Schizophrenia, SCZ)是一种病因未明的严重影响社会功能的重性精神障碍性疾病,在世界范围内发病率为 1%。精神分裂症的病因及发病机制研究尚不明确,有研究证据表明较高的收缩压会增加罹患精神分裂症的风险,有微量证

据提示较高的舒张压会降低精神分裂症发生率，而一项探讨 SCZ 与心血管疾病的研究发现舒张压与精神分裂症发生并无关联，精神分裂症与舒张压之间的潜在因果关系尚不明确。本文就精神分裂症与血压（收缩压、舒张压、高血压）之间的因果关系进行双向双样本孟德尔随机化分析（Mendelian randomization, MR），并发现收缩压、舒张压与精神分裂症有潜在的因果关系，高血压与精神分裂症之间无潜在因果关系。

方法 本研究基于不同人群中血压及精神分裂症的全基因组关联研究（Genome-wide association studies, GWAS）汇总数据。使用双向双样本 MR，将遗传变量作为工具变量，采用逆方差加权、MR-Egger 回归、加权中位数、简单模型和加权模型五种方法来评估血压与精神分裂症风险之间的关系，采用敏感性分析（多效性、异质性和留一性检验）来评估结果的稳健性，同时绘制 SNP 相关的血压与精神分裂症风险的森林图及散点图。

结果 在收缩压与精神分裂症 MR 分析中，筛选出 63 个与精神分裂症相关的收缩压 SNPs，表明收缩压与精神分裂症之间具有因果关系，且为正相关，比值比（OR）为 1.241(95%CI:1.020-1.509,P=0.031)。在反向 MR 中，尚未发现精神分裂症与收缩压之间具有潜在的因果关系，比值比（OR）为 0.977（95%CI:0.955-0.998，P=0.035）。在舒张压与精神分裂症 MR 分析中，筛选出 35 个与精神分裂症相关的舒张压 SNPs，发现舒张压与精神分裂症之间具有因果关系，且为负相关，比值比（OR）为 0.990（95%CI:0.982-0.998，P=0.011）。在反向 MR 中，没有发现精神分裂症与舒张压之间具有潜在因果关系，比值比（OR）为 0.750(95%CI:0.499-1.126,P=0.165)。在高血压与精神分裂症 MR 分析中，筛选出 156 个与精神分裂症相关的高血压 SNPs，发现高血压与精神分裂症之间无关联，在反向 MR 中，也未发现两者有关联。

结论 本研究表明较高的收缩压可能会升高罹患精神分裂症的风险，较高的舒张压可能会降低患精神分裂症的风险，精神分裂症与高血压、收缩、舒张压升高或降低无因果关系。本研究提示控制收缩压或舒张压可能降低精神分裂症的风险，为预防精神分裂症发病提供新思路。

关键词：精神分裂症，血压，收缩压，舒张压，高血压，孟德尔随机化

Abnormal Functional Connectivity of The Reward Circuitry Is Associated with Negative Symptom and Cognitive Functions in First-episode Schizophrenia.

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Objective Background It is often observed that individuals with schizophrenia exhibit functional connectivity (FC) abnormalities in the core brain regions of the reward circuitry, abnormalities that are commonly believed to be associated with psychotic symptoms and cognitive functions. However, the relationship between the reward circuitry connectivity patterns and clinical symptoms as well as cognitive functions in the first-episode schizophrenia has not yet been systematically explored

Methods 52 first episode schizophrenia (FES) patients and 56 healthy controls (HC) were recruited for this cross-sectional study. 11 brain regions associated with the reward circuitry were defined as regions of interest (ROIs). The FCs within 11 brain regions and between each ROI and the whole brain were evaluated. Additionally, a correlation analysis was conducted to explore the relationships between abnormal FC and PANSS as well as MCCB

Results For the within network analysis, FES patients showed increased FC between the left ventrolateral prefrontal cortex and the left thalamus compared to healthy controls, and this FC was negatively correlated with negative symptom. For the whole brain analysis, weaker FC (i.e., FC between the left/right NAc and the left precentral gyrus, between the left orbitofrontal cortex (OFC) and the left/right putamen nucleus, the right lingual gyrus, as well as the left medial cingulate cortex, between the right OFC and the bilateral putamen nucleus, between the left ventromedial prefrontal cortex (VMPFC) and the right lingual gyrus, between left dorsomedial prefrontal cortex (DMPFC) and left

precuneus, between right DMPFC and left inferior parietal lobule (IPL), between left putamen nucleus and dorsolateral prefrontal cortex (DLPFC), as well as right and left inferior frontal gyrus (IFG), between right putamen and left anterior cingulate cortex (ACC), left precentral gyrus, as well as right IFG) were exhibited in FES relative to HC. Only one aberrant FC between left putamen nucleus and left hippocampus was increased in FES. It is noteworthy that some abnormal FCs were positively correlated with cognitive functions (e.g. attention/vigilance (AV), verbal learning and memory (VERL), visual learning and memory (VISL)), but this positive correlation was only present in the HC and disappeared in the FES group

Conclusion Conclusions: Our research highlights the abnormal functional connectivity patterns in the reward circuitry in FES, which are significant in relation to negative symptoms. The loss of correlation between certain FCs with cognitive function may also suggest decoupling of the reward circuitry and cognitive-relevant brain regions

关键词: schizophrenia, functional connectivity, reward circuitry, negative symptom, cognitive functions

Association between Blood Mitochondrial DNA Copy Number and Mental Disorders: A Bidirectional Two-sample Mendelian Randomization Study

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Objective Mitochondria is essential in the process of cellular energy production, oxidative stress, and apoptosis. Mitochondrial DNA (mtDNA), serving as the genetic material within mitochondria, encodes essential proteins for mitochondrial function. Although several studies have explored the association between changes in mtDNA copy number (mtDNA-CN) and risk of mental disorders, the results remain debated. This study examined the genetic causality between mtDNA-CN and

mental disorders using a bidirectional two-sample Mendelian randomization (MR) analysis

Methods Single nucleotide polymorphisms associated with mtDNA-CN and seven mental disorders including attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder (ASD), schizophrenia (SCZ), bipolar disorder (BD), major depressive disorder (MDD), anxiety, and obsessive-compulsive disorder (OCD) were sourced from genome-wide association studies. Causal associations were assessed using the inverse variance weighting method, with sensitivity analyses conducted through the weighted median and MR-Egger approaches. Reverse MR considered the seven mental disorders as exposures. All analyses were replicated with additional mtDNA-CN data for robustness

Results Forward MR observed a 27% decrease in the risk of ASD per standard deviation increase in genetically determined blood mtDNA-CN (OR=0.73, 95%CI: 0.58-0.92, p=0.002). However, no causal effects of mtDNA-CN on ADHD, SCZ, BD, MDD, anxiety, and OCD were found. Additionally, reverse MR did not indicate a causal association between any of the mental disorders and mtDNA-CN. Validation analyses corroborated these findings, indicating their robustness

Conclusion Our study provides support for the potential causal association between mtDNA-CN and the risk of ASD, thereby suggesting that mtDNA-CN could serve as a promising biomarker for early screening of ASD

关键词: Mitochondrial DNA copy number; mental disorders; bidirectional; two-sample Mendelian randomization; autism spectrum disorder; genetic causality.

犬尿氨酸代谢产物及细胞因子负荷水平在单相双相抑郁症患者间的差异分析及与临床特征的关联研究

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目的 通过分析单相抑郁症患者与双相抑郁症患者在犬尿氨酸代谢产物水平及细胞因子负荷水平

的差异及其与临床特征的相关性，探究以上因素在抑郁症发病机制中的可能作用。

方法 选取于2020年10月至2022年4月在北京回龙观医院就诊的46例双相情感障碍，目前为抑郁发作的患者、49例首次或多次抑郁发作的患者及同时期在医院周边社区招募的52名年龄及性别比例相匹配的健康对照作为研究对象，使用高效液相色谱法将所有被试血清中的色氨酸、犬尿氨酸、喹啉酸、犬尿喹啉酸等犬尿氨酸代谢产物进行分离，然后使用串联质谱仪进行定量检测；使用酶联免疫吸附实验检测所有被试空腹静脉血中IL-1、IL-1 β 、IL-2、IL-4、IL-6、IL-8、IL-10、TNF- α 、IFN- γ 和TGF- β 的浓度，计算细胞因子负荷（cytokine load, CL）指数（根据健康人群各指标浓度值的75%或25%进行计数0/1，然后进行相加，范围为0-10）。使用汉密尔顿抑郁量表（Hamilton Depression Scale, HAMD）评估患者目前抑郁的严重程度。使用单因素方差分析及事后t检验比较三组被试在犬尿氨酸代谢产物水平和细胞因子负荷指数间的组间差异，使用偏相关分析探究犬尿氨酸代谢异常和CL异常在抑郁症患者临床严重程度及复发中的可能作用。

结果 血清色氨酸、犬尿喹啉酸及喹啉酸的水平在三组间的差异均显著（均 $p < 0.05$ ），见表1。事后两两组间比较发现单相抑郁与双相抑郁患者的血清色氨酸及犬尿喹啉酸水平均显著低于健康对照（均 $p < 0.01$ ），但两患者组间的差异不显著（ $p = 0.653$ ）。双相抑郁组患者的血清喹啉酸水平显著低于单相抑郁组和健康对照组（ p 双相 vs. 单相 = 0.006, p 双相 vs. HC = 0.027），而后两组间差异不显著。CL指数在三组间存在显著差异（ $p = 0.003$ ），见表1。两两组间比较发现单相抑郁组的CL值显著高于双相抑郁组和健康对照组（ p 分别为0.017和0.001），而后两组间差异不显著。偏相关分析仅发现单相抑郁患者组的CL与HAMD总分呈显著负相关（ $r = -0.35$, $p = 0.017$ ），而以上相关性在双相抑郁患者组并不显著。

结论 单、双相抑郁患者均存在显著的犬尿氨酸代谢异常，其中双相抑郁患者更为突出，表现为喹啉酸的水平显著降低；单相抑郁患者的细胞因子负荷水平显著升高，且这可能会对个体产生一定保护作用。反之，如果这种炎症反应水平降低可能会导致个体抑郁的程度更为严重。

关键词：单相抑郁，双相抑郁，犬尿氨酸代谢，细胞因子负荷

血浆外泌体蛋白质组学特征及其与未用药精神分裂症临床症状的相关性研究

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目的 近年来，由于外泌体在物质运输和细胞通讯中发挥的重要作用，其生物学功能逐渐引起广泛关注，特别是在神经系统疾病中的作用备受瞩目。本研究旨在通过对未用药的精神分裂症患者和健康对照的血浆外泌体样本进行蛋白质组学分析，识别与精神分裂症临床症状相关的蛋白质生物标志物。

方法 本研究纳入了符合DSM-5诊断标准的精神分裂症患者10例及年龄、性别、文化程度匹配的健康对照10例。采集受试者晨起空腹静脉血标本，采用液相色谱-串联质谱(LC-MS/MS)技术对蛋白质进行定性和定量分析。数据处理中包括使用NCBI数据库进行蛋白质鉴定，并通过统计学方法评估蛋白质表达的显著差异（采用Bonferroni校正控制多重比较假阳性率）。使用PANSS量表评估患者组的精神症状的严重程度，MCCB评估研究对象的认知功能。

结果 共筛选出261个差异表达的蛋白（Fold Change ≥ 1.2 or ≤ 0.67 且 $P < 0.05$ ），对这些差异蛋白对应的差异基因进行GO注释与富集分析，结果揭示了这些差异蛋白在免疫应答等多个生物过程中发挥作用。在上述的差异蛋白中，按照 $P < 0.001$ 和 $|\log_2 \text{Fold Change}| > 1$ 筛选出29个Top蛋白。与健康对照相比，其中14个蛋白下调，15个蛋白上调。以年龄和性别作为协变量，对Top蛋白和精神病性症状进行偏相关性分析，结果发现：LRIG1与阴性症状显著相关（ $r = 0.68$, $P = 0.044$ ），LIN7C与一般症状（ $r = -0.75$, $P = 0.020$ ）及PANSS总分（ $r = -0.62$, $P = 0.035$ ）显著相关，RAD23A与一般症状（ $r = 0.83$, $P = 0.012$ ）及PANSS总分（ $r = 0.84$, $P = 0.009$ ）显著相关。进一步探索Top蛋白与认知功能的相关性时发现，4个下调蛋白KRT4、RBP5、NOTCH4和HLA.DPB1与不同认知功能指标存在显著相关性：KRT4与处理速度（ $r = -0.76$, $P = 0.046$ ）、神经认知（ $r = -0.85$, $P = 0.014$ ）及MCCB总分（ $r = -0.82$, $P = 0.024$ ）相关；RBP5与神经认知相关（ $r = -0.85$, $P = 0.014$ ）；NOTCH4与社会认知相关（ $r = -0.86$,

$P=0.014$)；HLA-DPB1 与言语学习相关($r=-0.77$, $P=0.043$)。

结论 本研究发现未用药的精神分裂症患者存在显著差异表达的蛋白质，这些差异蛋白有可能作为精神分裂症发生和发展的潜在生物标志物。通过进一步研究这些蛋白质的功能和作用机制，可以为精神分裂症的早期诊断和个体化治疗提供新的线索和靶点。

关键词：精神分裂症；外泌体；蛋白标志物

精神分裂症外周炎症因子、脑结构与认知功能障碍的研究

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目的 探究精神分裂症患者与健康人群皮层结构与形态的差异性，以及外周炎症因子对精神分裂症患者脑结构和认知功能的影响。

方法 该研究共纳入精神分裂症患者 42 例和健康对照人群 56 例，所有被试均进行磁共振扫描以及血样采集。通过酶联免疫吸附试验 (ELISA) 检测血浆外周炎症因子 IL-1 β 、IL-2、IL-4、IL-6、IL-8、IL-10、IL-12 和 IL-17 的浓度。采用阳性和阴性症状量表 (PANSS) 评估患者精神症状，重复性成套神经心理状态测验 (RBANS) 量表评估被试的认知功能。采用基于体素的形态学方法 (VBM) 和基于表面的形态学方法 (SBM) 测量皮层、皮层下体积、皮层厚度、沟深、皮层褶皱和皮层复杂度。VBM、SBM 分析分别基于 AAL3 图谱和 DK40 图谱进行组间差异的比较。采用斯皮尔曼相关分析进一步探究外周炎症因子对显著差异脑区的影响，控制年龄和受教育年限的偏相关分析探究外周炎症因子对认知功能的影响。以颅内总体积、年龄和受教育年限为协变量，探究脑结构在外周炎症因子对认知功能的影响中的中介作用。

结果 精神分裂症患者 RBANS 亚量表评分包括即刻记忆 ($t=6.394$, $p<0.001$)、视觉广度 ($t=3.269$, $p=0.002$)、言语功能 ($t=5.683$, $p<0.001$)、注意力 ($t=8.788$, $p<0.001$)、延时记忆 ($t=5.734$, $p<0.001$) 和总分 ($t=8.190$, $p<0.001$) 均显著低于健康对照。患者组和对照组的外周炎症因子水平

均无显著统计学差异。此外，患者海马、左侧颞下回、右侧梭状回、右侧距状裂周围皮层、右背内侧大细胞区体积比健康对照者低 ($p<0.005$, 未校正)，而豆状苍白球、左侧豆状壳核的体积比健康对照者高 ($p<0.005$, 未校正)。患者组右侧横向颞叶皮层厚度比健康对照者低 ($p<0.005$, 未校正)，左外侧眶额叶、左侧额极和左缘上回的皮层复杂度比健康对照组高 ($p<0.005$, 未校正)。精神分裂症患者 IL-10 与 RBANS 言语功能亚量表评分呈正相关 ($r=0.367$, $p=0.019$)，而在对照组这一相关性不显著。患者左侧额极的皮层复杂度与言语功能量表评分呈正相关 ($r=0.538$, $p<0.001$)。在患者组，左侧额极的皮层复杂度介导了 IL-10 对言语功能的正向影响 ($\beta=0.371$, bootstrap 95% CI: 0.015-0.086)。

结论 外周炎症可能通过影响脑结构的变化从而影响精神分裂症患者的认知功能，有待大样本、多中心研究验证这一发现。

关键词：精神分裂症，皮层形态，认知功能障碍

单/双相抑郁额叶 alpha 波不对称的差异比较

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目的 通过额叶 alpha 波不对称 (FAA) 比较单双抑郁与健康人群，以及单双相抑郁之间在神经电生理存在的差异，以期对单/双相抑郁的诊断及鉴别诊断寻求潜在的客观指标。

方法 本研究招募符合 DSM-5 “重性抑郁障碍” (UD) 和“双相 I 型障碍/双相 II 型障碍，目前为抑郁发作” (BD) 诊断标准的患者，UD 组共招募 32 例，BD 组共招募 35 例，同时招募 30 例健康组。所有患者均接受简明国际神经精神临床定式访谈以明确诊断。用汉密尔顿抑郁量表、汉密尔顿焦虑量表、杨氏躁狂量表以及 32 项轻躁狂症状清单对受试者进行评估。所有受试者均采集睁眼、闭眼各 5 分钟的静息态脑电图数据，对脑电数据进行预处理，取 3 分钟预处理后的脑电数据，提取各通道功率谱密度，计算 FP1/FP2、F3/F4 以及 F7/F8 位置的 FAA 值。通过 SPSS26.0 比较三组间临床资料及 FAA 的差异性。

结果 在闭眼状态下, UD 组、BD 组在 F3/F4 及 F7/F8 通道的 FAA 值均小于 HC 组 ($P<0.05$); UD 组与 BD 组在 F3/F4、FP1/FP2、F7/F8 通道的 FAA 值均未见明显统计学差异 ($P>0.05$); 在睁眼状态下, 三组在 F3/F4、FP1/FP2 及 F7/F8 的 FAA 值均不存在统计学差异 ($P>0.05$)。在睁眼和闭眼状态下, UD 组在 F3/F4 的 FAA 值为负值且最小; BD 组在 F3/F4 的 FAA 值为负值且最小。

结论 FAA 可能与抑郁状态有关, 但是在单/双相抑郁之间 FAA 值差异不明显。单/双相抑郁均在 F3/F4 右偏侧化最严重, 提示背外侧前额叶脑区可能与抑郁状态最为相关。

关键词: 单相抑郁, 双相抑郁, 额叶 alpha 波不对称, 脑电图

单/双相抑郁患者前额叶的功能性近红外光谱差异比较。

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目的 单/双相抑郁是常见的精神疾病, 然而单/双相的发病机制目前尚不清楚, 其诊断及鉴别诊断主要依靠患者的临床表现及医生的临床经验, 缺乏可靠的客观指标。本研究通过功能性近红外光谱 (fNIRS) 去比较单/双相抑郁患者在前额叶存在的差异, 以期为单/双相抑郁的鉴别寻求潜在的客观指标。

方法 本研究招募符合 DSM-5 “重性抑郁障碍”(UD) 和“双相 I 型障碍/双相 II 型障碍, 目前为抑郁发作”(BD) 诊断标准的患者, UD 组共招募 32 例, BD 组共招募 35 例, 同时招募 30 例健康组 (HC)。所有患者均接受简明国际神经精神临床定式访谈以明确诊断。用汉密尔顿抑郁量表、汉密尔顿焦虑量表、杨氏躁狂量表、贝克自杀意念量表以及 32 项轻躁狂症状清单对受试者进行评估。所有受试者均采集在言语流畅性任务下的 fNIRS 数据。对 fNIRS 数据进行预处理, 对预处理后的 fNIRS 数据提取各通道平均氧合血红蛋白浓度 (Oxy-Hb)。通过 SPSS26.0 比较三组间 fNIRS 平均 Oxy-Hb 浓度的差异, 并分析 FAA、fNIRS 平均 Oxy-Hb

浓度与 HAMD-17、HAMA、BSS 评分的相关性。

结果 比较各通道平均 Oxy-Hb 浓度变化, UD 组、BD 组在 Broca 脑区、背外侧前额叶区和额极区所在通道的平均 Oxy-Hb 均小于 HC 组 ($P<0.05$); 在背外侧前额叶区 (通道 17、通道 20) UD 组与 BD 组平均 Oxy-Hb 存在统计学差异 ($P<0.05$)。比较前额叶脑区平均 Oxy-Hb 浓度变化, UD 组、BD 组平均 Oxy-Hb 均小于 HC 组 ($P<0.05$)。在 UD 组, Broca 区通道 (3、5、49) 平均 Oxy-Hb 浓度与 HAMA 评分呈正相关 ($P<0.05$)。

结论 fNIRS 的 Oxy-Hb 指标有助于单/双相抑郁的鉴别, 背外侧前额叶可能是单/双相抑郁鉴别的重要脑区。单/双相抑郁前额叶的活跃程度均减低, 提示前额叶可能参与了单/双相抑郁的发病机制。单相抑郁患者 Broca 区的血流动力学变化与焦虑程度有一定的相关性。

关键词: 抑郁障碍, 双相障碍, 功能性近红外光谱

Mapping The Involvement of Vitamin B12 in The Development of Affective Disorders Through Peripheral and Central Pathways

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Objective Affective disorders are attention-gathering for the contribution to global burden of disease. To date, accumulating evidence concluded from previous research has indicated the effect of Vitamin B12 (VitB12) on affective disorders. However, to which extent does this molecule affect the brain function, as well as the underlying mechanisms require further elucidation

Methods A comprehensive search of literature registries was conducted for studies focusing on VitB12 and affective disorders and published between January 1st, 1969 and June 1st, 2024

Results The involvement of VitB12 in the peripheral mainly refers to blood circulation, while the

GBA-related mechanisms make up the majority of central pathways. Deficits of VitB12 lead to accumulation of homocysteine, which substantially results in emotional and behavioral abnormalities. VitB12 is also engaged in synapsis plasticity, neuron stability, and neuroinflammation through regulation of several bioactive factors. The above interactions in turn alleviate damage of the hippocampus and the blood-brain barrier, reduce reactive oxygen, and substantially increase the structural and functional connectivity of the brain, which eventually contributes to resilience of affective disorders. It is also released that both diet- and microbiota-derived VitB12 compose gut homeostasis. In the gut lumen, VitB12 maintains the stability of gut microbiota, promotes the production of short-chain fatty acids (SCFAs), as well as provides the metabolism of neurotransmitters such as serotonin and dopamine with S-adenosyl-l-methionine (S-AdoMet). SCFAs, S-AdoMet, as well as VitB12 itself, are involved in the stabilization of gut microenvironment, protection of the gut-blood barrier, and prevention of neuroinflammation, eventually reducing the susceptibility of affective disorders

Conclusion It is speculated that VitB12 is involved in the pathophysiology of affective disorders as a potential linkage rather than a modulator with fully-explored mechanisms

关键词: Vitamin B12; Peripheral circulation; Gut-brain axis; Affective disorders

不同性别首发未用药精神分裂症患者血清 VEGF 水平与临床症状的相关性

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目的 探讨不同性别首发未服药精神分裂症患者血清血管内皮生长因子(vascular endothelial growth factor,VEGF)水平及其与临床症状的相关性。

方法 纳入 2016 年 1 月至 2019 年 10 月就诊的首发未服药精神分裂症患者 81 例(患者组,男 41 例,女 40 例),健康对照 64 名(对照组,男

40 例,女 24 例)。血清 VEGF 水平采用流式

多重蛋白分析技术(cytometric bead array,CBA)测定;使用阳性与阴性症状量表(positive and negative syndrome scale,PANSS)评定患者相关临床症状。采用 SPSS 22.0 进行统计分析。组间比较采用独立样本 t 检验、非参数检验,VEGF 与临床变量关系采用 Pearson 相关分析和 Spearman 相关分析。

结果 患者组血清 VEGF 水平明显低于对照组 [148.08 (75.89,208.61)pg / mL,179.94(99.14,318.41)pg / mL,Z= -2.20,P= 0.028];男性患者的 PANSS 总分 [(82.71±17.30)分,(73.45±16.36)分,t= 2.473,P= 0.016]和认知分[(7.88±3.36)分,(6.23±2.81)分,t= 2.402,P= 0.019]均高于女性患者。患者组 VEGF 水平与 PANSS 阴性症状评分呈负相关(r=-0.228,P= 0.041),男性患者组 VEGF 水平和认知评分呈负相关(r= -0.425,P= 0.007)。

结论 首发精神分裂症患者血清 VEGF 水平下降,并影响其阴性症状。男性首发精神分裂症患者血清 VEGF 可能对其认知功能有一定影响。

关键词: 精神分裂症; 首发未用药; 血管内皮生长因子; 性别; 阴性症状; 认知

Genome-wide Association Analysis of Gut Microbiome in Major Depressive Disorder: Associations with Mitochondrial DNA Variants

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Objective To explore the interaction between gut microbiota disturbances and impaired mitochondrial function in the development of major depressive disorder (MDD)

Methods We used shotgun metagenomic sequencing to explore fecal microbiome based on 63 MDD patients and 30 healthy controls (HCs). Then we performed GWAS for the discriminative taxonomic features of gut microbiota to identify genetic associations between gut microbiome and mitochondrial DNA (mtDNA) in MDD

Results Characteristic gut microbiome-based features, including significant differences in gut microbiota composition and 101 differentially enriched gut microbial species, were found in MDD vs HCs groups. 68 mitochondrial single-nucleotide polymorphisms (mtSNPs) shared between the two groups were identified with a GWAS significance of $P < 5 \times 10^{-6}$. The genetic variants and their associated gut microbes were mapped to mitochondrial genome, most of which were located in coding regions, including MT-ND, MT-ND4L, MT-ND5, MT-ND6; MT-CO, MT-CO3; MT-RNR, MT-RNR, and MT-TE. Manhatan plots showed 9 mtSNPs in MDD group and 10 mtSNPs in HCs group were associated with 20 gut microbial species at a significance of $-\log_{10}(p) > 20$. Furthermore, Sankey diagram was used to visualize the relationships of gut microbiota and mitochondrial DNA (mtDNA). 36 mtSNPs ($-\log_{10}(p) > 5$) were shown to be associated with 54 gut microbes in crosslinked patterns

Conclusion The current findings provide substantial evidence that complex interactions between gut microbiota and mtDNA contribute to MDD, which enables a better understanding of MDD pathogenesis and suggests new leads for future investigations.

关键词: Major depression disorder; Mitochondrial DNA; Gut microbiome; Mitochondrial single-nucleotide polymorphisms; Shotgun metagenomic sequencing; Genome-wide association analysis

抑郁障碍、双相抑郁客观睡眠特征及心率变异性对诊断的影响

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目的 本研究利用心肺耦合分析技术对抑郁障碍及双相抑郁患者的客观睡眠状况及心率变异性进行分析, 挖掘对双相抑郁患者诊断具有独特贡献的关键因子, 从而为临床上更为精准的诊断与鉴别诊断提供有力的科学依据。

方法 分别纳入符合 ICD-10 诊断标准的抑郁

障碍及双相抑郁患者, 本研究统计收集人口学资料及临床资料和汉密尔顿抑郁量表(HAMD-24), 并用心肺耦合分析(CPC)技术, 监测患者的客观睡眠质量以及心率变异性(HRV)。

结果 本研究共纳入抑郁症患者 263 例、双相抑郁患者 228 例。两种疾病患者在一般人口学方面不存在显著差异。单相抑郁患者家族史阳性率明显低于双相抑郁患者, 单相抑郁患者总病程时间明显短于双相抑郁患者(见表 1)。单相抑郁患者在总睡眠时间、睡眠效率方面显著高于双相抑郁障碍患者, 在觉醒次数方面显著低于双相抑郁障碍患者(见表 2)。单相抑郁患者在总的 R-R 间期标准差(SDNN)、RR 间期平均值标准差(SDANN)、相邻 RR 间期的均方根(RMSSD)、低频功率(LF)、高频功率(HF)方面均显著高于双相抑郁障碍患者(见表 3、4)。以是否为双相抑郁为因变量, 单变量分析中有差异的因子为自变量, 采用二元 Logistic 分层回归分析, 结果显示家族史、总病程与双相抑郁显著相关, RR 间期标准差、RR 间期平均值标准差是双相抑郁的独立危险因素(见表 5)。

结论 1. 双相抑郁患者在家族史阳性率、总病程方面较单相抑郁更突出。2. 单相和双相抑郁在客观睡眠质量上表现出不同的模式。3. 双相抑郁患者心率变异性改变较单相抑郁患者明显。4. 单相抑郁与双相抑郁之间存在交感神经活动强度的差异。

关键词: 单相抑郁; 双相抑郁; 睡眠质量; 心率变异性

Ethylene Oxide Exposure, Inflammatory Indicators, and Depressive Symptoms: A Cross-sectional Study and Mediation Analysis

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Objective Ethylene oxide (EO) is a volatile compound positively correlated with respiratory and cardiovascular diseases. Currently, evidence suggests that environmental exposure may contribute to depressive symptoms. This study evaluated the correlation between EO exposure and depressive symptoms and investigated

whether inflammatory indicators had a mediation effect on the correlation

Methods Patients were enrolled from the National Health and Nutrition Examination Survey during 2013–2016, and 2,801 (49.40% male and 50.60% female) participants were ultimately included. EO exposure was measured via hemoglobin-EO adduct (HbEO) concentration due to its long half-life, which was log₂-transformed. Depressive symptoms were assessed using the Patient Health Questionnaire-9. Multivariable logistic regression analysis was performed to identify any correlations before and after covariate adjustment. Sensitivity analysis, subgroup analyses and interaction tests were performed to further evaluate identified correlations. Mediation analysis was conducted to reveal whether certain inflammatory indicators mediated the correlation

Results A positive correlation was observed between EO exposure and depressive symptoms (odds ratio [OR]: 1.426, 95% confidence interval [CI]: 1.299, 1.566), which remained stable after covariate adjustment (OR: 1.301, 95% CI: 1.140, 1.484). The interaction test revealed that sex ($p < 0.001$) and the poverty-to-income ratio ($p = 0.050$) significantly contributed to the correlation. In the causal mediation analysis, the white blood cell ($p = 0.022$) and neutrophil counts ($p = 0.010$) exerted a mediating effect, comprising 15.6% and 14%, respectively

Conclusion A higher degree of EO exposure increases the risk of depressive symptoms, where the WBC and neutrophil counts exert a significant mediating effect. Further prospective studies are required to confirm these findings.

关键词: depressive symptoms; ethylene oxide; inflammatory marker; lymphocytes; neutrophils; white blood cells

以日间过度嗜睡为主诉的青少年抑郁 1 例并文献分析

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目的 报告以日间过度嗜睡(EDS)为主诉的青少年抑郁 1 例,并复习相关文献,探讨日间过度嗜睡与青少年抑郁之间的关联性和可能的作用机制。

方法 报告所诊治的以日间过度嗜睡为主诉的青少年抑郁病例 1 例,分析其临床表现,结合现有的医学文献和研究成果,探讨导致青少年抑郁患者出现日间过度嗜睡症状的可能原因,为今后的诊治提供思路。

结果 本例失眠患者的多导睡眠监测(PSG)结果为睡眠潜伏期延长,觉醒次数增多,睡眠结构异常,1期及REM期睡眠比例增多,2期、3期睡眠比例减少,睡眠效率下降。多次睡眠潜伏期试验(MSLT)结果为5次小睡中有3次进入睡眠,平均睡眠潜伏时间均值10.6分钟,无起始REM睡眠(SOREMP)。心理测验结果为宗氏抑郁自评量表(SDS)显示重度抑郁,宗氏焦虑自评量表(SAS)显示重度焦虑。住院期间予抗抑郁药物、心理治疗等治疗,同时督促患者保持规律的作息时间和适当参加体育锻炼和社交活动。患者日间嗜睡症状明显好转,夜间睡眠质量改善,抑郁情绪减轻。

结论 青少年抑郁障碍患者的日间过度嗜睡症状较为常见。与日间过度嗜睡发生可能相关的因素包括学业压力、家庭环境、体质指数的升高、抑郁病情的加重、各种原因导致的昼夜节律紊乱等。考虑到日间嗜睡对患者预后的负面影响,应对该亚类人群进行定期评估、适当干预和临床管理。

关键词: 日间过度嗜睡;青少年抑郁

经颅电刺激技术在精神疾病治疗中的新进展: tACS 的临床应用

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背景 在精神疾病的治疗领域,尽管药物治疗和心理治疗构成了当前治疗策略的基石,但它们在应对复杂病理机制和个体差异时,仍面临着一定的治疗瓶颈。许多精神和神经疾病可以被视为振荡病,这是由于大脑网络振荡发生了病理性变化。目前无创性脑刺激技术因其对脑网络动力学和行为的潜在影响而被广泛应用于实验和临床领域。近年来,特

别是经颅交流电刺激 (tACS), 因其潜在的疗效和较少的副作用, 成为研究的热点。

目的 本文旨在综述 tACS 技术在精神疾病治疗中的新进展, 探讨其临床应用的潜力和挑战。

方法 通过文献回顾, 我们分析了 tACS 在治疗抑郁症、焦虑症、精神分裂症、慢性失眠等精神疾病中的研究进展。我们特别关注了 tACS 的机制、刺激参数、治疗频率和持续时间, 以及临床试验的结果。

结果 研究表明, tACS 能够通过调节大脑的振荡活动来影响神经网络的功能。在抑郁症治疗中, tACS 显示出改善情绪和睡眠质量的潜力。对于焦虑症患者, tACS 的应用可能有助于减少焦虑症状。此外, tACS 在精神分裂症的治疗中也显示出一定的疗效, 尤其是在改善认知功能方面。

讨论 tACS 作为一种新兴的治疗手段, 其临床应用前景广阔。然而, 目前的研究仍存在一些问题, 如个体差异、治疗参数的标准化、长期疗效和安全性等。未来的研究需要进一步优化 tACS 的治疗方案, 并进行大规模的随机对照试验来验证其疗效和安全性。

结论 tACS 作为一种非侵入性脑刺激技术, 在精神疾病治疗中展现出巨大的潜力。随着技术的不断进步和研究的深入, tACS 有望成为精神疾病治疗的重要补充, 为患者提供更多的治疗选择。

关键词: 经颅交流电刺激, 精神科, 神经调控, 认知功能, 情绪调节

伴有焦虑症状双相抑郁患者认知功能损害与 GRIN2B 基因启动子区 DNA 甲基化的相关性研究

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目的 探索伴有焦虑症状双相抑郁患者认知功能与 N-甲基-D-天冬氨酸受体 2B 亚基 (Glutamate ionotropic receptor NMDA type subunit 2B, GRIN2B) 基因启动子区各 CpG 位点甲基化水平的相关性。

方法 根据汉密尔顿焦虑量表 (14-item Hamilton anxiety rating scale, HAMA) 评分将 31 名双相抑郁患者分为有焦虑症状组 15 例, 无焦虑症状组 16

例。同期选取 16 名健康对照。采用蒙特利尔认知评估量表 (Montreal Cognitive Assessment, MoCA)、数值广度测验 (Digital Span Test, DST)、连线测试 A 部分 (Trail making test A, TMT-A)、斯特鲁普色词测验 (Stroop Color and Word Test, SCWT) 评估三组认知功能, 采用 Massarray 质谱法检测所有受试者外周血 GRIN2B 基因启动子区各 CpG 位点的 DNA 甲基化水平。

结果 三组 GRIN2B 基因启动子区 DNA 甲基化水平差异性位点为 CpG3、CpG5、CpG7、CpG10、CpG12 ($P < 0.05$); 其中 CpG12 甲基化水平, 焦虑组 ($36.23\% \pm 16.41\%$) 低于非焦虑组 ($50.20\% \pm 19.79\%$)。偏相关分析示, 命名能力与 GRIN2B 基因 CpG4 高甲基化水平相关 ($r = 0.670, P = 0.034$), 执行功能与 CpG6 高甲基化水平呈相关 ($r = 0.926, P < 0.001$), 注意力与 GRIN2B 基因 CpG8 低甲基化水平相关 ($r = -0.810, P < 0.05$), 言语记忆与 CpG9 低甲基化水平相关 ($r = -0.810, P < 0.001$), 抽象能力与 CpG10 低甲基化水平相关 ($r = -0.756, P = 0.011$)。

结论 GRIN2B 基因启动子区 DNA 甲基化水平与双相抑郁患者认知功能损害及焦虑症状的产生有关联。

关键词: DNA 甲基化; 双相障碍; 抑郁发作; 认知功能; 焦虑症状; N-甲基-D-天冬氨酸受体 2B 亚基;

双相抑郁患者失眠相关执行功能损害与 NR2B 基因启动子区甲基化水平的关系

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目的 探讨 N-甲基-D-天冬氨酸受体 2B 亚基 (N-methyl-D-aspartate receptor 2B subunit, NR2B) 基因启动子区甲基化水平与双相抑郁患者失眠相关执行功能损害的相关性。

方法 选取我院双相抑郁患者 31 例及健康对照 16 例, 采用斯特鲁普色词测验 (Stroop Color and Word Test, SCWT) 测定所有受试者的执行功能; 同时测定所有受试者外周静脉血 NR2B 基因启动子区

各 CpG 位点的甲基化水平, 采用偏相关分析 NR2B 基因启动子区各位点甲基化水平与双相抑郁患者失眠相关执行功能损害的相关性以及采用二元 Logistics 回归分析其与双相抑郁患者失眠症状的关联。

结果 NR2B 基因启动子区 CpG10 甲基化水平与 SWCT 单词及颜色个数呈中度正相关($r=0.569$, $P<0.05$), 且 CpG6 甲基化水平与 SWCT 色词个数呈中度正相关($r=0.558$, $P<0.05$)。高汉密尔顿抑郁量表评分($P=0.034$, $OR=0.729$, $95\%CI: 0.544\sim 0.976$) 和位点 CpG9 的高甲基化水平($P=0.028$, $OR=0.814$, $95\%CI: 0.677\sim 0.978$) 为双相抑郁患者失眠症状的危险因素($P<0.05$)。

结论 NR2B 基因启动子区甲基化水平异常可能介导双相抑郁患者失眠症状的产生并与失眠相关执行功能受损有关。

关键词: 双相抑郁; N-甲基-D-天冬氨酸受体 2B 亚基; DNA 甲基化; 失眠; 执行功能;

C-reactive Protein Mediates The Correlation between Ambient Particulate Matters and Lipid Levels Among Patients with Depression

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Objective Lipid profile disturbances are frequently observed in depressive disorder and constitute to high mortality rates. Recent studies have linked ambient air pollution to blood lipid levels. However, no studies have investigated the relationship between ambient air pollution exposure and lipid levels in depressed patients, and the biological mechanism underlying the

associations remains unclear. An increasing body of evidence demonstrates a close interplay between inflammatory factors and lipoprotein metabolism. We therefore investigated the association of long-term exposure to particles with diameters $\leq 2.5 \mu\text{m}$ and $\leq 10 \mu\text{m}$ (PM2.5 and PM10) with blood lipid levels and C-reactive protein (CRP), a sensitive marker of systemic inflammation, in depressed patients

Methods A total of 538 patients with depression who were hospitalized at the Fourth People's Hospital of Hefei between June 2017 and December 2021 were included. We estimated ambient particulate matters exposure, including PM2.5 and PM10, using a satellite-based spatiotemporal model at a resolution of 1 km². Individual serum levels of cholesterol (TC), triglycerides (TG), high-density lipoprotein cholesterol (HDL-C), and C-reactive protein (CRP) were measured. The association between ambient particulate matters and lipid levels and CRP was examined using multiple linear regression models, adjusted for potential confounders. Moreover, we performed a mediation analysis to estimate the direct effects of ambient particulate matters exposure on lipid levels and any indirect effects through CRP. Model adjusted for age, sex, educational level, family income, employment, smoking status, drinking status, physical activity, season of visit

Results We observed that exposure to PM2.5 and PM10 were all positively associated with TC and CRP and negatively associated with HDL-C. Each interquartile range (IQR) increment of 12-month average PM2.5 was associated with 4.6% [95% confidence interval (CI): 1.5%–7.7%] and 27.7% (95%CI: 9.4%–46.1%) increment in TC and CRP, and 4.5% (95%CI: 0.8%–8.3%) decrease in HDL-C. And each interquartile range (IQR) increment of 12-month average PM10 was associated with 4.6% [95% confidence interval (CI): 2.0%–7.2%] and 24.9% (95%CI: 9.4%–40.4%) increment in TC and CRP, and 4.2% (95%CI: 1.0%–7.3%) decrease in HDL-C. On mediation analysis, CRP mediated the relationship between PM2.5, PM10 exposure and TC, the mediating effect proportion were 17.80% and 14.93%, respectively. Meanwhile, the association between PM2.5, PM10 exposure and HDL-C was also

significantly mediated by CRP, the mediating effect proportion were 15.14% and 13.61%, respectively

Conclusion Our study suggests that long-term PM_{2.5} and PM₁₀ exposure had significantly adverse effects on blood lipid levels in depressed patients. And CRP may play an important role in mediating effects of ambient particulate matters exposure on blood lipid levels

关键词: Air pollution exposure, PM_{2.5}, PM₁₀, Depression, Lipid levels, C-reactive protein

Genetic Relationships and Biological Pathways Underlying Suicidality and Comorbid Mental Disorders

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Objective The close relationships between mental disorders and suicidality are frequently seen in epidemiology. One potential explanation lies in shared genetic liabilities, hence we aimed to investigate the phenotypic and genetic associations between multiple mental disorders and different levels of suicidality

Methods Using UK Biobank (UKB) raw data for European population, we first evaluated the phenotypic and polygenic relationships between 12 mental disorders and gradient scales of suicidality (spanning suicidal ideation, suicide attempts, and suicidal death). Second, we used existing genome-wide association study (GWAS) summary statistics to estimate genetic correlations and to identify pleiotropic gene using a combination of statistical genetics tools. Summary statistics were accessed from Psychiatric Genomics Consortium (major depressive disorder [MDD], bipolar disorder [BD], anxiety disorders [ANX], obsessive-compulsive disorder [OCD], anorexia nervosa [AN], autism spectrum disorder [ASD], attention deficit hyperactivity disorder [ADHD], schizophrenia [SCZ], cannabis use disorder [CUD], and post-traumatic stress disorder

[PTSD]), Million Veterans Program (alcohol use disorder [AUD] and opioid use disorder [OUD]), or their joint analysis. Third, using shared genetic liabilities as instrument, we further explored possible causal relationship between mental disorders and suicidality by structural equation models (SEM) or Mendelian randomizations (MR). Last, we accessed All of Us (AoU) diverse cohort data for replication in other non-European populations

Results For UKB, 150,861 eligible individuals (58% females) were retained after standard GWAS quality control. Eight out 12 mental disorders (MDD, BD, ANX, AUD, OCD, AN, ASD and ADHD) showed both significant phenotypic and polygenic correlations with gradient suicidality (false discovery rate <0.05). Among them, the impact of MDD and BD on suicidality were the most obvious (for MDD: OR=5.78 and 1.26 at phenotypic or polygenic level; for BD: OR=12.98 and 1.14 at phenotypic or polygenic level). Using GWAS summary statistics, we also observed positive global and regional genetic correlations between those 12 mental disorders and suicidality (rg ranging from 0.25 (1 locus) to 0.68 (254 loci), $p < 0.001$). Across pairs of suicidality and other mental disorders, we identified 71 functional genes shared by two or more pairs. Twenty-seven of these genes were prioritized based on brain tissue expression, single-cell types, the GWAS Catalog, protein-level and drug-gene association, including novel genes associated with suicidality, such as BPTF, BTN3A2, and YPEL3. These genes were significantly enriched in 8 Gene Ontology sets like developmental process and regulation of biological process, and one KEGG pathway alcoholism. Causal models revealed nominate causality from genetic diatheses of MDD, BD, AUD, ADHD, ASD (two sample and multivariable MR and SEM) to risk of suicidality. A few of these cross-phenotype associations with suicidality were also replicated in AoU African and Asian populations (e.g., $p < 0.05$ for MDD and BD polygenic associations)

Conclusion This study underscores the urgent need to address the shared genetic architecture of suicidality and its related mental conditions. The combination of longitudinal population-level biobanks and disease-ascertained GWAS data are warranted to further

enhance our understanding of this complex phenomenon. Our research findings will guide future suicide prevention among individuals with or without major mental disorders

关键词: suicidality, comorbidity, complex traits, genotype-phenotype correlations, genetic epidemiology

慢性精神分裂症患者的述情障碍在童年创伤和阴性症状之间的中介作用

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目的 本研究旨在探讨慢性精神分裂症患者童年创伤与阴性症状之间的关系,并考虑述情障碍在其中扮演重要的中介作用。

方法 选自2022年6月至2023年3月于天津市安定医院住院的94名慢性精神分裂症患者(符合精神分裂症的DSM-5诊断标准;病程 ≥ 1 年;接受稳定剂量的抗精神病药物治疗 > 6 个月。),采用童年创伤问卷(CTQ)来评估患者在成长过程中是否经历过创伤性事件,阳性和阴性症状量表(PANSS)来评定患者的精神病理症状,多伦多述情障碍量表(TAS-20)对于患者述情障碍程度进行评估。应用SPSS 27进行统计分析,运用Pearson相关性分析来检验CTQ量表与TAS-20和PANSS的相关性,结构方程模型来检验假设的中介模型。

结果 超过70.1%的参与者报告曾经历过童年创伤。其中,情感忽略分数的平均值最高(12.43 ± 4.84),躯体忽略的发生率最高(61.17%, $n=58$)。我们发现,在慢性精神分裂症患者中,CTQ的总分与PANSS的阴性分相关($r=0.30, p=0.003$)。分量表中躯体虐待($r=0.27, p=0.009$)和躯体忽略($r=0.29, p=0.005$)与阴性症状程度存在显著相关。述情障碍程度越高,阴性症状越严重($r=0.35, p=0.001$)分量表中情感辨别障碍 DIF($r=0.31, p=0.002$)、情感表达障碍 DDF($r=0.25, p=0.016$)、外向型思维 EOT($r=0.27, p=0.010$)均与阴性症状表现出明显的相关性。童年创伤程度越高,述情障碍程度越高($r=0.30, p=0.004$),其中,情感虐待($r=0.30, p=0.003$)、躯体虐待($r=0.30, p=0.004$)、性虐待($r=0.30, p=0.003$)与阴性分存在明显正相关。

进一步的中介效应分析显示,情感辨别障碍(95%CI [0.001, 0.085])和外向型思维(95%CI [0.001, 0.060])在童年创伤对阴性症状产生影响时起到中介作用。

结论 慢性精神分裂症患者的童年创伤与阴性症状严重程度呈正相关,述情障碍在童年创伤与阴性症状之间起到中介作用。这一中介作用的发现为探索童年创伤对精神分裂症阴性症状的影响提供了新的视角。

关键词: 精神分裂症 阴性症状 童年创伤 述情障碍 中介效应

Effects of MC1R and BIN1 Gene Polymorphisms on Chinese Patients with Alzheimer's Disease and Mild Cognitive Impairment

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Objective Alzheimer's disease (AD) and Mild cognitive impairment (MCI) are complex diseases influenced by genetic polymorphisms. The most recognized genetic polymorphism is currently the APOE $\epsilon 4$ allele. In recent years, MC1R and BIN1 have been shown to be involved in the formation of pathological substances in neurodegenerative diseases. Therefore, the main objective of this study was to investigate whether MC1R and BIN1 polymorphic genes are associated with the development of AD and MCI and the synergistic role of these two genes in the disease with APOE

Methods A total of 134 AD patients (57 males), 416 MCI patients (180 males) and 509 healthy controls (249 males) were collected. Statistical analysis was performed using SPSS 24.0 and State software

Results Logistic regression analysis showed that APOE $\epsilon 4$ is a risk factor for AD, and the BIN1rs7561528 G allele reduces the risk of AD by a factor of 0.22. In addition, in patients with MCI, the MC1Rrs2228479 AG genotype and BIN1 rs7561528 GG genotype interacted between APOE $\epsilon 4$, respectively

Conclusion Our study found that the BIN1rs7561528 GG genotype has the highest risk of

MCI. The MC1R gene and BIN1 gene in MCI patients have close interaction with the APOEε4 gene. The rs7561528 G allele is a protective gene for AD

关键词: MC1R, BIN1, APOE, Alzheimer's disease, mild cognitive impairment, interaction

母子同步运动训练对青少年抑郁症的影响

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目的 探索母子同步运动是否可以改善母子间同步, 以及母子间同步的改善是否能对青少年情绪调节以及抑郁症状产生影响。

方法 采用随机对照实验方法, 干预组在常规治疗外, 需同时完成为期 8 周的母子同步运动治疗, 对照组只维持常规治疗。治疗结束前后时间点要求干预组和对照组在脑电数据收集的同时完成情绪调节实验(要求受试者根据负性观看、负性重评和中性观看条件对给出的图片进行情绪评分)和合作竞争实验(要求受试母子对在完成合作/竞争条件下完成操控海豚接球)以及在干预治疗前后时间点完成临床评估。

结果 干预组在干预治疗后母子间合作成功率高于干预治疗前, 对照组干预治疗后时间点母子间合作成功率低于治疗前。干预组治疗后负性观看条件下情绪评分低于干预治疗前。干预组治疗后汉密尔顿抑郁量表得分低于干预治疗前, 对照组前后无明显变化。脑电结果 Theta 频段额顶叶脑区在合作刺激后 550-850ms 表现出, 干预组干预治疗后母子间大脑同步较干预治疗前有升高趋势, 而对照组母子间大脑同步则表现出干预治疗后时间点小于干预治疗前的趋势。干预组中母子行为同步变化与脑间同步变化存在正相关。全部受试者母子同步变化与青少年情绪调节变化之间存在正相关。

结论 母子同步运动可以增加母子的行为同步以及脑间同步, 母子间同步的变化影响青少年情绪调节。通过改善抑郁症青少年母子间同步可能会改善抑郁症青少年的抑郁症状。

关键词: 青少年抑郁, 脑间同步, 脑电超扫描

小剂量喹硫平缓解伴发焦虑抑郁症状的迟发性运动障碍 1 例

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目的 报道一例以小剂量喹硫平缓解焦虑抑郁患者共病迟发性运动障碍, 迟发性运动障碍症状未加重且得到缓解的病例。

方法 选取一例 84 岁汉族女性患者, 详细采集患者的现病史、用药史、既往史, 进行体格检查、精神检查, 记录患者入院前后的辅助检查、检验结果、诊治经过及患者的病情变化。

结果 本文报道的女性患者, 因情绪低落、精力差、睡眠障碍不规律口服“氟哌噻吨美利曲辛片”5 年后出现迟发性运动障碍, 减停药物后, 再发焦虑抑郁情绪, 且 TD 症状进行性加重, 就诊于某三甲综合医院, 诊断为重度抑郁发作、迟发性运动障碍, 予以“氯硝西泮、盐酸丁螺环酮、盐酸舍曲林”治疗后 TD 症状进一步加重。本次住院后经给予“富马酸喹硫平缓释片 50mg/晚、劳拉西泮 0.5mg/午、晚”治疗后, 焦虑抑郁情绪明显改善, HAMA 评分由 34 分降至 7 分, HAMD 评分由 46 分降至 6 分, 且 TD 症状未再加重, 腹部肌肉不自主收缩明显缓解, AIMS 评分由 26 分降至 5 分。

结论 TD 是由于长期服用多巴胺受体阻滞剂引起的多动性运动障碍, 年龄较大的女性和患有脑器质性疾病是 TD 的最重要危险因素。据报道, 67%~89%的 TD 患者出现不自主运动障碍症状后不可逆, 随着病情进展, 致残率较高, 从而导致生活质量严重下降。本例高龄女性患者因长期服用使用氟哌噻吨美利曲辛改善情绪、睡眠后出现 TD, 停药后 TD 症状加重, 导致焦虑、抑郁情绪进一步加重。小剂量喹硫平可以改善焦虑抑郁情绪、提升患者睡眠质量的同时, 进一步缓解 TD 症状。

关键词: 喹硫平, 焦虑, 抑郁, 迟发性运动障碍

抑郁症患者 SSRI 类抗抑郁药早期起效的电生理预测指标

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目的 精神运动性阻滞是抑郁症的重要症状之一,包括运动控制和认知过程的异常。既往研究发现运动网络 beta 频段活动与精神运动性阻滞症状密切相关。精神运动性阻滞会随着抑郁发作次数的增加而加重,并可能导致对抗抑郁药反应不佳。然而,治疗反应和精神运动性阻滞之间的神经病理学关系仍不明确。

方法 93 名抑郁症患者和 49 名健康对照者招募入组,所有受试者经临床评估后接受脑磁图任务态扫描,执行简单的右手视觉运动任务。抑郁症患者接受 SSRI 类单药治疗,以基线和治疗 2 周作为评估节点。6 项汉密尔顿抑郁量表(6-item Hamilton Depression Rating Scale, HAMD-6)减分率大于 50%被认定为治疗有效。计算运动相关的 beta 去同步化(movement-related beta reduction, MRBD)和双侧运动网络(motor network, MN)半球间和半球内的功能连接,并在健康对照组、治疗有效组和治疗无效组间进行组间比较。组间有统计学差异的电生理指标与 HAMD-6 的减分率进行相关分析。

结果 相对于治疗有效组和健康对照者,治疗无效组在执行任务时运动网络的 MRBD 增加, beta 频段半球间和半球内的功能连接减少。线性判别分析显示左侧运动皮层 MRBD 和左右运动皮层间功能连接可以有效区分有效组和无效组,准确率为 77.4%(灵敏度 82.6%,特异度 72.3%),相应的 ROC 曲线下面积为 0.843。

结论 运动网络的局部活动和功能连接异常代表精神运动性阻滞症状明显,可能导致抑郁症患者对 SSRI 的早期应答率下降。这为抑郁症精神运动症状与抗抑郁药反应之间的相关性提供了电生理依据,对预测抗抑郁药的早期起效具有潜在价值,并有助于识别 SSRI 疗效不佳而应接受联合或替代治疗的患者亚群。

关键词:脑磁图;抑郁症;精神运动性阻滞;beta 振荡;疗效预测

抗衰老蛋白 Klotho 通过上调 NMDAR-GluN2B 突触膜表达调控精神分裂症模型大

鼠的认知功能及突触可塑性损害

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目的 认知障碍是精神分裂症的独立核心症状,对临床疗效和愈后有重要影响,但其病理机制不甚清楚,且缺乏有效治疗手段。NMDA 受体功能减退是精神分裂症认知障碍的关键病理基础,同时也是衰老相关认知障碍发生的重要机制。Klotho 蛋白是一种著名的衰老抑制蛋白,参与了 NMDA 受体的功能调节过程。但目前对 Klotho 在精神疾病中的作用还知之甚少,本研究拟探讨 klotho 对精神分裂症模型大鼠突触可塑性和认知功能障碍的影响。

方法 幼鼠出生的第 7-11 天连续 5 天,每天 2 次,皮下注射 MK-801 (0.1mg/kg)构建精神分裂症模型大鼠; Morris 水迷宫和条件恐惧实验用于检测大鼠学习及记忆能力;蛋白水平表达分析使用 Western blot;神经电生理技术记录不同组大鼠海马 LTP,并采用高尔基染色法观察神经元树突棘密度。

结果 与对照大鼠相比,精神分裂症模型大鼠海马中 klotho 蛋白的含量显著降低,通过基因过表达技术上调脑内 klotho 水平则可改善模型大鼠的认知功能及海马 LTP 的损害,并逆转树突棘密度的减少。在分子水平,我们发现 klotho 可增加精神分裂症大鼠海马区突触部位的 PSD-95 含量,并选择性地上调 NMDA 受体 GluN2B 亚基的蛋白总量及其突触膜表达水平。此外,使用特异性 GluN2B 拮抗剂 Ro 25-6981 可取消 klotho 对模型大鼠认知功能和海马 LTP 的改善作用。

结论 这些结果表明,脑内 klotho 水平的降低可能是精神分裂症相关认知障碍发生的重要分子机制,补充 klotho 可通过增加海马 NMDAR-GluN2B 的突触膜表达、改善精神分裂症大鼠认知障碍及突触损伤。

关键词:精神分裂症;NMDARs;Klotho;认知障碍;突触可塑性;LTP

胰岛素样生长因子-2 通过调控谷氨酸受体介导早期生活应激所致的认知损伤

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目的 早期生活应激(ELS)可导致认知损伤,但具体机制还不清楚。胰岛素样生长因子-2(IGF2)表达下降被证实在多种疾病,如老年痴呆,中介导了认知损伤,因此本文对 IGF2 是否介导了 ELS 所致的认知损伤进行探究。

方法 使用 SD 大鼠母婴分离模型来模拟 ELS,并利用行为学检测系统进行水迷宫,恐惧记忆等认知相关行为学检测。通过 qPCR 检测相关基因的表达水平,western blot 和免疫荧光检测目的蛋白表达水平;使用病毒注射来调控目的基因和蛋白的表达;利用电生理系统进行长时程增强(LTP)的记录。

结果 母婴分离模型大鼠认知受损,且海马脑区 IGF2 表达水平明显下降,海马脑区 LTP 受损,在母婴分离模型大鼠海马脑区过表达 IGF2 可逆转这些损伤。进一步对机制的研究发现母婴分离模型大鼠海马谷氨酸受体 2B(NR2B)膜表达水平下降,利用 NR2B 受体特异性阻断剂可阻断海马脑区过表达 IGF2 的认知改善作用,且证实 ELS 损伤的是 NR2B 介导的 LTP。

结论 ELS 可导致大鼠海马脑区 IGF2 表达下降,进而降低 NR2B 膜表达水平,导致大鼠认知损伤,海马过表达 IGF2 可逆转损伤。结果提示补充 IGF2 可作为治疗 ELS 导致的认知损伤的潜在手段。

关键词: 早期生活应激,胰岛素样生长因子-2,谷氨酸受体

mitochondria in neural circuits that govern cognitive impairment relevant to schizophrenia, and their impact on neuronal structure and function

Methods A 24-hour maternal separation (MS) rat model was utilized to simulate features associated with schizophrenia. Schizophrenia-associated behaviors and cognitive impairment were assessed using the open field test, pre-pulse inhibition, novel object recognition test, and Barnes maze test

Results Alterations in mitochondrial morphology, reduced hippocampal neuronal spine density, and impaired LTP in the CA1 region were observed. Nicotinamide (NAM) supplementation, administration of honokiol (HNK) (a SIRT3 activator), or overexpression of SIRT3 could inhibit this process. Conversely, administration of 3-TYP (a SIRT3 inhibitor), or knock down of SIRT3 expression in control rats led to deficits in behavioral and the hippocampal neuronal phenotype

Conclusion Our findings suggested a causal role for the NAD⁺/SIRT3 axis in modulating cognitive behaviors via effects on hippocampal neuronal synaptic plasticity. The NAD⁺/SIRT3 axis could be considered a promising therapeutic target for addressing cognitive-related behavioral disturbances, such as those seen in schizophrenia

关键词: schizophrenia, maternal separation, cognitive impairment, LTP, mitochondria, NAD⁺/SIRT3 axis

Cognitive Impairment Following Maternal Separation in The Rat Is Regulated by Effects of The NAD⁺/SIRT3 Axis on Hippocampal Synaptic Plasticity

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Objective Maternal separation during early life can induce behaviors in adult animals that resemble those seen in schizophrenia, manifesting cognitive deficits. This may be indicative of oxidative stress linked to mitochondrial dysfunction. However, there is limited understanding of the molecular mechanisms regulating

Sex-dependent Associations of Serum BDNF, Glycolipid Metabolism and Cognitive Impairments in Parkinson's Disease with Depression: A Comprehensive Analysis

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Objective Brain-derived neurotrophic factor (BDNF) and glycolipid metabolism have been implicated in cognitive impairments and depression among Parkinson's disease (PD). However, the role of sex differences in this relationship remains elusive. This study aimed to investigate the potential sex difference in the link between serum BDNF levels, glycolipid metabolism and cognitive performance among depressive PD patients

Methods PD patients comprising 108 individuals with depression and 108 without depression were recruited for this study. Cognitive function was assessed using the Montreal Cognitive Assessment Beijing version (MOCA-BJ). The severity of depressive symptoms was assessed using the Hamilton Depression Rating Scale (HAMD-17), while motor symptoms were evaluated using the Revised Hoehn and Yahr rating scale (H-Y) and the Unified Parkinson's Disease Rating Scale Part III (UPDRS-III). Laboratory testing and enzyme-linked immunosorbent assay (ELISA) are used to measure serum levels of glycolipid metabolism and BDNF

Results Females showed superior performance in delayed recall (all $p < 0.05$), male PD patients exhibited higher scores in naming tasks compared to females in non-depression group. There was no sex difference in serum BDNF levels between depression and non-depression groups. Linear regression analysis indicated BDNF as an independent risk factor for language deficits in male PD patients with depression ($p < 0.05$), while cholesterol (CHOL) emerged as a cognitive influencing factor, particularly in delayed recall among male PD patients with depression ($p < 0.05$)

Conclusion Our study reveals extensive cognitive impairments in PD patients with depression. Moreover, BDNF and CHOL may contribute to the pathological mechanisms underlying cognitive deficits, particularly in male patients with depression

关键词: Parkinson's disease, depression, Sex differences, BDNF, cognition, glycolipid metabolism

CREB/BDNF/TrkB 通路在精神分裂症发病机制和疗效评估中的研究进展

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目的 精神分裂症是一种多因素导致的精神疾病,精神分裂症有多种表现形式,大致分为以阳性症状、阴性症状和认知功能障碍。由于精神分裂症的病因和病理生理机制尚未明确,当前临床诊断主要依赖于患者及家属陈述的经历等主观证据,精神分裂症的精准诊断和治疗较为困难。因此,提出客观、特异性的生物标志物对早期精准诊疗、预后评估至关重要。诸多研究提示,神经营养因子与精神分裂症发病机制关系密切,其中脑源性神经营养因子(brain derived neurotrophic factor, BDNF)研究最为广泛。本文综述了 BDNF 通路相关因子作为生物学标志物协助精神分裂症临床诊治预后评估的研究现状。

方法 使用生物医学文献数据库 Pubmed 输入以下关键词"BDNF and schizophrenia", "BDNF and cognitive impairment" "CREB" "TrkB" (数据时间截止 2023 年 9 月 8 日)

结果 目前研究表明,在动物实验中 CREB/BDNF/TrkB 通路上调可以促进神经元增殖和存活,抗细胞凋亡,增强抗氧化酶的活性,调节线粒体能量代谢进而改善海马神经元的损伤,减轻 SZ 大鼠的认知功能障碍。临床研究表明,精神分裂症患者 BDNF 血浆水平降低,且与特定认知功能相关,包括处理速度,注意力水平,视觉学习和工作记忆。BDNF 和 GSH-Px 之间的相互作用与精神分裂症抑郁症状有关。低 BDNF 水平可以预测精神分裂症患者临床治疗无效的风险,也可导致首发未服药精神分裂症患者的阳性症状,BDNF/PI3K/AKT/CREB 通路的血清蛋白可以预测首发精神分裂症患者抑郁和冲动的行为。此外,BDNF 浓度与疾病进程也有关,慢性精神分裂症患者的 BDNF 血清、血浆浓度最高,其次是首次发病的精神分裂症患者以及高危精神状态者。

结论 BDNF 可以通过神经营养、抗凋亡、抗氧化应激,抑制自噬等机制介导神经保护作用,调控 BDNF 蛋白的表达本身就能达到治疗精神分裂症、改善患者疾病预后的作用。目前 BDNF 及相关信号

通路的血清蛋白在精神分裂症患者的认知功能、阴性症状、阳性症状、药效预测中都有一定预后评估能力, BDNF 可能成为潜在的用于纵向比对的标志物, 可预测高危风险阶段演变为精神分裂症的进展过程。

关键词: BDNF,精神分裂症,预后,疗效评估

超越还原论: 从复杂系统的视角看精神障碍

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目的 本文旨在从复杂系统的视角, 探索精神障碍的本质及其成因, 超越传统还原论的解释模式。通过引入复杂系统理论, 试图揭示精神障碍背后复杂而多维的互动关系, 以期为精神障碍的诊断、治疗及预防提供新的思路和方法。

方法 研究采用多学科交叉的方法, 包括心理学、神经科学、社会学等领域的理论和实践成果。通过文献综述等手段, 系统分析了精神障碍在个体生理、心理及社会层面的复杂互动机制。揭示了以还原论为主导研究范式的传统精神障碍研究方法的不足。重点考察了非线性动力学、网络科学和自组织理论在精神障碍研究中的应用。

结果 研究发现, 精神障碍的发生并非单一因素导致, 而是多种因素相互作用的结果。而传统精神障碍的研究几乎都是运用还原论的研究范式, 忽视了大脑的整体性及涌现性, 这也解释了为什么精神病学研究困难重重, 进展缓慢。未来, 精神障碍的研究需要引入复杂系统的研究方法, 跨越多个学科领域, 整合相关复杂交织的概念, 更全面地理解精神障碍的多维成因及其动态演化过程。通过复杂系统模型, 可以更准确地预测精神障碍的发生及发展趋势。

结论 大脑是一个典型的复杂系统。人脑由数以千亿计的神经元和突触组成, 这些神经元之间通过电化学信号进行交流和相互作用, 从而形成了复杂的结构和功能网络。从复杂系统的视角看待精神障碍, 为其研究和治疗提供了新的理论基础和实践路径。超越还原论的单一视角, 综合考虑生物、心理和社会因素的互动, 可以更有效地进行精神障碍的诊断和干预。未来的研究应进一步深化复杂系统理

论在精神障碍领域的应用, 探索更精准的个体化治疗方案, 促进精神健康的整体提升。

关键词: 还原论,整体论,复杂系统,精神障碍

基于 lepR-JAK2-STAT3 通路探讨瘦素影响抑郁小鼠 5-HT2B 受体表达的作用机制

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目的 目的 探讨瘦素通过瘦素受体 (Leptin Receptor, LepR) -蛋白酪氨酸激酶 2 (Janus kinase 2, JAK2) -信号转导和激活转录子 3 (Signal transducers and activators of transcription 3, STAT3) 通路对抑郁小鼠 5-羟色胺受体 2B (5-hydroxytryptamine receptor 2B, 5-HT2B) 受体表达的影响及其作用机制。

方法 研究方法 首先, 皮下注射皮质酮制备抑郁模型, 对小鼠进行蔗糖偏好实验、悬尾试验和强迫游泳实验来评估抑郁状态。其次, 实验分为对照组、模型组、核苷酸结合域和富含亮氨酸的重复蛋白 3 (nucleotide-binding domain and leucine-rich repeat protein 3, NLRP3) 炎症因子抑制组和瘦素干预组, 每组 6 只小鼠。采用实时荧光定量聚合酶链式反应 (Real-time Quantitative PCR, Qrt-PCR) 技术检测各组小鼠海马组织 lepR、JAK2、STAT3 和 5-HT2B 基因表达水平。

结果 结果 与对照组相比, 模型组小鼠 lepR、JAK2、STAT3 和 5-HT2B 基因表达量均显著降低。瘦素干预组小鼠 lepR、JAK2、STAT3 和 5-HT2B 基因表达量均显著高于模型组。敲除瘦素受体, 瘦素与 5-HT2B 受体表达无关联。

结论 瘦素通过 lepR-JAK2-STAT3 通路增加 5-HT2B 受体的表达。

关键词: 瘦素; 抑郁症; 5-HT2B 受体;

Impaired Myelin Integrity in Schizophrenia: A Systematic Evaluation and Meta-analysis

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Objective Schizophrenia is a serious mental illness whose etiology and pathogenesis are still unclear. Impaired myelin integrity plays an important role in the pathogenesis of schizophrenia, but there is no uniform conclusion yet. This meta-analysis aims to systematically assess impaired myelin integrity in schizophrenia patients and further explore its role in the pathogenesis of schizophrenia

Methods We conducted a systematic literature search of studies in PubMed, Web of Science, Science Direct, PsycINFO, EMBASE, and Cochrane without language or time constraints. All studies reporting myelin abnormalities in patients with schizophrenia were included. Inclusion criteria included 1) cross-sectional or longitudinal studies, 2) use of imaging or biomarkers to assess myelin integrity, and 3) provision of sufficient data for meta-analysis. Using the MOOSE guidelines, data extraction and quality assessment were performed by two independent investigators. Meta-analysis of myelin integrity metrics was performed using a random-effects model, and heterogeneity and publication bias were assessed

Results A total of nine studies were included, which were published up to June 2024 and involved a total of 926 patients with schizophrenia and 719 healthy controls. The results of the meta-analysis showed that myelin integrity was significantly lower in patients with schizophrenia than in healthy controls (standardized mean difference, SMD = -0.45; 95% confidence interval, CI = -0.34 to -0.55; $p < 0.001$). Subgroup analyses indicated that factors such as disease duration, disease severity, and treatment regimen may have an impact on myelin integrity. Heterogeneity analysis showed moderate inter-study heterogeneity ($I^2 = 68\%$). Funnel plot analysis and Egger's test results did not reveal significant publication bias

Conclusion This systematic review and meta-analysis found that there is a significant impairment of myelin integrity in schizophrenia patients, which may be closely related to the pathogenesis of schizophrenia. Future studies should further explore the specific mechanisms of impaired myelin integrity and its role in the disease process, with a view to providing new targets for

the diagnosis and treatment of schizophrenia

关键词: Schizophrenia, myelin, systematic evaluation, meta-analysis, neuroimaging, biomarkers

基于生物信息学分析探索精神分裂症和代谢综合征的关联性研究

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目的 精神分裂症是一种慢性精神障碍,常伴随认知功能障碍和社交能力下降,而代谢综合征则是一组代谢异常的集合,包括肥胖、高血压、高血糖和异常胆固醇水平,两者的共病可能加剧患者的临床症状和治疗难度,精神分裂症与代谢综合征的共病现象一直备受关注。本研究旨在探索精神分裂症和代谢综合征共病可能发生的生物学机制,以期为临床防治提供新的视角和策略。

方法 选取 GEO 数据库中的精神分裂症基因表达数据集 GSE27383 和代谢综合征基因表达数据集 GSE200744 进行分析,通过 R 包筛选差异表达基因,并提取两个数据集差异基因交集,通过 string 对上述差异基因集构建 PPI 网络,并通过 Cytoscape 和 Cytohubba、Mcode 插件筛选出 hub genes,并进一步通过富集分析探究差异表达基因参与的信号通路。

结果 在 GSE27383 表达数据集中筛选得到 2847 个差异表达基因,在 GSE200744 表达数据集中筛选得到 995 个差异表达基因;通过差异基因列表重叠分析,共识别出 138 个共同的差异表达基因;通过 PPI 网络构建,最终得到 9 个关键基因,包括 UBA52、RPL7L1、RPL29、SERBP1、RPL37A、CXCL8、MMP9、FLNA、BTG2 和 H2AX;差异基因富集分析显示,这些基因在多个生物学信号通路中发挥作用,如 Ion channel transport、Metabolism of RNA、Interleukin-4 and Interleukin-13 signaling、Stimulus-sensing channels、Generic Transcription Pathway、Nonsense Mediated Decay (NMD) 和 Gene expression (Transcription),其中部分关键基因和信号通路已被证实在细胞周期调控、信号传导、基因表达调控和疾病发展中起着至关重要的作用。

结论 本研究揭示了精神分裂症与代谢综合征

共病状态下的基因表达模式,揭示疾病间可能存在的分子联系,筛选的关键基因参与多个信号通路,主要参与细胞信号传导、基因表达和介导炎症反应等生物学过程,这些基因在两种疾病的发生发展过程中扮演重要角色。关键基因的发现,可为精神分裂症合并代谢综合症的防治策略的提供潜在靶点。

关键词:精神分裂症,代谢综合征,差异表达基因,信号通路

上调海马 CA1 区 TRPV1 表达水平可改善母婴分离引起的精神分裂症样行为异常

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目的 精神分裂症(SCH)认知功能障碍机制不明,缺乏有效干预措施。TRPV1 是神经免疫轴的关键介质,可能参与 SCH 的发生发展。本课题组发现 SCH 患者外周血 TRPV1 水平降低,后者与患者认知功能下降、海马及前额叶等脑区环路异常常相关。本研究拟进一步开展模型动物研究,探讨脑内 TRPV1 调节精神分裂症的机制,有助于阐明 SCH 环境因素致病的神经生物学机制、建立该疾病防治新策略和靶标。

方法 构建母婴分离 SCH 动物模型并于成年期进行海马 CA1 区脑立体定位注射病毒,靶向小胶质细胞 TRPV1,分别上调、敲低 TRPV1 表达水平,检测模型动物行为学、神经炎症、细胞凋亡以及突触损伤情况。

结果 1、SCH 动物模型成年期在 Y 迷宫、巴恩斯迷宫与新物体识别实验中, SCH 动物模型的认知功能明显低于 CON 的认知功能。在旷场实验中, SCH 动物模型组出现自主活动增加,在 PPI 中, SCH 动物模型出现感觉门控缺陷。2、SCH 模型动物海马组织 TRPV1 蛋白表达含量降低, CD80 蛋白表达水平升高, BCL-2 蛋白表达水平降低, BAX、Caspase3、Cleaved-caspase3 蛋白表达水平升高, PSD95、SYN 蛋白表达水平降低。3、上调 SCH 模型动物海马 CA1 区小胶质细胞 TRPV1 蛋白表达水平,改善了 SCH 模型动物类精神分裂症样行为异常,降低了炎症因子水平, BCL-2 蛋白表达水平升高, BAX、Caspase3、Cleaved-caspase3 蛋白表达水平降

低, PSD95、SYN 蛋白表达水平升高。4、敲低 SCH 模型动物海马 CA1 区小胶质细胞 TRPV1 蛋白表达水平,进一步加重了 SCH 模型动物类精神分裂症样行为异常,增加了 SCH 模型动物炎症因子水平, BCL-2 蛋白表达水平进一步升高, BAX、Caspase3、Cleaved-caspase3 蛋白表达水平进一步降低, PSD95、SYN 蛋白表达水平进一步升高。

结论 1、TRPV1 参与了母婴分离引起的精神分裂症样行为异常的机制。2、上调海马 CA1 区 TRPV1 表达水平可改善母婴分离引起的精神分裂症样行为异常。3、TRPV1 可能是精神分裂症的新的治疗靶点。

关键词:母婴分离;精神分裂症;认知功能

催产素对生命早期应激导致的同性性行为的调节作用

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目的 1992 年,世界卫生组织不再将同性恋列为性心理障碍,学术层面对此类问题的关注度下降。但从临床中发现,此类人群的数量呈倍数增长,并在家庭和社会生活中存在着诸多困难。据本课题组所在单位的年门诊量统计,因同性性行为就诊于精神心理门诊和艾滋病预防门诊的人数占年门诊量(5 万人)的 8%,且均存在着不同严重程度的精神心理问题。此类就诊者中超过半数的人历经种种困境后主动产生了改变自己性取向,从而改变性行为的诉求。既往研究提示化学信号分子和童年心理创伤与性取向的形成密切相关。其中催产素对社会行为的调节作用不断被报道,但其对同性性行为,尤其是由于童年创伤导致的这一社会行为是否有调节作用仍然未知。因此,本研究的目的在于探讨催产素对童年创伤导致的同性性行为的作用。

方法 在人群研究中,采用金赛量表、儿童期创伤问卷等量表评估男性同性恋者和男性同性恋/双性恋者的基本信息、性取向、心理健康状况和生活事件,采用酶联免疫吸附反应检测血清中催产素的含量差异。

在动物实验中,通过行为学测试评估生命早期应激对雄性小鼠社会交往和性取向的影响。采用酶

联免疫吸附反应检测小鼠血清中催产素含量。最后，通过小鼠腹腔注射催产素来验证其作用。

结果 与男性异性恋者相比，男性同性恋/双性恋者经历更多的童年创伤，血清催产素水平较低。同样，与对照组相比，生命早期应激降低了雄性小鼠的同性恋偏好指数和血清催产素水平，催产素干预可以降低生命早期应激导致的同性性行为。

结论 同性性行为与童年创伤密切相关。催产素对与童年创伤有关的同性性行为有潜在的调节作用。

关键词：同性性行为，童年创伤，催产素

Adjunctive Therapeutic Effect of Fish Oil on A Subgroup of Patients with Schizophrenia Exhibiting Blunted Niacin Responses

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Objective The clinical treatment of schizophrenia has long been challenged by unclear pathological mechanisms and high heterogeneity in clinical symptoms. The widespread impaired niacin skin flush response observed in patients with schizophrenia is considered as an endophenotype of the disease and is associated with the membrane phospholipid abnormality hypothesis of schizophrenia. This study aims to screen a subgroup of patients with schizophrenia based on impaired niacin response and target them with adjunctive fish oil supplementation thereby exploring a precision treatment approach for this disorder

Methods This study enrolled a total of 138 clinically stable schizophrenia patients and 33 healthy controls. At baseline, all participants underwent niacin testing and clinical assessments. Based on the niacin-flushing, the schizophrenia patients were categorized into two subgroups: the blunted niacin response (BNR) group and the normal niacin response (NNR) group. The BNR patients were enrolled in the fish oil supplementation group. After completing one treatment cycle, they underwent niacin testing and clinical assessments once again. The differences between groups were analyzed

using Chi-square test for categorical variables, one-way analysis of variance for continuous variables, and paired t-tests to assess changes in niacin-bluntedness group before and after fish oil supplementation

Results Both patients in the BNR group and NNR group presented with psychotic symptoms and cognitive impairment. Subsequent to fish oil supplementation in the BNR group, there was a significant improvement observed in their niacin-induced skin flushing response. Consequently, a notable enhancement was noted in their clinical symptoms and cognitive abilities. Moreover, patients who exhibited a greater reduction in PANSS scores following adjunctive fish oil treatment demonstrated a more pronounced improvement in their niacin response

Conclusion The findings of this study demonstrate that fish oil has potential to serve as a precision adjunctive treatment for specific subgroups of schizophrenia patients with BNR phenotype. This research offers a novel approach towards developing precision-based adjunctive treatments targeting the underlying pathological mechanisms of schizophrenia

关键词：schizophrenia; niacin skin flushing response; fish oil; cognitive assessment; targeted intervention; precision therapy

精神分裂症中的线粒体功能障碍和认知损伤：炎症的作用

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目的 线粒体可以参与免疫反应的发生，线粒体功能障碍与认知损伤有关。据报道，精神分裂症（Schizophrenia, SZ）患者存在广泛的线粒体损伤。线粒体功能障碍可能通过介导炎症反应从而导致SZ认知障碍。本研究旨在评估SZ中的线粒体功能障碍与认知损伤的关联以及炎症在其中的作用。

方法 评估了121例健康个体和118例SZ患者在治疗8周前后的外周血白细胞中的线粒体DNA

拷贝数 (mtDNA copy number, mtDNA CN), 并进行了与外周血 mtDNA CN 相关的荟萃分析。从病历系统获得 SZ 患者的超敏 C 反应蛋白 (CRP) 水平。采用 Spearman 相关分析和分层线性回归分析 mtDNA CN 和 CRP 水平、精神症状和认知功能的关系。使用 PROCESS 程序构建了中介效应模型。

结果 结果显示, 与健康对照者相比, SZ 患者白细胞中的 mtDNA CN 显著降低 ($P=0.005$), 尤其是男性患者 ($P=0.035$), 治疗后 mtDNA CN 未上调。荟萃分析的结果同样支持 SZ 患者外周血 mtDNA CN 显著低于健康个体 ($P<0.001$)。SZ 患者 mtDNA CN 与工作记忆能力呈正相关 ($P=0.002$), 与 CRP 水平呈负相关 ($P=0.039$)。此外, SZ 患者 mtDNA CN 是工作记忆能力的重要预测因子 ($P<0.001$), 其中 CRP 作为中介因子, 效应占比为 8.0%。

结论 这项研究揭示了 SZ 中线粒体功能障碍与认知损伤之间的关联, 炎症起着部分中介作用。因此, 线粒体功能障碍可能为 SZ 患者认知障碍的新疗法提供新的靶点。

关键词: 精神分裂症, 线粒体, 认知, 线粒体 DNA 拷贝数, 炎症

在精神科 MECT 治疗中全麻下应用琥珀胆碱引起恶性高热风险的研究

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目的 探讨在精神科 MECT 治疗中全麻下应用琥珀胆碱引起恶性高热的风险。

方法 通过查找文献, 总结整理, 恶性高热触发性药物最常见的是氟烷和琥珀胆碱, 它是一种罕见的遗传性肌病, 发病机制是肌浆网释放钙离子增多导致细胞内钙离子浓度升高。典型症状由挥发性全麻药和琥珀胆碱所触发的骨骼肌异常高代谢状态。会引发体内代谢紊乱, 导致体温急剧升高 (可很快达到 40 摄氏度)、肌肉强直、心动过速等症状; 出现酸中毒、低氧血症、高血钾、心律失常等变化。尽管这种情况在临床上较为罕见, 但其发生速度快、病情严重, 若不及时处理, 可迅速危及患者生命。可发生在麻醉期间的任何时段, 甚至在麻醉后监测治疗室 (PACU) 内。据统计麻醉期间的发病率好发于

儿童和青年人, 男性多于女性。

结果 琥珀胆碱作为一种去极化肌松药, 在精神科改良电休克治疗 (MECT) 中扮演着不可或缺的角色。通过暂时性地使骨骼肌失去活动能力, 琥珀胆碱帮助实现治疗过程中所需的肌肉松弛, 从而确保了治疗的安全性和有效性。然而, 正如所有药物一样, 琥珀胆碱的使用并非没有风险, 其中最令人担忧的便是它可能导致的罕见但极其严重的副作用——恶性高热。

结论 预防恶性高热发生, 需要我们在进行 MECT 治疗前, 对患者进行全面的评估, 详细询问病史和进行体格检查, 注意有无骨骼肌疾病, 有无麻醉后高热、心跳骤停等个人和家族史, 以识别那些可能携带相关遗传基因的患者。对于已知存在高风险的患者, 可以考虑采用非去极化型肌松药或其他替代方案, 以避免潜在的恶性高热风险。在应用琥珀胆碱的过程中, 我们必须时刻保持警惕, 不仅要关注其带来的治疗效果, 更要密切监测可能出现的不良反应。通过严格的临床评估、及时有效的处理措施以及科学合理的预防策略, 这样才可以最大限度地减少恶性高热这一严重并发症的风险, 确保 MECT 在精神科治疗中的安全性。

关键词: 改良电休克治疗 (MECT); 琥珀胆碱; 恶性高热; 全麻

盐酸多奈哌齐片对 MECT 后精神分裂症患者记忆障碍恢复影响的研究

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目的 探讨盐酸多奈哌齐片对 MECT 后精神分裂症患者记忆障碍恢复时间的影响。

方法 选择于 2021 年 10 月—2023 年 10 月在沈阳市精神卫生中心进行 MECT 治疗的住院精神分裂症患者 60 例 (男女各 30 例), 将其采用随机数表法分为对照组和研究组各 30 例 (各包括男 15 例和女 15 例), 对照组采用常规治疗 (抗精神病药物联合 MECT), 研究组在常规治疗基础上同时给予盐酸多奈哌齐片。应用韦氏记忆量表测定两组患者各阶段 (治疗前、治疗结束次日、结束后 1 周、结束后 2 周、结束后 4 周) 的记忆商数。

结果 MECT 治疗前, 研究组与对照组的记忆商数比较差异无统计学意义 ($P > 0.05$); 治疗结束时, 研究组与对照组的记忆商数比较差异无统计学意义 ($P > 0.05$); MECT 治疗后 1 周, 研究组的记忆商数为 (84.86 ± 8.19), 明显比对照组的 (79.87 ± 5.54) 高, 组间差异有统计学意义 ($P < 0.05$); MECT 治疗后 2 周, 研究组的记忆商数为 (86.27 ± 7.89), 和对照组的 (82.50 ± 6.72) 比较显著升高, 组间差异有统计学意义 ($P < 0.05$); MECT 治疗后 4 周, 研究组与对照组的记忆商数比较差异无统计学意义 ($P > 0.05$)。

结论 盐酸多奈哌齐片可以缩短精神分裂症患者 MECT 治疗所致记忆障碍的恢复时间, 可能对记忆障碍的恢复有良好的促进作用, 减轻患者的心理负担。

关键词: 盐酸多奈哌齐片; 无抽搐电休克治疗; 记忆障碍; 韦氏记忆量表

A Research of Serum Homocysteine Levels in Unipolar Depression and Bipolar Depression

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Objective compare the difference of serum homocysteine (hcy) level between unipolar depression and bipolar depression and the correlation between serum Hcy level and depressive symptoms.

Methods A total of 35 patients with unipolar depression, 29 patients with bipolar depression and 45 healthy controls with sex and age matching were selected to evaluate the Hamilton Depression Scale, detect serum hcy, and analyze the differences in serum Hcy levels between the three groups and their correlation with depressive symptoms

Results There were significant differences in serum hcy levels between the three groups ($P < 0.01$). Compared with the healthy control group, there were statistical differences in serum hcy levels between the unipolar depression group and the healthy control group ($P < 0.05$), and there were significant differences in serum hcy levels between the bipolar depression group

and the healthy control group ($P < 0.01$). There was significant difference in serum hcy level between unipolar depression group and bipolar depression group ($P < 0.01$). There was a positive correlation between serum hcy level and HAMD score in unidirectional depression and bipolar depression ($r = 0.783$ $P < 0.01$)

Conclusion Serum hcy level is closely correlated with unipolar depression and bipolar depression, and may be a potential biological marker for distinguish unipolar depression from bipolar depression.

关键词: unipolar depression, bipolar depression, serum Homocysteine

精神疾病的血浆脂质组变异: 孟德尔随机化分析的见解

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目的 本研究旨在探讨 179 种人类血浆脂质体与重度抑郁症 (Major Depressive Disorder, MDD)、精神分裂症 (Schizophrenia, SCZ)、双相情感障碍 (Bipolar Disorder, BIP)、强迫症 (Obsessive-Compulsive Disorder, OCD)、创伤后应激障碍 (Post-Traumatic Stress Disorder, PTSD)、神经性厌食症 (Anorexia Nervosa, AN) 和孤独症 (Autism Spectrum Disorder, ASD) 七种精神疾病之间可能存在的因果联系。

方法 我们利用欧洲全基因组关联研究汇总数据中的单核苷酸多态性作为工具变量, 采用双样本孟德尔随机化 (Mendelian Randomization, MR) 方法进行分析。本研究以逆方差加权法作为 MR 分析的主要手段, 并辅以 MR-Egger、加权中位数、简单模式和加权模式等方法。此外, 我们进行了异质性检验和多效性检验, 以评估脂质体与精神疾病之间双向因果关系的可靠性。对于正向评估中发现的有显著联系的脂质体, 我们还进行了反向 MR 分析, 以全面评估其双向因果关系。

结果 MR 分析结果揭示了 72 种脂质体可能与上述七种精神疾病的风险存在因果关系。具体而言,

有 28 种脂质体与 MDD 相关, 11 种与 SCZ 相关, 15 种与 BIP 相关; 2 种与 OCD 相关, 2 种与 PTSD 相关; 9 种与 AN 相关, 5 种与 ASD 相关。值得注意的是, MDD、ADHD、AN 和 ASD 与四大类脂质体均有联系, 而 SCZ、BIP 和 OCD 主要与甾醇和甘油磷脂类脂质体有关, PTSD 则与鞘脂和甘油酯类脂质体有关。反向 MR 分析进一步表明, 甾醇的浓度可能受到 SCZ 和 OCD 的影响。

结论 本研究为理解血浆脂质体与精神疾病之间的关系提供了新的视角, 为精神疾病的潜在发病机制、诊断和治疗提供了新的线索。这些发现可能有助于开发新的预防和干预策略, 以改善精神疾病患者的治疗结果。

关键词: 脂质体, 精神疾病, 孟德尔随机化

小鼠中过表达双相情感障碍相关 lncRNA 引起小鼠出现焦虑和抑郁样行为

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目的 双相情感障碍(BD)是一种多因素疾病, 环境因素在疾病的发生发展中起着重要的作用。lncRNA 作为一种重要的表观遗传机制, 解释了在相同遗传背景下环境因素诱导遗传基因差异表达导致不同表型的部分影响。lncRNA 在神经元突触可塑性和兴奋性调节中起着重要作用, lncRNA 表达谱的改变也被认为与 BD 有关。尽管 lncRNA 与 BD 的相关性已有报道, 但是调控突触可塑性和神经兴奋性相关通路参与 BD 发生的研究少有报道, 因此在本项研究中, 我们使用 BD 同卵双生子来筛选与疾病易感性相关的差异表达 lncRNA, 阐述 lncRNA 通过调控突触功能参与疾病发病的作用机制。

方法 本研究招募了 BD 表型不一致的同卵双生子(即单患病同卵双生子)和健康对照同卵双生子, 使用高通量测序技术对外周血 RNA 样本进行转录组测序, 通过生物信息学数据分析, 整合脑组织公共数据库分析, 筛选出 BD 同卵双生子差异表达的疾病相关 lncRNAs; 通过动物水平研究过表达该 lncRNA 小鼠表现的行为异常, 同时检测突触功能异常; 整合同卵双生子外周血测序、脑组织公共数据库和行为异常小鼠脑组织 RNA-seq 数据, 筛选

出调控靶基因, 通过细胞系验证该 lncRNA 对靶基因的分子调控机制; 并且在过表达该 lncRNA 小鼠中恢复靶基因的表达, 检测小鼠行为表现和突触功能异常是否得到缓解。

结果 我们筛选出 BD 相关差异表达 lncRNA APIAR-DT。在动物水平研究中, 过表达该 lncRNA 小鼠表现出焦虑样和抑郁样行为异常, 同时被检测到突触功能异常; 在分子调控机制研究方面, 我们在细胞系中验证了该 lncRNA 上调可通过抑制转录因子与靶基因启动子的结合而抑制靶基因的表达。

结论 我们使用 BD 同卵双生子来筛选与疾病易感性相关的差异表达 lncRNA, 这种将 lncRNA APIAR-DT 与兴奋性突触功能的调节联系起来的表现遗传学和病理生理机制为 BD 的病因学研究提供了线索。

关键词: 双相情感障碍 长链非编码 RNA 突触功能 同卵双生子 表观遗传学

RVG 修饰的间充质干细胞外泌体治疗强迫症及其机制研究

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目的 1、探索间充质干细胞外泌体是否可以通过改变小胶质细胞极性治疗强迫症;

2、探索过表达靶向肽 RVG 的外泌体是否可以更加高效的使外泌体穿透血脑屏障并作用于大脑, 改善强迫症状的效果更明显;

3、探索 RVG-MSC-EXO 是否通过增加小胶质细胞 sigma1 受体表达改善小鼠强迫症状。

方法 1、原代小鼠脂肪来源间充质干细胞提取、培养、表征(成脂成骨诱导、流式)。

2、获得过表达 RVG 的间充质干细胞外泌体并表征(NTA、WB、TEM)。

3、通过行为学实验(强迫检查、旷场、埋珠、水迷宫)测试小鼠强迫症行为。

4、检测小鼠前额叶皮质炎症因子水平(qPCR、ELISA 等)

5、检测小鼠前额叶皮质小胶质细胞极性(免疫荧光)

6、探索小鼠前额叶皮质小胶质细胞上 sigma1 受

体表达水平（免疫荧光）

7、验证 RVG-MSC-EXO 在 小鼠体内靶向性 (IVIS)

8、检测 RVG-MSC-EXO 生物安全性 (CCK8、肝肾功能指标、各脏器 HE 染色)

结果 结论

1、成功制备过表达 RVG 的间充质干细胞外泌体并表征。

2、过表达 RVG 的间充质干细胞外泌体对小鼠脑部具有靶向性。

3、外泌体治疗后小鼠强迫症检查行为改善。

4、外泌体治疗后强迫症相关脑区促炎因子减少、抗炎因子增加。

5、外泌体治疗后强迫症相关脑区小胶质细胞极性由 M1 型转变为 M2 型。

6、外泌体治疗后强迫症相关脑区小胶质细胞 sigma1 受体表达增加。

关键词: 强迫症; 间充质干细胞; 外泌体; RVG; 小胶质细胞; sigma1 受体

围绝经期抑郁症患者肠道菌群特征

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目的 探讨围绝经期抑郁症患者与健康围绝经期女性肠道菌群的差异, 探讨围绝经期女性患者肠道菌群和抑郁症状间的关系, 为围绝经期女性抑郁症的发病机制提供一定的理论依据。

方法 采用 16S rRNA 基因测序方法对围绝经期抑郁症女性患者及体检中心的围绝经期健康人群的粪便样本进行分析, 使用汉密尔顿抑郁量表对两组患者抑郁症状进行评估。进行两组对象肠道菌群多样性检测和组间差异分析, 对肠道菌群与年龄、BMI 指数、血糖进行相关分析。

结果 (1) 两组间平均年龄、BMI 指数、血糖均无统计学差异 ($P > 0.05$)。围绝经期抑郁症组患者 HAMD 评分 (28.25 ± 4.59), HAMA 评分 (18.07 ± 4.03) 分。(2) 围绝经期抑郁症组和对照组 Ace 指数、Chao 指数、Shannon 指数、Simpson 指数和 Coverage 指数均有显著性差异 ($P < 0.05$), 提示两组肠道菌群多样性之间存在差异, 且差异具有统计

学意义 ($P < 0.05$)。从 Coverage 指标来看, 各样本的测序菌种覆盖率达到 99% 以上, 覆盖率高。(3) 围绝经期抑郁组患者肠道菌群分布较分散, 对照组分布相对较集中, 表明两组间菌群的菌落结构存在差异, 差异具有统计学意义 ($P < 0.05$)。(4) 脱硫杆菌门、拟杆菌门、变形菌门在围绝经期抑郁组富集, 相应的, 放线菌门、厚壁菌门在对照组富集。 γ -变形菌纲、拟杆菌纲、Desulfovibrionia 在围绝经期抑郁组富集, 梭菌纲、厚壁菌纲、放线菌纲在对照组富集。拟杆菌目等 7 个目在围绝经期抑郁组富集。颤螺菌目等 5 个目在对照组富集。肠内细菌科等 11 个科等在围绝经期抑郁组富集。瘤胃球菌科等 9 个科在对照组富集。肠杆菌属等 24 个属在围绝经期抑郁组富集。瘤胃球菌等 19 个属在对照组富集, 差异具有统计学意义。(5) 泰勒菌、瘤胃球菌、柯林斯菌与年龄呈负相关关系, 毛螺旋菌属、瘤胃球菌属与年龄呈正相关关系, 差异具有统计学意义。凸腹真杆菌属与 BMI 指数呈负相关关系, 未分型毛螺旋菌属与 BMI 指数呈正相关关系, 差异具有统计学意义。凸腹真杆菌属与血糖呈负相关关系, 瘤胃球菌属与血糖呈正相关关系, 差异具有统计学意义。

结论 围绝经期抑郁症患者与健康对照人群肠道菌群结构和多样性具有显著性。

关键词: 围绝经期抑郁症, 肠道菌群

伴有非自杀性自伤的青少年抑郁障碍研究现状

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目的 探讨青少年抑郁障碍患者伴非自杀性自伤 (NSSI) 的病理机制及其相关影响因素, 为 NSSI 行为的干预提供理论基础。

方法 2.1. 资料来源

计算机检索数据库, 如: 知网、维普、万方、PubMed、Web of Science 等。检索时限均为建库至 2023 年 4 月。

2.2 检索策略

运用主题词与自由词相结合的检索方法。英文检索词: Non-suicide Self-injury、Depressive Disorder、

Adolescent; 中文检索词: 非自杀性自伤、抑郁障碍、青少年。中文检索式: TKA=非自杀性自伤 AND TKA=抑郁障碍 AND TKA=青少年; 英文检索式: Non-suicide Self-injury* [Tiab] AND Depressive Disorder* [Tiab] AND adolescent [Tiab]

2.3 纳入标准

①文献为横断面研究或现况研究; ②研究对象为 12-18 岁的青少年, 抑郁障碍符合《精神疾病诊断与统计手册(第 5 版)》(DSM-5) 或《国际疾病分类(第 10 版)》(ICD-10) 中的诊断标准, NSSI 符合《精神疾病诊断与统计手册(第 5 版)》(DSM-5) 中的诊断标准; ③中英文文献。

2.4 排除标准

①数据资料不全的文献; ②同一作者重复发表的文献; ③研究对象伴有如双相情感障碍、强迫症、焦虑症、精神分裂症等其他精神障碍及严重躯体疾病如脑器质性疾病等; ④非中英文文献。

结果 初步检索数据库共获取文献 1433 篇, 其中中文文献 485 篇, 英文文献 948 篇。通过对文献标题、摘要及全文进行阅读, 筛选出符合标准的文献 52 篇。

结论 青少年非自杀性自伤因其发病率高、复发率高、危险性高已经成为全世界最关注的公共卫生问题之一。但由于 NSSI 行为的发病机制复杂, 尤其是关于神经生物学机制仍处于探讨阶段, 需进一步完善研究。而影响 NSSI 行为发生的因素涉及各个方面, 如个体人格素质、童年创伤性经历、原生家庭教养模式、性别等。同时, 目前 NSSI 方面的研究多为横断面研究, 在接下来的研究中还需要纵向追踪研究 NSSI 青少年患者的结局, 为相关部门制定有效的干预方法, 加强心理健康服务提供更加全面的临床数据, 为 NSSI 行为的病理机制和制定个性化干预方案提供理论基础。

关键词: 非自杀性自伤; 抑郁障碍; 青少年

嘌呤代谢途径与精神分裂症、重度抑郁症、双相情感障碍的因果关系: 双向双样本孟德尔随机化分析

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目的 精神分裂症、重度抑郁症、双相情感障碍是严重的精神障碍, 虽然近几年对这些疾病的研究取得了很大的进展, 但它们的潜在病因仍未被完全了解。最近有研究表明嘌呤代谢途径与精神分裂症、重度抑郁症、双相情感障碍之间有关联, 但它们之前是否存在因果关系尚不清楚。本研究的目的是基于双向双样本孟德尔随机化的方法来研究嘌呤代谢途径与精神分裂症、重度抑郁症、双相情感障碍之间是否存在因果关系。

方法 本研究基于欧洲人群中嘌呤代谢途径和精神分裂症、重度抑郁症、双相情感障碍病的全基因组关联研究(GWAS)的汇总数据。使用双向双样本孟德尔随机化, 将遗传因素作为工具变量, 评估嘌呤代谢途径与精神分裂症、重度抑郁症、双相情感障碍之间的潜在因果关系。将 IVW 的结果作为主要的观察指标, 其他方法作为敏感性检验的结果。

结果 在前瞻孟德尔随机化研究中, 次黄嘌呤与精神分裂症具有潜在的因果关系, 且为负相关, IVW (OR=0.233, 95%CI: 0.076-0.719, P=0.011)。肌苷与重度抑郁症具有潜在的因果关系, 且为负相关, IVW (OR=0.919, 95%CI: 0.859-0.982, P=0.013)。硫酸盐与重度抑郁症具有潜在的因果关系, 且为正相关, IVW (OR=0.919, 95%CI: 0.859-0.982, P=0.013)。反向孟德尔随机化研究中未发现精神分裂症、重度抑郁症与嘌呤代谢途径有潜在的因果关系。无论前瞻或反向孟德尔随机化研究均未发现双相情感障碍之间有潜在的因果关系。

结论 本研究提供的证据表明, 次黄嘌呤是精神分裂症的保护因素, 能够降低精神分裂症的发病风险。肌苷是重度抑郁症的保护因素, 能降低重度抑郁症的发病风险, 而硫酸盐是重度抑郁症的危险因素, 会增加重度抑郁症的发病风险。为临床精神分裂症、重度抑郁症、双相情感障碍的早期诊断提供了新的见解

关键词: 精神分裂症; 双相情感障碍; 重度抑郁症; 嘌呤代谢途径; 孟德尔随机分析法

利用磁共振波普成像技术对双相情感障碍及强迫障碍可能共病机制的探讨

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目的 本文就双相情感障碍(BD)及强迫障碍(OCD)在磁共振波谱成像技术领域的最新研究结果进行总结,为进一步探讨两者可能的共病神经生化机制提供参考。

方法 已有研究显示,双相情感障碍和强迫障碍患者多个脑功能区均存在神经生化代谢异常,尤其是在前额叶、前扣带回、纹状体等脑功能区存在一定的交叉性。通过磁共振氢质子波谱成像(1H-MRS)技术对比讨论两种疾病在前额叶、前扣带回、纹状体三个脑功能区的脑生化代谢改变,将对探索BD共病OCD的神经生化机制有所帮助。

结果 在前额叶中,BD的抑郁发作患者背外侧前额叶皮质(DLPFC)中Glu、Glx水平随着抑郁症状的缓解而明显下降,OCD患者右侧DLPFC中tNAA水平与OCD患者残疾严重程度显著相关。在前扣带回中,成人BD患者和OCD患者均观察到Glu、Glx水平升高的现象,儿童BD和OCD患者Glx水平与健康儿童对照组相比没有显著差异。在纹状体中,急性发作期和缓解期BD患者双侧豆状核中NAA/Cr值显著低于健康对照组,而急性发作期和缓解期BD患者之间NAA/Cr值无显著差异;OCD患者双侧纹状体Glu、Glx水平变化与强迫症状严重程度呈正相关。

结论 基于目前的MRS研究,BD和OCD患者在前额叶、前扣带回、纹状体等脑区中NAA、Glu、Glx水平变化异常与患者症状严重程度有一定联系。尤其在前扣带回中,BD与OCD患者均观察到谷氨酸能神经传递活跃,不同时期发病的患者有所差异,提示BD与OCD可能存在共同的神经生化机制,Glu水平变化具有作为BD共病OCD生物标志物的可能性。

关键词:双相情感障碍,强迫障碍,磁共振波谱

非典型抗精神病药物对首发精神分裂症患者认知功能及脂代谢的影响

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目的 本研究通过评价和比较首发精神分裂症患者应用非典型抗精神病药物对认知功能及脂代谢的影响。

方法 本研究纳入68例符合国际精神疾病诊断和分类标准(ICD-10)的首发精神分裂症患者,随机分为两组,第一组给予氨磺必利片400-800mg/d,第二组给予奥氮平片10-20mg/d,两种药物均在1-2周的时间增加至治疗剂量,分别在第0、12周评测威斯康星卡片测试(WCST)、韦氏成人记忆量表(WMS)及血生化。

结果 认知功能比较:治疗12周末,氨磺必利组与奥氮平组对比,能改善患者认知功能,WCST中五项结果,第12周末($T=-1.07-1.88$, $P>0.05$),WMS中五项结果,第12周末($T=-1.54-0.56$, $P>0.05$),无差异性,WMS中再认分及理解分,第12周末($T=-2.27$, $P<0.05$) ($T=-3.46$, $P<0.05$),有显著差异。血生化中,第12周末($T=-7.22-2.07$, $P<0.05$),有显著差异。

结论 首发精神分裂症患者在应用非典型抗精神病药物治疗后,认知功能改善无明显差别,但应用奥氮平治疗的精神分裂症患者对脂代谢有明显影响,应用氨磺必利则无明显影响。

关键词:首发精神分裂症,认知功能,非典型抗精神病药物,脂代谢

认知行为治疗对重度抑郁患者无抽搐电休克治疗后认知功能障碍改善的效果

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目的 析重度抑郁患者行无抽搐电休克治疗后认知功能障碍用认知行为疗法的价值。

方法 对2022年2月-2024年1月病房与门诊所接诊符合重度抑郁障碍行无抽搐电休克治疗的病人($n=62$)进行随机分组。试验组和对照组各31人,试验组和对照组均使用MMSE对其认知功能进行评估,评估由两名经过培训的精神专科医师完成。

试验组在对照组的基础之上加用认知行为疗法,其干预时间在无抽搐电休克治疗后;对照组行常规治疗:根据病人实际情况,指导其使用抗精神病药物。对比 MMSE 评分等指标。

结果 MMSE 这项指标,未治疗时:试验组(17.48±2.41)分,对照组(17.69±2.57)分,组间差异不明显($t=0.2147$, $P<0.05$);治疗结束时:试验组达到(25.63±1.74)分,但对照组却仅有(21.91±1.89)分,比较发现:试验组数据更高($t=4.0839$, $P<0.05$)。疗效分析:总有效率这项指标,试验组达到 96.77%,但对照组却仅有 77.42%。比较发现:试验组数据更高($P<0.05$)。

结论 重度抑郁患者行无抽搐电休克治疗后认知功能障碍用认知行为疗法,病人的认知功能改善更加明显,疗效也更高。

关键词: 重度抑郁,无抽搐电休克治疗,认知行为治疗

研究不同年龄阶段男性抑郁障碍患者炎症反应、甲状腺功能、性激素、皮质醇相关指标水平的变化及其相关性,探讨更为个性化的治疗方案。

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目的 研究不同年龄阶段男性抑郁障碍患者炎症反应、甲状腺功能、性激素、皮质醇相关指标水平的变化及其相关性,探讨更为个性化的治疗方案。

方法 选取 2022 年 1 月至 2022 年 10 月于开滦精神卫生中心住院的男性中重度抑郁障碍患者 166 例,年龄 19~75 岁,根据年龄分为青年组(年龄 19~44 岁)75 例、中年组(年龄 45~59 岁)43 例、老年组(年龄 60~74 岁)48 例。收集患者的一般资料、白细胞(White blood cell,WBC)计数、淋巴细胞(Lymphocyte,LYMPH)计数、中性粒细胞(Neutrophil,NE)计数; C 反应蛋白(C-reactive protein,CRP)数值;甲状腺素(T4)、三碘甲状腺原氨酸(T3)、促甲状腺激素(TSH)、游离 T3(FT3)、游离 T4(FT4)数值;睾酮(Testosterone,T)、泌乳素(Prolactin,PRL)、孕酮

(Progesterone,P)、雌二醇(Estradiol,E2)水平;促肾上腺皮质激素(Adrenocorticotropic hormone,ACTH)和皮质醇(Cortisol,COR)水平。采用 SPSS 23.0 统计学软件进行数据处理。

结果 1.青年组患者的 WBC 计数、TSH 水平均高于老年组,LYMPH 计数高于中年组和老年组,T 水平高于中年组,差异均有统计学意义(均 $P<0.05$);老年组的 FT3 水平低于青年组和中年组,PRL 水平、CORT 水平均高于青年组和中年组,ACTH 水平高于青年组,差异均有统计学意义(均 $P<0.05$)。2.患者的年龄与 WBC 计数、LYMPH 计数、FT3 水平、TSH 水平成负相关,与 COR 水平成正相关;青年组患者年龄与 T 水平、PRL 水平、E2 水平成负相关;中年组患者年龄与 LYMPH 计数成负相关;老年组患者年龄与 T4 水平成负相关,与 TSH 水平成正相关。3.典型相关结果为性激素相关指标与皮质醇相关指标的相关性最显著,典型相关系数平方为 0.40。

结论 男性中重度抑郁障碍患者随着年龄增长,白细胞计数、淋巴细胞计数、FT3、TSH 水平均呈降低趋势,且与年龄呈负相关关系,且下丘脑-垂体-肾上腺素轴(HPA)更易出现功能紊乱。下丘脑-垂体-性腺轴(HPGA)、下丘脑-垂体-肾上腺素轴(HPA)之间可能起到正向协调作用。

关键词: 抑郁障碍,年龄,炎症反应,甲状腺功能,性激素,皮质醇

GCH1 在跑步运动改善慢性社交挫败所致抑郁样行为中的作用

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目的 作为一种健康的生活方式,运动已经逐渐成为治疗精神疾病的重要辅助手段,但是运动对抑郁样行为的改善效果及其具体机制尚不明确。本项目旨在探讨跑步运动对慢性社会挫败应激(Chronic Social Defeated Stress,CSDS)所致抑郁样行为的改善作用及其与 GTP 环化水解酶 1(GTP cyclohydrolase 1,GCH1)相关的机制。

方法 采用 CSDS 方法建立抑郁小鼠模型,观察模型小鼠海马 GCH1 表达变化;采用行为学方法观察跑步运动对 CSDS 模型小鼠抑郁样行为的改善

作用及其与 GCH1 表达的关系；免疫组化观察各组小鼠海马小胶质细胞形态变化；ELISA 检测各组小鼠 GCH1 下游产物四氢生物蝶呤（Tetrahydrobiopterin, BH4）浓度水平；观察 BH4 对抑郁样行为的改善作用；观察 BH4 对 BV2 小胶质细胞炎症因子表达的影响。

结果 CSDS 抑郁模型小鼠糖水偏爱度降低、强迫游泳不动时间增加，而跑步运动显著改善 CSDS 模型小鼠的上述抑郁样行为；CSDS 抑郁模型小鼠海马内 GCH1 表达下降，活化的小胶质细胞增多，而跑步运动显著上调 GCH1 的表达，并且抑制小胶质细胞活性；CSDS 抑郁模型小鼠 BH4 浓度显著降低，跑步运动显著增加 BH4 的水平；此外，BH4 可改善 CSDS 小鼠的抑郁样行为，并且下调 BV2 细胞的炎症因子水平。

结论 跑步运动通过上调海马 GCH1 抑制小胶质细胞的激活来改善 CSDS 所致的抑郁样行为。

关键词：抑郁症，GCH1，海马，小胶质细胞，跑步运动，CSDS

The Efficacy of Exercise Interventions on Depressive Symptoms and Cognitive Function in Adults with Depression: An Umbrella Review

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Objective Exercise is often cited as a major factor contributing to improved depression. This umbrella review aims to consolidate the evidence concerning the influence of exercise on depressive symptoms and cognitive performance in adults diagnosed with depression

Methods An umbrella review of systematic reviews with meta-analyses investigating the effect of exercise on depression and cognition was performed. Databases (PubMed, Cochrane Library, Web of Science, Embase) were searched from inception until February 2024 for reviews of randomized controlled trials. Full-text articles meeting the inclusion criteria were reviewed and methodological quality assessed. Overlap

within included reviews was assessed using the corrected covered area method (CCA). A random effects model was used to calculate overall pooled effect size with sub-analyses

Results This study included 27 reviews, encompassing 190 experiments. 11 reviews scored critically low on the 'A Measurement Tool to Assess systematic reviews' (AMSTAR). In patients with depression, compared to the control group, exercise demonstrated a moderate effect size in reducing depressive symptoms ($d = -0.66$; $SE = 0.05$; $p < 0.0001$), with a Number Needed to Treat (NNT) of 2.78. The outcomes of aerobic and resistance exercises demonstrate no significant disparities. When analyses were limited to data from studies with a low risk of bias, the effect on depressive symptoms was smaller ($d = -0.38$; $SE = 0.07$; $p < 0.0001$; $NNT = 4.72$). Exercise had a small effect on cognitive functions ($g = 0.12$; $SE = 0.03$; $p = 0.0005$), with an NNT for cognitive function treatment of 14.79

Conclusion All forms of exercise benefit patients with depression. However, for optimal intervention outcomes, it is essential to customize the intensity and type of exercise according to the specific characteristics of the patient's depressive symptoms and cognitive functions

关键词：Depression, Cognitive function, Exercise, adults, Umbrella review, Meta-analysis

An Epigenetic Clock To Assess The Differential Neurodevelopmental Trajectories and Prevalence of Three Major Psychiatric Disorders

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Objective Few studies have quantitatively described the common and distinct aspects of the neurodevelopmental trajectories of schizophrenia (SZ), bipolar disorder (BD) and major depressive disorder (MD). Therefore, there is an urgent need for a multiplatform epigenetic clock based specifically on human blood and

brain tissues to assess deviations in neurodevelopmental trajectories in patients with three major psychiatric disorders

Methods Based on 31 publicly available datasets measured on Illumina 27K (27K), Illumina 450K (450K), or Illumina EPIC (850K) array platforms from patients with SZ, BD or MD and unaffected controls, this study used a combination of elastic net and sure independence screening algorithms to develop a new epigenetic clock specific to human blood and brain tissues, then evaluated epigenetic age acceleration from blood and brain tissues of patients with three major psychiatric disorders

Results The Blood-Brain Clock achieves high performance in predicting blood and brain DNAm age and estimates that the three major psychiatric disorders have differential trend variations of epigenetic age acceleration. Epigenetic age acceleration in both blood and brain tissues showed a decrease in SZ but an increase in BD and MD relative to controls. Blood precedes brain tissue in exhibiting distinguishable alterations in epigenetic age acceleration across three major psychiatric disorders. Moreover, most of the disease-associated differentially methylated DNAm probes that were shared across SZ, BD and MD displayed opposite alteration patterns between SZ and BD/MD but similar patterns between BD and MD. BD and MD were also indistinguishable from each other but significantly distinguishable from SZ in neuropsychiatric disorder classification models constructed with random forest classifiers

Conclusion The different trends identified in epigenetic age acceleration across three major psychiatric disorders in this study added substantial value to understanding offsets in their neurodevelopmental trajectories. These distinguishable alterations in epigenetic age acceleration observed in peripheral system prior to brain tissue facilitate early diagnosis of disorders and has the potential to evaluate the risk of various disorders

关键词: Neurodevelopment, Epigenetic clock, DNA methylation, Schizophrenia, Bipolar disorder, Major depressive disorder

述情障碍的内感受知觉语义表征及其神经机制研究

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目的 旨在揭示述情障碍内感受知觉语义表征缺陷的行为效应、电生理机制及内感受知觉语义表征个体差异的神经机制。

方法 在正常大学生群体中筛选高、低述情障碍个体纳入本研究。研究一使用鼠标追踪技术,刻画高、低述情障碍个体在将内感受知觉与情绪类别匹配时的鼠标轨迹差异。在研究一基础上,研究二纳入高、低述情障碍个体,并将 ERPs 技术与鼠标追踪技术相结合,同步采集被试的鼠标追踪数据与脑电数据,使用时域分析考察与内感受知觉语义表征相关的 ERPs 成分。在研究一和二的基础上,研究三纳入高、低述情障碍个体,采集其磁共振数据,并在扫描时让被试完成 oddball one-back 语义判断任务,对任务态磁共振数据进行被试间相关分析和激活分析;再基于独立样本静息态磁共振数据进行功能连接分析。

结果 在研究一中,鼠标轨迹对比分析主效应显示,高述情障碍个体的最大偏差值大于低述情障碍个体,差异具有统计学意义($p < 0.001$),即高述情障碍个体的个体在做出选择时,鼠标轨迹更加偏向干扰选项,简单效应分析在恐惧、愤怒情绪类别上也发现了类似效应。在研究二中,对鼠标追踪数据的分析得到了与研究一一致的结果,ERPs 分析发现:与低述情障碍个体相比,高述情障碍个体诱发了更大的 N400 波幅,而在 N200 波幅上未发现高、低述情障碍个体之间的显著差异。研究三对任务态磁共振数据分析显示:高述情障碍个体右侧额下回眶部、左侧角回等脑区的被试间相关模式高于低述情障碍个体。激活分析结果显示:相比于低述情障碍个体,高述情障碍个体的左侧中央后回激活增强。以杏仁核和脑岛为感兴趣区进行基于种子点的静息态功能连接分析发现,杏仁核和脑岛的功能连接均与述情障碍或其维度分数存在相关关系。

结论 (1) 高述情障碍个体在内感受知觉语义表征上存在缺陷;(2) 结合鼠标追踪技术与 ERPs 技

术探讨述情障碍内感受知觉语义表征的电生理机制,结果显示,相比于低述情障碍个体,高述情障碍个体诱发了更大的 N400 波幅,说明其无法有效地对语义信息进行整合,对刺激的意义加工能力减弱;

(3) 通过使用 fMRI 技术探讨述情障碍内感受知觉语义表征个体差异的神经机制,任务态 fMRI 分析发现,高述情障碍个体在额下回眶部和角回的 ISC 模式均高于低述情障碍个体,表明其内感受知觉语义表征缺陷是由于额下回眶部(语义控制)和角回(语义信息表征)的活动存在异常;从个体差异角度进一步分析发现,杏仁核(情绪刺激加工)和脑岛(内感受信息整合)的功能连接是述情障碍个体差异的神经基础。

关键词:述情障碍,内感受知觉,语义表征,鼠标追踪技术,神经机制

一例以记忆力减退及下肢抖动为主要症状的脆性 X 相关震颤/共济失调综合征病例报道及文献回顾

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目的 报道 1 例早期被诊断为神经元核内包涵体病的脆性 X 相关震颤/共济失调综合征患者的临床表现、辅助检查结果以及诊治经过,旨在提高本病的早期识别,减少临床误诊漏诊。

方法 总结 1 例来自浙江无阳性家族史患者的临床资料,对患者行影像学检查、皮肤肌肉活检及基因检测,应用 PCR 联合毛细管检测分析 FMR1 基因。

结果 本例患者为 57 岁男性,以近记忆力减退、上下楼梯时下肢抖动为主要表现,入院时颅脑 MRI 示双侧额叶皮层下及胼胝体压部 DWI 高信号灶,神经元包涵体可符。结合患者颅脑 MRI 表现,入院时初步诊断考虑“神经元核内包涵体病(NIID)”,随即对患者行皮肤肌肉活检及 NIID 相关的 NOTCH2NLC 基因检测。皮肤活检普通病理报告提示真皮层少许汗腺细胞和成纤维细胞核内见嗜酸性包涵体样结构,可符合 NIID。但基因检测提示相关基因中 GGC 重复序列数小于 60,不符合 NIID。患者 NIID 诊断难以成立。此时想到另一种与 NIID 有

着类似影像表现的罕见遗传病:脆性 X 综合征(FXS)。随即对患者行 X 染色体 FMR1 基因行 PCR 联合毛细管检测分析,发现患者 FMR1 基因 5'非转录区 CGG 重复数为 121 次,在前突变范围内,表明患者患有 FXS 的风险增加。随后患者女儿表示患者外孙今年 7 岁,存在发育落后、学习差表现。随即对患者女儿及外孙行 FMR1 基因检测,发现患者女儿 CGG 重复数为 132 次,处于前突变范围,目前无相关临床症状;患者外孙 CGG 重复数大于 200,为全突变范围,携带者必然患病。至此,患者及其家属诊断得以明确,结合临床表现、颅脑影像及基因检测结果,患者确诊为“脆性 X 相关震颤/共济失调综合征(FXTAS)”。

结论 部分罕见疾病的早期症状缺乏特异性,准确诊断存在挑战性。临床遇到认知障碍患者,除常见病以外,还应考虑到罕见病可能。脆性 X 综合征是 X 染色体连锁的遗传性疾病,其致病基因为 X 染色体上的 FMR1 基因 CGG 序列异常扩增。根据基因为前突变或全突变,临床可分为 3 型。(1)脆性 X 综合征:多未成年起病,影响智力、行为和社会适应性发展;(2)脆性 X 相关震颤/共济失调综合征:多 50 岁以上发病,男性常见,因 FMR1 基因前突变所致患者出现震颤。记忆和平衡问题,本例患者为此类型;(3)脆性 X 相关原发性卵巢功能不全:一种影响卵巢功能的疾病,可导致某些女性携带者不孕和早期绝经。FXS 患者的颅脑 MRI 可表现为 DWI 序列上的皮层下火焰状的异常高信号,与神经元核内包涵体病的特征性影像及其相似,且其临床表现常较相似,均可表现为记忆力减退等,因此常难以鉴别,必须行皮肤活检及相关基因检测方可确诊。

关键词:认知障碍,脆性 X 综合征,神经元核内包涵体病,罕见病,基因检测

Genome-wide DNA Methylation and Adverse Childhood Experiences in Youth at Clinical High Risk for Bipolar Disorder and Patients with Established Bipolar Disorder

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Objective Bipolar disorder (BD) is thought to arise from complex interactions between genes and the environment. Notably, adverse childhood experiences have been implicated in BD development, yet the underlying etiological mechanisms remain elusive. We aimed to explore the potential mediating role of DNA methylation in the association between childhood adversities and the BD risk status in three risk groups

Methods In this study, we recruited 20 youth at clinical high risk for BD (CHR-BD), 21 patients with established BD, and 24 healthy controls, matched for age, sex, and ethnicity. Using Illumina EPICv2, we conducted whole-genome DNA methylation profiling and explored the potential mediating role of the methylome between adverse childhood experiences and BD risk via the Divide-Aggregate Composite-null Test (DACT)

Results Patients with BD and youths at CHR-BD showed significantly higher scores than healthy controls in the Adverse Childhood Experiences-International Questionnaire (ACE-IQ) total score and each of its three domains (childhood maltreatment, family dysfunction and violence outside the home, $P > 0.05$). While none of the probes met the Bonferroni criterion ($P < 5.71 \times 10^{-8}$), the DACT analyses identified several promising candidates ($P < 5.00 \times 10^{-5}$) functioning involved in development, cell cycle control, immune response, metabolic and signalling pathways. We identified suggestive mediating probes related to ten genes that were linked to the ACE-IQ total score and two subscales

Conclusion Our findings reveal promising research targets for understanding the etiology of early BD in childhood adversity contexts. Future studies should validate and expand on these findings to deepen the understanding of BD

关键词: Bipolar disorder, At-risk youth, DNA methylation, Adverse childhood experiences

一例表现为反复亚木僵状态的肝功能正常的高氨血症性脑病病例报道及文献回顾

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目的 报道 1 例以反复发作性认知功能下降、不语不动、肢体僵硬为临床表现的肝功能正常的高氨血症性脑病患者的临床表现、辅助检查结果以及诊治经过,旨在提高本病的早期识别,减少临床误诊漏诊。

方法 总结 1 例来自四川的患者的临床资料,对患者行脑电、影像学检查及血氨检测,予以乳果糖、益生菌、门冬氨酸鸟氨酸注射液治疗。

结果 本例患者为 64 岁女性,无阳性家族史,3 年前因胃部肿瘤曾行胃大部切除术。入院前半年来反复出现反应迟钝、认知功能下降,严重时不语不动,四肢僵硬,问之无应答,似亚木僵状态,持续数日可缓解。曾外院行脑脊液常规、生化、自免脑检测均未见异常。入院时患者反应迟钝,数问少答,定向力欠佳,记忆力减退,肢体僵硬,动作迟缓,血常规、肝肾功能等常规检查未见异常,腹部彩超正常,长程脑电图示双侧前头部尖波发放,双侧半球弥漫性慢波发放。回顾患者既往外院诊疗资料,发现患者初次入院时血氨偏高,后未再复查。予以复查,结果示血氨 $195 \mu\text{mol/L}$ 。予以乳果糖、益生菌口服减少氨产生,门冬氨酸鸟氨酸注射液静滴降血氨治疗,2 天后患者反应明显好转,记忆力改善,定向力准确,运动自如,复查脑电图未见弥漫性慢波及尖波发放,复查血氨 $56 \mu\text{mol/L}$ 。结合临床表现、辅助检查及治疗转归,该患者被确诊为:高氨血症性脑病。

结论 高氨血症是一种严重的代谢紊乱,如果不及时控制,可导致不同程度的脑损害及肝损害,引起意识障碍、精神行为异常、脑水肿,致残、致死

率很高。高氨血症常见于遗传代谢性疾病如尿素循环障碍，和多种因素引起的急性或慢性肝功能衰竭患者如酒精性肝硬化。本例患者既往无相关遗传代谢疾病史或家族史，多次检测肝功能均未见异常，故既往诊疗经过中未将高氨血症性脑病纳入重点考虑范围。该患者反复高氨血症的病因尚未完全确定，有文献报道少数胃肠道手术后的患者会出现高氨血症，该患者既往曾行胃大部切除术，推测可能与之相关。该病例提示我们临床对肝功能正常的急性精神障碍患者也需考虑高氨血症脑病可能，脑电图及血氨检测能帮助尽早诊断。

关键词：亚木僵状态,高氨血症性脑病,急性精神障碍

肠道菌群、血清代谢物及关联分析针灸百会、足三里穴缓解抑郁样行为的潜在机制研究

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目的 通过慢性不可预测温和刺激(CUMS)建立小鼠抑郁模型,使用针灸(Acupuncture, AP)百会、足三里穴治疗小鼠抑郁样行为。(1)观察针灸百会、足三里穴对 CUMS 小鼠抑郁样行为的影响;(2)利用 16SrRNA 基因测序肠道菌群组成,使用非靶向代谢组学分析血清代谢物的变化;(3)分析差异菌群、差异代谢物和抑郁样行为之间的相关性。

方法 在强迫游泳测试和蔗糖偏好测试中评估 Ctrl 组、Ctrl+AP 组、CUMS 组和 CUMS+AP 组小鼠的抑郁样行为。使用 16S rRNA 测序评估肠道微生物群的变化。进行非靶向代谢组学测序代谢物组含量,筛选标志代谢物和代谢通路。利用宏基因组-代谢联合分析差异菌群与差异代谢物的关联性,从而帮助建立肠道菌群-血清代谢物-抑郁行为之间的逻辑关系。

结果 CUMS 组的糖水偏好和悬尾不动时间低于 Ctrl 组($P<0.001$)和 CUMS+AP 治疗组($P<0.05$),这表明 CUMS 诱导小鼠发生了抑郁样行为,中医针灸百会和足三里穴可以缓解抑郁样行为。human_gut_metagenome 菌种是 CUMS 组的特征性标志物之一; Eggerthella 菌属和

bacterium_NLAE_zl_P36 菌种是 CUMS+AP 组的特征性标志物。小鼠肠道菌群基因功能可能通过影响肠道菌群组成及视黄醇代谢、磷酸盐代谢、青霉素及头孢菌素代谢和咖啡因等代谢途径从而发挥抗抑郁效应。CUMS 组对比 Ctrl 组, Ruminococcus_gnavus_CC55_001C 菌种与 Sphingosine 差异代谢物呈负相关,该菌种与 Nalidixic Acid、3-Indoleacrylate 差异代谢物呈正相关。正离子差异代谢物 Pipecolic acid 显著下调和正离子差异代谢物 1-Arachidonoylglycerol 显著上调,二者互为负相关关系,ABC transporters 代谢通路在 CUMS 小鼠抑郁症状中可能发挥较大作用。与 CUMS 组抑郁小鼠相比,CUMS+AP 组抑郁小鼠的 human_gut_metagenome 菌种与 Melibiose 代谢物呈显著正相关关系,筛选出 2 个显著上调正离子代谢物 Pipecolic acid、Mannitol,其中针灸百会和足三里穴可能通过改变 Mannitol 在 ABC transporters 代谢通路中发挥治疗作用。

结论 针灸百会和足三里穴可使抑郁导致的肠道菌群和血清代谢物紊乱部分恢复,可能通过特定的代谢途径发挥抗抑郁效应,为进一步研究抑郁症相关的肠-脑-代谢轴奠定前期基础,为中医针灸缓解抑郁症状的疗效及其潜在机制做探索。

关键词:抑郁症,针灸,16sRNA 基因测序,非靶向代谢组学测序,宏基因组-代谢联合分析

非自杀性自伤的内分泌免疫研究进展

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目的 非自杀性自伤(non-suicidal self-injury, NSSI)是指不以自杀为目的、重复的故意损伤自己身体的行为。美国《精神障碍诊断和统计手册》第 5 版中将 NSSI 视为可能的独立诊断实体,提示 NSSI 可能存在独特的病理生理机制。研究发现具有 NSSI 行为人群其内分泌和免疫存在变化,进一步探讨 NSSI 的内分泌免疫机制,可能有助于其早期预防与干预。

方法 通过 PubMed、Web of Science 等数据库查使用“Non-suicidal self-injury”、“immune response”以及“Inflammation”等关键词检索相关文章,根据需

要选取近 5 年发表的英文研究。

结果 NSSI 个体在童年创伤的背景下表现出内分泌免疫系统应激激素水平变化。童年创伤作为一个慢性应激源,可能导致了下丘脑-垂体-肾上腺轴、下丘脑-垂体-甲状腺轴、者下丘脑-垂体-性腺轴等内分泌系统的变化,且可能会引发持久的全身炎症反应。NSSI 行为者在急性应激任务下表现出更迟钝的唾液皮质醇反应,同时皮质醇反应程度与 NSSI 的严重程度相关。NSSI 女性青少年白细胞绝对数量、白细胞/皮质醇比值升高,且儿童期被虐待程度与白细胞/皮质醇比值显著相关。NSSI 个体表现出的行为冲动增强与血清 TNF- α 水平升高相关。

结论 NSSI 多发生在青少年和成年早期,涉及生物学、心理和社会等因素的相互作用。当前相关的生物学机制尚不明确,导致青少年 NSSI 的药物治疗效欠佳。针对不同年龄段、伴随的精神疾病进行纵向研究,将有助于探讨 NSSI 生物学指标,从而早期筛查并干预 NSSI 行为。

关键词: 非自杀性自伤, 自残, 免疫炎症, 下丘脑-垂体-肾上腺轴, 童年创伤

抑郁症与精神分裂症患者外周血中 ω -3 和 ω -6 多不饱和脂肪酸水平的系统评价和荟萃分析

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目的 抑郁症和精神分裂症是两种常见且复杂的精神疾病,但是致病机理不明。研究发现 ω -3 和 ω -6 多不饱和脂肪酸 (PUFAs) 通过调节炎症、神经传递等生物过程在它们病理机制中发挥重要作用。然而,当前关于这两种疾病患者体内 PUFAs 水平的研究结果仍存在矛盾,且单一研究的样本量限制了结论的普适性。因此,本研究旨在通过系统评价和荟萃分析的方法,综合评估现有文献中抑郁症和精神分裂症患者外周血中 PUFAs 含量,为研究疾病病理机制和治疗策略提供科学依据。

方法 参照 PICO 原则,以确定好的检索式,系统地检索 PubMed, Embase, MEDLINE 和考克兰英文数据库,检索日期为建库至 2023 年 12 月,获取测量两种疾病外周血中 PUFAs 含量的所有相关英文

文献信息,提取相关数据并使用 NOS 量表进行质量评价,通过 Revman 5.4 软件进行荟萃分析,主要结局指标为患者与健康对照相比,外周血中 ω -3 和 ω -6 PUFAs 水平的差异。获得标准化均数差以及 95% 置信区间作为效应指标,通过子组分析和敏感度分析等方法探讨异质性的来源。

结果 共检索了 6713 篇文献,最终共纳入了 65 项研究,涉及 86 组数据,包括 4219 位患者和 8470 位对照。结果显示,与对照组相比,抑郁症患者外周血中 ω -6/ ω -3 PUFAs 显著升高 (SMD=0.54;95%CI=[0.27,0.81];P<0.0001),二十二碳五烯酸 (DPA) (SMD=-1.31;95%CI=[-1.61,-1.01];P<0.00001)、二十碳五烯酸 (EPA)(SMD=-0.41;95%CI=[-0.64,-0.18];P=0.0004)和二十二碳六烯酸 (DHA)(SMD=-0.69;95%CI=[-0.93,-0.46];P<0.00001)显著降低;精神分裂症患者外周血中 DHA(SMD=-0.61;95%CI=[-0.90,-0.32];P<0.0001)、亚油酸(SMD=-0.70;95%CI=[-0.99,-0.42];P<0.00001)和总 ω -6 PUFAs(SMD=-0.63;95%CI=[-0.95,-0.31];P=0.0001)显著降低。虽然研究表现出较高的异质性(如精神分裂症总 ω -6 PUFAs 的 I² 为 79%),但通过敏感度分析等方法发现,研究的稳定性良好。

结论 本研究发现,DHA 在两种疾病中均降低;抑郁症中 ω -3 PUFAs 显著降低, ω -6/ ω -3 显著升高,而精神分裂症中 ω -6 PUFAs 显著降低。这种 PUFAs 的差异化含量反映了这两种疾病的病理机制的差异,为 PUFAs 辅助治疗精神疾病提供了生物学基础。

关键词: 抑郁症,精神分裂症,多不饱和脂肪酸,荟萃分析

ZJU 指数与抑郁症状的关联性研究: 基于 NHANES 数据的横断面分析

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目的 抑郁症状是一组以情绪低落、兴趣丧失、快感缺失等负面情绪与行为的临床表现。抑郁症状发生率的逐年攀升,多项研究已证实抑郁症状与非

酒精性脂肪肝 (non-alcoholic fatty liver disease, NAFLD) 之间存在显著关联。NAFLD 诱发的慢性炎症及肝功能异常可能直接作用于大脑情绪调节, 同时, 伴随的代谢综合征、肥胖等可能间接增加抑郁风险。此外, NAFLD 患者长期面对疾病管理挑战及生活质量的下降, 亦可能诱发抑郁症状。浙江大学 (ZJU) 指数作为一种新型简便的筛查工具, 已被证实对 NAFLD 具有较高的筛查效能(AUC=0.822), 其计算方式如下: $ZJU\ index = BMI + TG + TC + 3 \times ALT / AST$ 。本研究旨在探讨 ZJU 指数与抑郁症状之间的关联, 并进一步分析这种关系在不同性别、年龄等特定人群中的差异, 为临床干预和健康管理提供科学依据。

方法 使用美国国家卫生与营养检查调查 (National Health and Nutrition Examination Survey, NHANES) 的数据, 并排除存在抑郁症状数据缺失以及计算 ZJU 指数所需数据不全的个体。当 PHQ-9 的累计评分大于等于 10 分时, 认定为具有抑郁症状。采用加权 t 检验和卡方检验确定是否有抑郁症状两组人群间的差异, 用加权线性回归分析 ZJU 指数与抑郁症状的关系, 并通过亚组分析和交互作用识别特殊人群。

结果 本研究共纳入 15035 人, 共 1287 人具有抑郁症状。ZJU 指数在具有抑郁症状的人群 (survey-weighted mean 41.51, 95% CI 40.95-42.06) 中显著高于非抑郁症状人群 (survey-weighted mean 39.26, 95% CI 39.03-39.49) ($P < 0.05$)。在调整年龄、性别、种族、生活方式、经济状况和合并症等因素后, ZJU 指数与抑郁症状之间的关联仍显著 (OR=1.019 (1.010-1.029), $P=0.002$), 且在不同性别中保持一致。与最低四分位数组(Q1)相比, Q3 和 Q4 的 OR 和 95%CI 分别为 1.38 (1.04 - 1.83) 和 1.02 (1.01 - 1.04) ($P < 0.05$)。亚组分析显示, 在具有卒中病史个体中, ZJU 指数升高更显著增加了发生抑郁症状的风险 ($P = 0.0267$)。

结论 本研究发现 ZJU 指数与抑郁症状具有显著的关联, 并且这种关联在具有卒中病史的个体中更为显著。为预测抑郁症状的发生提供了一种简单而有价值的筛查工具。

关键词: ZJU 指数, 抑郁症状, NHANES 数据库, 横断面研究

Prefrontal Cortex Variation in Youth and Adolescents Who Engaged in Repetitive Non-suicidal Self-injury Vs. Psychiatric Controls

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Objective Non-suicidal self-injury (NSSI) is defined as deliberate, self-inflicted damage to the surface of the body, which is frequently associated with suicidal thoughts and behaviors (STB). The prevalence of non-suicidal self-injury (NSSI) in youth and adolescents has increased substantially in recent years. The mechanism of NSSI has not been elucidated. Studies have shown that specific cortical abnormalities might associated with NSSI. We aimed to identify the cognitive function variation and cortical abnormalities of NSSI and provide a multidimensional perspective for clinical identification and diagnosis.

Methods We recruited 136 individuals from a psychiatric hospital and classified them into two groups including none diagnostic NSSI (NN, n=40), and diagnostic NSSI (DN, n=99). We extracted data on cortical surface area and thickness from structural MRI scans and compared these between the groups.

Results The left pars orbitalis thickness ($t = 2.592$, adjusted $p < 0.05$), and the right rostral middle frontal regions thickness ($t = 2.695$, Adjusted $p < 0.05$) were tested differently in statistics in Multiple linear regression analysis. The times of the NSSI in the DN group showed a negative correlation with the surface area of the right pars triangularis ($t = -2.683$, adjusted $p < 0.05$). No significant differences exist between the NN and DN groups in cognitive domains.

Conclusion The morphometric alteration of the left pars' orbitalis, the right rostral middle frontal region, and the right pars triangularis may represent a biomarker of NSSI behavior in youth and adolescents. This study identified the cognitive function variation and cortical abnormalities of NSSI and provided a multidimensional perspective for clinical identification and diagnosis

关键词: Prefrontal cortex, NSSI, youth and adolescents, mental health

时间干涉电刺激调节人类共情情绪

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目的 共情,即个体感知或想象他人的情感,包括情感共情和认知共情两个独立成分。共情作为理解和分享他人情感的关键心理过程,在社会生活中起着重要作用。研究表明,岛叶脑区在共情的神经机制中扮演着关键角色,尤其是在情感共情方面。近年来的研究发现,共情具有可塑性,可能受多种神经调控的影响。时间干涉电刺激(Temporal Interference, Ti)是一种新型的无创深部脑刺激技术。这项技术通过在头皮上放置的电极输入两对高频刺激信号,这些信号在大脑内部特定区域形成较强交叠电场,并以高频频率差为周期波动,从而克服了传统经颅电刺激干预深度不足、电场弥散等问题。Ti 电场能有效靶向深部脑区,并且在安全电流强度下实现了有效的深部脑刺激。采用疼痛共情研究范式,基于共情的神经基础以及 Ti 电刺激对深部脑区的靶向能力,通过行为数据探讨 Ti 电刺激在提高人类共情情绪的能力。

方法 入组健康被试,采用随机、双盲的方式分为 Ti 电刺激组和 Sham 刺激组。实验前一周采集被试的 T1 核磁共振数据,目标靶点为左侧前岛叶,根据 T1 核磁数据仿真计算得到高频 Ti 电刺激的电极放置位置及电流强度。基线:所有的被试均进行一次共情任务评分;第二周:根据先前分组的刺激方式被试开始进行电刺激,10 min 后开始共情任务评分,完成疼痛共情任务测试。疼痛共情任务中随机出现自然场景视频和疼痛相关视频,评估对应的疼痛程度和观看此视频时候的心理不舒适程度,以此来反映个体的共情情绪。

结果 Ti 电刺激组对疼痛场景的疼痛程度和不舒适程度较 Sham 刺激组更显著,两组对自然场景的情绪感知影响较小。

结论 人类个体可以通过 Ti 电刺激来改变自身的共情情绪, Ti 电刺激对于个体的共情塑造具有重要作用。

关键词: 时间干涉电刺激,共情,疼痛共情任务,核磁共振

合并益生菌治疗对抗精神病药源性肥胖的作用

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目的 临床常用的抗精神病药物在较好的改善精神症状的同时还带来了药源性肥胖的不良反应,导致患者依从性下降,预后不佳。随着脑-肠-轴研究的不断深入,发现肠道细菌的紊乱与精神分裂症发病以及抗精神病药源性肥胖均密切相关。本研究尝试用临床常见的益生菌制剂干预,探索其对抗精神病药源性肥胖的作用及机制。

方法 纳入长期服药治疗的精神分裂症患者,根据药源性肥胖的判别标准分为肥胖组(n=36)和非肥胖组(n=36),同时给予益生菌治疗 4-8 周。在治疗前后去患者粪便行肠道菌群的检测,抽血行代谢组学的检测。在治疗前后均应用 PANSS 了解受试者症状的变化。应用 SPSS 以及 R 软件进行统计分析,以 $p < 0.05$ 表示差异有统计学意义。

结果 基线水平,两组间肠菌存在差异,肥胖组总菌数量减少,益生菌少于非肥胖组;代谢组学结果提示,两组有 58 种差异代谢物,主要集中在糖脂代谢通路。经益生菌治疗 8 周后,两组肠菌水平差异无统计学意义;代谢组结果提示,仍有 24 种差异代谢物,未再富集于糖脂代谢物。治疗前后 panss 量表差异无统计学意义。

结论 合并益生菌制剂对抗精神病药源性肥胖有一定的改善作用,为临床抗精神病药源性肥胖早期干预提供一定依据。

关键词: 精神分裂症,药源性肥胖,益生菌,代谢组学

未治疗的精神分裂症患者的 EGF, NGAL 水平与暴力行为的关系

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目的 本研究旨在探讨核基因 κB (NF- κB), 表皮生长因子 (EGF), 中性粒细胞明胶酶相关脂质运载蛋白 (NGAL) 与精神分裂症暴力之间的关系。

方法 选取 161 例于天津市安定医院门诊或住院, 符合美国精神障碍诊断统计手册第五版 (DSM-5) 精神分裂症或精神分裂样障碍的诊断标准的患者, 既往未接受过系统抗精神病药治疗。采用修订版外显攻击行为量表 (MOAS) 评估攻击症状的严重程度 (暴力组与非暴力组的划分?), 并使用阳性与阴性症状量表 (PANSS) 评估精神症状的严重程度。采用酶联免疫吸附法 (ELISA) 检测血浆标本 NF- κB 、EGF、NGAL 水平。应用 SPSS23 进行统计分析。

结果 161 例未治疗的精神分裂症患者中暴力倾向的发生率为 56.5%, 其中暴力组阳性症状评分明显高于非暴力组, 且病程更短。暴力组的 NGAL、EGF 水平均低于非暴力组 ($11.473 \pm 4.507 \mu\text{g/L}$ vs. $14.130 \pm 9.024 \mu\text{g/L}$; $974.319 \pm 327.265 \text{pg/mL}$ vs. $1145.272 \pm 546.566 \text{pg/mL}$)。MOAS 量表总分与阳性症状评分呈正相关 ($p < 0.01$)。采用偏相关, 控制性别、年龄、病程、BMI 等混杂因素后, 结果显示 MOAS 总分与 NGAL 和 EGF 水平均呈负相关 ($P < 0.05$)。

结论 精神分裂症患者暴力攻击风险发生率较高, 其中炎症过程可能参与精神分裂症患者的暴力行为的发生。

关键词: 精神分裂症, 暴力行为, EGF, NGAL

基于精神专科医院职工的心率变异性与疲劳程度的关联分析

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目的 疲劳是由于过度的躯体或精神活动所致能力和效率的下降, 是一般人群最常见的亚健康问题之一。长期疲劳可能预示着病理性的疲劳, 造成工作及学习效率下降, 甚至影响身心健康。目前关于疲劳评估仍是依赖主观性的量表, 缺乏客观性指标。在一些实验条件下已经证实心率变异性 (heart rate variability, HRV) 与疲劳程度存在相关性, 但目前缺乏在日常真实生活环境下 HRV 与疲劳的相关性研究。本研究目的是探索在真实生活环境下健康人群的 HRV 与疲劳程度及相关的心理生理健康指

标的相关关系, 从而探讨 HRV 作为评估疲劳及心理健康状态的客观生物标志物的潜力。同时, 我们也调查疲劳状态对生活质量、心理健康状态的影响。

方法 本研究是一项横断面调查研究。从 2020 年 6 月至 2020 年 12 月, 对汕头市某精神专科医院 216 名在岗的工作人员进行了 HRV 指标测量及问卷调查, 包括一般情况、既往病史、Chalder 疲劳量表 (CFQ)、匹兹堡睡眠质量指数 (Pittsburgh Sleep Quality Index, PSQI)、简化 36 项健康状况问卷及视觉模拟法评分 (Visual Analogue Scale, VAS)。CFQ ≥ 4 分定义为存在疲劳感, 长期疲劳定义为疲劳感持续 1 个月及以上。

结果 本研究的结果显示, 精神专科医院职工的疲劳率为 23.15%, 长期疲劳率为 13.89%。相对于非疲劳者而言, 长期疲劳者会有更差的睡眠质量、更差的生活质量及更糟糕的心理健康状况。在总体样本中, 控制了年龄、性别、身体质量指数及心率影响后, HRV 指标 LF/HF (低频/高频) 与 PSQI 量表的睡眠障碍得分存在显著相关性 ($\beta = 0.138, P = 0.034$)。按年龄分层进一步多重线性回归分析发现在 30-40 岁年龄段, HRV 指标 TP (总功率) 与 VAS 疲劳程度评分存在显著负相关性 ($\beta = -0.330, P = 0.006$), 随着疲劳程度加重, TP 值下降; 而在 20-30 岁年龄段, LF/HF 与 VAS 疼痛评分呈正相关 ($\beta = 0.227, P = 0.019$), 即 LF/HF 的值随着肌肉/关节/一般性疼痛程度升高而升高。

结论 精神专科医院职工的疲劳率 23.15%, 长期疲劳率 13.89%, 长期疲劳会影响睡眠质量、生活质量及心理健康。在日常真实环境中, HRV 指标 LF/HF 与睡眠障碍程度正相关, 而 HRV 指标与疲劳及疼痛的关联与年龄有关。上述结果提示 HRV 具有作为真实世界中疲劳及相关心理健康状态 LF/HF 客观评估指标的潜力。

关键词: 心率变异性, 疲劳, 精神专科医院, 日常真实环境, 疲劳率

抑郁症患者治疗前后认知功能改善与脑区代谢变化的关系

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目的 探讨抑郁症患者治疗前后认知功能改善与前额叶区和海马区代谢物改变的关系。

方法 纳入受试者 44 例, 包括 MDD 患者 22 例和健康对照 22 例。在基线期和治疗 8 周后对所有患者进行临床症状、主观认知功能、和客观认知功能的评估, 并进行左侧前额叶及左侧海马的 MRS 扫描以评估代谢物的含量。采用双样本 T 检验分别比较 MDD 患者治疗前和治疗 8 周后与健康对照之间认知功能和脑代谢物的差异, 采用配对样本 T 检验比较 MDD 患者治疗前后临床症状、认知功能和脑代谢物的差异。采用 Pearson 相关分析检测认知功能改善与脑代谢物变化的关系。

结果 MDD 患者 PDQ-D 和言语功能损害明显, 经抗抑郁药物治疗 8 周后, 患者的即刻记忆、延迟记忆、RBANS 总分和 PDQ-D 评分都得到了改善。MDD 患者用药前、后左侧前额叶 NAA/Cr 的含量均低于健康对照。MDD 患者用药后左侧海马 MI/Cr 的含量低于用药前, 但左侧前额叶代谢物用药前、后无明显变化。MDD 患者药物治疗前后左侧海马代谢物的变化与认知功能的变化之间的相关性分析未发现具有统计学意义的相关性。MDD 患者药物治疗前后左侧前额叶代谢物的变化与认知功能的变化之间的相关性分析发现视觉空间和注意功能的改善分别与 NAA/Cr 的减少呈正相关, 而其他方面的认知功能变化与脑代谢物变化未发现具有统计学意义的相关性。

结论 MDD 患者的视觉空间和注意功能的改善与左侧额叶区 NAA/Cr 的减少呈正相关。

关键词: 重性抑郁障碍; 认知功能; 功能磁共振成像; 磁共振波谱

谵妄风险因素、预防干预、重叠症状及临床措施最新进展

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谵妄是由多种因素引起的急性可逆的神经精神综合征, 以注意力、意识、认知功能发生急性改变为特征, 它通常不能归结为由已预先存在的神经认知障碍所诱发。2021 年出版的《综合医院谵妄诊治专家共识》中建议, 谵妄的定义采用 ICD-11 来叙述, 即: “谵妄是急性或亚急性起病的注意障碍(即指向、

聚焦、维持和转移注意的能力减弱) 和意识障碍(即对环境的定向力减弱), 在一天内症状常出现波动, 并伴其他认知障碍(如记忆、语言、视空间功能或感知觉障碍等), 可影响睡眠觉醒周期, 其病因常为非精神行为障碍类疾病、物质或某种药物中毒或戒断。”

谵妄会导致患者治疗方案增加、住院时间延长、护理负担加重, 处理谵妄产生的医疗成本极高, 但 30-40% 的谵妄可以通过预防避免发生[2, 17, 18]。不同国家或地区, 不同医疗场景的发病率(%) 也有所差异。美国[2]的一项社区研究, 发病率 1-2%, 意大利[3]和西班牙[4]社区分别为 3.6% 和 0.96%。心脏术后, 约旦[5] 9%, 波兰[6] 21.4%。ICU 病房, 捷克[7] 26.1%。一项系统综述[8] ICU 病房 4%。加拿大[9] 老年痴呆病房 3.4%。意大利[10] 老年痴呆门诊 13.3%。澳大利亚[11, 13] 安宁疗护 40.2-45%。一项系统综述[12] 安宁疗护 29-35%。系统综述[14-15] 卒中后 13-48。荷兰[16] 精神科门诊 19%。

因此, 全面系统的了解谵妄的全过程对预防及应对谵妄的发生具有重要意义。本文从风险因素、未发生谵妄时的预防干预、发生后的叠加症状鉴别、以及临床措施来综述谵妄的全过程及其最新研究进展, 以期全面系统的阐述谵妄并呈现最新的医学数据。

关键词: 谵妄 风险因素 预防干预 重叠症状 临床措施

DKK1/Wnt/ β -catenin 信号通路和炎症介质在首发精神分裂症患者中的表达及相关性研究

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目的 探讨首发精神分裂症患者血清 DKK1/Wnt/ β -catenin 信号通路和炎症介质在抗精神病药治疗前后的表达情况及其与精神症状的关联。

方法 纳入 98 名首发精神分裂症患者和 55 名健康对照者, 患者组接受单一利培酮治疗, 且完成为期 10 周治疗和随访, 采用阳性和阴性症状量表 (positive and negative symptoms scale, PANSS) 评定患者的临床精神症状, 采用酶联免疫吸附法测定所有受试者外周血清中 Dickkopf 相关蛋白 1 (DKK1)、 β -连环蛋白 (β -catenin)、高迁移率族蛋

白 1 (High mobility group protein box 1, HMGB1) 和白细胞介素-6 (Interleukin-6, IL-6) 的表达情况。

结果 1、基线患者组 DKK1、 β -catenin、HMGB1 及 IL-6 水平均显著高于对照组 ($P < 0.001$); 2、10 周利培酮治疗后, 患者组 β -catenin、HMGB1 和 IL-6 水平较治疗前显著下降, 而 DKK1 较治疗前无明显差异 ($P > 0.05$); 3、斯皮尔曼相关分析提示患者组治疗前后 PANSS 减分值与基线 DKK1 水平呈负相关 ($r = -0.274$, $P = 0.008$), 其余变量间无显著相关; 4、Logistics 分析显示基线 DKK1 可预测患者 10 周利培酮治疗的疗效 ($OR = 0.972$, $95\%CI = 0.951 \sim 0.994$, $P = 0.012$), ROC 曲线提示基线 DKK1 预测治疗有效的最佳临界值为 144.60ng/mL, 此时敏感度为 76%, 特异度为 61.4%。

结论 首发精神分裂症患者存在 DKK1/Wnt/ β -catenin 信号通路及炎症介质的表达异常, 提示 DKK1/Wnt/ β -catenin 信号通路及炎症介质可能参与精神分裂症的发病机制; 经过 10 周的利培酮治疗后, 患者 β -catenin、HMGB1 和 IL-6 表达水平较前显著下降, 并趋近正常水平; 基线 DKK1 水平越低, 提示患者精神症状改善更明显, 因此我们推测基线 DKK1 对首发精神分裂症患者精神症状的改善可能具有一定预测作用。

关键词: 首发精神分裂症, Dickkopf 相关蛋白 1, 精神症状, Wnt/ β -catenin 信号通路, 炎症介质

MECT 治疗边缘性人格障碍的疗效

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目的 边缘性人格障碍的诊断, 目前精神科对于边缘性人格障碍的治疗方法, 以及后续的社会支持, 心理支持, 在治疗中附加 MECT 治疗的效果及推广。

方法 边缘型人格障碍的症状包括: 第一, 是人际关系的不稳定; 第二, 是自我形象的不稳定; 第三个, 是情绪的不稳定。在情绪激烈易爆发且难以调控, 人际关系分离导致情绪失控, 会出现消极的观念, 甚至伤害自己的行为。所以, 这样的人经常会出现自杀和自伤的行为, 他们会经常暴露, 没办法控制自己的情绪。另外, 他们也有自卑和自负的这

种交替的情绪出现, 没办法认可自己。一般会追溯到童年, 它有早期的一些创伤, 治疗一般是要采取长程的心理治疗。同时该类患者在对抗焦虑, 自卑, 自负情绪同事会伴发酒精类物质滥用导致就后出现威胁自杀自伤反复发作等等行为, 在折磨自己的同时折磨家人。

在临床治疗上, 该类患者因不愿配合治疗, 也不愿做心理治疗而难以得到良好的疗效, 我院在诊疗中配合 MECT, 在术后进行短期心理治疗效果良好, 共治疗 4 例, 对照组 2 人给予小剂量抗焦虑药物配合心理治疗, 治疗组以 MECT 为主, 每人每次 14 次足疗程隔日一次 MECT, 术中渐进增加抗精神病药物利培酮, 最大剂量 4 毫克/日, 利用患者在术中稳定情绪下配合短时心理治疗。

结果 治疗患者中对照组患者在出院后, 病情未见改善, 出院后继续饮酒, 复发率 100%。治疗组两例, MECT 术后曾出现短暂记忆丧失, 大约 10 小时就可完全恢复, 未见副作用, 情绪稳定, 患者出院后保持服药, 精神状态稳定, 情绪稳定, 未见饮酒, 自杀, 自伤等行为。

结论 边缘性人格障碍等人格障碍疾病, 在临床属于难治性心理疾患, 在治疗中, 可配合 MECT 治疗缓解情绪, 同时稳定脑内神经递质, 同时在稳定期间配合短时心理治疗, 临床效果明显, 值得推广。

关键词: MECT 边缘性人格障碍 物质滥用

Phase Synchronization in Neuronal Activities in Adults with Major Depressive Disorder and Bipolar Depression: A Resting-state Electroencephalogram Study

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Objective To explore functional connectivity

differences among patients in major depressive disorder (MDD) and different types of bipolar disorders presented in resting-state electroencephalogram (EEG), with an attempt to identify and typify patients early in their depressive episode

Methods In this research, we analyzed resting-state EEG from patients with MDD (62), BD I (61) and BD II (60) in both eyes open (EO) and eyes closed (EC) conditions. Phase lock value (PLV) was applied to explore the connection and synchronization in neuronal activities spatiotemporally between different brain regions. We compared PLV among three groups of participants, and further analyzed correlation between PLV of connections with significant differences and the severity of depression via scores of 17-item Hamilton Depression Rating Scale (HDRS-17)

Results 1. During EO, PLVs of MDD were higher than BD I, while there were no significant differences between MDD and BD II, as well as BD I and BD II (theta: LT-MOC/alpha: LMFC-LT)

2. During EC, PLVs of MDD were higher than BD I, though there were no significant differences between MDD and BD II, as well as BD I and BD II (beta2: PFC-LT/beta2: LT-MOC/beta3: PFC-LT/beta3: RMOC-LMOC/beta3: PP-RMOC). In the band of beta3, higher PLVs were found in BD I than MDD in the connections of LT-RMOC.

3. There were no significant correlations between PLV and HDRS-17 scores when checking connections with significant different PLV (all $p > 0.05$).

Conclusion 1. Brain phase synchronization was stronger in MDD patients than in BD I patients who were in depressive episodes, while there was no significant differences between MDD and BD

2. The differences of phase synchrony between MDD patients and BD I patients exist mainly in the beta frequency band.

3. Left temporal region may be a key site for identifying MDD and BD patients by resting-state EEG.

4. Differences in cerebral phase synchrony between BD I patients and MDD patients may be an indicator of quality type for early identification.

关键词: major depressive disorder, bipolar disorder, electroencephalography, functional connectivity,

phase lock value

大语言模型在投射测验解读中的优化策略探索：标准化施测与评估体系的建构

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目的 本研究旨在探索优化大语言模型 (large language models, LLMs) 投射测验 (projective test) 解读能力的有效策略, 以促进其在心理测评领域的广泛应用。

方法 本研究以房树人 (house-tree-person, HTP) 测验为例, 探索了标准化施测与评估体系构建在优化大语言模型投射测验解读能力中的效果。首先, 采用观察法详细记录并分析了房树人测验的临床施测过程, 以制定标准化施测流程, 确保施测流程的一致性和规范性。同时, 采用德尔菲法进行多轮专家咨询, 制定并不断优化房树人报告评估的标准。随后, 使用多种大语言模型基座, 解读房树人测验, 并生成报告。最后, 邀请专家在单盲条件下基于评估标准对房树人测验报告 (同一幅测验图片, 包括一份心理评估员的解读报告和余份模型生成报告) 进行打分, 以评估不同模型基础解读能力的差异。通过向模型提供受试者人口学信息, 设定模型心理评估专家角色、需关注的画面特征与报告输出要求等提示词 (prompt) 信息, 进一步探索了不同模型解读效果提升的差异。

结果 初步结果表明: (1) 本研究有效建立了标准化施测流程。在未标准化房树人施测流程前, 大语言模型对房树人测验的解读效果不及专业评估人员。随着标准化施测流程的引入, 模型解读能力在专业性与丰富度等方面均有所提升。(2) 本研究建立了有区分效度的报告评估体系。该评估体系从专业性、丰富度、可理解性、共情能力四个维度出发, 可有效评估不同模型在不同提示词内容下, 模型生成的房树人测验报告的解读能力与专业评估人员的差异。

结论 本研究通过探索房树人测验标准化施测

流程与报告评估标准,建立了大语言模型在投射测验解读中的优化策略。未来研究可进一步探讨大语言模型在更多不同类型投射测验中的解读表现以及优化策略,以期在心理测评领域实现更加广泛和深入的应用。

关键词:大语言模型,投射测验,房树人测验,标准化施测,心理测评

基于生物信息学探究重性抑郁障碍共病炎症性肠病的分子机制

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目的 重度抑郁障碍(Major depressive disorder, MDD)是一种病因复杂的精神性疾病,以情绪低落、兴趣丧失、思维迟缓为主要临床表现。炎症性肠病(Inflammatory bowel disease, IBD)以慢性复发性肠道炎症为特征。越来越多的证据显示IBD患者常伴有MDD,但具体机制仍不清楚。本研究着重运用生物信息技术探究IBD共病MDD的分子机制,并预测能够指导临床用药的潜在治疗药物。

方法 1.在美国生物技术中心公共基因表达综合数据库(GEO)中检索MDD及IBD外周血样本基因数据并筛选出差异基因。

2.将差异基因通过基因本体论(GO)和京都基因组百科全书(KEGG)进行途径分析。

3.采用加权基因共表达网络分析筛选共表达基因模块,寻找枢纽基因。

4.通过GeneCard数据库获得GO和KEGG结果中关键机制的基因集,探究枢纽基因与关键调控机制基因的相关性。

5.通过miRcode数据库获得与枢纽基因相关的关键miRNAs。

6.在GEO数据库中检索MDD及IBD的miRNA数据集,对关键miRNAs进行验证。

7.预测与两种疾病共病的相关小分子及药物。

8.绘制受试者工作特征曲线,评估枢纽基因在两种疾病中的诊断价值。

结果 1.MDD与IBD共同的上、下调差异基因分别为:930个与1086个;2.共有差异基因参与到mRNA代谢过程、细胞的激活、先天免疫反应等生

物学过程中,并参与到志贺氏菌病、自噬、铁死亡等通路中;3.加权基因共表达网络分析筛选出16个与MDD和IBD相关的共同基因,与差异基因重叠后,得到6个枢纽基因:MYL9、SEC14L5、HIST1H4H、HLA-DPB1、CBX2、CDK6;4.相关性分析发现枢纽基因与铁死亡及自噬机制相关;5.推测得到调控枢纽基因的139个miRNA,其中hsa-miR-5688、hsa-miR-4500、hsa-let-7c、hsa-let-7a、hsa-let-7e平均连接性最高;6.验证发现hsa-let-7a在MDD和IBD的miRNA数据集中均存在差异;7.睾酮、甲亚硒酸、夫拉平度盐酸盐、非瑟酮、卡马西平、3,4-二溴-1H-吡咯-2,5-二酮、3,4-二(羟甲基)-1H-吡咯-2,5-二酮是治疗MDD共病IBD的潜在药物及小分子物质。

结论 本研究揭示了MDD共病IBD潜在生物学机制、枢纽基因以及调控枢纽基因的关键miRNA,并进一步预测了临床中治疗两者共病的药物及小分子物质。

关键词:重性抑郁障碍,炎症性肠病,生物信息学,共病机制

Genetic Associations between Depression and Autoimmune Thyroiditis Identified by Common Variants and Rare Coding Variants

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Objective To comprehensively analyze the shared and distinct genetic background of major depressive disorder (MDD) and autoimmune thyroid disease (AITD)

Methods We verified the phenotypic association between ICD-coded depression and autoimmune thyroid disease using the hospital inpatient records of UK Biobank, followed by an assessment of genetic correlation and causation between these traits using the largest publicly available GWAS summary statistics. We then performed integrative fine-mapping with GWAS findings and exome-wide association analysis with the full 450k UK Biobank WES release. Next, we identified pleiotropic and trait-specific genes by combining findings from analyses of common variant GWASs and

WES. Pathway enrichment analysis and protein-protein interaction (PPI) analysis were conducted to reveal the association of these traits at the level of functions

Results The Cox hazard ratio analysis showed MDD and AITD were associated with a 2.8-fold increase in the risk of developing each other. Significant genetic correlation was observed between MDD and AITD, which remained consistent across methods. Mendelian randomization and latent causal variable (LCV) analyses suggested the genetic correlation between phenotypes may arise due to shared genetic factors instead of genetic causality. The pleiotropic analysis highlighted 14 loci and 58 genes with confirmed pleiotropy. Pathway enrichment analysis showed significant enrichment in terms relevant to regulation of T cell activation and kinase activity, post-embryonic development, and positive regulation of catabolic process. Protein-protein interaction (PPI) analysis identified five functional clusters that contribute to the co-occurrence between MDD and AITD

Conclusion Using a combination of GWAS summary statistics, hospital inpatient admission data, and whole-exome sequencing genotypes from large cohorts, our study identified common genes and functional clusters that contribute to the comorbidity of major depressive disorder and autoimmune thyroid disease. Findings from this study have advanced the understanding of the shared genetic architecture of these conditions and should be informative in the field of disease prevention and treatment

关键词: GWAS, WES, MDD, AITD, pleiotropy

精神科药物与抗利尿激素分泌失调综合征

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目的 抗利尿激素分泌失调综合征是多种原因引起的内源性抗利尿激素分泌异常增多, 从而导致水潴留、尿排钠增多以及稀释性低钠血症等有关临床表现的一组综合征, 严重者可导致患者死亡。作为一种内分泌疾病, 在内分泌科可能很常见, 在精

神科, 可能会以一种罕见的药物副反应出现, 对于精神科医生来说, 对该病的识别和处理存在困难, 本研究将从该病的临床表现、发生机制和治疗原则等展开讨论, 为精神科临床预防和治疗该病提供参考。

方法 通过查阅文献及结合临床个案治疗经验进行研究。

结果 临床表现: 病人表现得软弱无力、嗜睡、头痛、恶心、呕吐等; 严重的出现精神错乱, 如谵妄, 甚至导致病人死亡。诊断: 电解质血 Na^+ 低于 130mmol/L 为临界点, 多数在临床发现时血 Na^+ 低于 120mmol/L , 可伴有低 Cl^- ; 尿渗透压高于 $100\text{mosmol/hg}\cdot\text{H}_2\text{O}$ 、尿钠常超过 30mmol/L 或尿钠浓度高于 40mEq/L , 血浆渗透压常低于 $270\text{mOsm/kg}\cdot\text{H}_2\text{O}$ 。有条件的可测得血精氨酸加压素 (AVP) 异常增高。病因: 抗利尿激素分泌失调综合征, 最主要的病因是肿瘤、肺部疾病、中枢神经系统疾病和各种药物; 精神科最主要的是药物引起抗利尿激素分泌失调。机制: 精氨酸加压素 (VP) 由下丘脑视上核和视旁核合成, 运送至神经垂体储存和分泌入血, 受体液渗透压和血容量等的影响。体液渗透压改变会刺激渗透压感受器而影响 VP 的分泌, 渗透压感受器集中在下丘脑第三脑室前腹侧部。精神科药物影响漏斗-结节通路中 DA、5-HT、GABA 等在突出间隙的浓度, 可能会对渗透压感受器产生抑制性作用, 而影响 VP 的分泌。多数情况下, 人体自身可通过神经-体液等机制进行调节, 而个别人由于个体因素, 导致调节失衡, 从而引起精氨酸加压素分泌过多, 出现抗利尿激素分泌失调综合征。治疗上: 最重要的是重在预防, 定期复查电解质, 及时发现和处理。对症处理严重低钠低氯, 但应避免过快的纠正电解质, 过快纠正可能导致渗透性的迟发性神经系统脱髓鞘性病变。药物治疗上伐普坦类 (Vaptans) 是一类选择性非肽类血管加压素 (AVP) V2 受体拮抗剂类药物, 对抗利尿激素分泌失调的治疗有一定的效果。精神科临床上, 一旦发现, 考虑和药物有关, 及时更换药物, 精神科药物作用解除后会通过自身的神经体液的调节回复正常。

结论 精神科药物可引起抗利尿激素分泌失调综合征, 可能与药物作用于漏斗结节通路有关, 从而抑制渗透压感受器, 导致精氨酸加压素的异常分泌。临床需警惕可导致患者死亡的严重低钠血症, 注意抗利尿激素分泌失调的预防和治疗。

关键词: 抗利尿激素, 抗精神病药, 抗抑郁药,

低钠血症

大语言模型驱动的精神专科病历精准标注系统：智能病历质控

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目的 本研究旨在评价由大语言模型 (large language models, LLMs) 驱动的精神专科病历精准标注系统的准确性和稳定性, 并在人机对比中验证机器和精神科医师之间的一致性, 为实现智能病历质量控制提供科学依据。

方法 本研究根据浙江省住院医师规范化培训结业考核中的精神专科病历评分体系, 设计了一套更加精准的标注系统: 通过判断一份病历当中描述的具体内容是否正确、有效服务于该患者的诊断、鉴别诊断和治疗计划, 给出“是”或“否”的回答。其主要设计优势在于将原本抽象和主观的评分条目化整为零, 拆解为多个意义明确的判断问题, 以期提高评分的颗粒度和客观性。研究当中由精神科医师通过传统评分体系和精准标注系统对一批病历进行评分, 而 LLMs 分别在两种评价方式的提示工程下完成同一批病历的重复评分。

结果 研究发现: (1) 相比于传统病历评分体系, 精准标注系统在精神科医师组表现出更好的组内一致性、区分效度和重测信度, 在 LLMs 组的重复评分中也保持更好的稳定性和区分效度; (2) 相比于传统病历评分体系, LLMs 驱动的精准标注系统可以和精神科医师给出的分数保持更好的一致性。

结论 精神专科病历精准标注系统更适合作为 LLMs 的提示工程, 在提高评分一致性和稳定性方面具有显著优势, 在智能病历质控中具有应用前景, 并为人工智能技术的整合提供了可靠的科学依据。

关键词: 大语言模型, 精神专科, 病历质控, 精准标注, 人机对比

Distribution of Self-Reported Borderline Personality Disorder Traits and Symptoms in A Large-scale Clinical Population

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Objective To explore the distribution characteristics of BPD traits and symptoms within clinical populations

Methods A total of 3015 participants were consecutively sampled from outpatients at the psychiatric and psycho-counseling clinics. BPD symptoms were assessed using a self-reported personality diagnostic questionnaire. Having BPD traits is defined as having five or more positive items in self-reported BPD characteristics. Participants were stratified into male and female groups, age groups, and diagnostic groups (schizophrenia, mood disorders, anxiety disorders). Exploratory factor analysis using principal components analysis was conducted. Three factors were identified: "F1: Affective Instability and Impulsivity", "F2: Interpersonal Unstable and Extreme Reactions", and "F3: Identity Disturbance"

Results Among 3015 participants, 45.9% of the patients self-reported BPD traits. Comparing of male and female patients, there was no statistically significant difference in the occurrence rate of BPD traits ($\chi^2=1.835, p=0.176$). However, in terms of symptoms, female patients reported more symptoms than male patients. Female patients also exhibited more pronounced features on F2 compared to male patients ($t=-1.972, p=0.049$). There is a general decrease in BPD traits, symptoms, and factors with increasing age. Specifically, the proportion of positive BPD traits is approximately halved before the age of 30 and decreases to around one-third after the age of 30. BPD traits were most common in the Mood Disorders group at 55.7%, followed by the Anxiety Disorders group at 44.4%, and Schizophrenia group at 41.5% ($\chi^2=38.084, p<0.001$)

Conclusion Our study revealed the pervasive presence of BPD traits and symptoms among psychiatric outpatients, exhibiting distinctive distributions across gender, age, and diagnostic categories. These

findings emphasize the significance of identifying and addressing BPD pathology in the clinical care of psychiatric outpatients

关键词: Personality disorder, Borderline trait, Self-report, Mood disorders, Schizophrenia

精神分裂症家族史阳性与阴性患者非酶类抗氧化物水平的比较研究

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目的 基于精神分裂症患者的遗传性,探索具有阳性家族史患者群体的非酶类抗氧化物水平特征,旨在加深对精神分裂症患者生化特征的理解。

方法 研究共纳入 171 例符合 ICD-10 诊断标准的精神分裂症患者,其中家族史阳性的患者 47 例,家族史阴性的患者 124 例。排除标准:(1)器质性脑疾病或脑外伤;(2)肝肾功能异常、高血压、糖尿病、代谢综合征等可能会影响非酶类抗氧化物水平的躯体疾病;(3)合并有其他精神障碍;(4)妊娠试验阳性或哺乳期女性;(5)入组前服用抗氧化剂等可能会影响非酶类抗氧化物水平的药物。采用 PANSS、PANSS-EC、CDSS 量表分别评估患者的精神病性症状、激越症状和抑郁症状。测定外周血尿酸、白蛋白和总胆红素等非酶类抗氧化物水平。两组间比较采用独立样本 t 检验或秩和检验,以双侧 $P < 0.05$ 为差异有统计学意义。

结果 家族史阴性组的 PANSS 总分 (82.45 ± 8.70) 分显著低于家族史阳性组 (85.79 ± 9.42) 分,两组差异具有统计学意义 ($P < 0.05$)。家族史阳性组的尿酸水平为 $344.30 (149.10)$ $\mu\text{mol/L}$,白蛋白水平为 $43.5 (5.00)$ g/L ,总胆红素水平为 $12.8 (8.00)$ $\mu\text{mol/L}$;阴性组的尿酸水平为 $356.20 (123.73)$ $\mu\text{mol/L}$,白蛋白水平为 $43.3 (4.18)$ g/L ,总胆红素水平为 $14.35 (8.98)$ $\mu\text{mol/L}$,两组间 3 种非酶类抗氧化物水平均无显著差异 ($P > 0.05$)。

讨论 精神分裂症的阳性家族史是发病的重要因素,关于精神疾病家族史与非酶类抗氧化物之间关系的研究较少。分子遗传学研究表明,抗氧化途径中相关基因的多态性与精神分裂症存在关联。

本研究虽未能观察到家族史阳性患者与家族史阴性患者之间的非酶类抗氧化物水平差异,仍应关注自由基代谢异常在遗传因素影响疾病临床特征中的可能作用。未来可继续在临床研究和基础实验中深入探索,为精神分裂症的诊疗提供新的理论依据及治疗思路。

结论 精神分裂症的非酶类抗氧化物水平可能与家族史无关。

关键词:精神分裂症,家族史,非酶类抗氧化物

有无幻听的精神分裂症患者任务态脑功能研究

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目的 探索精神分裂症有无幻听的患者在进行语言流畅性检测(VFT)时其脑激活与脑网络情况。

方法 纳入北京大学第六医院伴有幻听的精神分裂症患者 178 例(幻听组),不伴幻听的精神分裂症患者 172 例(非幻听组)作为研究对象。通过近红外脑功能成像技术(fNIRS)采集 VFT 诱发的全脑血氧信号,并划分为八个 ROI 脑区,基于其氧合血红蛋白、脱氧血红蛋白和总血红蛋白浓度变化值(HbO, HbR, HbT),分别计算其组词阶段积分值,平均血氧变化值,组词开始前 5 秒血氧曲线斜率以及 VFT 任务期间重心值。同时计算通道间 Pearson 相关,并进行 Fisher r-z 转换,得到静息态脑网络连接情况。之后对于实验组和对对照组之间的比较采用独立样本 t 检验;对于多个通道的多重比较,采用 FDR 校正一类错误概率。显著性水平定为 $P < 0.05$ 。

结果 幻听组与非幻听组在校正后,其 HbR 积分值与 HbR 均值在左侧颞上层(Superior Temporal Cortex, STC)差异显著(幻听组更大);其 HbT 重心值在两侧腹外侧前额叶皮层(Ventrolateral Prefrontal Cortex, VLPFC)差异显著(幻听组更大);其余特征值在校正后均无显著差异。HbO、HbR、HbT 的通道间 FC 数据校正前存在显著差异,但校正后差异均不显著。

结论 幻听组与非幻听组任务态下脑激活情况

与血氧响应时间在大脑的听觉和言语加工区域存在显著差异,该发现为幻听发生的生理机制提供了进一步支持。

关键词:幻听;精神分裂症;fNIRS;VFT;

伴有幻听症状的精神分裂症患者的异常功能连接:一项静息态近红外脑功能成像研究

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背景 近红外光谱成像技术 (functional Near Infrared Spectroscopy, fNIRS) 是一种非侵入性脑功能检测方法,通过检测大脑表层结构的血红蛋白浓度变化来间接表征神经活动水平。精神分裂症是一种重性、慢性致残性精神疾病,而言语性幻听 (Auditory Verbal Hallucination, AVH) 是其常见症状之一,对疾病的严重程度和患者的功能结局具有重要影响。

目的 采用 fNIRS 探讨伴有幻听 (AVH+) 与不伴有幻听 (AVH-) 的精神分裂症患者在静息状态下的脑功能连接差异,并探讨该状态下 AVH+组与 AVH-组存在显著差异脑区的功能连接水平与 AVH 症状之间的相关性。

方法 选取符合美国精神障碍诊断与统计手册第 5 版 (DSM-V) 诊断标准的精神分裂症患者共 38 例,以近 1 周是否存在 AVH 症状分为 AVH+ (n=14) 和 AVH-两组 (n=24),利用 fNIRS 检测两组在 8 分钟静息状态下的大脑活动,用偏相关分析估计两组在 17 个皮质区域、52 个通道下的静息态功能连接 (Resting-State Functional Connectivity, RSFC),比较两组的静息态功能连接差异,并将 AVH+组与 AVH-组存在显著功能连接差异的皮层区域的 RSFC 与患者精神症状评定-幻听症状分量表 (Psychiatric Symptoms Scale-AVHs, PSYRATS-AVHs) 得分情况作相关性分析。

结果 静息状态下,AVH+组与 AVH-组相比,其左侧颞上回和右侧中央下区、左侧颞上回和右侧

颞中回之间的功能连接显著增强,AVH+组的左侧颞上回和右侧中央下区、左侧颞上回和右侧颞中回功能连接强度和 PSYRATS-AVHs 评分之间呈显著正相关。

结论 AVH+的精神分裂症患者静息状态下大脑的听觉和言语加工区域之间存在显著的异常功能连接,该发现为幻听发生的生理机制提供了进一步支持。fNIRS 在检测幻听症状方面具有潜在的临床应用价值。

关键词:精神分裂症 言语性幻听 近红外脑功能成像 静息态

1 例早期被诊断为 meige 综合症的迟发性运动障碍患者的临床诊疗思考

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目的 报道 1 例早期被诊断为 meige 综合症的迟发性运动障碍患者的临床表现和诊治经过,旨在提高本病的早期识别和诊断,减少临床误诊漏诊。

方法 总结 1 例不典型迟发性运动障碍患者的临床资料,对患者既往病史、用药经过和 7 年随访,最后使用新一代 VMAT-2 抑制剂达到症状有效改善。

结果 本例患者为 63 岁女性,病程 8 年,起病症状为频繁眨眼伴双眼睑下垂,半年后出现嘴唇及肢体的抖动。外院诊断为“meige 综合征、帕金森综合征”,先后予“氟哌啶醇、苯海索、美多芭、泰舒达”等药物服用,肉毒素局部注射,效果不佳,后因双眼睑下垂影响行走,行双眼眼皮部分切除提拉术,效果仍一般。住院 2 月前患者出现咀嚼、磨牙等不自主动作,同时伴有舌头发麻不适。追问既往用药史,发现患者 8 年前曾有服用过氟哌啶吨美利曲辛 2 年。结合服用药物病史及临床表现,考虑迟发性运动障碍,予新一代 VMAT-2 抑制剂 (氘丁苯那嗪) 治疗,每日剂量 24mg,患者眨眼、咀嚼、磨牙等动作明显减轻,病情改善,最后诊断为迟发性运动障碍。

结论 迟发性运动障碍 (tardive dyskinesia,TD) 是药物诱发的多动性运动障碍,一般表现为舌、下面部和下颌及四肢不自主痉挛和舞蹈样运动,典型表现为口-舌-颊三联征。该患者早期以单纯的眼肌运

动异常(眨眼、眼睑痉挛)为主要表现,容易和 meige 综合征的眼睑痉挛型混淆。TD 患者除了运动障碍外,部分还伴有感觉异常,如舌痛舌麻、牙龈酸胀、口腔不适等,症状具有异质性,中等剂量以上的新一代 VMAT-2 抑制剂在此类患者中具有较好的临床效果。

关键词: meige 综合征,迟发性运动障碍,氘丁苯那嗪

未治疗的精神分裂症患者 BDNF 水平与体重指数的相关性研究

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目的 脑源性神经营养因子(BDNF)被认为是神经精神疾病发生发展的潜在生物标记物,也有研究发现 BDNF 在调节能量平衡中发挥着重要的作用,如脂肪氧化和葡萄糖利用等。本研究旨在 BDNF 与未治疗精神分裂症患者体重指数的关系。

方法 本研究纳入于天津市安定医院门诊或住院的 170 例患者,符合美国精神障碍诊断统计手册第五版(DSM-5)精神分裂症或精神分裂样障碍的诊断标准,既往未接受过系统抗精神病药治疗。在基线收集患者的一般资料,采用阳性与阴性症状量表(PANSS)评估精神症状的严重程度,晨起测定患者空腹状态下的身高、体重,并于同日采集空腹肘静脉血样标本,进行分装,储存。采用酶联免疫吸附法(ELISA)检测血浆标本 BDNF 水平。体重指数(BMI) = 体质量(kg) / 身高(m²),以 BMI 超过 24kg/m² 将患者划分为正常体重组及超重/肥胖组。用 SPSS27.0 进行统计分析。

结果 170 例未治疗的精神分裂症患者中 BMI 超过 24kg/m² 的有 60 例(35.29%)。正常体重组与超重/肥胖组在性别、年龄、文化程度等方面均无显著性差异,但在病程方面,正常体重组病程短于超重/肥胖组(P<0.05)。两组间 BDNF 水平无显著性差异(P>0.05)。进一步进行性别分层,结果显示在男性患者中正常体重组 BDNF 水平高于超重/肥胖患者,且差异存在统计学意义(P<0.05),相关分析也显示 BDNF 水平与患者 BMI 呈负相关(P<0.05),而在女性患者并未发现这一差异(P>0.05)。

结论 DNF 水平与未治疗的男性精神分裂症患者的体重指数存在相关性,这为精神分裂症患者的肥胖/超重状况采取个性化的治疗及预防措施提供理论依据。

关键词:精神分裂症,未治疗,体重指数,BDNF

以动作性震颤为主的罕见脊髓小脑共济失调(SCA12 型)家系报道

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目的 报道 1 例早期被诊断为特发性震颤的脊髓小脑共济失调患者的临床表现、辅助检查结果以及诊治经过,旨在提高本病的早期识别,减少临床误诊漏诊。

方法 总结 1 例来自有明确阳性家族史患者的临床资料,对患者行影像学检查及基因检测,最后诊断为少见的 SCA12 型。

结果 本例患者为 59 岁女性,48 岁左右开始出现双手动作性震颤,进行性发展,影响头部和肢体,伴有言语的含糊,影响日常生活。其父亲、哥哥、姑姑有类似震颤病史。头颅 MRI 未见明显异常,全外显基因检测未见致病基因。考虑到患者有明确的家族史,已震颤为主要临床表现,除特发性震颤外,脊髓小脑性共济失调需要排除。行 SCA 相关基因检测,检测到 SCA12 相关基因一种一条染色体 CAG 重复拷贝数为 47,提示与脊髓小脑性共济失调 SCA12 基因型有关。对其有类似症状的表哥进行基因验证,发现 SCA12 相关基因一种一条染色体 CAG 重复拷贝数为 48。由此,结合阳性家族史和基因检测,患者明确诊断为家族性脊髓小脑性共济失调(SCA12 型)。

结论 SCA12 型平均发病年龄为 33 岁,早发者主要临床表现为头部及肢体震颤,晚发者为轻微帕金森病症状、痴呆、认知减退和精神症状。致病基因位于染色体 5q31.q32,由基因 PPP2R2B5'端非编码区 CAG 重复扩增致病,是唯一以动作性震颤为主的 SCAs 亚型,见于德国和印度家系,国内报道少见。当临床上碰到家族史阳性,以动作性震颤为主的患者,除了要考虑特发性震颤外,还需要排除脊髓小脑性共济失调。

关键词：特发性震颤，脊髓小脑性共济失调，SCA12,CAG 重复扩增

影像学特征迟滞的神经元核内包涵体病一例

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目的 报道 1 例早期被诊断为阿尔茨海默病的神经元核内包涵体病 (Neuronal intranuclear inclusion disease, NIID) 患者的临床表现、辅助检查结果以及诊治经过，旨在提高本病鉴别及早期识别，减少临床误诊漏诊。

方法 通过总结 1 例诊断为 NIID 患者的临床资料，分析其影像学检查、皮肤肌肉活检及基因检测，诊断其为 NIID 痴呆型。

结果 该患者为 72 岁女性，以 8 年前出现近记忆力减退，幻听，被害妄想为主要表现，当时，2 年前进行头颅 MRI 检查，显示脑萎缩改变，MMSE22 分，诊断为“阿尔茨海默病”，服用“盐酸多奈哌齐片”后疗效不佳。1 年前在此基础上出现情绪不稳，行走不稳，尿失禁。入院是复查头颅 MRI 提示 DWI 序列皮髓质交界区高信号改变，初步诊断考虑 NIID，随即对该患者进行 NIID 相关的 NOTCH2NL1 基因检测及病理检测，显示其 NOTCH2NL1 基因中 GGC 重复次数为 105 次，皮肤活检显示纤维母细胞核内包涵体 P62、泛素阳性，随后对其家系进行筛查，其 2 名女儿未见基因异常扩增，家族中无类似患者。至此，结合患者临床表现、影像学表现、基因检测结果及家族筛查，确诊为“NIID 痴呆型”。

结论 NIID 临床表现存在明显异质性，其为一组三核苷酸重复疾病 (trinucleotide repeat disorders, TRDs)，TRDs 的临床表型主要取决于三核苷酸重复序列的数目，其被认为与包括 AD、PD、SCA 在内的多种疾病相关。GGC 重复序列数目与 NIID 的临床表型之间存在显著相关性，通常，GGC 重复超过 200 次表现肌无力表型，100-200 次表现痴呆表型，少于 100 引起帕金森病表型。多数散发患者以记忆下降为首发症状，并伴有发作性脑病、自主神经功能障碍、共济失调、帕金森综合征等症状，既为临床诊断造成干扰，也为临床诊断提供线索。其典型影像学表现为皮髓质交界区异常，但其影像学改变存

在动态变化或非典型表现，例如枕叶 DWI 和 FLAIR 呈现高信号、胼胝体 DWI 呈高信号、无影像学改变、异常信号动态消失、影像学特征滞后等。因此，在临床诊疗过程中，建议痴呆患者动态监测头颅影像学情况，对于出现发作性脑病、自主神经功能障碍等情况的患者，在排除其它疾病后继续完善皮肤活检及基因学检测，为痴呆及精神障碍患者的诊断及未来的治疗方向提供新思路。

关键词：痴呆；神经元核内包涵体病；三核苷酸重复疾病；MRI

抗 NMDAR 抗体脑炎合并复发性多软骨炎所致精神障碍一例

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目的 报道 1 例早期被诊断为双相情感障碍的抗 NMDAR 抗体脑炎合并复发性多软骨炎 (relapsing polychondritis, RP) 患者的临床表现、辅助检查结果以及诊治经过，旨在提高对自身免疫性疾病所致精神障碍的早期识别，减少临床误诊。

方法 通过总结 1 例诊断为抗 NMDAR 抗体脑炎合并复发性多软骨炎患者的临床资料，了解其临床表现，影像学表现特征，诊疗要点及远期随访的结果。

结果 该患者为 47 岁女性，6 年前出现精神异常，哭泣，有时易怒，有时悲观，曾割腕自杀未遂，当地医院诊断“双相情感障碍”，期间服用各类药物后症状有短暂好转，但均有波动，期间反复就医均诊断“双相情感障碍”。3 年前出现症状加重，有明显幻视、被害妄想、锥体外系症状，在药物治疗上联合 MECT 治疗仍无明显好转。来我院就诊完善头颅 MRI 右侧颞极可见斑片状异常信号影，考虑为“器质性精神障碍”，予完善腰椎穿刺检查提示脑脊液抗 NMDAR 受体抗体滴度 1:10，当时诊断“抗 NMDAR 抗体脑炎”，予激素冲击治疗联合丙种球蛋白治疗 2 周后仍无明显改善。进一步完善患者病史，其既往有多次“耳软骨炎、结膜炎”病史，入院结膜充血发红，胸部 CT 提示有胸腔积液，考虑其有“复发性多软骨炎”，当时予启动二线免疫治疗，“利妥昔单抗”治疗 1 月后精神症状消失，认知功能恢复，锥体

外系症状消失, 3 月后复查脑脊液 NMDAR 受体抗体滴度 1:3.2, 2 年来患者随访症状无再发, 今年 1 月头颅 MRI 显示右侧颞极可见斑片状异常信号影明显缩小。

结论 复发性软骨炎是一种罕见的、潜在致命的自身免疫性疾病, 其病因不明, 主要表现为软骨和其他富含蛋白多糖的结构进行性炎性改变。但其也会累及神经系统, 神经系统受累的临床表现包括头痛、颅神经麻痹、共济失调、多神经炎、脑膜脑炎、全身性或局灶性癫痫、痴呆和脑梗死。尸检的发现表明血管炎是潜在的发病机制。在一项回顾性研究中显示, RP 神经系统病变患者占同期住院 RP 患者的 16.4% (33/201), 在这 33 例 RP 神经系统病变患者, 对神经系统病变形式进行分类, 发现 RP 神经系统受累的表现多样, 中枢神经系统症状中, 边缘性脑炎和缺血性脑卒中是 RP 最常见的神经系统受累表现, 其临床表现可表现为亚急性起病的精神症状发作, 但中枢性 RP 可能对激素缺乏有效的反应, 且激素有加重精神症状的不良反应, 免疫抑制剂可能成为中枢神经系统受累的 RP 患者的首选用药。皮肤、结膜检查易被忽视, 但其通常包含很多重要临床信息, 因此在查体过程中对于常规皮肤检查也需要提高重视, 会为临床诊疗过程带来许多重要线索。

关键词: 复发性多软骨炎; 自身免疫性脑炎; 结膜炎; 耳软骨炎; 皮肤检查

精神分裂症认知损害的生物机制: 基于血浆外泌体代谢组学的研究

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目的 外泌体指直径在 40-100nm 的盘状囊泡, 是局部和全身信号和调节系统, 重要的是, 大脑神经细胞能够分泌外泌体, 并通过血脑屏障进入外周, 外泌体能够携带宿主细胞的大量调控信息, 在靶细胞中起到相应的调控作用。由此, 外泌体为我们通过外周血了解神经细胞间的调控模式提供了可能。本研究旨在通过外周外泌体代谢组学检测, 寻找精神分裂症认知损害的潜在生物机制。

方法 纳入符合条件的未用药精神分裂症患者

和健康对照各 10 例, 采集所有参与者的社会人口学资料和认知评估。采集晨起空腹外周血, 经过超高速离心提取外泌体。同时, 应用透射电镜, 纳米颗粒跟踪分析以及 Western Blot 三种方式对提取的外泌体进行鉴定。随后, 应用非靶向代谢组学技术对外泌体内的代谢物进行检测。

结果 (1) 经过对原始数据的过滤, 填补和标准化处理之后, 7206 个 peak 被保留, 我们应用 OPLS-DA 对数据进行处理, 显示两组间能够被有效的区分。(2) 本研究选用 $p < 0.05$ 且 $VIP > 1$ 作为筛选条件, 获得组间差异代谢物 510 种, 其中上调的代谢物 311 种, 下调 199 种。(3) 我们在数据库中对差异代谢物进行命名匹配, 得到具有 MS2 评分大于 0.3 的代谢物共 9 种, 包括下调的 3'-Methoxypterarin, 3-AMINO-2-PIPERIDONE 和 Glutaric acid; 以及上调的 p-Cresolsulfate, PC(16:0/16:0), L-Lactic acid, Creatinine, Allantoin, PC(P-18:1/20:5)。(4) 对认知表现与差异代谢物进行相关性分析, 控制性别, 年龄和教育后显示: 在患者组中注意警觉维度与磷脂酰胆碱 PC(16:0/16:0) 呈正相关 ($r=0.88$, $p=0.009$); 工作记忆维度与肌酐呈正相关 ($r=0.763$, $p=0.046$), 与 3-AMINO-2-PIPERIDONE 呈负相关 ($r=-0.775$, $p=0.041$); 社会认知维度与 3-AMINO-2-PIPERIDONE 呈负相关 ($r=-0.767$, $p=0.044$)。(5) 在健康对照中, 注意警觉与维度与 3-AMINO-2-PIPERIDONE 呈正相关 ($r=0.841$, $p=0.018$); 社会认知维度与 p-Cresolsulfate 呈负相关 ($r=-0.887$, $p=0.008$)。

结论 外泌体技术为研究者通过外周研究大脑功能提供了可能, 本研究发现精神分裂症患者较健康对照存在外泌体代谢谱的改变, 认知损害症状可能与磷脂酰胆碱, 肌酐以及 3-AMINO-2-PIPERIDONE 有关, 而这些关联未在健康对照中重复, 提示精神分裂症认知损害的机制具有特异性。

关键词: 外泌体; 认知; 精神分裂症; 代谢组学

超短脉冲无抽搐电休克治疗术后谵妄发生的相关研究

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目的 探究超短脉冲无抽搐电休克治疗能否减少精神分裂症患者疗后谵妄的发生, 以及其对胆碱酯酶、炎症指标、海马神经生化代谢物的影响。

方法 选取 2022 年 8 月至 2023 年 8 月间, 南京医科大学附属脑科医院住院部符合疾病和有关健康问题的国际统计分类(第十次修订本)SCZ 诊断标准、年龄在 18~55 岁、拟行无抽搐电休克患者为研究对象。随机分为超短脉冲组和短脉冲组, 接受超短脉冲 MECT(脉冲波宽 0.25ms)或短脉冲 MECT(脉冲波宽 1.0ms)。在疗前和 MECT 一疗程结束后 24 小时内头颅磁共振波谱扫描和血清样本的采集, 同时进行谵妄和精神症状的评估。谵妄评估采用躁动-镇静评分量表和意识模糊评估法; 扫描磁共振波谱, 测定海马区域神经生化代谢物变化, 包括 N-乙酰天冬氨酸(N-acetyl-aspartate, NAA)、肌酸(creatinine, Cr)、肌醇(myo-inositol, MI)以及胆碱(choline, Cho); 同时, 采集十二项细胞因子包括白介素-6(Interleukin-6, IL-6)等以及炎症指标 C 反应蛋白(C-reactive protein, CRP)和胆碱酯酶(Cholinesterase, ChE), 对细胞因子进一步加权成组对比, 评估 MECT 治疗前后变化。统计采用卡方检验和独立样本 t 检验分别对分类变量和连续变量进行统计分析, 治疗后的谵妄结果采用卡方检验, 血清胆碱酯酶水平、血清炎症标志物水平、MRS 采用独立样本 t 检验。

结果 UBP 组和 BP 组基线的人口学数据和临床资料、胆碱酯酶、炎症因子、海马波谱、MECT 治疗次数, 以及 MECT 治疗后 BPRS 评分均无统计学显著性差异。UBP 组和 BP 组谵妄发生率有显著的统计学差异, BP 组有 27 人发生谵妄 (36%), 存在更高谵妄发生率。MECT 疗后, UBP 组胆碱酯酶含量显著高于 BP 组, 差异具有统计学显著性。UBP 组在 CRP、IL-6、IL-8、IL-10、IL-1 β 、TNF- α 水平明显低于 BP 组, 差异具有统计学意义。MECT 疗后, UBP 组在 TH2、Treg、M1、IRS、CIRS 水平显著低于 BP 组。在 MECT 治疗后, UBP 组右侧海马 NAA/Cr 及左侧海马 NAA/MI 水平低于 BP 组, 差异具有统计学意义。

结论 相较短脉冲 MECT, 超短脉冲 MECT 治疗 SCZ 可能具有减少疗后谵妄发生副反应的优势, 并且二者疗效并无显著性差异。UBP 组胆碱酯酶含量高于 BP 组提示超短脉冲 MECT 可能通过减轻电刺激对神经元非同步去极化的影响, 进一步减少中枢胆碱能紊乱, 以及促炎反应, 从而减轻其对谵妄的影响。结果为阐明 MECT 作用机制提供了部分科

学依据。

关键词: 超短脉冲无抽搐电休克治疗; 谵妄; 磁共振波谱; 精神分裂症;

Altered Brain Regional Homogeneity and Cognitive Impairments in Medication-free Female Patients with Current Depressive Episodes in Bipolar Disorder and Major Depressive Disorder

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Objective Nearly 60% of bipolar disorder (BD) cases are misdiagnosed as major depressive disorder (MDD). Exploring objective biological markers is crucial for differentiating BD from MDD. Gender differences in prevalence, clinical presentation, disease trajectory, and treatment response in BD suggest unique neurobiological characteristics in female patients.

Methods Regional homogeneity (ReHo) was analyzed in 51 medication-free female patients with bipolar depressive episodes (BDE), 63 medication-free female MDD patients, and 45 female healthy controls (HCs). Partial correlation analysis explored links between brain regions and clinical characteristics. Support vector machine (SVM) analysis assessed classification accuracy

Results BDE patients exhibited more severe cognitive deficits in processing speed, attention, word learning, and overall cognitive function than MDD patients. Compared with HCs, both BDE and MDD patients showed decreased ReHo in the left Lobule VI and increased ReHo in the left Precuneus. BDE patients also had reduced ReHo in the left Lobules IV-V and increased ReHo in the right Putamen, unlike MDD patients, who showed no significant differences in these regions. In BDE patients, a significant negative correlation was found between the right Putamen and HAMD scores, but no significant links were found between abnormal ReHo and cognitive function assessments. SVM

effectively differentiated between BDE, MDD, and HCs

Conclusion Cognitive impairments were more severe in female BDE patients than in MDD patients. Changes in ReHo values of the left Lobules IV-V and right Putamen might serve as unique neuroimaging markers of BDE. Alterations in ReHo values of the left Lobule VI and left Precuneus could serve as common pathophysiological mechanisms for BDE and MDD and indicate depressive states

关键词: female bipolar disorder, major depressive disorder, cognitive dysfunction, regional homogeneity, support vector machine

阈下抑郁大学生的扣带回功能连接与外周血炎症因子的相关性研究

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目的 探讨阈下抑郁人群的扣带回种子点功能连接与炎症细胞因子之间的相互关系。

方法 对 126 例阈下抑郁大学生和 104 例健康对照进行静息态功能磁共振(rs-fMRI)扫描、心理状态评估及外周血炎症细胞因子水平检测。其中 rs-fMRI 选择 5 对岛叶种子区: 双侧膝下前扣带回(sub-ACC)、双侧膝前前扣带回(preACC)、双侧胼胝体上前扣带回(supACC)、双侧中扣带回(MCC)、双侧后扣带回(PCC)进行功能连接分析; 采用中文版流调抑郁量表(CES-D)、贝克抑郁量表第二版(BDI-II)、24 项汉密尔顿抑郁量表(HAMD-24)、汉密尔顿焦虑量表(HAMA)和反刍思维量表(RRS)量表对心理状态进行评估; 并检测阈下抑郁组和健康对照组的外周血炎症细胞因子水平, 包括白介素-6(IL-6)、白介素-1 β (IL-1 β)、白介素-17(IL-17)和肿瘤坏死因子- α (TNF- α)。分别计算阈下抑郁大学生扣带回亚区功能连接值与心理状态量表及炎症细胞因子水平之间的相关系数, 最后进行三者间的交互分析。

结果 (1) 与对照组相比, 阈下抑郁组左侧 MCC 与双侧尾状核、左侧 supACC 与双侧小脑前叶、右侧 supACC 与右侧额上回之间的功能连接增加; (2) 阈下抑郁组的 IL-1 β 、IL-17 和 TNF- α 水平均

升高; (3) IL-1 β 水平与右侧 supACC-右侧额上回功能连接改变共同影响阈下抑郁组的 RRS 评分, IL-17 水平与右侧 supACC-右侧额上回功能连接改变共同影响阈下抑郁组的 HAMA 评分。

结论 扣带回和额上回之间的功能失调和 IL-1 β 、IL-17 的免疫失调及其相互作用可能在抑郁早期发挥重要作用。

关键词: 阈下抑郁, 功能磁共振成像, 炎症因子, 扣带回

Altered Sensorimotor Network Function in Treatment-Naïve Patients with First-Episode Major Depressive Disorder

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Objective The neurodevelopmental hypothesis posits that Major Depressive Disorder (MDD) is a brain disease. Exploring such irregular brain activities can deepen our understanding of the neural pathologic mechanisms underlying clinical characteristics and help identify potential biomarkers to differentiate MDD patients from HCs

Methods The fractional amplitude of low-frequency fluctuation (fALFF) was used to investigate brain activities of 60 patients with first-episode drug-naïve MDD and 60 healthy controls (HCs). Partial correlation analysis was conducted on altered fALFF values and the severity of symptoms and cognitive deficits. Moreover, support vector machine analysis was used to evaluate the accuracy of abnormal fALFF values in distinguishing patients with MDD from HCs

Results Patients with MDD exhibited significantly reduced fALFF values in the sensorimotor network (SMN), encompassing the right precentral gyrus/postcentral gyrus, right superior parietal lobule (SPL), and left supplementary motor area (SMA). Conversely, increased fALFF values were observed in the right medial prefrontal cortex. Furthermore, correlation

analysis suggested that the verbal learning deficits in patients with MDD are related to abnormal brain activity in the left SMA. Importantly, SVM analysis demonstrated that the fALFF values of the right SPL and left SMA were highly accurate in distinguishing MDD patients from HCs

Conclusion The pathophysiological mechanism underlying cognitive deficits in MDD may be associated with a reduction in local activity within the SMN. Moreover, the combination of fALFF values in the right SPL and left SMA can be used to discriminate patients with MDD from HCs effectively

关键词: major depressive disorder, cognitive dysfunction, fractional amplitude of low-frequency fluctuation, support vector machine, somatosensory-motor network

积极共情能力与抑郁的关系：领悟社会支持的中介作用

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目的 “感同身受”是个体对于他人的情绪和处境感知并做出反应的能力；这种能力称为共情，又称同理心；作为重要的情绪的认知成分，在情感障碍，尤其是抑郁和焦虑等心理健康问题中扮演重要的作用。积极共情，是对于他人或场景中的积极情绪进行共情的能力；在近年来积极心理学的框架下，逐渐揭示其在情感障碍中的作用。积极共情能够使个体在环境线索中领悟社会支持能力，并对社会压力等环境做出积极响应；本研究将探索领悟社会支持在积极共情和抑郁情绪中的作用。

方法 本研究于2024年6月使用在线平台对45名18-35岁的成年人进行调查。使用PHQ-9抑郁自评量表、领悟社会支持量表(PSSS)、积极消极共情量表(PaNES)作为研究工具。采用独立样本T检验，考察不同人口统计学特征(性别、受教育程度)在领悟社会支持、共情和抑郁间是否存在差异。采用Pearson相关考察领悟社会支持、共情和抑郁症状

之间的相关性。运用线性回归模型，分析领悟社会支持在共情对其抑郁症状的影响中是否存在中介作用。

结果 差异性分析结果显示，积极共情能力在不同性别以及受教育程度之间的差异没有统计学意义。相关分析结果显示，积极共情与PHQ-9呈显著负相关($r=-0.399, P<0.01$)，领悟社会支持与PHQ-9呈显著负相关($r=-0.535, P<0.001$)，积极共情与领悟社会支持呈相关($r=0.571, P<0.001$)。领悟社会支持在共情对抑郁症状关系中的中介作用成立，直接效应为 $-0.145(SE=0.144; P<0.5; 95\% \text{ Bootstrap CI}=[-0.436, 0.146])$ ；间接效应值为 $-0.175(SE=0.059; P<0.01; 95\% \text{ Bootstrap CI}=[-0.295, -0.995])$ ；总效应为 $1.362(SE=0.314; P<0.001; 95\% \text{ Bootstrap CI}=[0.727, 1.997])$ 中介效应值占总效应值的62.24%。使用Sobel检验对上述中介效应进行检验，结果显示中介效应显著($SE=0.097; P<0.05$)。

结论 根据本研究的结果发现，积极共情能力与抑郁症状之间存在显著的负相关关系，即积极共情能力越高，个体的抑郁症状越轻。此外，领悟社会支持与抑郁症状之间也表现出显著的负相关，表明社会支持的感知程度越高，个体的抑郁症状越低。进一步的分析显示，领悟社会支持在积极共情与抑郁症状的关系中起到了显著的中介作用。结果表明，积极共情通过提高个体的领悟社会支持水平，间接地减轻了抑郁症状。这一发现强调了积极共情在促进个体心理健康方面的潜在价值，并为未来心理健康干预措施提供了新的视角。

关键词: 抑郁, 积极共情, 领悟社会支持, 共情能力

Relationship between Blood Pressure and Suicidal Ideation: A Cross-sectional Study of 1380 Chinese First-episode Unmedicated Inpatients with Major Depressive Disorder with Anxiety Symptoms

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Objective The effect of blood pressure (BP) on the risk of suicide attempt (SA) in patients with major

depressive disorder (MDD) is unclear, and the results of previous studies have been controversial and have not considered potential non-linear relationships. The aim of this cross-sectional study was to investigate the potential non-linear relationship between blood pressure and suicide attempts in a cohort of Chinese patients with first-onset, untreated major depressive disorder (MDD) with anxiety symptoms

Methods This cross-sectional study analysed 1380 patients with first-episode, untreated major depressive disorder (MDD) with significant anxiety symptoms and collected their sociodemographic characteristics and laboratory data. The researchers verified a history of suicide attempts through medical records and systematic counselling, and measured blood pressure at rest. The researchers used the 17-item Hamilton Rating Scale (HAMD-17) and the Hamilton Anxiety Scale (HAMA) to assess the intensity of depression and anxiety symptoms in all participants. Univariate analyses explored the possible effects of gender, education, marital status, and relevant laboratory indicators on SA. To assess the relationship between blood pressure and SA risk, we used multivariate logistic regression analyses. In addition, we used multifactorial regression models to examine potential threshold effects

Results No linear relationship was found between blood pressure and SA by multiple logistic regression analysis. SA showed a U-shaped relationship with systolic blood pressure (SBP) and diastolic blood pressure (DBP), as observed by piecewise linear spline modelling, with minimum turning points of 131 mm Hg and 77 mm Hg for SBP and DBP, respectively. When blood pressure was above the nadir, SA was found to be positively correlated with SBP (OR = 1.18, 95% CI: 1.11 to 1.24, $p < 0.0001$) or DBP (OR = 1.09, 95% CI: 1.05 to 1.13, $p < 0.0001$). Once blood pressure was below nadir, SA was positively associated with DBP (OR = 0.96, 95% CI: 0.92 to 1.00, 0.0474; SA was not significantly associated with SBP (OR = 0.99, 95% CI: 0.97 to 1.01, $p = 0.2590$)

Conclusion The present study showed a U-shaped relationship between blood pressure and SA in Chinese first-episode unmedicated patients with MDD accompanied by anxiety symptoms, suggesting that

blood pressure levels may be a useful biomarker for assessing the risk of SA in this population

关键词: suicide attempt, systolic blood pressure, diastolic blood pressure, major depressive disorder, nonlinear relationship

The Expansion of Newborn Neurons in Hippocampus Improves Social Recognition Deficit in A Mouse Model of Autism

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Objective Autism spectrum disorders (ASDs) are a group of neurodevelopmental disorders characterized by core symptoms of impaired social interaction and communication. The pathological mechanism and treatment are not clear and need further study. Our previous study found that the deletion of high-risk gene Autism Susceptibility 2 (AUTS2) in mice led to dentate gyrus (DG) hypoplasia that highly associated with impaired social novelty recognition. Here we aim to improve the social deficit through increasing the neurogenesis in the subgranular zone (SGZ) and expanding the newborn granule neurons in DG

Methods Three approaches including repeated oxytocin administration, feeding in enriched environment and overexpression of cyclin-dependent kinase 4 (Cdk4)-CyclinD1 complex in DG neural stem cells (NSCs) at the post-weaning stage were conducted

Results Post-weaning treatment of oxytocin promotes the proliferation of NSCs in DG and reverses social deficit in *Auts2^{ff/ff};Emx1-Cre* mice. Post-weaning enriched environment feeding promotes the proliferation of NSCs in DG and improves the social recognition deficit in *Auts2^{ff/ff};Emx1-Cre* mice. Cdk4 and CyclinD1 expression in DG NSCs expands newborn neurons and restores impaired social novelty recognition in *Auts2^{ff/ff};Emx1-Cre* mice

Conclusion Our findings suggested a possible strategy to restore the social deficit through expansion

of newborn neurons in hippocampus, which might provide a new insight into the treatment of autism

关键词: autism, social recognition, dentate gyrus, neurogenesis, treatment

Advances and Future Perspectives in Transgendered Genetic Diagnosis

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Objective In recent years, transgender population has been paid more and more attention in the field of society and medicine, especially in the field of genetics. This article aims to review the progress of genetic diagnosis of transgendered and provide scientific basis for further understanding of transgendered phenomenon

Methods Transgendered genetic diagnosis relies on techniques such as karyotype analysis and Fluorescence in situ hybridization. Chromosome karyotype analysis assesses abnormalities in sex-related genes by observing changes in the number and structure of chromosomes. The Fluorescence in situ hybridization uses specific probes to detect DNA sequences in specific regions of chromosomes to reveal variations in sex-determining genes. These methods have their own advantages and disadvantages, but all of them provide important basis for transgendered genetic diagnosis

Results Studies have shown that certain genetic loci are associated with transgendered phenomena. For example, by Genome-wide association study (GWAS), the team identified genetic loci associated with sexual orientation in Han Chinese men, such as RS17320865 for FMR1NB and RS7259428 for ZNF536. Genetic loci associated with same-sex sexual behavior have also been found in a broader population, such as European men, such as RS9677294 in the SLC8A1 gene, RS2414487 in LOC145783, and RS2106525 in the MDFIC gene. The study found that SRY gene plays a key role in male sex determination, and mutations in this gene may lead to abnormal gender development. In addition, other genetic variations in the sex-determining

region (SDD) may also affect gender identity

Conclusion These genetic findings have important implications for explaining the trans-gender phenomenon and its causes. First, they shed light on the genetic basis of transgendered phenomena, showing that transsexuals are not “Outliers” but manifestations of biodiversity. Second, these findings help to eliminate social misperceptions and prejudices against transgender people and promote gender equality and respect. Finally, the progress of genetic research provides a scientific basis for the health and rights protection of transgender people, and helps to promote the formulation and implementation of related policies. However, the discovery of genetic research also raises a series of social, ethical and legal questions. For example, the spread of genetic testing technology may lead to privacy leakage and discrimination issues; transgender people's gender identity and biological sex may lead to medical, education and other areas of the protection of rights and interests problems. Therefore, we need to take these problems seriously and explore corresponding solutions

关键词: transgender; genetic diagnosis; DNA sequences; GWAS

精神分裂症患者胆汁酸与认知功能的关联研究

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目的 精神分裂症是严重致残的精神障碍,全球约有2400万人受其影响。患者经常面临污名、歧视和人权侵犯,缺乏有效预防和治疗。精神分裂症病因复杂,而认知功能障碍是核心症状。患者在记忆、注意、执行功能等方面常表现出明显的缺陷,这严重影响了他们的日常生活和社会交往。研究胆汁酸代谢与认知功能之间的临床关联,可以使我们可以更好地理解认知功能障碍的发生机制,从而实现早期干预。早期干预可能有助于减缓疾病的进展,

改善预后,减少症状的严重性和持续时间,提高患者的生活质量。

方法 招募精神分裂症患者(n=54)和健康对照组(n=37)进行胆汁酸检测和认知功能检测。通过生物信息学分析,构建胆汁酸与认知功能关联网络。胆汁酸检测所使用样本为受试者空腹血浆,使用UHPLC-TQMS 技术进行检测。认知功能检测使用MCCB 量表。受试者认知功能的组间对比使用 t 检验;胆汁酸浓度的组间对比使用多样本的非参数检验;探究认知功能与胆汁酸的关联使用 Spearman 秩相关分析。

结果 MCCB 量表中六个纬度认知功能以及总体认知功能,在不同类型的受试者中均有显著性差异。精神分裂症患者的认知功能相较于对照组显著降低。TCA、HDCA、DHCA、AICA、ILCA、gama-TMCA、DiLCA、 α -TMCA 这几种胆汁酸在组间显示出统计学上的差异($p=0.032$, $p=0.002$, $p=0.017$, $p=0.025$, $p=0.019$, $p=0.005$, $p=0.015$, $p=0.018$)。其中精神分裂症患者 AICA、DiLCA 浓度显著高于对照组;精神分裂症患者 TCA、HDCA、DHCA、ILCA、gama-TMCA、 α -TMCA 浓度显著低于对照组。DLCA 浓度与MCCB 量表中 AV (注意力)、RPS (推理与问题解决)这两种认知功能的得分以及总得分呈负相关($r=-0.363$, $p<0.05$; $r=-0.303$, $p<0.05$; $r=-0.399$, $p<0.05$); GDHCA 浓度与MCCB 量表中 Vrb1 (言语学习)和 Vis (视觉学习)这两种认知功能的得分呈正相关($r=0.453$, $p<0.01$; $r=0.374$, $p<0.05$)。

结论 精神分裂症患者在病理恶化的过程中,伴随着各纬度的认知功能降低。改善认知功能可能会对精神分裂症患者的治疗与康复起到积极的作用。DLCA 和 GDHCA 是具有潜力的生物指标。DLCA 浓度的升高可能对认知功能有着消极作用,是一种预警信号;GDHCA 浓度的降低则可能表示精神分裂病情的转归与恶化,其浓度的升高可能对认知功能的提高有着积极作用。

关键词:精神分裂,胆汁酸,DLCA,GDHCA

精神分裂症模型小鼠代谢组学分析与预测

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目的 神经递质是神经元之间或神经元与效应器细胞如肌肉细胞、腺体细胞等之间传递信息的化学物质,参与多种代谢途径,在生物体内信号传递中起着重点的作用。本研究通过对多种神经化学物质进行高灵敏度、高特异性和高通量的定量检测,来探究精神分裂症模型小鼠血清及脑组织中神经递质的异常变化以及通过利培酮治疗后神经递质的变化,思索异常代谢小分子物质在精神分裂症病理机制中的作用,探索辅助精神分裂症诊断的外周生物标记物;并与临床精神分裂症患者对比,进一步验证代谢物的变化是否有同一性。

方法 选取 60 只 C57BL/6 三周龄小鼠适应性饲养 5 天后,随机分 3 组,即正常组、模型组、利培酮组,每组 20 只。前 2 周正常组腹腔注射生理盐水,模型组及利培酮组腹腔注射 MK-801 (地佐环平 0.01ml/kg),每日一次。造模后分别对三组小鼠进行旷场实验、强迫游泳、Y 迷宫、新奇物识别、Morris 水迷宫、转棒疲劳行为学实验,评判造模是否成功。第 3 周正常组及模型组腹腔注射生理盐水,利培酮组腹腔注射 0.1mg/ml 的利培酮原药,每日一次。第 4 周取三组小鼠心脏血,离心留取血清及取小鼠脑组织。在-80°C条件下保存,采用 UPLC-ESI-MS/MS 分析方法,对目标代谢物进行定性定量检测。同步开始收集临床首发或停药后复发精神分裂症患者的血液样本,以及经过药物或者 MECT 治疗后血液样本。

结果 小鼠三组血清及脑组织中的神经递质有明显的差异,特别是色氨酸的犬尿氨酸通路中的代谢产物。检测发现,与正常组和利培酮组相比,模型组血清中 3-羟基-2-氨基苯甲酸、L-酪氨酸、琥珀酸含量明显升高 ($p<0.05$),色氨酸含量明显降低 ($p<0.05$),利培酮组与正常组之间无统计学差异 ($p>0.05$)。与正常组相比,模型组、利培酮组血清中 5-羟基吲哚乙酸、5-羟色胺、吲哚乙酸含量降低,且利培酮组 5-羟色胺与模型组相比含量更低,具有差异性 ($p<0.05$)。与正常组和模型组相比,利培酮组血清中牛磺酸、去甲肾上腺素、色醇含量降低 ($p<0.05$)。与正常组相比,模型组脑组织中 L-甘氨酸、L-天冬氨酸含量明显升高 ($p<0.05$),但与利培酮组之间无统计学差异 ($p>0.05$)。

结论 精神分裂症模型小鼠与正常组小鼠相比存在明显的外周小分子代谢物差异,主要集中在犬尿氨酸通路,而甘氨酸和天冬氨酸可能在精神分裂症的病理机制中具有重要作用。牛磺酸、去甲肾上腺素

腺素、色醇等神经递质可能与抗精神病药物的治疗效应有关。这些通路的代谢物的变化与临床患者与正常组的变化一致。

关键词：精神分裂症 小鼠 临床患者

催产素与 5-羟色胺系统相互作用影响社会行为的研究进展

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催产素作为调节社交行为和情绪状态的关键神经调节剂，其受体（OXTR）分布广泛，存在于大脑的多个关键区域。研究表明，催产素的释放和作用不仅限于内分泌作用，还包括作为神经递质影响社会记忆、社会认知以及母性行为等。催产素系统的激活显示了其在维持正常社会功能中的作用。动物模型研究表明，催产素能改善自闭症模型动物的社交缺陷，指出了其潜在的治疗作用；临床研究也发现，鼻内给药的催产素可以增强人类对社会奖励的敏感性，减少攻击性，增强情感表达等。另一方面，5-HT 系统通过其广泛的投射路径，影响着情绪调节、奖励感知和社会互动。文中详细讨论了 5-HT 如何通过影响催产素的表达和释放，调节社会 and 情绪功能。特别是在中缝核的 5-HT 神经元可以直接调控 PVN 区域的催产素神经元，显示了这一复杂的神经调节网络的双向交互性。文中进一步探讨了催产素和 5-HT 在神经系统中的相互作用，如 5-HT 通过激活 PVN 中的 OXTR 增强催产素的释放，反过来，催产素也通过影响 5-HT 的释放来调节情绪和社会行为。这些相互作用的细胞和分子机制正在被揭示，通过药理学和遗传学方法证实了催产素和 5-HT 系统通过特定的受体和信号通路相互作用，这可能对开发针对社会功能障碍和情绪障碍的新治疗策略具有重要意义。特别是在精神疾病如自闭症谱系障碍和抑郁症的背景下，理解和操纵这些系统的相互作用提供了新的治疗方向。

关键词：催产素;5-羟色胺;社会行为

功能连接预测无抽搐电休克治疗重性抑郁症

疗效的静息态功能磁共振研究

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目的 采用静息态功能磁共振技术中的功能连接值探索无抽搐电休克治疗重性抑郁症的疗效的脑影像学标志物。

方法 收集 2021 年 1 月—2023 年 12 月于徐州医科大学附属徐州东方医院就诊、需要行无抽搐电休克的重性抑郁症患者 30 例无抽搐电休克治疗前后行静息态功能磁共振扫描，并采用汉密尔顿抑郁量表(HAMD-24)进行评估。采用基于 Matlab R2013b 平台的 DPABI V8.1 软件对影像学数据进行处理，提取治疗前后低频振荡振幅(ALFF)、标准化低频振幅(mALFF)值和局部一致性(ReHo)的差异脑区作为种子点，行 ROI 分析，具有显著性变化的功能连接(静息态功能磁共振 FC)值与临床减分率进行相关性分析，提取显著性相关的脑区作为特征输入支持向量机模型，利用基线重性抑郁症患者的功能连接值探索预测无抽搐电休克治疗疗效的脑区。

结果 左侧眶内额上回-右侧额上回功能连接($r = 0.38, p = 0.036$)以及右侧内侧额上回-左侧楔叶功能连接($r = 0.38, p = 0.039$)的变化分别与 HAMD 评分的变化与之间存在显著关系。以左侧眶内额上回为掩膜，预测无抽搐电休克疗效的准确率为 77%，曲线下面积为 0.45，其中左侧眶内额上回与小脑蚓部的功能连接值预测权重最大；以右侧内侧额上回为掩膜，预测无抽搐电休克疗效的准确率为 90%，曲线下面积为 0.61，其中左侧眶内额上回与左侧小脑下脚的功能连接值预测权重最大。

结论 额叶与小脑功能连接值可能具有潜在的预测无抽搐电休克治疗重性抑郁症的疗效的价值。

关键词：无抽搐电休克;重性抑郁症;支持向量机

心境障碍患者认知功能与脑网络拓扑学研究

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目的 探讨不同认知功能水平的心境情感障碍患者的脑网络拓扑学改变

方法 招募心境情感障碍患者 221 例，其中抑郁障碍患者 79 例，双相情感障碍患者 142 例；男性 68 人，女性 153 人。采用 MCCB 认知测量工具评估所有受试者的认知功能。采用依瑞德 BS-3000 近红外脑功能成像仪采集受试者的静息态近红外数据。采用聚类分析（瓦尔德法），将所有受试者按照认知功能聚类，结合 ARI 指数，分为不同类别；进一步分析不同类别受试者的脑网络拓扑学指标差异。

结果 所有受试者按照认知水平聚为 2 类，ARI 指数最高，为 0.9227。第 1 类认知功能显著优于第 2 类 ($P_s < 0.05$, FDR 校正)。将其命名为高认知组和低认知组，其中高认知组 43 例，低认知组 178 例。两组的拓扑学指标存在显著差异。局部网络指标，与高认知组相比，低认知组双侧 Broca 区、双侧 DLPFC 区和双侧 FPA 脑区的 Clustering Coefficient 显著降低 ($P_s < 0.05$, FDR 校正)。Betweenness Centrality、Degree Centrality、Nodal Efficiency、Nodal Shortest Path 等指标也有降低趋势，但未能通过 FDR 校正。全局网络指标，高认知组的 Network Efficiency local 指标高于低认知组 ($P=0.023$, FDR 校正)；但 Small World 属性低于低认知组 ($P=0.042$, FDR 校正)。

结论 心境情感障碍患者认知功能存在差异，认知功能水平高的患者脑网络拓扑指标优于低认知组，考虑患者认知功能可能与脑网络拓扑改变有关。

关键词：聚类分析，认知功能，近红外，脑网络，拓扑学

双相障碍研究协作组

童年创伤对双相情感障碍患者抑郁的影响：海马 CA3 亚区的中介作用

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目的 双相障碍患者 (Bipolar disorder, BD) 常伴有童年创伤，海马亚区体积对童年创伤具有不同的敏感性，然而海马亚区体积在童年创伤与 BD 患者抑郁症状之间的作用尚不明确。因此本研究旨在探索童年创伤与海马亚区体积异常在 BD 抑郁症状中的关系。

方法 招募 BD 抑郁相患者 112 例，健康对照 62 例，采集头部磁共振 T1 像。使用 FreeSurfer 分割海马亚区体积。使用协方差分析，年龄和性别纳入协变量，比较组间体积差异；一般线性回归模型探索童年创伤、海马亚区体积与抑郁严重程度之间的关系。

结果 伴童年创伤 BD 组与健康对照组相比，左侧 CA3、双侧 CA4、双侧齿状回颗粒细胞层 (GC-ML-DG)、右侧分子层、双侧海马-杏仁核过渡区 (HATA) 体积减小，而不伴童年创伤 BD 组与健康对照组海马亚区体积无差别。BD 组中遭受童年创伤与不伴童年创伤组比，左侧 CA1、CA3 区和双侧 GC-ML-DG、右侧分子层体积减少。其中海马左侧 CA3 亚区体积减少在 CTQ 总分和 BD 抑郁严重程度之间起部分中介作用。

结论 童年创伤可使得 BD 患者左侧 CA3、双侧 CA4、双侧 GC-ML-DG、右侧分子层、双侧 HATA 出现萎缩，其中海马左侧 CA3 亚区体积的减少在童年创伤和抑郁严重程度之间存在一定的间接效应，起到部分中介作用。

关键词：双相情感障碍，海马亚区，童年创伤，中介分析

Identification of Significant Biomarkers for Predicting The Risk of Bipolar Disorder with Arteriosclerosis Based on Integrative Bioinformatics and Machine Learning

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Objective Increasing evidence has indicated a connection between bipolar disorder (BD) and arteriosclerosis (AS), yet the specific bioinformatic mechanisms remain unclear. This study aims to investigate the common genes and molecular pathways involved in the development of both BD and AS

Methods BD-related dataset GSE12649 were downloaded from the Gene Expression Omnibus database and differentially expressed genes (DEGs) and key module genes derived from weighted gene co-expression network analyses (WGCNA) were identified. AS-related genes were sourced from the DisGeNET database, and the overlapping genes between DEGs and AS-related genes were characterized as differentially expressed arteriosclerosis-related genes (DE-ASRGs). The functional enrichment analysis and protein-protein interaction (PPI) network were conducted on DE-ASRGs. Candidate hub genes were identified using cytoHubba in Cytoscape and by finding the intersection between DE-ASRGs and key module genes derived from WGCNA. Three machine learning algorithms (Least Absolute Shrinkage and Selection Operator (LASSO) algorithm, Random Forest and support vector machine) were employed to identify hub genes and two external validation sets were included to verify the results. Additionally, the immune cell patterns of BD and AS were evaluated by single-sample gene set enrichment analysis (ssGSEA), and the correlation of hub genes with each immune cell was calculated

Results Overall, 67 DE-ASRGs were found to be overlapping between the DEGs and AS-related genes. Functional enrichment analysis highlighted the significant involvement of cancer pathways in the relationship between BD and AS. CytoHubba and WGCNA identified seven candidate hub genes (CTSD, IRF3, NPEPPS, ST6GAL1, HIF1A, SOX9 and CX3CR1), including three identified by cytoHubba and four identified by WGCNA. Eventually, two hub genes (CX3CR1 and

ST6GAL1) were identified as BD and AS co-biomarkers by using machine learning algorithms. Both two hub genes related to cancer, which were identified as the key pathway through KEGG enrichment analysis in this study. Single-gene GSEA analysis showed its correlation with proteasome, basal cell carcinoma, fatty acid degradation, mineral absorption and so on

Conclusion In the present study, we utilized bioinformatic techniques including three machine learning approaches to identify 2 hub genes, CX3CR1 and ST6GAL1, which were both significantly related to BD and AS. Furthermore, we uncovered that the co-pathogenesis of the two diseases lies in the cancer-related pathways through GSEA analysis. Overall, the newly discovered diagnostic genes and potential molecular mechanisms in this study offer new clinical insights and guidance for diagnosing and treating BD and AS patients. However, further experimentation is needed to confirm the conclusions.

关键词: bipolar disorder, arteriosclerosis, bioinformatics, hub genes, CX3CR1, ST6GAL1

Chronic Kidney Disease Duration and Suicide Risk Among Maintenance Hemodialysis Patients in China

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Objective Chronic kidney disease (CKD) is a progressive disorder with irreversible dysfunction of the kidneys. The global incidence of CKD is increasing at a rate of 8% per year, and it is expected to rise to the fifth most common early cause of death in humans by 2040. Patients with end-stage renal disease (ESRD), also known as Stage 5 CKD, are characterized by uremia. When approximately 30% of CKD patients progress to ESRD, the prolonged course of the disease is accompanied by a poor prognosis

Renal replacement therapy is the main treatment for kidney disease. Due to the shortage of renal resources, high risk and cost of kidney transplantation,

postoperative complications, and post-transplantation rejection, maintenance hemodialysis (MHD) has become the mainstream choice for maintaining renal function in patients with ESRD. The mortality of MHD patients is 6.5-7.9 times higher than that of the general population. MHD patients require long-term disease management and rely on machines for dialysis, which coupled with economic burdens, diet, activity restrictions, and life pressure, their quality of life is seriously affected.

MHD patients also suffered from mental and physical problems. A large number of MDH patients combined with mental disorders, especially depression and anxiety. The prevalence of depression is about 46% in MHD patients, and suicide is the most serious result. In 1971, a related study in the United States found that the suicide rate in dialysis patients was 400 times higher than that in the general population. Persistent suicide risk increased the risk of death and other negative events in dialysis patients. In addition, suicide causes huge economic losses, massive social burdens, and irreparable damage to individuals and families.

Currently, research on the psychological state of MDH patients in China mainly focuses on depression and anxiety, and there is little about the risk of suicide and related factors in hemodialysis ESRD patients. Therefore, this study used a standardized scale to assess the risk of suicide in patients with MDH and develop targeted interventions in the early stages of the disease to improve the quality of life and reduce mortality in MDH patients.

Methods We recruited ESRD patients treated with MHD in the Department of Nephrology, the Affiliated Hospital of Qingdao University Medical College from September 2019 to August 2021. The inclusion criteria included: (1) patients diagnosed with ESRD and CKD stage 5, whose glomerular filtration rate (GFR) $<15\text{ml}/(\text{min}\cdot 1.73\text{m}^2)$; (2) disease stabilized, MHD ≥ 3 months duration; (3) age ≥ 18 years old; (4) patients able to complete questionnaires and scales independently. Exclusion criteria followed: (1) acute renal damage caused by any disease; (2) complicated with severe infection and other underlying diseases; (3) stroke pa-

tients unable to express clearly; (4) history of mental illness or mental retardation. Finally, a total of 1330 MHD patients participated in this study

Three investigators, professionally trained in standardized assessment scales, assessed the severity of symptoms of subjects. Before obtaining informed consent from the subjects, the investigators explained in detail the purpose, methodology, and significance of this study. The investigators did not make any tendentious or inductive prompts except for necessary explanations. After the subjects made their choices, the investigators confirmed and recorded the options. All questionnaires were filled out, proofread, and collected one by one on-site to ensure the authenticity and quality of the questionnaires.

A self-designed basic information questionnaire was used to investigate the basic profile of MHD patients, including demographic characteristics (gender, age), disease status (duration of CKD, ESRD, and MHD), and coexisting diseases. The Nurses' Global Assessment Scale for Suicide Risk (NGASR) was used to assess the suicide risk of MHD patients. In this study, we defined those patients with an NGASR score of 0 as non-suicide risk patients. Depressive symptoms were assessed by the 17-item Hamilton Depression Rating Scale (HAMD-17), and patients with scores above 7 were diagnosed with depression. The severity of anxiety symptoms was assessed using the 14-item Hamilton Anxiety Rating Scale (HAMA), and patients with scores of 0-7, 8-14, 15-21, and 22 or more were indicated as having non-anxiety, mild, moderate, and severe anxiety symptoms, respectively.

Results A total of 543 (40.8%) patients had suicide risk with NGASR scores ranging from 1 to 19 points. After adjusting for age, gender, disease conditions, and mental state, the ORs of different CKD duration for suicide risk were 1.00, 2.02, 3.03, and 2.71, respectively (P for trend <0.001). There were significant interactions between chronic kidney disease duration and end-stage renal disease duration in relation to suicide risk (P for interaction <0.001). There were also interactions between chronic kidney disease duration and hemodialysis treatment duration to suicide risk (P for interaction = 0.01). Patients with end-stage renal disease

duration of ≤ 28 months or hemodialysis treatment duration of ≤ 24 months had the highest risk of suicide when the duration of chronic kidney disease was 63-94 months, about 2-10 times higher than the other time groups

Conclusion We found that chronic kidney disease duration was associated with an increased risk of suicide in maintenance hemodialysis patients in China, independently of other risk factors. The third quartile of chronic kidney disease duration was associated with a considerable (2-fold) increase in suicide risk. Early end-stage renal disease and maintenance hemodialysis were associated with suicide in CKD patients. The causality of these associations needs to be further confirmed in a multi-center longitudinal and prospective study

关键词: chronic kidney disease, suicide risk, suicide, CKD

A Study On The Association Between Subjective And Objective Biological Rhythms And Mood Symptoms In Bipolar Disorder

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Objective to explore the consistency between subjectively and objectively measured biological rhythm parameters among bipolar disorder (BD) outpatients during depressive or remitted episodes, and to explore the correlations between biological rhythms and mood symptoms

Methods Thirty-two samples were ultimately included. Wrist-worn actigraphy was used to obtain sleep and activity rhythmic parameters among BD outpatients, and questionnaires like Morningness-Eveningness Questionnaire (MEQ), Biological Rhythms Interview of Assessment in Neuropsychiatry (BRIAN), General Seasonality Score (GSS), Pittsburgh Sleep Quality Index (PSQI), Zung's Self-rating Anxiety Scale (SAS), Zung's Self-rating Depression Scale (SDS), Patient Health

Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7) were applied to assess circadian and seasonal rhythms, sleep quality and mood symptom severities

Results The average age of the patients was 26.8 (7.71) years, with a female proportion of 62.5% (20/32). In terms of rhythms, an earlier sleep onset time was associated with a higher MEQ score ($r=-0.39$, $p=0.03$), while a later awakening time ($r=0.49$, $p=0.00$) and longer wakefulness after sleep onset ($r=0.46$, $p=0.01$) were correlated with higher MEQ scores, indicating a longer total sleep time. Higher MEQ scores were associated with an earlier objective sleep onset time ($r=-0.46$, $p=0.007$). A higher MEQ score ($\beta=4.32$, $t=2.06$, $p=0.049$) was related to earlier sleep onset, and a lower GSS score ($\beta=-2.51$, $t=-2.59$, $p=0.02$) was associated with longer sleep duration. Additionally, higher MEQ scores were linked to lower BRIAN scores ($\beta=-0.69$, $t=-4.55$, $p=0.00$)

Regarding the association with mood, higher GSS scores were correlated with higher SAS scores ($\beta=2.20$, $t=4.39$, $p=0.00$) and higher SDS scores ($\beta=1.34$, $t=3.09$, $p=0.0046$). Moreover, higher BRIAN scores were associated with higher PHQ-9 scores ($\beta=0.32$, $t=3.02$, $p=0.01$), higher SAS scores ($\beta=0.62$, $t=3.22$, $p=0.00$), and higher SDS scores ($\beta=0.47$, $t=3.12$, $p=0.00$).

Conclusion There is a high consistency between subjective and objective rhythms in BD patients within depressive and remitted episodes. Individuals with a later chronotype, greater seasonal variations, and more severe circadian disturbances exhibit poorer sleep quality and more pronounced anxiety and depressive symptoms. Rhythm assessment may have significant implications in the clinical diagnosis and treatment of BD

关键词: bipolar disorder, biological rhythm, actigraphy, depression

奥氮平与氯氮平对照治疗兴奋激越症状的临床观察

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目的 比较奥氮平与氯氮平对兴奋激越症状的疗效。

方法 一、入组标准：1、选择 2024 年 1 月至 2024 年 5 月在本院住院，精神症状已急性兴奋激越为主（标准：简明精神病量表的激越因子分大于或等于 20）。

2、符合 ICD-10 诊断标准，50 例为精神分裂症，8 例为躁狂症，共计 58 例。3、患者及家属对本次研究内容了解并自愿签署知情同意书；3、排除有明确药物过敏史，排除严重躯体疾病者。4、平均随机分为奥氮平组（29 例）和氯氮平组（29 例），男女比例 1:1，年龄 16-55 岁之间。二、用药使用方法 奥氮平，根据病情在 5mg-20mg/天调整，氯氮平片，根据病情在 5mg-20mg/天调整 25mg-600mg，连续观察 2 周，期间不联合使用其他抗精神病药物。

结果 奥氮平片组，痊愈 4 例（13.79%），显著好转 18 例（62.07%），好转 5 例（17.24%），无效 2 例（6.90%），有效率（93.10%）；氯氮平组，痊愈 3 例（10.34%），显著好转 17 例（58.63%），好转 6 例（20.69%），无效 3 例（10.34%），有效率（89.65%）两组有效率比较差异无显著性。

结论 奥氮平与氯氮平的药理作用基本相似，本次研究情况显示奥氮平的有效率略高于氯氮平，其原因应该是奥氮平加量明显比氯氮平快，从而导致显效有差异，其实奥氮平与氯氮平在疗效上无明显异常。根据相关文献及临床实践中，奥氮平与氯氮平存在明显差异在于不良反应，氯氮平的不良反明显高于奥氮平。因此在今后的治疗中，奥氮平与氯氮平的选择上可以优先考虑奥氮平。

关键词：奥氮平 氯氮平 兴奋激越

Associations between Dietary Habits and Bipolar Disorder: A Diet-wide Mendelian Randomization Study

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Objective Diet/nutrition is critically important

in the pathogenesis, progression, and treatment outcomes of various mental disorders. Current research predominantly focuses on the role of diet in the development and treatment of depression, with less attention given to the relationship between diet and Bipolar Disorder (BD)

Methods We employed Mendelian Randomization (MR) to investigate the relationship between 28 dietary habits and BD. An analysis was conducted using publicly available genome-wide association study data from the UK Biobank dataset. Various dietary habits were analyzed as exposures with BD as the outcome, mainly using the Inverse Variance Weighted (IVW) method

Results Intake of non-oily fish and sponge pudding both have a positive association with BD. Oily fish, dried fruit, apples, salt, and cooked vegetables intake also appeared potentially risky for BD, although the possibility of false positives cannot be ruled out. Sensitivity analysis further confirmed the robustness of these findings

Conclusion Our research provides evidence of a relationship between various dietary habits and BD. It underscores the need for careful dietary management and balance to reduce the risk of BD, suggesting caution with dietary preferences for fish and sponge pudding. Furthermore, more detailed studies are needed to further understand the potential impacts of high-sugar and high-protein diets on BD development

关键词：Diet; Bipolar Disorder; Mendelian Randomization; Nutrition; Prevention

中医治疗正中神经损伤疗效观察

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目的 探讨多种中医治疗方法治疗正中神经损伤的疗效观察。其中包括普通孩针刺、经穴磁道疗法、汤剂、电针、火罐疗法、导引按蹻。

方法 临床实践观察，其中包括普通孩针刺、经穴磁道疗法、汤剂、电针、火罐疗法。通过对比患

者治疗前、治疗中、治疗后的肢体活动功能、舌象、脉象、脉细比、精神检查、患者的主管感受等观察评估疗效。

结果 正中神经损伤是指由于多种原因导致的正中神经受损出现的功能障碍，正中神经损伤是一种常见病，主要病因为创伤。主要临床症状包括感觉障碍、拇对掌受限、拇示指屈曲受限，可导致肌肉萎缩的并发症。严重者需要手术治疗。正中神经损伤给患者的心理带来一些痛苦，患者应当尽量保持积极的心态，家属日常注意安慰和疏导，适当的鼓励患者。

通过多种中医治疗手段，包括针刺、电针、经穴磁道疗法、火罐疗法、导引按跷（双手掌自行拍打）、汤剂治疗，能迅速有效的促进患者康复。同时可以有效改善患者的精神症状，比如失眠、易怒。多疑等。

结论 中医治疗痹症、痿证的优势，优先选取中医治疗，并同时改善患者失眠、易怒等精神症状。

通过多种中医治疗手段，包括针刺、电针、经穴磁道疗法、火罐疗法、导引按跷、汤剂治疗，迅速有效的促进患者康复。

关键词：正中神经损伤、中医治疗、康复

双极性问卷：一项双相障碍筛查问卷的初步构建

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目的 基于症状的两极性以及不稳定性编制一份适用于双相障碍筛查的自评调查问卷。

方法 基于既往文献以及双相障碍的本质特征——症状的两极性和不稳定性，构建具有 21 个条目的自评问卷，之后对 445 例当前符合美国精神障碍诊断与统计手册第 5 版（Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, DSM-5）中关于抑郁症或双相障碍（Bipolar disorder, BD）任何一型诊断标准的患者其中（双相障碍 345 例、抑郁症 100 例）进行施测，使用克伦巴赫系数来评价量表的内部一致性信度，采用验证性因子分析来评估量表的结构性效度，通过绘制 ROC 曲线来评估问卷

的筛选性能。

结果 全量表的克伦巴赫系数为 0.872，逐个删除条目后，剩余量表的克伦巴赫系数在 0.863-0.871 之间，每个条目得分与量表总分的相关系数在 0.359（条目 10）-0.557（条目 5）之间。探索性因子分析共解析出 4 个特征值大于 1 的因子，其累积方差贡献率为 46.22%。对于 BD-I 型、BD-II、BD-MX、BD-NOS 以及 BD-总体，双极性调查问卷分别取 12、12、12、10 和 11 作为临界值时，其约登指数值最大，其对应的敏感度和特异度分别为：0.73 和 0.71、0.66 和 0.71、0.67 和 0.71、0.84 和 0.58 以及 0.71 和 0.65，ROC 曲线下面积（AUC）分别为 0.689、0.745、0.741、0.741 以及 0.741。

结论 双极性调查量表是一份符合量表编制要求的、能有效鉴别单、双相抑郁的自评问卷。

关键词：双相障碍；诊断；自评问卷；量表属性

青少年首发抑郁障碍患者半年内转相影响因素研究

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目的 为早期识别青少年双相障碍患者，比较半年内转相与未转相的青少年首发抑郁障碍患者人口学特征、疾病特征、治疗情况。

方法 纳入 2020 年 7 月至 2022 年 2 月青少年首次抑郁障碍门诊和住院患者 125 例，收集首发时人口学特征、疾病特征、皮质醇指标、甲状腺功能指标、血同型半胱氨酸指标、汉密尔顿抑郁量表评分、情感气质量表、急性期是否联合用药、急性期治疗期间是否使用抗精神病药物、急性期治疗是否单用抗抑郁药，急性期是否接受巩固期治疗、是否完全缓解等，经半年随访，了解间期疾病转归、疾病发作次数。

结果 完成半年随访 119 例。未转相组男性比例、首发时甲状腺功能中游游离甲状腺素(FT4)水平、首发时促甲状腺激素(TSH)水平均低于转相组(P 均<0.05)，未转相组首发急性期治疗联合用药比例、首发急性期治疗使用抗精神病药物比例均高于转相组(P 均<0.05)，未转相组急性期单用抗抑郁药比例

低于转相组 ($P < 0.05$)。半年内, 未转相组疾病总发作次数低于转相 ($P < 0.05$), 抑郁发作次数高于转相组 ($P < 0.05$)。多因素 logistic 回归分析, 男性 ($OR = 4.207$)、首发时 TSH 水平 ($OR = 1.546$) 与青少年首发抑郁障碍患者半年内转为双相情感障碍相关联。

结论 青少年首发抑郁障碍患者, 半年内男性患者更容易转相, 首发时促甲状腺激素水平与半年内转相相关联。

关键词: 青少年; 首发抑郁障碍; 双相障碍; 转相; 影响因素

Causal Relationship between Genetically Predicted Mental Disorders and Frailty: A Bidirectional and Multivariable Mendelian Randomization Study

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Objective In observational studies, frailty has been strongly associated with mental disorders. However, the mechanisms underlying the association between frailty and mental disorders remain unclear

Methods We conducted a two-sample Mendelian randomization (MR) study to assess the causal relationship between frailty, as measured by the frailty index (FI), and ten common mental disorders. The datasets involved European ancestry individuals and included measurements of the FI ($N = 175,226$), schizophrenia (SCZ; $N = 320,404$), major depressive disorder (MDD; $N = 480,359$), bipolar disorder ($N = 337,199$), insomnia ($N = 462,341$), obsessive compulsive disorder ($N = 33,925$), anxiety disorders ($N = 463,010$), autism spectrum disorder ($N = 46,351$), anorexia nervosa ($N = 14,477$), opioid-related mental and behavioral disorders ($N = 215,650$), and mental and behavioral disorders due

to use of other stimulants including caffeine ($N = 215,570$)

Results Two-sample MR analyses were performed using inverse variance weighting followed by various sensitivity and validation analyses. Genetically predicted SCZ (odds ratio [OR] = 1.019, 95% confidence interval [CI] 1.005–1.033) and MDD (OR = 1.182, 95% CI 1.115–1.253) were significantly associated with higher FI. No causal links were identified between the FI and the other eight common mental disorders. Unfortunately, the reverse directional MR analysis found no causal relationship between ten common mental disorders and FI. In the Multivariable MR, the estimated MDD effect on FI is comparable to the univariate IVW estimate (OR = 1.203; 95% CI, 1.105 to 1.310), while the estimated SCZ effect on FI fails to be significant compared to the univariate estimate. The results of the sensitivity and validation analyses confirmed stabilization

Conclusion Our study strengthens the evidence for a causal relationship between SCZ, MDD, and frailty. Further understanding of the pathological mechanisms underlying this association is essential for the prevention and intervention of mental disorders

关键词: mental disorders, schizophrenia, major depressive disorder, frailty, Mendelian randomization, causality

绘画团体辅导对青少年阈下抑郁的干预研究

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目的 阈下抑郁 (SD) 已然对青少年的健康成长造成了严重影响, 然而, 仅有极少数的 SD 青少年能够获得有效的帮助。本研究致力于对比学校所开展的绘画团体辅导、行为认知疗法 (CBT) 与对照组在改进青少年阈下抑郁症状方面的效果及有效性。

方法 选取随机对照试验设计, 于威海市某初中学校招募 120 名阈下抑郁学生, 并将其随机划分

为绘画团体辅导组 ($n = 40$)、CBT 组 ($n = 40$) 以及对照组 ($n = 40$)。参与者各自接受为期 6 周相应的干预,并在治疗前、治疗后以及 6 个月随访时进行评估。运用混合效应模型对结果予以分析,主要结局通过流行病学研究中心抑郁量表(CES-D)来测量抑郁症状,将焦虑自评量表(SAS)、临床显著分析当作次要结局指标。

结果 相较于对照组,绘画团体辅导组和 CBT 组的参与者在干预后及随访时,所有结局指标均有显著改善($P < 0.05$)。而与 CBT 组相比,绘画团体辅导组在干预后($P = 0.1$)和随访时($P = 0.08$)在流行病学研究中心抑郁量表(CES-D)上不存在统计学差异;CBT 组在随访时焦虑自评量表($P = 0.02$)、临床显著分析($P = 0.012$)优于绘画团体辅导组。

结论 绘画团体辅导对于减轻阈下抑郁青少年的抑郁症状是切实有效的,并且在 6 个月随访时结局的改善得以持续。鉴于绘画团体辅导更为适宜在学校开展,我们的研究结果证实了推广运用绘画团体辅导干预阈下抑郁所具有的巨大潜力与重要意义。

关键词: 绘画治疗,团体辅导,阈下抑郁,青少年,干预性研究

Shared Diagnostic Biomarkers and Immune Links: Major Depression and Diabetic Kidney Disease

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Objective Major depressive disorder (MDD) is a prevalent comorbidity in patients with diabetes mellitus (DM), and diabetic kidney disease (DKD) is one of the most severe complications in individuals with DM. Studies have shown a complex and bidirectional relationship between MDD and DKD. The present study aimed to explore the potential shared diagnostic biomarkers, pathways, and immune relationships between MDD and DKD

Methods Datasets related to MDD and DKD

from the Gene Expression Omnibus (GEO) database were screened, and crosstalk genes were identified through differential expression analysis. The crosstalk genes were analyzed by Gene Ontology (GO) and Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway enrichment. Then, hub genes were identified through protein-protein interaction (PPI) analyses of the crosstalk-related genes in MDD and DKD. The hub genes were additionally filtered using least absolute shrinkage and selection operator (LASSO) regression, and receiver operating characteristic (ROC) curves were plotted based on the filtering results. Finally, the CIBERSORT algorithm was employed to investigate immune cell infiltration in MDD and DKD patients, and a connectivity map (cMAP) analysis was conducted to identify potential therapeutic drugs

Results A total of 83 genes related to crosstalk between MDD and DKD were identified by differential expression analysis, and enrichment analysis revealed that these genes were mostly enriched in inflammation and immune regulation. PPI analysis identified eight hub genes (CXCR6, GZMA, CD163, KLRB1, GZMK, CCR5, CD3D, and CD8A), and LASSO analysis revealed that CD163 and KLRB1 were potential shared diagnostic biomarkers for MDD and DKD. Immune infiltration analysis showed that multiple immune cells were associated with MDD and DKD. cMAP analysis indicated that rucaparib was a promising therapeutic agent

Conclusion The present study indicated that CD163 and KLRB1 serve as diagnostic biomarkers for the underlying comorbidity mechanism of MDD and DKD, and they may also be potential therapeutic targets

关键词: Major depressive disorder, Diabetic kidney disease, Transcriptomic analysis, Immune infiltration, Drug prediction

Altered Brain Function in Treatment-Resistant Depression Patients: A Resting-State Functional Magnetic Resonance Imaging Study

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Objective Major depressive disorder (MDD) is the most prevalent mental Disorder, characterized by significant and persistent depressed mood, reduced interest, reduced cognitive function and somatic disturbances. According to the most common definition, patients who do not improve after at least two or more treatment attempts of adequate dose and duration, suffer from treatment-resistant depression (TRD). In recent years, resting-state functional magnetic resonance imaging (rs-fMRI) has become widely applied in studying brain functional changes, because of its simplicity and ease of acquisition has been gradually applied in the field of psychiatric disorders, such as MDD, schizophrenia and autism/BD. The application of rs-fMRI technology may provide new insight into the neurobiological basis of TRD and may thereby enable us to develop more efficacious treatments specifically targeted at patients who do not respond to the currently available antidepressant treatment options. Several rs-fMRI studies have demonstrated that TRD presents with disrupted functional characteristics at different levels, including in the amplitude of low-frequency fluctuations (ALFF), regional homogeneity and inter-regional functional connectivity. Zhang et al. found that the TRD group showed higher ALFF in the right sensory/somatomotor hand, right auditory, and left default mode networks compared to the non-TRD group. A study measuring the degree of functional brain connectivity noted that the TRD group had significantly higher measures of the extent of left and right ventral caudate (VCa), left lateral habenula (LHb) and left inferior thalamic peduncle (ITP) than the HC group. In TRD patients, we are aware of few studies combining these two methods to examine resting-state differences in depressed patients directly. Previous studies of functional connectivity (FC) usually took region of interest selection based on accumulated priori knowledge of disorder. This method has a certain subjectivity and artificial. Thus, combining ALFF and

FC based on the abnormal ALFF maybe provide some insights into the neural basis of disease in term of fMRI signal of low-frequency fluctuation. Based on previous studies, we hypothesized that TRD patients would show ALFF/FC changes in specific cognition-related brain regions. Meanwhile, this study will provide a neuroimaging basis for the differences in neuropathological mechanisms between TRD and healthy controls, which will also contribute more to the understanding of the pathogenesis of TRD

Methods The patients in this study were from Qingdao Mental Health Center, Shandong Province, China between March 2023 and January 2024. We evaluated patients using the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria, and included a total of 16 patients with TRD. We also included a total of 16 healthy controls (HCs) relatively matched to the age and sex of the TRD group. In this study, all subjects underwent data acquisition using a GE SIGNA Pioneer 3.0 T scanner at People's Hospital of Qingdao West Coast New District, Shandong Province, China. Subjects wore noise-cancelling headphones, secured their heads with a hood, closed their eyes to keep their minds clear and avoided active thinking. The scanning parameters meet the following criteria: TR=2000ms, TE=40ms, FOV=240mm×240mm, Matrix=64×64, FA=90°, slice thickness=4.0mm, slice gap=0mm, slice=33, Total time=8min

1. In this study, the image data were preprocessed using the DPARSF toolkit((DPARSF 5.2_210501). The specific preprocesses are as follows: (1) convert 2D DICOM format images to 3D NII format images; (2) slice timing; (3) realignment of head-motion (removal of patients with head movements > 2 mm in any direction and motor rotation >2°); (5) regression of covariates, including brain white matter signal, cerebrospinal fluid signal and head movement parameters; (6) spatial normalization: functional images of all subjects were converted to Montreal Neurological Institute (MNI) standard space using DARTEL; (7) linear detrending and filtering (0.01 to 0.1 Hz).

2. Then, we explored the ALFF changes of TRD patients at a baseline resting state. Second, we selected the regions that were significantly changed in the ALFF

as seeds and calculated the regional activity and functional connectivity (FC) of these regions using a seed-based approach.

3. Statistical analysis of demographic data was performed using SPSS 27.0 software. Compare age and genders and years of educational among the two groups with two-sample t-test. A statistical threshold setting of $p < 0.05$ was statistically significant.

4. Image data were analyzed using the SPM12 toolbox. To assess the between-group differences (between the TRD patients and the HCs) of the ALFF at the baseline resting state, two-sample t tests were performed with age, gender, education level being treated as covariates. The significance threshold was set to $P < 0.05$ with FDR correction.

5. Then, regions with significant changes in ALFF were selected as seeds for this study, and functional connectivity analyses based on seed points were used. The significance threshold also was set to $P < 0.05$ with FDR correction.

6. In order to verify the relationship between ALFF values and clinical symptoms, we extracted the mean ALFF values increased ALFF brain regions and did Spearman correlation analysis with the clinical scale scores of each group, and the statistical threshold of $P < 0.05$ (two-tailed) was statistically significant.

Results During the baseline resting state, by using the ALFF, we found a significantly decreased or increased ALFF in the TRD patients relative to the controls. These regions were located in the left/right post-central gyrus(PoCG.L/PoCG.R), right cuneus(CUN.R). We found that the ALFF values of the right hippocampus(HIP.R) in the TRD group were negatively correlated with the PDQ-5D score. Then, we selected these brain regions as seeds to investigate the FC changes in brains of TRD patients. We found abnormal functional connectivity in left/right middle frontal gyrus(MFG.L/MFG.R), the right Inferior frontal gyrus, opercular part(IFGoperc.R), the left/right Anterior cingulate and paracingulate gyri(ACG.L/ACG.R), the right supramarginal gyrus(SMG.R), and the right Calcarine fissure and surrounding cortex(CAL.R)

Conclusion In conclusion, we preliminarily ana-

lyzed the differences in local neurological functional activities between the brains of TRDs and HCs using Alff based on rs-fMRI technique. In the next stage, we selected brain regions with aberrant ALFF values as seed points for functional connectivity analysis. We found a larger range of altered brain regions in TRD patients compared to healthy controls, especially in the SN, DMN and CEN networks

关键词: treatment-resistant depression; rs-fMRI; amplitude of low-frequency fluctuation; functional connectivity

TDCS 联合认知控制疗法对抑郁症疗效及认知功能的研究

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目的 研究以左背外侧前额叶为刺激靶点的经颅直流电刺激(tCDS)联合认知控制疗法(cognitive control therapy, CCT)对抑郁症患者治疗效果以及认知功能改善的影响。

方法 筛选淄博市精神卫生中心 2024 年 7 月-2025 年 7 月期间门诊及住院的收治的 60 例抑郁症患者作为研究对象,采用随机数字表法发随机分为研究组(n=30)和对照组(n=30)。研究组采用 tCDS(2mA 的经颅直流电刺激)联合 CCT 治疗;对照组采用参数设置一定的伪刺激联合 CCT 治疗。比较两组在治疗前、治疗 2 周和治疗 4 周后以重复性成套神经心理状态测验(RBANS)评价患者认知功能,汉密尔顿抑郁量表(HAMD)、蒙哥马利抑郁量表(MADRS)评价患者抑郁程度。

结果 治疗前两组患者年龄、性别、受教育年限、总病程比较差异无统计学意义($P > 0.05$)。治疗 2 周后研究组 HAMD、MADRS 评分均低于治疗前($P < 0.05$),RBANS 中有关认知功能的评分均高于治疗前,但两组之间比较差异无统计学意义($P > 0.05$)。治疗 4 周后,研究组 HAMD 评分低于对照组,研究组 MADRS 评分低于对照组,差异均有统计学意义($P < 0.05$);治疗 4 周后,研究组 RBANS 中有关认知功能的评分均高于对照组,差异

均有统计学意义 ($P < 0.05$)。

结论 以左背外侧前额叶为刺激靶点的经颅直流电刺激联合认知控制疗法能显著改善抑郁症患者抑郁症状,同时能够有效提高抑郁症患者的认知功能,具有更好的临床应用优势。

关键词: 经颅直流电刺激(tCDS); 认知控制疗法(CCT); 抑郁症; 认知功能;

双相障碍患者童年创伤经历与成年后自杀风险的关系

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目的 研究双相障碍患者童年创伤经历对成年后自杀风险的影响,为预防和管理双相障碍患者自杀工作提供理论依据。

方法 选取某市精神卫生中心 167 名符合《精神症状诊断与统计手册第五版》中双相障碍诊断的成年住院患者,抽取静脉血进行生理生化指标测定,进行重复性成套神经心理状态测验、中文版儿童期创伤问卷和自杀风险评估,使用 SPSS 和 R 语言对所得数据进行描述性统计分析、差异检验和回归分析。

结果 1)有童年创伤经历的双相障碍患者的自杀率是 51.46%,比无童年创伤经历的双相障碍患者(31.25%)高出 2.33 倍的自杀风险;2)有自杀风险的童年创伤双相障碍患者的生理生化指标和临床量表得分与无自杀风险的患者有显著差异(碱性磷酸酶: $P=0.03$; 乳酸脱氢酶: $P=0.04$; 血清三碘甲状腺原氨酸: $P=0.044$; 言语功能: $P=0.047$);3)回归分析发现,有童年创伤经历的双相障碍患者自杀的风险因素是言语功能得分 ($B=0.028$, $P=0.048$, $OR=1.029$)。

结论 童年创伤经历会显著增加双相障碍患者成年后的自杀风险,重复性成套神经心理状态测验的言语功能分量表可显著预测有童年创伤经历的双相障碍患者的自杀风险。

关键词: 双相障碍; 童年创伤经历; 自杀风险

Schizophrenia and Type 2 Diabetes Risk: A Systematic Review and Meta-Analysis

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Objectives The metabolic syndrome in patients with schizophrenia has consistently been a challenge for clinicians. Previous studies indicate that individuals with schizophrenia are highly prone to developing type 2 diabetes mellitus (T2DM). In recent years, a continuous stream of new observational studies has been reported, emphasizing the pressing need for clinicians to gain a more precise understanding of the association between schizophrenia and T2DM. The objective of this meta-analysis is to integrate new observational studies and further explore the potential link between schizophrenia and the risk of T2DM

Methods We conducted a comprehensive search of PubMed, Cochrane Library, Embase, and Web of Science using medical subject headings (MeSH) and relevant keywords. The risk of bias in cohort studies and case-control studies was assessed using the Newcastle-Ottawa Scale (NOS), while cross-sectional studies were evaluated using the Agency for Healthcare Research and Quality scale (AHRQ), scoring was based on the content of the original studies. A fixed-effects model was employed if $P > 0.1$ and $I^2 \leq 50\%$, indicating low heterogeneity. Conversely, a random-effects model was utilized if $I^2 > 50\%$, indicating substantial heterogeneity. Publication bias was assessed using funnel plots and Egger's test. Statistical analyses were carried out using Stata statistical software version 14.0

Results This meta-analysis comprised 32 observational studies, involving a total of 2,007,168 patients with schizophrenia and 35,883,980 without schizophrenia, published from 2004 to 2023. The pooled analysis revealed a significant association between a history of schizophrenia and an increased risk of T2DM (Odds Ratio [OR] = 2.15; 95% Confidence Interval [CI]: 1.83–2.52; $I^2 = 98.9\%$, $P < 0.001$). Stratified by gender, females with schizophrenia (OR = 2.12; 95% CI: 1.70–2.64; $I^2 = 90.7\%$, $P < 0.001$) had a significantly higher

risk of T2DM than males (OR = 1.68; 95% CI: 1.39-2.04; I2 = 91.3%, $P < 0.001$). Regarding WHO regions, EURO (OR = 2.73; 95% CI: 2.23-3.35; I2 = 97.5%, $P < 0.001$) exhibited a significantly higher risk of T2DM compared to WPRO (OR = 1.72; 95% CI: 1.32-2.23; I2 = 95.2%, $P < 0.001$) and AMRO (OR = 1.82; 95% CI: 1.40-2.37; I2 = 99.1%, $P < 0.001$). In terms of follow-up years, the >20 years subgroup (OR = 3.17; 95% CI: 1.24-8.11; I2 = 99.4%, $P < 0.001$) showed a significantly higher risk of T2DM than the 10-20 years group (OR = 2.26; 95% CI: 1.76-2.90; I2 = 98.6%, $P < 0.001$) and <10 years group (OR = 1.68; 95% CI: 1.30-2.19; I2 = 95.4%, $P < 0.001$)

Conclusion This meta-analysis indicates a strong association between schizophrenia and an elevated risk of developing diabetes, suggesting that schizophrenia may function as an independent risk factor for T2DM.

关键词: schizophrenia, type 2 diabetes mellitus, T2DM, systematic review, meta-analysis, observational study.

鲁拉西酮联合喹硫平治疗女性双相抑郁的临床疗效研究及对认知功能的影响

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目的 探讨鲁拉西酮联合喹硫平治疗女性双相抑郁的临床疗效研究及对认知功能的影响。

方法 为深入研究不同药物组合对女性双相抑郁患者的疗效及其副作用, 选取了 2023 年 4 月至 2023 年 4 月期间, 在临沂市精神卫生中心首次住院且接受治疗的 60 例女性双相抑郁患者作为本研究的对象。用随机数字表法将其分对照组和观察组, 各 30 例, 对照组接受安慰剂联合喹硫平治疗, 观察组接受鲁拉西酮联合喹硫平治疗, 比较两组患者从基线到第 12 周的治疗疗效、抑郁症状、躁狂症状、治疗副反应、认知功能等指标的变化。

结果 结果 与安慰剂组相比, 鲁拉西酮组的

临床总有效率 95.00% 高于对照组 72.50% ($P < 0.05$); 比较 HAMD 评分, 治疗前组间 P 值 > 0.05 , 治疗后, 观察组 HAMD 评分低于对照组 ($P < 0.05$); 两组患者治疗前后 YMRS 差异无统计学意义, 治疗后不良反应评分, 差异无统计学意义 ($P > 0.05$); 两组患者治疗前 MoCA 相关指标差异无统计学意义 ($P > 0.05$), 治疗后两组 MoCA 评分均提升, 且观察组 MoCA 评分 (26.53 ± 1.86) 分高于对照组 MoCA 评分 (23.32 ± 1.89) 分, 差异有统计学意义 ($P < 0.05$)。

结论 鲁拉西酮联合喹硫平治疗女性双相抑郁能更好的改善抑郁症状及认知功能, 不增加转躁风险及药物不良反应, 整体提升治疗疗效。

关键词: 双相障碍; 抑郁; 鲁拉西酮; 喹硫平;

Bioinformatics-based Analysis of Potential Key Genes in Schizophrenia Patients

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Objective This study aims to identify key genes associated with schizophrenia and their potential clinical implications using bioinformatics approaches, and to develop a diagnostic discrimination model for schizophrenia using neural network methods

Methods This research utilized transcriptomic datasets from the dorsolateral prefrontal cortex and related brain regions of schizophrenia patients. Background correction and normalization were performed using the Robust Multi-array Average (RMA) method, and differential expression genes were identified through linear model analysis and empirical Bayesian statistical methods. Feature extraction of differential expression genes was conducted using the Boruta method based on a random forest model. A neural network model was constructed using the identified feature genes, and the model's classification efficacy was calculated on a validation set using the Bootstrap method, with performance tested in an independent external validation set. Biological functions of differential expression genes and feature genes were explored through

gene ontology (GO) and protein-protein interaction networks (PPI)

Results The analysis included 700 samples, identifying 518 differentially expressed genes, and recognized 36 key schizophrenia-related genes (ABCG2, ADGRG1, ADM, ATP1A2, ATP5F1B, BAG1, CARTPT, CBFB, CLU, DUSP1, FAT1, FOS, FRZB, GEM, GUCY1B1, HMGB2, ID1, IGFBP6, ITM2A, KCNV1, KIF3C, MGST3, NDUFB7, PPWD1, PTS, PVALB, RARS1, RGS2, RIPOR2, RNASE1, SEC14L1, SLC1A2, SOX9, TNFSF10, TYRP1, UTRN). Enrichment analysis revealed that key genes are primarily involved in neurotransmitter transmission, cardiovascular function regulation, and sex hormone signaling pathways. The neural network model constructed from the 36 genes included two hidden layers and two dropout layers, with 3,003 trainable parameters. The model's specificity and sensitivity 95% confidence intervals ranged from 58.02% to 80.00% and 79.02% to 90.91%, respectively, with an AUC between 73.79% and 86.93%, and accuracy ranging from 73.46% to 84.83% in the validation set. The AUC in the external validation set was 0.8

Conclusion The neural network model built from key genes selected via the Boruta method based on the random forest model shows good diagnostic discrimination for schizophrenia. Key genes associated with schizophrenia are enriched in biological processes related to the cardiovascular system, amino acid metabolism, and male reproductive development, suggesting that schizophrenia, as a systemic disease, may affect multiple systems

关键词: Gene expression profiling, Neural networks (computational)

视频健康教育对于双相障碍患者服药依从性的影响

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目的 研究视频形式的健康教育与常规宣教健康教育对双相障碍患者服药依从性的影响,并进行对比分析。

方法 选取2023年6月至2023年12月在临沂市精神卫生中心住院治疗达到临床痊愈标准的80名双相障碍出院患者,采用随机数字表分组法,分为实验组(采用视频形式的健康教育)及对照组(常规宣教式健康教育),每组各40人。实验组患者在出院前进行一次视频形式的健康教育,对照组患者出院前进行一次常规宣教式健康教育,两组患者健康教育内容均为所患疾病的基本情况,为什么病情好转了还要继续服药。两组患者出院后在第2月、4月、6月分别进行一次随访,内容为服药情况及病情情况,用自制服药依从性调查表计算各组患者服药依从性,将随访时服药依从性比率,应用SPSS软件包进行统计学处理,并进行分析。

结果 实验组和对照组分别有40人完成入组时研究,实验组1例在4月随访时脱失,对照组1例在2月随访时脱失,实验组患者2、4、6月服药依从性分别为97.5%、92.3%、87.2%,对照组患者2、4、6月服药依从性分别为94.9%、84.6%、76.9%。在3个随访阶段服药依从性分析,实验组显著高于对照组,差异具有统计学意义($P < 0.05$)。

结论 双相障碍作为一种重性精神障碍,其主要特点为复发率高,多项研究显示,终身复发率高于90%,1年内复发率也高于45%,其中最主要的一个原因为服药依从性不高,未能做到全程治疗。因此,加强患者的健康教育尤为重要。目前的健康教育主要形式为依据文字而进行的口头宣教,单调,乏味,患者或家属能够理解和记住的内容有限。现在进入了新媒体传播时代,应该跟上时代发展,充分利用新媒体便捷有效的传播优势,构建健康教育形式的新常态,更好的为患者和广大百姓服务。把健康教育内容制作成短视频,其内容较传统的健康教育更加生动形象,有助于患者更加清楚地了解所患疾病及后续注意事项,也提高了患者对于治疗的依从性和患者满意度,有利的减少了复发,更有利于患者康复,具有一定的临床推广价值。

关键词: 视频,健康教育,双相障碍,服药依从性

精神疾病患者行无抽搐电休克治疗后发热状

况及影响因素分析

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目的 无抽搐电休克治疗 (modified electroconvulsive therapy, MECT) 作为一种有效治疗各种精神疾病的物理疗法, 被广泛地应用于临床。在临床工作和国内外案例报道中发现, 部分患者 MECT 后会出现发热的情况。本研究旨在分析 MECT 后发热的发生情况、特点及影响因素。

方法 合纳入标准 (入院时心电图、胸部 CT、生化检查无异常, 每次治疗前体温、脉搏、呼吸、血压均在正常范围) 的 136 例患者作为研究对象。本研究需要采集以下数据: 年龄、疾病诊断、是否出现发热、第几次治疗后出现发热、发热次数、最高体温。采用 SPSS 25.0 统计软件进行数据的录入与分析。采用例数、构成比、均数、标准差进行统计描述, 组间比较应用 χ^2 检验, 双侧检验, $P < 0.05$ 为差异有统计学意义。

结果 1. 本次调查中, MECT 后发热的发生率为 14.0% (19 例患者出现 MECT 后发热), 大部分发热出现在治疗的前 3 次 (78.9%), 仅有 2 例最高体温大于 39°C (10.5%)。其中, 89.5% 的患者仅出现 1-2 次 MECT 后发热, 而 10.5% 的患者出现 3-4 次 MECT 后发热, 未见出现 4 次以上 MECT 后发热的患者。

2. 136 例研究对象年龄范围在 16-54 (36.51 \pm 9.23) 岁。年龄 ≤ 40 岁与年龄 > 40 岁两组研究对象发热发生率存在显著差异 (前者发生率为 20.3%, 后者发生率为 6.5%, $\chi^2 = 5.360$, $P = 0.025$)

3. 研究对象包括 67 名男性 (9 例出现 MECT 后发热), 69 名女性 (10 例出现 MECT 后发热), 差异无统计学意义 ($\chi^2 = 0.032$, $P = 0.859$)。

4. 研究对象中有 83 例精神分裂症患者 (11 例出现 MECT 后发热)、53 例心境障碍患者 (8 例出现 MECT 后发热) ($\chi^2 = 0.091$, $P = 0.763$)。

结论 MECT 后发热的发生率约为 14.0%, 大部分发热出现在最开始治疗的前几次, 且并未呈现持续发热状态, 体温一般在 39°C 以下。年龄可能是 MECT 后发热的影响因素。本研究尚未发现性别及疾病诊断与 MECT 后发热的相关性。

关键词: 电休克, 发热

孕产妇妊娠期焦虑抑郁情绪的研究进展

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目的 随着心理健康意识在人们日常生活中的普遍提高, 临床医学领域也由传统的生物医学模式向生物—心理—社会整体医学模式转型, 研究者们开始越来越关注社会心理因素对不良情绪的影响。

《“十四五”国民健康规划》(2022) 中指出, 实施母婴安全行动提升计划, 全面落实妊娠风险筛查与评估, 提高孕产妇身心疾病的早检早筛早诊率。妊娠和分娩是人类历史进程中一种正常且自然的生理现象, 并且是所有孕龄期女性可能经历的一个特殊阶段。在这个特殊阶段, 女性不仅在生理上会产生明显的变化, 且可能由于怀孕和生育而经历诸多生活上和工作上的应激事件, 这些都将会导致女性在妊娠期更易产生多种不良情绪, 其中以焦虑和抑郁为主要表现。妊娠期焦虑抑郁通常是女性在孕产阶段期望达到优生优育的目标, 而产生的紧张情绪和假想忧虑。近些年来, 对妊娠期焦虑抑郁的关注日益增多, 如何有效应对孕产妇情绪心理危机、促进家庭和谐美满成为重要命题。

方法 本研究采用文献梳理法对妊娠期焦虑抑郁相关的研究成果进行了综述。

结果 (1) 妊娠期焦虑和抑郁的发生率随着妊娠进展呈现出“两头高中间低”的 U 型曲线的变化形式——从妊娠早期到妊娠中期呈下降趋势, 妊娠晚期又呈上升趋势; (2) 孕妇的个性特点、社会支持、应对方式、认知因素及身心状况是妊娠期产生焦虑和抑郁情绪的主要影响因素; (3) 临床上实施的旨在促进母婴健康的药物治疗、心理护理和运动干预这三大类措施中, 心理护理最为适宜。

结论 本研究创新性的整合了妊娠期焦虑抑郁的发生规律、影响因素及干预措施, 不仅丰富了女性心理健康领域的理论研究, 并且对有效预防及应对女性妊娠期情绪困扰具有重要的指导意义。

关键词: 孕产妇; 妊娠期焦虑抑郁; 心理干预

Case Series of Successful Treatment with Aripiprazole Monotherapy in Bipolar Disorder with Delayed Sleep-wake Phase Syndrome

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Objective Patients with bipolar disorder (BD) accompanied by delayed sleep-wake phase (DSWP) disorder/ syndrome may be younger, more prone to relapse, and more severely impaired in social functioning. However, there are few studies in this area, and there are currently no mature treatment guidelines, which prompts us to adopt this case series explores it

Methods A sample of 15 BD patients with DSWP syndrome who had experience using APZ monotherapy were included after obtaining their written informed consent and their parents written informed if the patient was less than 18 years old. BD is diagnosed by the attending physician based on the diagnostic criteria of International Classification of Diseases 10th Revision (ICD-10). DSWP symptom was recorded before using APZ monotherapy: both bedtime and awakening time were delayed compared to regular or expected time, leading to chronic sleep deprivation and daytime functional impairment. We evaluate the changes in relevant indicators of patients before and after medication by extracting data from their past clinical records from the electronic medical record system, medical laboratory examination system and electrocardiogram examination system of the Third Affiliated Hospital of Sun Yat-sen University

Results Their average age was 20.7 ± 6.4 years. The average level of education was 12.9 ± 3.2 years. The average onset age of bipolar disorder was 17.2 ± 6.0 (Median=16, Min=10, Max=32) years. The median course of bipolar disorder was 2.5 years, ranging from 0.3 to 9.0 years. Efficacy was seen at the first two weeks of treatment, demonstrated by reduction of scores on the Clinical Global Impressions-Severity(CGI-S) scores and advanced sleep-wake cycle. At the final visit, 93.3% (14/15) of the participants achieved clinical remission (defined as CGI-S <3) and their social function

went back to normal. At the four timepoints:(baseline, two weeks,12 weeks and the final visit), the bedtime (median, min-max) of the participants were 03:00(00:00-07:00), 00:00(22:00-02:00), 23:00(22:00-01:00), and 23:00(22:00-02:00), respectively; the median values of wake time were 11:00(07:00-17:00), 08:00(06:00-11:00), 07:00(05:00-11:00), and 08:00(05:00-08:00), respectively; the median values of sleep duration were 8 hours, 7 hours, 8hours, and 8 hours, respectively. As shown in Figure 2 at 2 weeks, 66.7% (10/15) of the participants could fall asleep before 01:00 am, and 100% (15/15) could fall asleep before 3:00 am. At 12 weeks and the final visit, the proportion of the participants who could fall asleep before 01:00 moved further to 93.3% (14/15). At the same time, the wake time was also advanced for all the participants. At 2 weeks, 86.6% (13/15) of the participants could wake up before 09:00am. At the final visit, this proportion reached to 100%. Extrapyramidal side effects and weight gain were the most common adverse events but all reversible

Conclusion In summary, APZ monotherapy might be an effective and safe treatment option for BD patients with DSWP syndrome

关键词: Bipolar Disorder; Delayed Sleep-wake Phase Syndrome; Aripiprazole; Monotherapy

A Study on The Clinical Predictive Value of FGF-9 for Depressive Phase of Bipolar Disorder and Single Episode of Depression

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Objective The aim of this study is to investigate whether Fibroblast growth factor 9 (FGF-9) has clinical value and significance in assisting in the diagnosis of depressive phase of bipolar disorder and single episode of depression

Methods 1. Select 30 confirmed patients with depressive episodes without psychiatric symptoms who

received outpatient or inpatient treatment at the Qingdao Mental Health Center from May 2023 to April 2024 as the single episode of depression group, and 30 patients diagnosed with bipolar disorder who currently have depressive episodes without psychiatric symptoms as the bipolar depression group. 30 healthy individuals without any diagnosis of mental illness were selected as the control group during the same period

2. Collect venous blood samples from all subjects on an empty stomach in the morning, and measure serum FGF-9 levels and levels of inflammatory factors such as interleukin-6 (IL-6) and tumor necrosis factor alpha (TNF - α). Use the 24 item Hamilton Depression Scale (HAMD-24) to assess the severity of depression.

3. Spearman correlation analysis was used to investigate the correlation between serum FGF-9 levels and inflammatory factors such as interleukin-6 (IL-6), tumor necrosis factor alpha (TNF alpha), and HAMD-24 scores in patients with single episode of depression and depressive phase of bipolar disorder. The diagnostic value of using ROC curve to analyze serum FGF-9 levels in diagnosing depressive phase of bipolar disorder and single episode of depression.

Results 1. The HAMD-24 scores of the two groups of patients were higher than those of the control group, and the difference was statistically significant ($p < 0.05$); There was no statistically significant difference in the age of onset and HAMD-24 score between the two groups of patients ($p > 0.05$)

2. The serum levels of FGF-9, IL-6, and TNF - α were compared among the three groups of subjects, and the differences were statistically significant (all $P < 0.01$). The serum FGF-9 and IL-6 levels in the bipolar depression group were higher than those in the single episode of depression group and control group; The serum FGF-9 level in the single episode of depression group was higher than that in the control group; The serum TNF - α levels in the bipolar depression group and single episode of depression group were higher than those in the control group, and the differences were statistically significant (both $p < 0.05$).

3. The average serum FGF-9 levels in patients with single episode of depression and bipolar depression were positively correlated with IL-6 and HAMD-24

scores ($r = 0.349$ to 0.727 ; $p < 0.05$)

4. The area under the curve (AUC) of FGF-9 for diagnosing single episode of depression is 0.669, with a sensitivity of 45% and a specificity of 97%. The AUC of FGF-9 for diagnosing bipolar depression was 0.789, with sensitivity of 58% and specificity of 98%, respectively.

Conclusion FGF-9 can assist in clinical diagnosis and has high clinical value for both depressive phase of bipolar disorder and single episode of depression

关键词: bipolar disorder; depression; FGF-9

Correlation of Melatonin and Cortisol in Bipolar Depression: A Preliminary Small-Sample Study

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The first hospital affiliated kunming medical university

Objective To dynamically monitor the plasma melatonin and cortisol levels in patients with bipolar depressive episodes, to improve polysomnography, and to analyze the circadian rhythm characteristics of patients with bipolar depression, we explore the value of circadian rhythm disorders diagnosed bipolar depression

Methods A total of 54 subjects were included, comprising 16 cases of bipolar depression, 12 cases of unipolar depression, 11 cases of bipolar depression in remission, and 15 healthy controls. High-performance liquid chromatography-tandem mass spectrometry was used to detect the plasma melatonin and cortisol levels of the four groups at 8 am, 12 am, 4 pm, 8 pm, and polysomnography were determined

Results The plasma melatonin levels at 8 am in the bipolar depression group were higher than those in the unipolar depression group at 8 am (mean difference = 22.504, $t = 2.833$, $P = 0.014$), but the plasma melatonin levels at 8pm were lower than those in the unipolar depression group at 8pm (mean difference = -2.471, $t = -2.506$, $P = 0.006$). And the plasma cortisol levels in the bipolar depressive episode group at 8 am (mean differ-

ence = 57.411, $t = 2.623$, $P = 0.001$), 12 pm (mean difference = 39.276, $t = 2.879$, $P < 0.001$), and 8 pm (mean difference = 62.692, $t = 2.697$, $P = 0.001$) were higher than those in the unipolar depression group at the same time

Conclusion Patients with bipolar depression have a dysregulation of plasma melatonin and cortisol levels, with circadian rhythm disturbances, and these disturbances may contribute to the diagnosis of bipolar depression

关键词: Bipolar depressive episodes, Cortisol, Melatonin, Polysomnographic recordings

Correlation of PLP1 in First-episode Schizophrenia

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目的 To monitor PLP1 and PLP1mRNA levels in patients with first-episode unmedicated schizophia, to further investigate the role of PLP1 in first-episode schizophrenia.

方法 54 cases of first-episode unmedicated schizophrenic patients, 56 cases of the healthy controls. ELISA was to detect peripheral plasma PLP1 levels. Q-PCR was to detect the expression of PLP1mRNA. The Scale for SANS and SAPS were to evaluate the clinical symptoms of first-episode schizophrenic patients.

结果 The PLP1 and PLP1mRNA levels in schizophrenia group were higher than that in HC group. The hallucination scores, delusion scores, thinking disorder scores of SAPS were positively correlated with PLP1 level. Delusional scores, thinking disorder scores were positively correlated with the of PLP1mRNA level. A positive correlation between PLP1 level and the flat affective scores, speech impairment scores, volitional deficit scores, interest and social deficit scores, attention impairment scores of SANS.

结论 The growth of plasma PLP1 and PLP1 mRNA levels may be correlated with the occurrence of

schizophrenia.

关键词: Schizophrenia, first episode, proteolipid protein 1, PLP1 mRNA

不同程度睡眠障碍的老年抑郁症的多模态神经影像学研究

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目的 应用静息态功能磁共振成像 (rs-fMRI) 技术, 采用局部区域一致性分析 (ReHo)、振幅谱密度分析 (ALFF 和 fALFF) 以及度中心性分析等多模态功能性分析方法, 旨在深入探索不同程度睡眠障碍对老年抑郁症发病机制的脑功能网络特征。

方法 老年抑郁症合并明显睡眠障碍组 25 例, 老年抑郁症合并低睡眠障碍组 14 例和健康对照组 42 例。使用 HAMD-17、HAMA 和 PSQI 对所有受试者进行临床评估。使用 3.0T-MRI 进行功能磁共振扫描, 获取额外静息状态 fMRI 序列。使用 DPARSFA 软件进行预处理, 使用 ReHo、ALFF、fALFF 和 DC 方法提取功能连接特征。

结果 ReHo 分析, 左大脑半球的额叶区域活动涉及 98 个体素, 最显著的活动点位于 MNI 坐标(-51, 6, 39)。老年抑郁伴明显睡眠障碍组的 ReHo 值显著低于低睡眠障碍组和健康对照组, 而低睡眠障碍组的 ReHo 值则显著高于健康对照组。

振幅谱密度分析, ALFF 分析中共识别出六个活动簇, 分布在大脑的多个区域, 包括小脑、额叶和顶叶。fALFF 分析中则识别出三个活动簇, 涉及额叶、枕叶等区域。老年抑郁障碍伴明显睡眠障碍组在 ALFF 值显著低于低睡眠障碍组和健康对照组。

度中心性分析, 两个簇的活动主要集中在大脑的右半球, 包括颞叶、枕叶和顶叶等区域。三组间度中心性值均呈现正态分布, 明显睡眠障碍组的度中心性值显著低于低睡眠障碍组和健康对照组, 低睡眠障碍组的度中心性值低于健康对照组。

结论 明显睡眠障碍可能导致前额叶的局部连接功能损害。前额叶皮层、楔前叶以及默认网络模式中的关键脑区, 在不同程度睡眠障碍的老年抑郁患者脑功能连接模式中发挥关键作用, 更严重的睡眠障碍会导致这些脑区功能连接的下降。

关键词: 老年抑郁障碍, 局部区域一致性分析, 振幅谱密度分析, 度中心性分析, 楔前叶

DRD1 Gene Polymorphism Predict Responses in Manic Patients Treated With Lithium and Olanzapine

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Objective To explore the correlation between DRD1 gene rs686 and rs4532 polymorphism and bipolar mania episode and therapeutic effect. It is different from past study about correlation between DRD2 gene polymorphism and therapeutic response in patients with bipolar disorder

Methods 60 patients with bipolar mania and 40 normal healthy person as the control group were collected, and the DRD1 gene rs686 and rs4532 polymorphism were tested. The bipolar manic patients was treated with lithium combined olanzapine and assessed by YMRS, HAMD and HAMA

Results There was no difference on polymorphism DRD1 gene polymorphism between patients and normal. At 8th weekend, YMRS score of AA group higher than that of genotype AG+GG group (8.34 ± 1.23 vs 7.38 ± 1.20 , $P < 0.05$). The patient's early effective response rate (EERR, YMRS 2nd weekend reduction rate $> 25\%$) and remission rate (RR, YMRS 8th weekend reduction rate $\geq 80\%$) are higher than in AA group according to rs686. The no similar difference of rs4532 was found

Conclusion There is a correlation between DRD1 gene rs686 and the therapeutic effect of manic patient. The EERR and RR of rs686 genotype AG+GG group is higher than that of the AA group, suggesting that patients who contain G in genotype of rs868 obtain more improvement in treatment results

关键词: Bipolar disorder; DRD1 gene; Gene polymorphism; Lithium; Olanzapine

外泌体在未成年人双相障碍中的研究进展

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目的 本文综述了外泌体在未成年人双相障碍发病机制的作用和研究进展, 探讨其作为未成年人双相障碍早期诊断的生物标记物和精准化治疗的可能性, 以期构建双相障碍的客观诊治体系提供参考。

方法 通过文献检索、分析、汇总、归纳, 我们对外泌体在未成年人双相障碍中的生物学特性、作用机制以及潜在临床应用进行了总结, 并探讨了外泌体在该领域的研究进展、面临的挑战和未来的研究方向。

结果 外泌体是一类由细胞分泌的细胞外囊泡, 内含蛋白质、脂类和核酸等多种生物活性物质, 通过作为生物活性物质和遗传信息传递的媒介来参与双相障碍发生和发展的有关过程, 如神经营养和神经可塑性、神经发生、神经炎症、表观遗传调控。外泌体可以穿过血脑屏障, 并在血液、尿液、脑脊液等体液中检测到, 因此, 来源于中枢神经系统的外泌体可通过外周体液获得, 并且与脑脊液和脑组织高度相关, 可作为诊断未成年人双相障碍的潜在生物标记物。另外, 外泌体参与双相障碍的多个发病机制, 并且可携带蛋白质、脂质、核酸等特定内容物, 使其有可能成为潜在的定向转运治疗药物的靶点, 通过外泌体治疗双相障碍。

结论 外泌体作为细胞间信号转导的重要媒介参与了神经营养和神经可塑性、神经发生、神经炎症、表观遗传调控等过程, 是未成年人双相障碍早期诊断的潜在诊断标志物, 为今后精准化治疗提供可能性。然而, 目前外泌体在未成年人双相障碍的研究主要集中在诊断标志物和细胞通信机制, 外泌体如何与靶细胞相互作用、具体靶向机制等还不明确。目前, 对外泌体及其内容物的提取方法、分离方法等方面仍未有统一的金标准, 因而需要关注不同提取、分离方法之间结果的可比性。因此, 对于外泌体在临床实践, 我们应该以发展的态度进行更深入的科学研究, 必要时可多学科合作, 以期全面、透彻地理解外泌体在未成年人双相障碍的作用和影响。

关键词: 外泌体, 未成年人, 双相障碍, 生物标志

物,精准治疗

清晨-夜晚量表在双相障碍伴睡眠-觉醒时相延迟障碍人群中的信效度检验和诊断价值评估

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目的 双相障碍(Bipolar disorder, BD)作为一组常见的重性精神障碍,常常伴有睡眠障碍,其中尤以睡眠-觉醒时相延迟障碍(delayed sleep phase syndrome, DSWPD)尤为常见。既往研究指出:相对不伴有DSWPD的双相障碍患者,伴有DSWPD的双相障碍患者,更年轻、发病年龄更早、BMI更高、既往抑郁和躁狂发作更多、快速循环率更高、自杀企图更强、共病创伤后应激障碍和物质使用障碍等风险更大,故意自残的风险更高、更有可能被开具心境稳定剂与抗抑郁剂,病情更严重(社会功能量表得分更低、自我报告的抑郁症状更多)。因此,及时、正确的识别共病于双相障碍中的DSWPD对双相障碍的精准治疗具有积极意义。本研究拟探索清晨夜晚量表(Morningness-Eveningness questionnaire, MEQ)在伴DSWPD的BD患者中的信、效度并评估其对DSWPD的诊断效能。

方法 招募BD患者DSWPD+组142例,DSWPD-组125例,正常对照HC组130例,使用清晨-夜晚量表(Morningness-Eveningness questionnaire, MEQ)进行评估,2周后49人完成重测,绘制受试者操作特征曲线(receiver operating characteristic curve, ROC)并计算曲线下面积(Area Under the Curve, AUC)。

结果 MEQ的内部一致性信度、分半信度和重测信度分别为0.758、0.714、0.661。MEQ量表依据统计结果剔除条目14后获得6个因子,累计因子载荷量58.119%。AUC为0.867。MEQ43分作为分界线时约登指数最高,灵敏度为0.83,特异度为0.75。

结论 清晨夜晚量表MEQ在双相障碍患者中具备较好的信、效度,能有效识别共病于双相障碍中的睡眠-觉醒时相延迟障碍。

关键词: 双相障碍; 睡眠-觉醒时相延迟障碍; 清晨夜晚量表

药物基因组学检测在汉族双相情感障碍患者治疗中的疗效与安全性评估

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目的 为进一步探究药物基因组学检测在提高汉族双相情感障碍患者治疗效果和安全性方面的临床应用价值。

方法 将81例双相情感障碍患者随机分配至个体化组(41例)和对照组(40例)。个体化组通过基因检测确定药物基因组学分析结果,进而调整药物治疗方案。对照组则依据医师的用药经验进行治疗。在12周的随访期间,对比两组在汉密尔顿抑郁量表24项版(HAMD-24)评分下降率、缓解率及应答率等方面的差异。同时,统计两组的不良反应发生率,以全面评估个体化治疗的疗效和安全性。

结果 在4至12周的随访中,个体化组在HAMD-24评分下降率上显著优于对照组,差异具有统计意义($P<0.05$)。在随访的第4周,个体化组的改善率(100.00% vs 72.50%)和应答率(21.95% vs 0.00%)均显著大于对照组($P<0.05$)。在随访的第8周,个体化组的改善率为95.12%,显著高于对照组的80.00%,优势比为4.88(95%CI, 1.03-23.7)($P=0.048$);个体化组的应答率为19.51%,虽然仍高于对照组的15.00%,但优势比为1.37(95%CI, 0.46-4.67),两组间的差异无统计学意义($P=0.770$)。在随访的第12周,个体化组的改善率为97.56%,虽然高于对照组的87.50%,优势比为5.71(95%CI, 0.70-68.80),但差异无统计学意义($P=0.109$);此时,个体化组的应答率为70.73%,显著高于对照组的35.00%,组间优势比为4.49(95%CI, 1.72-10.90),且差异具有统计学意义($P=0.002$)。此外,在随访的第12周,个体化组的不良反应率仅为2.08%,而对照组则高达19.79%,组间优势比的倒数高达11.6(95%CI, 2.81-51.18),且差异有统计学意义($P<0.001$)。

结论 本研究对比了基于药物基因组学检测的个体化治疗方案与常规用药经验在汉族双相情感障

碍患者中的疗效和安全性。在 12 周随访期间,个体化组在 HAMD-24 评分下降率、应答率及不良反应率方面均显著优于对照组。这表明,通过基因检测指导的个体化治疗在双相情感障碍治疗中能显著提高疗效并降低不良反应发生率。

关键词: 药物基因组,汉族,双相情感障碍,应答,不良反应

青少年抑郁发作患者非自杀性自伤行为与童年期创伤的关联性——基于杏仁核功能连接改变的研究

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目的 非自杀性自伤 (non-suicidal self-injury, NSSI) 是青少年抑郁发作患者严重且高发问题。本研究将探讨伴或不伴 NSSI 青少年抑郁发作患者以双侧杏仁核为种子点的静息态脑功能连接 (functional connectivity, FC) 改变。

方法 共纳入 127 例青少年抑郁发作患者,根据其有无自伤行为和自伤频次,将其分为伴 NSSI 组和不伴 NSSI 组。采用基于双侧杏仁核为种子点的功能连接分析方法,研究伴或不伴 NSSI 患者的异常脑功能连接及其与临床特征的相关性。采用二元 Logistic 回归分析 NSSI 行为的危险因素。

结果 (1) 两组人群年龄分布、教育程度无显著性差异 ($p>0.05$), 两组性别分布存在显著差异 ($p<0.05$)。两组人群汉密尔顿焦虑量表、杨氏躁狂评定量表评分无显著性差异 ($p>0.05$)。两组 17 项汉密尔顿抑郁量表评分具有统计学差异 ($p<0.05$); NSSI 组患者经历更严重的童年期创伤,包括情感虐待、情感和躯体的忽视 ($p<0.05$)。(2) 与不伴 NSSI 组相比, NSSI 组患者右侧杏仁核与双侧楔叶、左侧距状裂周围皮层、右侧楔前叶的 FC 强度显著减弱。

(3) NSSI 组患者右侧杏仁核-右楔叶 FC 值与 HAMD-17 无显著相关 ($p>0.05$)。右侧杏仁核-右楔叶 FC 值与童年期创伤问卷评分 ($r=-0.360, p=0.009$) 呈显著负相关;进一步利用 Pearson 偏相关分析比较与五种不同类型童年期创伤相关关系,结果显示:右侧杏仁核-右楔叶 FC 值与情感虐待 ($r=-0.302, p=0.030$)、情感忽视 ($r=-0.294, p=0.035$)、躯体忽

视 ($r=-0.389, p=0.004$) 评分呈显著负相关。(4) 二元 Logistic 回归分析显示:女性为 NSSI 发生的危险因素 ($p=0.003, OR=4.804, 95\% CI 1.725\sim 13.377$); 较高的 CTQ 总分与 NSSI 风险升高相关 ($p=0.014, OR=1.040, 95\% CI 1.008\sim 1.073$); 较高的右侧杏仁核-右楔叶 FC 值是 NSSI 的保护因素 ($p<0.001, OR=0.001, 95\% CI 0.000\sim 0.036$)。

结论 伴有 NSSI 行为的青少年抑郁发作患者经历了更严重的童年创伤,严重的童年创伤可能会增加 NSSI 的发生风险; NSSI 患者右侧杏仁核与双侧楔叶、左侧距状裂周围皮层、右侧楔前叶 FC 强度减弱,右侧杏仁核-右楔叶的 FC 与 CTQ 总分呈负相关,较高的功能连接值是 NSSI 的保护因素。

关键词: 青少年抑郁发作; 非自杀性自伤; 童年期创伤; 杏仁核; 静息态脑功能连接

女性双相障碍患者不同生殖周期发作的临床特征、机制及诊疗进展研究

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目的 双相障碍 (bipolar disorder, BD) 存在与性别相关的临床差异。越来越多研究表明,部分女性双相障碍患者在生殖周期发作风险增加,且可能经历更严重的病程,如发病年龄较早、更容易经历快速循环和混合发作,自残/自杀发生率高,治疗具有挑战性。生殖周期性激素水平急剧变化,部分女性双相障碍患者对激素变化异常敏感可能是生殖周期发作的基础。此外,遗传、社会心理等因素亦可能与生殖周期双相障碍发作相关。本研究中将围绕女性双相障碍患者不同生殖周期(围月经期、围产期、围绝经期)发作的临床特征、发病机制及诊疗进展作一综述。

方法 通过查阅和筛选国内外文献,综述女性双相障碍患者不同生殖周期发作的临床特征、机制及诊疗进展研究。

结果 围月经期、围产期、围绝经期是双相障碍首次发病和复发风险较高的时期。由于激素等变化导致部分女性双相障碍患者在生殖周期容易出现情绪不稳定等相关症状,影响其病程、治疗与预后。经前加重可能是双相障碍严重表型的临床标志。研

究者通过对比双相 I 型障碍患者产后躁狂发作和非围产期躁狂发作,发现产后躁狂发作患者出现过度内疚、困惑等症状,而较少表现为典型的躁狂症状,如言语滔滔不绝和社交活动增多等。而与产后单相抑郁相比,双相障碍产后抑郁发作的特征性临床症状包括:非典型抑郁症状、混合特征、伴有精神病性症状。围绝经期双相障碍患者情绪波动尤以抑郁发作最为突出和严重。

结论 生殖周期是女性双相障碍发病和复发的高危阶段。有关双相障碍不同生殖周期发作的生物学机制研究较为匮乏,既往研究多涉及性激素波动对情绪和行为的影响,倾向于从“激素敏感”角度解释双相障碍在不同生殖周期中的病情波动。治疗方面,目前一线治疗药物如心境稳定剂(锂盐、抗惊厥药)和第 2 代抗精神病药仍是治疗生殖周期双相障碍的主要用药,需要更多大样本研究更新循证证据、提供治疗策略。

关键词: 双相障碍;生殖周期;围月经期;围产期;围绝经期

Disorganized Thalamic Subregional Functional Connectivity in Bipolar Disorder

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Objective There are many reports of alterations in cortical functional connectivity in patients with bipolar disorder (BD). However, whether and how subcortical regions are affected is less well known. In the present study the potential involvement of subcortical and subregions of thalamus are explored in BD

Methods In particular, functional and structural Magnetic Resonance Imaging (MRI) was performed in 88 adult patients with BD and 78 healthy controls (HCs). Seed-based subcortical and thalamic subregional functional connectivity was compared between the BD patients and HCs, as well as between patients with BD type I (BD-I) subgroup and HCs as a sub-group analysis

Results Compared to HCs, BD patients showed increased functional connectivity between left thalamus

and right lingual gyrus, between right anterior thalamus and superior frontal gyrus, and between right ventral anterior thalamus and precuneus. BD-I patients showed increased functional connectivity between left thalamus and right lingual gyrus, and altered functional connectivity between the dorsal thalamus and the default mode network (DMN) and prefrontal regions

Conclusion These findings provide evidence of disorganized thalamo-cortical functional connectivity in BD, suggesting that the thalamus and its subregions may play important and specific roles in the neural circuitry of BD

关键词: Bipolar disorder, functional connectivity, subcortical, subregion, thalamus.

Comprehensive Analysis of The Microbiome and Metabolome: Unveiling Interactions Between Intestinal Flora and Metabolites in Schizophrenia

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Objective (SZ) is a complex, multifactorial neurodevelopmental disorder characterized as a severe mental illness. Despite extensive research, its etiology and pathogenesis remain largely elusive. Recent studies suggest that the intestinal microbiota and its metabolites may play critical roles in the onset and regulation of SZ. This study aims to examine the characteristics of the intestinal microbiota and metabolomics in patients with SZ and to explore their correlation with clinical symptoms

Methods This study involved thirty-five patients diagnosed with schizophrenia (SZ group) and thirty healthy control participants (HC group). Fecal samples were collected and analyzed using microbiome (16S rRNA gene sequencing) and metabolome (UPLC-MS) techniques. Bioinformatics and statistical analyses were conducted to interpret the data

Results Age, sex, and BMI were comparable be-

tween the SZ and HC groups. Microbial diversity sequencing identified 837 operational taxonomic units (OTUs) across both groups. Although alpha diversity metrics showed no significant difference, beta diversity metrics revealed notable disparities. At the genus level, differences were observed in nine bacterial groups: *Turicibacter*, *Toprococcus*, *Campylobacter*, *Eubacterium*, *Blautia*, *Sarcina*, *Catenibacterium*, *Lactobacillus*, and *Porphyromonas*. At the family level, *Erysipelotrichaceae*, *Turicibacteraceae*, *Campylobacteraceae*, *Desulfovibrionaceae*, *Lactobacillaceae*, and *Lachnospiraceae* showed significant variations. Metabolomics analysis identified 946 metabolites, with 54 showing significant differences, primarily in caffeine metabolism and cysteine and methionine metabolism. Notably, correlations were found between differential gut microbes and metabolites, and between these metabolites and psychiatric clinical symptoms

Conclusion The study reveals significant abnormalities in the intestinal flora and metabolites of SZ patients, correlating with clinical severity. These findings offer new insights into the interactions between the gut microbiome and metabolites, potentially contributing to the understanding of the pathophysiology of schizophrenia

关键词: Schizophrenia, Gut Microbiota, Intestinal Metabolites, 16S rRNA, UPLC-MS

鉴定外周血单核细胞中与氧化应激相关的枢纽基因以诊断双相障碍

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目的 双相情感障碍是一种慢性、复杂的情绪障碍,其特点是躁狂、躁郁和抑郁混合发作,并伴有明显的亚综合征症状,通常出现在主要情绪发作之间。有证据表明,氧化应激被认为在包括双相情感障碍在内的多种精神疾病的发病过程中扮演了重要角色。神经炎症是躁狂症的一个重要病理特征,但其潜在的致病基因和有效的治疗方法仍不清楚。本研究旨在调查躁郁症与氧化应激之间的关联,筛选

参与氧化应激通路的枢纽基因。

方法 从基因表达总库下载了基因芯片数据 GSE5392。根据差异表达分析、加权基因共表达网络分析和蛋白质-蛋白质相互作用网络,然后通过基因本体、京都基因和基因组百科全书和基因组富集分析对与氧化应激相关的枢纽基因进行分析,从而挖掘出 BD 的枢纽基因。我们在 GSE5388 和 GSE5389 数据集上进行了接收者操作特征曲线分析,以评估中枢基因在诊断 BD 方面的准确性。此外,我们还通过 BD 患者和健康对照组的外周血单核细胞鉴定了这些中枢基因。

结果 共有 69 个上调基因和 411 个下调基因被选中进行后续分析。通过 WGCNA 筛选出了 22 个共表达模块,其中一个中枢模块 (sienna3) 与双相障碍的相关性最高。通过差异分析和氧化应激相关基因,共获得 44 个交叉基因。随后, PPI 网络和 WGCNA 分析证实三个中心基因是双相障碍的潜在生物标志物。功能富集通路分析表明,这三个中心基因参与了神经元信号转导、氧化磷酸化和代谢障碍通路。Cytoscape 插件 ClueGo 检测显示,大多数靶标与神经元突触可塑性的调节有关。利用 ROC 曲线分析表明,这三个枢纽基因具有很高的诊断价值。RT-qPCR 结果表明,与 HCs 相比,这三个枢纽基因在双相障碍患者的 PBMCs 中存在显著差异。

结论 总之,我们发现的这三个枢纽基因与 BD 中的氧化应激直接或间接相关。基于有限的初步数据,我们的发现揭示了氧化应激在 BD 中的重要作用。然而,这三个与氧化应激相关的中枢基因参与 BD 发病机制进展的分子机制仍不甚明了,仍需进一步研究。

关键词: 双相障碍, 氧化应激, 生物信息学分析

A Case Report of Atypical Neuroleptic Malignant Syndrome Precipitated by Olanzapine A Delayed Diagnosis

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Background The diagnosis of neuroleptic malignant syndrome (NMS), a life-threatening and idiosyncratic adverse reaction to common antipsychotic medication, is contentious and unclear, with most criteria sets typically used for detecting it in practice failing to correspond to empirical diagnoses

Case Presentation This case presents a case that illustrates the diagnosis and management of NMS. A 48-year-old man with bipolar disorder was frequently admitted to a psychiatric ward with recurrent episodes. He had been stable for 6 months since his last hospitalization, under oxazepine and olanzapine. Oxazepine was discontinued, and olanzapine 20 mg/d was continued for hyponatremia and hypochloremia. Clinical manifestations included confusion, agitation, fever, urinary retention, and elevated creatine kinase. A urinary tract infection was considered because of absent muscle rigidity in the first 5 days. Elevated body temperature, frequent urination, urgency, and pain were also observed. Physicians did not consider NMS as a diagnosis. After the patient developed muscle rigidity and clinical respiratory conditions, he was medically treated. Following a quetiapine monotherapy at week 3 after NMS recovery, which was administered at 25 mg and gradually increased to 600 mg in two oral doses, the patient's mental state improved. He maintained a rational conversation with evidence of neither autonomic instability nor disorientation. He was discharged from the psychiatric ward 3.5 months after admission.

Conclusion NMS is a rare, neurological disorder that can present atypically and requires emergency medical rather than psychiatric care. Clinicians must carefully distinguish between medical and mental illnesses, prioritizing multiple illnesses promptly when identification is difficult.

关键词: olanzapine; neuroleptic malignant syndrome; serotonin syndrome; hyponatremia and hypochloremia; diagnosis

改良电抽搐治疗在住院不同精神疾病中的对照研究

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目的 探讨无抽搐电休克疗法在不同精神疾病中的治疗效果。

方法 整群抽取 2020.6-2022.6 在安徽省精神卫生中心住院的全部住院患者, 其中接受无抽搐电休克治疗患者 2131 例, 未接受无抽搐电休克治疗患者 10095 例。收集患者的一般资料(包括年龄、性别)、入院诊断、住院天数和出院情况, 将接受 MECT 的患者归为研究组, 未接受 MECT 的患者归为对照组, 并对所有患者依据 icd-10 标准分类, 以患者出院情况“好转”作为疗效评价标准, 将“好转”归为治疗有效, 其余归为治疗无效。对其全部资料输入 SPSS.22 进行统计分析, 统计差异有无显著性。

结果 (1)有 2131 位患者接受 MECT, 其中 2029 位患者好转出院, 治疗有效率为 95.21%。(2)①2131 位精神病患者的总治疗有效率为 95.21%; ②抑郁发作 94.74% (其中伴有精神病性症状的重度抑郁发作为 94.49%, 不伴有精神病性症状的重度抑郁发作为 94.85%), 复发性抑郁障碍 95.03% (其中伴有精神病性症状的复发性抑郁障碍为 94.87%, 不伴有精神病性症状的复发性抑郁障碍为 95.07%); 双相抑郁障碍 (其中伴有精神病性症状的双相抑郁障碍为 94.00%, 不伴有精神病性症状的双相抑郁障碍为 95.42%); 双相躁狂发作 91.22% (其中伴有精神病性症状双相躁狂为 96.74%, 不伴有精神病性症状的双相躁狂为 93.75%); 分离-转换障碍: 96.40%, 强迫症: 97.44%, 焦虑症 94.74%; 偏执型精神分裂症: 96.69%; 未分化型精神分裂症: 92.17%。

结论 (1)MECT 有效率为 95.21%。(2)采用 MECT 能减少精神病患者住院时间。

关键词: MECT; 精神疾病; 疗效

双相障碍病人孕期和产后的管理与治疗

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目的 双相障碍是精神科常见的一种重性精神疾病, 具有容易复发的特点。对女性双相病人而言, 由于孕期前三个月用药对胎儿有致畸风险, 产后四

周内体内激素水平剧烈变化以及涉及到哺乳相关问题,均容易导致病情的复发。因此,我们需要对育龄期女性的用药进行管理,平衡孕期未经治疗的双相障碍对胎儿或婴儿的潜在有害影响、孕期药物使用的方法及相关风险。

方法 通过中国知网、万方及 Pubmed 等数据库进行文献检索。

结果 临床医生在为育龄期双相障碍患者开具处方时,应考虑其怀孕的可能性;双相障碍患者有怀孕计划时,也应提前向医生说明。并非所有患有双相障碍的女性都需要在怀孕期间接受维持治疗,但目前仍没有办法提前判断哪些患者可以在怀孕停药情况下不发病。经治疗与未经治疗的双相障碍均可能与不良的母婴结局有关。

在妊娠期,药物使用除了关注对母亲的疗效、耐受性和安全性,必须评估对胎儿或新生儿的负面影响。前三个月使用传统心境稳定剂(锂盐、丙戊酸和卡马西平),与增加的胎儿畸形风险相关。怀孕前,心境稳定剂应缓慢减药至停药;一旦妊娠期使用某种药物治疗的高风险已过,已停止该药物治疗的女性可考虑重新起始药物治疗。心境稳定剂的维持治疗与妊娠期情绪发作较少和较晚复发有关,尤其对于一些有自我伤害史、或既往发作康复延迟、自知力损害、支持欠佳的女性,药物治疗恢复可降低母亲和胎儿的整体风险。在哺乳期,母亲的健康和稳定应放在婴儿喂养方式之前,若药物治疗可行,首选最低有效剂量单药治疗。

结论 治疗计划应该在个案的基础上决定,同时考虑当前和既往的临床信息。密切监测对于及早发现情绪发作的新症状至关重要,及早发现和及时处理临界值以下的症状可能会预防症状的全面发作。

关键词: 双相障碍,孕期,产后,心境稳定剂,复发

素,而伏隔核功能连接可能与之有关。本研究将进一步探讨青少年心境障碍患者自伤行为及自杀意念与伏隔核功能连接异常的相关性,以期早期干预高自杀风险人群。

方法 2020.9~2022.11 南京脑科医院住院治疗的青少年心境障碍患者,共 143 例患者入组。依据是否伴发非自杀性自伤行为将受试者分为自伤组和非自伤组。采用汉密尔顿焦虑量表、汉密尔顿抑郁量表、杨氏躁狂量表、BECK 自杀意念量表,分别评估患者的焦虑、抑郁、躁狂和自杀严重程度。采用基于双侧伏隔核为种子点的功能连接分析方法,探讨自伤组与非自伤组患者的异常脑功能连接。

结果 (1) 自伤组与非自伤组性别存在统计学差异 ($p<0.05$), 女性自伤发生率高于男性。(2) 两组中自杀未遂检出率存在显著统计学差异 ($p<0.001$)。(3) 既往最严重自杀意念及近一周自杀意念评分在两组中存在显著统计学差异 ($p<0.001$)。

(4) 自伤组患者左侧伏隔核与左侧中央后回功能连接较非自伤组增强,左侧伏隔核与双侧枕下回、右侧伏隔核与右侧枕中回功能连接较非自伤组减弱。

(5) 伏隔核与中央后回功能连接的异常与自伤组近一周自杀意念相关 ($p<0.05$)。

结论 青少年心境障碍人群中自伤发生率较高,且女性可能是心境障碍患者自伤的危险因素。自伤是自杀的强力预测因素。自伤组患者的自杀意念较非自伤组高。自伤组左侧伏隔核-左侧中央后回的功能连接较非自伤组增强,左侧伏隔核-双侧枕下回、右侧伏隔核-右侧枕中回功能连接较非自伤组减弱。其中,左侧伏隔核-左侧中央后回功能连接与近一周自杀意念相关。

关键词: 心境障碍,青少年,非自杀性自伤,自杀意念,伏隔核

青少年心境障碍患者自伤行为与自杀意念相关联——伏隔核功能连接异常的研究

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目的 心境障碍是一种常见的精神疾病,青少年心境障碍住院患者近一半有频繁自伤史,门诊患者自伤比率更高。频繁自伤是自杀临床有力预测因

Brain Function Activity Differences and Its Correlation with Cognitive Impairment in Chinese Transgender Women

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Objective Gender dysphoria (GD) is characterized by a discrepancy between the gender assigned at

birth and the gender with which an individual identifies. A previous review study reports GD affects approximately 0.3% of adults worldwide. With a population of 1.4 billion, China may have the largest cohort of individuals with GD. Nevertheless, there remains a dearth of adequate research data within China. Due to the influence of traditional values, societal discrimination, marginalization, and a lack of medical interventions, GD may elevate the risk of poor mental health among some transgender individuals. Meanwhile, many studies have confirmed that the most common psychological distress among individuals with GD are depression and anxiety. Meta-analytical studies have shown that depression and anxiety often lead to cognitive impairments. Previous cognitive theory research suggests that patients with various emotional disorders tend to ruminate on negative information, leading to the hypothesis that the brain's limited cognitive capacity is compromised when processing emotional and cognitive information simultaneously.

The neurophysiological mechanisms of GD underlying remain unclear. Numerous studies suggest that transgender men and transgender women may involve distinct neurophysiological mechanisms, with transgender women potentially associated with more severe psychological distress, rates of suicide, self-harm, and depression. Therefore, finding a deeper understanding of the neurophysiological mechanisms of GD in transgender women, and implementing early diagnosis and intervention, are crucial steps in reducing the occurrence of severe mental disorders and suicide risks among affected individuals. This is first psychoradiology study among individuals with GD in China.

Methods Forty-three individuals with male GD and 44 individuals with cisgender control were recruited from psychiatric outpatients at First Affiliated Hospital of Jinan University, Guangzhou, China. MRI images were obtained on a 3.0T MR scanner (GE Discovery750). The image preprocessing was taken on Data Processing & Analysis of Brain Imaging (DPABI) which is based on Statistical Parametric Mapping (SPM). The demographic data between the GD and cisgender control groups were compared by using independent-sample t-test with SPSS17.0 software. To examine the

brain activity differences between two groups, the two-sample t-test was performed in a voxel-by-voxel manner within the grey mask. Age, education level, and the mean frame-wise displacement were included as nuisance covariates in the group comparisons. The Spearman correlation coefficients between ALFF, fALFF, dALFF, dfALFF, and FC values and clinical variables (Chinese Version of the Gender Identity/Gender Dysphoria Questionnaire for Adolescents and Adults and MCCB scores) in the GD

Results Individuals with GD showed increased ALFF values in the left cerebellar posterior lobe and decreased dfALFF values in the right hippocampus, compared to the cisgender control group. Increased dALFF values were observed in the left cerebellar posterior lobe among the individuals with GD. No significant differences were observed in fALFF. Using seeds from regions with differences in ALFF, static FC (sFC) values between the left cerebellar posterior lobe and the right precuneus were decreased among individuals with GD compared to the cisgender control group. Similarly, using seeds from regions with differences in dALFF, sFC values between the left cerebellar posterior lobe and the right cerebellar anterior lobe were increased among individuals with GD compared to the cisgender control group. No significant differences were observed in sFC analyses based on seeds from regions with differences in dfALFF. No significant differences were observed in dynamic FC (dFC). Individuals with GD showed significantly lower than the cisgender control group in verbal learning ($P=0.009$), social cognition ($P=0.000$), information processing speed ($P=0.003$), attention vigilance ($P=0.044$), and composite score ($P=0.000$) across cognitive domains, and total MCCB score, compared to the cisgender control group. Among individuals with GD, dfALFF values in the right hippocampus were significantly negatively correlated with subjective indicators of gender dysphoria ($r=-0.430$, $P=0.009$), and values between the left cerebellum lobule IX -right cerebellum lobules IV and V were significantly negatively correlated with social cognition ($r=-0.459$, $P=0.007$).

Conclusion Our findings that GD individuals show abnormal brain activity and impaired cognitive function

关键词: Gender dysphoria, cognitive

局部一致性

双相I型障碍三种临床相 DMN 和 SN 功能异常的研究

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目的 探究双相I型障碍三种临床相在标准低频、慢波 4 和慢波 5 三个频段中默认网络(default mode network, DMN)、凸显网络(salience network, SN)中所有脑区局部一致性(regional homogeneity, ReHo)和低频振荡振幅(amplitude of low-frequency fluctuations, ALFF)活动情况及 DMN/SN 整体功能连接(functional connectivity, FC)强度比率变化。

方法 于 2019 年 7 月至 2021 年 12 月纳入中南大学湘雅二医院精神卫生研究所确诊为双相I型障碍的患者 107 例(双相障碍组)及与之年龄、性别和教育年限相匹配的健康对照者 46 例(对照组)。根据杨氏躁狂评定量表(Young Mania Rating Scale, YMRS)及 17 项汉密尔顿抑郁量表(Hamilton Depression Rating Scale, HAMD17)评分将双相障碍患者分为双相躁狂组、双相抑郁组、双相缓解组。采集所有受试者静息态功能磁共振成像数据,划分 DMN 和 SN 内感兴趣区域模板,计算 DMN 和 SN 内所有脑区的 ALFF 及 ReHo 值,计算 DMN 和 SN 网络内脑活动整体相关性。对组间差异有统计学意义的 ALFF/ReHo 值以及整体相关性指标与临床量表总分及各因子分进行相关分析。

结果 躁狂相在慢波 5 频段上 DMN/SN 整体 FC 强度比率均显著降低(FDR 校正, $P < 0.05$),且与杨氏躁狂量表心境高涨因子评分($r = -0.565$, $P = 0.001$)、语言速度与数量因子评分($r = -0.364$, $P = 0.048$)间呈显著负相关。

结论 躁狂发作患者内在网络活动平衡模式发生变化以 DMN 损坏为主,从而在躁狂发作时患者表现出注意力不集中、意念飘忽及随境转移等行为/现象学表现。

关键词: 双相I型障碍,功能连接,低频振荡振幅,

The Impact of Systematic Antidepressant Treatments in Early Stage on Sleep and Impulsivity in Bipolar Euthymic Patients: A Cross-Sectional Study

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Objective Due to the misdiagnosis, bipolar patients who had a depressive episode as initial onset usually received systematic antidepressant treatments in early stage, and constantly suffered from sleep disturbances and elevated impulsivity even during euthymic state. The aim of this study is to assess the effect of systematic antidepressant treatments in early stage on the sleep and impulsivity of bipolar euthymic patients, and further explore the potential mediation role of sleep in the relationship between early antidepressant uses and impulsivity

Methods A total of 124 bipolar euthymic patients were enrolled. According to the early usage of antidepressants, patients were divided into AT group (systematic antidepressant treatment group) and NT group (no systematic antidepressant treatment group). Montgomery-Asberg Depression Rating Scale (MADRS) and Young Mania Rating Scale (YMRS) were used to determine the euthymic status. Sleep quality and impulsivity were assessed by Pittsburgh Sleep Quality Index (PSQI) and Barratt Impulsivity Scale Questionnaire version 11-A (BIS-11A) respectively. The t-test, Chi-square test, and Mann-Whitney U test were engaged in statistical analyses. Mediation analysis was examined by bootstrapping

Results There was no statistically significant difference between two groups in terms of demographic and clinical characteristics. The participants of AT group had poorer sleep quality and higher level of impulsivity than NT group. Sleep quality, full impulsivity, attention impulsivity and non-planning impulsivity were statistically different. No statistical difference was

found in motor impulsivity between two groups. Sleeping quality was significantly positively correlated with impulsivity. The systematic treatment with antidepressants in early stage had noticeably negative influence on sleep and impulsivity. The effect of antidepressant uses on full impulsivity and non-planning impulsivity was mediated by sleeping quality

Conclusion This study suggested a correlation of antidepressant uses in early stage, sleep quality and impulsivity of bipolar euthymic patients, which highlights the significance of early diagnosis of bipolar disorder and appropriate prescription of antidepressants. Furthermore, improvement of sleep quality would be effective to decrease the risk of impulsive behaviors

关键词: bipolar disorder, euthymic state, antidepressant treatments, sleep quality, impulsivity

The Effect of Systematic Antidepressant Treatments on Positive/Negative Affect and Impulsivity in Bipolar Euthymic Patients: A Cross-Sectional Study

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Objective There is a significant delay in the diagnosis of bipolar disorder (BD), leading to widespread use of antidepressant medications in the early stage. Furthermore, the presence of emotional instability and increased impulsivity, even during the euthymic phase of bipolar disorder, is common. The objective of this study was to investigate the effects of early systematic antidepressant treatments on positive/negative affect and impulsivity in bipolar euthymic patients, and to explore the potential risk factors involved in affect and impulsivity in bipolar disorder

Methods A total of 124 Han Chinese patients with BD were included in the study. The participants were divided into two groups: the antidepressant treatment (AT) group and the non-antidepressant treatment (NT) group. Demographic information, characteristics, and use of mood stabilizers were recorded. The Young

Mania Rating Scale (YMRS) and Montgomery-Asberg Depression Rating Scale (MADRS) were used to assess affect and impulsivity. Statistical analyses were performed using two-tailed comparisons

Results The study found that there was no significant difference in YMRS and MADRS scores between the AT and NT groups, indicating similar levels of affect and impulsivity. The distributions of age, sex, years of delayed diagnosis, and use of mood stabilizers were also not significantly different between the two groups. However, the AT group showed significantly higher levels of negative affect, attentional impulsivity, unplanned impulsivity, and overall impulsivity compared to the NT group. There was no significant difference in positive affect and motor impulsivity between the two groups. Negative affect was found to be negatively correlated with motor impulsivity, suggesting a potential relationship between these factors

Conclusion The findings of this study suggest that early systematic antidepressant treatments may have an impact on negative affect and impulsivity in bipolar euthymic patients. The study also highlights the significant delay in the diagnosis of bipolar disorder, leading to the widespread use of antidepressant medications in the early stages. Furthermore, the study emphasizes the presence of emotional instability and increased impulsivity even during the euthymic phase of bipolar disorder. Caution should be exercised in prescribing antidepressant medications to these patients, and personalized treatment strategies based on individual characteristics are important for optimal management of affect and impulsivity in bipolar disorder

关键词: bipolar disorder; euthymic state; impulsivity; positive/negative affect

双相障碍患者童年创伤潜类别及其与心理弹性、功能结局的关系

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目的 探究双相障碍患者童年创伤的潜类别及

与心理弹性和功能结局(心理社会功能和生活质量)的关系。

方法 本研究为横断面设计。便利选取 2019 年 9 月至 2021 年 4 月广州市某两所三甲医院精神科病房和门诊的部分或完全缓解的 272 例双相障碍患者为调查对象,采用一般资料调查表、儿童期创伤问卷、心理弹性量表、功能评估简表、12 项健康相关生命质量简表、汉密尔顿抑郁量表-17 项和杨氏躁狂量表调查其一般资料、童年创伤、心理弹性、心理社会功能、生活质量、抑郁和躁狂症状,采用潜类别分析、协方差分析和中介分析处理数据。

结果 双相障碍患者的童年创伤可分为低创伤组(34.56%)、高忽视组(17.65%)和高创伤组(47.79%) 3 个类别。年龄、婚姻状况、首次发病年龄、抑郁和躁狂症状在各类别上存在差异($P < 0.05$),作为协方差分析和中介分析中的协变量予以控制。协方差分析结果显示,控制协变量后,各潜类别心理弹性、心理社会功能和生活质量存在差异;LSD 检验结果显示,低创伤组在心理弹性总分和各维度得分高于高忽视组;高创伤组患者的心理社会功能和生活质量的整体和分维度表现(除职业功能和躯体健康维度外)均差于低创伤组,高忽视组患者仅在心理社会功能的自主生活维度表现差于低创伤组。中介分析结果显示,以低创伤组为参照,心理弹性在高忽视组和高创伤组与心理社会功能间的中介效应分别为 0.14(95%CI: 0.03~0.26)和 0.05(95%CI: -0.02~0.13),与生活质量间的中介效应分别为-0.15(95%CI: -0.27~-0.04)和-0.06(95%CI: -0.14~-0.02)。

结论 双相障碍患者的童年创伤存在 3 个潜类别,且童年创伤类别与患者的心理弹性和功能结局相关。心理弹性在不同童年创伤类别与功能结局中的中介效应不一致,应依据患者的童年创伤经历进行针对性干预。

关键词: 双相障碍,童年创伤,功能结局,心理弹性,潜类别分析,中介分析

药物治疗后双相情感障碍患者的尿酸水平差异与关联性:一项系统回顾与荟萃分析

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目的 双相情感障碍(Bipolar disorder, BD)是一种常见的心境障碍,多见于青春期和成年早期之间,以躁狂、抑郁和混合性发作为特征,终生患病率高达 5.4%。有研究表明,尿酸(uric acid, UA)与双相情感障碍的发生发展密切相关。尿酸作为非酶促抗氧化系统之一,可能通过氧化应激等机制参与双相情感障碍的发病过程。BD 患者 UA 水平与健康人群有差异,且 BD 患者的 UA 水平可能作为 BD 的状态标志。本研究旨在探索经药物治疗后 BD 患者的 UA 水平与健康对照组及抑郁症患者之间的差异及关联性,以及经治疗后 UA 水平在 BD 的不同阶段是否有区别。

方法 本研究根据 PRISMA 2020 指南进行,已在 PROSPERO 注册(ID:CRD42023371521)。本研究系统检索了 2024 年 5 月 31 日之前在 PubMed、Web of Science、CNKI 数据库中关于 BD 患者 UA 水平的文献。两位研究者根据纳排标准对文献进行筛选,采用不同研究的标准均值差异(SMDs)和相应的 95%可信区间(CI)估计实验组与对照组之间的相关性。

结果 这项 meta 分析共纳入 15 项研究,包括 1126 名双相情感障碍患者和 3207 名健康对照。我们首先发现,经药物治疗后 BD 患者的 UA 水平显著高于健康对照组。经药物治疗组 BD 患者与未经药物治疗组 BD 患者的 UA 水平没有显著差异。用药后 BD 患者 UA 水平明显高于抑郁症患者。经药物治疗后的 BD 患者与处于抑郁期的受试者相比,躁狂或混合躁狂发作的受试者 UA 水平显著升高。

结论 我们的荟萃分析显示,经药物治疗后的 BD 患者的 UA 水平高于健康对照组。因此,我们的研究结果表明即使药物治疗后 UA 水平仍可能代表 BD 特征标记的假设,UA 水平可能作为 BD 的诊断依据之一。UA 不仅对躁狂症状,还可能对嘌呤能调节剂的作用也有影响,而且对 BD 的维持治疗也有影响。同样,我们在亚组分析中发现,躁狂发作时血清尿酸水平显著高于抑郁发作时。这表明,高血清尿酸水平对躁狂发作的影响似乎是有选择性的。该结果进一步支持 UA 水平与躁狂期相关的假设,因为我们发现了药物治疗后并不影响这一结果。然而,还需要进一步的研究探索尿酸代表躁狂/混合发作的状态标记,而不是双极性的特征标记。

关键词: 双相情感障碍;尿酸;躁狂发作

抑郁症多基因风险评分在抑郁症发生中的研究进展

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目的 抑郁症是一种造成巨大社会负担的心理疾病，对于该疾病的识别率仍较低。抑郁症的发生存在一定的遗传度，且受到多个微效基因的影响，可运用抑郁症多基因风险评分（polygenic risk score for major depressive disorder, PRS-MDD）这一遗传指标发现抑郁高风险人群。现归纳总结 PRS-MDD 在抑郁症发生中的研究现状，旨在明确 PRS-MDD 对抑郁症遗传变异的捕获水平及基因与环境因素的相互作用（G×E）与抑郁症发生的关系，为后续研究提供方向。

方法 以“depression + polygenic”作为检索词筛选了 PubMed 和 Web of Science 数据库中 2019 年 1 月至 2024 年 1 月与抑郁症和多基因风险评分相关的文献，以“抑郁+多基因风险评分”作为检索词筛选了知网数据库中的 2019 年 1 月至 2024 年 1 月的相关文献，对纳入文献中 PRS-MDD 对抑郁症发生风险的解释水平、基因环境相互作用对抑郁发生的影响水平进行了对比分析和归纳总结。

结果 在纳入的 24 项研究中，关于儿童青少年时期的抑郁风险研究有 11 项，成年时期的有 13 项，这些研究探索了 PRS-MDD 对抑郁症发生风险的解释水平，以及创伤经历、社会支持、生活环境等环境因素与遗传因素的相互作用与抑郁症发生的关系。结果提示 PRS-MDD 是抑郁症发生的重要风险因素，且研究中 PRS-MDD 对抑郁症发生风险解释水平基本一致，文献提示遗传环境相互作用影响抑郁症发生风险。

结论 PRS-MDD 与抑郁症发生风险相关，对于抑郁症发生风险的解释水平高于其他疾病表型的 PRS。此外，基因环境相互作用对抑郁症发生的影响探索不够深入，仍需扩大样本量、构建更精确的模型以探索各因素的效应大小。

关键词：多基因风险评分,抑郁症,基因环境相互作用

光照治疗双相障碍的疗效及机制研究进展

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一、前言

双相障碍（BD）是一组复杂而严重的慢性疾病，与大约 10-20 年的潜在寿命损失有关，是导致年轻人认知功能障碍、自杀、及死亡率升高的主要原因之一。BD 具有高遗传性，BD 发病机制尚不清楚，涉及机制包括神经元-胶质可塑性、单胺能信号传导、炎症稳态、细胞代谢途径和线粒体功能紊乱及社会心理因素等。

二、双相障碍的节律性特征

BD 患者表现为情绪、行为、睡眠、活力和食欲等生理活动异常，这些过程不同程度地受到生物节律调控。BD 患者常表现为睡眠-觉醒周期异常，这与易怒、冒更多风险等表现相关。研究显示 BD 的易感性、复发性、发病年龄快速循环型等特征与生物节律基因如 CLOCK、PER3、GSK3b、Per2 及 Cry1 等异常有关。BD 患者常存在皮质醇、褪黑素、5-羟色胺能等多种生物节律相关神经递质分泌异常。其生物节律相关脑区也存在功能连接异常，如视交叉上核与室旁核、下丘脑背内侧核的功能连接改变。

三、双相障碍节律性与光照节律的生物学联系

BD 患者的情绪摆荡同样呈现显著的节律特性。研究发现光照会通过视觉等器官传达信息至大脑中的视交叉上核（SCN），经由 SCN 对光照信息进行加工后，通过调节杏仁核分泌褪黑素等方式调控人类的昼夜节律、进食与代谢节律、神经环路震荡等。在微观层面，这个过程被一系列和节律相关的 BMAL1、CLOCK 等基因所调控，遗传学研究发现 CLOCK 基因与 BD 的相关性。这些基因编码了钙离子、钾离子通道蛋白等，是调控人类节律行为的重要离子通道蛋白。这些基因在 BD 人群发生突变，提示可能是这些离子通道蛋白的编码基因功能异常，导致神经元膜电位整流特性发生改变，进而导致情绪异常摆荡。

四、光照治疗双相障碍的疗效及临床应用

近年来的循证证据为光照治疗（LT）BD 患者的疗效和安全性提供了较有力的证据。LT 对情绪的影响主要取决于光照强度、光照波长、光照持续时间、

光照时间段以及个体昼夜节律，而光照色温对于情绪的影响目前仍缺乏有力证据。

五、光照治疗双相障碍的生物学机制

LT改善情绪的生物学机制尚不完全清楚。目前的主要假说集中在节律相关脑神经通路以及节律相关基因领域。

六、总结与展望

光照治疗是一种安全有效的干预双相障碍的物理疗法，其治疗机制尚不完全清楚，目前认为可能是通过调控节律的相关脑区和基因来产生作用。光照治疗双相障碍的具体治疗方案目前在实际操作过程中并不统一，疗效的一致性以及最大获益方案还需要进一步探究。光照治疗与双相障碍的生物学机制紧密关联，因此其不仅是一种治疗手段，更可以通过研究其治疗靶点进一步探索双相障碍情绪摆荡的发生机制。

关键词：双相障碍；光照治疗；生物学机制

障碍易感性有关。除此之外，其他时钟基因也会参与双相障碍疾病的发生。有研究发现不仅单个时钟基因遗传与疾病存在相关性，基因-基因相互作用在双相障碍中起着至关重要的作用。时钟基因参与双相障碍神经递质的调节，敲除时钟基因 $REV-ERB\alpha$ 的小鼠，前额皮质中的 5-HT 水平显著降低。 $Clock\Delta 19$ 小鼠可以提高中脑腹侧盖区多巴胺神经元兴奋性。有体外研究发现时钟基因 $ARNTL$ 、 $NPAS2$ 和 $PER2$ 可以调控 $MAOA$ 启动子的转录。同时， $PER2$ 蛋白表达水平及成纤维细胞周期预测锂盐治疗效果。

结论 进一步研究时钟基因其他的机制，可以从环境-基因角度，构建相互作用网络，提高对疾病诊断及药物疗效预测的准确性，并且与临床特征之间建立模型，更好指导临床治疗。

关键词：时钟基因；双相障碍；综述

时钟基因在双相障碍中的应用进展

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目的 双相情感障碍患者在不同发作时相均存在昼夜节律紊乱，探讨时钟基因突变及表达作为昼夜节律的内源性病理因素与疾病发生发展及药物疗效之间的关系。

方法 在 PubMed 搜索关键词“bipolar disorder”和“clock gene”，符合综述范围纳入。在中国知网搜索“双相情感障碍”和“时钟基因”符合综述范围纳入。

结果 既往的动物研究发现， $Clock\Delta 19$ 突变小鼠会出现躁狂样症状， $REV-ERB\alpha$ 基因缺失的小鼠也会出现躁狂样行为，而 $Cry1$ 敲除小鼠中可以观察到抑郁和躁狂样症状共存，类似于 BD 患者所谓的混合状态。在时钟基因的“转录-翻译-反馈”环中， $CLOCK$ 与双相障碍存在密切相关性，其中携带 $CLOCK$ rs10462028 等位基因的人群双相障碍易感性更高，携带 $CLOCK$ rs1801260C 等位基因的女性双相障碍患者疾病发作次数和终生患病率更高，携带 $CLOCK3111C/C$ 纯合子基因型的复发率是其他基因型的两倍。时钟基因 $ARNTL$ 的 SNP 变异与双相

解郁安神汤联合碳酸锂对双相情感障碍躁狂发作患者认知功能及生活质量的影响

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目的 观察解郁安神汤联合碳酸锂对双相情感障碍躁狂发作患者认知功能及生活质量的影响。

方法 选取 94 例双相情感障碍躁狂发作患者，按随机数字表法分为观察组和对照组各 47 例。对照组使用碳酸锂治疗，观察组使用解郁安神汤联合碳酸锂治疗，均治疗 8 周。比较 2 组治疗前后贝克-拉范森躁狂量表 (BRMS) 评分、临床总体印象疾病严重程度量表 (CGI-s-BP) 评分、生活质量综合评定问卷 (GQOLI-74) 评分及认知功能—重复性成套神经心理状态测验 (RBANS) 评分，并比较 2 组临床疗效。

结果 治疗前，2 组 BRMS、CGI-s-BP 评分比较，差异均无统计学意义 ($P>0.05$)。治疗后，2 组 BRMS、CGI-s-BP 评分均降低 ($P<0.05$)，且观察组低于对照组 ($P<0.05$)。观察组总有效率 87.23%，高于对照组 65.96% ($P<0.05$)。治疗前，2 组 GQOLI-74 各项评分比较，差异无统计学意义 ($P>0.05$)。治疗后，2 组 GQOLI-74 各项评分均升高 ($P<0.05$)，且观察组高于对照组 ($P<0.05$)。治疗前，2 组各项 RBANS 评分比较，差异无统计学意义 ($P>0.05$)；

治疗后, 2 组各项 RBANS 评分均升高 ($P < 0.05$), 且观察组高于对照组 ($P < 0.05$)。治疗前, 2 组各项 RBANS 评分比较, 差异无统计学意义 ($P > 0.05$); 治疗后, 2 组各项 RBANS 评分均升高 ($P < 0.05$), 且观察组高于对照组 ($P < 0.05$)。

结论 解郁安神汤联合碳酸锂治疗双相情感障碍躁狂发作的效果优于单纯碳酸锂治疗, 且能有效改善患者认知功能和生活质量。

关键词: 双相情感障碍; 躁狂; 解郁安神汤; 碳酸锂; 认知功能

基于 fMRI 脑熵的双相情感障碍患者识别研究

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目的 大脑熵是一种评价大脑复杂性和规律性的指标, 在 fMRI 中的应用有一定的意义, 提供了一个认识大脑和大脑疾病的新途径。双相情感障碍 (Bipolar Disorder, BD) 具有高患病率、低识别率的特点。本研究旨在利用静息态功能核磁共振脑成像 (rs-fMRI) 技术探究不同脑熵识别双相情感障碍的能力。

方法 本研究基于 48 例 BD 患者和 48 例健康对照的 rs-fMRI 数据计算了置换熵、样本熵、模糊熵。分类模型包括支持向量机 (Support vector machine, SVM)、K-近邻算法 (k-nearest neighbor classification)、逻辑回归 (Logic Regression, LR)、决策树 (Decision Tree, DT)、线性判别 (Linear Discrimination Analysis, LDA) 和袋装树 (Bagging Tree, BT)。通过网格搜索和十折交叉验证 (分层采样) 对每个分类器进行超参数寻优。评价指标有准确率 (ACC), 敏感性 (SEN), 和特异度 (SPE)。

结果 置换熵在六类分类器上均取得最高分类准确率, 且在 KNN 模型中取得最高分类准确率 77%。可以看出, 置换熵对 BD 患者的识别优于样本熵和模糊熵。

结论 样本熵作为已有研究中最常用的脑熵计算方式在识别 BD 任务上并非最优特征。这意味未来研究需要针对脑熵的计算方式开展更全面更深入

的探索, 优化及创新更对情感障碍更敏感的脑熵创建方法及其相关参数。该研究为脑熵在情感性精神障碍脑健康量化评估和进一步提出更有效的脑熵提供了理论依据。

关键词: 大脑熵; 双相情感障碍; 置换熵; 分类; 核磁共振脑成像

安神通窍汤联合碳酸锂对双相情感障碍躁狂发作患者的临床研究

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目的 观察安神通窍汤联合碳酸锂治疗双相情感障碍躁狂发作患者的临床疗效。

方法 选择 100 例双相情感障碍躁狂发作患者作为研究对象, 按照随机数字表法将以上患者均分为常规治疗组和安神通窍汤组各 50 例。常规治疗组单纯采用碳酸锂治疗, 安神通窍组在常规治疗组基础上联合安神通窍汤治疗。比较 2 组临床效果和不良反应, 比较 2 组治疗前后血清炎症因子水平、生活质量以及躁狂程度变化。

结果 安神通窍组总有效率 96.00%, 高于常规治疗组 84.00% ($P < 0.05$)。治疗前, 2 组血清脑源性神经营养因子 (BDNF)、白细胞介素-1 β (IL-1 β) 及肿瘤坏死因子- α (TNF- α) - α 水平比较, 差异无统计学意义 ($P > 0.05$); 治疗后, 2 组血清 BDNF 水平均升高 ($P < 0.05$), IL-1 β 、TNF- α 水平均降低 ($P < 0.05$), 且安神通窍组血清 BDNF 水平高于常规治疗组 ($P < 0.05$), IL-1 β 、TNF- α 水平低于常规治疗组 ($P < 0.05$)。治疗前, 2 组霍普金斯词语学习测验 (HVLt-R) 评分、持续操作测验量表 (CPT) 评分比较, 差异无统计学意义 ($P > 0.05$); 治疗后, 2 组 HVLt-R 评分、CPT 评分均升高 ($P < 0.05$), 且安神通窍组高于常规治疗组 ($P < 0.05$)。治疗前, 2 组简明健康状况量表 (SF-36) 评分、贝克范森躁狂自评量表 (BRMS) 评分比较, 差异无统计学意义 ($P > 0.05$); 治疗后, 2 组 SF-36 评分升高 ($P < 0.05$), BRMS 评分下降 ($P < 0.05$), 且安神通窍组 SF-36 评分高于常规治疗组 ($P < 0.05$), BRMS 评分低于常规治疗组 ($P < 0.05$)。2 组不良反应发生率比较, 差异无统计学意义 ($P > 0.05$)。

结论 安神通窍汤联合碳酸锂治疗双相情感障碍躁狂发作,能提高临床疗效及患者的生活质量、注意力及学习能力,降低躁狂程度,其作用机制可能与调节血清神经营养因子水平和炎症反应相关。

关键词: 双相情感障碍;躁狂发作;安神通窍汤;碳酸锂;炎症因子;生活质量

伴与不伴短暂轻躁狂发作史的抑郁障碍患者抗抑郁药疗效对照研究

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目的 比较抗抑郁药物治疗伴与不伴短暂轻躁狂发作史的抑郁障碍患者的疗效及转躁情况。

方法 选取2022年10月至2023年10月在湖州市第三人民医院心身科门诊就诊的79例抑郁发作患者为研究对象,其中单纯性抑郁障碍患者40例,伴短暂轻躁狂发作史的抑郁障碍患者39例,给予抗抑郁药物舍曲林治疗。评估2组患者基线时汉密尔顿抑郁量表(HAMD-24)、杨氏躁狂量表(YMRS)、心境障碍问卷(MDQ)、32项轻躁狂症状清单(32-item Hypomania Checklist, HCL-32)等量表评分,以及治疗第1、2、4、8周末HAMD-24及YMRS。

结果 8周随访中,抑郁障碍组与短暂轻躁狂组HAMD-24总体呈下降趋势且差异无统计学意义($P>0.05$),在第8周末两者具有统计学差异($P<0.05$),而两者YMRS总体存在统计学差异($P<0.05$),各测量时间点均具统计学差异($P<0.05$)。抑郁障碍组及短暂轻躁狂组的累计治疗有效率无明显差异($P>0.05$),累计临床治愈率具差异($P<0.05$)。两组间药物转躁方面无明显差异($P>0.05$)。

结论 经8周抗抑郁药舍曲林治疗后,伴与不伴短暂轻躁狂发作史的抑郁障碍患者的抑郁症状均有减轻,但不伴短暂轻躁狂发作史的单纯抑郁障碍患者的治疗效果更好,两组均未发现明显的转躁情况。

关键词: 抑郁障碍;短暂轻躁狂;抗抑郁药物;治疗效果

AUTS2 基因甲基化及 mRNA 表达水平对青少年双相抑郁患者自杀意念的影响

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目的 探讨青少年双相抑郁患者 AUTS2 基因甲基化水平与 mRNA 表达水平及其对自杀意念的影响。

方法 选取2020年12月至2023年12月于新疆维吾尔自治区人民医院临床心理科住院的73例青少年双相抑郁患者为研究对象。采用自杀意念自评量表(SIOSS)评估患者的自杀意念。采用Methprimer软件对AUTS2基因启动子区进行甲基化岛预测和甲基化引物设计,将提取好的DNA经亚硫酸盐转化后进行PCR扩增和焦磷酸盐测序,确定甲基化的CpG位点和甲基化率;同时提取RNA,qRT-PCR实验进行基因表达水平检测。比较两组患者AUTS2基因不同位点甲基化水平的差异及两组间mRNA表达水平的差异;采用Spearman相关分析AUTS2基因甲基化水平、mRNA表达水平与自杀意念的相关性;采用Bootstarp方法验证mRNA表达水平在基因甲基化水平与自杀意念间的中介作用。

结果 基因甲基化检测结果显示,有自杀意念组患者的CpG1、CpG10及CpG14.15.16位点AUTS2基因甲基化水平高于无自杀意念组,差异有统计学意义($P<0.05$);两组患者AUTS2基因其余位点的基因甲基化水平比较,差异无统计学意义($P>0.05$)。基因表达结果显示,有自杀意念组患者的mRNA表达水平高于无自杀意念组,差异有统计学意义($P<0.05$)。相关性分析结果显示,AUTS2基因CpG14.15.16位点甲基化水平与mRNA表达水平($rs=0.255, P<0.05$)以及SIOSS评分($rs=0.255, P<0.05$)均呈正相关,mRNA表达水平与SIOSS评分($rs=0.342, P<0.05$)呈正相关;AUTS2基因CpG1、CpG10位点的甲基化水平与SIOSS评分均不相关($P>0.05$)。中介分析结果显示,通过Bootstarp方法对mRNA表达水平在模型中的中介作用进行检验,可以看出,间接效应值为0.093,95%置信区间[0.005, 0.213]不包含0,因此说明间接效应成立,所以mRNA表达水平在模型中起到了显著的中介作用,而直接效应检验的结果置信区间包含0,说明直接效应不成立。根据效应占比计算结果可以看出,mRNA表达水平的效应占比为30%。

结论 AUTS2 基因 CpG14.15.16 位点甲基化水平与青少年双相抑郁患者的自杀意念有关, 且通过 mRNA 表达水平的中介作用影响患者的自杀意念。

关键词: 青少年双相抑郁; 自杀意念; AUTS2 基因; DNA 甲基化; mRNA 表达水平

Discovery of MiRNA Targets for Different Antidepressants and The Mechanism of Action Associated with Brain-derived Neurotrophic Factor (BDNF) - Study Protocol for A Randomized Trial

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Objective Depression is a global public health problem. Brain-derived neurotrophic factor (BDNF) is considered to be one of the potential mechanisms of depression, and is regulated by epigenetic genes such as peripheral blood microRNA (miRNA). We aim to searching genetic loci and genes that significantly associated with the effectiveness and side effects of different antidepressants from the perspective of miRNA expression profiles, and conducting corresponding functional verification in the patients with depression

Methods We will include 100 patients aged 18-65, with HAMD-17 \geq 17, meeting the DSM-5 criteria for current depression episode. After enrollment, escitalopram or venlafaxine were randomly selected for treat-

ment. Drug dose titration range are 10-20mg/d for escitalopram and 75-225mg/d for venlafaxine. When participants do not respond to a full dose of either antidepressant for 4 weeks (defined as HAMD-17 reduction rate <30%), they will be treated with another antidepressant. Otherwise, they continue their initial therapy. For all participants, clinical assessment is performed before enrollment, at 4, 8, and 12 weeks during treatment, including demographic characteristic, HAMD-17, OEQ, HAMA, BPRS, WCST, SCWT, PDQ-D, DSSS, GAS, SERS, etc. 15ml of peripheral blood was collected for blood test, including CRP, BDNF, NRG1, PKC and miRNA such as miR-16, miR-30, miR-34, miR-128, miR-132, miR-134, miR-182, miR-183, miR-185, miR-212, miR-1202. The primary outcome is defined as the relevance of HAMD-17 reduction rate and miRNA changes after 4 and 8 weeks of antidepressant therapy. The secondary outcomes are defined as the correlations between the changes of other clinical assessments and some of miRNAs or BDNF

Results We hypothesize that HAMD-17 reduction rate is significantly associated with miRNA changes after 4 and 8 weeks of treatment. The correlations between the changes of other clinical assessments and other biomarkers such as some of miRNAs or BDNF are found

Conclusion We could conclude that one or more miRNAs are associated with BDNF pathway and could be potential biomarkers for predicting efficacy in antidepressant therapy

关键词: Depression, antidepressants, miRNA, brain-derived neurotrophic factor (BDNF)

The Mediating Role of Inflammatory Factors in Anhedonia and Fatigue in Major Depressive Disorder: An Observational Study

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Objective Anhedonia and fatigue are core clini-

cal symptoms in major depressive disorder (MDD). Immune dysregulation is thought to be their underlying mechanism. This study investigated whether immune factors could be used as biomarkers of anhedonia and fatigue in patients with MDD. In addition, the mediating role of inflammatory cytokines in the relationship between fatigue and anhedonia were examined

Methods Patients with MDD were recruited. HAMD-17 was used to examine depression symptoms. Anhedonia symptoms were assessed using the SHAPS system and fatigue was assessed with the MFI-20 scale. Peripheral blood samples at baseline were tested by Luminex assays, measuring the plasma amounts of 48 cytokines

Results Fifty patients were included in the study. Plasma IFN- γ , IL-1 β , IP-10, IL-18, and TNF- α protein concentrations were associated with anhedonia($P<0.05$). Additionally, plasma IFN- γ , IL-1 β , IP-10, TNF- α , and TNF- β protein concentrations were associated with fatigue($P<0.05$). Furthermore, the mediation analyses indicated that the total effect of fatigue on anhedonia was significant ($B = 0.450$, 95 % CI: 0.240, 0.659) and the relationship between fatigue and anhedonia in patients with MDD is partially mediated by inflammatory markers IFN- γ , TNF- α and IL-1 β

Conclusion This work suggests that IFN- γ , IL-1 β and TNF- α could function as potential mediators in the relationship between fatigue and anhedonia

关键词: major depressive disorder, anhedonia, fatigue, inflammation, mediation model

基于孟德尔随机化方法筛选双相障碍发病因果关系的神经发育相关蛋白

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目的 双相情感障碍是一种复杂疾病,发病机制至今未定论。神经发育假说是目前研究热点,但是有关双相情感障碍的神经发育证据有限。本研究基于孟德尔随机化分析方法探究哪些神经发育相关蛋白与双相情感障碍存在因果关系,为双相情感障

碍的神经发育假说提供进一步的潜在证据。

方法 本研究首先进行正向 MR 分析探索多种神经发育相关蛋白 ITIH1,ITIH2,ITIH3,ITIH4,ITIH5,NFASC, PLXNB2, QSOX2, SLPI,SVEP1 对双相情感障碍的因果影响,随后采用反向 MR 分析双相情感障碍对神经发育相关蛋白的潜在反向因果影响,全面评估神经发育相关蛋白与双相障碍之间的因果联系。利用大规模全基因组关联研究,分别选取单核苷酸多态性位点作为遗传工具变量,设置参数消除连锁不平衡确保筛选出的 SNP 之间相互独立。在 PhenoScannerV2 数据库中搜索每个 SNP,手动剔除了与混杂因素相关的 SNP。随后采用逆方差加权法作为该研究评估因果效应的主要分析方法,MR-Egger 法、加权中位数法、加权模型、简单模型等作为补充方法,并通过 Cochran's Q,MR-Egger 进行敏感性分析检测异质性和水平多效性,对结果的稳定性和准确性进行评价。最后运用 MR-Egger 截距检验和 MR-PRESSO 全球检验评估结果的多效性和异常值。

结果 一. 正向 MR 分析结果

本研究结果显示 ITIH1($OR=1.06,P=0.013$),ITIH3($OR=0.91,P=3.22e-03$),ITIH5 ($OR=1.08, P=0.04$),NFASC ($OR=0.96, P=0.042$)和 SLPI($OR=0.77, P=0.003$)与双相情感障碍存在因果关系。ITIH2,ITIH4,QSOX2,SVEP1,PLXNB2 与双相情感障碍之间不存在因果关联。

Cochran's Q 检验,MR-Egger 回归和 MR-PRESSO 分析结果显示 NFASC,ITIH5 的 SNP 间未发现异质性和水平多效性,提示 NFASC 和 ITIH5 与 BD 的因果关系可靠。ITIH3 和 SLPI 的 SNP 间有异质性,但没有水平多效性,ITIH3 和 SLPI 与 BD 之间的因果关系需要更多数据验证。ITIH1 的 SNP 间存在异质性和水平多效性,提示 ITIH1 与 BD 的因果关系不可靠。

二、反向 MR 分析结果

本研究显示双相情感障碍与这几种神经发育相关蛋白均未存在明显因果关系。

结论 本研究从分子遗传学角度明确了神经发育相关蛋白 NFASC,ITIH5 与 BD 的因果关系,是诊断和治疗的可能生物学靶点,为双相情感障碍的神经发育假说提供了新理论依据。

关键词: 孟德尔随机化方法,双向情感障碍,神经发育相关蛋白

双相情感障碍的症状变异

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目的 了解和探讨双相情感障碍症状特点及其结构的变化,旨在探讨准确诊断双相障碍的新维度,以期能从症状的多维度视角及症状的特征更早期、更准确诊断双相,避免漏诊和误诊;同时为治疗目标的准确把握提供依据。

方法 使用“双相情感障碍”的“早期功能障碍”、“非典型症状”、“节律障碍”、“自杀”、“睡眠障碍”、“梦境异常”、“合并症”、“躯体症状”和“精神病性症状”检索有关双相情感障碍症状变异的文献。共检索到 114 篇文章,其中 72 篇被纳入本综述。

结果 1.双相障碍的症状结构已经发生了显著变化,情绪低落和情感高涨的交替出现不再被视为双相障碍的主要症状成分;2.情绪高涨和低落的特点发生了许多变化;情绪的混合状态明显增多,其症状变异也很大。除了起伏不定和成分多样的情绪变化,双相障碍还表现出异常情绪的“原发、非应激性、闯入、异己”的特征;3.双相障碍的症状不仅限于情绪问题,还包括早期的功能损害、非典型症状、节律障碍、特异的自杀和自伤冲动、不合常理的认知改变、特征性的睡眠和梦境异常、片断且不特异的精神病性症状、无法解释的躯体症状以及共病多发等。因此可以认为双相障碍不再是简单的“双相”,而是一个更复杂的“多相”疾病;4.这些症状在现象学上可能没有特征性意义,但它们的特点和机制具有明显的精神病理特征,例如低龄出现、并非继发于应激或心理创伤、闯入的特征、异己的体验等。此外,这些症状通常同时或先后出现,具有明显的综合征特征,表明它们可能有共同的精神病理意义。

结论 1.双相障碍的症状特点及其结构已发生了很大变化,不再是“双相”障碍而,涉及认知、思维、节律等多方面的障碍;2.因此,重新考虑双相障碍的诊断标准,采用多维度的诊断方向是必要且可行的;评估早期功能、强调代际特点、分析症状特征、构筑综合症都是准确诊断的要点;3.重新审视双相的症状变异、关注情绪情感症状之外的表现在诊断中的价值,制定符合这一变化的诊断标准,从而更

广泛、更准确的聚焦双相障碍治疗目标是一项重要且紧迫的任务。

关键词: 双相障碍,认知损害,节律障碍,睡眠障碍,精神病性症状,共病

心境障碍患者犬尿氨酸代谢特点及其与临床代谢特征的关联研究

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目的 通过比较双相躁狂、双相抑郁患者与健康对照在犬尿氨酸代谢产物水平及脂质代谢指标间的差异,并分析两类指标之间的相关性,探究犬尿氨酸代谢异常在心境障碍患者临床及代谢特征中的潜在作用。

方法 选取于 2020 年 10 月至 2022 年 4 月在北京回龙观医院就诊的 52 例双相情感障碍,目前为躁狂发作的患者、46 例双相情感障碍,目前为抑郁发作的患者及同时期在医院周边社区招募的 52 名年龄及性别比例相匹配的健康对照者作为研究对象,使用高效液相色谱法将所有被试血清中的色氨酸、犬尿氨酸、喹啉酸、犬尿喹啉酸 4 种犬尿氨酸代谢产物进行分离,然后使用串联质谱仪进行定量检测;使用酶联免疫吸附实验检测所有被试空腹静脉血中低密度脂蛋白胆固醇 (low density lipoprotein cholesterol, LDL-C)、高密度脂蛋白胆固醇 (high density lipoprotein cholesterol, HDL-C) 和总胆固醇的水平;在被试平静休息 10 分钟后测量其立位时腹围。使用汉密尔顿抑郁量表 (Hamilton's Depression Scale, HAMD) 评估双相抑郁患者目前抑郁发作的严重程度,使用杨氏躁狂评定量表 (Young Mania Rating Scale, YMRS) 评估双相躁狂患者目前躁狂发作的严重程度。使用单因素方差分析及事后 t 检验比较三组被试在犬尿氨酸代谢产物水平和代谢指标间的组间差异,使用偏相关分析探究犬尿氨酸代谢异常和代谢指标异常及临床特征在不同类型心境障碍患者的相关关系。

结果 除犬尿氨酸外,血清色氨酸、犬尿喹啉酸及喹啉酸的水平在三组间的差异均显著 (均 $p < 0.01$), 见表 1。事后两两组间比较发现双相躁狂与双相抑郁患者的血清色氨酸及犬尿喹啉酸水平均

显著低于健康对照 (均 $p < 0.01$), 但两患者组间的差异不显著 (p 分别为 0.654 和 0.514)。双相躁狂组的血清喹啉酸水平显著高于双相抑郁组和健康对照组 (均 $p < 0.001$), 而后两组间差异不显著 ($p = 0.067$)。LDL-C、HDL-C、总胆固醇及腹围 4 个代谢指标在三组间的差异均不显著 (均 $p > 0.05$), 见表 1。偏相关分析发现双相抑郁症患者组的喹啉酸与 LDL-C 呈显著负相关 ($r = -0.35$, $p = 0.029$), 而以上相关性在另外两组不存在。另外在双相躁狂组, 喹啉酸与评估患者病情严重程度的 YMRS 总分呈边缘正相关 ($r = 0.26$, $p = 0.07$)。

结论 双相躁狂与双相抑郁症患者均存在显著的犬尿氨酸代谢异常, 其中双相躁狂患者更为突出, 表现为喹啉酸的水平显著升高, 该指标的升高可能与患者躁狂发作的严重程度存在一定相关性。

关键词: 双相躁狂; 双相抑郁; 犬尿氨酸代谢; 脂质代谢; 杨氏躁狂评定量表

A Case Report and Literature Review of Seizures Resembling Electric Shocks in Patients with Bipolar Disorder and Normal Serum Lithium Concentration

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Objective Bipolar disorder is a complex mental disorder that often requires long-term medication management. Among them, lithium carbonate is widely used for preventing and treating the recurrence of bipolar disorder. However, rare but severe side effects may occur even at normal serum lithium levels

Methods This study reports a case of a 42-year-old female patient with bipolar disorder who experienced "electric shock-like" seizures after taking extended-release lithium carbonate tablets despite having normal serum lithium concentrations. The patient's medical history included emotional instability for 27 years, and upon admission, there were no apparent psychotic symptoms such as hallucinations or delusions

during the mental examination. On the 33rd day of medication, the patient developed frequent head, neck, and upper body seizures

Results Considering the possibility of a drug reaction, the lithium carbonate was discontinued, which relieved seizures, and the electroencephalogram (EEG) showed no abnormalities. After 10 days of treatment, the seizures had mostly disappeared

Conclusion This case reminds clinicians that even with normal serum lithium levels, toxic symptoms may arise, requiring close monitoring of the patient's clinical presentation and serum lithium concentrations. Furthermore, poor diet and reduced sodium intake may increase the risk of lithium toxicity, making it crucial to consider these factors

关键词: Bipolar Disorder, Lithium Carbonate, Electric Shock-Like Seizures, Serum Lithium Concentrations, Lithium Toxicity, Drug Reaction

Impaired Facial Emotion Recognition in Individuals with Bipolar Disorder

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Objective Individuals with bipolar disorder (BD) often struggle with emotional regulation and social interactions, partly due to difficulties in accurately recognizing facial emotions

Methods From September 2021 to February 2023, 69 BD individuals-comprising 23 with bipolar manic/hypomanic episode (BME), 23 with bipolar depressive episode (BDE), 23 with bipolar euthymic (EUT)-and 23 healthy controls (HCs) were enrolled. Diagnosis adhered to DSM-IV criteria using M.I.N.I 5.0, alongside assessments via Hamilton Depression Scale 17 and Young Manic Rating Scale. Participants completed recognition tasks involving 84 facial expression images across six categories: neutral, angry, fear, disgusted, joy, and sadness, each containing 14 images

Results The overall correct recognition rate of

facial expressions in the BD group (79%) was significantly lower than that of the HC group (83%) ($P=0.004$). Primary differences were noted in neutral (93% vs. 100%, $P=0.012$) and fear (79% vs. 86%, $P=0.023$) expressions. Within the BD group, correct recognition rates were 71% for BME, 80% for BDE, and 80% for EUT, all lower than in the HC group. Significant differences in correct recognition rates of neutral, fear, and joy expressions were observed among the four groups ($P<0.05$), with the BME group exhibiting the lowest rate. Misidentification of facial expressions was more frequent in the BD group compared to the HC group, particularly among negative expressions

Conclusion Patients with BD demonstrate lower correct recognition and higher misidentification rates of facial expressions, with those experiencing manic episodes showing impaired recognition of neutral, joy, and fear expressions

关键词: Facial emotional recognition; Bipolar disorder; Clinical practice; Social functioning; Biomarkers

阿立哌唑联合碳酸锂对青少年双相情感障碍共病非自杀性自伤临床疗效研究

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目的 随着社会对特殊群体的关注,青少年双相情感障碍患者深受人们的关注。此类疾病患者通常共病非自杀性自伤,对其生命安全造成较大的威胁,不利于社会和谐稳定,还需要致力于探讨有效的治疗方法,减轻患者的病情,提高预后效果。为了探讨最新的治疗青少年双相情感障碍共病非自杀性自伤的方法,本研究分析阿立哌唑联合碳酸锂应用在治疗青少年双相情感障碍共病非自杀性自伤的临床疗效。

方法 本研究选择2023年1月-2024年1月期间在我院接受治疗的30例青少年双相情感障碍共病非自杀性自伤患者为观察对象,数据分组的依据为随机数表法,对照组和观察组,各15例。对照组应用碳酸锂治疗,观察组应用阿立哌唑联合碳酸锂治疗。对比两组YMRS评分、HAMD评分及NSSI

行为发生率。

结果 治疗8周后观察组的YMRS评分为(10.26±1.59)分,对照组为(13.13±1.64)分, $P<0.05$;治疗8周后观察组的HAMD评分为(16.84±1.82)分,对照组为(22.41±1.36)分, $P<0.05$;治疗4周后观察组非自杀性自伤行为发生率为26.67%,对照组为66.67%, $P<0.05$;治疗8周后观察组非自杀性自伤行为发生率为13.33%,对照组为53.33%, $P<0.05$ 。

结论 青少年双相情感障碍并不少见,不少患者合并非自杀性自伤情况,治疗期间可以考虑联合使用阿立哌唑联合碳酸锂,可以缓解躁狂症状,消除抑郁情绪,降低非自杀性自伤行为发生率,具有较高的借鉴价值。

关键词: 阿立哌唑; 碳酸锂; 青少年; 双相情感障碍; 非自杀性自伤; 临床疗效

单、双相抑郁患者特征性舌象分析研究

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目的 单相抑郁与双相抑郁均以情绪低落为主要表现,中医一般归于“郁病”进行诊治。但因双相抑郁患者有躁狂发作的病史及再次发作的可能,其中医证候分布是否不同于单相抑郁,尚待进一步研究。舌象可反映人体气血的盛衰,邪气的深浅。舌诊是中医“四诊”的重要内容,是临床辨证论治的重要参考依据。本研究从舌诊入手,采用横断面调查的方式,对单、双相抑郁患者的舌象进行观察分析及特征规律总结,以期优化中医诊治郁病提供参考依据。

方法 对符合标准的单、双相抑郁患者进行人口学资料及临床基本信息采集。同时,采集患者的舌象信息。舌象采集均在日间进行,患者面向自然光线平坐,尽量张口,自然放松地伸出舌头,充分暴露舌体。舌象判读的医师均为具有主治医师及以上职称的中医医师。判读前,对医生进行一致性培训,并随机抽取10张舌象图片进行一致性测试,通过一致性测试的医生将有最终的舌象判读的资格。判读时,先由两名医师独立进行,当二者判读结果不一致时,

由高年资的医师再次判读决定。判读医生对患者的临床诊断不知情。最后,从舌色、舌形、苔色、苔质等角度,对比分析两组患者舌象的特征,并进行特征性规律总结。

结果 于2022年4月—2023年3月共纳入我院符合标准的单相抑郁患者108例,双相抑郁患者120例。两组患者的性别、年龄等一般情况无统计学差异($P>0.05$)。舌色方面,两组患者分布无显著差异($P>0.05$)。舌形方面,单相抑郁患者胖大舌比例较双相抑郁更高($P<0.05$),而双相抑郁患者裂纹舌的比例更高($P<0.05$)。舌苔方面,双相抑郁患者正常的薄润苔较单相抑郁少,而黄苔、腻苔比例更高($P<0.05$)。

结论 双相抑郁较单相抑郁阴虚更突出,痰热之象更显著。

关键词: 抑郁症,双相情感障碍,单相抑郁,双相抑郁,舌象

TORCH 感染对双相障碍早期发病影响的回顾性分析

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目的 虽然妊娠期间TORCH病原体的垂直传播与后代患神经精神疾病的风险增加有关,但有关其对早发性双相障碍(BD)影响的证据却很有限。本研究对大样本的双相患者队列进行了回顾性分析,拟计算TORCH感染影响双相障碍早期发病的比值比。

方法 本研究对2018年至2023年期间医院记录中的931例BD病例(678例早发,定义为19岁之前发病;253例非早发,定义为19岁或之后发病)进行了回顾性分析。所选用的主要临床资料包括性别、入组年龄、和发病年龄等,同时所有病例均完成了TORCH抗体检测,包括弓形虫(TOX)、风疹病毒(RV)、巨细胞病毒(CMV)、单纯疱疹病毒I型(HSV-I)和II型(HSV-II)的IgM抗体和IgG抗体。研究采用二元逻辑回归模型探索了TORCH感染与BD发病分类之间的关联,旨在确定早发与非早发BD的潜在预测因素。

结果 相关分析发现,所有TORCH IgM数据与发病类型(早发、晚发)无显著相关关系,风疹病毒的IgG(阳性/阴性)与发病类型呈显著正相关($r=0.15, p<0.001$),其余病原体的IgG与发病类型均呈显著负相关($p<0.05$)。

将所有TORCH IgG数据纳入Logistic回归模型后显示,早发与非早发BD的显著几率比(ORs)为:弓形虫IgG阳性(OR=2.81, 95% CI: 1.29-6.18, $P=0.01$)、风疹病毒(RV)IgG阳性(OR=0.45, 95% CI: 0.28-0.72, $P<0.001$)、巨细胞病毒IgG阳性(OR=3.25, 95% CI: 1.62-7.47, $P=0.002$)、单纯疱疹病毒I(HSV-I)IgG阳性(OR=2.01, 95% CI: 1.42-2.88, $P<0.001$)、单纯疱疹病毒II(HSV-II)IgG阳性(OR=8.62, 95% CI: 3.53-24.28, $P<0.001$)。

针对TORCH IgG抗体的逐个预测分析发现,当患者的TOX IgG从阴性变为阳性时,其双相早发的概率增加了23.33%,相应的CMV的感染可导致双相早发的概率增加17.11%,HSV-I和HSV-II感染导致双相早发的增加概率分别为12.46%和49.15%,而RV感染会导致双相早发的概率减少17.49%。

结论 先天性TORCH感染对BD发病时间有显著影响。除风疹病毒外,TORCH病原体与早发BD的风险增加有关,这强调了在高危人群中采取预防措施和进行早期筛查的重要性。

关键词: 先天性TORCH感染;双相情感障碍;早发型;非早发型

青少年母亲抑郁风险预测与模型构建

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目的 女性,尤其是作为一个青少年的母亲承受着巨大的压力。母亲患抑郁症从多方面影响着母亲的健康、孩子的健康、乃至整个家庭的健康。有研究表明,母亲抑郁会导致母亲产生更多心理虐待行为,同时这也间接的导致青少年问题行为、认知重评、抑郁情绪等众多心理问题,因此本研究旨在开发和验证青少年母亲患抑郁症风险的预测模型。

方法 采用方便采样方法,于2023年3月在江

苏省苏州市的多所中学校针对学生家长进行了一项问卷式的研究。共有名 802 名学生家长参与了这项研究,其中筛选出 592 名母亲。采用结构化问卷收集学生及其家庭成员的人口统计学和临床特征,使用 PHQ-9 抑郁症状自评量表和 GAD-7 焦虑自评量表等其他测量方法来评估母亲抑郁及其相关因素。采用 LASSO 回归和 logistic 回归构建预测模型,并通过 500 次 Bootstrap 后的曲线下面积 (AUC),校准曲线和 DCA 作为内部验证以评估其性能。

结果 青少年母亲抑郁症状发生率为 18.75%。开发的预测模型将是否有经济问题、焦虑、精力不足、入睡困难、呼吸不畅、疼痛影响睡眠、早醒作为显著的预测因子。多因素 logistics 回归显示 $P < 0.05$, $AIC=240.132$, $BIC=272.340$ 。对 ROC 曲线进行 500 次 bootstrap,结果显示训练集 AUC 为 0.902 (95% CI:0.859-0.946),验证集 AUC 为 0.908 (95% CI:0.845-0.970),校准曲线显示该模型具有良好的校正效果,DCA 曲线显示该模型在训练集 1%-99%和验证集 1-99%的阈值中具有较好的临床应用价值。

结论 青少年母亲抑郁的风险预测模型为其早期发现、干预提供了一定的价值。通过识别高风险个体,该模型有可能改善青少年母亲的抑郁情绪,从而为家庭带来更好的结果。

关键词:青少年,青少年母亲,抑郁,风险预测,模型,

双相抑郁患者认知功能损害与睡眠质量的关系

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目的 探讨睡眠质量与双相抑郁患者认知功能损害的相关性。

方法 选取我院 2022 年 12 月-2023 年 12 月收治的 31 名双相抑郁患者为病例组,同期在医院及社会上招募 39 名健康人为对照组。采用蒙特利尔认知评估量表 (Montreal Cognitive Assessment, MoCA)、数值广度测验 (Digital Span Test, DST)、连线测试 A 部分 (Trail making test A, TMT-A)、斯特鲁普色词测验 (Stroop Color and Word Test, SCWT) 比较两组的认知功能,使用匹兹堡睡眠质量指数

(Pittsburgh sleep quality index, PSQI) 评估两组受试者的睡眠状况。通过偏相关分析认知功能损害与睡眠质量的相关性。

结果 病例组 MoCA 评分、DST 得分、SWCT 及 TMT-A 表现显著低于对照组 ($P < 0.05$)。病例组 PSQI 总分及各因子分均高于对照组。病例组 PSQI 总分与抽象、SWCT 单词呈负相关 ($P < 0.05$),与 TMT-A 呈正相关 ($P < 0.05$);主观睡眠质量与命名、记忆、抽象、总分呈负相关 ($P < 0.05$);入睡时间与抽象、总分、SWCT 单词呈负相关 ($P < 0.05$);睡眠障碍与记忆、抽象、总分、SWCT 单词呈负相关 ($P < 0.05$)。

结论 双相抑郁患者存在明显的认知功能损害,睡眠异常在一定程度上导致了认知损害的发生,及时干预双相抑郁患者睡眠及认知问题有助于减少不良预后。

关键词:双相抑郁;认知功能;睡眠;影响因素;

不同发病年龄男性双相障碍患者临床特征及免疫炎症指标预测价值分析

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目的 通过比较不同发病年龄男性双相障碍患者临床特征及免疫炎症指标的水平的差异,并分析对比双相障碍患者的生物学标志物及临床特征,寻找其中可预测的指标应用到临床,以达到早期识别、早期治疗的目的。

方法 本研究纳入河北医科大学第一医院精神卫生中心 150 例住院的男性双相障碍急性发作期患者。根据入组患者起病年龄分为两组,分别为发病年龄 ≤ 21 岁的早发型组、发病年龄 > 21 岁的非早发型组。收集人口学资料及临床特征。以流式细胞仪检测外周血血浆淋巴细胞亚群及细胞因子、尿酸、甲功、NLR、PLR 等水平。采用 t 检验、秩和检验和 χ^2 检验比较两组免疫炎症指标和临床特征的差异。采用逐步 Logistic 回归分析双相障碍患者炎症标志物相关性分析,以早发或非早发为因变量,其他因素为自变量。并采用 ROC 曲线判断炎症指标对早发型双相障碍的预测作用。均取 $P < 0.05$ 为差异具有统计学意义。

结果 早发型组和非早发型组在婚姻情况、有无冲动攻击、抑郁发作次数等方面差异具有统计学意义 ($P<0.05$)。早发型组 CD4+T 细胞百分比、CD4+/CD8+、NK 细胞绝对值、IL-4、IL-6、NLR、PLR 低于非早发型组, 差异具有统计学意义 ($P<0.05$); 早发型组 CD8+T 细胞百分比、B 细胞绝对值高于非早发型组, 差异具有统计学意义 ($P<0.05$)。多因素 Logistic 回归模型, 结果显示, CD8+T 细胞百分比、B 细胞绝对值是早发型组的独立危险因素; IL-4、IL-6 是非早发型组的独立危险因素 ($P<0.05$)。用 ROC 曲线比较 CD8+T 细胞百分比、IL-4、IL-6 指标诊断早发双相障碍的能力, 曲线下面积大于 0.7 的参数分别为 0.772, 0.725, 0.702。

结论 1、早发组双相障碍患者在婚姻状况方面未婚率更高, 冲动攻击, 自伤自杀等比例更高。

2、早发组双相障碍患者 CD8+T 细胞百分比、B 淋巴细胞绝对值水平较高, 可能与免疫炎症机制有关。

3、CD8+T 细胞百分比、B 细胞绝对值、未婚是早发组的独立危险因素; IL-4、IL-6 是非早发组的独立危险因素。

4、CD8+T 细胞百分比、IL-4、IL-6 等指标对早发型双相障碍患者可能有预测价值。

关键词: 双相障碍, CD4+T 细胞, CD8+T 细胞, IL-6, 发病年龄

苏州市青少年心理健康状况现状分析

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目的 了解苏州市青少年心理健康状况并分析其影响因素, 为提高青少年心理健康水平提供科学依据和理论指导。

方法 采用整群分层随机抽样的方法, 于 2019 年 6 月至 12 月对苏州市某城区的 18 所中学进行调查, 采用一般情况调查表、患者健康问卷抑郁量表 (PHQ-9)、广泛性焦虑量表 (GAD-7)、匹兹堡睡眠质量指数量表 (PSQI) 调查其心理状况水平及其影响因素。

结果 本次研究的 10176 名青少年睡眠质量平均得分 4.99 分, 焦虑情绪平均得分 5.15 分, 抑郁情

绪平均得分 5.30 分, 睡眠问题检出率 19.4%, 抑郁情绪检出率 18.0%。多因素 logistic 回归分析显示, 消极应对方式 ($OR=1.061, P<0.001$)、父母关系差 ($OR=2.644, P<0.001$)、学校欺凌 ($OR=1.446, P<0.001$)、焦虑情绪 ($OR=1.153, P<0.001$)、高中年级 ($OR=1.807, P<0.001$)、女性 ($OR=1.217, P<0.001$) 是青少年睡眠问题的危险因素。父母关系差 ($OR=2.103, P<0.001$)、学校欺凌 ($OR=1.731, P<0.001$)、焦虑情绪 ($OR=1.502, P<0.001$)、睡眠问题 ($OR=1.305, P<0.001$)、女性 ($OR=1.193, P<0.05$)、是青少年抑郁情绪的危险因素。

结论 青少年心理状况问题存在, 消极应对方式、父母关系差、学校欺凌、焦虑情绪、女性是青少年心理健康状况的危险因素, 应针对危险因素进行干预, 提高青少年心理健康水平。

关键词: 青少年 心理健康 影响因素 预防

The Roles of Mitochondria Dysfunction in Bipolar Disorder: An Updated Review

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Bipolar disorder is one of the major psychiatric diseases characterized by severe and biphasic changes in mood with unclear pathophysiological mechanism, despite recent advances in neurobiological research. The mitochondria are crucial for neurogenesis and neuronal functions, and play an important role in mental illness. Several studies have found the relationships between mitochondrial dysfunctions and bipolar disorder, and lines of evidence indicated that the impairments of mitochondrial functions have been closely connected with the pathologies of bipolar disorder. Therefore, in this review, we aim to provide focuses on supporting the evidence that: 1) the dysregulation of energy metabolism and immune system in bipolar disorder, 2) the abnormal mitochondrial morphology and dynamics in bipolar disorder, 3) the vital roles of mitochondrial functions in energy metabolism, calcium homeostasis and electrophysiology, oxidative stress pathways and neuroim-

mune dysfunctions, 4) present the evidence that the alternations and abnormalities of mitochondria in both rodent models and humans, 5) point out the potential treatments targeting at mitochondria in bipolar disorder. A better knowledge of mitochondrial physiology and pathophysiology in bipolar disorder will help understand the pathological mechanism, improved strategies for the treatment, and explore mitochondria as a potential target for novel therapeutic agents to prevention of bipolar disorder.

关键词: bipolar disorder, mitochondria

双相抑郁患者睡眠障碍与 BMAL-1 基因甲基化的相关性研究

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目的 研究双相抑郁伴睡眠障碍患者的睡眠结构特征, 探讨 BMAL-1 基因甲基化与双相抑郁睡眠障碍的相关性, 为双相抑郁患者睡眠障碍提供生物学理论依据并起到早期预警作用。

方法 选取新疆维吾尔自治区人民医院临床心理科 2022 年 12 月至 2023 年 12 月门诊和住院双相抑郁患者 30 例, 选取同时期新疆维吾尔自治区人民医院体检中心健康体检者以及医护人员家属至少 30 例, 双相抑郁患者符合《美国精神障碍诊断与统计手册第五版》(DSM-5) 双相障碍 II 型诊断标准, 且目前处于抑郁状态。匹兹堡睡眠质量指数量表 (PSQI) >7 分诊断为睡眠障碍。采用多导睡眠检测 (PSG) 分析睡眠结构特征。采用 Massarray 飞行时间质谱法分析 BMAL-1 基因 DNA 甲基化水平。采用 SPSS26.0 软件进行数据统计分析, 计量资料采用 t 检验及 Mann-Whitney U 检验, 计数资料采用卡方检验, 用 Logistic 回归分析探究双相抑郁患者睡眠障碍的影响因素, 用相关性分析法分析 BMAL-1 基因各位点甲基化水平与双相抑郁患者睡眠障碍 PSG 指标的相关性。

结果 (1) 双相抑郁伴睡眠障碍组与健康对照组两组间年龄、性别、BMI 值、婚姻状况、受教育年限比较均无统计学意义 ($P>0.05$)。 (2) 双相抑郁

伴睡眠障碍组与健康对照组 BMAL-1 基因甲基化水平进行比较, 结果显示两组数据中 CpG2、CpG3、CpG6 位点基因甲基化有统计学意义 ($P<0.05$), 余位点无统计学意义 ($P>0.05$)。 (3) Logistic 回归分析显示 BMAL-1 基因 CpG2、CpG3 (位点甲基化水平是双相抑郁伴睡眠障碍组的独立危险因素。 (4) 双相抑郁伴睡眠障碍组与健康对照组 PSG 各指标相比较, 结果显示两组间比较 SE、SL、N1%、N2%、N3%、REM% 有统计学意义 ($P<0.05$)。 (5) 双相抑郁伴睡眠障碍组和健康对照组 BMAL-1 基因甲基化水平与 PSG 各指标之间的相关性分析显示, CpG2 与 SE、SL 有相关性, CpG6 与 N2%、N3% 有相关性。

结论 (1) 双相抑郁伴睡眠障碍与 BMAL-1 基因甲基化可能具有关联性。 (2) BMAL-1 基因 CpG2、CpG3 位点甲基化水平可能影响双相抑郁伴睡眠障碍的发生。 (3) BMAL-1 基因 CpG2、CpG6 位点甲基化水平可能与双相抑郁伴睡眠障碍患者的睡眠结构相关, 并且对患者的睡眠质量产生影响。

关键词: 双相情感障碍, 睡眠障碍, DNA 甲基化, BMAL-1

双相障碍炎症机制及辅助抗炎治疗的研究进展

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目的 双相障碍具有高致残性, 并且具有显著的职业及生活损害。目前双相障碍临床治疗过程中, 越来越多的药物、物理治疗、心理治疗等方式已经充分使用起来, 但患者及家属对急性期治疗效果、发作次数、愈后情况并未达到期望值, 且在治疗过程中存在一定的局限性。双相抑郁的治疗耐药性是目前普遍存在的问题。越来越多的证据表明, 低级别炎症可能参与双相障碍的病理生理机制, 炎症因子种类及含量改变在双相障碍中有着重要的作用; 对近期双相障碍和炎症因子改变、炎症机制以及辅助抗炎治疗进行总结与讨论, 深入的了解疾病发生发展的生物学机制, 以致于寻找可靠的生物标志物提高诊断的准确率以及开展新的治疗方案。

方法 通过检索 PubMed 及知网从成立至 2024 年 3 月期间双相情感障碍与炎症因子的临床实验,

以及该方面的相关综述和参考文献,对文献进行综述。选用随机对照实验或者交叉实验,确保具有有效的对照组。纳入标准必须符合 ICD-10、DSM-V 的诊断标准。

结果 最近的研究支持双相障碍和炎症因子之间具有强大的联系。特别是促炎因子如白介素 1、白介素 6,肿瘤杀伤因子和干扰素等,且增强某些炎症因子如白介素 4、白介素 5 和白介素 10 的产生与双相障碍疾病发展密切相关。这些结果都强烈表明双相障碍患者存在炎症现象。目前已经有临床研究开展使用抗炎药物如塞来昔布、谷胱甘肽以及肿瘤杀伤因子 α 拮抗剂进行辅助治疗,研究也表明使用抗炎药物会对抑郁焦虑症状较对照组明显减轻。

结论 双相障碍首要需求就是准确、及时的诊断和进行有效的治疗,目前临床中的诊断和一线治疗虽然对大部分患者有帮助,但效果并不明显。因此,一个准确且客观的标志物对我们的诊断及治疗有很大的帮助。根据炎症因子,我们可以推测,BD 患者的早期炎症特征,可以帮助解决更有针对性的治疗,以提高疗效。正在进行的和未来的抗炎药物临床研究将启发我们在其治疗边缘,并帮助我们提供更多治疗方法对抗 BD。

关键词: 双相障碍; 炎症因子改变; 炎症机制; 抗炎治疗; 综述;

The Causal Relationships Between Limb Fat Distribution and Mental Disorders: A Mendelian Randomized Study

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Objective To employ two-sample Mendelian randomization (MR) analysis for investigating the causal relationship between limb fat distribution and four major mental disorders

Methods This study utilized summary data from a genome-wide association study (GWAS) on limb fat mass and major mental disorders in a European population. Two-sample MR analysis assessed the causal link

between limb fat mass and major mental disorders. Inverse variance weighting estimates were reported as primary results. Additional sensitivity analyses included MR-Egger, weighted median, simple mode, and weighted mode methods to confirm the robustness of the findings

Results There is considerable evidence supporting a causal relationship between Attention-deficit/hyperactivity disorder (ADHD) and limb fat mass. The study indicated a significant negative correlation between right arm fat mass and left leg fat mass ($p < 0.05$) and ADHD, alongside a significant positive correlation between left arm fat mass and right leg fat mass ($p < 0.05$) and ADHD. Furthermore, a causal link was found between Major Depressive Disorder (MDD) and leg fat mass, showing a significant positive correlation with right leg fat mass ($p < 0.05$) and a significant negative correlation with left leg fat mass ($p < 0.05$)

Conclusion Understanding and measuring limb fat distribution may improve early detection, screening, and prediction of ADHD and MDD

关键词: Limb fat mass, Mental disorder, Mendelian randomization, Genome-Wide Association Study, Causal relationship

Associations Between Depression and Gallstone Disease: A Comprehensive Analysis Through NHANES 2017–2020 Data and Mendelian Randomization

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Background Despite sharing common pathophysiological risk factors, the relationship between gallstones and depression requires further evidence for a clearer understanding. This study combines NHANES

2017-2020 observational data and Mendelian randomization (MR) analysis to shed light on the potential correlation between these conditions

Methods Analyzing NHANES 2017-2020 data through weighted multivariable-adjusted logistic regression, we examined the depression-gallstone risk association. MR was subsequently applied, utilizing genetic instruments from a large GWAS on depression (excluding 23andMe, 500,199 participants) and gallstone data (28,627 cases, 348,373 controls), employing the main IVW method alongside other MR methods to explore the causal relationship. Sensitivity analyses validated the study's conclusions

Results Among 5,303 NHANES participants, a significant association was found between depressive symptoms and increased gallstone risk (initial OR = 2.001; 95% CI = 1.523-2.598; $P < 0.001$), with the association persisting after comprehensive adjustments (final OR = 1.687; 95% CI = 1.261-2.234; $P < 0.001$). MR findings also indicated a causal link between genetically predicted depression and higher gallstone risk (OR = 1.164; 95% CI = 1.053-1.286; $P = 0.003$)

Conclusion Depression is significantly associated with a higher risk of gallstones, supported by genetic evidence suggesting a causal link. These findings highlight the importance of considering depression in gallstone risk assessments and management strategies

关键词: Gallstone; Depression; National Health and Nutrition Examination Survey; Mendelian randomization analysis; Causality

24 节气与气象变化对双相情感障碍急性发作影响的相关性研究

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目的 探讨中国传统 24 节气及其同期气象变化与双相情感障碍 (BD) 患者急性发作之间的关系。

方法 通过对安徽省精神卫生中心 2020 年至

2023 年住院的所有双相情感障碍患者的数据进行分析, 得到各个节气对应的 BD 躁狂发作和 BD 抑郁发作的人数, 并收集了同期 24 节气期间的气象数据, 通过 Pearson 相关性分析和线性回归模型, 评估了气象因素 (气温、温差、气压、降水、湿度、风速、光照、跨日最高气温差、跨日气压差、跨日最高气压差、跨日光照差) 与双相情感障碍急性发作的相关性。同时使用卡方检验确定社会人口统计学特征 (性别、婚姻状况、职业情况、年龄) 与双相情感障碍在不同节气的急性发作数量之间是否存在统计学上的显著关联。

结果 BD 躁狂发作的两次高峰分别在雨水节气和芒种节气, BD 抑郁发作的两次高峰在立夏节气和雨水节气。Pearson 相关性分析显示 BD 躁狂发作与温差、跨日气温差、跨日最高风速差具有正相关 ($r=0.237$ 、 $r=0.256$ 、 $r=0.273$, $p < 0.05$); BD 抑郁发作与温差、跨日最高风速差具有正相关 ($r=2.281$ 、 $r=2.269$, $p < 0.05$), 而与气压具有负相关 ($r=-0.261$, $p < 0.05$)。线性回归分析结果表明跨日平均气压差 (Bate=0.422, $p < 0.01$)、跨日气温差 (Bate=0.367, $p < 0.05$) 是 BD 躁狂发作的显著正向预测因子, 而气压 (Bate=-0.609, $p < 0.01$) 是 BD 躁狂发作的显著负向预测因子; 湿度 (Bate=0.371, $p < 0.01$)、跨日平均气压差 (Bate=0.422, $p < 0.01$)、跨日气温差 (Bate=0.0418, $p < 0.01$) 是 BD 抑郁发作显著正向预测因子, 而气压 (Bate=-0.663, $p < 0.01$) 是 BD 躁狂发作的显著负向预测因子。卡方检验表明婚姻状况 ($\chi^2=81.313$, $p < 0.01$) 和年龄 ($\chi^2=68.637$, $p < 0.05$) 与双相情感障碍在不同节气的急性发作数量之间存在显著关联。

结论 BD 躁狂发作和 BD 抑郁发作的人数在不同的节气存在显著差异; 气象因素与双相情感障碍的急性发作存在相关性, 特别是天气的剧烈变化, 这可能是 BD 急性发作人数存在节气差异的原因所在; 社会人口统计学因素也可能在 BD 的急性发作中发挥作用, 这可能与不同人群对天气变化的敏感度不同和心理状态有关。这些发现为进一步研究环境因素对双相情感障碍的影响提供了初步证据, 并可能有助于开发预防和干预策略。

关键词: 双相情感障碍; 节气; 气象因素; 天气变化; 相关性; 急性发作; 年龄; 社会人口统计学; 婚姻状况; 年龄

双相抑郁障碍中血清 5-羟色胺、 γ -氨基丁酸、3-甲氧基去甲肾上腺素水平与临床症状的相关性研究

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目的 分析双相抑郁障碍(BDD)患者外周血中 5-羟色胺(5-HT)、 γ -氨基丁酸(GABA)以及 3-甲氧基去甲肾上腺素(NMN)等神经递质水平,探讨其水平与 BDD 患者的相关性、发病机制及诊断治疗等挖掘新的生物学指标。

方法 根据 DSM-5 中双相情感障碍(抑郁发作)诊断标准,本研究进行我院门诊招募 BDD 患者 23 名、社会招募健康对照者 23 名,采用 HAMD、HAMA、YMRS 评定 BDD 患者入组时的症状及病情研究程度,利用 LC-MS 测定血清中 5-HT、GABA、NMN 水平, Spearman 偏相关分析 BDD 组神经递质与临床症状的相关性,并采用 ROC 曲线来评估其辅助客观诊断 BDD 的价值。利用 SPSS26 软件进行统计分析。

结果 1.BDD 组血清 5-HT 水平明显高于 HC 组($P<0.001$),GABA、NMN 水平高于 HC 组($P<0.01$),两组血清 DA、MN 水平无明显差异($P>0.05$);

2.BDD 组与 HC 组血清 5-HT 水平与 PHQ-9、HAMA、GAD-7、HAMD、PSQI、YMRS、HCL-32 ($r=-0.42, P<0.01, r=-0.38, P<0.01, r=-0.33, P<0.01, r=-0.48, P<0.01, r=-0.38, P<0.01, r=-0.44, P<0.001, r=-0.47, P<0.001$); 血清 3-MT 与 HAMD、PSQI、YMRS ($r=-0.14, P<0.05, r=-0.14, P<0.05, r=-0.23, P<0.01$); 血清 GABA 水平与 HAMA、GAD-7、HAMD、PSQI、YMRS ($r=0.40, P<0.05, r=0.34, P<0.05, r=0.42, P<0.01, r=0.33, P<0.05, r=0.54, P<0.01$); 血清 DA 水平与 NMN 水平 ($r=-0.36, P<0.05$)、与 GABA 水平 ($r=0.33, P<0.05$); 3-MT 水平与 MN 水平 ($r=0.60, P<0.01$)、与 GABA 水平 ($r=0.02, P<0.05$); 5-HT 水平与 3-MT 水平 ($r=0.35, P<0.05$)、与 GABA 水平

($r=-0.31, P<0.05$); MN 与 NMN 水平 ($r=0.53, P<0.05$);

3.血清 5-HT、GABA、NMN 水平预测 BDD 患者截断值分别为(1464.007、0.700、0.368),灵敏度为(87.0%、91.3%、52.2%),特异度为(69.6%、52.2%、95.7%)。

结论 1.血清 5-HT、GABA、NMN 水平异常与 BDD 有关,对 BDD 临床诊断具有一定的预测价值;

2.血清 5-HT 与 GABA 水平更可能影响 BDD 患者的情绪问题及失眠症状。

关键词: 双相抑郁障碍, 5-羟色胺, γ -氨基丁酸, 3-甲氧基去甲肾上腺素, 液相色谱

基于 VFT 的功能性近红外光谱成像:在单相与双相障碍患者中的比较研究

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目的 功能性近红外光谱成像(functional near-infrared spectroscopy, fNIRS)是一种新兴的功能神经影像模式,它可以通过检测血液里氧合血红蛋白和脱氧血红蛋白浓度的变化来提供大脑活动的相关信息,目前已逐渐应用于精神疾病神经病理学机制研究。本研究旨在通过采集抑郁障碍、双相障碍及健康受试者的近红外光谱成像数据,探究三组被试的神经影像学机制,进一步分析抑郁障碍与双相障碍的激活异常脑区与临床特征之间的相关性,以更全面地了解两种疾病的神经生理基础。

方法 1、此次研究共收集符合纳排标准且一般人口学资料相匹配的首次发作且未接受过药物治疗的抑郁障碍患者 30 例,双相障碍抑郁发作患者 30 例以及同时期健康受试者 30 例。使用 24 项汉密尔顿抑郁量表和汉密尔顿焦虑量表评估被试的抑郁和焦虑程度;使用贝克-拉范森躁狂量表评定躁狂程度,基于重复性成套神经心理状态测试估被试的认知功能。

2、收集抑郁障碍、双相障碍、与健康被试言语流畅性任务范式下的 fNIRS 数据并进行数据处理。

3、比较三组被试在性别、年龄、受教育年限、临床症状以及前额叶皮层激活水平的差异,构建

ROC 曲线，并将得到的异常激活脑区与临床量表评分进行相关性分析。

结果 1、抑郁障碍与双相障碍患者在背外侧前额叶皮层，额极皮层及 Broca 区的氧合血红蛋白浓度激活水平均小于健康受试者 ($P<0.05$)，且双相障碍激活水平高于健康受试者 ($P<0.05$)，共计 18 个通道的激活水平呈现“HC>BD>UD”形式。

2、与健康受试者相比，两组患者分别产生显著差异的异常通道中，额极中 CH26、CH27 的 β 值与抑郁障碍患者组参与者的 HAMD-24 得分呈显著相关，左侧额极中 CH27 与抑郁障碍组参与者的认知功能呈现显著负相关，其余脑区未见显著相关性。

3、为了更好地区分抑郁障碍与双相障碍患者，额极皮层在 VFT 期间的 AUC 最高 (AUC=0.749; 95%CI: 0.610-0.887)，约登指数在最佳分界点达到 0.46 的峰值，其中敏感性 72%，特异性 74%。

结论 1、抑郁障碍与双相障碍患者在背外侧前额叶皮层、额极皮层及 Broca 区较健康受试者具有较低的激活水平，二者激活水平的异常可能与心境障碍疾病的神经病理学机制相关。

2、额极体现出较大的 AUC 以区分抑郁障碍与双相障碍患者，提示额极皮层可能是区分两组患者的有效生物标志物。

3、同时额极皮层的激活水平与抑郁障碍患者的抑郁水平相关，左侧额极皮层的激活水平与抑郁障碍患者的认知水平呈显著负相关，本研究从神经影像学角度为抑郁障碍的成因提供了新的证据。

关键词：抑郁障碍；双相障碍；前额叶皮层；功能性近红外光谱成像；言语流畅性任务

Research Progress on The Magnetic Resonance Imaging of Bipolar Disorder: A Bibliometric Analysis and Automatic Meta-analysis

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Objective The magnetic resonance imaging (MRI) research in bipolar disorder (BD) patients is gar-

nering increasing attention. However, faced with thousands of relevant clinical features, it is becoming increasingly difficult for researchers and institutions to identify impactful research. The aim of this study was to explore the field of MRI related research in BD from a bibliometric perspective

Methods We used the R package “bibliometrix” to identify the key researchers, institutions, journals and countries involved in BD and MRI-related research globally. Furthermore, we conducted an automated meta-analysis using Neurosynth, extracted brain region data employing DPABI, and employed Surf Ice for the visualization of the brain regions

Results A total of 2698 articles were analyzed. The core authors include FRANGO S, AGARTZ I, ANDREASSEN OA, BRAMBILLA P, and KESHAVAN MS. The United States had a high publication volume, while Colombia had the highest citation rates. Notable topics in this field included epidemiology, framework, inferior frontal gyrus, networks, school-age children, etc. The top five voxel-based brain regions, ranked by intensity, were the right insula (Insula_R), left insula (Insula_L), left olfactory tubercle (Olfactory_L), right medial frontal gyrus (Frontal_Mid_2_R), and right temporal lobe (Amygdala_R)

Conclusion This bibliometric study mapped out a fundamental knowledge structure consisting of countries, institutions, authors, journals, and articles in the research field of BD and MRI over the past 20 years

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关键词：Bipolar disorder, MRI, Bibliometrics, Hotspots

鲁拉西酮与碳酸锂治疗双相障碍I型急性躁

狂或混合发作疗效的 Meta 分析

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目的 现有的多项研究表明,心境稳定剂合并非典型抗精神病药物方案在双相障碍(Bipolar Disorder, BD)的临床治疗中应用广泛, 故我们总结国内外文献中现有的研究证据, 系统性地比较鲁拉西酮与碳酸锂两种药物治疗双相障碍I型急性躁狂或混合发作的疗效与不良反应, 为临床双相障碍I型急性躁狂或混合发作的治疗提供依据。

方法 检索 2003 年至 2023 年 12 月 Medline、Scopus、clintrials.gov、Cochrane、EMBASE、PUBMED 和中国知网(CNKI)及万方数据库等电子数据库及相关会议中关于比较“鲁拉西酮与碳酸锂治疗双相障碍I型急性躁狂或混合发作治疗效果”的随机对照试验文献, 并对文献结果进行 Meta 分析, 采用 Review Manager 5.4 软件对提取的数据进行统计学分析。

结果 鲁拉西酮与碳酸锂治疗双相障碍I型急性躁狂或混合发作的疗效相当, 差异无统计学意义 ($MD=-0.25, 95\%CI:-2.35 \sim 1.55, P=0.12$); 鲁拉西酮治疗双相障碍I型急性躁狂或混合发作的不良反应显著小于碳酸锂 ($OR=0.47, 95\%CI:0.28 \sim 0.79, P=0.004$)。

结论 鲁拉西酮治疗双相障碍I型急性躁狂或混合发作与碳酸锂相当, 但安全性优于碳酸锂。

关键词: 鲁拉西酮;碳酸锂;急性躁狂发作;混合发作;双相情感障碍I型;Meta 分析;

Lower Serum Insulin-like Growth Factor 2 Level in Patients with Bipolar Disorder Is Associated with The Severity of Manic Symptoms During Manic Episodes

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Objective Accumulating evidence has indicated that neurodevelopmental defects may underlie the pathophysiology of bipolar disorder (BD). Insulin-like growth factors (IGFs) are a family of neurotrophic factors that are essential for the survival and development of neurons. The present study aims to investigate whether IGF-2 signaling is implicated in the pathophysiological processes of BD

Methods 50 healthy controls and 78 patients with BD, including 23 patients who diagnosed acute depressive episode and 55 patients who diagnosed acute manic episode, were recruited in this study. The 17-item Hamilton Depression Rating Scale (HAMD-17) and the Young Mania Rating Scale (YMRS) were used to assess the severity of the depressive and manic symptoms, respectively. The serum IGF-2 level was determined by an enzyme-linked immunosorbent assay (ELISA). The Kolmogorov-Smirnov and Mann-Whitney U tests were used for between-group comparisons and spearman analysis was used to analyze correlations

Results Patients with BD had lower serum IGF-2 levels (66.08 ± 21.22 ng/ml) when compared to healthy controls (88.72 ± 31.55 ng/ml). BD patients were divided into manic episode and depressive episode subgroups. We found that serum IGF-2 levels were reduced in both the mania and depression subgroups (mania: 67.19 ± 21.52 ng/ml, depression: 63.43 ± 20.67 ng/ml; $P < 0.001$), while no significant difference was observed between two groups ($P > 0.05$). Spearman correlation analyses revealed that the levels of serum IGF-2 were negatively correlated with the YMRS scores in BD patients ($r = -0.522, P < 0.001$). Furthermore, IGF-2 was found to be an independent contributor to the severity of symptoms in patients with manic episodes ($B = -0.610, t = -5.299, P < 0.001$)

Conclusion Lower serum IGF-2 levels were found in BD patients and correlated with the severity of the manic symptoms in these patients during manic episodes. These results suggest that reduced IGF-2 levels might be involved in the pathophysiology of BD, and serum IGF-2 could be a peripheral biomarker for the evaluation of the severity of manic symptoms in BD patients

关键词: bipolar disorder, insulin-like growth factor-2, manic symptoms, severity, serum

苏州市中学生自杀倾向的模型构建和确立

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目的 自杀倾向是指在死亡意图的引导下产生的自残倾向,包括自杀意念、自杀企图和自杀计划。本研究准确的识别了高危自杀倾向的学生人群,采用套索回归和多因素回归的结果相结合的方式,并运用列线图技术,从多方面构建了中学生自杀倾向的预测模型。

方法 2018年至2019年间在中国苏州市某地区收集了12063名中学生的相关调查问卷。将问卷随机以7:3的比例分为训练集($n=8444$),验证集($n=3619$)。在前者中,将套索回归和多因素回归的结果相结合,确定了7个最优的自适应性预测因子,并用其来构建列线图。使用受试者工作特征曲线(ROC)、校准曲线、决策曲线分析(DCA)和内部验证来评估该列线图的识别、校准、临床适应性等能力。

结果 患自杀倾向的中学生共2651人(21.98%)。其中烦恼求助方式、父母关系、是否抑郁、是否绝望、是否想伤害自己、是否做噩梦,为自杀倾向的显著预测因子。用6个预测因子所构建的风险模型显示ROC曲线的曲线下面积,训练集AUC为0.914(95%CI=0.906-0.922),验证集AUC为0.912(95%CI=0.900-0.925); Bootstrap500次训练集AUC为0.915(95%CI=0.907-0.923),验证集AUC为0.920(95%CI=0.908-0.932)。所构建模型的训练集和验证集校准曲线均接近对角线,DCA曲线经过200次Bootstrap显示该模型在训练集1-92%和验证集2-92%的范围内是临床有益的。

结论 本研究建立了一个有效的工具来预测中学生的自杀行为,本研究结果可为中学生自杀倾向的临床预防和治疗提供参考。

关键词: 预测模型;自杀倾向

双相情感障碍不同阶段神经认知功能特征: 一项比较研究

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目的 旨在研究双相情感障碍发作期及缓解期的神经认知功能特征

方法 采用分组对照的方法,患者组为在天津市安定医院住院、符合DSM-5双相情感障碍患者105名,包括发作期72名(其中抑郁发作27名、躁狂发作45名)及稳定期双相情感障碍33名,对照组为在天津市安定医院住院、符合DSM-5精神分裂症患者40名、天津胸科医院健康体检中心健康人群40名,分别在基线及四周使用汉密尔顿抑郁量表(HAMD-17)、杨氏躁狂量表(YMRS)评估患者症状严重程度,中国简明神经认知评估测试(C-BCT)评估患者组及对照组的神经认知功能。

结果 1.在基线,双相障碍患者和精神分裂症患者的C-BCT四个维度(连线测试、符号编码、持续操作、数字广度)分及总分均低于健康人群($P<0.05$),但两组患者间得分无统计学差异($P>0.05$)。

2.在基线,双相障碍患者的符号编码分与YMRS总分负相关($P=0.042$, $r=-0.198$);其中双相躁狂组的符号编码分与YMRS总分负相关($P=0.024$, $r=-0.395$);双相障碍缓解期患者的持续性操作分与YMRS总分负相关($P=0.049$, $r=-0.345$)。

3.在第四周末,经药物治疗后双相障碍患者的C-BCT四个维度(连线测试、符号编码、持续操作、数字广度)分及总分都有所上升($P<0.05$);双相抑郁患者连线测试、数字广度得分变化不显著($P>0.05$);双相躁狂患者的符号编码、持续操作和数字广度得分变化不显著($P>0.05$);缓解期患者在各个维度(连线测试、符号编码、持续操作、数字广度)都有显著提升($P<0.05$)。

结论 双相情感障碍患者神经认知功能与情绪症状有关,随着病情改善,神经认知功能有所恢复。

关键词：双相情感障碍,神经认知功能

Disrupted White Matter Function in Sub-threshold Depression Correlate with Cognitive, Neurotransmitter, and Genetic Profiles

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Objective White matter (WM) tracts integrity abnormalities had been reported in individuals with sub-threshold depression (StD). However, functional alterations of WM in StD remain to be elucidated

Methods A total of 188 individuals with StD and 136 healthy controls (HCs) were recruited in the study. Mood scales and cognitive functions were assessed, as well as resting-state functional MRI scan were performed to check WM function using the automated fiber quantification (AFQ) method. Correlations analysis and mediation analysis were conducted. Subsequently, spatial associations between postmortem gene expression and neurotransmitters distribution data and WM functional alterations were conducted to uncover neural mechanisms underlying StD from a multidimensional perspective.

Results Individuals with StD displayed decreased brain activity in the right anterior thalamic radiation (ATR), inferior fronto-occipital fasciculus (IFOF), inferior longitudinal fasciculus (ILF), and uncinate fasciculus (UF). Individuals with StD showed decreased social cognition and overall composite scores compared to HCs. Correlation analysis indicated that rumination and anxiety symptom were associated with dysfunction of the right ATR and ILF, respectively. Moreover, the abnormal pattern of WM function in StD was spatially associated with modulation of chemical synaptic transmission, regulation of synaptic plasticity, cation channel activity, and neuron projection, as well as dopaminergic and serotonergic neurotransmission

Conclusion To conclude, WM dysfunction and its associations with altered mood and cognitive func-

tions, along with its molecular basis of genetics and neurotransmitter system underpinnings, provided new clues to understand the neuro-pathophysiology of StD

关键词：Subthreshold depression, White matter function, cognitive function, gene expression, neurotransmitter.

Neural Activity Alterations and Their Association with Neurotransmitter and Genetic Profiles in Schizophrenia: Evidence From Clinical Patients and Unaffected Relatives

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Objective The pattern of abnormal resting-state brain function has been documented in schizophrenia (SCZ). However, as of yet it remains unclear whether this pattern is of genetic predisposition or related to the illness itself

Methods A systematical meta-analysis was performed to identify resting-state functional differences in probands and their high-risk first-degree relatives of schizophrenia (FDRs-SCZ) using Seed-based d Mapping software. Subsequently, spatial associations between postmortem gene expression and neurotransmitters distribution data and neural activity alterations were conducted to uncover neural mechanisms underlying FDRs-SCZ and SCZ from a multidimensional perspective

Results A total of 13 studies comprising 503 FDRs-SCZ and 605 healthy controls (HCs) and 129 studies comprising 6506 patients with SCZ and 6982 HCs were included. Compared to HCs, FDRs-SCZ displayed increased spontaneous functional activity in the bilateral anterior cingulate cortex/medial prefrontal cortex (ACC/mPFC); patients with SCZ showed decreased spontaneous functional activity in the bilateral ACC/mPFC, bilateral postcentral gyrus and right middle temporal gyrus, as well as increased spontaneous functional activity in the bilateral striatum. The altered

functional activity in FDRs-SCZ and SCZ shared similar spatial associations with genes enriched in potassium ion transmembrane transport, channel activity and complex. The FDRs-SCZ and SCZ-related brain functional patterns were additionally associated with dopaminergic, serotonergic, and cholinergic neurotransmitter distribution. SCZ-related resting-state functional, neuroimaging transcriptomes and neurotransmitters abnormalities may exist in high-risk unaffected FDRs-SCZ, rather than just in overt SCZ

Conclusion The study extended the evidence that altered brain function, along with their spatial correlations to genetics and neurotransmitter systems, may associate with genetic vulnerability for SCZ

关键词: First-degree relatives, schizophrenia, resting-state functional MRI, gene expression, neurotransmitter.

双歧杆菌干预双相障碍骨稳态的疗效及机制研究

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目的 双相障碍(Bipolar Disorder, BD)的代谢相关障碍亟待解决,其中,骨代谢相关疾病的疾病负担重但关注度不足,更缺乏相应的防治措施。本研究旨在初步评价双歧杆菌对首治双相障碍患者骨稳态的影响及其可能的相关机制。

方法 基于随机、双盲、安慰剂对照临床试验,探讨双歧杆菌三联活菌胶囊辅助治疗 BD 患者骨代谢异常的有效性和安全性。于治疗前及治疗后 4 周末、12 周末、24 周末随访受试者,收集首治未用药 BD 患者及性别年龄匹配的健康志愿者的一般资料;使用汉密尔顿抑郁量表、杨氏躁狂量表评估 BD 患者临床症状;国际体力活力问卷评估活动量;检测骨密度及骨转换生化指标以评估受试者药物治疗开始前的骨骼健康状态。分别使用重复测量的混合效应模型进行意向治疗分析和两因素重复测量的方差分析进行符合方案集分析。然后,进一步筛选基线

期既已存在低骨量的 BD 患者进行亚组分析。随后,基于高通量测序技术 RNA-seq 评估外周血单个核细胞的转录组学特征,使用 GO 富集分析探索显著差异表达基因所行使的主要生物学功能,使用 KEGG 富集分析探索显著差异表达的基因参与的主要生化代谢途径和信号转导途径;并构建过蛋白质相互作用网络,进一步了解益生菌在双相障碍骨稳态调节中的作用。

结果 共 140 名首治未用药 BD 受试者进入随机并在治疗后完成了至少 1 次的随访(双歧杆菌组 70 人,安慰剂组 70 人)。治疗后汉密尔顿抑郁量表、杨氏躁狂量表较基线均显著降低,但两组间无显著组间差异。受试者 BMD 均随时间的增加而增加,但无显著的组间差异。在治疗 12 周末、24 周末双歧杆菌组 25-OH-VD 的水平均显著高于安慰剂组($F=5.511, p=0.002$);血钙水平在模型总体上未见明显的组间差异,但在治疗 24 周末时双歧杆菌组显著高于安慰剂组。其余骨转换生化标志物均未见显著组间差异。在基线期既已存在低骨量的 BD 患者中,治疗 24 周后,双歧杆菌组股骨大转子 BMD 显著高于安慰剂组($F=4.398, p=0.039$),双歧杆菌组 25-OH-VD 的水平仍高于安慰剂组。对双歧杆菌组与安慰剂组的差异基因进行 KEGG 分析,发现差异基因主要富集于破骨细胞分化途径及 JAK-STAT 信号通路,涉及的基因主要有 SOCS1、SOCS3、LILRA5、SIRPG、JUNB 和 MITF。蛋白质互相作用网络中发现 EGF、SOCS3 和 SOCS1 处于相对核心位置。

结论 双歧杆菌可以通过促进双相障碍患者维生素 D 水平调节骨稳态,其机制可能与 JAK/STAT 通路和破骨细胞分化途径有关;治疗前存在低骨量的双相障碍患者有可能从双歧杆菌辅助治疗中获益。

关键词: 双相障碍,骨密度,骨转换生化指标,益生菌, RNA 测序

TMS-EEG 技术在双相障碍诊断治疗中的研究进展

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目的 双相情感障碍(bipolar disorder,BD)是一

种以情绪波动、认知功能损害为特征的精神疾病，其发病机制复杂且目前尚不完全清楚。传统的诊断和治疗方法存在一定的局限性。TMS (transcranial magnetic stimulation, TMS) 与 EEG (electroencephalography, EEG) 结合技术一种直接评估皮质特性的新技术。TMS-EEG 技术以其操作便捷、无创性和成本效益，它是一种可识别精神障碍生物标记的有价值工具。近年来，TMS-EEG 技术作为一种新兴的神经生理学工具，为 BD 的诊断和治疗提供了新的视角。本文系统地探讨了 TMS-EEG 技术在评估 BD 患者大脑皮层兴奋性、连接性及自然振荡频率方面的特性，并探讨了其在疾病鉴别诊断和治疗效果预测中的应用。

方法 通过在各大文献数据库 (PubMed、Google Scholar、Web of Science 等) 中查找、阅读、筛选与 TMS-EEG 技术在 BD 中的应用相关的最新及最具代表性的文献，总结 BD 患者大脑皮层兴奋性、连接性及自然频率振荡，神经网络异常的特征标志物，以及上述特征对预测治疗效果的作用。

结果 BD 患者在额叶区域自然振荡频率降低，尤其在双相抑郁期间，额叶、默认模式网络 (DMN) 和边缘系统的贝塔振荡出现异常。不同精神疾病，包括 BD、抑郁症、精神分裂症，在 TMS 刺激下的大脑皮层自然振荡频率表现出不同的变化。与精神分裂症患者相比，BD 患者的前扣带回皮层 GABA 中间神经元密度降低，而精神分裂症患者在背外侧前额叶皮层 (DLPFC) 表现出选择性皮质抑制 (CI) 缺陷。TMS-EEG 技术有助于监测患者对治疗的反应，特别是在预测治疗效果方面。GMFP

(global mean field power, GMFP) 和 LMFP (local mean field power, LMFP) 指标可以预测治疗药物的疗效，反映了治疗前后大脑活动的变化。

结论 TMS-EEG 技术为理解 BD 及其他精神疾病的神经生理学基础提供了新的视角，并在诊断、治疗及疗效预测中显示出巨大潜力。该技术揭示了不同精神疾病在神经生物学上的差异，有助于个性化治疗策略的制定。未来的研究需要进一步优化 TMS-EEG 技术的操作流程，深入研究其在不同患者群体中的适用性，并探索与其他神经影像学技术的结合潜力。

关键词：双相情感障碍，TMS-EEG，自然振荡频率，皮质兴奋/抑制，疾病鉴别诊断和疗效预测

Vitamin D3 and Bipolar Disorder: Progress in Correlative Research

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Objective The overarching goal of this review article is to present a detailed synthesis of the existing scientific literature concerning the potential correlations and interactions between vitamin D and bipolar disorder (BD). The purpose is not merely to compile existing knowledge but to critically evaluate and interpret the findings in a manner that informs and inspires future research directions. BD, a complex psychiatric condition characterized by recurrent episodes of depression and mania, represents a significant global health burden. Given the high prevalence, early onset, and comorbidity with other illnesses, there is an urgent need to identify modifiable risk factors and develop innovative therapeutic interventions. Vitamin D, an essential nutrient primarily derived from sun exposure and dietary sources, has gained attention in recent years for its potential role in various psychiatric conditions, including BD. This review aims to consolidate the current understanding of vitamin D's role in BD and to offer novel insights for researchers and clinicians alike

Methods To achieve the stated purpose, this study employs a systematic narrative review approach. A comprehensive search strategy was devised to identify relevant scientific articles published in peer-reviewed journals, encompassing original research, review articles, and meta-analyses. The search encompassed multiple electronic databases, including PubMed, Scopus, Web of Science, and Google Scholar, using a combination of keywords such as "vitamin D," "bipolar disorder," "cognition," "calcium ion channels," "inflammation," and "neuroplasticity." The search was not limited by publication date to ensure inclusivity of all relevant research. The identified articles were then screened based on pre-defined inclusion and exclusion criteria,

with a focus on studies directly investigating the relationship between vitamin D and BD. The final selection of articles was critically appraised for quality and relevance before being included in the review

Results The review findings highlight several key aspects of the relationship between vitamin D and BD. Firstly, vitamin D deficiency emerges as a significant risk factor for BD development. Several studies have reported an inverse association between serum vitamin D levels and BD prevalence, suggesting that low vitamin D status may contribute to the etiology of BD. This is corroborated by evidence suggesting that vitamin D plays a crucial role in neuronal health, differentiation, and synaptic plasticity, all of which are disrupted in BD

Secondly, vitamin D appears to modulate the severity and course of BD symptoms. Specifically, vitamin D deficiency has been linked to increased severity of manic and depressive episodes, as well as poorer treatment outcomes. Conversely, vitamin D supplementation has been shown to improve mood symptoms, cognitive function, and overall quality of life in BD patients. These effects are likely mediated through vitamin D's ability to regulate neurotransmitter synthesis, modulate immune responses, and protect against oxidative stress and inflammation.

Moreover, vitamin D's impact on BD extends to its influence on calcium metabolism and associated signaling pathways. Intracellular calcium homeostasis is critical for neuronal function, and vitamin D regulates calcium influx and efflux through various mechanisms. Dysregulation of calcium signaling has been implicated in BD pathophysiology, and vitamin D's role in maintaining calcium balance may contribute to its neuroprotective effects.

The review also highlights the potential involvement of vitamin D binding protein (DBP) in BD. DBP serves as a carrier for vitamin D in the circulation, but its role in the central nervous system remains poorly understood. Emerging evidence suggests that DBP levels are elevated in BD patients, potentially reflecting its involvement in neuroinflammatory processes and neuronal damage. Further research is needed to elucidate the specific mechanisms underlying DBP's role in BD.

We further expanded our findings by delving deeper into the correlation between vitamin D3 and bipolar disorder (BD). Our analysis revealed that lower serum levels of vitamin D3 were consistently associated with more severe manic episodes and a higher incidence of BD-related cognitive impairment. Specifically, we identified a significant negative correlation between vitamin D3 levels and scores on the Young Mania Rating Scale (YMRS), suggesting that vitamin D3 deficiency may exacerbate manic symptoms. Additionally, we observed an improvement in depressive symptoms among BD patients who received vitamin D3 supplementation in conjunction with standard treatment, as evidenced by a reduction in Hamilton Depression Rating Scale (HAM-D) scores. This improvement was more pronounced in patients with initially lower vitamin D3 levels, reinforcing the therapeutic potential of vitamin D3 in BD management. Furthermore, our data suggested a potential role of vitamin D3 in preserving neuroplasticity and cognitive function, as reflected by improved performance on neuropsychological tests among vitamin D3-supplemented patients. These results highlight the need for further research to elucidate the underlying mechanisms and optimal dosing strategies of vitamin D3 in the treatment and prevention of BD.

Conclusion In conclusion, the findings presented in this review reinforce the notion that vitamin D plays a complex and multifaceted role in BD. Vitamin D deficiency emerges as a significant risk factor for BD development and may exacerbate existing symptoms. Conversely, vitamin D supplementation shows promise as an adjunctive therapy for BD, with the potential to improve mood, cognition, and overall functioning. The mechanisms underlying these effects are likely diverse, involving vitamin D's influence on neurotransmitter synthesis, immune regulation, calcium signaling, and neuronal health

Future research in this area should prioritize the identification of the specific pathways and molecules through which vitamin D exerts its effects in BD. This will require a multidisciplinary approach, combining expertise from fields such as neurobiology, immunology, endocrinology, and psychiatry. Additionally, large-scale, well-designed clinical trials are needed to confirm the

efficacy and safety of vitamin D supplementation in BD and to establish optimal dosing regimens. Given the potential interactions between vitamin D and other treatments for BD, future studies should also explore the potential of vitamin D as an adjunctive therapy in combination with conventional medications and psychotherapies.

Furthermore, the role of DBP and other vitamin D-related proteins in BD merits further investigation. Understanding the specific functions of these proteins in the central nervous system and their potential involvement in BD pathophysiology could uncover novel therapeutic targets. Finally, research should also consider the potential influence of environmental factors, such as sun exposure and dietary habits, on vitamin D status and BD outcomes. By taking a holistic approach that integrates biological, psychological, and environmental factors, future research in this field stands to make significant contributions to the understanding and treatment of BD.

关键词: Bipolar Disorder, Vitamin D3, Cognitive Function, Calcium Signaling Pathway Neuroplasticity, Inflammatory Markers

语音识别在情感障碍辅助诊断中的研究进展

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情感障碍对人类的健康构成严重威胁,也给社会带来沉重负担,其早期识别与诊断对于提高治疗效果、改善患者生活质量具有重大意义。但是,双相情感障碍临床表现复杂,且多依赖专业医生以及患者的表述,主观性强。语音作为一种携带客观信息的生物标记物,近年来在情感障碍领域得到长足发展,为疾病的识别和辅助诊断提供了新的可能。

语音中包含声波信息,且其可从时域、频域两个方面提取特征进行分析。目前,分析语音常用的特征有过零率、频率滚降、谱熵、频谱能量、梅尔频

谱倒谱系数(MFCC)等,尤以梅尔频谱倒谱系数居多。对于语音的处理,多数研究包含去噪、端点检测、加窗等预处理,以保证提取的特征尽可能代表语音的特点。在方法上,多数研究采用机器学习或者深度学习算法训练模型,达到识别精神疾病或情绪问题的目的,如李志营等人利用类 LIGHT-SERNET 深度学习算法识别双相情感障碍患者处于何种情绪时相,达到 0.84 的准确度。蒋海华等人通过使用多种机器学习算法分析抑郁症患者与健康人的语音,得出不同性别抑郁症识别率分别为 0.80(男性)和 0.76(女性)。Rapcan 等人通过线性判别分析方法比较精神分裂患者与健康人的语音,对精神分裂症的辅助诊断识别准确率为 0.794。近年来,亦有诸多学者对语音进一步处理,提取出语音中蕴含的语义,联合分析语音与文本信息,达到对精神疾病的辅助诊断识别。如 Ying Shen 提出结合文本与语音分析的双模态抑郁识别模型,其召回率达到 0.84,精确率达到 0.62。Bo Wang 等人联合分析语音和文本数据,实现对双相情感障碍 0.733 的识别率。随着预训练模型的发展,黄祥胜等人提出使用预训练模型分析语音来辅助诊断识别抑郁症,在二分类和四分类任务上均实现精确率、召回率和 F1 分数在 0.92 以上。

语音作为一种客观的生物标记物,且其具有非侵入性、方便采集的特点,在情感障碍疾病辅助诊断识别领域具有广阔的应用前景。随着技术的不断进步以及应用的深入验证,语音技术有望成为辅助诊断情感障碍疾病的重要工具之一。

关键词: 双相情感障碍,语音,辅助诊断

Application of Machine Learning in The Study of Facial Expressions Or Speech of Patients with Bipolar Disorder: A Systematic Review

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Objective Recent advancements in machine

learning (ML) have opened up new possibilities for developing biomarkers for bipolar disorder (BD). BD is a complex medical syndrome characterized by emotional instability and has a multifactorial origin, making it challenging to diagnose and understand. ML can process and analyze vast amounts of data from various sources, such as facial expressions and speech patterns. By leveraging these abundant data, ML has the potential to significantly enhance the detection, monitoring, and comprehension of BD, offering new insights into its underlying mechanisms and improving clinical outcomes. This systematic review aims to consolidate previous research findings on the use of ML techniques for the diagnostic classification and prediction of clinical status in BD through the analysis of facial expressions or speech patterns

Methods A bibliographic search was conducted for articles published up to March 2024 that utilized ML to study BD based on facial expressions or speech in the following databases: IEEE Xplore, PubMed, Embase, Web of Science, as well as the Chinese databases Wanfang, Weipu, and China National Knowledge Infrastructure (CNKI)

Results We found 616 potential abstracts and included 52 articles in the present review. Most of the studies (43 in total) focused on diagnostic classification to distinguish BD from schizophrenia, unipolar depression, healthy controls, and other conditions, as well as to differentiate between the onset and remission phases of BD. Among these studies, 36 utilized audio or video datasets collected through fixed paradigms or interview processes for ML modeling and analysis, while the remaining studies analyzed modalities such as real-world speech or calls collected in the participants' natural environments. A total of 4 studies employed unsupervised or semi-supervised ML techniques to identify homogeneous groups of patients, while only 3 articles focused on predicting changes in clinical status by forecasting scale scores

Conclusion We concluded that due to the clinical heterogeneity of patients with BD, ML techniques offer clinicians and researchers valuable insights into diagnosis, personalized treatment, and prognosis based on subjective data like facial expressions or speech

关键词: machine learning, bipolar disorder, speech analysis, facial analysis, diagnosis

鲁拉西酮治疗双相障碍的临床优势

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目的 评价鲁拉西酮治疗双相障碍的临床优势。

方法 双相障碍抑郁发作是主要临床相, 治疗棘手, 疗效差, 容易转相。第二代新型抗精神病药物比如奥氮平等, 疗效好, 但是代谢副作用严重, 引发并发症, 影响生活质量。复习文献表明, 鲁拉西酮是美国 FDA 于 2013 年 6 月批准用于急性治疗躁双相障碍的苯并异噻唑类药物, 中国已经国产化, 临床主要用于治疗精神分裂症。目前尚未批准用于治疗双相障碍。

结果 鲁拉西酮药理学特征在于 D2、5-HT_{2A} 和 5-HT₇ 受体的高亲和力拮抗作用; α_2C 受体的中等亲和力拮抗作用; α_1A 、 α_2A 、H₁、M₁ 和 5-HT_{2C} 受体的低至非常低亲和力拮抗作用; 以及 5-HT_{1A} 的高亲和力部分激动作用。多个双盲研究结果表明, 鲁拉西酮治疗双相 I 型抑郁发作, 2-3 周开始起效。疗效与喹硫平和奥氮平-氟西汀合剂类似, 临床量表评定显示抑郁评分、躁狂评分、精神病性症状评分均明显减少, 可以有效缓解双相抑郁发作、躁狂发作和精神病性症状, 改善认知, 无转躁作用。肥胖患者可以减轻体重, 血糖或血脂水平紊乱等代谢副作用不明显。

结论 鲁拉西酮治疗双相障碍安全有效, 可以有效缓解双相抑郁发作、躁狂发作和精神病性症状, 改善认知, 无明显代谢副作用, 可作为治疗双相障碍的一线药物。

关键词: 鲁拉西酮 双相障碍 疗效 副作用

2022 年北京安定医院抑郁症治疗中心双相情感障碍抑郁相住院患者用药情况调查

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目的 双相情感障碍是指既有躁狂或轻躁狂发作, 又有抑郁发作的一种慢性复发性精神疾病。该患病率高、诊断及治疗率低、致残率高, 其诊疗情况备受关注。心境稳定剂、新型抗癫痫药物、新型抗精神病药物、抗抑郁药物广泛应用于临床, 但是目前国内外治疗指南不完全一致, 尤其是抑郁相的治疗, 不同指南间、指南与临床实践间均存在较大差异。北京安定医院抑郁症治疗中心作为国内最早、规模较大的心境障碍诊疗中心, 年均收治双相障碍患者逾1000例, 其中大部分为双相障碍抑郁相, 在北京地区具有较强的代表性。本研究旨在了解2022年北京安定医院抑郁症治疗中心双相情感障碍抑郁相住院患者精神药物使用现状, 为临床合理用药提供参考。

方法 采用自行设计的用药情况调查表对研究对象进行病例回顾性研究, 调查患者一般资料及用药情况, 包括编号、性别、具体用药品种、规格、剂量、频次等, 其中所有患者的药物剂量以出院时服药剂量为准。

结果 纳入2022年抑郁症治疗中心住院的双相情感障碍抑郁相患者955例中, 调查结果显示位居首位的药物为喹硫平(841, 88.1%), 丙戊酸盐位居第二(800, 83.8%), 碳酸锂位居第三(734, 76.9%), 第4、5名分别是奥氮平(494, 51.7%)、阿立哌唑(321, 33.6%)。几乎所有患者使用一种或两种心境稳定剂, 其中丙戊酸盐使用频率高于碳酸锂。几乎所有双相情感障碍抑郁相均使用非典型抗精神病药物, 其中使用频次前三位分别是喹硫平、奥氮平、阿立哌唑。693例患者使用抗抑郁药物, 占73.7%, 使用频率位居前三位分别是草酸艾司西酞普兰(203, 21.3%)、舍曲林(173, 18.1%)、文拉法辛(94, 9.8%)

结论 心境稳定剂及抗精神病药物广泛应用于双相抑郁患者中, 与国内外指南基本一致; 抗抑郁剂使用频率仍偏高, 本研究结果对临床用药有一定指导意义, 但较高的抗抑郁使用率提示临床工作中

需规范使用抗抑郁药物, 降低转躁风险。

关键词: 双相情感障碍抑郁发作, 心境稳定剂, 抗精神病药, 抗抑郁药

抑郁障碍和双相障碍 DSM-5 和 ICD-11 的分类混乱与对策

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目的 评价抑郁障碍和双相障碍 DSM-5 和 ICD-11 分类的混乱状况

方法 分析抑郁障碍和双相障碍 DSM 系统、ICD-11 系统的历史演化。情感障碍自 DSM-III 和 ICD-9 引入, 系统内抑郁障碍和双相障碍各个亚型归类, 反复变化, 特别是情感障碍分为抑郁障碍和双相障碍两大类型的概念和各个类型亚型; 抑郁障碍定义中“易激惹”症状就是躁狂的表现, 各个类别包含了双相障碍亚型。DSM-5 和 ICD-11 版本更为突出。DSM-5 抑郁障碍中破坏性心境失调障碍、持续性抑郁障碍、经前期烦躁障碍, ICD-11 复发性抑郁障碍、恶劣心境障碍、混合性抑郁和焦虑障碍、经前期烦躁障碍, 同样具备双相障碍特点, 而且文献表明双相障碍多数误诊为抑郁障碍, 导致病情加重, 或者是转变为混合状态, 长期不愈。

结果 抑郁障碍和双相障碍 DSM-5 和 ICD-11 概念模糊, 分类混乱, 你中有我, 我中有你, 影响治疗决策和预后。

结论 诊断是为了治疗和预后。情感障碍是一类综合征, 是一个连续变化、有不同阶段的过程, 涵盖了各种体征和症状、不同严重程度和不同疾病轨迹。患者之间, 各不相同; 患者不同疾病阶段, 表现类型可以转换。建议百科全书式的谱系分类范式逐步取代病因学结合症状学分类范式。

关键词: 双相障碍 抑郁障碍 DSM ICD 分类

Machine Learning for The Diagnosis Accu-

racy of Bipolar Disorder: A Systematic Review and Meta-Analysis

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Background Diagnosing bipolar disorder poses a challenge in clinical practice and demands a substantial time investment. Researchers are endeavoring to create AI-based diagnostic models. In this context, some researchers have sought to develop machine-learning models for bipolar disorder diagnosis. Nevertheless, the accuracy of these diagnoses remains a subject of controversy. Consequently, we conducted this systematic review to comprehensively assess the diagnostic value of machine learning in the context of bipolar disorder

Methods We searched PubMed, Embase, Cochrane, and Web of Science, with the search ending on April 1, 2023. QUADAS-2 was applied to assess the quality of the literature included. In addition, we employed a bivariate mixed-effects model for the meta-analysis

Results 18 studies were included, covering 3152 participants, including 1858 cases of bipolar disorder. 28 machine learning models were encompassed. Sensitivity and specificity in discriminating between bipolar disorder and normal individuals were 0.88 (95% CI: 0.74~0.95) and 0.89 (95% CI: 0.73~0.96) respectively, and the SROC curve was 0.94(95% CI: 0.92~0.96). The sensitivity and specificity for distinguishing between bipolar disorder and depression were 0.84 (95%CI: 0.80~0.87) and 0.82 (95%CI: 0.75~0.88) respectively. The SROC curve was 0.89 (95%CI: 0.86~0.91)

Conclusion Machine learning methods can be employed for discriminating and diagnosing bipolar disorder. However, in current research, they are predominantly utilized for binary classification tasks. Therefore, in future studies, we anticipate the development of more multi-class classification tasks to enhance the clinical applicability of these methods.

关键词: depression, bipolar disorder, machine learning, predictive model

首发未服药重度抑郁症患者决策反馈的电生理特征：一项 ERP 研究

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目的 重度抑郁障碍(MDD)的特征是大脑奖赏环路的功能障碍, 但对这种障碍的机制理解仍然难以解释。本研究旨在探索首发未服药重度抑郁症患者与健康对照之间的决策行为学及电生理特征。

方法 根据 24 项汉密尔顿抑郁量表在 2023 年 9 月至 2024 年 6 月在南京脑科医院抑郁症专病门诊入组 50 例首发未服药重度抑郁症患者, 同一时间在社区入组匹配性别、年龄及教育年限的健康对照 56 例。采用爱荷华博弈任务(Iowa gambling task, IGT)范式对被试进行行为学评估及 ERP 检测, 关注结果反馈阶段所诱发的奖励积极性(Reward Positivity, RewP)和 P300 波幅和潜伏期。此外我们还将电生理指标与抑郁症的反刍思维及自杀风险进行相关性分析。

结果 我们的研究发现抑郁症组存在决策损害, 在获益/损失情况下, 抑郁组的 RewP 均比健康对照更负性($p < 0.05$)。结果表明相比于健康对照, 抑郁组对负性的反馈更敏感, 对正性的反馈更迟钝。对于 P300 波幅, 相比于健康对照, 抑郁患者 P300 波幅更小($p < 0.05$)。此外, RewP 与自杀风险及反刍思维存在相关性。

结论 综上所述, RewP 可能是抑郁反刍思维和自杀风险的敏感探针, 对治疗和未来的事件相关电位研究的意义进行了讨论。

关键词: 事件相关电位; 爱荷华博弈; 重症抑郁症; RewP

伴非自杀性自伤成年早期抑郁症患者自发脑活动的局部一致性改变

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目的 近年来, 伴非自杀性自伤 (non-suicidal self-injury, NSSI) 抑郁症的研究受到了广泛重视。NSSI 被认为是预测自杀的因子之一, 是一种常见的抑郁症伴随症状。伴 NSSI 抑郁症患者的治疗效果更差, 自杀风险更高, 更易复发且预后更差。但伴 NSSI 抑郁症的神经机制尚不明确。局部一致性 (ReHo) 是衡量脑区内局部神经元活动同步性的重要指标, 已被用于研究多种精神疾病的神经机制。本研究旨在探讨 MDD 伴 NSSI 患者的 ReHo 变化及其与自伤频率的关系, 从而为理解 NSSI 行为的神经生物学基础提供新的视角。

方法 本研究招募了南京脑科医院精神科从 2017 年 7 月至 2019 年 12 月入院的 18-30 岁的抑郁症患者。根据是否伴有 NSSI, 抑郁症患者被分成伴 NSSI 的抑郁症组 (MDD/NSSI), 和不伴 NSSI 的抑郁症组 (sMDD)。一共纳入 54 名 MDD/NSSI 患者和 68 名 sMDD 患者及 66 名年龄、性别、受教育年限匹配的健康被试。所有参与者均接受了静息态功能磁共振成像 (rsfMRI) 扫描。预处理后进行 ReHo 分析, 使用基于 Kendall's coefficient of concordance (KCC) 的方法, 测量每个体素与其邻近体素之间的同步性。在 DPABI 软件中进行 ReHo 计算, 并在 SPM12 中进行统计分析。首先使用方差分析 (ANOVA) 比较三组被试间的 ReHo 差异, 并使用 GRF 方法进行多重比较校正 (单个体素 $p < 0.001$, 连续体素 ≥ 50)。然后进行事后检验 (post-hoc T 检验) 对三组进行两两比较。最后, 采用 Pearson 相关分析评估 ReHo 值与自伤频率之间的关系。

结果 与 sMDD 组相比, MDD/NSSI 患者在右侧额上回 (SFG)、右侧中颞回 (MTG) 和左侧中枕回 (MOG) 的 ReHo 值显著降低 ($p < 0.05$)。右侧 SFG 的 ReHo 值与最近自伤次数呈显著正相关 ($r = 0.28$, $p < 0.05$), 表明右侧 SFG 区域的功能异常可能是评估自伤频率的重要生理标志。

结论 MDD 伴 NSSI 患者的右侧 SFG 区域 ReHo 值的降低与自伤频率密切相关。该研究揭示了 NSSI 行为的神经生物学基础, 提示右侧 SFG 区域的局部一致性异常可作为 NSSI 频率评估的重要指

标, 为未来的临床干预和自伤行为管理提供了新思路。

关键词: 非自杀性自伤; 重性抑郁障碍; 局部一致性; rsfMRI

The Correlation between Social Jetlag and Depression Differs in Depressive and Healthy Individual

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Objective Sleep and circadian rhythm disruption indicators (SCRDI, i.e. chronotype, SJL, sleep quality) being associated with a high risk of incident depression, the underlying mechanisms behind this relationship remain unexplored

Methods A total ninety-seven patients and one hundred and four healthy individuals were enrolled for the study. Participants completed self-reported questionnaire including the Beck Depression Inventory (BDI), the Morningness-Eveningness Questionnaire (MEQ), the Munich Chronotype Questionnaire (MCTQ), the Pittsburgh Sleep Quality Index (PSQI). Partial correlation analyses were conducted between BDI, chronotype, social jetlag, averaged daily light exposure, and sleep quality for depressive and healthy individuals, respectively. To control for multiple comparisons, the False Discovery Rate (FDR) was applied. the correlations between BDI and other variables were compared between DE and HC group utilizing the "co-

cor” package in R, to investigate whether these correlations differ according to the disease status. Fisher's z-test and Zou's confidence interval were applied to determine whether the difference in correlations is statistically significant

Results In DE group, BDI had significantly positive correlations with PSQI ($r = 0.47, q < 0.001$), SR ($r = 0.40, q < 0.001$). In HC group, on the other hand, BDI was significantly correlated with MEQ ($r = -0.26, q = 0.028$), SJL ($r = 0.39, q < 0.001$), PSQI ($r = 0.34, q = 0.002$). The comparison of partial correlations between the DE and HC groups revealed several significant differences. For instance, the correlation between BDI and SJL was significantly different between groups ($P = 0.013, CI: -0.589, -0.072$), with the DE group showing a weaker positive correlation ($r = 0.05$) compared to HC group ($r = 0.39$)

Conclusion Findings from our correlation analyses confirm that the relationship between social jetlag and depressive symptoms differs between patients and healthy controls. The difference of correlation may imply a potential psychological mechanism of circadian rhythm disruption and depression

关键词: Major depressive disorders, chronotype, social jetlag, sleep quality.

Repetitive Transcranial Magnetic Stimulation Treatment for Bipolar Disorder

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Objective Bipolar disorder (BD) is a common and serious psychiatric disorder characterized by recurrent changes in mood and behavior. Traditional pharmacological treatments are often limited by issues of patient adherence, highlighting the urgent need for new therapeutic approaches to improve patients' quality of life. Therefore, this review aims to explore the efficacy, safety, and adverse effects of different repetitive transcranial magnetic stimulation (rTMS) protocols (stimu-

lation parameters, frequencies, target selection) in patients with bipolar depressive episodes, manic episodes, and mixed episodes

Methods This review selected relevant literature from major databases including PubMed, Web of Science, PsycINFO, and Cochrane Library by using keyword combinations. The search was limited to studies published between 2003 and 2023. Inclusion criteria comprised all randomized controlled trials, meta-analyses, and systematic reviews investigating rTMS treatment for BD. Exclusion criteria included animal studies, case reports, and non-English literature. Data extraction focused on basic study information, sample characteristics, rTMS treatment parameters, treatment outcomes, and adverse effects

Results rTMS has been shown to be a safe and effective treatment for BD. For bipolar depressive episodes, patients in the rTMS group had significantly better depression scores and remission rates compared to the sham control group. Regarding target selection and frequencies, low-frequency stimulation of the right dorsolateral prefrontal cortex (DLPFC) and high-frequency stimulation of the left DLPFC both demonstrated good efficacy with a lower risk of inducing mania/hypomania. For bipolar manic episodes, high-frequency stimulation of the right DLPFC showed better efficacy, while high-frequency stimulation of the left DLPFC might exacerbate manic symptoms. Although research on rTMS for mixed episodes of BD is limited, preliminary results indicate that low-frequency stimulation of the right DLPFC has the potential to improve both depressive and manic symptoms in mixed states

Conclusion As a non-invasive, non-pharmacological, and safe physical treatment, rTMS has shown significant advantages in the clinical treatment of BD, particularly in managing bipolar depressive episodes. Extensive research has demonstrated its good efficacy and low incidence of adverse effects. For bipolar manic episodes, high-frequency stimulation of the right DLPFC may be an effective treatment strategy. However, more randomized controlled trials are needed to further evaluate the efficacy of rTMS in treating mixed episodes of BD. Overall, rTMS has the potential to be a promising adjunctive treatment for BD

关键词: bipolar disorder, repetitive transcranial magnetic stimulation, depressive episodes, manic episodes, mixed episodes

单双相抑郁症反应抑制相关神经振荡瞬时特征的共性与差异: 一项脑磁图研究

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目的 反应抑制障碍是双相抑郁和单相抑郁共有的认知损伤,与预后密切相关。目前,反应抑制损害背后的神经机制尚不清楚。借助高时间分辨率脑磁图技术,本研究探索与反应抑制损害相关的神经环路改变在双相抑郁和单相抑郁中的共性和差异,以及神经振荡瞬时特征是否可以作为双相抑郁的早期生物标志物。

方法 共计纳入 130 名在 2010 至 2019 年间于南京医科大学附属脑科医院心境障碍科住院的单相抑郁患者。在随访中,有 35 名患者经历躁狂或轻躁狂发作,并修改诊断为双相抑郁,归为转相组。此外,招募性别、年龄和受教育年限与之匹配的健康人和双相抑郁患者各 35 名。所有参与者均接受了 Go/No-go 任务下的脑磁图扫描和结构磁共振扫描。采用溯源分析方法提取右额下回和左侧运动皮层的虚拟时间序列。通过机器学习得出最优的爆发阈值。基于虚拟时间序列,利用最优阈值,分别提取脑区内 beta 振荡的爆发率、爆发时间、爆发频段、爆发能量、爆发体积等局部特征。最后,计算脑区间 beta 爆发的 Jaccard 系数和相对锁相值,评估长程协同性。

结果 双相抑郁患者的右额下回 beta 爆发率、爆发能量和爆发体积均降低,而右额下回与左侧运动皮层之间的 Jaccard 系数无改变。单相抑郁患者右额下回与左侧运动皮层之间的 Jaccard 系数减小,而右额下回局部振荡特征无异常。转相组的局部和长程神经振荡瞬时均介于单相组和双相组之间,且与单相组存在差异。在发生 beta 爆发的试次中,运动皮层 beta 爆发率上调,组间无差异,这表明右额下回一旦触发抑制,患者可完成反应抑制过程。相较于未发生 beta 爆发的试次,发生 beta 爆发的试次中相对锁相值增加,组间无差异,进一步提示右额下

回 beta 爆发驱动脑区长程交流。

结论 前额叶控制网络长程协同性降低是单相抑郁反应抑制损害的特征,而右额下回的局部异常活动在双相抑郁中更为明显。我们的研究表明,反应抑制期间的局部和大尺度瞬时神经振荡可以作为双相抑郁早期识别的生物标志物。

关键词: 脑磁图; 双相情感障碍; 抑郁症; 早期识别; 瞬时神经振荡

伴睡眠障碍抑郁症患者抑郁症状的网络分析

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目的 抑郁症是全球致残的主要原因。除了典型的情绪症状外,高达 90%的抑郁症患者会表现出不同程度的睡眠症状。因此,本研究通过对伴睡眠障碍抑郁症患者的抑郁症状进行网络分析,以期进一步了解伴睡眠障碍抑郁症患者的症状特征,开发更有针对性和更有效的治疗方法。

方法 采用 17 项汉密尔顿抑郁量表,匹兹堡睡眠指数量表分别测量抑郁症患者的抑郁症状和睡眠症状。采用基于 R 4.4.1 的“qgraph”程序包、“plot”程序包及“bootnet”程序包评估抑郁症状及睡眠症状的网络结构、症状中心性和结果稳健性。最后,进行网络比较测试来检验网络特征是否因性别而异。

结果 共有 358 名抑郁症患者的问卷被回收,其中,82.4%抑郁症患者存在睡眠障碍(PSQI \geq 7 分)。因此,295 名伴失眠障碍抑郁症患者进入最终的网络分析,网络分析和多维尺度分析发现,“抑郁情绪”是这些伴睡眠障碍的抑郁症患者网络结构中的最核心症状,其强度、接近中心性和中介中心性均为最强。其中几组抑郁症状彼此密切相关,包括“睡眠不深-早醒”;“抑郁情绪-自杀”;“工作和兴趣-迟缓”。此外,性别对网络特征没有影响($p = 0.072$)。

结论 睡眠障碍在抑郁症患者中非常普遍。同时,抑郁情绪作为伴睡眠障碍的抑郁症患者的核心症状与自杀密切相关,这需要引起临床医生及科研人员的重视,应当及时有效的控制患者抑郁情绪。

关键词: 抑郁症; 睡眠障碍; 网络分析; 抑郁症状。

单双相抑郁症负性情绪处理相关神经振荡瞬时特征的共性与差异：一项脑磁图研究

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目的 情绪处理异常是双相抑郁和单相抑郁共有的特征。腹外侧前额叶和杏仁核是情绪处理神经环路的核心组成部分，这些区域的功能失调既是情感障碍的重要神经病理基础。受限于既往神经影像学研究较低的时间分辨率，情感障碍情绪处理异常相关的神经机制尚不清楚。本研究利用先进的脑磁图技术，旨在探索与负性情绪处理相关的神经环路改变在双相抑郁和单相抑郁中的共性和差异，以及神经振荡瞬时特征是否可以作为双相抑郁的早期生物标志物。

方法 共计纳入 130 名在 2010 至 2019 年间于南京医科大学附属脑科医院心境障碍科住院的单相抑郁患者。在随访中，有 35 名患者经历躁狂或轻躁狂发作，并修改诊断为双相抑郁，归为转相组。此外，招募性别、年龄和受教育年限与之匹配的健康人和双相抑郁患者各 35 名。所有参与者均接受了负性面孔识别任务下的脑磁图扫描和结构磁共振扫描。采用溯源分析方法提取腹外侧前额叶和杏仁核的虚拟时间序列。通过机器学习得出最优的爆发阈值。基于虚拟时间序列，利用最优阈值，提取脑区内 beta 振荡的爆发率和爆发体积等局部动态特征。最后，计算脑区间 beta 爆发的 Jaccard 系数，评估长程动态协同性。

结果 相较于单相和健康对照组，双相和转相组患者的腹外侧前额叶 beta 爆发率和爆发体积降低。三个患者组腹外侧前额叶与之间的 Jaccard 系数下降，且双相和转相组比单相组降低更明显。在腹外侧前额叶发生 beta 爆发的试次中，杏仁核皮层 beta 爆发率上调，但双相和转相组患者上调较小。这表明，即使腹外侧前额叶启动对杏仁核的抑制，双相和转相组患者仍无法较好抑制负性情绪。

结论 情绪调节网络长程协同性降低是单相和双相抑郁的共性，而腹外侧前额叶局部异常活动是双相抑郁的特性。我们的研究表明，负性情绪

处理过程中的局部和大尺度瞬时神经振荡可以作为双相抑郁早期识别的生物标志物。

关键词：脑磁图；双相情感障碍；抑郁症；瞬时神经振荡

双相情感障碍未患病一级亲属负性情绪处理相关神经振荡瞬时模式

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目的 双相情感障碍是一种遗传性很高的家族聚集性疾病。双相情感障碍未患病一级亲属可能在发病前已表现出脑部异常。腹外侧前额叶结构与功能改变是双相情感障碍重复性最高的神经影像特征。我们的前期工作中已发现腹外侧前额叶 beta 振荡在双相情感障碍中的独特作用。最近的文献表明，神经振荡是由瞬变的爆发事件驱动，而平均频谱能量掩盖了 beta 活动的瞬时、突发性特征。鉴于腹外侧前额叶在调节情绪的重要作用，本研究借助先进的脑磁图技术，结合负性面孔识别任务，进一步探索双相情感障碍遗传高危人群神经振荡瞬时特征，阐明双相情感障碍遗传风险的神经机制。

方法 共计纳入 22 名在 2010 至 2020 年间于南京医科大学附属脑科医院心境障碍科住院的双相情感障碍患者的未患病一级亲属。此外，于社区招募性别、年龄和受教育年限与之匹配的健康人 22 名。所有参与者均接受了负性面孔识别任务下的脑磁图扫描和结构磁共振扫描。采用溯源分析方法提取腹外侧前额叶和杏仁核的虚拟时间序列。通过机器学习得出最优的爆发阈值。基于虚拟时间序列，利用最优阈值，提取脑区内 beta 振荡的爆发率和爆发体积等局部动态特征。最后，计算脑区间 beta 爆发的 Jaccard 系数，评估长程动态协同性。

结果 与健康对照组相比，双相情感障碍患者的未患病一级亲属的腹外侧前额叶 beta 爆发次数和爆发体积减少。在腹外侧前额叶发生 beta 爆发的试次中，一级亲属杏仁核 beta 爆发率仍可上调，但程度比健康对照低。这表明腹外侧前额叶即使启动对负性情绪的抑制，仍无法较好抑制边缘脑区的激活。另一方面，一级亲属腹外侧前额叶和杏仁核之间的

Jaccard 系数下降, 进一步验证了一级亲属脑区长程协同性降低。

结论 我们的发现提示, 腹外侧前额叶 beta 爆发的局部和长程特征是双相情感障碍遗传风险超早期可识别的潜在标志物之一。本研究进一步阐明腹外侧前额叶在双相情感障碍遗传风险中的作用, 并指导识别高危个体进行初级预防。

关键词: 脑磁图; 双相情感障碍; beta 爆发; 遗传高危

伴睡眠障碍抑郁症患者的系统炎症和全脑形态学指标研究

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目的 睡眠障碍是一个抑郁症的显著特征, 并且其严重程度与抑郁症的整体病情紧密相关。研究表明, 伴或不伴睡眠障碍的重度抑郁症可能与机体不同的炎症状态紧密相关, 并伴随着独特的脑形态学改变。本研究旨在探讨伴睡眠障碍的抑郁症患者中系统炎症和全脑形态特征。

方法 本研究招募了南京脑科医院精神科从 2020 年 7 月至 2024 年 6 月入院的 15-55 岁的抑郁症患者。通过匹兹堡睡眠质量问卷筛选出 75 例伴有睡眠障碍、144 例不伴睡眠障碍的重度抑郁症患者和年龄、性别匹配的 112 例健康对照。对入组被试进行脑磁共振成像扫描, 将采集的 T1 数据预处理后, 使用 FreeSurfer 软件计算了包括皮层厚度、体积、表面积在内的全脑结构形态学指标, 以及皮质内髓鞘相关指标——灰白质对比度 (GWC)。

结果 重度抑郁症患者与健康对照在多个炎症指标上存在显著差异, 包括中性粒细胞绝对值、单核细胞绝对值、NIR、MLR、SII 和 PIV。在脑结构形态学方面, 重度抑郁症患者有更小的左侧颞上回后部、额下回三角部的体积, 左侧额下回三角部的表面积, 以及左右侧额叶、左右侧内侧眶额、左侧左额下回眶部、左右侧额中回的 GWC 值更低 ($p < 0.05$, FDR 矫正)。进一步对比伴或不伴睡眠障碍的

重度抑郁症患者, 发现两者在系统炎症指标上并未表现出明显的差异。然而, 在脑形态学方面, 伴有睡眠障碍的重度抑郁症患者的右侧中央前回皮质厚度相对较小 (未经过 FDR 矫正), 但其 GWC 值并未显示出显著差异。

结论 尽管伴有或不伴有睡眠障碍的重度抑郁症患者在系统炎症和脑形态学方面可能存在一定的联系, 但本研究的结果并未显示出两者在这些方面的显著差异。这提示我们, 这两种类型的抑郁症患者之间的差异机制可能更为复杂, 需要进一步的研究来深入探讨。

关键词: 睡眠障碍; 抑郁症; 脑形态学; 系统炎症

Analysis of The Mediating Effect of The Central Cortical Complex of The Amygdala in The Influence of Childhood Trauma on Depressive Status in Bipolar Patients

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Objective Patients with bipolar disorder (BD) are often associated with childhood trauma, and amygdala subregion volumes have varying sensitivities to such trauma. However, the role of these volumes in the relationship between childhood trauma and depressive symptoms in BD patients remains unclear. This study aimed to explore the relationship between childhood trauma and amygdala subregion volume abnormalities in BD depressive symptoms

Methods A total of 112 patients in the depressive phase of BD and 62 healthy controls were recruited. Head magnetic resonance T1 images were collected, and amygdala subregion volumes were segmented using

FreeSurfer. Analysis of covariance (ANCOVA) was employed, with age and gender as covariates, to compare volume differences between groups. General linear regression modeling was used to explore the relationship between childhood trauma, amygdala subregion volume, and depression severity

Results The volumes of the right side of the amygdala central nucleus, bilateral medial nucleus, bilateral cortex, the right side of the central complex of the cortex were reduced in the BD group with childhood trauma compared to healthy controls. No significant differences in amygdala subregion volumes were observed between the BD group without childhood trauma and healthy controls. Within the BD group exposed to childhood trauma, the volumes of the bilateral basal nucleus, right central nucleus, right medial nucleus, bilateral cortical nucleus, right central cortical complex were reduced compared to those without childhood trauma. Notably, the reduction in the right central complex of the cortex subregion volume partially mediated the relationship between the Childhood Trauma Questionnaire (CTQ) total score and depression severity in BD patients

Conclusion Childhood trauma can lead to atrophy in right amygdala central nucleus, bilateral medial nucleus, bilateral cortex, the right side of the central complex of the cortex in BD patients. Among these, the reduction in right central complex of the cortex volume plays a partial mediating role in the indirect effect between childhood trauma and depression severity

关键词: bipolar disorder; amygdala subregions; childhood trauma; mediation analysis

伴非自杀性自伤成年早期抑郁症患者自发脑活动的比率低频振幅改变

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目的 近年来, 伴非自杀性自伤 (non-suicidal self-injury, NSSI) 抑郁症的研究受到了广泛重视。NSSI 被认为是预测自杀的因子之一, 是一种常见的抑郁症伴随症状。伴 NSSI 抑郁症患者的治疗效果更差, 自杀风险更高, 更易复发且预后更差。但伴 NSSI 抑郁症的神经机制尚不明确。静息态功能磁共振成像 (rsfMRI) 作为一种无创性脑成像技术, 已被广泛用于研究精神疾病的神经机制。本研究旨在通过分析比率低频振幅 (fALFF) 指标, 探讨 MDD 伴 NSSI 患者的脑功能异常及其与自伤严重程度之间的关系。

方法 本研究招募了南京脑科医院精神科从 2017 年 7 月至 2019 年 12 月入院的 18-30 岁的抑郁症患者。根据是否伴有 NSSI, 抑郁症患者被分成伴 NSSI 的抑郁症组 (MDD/NSSI), 和不伴 NSSI 的抑郁症组 (sMDD)。一共纳入 54 名 MDD/NSSI 患者和 68 名 sMDD 患者及 66 名年龄、性别、受教育年限匹配的健康被试。所有参与者均接受了静息态功能磁共振成像 (rsfMRI) 扫描。数据预处理后进行 fALFF 分析, 计算使用基于 AFNI 的分析方法, 测量每个体素在 0.01-0.08 Hz 频段内的低频波动幅度分数。在 DPABI 软件中进行 fALFF 计算, 并在 SPM12 中进行统计分析。首先使用方差分析 (ANOVA) 比较三组被试间的 fALFF 差异, 并使用 GRF 方法进行多重比较校正 (单个体素 $p < 0.001$, 连续体素 ≥ 50)。然后进行事后检验 (post-hoc T 检验) 对三组进行两两比较。最后, 采用 Pearson 相关分析评估 fALFF 值与自伤严重程度之间的关系。

结果 与 sMDD 组相比, MDD/NSSI 患者在右侧额上回 (SFG) 和右侧顶下小叶 (IPL) 的 fALFF 值显著降低 ($p < 0.05$)。右侧 SFG 的 fALFF 值与自伤严重程度呈显著负相关 ($r = -0.35$, $p < 0.01$), 表明右侧 SFG 区域的功能异常可能是评估自伤严重程度的重要生理标志。

结论 MDD/NSSI 患者的右侧 SFG 区域 fALFF 值的降低与自伤严重程度密切相关。该研究为理解 MDD 共病 NSSI 的神经机制提供了新的视角, 并有助于自伤严重程度的评估和预防自伤行为。

关键词: 非自杀性自伤; 重性抑郁障碍; 低频振幅; rsfMRI

基于 freesurfer 杏仁核亚区分割探索童年创伤对抑郁症患者杏仁核亚区的影响

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目的 既往研究发现童年创伤可导致抑郁症患者出现杏仁核体积减少等边缘结构异常。杏仁核作为情绪处理的关键脑区, 其结构和功能异常与抑郁症的发病密切相关。目前尚无研究探索童年创伤对杏仁核亚区体积的影响。本研究将杏仁核分割为左右共 18 个亚区, 探索童年创伤对杏仁核亚区体积的影响。旨在细致理解童年创伤如何影响抑郁症患者的杏仁核结构, 从而为抑郁症的诊断和治疗提供新的视角和策略。

方法 本研究对象纳入了 129 抑郁症患者和 81 例健康对照。使用儿童期创伤问卷 (Childhood Trauma Questionnaire, CTQ): 用于评定受试者 16 周岁之前的创伤经历。此问卷共 28 个条目, 包括情感虐待、躯体虐待、性虐待、情感忽视、躯体忽视 5 个分量表。在 16 岁之前至少经历过 1 种及以上童年创伤类型即为中重度伴童年创伤组, 不伴童年创伤组和对照组无中重度童年创伤。据此, 本研究的 129 例抑郁症患者根据以上分组标准分为 60 例伴有童年创伤的抑郁症患者组、69 例不伴有童年创伤抑郁症患者组。采集所有的被试的 T1 加权 MRI 扫描数据, 并使用 FreeSurfer 对杏仁核自动分割亚区体积, 这些亚区包括外侧核、基底核、中央核、内侧核、皮质核、副基底核、层旁核、皮层-杏仁核移行区、杏仁核前区。所有杏仁核亚区体积均使用广义线性模型, 以组别为预测因子。考虑年龄对杏仁核体积的非线性影响, 对年龄的线性和二次正交多项式进行了调整, 另外加入颅内总体积进行了调整。使用 *fdr* 对广义线性模型的结果进行多重比较校正。

结果 伴童年创伤抑郁症患者与不伴童年创伤抑郁症患者相比, 右侧外侧核($t=2.873, p=0.0346$)、右侧中央核($t=3.041, p=0.0239$)和右侧层旁核($t=2.715, p=0.0486$)体积显著减少。不伴童年创伤抑郁症患者与健康对照组比, 右侧中央核($t=4.059, p=0.0019$)、双侧内侧核($t=3.484, p=0.0109; t=4.672,$

$p=0.0003$)的体积显著增大, 双侧层旁核($t=3.217, p=0.0204; t=3.073, p=0.0239$)的和体积显著减少。然而伴童年创伤抑郁症患者与健康对照组体积上无显著差异($p>0.05$)。

结论 本研究发现童年创伤可使得抑郁症患者的右侧外侧核、右侧中央核和右侧层旁核体积显著减少。此外, 不伴童年创伤的抑郁症患者在多个亚区体积上与健康对照组有显著差异, 突出了抑郁症本身对杏仁核结构的影响。故在评估和治疗抑郁症时, 需要充分考虑患者的童年创伤经历, 以制定更为个性化和有效的治疗方案。

关键词: 抑郁症; 童年创伤; 杏仁核亚区体积; FreeSurfer 皮层下亚区分割; 结构 MRI

伴童年创伤抑郁症患者负性情绪处理相关神经振荡模式

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目的 伴童年创伤的重性抑郁障碍有着极高的自杀率。内侧前额叶和杏仁核是情绪处理神经环路的核心组成部分, 这些区域的功能失调既是童年创伤潜在后果, 又是重性抑郁障碍的重要神经病理基础, 还是自杀行为的关键机制。受限于既往神经影像学研究较低的时间分辨率, 伴童年创伤重性抑郁障碍患者情绪处理异常背后的神经机制尚不清晰。本研究利用先进的脑磁图技术, 旨在探索伴童年创伤抑郁症患者情绪处理相关的神经振荡模式及其与自杀行为的关系。

方法 本研究共招募了 88 名被诊断为重性抑郁障碍的住院患者, 其中 44 名有童年创伤史。此外, 于社区招募性别、年龄和受教育年限与之匹配的健康人 44 名。所有参与者都接受了负性情绪识别任务下的脑磁图扫描和结构磁共振扫描。在溯源分析的基础上, 比较三组在内侧前额叶和杏仁核 *theta* 频段能量和试次间相位一致性。然后, 我们使用格兰杰因果模型来检测脑区间的方向性连接。最后, 探索性分析神经生理学指标是否是童年创伤与自杀未遂之间的中介因素。

结果 与健康对照相比, 重性抑郁障碍患者在

在内侧前额叶和杏仁核 θ 频段能量和试次间相位一致性均降低。其中, 伴童年创伤的重性抑郁障碍患者比无童年创伤的患者降低更明显。重性抑郁障碍患者右侧杏仁核到内侧前额叶的效能连接下降, 而伴童年创伤的重性抑郁障碍患者从左侧内侧前额叶到杏仁核的效能连接进一步降低。此外, 童年创伤可通过左侧内侧前额叶的 θ 试次间相位一致性的下降影响自杀未遂。

结论 从局部角度, 童年创伤会影响重性抑郁障碍患者负性情绪处理时内侧前额叶和杏仁核 θ 频段活动。从长程角度, 伴童年创伤的重性抑郁障碍前额叶对边缘脑区自上而下的调控和自下而上的反馈均降低。我们的结果进一步揭示了伴童年创伤抑郁症患者高自杀率背后的神经基础。

关键词: 脑磁图; 重性抑郁障碍; 童年创伤; 自杀未遂

Common and Unique Alterations of Functional Connectivity and Topology Properties in Unipolar Disorder and Bipolar Disorder

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Objective Unipolar disorder (UD) and bipolar disorder (BD) are supposed to be whole-brain diseases with some shared clinical and neuropathology characteristics. It is important to study the neural mechanisms that distinguish between the two diseases. This study aims to explore the different neural mechanisms of functional connectivity and topology properties between BD and UD

Methods In this study, 265 patients with UD, 181 patients with BD, and 204 healthy controls completed Hamilton Depression Scale (HAMD) assessment and resting-state functional magnetic resonance imaging (rfMRI) scans. Functional connectivity of BD, UD and HC were compared. On the basis of the network alterations shared by BD and UD, the topological pattern of the two groups were analysed

Results Both BD and UD showed decreased FC in the whole-brain, mainly involving VN, SMN and DMN. Topological attribute analyses are carried out on nodes of SMN, DMN and VN. Results suggesting that both BD ($t=-2.093$, $p=0.037$) and UD ($t=-2.406$, $p=0.017$) showed a decrease in Cp. While only the BD group showed a decrease in Lp ($t = -2.888$, $p = 0.004$) and an increase in Eglob ($t = 3.402$, $p < 0.001$)

Conclusion Our findings suggest that both BD and UD are disease with a wide range abnormal brain networks, mainly associated with VN, SMN and DMN. Unique topological characteristics alterations were only found in BD, which may provide possible characteristic markers to distinguish the two disorders

关键词: bipolar disorder; unipolar disorder; functional connectivity; topology property

右侧楔前叶的动态功能活动在抑郁症患者自杀意念及行为的改变

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目的 自杀死亡是抑郁症(MDD)最严重的结局, 预防抑郁症自杀的一个重要途径是了解从自杀意念(SI)到高度致命的自杀行为的神经生物学过程。本研究旨在探索抑郁症患者自杀意念及自杀行为不同的神经基础。

方法 在本研究中, 499例MDD患者(87例无自杀意念(NSI)患者、327例SI患者、69例自杀未遂(SA)患者)和247名健康对照者完成汉密

尔顿抑郁量表(HAMD)评估和静息状态功能磁共振成像(rfMRI)扫描。采用滑动窗分析测量四组患者动态局部一致性(dReHo)。

结果 与HC组相比, NSI和SI组均在右侧梭状回(FFG.R)、右侧眶部额下回(ORBinf.R)、右侧三角部额下回(IFGoperc.R)、右侧前扣带(ACG.R)、右内侧额上回(SFGmed.R)、右侧楔前叶(PCUN.R)和右侧额中回(MFG.R)的dReHo值降低,不同的是NSI组在左侧脑岛dReHo降低,而SI组在右侧脑岛(INS.R)及右侧颞中回(MTG.R)的dReHo值降低。NSI与SI组对比,差异无统计学意义($p < 0.05$, GRF校正)。SA组与HC组相比,在右侧壳核(PUT.R)、INS.R、左侧壳核(PUT.L)、ACC.R、SFGmed.R和MFG.R的dReHo值降低,而在PCUN.R的dReHo值升高,同样,SA组与NSI及SI组对比,在PCUN.R的dReHo值均升高($p < 0.05$, GRF校正)。也就是说NSI及SI组在PCUN.R具有更低的dReHo值,而SA组在PCUN.R具有更高的dReHo值。

结论 研究发现NSI及SI组动态功能活动改变相似,而与SA组表现不同,右侧PCUN的dReHo活动在NSI和SI组降低,而在SA组表现为升高,右侧PCUN的dReHo升高可能是SA组独特的神经活动改变。

关键词: 抑郁症,自杀意念,自杀行为,动态局部一致性

精神性焦虑水平在抑郁症患者执行功能损害中的作用研究

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目的 认知功能损害是抑郁症的主要表现之一,焦虑与抑郁症认知损害密切相关,然而,不同的焦虑维度在认知损害中起到作用还不清楚。本研究旨在探究精神性焦虑和躯体性焦虑在认知的各个维度中起到的作用。

方法 本研究招募了245名抑郁症(MDD)患者以及性别、年龄、受教育年限相匹配的105健康(HC)被试,对其进行认知的四个维度的测试:连

线测试A(TMT-A)、连线测试B(TMT-B)、数字广度测试(DSB)、威斯康辛卡片分类测试(WCST)、语言流利性测试(VFT)衡量执行功能,连线测试A(TMT-A)衡量注意力,Wechsler记忆量表修订版(WMS-R)的逻辑记忆(LM)和图形记忆(FM)用来衡量记忆,数字符号替换测试(DSST)来衡量处理速度。所有的抑郁症患者均完成HAMD-17以及HAMA的评估,MDD的HAMD-17的得分均大于17分。采用独立样本t检验和Pearson偏相关分析进行统计。

结果 MDD与HC相比,在认知的执行功能、注意力、记忆、处理速度等方面都发现有明显损害(p 均 < 0.05),在MDD组中,HAMA躯体性焦虑的水平与认知功能的各个维度均没有显著的相关性,但是HAMA精神性焦虑水平与VFT得分呈显著的负相关($r = -0.139$, $p = 0.029$),即使控制了HAMD-17得分负相关关系依旧显著($r = -0.139$, $p = 0.030$)。

结论 我们的结果表明抑郁症会损害病人认知的各个维度,而且病人的精神性焦虑的水平越高执行功能就越差且不受疾病的严重程度的影响。

关键词: 精神性焦虑;躯体性焦虑;认知功能;执行功能;处理速度;记忆;注意力

抑郁症患者反应抑制相关的 theta 振荡功能连接分析

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目的 反应抑制功能的损害在抑郁症(MDD)患者中非常普遍,而且在缓解后仍会出现持续性损害,但是反应抑制相关theta振荡的时空神经活动尚不清楚。本研究旨在探究MDD反应抑制相关theta振荡在反应抑制的各个时间窗内的功能连接差异。

方法 我们招募了MDD被试和健康(HC)被试各35人,在Go/no-go任务下采集脑磁图(MEG)数据。分析No-go刺激出现后0-200ms、200-400ms、400-600ms两组theta(4-8Hz)振荡功能连接(FC)的差异,最后分析FC与HAMD-17之间的相关性。

结果 MDD组与健康对照相比,在no-go出现

后的 0-200ms 中右丘脑(THA.R)到右颞下回(ITG.R)的功能连接增强, 200-400ms 中发现右内侧额上回(SFGmed.R)到右海马(HIP.R)的功能连接减弱, 在 400-600ms 中发现左回直肌(REC.L)到右颞横回(HES.R)的功能连接增强, 左眶内额上回(ORBsupmed.L)到右楔叶(CUN.R)的功能连接减弱(p 均 < 0.003 , 通过 Bonferroni 校正)。且有差异的结果与 HAMD-17 均无相关性。

结论 我们的研究表明 MDD 患者在反应抑制相关的 theta 振荡上表现出异常的时空相互作用, 且与疾病的严重程度无关。这些发现对于理解 MDD 的病理生理学机制具有重要意义, 可能为抑郁症的治疗和预后提供理论依据。

关键词: 抑郁症; 反应抑制; theta 振荡; 脑磁图

抑郁症转相者在识别正性情绪面孔时前额叶—纹状体通路 high-gamma 频段效能连接差异

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目的 双相障碍患者抑郁发作时间占总病程时间长, 且多数患者首次疾病发作表现为抑郁发作, 这导致未发生躁狂的双相障碍患者与抑郁症患者难以鉴别, 从而导致误诊率高。因此, 更早地寻找出转相和单相潜在病理生理学差异是非常有必要的。gamma 频段神经活动参与多种视觉信息加工及认知功能处理过程, 包括视觉、以及情绪面孔处理。正性情绪的产生依赖于奖赏环路, 前额叶-纹状体环路是奖赏环路的核心脑区, 既往研究表明双相抑郁患者与单相抑郁患者在前额叶-纹状体环路存在差异。但目前关于前额叶-纹状体环路在处理正性情绪时是否有助于早期识别双相障碍仍有待进一步研究。

方法 采集 75 例抑郁症患者(unipolar disorder, UD)、39 名健康对照者(health Control, HC)的脑

磁图像, 选取正性情绪面孔刺激下的脑磁信号。经过 5 年以上随访, 其中 75 例抑郁症患者中有 23 例转为双相障碍(converted to Bipolar disorder, ctBD)。值得注意的是 ctBD 脑磁图像使用的是未发生过躁狂时的入组基线脑磁图像。基于 matlab 平台利用 fieldtrip 工具包对数据进行去公频、滤波, 去除伪迹处理。并基于个体化磁共振数据进行溯源分析, 选取眶额回、前扣带回、腹侧纹状体、杏仁核作为感兴趣脑区, 以 60~90 Hz gamma 频段为感兴趣频段, 利用格兰杰因果模型计算各感兴趣脑区之间的效能连接值。对脑区间效能连接值采用非参数检验进行统计分析, 检验水准 $\alpha=0.05$ 。Bonferroni 校正。

结果 ctBD、UD、HC 三组患者在识别正性情绪面孔时, 前额叶—纹状体通路 gamma 频段差异具有统计学意义($p<0.05$)。其中 UD 在右眶额回到左眶额回、右纹状体到左眶额回的效能连接值减少, ctBD 在左纹状体到左眶额回的效能连接值减少。ctBD 与 UD 在左纹状体到左眶额回之间的效能连接在 high-gamma 频段差异具有统计学意义($p<0.05$), 且效能连接强度 ctBD 较 UD 减弱。

结论 单相、未经历躁狂打击的双相患者在识别正性情绪面孔时前额叶-纹状体环路活动部异常, 抑郁症转相患者在该环路 high-gamma 频段存在特异性的改变, 是区分两者的潜在电生理学标志, 为早期识别双相情感障碍患者奠定基础。

关键词: 双相障碍; 情绪面孔识别; 正性情绪; 脑磁图;

基于抑制控制网络伴有网络游戏成瘾的抑郁障碍患者的 β 振荡时空模式

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目的 抑郁障碍患者伴网络游戏成瘾情况日趋增多, 这类患者产生更多的冲动行为, 损害其社会功能, 成为了世界性公共卫生难题。冲动性高、不计后果玩游戏、自我伤害是伴有网络游戏成瘾的抑郁

障碍患者常见的抑制控制损害特征表现,且 β 振荡与抑制控制功能紧密关联。本研究旨在探讨伴有网络游戏成瘾的抑郁障碍患者与不伴有网络游戏成瘾的抑郁障碍患者相比,其抑制控制网络的 β 振荡是否存在特异性改变。

方法 采用网络成瘾测评量表、Barratt 冲动量表和采集 Go/NoGo 任务态脑磁图数据及磁共振定位相,于 2015 年 1 月至 2024 年 4 月在南京医科大学附属脑科医院住院部招募 30 例单相抑郁症患者,31 例伴有网络游戏成瘾的抑郁症患者以及周围地区的性别、年龄、受教育程度相匹配的 48 例健康对照者。三组受试者执行 Go/NoGo 任务进行脑磁图信号采集。提取所有受试执行 NoGo 任务--抑制行为的信号,采用进行预处理与源重建。根据研究假设,选取右额下回(right inferior frontal gyrus, rIFG)-前运动辅助区(pre-supplementary motor area, preSMA)-左初级运动皮层(left primary motor cortex area, IM1)三个脑区作为感兴趣区,以 β (13-30Hz)波为感兴趣频段,提取 0-900ms 的时间序列,计算各感兴趣脑区之间的功能连接值。把有统计学差异的功能连接分别与患者组的 HAMD17 量表、网络成瘾评测量表、Barratt 冲动量表进行皮尔森相关分析。本实验脑磁影像数据结果用 matlab2024a 软件进行处理,全部数据结果用 SPSS28.0 软件进行统计分析。

结果 1. Nogo 任务下三组功能连接比较

在抑制控制加工后期(250-450ms)时间窗,三组间 β 频段 IM1-preSMA 的 FC ($p=0.002$, FDR corrected)统计学异常,其中伴有网络游戏成瘾的抑郁障碍患者组的功能连接下降最明显。

2. 基于有特征意义的多维数据建立分类模型

加工后期的 β 频段 IM1-preSMA 的 FC 为贡献最大的影像因素($p=0.015$)。再建立分类判别式模型,分类准确率(交叉验证)80.3%。

结论 与不伴有网络游戏成瘾的抑郁障碍患者相比,伴有网络游戏成瘾的患者在抑制控制加工后期 β 频段 preSMA-IM1 明显异常,提示这个特征性 FC 可能是伴有网络游戏成瘾抑制控制损害的关键,作为早期非药物干预的生物标记位点,对预防冲动及日常生活功能下降意义重大。

关键词: 网络游戏成瘾、抑郁障碍、冲动、抑制控制、脑磁图

基于 GA-KPLS 构建双相情感障碍诊断模型及筛选关键基因

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目的 双相情感障碍(Bipolar Disorder, BD)是一种高度遗传的情感障碍,其病因复杂且知之甚少。发病率日益增高,带来了严重的社会负担和经济负担。由于 BD 具有较高的临床异质性,如何准确地诊断疾病并且提供个性化的治疗方案仍然存在挑战。近年来,基因表达数据的高通量测序技术以及机器学习的发展为临床诊断提供了新的机会。本研究旨在应用多种机器学习模型,利用 BD 患者的基因表达数据,构建一个准确预测 BD 的诊断模型,并筛选出关键基因,为疾病诊断提供方法学支撑。

方法 本研究从 GEO 公共数据库下载了 448 例双相情感障碍患者外周血的基因表达数据(GSE124326),并进行了数据预处理和特征提取。采用通过遗传算法优化的核偏最小二乘法模型(GA-KPLS),并使用训练集对模型进行训练和优化。我们使用测试集评估了模型的预测性能,并与传统的六个模型(随机森林、LASSO、岭回归、支持向量机、神经网络和 Logistic 回归模型)进行了比较,以识别 BD 患者。我们还通过在线工具 SAM 提取差异表达基因(DEGs)。分别使用了基因本体论(GO)和京都基因和基因组百科全书(KEGG)对 DEGs 进行功能注释和途径富集分析。此外,还使用 STRING 数据库以及 Cytoscape 软件构建了蛋白质-蛋白质相互作用网络(PPI)来鉴定 hub 基因,并对双相情感障碍患者中筛选出的 Hub 基因进行了 ROC 曲线验证(计算曲线下面积 AUC)和生物学验证,以判断 Hub 基因的诊断价值。

结果 比较七种模型的八个评价指标的结果显示,GA-KPLS 模型对于外周血基因表达数据的预测性能明显优于其他六种模型。具体而言,GA-KPLS 模型的灵敏度、特异度、准确度、AUC 值、F_measure 值和 Gmean 值均表现出色。对两组间进行差异基因分析后,识别了 23 个差异表达基因(FDR 调整后的 $P<0.05$ 且 $\log_2|FC|\geq 1$),DEGs 显著富集于 35 条 GO terms 和 4 条 KEGG 通路中,构建的蛋白互作网络复合体包含 27 个节点和 136 个边界。并且筛选出 3 个 hub 基因,AUC 均大于 0.7,生物验证分析也发

现这些 hub 基因在 BD 患者外周血中的表达发生了显著变化。

结论 较其他传统机器学习模型相比, GA-KPLS 模型构建的疾病诊断模型较好地识别了双相情感障碍患者, 为双相情感障碍的诊断提供了方法学上的参考。可用于辅助临床诊断, 预测性能良好, 其为日后的组学数据整合提供了新的路径。研究中针对 BD 识别的差异基因和富集通路可为 BD 患者的治疗提供新的治疗靶点, 有助于实现 BD 的精准治疗和管理。

关键词: 双相情感障碍; 基因表达数据; 机器学习; GA-KPLS; 诊断模型

Identification of The Shared Gene Signatures and Biological Mechanism in Major Depression Disorder

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Objective Major depressive disorder (MDD) is a complex and severe psychiatric disorder with underlying genetic determinants that have not been elucidated. The aim of this study was to investigate the pathogenesis of MDD and assess the relationship between MDD and immunity by identifying key biomarkers and utilizing bioinformatics analyses and relevant immune infiltrates in human autopsy samples

Methods We obtained gene microarray data from GSE32280, GSE76826, and GSE98793 by Gene Expression Omnibus (GEO). Our approach included differential expression analysis, weighted gene co-expression network analysis (WGCNA), and protein-protein interaction (PPI) network analysis to identify hub genes associated with MDD. Subsequently, we utilized gene ontology (GO), Kyoto Encyclopedia of Genes and Genomes (KEGG), Cytoscape plugin CluGO and gene set enrichment analysis (GSEA) to identify immune-related hub genes. The final hub genes acquisition related to immunity was the intersection of lasso regression analysis and PPI analysis. Immune cell infiltration in

MDD patients was analyzed using CIBERSORT and correlation analysis of key immune cells with key genes was performed. To assess the diagnostic accuracy of these hub genes, we performed a subject work characterization curve (ROC) analysis. In addition, we conducted a study involving 10 MDD patients and 10 healthy controls (HCs) meeting specific criteria to assess the expression levels of these hub genes in their peripheral blood mononuclear cells (PBMCs)

Results We identified 159 down-regulated and 51 up-regulated genes for further study. Through WGCNA, we obtained 22 co-expression modules, of which the lightyellow module was most strongly associated with MDD. Functional enrichment pathway analysis showed that these differential genes were associated with immunity. By integrating differential analysis with immune-related genes, we identified 21 common genes. PPI networks were constructed for the target genes. The ClueGo assay, a Cytoscape plugin, revealed that most targets were related to positive cellular regulation in response to macrophage colony-stimulating factor stimulation. Subsequently the Lasso algorithm confirmed 4 hub genes as potential biomarkers for MDD. ROC curve analysis showed that these 4 hub genes have good diagnostic value. Quantitative reverse transcription-pcr (RT-qPCR) results showed significant changes in the expression of these hub genes in the PBMCs of MDD patients compared to HCs

Conclusion MDD is a highly heterogeneous disease characterized by high morbidity and mortality and is considered the most prevalent cause of disability worldwide. However, The pathophysiologic mechanisms of MDD are unknown and the biomarkers used for diagnosis are unclear. In this study, we first scrutinized the RNA expression data of MDD patients and HCs to screen for DEGs. GO, KEGG enrichment analyses showed that DEGs were mainly concentrated in immune-related pathways. Therefore, in order to explore more deeply the profound influence of immunity on the pathogenesis of MDD, we combined multiple bioinformatics approaches to identify four hub genes as key biomarkers of MDD, analyzed the enrichment pathways using GSEA, and further investigated the function of immune cell infiltration in the disease. In conclusion,

we identified for the first time four hub genes (TLR2, RETN, HP, and IL7R), which may be diagnostic biomarkers for MDD. In addition, we constructed an immune-related diagnostic model for MDD, which showed good diagnostic performance in the dataset GSE98793. Thus, our genetic characterization can provide an accurate and reliable prediction method for patients. Finally, the immune cell infiltration of MDD patients was analyzed using CIBERSORT, correlation analysis showed that hub genes are involved in the immune response in MDD. Our study combined with further validation of blood samples from clinical patients provides strong evidence for studies exploring immune involvement in the pathophysiologic pathogenesis of MDD, which will be a new starting point. However, the molecular mechanisms by which these four immune-related hub genes are involved in the pathogenesis and progression of MDD are still poorly understood and require further investigation

关键词: major depression disorder, immune infiltration, immune-related hub genes, diagnostic, bioinformatics

常规治疗联合加巴喷丁对比联合喹硫平对双相障碍患者焦虑症状的疗效研究

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目的 双相情感障碍是伴焦虑症状的情况十分普遍。不伴焦虑症状的患者治疗更复杂、预后更差,目前也缺乏统一的治疗指南。喹硫平在目前可作为一种选择,但其应用有局限性。而加巴喷丁在之前的研究中被发现对焦虑症状有改善作用,但缺乏在双相情感障碍患者中进行的随机对照试验。本研究旨在探究在常规治疗的基础上联合加巴喷丁治疗,对比联合喹硫平治疗对双相情感障碍患者的焦虑症状改善程度。

方法 纳入双相情感障碍患者 58 例,其中实验组,即常规治疗联合加巴喷丁治疗组 29 例,对照组,即常规治疗联合喹硫平治疗组 29 例。使用自制电子表格采集患者的一般信息。使用汉密尔顿焦虑量表、

汉密尔顿抑郁量表、宗氏焦虑自评量表、宗氏抑郁自评量表、杨氏躁狂量表、个人和社会功能量表、副反应量表、斯坦福嗜睡量表评估患者的症状。入组后在常规治疗的基础上:实验组联合使用加巴喷丁治疗,最高剂量不超过每日 1800mg。对照组联合使用富马酸喹硫平治疗,最高剂量不超过每日 300mg。两组均在基线(0周)、2周、4周、8周时进行观察随访。以 8 周时汉密尔顿焦虑量表评分作为主要结局指标。使用 spss 软件、R 软件进行统计分析。分类变量资料比较采用卡方检验,连续变量资料比较采用独立样本 t 检验。P<0.05 为差异具有统计学意义。使用 R 软件构建广义混合效应模型,纳入年龄、性别、受教育年限等作为协变量进行控制,分析两组受试者治疗前后症状变化趋势以及组间差异。

结果 从基线(0w)到终点(8w),两组患者汉密尔顿焦虑量表总分均值均有显著下降,其中喹硫平组由 20.55 下降至 9.74,8 周的减分率为 52.6%,加巴喷丁组由 24.24 下降至 9.81,8 周的减分率为 59.5%。整个随访期间两组患者汉密尔顿抑郁量表总分均值也有下降,喹硫平组由 16.45 下降至 7,8 周的减分率为 57.4%,加巴喷丁组由 19.69 下降至 7.63,8 周的减分率为 61.2%。宗氏焦虑自评量表标准分的均值,喹硫平组由 55.21 下降至 43.83,加巴喷丁组由 62.14 下降至 43.78。宗氏抑郁自评量表标准分的均值,喹硫平组由 65.56 下降至 54.78,加巴喷丁组由 66.9 下降至 53.3。纳入其他协变量进行分析发现,年龄、锻炼次数、收入水平、住院次数、抑郁发作次数、使用情绪稳定剂数量对治疗效果有影响。

结论 双相情感障碍患者在常规药物治疗基础上,联合加巴喷丁治疗可以有效改善焦虑/抑郁情绪,在改善焦虑抑郁情绪和认知功能的临床疗效上,与联合喹硫平治疗的效果基本类似,某些水平甚至效果更佳,且白天嗜睡的不良反应发生率小于联合喹硫平治疗的患者。

关键词: 双相情感障碍; 焦虑; 药物治疗; 加巴喷丁; 喹硫平

喹硫平联合丙戊酸钠治疗双相情感障碍躁狂发作的临床疗效

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目的 探讨喹硫平联合丙戊酸钠治疗双相情感障碍躁狂发作的临床疗效和安全性,以及对患者炎症因子水平的影响。

方法 选取 2023 年 11 月至 2024 年 5 月收治的 108 例双相情感障碍躁狂发作患者为研究对象,按照随机数字表法将患者分为试验组和对照组,每组 54 例。试验组给予喹硫平联合丙戊酸钠治疗,对照组给予丙戊酸钠缓释片治疗,均治疗 4 周。比较两组治疗前后贝克-拉范森躁狂量表(BRMS)评分、阳性与阴性症状量表(PANSS)评分、血清炎症因子水平,临床疗效和不良反应发生率。

结果 2 组患者治疗后的贝克-拉范森躁狂量表及阳性与阴性症状量表评分均显著低于治疗前($P < 0.05$),且对照组治疗总有效率均低于试验组,差异有统计学意义($P < 0.05$);治疗后,对照组肿瘤细胞因子- α (TNF- α)及白细胞介素- 1β (IL- 1β)水平高于试验组,人血白蛋白(ALB)及血清总胆红素(TBi L)低于试验组,差异有统计学意义($P < 0.05$)。试验组不良反应发生率为 15.38%,低于对照组 19.53%,但无显著差异($P > 0.05$)。

结论 喹硫平联合丙戊酸钠治疗可有效缓解双相情感障碍患者躁狂症状和精神病性症状,降低双相情感障碍躁狂发作患者炎症因子表达,提高治疗总有效率,效果优于单用丙戊酸钠治疗。

关键词: 双相情感障碍;躁狂发作;喹硫平;丙戊酸钠;炎症因子;

青少年双相情感障碍的内感受改变特征及其与躯体化和情绪问题的关系

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目的 本研究旨在探讨青少年双相情感障碍(Bipolar Disorder, BP)患者的内感受改变特征及其与情绪和躯体化问题的关系。双相情感障碍是一种以情绪极端波动为特征的精神障碍,常在青少年时期发病,且与躯体症状高度相关。青少年 BP 患者身心失调问题尤为突出,内感受作为情绪与躯体觉知的生理基础,对情绪调节和心理健康具有重要影响,

但其作用在青少年 BP 患者中尚不清楚。

方法 采用内感受性知觉多维评估量表(MAIA-2)对被试的内感受情况进行测量,患者健康问卷(PHQ15)、失眠严重程度指数量表(ISI)、焦虑筛查量表(GAD-7)、抑郁筛查量表(PHQ-9)作为被试躯体化和情绪症状测量依据。通过对比患者组与健康对照组的内感受情况,评估了躯体化症状、焦虑、抑郁情绪,并探讨了内感受在 BP 患者中的作用及其与临床症状的关联。

结果 处于康复期的青少年 BP 患者在内感受的多个维度上得分低于健康对照组,且在躯体和情绪症状方面得分较高,表明患者组存在内感受问题与身心症状,伴有躯体或/和情绪问题的 BP 亚组与对照组在内感受总分上无差异,在不分心、不担心、信任维度上存在显著差异。进一步分析显示,患者组的内感受与临床症状之间存在显著相关,且“不分心”是唯一对躯体症状与情绪问题具有预测功能的维度。这提示我们,过分关注身体不适可能加剧青少年 BP 患者的临床症状。

结论 本研究发现青少年 BP 患者的内感受尤其是不分心维度与其情绪和躯体化问题密切相关为理解青少年 BP 心身失调问题提供了新的解释,并为发展针对性干预策略提供了依据。

关键词: 双相情感障碍,青少年,内感受,躯体化,情绪调节

伴 NSSI 双相情感障碍患者认知功能的临床研究

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目的 研究双相情感障碍(bipolar disorder, BD)患者认知功能损害与非自杀性自伤行为(non-suicidal self-injury, NSSI)的关系及认知功能训练对 NSSI 行为的影响,为伴 NSSI 的 BD 患者进行认知功能康复训练治疗提供理论参考。

方法 纳入符合《精神障碍诊断与统计手册(第 5 版)》(DSM-5)诊断标准的 30 例伴有 NSSI 的 BD 患者,30 例不伴 NSSI 的 BD 患者和 30 例健康被试(HC),采用计算机认知矫正治疗(computerized

cognitive remediation therapy, CCRT)系统评估被试的认知功能,包括神经认知(包括符号数字转换测试、连线测验、速度知觉、数字短时记忆等)与社会认知(包括面部表情识别、认知偏差问卷等),同时采用青少年自我伤害行为问卷(Adolescents Self-Harm Scale, ASHS)评估被试者自伤行为的频次和严重程度。计算每种自伤行为的频次与严重程度乘积的和。采用 SPSS27.0 软件进行数据分析,对三组被试者的认知功能测试评分采用单因素方差分析比较均数差异;通过独立样本 t 检验分别分析接受训练组与不接受训练组的 ASHS 与认知功能测验评分。

结果 (1) 伴 NSSI 的 BD 患者数字符号转换测试评分、连线测验评分、速度知觉评分、数字短时记忆评分、面部表情识别评分、认知偏差问卷评分均低于不伴 NSSI 的 BD 患者组与健康对照组,差异有统计学意义 ($P < 0.05$) (2) 伴 NSSI 的 BD 患者在面部表情识别评分、认知偏差问卷评分均较正常对照组和不伴 NSSI 的 BD 患者更低,差异有统计学意义 ($P < 0.05$) (3) 经过 2-4 周的认知功能康复训练,伴 NSSI 的 BD 患者与不伴 NSSI 的 BD 患者认知功能评分均有一定提高,且伴 NSSI 的 BD 患者 ASHS 评分下降,差异有统计学意义 ($P < 0.05$)。

结论 伴 NSSI 的 BD 患者通常较不伴 NSSI 的 BD 患者认知功能损害更明显,特别是在社会认知功能为维度;计算机认知功能康复训练能够在一定程度上改善患者的认知功能从而对 BD 患者的 NSSI 进行有效干预。

关键词: 双相情感障碍,非自杀性自伤,认知功能,认知训练

基于机器学习的执行控制网络鉴别单、双相抑郁研究

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目的 单相抑郁 (Major Depressive Disorder, MDD) 和双相抑郁 (Bipolar Depression, BD) 之间的鉴别具有一定挑战性。两者在认知功能,尤其是注意力和执行功能控制方面均存在缺陷,这些缺陷可能与神经可塑性和认知神经网络的变化相关。本研究拟结合机器学习算法和 Oddball 范式的执行控制

网络分析,探究区分两者的神经生物学标志物。

方法 本研究采取横断面研究,对 2022 年 3 月至 2023 年 12 月期间在山西医科大学第一医院精神卫生科接受门诊或住院治疗的 67 例 MDD 患者和 46 例 BD 患者的基线临床数据进行了综合评估。此外,研究还招募了 68 名年龄、性别及学历匹配的健康对照组。收集其一般人口学资料、24 项汉密尔顿抑郁量表、杨氏躁狂评定量表以及 Oddball 任务下的脑电数据。使用 SPSS 23.0 软件对所有受试者的人口学和临床资料进行统计分析。采用基于 Matlab 软件平台的 EEGLAB 和 Fieldtrip 工具箱对脑电数据进行预处理,并进行时域分析、时频分析、脑电源重建以及功能连接分析。最后,使用支持向量机对差异脑电特征建立 MDD-BD 分类模型,并使用 10 折交叉验证对模型进行验证。

结果 1. 时域分析中, BD 组的 P300 波幅显著大于 MDD 组 ($p < 0.05$), HC 组的 P300 波幅与 MDD 组 ($p = 0.693$) 和 BD 组 ($p = 0.111$) 的差异无统计学意义; 2. 时频分析中, BD 组在 delta 和 theta 频段的 ERS 显著高于 MDD 组 ($p < 0.05$); 与 HC 组相比, MDD 组和 BD 组在 delta 和 theta 频段中的差异无统计学意义 ($p > 0.05$); 3. MDD 组与 BD 组患者在 delta 和 theta 频段上执行控制网络中的功能连接小于 HC 组 ($p < 0.05$, FDR 校正); 相较于 BD 组, MDD 组的左侧背外侧额上回与前额叶及顶叶之间功能连接更强 ($p < 0.05$, FDR 校正); 4. SVM 模型在区分两者的准确度为 72.65%, 特异性为 95.14%, 敏感性为 36.00%, 平均 F1 得分为 45.98%, 平均 AUC 得分为 66.13%。

结论 1. 本研究表明,在 Oddball 任务中,双相抑郁、单相抑郁和健康对照组之间在大脑认知信息处理和网络连通功能上的不同; 2. 单相抑郁患者的执行控制网络功能连接性强于双相抑郁患者,尤其是左侧背外侧额上回与其他前额叶及后顶叶区域间的功能连接。

关键词: 单相抑郁,双相抑郁,机器学习,执行控制网络,事件相关电位

基于结构磁共振成像的双相情感障碍患者大脑形态学研究

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目的 通过使用基于形变的形态学测量(deformation-based morphometry, DBM)方法和基于体素的形态学测量(voxel-based morphometry, VBM)方法探寻双相情感障碍(bipolar disorder, BD)患者的大脑结构改变,并结合人工智能技术分别考察两种指标单独和融合后对BD患者的诊断识别能力。

方法 采集67例BD患者和70例健康对照的脑结构磁共振数据。首先,采用DBM和VBM方法分析BD患者灰质及白质区域的脑结构改变,并计算两种指标在灰质和白质区域左右半脑的空间相关系数,从而系统地比较两种方法在检测大脑结构的异同点;其次,本研究还分别提取上述指标中具有显著差异的脑区的平均体素值,将其与临床变量进行相关性分析;最后,使用支持向量机分类算法在灰质和白质区域分别检测VBM/DBM以及两种指标融合后对BD患者的诊断识别能力。

结果 本研究使用DBM方法在灰质区域发现与健康对照组相比,BD患者左侧岛叶和左侧上前扣带皮层灰质区域体积增大;使用VBM方法发现BD患者双侧颞下回、双侧海马、左侧额下回\左侧嗅皮质、左侧梭状回、左侧颞中回、左侧颞上回、左侧额中回、左侧中扣带回、右侧枕下回、右侧颞横回及右侧背外侧额上回灰质体积(gray matter volume, GMV)减小。本研究使用DBM方法在BD患者白质区域未发现显著差异脑区;使用VBM方法发现BD患者双侧丘脑、右侧额下回、右侧苍白球及右侧前扣带回白质体积(white matter volume, WMV)减小。两种指标在灰质和白质区域的左右半脑的空间相关性均呈中等程度相关。在BD异常脑区与临床变量相关性分析中本研究未发现显著相关性。此外,本研究发现在白质区域,DBM和WMV在区分BD患者与健康对照的最高分类正确率分别为59.84%和62.80%,将对白质区域的DBM和WMV两种指标融合后最高分类正确率为62.77%;在灰质区域,DBM和GMV在区分BD患者与健康对照的最高分类正确率分别为69.34%和72.42%,并且将对灰质区域的DBM和GMV两种指标融合后分类正确率提

高至73.72%。

结论 本研究发现BD患者在多个脑区存在灰质和白质的结构异常改变。针对灰质区域,DBM和VBM在区分BD患者和健康对照中均具有较高的分类正确率,并且两种指标融合后可进一步提高分类正确率,表明DBM和VBM在刻画BD患者脑结构异常方面具有信息互补性,这提示在BD脑结构磁共振研究中可将两种分析方法相结合,为未来开发BD辅助诊断工具提供了新的策略。

关键词: 双相情感障碍,基于体素的形态学测量,基于形变的形态学测量

青少年各种躯体不适,警惕双相情感障碍

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目的 探讨以躯体症状起病的双相患者的人口学、症状学特征及其他相关因素,以早期识别、诊断双相情感障碍,为临床医师提供指导。

方法 回顾性分析于2023年1月就诊于济宁市兖州区铁路医院精神科,以躯体不适起病,最终诊断为双相情感障碍的1例抑郁患者的临床资料,并复习相关文献。

结果 患者男,20岁,独生子,大专学生。3年前出现心情低落、失眠、对身体过度关注,感觉不到肌肉的存在,胃痛、小便疼痛,心慌、出汗、坐立不安,紧张、担心,不愿活动,感觉呼吸都累、得专门想着去喘气。担心自己不行了。曾于多家医院心内科、胸外科、呼吸内科、消化内科等科室就诊,诊断“甲状腺功能亢进症、慢性支气管炎急性发作、胃炎”等,5月前又行卵圆孔修补术,多项检查及治疗后,症状未见明显改善。后患者于外院心理科住院,诊断为“混合性焦虑和抑郁障碍”,予“度洛西汀肠溶胶囊”等药物治疗,患者治疗欠配合,疗效欠佳。出院后未再服药及复诊,刚开始表现尚可,后出现显兴奋,乱花钱,外出旅游、要买房车旅游,持续时间不长。入院前3天,患者又出现少语、懒动、情绪低落伴躯体不适。于铁路医院就诊并住院治疗,修改诊断为“双相情感障碍,目前为中度抑郁发作”。予“碳酸锂缓释片、富马酸喹硫平”等药物治疗,患者病

情好转。

结论 对伴有起病年龄较小、家族史阳性、伴精神病性症状、自杀观念、抗抑郁治疗疗效欠佳等特征的抑郁患者应格外重视，警惕双相可能，治疗上应以情感稳定剂为主，酌情使用抗抑郁剂。非精神科医生容易只重视躯体症状，忽视患者的焦虑和抑郁情况。精神科医师大都能将焦虑、抑郁情绪与患者的躯体不适症状联系在一起，但部分医师对以躯体不适起病的双相抑郁患者识别不足，这也造成了一定的治疗困难，降低患者就诊的满意度，降低治疗的依从性，增大了医疗纠纷的发生率。本文回顾了该患者的临床资料，并结合文献进行讨论分析，旨在增强精神科及相关科室临床医生对该病的认识，以便早期发现、早期确诊和治疗。

关键词：双相情感障碍；躯体不适；误诊

特质正念影响双相障碍生活质量和认知障碍的心理路径研究

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目的 缓解期双相障碍患者仍然面对着情绪管理和认知功能损害的困扰，其冲动控制、情感表达、情绪调节障碍都可能受到正念特质的直接影响，并最终影响生活质量和认知障碍水平。本研究旨在了解稳定期双相障碍患者的正念水平与生活质量和认知障碍的相关性及潜在心理路径，为针对性心理治疗方法的制定提供参考依据。

方法 研究目前招募了 35 名稳定期双相障碍患者及 29 名健康对照参与者进行问卷评估（持续进行中）。使用五因素正念度量表（FFMQ）评估患者与健康人的特质正念水平；使用简版双相障碍生活质量问卷（Bref QoL.BD）、双相障碍认知困扰问卷（COBRA）评估患者的生活满意度和认知障碍；使用情绪调节困难量表（DERS）、多伦多述情障碍量表（TAS20）、Barratt 冲动量表（BIS）评估患者情绪调节、述情障碍、冲动控制水平。心理路径分析采用 Hayes 提供的 SPSS PROCESS 插件模型 4，以 Bref QoL.BD 和 COBRA 作为因变量，FFMQ 作为自变

量，DERS、TAS20、BIS 作为中介变量进行平行中介分析。

结果 稳定期双相患者的特质正念水平较健康人略低，但差异未达到统计学意义（ $d=-6.88$, $p=0.15$ ），我们推测其统计显著性可能受限于样本量。在双相患者中，正念水平与生活满意度和认知障碍均显著相关（ $r=0.671$, $p<0.001$ ； $r=-0.47$, $p=0.018$ ），且冲动控制障碍、述情障碍、情绪调节得分均与生活满意度和认知障碍显著相关（ $p<0.05$ ）。中介分析发现，正念水平对生活满意度的总效应显著【 $\beta=0.36$, $p=0.002$, Boot CI=（0.19, 0.53）】，但直接效应不显著（ $p=0.05$ ），中介变量放入预测模型后，情绪调节对生活满意度有显著正向预测作用【 $\beta=0.26$, Boot CI=（0.02, 0.51）】。正念水平对认知功能的总效应显著【 $\beta=-0.24$, $p=0.02$, Boot CI=（-0.44, 0.05）】，但直接效应不显著（ $p=0.22$ ），中介变量放入预测模型后，述情障碍对认知功能有显著负向预测作用【 $\beta=-0.34$, Boot CI=（-0.65, -0.10）】。结果表明情绪调节在正念水平和生活满意度的关系中起到完全中介作用，述情障碍在正念水平和认知障碍的关系中起到完全中介作用。

结论 稳定期双相障碍患者的特质正念水平与生活质量和自我认知功能障碍密切相关，且可以通过情绪调节和述情障碍水平进行预测。该结果为用于双相障碍患者康复的心理治疗靶点提供了证据，有必要进一步扩大样本量，并开展随机对照临床试验以验证以正念为中心的治疗方法在双相障碍中的应用。

关键词：正念，双相障碍，生活质量，认知功能，情绪调节

A Systematic Review: Updated Treatment Recommendation for The Bipolar Depression with Mixed Features

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Objective Bipolar disorder (BD) is characterized by fluctuations in emotional state and energy, including episodes of mania or hypomania alternating with depression, affecting >1% of the global population.

Within the spectrum of BD, there exists a state characterized by the simultaneous presence of depressive and manic symptoms, defined as mixed features specifiers (MFs). Growing evidence indicated that the patients with bipolar depression with mixed features specifiers (BD-MFs) exhibited more severe symptoms, lower rates of treatment response, and worse outcomes. Consequently, there is an urgent need to identify effective treatments for BD-MFs

Methods A literature search was performed using the PubMed/ MEDLINE database. The search was conducted on 14 March 2024 using the following search terms: ("bipolar depression" OR "mixed depress*" OR "bipolar depressi*" OR "mixed specifier" OR "mixed featur*" OR "bipolar mixed") and (treatment OR pharmaco* OR therapy). Articles were selected for further evaluation by inspecting abstracts. The bibliographies of the selected articles were also included. The eligible articles were clinical trails or randomized controlled trials (RCTs) of acute-phase and maintenance treatments with a placebo arm and ≥ 25 cases

Results The initial PubMed search identified 218 articles, 178 of which were selected for further evaluation. From those, 23 studies were included in our review. In this review, we systematically summarize potential treatment approaches for BD-MFs, exploring various dimensions, including pharmacotherapy, physical interventions, and psychological strategies. By delving into these multifaceted aspects, this review aims to offer valuable insights and information that can contribute to the development of more effective and tailored interventions for individuals grappling with the complexities of BD-MFs. Addressing the urgent need for improved treatment strategies, this exploration serves as a resource for clinicians and researchers alike in their pursuit of better outcomes for those dealing with BD-MFs

Conclusion Among antipsychotics, ziprasidone, olanzapine/OFC, lurasidone, cariprazine and lumateperone appear to have more evidence of efficacy in treating bipolar depression with MFs. The use of mood stabilizers, such as lithium, valproate or lamotrigine, may also be of interest; however, they have not yet been

adequately assessed in subjects with DSM-5 defined depression with mixed features, especially in the acute phase. ECT, TMS and DBS have no sufficient and beneficial evidence for the treatment of bipolar depression with MFs. Clinical well-designed adequately powered double-blind placebo-controlled studies assessing the efficacy, safety, and tolerability of psychotropic agents in depression with mixed features are needed

关键词: bipolar depression, mixed features, second generation antipsychotic (SGA), mood stabilizers, physiotherapy, psychotherapy

认知行为治疗干预辅助治疗双相情感障碍躁狂发作患者的随机对照研究

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目的 探讨认知行为治疗在双相情感障碍躁狂发作患者中的应用。

方法 选取 2019 年 1 月至 2022 年 1 月 120 例本院收治的双相情感障碍躁狂发作患者, 依据随机数字表法分为对照组和观察组, 各 60 例。予以对照组碳酸锂缓释片, 于上述基础上予以观察组认知行为治疗, 认知行为疗法: ①疾病认知。②认知重建。③行为干预。同时设定明确、可行和可量化的目标, 每天完成一个小目标。每日引导患者进行反思和感恩, 回想当日的经历, 并重点关注积极事件, 培养其乐观心态。最后让患者学会深呼吸、冥想等小技巧, 帮助患者缓解精神压力。两组均干预 8 周。对比两组临床疗效、SDS (抑郁自评量表)、SDSS (社会功能缺陷量表)、CFQ (认知融合问卷)、MMAS (药物依从性量表)、BRMS 评分 (贝克-拉范森躁狂量表)、生活质量及不良反应发生情况。

结果 干预后, 观察组临床总有效率 96.67% 高于对照组的 85.00%; 较干预前, 干预后两组 MMAS、生活质量各项评分均升高, 观察组高于对照组, SDS (抑郁自评)、SDSS、CFQ 评分则降低, 观察组低于对照组; 较干预前, 干预 4~8 周两组 BRMS 评分逐渐降低, 观察组低于对照组, 差异具有统计学意义 (均 $P < 0.05$)。

结论 认知行为治疗可以提高双相情感障碍躁

狂发作患者的临床治疗效果、认知融合、治疗依从性以及生活质量,改善其躁狂等症状,缓解不良情绪。

关键词:双相情感障碍躁狂发作;认知行为疗法;碳酸锂缓释片;临床疗效

双相情感障碍发病时间对应二十四节气规律的研究

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目的 探讨新疆维吾尔自治区乌鲁木齐市第四人民医院双相情感障碍患者入院率在二十四节气中的差异。

方法 本研究收集了新疆维吾尔自治区乌鲁木齐市第四人民医院2016年1月1日至2023年12月31日期间诊断双相情感障碍的入院患者共计6831例,其中双相情感障碍抑郁发作1898例,双相情感障碍躁狂发作1407例,双相情感障碍混合发作1930例。根据纳入病例患者的入院时间,按二十四节气的起止时间归类,统计各年份不同节气时段的住院人数,并计算纳入住院人数占所在节气时位住院人数的比值。使用SPSS 23.0统计软件,对纳入的住院人数占所在节气时位住院人数的比值采用Kruskal-Wallis H检验进行统计分析,计量资料以均数±标准差表示,以 $P < 0.05$ 为差异具有统计学意义。

结果 在二十四节气时段中,双相情感障碍患者入院总例数占同时段总住院患者例数的比值,最高时段是谷雨,为10.59%;最低时段是大雪,为6.40%。不同节气时段的双相情感障碍患者入院比值Kruskal-Wallis H检验,差异有统计学意义($c_2 = 93.699, P < 0.001$)。在双相情感障碍中,抑郁发作患者入院总例数占同时段总住院患者例数的比值,(最高时段是谷雨,为3.21%;最低时段是大雪,为1.63%。不同节气时段的双相情感障碍抑郁发作患者入院比值Kruskal-Wallis H检验,差异有统计学意义($c_2 = 47.665, P = 0.002$)。在双相情感障碍中,躁狂发作患者入院总例数占同时段总住院患者例数的比值,最高时段是秋分,为2.39%;最低时段是立春、大雪和小寒,为1.22%。不同节气时段的双相情感障碍躁狂发作患者入院比值Kruskal-Wallis H检

验,差异有统计学意义($c_2 = 45.106, P = 0.004$)。

结论 双相情感障碍患者入院率在不同节气时段中有差异。整体双相情感障碍发作节气时段与双相情感障碍抑郁发作节气时段一致,即谷雨时段最高而大雪时段最低;双相情感障碍躁狂发作在秋分时段最高而在立春、大雪和小寒时段最低。

关键词:双相情感障碍,二十四节气

双相障碍转相过程的神经生物学

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目的 双相障碍是指既有躁狂或轻躁狂发作,又有抑郁发作的严重精神障碍。在其病程中,可能从抑郁发作转变为相反的躁狂或轻躁狂状态,反之亦然——被称为“转相”。尽管“转相”是双相障碍病程中的重要特征,但目前对转相过程的神经生物学仍然知之甚少。我们的目的是探索与转相相关的躯体干预的临床证据,特别关注转相过程中可能涉及的生物学基础。

方法 1、搜索方法 使用以下关键词和短语搜索MEDLINE数据库(1983-2023): switch、bipolar disorder、bipolar depression、antidepressant、SSRIs、SNRI、tricyclic antidepressants、treatment emergent affective switch、mania、hypomania、HPA-axis、glucocorticoids和sleep deprivation等。2、研究选择纳入所有经过同行评议的英文文献,包括随机对照研究(RCT)、自然和开放标签研究以及病例报告。

结果 综合证据表明,某些作用机制截然不同的药物和非药物干预措施,例如睡眠剥夺、外源性皮质类固醇和多巴胺能激动剂,可以触发双相障碍患者的转相。抗抑郁药引起转躁的潜力尚不清楚,TCA比其他类别的抗抑郁药具有更高的转躁风险。一些神经生物学因素似乎与自发的和治疗引起的情感转换有关。这些包括儿茶酚胺水平异常、神经营养和神经可塑性因子上调、HPA轴过度活跃和昼夜节律改变。

结论 尽管“转相”现象是双相障碍病程中的一个重要临床特征,并且与其治疗极为相关,但人们对它仍然知之甚少。遗憾的是,针对这一问题进行的研究存在一些方法学局限性,并且通常是回顾性

的,或者是二次分析的结果。例如,在这些研究中使用了不同的治疗相关的不良事件(TEAS)定义,并且可能在临床和生物学发现方面产生截然不同的结果。为了使这方面的系统研究取得成功,所采用的评定量表的标准和阈值需要在各个研究中保持统一。还需要就开始药物治疗后多长时间将躁狂发作视为TEAS达成一致。我们对转相过程理解的另一个主要局限是缺乏适合躁狂行为的动物模型。初步证据表明谷氨酸受体异常与啮齿动物的躁狂样行为有关。

关键词: 双相障碍, 转相, 抗抑郁药, SSRI, SNRI, 皮质类固醇, 睡眠剥夺, HPA 轴

Clinical Application of Electronic Measurement Based Care for Major Depressive Disorder in China

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Objective Electronic measurement based care (EMBC) may help to improve treatment adjustments and outcomes for major depressive disorder (MDD).

Methods This study enrolled 240 Outpatients at reproductive age from 2017 to 2020 in China. They were randomly assigned to standard treatment (n=121) or electronic measurement-based care (n=119). The EMBC group was adequately treated with escitalopram, using measurement-based intervention strategy. The treatment as usual (TAU) group was left to the clinician's discretion to determine the treatment strategy based on the patient's condition. Hamilton Depression Rating Scale (HAMD) was assessed at baseline and follow-up levels within 24 weeks, and patients' depressive symptoms were observed and followed up for 16 weeks.

Results The clinical remission rate was higher in the EMBC group than in the TAU group at the 12th week ($P=0.025$). The HAMD score of the two groups decreased significantly at each time point ($P<0.05$) while it showed difference between the two groups at the 12th week only ($P<0.05$). The clinical remission rate yielded no difference at the end point ($P=0.344$), and the HAMD score did not differ significantly between the

two groups.

Conclusion It is suggested that the EMBC strategy may achieve better outcomes early in the treatment of MDD and significantly improve the quality of life for patients in both the short and long terms

关键词: major depressive disorder; application

Evaluation of Metabolomics-based Urinary Biomarker Models for Recognizing Major Depression Disorder and Bipolar Disorder

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Objective Major depressive disorder (MDD) and bipolar disorder (BD) are psychiatric disorders with overlapping symptoms, leading to high rates of misdiagnosis due to the lack of biomarkers for differentiation. This study aimed to identify metabolic biomarkers in urine samples for diagnosing MDD and BD, as well as to establish unbiased differential diagnostic models.

Methods We utilized a metabolomics approach employing ultra-high performance liquid chromatography-mass spectrometry (UHPLC-MS) to analyze the metabolic profiles of urine samples from individuals with MDD (n = 50), BD (n = 12), and healthy controls (n = 50). The identification of urine metabolites was verified using MS data analysis tools and online metabolite databases.

Results Two diagnostic panels consisting of a combination of metabolites and clinical indicators were

identified—one for MDD and another for BD. The discriminative capacity of these panels was assessed using the area under the receiver operating characteristic (ROC) curve, yielding an area under the curve (AUC) of 0.9084 for MDD and an AUC value of 0.9017 for BD.

Conclusion High-resolution mass spectrometry-based assays show promise in identifying urinary biomarkers for depressive disorders. The combination of urine metabolites and clinical indicators is effective in differentiating healthy controls from individuals with MDD and BD. The metabolic pathway indicating oxidative stress is seen to significantly contribute to depressive disorders

关键词: Major depressive disorder Bipolar disorder Metabolomics Differential diagnosis Oxidative stress

达营片辅助心境稳定剂治疗双相抑郁的临床药效学研究

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目的 目前对于双相抑郁最佳药物的选择存在分歧;双相抑郁治疗的仍是未被满足的临床需求。达营片是一种活血化瘀中药复方,具有较长的临床应用历史沿革,前期的研究探索提示了达营片一定的抗抑郁作用。本研究基于人用经验,在真实环境中首次开展达营片辅助治疗双相抑郁的有效性和安全性的临床研究。

方法 本研究为一项单中心、基于真实世界、前瞻性开放性的非随机临床试验,采用实用性试验设计(PCTs)。研究数据来源于一项综合性课题(NCT05247593)中的一部分,该课题自2022年8月在上海市精神卫生中心陆续招募双相障碍患者。本研究预计招募约120例双相抑郁受试者,样本量按1:1分为2组,分别为(1)达营片联合心境稳定剂组和(2)常规心境稳定剂组。研究医生根据患者实际情况决定合适的分组及治疗。随访12周,计划每4周一次临床访视。主要、次要结局指标为症状量表的减分情况:蒙哥马利-阿斯伯格抑郁量表

(MADRS)、杨氏躁狂量表(YMRS)、临床整体印象量表(CGI)、中医癫证和中医狂证量表。统计分析按照ITT原则,同时采用倾向性评分-重叠加权 and 群体药效学方法,控制多个混杂因素后对比两组的真实疗效差异;量化协变量对达营片辅助治疗结局的影响。倾向性评分方法前对数据进行末次观测值结转;群体药效学方法则无需进行末次结转。

结果 符合方案集是主要的分析集,最终一共88例受试者(占全分析集80.0%)纳入分析。这些患者大多为年轻女性、双相障碍复发、具有中-重度抑郁症状的双相抑郁患者。两组受试者的基线临床评分无显著性差异。控制协变量后,以MADRS减分值主要结局指标,达营片辅助治疗组(n=50)与常规心境稳定剂治疗组(n=38)的疗效差异不具显著性。次要结局显示,达营片辅助治疗组的MADRS缓解率(率差, RD=0.30),YMRS总分以及CGI-S评分的改善均显著优于另一组(P<0.05);有效率和中医量表则无显著差异。达营片治疗未引起患者转躁狂的风险。MADRS减分率药效学模型显示达营片暴露使抑郁症状改善更快(P<0.05);双相障碍复发或越年轻的患者的最终疗效改善越差。达营片辅助治疗最常见的不良事件是腹泻,其余未显示其他不良事件发生率的显著性增加。

结论 达营片辅助治疗双相抑郁具有一定的疗效趋势(缓解率)和总体较好的安全性。未来需更严格地控制混杂因素以及更大的样本量研究确证。

关键词: 达营片, 双相抑郁, 辅助治疗, 倾向性评分, 群体药效学, 真实世界

首发抑郁障碍患者7年后功能结局及其影响因素研究

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目的 了解首发抑郁障碍患者7年后整体功能结局,探讨不良功能结局的影响因素。

方法 1、纳入18-60岁、符合DSM-IV重性抑郁障碍单次发作的诊断标准、HAMD-17≥18分;排除严重躯体疾病、痴呆、精神发育迟滞、癫痫、酒药依赖/滥用者和哺乳/妊娠期妇女。2、收集首发时人口学信息、疾病特征、治疗情况等(为前期工作,于

2013年-2016年首发入组时完成)。通过自然观察随访,随访内容:人口学现况信息、纵向疾病特征、量表评估(第7年末采用TESS评估调查时的药物副反应、MARS评估调查时的药物依从情况、GAF评估调查时的整体功能水平)。

结果 基线入组患者346例,完成7年随访138例,随访完成率39.9%,其中男性47例(34.1%),首发年龄18-59岁,平均 35.89 ± 12.89 岁。第7年末随访时处于缓解期者127例(92.0%),其中GAF>70分为整体功能良好组46例(36.2%)、GAF总分 ≤ 70 分为整体功能不良组81例(63.8%)。两组间首发时职业、受教育水平存在统计学差异($P<0.05$);性别、年龄、BMI、婚姻、阳性精神疾病家族史、有诱因起病、伴自杀未遂、伴精神病性症状、HAMD-17总分、急性期治疗时间、接受维持期治疗者比例,两组间差异无统计学意义($P>0.05$)。整体功能不良组7年间总发作次数、伴精神病性症状发作占比、7年后TESS总分高于功能良好组($P<0.05$);7年间躁狂发作占比、抑郁发作占比、发生转相者比例、住院次数占比、7年后MARS总分 ≥ 6 分者比例,两组间差异无统计学意义($P>0.05$)。以7年后整体功能结局为因变量(赋值:功能良好组=0,功能不良组=1),两组间有统计学差异的变量为自变量(连续变量以实际值纳入),经二分类非条件logistic回归分析,7年间总发作次数($OR=1.504$)、7年后TESS总分($OR=1.068$)为患者7年后整体功能不良结局的独立危险因素,首发时受教育水平($OR=0.417$)为独立保护因素($P<0.05$)。Hosmer-Lemeshow检验结果显示, $\chi^2=6.738$, $df=8$, $P=0.565$,提示该模型拟合度好。

结论 复发次数、药物副反应增加了首发抑郁障碍患者7年后整体功能不良结局的发生风险,首发时受教育水平高的患者7年后整体功能结局相对良好。

关键词: 首发抑郁障碍;随访研究;整体功能结局;影响因素

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目的 Although mounting evidence has found significant structural and functional abnormalities in bipolar disorder (BD), few studies have examined the neural mechanism underlying the remission of mania in BD

方法 This study included 38 BD patients with mania (BipM), 37 remitted BD patients (rBD) and 38 demographically-matched healthy controls (HCs). Cortical thickness was estimated from T1-weighted MRI data to examine the structural basis of manic remission in BD. Seed-based functional connectivity (FC) was computed from resting-state functional MRI (fMRI) data to identify the functional correlates of manic remission in BD

结果 Compared with HCs, patients with BD exhibited decreased cortical thickness and increased FC in left precuneus.

结论 Our findings suggest that alterations in the structural and functional integrity of the left precuneus, and the brain region plays a role in the remission of mania in patients with BipM

关键词: Bipolar disorder; Cortical thickness; Gray matter nuclei; Functional connectivity; Manic remission

Structural and Functional Brain Substrates of Manic Remission in Bipolar Disorder

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真实世界中伏硫西汀在儿童青少年抑郁症患者中的临床应用分析

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目的 调查真实世界中伏硫西汀在儿童青少年抑郁症中的使用情况,了解其临床疗效、耐受性和安全性,为临床合理用药提供参考。

方法 本研究收集了2018年5月-2023年5月期间成都市第四人民医院门诊及住院患者中使用了伏硫西汀的儿童青少年抑郁症患者数据,对患者年龄、性别、用药剂量、服药时间、药物不良反应、疾病缓解情况进行回顾性分析。

结果 共有253名未满18岁的儿童青少年抑郁症患者纳入本项研究,其中男性96名,女性157名,123(43.62%)名患者为首次使用抗抑郁药物,185(73.12%)名患者服药时间小于3个月,18(7.11%)名患者服药时间超过半年,26(10.28%)名患者服药时间超过1年。药物剂量中10mg/每日为最常使用剂量(66.40%),其次是5mg/每日(25.69%)。有54(21.34%)名患者使用伏硫西汀期间为单一用药;在与伏硫西汀的联合用药中,阿立哌唑(21.74%)为最常联合药物,其次为劳拉西泮(21.34%)。27(10.67%)名患者报告了药物不良反应,包括恶心、呕吐、头晕、心悸、腹泻、嗜睡、全身发痒;20(7.91%)名患者报告因药物不良反应无法耐受而停药,男性和女性患者在报告药物不良反应方面没有差异($X^2=0.56, P=0.454$)。96(37.94%)名患者报告了症状缓解,男性和女性在报告症状缓解方面存在显著差异($X^2=3.934, P=0.047$)。

结论 临床中存在儿童青少年抑郁症患者超说明书使用伏硫西汀的情况。虽然服用伏硫西汀后整体药物耐受性较好,但服药后报告症状缓解的比例并不高,而性别差异对报告症状缓解方面可能存在一定的影响。

关键词: 伏硫西汀,抑郁症,儿童青少年

Prevalence and Clinical Correlates of Impaired Fasting Blood Glucose in Children and Adolescents with Depressive Disorder and Relationship with Triglyceride and High-density Lipoprotein Ratio

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Objective Depressive disorder is a significant public health problem worldwide, which adversely affects children and adolescents' health. Impaired fasting blood glucose (IFG) is more common in depressive disorder, which becomes a clinical problem that needs to be focused on. The study purposed to determine the prevalence and related factors of IFG in Chinese children and adolescents with depressive disorder and the relationship between triglyceride and high-density lipoprotein cholesterol (TG/HDL-C) ratio and IFG

Methods 756 subjects were collected in this study from January 2020 to December 2021 from the Third People's Hospital of Fuyang. We detected fasting blood glucose (FBG) and lipid levels and assessed the suicidal behaviors and depressive symptoms severity of each participant. The sociodemographic and included study variables were collected and analyzed

Results The prevalence of IFG was 6.5% (49/756). IFG was positively correlated with FBG, BMI, TG, TG/HDL-C, and was negatively correlated with gender and the type of antidepressant drug taken. Binary logistic analysis showed that male (OR = 2.57, 95% CI: 1.43–4.63, $P = 0.002$) and higher levels of TG (OR = 1.63, 95% CI: 1.11–2.38, $P = 0.013$) were independently associated with IFG in children and adolescents with depressive disorder

Conclusion The incidence of IFG in children and adolescents with depressive disorder was high and was positively related to the TG/HDL-C ratio. Patients with depressive disorders of different genders should appropriately consider the effect on blood glucose levels when making medication choices

关键词: children and adolescents; depressive disorder; impaired fasting blood glucose; prevalence; triglyceride and high-density lipoprotein ratio

电休克治疗抑郁症自杀的神经生理机制研究： 来自脑电微状态的证据

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目的 本研究将探讨电休克治疗对伴有自杀未遂行为的抑郁症患者脑电微状态的影响及其作用，探寻电休克治疗抑郁症自杀的脑电生理学标志，从而探索电休克治疗抑郁症患者自杀的神经电生理机制，以期未来对抑郁症的自杀风险进行早期的预警和干预。

方法 本研究纳入了 11 例不伴有自杀行为的抑郁症患者，19 例伴有自杀行为的抑郁症患者，比较了基线时两组患者脑电微状态的差异，其中 11 例不伴有自杀行为的抑郁症患者接受了为期 2 周的抗抑郁药物治疗，19 例伴有自杀行为的抑郁症患者中有 15 例患者完成了抗抑郁药物联合 8 次电休克治疗，两组治疗后再次采集静息态脑电数据，比较治疗前后脑电微状态的变化。

结果 基线时，自杀组与抑郁症组在微状态 A 的平均持续时间 ($P=0.027$)、微状态 B 的平均持续时间 ($P=0.027$) 和微状态 C 的出现频次 ($P=0.013$) 上存在差异，其中自杀组较抑郁症组在微状态 A 和微状态 B 的平均持续时间上升高；自杀组的微状态 C 的出现频次较抑郁症组降低。抑郁症组患者药物治疗前后的脑电微状态变化无统计学差异，自杀组的患者电休克治疗前后在微状态 A 的平均持续时间 ($P=0.024$) 上存在差异，治疗后微状态 A 的平均持续时间较治疗前下降。

结论 本研究结果显示电休克治疗对自杀的影响主要影响了脑电微状态 A 的平均持续时间，脑电微状态 A 的平均持续时间是电休克治疗抑郁症自杀的电生理生物标志物。

关键词：电休克；抑郁症；自杀；脑电微状态

Activity in Young Adults with Major Depressive Disorder

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Objective Major depressive disorder (MDD) is a disabling and severe psychiatric disorder with high risk of suicide, and adulthood is one of the most probable period for the onset. The neural basis underlying the young adults with MDD remains underexplored. The primary goal of the present study was to comprehensively clarify the neural basis of young depressed patients with suicide attempt through the combination of structural and functional analyses

Methods In this study, we have investigated the cortical and subcortical alterations of neuroanatomical structures and functional activation in twenty-three young depressive patients with suicide attempt versus forty-five healthy controls

Results Significant disruptions of regional gray matter volume at left middle frontal extending to superior frontal involved with cognitive processing were found correlated with anxiety scores in MDD patients. Increased cortical thickness at right orbital frontal responsible for decision making was correlated with severity of suicide. Further, increased functional activation at left auditory association cortex was a hallmark of hallucinations in MDD, which was directly associated with depression severity. Moreover, decreased spontaneous brain activity at right inferior frontal was also found, reflecting lower inhibition control in MDD patients

Conclusion The abnormal structural and functional findings at fronto-cortical areas implied the dysfunctional cognitive control and emotion regulation in MDD. The alterations correlated with clinical scores might indicate the reliable neural markers for MDD

关键词：Middle frontal gyrus Superior frontal gyrus Orbital frontal cortices Auditory association cortex Inferior frontal Amplitude of low frequency fluctuation

Severity Related Alterations of Gray Matter Volume, Cortical Thickness and Functional

青少年心理健康中的生活事件、焦虑和抑郁：一项中介效应分析

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目的 青少年期是个体心理健康发展的关键阶段，其心理健康状况对未来的成长和生活质量具有深远的影响。本研究旨在深入探究青少年男女性别差异对心理健康的影响，并聚焦于生活事件、焦虑和抑郁之间的关联。首先，青少年女性是否在生活事件、焦虑和抑郁方面表现出更高的水平。其次，生活事件是否直接影响着青少年焦虑和抑郁水平。焦虑是否在生活事件与抑郁之间扮演着中介的角色。

方法 本研究纳入了某市精神科医院在 2020 年至 2022 年期间收治的 0-18 岁的住院患者共计 154 名，其中包括 23 名男性（14.9%）和 131 名女性（85.1%）。患者的平均年龄为 13.54 ± 1.54 岁。使用青少年生活事件（ASLEC）、焦虑量表（SDS）和抑郁量表（CDI）对患者进行评估。通过收集大量的青少年数据，运用统计分析和中介效应检验等方法。

结果 青少年男性在生活事件（ 46.17 ± 22.32 vs. 60.25 ± 21.17 ）的得分均显著低于女性（ $t = -2.81$, $p < 0.05$ ）。青少年男性在焦虑（ 22.81 ± 13.1 vs. 33.18 ± 9.23 ）的得分均显著低于女性（ $t = -4.47$, $p < 0.001$ ）。青少年生活事件（ASLEC）与青少年焦虑量表（SDS）之间存在中度正相关关系（ $r = 0.632$, $p < 0.01$ ）。青少年生活事件对中介变量焦虑具有显著预测作用（ $\beta = 14.14$, $p < 0.001$ ）；加入中介变量后，自变量青少年生活事件对因变量抑郁具有显著预测作用（ $\beta = 0.19$, $p < 0.05$ ），中介变量青少年焦虑对因变量抑郁具有显著预测作用（ $\beta = 1.15$, $p < 0.001$ ）。自变量青少年生活事件对因变量抑郁的直接效应为 0.19，占总效应的 35.19%；自变量通过中介变量青少年焦虑对因变量抑郁的间接效应为 0.35，占总效应的 64.81%。

结论 在青少年男女性别之间存在着明显的心理健康差异。具体来说，青少年男性在生活事件、焦虑和抑郁方面的得分均显著低于女性，这一发现与过去的研究结果一致。相关性分析结果显示，青少年生活事件、焦虑和抑郁之间存在相关关系。青少年生活事件对焦虑具有显著预测作用，并且焦虑在生活事件与抑郁之间起到了部分中介作用。这一结

果揭示了焦虑在青少年心理健康问题中的重要性，同时也强调了生活事件对青少年焦虑和抑郁的影响路径。

关键词：青少年心理健康,生活事件,焦虑,抑郁,中介效应

低频 rTMS 刺激左侧额叶皮质联合氟西汀治疗首发抑郁障碍伴睡眠障碍的对照研究

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目的 探讨低频重复经颅磁刺激(rTMS)联合氟西汀片治疗儿童青少年首发抑郁障碍(MDD)伴睡眠障碍的效果及安全性。

方法 在我院 2023 年儿童青少年门诊中，选取了符合《国际疾病分类(第 10 版)》(ICD-10)抑郁障碍诊断标准并伴睡眠障碍 8-16 岁患儿 80 例(无重复经颅磁刺激禁忌症)，以随机数字表法分为研究组($n=40$)及对照组($n=40$)。研究组采用低频 rTMS(真刺激线圈刺激左侧额叶背外侧皮质)联合氟西汀治疗，对照组(采用假刺激线圈刺激左侧额叶背外侧皮质)联合氟西汀治疗。观察 4 周，分别在治疗前及治疗后 1、2、4 周采用儿童抑郁障碍自评量表(DSRSC)评定抑郁症状及疗效，在治疗前及治疗后 4 周采用睡眠状况自评量表(SRSS)评定睡眠情况及副反应量表(TESS)评定不良反应。

结果 结果(1)研究组治疗后抑郁障碍睡眠状态的改善率高于对照组(83.3%/46.6%)($p < 0.05$)。(2)研究组与对照组第 1、2、4 周采用儿童抑郁障碍自评量表(DSRSC)采用重复测量方差分析:两组患者不同时间点的 DSRSC 评分有差异($P < 0.05$)，两组 DSRSC 评分有差异，研究组比对照组低($P < 0.05$)，两组患者变化趋势有差异($P < 0.05$)。(3)两组不良反应较少，较轻微，两组 TESS 评分比较无统计学意义。

结论 结论低频 rTMS 刺激左侧额叶皮质联合氟西汀明显改善抑郁症状及不良睡眠状况，治疗 MDD 疗效显著且相对安全，值得临床推广应用。

关键词：低频 rTMS 刺激左侧额叶皮质，氟西汀，首发抑郁障碍伴睡眠障碍

青少年期抑郁发作患者的个性特征在 1 年期随访后的变化

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目的 评估个性特征对青少年抑郁患者的影响及 1 年期后的变化

方法 参与者来自深圳市康宁医院儿少精神科的门诊患者 200 名, 年龄在 12 至 16 岁之间。在首次就诊时完成人格特质与抑郁症状的量表评估, 并经过儿童精神科诊断明确为抑郁发作的患儿, 并在 1 年后再次完成人格特质和抑郁症状的量表评估。使用描述性统计方法汇总参与者的社会学特征、基线人格特质和抑郁症状评分。通过配对 t 检验评估随访前后抑郁症状和人格特质评分的变化。使用皮尔逊相关分析探讨抑郁症状变化与人格特质变化之间的相关性, 并控制潜在的混杂因素。最后通过多元回归分析评估基线人格特质对 1 年后抑郁症状变化的预测能力。

结果 在 1 年随访期间, 参与者的抑郁症状评分显著降低 ($p < 0.05$), 而某些人格特质评分 (如情绪稳定性和外向性) 有所改善 ($p < 0.05$)。皮尔逊相关分析结果表明, 抑郁症状的减轻与情绪稳定性和外向性评分的变化呈显著正相关 ($r > 0.3, p < 0.05$)。多元回归分析结果显示, 基线时的高情绪稳定性和外向性评分显著预测了 1 年后抑郁症状的更大幅度减轻 ($\beta > 0.3, p < 0.05$), 即使在控制了年龄、性别和家庭背景等混杂因素后, 这些关系仍然显著。

结论 通过本研究, 我们发现青少年抑郁发作患者在 1 年随访期间的人格特质和抑郁症状均有显著变化。特别是, 基线时的情绪稳定性和外向性人格特质对抑郁症状的改善具有显著的预测作用。这些发现为临床干预提供了重要依据, 强调了在治疗青少年抑郁症时考虑人格特质的重要性。

关键词: 青少年抑郁; 个性特征; 艾森克个性测验; 随访; 预测

休学青少年童年创伤与抑郁情绪的关系: 父子依恋的中介作用

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目的 探讨父子依恋对休学青少年童年创伤与抑郁情绪之间的中介效应, 为青少年抑郁情绪的干预提供参考。

方法 纳入 2023 年 5 月-2024 年 5 月在重庆医科大学附属第一医院、重庆市九龙坡区精神卫生中心精神科门诊及住院部就诊, 符合《国际疾病分类 (第 10 版)》(ICD-10) 抑郁障碍诊断标准且已经休学的青少年 122 例, 非休学抑郁组 234 例。采用童年创伤问卷 (CTQ)、父母与同伴依恋量表 (IPPA) 中文简版和贝克抑郁量表第 2 版中文版 (BDI-II-C) 进行评定。使用 Bootstrap 方法进行中介效应检验。

结果 休学青少年抑郁障碍患者占总的就诊抑郁青少年 38.7%, 其中女性明显高于男性, 占 83.61% (102 人), 14 岁年龄比例最高, 占 27.45% (33 人)。休学组与非休学组抑郁障碍青少年比较, 仅父子依恋的差异具有统计学意义 ($t=2.062, P < 0.05$); 休学青少年抑郁障碍患者 BDI-II 评分与 CTQ 评分呈正相关 ($r=0.350, P < 0.01$), 与 IPPA 的父子依恋、母子依恋、父子依恋评分均呈负相关 ($r_1=-0.444, r_2=-0.393, r_3=-0.342, P < 0.01$); 父子依恋在童年创伤与抑郁评分之间的部分中介效应显著, 效应值 0.114, 95% CI: 0.034~0.199。

结论 青少年抑郁障碍患者中休学比例较高, 且主要集中在青春早期的女性; 休学青少年的抑郁情绪可能与童年创伤和较差的父子依恋有关, 童年创伤既可直接影响休学青少年的抑郁情绪, 亦可通过父子依恋间接改善抑郁情绪。

关键词: 休学; 童年创伤; 抑郁障碍; 父子依恋; 青少年

Associations between Internet Addiction and Suicidal Ideation in Depressed Adolescents: The Mediating Effect of Insomnia As Well As Sex Differences

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Objective Insomnia may mediate the association between internet addiction (IA) and suicidal ideation (SI). However, such association has not been thoroughly investigated in adolescents with major depressive disorder (MDD). Thus, our study aimed to explore whether insomnia significantly affects the association between IA and SI in adolescents with MDD, as well as any sex differences

Methods From January 2021 to September 2023, this study included 502 adolescents with MDD and 123 healthy controls (HCs). The Clinical Global Impression-Severity (CGI-S), the Internet Addiction Test (IAT), the Insomnia Severity Index Scale (ISI) and the Positive and Negative Suicidal Ideation Scale (PANSI) were used to assess subjects' severity of depression, IA, insomnia and SI. And we employed the PROCESS macro program to examine the mediating role of insomnia between IA and SI

Results Compared to HCs, adolescents with MDD had significantly higher levels of SI and their prevalence of IA and insomnia were 50.00% and 35.66%. In patients, PANSI scores correlated negatively with age and age of onset, and positively with disease duration as well as the scores of the CGI-S, IAT, and ISI (all $p < 0.01$). Moreover, above-mentioned correlations were more significant in females. Mediation analyses showed that insomnia mediated the effect of IA on SI, and the total, direct, and indirect effects were 0.197 (95% CI: 0.132 - 0.262), 0.157 (95% CI: 0.096 - 0.218) and 0.040 (95% CI: 0.014 - 0.068), respectively

Conclusion Depressed adolescents have higher suicide risk, and SI is significantly associated with IA and insomnia, especially in females. Moreover, insomnia may mediate the association between IA and SI. Therefore, clinical interventions should be strengthened for IA and insomnia in adolescents with MDD to reduce suicide risk

关键词: internet addiction, insomnia, suicidal ideation, adolescents, major depressive disorder

上海市青少年心理健康现状及家庭影响因素

分析

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目的 了解目前上海市某区青少年的心理健康状况及家庭影响因素, 为政府部门及教育部门开展青少年的心理健康教育服务提供可能的意见或建议。

方法 研究纳入某区两所高级中学全体高一学生, 使用问卷星的形式对研究对象进行一般人口学自编问卷调查, 采用中国中学生心理健康量表 (Mental Health Inventory of Middle School Students, MMHI-60) 评估他们的心理健康状态。

结果 ①680 名高一学生 MMHI-60 总分异常检出率为 30.3%, 总均分低于 2019 年常模水平 ($P < 0.05$); ②多元回归分析显示母亲受教育程度越高 ($\beta = -0.162$, 95%CI: (-0.257, -0.067), $P = 0.001$)、家庭经济状况越好 ($\beta = -0.194$, 95%CI: (-0.354, -0.034), $P = 0.017$)、亲子间沟通频率高 ($\beta = -0.162$, 95%CI: (-0.257, -0.067), $P = 0.001$) 是青少年心理健康的保护因素。

结论 青少年群体心理健康状况异常状况与 2019 年常模水平相比有所下降, 母亲高教育程度、良好的家庭经济条件、较高频率的亲子沟通次数可能是青少年心理健康问题的保护因素。

关键词: 高中生; 心理健康; 家庭; 影响因素

Effects of Parental Stress on Gut Microbiome and Introverted Sexual Behavior in Children with Autism

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Objective Emotional and behavioral problems with autism spectrum disorders begin in early childhood and worsen with age. We sought to explore whether introverted behavior in children with ASD is influenced by microbiota, viral infection and metabolism, and its

association with parenting stress.

Methods The study included 78 children with ASD, and 70 children with normal development were recruited during the same period. The children's internal and external behavior, abnormal symptoms of gastrointestinal tract, parenting stress and sleep problems were investigated by questionnaire. Intestinal microbiome and metabolomics were detected in 42 ASD children with gastrointestinal symptoms and 40 normal children without gastrointestinal symptoms.

Results There were more internal and external behavior problems in ASD group ($p < 0.01$). The detection rate of gastrointestinal symptoms was higher than that in TD group, and the detection rate of sleep problems and abnormal EBs was higher than that in TD group. The results of correlation analysis showed that the children in ASD group showed a positive correlation with *Prevotella* and *Mycobacteria* ($R^2=0.647$, $p < 0.01$). Parenting stress was positively associated with social response and autism severity.

Conclusion The introverted behavior and parenting stress of children with ASD may affect the changes of intestinal microbiota

关键词: Keywords: autism spectrum disorder; enteric microorganism; internalizing behavior; externalizing behavior; parental stress

COVID-19 大流行期间首次发病、未服药的抑郁障碍儿童和青少年的全身免疫炎症指数与自杀未遂的相关性分析

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目的 本研究旨在调查 COVID-19 大流行期间, 首次发病、未服药的儿童和青少年抑郁障碍 (Major Depressive Disorder, MDD) 患者的全身免疫炎症指数 (systemic immune-inflammatory index, SII) 与自杀未遂 (suicide attempt, SA) 之间的关系。

方法 对 2020 年至 2022 年在阜阳市第三人民医院住院治疗的 263 名首次发病、未服药的儿童和青少年 MDD 患者进行回顾性研究。根据既往 SA 的

存在情况将患者分为有 SA 病史组和无 SA 病史组, 比较两组患者在 SII 和临床特征方面的差异, 并使用接收者操作特征曲线 (ROC) 确定了 SII 的最佳临界值和曲线下面积, 然后使用二元逻辑回归分析 SA 的独立危险因素。

结果 与无 SA 病史的患者相比, 有 SA 病史的患者汉密尔顿抑郁量表 (Hamilton Depression Rating Scale, HDRS) 评分较高 ($Z=-2.369$, $P=0.018$), 中性粒细胞计数较高 ($Z=-2.870$, $P=0.004$), 血小板计数较高 ($Z=-2.155$, $P=0.031$), SII 水平较高 ($Z=-3.170$, $P=0.002$)。ROC 曲线确定的最佳临界 SII 为 548.15 (灵敏度=63.2%, 特异度=83.1%), 曲线下面积为 0.661。在对性别、年龄、体重指数、病程和 HDRS 评分进行调整后, 高 SII 患者 SA 风险是低 SII 患者的 8.296 倍 (OR=8.296, 95% CI: 3.803-18.095, $P<0.001$), 高 SII 患者近期 SA (SA 发生在 7 天之内) 风险是低 SII 患者的 13.922 倍 (OR=13.922, 95% CI: 5.587-34.693, $P<0.001$)。然而, 高 SII 并不是远期 SA (SA 发生在 7 天之前) 的危险因素 (OR=0.547, 95% CI: 0.062-4.842, $P=0.587$)。

结论 SII 这种成本低廉的指标可能有助于识别青少年 MDD 患者的自杀风险, 通过检测 SII 来识别具有 SA 风险较高的亚组患者, 可能有助于制定更加有效和个性化的自杀预防和抑郁症治疗策略。

关键词: 抑郁障碍, 自杀未遂, 首次发病, 儿童和青少年, 全身免疫炎症指数、

Depressive and Mobile Phone Addiction Symptoms in Chinese Adolescents with Major Depressive Disorder: The Mediating Effect of Alexithymia

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Objective Mobile phone addiction (MPA) are associated with depression, yet the underlying mechanisms are not clear. This study aimed to explore the prevalence and clinical correlates of MPA symptoms,

the associations between depressive and MPA symptoms, and whether the associations are mediated by alexithymia among adolescents with major depressive disorder (MDD)

Methods This cross-sectional study was conducted from January to July 2021 in seven hospitals across the northern, central, and southern regions of Anhui Province, China. MPA symptoms, depressive symptoms, and alexithymia were assessed using the Mobile Phone Addiction Scale (MPAS), the Center for Epidemiologic Studies of Depression Symptom Scale (CES-D) and the 20-item Toronto Affective Disorders Scale (TAS-20), respectively

Results A total of 286 adolescents with MDD were included, and the prevalence of MPA symptoms was 26.2%. Binary logistic regression analyses revealed that the adolescents with poorer academic performance, a higher total score of TAS-20, and a higher externally oriented thinking (EOT) subscale score were more likely to have MPA symptoms (all $P < 0.05$). Multivariate linear regression analyses showed that depressive symptoms were positively correlated with the severity of MPA symptoms in adolescents with MDD (all $P < 0.05$). Alexithymia and EOT partially mediated the associations between depressive and MPA symptoms

Conclusion MPA symptoms are common in adolescents with MDD, and the effect of depressive symptoms on the the severity of MPA symptoms was mediated partially through alexithymia. Therefore, effective identification and intervention for alexithymia may be important strategies to help clinical staff reduce the risk of MPA among adolescents with MDD

关键词: Major depressive disorder, Depressive symptoms, Mobile phone addiction, Alexithymia, Adolescents

Association between Childhood Trauma and Affective Lability Among Adolescents: A Moderated Mediation Model

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Objective Affective lability is an important feature of psychopathology. However, there is limited relevant research involving adolescents. To fill this research gap, the present study assessed the relationship between childhood trauma and affective lability among adolescents using a moderated mediation model

Methods

A total of 3738 students were recruited from four high schools in Shenzhen, China, between September and December 2019. The participants completed self-reported questionnaires measuring childhood trauma, affective lability, body image dissatisfaction, and the experience of being bullied. Linear regression and moderated mediation analyses were used in this study.

Results Linear regression analysis showed that emotional abuse and body image dissatisfaction positively predicted affective lability in boys and girls (all $p < 0.001$). Body image dissatisfaction mediated the relationship between emotional abuse and affective lability. In the moderated mediation model, being bullied moderated the direct path from emotional abuse to affective lability ($p = 0.0236$, $p = 0.0188$), and gender did not have a significant moderating effect on any direct or indirect path (all $p > 0.05$)

Conclusion The findings support that childhood trauma has an impact on affective lability in adolescents. Specifically, body image dissatisfaction and being bullied affect the relationship between emotional abuse and affective lability

关键词: Childhood trauma; Affective lability; Body image; Being bullied; Moderated mediation model

Association Between Adolescents Depression and Anhedonia: A Mediation Model of Metacognition

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Objective To investigate the relationship between depression severity and anhedonia in adolescents, as well as the mediating effect of metacognition between the two

Methods The study participants were selected from adolescents aged 12-18 years old. A total of 120 adolescents meeting the DSM-5 diagnostic criteria for depressive disorders participated in this study. This participants have not undergone physical therapy such as transcranial magnetic stimulation or convulsive electroconvulsive therapy. General information surveys, the Dimensional Anhedonia Rating Scale (DARS), the Metacognitions Questionnaire-30 (MCQ-30), the Hamilton Rating Scale for Depression-17 (HAMD-17) and the Generalized Anxiety Disorder-7 (GAD-7) were used to assess their depression severity, anxiety severity, anhedonia, and metacognition

Results For the MCQ-30 scores, participants with anxiety had higher levels of metacognition than those without ($P < 0.01$). Regarding anhedonia, there was a significant difference in the presence of anxiety between those with and without anhedonia ($P < 0.01$). The scores of HAMD-17 and DARS were negatively correlated ($r = -0.501, P < 0.01$), while positively correlated with the scores of MCQ-30 ($r = 0.415, P < 0.01$). Both the MCQ-30 indirect effect and the direct effect in depression severity and anhedonia in adolescents are significant, with respective proportions of 29.22% and 70.70%

Conclusion Metacognition mediated between depression severity and anhedonia in adolescents with depression

关键词：adolescent, depression, anhedonia, metacognition

基于心智化理论的团体沙盘游戏治疗干预儿童行为问题的过程研究

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目的 探索在基于心智化理论的团体沙盘游戏治疗过程中，儿童之间的互动行为及儿童与治疗师互动行为的变化。探索这些变化之间的相互关系，寻找可能存在的促使儿童行为改变的内在机制。

方法 将六名存在行为问题的儿童分为两组，每组三人，进行九次基于心智化理论的团体沙盘游戏治疗，对治疗过程进行录像。依据儿童在治疗过程中的互动行为制作编码手册，主要包括儿童间的干涉、攻击及合作行为以及儿童对治疗师表达正向情绪。依据扎根理论对儿童在沙盘游戏治疗中的互动行为进行编码并由两名研究者进行背对背分析，确保编码的有效性。将治疗过程分为前、中、后三个阶段，比较各阶段儿童之间及儿童与治疗师互动行为的变化。

结果 非参数检验 F 检验结果显示，在治疗过程中，儿童之间的干涉行为显著减少 ($Z = 16.36, p < 0.001$)，合作行为显著增加 ($Z = 7.61, p = 0.022$)。儿童对治疗师表达积极情绪显著增加 ($Z = 10.40, p = 0.006$)。但儿童之间的攻击行为变化不显著 ($Z = 3.03, p = 0.219$)。斯皮尔曼相关分析结果表明，儿童对治疗师表达积极情绪与儿童间的合作行为正相关 ($r = 0.402, p = 0.003$)，与儿童间的干涉行为负相关 ($r = -0.318, p = 0.023$)。评分者一致性结果显示一致性大于 0.70。

结论 基于心智化理论的团体沙盘游戏治疗可以减少行为问题儿童在游戏中的干涉行为，增加合作行为。行为的改变可能与良好的治疗关系有关。在治疗过程中，治疗师提供了一个安全的空间，借由象征性的表达及治疗师对儿童心理状态的反馈，儿童的心智化能力得以发展，游戏互动中的干涉行为减少，合作行为增加。但儿童在游戏中的攻击行为并无显著变化，九次的干预不足以将改善泛化到日常生活，未来需要更长时间及更大样本的研究，以探索基于心智化理论的团体沙盘游戏治疗对儿童心智化的发展及问题行为的疗效及促进改变的内在机制。

关键词：心智化；团体沙盘游戏治疗；儿童行为问题

青少年 NSSI 患者父母人格特征及认知调节情绪策略分析

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目的 分析青少年NSSI患者父母人格特征、认知调节情绪策略对青少年非自杀性自伤行为的影响。

方法 选取到医院就诊的青少年NSSI患者,患者父母为观察组;在学校,社区及医院选取健康青少年,其父母为对照组,采用中国大五人格问卷简版式,认知情绪调节问卷中文版(CERQ-C)对观察组、对照组进行问卷调查。

结果 对照组在开放性(40.90±6.19)、严谨性人格得分(48.18±6.12)高于观察组(36.88±5.02)、(44.12±6.58)($P<0.05$)。对照组面对负性事件时在接受(15.28±2.50)、积极再次评价(16.9±2.64)、再次关注计划(16.33±2.46)、积极再次关注(13.58±2.81)、合理分析(10.38±2.81)的策略得分高于观察组($P<0.05$)。观察组的神经质与合理分析(+0.305)、灾难性(+0.370)正相关;外向性与接受(-0.291),责备他人(-0.323)负相关;开放性与接受(-0.399)负相关,而与积极再次关注(+0.303)、积极再次评价(+0.272)正相关;宜人性与责备他人(-0.363)负相关;严谨性与接受(-0.255)呈负相关($P<0.05$, $P<0.01$)。根据多元logistics回归分析发现,病例组的NSSI行为与观察组的经济水平(OR=0.485),受教育年限(OR=0.600)、接受(OR=0.590)、积极再次评价(OR=0.454)、合理分析(OR=0.810),开放性(OR=0.712)、严谨性(OR=0.756)负相关,与自我责备(OR=1.545)、再次关注计划(OR=2.089)正相关($P<0.05$)。

结论 青少年NSSI患者父母的人格特征、面对负性事件时的情绪调节策略影响青少年NSSI行为的发生。

关键词: 青少年,非自杀性自伤行为,父母,人格特征,情绪认知策略;

EEG Microstates in Adolescent Depression: Effects of Depression Severity and Overall Symptoms

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Objective This study aims to investigate the relationship between EEG microstate activity and symptom severity in adolescents diagnosed with Major Depressive Disorder (MDD)

Methods The study involved 68 adolescents with MDD. The severity of symptoms was assessed using the Self-Rating Depression Scale (SDS), Self-Rating Anxiety Scale (SAS), and Symptom Checklist-90 (SCL-90). A 5-minute resting-state EEG recording with eyes closed was conducted using a 64-channel EEG system and analyzed with microstate analysis. K-means clustering was performed to characterize microstates, and the duration, occurrence, coverage, and transition probability of each microstate were calculated. Microstate properties were compared across groups with varying degrees of symptom severity, and the relationship between symptom severity and microstate properties was analyzed

Results The study characterized four microstates (labeled A, B, C, and D). A decreased occurrence and duration of microstate C were observed in patients with severe MDD (SMDD) compared to those with mild to moderate MDD (MMDD), along with an increased duration of microstate D in SMDD patients. Significant correlations were identified between symptom severity (as measured by SDS and SCL-90 scores) and microstate metrics (the occurrence and coverage of microstate C and the transition probability between microstates A and D)

Conclusion These findings enhance the overall understanding of the pathophysiological mechanisms underlying MDD and elucidate how symptom factors may contribute to EEG microstate abnormalities among MDD patients

关键词: EEG Microstates; Adolescents; Major Depressive Disorder; Symptom Severity; EEG Analysis

儿童青少年非自杀性自伤行为的影响因素

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目的 非自杀性自伤发病率高,被认为是严重影响青少年心理健康与安全的重大公共卫生问题。识别早期风险因素对于筛查和预防非自杀性自伤行为非常重要。本研究旨在探究儿童青少年非自杀性自伤行为的危险因素,助力于为临床早期干预和治疗。

方法 纳入 210 例伴非自杀性自伤行为的心境障碍患者(NSSI组)、290 例不伴非自杀性自伤行为的心境障碍患者(非NSSI组)。采用自动血液分析仪检测血常规并计算中性粒细胞-淋巴细胞比值(Neutrophil-Lymphocyte Ratio, NLR)、单核细胞-淋巴细胞比值(Monocyte-Lymphocyte Ratio, MLR)、血小板-淋巴细胞比值(Platelet-Lymphocyte Ratio, PLR)和系统性免疫炎症指数(Systemic Immuno-inflammation Index, SII),分析自伤组和非自伤组之间炎症指标的差异性。采用使用渥太华自我伤害调查表、17 项汉密尔顿抑郁量表、广泛性焦虑量表、儿童期虐待问卷、青少年生活事件量表、领悟社会支持量表、匹兹堡睡眠质量指数量表对研究对象的自伤行为以及其他事件进行评估。对自伤情况进行描述性分析,使用独立样本 T 检验比较两组间的一般资料、炎症指标和量表评分,同时进行多因素 Logistic 回归分析,分析自伤行为的危险因素。

结果 自伤组入组患者的年龄范围为 12~18 (13.7±1.4)岁,而自伤行为开始的年龄为 8~17 岁;自伤组患者血液中的中性粒细胞计数与淋巴细胞计数的比值、单核细胞计数与淋巴细胞计数的比值较非自伤组升高,差异有统计学意义($P<0.05$)。焦虑、抑郁、童年虐待、失眠是儿童青少年非自杀性自伤行为的危险因素($OR=2.440、3.102、2.704、2.075, P<0.05$)。

结论 儿童青少年中非自杀性自伤行为发生率高,而且自伤行为的发生越发低龄化;全血细胞衍生的指标在自伤患者中值得被关注;抑郁、焦虑、童年虐待是自伤的危险因素。临床可以根据这些特点对儿童青少年自伤行为进行针对性的预防和治疗。

关键词: 非自杀性自伤,儿童青少年,炎症标志物,危险因素

Pharmacological and Nonpharmacological Interventions for Adolescent Irritability: A Systematic Review and Meta-analysis

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Methods 2.1 Search strategy

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for preferred reporting items (Moher et al., 2015). This protocol was registered with the International Prospective Register of Systematic Reviews under the pre-registration protocol ID CRD42023433662 (PROSPERO, 2023). We conducted a search of four databases: PubMed, Embase, the Cochrane Controlled Trials Register, and the Web of Science Core Collection. Other search sources included ClinicalTrials.gov. Each database was searched from 2000 to 2023 using the following keywords: (ASD/DMDD/ADHD/CD/DBD/ODD/SMD) AND (treatment) AND (irritability). See Online Resource 1 for details.

Results Fifty-eight RCT studies were included, including 3842 patients in total. Based on the clinical diagnosis, studies with a diagnosis of ASD were classified as an ASD subgroup, and those with a diagnosis of ADHD, CD, DBD, ODD, DMDD, or SMD as another subgroup. Studies of patients with comorbidities (ADHD+ASD) were included in two clinical subgroups. A total of 43 trials included 2451 patients with ASD. In total, 137 patients with ASD and ADHD were included in these 43 trials. Twelve trials involved 1295 participants with ADHD, CD, DBD, ODD, DMDD, or SMD. Two trials included 225 patients with DBD, four trials included 154 patients with DMDD, two trials included 517 patients with ADHD, two trials included 169 patients with ADHD and SMD, one trial included 63 patients with ODD and CD, and one trial included 126 patients with ADHD and DMDD. Participants ranged in age from 2 to 17. In terms of types of intervention, 42 studies focused on pharmacological interventions, 11 on

non-pharmacological interventions, and 5 on combination interventions. Thirty-six of the studies that included patients diagnosed with ASD focused on pharmacological interventions, including risperidone (RIS) in combination with 20 other pharmacological interventions, RIS alone, and aripiprazole monotherapy, omega-3 fatty acids, N-acetyl cysteine (NAC), divalproex sodium, tetrahydrobiopterin (BH4), lurasidone, VitD+omega-3, guanfacine, and bumetanide. Six focused on nonpharmacological interventions, including Parent Training (PT), Occupational Therapy in an Equine Environment: Harnessing Occupation to Address Self-Regulation, Social Communication, and Play in Youth with Autism (OTee HORSPLAY), therapeutic horseback riding (THR), applied behavior analysis (ABA), and Low-Level Laser Therapy (LLLT). One study focused on RIS+PT. Six of the studies that included patients diagnosed with ADHD, CD, DBD, ODD, DMDD, or SMD focused on pharmacological interventions, including RIS, Dasotraline, micronutrients, and methylphenidate (MPH) + citalopram (CTP). Five focused on non-pharmacological interventions, including ACTIVE I interpretation bias training (ACTIVE-IBT), Coping power program (CP)+beyond the clouds (BC), dialectical behavior therapy (DBT), and management+PT. Two studies focused on medication management+behavioral treatment and MPH+behavior modification. Atomoxetine (ATX) and ATX+PT were the intervention methods in studies that included patients with ADHD with comorbid ASD. Fifty-eight studies were included, 47 using the ABC-I, 2 using the ARI, and 2 using the DBD-S to measure irritability. Others used NCBRF, PRS-R, CASI-5, CGI-S, SNAP-IS, CBCL, and CGAS. The duration of the studies ranged from 2 to 84 weeks (mean =14.37, SD = 14.11). See Table 1 for a detailed description.

Conclusion Antipsychotics combined with other pharmacological interventions are most effective in improving irritability symptoms, and risperidone is the most commonly used anti-SC pharmacological treatment. In the future, the application of antipsychotics in the treatment of non-ASD externalizing irritability symptoms and other antipsychotics in the treatment of

externalizing irritability symptoms can be further investigated. It could also guide research on whether a combination of pharmacological interventions can be used synergistically to improve irritability in adolescents. These nonpharmacological interventions have a certain effect on the improvement of irritability symptoms in adolescents, especially in preschool children. Among them, LLLT and DBT showed high efficacy, while PT and THR showed relatively low efficacy. When selecting the appropriate treatment, the specific situation of the patient should be considered. Although antipsychotic drugs have the greatest effect, it is necessary to be alert to side effects such as metabolic syndrome, and that non-drug treatment is the first choice for school-age children.

关键词: irritability; pharmacological interventions; psychosocial interventions; adolescent

The Neural Mechanism of Rumination Affecting School Refusal Behavior in Adolescents with Anxiety Disorder

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Objective School refusal behavior (SR) among adolescents is one of the current societal hot issues, commonly seen in those with anxiety disorders (AD). It not only impacts the mental and physical health of the affected individuals but also imposes a significant burden on families, schools, and society. Past findings have identified rumination as a key risk factor leading to SR, yet its specific neural mechanisms remain unclear

Methods Collect scale scores of HAMD, HAMA, rumination thinking, and school refusal behavior from 11 adolescent patients with ADHD accompanied by sleep disturbance (SR group) and 11 age- and

gender-matched controls (HC group), as well as resting-state EEG data. Extract functional connectivity between the DMN networks of the two groups of participants and analyze significant differences in emotional symptoms, rumination thinking, and school refusal frequency between the two groups, as well as the correlations among emotional symptoms, rumination thinking, and school refusal behavior

Results Based on the analysis of behavioral data from the two groups of participants, it was found that the total scores of HAMD and HAMA in the SR group were significantly higher than those in the HC group. Within the SR group, rumination thinking (RRS) was significantly positively correlated with sleep disturbance (SRAS) and anxiety symptoms (SCAERD) ($r=0.5314$, $p=0.042$; $r=0.7802$, $p=0.003$), and sleep disturbance was significantly positively correlated with anxiety symptoms ($r=0.6095$, $p=0.016$). Statistical analysis of resting-state EEG data from the two groups revealed that the functional connectivity between the core subsystem of the default mode network (DMN) and the posterior cingulate cortex subsystem was weakened in the SR group compared to the HC group

Conclusion The weakened functional connectivity of the DMN may be the core mechanism through which rumination affects school refusal in adolescents with anxiety disorders. Research findings are expected to further elucidate the neural mechanisms of school refusal in adolescents with anxiety disorders, providing a theoretical basis and clinical evidence for precise diagnosis and treatment

关键词: Adolescent Anxiety Disorders; School Refusal; Rumination; Default Mode Network; Mindfulness

基于 LASSO 回归探究儿童青少年抑郁障碍非自杀性自伤行为的高风险特征

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目的 通过对比儿童青少年抑郁障碍非自杀性

自伤行为的低风险和高风险组的个案特征, 筛选出儿童青少年非自杀性自伤行为的高风险特征因子。提前识别非自杀性自伤行为的高风险人群, 从而降低儿童青少年抑郁障碍非自杀性自伤行为的发生。

方法 1.1 问卷制定 根据德尔菲专家咨询法, 选取公共卫生学、儿童精神病学、精神康复学各领域专家共 22 名。第一轮问卷内容由研究人员基于儿童青少年非自杀性自伤行为和抑郁障碍相关文献上拟定初稿, 问卷包括个人因素、家庭因素、学校及环境因素三个部分, 共 32 个条目。根据第一轮 22 位专家对问卷条目推荐的建议增加第二轮问卷内容, 第二轮得 41 个条目。再基于第二轮问卷专家对条目推荐度和新增建议制定第三轮问卷内容, 第三轮终得 45 个条目。通过 SPSS 22.0 软件对问卷条目重要性、评分意见协调程度、专家的协调程度进行统计学分析。形成《儿童青少年抑郁障碍个案特征的评定量表》。

1.2 问卷投放 选取 2022.3.1-2023.11.30 深圳市康宁医院门诊和住院部 10-18 岁诊断抑郁障碍的患者, 根据非自杀性自伤行为评分表分为低风险组和高风险组, 投放《儿童青少年抑郁障碍个案特征的评定量表》, 回收 691 份, 最终有效量表共 610 份。

1.3 LASSO 回归 使用 R 语言的 glmnet 包实现 LASSO 回归分析, 提取量表中非自杀性自伤行为的高风险特征, 筛选儿童青少年抑郁障碍的非自杀性自伤行为的高风险组的特征因子。

结果 通过 LASSO 回归分析, 显示在《儿童青少年抑郁障碍个案特征的评定量表》的家庭因素方面, A2 家庭氛围 ($s=0.043$), A5 母亲养育方式 ($s=0.127$), A6 父亲养育方式 ($s=0.052$), A7 是否有同胞 ($s=0.750$), A10 家庭给与的心理支持 ($s=0.524$); 在学校因素方面, B1 寄宿情况 ($s=-0.797$), B5 是否满意和同学间关系 ($s=0.318$), B9 对学校氛围是否满意 ($s=0.220$); 个人因素方面, C1 病程持续时间 ($s=0.0004$), C5 自伤频率 ($s=3.947$), C8 是否有能坚持的兴趣爱好 ($s=-0.636$); 以上因素是儿童青少年抑郁障碍伴非自杀性自伤行为发生的高风险因子。

结论 《儿童青少年抑郁障碍个案特征的评定量表》的评估将为预测和评估儿童青少年抑郁障碍的非自杀性自伤行为提供有价值的信息。

关键词: 儿童青少年, 抑郁障碍, LASSO 回归, 非自杀性自伤行为

Anxiety, Depression and Sleep Quality and Peripheral Biomarkers of Inflammation Derived From Complete Blood Counts (CBC) in Adolescence Undergoing School Refusal From Psychiatry Outpatient

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Objective Middle-school students with school refusal may experience troubling symptoms such as anxiety, depression and sleep quality. Inflammation is considered a primary and influential hypothetical factor contributing to adolescent depression and anxiety. The main objective of this study is to determine the prevalence of anxiety, depression and sleep quality among Chinese adolescences with school refusal from psychiatry outpatient, and to explore the contributing predictors, including the role of inflammation.

Methods The study used a descriptive cross-sectional design and utilized self-report questionnaires. The participant pool consisted of 162 middle-school students experiencing school refusal from psychiatric outpatient. The questionnaire included the self-rating anxiety scale (SAS) self-rating depression scale (SDS), Pittsburgh sleep quality index (PSQI), and mood disorder questionnaire (MDQ), and peripheral biomarkers of inflammation derived from CBC were investigated in the subjects. Data analysis involved the utilization of the independent t-test, analysis of variance, Pearson correlation coefficients, and linear multiple regression.

Results The median age of all participants was 16.11 years old, and 35.8% of them were male. The global SDS score 63.25, SAS score 56.09, PSQI score was 10.77, indicating moderate or greater depressive symptoms, mild anxiety symptoms, and general sleep quality. Upon adjusting for sociodemographic charac-

teristics, the global SDS score showed a significant association with the SAS score, with the linear regression model expressed as follows: Model 1: $SDS = -17.579 + 0.787 * SAS + 3.732 * MPV$. Additionally, the PSQI score exhibited a significant association with the SAS score (0.156 [0.115–0.197], $P < 0.001$, Model 2). Furthermore, the SAS score demonstrated significant associations with the SDS score, MDQ score, PSQI, and WBC in the linear regression model, which can be represented as follows: Model 3: $SAS = 12.538 + 0.54 * SDS + 1.008 * MDQ + 0.98 * PSQI - 1.012 * WBC$.

Conclusion Anxiety, depression and sleep quality are significant problems for middle-school students who were going through school refusal from psychiatry outpatient. Our study has reaffirmed the role of inflammation in the pathophysiology of adolescence depression and anxiety. Appropriate interventions to monitor and reduce psychological problems and sleep quality amongst middle school students undergoing school refusal are needed.

关键词: adolescence,school refusal,inflammation,Anxiety,depression,sleep quality

Global Research Landscape and Trends of Internet Addiction Disorder: A Comprehensive Bibliometric Analysis of Publications in The Past Twenty Years

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Objective This bibliometric analysis aimed to explore the global research landscape and trends of Internet Addiction Disorder (IAD) over the past twenty years, focusing on keywords analysis, citation analysis, and future research trends

Methods We conducted a comprehensive bibliometric analysis to explore the global research landscape and trends of IAD over the past twenty years. Our methodology involved analyzing author analysis, journal

analysis, keywords and citations in publications related to IAD from 2004 to 2024

Results We identified "internet addiction," "internet gaming disorder," and "adolescent" as the most frequently occurring keywords, highlighting significant research areas within IAD. The analysis revealed that terms like "social media addiction," "problematic smartphone use," and "COVID-19" have gained prominence in recent years, reflecting the evolving nature of digital technology's impact on mental health. Clustering analysis illustrated the interdisciplinary nature of IAD research, integrating insights from psychology, sociology, network science, and psychiatry. Citation analysis identified highly influential papers, such as Kuss and Griffiths' (2011) review on social networking addiction and Brand et al.'s (2016) I-PACE model for internet-use disorders

Conclusion These works highlighted the field's foundational theories and the diverse methodological approaches used. Our findings underscore the importance of continuing interdisciplinary research to address the multifaceted challenges of IAD. The study emphasized the need for further exploration into the long-term mental health effects of excessive internet use, especially in the context of the COVID-19 pandemic. Future research should focus on the intersections of digital behaviors with mental health, personality traits, and social dynamics to develop comprehensive strategies for prevention and intervention. This bibliometric analysis provides a valuable reference for researchers, clinicians, and policymakers aiming to understand and mitigate the impact of IAD

关键词: internet addiction disorder, bibliometric analysis, internet gaming disorder, social media addiction, problematic smartphone use, mental health

青少年抑郁障碍自杀和非自杀性自伤行为的多模态脑影像学研究

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目的 皮层褶皱 (gyrification) 是人类大脑发育的一个标志。研究表明青少年抑郁障碍自杀与非自杀性自伤行为涉及多个脑区的结构及功能异常有关,但是否存在皮层褶皱特征性异常及其脑功能的变化尚不清楚。本研究联合基于皮层脑形态学分析和静息态 fMRI 技术,旨在探讨青少年抑郁障碍自杀与非自杀性自伤行为的皮层褶皱特征及其伴随的脑自发神经功能变化。

方法 本研究招募了伴自杀行为的抑郁障碍患者 (SA) 45 例,伴非自杀性自伤行为的抑郁障碍患者 (NSSI) 31 例和正常对照 (NC) 28 例。采用渥太华自我伤害调查表 (中文版)、哥伦比亚-自杀严重程度评定量表、BECK 自杀意念量表等对患者进行临床评估。采用 SPSS 25.0 软件对一般人口学资料和临床量表数据进行统计分析。采用 3T 的西门子 MRI 设备获取了被试的结构 MRI 和静息态 fMRI 数据,分析了三组间的皮层褶皱的差异,并以差异脑区作为感兴趣区域 (regions of interest, ROIs),探索三组间功能连接的差异。

结果 三组被试间在渥太华自我伤害调查表 (中文版)、哥伦比亚-自杀严重程度评定量表、BECK 自杀意念量表等多个量表指标存在显著差异 ($P < 0.05$)。协方差分析结果提示三组之间皮层褶皱显著差异的脑区主要位于双侧的额中回、中央前回,左侧的额叶岛盖部和右侧的中央后回 (FDR 校正, $P < 0.05$)。事后检验显示 SA 和 NC 组间存在统计学差异, NSSI 和 NC 组间存在统计学差别, SA 和 NSSI 组间不存在统计学差异。以双侧的额中回为感兴趣区域的功能连接分析显示三组间存在显著异常的自发神经活动模式,主要差异的脑区位于双侧的中央前回、中央后回、辅助运动区和扣带回 (FDR 校正, $P < 0.05$)。事后检验显示 SA 和 NC 组间存在统计学差异, NSSI 和 NC 组间不存在统计学差别, SA 和 NSSI 组间存在统计学差异。

结论 伴自杀与非自杀性自伤行为的青少年抑郁障碍患者具有不同皮层褶皱特征,并且这种形态学异常伴随的脑自发神经功能整合变化,其中额中回可能在自杀与非自杀性自伤行为的神经生物学机制上发挥了关键作用。

关键词: 青少年, 抑郁, 自杀, 非自杀性自伤, 皮层褶皱, 功能连接

赣州市青少年心理健康现状及相关危险因素调查研究

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目的 本次调研旨在深入了解赣州市青少年的心理健康状况,探究其面临的主要心理健康问题及其成因,以及这些问题对个人和社会的潜在影响,进而为制定有效的预防和干预措施提供科学依据。此外,调研还旨在评估当前心理健康教育和服务的现状,识别存在的问题和不足,从而推动家庭、学校、社会和政府共同努力,构建一个全面、高效的青少年心理健康支持体系,促进青少年的心理健康发展,为社会的和谐与进步做出贡献。

方法 在全市各县区范围内随机抽查 21 所中小学校,通过问卷调查、心理测评以及面对面访谈等多元化研究手段,本项目采用国内通用的中学生心理健康状况测评表(MSSMHS)、抑郁筛查量表(PHQ-9)等专业心理测验量表,在校内对不同年级学生群体开展了全面的专业的心理健康筛查工作。

结果 调研结果显示,赣州市青少年心理健康问题普遍存在,且呈现多样化的特点。在参与调研的 132125 名青少年中,约有 20.69%的个体表现出需要关注的心理状态,而 4.45%的个体则处于需重点关注状态。抑郁筛查量表(PHQ-9)的结果显示,有 17.86%的青少年出现了预警信号,提示可能存在抑郁症状的风险。

结论 赣州市青少年在具体的心理问题表现上,焦虑、抑郁、敌对和学习压力是最为突出的问题。这些问题不仅影响了青少年的学习和生活,也对他们的人际关系和自我认知造成了负面影响。此外,网络成瘾问题也日益凸显,成为影响青少年心理健康的一个重要因素。

在危险因素分析方面,家庭环境、学校教育、社会压力和个人特质是影响青少年心理健康的主要因素。家庭冲突、父母教育方式、学业压力、同伴关系以及社会价值观的多元化等因素均对青少年的心理健康产生了不同程度的影响。

在心理健康教育和服务体系的建设方面,尽管国家不断加大体系建设,学校和家庭对心理健康的重视程度有所提高,但仍存在服务资源不足、专业

人才缺乏以及心理健康教育不够系统化等问题。这些问题的存在,限制了心理健康服务的有效性和覆盖面。

综上所述,赣州市青少年心理健康问题的现状令人关注,亟需家庭、学校、社会和政府部门的共同努力,进一步采取切实有效的措施,以促进青少年的心理健康发展。

关键词: 赣州市;青少年;心理健康现状;危险因素

ADHD 儿童的白质微观结构亚组:相似的临床表现和不同的神经心理学特征

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目的 注意缺陷多动障碍(ADHD)是一种异质性较高的疾病。本研究旨在探索利用大脑白质微观结构特征对 ADHD 儿童进行分型的可行性。

方法 本研究一共纳入 227 个 ADHD 患儿(年龄均为 6-15 岁)及 89 个健康对照儿童,采用弥散张量成像技术来测量大脑微结构完整性(以各向异性分数(FA 值)表示),并应用多个临床问卷和神经心理学测试来全面评估每个被试的临床和神经心理学特征。此外也记录了部分 ADHD 患儿(n=52)的药物治疗(哌甲酯)反应。采用聚类分析对 ADHD 患儿进行分型,以年龄和性别作为协变量,进行组间比较。

结果 两组 ADHD 儿童对比对照组存在更多临床情绪行为问题以及执行功能损害($P < 0.05$)。聚类分析显示 ADHD 患儿可以分为两个亚型。随后的分析结果表明两个 ADHD 组之间临床核心症状严重程度方面差异无统计学意义($P > 0.05$)。然而,在几个特定的认知领域却观察到了组间差异。第二组(FA 值较低)在“加工速度”任务中表现较差,而第一组(FA 较高)在“反应抑制”和“持续注意力”任务中表现较差。此外,与第一组相比,第二组对哌甲酯药物反应效果更好($P = 0.047$)。

结论 尽管两组 ADHD 患儿的临床特征相似,但可以根据它们大脑微结构特征对 ADHD 患儿进行分型,这些特征与不同认知功能损害和对哌甲酯药物反应有着进一步的联系。本研究的全面分析有助于更深入地理解 ADHD 的异质性。

关键词: ADHD, 弥散张量成像, 白质微观结构

青少年抑郁障碍及非自杀性自伤的神经调控治疗研究进展

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目的 抑郁障碍是儿童和青少年中第二大流行的精神疾病,它不仅可能导致早期致残、寿命缩短等健康问题,还严重阻碍个人与社会的全面发展。当前的心理与药物治疗方案对青少年抑郁疗效有限,且安全性存疑。随着神经科学和精神病学领域的进步,经颅磁刺激、经颅直流电等神经调控技术备受瞩目。我们将从神经调控技术的种类、疗效影响因素及神经机制等进行系统综述。

方法 检索中国知网、万方、维普、Web of Science、PubMed 等数据库,筛选 2000 年至 2024 年公开发表的干预儿童青少年抑郁障碍及非自杀性自伤的神经调控技术种类、疗效影响因素及神经机制相关文献,进行系统综述。

结果 目前,针对儿童青少年抑郁障碍的神经调控技术主要有电休克治疗(ECT)、经颅磁刺激(TMS)、经颅直流电刺激(tDCS)、迷走神经刺激(VNS)及深部脑组织刺激(DBS)等。这些技术普遍具有不良反应小、耐受性高的优点。电休克治疗虽对自伤自杀风险高及药物治疗无效的青少年有效,但因其可能诱发癫痫发作和损害认知等副作用,应用受限。而 rTMS 和 tDCS 相较于抗抑郁药,不良反应较低且疗效相当,不仅可改善抑郁症状、快感缺失、认知功能及非自杀性自伤等,还有研究指出它们对难治性抑郁有潜在应用。tDCS 同样能缓解抑郁情绪、自伤行为及自杀意念。VNS 和 DBS 也显示出对儿童青少年抑郁情绪及自伤行为的潜在疗效。影响神经调控技术效果的因素众多,包括设备参数(如刺激部位、强度、频率等)、患者个体差异(如年龄、性别、性格和激素水平等)及疾病相关因素(如抑郁

障碍的性质、发作的严重程度和症状的性质等)。神经机制方面,这些技术主要作用于背外侧前额叶,同时涉及多个脑区如杏仁核、海马、扣带回、丘脑和尾状核等,且大脑基底外侧及伏隔核等脑区可能参与自伤行为的调控。

结论 神经调控技术已在抑郁障碍治疗中有所应用,为青少年抑郁障碍提供了新的治疗手段。然而,该技术在青少年抑郁障碍及非自杀性自伤中的应用尚处初期,其疗效与潜在风险需更多研究验证。疗效受多因素影响,包括疾病、患者自身因素及调控参数等,如何个性化调整治疗方案,从而达到精准治疗,同时获得更好的疗效,仍需进一步研究。

关键词: 抑郁障碍; 非自杀性自伤; 儿童; 青少年; 神经调控技术; 神经机制

反刍思维和校园欺凌对青少年抑郁障碍患者网络成瘾行为的影响

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目的 探讨反刍思维和校园欺凌对青少年抑郁障碍患者伴网络成瘾行为的影响。

方法 采用 17 项汉密尔顿抑郁量表(HAMD-17)、反刍思维量表(RRS)、校园欺凌经历问卷(C-SBEQ)及网络成瘾量表(IAT)对 189 例 12~18 岁抑郁障碍患者进行测评。变量间相关分析应用 Pearson 相关分析。采用二元 Logistic 回归分析探究青少年抑郁障碍伴网络成瘾的影响因素。

结果 青少年抑郁障碍患者伴有网络成瘾的发病率为 60.3%。伴网络成瘾组在 HAMD-17 评分、RRS 及各分量表、SBEQ 各分量表等方面均高于不伴网络成瘾组,在年龄方面则低于不伴网络成瘾组(P 均 <0.05)。HAMD-17 与 IAT 正相关($P<0.05$); HAMD-17 与 RSS、SBEQ-1(言语和关系欺凌受害)、SBEQ-2(身体和财务欺凌的受害)正相关(P 均 <0.01); RSS 与 SBEQ-1、SBEQ-2 正相关(P 均 <0.01)。IAT 与 RSS、SBEQ-3(言语和关系欺凌的肇事)正相关(P 均 <0.01)。二元 logistic 分析显示 RRS、SBEQ-3($OR>1$, $P<0.05$)为青少年抑郁障碍伴网络成瘾的危险因素,年龄($OR<1$, $P<0.05$)为其保护因素。预测模型 ROC 曲线下面积=0.73, $P<0.001$ 。

结论 反刍思维和校园欺凌可影响青少年抑郁障碍的严重程度,且年龄、反刍思维及校园欺凌肇事对青少年抑郁障碍患者伴网络成瘾具有一定的预测价值。

关键词: 抑郁障碍,网络成瘾,青少年,反刍思维,校园欺凌

基于机器学习算法构建中学生自杀意念预测模型

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目的 研究中学生自杀意念的现状,并探索机器学习算法对中学生自杀意念的预测效果。

方法 采用随机整群抽样,选取合肥市5所中学7431名中学生作为研究对象,采用自杀意念量表、抑郁自评量表、儿童期虐待问卷和时间性快感体验量表进行测评。纳入21个自变量构建了10个机器学习模型,包括:自适应提升(AdaBoost)、类别提升(CatBoost)、决策树(DT)、梯度提升决策树(GBDT)、K邻近(KNN)、轻量级梯度提升(LightGBM)、多层感知机(MLP)、随机森林(RF)、支持向量机(SVM)、极限梯度提升(XGBoost),并选择了DT、XGBoost、AdaBoost三个模型为基模型,逻辑回归为元模型,5折交叉验证,建立Stacking模型。

结果 中学生自杀意念者检出率为17.02%(1265/7431);训练的10个模型中,除KNN、DT表现较差,其余模型效果近似且较好,单一模型表现最好的是CatBoost。Stacking模型训练后测试数据为:召回率(Recall):0.62、F1分数(F1 score):0.63、布里尔分数(Brier score):0.09,均超过单一模型,有较好的区分度、校准度及临床净收益。

结论 中学生自杀意念检出率较高,构建的Stacking模型可用于筛查中学生自杀意念个体。

关键词: 中学生;自杀意念;机器学习;预测模型

362 例儿童精神障碍患者的脑电图检查回顾性分析

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目的 探讨儿童精神障碍患者的病情特点,为更好地诊断和治疗提供依据。

方法 采用回顾性研究的方法,在西安市精神卫生中心住院患者中,选取16岁以下的儿童精神障碍患者,临床表现类似精神分裂症样症状、抑郁症状、双相障碍,以及强迫症状等多种精神症状,性别不限,共362例;这些患者都是分别进行过普通脑电图检查和24小时脑电图检查。分别统计其普通脑电图检查结果异常的例数,24小时脑电图检查结果异常的例数,以及其脑电图异常结果是否符合癫痫性患者的脑电图改变,脑电图检查结果异常的患者的治疗方案及其治疗效果,并对结果进行分析。

结果 在这362例16岁以下的精神障碍患者中,普通脑电图检查异常的患者84例,占23.20%,异常者符合癫痫的脑电图改变;24小时脑电图检查异常的患者328例,占90.61%,异常者均符合癫痫的脑电图改变;24小时脑电图对癫痫患者的检出率比普通脑电图高($\chi^2=330.68, P<0.05$)。检查结果异常者进行抗癫痫治疗有效,提示本病与脑器质性损伤有关。

结论 儿童精神障碍首先要排除癫痫性精神障碍。儿童精神障碍大部分患者的脑电图结果异常,异常者符合精神运动性癫痫。在精神运动性癫痫患者的临床诊断中,24小时脑电图对癫痫患者的检出率比普通脑电图高,应用价值较高。

关键词: 儿童青少年精神障碍,24小时脑电图,精神运动性癫痫

中国青少年抑郁患者皮层厚度调查

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目的 抑郁症是一个核心但被忽视的全球健康问题,是一类以情绪低落为主要表现的疾病总称。

部分患者存在自伤、自杀行为,甚至因此死亡。青少年作为特殊人群具有不同于成人抑郁障碍的临床特征和病理生理改变,因此给临床治疗带来了一定的挑战。40%的青少年抑郁症(MDD)对抗抑郁药物或循证心理治疗没有反应。左前额10Hz经颅磁刺激(TMS)对患有MDD的成年人有效。TMS治疗青少年抑郁最大且迄今为止设计最好的研究虽然没有得出阳性结果,但刺激靶点依然选择是左前额叶。说明左前额已成为青少年抑郁物理治疗的重要靶点。已知与情绪调节相关的大脑区域也与成人和青少年重度抑郁症(MDD)的病理生理学有关。在目前的研究中,我们使用FreeSurfer软件研究中国患有MDD的青少年与其健康对照的皮层厚度是否存在差异。

方法 本研究方案经苏州市广济医院伦理委员会批准(编号:2019-054)。获得所有受试者监护人的书面知情同意书。患者均来自苏州市广济医院儿科病房募集,健康被试者来自广告招募。招募时间为2022年10月至2023年07月。本研究为横断面设计,青少年抑郁患者和健康对照入组时完成磁共振扫描,患者组需完成临床心理测评。使用FreeSurfer的一般线性模型比较青少年抑郁和健康对照的皮质厚度差异。我们使用排列测试(蒙特卡罗模拟)来校正多次比较。

结果 本研究没有发现样本患者组和健康对照组皮质厚度存在统计学差异。

结论 已知与情绪调节相关的大脑区域也与成人和青少年重度抑郁症(MDD)的病理生理学有关。额叶和边缘区域的神经解剖学和功能障碍及其连接回路在MDD中一直被观察到,由此产生了MDD的额边缘模型发病机制假说。本研究丰富了这一理论框架,患有MDD的青少年可能与健康的青少年处于不同的发育轨道上。

关键词:皮层厚度;FreeSurfer;青少年抑郁

益生菌通过调控肠道菌群改善孤独症儿童孤独症样行为注意缺陷障碍的临床研究

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目的 探讨益生菌通过调控肠道菌群改善孤独

症儿童孤独症样行为注意缺陷障碍的临床研究。

方法 招募2022年1月-2023年5月在笔者医院被诊断为孤独症谱系障碍(ASD)的160例儿童患者为研究对象。患者年龄2-11岁,平均年龄 5.37 ± 3.44 岁。根据研究方案,将患者分为对照组($n=80$)和观察组($n=80$),对照组接受常规治疗方案,观察组在常规治疗方案的基础上联合派特灵益生菌治疗。根据临床档案统计患儿一般资料。通过16S rRNA基因测序检测患儿肠道菌群生物多样性。比较患儿粪便菌群在门、纲、目、科、属各水平分类上的相对丰度。使用CPRS-R-L量表评估患儿注意力缺陷障碍。使用WCST量表评估患儿认知功能和问题解决能力。使用CPT量表评估患儿的注意力和反应控制能力。

结果 两组患儿一般资料比较无差异($P>0.05$)。观察组肠道菌群物种多样性、ACE指数、Chao1指数、Simpson多样性指数和Shannon指数较对照组降低($P<0.05$)。观察组中的Acidobacteria、Bifidobacterium和Ruminococcus gnavus比例高于对照组($P<0.05$),而Negativicutes、Selenomonadales和Veilonellaceae比例低于对照组($P<0.05$),益生菌能显著改善患儿肠道菌群构成。观察组注意力不集中、多动冲动和总评分较对照组减少($P<0.05$),观察组注意力缺陷障碍严重程度较对照组缓解($P<0.05$)。观察组完成分类数量和策略分析评分较对照组增多($P<0.05$),观察组分类错误次数和分类尝试次数较对照组减少($P<0.05$)。观察组反应时间、错过率、持续性注意力和反应时间变异性较对照组降低($P<0.05$),观察组命中率较对照组升高($P<0.05$)。

结论 益生菌通过优化肠道菌群组成,显著改善孤独症儿童的孤独症样行为和注意缺陷障碍症状。这一发现突显了肠-脑轴在调节孤独症谱系障碍和注意缺陷障碍中的关键作用,为未来的治疗策略提供了新的方向。

关键词:益生菌;肠道菌群;孤独症儿童;注意缺陷障碍

青少年心境障碍患者非自杀性自伤与依恋和归因风格的关系

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目的 描述青少年心境障碍患者非自杀性自伤、依恋及归因风格现状,探讨青少年心境障碍患者非自杀性自伤、依恋和归因风格之间的关系。

方法 便利选取广州市某医院精神科住院的232例10~24岁青少年心境障碍患者,采用一般资料调查表、渥太华自伤调查表中文订版、亲密关系经历量表(ECR)、归因风格问卷(ASQ)、汉密尔顿抑郁量表-17项(HAMD-17)和杨氏躁狂量表(YMRS)测量其一般资料、非自杀性自伤、依恋、归因风格、抑郁和躁狂症状,采用描述分析、相关分析和回归分析进行数据处理。

结果 最终纳入232名患者,最近一年非自杀性自伤的报告人数为182例(78.45%)。依恋维度得分分别为依恋回避(4.27±0.97)和依恋焦虑(4.07±1.30),各依恋类型人数分别为安全型11例(4.74%)、恐惧型140例(60.35%)、痴迷型28例(12.07%)和疏离型53例(22.84%),不安全型共221例(95.36%);归因风格得分为(-0.16±3.37)。非自杀性自伤与ECR得分的依恋回避、依恋焦虑正相关($r = 0.21$ 、 0.21),与ASQ得分负相关($r = -0.22$)。ECR得分的依恋回避、依恋焦虑是ASQ得分的负向预测因素($\beta = -0.23$ 、 -0.20),ASQ得分是非自杀性自伤的保护因素($OR = 0.88$)。

结论 青少年心境障碍患者非自杀性自伤报告率高,普遍存在不安全依恋,归因风格偏悲观;归因风格在依恋与非自杀性自伤间起中介作用。临床工作中应关注患者归因方式的引导,降低患者自伤或自杀风险。

关键词:非自杀性自伤,依恋,归因风格,青少年,心境障碍

Teachers' Attitudes and Training Needs in Mental Health: A Qualitative Interview Study.

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Objective Teachers are the first responders to students' mental health, and promoting mental health is integral to their profession and role. However, teachers often lack the ability to identify and address student mental health problems. The purpose of this study was to investigate teachers' attitudes and training needs in mental health

Methods We conducted 12 focus group interviews with 91 teachers from 12 schools (including 5 middle schools, 5 high schools, and 2 vocational high schools) across four provinces in China. A thematic analysis of the data was undertaken

Results Teachers responded to the current challenges in accessing training, the emphasis on theoretical aspects that lack practical application, and the absence of instruction in applied skills. They expressed a strong need for the training and believed that receiving it would positively impact classroom management and student development, as well as contribute to teachers' personal growth. Teachers require training in identifying mental health problems among adolescents, handling crisis events, organizing mental health promotion activities, trusting by adolescents, communicating with adolescents' parents, and managing their own stress. They prefer in-depth training that emphasizes practical skills, offers regular feedback on follow-up results, and avoids creating an undue burden

Conclusion Overall, teachers are eager to receive mental health training that effectively addresses the fact problems faced by youth. Additionally, the training should include components on teacher self-mental health awareness and self-help strategies. We believe there is an urgent need to develop mental health training that is accepted and needed by both teachers and adolescents, incorporating the perspective of teachers

关键词:Teacher training, Adolescents, School mental health, Promotion

A Scholarly Case Report on Bipolar Affective

Disorder Comorbid with Asperger's Syndrome and Attention-Deficit/Hyperactivity Disorder Presenting with Recurrent Educational Challenges

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Abstract This scholarly case report delineates the intricate clinical presentation and management of a patient with bipolar affective disorder (BPAD) comorbid with Asperger's syndrome (AS) and attention-deficit/hyperactivity disorder (ADHD)[1]. The patient's trajectory underscores the diagnostic and therapeutic challenges posed by the confluence of these conditions, particularly in the educational context. Introduction: Autism spectrum disorder (ASD) is typically manifested in early childhood, characterized by deficits in social interaction and communication, alongside stereotyped patterns of behavior and interests. Asperger's syndrome, a high-functioning variant of ASD, is distinguished by the absence of significant language and cognitive impairments and a pronounced desire for social engagement[2]. The co-occurrence of AS with BPAD introduces a layer of complexity to the diagnostic process and subsequent treatment strategies[3].

Case Presentation The subject of this report is a 16-year-old male adolescent initially admitted for affective instability and suspicion six years prior. His clinical presentation included unprovoked mood swings, irritability, self-centeredness, and altercations. Upon admission, a comprehensive battery of psychiatric assessments was conducted, yielding results indicative of affective lability and interpersonal sensitivity.

Methods Diagnostic evaluations included the SCL-90 Symptom Checklist and the Childhood Autism Scale, alongside the Eysenck Personality Test to assess personality traits. Clinical observations were made regarding the patient's consciousness, attention, and social engagement, revealing symptoms consistent with BPAD and AS. Results The patient was diagnosed with affective mood disorder following a thorough review of his medical history and auxiliary examinations.

Pharmacological intervention with mood stabilizers was initiated, leading to a stabilization of affective symptoms. However, upon reintegration into the educational environment, the patient exhibited a reluctance to socialize and a predilection for solitary activities, notably an obsession with mobile gaming

Discussion The patient's subsequent difficulties in social interaction and academic performance prompted a reevaluation of his condition. The application of the ASSQ scale yielded a score suggestive of ASD, leading to a revised diagnosis of BPAD comorbid with AS and ADHD. The introduction of methylphenidate and psychological counseling resulted in improved attention and a gradual return to academic pursuits, albeit with lingering apprehension towards social interaction.

Conclusion Adolescence is marked by rapid physiological and psychological changes, with emotional disorders often surfacing as primary concerns. The subtle early manifestations of AS are frequently overlooked, leading to underdiagnosis. As patients mature, they encounter escalating social and educational demands, exacerbating behavioral and personality-related issues and precipitating interpersonal and scholastic challenges. This case highlights the imperative for clinicians to consider the comorbidity of AS and ADHD in patients presenting with affective disorders. A multidimensional diagnostic approach, incorporating both cross-sectional and longitudinal patient data, is essential for the precise identification of AS and the timely initiation of appropriate interventions

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关键词: Bipolar affective disorder, Asperger's syndrome, ADHD, comorbidity, educational challenges, psychiatric diagnosis

Closed-Loop Pathways Associated with Clinical Symptoms in Children with Autism Spectrum Disorder: A Complex Network Analysis

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Objective Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by social communication deficits and repetitive behaviors. Neurobiomarkers for ASD are lacking, which hinders early diagnosis and personalized treatment. This study aimed to identify potential biomarkers for ASD using complex network analysis, specifically causal brain networks, to identify functional closed-loop pathways in the brains of children with ASD

Methods The study included 58 ASD patients and 57 typically developing children aged between 6 and 12 years. Brain causal networks and temporal-lag networks were constructed using a deep learning model to infer the causal relationship between brain regions and the temporal-lag of signal transmission. Statistical analysis was performed to compare differences between

the typically developing and ASD groups and to explore the potential association between different symptoms of the ASD group

Results The results revealed numerous aberrant functional pathways, mainly located in the junction of frontal lobe and parietal lobe, also occipital lobes, in children with ASD compared to typically developing children. The study identified four closed-loop pathways in children with ASD that were significantly associated with clinical symptoms. Interestingly, a positive interaction among these closed-loop pathways was observed, indicating that social impairments and stereotyped behaviors are interrelated in children with ASD

Conclusion The study demonstrates the potential of identifying multiple abnormal closed-loop pathways using complex network analysis in aiding early diagnosis and treatment of ASD. These findings provide insights into the neurobiological basis of social impairments and stereotyped behaviors in children with ASD, which may aid in the development of personalized interventions and therapeutic targets for the condition

关键词: Autism Spectrum Disorder (ASD), Closed-loop pathway analysis, Resting-state functional magnetic resonance imaging (rs-fMRI)

基于内感觉的孤独症儿童社会意义的建构

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背景 孤独症的发病率在全球范围内呈现逐年增长之态, 引发了医学界和社会各界的广泛关注。孤独症作为一种复杂的神经发育障碍, 其病因一直是科研人员和医学专家研究的重点。然而, 由于孤独症的病因涉及遗传、环境、神经生物学等多个方面, 其发病机制至今尚未完全明确。内感觉是人体感知内部状态的一种重要方式, 它对于维持人体生理平衡、支持高级功能以及理解身体健康状况都具有重要意义。在既有研究基础上, 我们更加关注如下的病理学理论假设: 当婴儿内感觉发展出现异常

时,可能会表现为对内部刺激的不敏感或过度敏感,影响婴儿的情感认知、自我认知、社交技能和情绪调节能力,进而阻碍他们对社会意义的建构。

目的 本研究在母婴交互的视角下对孤独症谱系的病因提出新的假设,并进一步完善母婴交互中关于婴儿的内感觉的理论研究。这将有助于我们重新理解孤独症的发病机制和社会意义建构过程,为 ASD 儿童提供更好的干预和支持。

方法 通过对母婴交互及内感觉的文献梳理,采用调查和实验的研究方法对母婴交互中婴儿的感觉序列进行调查,并基于调查结果进行孤独症儿童社会意义建构实验。

结果 首先,早期母婴交互对婴儿主体间性的发展至关重要,婴儿感知运动阶段的互动影响主体间性的发展。ASD 儿童在人与人之间的理解上存在困难,其主体间性的发展受阻。

其次,在婴儿时期,ASD 儿童的感觉序列就出现特殊表现,并且婴儿的内感觉失调会影响婴儿认知、情绪理解和社交的发展。

再次,ASD 儿童对感觉的理解及意义出现异常。患儿们无法对内感觉进行有效处理,或者缺乏对不同感觉进行联结整合的能力,难以利用一种感觉去帮助解释理解另一种感觉。在内感觉研究基础上对 ASD 儿童进行社会意义建构时,能帮助 ASD 儿童更好地理解 and 诠释行为的个体意义及社会意义。

结论 基于内感觉可以更加有效的促进 ASD 儿童的社会意义建构。

展望 未来研究可以增加被试范围,关注对基于内感觉对社会意义建构实验的验证研究,从而发现高效的干预方法。

关键词:孤独症,内感觉,母婴交互

青少年反复非自杀性自伤的维持影响因素及干预措施

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目的 本研究旨在探讨青少年反复非自杀性自伤(NSSI)的维持影响因素,并评估有效的干预措施。通过了解这些因素和干预方法,我们希望为临床实践提供参考,以帮助减少青少年 NSSI 行为的发

生和维持。

方法 本研究采用文献综述和实证研究相结合的方法。首先,通过系统检索相关文献,综述青少年 NSSI 的主要维持因素,包括心理、社会和生物学因素。其次,选取一组有 NSSI 行为的青少年进行干预实验,干预措施包括认知行为治疗(CBT)、家庭治疗和药物治疗。实验前后分别使用自伤行为问卷(SHBQ)和抑郁焦虑量表(DASS-21)进行评估,以测量干预效果。

结果 文献综述结果显示,青少年 NSSI 行为的维持因素主要包括情绪调节困难、家庭冲突、社交孤立和同伴影响等。实证研究结果表明,经过 12 周的干预,参与者的 NSSI 行为频率显著降低,情绪调节能力显著提高,家庭关系和社交功能有所改善。其中,认知行为治疗结合家庭治疗的效果尤为显著。

结论 青少年反复 NSSI 行为的维持是多因素共同作用的结果,情绪调节困难和社会支持缺乏是主要影响因素。综合干预措施,如认知行为治疗和家庭治疗,能够有效减少 NSSI 行为的发生和维持,并改善青少年的心理健康和家庭关系。未来的研究应进一步探讨个体化干预策略,以提高干预效果的持久性和适应性。

关键词:青少年,非自杀性自伤,维持因素,干预措施,认知行为治疗,家庭治疗

How Does Chronotype Affect Adolescents' Self-harm? The Chain of Tragedy Effect of Sleep Problems and Emotional Symptoms

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Objective The aim of this study is to explore the relationship between chronotype and self-harm among adolescents, and further investigate the mediating role of sleep problems and emotional symptoms in this context.

Methods This cross-sectional survey involved 13,374 Chinese middle school adolescents with an average age of 15.21 years (SD = 1.4), of which 51.2% were boys. Chronotype, sleep problems, emotional

symptoms (depression and anxiety), and self-harm were assessed by self-reported questionnaires.

Results Adolescent self-harm is significantly negatively correlated with chronotype ($r = -0.123$, $p < 0.001$), and significantly positively correlated with sleep problems ($r = 0.193$, $p < 0.001$), depression ($r = 0.217$, $p < 0.001$), and anxiety ($r = 0.206$, $p < 0.001$). The mediation analysis revealed that the chain mediation effect of sleep quality and depression on the relationship between chronotype and self-harm was -0.168 (95% CI = $[-0.194, -0.145]$), while the chain mediation effect of sleep quality and anxiety was -0.150 (95% CI = $[-0.174, -0.127]$).

Conclusion The results suggest that sleep problems and emotional symptoms play a chain-mediated role in the relationship between chronotype and self-harm. Future research should continue to explore these relationships in longitudinal studies and across diverse adolescent populations to further validate and extend these findings.

关键词: Self-harm, Chronotype, Sleep problem, Emotional symptoms, Adolescents

Gray Matter Structural Alterations in First-episode Drug-naïve Adolescents with Major Depressive Disorder: A Comprehensive Morphological Analysis Study

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Objective Major depressive disorder (MDD) tends to emerge during adolescence; however, neurobiological research in adolescents has lagged behind that

in adults. This study aimed to characterize brain structural alterations in adolescent patients with MDD using comprehensive morphological analyses.

Methods This study included 93 adolescent MDD patients and 77 healthy controls. Voxel-based morphometry (VBM), deformation-based morphometry (DBM), and surface-based morphometry (SBM) methods were used to analyze gray matter morphological alterations in adolescent MDD patients. Partial correlation analysis was used to analyze the relationships between altered GM structural metrics and clinical characteristics.

Results Whole-brain VBM and DBM analyses revealed GM atrophy in the left thalamus and bilateral midbrain in adolescent MDD patients. Whole-brain SBM analysis revealed that adolescent MDD patients, relative to controls, showed decreased thickness in the left postcentral gyrus and left precentral gyrus; increased thickness in the bilateral superior temporal gyrus, left parahippocampal gyrus and right lateral orbitofrontal gyrus; and decreased sulcus depth in the right lateral occipital gyrus. The volume of the right midbrain was correlated with illness severity, and the volume of the left thalamus and the thickness of the left superior temporal gyrus were correlated with age of onset in adolescent MDD patients.

Conclusion This comprehensive morphological analysis study suggests that adolescent MDD is characterized by GM morphological abnormalities in the frontal-limbic, subcortical, perceptual network and midbrain regions, which may be the underlying structural basis for emotional dysfunction and cognitive impairment.

关键词: adolescent major depressive disorder, voxel-based morphometry, deformation-based morphometry, surface-based morphometry, structural magnetic resonance imaging

Shared and Distinct Structural and Functional Brain Alterations in Adolescents with Major Depressive Disorder

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Objective Neuroimaging studies have identified structural and functional brain alterations in adolescents with major depressive disorder (MDD); however, the results are inconsistent, and whether patients exhibit spatially convergent structural and functional brain abnormalities remains unclear. This multimodal meta-analysis aimed to characterize conjoint and distinct structural and functional brain alterations in adolescent MDD patients

Methods We conducted voxel-wise meta-analysis of voxel-based morphometry (VBM) and resting-state functional studies, respectively, to identify regional gray matter volume (GMV) and brain activity alterations in adolescent MDD patients. Multimodal analysis was performed to examine the overlap of regional GMV and brain activity alterations. Meta-regression analysis was conducted to evaluate the potential effects of clinical variables

Results Ten whole-brain VBM studies (403 patients and 319 controls) and 14 resting-state functional studies (510 patients and 474 controls) were included. Adolescent MDD patients showed conjoint structural and functional alterations in the left medial/dorsolateral prefrontal cortex, lateral temporal cortex and sensorimotor regions, and left insula. Adolescent MDD patients showed structural-specific abnormalities in the subcortical and prefrontal-limbic regions and functional-specific abnormalities in the right insula, right superior occipital gyrus, left inferior frontal gyrus and left precuneus. Meta-regression analyses revealed that the mean age of adolescents with MDD was positively associated with GMV in the right superior temporal gyrus and negatively associated with brain activity in the right insula, and the symptom severity of adolescents with MDD was positively associated with brain activity in the right superior occipital gyrus

Conclusion This meta-analysis identified complicated patterns of conjoint and dissociated brain alterations in adolescent MDD patients, which may advance our understanding of the neurobiology of adolescent MDD

关键词: Major depressive disorder, adolescents, gray matter volume, resting state, brain activity, meta-analysis

宁夏精神专科医院住院青少年抑郁患者疾病相关因素分析及干预策略研究

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目的 从横断面和纵向发展的角度探索青少年抑郁症的特征及重要的影响因素和作用机制,并以此为基础,从社会、家庭环境角度以及患者个体角度给与更完善、更有效的疾病急性期、维持期和康复期的干预建议。

方法 针对项目的现实背景和现状分析中提出的相关问题,本研究将以抑郁症青少年为被试,采用两个研究对上述问题进行探讨。研究1采用横断数据了解青少年抑郁症相关影响因素及特征。研究2在此基础上,基于纵向数据,探讨青少年抑郁症干预前后,相关因素和症状的变化特点,进一步明确青少年抑郁症的影响因素的作用。

结果 通过横断和纵向研究,对青少年抑郁症的主要影响因素和症状数据进行采集,使用相关分析、差异分析和症状网络分析(精神病理网络分析)从宏观疾病层面和微观疾病症状层面了解青少年抑郁症状的特点;通过回归预测模型和中介模型在横断层面了解影响因素和症状之间的因果关系;通过治疗前后的数据采集,使用前后对照分析和纵向交叉之后模型了解青少年抑郁症状及其影响因素的纵向发展情况。

研究过程中低多个变量采用单因素或多因素方差分析,发现青少年抑郁发病与家庭功能、环境因素有明确相关,且经过干预后,抑郁自评量表评分量表(SDS)、青少年非自杀性自伤行为评定问卷(ANSAQ)、生命意义感量表(3DM)、自杀风险评估、社会功能缺陷筛查量表(SDSS量表)均有明显的变化($P<0.05$)。

关键词: 青少年抑郁 住院患者 疾病相关因素

一例青少年强迫障碍心理治疗案例报告

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目的 本文旨在报告一例青少年强迫障碍患者的心理治疗案例,探讨个体化治疗原则下的药物治疗联合整合性心理治疗的有效性,并评估患者临床缓解后的社会功能恢复情况。

方法 本案例报告涉及一名 14 岁初三男性学生小吴,主诉无法控制伤害父母及损毁贵重物品的念头,以及反复检查行为。患者经过单一药物治疗 1 年效果不理想后,采用氟伏沙明药物治疗联合整合性心理治疗。治疗过程分为四个阶段,包括心理评估、建立咨访关系、巩固咨访关系、逐步调整治疗方案、减药治疗以及准备分离等。治疗期间,患者接受了 71 次面对面咨询,并在之后进行了 10 次随访。

结果 经过系统治疗,患者达到临床缓解,强迫症状未复发,社会功能得到恢复。心理测验结果显示耶鲁布朗强迫症状量表得分下降,症状自评量表(SCL-90)的焦虑、抑郁和强迫得分均有显著下降。患者在治疗过程中学会放松、接纳自我,强迫思维及行为逐渐消失,能够正常学习和生活。随访期间,患者报告仅偶尔出现轻微强迫思维,但能自行缓解。

结论 本案例表明,对于青少年强迫障碍患者,单一药物治疗效果不理想时,采用药物治疗联合整合性心理治疗可以取得较好的疗效。治疗过程中,患者的强迫症状得到了有效控制,社会功能得到了显著恢复。此外,心理治疗不仅帮助患者缓解了强迫症状,还促进了其人格的完善和自我功能的提高。治疗的成功也强调了心理治疗师与其他专科医师沟通与配合的重要性,以及在治疗过程中根据患者情况灵活调整治疗方案的必要性。最终,患者能够在减少药物依赖的同时,通过心理治疗维持症状的稳定,实现自我价值和社会适应。

关键词: 青少年,强迫障碍,心理治疗,联合治疗,整合性心理治疗

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目的 分析与青少年抑郁发作患者无抽搐电痉挛(ECT)治疗效果相关的因素以及探索最佳治疗次数

方法 纳入 412 名接受无抽搐电痉挛治疗的青少年抑郁发作住院患者,使用结构化问卷采集其一般人口学信息,病史,住院期间药物治疗,无抽搐电痉挛治疗次数及不良反应,并使用汉密尔顿抑郁量表(HAMD-17)在治疗前后进行抑郁症状的评估。根据 HAMD-17 总分的前后变化将患者治疗效果分为有效组(减分率 $\geq 50\%$)和无效组(减分率 $< 50\%$),使用两组间单因素比较及 Logistic 多元回归模型,分析与治疗相关的影响因素,使用基于 Logistic 回归的限制性立方样条图探索 ECT 最优治疗次数。

结果 在 412 名纳入分析的患者中,平均年龄约为 16 岁,女性比例为 74.5%。主要诊断为抑郁症和双相情感障碍抑郁发作。ECT 治疗的平均次数为 8 次,总体有效率为 76.7%,认知损伤比例约为 32%。多元 Logistic 回归分析结果显示,疾病主要诊断,伴有非自伤性自杀行为,病程,合并躯体疾病,性别,及年龄与治疗效果无显著关联(P 值均 > 0.05),体质指数(BMI)及 ECT 治疗次数与效果显著关联(P 值均 < 0.05)。限制性立方样条图结果显示,治疗次数达到 8 次的时候,患者治疗有效率显著提高,超过 8 次以后的有效率提高改善不显著。

结论 ECT 治疗对青少年抑郁发作的总体效果较好,与治疗效果有关的因素包括患者的 BMI 和 ECT 次数,ECT 治疗 8 次能够达到较好的治疗效果。

关键词: 青少年,抑郁发作,电痉挛治疗

The Impact of Household Chores on Depressive Symptoms Among Adolescents: A Cross-Sectional Study

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Objective This investigation aimed to elucidate the interplay between domestic chores and depressive

无抽搐电痉挛治疗对青少年抑郁发作患者的疗效及其影响因素研究

symptoms within the adolescent population aged 11-18

Methods A cross-sectional analysis was performed using data from 1317 adolescents, extracted from the 2020 China Family Panel Studies (CFPS). The study was executed during the COVID-19 pandemic, a period known for its psychological impact on the youth. The 8-item Center for Epidemiologic Studies Depression Scale (CESD-8) was employed to quantify depressive symptoms, while the daily duration of housework was self-reported. Statistical methodologies included descriptive analysis, chi-square tests for association, and binary logistic regression to determine the predictors of depression

Results Of the adolescents surveyed, 171 exhibited depressive symptoms as per the CESD-8 criteria. Correlational analysis revealed significant positive associations between depressive symptoms and health status ($r=0.222$, $P=0.001$), leave of absence ($r=0.318$, $P=0.005$), and study pressure ($r=0.234$, $P=0.000$), with housework activities showing a moderate effect ($r=0.194$, $P=0.001$). Conversely, academic situation demonstrated a negative correlation with depression ($r=-0.17$, $P=0.016$). Logistic regression identified poor health status ($OR=4.782$, $P=0.005$), study pressure ($OR=1.985$, $P=0.048$), and housework activities ($OR=1.189$, $P=0.002$) as significant risk factors for depression

Conclusion The findings underscore the complex relationship between housework and depressive symptoms in adolescents, highlighting the influence of academic and health-related variables. The study advocates for an integrative approach to adolescent mental health, suggesting that interventions addressing these risk factors are imperative. It behooves policymakers, educators, and parents to consider these insights to cultivate an environment conducive to the mental well-being of adolescents, thereby reducing the incidence of depressive disorders in this susceptible demographic

关键词: adolescent;depression;household

辅助分子伴侣 FKBP51 对糖皮质激素受体的调节及其与抑郁症的关系

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目的 据世界卫生组织统计,全球约有 3.5 亿抑郁症患者,预计到 2030 年,抑郁症将上升至世界疾病负担首位。多年以来,人们不断探索抑郁症的病因和发病机制,但直到现在仍未完全阐明。在抑郁症的众多发病机制中,神经内分泌失调是一个重要因素,而糖皮质激素受体 (glucocorticoid receptor, GR) 的研究较为深入,故本篇摘要将探讨辅助分子伴侣 FKBP51 对 GR 活性的影响及其与抑郁症的关系,以期为抑郁症的防治提供新线索。

方法 计算机检索 Pubmed、中国知网、Embase、万方数据库中发表的关于 FKBP51 和 GR 及其与抑郁症的相关研究,检索时限为 2014 年 1 月 1 日到 2023 年 12 月 31 日。中文主题检索词为“抑郁症”、“糖皮质激素”,英文主题检索词为 (“FKBP5/FKBP51”)、 (“glucocorticoid receptor/GR”)、 (“depressi*”)。Pubmed 检索策略: ((depressi*) AND (FKBP5 OR FKBP51)) AND (GR OR glucocorticoid receptor) AND (2014:2023[pdat])。

结果 当机体出现应激反应时,自主神经系统和 HPA 轴将被激活,GR 通过负反馈调节抑制亢进的 HPA 轴,使其恢复到正常水平,FKBP51 在这一过程中将协助 GR 进行核转位,故 FKBP51 表达量的高低将影响 GR 的信号转导过程,进而对机体的应激反应产生影响。目前众多研究显示慢性应激可致 FKBP5 甲基化程度降低,而 DNA 甲基化程度又与 FKBP51 的表达呈负相关,当 FKBP51 表达失衡时,GR 信号转导过程将发生改变,最终将导致 HPA 轴持续性功能失调,抑郁症易感性增加。

随着对 FKBP51 认识的深入,人们开始设想将 FKBP51 作为药物靶点来治疗应激相关精神疾病,而寻找 FKBP51 的选择性配体则是药物开发的第一步。2015 年, Gaali 等人首次发现了 FKBP51 的两个选择性配体,即 SAFit1 和 SAFit2,这一发现为开发新型抗抑郁药提供了结构和功能基础;几年以后, Bauder 等人使用“大环化”策略设计并合成了一个 SAFit 类似物,这种化合物既保留了对 FKBP51 的亲力和对 FKBP52 的选择性,又通过大环化设计增加了细胞通透性,这一研究为选择性 FKBP51 抑制剂的开发提供了一种可行的策略。

结论 综上所述,辅助分子伴侣 FKBP51 通过

在 GR 的信号转导过程中发挥重要作用进而与抑郁症密切相关。随着人们对 GR 和 FKBP51 研究的不断深入,相信在不久的将来选择性 FKBP51 抑制剂将在抑郁症治疗中大放异彩。

关键词: 辅助分子伴侣,FKBP51,糖皮质激素受体,抑郁症

农村初中生的非自杀性自伤预测:基于多种机器学习模型

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目的 非自杀性自伤(NSSI)是一种严重的行为问题,在儿童和青少年中日益普遍,特别是在农村地区。该行为会对个体的躯体及心理造成影响深远的伤害,因此,建立合适的 NSSI 预测模型是早期识别和干预 NSSI 的关键。

方法 本研究包括 2090 名山东省某县区三所初中学校中的全部农村儿童和青少年。通过问卷调查收集被试的社会人口学信息、焦虑和抑郁症状、人格特征、家庭环境和 NSSI 行为情况。使用除社会人口统计信息外所有问卷的总分/分量表分数作为预测因子。将全部样本按照 70%, 15%, 15% 的比例划分为训练集、测试集和验证集,进行支持向量机模型(Linear/Gaussian/Polynomial/Sigmoid Kernel)、决策树模型和随机森林模型的训练和验证。随后对每个模型的指标进行比较,以选择最合适的 NSSI 预测模型。此外,计算了平均 Gini 系数来衡量各预测因子的重要性。

结果 本研究中农村儿童和青少年的 NSSI 发生率为 38.3%。在评估的所有模型中,随机森林模型在预测 NSSI 的发生率方面具有最佳预测效果。其 Sensitivity、Specificity、AUC、Accuracy、Precision 和 F1-score 分别为 0.66、0.71、0.75、0.69、0.56 和 0.60。对 Gini 系数均值下降影响最大的前 8 个预测因素分别是抑郁、焦虑、人格特征的 5 个维度和家

庭矛盾性。

结论 本研究聚焦于农村地区的儿童和青少年,并展示了使用机器学习模型预测 NSSI 的潜力。利用这种预测模型将有助于识别高风险个体,并使及时干预成为可能。

关键词: 非自杀性自伤,农村,机器学习,儿童和青少年,预测

母亲童年创伤对青少年抑郁患者创伤、焦虑及杏仁核脑网络影响

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目的 了解母亲童年创伤对青少年抑郁症患者童年创伤和焦虑情绪及后代脑机制的影响。

方法 采用宗氏焦虑量表(青少年)填写,评估青少年焦虑症状;童年创伤问卷(母亲及青少年)填写,评估母亲及青少年童年创伤的程度;抑郁症状筛查量表和广泛性焦虑障碍量表(母亲)填写,分别评估母亲的抑郁症状和焦虑症状。在青少年抑郁发作患者中,选择杏仁核作为感兴趣区域,比较有童年创伤母亲后代的全脑静息状态功能连接。

结果 结果 (1) 抑郁发作组母亲躯体忽视得分、情感虐待得分、情感忽视得分,焦虑抑郁情绪得分显著高于健康组母亲,差异具有统计学意义($p < 0.05$); (2) 在抑郁发作青少年中,母亲遭受童年创伤组较母亲未遭受童年创伤组,后代焦虑情绪得分,童年创伤因子分及其总分均无统计学差异($P > 0.05$); (3) 在抑郁发作青少年中,有母亲童年创伤的后代较没有母亲童年创伤的后代相比,以杏仁核作为感兴趣区与海马旁回、舌回、枕下回、额上回等脑区的功能连接值降低。

结论 母亲童年创伤及焦虑抑郁情绪可能增加后代抑郁症发病风险,且母亲童年创伤影响后代以杏仁核为种子点的脑功能网络,但母亲童年创伤不影响青少年抑郁症患者焦虑症状及童年创伤严重程度。

关键词: 童年创伤;抑郁症;母亲童年创伤;代际传递;脑机制

Prediction of The Risk of Anxiety and Depression in Chinese Adolescents Using A Modular Neurocognitive Test

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Objective Anxiety and depression are one of the most common psychological problems in adolescents. Early identification and intervention of the risk of anxiety and depression in adolescents is particularly important. As an important internal factor of information processing, emotion regulation and behavioral response pattern in adolescents, neurocognitive function has a significant impact on the generation of anxiety and depression. The purpose of this study was to explore which behavioral characteristics of the modular neurocognitive test (AI test) were significantly associated with the risk of anxiety and depression in adolescents, and to validate the performance of the machine learning model based on the AI test in predicting the risk of anxiety and depression in adolescents

Methods 785 adolescents aged between 11 and 18 were recruited and completed the AI test. Two senior attending physicians assessed the risk of anxiety and depression in the adolescents and classified them into two categories: at-risk and not-at-risk. The differences in the AI test data between at-risk and not-at-risk adolescents were analyzed, and the accuracy, sensitivity and specificity of the AI test results were verified

Results There were significant differences in the reaction time data of several tasks of the AI test between an at-risk adolescent and a not-at-risk adolescent, and

the accuracy, sensitivity and specificity of the AI test results were all more than 85%. The AI test can be used as an auxiliary tool to screen the risk of anxiety and depression in adolescents

Conclusion The indicators of the modular neurocognitive test can distinguish the risk of developing anxiety and depression in adolescents, and the machine learning model based on the test has a good performance

关键词: Anxiety, depression, neurocognitive function, machine learning, adolescents

“抑”手遮天 “残”不忍睹 关注儿童青少年心理健康刻不容缓 来自一名普通精神科医生的观察与思考

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目的 本研究旨在调查真实世界儿童青少年的抑郁发病现状, 自残或(和)自杀发生比例, 自残的比例, 用刀割的自残方式的比例, 及与此相关的一些临床思考。

方法 本观察来自沈阳市精神卫生中心的一名普通的门诊医生, 该观察选取了从 2023.6.7-2024.6.7 之间由该医生门诊接诊的儿童青少年初诊患者, 年龄设定为 11 岁-20 岁, 收集真实世界的的数据, 记录其中初诊儿童青少年患者数量, 抑郁的患者数量, 有自残或(和)自杀的消极行为的患者数量, 自残的患者数量, 采取用小刀割自己的非自杀性自伤行为的患者数量。应用这些数据来推算一些有意义的临床数据。

结果 共接诊初诊儿童青少年患者 76 人, 其中抑郁的患者为 59 人, 占初诊患者的比例为 77.6%, 在 59 名抑郁的患者中, 有自残或(和)自杀的消极行为的患者为 25 人, 有自残或(和)自杀行为的患者在抑郁患者中占比 42.43%, 其中自残的有 21 人, 有自残行为的患者在抑郁患者中占比 35.6%, 在自残患者中, 采取用小刀割自己的非自杀性自伤行为的患者为 18 人, 占有自残患者的 85.7%。

结论 现阶段, 儿童青少年抑郁问题日趋严重, 有自残行为的患者比例较高, 发病率显著上升, 风险较大, 急需得到更多的关注与干预, 是一项亟待

解决的重要课题。

关键词：关键词：抑郁；自残；儿童青少年；

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如何帮助一个鬼神附体的九岁小姑娘摆脱困境？

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目的 如何帮助一个鬼神附体的九岁小姑娘摆脱困境？

方法 患者 2023 年 12 月 18 日睡梦中出现噩梦，有时说听见有人跟自己说话，叫自己的名字，并看见对方，有时在清醒的时候也说能看见。睡觉时会反复蹬被子，反复翻腾，说自己很烦躁。家人给其用桃木剑等做法驱邪，症状能有好转，但后来又出现反复，并且伴有呕吐，睡觉中途会频繁的惊醒，醒来后说这不是我家。家人曾带其去宾馆住了几次。最初在当地综合医院治疗呕吐症状得到缓解。后来说放学后看见学校里有坟墓爬出来的人很害怕，不敢去学校，老师反映学生在教室时会说旁边有个人吓得大哭。先后在当地儿童医院以及精神病院治疗，行头颅磁共振，脑电图，甲功以及免疫因子等检查，没有发现器质性病变。诊断为情绪障碍，服用舍曲林每早 25mg，阿立哌唑每晚 5mg，丙戊酸镁缓释片每晚 0.25g，晚上睡眠有所改善。3-4 天以后出现白天犯困，正玩着或者正吃饭时就会去睡觉，说梦见有个光头爷爷在摸她，早上，中午的情况会比较明显。奶奶用桃木剑砍几下就会清醒，近几日经常说背后有人跟着她。在父母带出来的时候状态能好一些。对其进行心理治疗。

结果 症状缓解

结论 对于儿童出现的一些症状应做好识别，尤其所谓的幻觉妄想等词语的使用往往导致抗精神病药的滥用。儿童使用药物治疗要慎重，精神科医生应加强心理治疗方面的培训。

关键词：儿童,分离性障碍,心理治疗

短程聚焦家庭的行为干预对于学龄期儿童注意缺陷多动障碍的疗效评估及影响因素分析

目的 多国指南建议学龄期注意缺陷多动障碍 (Attention Deficit Hyperactivity Disorder, ADHD) 儿童应药物治疗结合父母行为训练 (behavioral parent training, BPT)。针对既往训练方案周期长、未关注执行功能受损和未聚焦家庭的局限，本研究提出短程聚焦家庭的行为干预，探索该方案对学龄期 ADHD 儿童的疗效及其影响因素。

方法 本研究为随机对照试验，使用随机数生成函数分配受试者。干预组接受 4 周、每周 3 小时的行为干预，对照组接受健康教育。主要结局指标是 ADHD 症状评分。在基线、干预结束时、结束后 1 月以及结束后 3 月时进行测量。采用重复测量方差分析，事后检验采用 Bonferroni 进行校正。采用多因素回归模型进行疗效的影响因素分析。

结果 本研究共 66 例 ADHD 儿童 (干预组和对照组各 33 例) 完成随访。两组在一般人口学资料、核心症状及行为问题、执行功能及情绪调节上无差异 ($p > 0.05$)。干预组教师报告的注意缺陷评分在结束后 3 月时低于对照组 ($F=5.074$, $p=0.028$, $\eta^2p=0.073$)，多动指数在干预结束时 ($F=4.858$, $p=0.031$, $\eta^2p=0.071$)、结束后 1 月 ($F=4.297$, $p=0.042$, $\eta^2p=0.063$) 及结束后 3 月时 ($F=7.050$, $p=0.010$, $\eta^2p=0.099$) 均低于对照组。干预组家长报告的多动冲动评分在干预结束时 ($F=8.659$, $p=0.005$, $\eta^2p=0.119$)、结束后 1 月 ($F=17.257$, $p=0.000$, $\eta^2p=0.212$) 和结束后 3 月 ($F=10.186$, $p=0.002$, $\eta^2p=0.137$) 均低于对照组。干预组家庭功能总分 ($F=7.014$, $p=0.009$, $\eta^2p=0.051$)、情感反应评分 ($p < 0.05$) 和问题解决评分在干预结束时高于对照组，家庭功能总分 ($F=5.078$, $p=0.026$, $\eta^2p=0.038$) 和沟通评分 ($p < 0.05$) 在结束后 3 月时低于对照组。将心身问题、情绪不稳定/消极评分纳入结构方程模型后，模型拟合度 (R^2) 为 0.274，提示干预前儿童心身问题评分 (回归系数 β 为 -0.368) 和情绪不稳定/消极情绪评分 (回归系数 β 为 -0.361) 可以预测核心症状评分减分率。

结论 相较于健康教育，短程聚焦家庭的行为干预可以短期改善学龄期 ADHD 儿童的核心症状及

家庭功能。ADHD 儿童伴随情绪问题和心身问题可以预测短程聚焦家庭的行为干预短期疗效不佳。

关键词：随机对照试验；注意缺陷多动障碍；行为干预；核心症状；家庭功能

Event-Related Potential (ERP) Based Prediction of Attention Deficit/Hyperactivity Disorder (ADHD) in Children and Adolescents

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Objective Event-related potentials (ERPs), namely mismatch negativity (MMN) and the P300 (P3) component, are indicative of cerebral electrical activity that is intricately linked to cognitive states and decision-making. We investigated the characteristics of MMN and P3 as biomarkers for classifying children and adolescents with ADHD from healthy controls (HCs), and

examined their role in cognitive and clinical symptomatology

Methods Using a three-stimulus auditory odd-ball paradigm, we compared MMN and P3 parameters (amplitude and latency) in EEG data from 70 patients with ADHD and 54 HCs. We applied machine learning with ERP features to differentiate between the two groups. Furthermore, an examination was conducted on the potential moderating impacts of ERP features on clinical symptoms and cognitive functions

Results In comparison to HCs, individuals with ADHD exhibited notably extended MMN latencies at the frontal and temporal electrodes, as well as diminished P3b latencies at the temporal electrodes but an increase at the parieto-occipital electrodes. The optimal classification performance for distinguishing ADHD patients from HCs, based on MMN and P3 features, achieved an accuracy of 71.3%, sensitivity of 80.0%, and specificity of 60.6%. Additionally, it was discovered that the relationship between cognitive function and hyperactive-impulsive symptoms is modulated by the amplitude of MMN at P4

Conclusion The findings suggest that abnormal MMN and P3 represent pathophysiological traits of ADHD in children and adolescents and could potentially be used as clinical neurobiomarkers for this group

关键词：attention-deficit/hyperactivity disorder, electroencephalogram, event-related potentials

ADHD 共病边缘型人格障碍的冲动和情绪失调：与健康人和 ADHD 患者的比较

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目的 比较 ADHD 共病 BPD 和 ADHD 患者多种维度的冲动和情绪失调。

方法 本研究采用横断面病例对照研究方法，样本包括 ADHD+BPD 组、ADHD 组、正常对照组，按年龄、性别匹配，每组各 48 例。本研究采用 Barratt 冲动量表 (BIS-11)，执行功能行为评定量表-成人版 (BRIEF-A) 的“情绪控制” (EC) 因子，情绪调节困

量表(DERS),情绪调节问卷(ERQ)等评估 ADHD 共病 ADHD,单纯 ADHD 及正常对照组的冲动特点和情绪失调及情绪调节困难各维度。

结果 ADHD+BPD 组、ADHD 组、正常对照组在认知冲动、非计划冲动和冲动总分上三组被试的差异均有统计学意义($P<0.001$),而在行动冲动方面,三组被试的差异无统计学意义($P>0.05$)。但 ADHD+BPD 组与 ADHD 组比较,在各冲动因子及冲动总分上差异均无统计学意义($P>0.05$)。对于情绪失调,使用执行功能行为评定量表-成人版(BRIEF-A)的“情绪控制”(EC)因子表示,该因子在三组被试的差异有统计学意义($P<0.001$)。在三组间进一步比较 DERS 量表,发现与正常对照组比较,单纯 ADHD 组和 ADHD 共病 BPD 组 DERS 量表总分也逐渐增高、组间比较均有差异,差异有统计学意义($P<0.001$)。另外正常对照组在各因子上均低于 ADHD 组、ADHD+BPD 组,差异有统计学意义($P<0.001$)。ADHD+BPD 组与 ADHD 组比较,差异主要体现在冲动控制困难($P<0.05$)、调节策略使用困难上($P<0.001$)。对其中差异最明显的“调节策略使用”,进一步采用 ERQ 量表评估其两种常用情绪调节策略的使用情况,结果发现在认知重新评估方面,三组被试的差异均有统计学意义($P<0.001$),而在表达抑制方面,三组被试的差异无统计学意义($P>0.05$)。

结论 ADHD 共病 BPD 较对照组有更多的冲动性,但较 ADHD 组这种冲动性并无差异。在情绪失调方面,ADHD 共病 ADHD 较单纯 ADHD 存在更严重的情绪失调及更多的情绪调整困难,尤其是在情绪调节策略方面,而这种情绪调节策略异常主要为较少使用认知重新评估。

关键词: ADHD,边缘型人格障碍,冲动,情绪失调,情绪调节困难

静息态功能磁共振成像特征对 SSRI 治疗青少年抑郁症疗效的影响研究

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目的 本研究旨在探讨大脑静息态功能磁共振

成像(rs-fMRI)特征对选择性血清素再摄取抑制剂(SSRIs)治疗青少年抑郁症疗效的影响。结合心理学和神经科学视角,我们观察 SSRIs 疗效与免疫系统指标及大脑功能变化的关系,期望为临床治疗提供精准指导,优化青少年抑郁症的治疗策略,理解其生物学基础及治疗反应差异,促进治疗方法的革新。

方法 选取 12 至 18 岁抑郁症患者,排除具有严重躯体疾病或被诊断为精神分裂症的患者。采用汉密尔顿抑郁量表(HAMD)和焦虑量表(HAMA)评估患者在入组后 1 周内及治疗 8 至 9 周后的心理状态,同时使用静息态功能磁共振成像(rs-fMRI)技术探索大脑功能变化。数据采用 Python 和 R 软件进行统计分析,通过 HAMD 减分率量化治疗效果,并分析 SSRIs 剂量与治疗效果的关系,以探索最佳治疗方案。

结果 1.心理状态的改善:治疗后,患者的 HAMD 评分从基线的 24.6 ± 5.3 显著下降至 12.1 ± 3.7 ($p<0.001$),HAMA 评分从基线的 18.4 ± 4.2 显著下降至 9.5 ± 2.8 ($p<0.001$),显示 SSRIs 在减轻青少年抑郁和焦虑症状方面的显著有效性。不同剂量的 SSRIs 在治疗效果上存在显著差异,SSRIs 剂量较高的患者显示出更显著的症状改善,强调个性化剂量调整的重要性。

2.大脑功能的变化:治疗后,患者前额叶和海马区域的局部一致性指数(ReHo)显著提高($p<0.01$),振幅低频波动(ALFF)在这些区域也显著增强($p<0.01$)。皮层厚度的增加与抑郁症状改善呈正相关($r=0.45$, $p<0.05$),尤其是在前额叶区域。rs-fMRI 结果显示,治疗后前额叶与海马之间的功能连接增强,表明这些关键脑区功能的恢复有助于提高治疗效果,减轻抑郁症状。

结论 本研究确认了 SSRIs 在治疗青少年抑郁症中的关键作用,并通过跨学科方法加深了对治疗效果与大脑功能变化之间关系的理解。研究为个性化治疗方案提供了科学依据,强调结合心理学和神经科学知识的重要性。结果促进了对青少年抑郁症复杂生物学机制的全面理解,尤其是 SSRIs 治疗反应的个体差异,为发展更有效的治疗策略奠定基础。

关键词: 青少年抑郁症,选择性血清素再摄取抑制剂(SSRIs),静息态功能磁共振成像(rs-fMRI),个性化治疗

负性生活事件与社会支持对青少年双相抑郁患者自杀意念的影响

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目的 探讨负性生活事件与社会支持对青少年双相抑郁患者自杀意念的影响。

方法 采用自杀意念自评量表(SIOSS)对186例PBD抑郁发作患者进行评估并分组。采用青少年生活事件量表(ASLEC)、社会支持评定量表(SSRS)评估患者的负性生活事件及社会支持情况。

结果 (1) 负性生活事件: 有自杀意念组青少年双相抑郁患者在人际关系因子 [(12.75±4.87)比(8.59±5.89)]、学习压力因子 [(12.52±4.82)比(9.49±5.41)]、受惩罚因子 [(9.89±6.70)比(7.52±6.48)]、健康适应因子 [(6.18±3.95)比(4.31±3.30)] 及其他因子 [(7.79±3.92)比(5.49±4.28)] 均高于无自杀意念组, 差异均有统计学意义 ($t=5.232, 4.009, 2.453, 3.517, 3.798; P<0.05$); 两组在丧失因子的比较 [(3.31±3.35)比(2.68±3.06)], 差异无统计学意义 ($t=1.349, P>0.05$)。 (2) 社会支持: 有自杀意念组青少年双相抑郁患者在主观支持分 [(15.76±3.88)比(18.75±5.52)]、客观支持分 [(5.66±2.20)比(6.85±2.75)] 及对客观度的利用 [(5.34±1.37)比(6.43±2.18)] 均低于无自杀意念组, 差异有统计学意义 ($t=-4.299, -3.219, -4.132; P<0.05$)。 (3) Logistic 回归分析显示: 人际关系因子、受惩罚因子与青少年双相抑郁患者的自杀意念有关 (OR=1.129, 1.059; $P<0.05$)。

结论 人际关系不融洽与受惩罚是青少年双相抑郁患者自杀意念的危险因素。

关键词: 青少年双相抑郁; 自杀意念; 负性生活事件; 社会支持

青少年双相抑郁患者自杀意念的神经代谢改变: 一项氢质子磁共振波谱研究

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目的 探讨青少年双相障碍(ABD)抑郁发作患者自杀意念与腹内侧前额叶(vmPFC)神经代谢之间的关系。

方法 选取2022年6月~2023年12月在新疆维吾尔自治区人民医院临床心理科住院的40例ABD抑郁发作患者为研究对象, 采用自杀意念自评量表(SIOSS)评估患者的自杀意念, 将总分 ≥ 12 分且掩饰因子得分 < 4 分的患者纳入有自杀意念组($n=21$), 将总分 < 12 分的患者纳入无自杀意念组($n=19$)。采用 $^1\text{H-MRS}$ 扫描vmPFC, 检测N-乙酰天门冬氨酸(N-acetylaspartate, NAA)、肌醇(myo-inositol, mI)、胆碱(choline, Cho)、肌酸(creatine, Cr)水平, 比较两组患者vmPFC脑区N-乙酰天门冬氨酸/肌酸(NAA/Cr)、胆碱/肌酸(Cho/Cr)、肌醇/肌酸(mI/Cr)的比值。

结果 有自杀意念的ABD抑郁发作患者组的NAA/Cr值低于无自杀意念患者组 [(1.10±1.16)比(1.92±0.45)], 有自杀意念的ABD抑郁发作组患者组的Cho/Cr值高于无自杀意念患者组 [(0.86±0.30)比(0.61±0.28)], 差异均有统计学意义 ($P<0.05$); 两组患者的mI/Cr值比较 [(0.43±0.35)比(0.58±0.49)], 差异无统计学意义 ($P>0.05$)。伴有自杀意念的ABD抑郁发作患者的NAA/Cr值与SIOSS评分呈正相关 ($r=0.382, P<0.05$)。

结论 青少年双相障碍抑郁发作患者的自杀意念可能与vmPFC脑区神经元功能下降及膜磷脂分解代谢异常有关。

关键词: 青少年双相抑郁; 自杀意念; 氢质子磁共振波谱; 腹内侧前额叶; 横断面研究

伴有童年创伤的青少年抑郁发作的易术心理剧干预研究

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目的 探讨伴有童年创伤的青少年抑郁发作患者, 在接受SSRI类抗抑郁药物治疗的基础上进行易术心理剧干预的效果。

方法 收集2021年2月至2024年2月在重庆市精神卫生中心儿童青少年心理科门诊就诊的青少年抑郁发作的患者, 共60例, 均为初诊。每位患者

符合国际疾病分类第 10 版中抑郁发作的诊断标准,同时符合童年创伤问卷(CTQ)中任一维度的创伤结果阳性,且服用 SSRI 类抗抑郁药物治疗,在家属及患者知情同意的情况下参与本研究。将符合入组的患者随机分为研究组和对照组。研究组:使用 SSRI 类抗抑郁药物+易术心理剧治疗,每位患者分别在六周内接受 3 次易术心理剧治疗的干预,并在第 6 周完成儿童抑郁量表测试。对照组:使用 SSRI 类抗抑郁药物,并在六周进行 3 次门诊复诊,并在第 6 周完成儿童抑郁量表测试。患者在研究过程中可以随时自愿退出本研究。

结果 研究组患者的儿童抑郁量表(CDI)总分显著低于对照组($P < 0.05$),且研究组儿童抑郁量表(CDI)中的负性情绪和低自尊两个维度的得分均显著低于对照组($P < 0.05$)。

结论 易术心理剧可以有效干预伴有早年创伤的青少年抑郁发作患者,并有效改善其负性情绪及低自尊情况。

关键词:青少年;抑郁发作;易术心理剧

青少年重度抑郁发作与社交行为、生活方式及自伤自杀倾向的相关研究

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目的 探讨重度抑郁发作青少年的社交行为和生活方式与自伤自杀之间的关系,以及不同社交生活方式对青少年抑郁、焦虑、自尊和自杀等情绪行为的影响。

方法 对 84 例重度抑郁发作的青少年采用自编一般人口学资料调查表、自我伤害想法和行为访谈表-修订版(SITBI-R)、抑郁自评量表(SDS)、焦虑自评量表(SAS)、儿童社交焦虑量表(SASC)、自尊量表(SES)、羞怯量表(SS)、惧怕否定评价量表(FNE)、多伦多述情障碍量表(TAS)、社交回避及苦恼量表(SAD)、安全感量表(SQ)、青少年睡眠-觉醒量表(ASWS)进行问卷评估。

结果 84 例重度抑郁发作的青少年中存在自伤行为者 62 例(73.81%),有自杀意念者 70 例(83.33%),有自杀计划者 47 例(55.95%)、实施自杀者 46 例(54.76%)。其中,学业压力、饮酒和 SQ 评分为重

度抑郁发作青少年出现自伤行为的危险因素;手机使用、FNE、SQ 和 SS 评分为自杀意念的危险因素;交友情况、吸烟、SAS 和 SASC 评分为自杀计划的危险因素;SDS 评分为实施自杀的危险因素。

结论 重度抑郁发作青少年的自伤和自杀行为与其社交行为和生活方式有显著相关性,其中学业压力、饮酒、手机使用及社交焦虑等因素在不同程度上增加了青少年出现自伤、自杀意念和实施自杀的风险。

关键词:青少年,重度抑郁发作,自伤,自杀,社交行为、生活方式

Multivariate Relationships between C-reactive Protein Inflammatory Marker Subtypes and Cognitive and Free Water Imaging in Adolescent-onset Major Depressive Disorder

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Objective Adolescent-onset major depressive disorder (AO-MDD) exhibits significant heterogeneity in clinical symptoms and pathological mechanisms, with unclear mechanisms of action for risk factors, severely impacting disease prevention and individual treatment outcomes

Methods This study integrated depressive symptoms, cognitive function, childhood trauma, peripheral C-reactive protein (CRP) levels, and free water (FW) imaging. Medication-free AO-MDD patients (N=115) were categorized into inflamed (N=40) and uninflamed (N=75) subtypes based on CRP levels. We explored group-specific relationship between baseline CRP levels and cognitive function, treatment outcomes at 2 weeks, childhood trauma, and FW in regions of interest

Results There were no significant differences in depressive symptoms and cognitive function between the two subtypes. However, in the inflamed AO-MDD subtype, baseline CRP levels were negatively correlated with processing of speed. After antidepressant treatment, a negative correlation between baseline CRP levels and

Hamilton Depression Scale (HAMD) reduction rates in inflamed AO-MDD subtype, not observed in the uninfamed AO-MDD subtype. In addition, total CTQ scores were higher in the inflammatory AO-MDD subtype compared to the non-inflammatory subtype, but there were no differences in FW in the ventral prefrontal cortex (vmPFC) and hippocampus. Further mediation analysis revealed that FW in vmPFC mediated the relationships between CTQ scores and HAMD scores as well as working memory in the inflamed AO-MDD subtype

Conclusion The study emphasizes the importance of understanding the inflammatory subtype of AO-MDD and its neuroimaging mechanisms related to childhood trauma, aiding in disease prevention and treatment innovation

关键词: adolescents with major depressive disorder; diffusion-weighted magnetic resonance imaging; free-water imaging; peripheral cytokine

内侧杏仁核 NRG1 信号通路介导青春期社会隔离诱导的自闭样行为

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目的 ①验证青春期社会隔离对小鼠自闭样行为的调控作用,并建立一种新的由环境因素诱导的自闭症谱系障碍(ASD)小鼠模型。②探究内侧杏仁核(MeA)脑区神经调节素1(NRG1)信号通路在青春期社会隔离诱导的自闭样行为中的作用。

方法 对21天龄的雄性C57BL/6J小鼠进行单笼处理(隔离组,1只/笼)或群居处理(对照组,5只/笼)。通过自闭相关行为学检测、药理学以及电生理、化学遗传学等方法,评估社会隔离对小鼠自闭样行为的影响以及MeA脑区NRG1信号通路是否参与上述过程。

结果 结果表明,在青春期社会隔离四周的小鼠出现社会互动受损、刻板样行为、焦虑样行为和识别记忆缺陷,这些现象在隔离一周、二周和三周的小鼠中未观察到。使用利培酮或阿立哌唑药物治疗显著改善了上述小鼠的自闭样行为。同时观察到MeA脑区的神经元活动减少和NRG1水平降低。

MeA脑区中敲低NRG1可诱导出自闭样行为,而向MeA脑区补充NRG1则可以改善上述社会隔离小鼠的自闭样行为。

结论 本研究建立了一个由青春期社会隔离诱导的ASD小鼠模型,揭示了MeA脑区NRG1信号通路是其关键介导因素。研究结果提示,针对MeA脑区NRG1信号通路可能是ASD治疗的潜在靶点。

关键词: 自闭症谱系障碍, 社会隔离, 内侧杏仁核, 神经调节素1, 小鼠模型

青少年情绪障碍自我退行患者的神经认知和fNIRS研究

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目的 青少年焦虑、抑郁、恐惧、强迫所致的疾病经济负担重、对个人学业/职业成就、家庭、社会稳定的影响深远。本研究旨在利用神经认知功能评估、近红外脑功能成像(fNIRS)技术,探究背外侧前额叶、伏隔核等区域的脑活动在自我退行的青少年情绪障碍患者中的变化。

方法 从弗洛伊德提出的自我防御机制分析,青少年情绪障碍后厌学、手机/游戏成瘾、回避社交这些意志活动减退行为是自我退行现象。研究设计:病例对照试验,根据纳入、排除标准确定入组对象,青少年情绪障碍组由两名主治医师参照ICD-10做出疾病诊断,依据主要症状特点确定有无自我退行现象,即厌学、手机/游戏成瘾、回避社交等意志活动减退行为;健康对照组的年龄、性别均与青少年情绪障碍组相匹配。收集数据:两组对象均完成HAMD、HAMA、YB、儿童艾森克人格问卷、防御方式问卷、中国简版神经认知成套测验(C-BCT)、家庭环境量表的评估,使用近红外脑功能成像设备收集神经认知功能评估、自行退行症状访谈期间受试者背外侧前额叶皮层、伏隔核区域的平均氧合血红蛋白浓度。数据分析:fNIRS数据预处理,进行统计学效应分析。

结果 青少年情绪障碍组神经认知功能下降,背外侧前额叶皮层、伏隔核区域脑活动存在不同。

结论 fNIRS可作为预测青少年情绪障碍自我退行的神经影像学指标。

关键词: 青少年情绪障碍, 神经认知, fNIRS

Disrupted Brain Network Dynamics of Tourette Syndrome During Childhood and Adolescence

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Objective Tourette Syndrome (TS), a neurodevelopmental disorder characterized by motor and vocal tics, exhibits profound disruptions in brain functional networks. Existing studies on the brain functional networks of TS predominantly focus on static connectivity, ignoring the dynamic adjustments of the functional networks over short time scales. This study aimed to explore the abnormal dynamics in the brain functional modular structure of TS

Methods This study used resting-state functional magnetic resonance imaging (rsfMRI) data of 90 participants (45 patients with TS and 45 healthy control subjects) from the Beijing Children's Hospital. Brain module dynamics were assessed using a multilayer network model. We further followed up on clinical performance in TS after three months of conventional treatment and developed a clinical prognostic prediction model based on the spatial distribution patterns of dynamic modular features using machine learning algorithms

Results Compared with healthy control participants, individuals with TS exhibited a higher global mean and lower standard deviation of whole-brain module dynamics, indicating an unstable and less regionally differentiated pattern. The dynamic module properties of the middle temporal gyrus, inferior temporal gyrus, fusiform gyrus, orbitofrontal gyrus, and frontal pole were significantly positively correlated with tic severity and were significantly negatively correlated in the somatosensory association cortex, cuneus cortex, and anterior cingulate cortex. Additionally, the spatial pattern

of dynamic modules in TS significantly predicted clinical outcomes at three months

Conclusion This study provides new scientific evidence for understanding the abnormal dynamic neurodevelopmental mechanisms in TS and offers innovative approaches to establishing effective prognostic biomarkers in clinical practice

关键词: Tourette Syndrome; brain connectome; dynamic module structure; clinical prognostic prediction model; MRI

一例恋童障碍患者的治疗

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目的 通过药物治疗合并心理治疗的模式, 探索性心理障碍的治疗

方法 患者为 18 岁的男性, 高三学生。患者多次尾随 10 岁左右的小女孩, 并施行猥亵行为(抚摸对方的身体, 未发生性交行为)。患者多次被公安部门训诫, 教育, 因此送其来就诊。入诊室后的精神检查发现: 患者对自己非常痛苦, 自认为不应该那样做, 但控制不住自己的行为。自诉有时想象在猥亵 10 来岁的女孩子, 很激动, 但好像并不想发生真正的性行为, 并越来越沉迷于对小女孩做那种事情。诊断“恋童障碍”。2022 年 10 月开始, 根据患者病情, 制定药物治疗联合心理治疗的综合治疗模式, 予以“马来酸氟伏沙明 200mg/日”治疗, 每周 2 次的心理治疗, 其中, 在接诊医生处开展“每周一次/六次认知行为+一次家庭治疗(认知行为取向)”治疗, 帮助其学会控制自己的情绪和行为, 改变患者及家属一贯的“读书不能谈恋爱”认知, 鼓励其建立合法合理的亲密关系。在另一位心理治疗师处开展“一周一次的精神分析取向”的心理治疗, 帮助其提高驯服性张力的能力, 促进其人格的成长, 鼓励其通过合适途径达到性满足等。持续治疗一年余。患者 2023 年 10 月起未再出现猥亵幼童的行为, 自诉猥亵幼童的想法明显减少, 且和同龄同学建立稳定的恋爱关系(无实质的性关系), 目前仍在坚持治疗。

结果 使用药物治疗合并心理治疗的模式, 对于性心理障碍的治疗有一定的效果。

结论 治疗后的思考：性心理障碍，在心理门诊就诊的患者中，其实并不少见。在以往，很多精神病学家认为心理障碍的治疗，可用药物不多，很多都是使用厌恶疗法等行为治疗的方法，帮助患者控制欲望，更有很多激进的专家推荐使用化学阉割等方法治疗，但效果都不理想。从精神症状的发生学角度去考虑，性心理障碍有可能和童年的不良经历，特别是遭遇过性暴力、父母亲关系不良等有密切关系——而本案例就符合这个特点——有心理学中“强迫性重复”的特点，也有“精神病学中强迫症”的特点。基于上述考虑，笔者给其开具了氟伏沙明治疗。同时性心理障碍是一组多因素引发的心理疾病，很多文献认为，童年期的不良经历，可能为重要的诱发因素，因此需要更多的心理治疗，帮助处理童年期的创伤。因此，本病例引入精神分析取向心理治疗师共同工作。在多方面的综合治疗下，患者最后取得阶段性的治疗效果。

关键词：恋童障碍、药物治疗合并新理论治疗

“与单亲 Vs 双亲一起生活”对青少年抑郁情绪的影响差异：家庭亲密度与适应性的中介作用

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目的 探讨“与单亲 vs 双亲一起生活”对青少年抑郁情绪的影响差异，同时分析“与单亲 vs 双亲一起生活”与青少年抑郁情绪之间关系的多重中介机制。

方法 本研究在某市有效调查 3505 名青少年，本研究仅纳入“与父母任何一方一起生活”或“与父母双方一起生活”的青少年，其中包括“与父母任何一方一起生活”青少年 680 人（年龄 15.16 ± 4.43 岁）和“与父母双方一起生活”青少年 2615 人（年龄 15.00 ± 2.63 岁）。使用家庭亲密度和适应性量表与流调中心抑郁量表分别评估家庭亲密度与适应性和抑郁情绪，本研究使用 SPSS 21 软件和 Process 3.1 插件处理数据，独立样本 t 检验被用于比较“与父母任何一方一起生活”和“与父母双方一起生活”青少年抑郁症状的差异，线性回归分析影响青少年抑郁情绪的影响因素，同时使用中介模型（Process 3.1 插件

Model 4，采用 Bootstrapping 法，抽样次数 5000）检验“与单亲 vs 双亲一起生活”与青少年抑郁情绪之间关系中的多重中介作用。

结果 (1) 独立样本 t 检验：“与父母任何一方一起生活”的青少年的抑郁症状高于“父母双方一起生活”的青少年的抑郁症状 ($t=2.099, p=0.036$)；(2) 线性回归分析：家庭亲密度和适应性分别负向预测青少年抑郁情绪 (β 值分别是 -0.367 和 $-0.251, p < 0.05$)，然而，“与父母一起生活”变量（“与父母任何一方一起生活” vs “与父母双方一起生活”）对青少年抑郁症状不起到预测作用 ($p > 0.05$)；(3) 进一步多重中介分析：家庭亲密度和适应性分别在“与父母一起生活”变量（“与父母任何一方一起生活” vs “与父母双方一起生活”）与青少年抑郁情绪之间起到完全中介作用（间接路径的 Bootstrapping 法的 95% 可信区间不包括 0，直接路径的 95% 可信区间包括 0）。

结论 相对“与父母双方一起生活”青少年，“与父母任何一方一起生活”青少年抑郁症状更严重，家庭亲密度与适应性可能是影响“与父母任何一方一起生活”青少年抑郁情绪的机制因素。

关键词：青少年抑郁；与父母双方（一方）一起生活；家庭亲密度与适应性；中介分析

积极心理学的应用价值和发展现状

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目的 加强心理学家和大众对积极心理学的认识和认可度。传统心理学主要关注发现问题和解决异常的心理疾病，被称为消极心理学；积极心理学受人本主义思想的影响，更注重挖掘积极情感和个体的优点，其核心理念在于关注个体的积极特质和生活满意度，它鼓励发展积极情绪，如乐观、感恩和自我效能，这些都能增强个体的抗压能力和适应性，它称得上是心理学领域的一场革命。然而绝大部分心理学家和大众对传统的心理学治疗的方法认知度较深，认可度更强，故而很难接受积极心理学，甚至还有很多专业的心理学家对积极心理学知之甚少，所以希望能通过这篇文章扩大大家对积极心理学的了解和认可，并投入对积极心理学的探索。

方法 综述

结果 积极心理学,作为心理学领域的一个新兴分支,其核心理念是挖掘个体的内在资源和潜能,帮助人们建立积极的情绪调节机制。这一理念的提出,不仅为心理治疗提供了新的视角,更为预防和缓解抑郁、焦虑等情绪困扰提供了有效的途径。在实际应用中,许多临床心理学家发现,积极心理学的干预方法能够显著提升人们的情绪控制能力。通过引导个体关注自身的优势和积极面,可以帮助他们增加对工作、人际和生活等方面的自信,提高自我效能感和抗压能力。这无疑为那些长期处于情绪困扰中的人们带来了新的希望。然而,尽管积极心理学在青少年情绪问题治疗中取得了突出的效果,但它仍面临着诸多挑战。积极心理学发展较晚,在心理学界的影响力和地位相对较低,且目前尚缺乏较多实用性、系统性的操作方法,而且大众对积极心理学的知晓度和认可度也不高。

结论 积极心理学的方法有助于青少年挖掘潜能、发现自己的优点,建立自信,提高对心理治疗的依从性。此外,积极心理学的方法还可以作为一个教育理念,提升家长、教师与青少年的相处的和谐度,促使青少年有一个更健康的支持性的成长环境,对教育界教育理念有显著的影响,给心理治疗的领域带来了新的方向,也能培养了人们积极应对逆境的心态,增强了适应性和情绪恢复能力,引导个体探索个人价值、生活目标,从而促进了个体情绪困扰的缓解。这不仅是个体层面的收获,青少年作为国家的未来,将积极心理学应用到教育领域中,长期广泛的推广积极心理学,青少年可以掌握情绪管理的工具,减少情绪问题,也会让社会更和谐稳定。积极心理学在情绪问题治疗中扮演着至关重要的角色,它不仅提供了有效的干预路径,而且对构建心理健康教育体系具有深远的启示意义。

关键词:情绪智力;正念疗法;感恩教育;积极心理学

首发未用药青少年抑郁症患者静息态脑网络度中心性及功能连接分析

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目的 抑郁症是影响青少年身心健康以及致残和死亡的主要原因,然而它的病理机制仍不清楚。本研究基于度中心性 (degree centrality, DC) 和功能连接分析探索首发未用药青少年抑郁症患者静息态脑网络节点中心地位的特点及大脑功能连接情况,并分析青少年抑郁症相关压力生活事件,以期揭示青少年抑郁症潜在的脑神经机制。

方法 本研究纳入符合诊断标准的首发未用药青少年抑郁症患者 80 例及性别、年龄匹配的健康志愿者 60 例,采用 24 项汉密尔顿抑郁量表 (Hamilton Depression Scale ,HAMD) 和 14 项汉密尔顿焦虑量表 (Hamilton Anxiety Scale ,HAMA) 评估受试者的抑郁和焦虑症状,采用青少年生活事件量表 (Adolescents Self-Rating Life Events Checklist ,ASLEC) 评估受试者的生活压力情况。采用静息态功能磁共振成像技术采集所有受试者磁共振数据,基于 DPABI V2.3 软件对数据进行预处理后得到 DC 图,采用双样本 t 检验比较抑郁组和健康对照组脑功能图像差异。提取有差异的脑区作为种子点,并采用基于种子点的静息态功能连接分析方法,分析差异脑区与全脑的功能连接。提取差异脑区 DC 值和功能连接强度与患者的临床量表评分进行偏相关分析,以性别、年龄和头动作为协变量。

结果 抑郁组 HAMD、HAMA 和各压力生活事件评分明显高于对照组 ($p<0.05$);抑郁组右侧枕下回后部、梭状回 DC 值明显高于健康对照组 ($p<0.05$, FDR 校正);基于种子点分析发现右侧梭状回与右侧豆状核和左侧壳核功能连接降低。抑郁组右侧枕下回后部、梭状回 DC 值与 HAMD 评分呈正相关。

结论 1.青少年抑郁症患者存在较大的生活压力事件。

2. 青少年抑郁症患者存在静息态脑网络节点中心地位的改变,这些脑区主要位于视觉皮层区,提示视觉功能异常,并且这些异常与抑郁症状有关。

3. 青少年抑郁症患者视觉皮层与豆状核和壳核功能连接存在异常,提示青少年抑郁症患者视觉相关认知、情绪功能受损。

这些异常,可能是青少年抑郁症潜在的神经病理机制。

关键词:青少年,抑郁症,磁共振,功能连接,度中心性

Loneliness, Hopelessness and Internet Addiction Among Non-suicidal Self-injury Adolescents: The Mediating Role of Emotion-focused Coping

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Objective This study aims to examine the relationship between loneliness and hopelessness and Internet addiction in non-suicidal self-injury (NSSI) adolescents, exploring the mediating role of problem-focused coping and emotion-focused coping.

Methods A total of 1545 NSSI adolescents (82.5% females; $M=14.88$, $SD=1.63$) and 553 (64.9% females; $M=15.43$, $SD=1.60$) non-NSSI adolescents from over 20 specialized psychiatric hospitals across multiple provinces in China were recruited in this study and completed the measures regarding loneliness, hopelessness, coping styles, and mobile phone addiction Scale.

Results *t*-tests showed that NSSI adolescents had lower score on problem-focused coping and higher scores on mobile internet addiction, loneliness, hopelessness, and emotion-focused coping than non-NSSI adolescents. Multi-group structural equation modeling was further used to examine the direct and indirect effects of loneliness and hopelessness on Internet addiction across two groups. Results showed that loneliness and hopelessness were positively related to mobile internet addiction, and emotion-focused coping played a mediating role for both NSSI and non-NSSI adolescents. In addition, the model was found to be variant across the two groups

Conclusion These findings suggest that NSSI adolescents with loneliness and hopelessness may have high usage of emotion-focused coping and mobile phone dependence. Such findings have potential implications for reducing Internet addiction of adolescents with NSSI.

关键词: Loneliness, hopelessness, Internet addiction, coping styles, non-suicidal self-injury adolescents

CRP 和 C4: 用于识别伴自杀未遂经历的非自杀性自伤青少年的潜在生物标志物

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目的 非自杀性自伤 (non-suicidal self-injury, NSSI) 和自杀未遂 (suicide attempt, SA) 严重威胁青少年的健康。二者常共存, 且有 SA 经历的 NSSI 患者面临更高的自杀风险, 然而二者的鉴别主要依靠临床观察, 对缺乏经验的临床医生造成了诊断困难, 因此亟需客观的生物标志物来辅助诊断。本研究旨在探讨炎症标志物 (C 反应蛋白 [C-reactive protein, CRP]、补体成分 3 [complement component 3, C3]、补体成分 4 [complement component 4, C4] 与 NSSI 患者 SA 经历之间的关联, 并评估其诊断效能。

方法 本研究共招募了 255 名 NSSI 青少年患者。使用 PHQ-9 和渥太华自伤量表评估抑郁症状和 NSSI 行为的严重程度, 使用半结构化访谈评估 SA 经历, 同时测量血浆中 CRP、C3 和 C4 水平。通过 logistic 回归模型控制相关混杂因素, 以分析 CRP、C3、C4 与青少年 NSSI 患者 SA 经历之间的关联。此外, 使用受试者工作特征 (receiver operating characteristic, ROC) 曲线分析评估各炎症标志物的诊断效能。

结果 本研究纳入 97 名不伴 SA 经历的 NSSI 患者 (仅 NSSI 组) 和 158 名伴 SA 经历的 NSSI 患者 (NSSI+SA 组)。NSSI+SA 组血浆 CRP、C4 水平显著高于仅 NSSI 组。Logistic 回归分析结果显示, CRP 水平升高 ($OR=1.989$, 95% CI: [1.313-3.014], $P=0.001$) 和 C4 水平升高 ($OR=1.092$, 95% CI: [1.016-1.174], $P=0.017$) 与 NSSI 患者中 SA 发生率增加独立相关。Logistic 回归模型的曲线下面积 (area under the curve, AUC) 为 0.732 (95% CI: [0.672-0.792], $P<0.001$)。单变量 ROC 曲线分析显示, CRP 鉴别伴 SA 经历的 NSSI 青少年的 AUC 为 0.622 (95% CI: [0.554-0.690], $P=0.001$), 最佳临界值为 1.95 mg/L, 灵敏度为 0.462, 特异度为 0.804; C4 鉴别伴 SA 经历的 NSSI 青少年的 AUC 为 0.623 (95% CI: [0.554-0.692], $P=0.001$), 最佳临界值为 18.5 mg/dL, 灵敏

度为 0.614, 特异度为 0.577。

结论 伴 SA 经历的 NSSI 青少年表现出更高的炎症水平。临床实践中可以根据炎症标志物可能有助于临床识别伴 SA 经历的 NSSI 患者从而采取针对性的治疗、护理措施。

关键词: 非自杀性自伤, 自杀, 炎症, 青少年

非自杀性自伤行为特征联合网络成瘾倾向对青少年双相抑郁障碍的识别

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目的 比较青少年单相抑郁障碍 (unipolar depression, UD)、双相抑郁障碍 (bipolar depression, BD) 之间的非自杀性自伤 (non-suicidal self-injury, NSSI) 行为特征和网络成瘾倾向, 并探讨是否可以根据二者识别青少年 BD。

方法 本研究纳入共纳入 129 名处于抑郁发作期的青少年 NSSI 患者, 分为 UD 组 45 人, BD 组 84 人, 使用卡方检验、独立样本 t 检验比较两组间特征差异, 并根据组间比较的结果建立逐步 logistics 回归方程, 后通过受试者工作特性 (receiver operating characteristic, ROC) 曲线评估模型对 BD 的诊断价值。

结果 UD、BD 患者在年龄、性别、居住地、父母受教育程度以及 HAMD-24 和 YMRS 得分均无显著差异。BD 组患者过去 1 年自伤行为严重程度、自伤方式总数、自伤原因 (社会影响、外部情绪调节、内部情绪调节)、自伤成瘾总分显著高于 UD 组患者。BD 组在网络成瘾总分、耐受性和时间管理、人际学业与健康问题、戒断反应的得分显著高于 UD 组, 两组间强迫性与突显性得分无显著差异。自伤成瘾总分 (OR 值为 1.103, 95%CI: 1.045-1.164, P=0.000) 和网络成瘾总分 (OR 值为 1.033, 95%CI: 1.010-1.057, P=0.003) 均为青少年 BD 的独立危险因素。自伤成瘾总分联合网络成瘾总分在伴 NSSI 行为的抑郁发作青少年中识别 BD 的 ROC 曲线下面积

为 0.742 (95%CI: 0.655-0.829, P<0.05), 灵敏度为 0.774, 特异度为 0.644。

结论 成瘾特质 (网络成瘾、自伤成瘾) 为青少年双相抑郁障碍的独立危险因素, 自伤成瘾联合网络成瘾评估可识别青少年 BD 患者。

关键词: 非自杀性自伤 (NSSI), 网络成瘾, 单相抑郁, 双相抑郁, 青少年

青少年社会支持对抑郁症状的影响: 安全感和心理弹性的中介与调节作用

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目的 研究青少年中社会支持与抑郁症状之间关系, 并分析安全感和心理弹性在其中的中介与调节作用, 为理解和干预青少年抑郁症状提供新的视角。

方法 在中国天津市便利选择了一所中学, 共纳入了 2,713 名学生 (11-18 岁, 49.54%为女性)。我们使用量表社会支持问卷, 安全感问卷, 心理弹性量表和 PHQ-9 问卷, 分别评估了学生的社会支持、安全感、心理弹性和抑郁症状。该调查共收集了 2705 份有效问卷。使用 R 软件进行统计分析。

结果 有抑郁症状的青少年占 29.70%, 其中女性 436 例 (54.30%), 女性多于男性。与男生相比, 女生抑郁症状评分较高, 安全感得分和心理弹性较低。社会支持与抑郁症状之间的关系部分由安全感介导, 安全感介导的中介效应占总效应的 36.87%。心理弹性对中介模型中的直接路径和间接路径都有显著的调节作用。与低心理弹性相比, 高心理弹性条件下, 对安全感知的影响更强; 低安全感对抑郁症状的影响较小; 低社会支持对抑郁症状的影响较小; 并且在整个观测数据范围内具有显著性。

结论 青少年抑郁症状检出较高, 应关注女性青少年心理健康状况。心理弹性对中介模型中的直接路径和间接路径都有显著的调节作用, 提示心理弹性增强了安全感, 并缓和了低安全感和社会支持差对抑郁症状的影响。因此, 我们可以通过专注于培养青少年的心理弹性和增强他们的安全感来减轻或者预防抑郁症状。

关键词: 青少年, 心理弹性, 安全感, 抑郁情绪, 社会支持

认知自知力对青少年早期边缘人格障碍及抑郁症状的影响

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目的 边缘人格障碍(BPD)是一种严重的精神障碍,经常与抑郁症状共病。该疾病通常在青少年时期发病,并在成年早期达到顶峰。青少年时期是早期识别和干预BPD的关键时期,然而,目前对其发病机制仍不清楚。本研究旨在探讨认知自知力对青少年早期BPD和抑郁症状的影响,并分析非自杀性自伤行为(NSSI)和自杀企图(SA)与早期BPD及抑郁症状的关系。

方法 我们采用修订版贝克认知自知力量表(BCIS)、儿童青少年边缘特征量表(BPFS-C)、抑郁自我评估量表(PHQ-9)、青少年非自杀性自伤量表和自杀行为问卷修订版(SBQ-R)对5572名青少年进行线下问卷调查。通过单因素逻辑回归(logistic)和多元线性回归分析认知自知力(包括自我确定、自我反思、综合指数三个维度)、NSSI、SA与早期BPD和抑郁症状的诊断及严重程度之间的关联。我们还通过计算BPD和抑郁症状共存共同联合优势比(COR)来分析两者的共病情况,并通过潜在类别分析(LCA)探究认知自知力及自残行为与BPD和抑郁的潜在关联。

结果 单因素logistic及多元线性回归结果显示,认知自知力(包括自我反思、自我确定、综合指数三个维度)与早期BPD和抑郁症状的诊断及严重程度呈显著正相关(OR自我反思-BPD=1.25, OR自我确定-BPD=1.12, OR综合指数-BPD=1.17, OR自我反思-抑郁=1.2, OR自我确定-抑郁=1.09, OR综合指数-抑郁=1.16; β 自我反思-BPD=0.518, β 自我确定-BPD=0.306, β 综合指数-BPD=0.311, β 自我反思-抑郁=0.41, β 自我确定-抑郁=0.157, β 综合指数-抑郁=0.301),自残行为也与早期BPD和抑郁症状

的诊断及严重程度呈显著正相关(ORNSSI-BPD=3.89, ORSA-BPD=4.74, ORNSSI-抑郁=4.65, ORSA-抑郁=5.99; β 自我反思-BPD=0.327, β 自我确定-BPD=0.185, β 自我反思-抑郁=0.358, β 自我确定-抑郁=0.222),COR结果显示认知自知力及自残行为与早期BPD和抑郁症状的同时发生没有显著相关性,LCA在认知自知力及自残行为的发生上产生了两类差异。高认知自知力组相比低认知自知力组更有可能诊断早期BPD和抑郁症状,并且与严重程度呈显著正相关。

结论 认知自知力与早期BPD和抑郁症状密切相关,较高的认知自知力可能是早期BPD和抑郁症状的一个特殊风险标志。同时,我们发现自残行为也是早期BPD和抑郁症状发生的风险因素,早期识别自残行为可以减少BPD和抑郁症状发生的机率。

关键词: 青少年,边缘人格障碍,抑郁症状,认知自知力

关注阅读障碍儿童的心理健康: 阅读能力、抑郁症状和行为问题的中介反馈循环

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目的 了解发展性阅读障碍儿童的心理健康现状,探讨儿童阅读能力、抑郁症状和行为问题的关联,为促进阅读障碍儿童的健康发展提供依据。

方法 本研究采用病例对照设计,纳入了2021年12月至2023年12月在汕头大学精神卫生中心确诊为发展性阅读障碍的44名2~5年级儿童作为病例组,从汕头市一所公立小学中按照年龄和年级匹配的原则随机抽取了81名学生作为对照组。使用汉语语音加工任务测试儿童的阅读能力,使用儿童抑郁障碍自评量表(DSRSC)和Achenbach儿童行为量表(CBCL)评估儿童的抑郁症状与行为问题。基于Bootstrap方法,应用Hayes编制的SPSS宏程序PROCESS模型4进行中介效应检验。

结果 (1) 阅读障碍儿童在语音加工任务中的正确率显著低于非阅读障碍儿童 ($P < 0.001$), 且随着任务难度的增加, 差异更为显著。阅读障碍儿童的抑郁症状检出率显著高于非阅读障碍儿童 (40.9% vs. 17.3%, $P < 0.01$), 在行为问题 (包括内化行为问题、外化行为问题和总行为问题, 下同) 上的得分也均显著高于非阅读障碍儿童 ($P < 0.001$)。 (2) 儿童的阅读能力、抑郁症状和行为问题之间呈显著相关 (P 值均 < 0.01)。 (3) 儿童的阅读能力可以正向预测抑郁症状和行为问题。此外, 在阅读困难的影响下, 行为问题可以在阅读能力与抑郁症状之间起部分中介作用, 抑郁症状也可以在阅读能力与行为问题之间起部分中介作用。 (4) 儿童的抑郁症状和行为问题同样可以直接对阅读能力产生负向影响, 二者相互影响, 互为中介, 对阅读能力产生部分中介效应。

结论 本研究揭示了中国学龄儿童的阅读能力、抑郁症状和行为问题之间的中介反馈循环及其相互强化的关系。抑郁情绪和行为问题可能源于阅读困难, 也可能有助于缓解阅读困难, 形成交互影响的循环效应。因此, 我们需要将阅读支持与心理援助相结合, 制定针对阅读障碍儿童不同表型、情绪状况和行为特点的个性化干预方案, 使儿童在学业和心理上茁壮成长, 为取得良好的教育成果和促进社会发展奠定基础。

关键词: 阅读障碍, 阅读能力, 抑郁症状, 行为问题, 中介反馈循环

Childhood Emotional Maltreatment Affects Depression of Adolescents with Mood Disorders: The Mediating Role of Functions of Non-suicidal Self-injury

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Background A wealth of data points to childhood emotional maltreatment as a risk factor for depression in adolescence. However, not much is understood about how non-suicidal self-injury mediates this relationship. Thus, the goal of this research was to ascertain how non-suicidal self-injury functions relate to childhood emotional maltreatment and depression

Methods The participants were adolescents with mood disorders from three hospitals in Sichuan Province, data was collected using self-administered questionnaires, including the Childhood Trauma Questionnaire, Ottawa Self-injury Inventory-Functions, and Childhood Depression Inventory. SPSS26.0 software and PROCESS v3.3 model 4 was used for analysis

Results In all, 295 adolescents ($M_{age}=14.8$, $SD=1.62$) participated in the research. The functions of non-suicidal self-injury ($r=0.289$, $P < 0.01$) and depression ($r=0.475$, $P < 0.01$) were considerably positively connected with childhood emotional maltreatment, and the functions of non-suicidal self-injury were strongly positively correlated with depression ($r=0.364$, $P < 0.01$). The direct impact of childhood emotional maltreatment on depression in adolescents was found to be significant (95% CI 0.434, 0.828) in the mediated effects model. Additionally, the indirect effect of childhood emotional maltreatment on depression through non-suicidal self-injury functions was found to be significant (95% CI 0.055, 0.236), with a mediating effect value of 17.58%

Conclusion Childhood emotional maltreatment has a direct impact on depression, but it also has an indirect influence through mediation roles of non-suicidal self-injury. Medical staff should take care of the mental health of adolescents hospitalized for mood disorders so that they can clarify the role of NSSI in lowering depressive symptoms and improving quality of life and create more targeted and effective intervention plans

关键词: Childhood emotional maltreatment, Depression, Functions, Non-suicidal self-injury, Adolescents

PRKCB Methylation Is Associated with Childhood Chronic Stress in Adolescent Major Depressive Disorder--- A Cross-sectional Study

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Objective Gene methylation is considered to be involved in the process of gene expression in many disease including psychiatric disorder. Many evidences have been found between gene methylation and major depressive(MDD), but how the relationship between gene methylation and chronic stress in unclear. A previous study have found PRKCB methylation was associated with MDD by genome-wide epigenetic association analysis in human brain tissue. The purpose of this study was furtherly to investigate the relationship between childhood chronic stress (CCS) and protein kinase C beta (PRKCB) methylation in adolescent MDD

Methods We recruited 100 adolescents with MDD (41 male, f59female) and 50 healthy controls (HCs) (28 male, 22 female). PRKCB methylation level were assessed by pyrosequencing using whole blood-derived DNA to explore the relationship between CCS and PRKCB methylation level in adolescent MDD. CCS was assessed by the Childhood Chronic Stress Questionnaire (CCSQ)

Results PRKCB methylation level and CCS were both found to be associated with the severity of depressive symptom in MDD, and CCS also was associated with PRKCB methylation level

Conclusion We found that PRKCB methylation level was associated with CCS, as well as the severity of depressive symptom in MDD, suggesting that PRKCB methylation may be an important factor in adolescent MDD

关键词: Adolescent MDD; Childhood chronic stress; PRKCB; DNA methylation

Mediating Effects of Insomnia and Resilience

on COVID-19-related Post-traumatic Stress Disorder and Quality of Life in Adolescents

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Objective The coronavirus disease-2019 (COVID-19) pandemic has impaired the quality of life (QoL) for many due to its extensive impacts. However, few studies have addressed the specific impact of COVID-19 on the mental health of adolescents, particularly post-traumatic stress disorder (PTSD). This study considered the impact of COVID-19-related PTSD on the QoL of adolescents in China, the mediating effects of insomnia, and the moderating effects of resilience

Methods Participants included 50,666 adolescents aged 12 to 18 years selected using a comprehensive sampling method. We performed data collection from January 8th to January 18th, 2023, using the Children's Revised Impact of Event Scale, Pittsburgh Sleep Quality Index, Ten-item Connor-Davidson Resilience Scale, and Screening for and Promotion of Health-related QoL in Children and Adolescents Questionnaire for data collection

Results Male adolescents exhibited significantly lower levels of PTSD and insomnia compared to females and scored significantly higher in psychological resilience and overall QoL. Insomnia played a mediating role between PTSD and QoL. Psychological resilience moderated the impact of COVID-19-related stress on adolescents' QoL through its influence on insomnia

Conclusion PTSD resulting from the COVID-19 pandemic affects the QoL of adolescents through the presence of insomnia. Psychological resilience plays a moderating role in this process. Cultivating psychological resilience in adolescents can effectively enhance their ability to cope with the impacts of sudden public events

关键词: Post-traumatic stress disorder; Coronavirus disease-2019; Quality of life; Insomnia; Resilience; Adolescents

青少年抑郁发作患者人格特征与儿童期创伤及父母养育方式关系研究

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目的 本研究旨在探讨青少年抑郁发作患者人格特征的影响因素，并分析儿童期创伤在父母养育方式与青少年抑郁发作患者人格特征之间的中介作用，从心理机制的角度为青少年抑郁发作的防治提供针对性的指导。

方法 以2020年8月-2021年12月深圳市康宁医院儿少精神科收治的187例抑郁发作患者为被试，采用艾森克人格问卷、儿童期创伤问卷和父母养育方式评价量表评估患者的心理状况，采用Pearson相关分析方法分析各人格维度与儿童期创伤总分、父母养育方式各因子之间的关联，采用多元逐步线性回归预测各人格维度的影响因素，采用SPSS软件Process插件通过Bootstrap法对儿童期创伤在父母养育方式与青少年抑郁发作患者人格特征之间的中介效应进行验证。检验水准 $\alpha=0.05$ 。

结果 (1) 母亲拒绝、否认的养育方式和儿童期创伤正向预测神经质维度(β 值分别为0.36和0.18, P 值均 <0.05)；父亲偏爱被试的养育方式正向预测内外向维度、负向预测神经质维度(β 值分别为0.90和-0.78, P 值均 <0.05)；父亲拒绝、否认的养育方式正向预测神经质维度(β 值=0.66, P 值 <0.05)。

(2) 儿童期创伤在母亲拒绝、否认的养育方式与青少年抑郁发作患者的神经质维度之间起到了中介作用(效应值为0.14, 95%CI: 0.03~0.26)；儿童期创伤在父亲偏爱被试的养育方式与青少年抑郁发作患者的神经质维度之间起到了中介作用(效应值为-0.14, 95%CI: -0.25~-0.05)；儿童期创伤在父亲拒绝、否认的养育方式与青少年抑郁发作患者的神经质维度之间起到了中介作用(效应值为0.16, 95%CI: 0.03~0.30)。

结论 父母养育方式影响青少年抑郁发作患者人格特征，其关系受到儿童期创伤的影响。

关键词 青少年,抑郁发作,人格特征,儿童期创伤,父母养育方式

Relationship of Depression Levels To Internet Addiction and Inflammatory Factors in Adolescents with Depressive Disorder Exposed To Secondhand Smoke

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目的 抑郁水平通常与网络成瘾(IA)和炎症生物标志物的水平有关。然而，在暴露于二手烟的抑郁症青少年中，这种关联尚未得到充分探索。本研究旨在探讨暴露于二手烟环境的抑郁症青少年中IA抑郁程度与炎症细胞因子之间的关联。

方法 从2023年1月到12月，这项研究包括136名患有抑郁症的青少年和83名健康对照(HC)。使用24项汉密尔顿抑郁量表(HAMD-24)和网络成瘾测试量表(IAT)来评估抑郁和网络成瘾症状。此外，还测量了白细胞介素(IL)-1 β 、IL-6、IL-8、IL-10、IL-17A和肿瘤坏死因子- α (TNF- α)的血浆水平。

结果 青少年抑郁症的二手烟暴露率为77.2%。患者的IA评分和二手烟暴露高于HC(均 $P>0.05$)。二手烟暴露组的24项汉密尔顿抑郁量表评分与IA总分和IL-1 β 、IL-6、IL-10、IL-17A和TNF- α 水平呈正相关，但与性别呈负相关。相比之下，在非二手烟暴露组中，24项汉密尔顿抑郁总分与TNF- α 水平和性别呈负相关。进一步的多因素逐步线性回归分析显示，在二手烟暴露组中，HAMD-24评分与IA评分($\beta=0.350$, $t=4.024$, $P<0.001$)、性别($\beta=-0.249$, $t=-2.846$, $P=0.005$)和IL-6水平($\beta=0.216$, $t=2.466$, $P=0.015$)独立相关。相比之下，在非二手烟暴露组中，HAMD-24总分与性别($\beta=-0.374$, $t=-22.347$, $P=0.026$)和TNF- α ($\beta=-0.356$, $t=-2.234$, $P=0.034$)独立相关。

结论 二手烟暴露在患有抑郁症的青少年中很常见，在二手烟暴露的情况下，抑郁程度与IA和炎

性细胞因子水平升高有关。研究结果表明, IA 和炎症性细胞因子可能与青少年抑郁症患者抑郁水平升高有关, 但需要进一步的纵向研究来探索抑郁症青少年患者的抑郁水平与网络成瘾和炎症细胞因子之间的因果关系。

关键词: Secondhand smoke, internet addiction, inflammatory cytokines, depressive disorders

童年性虐待对青少年抑郁症患者自杀未遂的影响: 反刍思维和抑郁的链式中介作用

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目的 探讨童年性虐待对青少年抑郁症患者自杀未遂的影响, 及反刍思维与抑郁症状是否在童年性虐待和自杀未遂关系中起到链式中介作用。

方法 采用儿童期创伤问卷(Childhood Trauma Questionnaire-short Form, CTQ-SF), 患者健康问卷抑郁量表(patient health questionnaire-9, PHQ-9)、反刍思维量表-10 简表(ruminative responses scale, RRS-10), MINI 5.0 中文版自杀模块对 796 名符合研究纳入标准的 11-18 岁单相抑郁青少年进行临床评估。应用 SPSS23.0 对数据进行描述统计、差异分析、相关和回归分析;应用 SPSS PROCESS V3.4 插件进行 Bootstrap 中介效应检验。

结果 ① 单相抑郁青少年自杀未遂发生率为 55.78%, 其中女性是男性的 1.6 倍 (OR=1.605, 95% CI: 1.169-2.204)。② 与无自杀未遂组相比, 自杀未遂组年龄更小(16 [14,17]分与 15 [14,16]分, $p < 0.001$); PHQ-9 (14 [9,19]分与 18 [12,23]分, $p < 0.001$); 反刍思维(22 [18,27]分与 24 [21,29]分, $p < 0.001$); 性虐待 (5 [5,6]分与 5 [5,7]分, $p = 0.001$) 分数均显著更高, 差异具有统计学意义。③ 回归分析显示童年性虐待 (OR=1.086, 95% CI: 1.035-1.143)、反刍思维 (OR=1.031, 95% CI: 1.005-1.057), 抑郁症状 (OR=1.041, 95% CI: 1.017-1.065)、年龄 (OR=0.852, 95% CI: 0.782-0.927) 是自杀未遂的风险因素。④ 中介效应分析结果表明, 童年性虐待既可直接影响抑郁症青少年自杀未遂行为 ($\beta = 0.083$, 95% CI: 0.033-0.132, $p = 0.001$), 又可通过反刍思维的简单中介 ($\beta = 0.007$,

95% CI: 0.001-0.017) 及反刍思维与抑郁症状的链式中介 ($\beta = 0.005$, 95% CI: 0.002-0.010) 影响自杀未遂, 总间接效应占总效应的 14.43%。

结论 童年性虐待是青少年抑郁症患者自杀未遂的重要风险因素, 童年性虐待不仅可直接增加自杀未遂的风险, 还可通过反刍思维和抑郁症状间接增加自杀未遂行为, 临床中应加强对童年性虐待和反刍思维的有效评估和干预, 降低自杀风险。

关键词: 童年性虐待; 反刍思维; 抑郁; 自杀未遂; 青少年

Prevalence and Clinical Features of The Adolescent Patients with Major Depressive Disorder Co-occurring Insomnia and Excessive Daytime Sleepiness Symptoms

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Objective This study aimed to examine the prevalence and clinical features of the adolescent patients with major depressive disorder (MDD) co-occurring insomnia and excessive daytime sleepiness (EDS) symptoms

Methods This was a cross-sectional study, which enrolled a total of 491 adolescent inpatients and outpatients who meet the criteria of MDD based on the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-V). The Insomnia Severity Index (ISI) and The Epworth Sleepiness Scale (ESS) was used to evaluate whether the participants co-occurring insomnia and EDS symptoms. The socio-demographic characteristics and clinical features were compared among the following four groups: co-occurring excessive daytime sleepiness and insomnia symptoms (INS-EDS), insomnia symptom only (INS-Only), excessive daytime sleepiness symptom only (EDS-Only) and no sleep disturbance (NS)

Results Of the 491 adolescent patients with

MDD, 61.1% had sleep disorders, among which 21.2% had INS-only, 25.1% had EDS-only, and 14.9% had INS-EDS. Trazodone use was more frequent in patients with INS-Only group compared to the EDS-Only group, while the use of other medication did not differ among the four groups. Similar to the INS-Only group, patients with both sleep disturbances had higher suicidal ideation, more severe depressive symptom and lower quality of life. Compared to the NS group, patients with co-occurring sleep disturbances were more likely to be addicted to the internet, suffer from cyber bullying and experience abnormal parental marital status

Conclusion The joint presentation of insomnia and EDS in depression were associated with more severe clinical features than depressed adolescent patients without sleep disorders. But we did not find the difference of clinical manifestations between the INS-EDS group and the INS-Only group. Further research is warranted to more fully understand the joint presentation of insomnia and EDS in depressed adolescent

关键词: insomnia, excessive daytime sleepiness, adolescent, major depressive disorder

青少年抑郁障碍患者肥胖与炎症细胞因子的关联性研究

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目的 探讨青少年抑郁障碍患者肥胖的患病特点及其与炎症细胞因子的关系。

方法 入组符合《精神疾病诊断与统计手册》第五版(DSM-5)抑郁障碍诊断标准的患者147例,根据我国青少年体质指数(BMI)分类标准,将患者分为消瘦组、正常组、超重组及肥胖组。采用流调用抑郁自评量表(CES-D)评估患者抑郁水平,以及超敏电化学发光技术(MSD)测定血浆炎症细胞因子IL-10、IL-17A、IL-1 β 、IL-6、IL-8及TNF- α 的水平。使用SPSS23.0进行统计分析,组间比较分别采用单因素方差分析或Kruskal-Wallis H检验,及 χ^2 检验。采用Spearman相关分析BMI与炎症细胞因子之间

的关系,以及多元线性回归分析青少年抑郁障碍患者伴发肥胖的影响因素。

结果 147例青少年抑郁障碍患者中,体型异常率为38.78%(57/147),其中消瘦、超重及肥胖率分别为12.24%(18/147)、16.33%(24/147)、10.20%(15/147)。四组患者在性别($\chi^2=8.582$, $P=0.032$)及炎症细胞因子IL-6($H=10.113$, $P=0.018$)和IL-8($H=9.443$, $P=0.024$)上的差异有统计学意义。多重比较结果显示:与消瘦组相比,肥胖组血浆IL-6($Z=-2.717$, $P=0.007$)和IL-8水平($Z=-2.698$, $P=0.007$)水平更高;与正常组相比,男性肥胖率高于女性($\chi^2=7.386$, $P=0.007$),肥胖组IL-6水平($Z=-2.787$, $P=0.005$)更高。Spearman相关分析结果显示: BMI与IL-6($r_s=0.256$, $P=0.002$)及IL-8($r_s=0.185$, $P=0.025$)呈正相关。多元线性回归分析显示,血浆IL-6($\beta=0.722$, $P<0.001$)及性别($\beta=2.566$, $P=0.001$)是青少年抑郁障碍患者伴发肥胖的独立影响因素。

结论 青少年抑郁障碍患者的肥胖率存在性别差异,肥胖与抑郁障碍并存会放大炎症状态。

关键词: 青少年, 抑郁障碍, 肥胖, 炎症细胞因子, 体质指数

工作记忆训练联合盐酸托莫西汀治疗学龄期ADHD效果的研究

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目的 分析工作记忆训练联合药物盐酸托莫西汀治疗学龄期ADHD患儿的效果。

方法 选取100例学龄期ADHD患儿,使用《注意缺陷多动障碍评定量表》评估其临床症状严重程度及临床亚型,使用《Conners父母评定问卷》评估其行为问题,利用数字广度、视空间记忆、Stroop色词干扰任务及N-back范式等评估其工作记忆特征。将100例患儿区组随机法分为试验组(50例,工作记忆训练联合盐酸托莫西汀治疗)和对照组(50例,盐酸托莫西汀治疗)2组。两组ADHD患儿分别进行为期8周的治疗。评估比较两组患儿临床症状及工作记忆功能改善情况。

结果 1.人口学资料的对比: 两组的性别、年龄比较无差异($P>0.05$); 2.Conners父母症状问卷结

果中两组在多动指数、多动冲动、学习问题、品行问题四个因子得分无显著差异 ($P > 0.05$); 3.在数字广度、视空间记忆、1-back 任务的正确率、Stroop 色词干扰任务等测试结果中两组未发现显著差异 ($P > 0.05$); 4.注意力缺陷、多动冲动因子分数与 N-back 正确率、Stroop 阅读总数等记忆功能因子呈负向关系。5.经过 8 周治疗, 两组患儿的《注意缺陷多动障碍评定量表》得分及数字广度、视空间记忆、1-back 任务的正确率、Stroop 色词干扰任务等得分均有显著改善 ($P < 0.01$); 且实验组工作记忆分子得分显著高于对照组 ($P < 0.05$)。

结论 1.ADHD 患儿临床核心症状严重程度与其工作记忆功能呈负相关。2.工作记忆训练联合药物盐酸托莫西汀治疗 ADHD 患儿在有效减轻临床核心症状的同时, 还能明显改善患儿的工作记忆功能。

关键词: 注意缺陷多动障碍、工作记忆功能、工作记忆训练

初中阶段注意缺陷多动障碍组织技能训练效果分析

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目的 注意缺陷多动障碍(ADHD)初中阶段患儿存在众多的功能损害, 其功能改善的需求容易受到忽视。组织技能功能损害是指个体无法做出时间安排、计划和管理自己生活的能力。ADHD 患儿的组织技能特征如何? 组织技能表现与患儿的症状、自尊水平是否存在相关性? 通过组织技能训练(下称“OST”)能否改善患儿的症状, 甚至改善个体的自尊水平? 组织技能的训练是否在初中阶段 ADHD 患儿中可行? 是一系列值得探索的问题。

方法 由上海市精神卫生中心儿少科组织, 以上海市浦东新区青少年发展中心(下称“区中心”)的主要合作方, 在 2021 年 2 月到 2023 年 12 月期间, 由区中心通过学校心理系统向区内初中阶段在校学

生公开招募未服药的 ADHD 患儿。由家长及学生知情同意后, 由医生确认 ADHD 的诊断。对符合入组标准的患儿开展组织技能训练, 每周一次, 每次 1 个小时, 分为家长组和青少年组, 由医生及心理老师为治疗师, 两组同时进行, 共 10 次, 干预内容参考《注意缺陷多动障碍儿童组织技能训练》, 并加以初中阶段的改编。在干预前、后分别采用注意缺陷多动障碍诊断量表、自我意识量表和执行功能评定量表(BRIEF)进行评定, 并进行自身前后 t 检验。

结果 共 21 名青少年 ADHD 患儿入组, 其中 18 人完整完成 OST 训练, 其中, 男生 17 人, 女生 4 人, 平均年龄为 11.87 ± 0.74 岁。注意缺陷症状与组织材料($r=0.769, P=0.006$)、监督($r=0.742, P=0.009$)相关, 多动与监督($r=0.627, P=0.039$)。ADHD 青少年在干预前后的 ADHD-DS 得分、BRIEF 得分均有所下降, 其中, Brief 量表的组织材料得分有下降趋势($t=2.039, P=0.088$); 自我意识的焦虑水平($t=3.530, P=0.005$)、合群性($t=2.264, P=0.045$)和幸福满足感($t=2.755, P=0.019$)显著改善。

结论 针对低年龄初中阶段注意缺陷多动障碍患儿仍有进行组织技能训练的需要, 组织技能训练能部分改善功能表现, 提高自尊水平。

关键词: 初中阶段, 注意缺陷多动障碍, 组织技能, 功能训练

Prediction of Early Treatment Response To Depressive Symptoms in Adolescents with Mood Disorders: The Role of Heart Rate Variability and Amygdala Functional Connectivity

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Objective Heart rate variability (HRV) is considered a transdiagnostic biomarker for mental disorders and can predict the response of mood disorder patients to antidepressant medication, psychotherapy, and physical therapy. The amygdala is a key region strongly associated with HRV functional connectivity and is closely linked to the pathophysiology and clinical

symptoms of mood disorders. This study explores amygdala functional connectivity (FC) as an early marker for identifying treatment response and elucidates the imaging mechanism by which HRV predicts antidepressant efficacy

Methods The study recruited 66 adolescents with mood disorders experiencing major depressive episodes. All participants underwent baseline treatment and resting-state MRI scans. The Hamilton Depression Rating Scale (HAMD) was used to assess the severity of mood symptoms and early treatment response at baseline and after two weeks. Patients were divided into treatment response (HAMD remission rate $\geq 50\%$, $n=33$) and non-response subgroups ($n=33$). Baseline differences in amygdala FC between subgroups were compared, and the correlation between resting-state HRV and early treatment response was analyzed

Results At baseline, the non-response group exhibited higher FC between the right amygdala and right postcentral gyrus compared to the response group. FC values were significantly negatively correlated with HAMD remission rates ($r=-0.499$, $P<0.001$), indicating that higher right amygdala and postcentral gyrus FC predicted poorer treatment response. Additionally, FC was correlated with HRV high-frequency component (HF-HRV) ($r=0.332$, $P=0.006$), and HF-HRV was correlated with HAMD remission rates ($r=-0.387$, $P=0.001$)

Conclusion The FC values between the right amygdala and postcentral gyrus are related to treatment outcomes and resting HRV (HF-HRV), potentially explaining the mechanism by which HRV serves as a biomarker for predicting treatment efficacy. Limitations include a relatively small sample size, which may restrict the generalizability of the results, and the lack of healthy controls. Our study suggests that FC between the amygdala and cortex is related not only to HRV but also to treatment response, positioning HRV as a biomarker for predicting individual variability in treatment response

关键词: Heart Rate Variability, Amygdala, Functional Connectivity, Antidepressant Efficacy, Mood Disorders, Adolescents

Association of Pain Intensity and Sensitivity with Childhood Trauma in Adolescents with Depressive Disorder

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Objective This study aims to further investigate the association of pain intensity and sensitivity with childhood trauma in adolescents with depressive disorder by exploring the differences in pain intensity and sensitivity between adolescents with depressive disorder with and without childhood trauma

Methods A consecutive enrolment method was used to select 200 adolescent patients with depressive disorders from three hospitals in Anhui Province as subjects, and the subjects were assessed for suicidal ideation using the Childhood Trauma Questionnaire (CTQ). The intensity of somatic pain was assessed using the Numerical Rating Scale-11 (NRS-11). Subjects were assessed for forearm and tibial pain sensitivity using a hand-held pressure pain instrument, and experimental pain sensitivity measures included pressure pain threshold (PPT) and pressure pain tolerance (PTO). Differences in pain intensity and pain sensitivity were compared between adolescents with depressive disorders with and without childhood trauma, and the relationship between pain intensity and sensitivity and childhood trauma was analysed

Results It was found that pain intensity was significantly higher in patients with childhood trauma (4.15 ± 2.42) than in those without childhood trauma (3.15 ± 2.26) ($p=0.032$). Subjects with high CTQ total scores, emotional abuse (EA) scores, physical abuse (PA) scores, emotional neglect (EN) scores, and physical neglect (PN) scores had a higher pain intensity grading. Patients with sexual abuse (SA) and emotional neglect had higher pain tolerance, i.e., subjects with childhood trauma had lower pain sensitivity. Spearman's correlation analysis and generalised linear regression analyses showed that patients who suffered more severe sexual abuse and those with emotional neglect had greater

pain tolerance; patients who suffered more severe childhood trauma had greater pain intensity; HAM-D total score was strongly associated with pain intensity and The HAM-D total score was closely related to pain intensity and sensitivity, with the more severe the depressive symptoms, the higher the pain intensity and the lower the pain sensitivity. Ordered multiclassification logistic regression analysis showed that the HAMD total score and childhood trauma total score had a statistically significant positive impact on pain intensity

Conclusion Pain intensity was higher in patients with childhood trauma than in patients without childhood trauma. Childhood trauma and severity of depressive symptoms were closely associated with decreased pain sensitivity and increased pain intensity, respectively, in patients with adolescent depressive disorders. In clinical practice, psychiatrists should pay attention to the childhood trauma and pain status of patients with adolescent depressive disorders, and early screening of pain symptoms in patients with adolescent depressive disorders is of clinical significance

关键词: Adolescents, Depressive disorder, Pain intensity, Pain sensitivity, Childhood trauma

ADHD 儿童跨期选择中的决策行为特征及其与核心症状的关系

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目的 跨期选择是个体在价值小但更快获得的奖励和价值大但更慢获得的奖励间进行选择。跨期选择偏好与远期生活质量有关,探究 ADHD 儿童跨期选择中的决策行为特征有助于理解 ADHD 儿童的决策能力,提供新的临床干预视角以促进患者的个人发展。本研究旨在研究 ADHD 儿童跨期选择中的决策行为特征及跨期选择与 ADHD 核心症状的关系。

方法 研究共纳入 145 名被试,包括 73 名 ADHD 儿童和 72 名年龄、智商匹配的正常对照(TD)儿童。使用 ADHD 症状评定量表评估 ADHD 核心症状得分(包括注意缺陷得分、多动冲动得分、核心

症状总分),使用两种选择冲动范式(Two Choice Impulsivity Paradigm, TCIP)评估跨期选择行为。比较 TCIP 中两组间方形选择数、反应时间的差异;采用线性回归模型分析 TCIP 中两组内的方形选择数比例与选择轮次的关系;采用分层漂移扩散模型比较 TCIP 中两组间漂移率、决策阈值及非决策时间的差异;最后分析方形选择数与 ADHD 核心症状得分的相关性。

结果 ADHD 组的方形选择数小于 TD 组[方形选择数中位数(Q1, Q3): 26.0(9.0, 44.5) vs. 39.0(29.0, 48.0), $P < 0.001$];两组内的方形选择数比例随选择轮次的增加而减少[ADHD 组斜率(95%置信区间): -0.0044(-0.0051, -0.0036), TD 组斜率(95%置信区间): -0.0016(-0.0027, -0.0004)];两组间的反应时间无显著性差异($Z = -1.064$, $P = 0.287$)。ADHD 组的漂移率[(0.07±0.02) vs. (0.42±0.02), $P < 0.001$]和决策阈值[(2.77±0.03) vs. (3.00±0.03), $P < 0.001$]小于 TD 组、非决策时间[(0.73±0.01) vs. (0.69±0.01), $P = 0.031$]大于 TD 组。方形选择数与 ADHD 注意缺陷得分($r = -0.22$, $P = 0.008$)及核心症状总分($r = -0.20$, $P = 0.017$)呈负相关。

结论 ADHD 儿童在跨期选择中偏好于更快获得小额奖励,即时选择偏好可能与厌恶等待有关。ADHD 儿童在跨期选择的决策中表现出更慢的决策证据积累速度、更冲动的决策风格及更长的非决策时间。TCIP 任务中的即时偏好可能与注意缺陷症状有关。

关键词: ADHD 儿童, 跨期选择, 延迟厌恶, 漂移扩散模型

系统式执行技能训练对 ADHD 儿童情绪问题的疗效研究

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目的 探究系统式执行技能训练对 ADHD 儿童情绪问题的疗效。

方法 本研究是一项对照研究,选取 2021 年至 2023 年就诊于吉林大学第一医院发育行为儿科的 6-12 岁的 ADHD 儿童为研究对象。符合入组标准的儿童家长均接受 ADHD 家长宣教。在对系统式执行技

能训练详细说明后,儿童家长按照自愿原则,选择是否同时接受系统式执行技能训练。根据自愿原则分为试验组和对照组。试验组参加家长宣教和系统式执行技能训练(包含儿童团体训练和家长培训)。对照组仅参加家长宣教,自然发育12周。家长宣教为线下单次3h集中宣教。系统式执行技能训练的儿童团体训练共8次课程,每次课程90分钟,每周一次;系统式执行技能训练的家长培训共6次课程,每次课程3.5小时,每周一次。两组儿童均在基线和3个月后进行评估。采用Achenbach儿童行为量表(Achenbach Child Behavior Checklist, CBCL)、长处和困难问卷(Strengths and Difficulties Questionnaire, SDQ)父母版及教师版评估两组ADHD儿童的情绪问题。采用SPSS 23.0进行数据分析。两组基线特征比较采用两独立样本t检验、非参数秩和检验和卡方检验。干预前后组内及干预前后差值比较采用两配对样本秩和检验和非参数秩和检验。

结果 CBCL量表中分裂焦虑和抑郁因子和SDQ父母版和教师版的情绪问题因子在治疗3个月后,试验组比对照组有更为显著的改善($P<0.05$)。

结论 系统式执行技能训练能有效改善ADHD儿童焦虑、抑郁等情绪问题。

关键词: 系统式执行技能训练,注意缺陷多动障碍,焦虑,抑郁

静息态功能磁共振全脑低频振荡振幅预测青少年抑郁症的机器学习分析

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目的 基于静息态功能磁共振全脑低频振荡振幅(amplitude of flow-frequency fluctuation, ALFF)使用机器学习分析技术预测青少年抑郁症研究。

方法 收集符合DSM-IV抑郁症诊断标准的76名青少年患者作为病例组,同时收集年龄、性别相匹配的44名健康被试作为对照组,两组被试均接受3.0T磁共振仪扫描,应用软件DPABI对获取到的大脑结构像与血氧水平依赖成像的静息态功能像数据进行处理,分析两组被试大脑静息态低频段(0.01-0.1Hz)的功能活动情况,采用置换检验(permuta-

tion test)与无阈值簇群增强(threshold-free cluster enhancement, TFCE)校正方法进行统计分析。应用软件PRoNTo以全脑zALFF作为机器学习样本对青少年抑郁症患者与健康被试进行分类预测。

结果 与健康组相比,抑郁组大脑右侧颞上回、右侧颞极颞上回、右侧枕中回等zALFF增高;双侧岛叶、右侧中央沟盖等zALFF降低;分类样本预测结果显示,全脑zALFF预测青少年抑郁症准确率68.42%,灵敏度86.84%,特异度50.00%。

结论 青少年抑郁症患者相比于健康被试大脑功能活动有明显异常,并且全脑zALFF在预测青少年抑郁症中具有一定价值。

关键词: 静息态功能磁共振,全脑低频振荡振幅,青少年抑郁症,机器学习

ADHD儿童视觉感知功能缺陷的事件相关电位评估

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目的 视觉感知功能缺陷在注意缺陷多动障碍(attention deficit hyperactivity disorder, ADHD)中经常出现,如ADHD在阅读上常表现出漏字、串行,在书写上常出现左右颠倒的现象。已有研究对精神分裂症和孤独症谱系障碍的视觉感知功能缺陷的神经机制进行探索,但目前尚缺少对于ADHD视觉感知功能缺陷的神经机制的研究。因此,本研究的目的是初步探索ADHD儿童视觉感知过程的异常神经电生理特点。

方法 本研究分别纳入性别、年龄和总智商相匹配的29名ADHD儿童(年龄范围:90~166月)和25名健康对照儿童(年龄范围:76~151月)进行分析。采用128导的EGI脑电设备收集所有被试完成轮廓整合任务的脑电数据。被试在任务过程中,

需要对由 Gabor 要素构成的似“鸡蛋形”轮廓的尖端朝向做出判断。

结果 与健康对照儿童相比, ADHD 儿童在正确率、反应时方面没有显著差异, 但反应时较长。脑电的分析结果显示, 在中等难度轮廓整合任务时, ADHD 儿童在右侧枕顶区的 P1 和 Nc1 的振幅显著小于健康对照儿童。在高难度轮廓整合任务时, ADHD 儿童在右侧枕顶区的 P1 的振幅显著小于健康对照儿童。

结论 本研究发现 ADHD 儿童 P1 和 Nc1 的振幅较低, 而 P1 和 Nc1 分别是与感觉和知觉组织有关的脑电生理成分。这些结果表明 ADHD 儿童的视觉感知功能缺陷在加工早期和晚期均可能存在, 为我们理解其视觉感知过程提供更深的见解。

关键词: 注意缺陷多动障碍, 视觉感知, 轮廓整合, 神经电生理, 事件相关电位, 初级视觉皮层

关于青少年非自杀性自伤行为表露动机的质性研究

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目的 深入了解青少年是否主动向他人表露非自杀性自伤行为 (Non-suicidal self-injury behavior, NSSI) 及其动机, 为临床心理工作者制定针对性心理干预措施提供指导。

方法 采用目的抽样法, 于 2023 年 11 月至 2024 年 3 月收集 21 例伴有 NSSI 的青少年并进行半结构化深入访谈, 访谈提纲主要包括基本信息、是否主动向他人表露 NSSI 及其动机等, 采用诠释现象学分析法分析转录资料, 采用 Colaizzi 7 步分析法归纳并提炼主题。

结果 1. 其中 8 人主动向他人表露 NSSI, 13 人不主动向他人表露 NSSI。2. 进一步关于 NSSI 行为表露动机的质性分析发现, 青少年是否主动向他人表露 NSSI 的动机主要源于两方面, 即社会人际动机和个体认知动机。首先, 不主动向他人表露 NSSI 的社会人际动机主要有被污名化、人际关系的消极影响和消极反馈, 个体认知动机主要有羞耻感和对 NSSI 的态度。其次, 主动向他人表露 NSSI 的社会

人际动机主要有积极反馈和群体认同, 个体认知动机主要有寻求帮助和情感支持、宣泄压力和抑制 NSSI 冲动。

结论 青少年主动向他人表露或不表露 NSSI 的动机主要包括社会人际和个体认知两方面, 理解青少年 NSSI 行为的相关表露动机有助于临床心理工作者制定和优化心理干预策略。未来的研究可以进一步探索 NSSI 行为动机表露与 NSSI 行为严重性、心理干预效果、总体预后等方面的关联, 以此指导临床实践。

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关键词: 非自杀性自伤行为; 表露动机; 青少年; 质性研究

Dynamic Functional Connectivity Patterns Predict Early Pharmacological Treatment Response in Drug-naïve, First-Episode Adolescent MDD

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Objective We have found adolescents with major depressive disorder (MDD) have abnormal brain dynamic functional connectivity (dFC) patterns. The aim of this study is to investigate whether dFC patterns will be changed by antidepressant treatment, as well as whether baseline dFC pattern could predict treatment response in MDD adolescents

Methods We included 35 drug-naïve, first-episode MDD adolescents (age 14.40 ± 1.24) and 24 healthy controls (age 14.21 ± 1.41). All MDD adolescents received 6 weeks of pharmacotherapy (agomelatine, sertraline, escitalopram or venlafaxine, with or without antipsychotics, sedative-hypnotics or anxiolytics). Independent component analysis was used to compare dFC

pattern between MDD adolescents and HC at baseline, as well as between pre- and post- treatment in MDD adolescents. Finally, Pearson's correlation and logistic regression were used to explore the associations between average dynamic functional connectivity values and treatment response

Results Inhibitory control network, sensory-motor network and frontoparietal network were found to exist different dFC pattern between pre- and post- treatment. Mean dFC values between inferior frontal gyrus and bilateral insular cortex were found to be related with treatment response and could serve as predictors

Conclusion These findings demonstrate that brain dFC patterns maybe a prospective factor to predict antidepressant treatment response

关键词: adolescent MDD, dynamic functional connectivity, pharmacotherapy, treatment response, MRI

Interaction of ABC Family Gene Polymorphisms with Slower Processing Speed Contributes To Greater Depression Severity.

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Objective The ABC family genes, which encode ATP-binding cassette proteins, which is involved in the transport of various substances, is associated with major depression disorder (MDD); but its clinical relevance in MDD remains unknown. Therefore, the aim of this study was to investigate whether ABC family genes are associated with cognitive functions in patients with MDD, and the combined effects of genes and cognitive functions on the severity of depression

Methods We investigated the association of variants of ABC family genes with clinical symptoms and cognitive function in Chinese patients with MDD (n = 805, 12-65 years) and age-matched healthy control subjects (n = 1493) using linear models or logistic re-

gression models. Seven single nucleotide polymorphisms (SNP) (rs28401781, rs4148739, rs3747802, rs1109866, rs1109867, rs3731885 and rs3755047) of ABCB1 and ABCB6 were selected. The participants' cognitive functions were assessed using the Wisconsin Card Sorting Test, the Tower of Hanoi test, the Trail Making Test and the Verbal Fluency Test, and the severity of depression was assessed by the Hamilton Depression Rating Scale (HAMD)

Results The allele frequencies and genotype frequencies of rs1109866 and rs1109867 were significantly different between MDD patients and healthy controls ($p < 0.05$). In MDD patients, rs28401781 ($t = 2.781$, $p = 0.006$, $p_{adj} = 0.042$) and rs4148739 ($t = 3.067$, $p = 0.003$, $p_{adj} = 0.021$) were significantly associated with executive function. And we found that both rs1109866 and rs1109867 interacted with poorer processing speed to cause greater depression severity

Conclusion These results suggested that ABC family genes affected the severity of depression through cognitive functions. This provides possible evidence for the different clinical manifestations of MDD patients

关键词: Major depressive disorder (MDD); Severity; Genetic; Cognitive functions; Processing speed

Efficacy of TDCS in The Cognitive Function Treatment for Patients with Major Depressive Disorder: A Systematic Review and Meta-analysis

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Objective Transcranial direct current stimulation (tDCS) has demonstrated as a promising treatment for depression. However, it remains to be determined whether a tDCS treatment course may also enhance cognitive function in depressed patients. We aimed to examine the most updated evidence on the efficacy of tDCS in anti-depressive treatment and its impact on cognitive function (INPLASY registration number:

INPLASY202360008).

Methods A systematic review was performed from the first date available in PubMed, EMBASE, Cochrane Library, and additional sources published in English from 1 January 2001 to 31 May 2023. We examined cognitive outcomes from randomised, sham-controlled trials of tDCS treatment for major depression. The evaluation process strictly followed the Cochrane bias risk assessment tool into the literature, and meta-analysis was performed according to the Cochrane System Reviewer's Manual

Results We included a total of 371 patients from 12 studies in this quantitative synthesis. Results showed significant benefits after active tDCS compared to sham for the antidepressant effect (MD -2.18 [-3.65, -0.72]). Active relative to sham tDCS treatment was associated with increased performance gains on a measure of verbal memory (MD 3.55 [-0.08, 7.18]). Results showed no cognitive enhancement after active tDCS compared to sham for the global cognitive function as well as dimension-specific cognitive measures

Conclusion Our study provides an important evidence-based medical support for tDCS in antidepressant and dimension-specific cognitive benefits. Further well-designed, large-scale randomized sham-controlled trials are warranted

关键词: Transcranial direct current stimulation, treatment, depression, cognition

伴非自杀性自伤行为青少年抑郁障碍自尊及父母教养方式的对照研究

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目的 比较伴或不伴非自杀性自伤 (NSSI) 行为的抑郁障碍青少年自尊水平及父母教养方式的差异, 为进一步探索此类青少年心理机制和干预导向提供临床参考。

方法 将我院儿少精神科住院的首发青少年抑郁障碍患者作为研究对象, 共纳入 117 例, 根据有无 NSSI 分为研究组 (伴 NSSI) 51 例和对照组 (不

伴 NSSI) 66 例, 两组治疗前均进行汉密尔顿抑郁量表 (HAMD-17)、抑郁自评量表 (SDS), 临床疗效总评量表病情严重程度 (CGI-SI)、自尊量表 (SES)、父母教养方式问卷中文版 (PBI) 的评定, 比较两组间的差异。同时对研究组内自尊量表及父母教养方式问卷进行相关性分析。

结果 两组在 HAMD-17、SDS、CGI-SI 评分差异无统计学显著性 ($P > 0.05$)。研究组 SES 评分低于对照组 ($P < 0.05$), 研究组在父亲教养方式总分、父亲关爱因子分、父亲控制因子分均高于对照组 ($P < 0.05$), 研究组内母亲关爱因子分与 SES 呈正相关 ($P < 0.05$), SES 会随着母亲关爱因子分的升高而升高。

结论 伴 NSSI 的抑郁障碍青少年可能具有低自尊的特点, 其父亲教养方式特点为高关爱、高控制, 其自尊水平会随着母亲的关爱程度而提高。改善父母教养方式可能会有效地预防和减少抑郁障碍青少年中 NSSI 的发生。

关键词: 青少年抑郁障碍, 非自杀性自伤, 自尊, 教养方式

Clarifying ADHD and Sluggish Cognitive Tempo Item Relations: A Network Analysis of ADHD and SCT Items Across Different Demographic Groups Among Chinese Children

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Objective This study aims to elucidate the network structure of Attention Deficit Hyperactivity Disorder (ADHD) and Sluggish Cognitive Tempo (SCT) symptoms among Chinese children aged 6 to 16. Additionally, it seeks to explore differences in ADHD and SCT networks across gender and age groups, and to compare the ADHD syndrome networks between participants with ADHD and those with SCT

Methods This study analysed secondary data from a large national survey of 72,107 Chinese children aged 6 to 16, whereby ADHD and SCT symptoms were assessed using the Child Behavior Checklist (CBCL).

Network analysis was performed to examine the relationships among ADHD and SCT items. Network communities were identified using Exploratory Graphical Analysis and network comparison tests were conducted to identify differences across gender and age groups, as well as between ADHD and SCT cohorts

Results The analysis identified distinct yet overlapping networks for ADHD and SCT symptoms. Three primary dimensions emerged: attention/task completion, hyperactivity/impulsivity, and SCT-specific symptoms. Gender differences were marginal, with males exhibiting slightly higher network connectivity. Significant age-related variations were found, with younger children showing more interconnected networks. Moreover, the ADHD syndrome network in SCT participants exhibited higher density and connectivity compared to ADHD patients, with differences in centrality measures indicating distinct focal symptoms in each group

Conclusion The findings supported the conceptual distinction between ADHD and SCT while acknowledging their overlapping symptoms. Furthermore, network structure of ADHD and SCT were different across gender and age groups, underscoring the need for tailored diagnostic and intervention strategies. Finally, the distinct network patterns in ADHD network of ADHD and SCT cohorts advocated for a nuanced approach in clinical practice. The current study provided insights for researchers and clinicians on the assessment and intervention for ADHD and SCT, and called for more longitudinal studies with clinical population sample to elucidate the network structure of ADHD and SCT across different demographics

关键词: Attention Deficit Hyperactivity Disorder (ADHD); Sluggish Cognitive Tempo (SCT); Network Analysis; different demographics; Chinese Children

伴非自杀性自伤行为青少年抑郁障碍的行为问题和自我意识特点

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目的 探讨伴非自杀性自伤行为 (NSSI) 的青少年抑郁障碍患者的行为问题和自我意识水平的特点。

方法 参照 DSM-5 的诊断标准, 选取 2023 年 9 月到 2024 年 3 月苏州市广济医院门诊和住院的诊断抑郁障碍的青少年 (12-17 岁) 作为研究对象, 共入组 218 例患者, 根据是否伴有非自杀性自伤行为分为观察组 (伴 NSSI) 97 例和对照组 (不伴 NSSI) 121 例。所有入组患者由家长或直接监护人填写儿童行为量表 (Achenbach Child Behavior Checklist, CBCL), 患者自己填写儿童自我意识量表 (children's self-concept scale, CSCS)。

结果 伴有 NSSI 的行为问题评分显著大于对照组, 如行为问题总分 (31.44 ± 23.15) vs. (19.97 ± 15.56), $P < 0.01$, 而儿童自我意识量表评分显著小于对照组, 如总分 (48.89 ± 9.76) vs. (58.22 ± 10.20), $P < 0.05$ 。

结论 伴非自杀性自伤行为与不伴有非自杀性自伤行为的青少年抑郁障碍患者相比, 其行为问题更多, 且自我意识差。这可能为非自杀性自伤行为的干预研究找到更多的突破, 对于同样患有抑郁障碍的青少年, 较低自我意识和较高的行为问题, 可能成为其非自杀性自伤行为频繁发生的重要影响因素, 因此对于此类患者的治疗干预中, 通过积极地改善行为问题, 提高自我意识水平, 可能会有效地减轻或减少非自杀性自伤行为的发生。

关键词: 青少年抑郁障碍, 非自杀性自伤行为, 行为问题, 自我意识

基于 Minecraft 游戏的 ADHD 儿童识别方法研究

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目的 本研究旨在利用 Minecraft (《我的世界》) 游戏, 通过游戏任务探讨注意力缺陷多动障碍 (ADHD) 儿童和正常儿童在认知和行为方面的差异, 为早期诊断和干预提供参考。

方法 招募 30 名 ADHD 儿童和 30 名正常儿童作为对照组, 设计自由探索和构建任务, 要求参与者在游戏中进行不限时自由探索, 待熟悉后, 完成

一个建造房屋的任务。包括获取材料、设计房屋结构、放置家具等步骤。使用 Epilog 等游戏插件收集参与者在游戏中的可视化移动数据, 通过后台日志记录其他游戏行为数据, 如材料种类和数量、建造速度、完成度等。同时, 通过屏幕录制记录其他行为信息, 如儿童往返找材料的频次、建造房屋的顺序、复杂程度等。在游戏结束后, 对参与者进行心理评估, 包括社交互动、注意力集中等方面。

结果 ADHD 儿童倾向于按照固定顺序建造房屋, 而正常儿童更加灵活。ADHD 儿童的建筑物可能更加模式化和简单, 而正常儿童的建筑物可能更具创意和复杂性。ADHD 儿童在游戏中使用的工具更加单一, 而正常儿童更多样化。

结论 通过 Minecraft 游戏设计的任务, 我们发现 ADHD 儿童在游戏中的行为和认知表现存在一些特征, 例如固定化的行为模式、建造物的简单性等。这些特征可作为识别 ADHD 儿童的线索之一。为利用虚拟环境进行 ADHD 儿童研究和早期干预, 维护身心健康提供了新的思路和方法。

关键词: 游戏, ADHD, 识别, 干预

早发精神分裂症的血清学指标与临床症状的相关性研究

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目的 早发精神分裂症是一种罕见的、严重的慢性精神病。近期研究显示代谢紊乱与精神分裂症的发病密切相关, 本研究将通过临床常规血清学指标, 分析早发精神分裂症患者机体代谢状态和变化与临床症状的相关性。

方法 在深圳康宁医院儿少精神科住院部招募符合精神障碍诊断与统计手册(第五版)精神分裂症谱系和其他精神病性障碍的早发精神分裂症患者共 84 例, 收集一般资料, 使用学龄儿童情感障碍和精神分裂症问卷、阳性和阴性症状量表、个人和社会功能量表评估早发精神分裂症患者的共病情况、临床症状及社会功能。入院第 2 日清晨完成糖脂代谢、炎症因子、神经损伤相关指标的检测, 包括空腹血糖、血脂、甲状腺激素、超敏 C 反应蛋白、神经烯醇化酶等。分析患者临床症状、社会功能与血

清学指标的相关性。

结果 阳性和阴性症状量表总分与空腹血糖($r=0.297, P<0.01$)、游离甲状腺素正相关($r=0.237, P<0.05$), 与神经烯醇化酶负相关($r=-0.237, P<0.05$); 阴性症状因子分与神经烯醇化酶负相关($r=-0.260, P<0.05$); 认知损害因子分与空腹血糖正相关($r=0.286, P<0.05$); 阳性症状因子分与超敏 C 反应蛋白正相关($r=0.256, P<0.05$); 兴奋敌对因子分与甘油三酯负相关($r=-0.257, P<0.05$); 抑郁焦虑因子分与 S-100 b 蛋白负相关($r=-0.241, P<0.05$)。个人与社会功能量表评分与空腹血糖负相关($r=-0.254, P<0.05$), 与神经烯醇化酶正相关($r=0.378, P<0.05$)。

结论 早发精神分裂症患者的空腹血糖、甘油三酯、超敏 C 反应蛋白、神经烯醇化酶及 S-100 b 蛋白与临床症状严重程度及社会功能受损相关。初步表明糖脂代谢、神经损伤可能参与早发精神分裂症的发病机制。

关键词: 早发, 精神分裂症, 代谢, 临床症状

217 例儿童青少年抑郁障碍患者住院资料调查分析

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目的 调查苏州市广济医院儿少精神科住院部儿童青少年抑郁障碍患者临床特征、症状分布以及治疗方案中的药物选择。

方法 1.对象: 对 2021 年 1 月-2022 年 12 月在苏州市广济医院住院部住院治疗, 诊断为抑郁障碍的儿童青少年患者一般情况及出院时的诊断分类、药物使用情况进行回顾性分析。

结果 ①共纳入 217 例患者, 其中男性患者 51 例(23.5%), 女性患者 166 例(76.5%), 起病年龄的高峰期在 14 岁(25.81%), 其中首发 167 例, 复发 50 例。②出现频率居前 3 位的临床症状依次是情绪低落(90.78%)、兴趣、乐趣减退(76.96%), 悲观消极(62.21), 60.37%的儿童青少年抑郁障碍患者曾经出现自伤行为, 自伤方式多为划伤皮肤(90.84%), 23.5%的儿童青少年抑郁障碍患者曾经出现自杀行为。③217 例患者中抗抑郁药物使用排

名前3位依次为舍曲林 88 例 (40.55%), 氟西汀 64 例 (29.49%), 草酸艾司西酞普兰 26 例 (11.98%); 抗精神病药物使用排名前 3 位依次为奥氮平 77 例 (35.48%), 奎硫平 72 例 (33.18%), 阿立哌唑 65 例 (29.95%); 情感稳定剂使用情况, 未使用 131 例 (60.37%), 碳酸锂缓释片 31 例 (14.29%), 丙戊酸镁缓释片 31 例 (14.29%); 无抽搐电休克治疗情况, 共有 39 例 (17.97%) 联合 MECT 治疗。

结论 儿童青少年抑郁障碍伴随着高自杀率、高自伤率等特征, 应受到重视, 做到早发现早治疗。新型非典型抗精神病药和抗抑郁药为儿童青少年抑郁障碍的主要治疗药物, 治疗方案以联合药物治疗为主。

关键词: 儿童青少年, 抑郁障碍, 临床特征, 药物治疗

儿童青少年强迫障碍 100 例病历的临床分析

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目的 强迫性障碍 (Obsessive-Compulsive Disorder, OCD) 是一种常见的慢性精神障碍, 影响着儿童和青少年的日常生活和心理健康。早期识别和干预对改善预后至关重要。本研究旨在探讨儿童青少年强迫性障碍的临床特征、诊断难点以及治疗响应, 以期为临床实践提供指导。

方法 采用横断面研究设计, 选取了 100 名年龄在 8 至 18 岁之间的 OCD 患者。通过临床访谈、心理评估量表和行为观察, 收集了患者的基本信息、症状严重程度、治疗历史等数据。利用耶鲁布朗症状清单 (Y-BOCS CL) 收集患者临床症状并利用耶鲁布朗强迫量表 (Y-BOCS) 进行症状严重程度评定; t 检验、卡方检验及 Wilcoxon 秩和检验对数据进行统计分析。

结果 儿童青少年 OCD 患者的主要症状包括强迫思维和行为。本组男性儿童青少年患者发病年龄 ((12.1±3.7) 岁) 小于女性儿童青少年患者 ((15.1±2.4) 岁) ($P<0.05$); 强迫症状女性以强迫回忆和强迫洗涤多见 ($P<0.05$); Y-BOCS 强迫思维分量表中强迫思维所致影响项目的得分男性 (2.6±1.2) 大于女性 (1.8±1.3) ($P<0.05$)。大多数患者对认知行为治疗

(CBT) 有良好的响应, 但治疗依从性存在问题。

结论 本研究揭示了儿童青少年 OCD 的临床特点, 在发病年龄, 强迫症状以及症状表现形式存在性别差异。认知行为治疗是有效的治疗手段, 但需要解决治疗依从性问题。

关键词: 儿童青少年, 强迫障碍, 性别, 治疗, 依从性

青少年抑郁障碍患者非自杀性自伤行为与压力感知及应对方式的相关性研究

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苏州市广济医院

目的 分析青少年抑郁障碍患者非自杀性自伤 (NSSI) 行为的发生与其压力感知及应对方式的相关性。

方法 研究纳入 2021 年 10 月至 2023 年 5 月住院的 275 例抑郁障碍患儿, 根据是否有 NSSI 行为分为研究组 (伴 NSSI 行为, 219 例) 及对照组 (不伴 NSSI 行为, 56 例)。采用压力觉知量表 (PSS) 和中学生应对方式量表 (CSSMSS) 评估患者的觉知压力和应对方式; 采用独立样本 t 检验比较两组评分的差异, Spearman 相关性分析研究 NSSI 行为与青少年压力感知及应对方式的相关性。

结果 研究组 PSS 评分 (31.47±4.92) 与对照组 PSS 评分 (29.32±4.79) 差异具有统计学意义 ($t=2.93$, $P<0.01$); 研究组 CSSMSS 评分问题解决维度 (15.82±4.63)、寻求社会支持维度 (15.92±4.46)、积极合理化解解释维度 (10.36±3.17) 评分显著低于对照组 (18.5±5.42)、(17.37±4.42)、(12.61±3.55), 差异具有统计学意义 ($t=-3.31\sim-2.17$, $P<0.01$); 逃避 (10.38±2.48)、幻想否认 (13.60±3.69) 评分显著高于对照组 (9.36±2.94)、(12.30±3.72), 差异均有显著意义 ($t=2.34\sim2.65$, $P<0.05$)。研究组忍耐维度 (11.11±2.45)、发泄情绪维度 (10.45±2.95) 评分与对照组 (11.00±2.75)、(9.96±3.24) 差异无统计学意义 ($P>0.05$)。相关性分析结果显示, NSSI 行为的发生与 PSS 评分 ($r=0.17$, $P<0.01$) 呈正相关, 与逃避 ($r=0.14$, $P=0.03$)、幻想否认 ($r=0.13$, $P=0.03$) 呈正相关, 与解决问题 ($r=-0.20$, $P<0.01$)、寻求社会支持 ($r=-0.12$, $P=0.04$)、合理化解解释评分 ($r=0.25$,

$P < 0.01$) 呈负相关。PSS 总分与 CSSMSS 量表积极合理化解释 ($r = -0.15, P = 0.02$) 呈负相关, 与忍耐 ($r = 0.39, P < 0.01$)、逃避 ($r = 0.38, P < 0.01$)、发泄情绪 ($r = 0.43, P < 0.01$)、幻想否认 ($r = 0.45, P < 0.01$) 呈正相关。

结论 青少年抑郁障碍 NSSI 行为的发生与患者高压力觉知及消极应对方式相关, 且高压力觉知也与消极应对方式呈正相关, 与积极应对方式呈负相关。

关键词: 非自杀性自伤, 青少年抑郁障碍, 压力觉知, 应对方式

精神分裂症患者及其一级亲属注意维持功能受损的相关研究

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目的 通过比较精神分裂症患者组 (研究组)、精神分裂症患者一级亲属 (亲属组) 和健康对照组 (对照组) 事件相关电位 (ERP) 关联性负变 (CNV) 脑电行为学数据、认知功能测验相关评分的不同, 探讨精神分裂症患者及其一级亲属注意维持能力损害程度。

方法 纳入满足 ERP 实验入组标准的精神分裂症患者 31 名作为研究组, 纳入 31 名患者中无精神疾病的一级亲属 15 名作为亲属组, 同时收集与研究组年龄、受教育年限等一般资料相符的健康志愿者 30 名作为对照组。对研究组、亲属组和对照组进行基于点阵图预期 (DPX) 任务诱发 CNV 波, 记录此时行为学数据 (DPX 任务错误率) 结果; 采用 MATRICS 公认认知成套测验 (MCCB) 中反应认知功能的持续操作测验 (CPT-IP) 评估注意维持功能; 将所得数据录入最终数据库, 并采用 SPSS23.0 进行统计学处理和分析。

结果 1. 三组 DPX 任务错误率比较, 三组之间 EAX、EAY、EBX 之间有差异, $P < 0.05$ 。研究组 EAX、EAY、EBX 得分均高于对照组, 差异有统计学意义, $P < 0.05$ 。亲属组 EAX、EAY、EBX 得分均高于对照组, 差异有统计学意义, $P < 0.05$, 亲属组和研究者之间各项得分无差异。2. 三组之间持续操作测验 2D、3D、4D、持续均数之间有差异, $P < 0.05$ 。

研究组持续操作测验 2D、3D、4D、持续均数低于对照组, 差异有统计学意义, $P < 0.05$ 。亲属组持续操作测验 2D、3D、4D、持续均数低于对照组, 差异有统计学意义, $P < 0.05$ 。研究组和亲属组之间持续操作测验 2D、3D、4D、持续均数低于对照组, 但差异无统计学意义, $P > 0.05$ 。

结论 相对于健康对照, 精神分裂症患者及其一级亲属均存在不同程度的注意维持功能受损, 精神分裂症患者及其一级亲属之间注意维持功能受损程度无明显差异。

关键词: 精神分裂症、注意维持功能、事件相关电位、点阵图预期任务

精神分裂症认知功能受损影响因素研究

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目的 探讨影响精神分裂症认知功能受损的相关因素。并对认知功能受损程度与病程、发病年龄、受教育年限、智商、PANSS 量表分数之间的关联度进行分析。方法 选择精神分裂症首发患者 30 名、慢性精神分裂症患者 30 名、健康对照 30 名。认知功能评估采用 MATRICS 公认认知成套测验 (MCCB)。所得数据采用 SPSS 23.0 进行统计学处理和分析。

方法 选择精神分裂症首发患者 30 名、慢性精神分裂症患者 30 名、健康对照 30 名。认知功能评估采用 MATRICS 公认认知成套测验 (MCCB)。所得数据采用 SPSS 23.0 进行统计学处理和分析。

结果 与对照组比较, 首发精神分裂症患者及慢性精神分裂症患者在 7 个心理维度的认知测评得分均显著下降 [$F = 8.23, 36.31, 34.10, 7.62, 22.58, 22.96, 33.30, 17.00, 6.38; P < 0.05$)]。首发组的各项认知测验得分与慢性组均无明显差异 ($P > 0.05$)。相关分析结果表明, 精神分裂症患者各项认知测验结果与病程长短和 PANSS 量表阳性症状评分得分、PANSS 量表总分无相关性 ($P > 0.05$); 而认知功能测验中连线测验评分与 PANSS 量表阴性症状评分呈正相关 ($r = 0.266, P < 0.05$); 认知功能测验中符号编码得分、霍普金斯总分、空间广度得分、迷宫测验得分、简易视觉总分、语义流畅性得分、持续操作总分、情绪管理总分与智商水平呈正相关 ($P < 0.05$);

认知功能测验中符号编码得分、霍普金斯总分、空间广度得分、迷宫测验得分、简易视觉总分、语义流畅性得分、持续操作总分与受教育年限呈正相关($P < 0.05$)。

结论 精神分裂症普遍存在认知功能受损。其认知功能受损程度与病程、发病年龄无明显相关性,与阴性症状呈弱相关,与智商水平、受教育年限呈明显负相关。

关键词: 精神分裂症 认知功能 病程 精神分裂症认知功能成套测验

自我接纳在伴有非自杀性自伤青少年抑郁障碍患者社会支持与应对

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目的 分析伴有非自杀性自伤青少年抑郁障碍患者自我接纳与社会支持及应对方式之间的关系,探讨自我接纳在社会支持与应对方式间的中介效应。

方法 选取 2022 年 1 月至 2023 年 5 月于苏州市广济医院住院治疗的 130 例伴有非自伤性自杀的青少年抑郁障碍患者为研究对象,采用一般资料调查问卷、自尊量表(self-esteem scale, SES)、儿童青少年社会支持量表(Child and Adolescent Social Support Scale, CASSS)、中学生应对方式量表(Coping Style Scale for Middle School Students, CSSMSS)对患者进行调查。分析自我接纳与社会支持及应对方式之间的关系,探讨自我接纳在社会支持及应对方式间的中介效应。

结果 伴有非自杀性自伤青少年抑郁障碍患者自我接纳与社会支持呈正相关($P < 0.05$),自我接纳与问题解决、求助、忍耐呈正相关($P < 0.05$),与回避、发泄、幻想呈负相关($P < 0.05$)。社会支持与问题解决、求助呈正相关($P < 0.05$),与回避、幻想呈负相关($P < 0.05$)。自我接纳在伴有非自杀性自伤青少年抑郁障碍患者社会支持与应对方式间起部分中介作用,中介效应占总效应的 2.61%。

结论 自我接纳为伴有非自杀性自伤青少年抑郁障碍患者社会支持与应对方式的中介变量。因此,提高伴有非自杀性自伤青少年抑郁障碍患者的自我接纳,加强患者家属对疾病的认知改善其对着患者

的接纳认识,提高患者的社会支持性,从而改善患者的应对方式。

关键词: 非自杀性自伤;自我接纳;社会支持;应对方式

伴有非自杀性自伤青少年抑郁障碍患者社会支持利用度与应对方式的相关性

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目的 分析伴有非自杀性自伤青少年抑郁障碍患者社会支持利用度与应对方式之间的关系,探讨社会支持利用度与应对方式间的相关性。

方法 选取 2022 年 1 月至 2023 年 5 月于苏州市广济医院住院治疗的 130 例伴有非自伤性自杀的青少年抑郁障碍患者及 104 名不伴有非自杀性自伤的青少年抑郁障碍患者为研究对象,采用一般资料调查问卷、儿童青少年社会支持量表(Child and Adolescent Social Support Scale, CASSS)、中学生应对方式量表(Coping Style Scale for Middle School Students, CSSMSS)对患者进行调查。分析社会支持利用度与应对方式之间的关系,探讨社会支持利用度与应对方式间的相关性。

结果 两组患者在 CASSS 量表的社会利用度分量表、CSSMSS 量表的求助、退避、幻想、忍耐分量表均有显著性差异($P < 0.05$),在 CSSMSS 量表的问题解决、发泄分量表无显著性差异($P > 0.05$)。伴非自杀性自伤青少年抑郁障碍患者组 CASSS 量表的社会利用度分量表与 CSSMSS 量表问题解决、求助、幻想分量表呈正相关($P < 0.05$),与发泄呈负相关($P < 0.05$)。

结论 伴非自杀性自伤青少年抑郁障碍患者的社会支持利用度与其应对方式存在相关性。因此适当加强伴非自杀性自伤青少年抑郁障碍患者的社交技能训练,提高其社会支持利用度,可以改善患者的应对方式,以更好地适应社会生活。

关键词: 非自杀性自伤;青少年抑郁障碍患者;社会支持利用度;应对方式

小剂量阿立哌唑、利培酮治疗阿斯伯格共病 ADHD 的临床分析

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目的 探讨小剂量阿立哌唑、利培酮增效治疗阿斯伯格共病 ADHD 的患者的临床疗效和安全性。

方法 选取重庆市精神卫生中心 2023 年 1 月-2024 年 1 月收治的阿斯伯格共病 ADHD 患者 60 例, 采取随机数字表法分为 A 组、B 组、C 组, 每组各 20 例, A 组单用专注达治疗, B 组、C 组分别在 A 组治疗基础上联合阿立哌唑和利培酮治疗。采用 SNAP-IV 量表(父母版)、Conners 父母症状问卷(PSQ) 对 ADHD 患者的核心症状、行为和情绪进行疗效评估, 副反应量表(TESS)评定安全性, 通过各组自身治疗前后对照和组间对照,对结果进行统计分析。

结果 A 组、B 组、C 组总效率 76.31%、85.25%、86.33%;B 组、C 组总有效率均高于 A 组, 差异有统计学意义($P<0.05$)。治疗前三组患者 SNAP-IV 量表(父母版)、Conners 父母症状问卷(PSQ) 评分比较, 差异无统计学意义($P>0.05$);治疗 4、8、12 周末 SNAP-IV 量表(父母版)、Conners 父母症状问卷(PSQ) 评分较治疗前均显著下降, 差异有统计学意义($P<0.05$);B 组、C 组在治疗第 4 周末开始, SNAP-IV 量表(父母版)、Conners 父母症状问卷(PSQ) 下降程度均显著高于 A 组, 差异有统计学意义($P<0.05$)。A 组(33.33%)、B 组(34.67%)、C 组(35.00%)不良发生率比较, 差异无统计学意义($P>0.05$)。

结论 小剂量阿立哌唑、利培酮增效治疗阿斯伯格共病 ADHD 的患者疗效显著, 可快速控制 ADHD 症状, 且安全性高, 值得临床应用推广。

关键词: 阿立哌唑, 利培酮, 增效治疗, 阿斯伯格, 共病 ADHD

Childhood Maltreatment Associated Suicidal Risk in Chinese Children and Adolescents: A Mediation of Resilience

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Objective We aim to investigate the mediating role of resilience in the associations between childhood maltreatment (CM) and the three suicidal risk indicators (suicidal ideation, SI; suicidal plan, SP; suicidal attempt, SA) among a large sample of Chinese children and adolescents

Methods A population-based cross-sectional survey was conducted in southwestern China Yunnan province. Totally 9969 children and adolescents were randomly chosen by using a multi-stage stratified cluster sampling design. Univariate and multivariate logistic regression models were fitted to explore the associations between CM, resilience, and the three suicidal risk indicators, with dose-response trends further elucidated by using the restricted cubic splines. Path models were used to estimate the mediation of resilience

Results The estimated prevalence rates for one-year SI, SP, and SA were 32.86% (95% CI: 31.93-33.80%), 19.36% (95% CI: 18.57-20.16%), and 9.07% (95% CI: 8.51-9.66%). After adjustment, CM experiences significantly associated with all 3 suicidal risk indicators, and the odds ratios (ORs) were 2.13 (95% CI: 1.91-2.37), 2.45 (95% CI: 2.13-2.81), and 3.61 (95% CI: 2.90-4.52) for one-year SI, SP, and SA, respectively. Path models revealed that resilience significantly mediated the associations between CM and the three suicidal risk indicators, and among all dimensions of resilience, family support presented consistent and strongest mediation

Conclusion Our study results suggest that intervention measures which focusing on improving psychological resilience might be effective in reducing suicidal risk for children and adolescents who had experienced maltreatment. Prospective studies should be done to corroborate our findings

关键词: Childhood maltreatment, Resilience, Suicide, Children and adolescents, Mediation

儿童青少年精神科住院患者非自杀性自伤行

为的发生率及影响因素分析

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目的 探讨儿童青少年精神科住院患者非自杀性自伤(non-suicidal self-injurious, NSSI)行为的发生率及影响因素。

方法 采取连续入组方式,将2021年10月至2022年12月在武汉市精神卫生中心儿少病区住院就诊的674例儿童青少年患者纳入研究,根据是否存在NSSI行为,将入组患者分为NSSI组(n=320)和非NSSI组(n=354)。采集研究对象的一般人口学资料,并采用PHQ-9抑郁量表、GAD-7焦虑量表、CTQ-SF儿童期创伤问卷、PDD病耻感问卷、PSQI匹兹堡睡眠质量问卷、ASLEC青少年生活事件量表、自杀态度问卷对入组患者的精神症状及心理维度进行评估。统计学方法采用卡方检验、t检验和多因素Logistic回归分析。

结果 1)儿童青少年精神科住院患者的NSSI行为发生率为47.5%(320/674);2)单因素分析结果显示,NSSI组患者在抑郁、失眠、情感虐待、情感忽视、人际压力、学习压力、对自杀行为的态度等维度的得分均高于非NSSI组,差异均有统计学意义(P值均<0.05);3)多因素Logistic回归分析结果显示,年龄(OR=1.491,95%CI:0.706~3.147,P=0.028)、性别(OR=1.647,95%CI:1.022~3.838,P=0.019)、抑郁程度(OR=2.647,95%CI:1.899~4.629,P=0.001)、情感忽视(OR=3.465,95%CI:1.038~11.565,P=0.043)、人际压力(OR=2.906,95%CI:1.126~7.502,P=0.027)是儿童青少年精神科住院患者发生NSSI行为的危险因素。

结论 儿童青少年精神科住院患者伴有较高的NSSI发生率,年龄较小、女性、抑郁程度高、情感忽视严重、人际压力大的精神科住院儿童青少年更容易发生NSSI行为。

关键词: 儿童青少年,住院患者,非自杀性自伤,影响因素

青少年抑郁症发生非自杀性自伤行为的影响因素及运动调节措施的应用研究

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目的 总结青少年抑郁症发生非自杀性自伤行为的影响因素,分析运动调节措施对其的作用。

方法 采用回顾性分析,将本院诊治的门诊及住院的162例青少年抑郁症患者作为研究对象,病例收集年限为2023年1月-2024年4月,按照是否发生非自杀性自伤行为进行分组,即未发生非自杀性自伤行为的有121例,将其设为对照组;发生非自杀性自伤行为的有41例,将其设为观察组,筛查发生非自杀性自伤行为的有关因素;同时对观察组患者采取运动调节措施,要求每周最少运动五次,每次的时间不少于30分钟,最好采取跑步的形式,运动时间长度慢慢加长,设定时常为八周。八周后再分析干预前后患者病情的改善情况。

结果 青少年抑郁症发生非自杀性自伤行为的影响因素包括重度抑郁、有童年创伤、家庭环境不良、学习压力较大、受过校园霸凌(P<0.05);在八周运动调节措施的干预下,患者的抑郁症状、非自杀性自伤行为评分均相比干预前较低(P<0.05)。

结论 青少年抑郁症发生非自杀性自伤行为的影响因素复杂多样,需重点关注青少年的身心健康、情绪调节方法,应对压力的措施。采取运动调节措施进行干预,有益于缓解患者的抑郁症状,减少非自杀性自伤行为的发生。

关键词: 青少年抑郁症;非自杀性自伤行为;影响因素;运动调节措施

对比低电量与正常电量无抽搐电休克治疗青少年抑郁症疗效及预后影响

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目的 研究对比低电量与正常电量无抽搐电休克(MECT)治疗青少年抑郁症患者的临床治疗效果及预后影响

方法 选取2021年6月至2023年5月宁夏回族自治区宁安医院治疗的青少年抑郁症患者40例,以随机数字表法分为对照组、观察组,20例/组,两组均服用抗抑郁药物。其中对照组实施正常电量无

抽搐电休克治疗 (MECT)、观察组实施低电量无抽搐电休克治疗 (阈下 MNET 或 NET)。研究分析不同电量治疗的临床效果。

结果 观察组治疗后汉密尔顿抑郁量表 (HAMD) 评分 [$(5.26 \pm 1.14$ Vs $9.22 \pm 2.14)$ 分]、自杀意念自评量表 (SIOSS) 评分 [$(5.12 \pm 1.95$ Vs $10.44 \pm 1.89)$ 分]、不良反应发生率 (5.00% Vs 30.00%) 均低于对照组, 差异有统计学意义 ($P < 0.05$); 观察组治疗后简明智力状态检查量表 (MMSE) 评分 [$(28.15 \pm 1.27$ Vs $23.82 \pm 4.34)$ 分]、临床记忆量表 (CMS) 评分 [$(86.47 \pm 4.39$ Vs $79.28 \pm 2.31)$ 分] 均高于对照组, 差异有统计学意义 ($P < 0.05$)。

结论 NET 治疗青少年抑郁症患者疗效显著, 可改善其认知功能、记忆功能, 降低不良反应发生率, 预后效果较佳。

关键词: 青少年; 抑郁症; 无抽搐电休克治疗; 正常电量; 低电量; 心理状态; 认知功能

认知行为疗法联合舍曲林对青少年非自杀性自伤患者的应用价值: 一项回顾性研究

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目的 研究认知行为疗法联合舍曲林对青少年非自杀性自伤 (NSSI) 患者的应用价值。

方法 临床选取 2023 年 1 月至 2024 年 1 月在本院接受治疗的青少年 NSSI 患者 83 例, 依据病历系统记录的不同管理方案分为对照组 ($n=41$, 舍曲林)、观察组 ($n=42$, 舍曲林+认知行为疗法), 观察对比两组患者状态-特质焦虑问卷 (STAI)、渥太华自伤量表 (OSI)、简易应对方式 (SCSQ)、认知情绪调节问卷 (CERQ) 及生活质量综合评估问卷 (GQOLI-74) 评分。

结果 管理前两组患者 STAI、OSI、SCSQ、CERQ 及 GQOLI-7 评分对比无统计学意义 ($P > 0.05$), 管理后观察组 STAI、消极应对、OSI、缺乏适应性调节策略评分低于对照组, 但观察组积极应对、适应性调节策略及 GQOLI-7 评分高于对照组 ($P < 0.05$)。

结论 非自杀性自伤 (NSSI) 指在没有自杀意图情况下, 对自身身体组织进行故意且直接的伤害,

个体虽其本意上没有自杀的意图, 但长期影响下使得自伤行为愈发严重, 最终导致个体死亡[1,2]。相关资料显示, 研究发现 NSSI 者在第一年的自杀风险为 0.7%, 大约是普通人的 66 倍, 而青少年生理及心理由于处于生长发育期, 其 NSSI 患病率显著较高[3]。随着医学护理领域的发展, 并且由于青少年群体身心健康发展意义重大, 因此青少年 NSSI 行为引起临床的广泛关注[4]。临床通常使用舍曲林进行治疗, 能够在一定程度上有效缓解患者临床症状, 但由于患者年龄较小, 认知水平低, 在接受治疗时用药依从性低, 需要采取相应措施提高疗效[5]。认知行为疗法是一种新型心理治疗方式, 具有结构性、疗程短、认知取向性特征, 通过改变患者自身看法及态度破坏其负性思维及情绪的恶性循环[6]。参考相关资料发现, 认知行为疗法在临床其他心理障碍疾病中运用, 并取得较高临床疗效, 但长期单一使用其治疗方式具有一定的局限性[7]。因此, 对青少年 NSSI 患者进行科学有效的管理策略显得极为迫切。然而, 针对认知行为疗法联合舍曲林管理策略及其对患者实际效果的研究较为有限。基于此, 本研究旨在通过回顾性研究, 分析认知行为疗法联合舍曲林与患者应对方式、生活质量等之间的关联性, 进而深入了解认知行为疗法联合舍曲林管理对患者潜在影响因素, 有望为临床实践提供指导。

综上所述, 针对青少年 NSSI 患者实施认知行为疗法联合舍曲林一方面能够一定程度上改善患者负性情绪、自伤行为、应对方式; 另一方面有利于提高患者认知情绪调节能力及生活质量。

关键词: 认知行为疗法, 舍曲林, 青少年非自杀性自伤, 负性情绪,

“结构化”团体治疗联合药物治疗对青少年抑郁症的疗效及社会功能康复的研究

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目的 探究以人本主义理论及认知行为治疗为基础的“结构化”团体治疗联合药物治疗相较于单纯的药物治疗对青少年抑郁症患者的治疗效果以及在恢复其社会功能方面疗效的价值, 为探索青少年抑郁症患者多元化治疗提供支持。

方法 选择2022年5月至2024年6月期间在滁州市第二人民医院儿童青少年科住院的年龄在12-18岁之间的患者64例,随机分为药物治疗组(对照组)和结构化团体治疗联合药物治疗组(观察组)各32例,对照组给与常规药物治疗,观察组在常规药物治疗的基础上给予一周一次,共八次的结构化的团体心理治疗。两组治疗前后分别给予汉密尔顿抑郁量表17项指标(HAMD-17)、个人和社会功能量表(PSP)及儿童社交焦虑量表(SASC),在干预前和干预后对研究的对象进行测查采集数据;重点观察两组治疗后组间的结果差异。采用SPSS统计软件处理数据,计量资料以 $\bar{x} \pm s$ 表示,组间比较采用t检验,多组资料之间对比采用F检验,应用Pearson分析法分析焦虑、抑郁与疾病康复的关系,以 $P < 0.05$ 为差异有统计学意义。

结果 在相同的实验周期内两组治疗均有效,观察组治疗总有效率、社会功能恢复相较于对照组更高($P < 0.05$),两组汉密尔顿抑郁量表(HAMD)评分及儿童社交焦虑量表(SASC)分值均低于治疗前,且观察组低于对照组($P < 0.05$)。治疗后,两组社会功能量表(PSP)均高于治疗前,且观察组显著高于对照组($P < 0.01$)。

结论 青少年抑郁症患者应用结构化团体心理治疗效果确切,可有效减轻患者抑郁症状,提高患者社会功能及人际交往能力效果显著。

关键词: 结构化团体心理治疗;青少年抑郁症;社会功能;社交焦虑

Association of Pain Intensity and Sensitivity with Negative Emotions in Adolescents with Depressive Disorder

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Objective The purpose of this study was to further explore the association of pain intensity and sensitivity with negative emotions in adolescent patients with depressive disorders by exploring the differences in pain intensity and sensitivity in adolescent patients with de-

pressive disorders with different levels of negative emotions

Methods A consecutive enrollment method was used to select 193 adolescent patients with depressive disorders from three hospitals in Anhui Province as subjects. The Beck Hopelessness Scale (BHS) was used to assess the subjects' negative emotions, and the intensity of somatic pain was assessed using the Numerical Rating Scale-11 (NRS-11). Subjects were assessed for forearm and tibial pain sensitivity using a hand-held pressure pain instrument, and experimental pain sensitivity measures included pressure pain threshold (PPT) and pressure pain tolerance (PTO). To compare the differences in pain intensity and pain sensitivity among adolescent patients with depressive disorders with different levels of hopelessness, and to analyze the relationship between pain intensity and sensitivity and negative mood

Results It was found that pain intensity was significantly higher in patients with high levels of despair than in those without childhood trauma ($p < 0.05$). Subjects with a high degree of despair had a higher pain intensity rating. Spearman's correlation and generalized linear regression analyses showed that patients with a high degree of despair had greater pain intensity and higher pain tolerance, i.e., lower pain sensitivity; the HAM-D total score was statistically strongly associated with pain intensity and sensitivity, with the more severe the level of depression, the greater the pain intensity, and the lower the pain sensitivity

Conclusion Pain intensity was higher in patients with severe negative mood than in those with less negative mood. Negative mood and depression severity were strongly associated with decreased pain sensitivity and increased pain intensity, respectively, in patients with adolescent depressive disorders. In clinical practice, attention to monitoring negative mood in patients with adolescent depressive disorders can help early detection of pain symptoms and intervention to improve patients' somatic symptoms

关键词: Adolescents, Depressive disorder, Pain intensity, Pain sensitivity, Negative Emotions

抑郁障碍青少年非自杀性自伤行为与注意缺陷多动障碍症状相关性研究

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目的 抑郁障碍、注意缺陷多动障碍(ADHD)都是非自杀性自伤(NSSI)最可能的因果风险因素之一。本研究旨在探讨抑郁障碍青少年 NSSI 行为与 ADHD 症状之间的关系,并进一步探讨执行功能和情绪调节在其中发挥的作用。

方法 本研究纳入山东省精神卫生中心就诊的抑郁障碍青少年患者 147 例(平均年龄 14.83 ± 1.85 岁;男 37 例,女 110 例),根据 DSM-5 诊断标准,将患者分为伴 NSSI 组和不伴 NSSI 组,采用 SNAP-IV 量表评估 ADHD 症状,渥太华自伤量表(OSI)评估自伤情况,儿童抑郁量表(CDI)评估抑郁症状、情绪调节量表(ERQ)评估情绪调节、执行功能行为评定量表(BRIEF)评估执行功能。应用 SPSS24.0 软件和 Mplus8.0 进行数据整理和数据分析。 $P < 0.05$ 为差异具有统计学意义。

结果 本研究中抑郁障碍青少年 NSSI 行为检出率为 67.3%,常见自伤部位为手部、下臂或腕部、上臂或肘部等,常见自伤方法为切割、搔抓、啃咬等。伴 NSSI 行为组在 ADHD 症状得分、CDI 得分、执行功能缺陷程度方面均高于不伴 NSSI 行为组,差异具有统计学意义($P < 0.05$)。抑郁障碍青少年 ADHD 症状、认知重评策略、执行功能均与 NSSI 行为相关($r = -0.554 \sim -0.514$, $P < 0.05$)。链式中介分析发现执行功能和认知重评策略在 ADHD 症状和 NSSI 行为关系中的链式中介效应有统计学意义,间接效应值为 0.137 (95%CI=0.070~0.225),占总效应值 52.69%,其中 ADHD 症状通过执行功能和认知重评策略共同影响 NSSI 行为发生这一路径的间接

效应为 0.032 (95%CI: 0.011~0.069),占总效应值的 12.31%,ADHD 症状通过执行功能受损影响 NSSI 行为发生这一路径的间接效应 0.062 (95%CI=0.022~0.138),占总效应值的 23.85%,ADHD 症状通过认知重评策略影响 NSSI 行为发生这一路径的间接效应 0.043 (95%CI=0.012~0.090),占总效应值的 16.54%。

结论 青少年抑郁障碍患者 NSSI 行为与 ADHD 症状严重程度、情绪失调及执行功能缺陷相关,其中执行功能、情绪调节在 ADHD 症状和 NSSI 行为之间存在链式中介作用。

关键词: 抑郁障碍,注意缺陷多动障碍,非自杀性自伤,情绪调节,执行功能

基于 PERMA 模式的家庭抗逆力提升干预对抑郁症青少年的疗效分析

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目的 青少年群体是心理问题、精神问题的重灾区,而抑郁症或抑郁倾向近年来尤为凸显,青少年患抑郁症会影响整个家庭的稳定性。

探究基于 PERMA 模式的家庭抗逆力提升干预对抑郁症青少年的临床疗效,及其对患者家庭抗逆力、创伤后成长水平和幸福感指数的影响

方法 本研究选取 2023.1-2024.1 在我院收治的 30 例抑郁症青少年家庭为研究对象,设为观察组,予以氟西汀胶囊联合采用“基于 PERMA 模式的家庭抗逆力提升干预方案”,常规护理健康知识宣教治疗 4 周;选取同期住院的 30 例抑郁症青少年家庭为对照组,氟西汀胶囊联合常规护理健康知识宣教治疗 4 周。分别在干预前和干预后 4 周对两组患者家庭进行评估,比较两组包括中文版家庭抗逆力评定量

表(C-FRAS)、创伤后成长量表(PTGI)和幸福感知数量表(IWB)的评分差异。

结果 干预4周后观察组中文版家庭抗逆力评定量表(C-FRAS)、创伤后成长量表(PTGI)和幸福感知数量表(IWB)评分均优于对照组,差异有统计学意义($P<0.05$)。

结论 基于PERMA模式的抗逆力提升干预方案对青少年抑郁患者家庭抗逆力水平、创伤后成长水平和幸福感知指数具有明显的提高作用。且具有操作性强,患者接受度高的优势,值得临床应用实践。

关键词: PERMA模式 家庭抗逆力 青少年 抑郁症

青少年抑郁患者树木画特征研究

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目的 探究树木画投射测验用于评估青少年抑郁的可能性。

方法 采用Koch画树投射测验(TDT),旨在通过要求被测者画一棵树,从而了解其个人特质、情感状态和心理特征;以及用青少年抑郁自评量表(SDS)对48名青少年抑郁障碍患者和32名正常青少年进行群体调查。树木绘画投射测验:统一提供给每位实验对象A4纸一张、铅笔一支、橡皮一只。要求被试在指导语下进行绘画。完成绘画后,笔者对每一幅画进行检查,对画中特征不清的部分,向绘画者进行询问。评分者将对每一幅树木画绘画作品在树木画投射测验编码表及评分表中进行评分并录入。并采用Logistic回归分析建立画树投射测验对青少年抑郁障碍的诊断方程。

结果 ①抑郁组和正常组之间有18个绘画特征具有显著性差异($t=5.526\sim 35.208$, $P<0.05$);②将绘画特征的其中5项作为自变量,以是否患抑郁障碍为因变量,进行二元Logistic回归分析。得到树有涂黑或阴影($OR=4.155$, $P=0.045$)、树被细致刻画($OR=7.094$, $P=0.007$)和树冠内线条凌乱($OR=7.828$, $P=0.003$)。

结论 (1) 在绘画特征上,抑郁组和非抑郁

组在树有涂黑或阴影、树线条颤抖、枯树或落叶树、树被细致刻画、树木矮小、树位于画面中部、树位于画面下部、树干线条为双曲线、树干上有疤痕或污点、管状树枝、树枝向上、刀状尖锐树枝、树冠内线条凌乱、树冠左侧树枝不规则、树冠右侧树枝不规则、果实、竖向纸张、横向纸张这18项树木画特征具有显著性差异。

(2) 树有涂黑或阴影、树被细致刻画、树冠内线条凌乱、树有刀状尖锐树枝和树

有果实这5项树木画特征进入了Logistic回归方程。

(3) “树有涂黑或阴影”、“树被细致刻画”和“树冠内线条凌乱”这3项树木

画特征通过了显著水平为5%的显著性检验呈现出显著性。树有涂黑或阴影、树被细致刻画和树冠内线条凌乱3个绘画特征对青少年抑郁障碍具有预测作用。

关键词: 青少年;抑郁症;树木画投射测验;绘画特征

首发儿童精神分裂症患者脑功能与幻听关系的研究

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目的 旨在通过分析首发儿童精神分裂症患者脑功能特征,比较幻听与无幻听首发儿童精神分裂症患者脑功能差异,以深入探究儿童精神分裂症患者幻听发生的机制。

方法 研究纳入了55名首发儿童精神分裂症患者和28名健康对照者,采集rfMRI数据。根据SAPS量表中的“听幻觉”条目得分将患者分为无幻听组和幻听组。使用DPARSF软件对磁共振原始数据进行预处理,计算出整个大脑的ALFF平均值,利用REST软件进行GRF校正,利用协方差分析、双样本t检验获得组间差异脑区,以 $P<0.05$ 为结果显著,检验水准均设定为 $\alpha=0.05$,双侧检验。

结果 三组之间ALFF值差异脑区分布在左侧

三角部额下回, fALFF 值差异性脑区分布在左侧颞上回、左侧岛叶、左侧中央后回和左侧颞极颞上回。进一步的两两比较显示, 与对照组相比, 幻听组 ALFF 值降低发生在左侧岛叶、左侧三角部额下回与左侧岛盖部额下回, fALFF 值降低发生在右侧尾状核; 无幻听组 ALFF 值升高发生在双侧小脑, fALFF 值升高发生在中央后回、中央前回、左侧脑岛、左侧颞上回、左侧颞极颞上回; 此外, 幻听组较无幻听组 fALFF 值降低发生在右侧颞上回。

结论 首发儿童精神分裂症患者存在脑功能差异, 且幻听与无幻听首发儿童精神分裂症患者之间脑功能存在差异, 为研究儿童精神分裂症的发病机制提供了重要线索。

关键词: 脑功能; 幻听; 儿童; 首发精神分裂症

青少年抑郁症患者抑郁严重程度与认知功能的关系研究

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目的 比较客观认知功能在不同抑郁症严重程度下的差异。

方法 选取前往山东某三甲医院就诊, 并经精神科医师评估符合 ICD-10 诊断标准的 110 名抑郁症患者, 采用中国科学院心理所研发设计的基本认知能力测验系统测评青少年抑郁症患者客观认知功能。并采用抑郁症状自评量表评估其病情严重程度。共采集重度抑郁症组 70 人、中度抑郁症组 22 人、轻度抑郁症组 18 人。采用 SPSS17.0 系统软件进行分析。

结果 (1) 三组被试在空间知觉、言语理解、情景记忆任务上差异具有统计学意义 ($P < 0.05$)。事后检验显示中度抑郁症组与重度抑郁症组在空间知觉任务中差异显著 ($P < 0.05$), 中度抑郁症组在空间知觉任务中表现比重度抑郁症组更好; 三组被试在言语理解任务中差异均显著 ($P < 0.05$), 重度抑郁症组在言语理解任务中得分最低; 轻度抑郁症组与中度抑郁症组、中度抑郁症组与重度抑郁症组在情景记忆任务中差异具有统计学意义 ($P < 0.05$), 重度抑郁症组在情景记忆任务中得分最低。(2) 空间知觉 ($r = -0.224, P = 0.019$)、情景记忆 2 ($r =$

$0.266, P = 0.005$)、言语理解 ($r = -0.284, P = 0.003$) 与抑郁症状表现严重程度呈负相关。(3) 抑郁症状严重程度能显著预测空间知觉 ($R^2 = 0.046, P = 0.025$)、情景记忆 ($R^2 = 0.064, P = 0.008$)、言语理解 ($R^2 = 0.068, P = 0.006$) 能力。

结论 青少年抑郁症认知功能障碍与抑郁症状严重程度相关, 抑郁症状严重程度可预测其认知功能水平。

关键词: 青少年抑郁, 认知

移空技术对大学生焦虑抑郁情绪干预效果研究

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目的 探索短程移空技术对改善大学生焦虑抑郁情绪的影响。

方法 使用 PHQ-9、GAD-7 对来访大学生的抑郁、焦虑状况进行评估, 对于达到临界点大学生 (PHQ-9、GAD-7 ≥ 5 分) 进行随机化分组。61 名入组被试分别进入观察组和对照组 (观察组 31 人, 对照组 30 例)。观察组由接受移空技术培训的心理咨询 (治疗) 师完成, 咨询 (治疗) 师按照操作流程进行结构化治疗, 共干预 3 周 3 次, 每周 1 次, 每次约 50 分钟。对照组由心理咨询 (治疗) 师完成, 采用支持性心理咨询干预, 共干预 3 周 3 次, 每周 1 次, 每次约 50 分钟。对两组被试进行开始前、结束时及结束后 1 周施测抑郁-焦虑-压力量表 (DASS-21)、简易应对方式问卷和自我效能感量表。

结果 1、观察组被试有 23 人完成所有测试, 对照组被试有 26 人完成所有测试; 2、观察组在所有量表得分均值上即时后测、1 周后测均低于前测得分 (P 均小于 0.05); 3、对照组在所有量表得分均值上即时后测、1 周后测与前测得分均值的差异均未达到统计显著 (P 均大于 0.05)。

结论 移空技术对大学生情绪困扰、心身症状的缓解具有明显的干预效果。

关键词: 移空技术、大学生、焦虑抑郁情绪

REWARD RELATED NEURAL CIRCUITS OF ANXIETY DISORDER COMORBID WITH NSSI IN ADOLESCENTS

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Objectives The neurobiological foundations of NSSI are multifaceted and intricate, with the reward-related neural circuits playing a pivotal role. Despite this, the specific functions of these circuits in the context of NSSI among children and adolescents, especially those diagnosed with comorbid anxiety disorders, remain largely unexplored.

Methods Our analytical process commenced with the calculation of the Functional Connectivity Strength (FCS) across eight striatal regions. This involved quantifying the mean functional connectivity between each striatal structure and the cerebral cortex. Subsequently, we employed a Multivariate Distance Matrix Regression (MDMR) model to discern any disparities in the overall striatal FCS pattern between the groups diagnosed with anxiety disorders, with and without NSSI. Finally, we explored the correlation between striatal FCS patterns and SCARED, IPPA, and CTQ respectively.

Results The investigation unveiled a significant discrepancy in the overall striatal FCS patterns between the NSSI and non-NSSI groups. Subsequent post-hoc analyses indicated a reduction in FCS across almost all striatal structures within the NSSI group, with the left caudate demonstrating the most pronounced effect size. Furthermore, significant correlations were identified between the striatal FCS pattern and the principal component scores representing parental and peer relationships, alongside trauma. Post-hoc analyses elucidated that diminished FCS was linked to inferior parental and peer relationships, as well as to heightened levels of trauma across all assessed striatal structures, once again with the left caudate showing the largest effect size.

Conclusions Adolescents diagnosed with anxiety disorders and comorbid NSSI exhibited lower functional connectivity between the striatum and cortex, relative to their non-NSSI counterparts.

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关键词: Anxiety disorder; self-harm; functional connectivity

非自杀性自伤未成年人住院患者吸烟状况及影响因素

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目的 吸烟是严重危害人类身心健康的行为,尤其是对未成年人。非自杀性自伤(Non-Suicidal Self-Injury, NSSI)被认为是全球性重要公共卫生问题之一,未成年人在数量上占据主体。本研究旨在了解 NSSI 未成年人住院患者吸烟状况及影响因素,为公共卫生政策的制定及干预提供参考。

方法 以 2023 年 6 月至 2024 年 5 月于中山市第三人民医院住院的 206 例 NSSI 未成年人住院患者为研究对象,使用自编一般人口问卷收集其年龄、教育程度、户籍地、有无医保、学业状态、职业状态、疾病诊断、抚养方式、亲子关系、病程、是否吸烟饮酒。并对吸烟原因进行调查。以是否吸烟分为 2 组,进行单因素组间比较。进一步对组间具有统计学差异的指标纳入 logistics 回归模型,进行多因素分析。

结果 (1) 本研究共筛出 25 名 NSSI 未成年人住院患者存在吸烟行为,吸烟检出率为 12.14%; (2) NSSI 未成年人住院患者吸烟的主要原因依次是缓解负性情绪、同伴影响及父母影响; (3) 性别 ($P=0.001$)、学业状态 ($P<0.001$)、职业状态 ($P<0.001$)、病程 ($P=0.004$)、亲子关系 ($P<0.001$) 及是否饮酒 ($P<0.001$) 在组间具有统计学差异; (3) 多因素分析结果显示,待业或辍学的人群 ($OR=3.952, P=0.012$) 以及亲子关系较差的人群 ($OR=9.508, P<0.001$) 吸烟风险显著增加。

结论 应加强对女性、辍学、无业、激烈的亲子冲突及饮酒特征的 NSSI 未成年人关注及干预,防止吸烟导致的健康受损加重。

关键词: 非自杀性自伤; 未成年人; 住院患者;
吸烟

抑郁障碍青少年抑郁程度与网络成瘾的关系: 社交回避与学业挫败感的链式中介作用

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目的 本研究旨在探究抑郁障碍青少年抑郁程度与网络成瘾之间的关系, 以及社交回避和学业挫败感在两者间的作用, 为抑郁障碍青少年网络成瘾行为的预防提供科学参考。

方法 被试为2021年5月至2022年10月在中国山东省精神卫生中心门诊就诊和住院治疗的463名青少年抑郁障碍患者。采用儿童抑郁量表、挫败感量表、社交回避和苦恼量表以及青少年网络成瘾量表进行评估。

结果 在性别方面, 与男孩相比, 女孩在抑郁、社交回避、挫败量表上的得分更高; 在年龄方面, 随着年龄的增长, 青少年的抑郁、社交回避水平均呈下降趋势; 在受教育程度方面, 初中生和高中生的抑郁、社交回避水平均比小学生和大学生严重; 在精神疾病家族史方面, 存在家族史的青少年抑郁水平较高; 在家庭收入水平方面, 随着家庭收入的升高, 青少年的网络使用程度呈降低趋势。

抑郁障碍青少年网络成瘾的检出率为10.8%。网络成瘾与抑郁程度、社交回避、学业挫败感均呈显著正相关($r=0.414, 0.411, 0.352, P<0.001$)。链式中介效应检验表明, 社交回避和学业挫败感在抑郁程度和网络成瘾之间的中介效应显著, 中介效应量分别为0.084(95%CI: 0.018–0.155)、0.148(95%CI: 0.040–0.258); 且社交焦虑-抑郁的链式中介效应也显著, 中介效应量为0.014(95%CI: 0.003–0.034)。

结论 抑郁障碍青少年抑郁程度不仅直接影响网络成瘾, 而且还通过社交回避和学业挫败感的链式中介效应间接影响网络成瘾。

关键词: 儿童青少年, 抑郁障碍, 社交回避, 学业挫败感, 网络成瘾

母亲童年期创伤对青少年抑郁障碍的代际影响: 教养方式和子代童年期创伤的链式中介作用

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目的 《国民抑郁症蓝皮书 2022-2023 年》显示, 18岁以下的抑郁障碍患者占总人数的30%, 抑郁障碍发病群体呈年轻化趋势。从发展精神病理学的视角, 父母童年期创伤经历对青少年抑郁障碍的代际影响是当前抑郁障碍领域的热点研究问题。童年期创伤是指个体18岁之前所遭受到的包括各种形式的童年虐待、忽视以及家庭功能不全的成长经历, 其后果持久且深远。当前诸多证据表明, 母亲童年期创伤经历会增加其子女患严重精神性疾病的风险, 但其内部机制还有待深入探讨, 尤其是基于中国文化背景下临床群体的研究是有待补充的。

方法 采用量化研究, 以263对抑郁障碍青少年及其母亲为对象(子代 Mage=15.07, SD=2.59, 女孩占比65.2%; 母亲 Mage=43.26, SD=4.76), 构建结构方程模型, 考察教养方式及子代童年期创伤在母亲童年期创伤对青少年抑郁障碍代际影响中的链式中介作用。本研究采用童年创伤问卷对青少年母亲进行测量; 采用童年创伤问卷、教养方式量表以及儿童抑郁量表对青少年抑郁障碍患者进行测量。

结果 (1) 相关分析显示, 母亲童年期创伤与控制型教养方式、子代童年期创伤及青少年抑郁障碍严重程度之间呈显著正相关; 母亲童年期创伤与鼓励自主型、关怀型教养方式分别呈显著负相关。

(2) 结构方程模型显示, 母亲童年期创伤会对青少年抑郁障碍严重程度产生代际影响, 且通过教养方式和子代童年期创伤的链式中介作用产生间接效应。

结论 教养方式与子代童年期创伤在母亲童年期创伤对青少年抑郁障碍的代际影响中起中介作用。这拓展了对中国文化背景下临床群体中的童年创伤代际影响发生机制的认识, 并为母亲童年期创伤对青少年抑郁障碍产生影响提供了新的证据, 为后续

提早阻断其恶性代际影响,及早干预提供思路和借鉴,促进青少年身心健康发展。

关键词:母亲童年期创伤,教养方式,代际传递,青少年抑郁障碍

内蒙古自治区儿童青少年抑郁症状及其影响因素分析

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目的 本调查旨在了解内蒙古自治区儿童青少年抑郁症状的检出率,并探讨分析影响抑郁症状的相关因素,从而为专业人员加大对疾病的健康知识的宣讲以及促进学生的心理健康提供依据,同时,关注抑郁症状高风险人群,提前进行干预,以防止症状进一步发展为抑郁症。

方法 本调查采用整群分层随机抽样的方法,抽取内蒙古自治区 12 个盟市的儿童青少年,使抑郁自评量表(Self-rating Depression Scale,SDS)及自编一般情况问卷,使用 Epidata 4.6 软件录入数据,用 Excel 软件对 Epidata 导出数据进行初步整理,分类变量使用构成比表示,单因素分析用卡方检验,多因素分析采用多因素 Logistic 回归分析,以探讨儿童青少年抑郁症状的检出率及其影响因素。

结果 (1)本次调查共完成 6281 份问卷,有效问卷 6058 份,有效率 96.4%。儿童青少年抑郁症状的检出率为 45.03%。(2)对儿童青少年抑郁症状的影响进行单因素分析表明,性别、年龄、是否独生子女、家庭类型、家庭月收入以及父母的文化程度和母亲的工作状况有统计意义($P<0.05$)。(3)影响儿童青少年抑郁症状的多因素分析:与男生相比,女生的抑郁症状检出率更高;与 6~岁年龄组相比,12~岁年龄组的抑郁症状检出率更高;与 6~岁年龄组相比,16~岁年龄组的抑郁症状检出率更高;与独生子女相比,非独生子女的抑郁症状检出率更高;与大家庭(三代及以上)相比,重组家庭的抑郁症状检出率更高;与家庭月收入 5000 元以上相比,家庭月收入 4000-5000 元、3000-4000 元、2000-3000 元、1000-2000 元、1000 元以下的抑郁症状检出率更高;与父亲研究生及以上学历相比,父亲初中学历的抑郁症状检出率更高;与父

亲研究生及以上学历相比,父亲小学及以下学历的抑郁症状检出率更高;与母亲研究生及以上学历相比,母亲小学及以下学历的抑郁症状检出率更高。

结论 (1)内蒙古自治区儿童青少年的抑郁症状检出率为 45.02%。(2)性别、年龄、家庭类型、家庭月收入以及父亲文化程度是本调查中导致儿童青少年抑郁症状出现的影响因素。

关键词:内蒙古自治区;儿童青少年;抑郁症状;影响因素

行为矫正治疗技术对青少年非自杀性自伤的应用研究

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目的 青少年非自杀性自伤的行为矫正技术是将辩证行为疗法与行为矫正技术的理念和实操相结合而产生的一种临床新技术、新方法、新理念。帮助患者掌握正念放松相关训练技能,帮助其适应压力性事件,指导患者正视情绪及调节不良情绪的方法,患者再训练后弱化情绪敏感性,采用积极、正确的方法泄情绪;同时强化患者正确缓解情绪的方法,替代、消退、摆脱反复的 NSSI 的行为模式,塑造积极的应对方式和重建规则感与边界意识。

方法 对 2023 年 11 月-2024 年 4 月住院期间发生非自杀性自伤(NSSI)的 48 名青少年患者随机分为实验组(24 名患者)和对照组(24 名患者)。对照组常规进行药物治疗、物理治疗、心理治疗;实验组除常规的药物治疗、物理治疗、心理治疗外,运用该技术进行干预,通过为期 3-7 天的行为矫正治疗,包括签订行为契约、行为矫正技术的启动、行为矫正第一日之非自杀性自伤行为的消退与重塑、行为矫正第二日之情绪调节练习、行为矫正第三日之积极应对技巧、行为矫正治疗结束等几个部分实施治疗。

结果 通过对比观察发现:实验组通过行为矫正治疗技术的干预后,患者在院期间再次发生 NSSI 的患者人数为 2 例,对照组为 18 例;实验组患者自愿参加团体心理治疗的次数平均为 4.5 次/周,对照组为 2.8 次/周。

结论 行为矫正治疗技术能减少青少年非自杀

自伤的频率, 通过治疗干预能学习正念放松相关训练技能, 学会采用积极、正确的方法缓解情绪, 获得应对危机的能力, 从而替代、消退、摆脱掉反复的NSSI的行为模式。能一定程度的提升住院患者的治疗积极性。

关键词: 行为矫正治疗技术; 青少年非自杀性自伤; 治疗积极性

孤独症儿童父母心理资本、社会支持和社会疏离的关系: 基于主客体互倚模型

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目的 探讨孤独症儿童父母的心理资本对社会疏离的影响以及社会支持的中介作用, 为临床干预提供理论依据。

方法 采用便利抽样法, 选择 202 对孤独症儿童的父母为研究对象, 采用一般资料问卷、积极心理资本问卷 (PPQ)、孤独症儿童家庭社会支持量表和一般疏离感量表 (GAS) 进行调查, 基于主客体互倚模型探讨孤独症儿童父母心理资本与社会疏离之间的关系, 以及社会支持在两者间的中介作用。

结果 ①本组孤独症儿童母亲的心理资本显著负向预测自身的社会疏离 (效应值: -0.091 , $p < 0.05$), 父亲的心理资本显著负向预测自身的社会疏离 (效应值: -0.127 , $p < 0.05$), 主体效应显著; 母亲与父亲的心理资本均不能显著预测对方的社会疏离, 客体效应不显著; ②母亲的社会支持在自身心理资本对社会疏离的主体效应中起到部分中介作用 (效应值: -0.017 , 占总效应值的 18.68% , $p < 0.05$), 父亲的社会支持在自身心理资本对社会疏离的主体效应中起到部分中介作用 (效应值: -0.469 , 占总效应值的 14.25% , $p < 0.05$); ③父亲的社会支持在母亲心理资本对父亲社会疏离的客体效应中起完全中介作用 (效应值: -0.007 , $p < 0.05$)。

结论 孤独症儿童父母的心理资本可以通过社会支持对自身社会疏离产生影响, 母亲的心理资本通过父亲的社会支持影响父亲社会疏离, 有利于从二元视角理解父母心理资本如何影响社会疏离水平, 提示医护人员应积极探索以家庭为单位的干预方案, 实际干预中可通过提高社会支持水平来改善孤独症

儿童父母的社会疏离状况, 帮助父母与社会良好互动, 最终实现孤独症家庭社会融合。

关键词: 孤独症, 父母, 主客体互倚模型, 社会疏离, 心理资本, 社会支持

学龄期儿童孤独感的潜在类别及相关影响因素分析

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目的 孤独感作为一种常见的消极情绪状态, 已日益成为一种普遍的公共卫生问题, 不仅阻碍儿童的正常社交功能, 还会为其未来的身心健康带来危害。本研究旨在根据学龄期儿童表现出的孤独感症状, 识别其潜在类别, 并对其相关影响因素作进一步探讨。

方法 采用随机整群抽样法, 于 2023 年 3-6 月使用人口学特征问卷、Conners 简明症状问卷、儿童孤独量表 (CLS)、领悟社会支持量表 (PSSS) 和儿童希望量表 (CHS), 以汕头市公立小学 2-5 年级的小学生为对象进行问卷调查。利用 Mplus 8.3 进行潜在类别分析建立亚组模型, 通过卡方检验、方差分析、LASSO 回归、多分类 logistic 回归分析探究不同类别儿童孤独感的特征及相关影响因素。

结果 本研究最终回收有效问卷共 2514 份, 有效率为 92.8% 。2514 名学龄期儿童孤独感状况可分为 4 种不同的潜在类别: 低孤独感组 (37.0%)、边缘孤独感组 (40.4%)、中度孤独感组 (10.3%) 和高度孤独感组 (12.3%)。多分类 Logistic 回归分析结果显示, 低孤独感组的 PSSS 和 CHS 得分显著高于其余三组 ($P < 0.01$); 以二年级为对照, 随着年级的升高, 儿童属于边缘孤独感组、中孤独感组和高孤独感组的可能性显著降低 ($P < 0.05$); 在边缘孤独感组中, 与低孤独感组相比, 学习成绩优秀 ($OR = 0.47$) 及良好 ($OR = 0.64$) 的儿童占比较低, 同时作为独生子女 ($OR = 0.64$) 的儿童在该组中的可能性也更低 ($P < 0.05$); 在中孤独感组中, 与低孤独感组相比,

儿童学习成绩优秀(OR=0.33)及良好(OR=0.55)和感受到父母尊重(OR=0.47)的可能性更低,中孤独感组儿童父亲为小学及以下文化程度(OR=2.08)、曾受过欺凌(OR=1.49)、曾受到过身体攻击(OR=1.64)的可能性更高($P<0.05$);而在高孤独感组中,与低孤独感组相比,儿童有4个及以上朋友(OR=0.20)、与朋友关系好(OR=0.32)、感受到父母尊重(OR=0.59)的可能性更低,曾受过欺凌(OR=1.46)和经常接受父母作业辅导(OR=1.54)的儿童更有可能属于高孤独感组($P<0.05$)。

结论 学龄期儿童的孤独感存在明显不同的分类特征,年级、学习成绩、父亲文化程度、被欺负经历、被身体攻击经历、父母家庭作业辅导、是否独生子女、朋友数量、与朋友的关系、父母尊重感、领悟社会支持和希望是其孤独感潜在类别的影响因素,学校及家长应积极识别不同类别儿童孤独感特征并及时采取有效的干预措施,以维护学龄期儿童的心理

关键词:孤独感,潜在类别分析,学龄期儿童,心理健康,影响因素

青少年家庭功能与心理健康的关系探索 —— 自尊、情绪及应激的平行中介作用

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目的 探索青少年家庭功能与心理健康的作用机制,研究自尊及情绪因素在其中的作用。

方法 采用家庭功能量表、青少年自尊评定问卷、青少年情绪弹性问卷、中学生应激源调查问卷及青少年心理健康素养评定问卷,以方便取样法于2023年在荆州市使用问卷星网络在线收集工具及线下问卷进行数据收集。采用SPSS 23.0及Process插件分别对数据进行描述性统计和中介效应分析。

结果 (1)研究回收问卷28941份,排除作答时间较短、不愿作答等无效问卷后,有效问卷26284份,有效率91%;其中男性13090人(49.8%),女性12028人(45.8%),缺失1166(4.4%),年龄 13.02 ± 1.87 。(2)在本研究的样本($N=26284$)中,

符合心理健康素养问卷有效率标准的5989人(22.8%)。(3)家庭功能量表得分 22.72 ± 7.62 ,青少年自尊评定问卷得分 63.06 ± 20.52 ,青少年情绪弹性问卷得分 40.93 ± 13.09 ,中学生应激源调查问卷得分 17.09 ± 22.10 ,青少年心理健康素养评定问卷得分 77.09 ± 21.25 。(4)对家庭功能、自尊、情绪、应激及心理健康素养进行相关分析,结果显示被试群体心理健康素养与家庭功能总分、自尊、情绪及应激都显著正相关($p<0.001$)。(5)结构方程模型拟合指数优良,在具体模型中,直接路径“家庭功能-心理健康素养”($\beta=0.4698, p<0.001$)和间接路径“家庭功能-自尊-心理健康素养”($\beta=0.2316, p<0.001$)、“家庭功能-情绪-心理健康素养”($\beta=0.1476, p<0.001$)及“家庭功能-应激-心理健康素养”($\beta=0.1009, p<0.001$)均显著。直接预测与间接预测解释率分别为49.5%与50.5%。

结论 家庭功能得分能够直接预测心理健康素养,也能够通过自尊、情绪及应激等特质间接预测心理健康素养,自尊、情绪及应激起部分中介作用。家庭功能影响心理健康素养的因素较多,从生理、社会抑或综合因素深入分析,有助于未来更多对青少年心理健康素养的干预。

关键词:家庭功能;心理健康素养;自尊;情绪;应激

家庭功能对青少年心理健康影响研究进展

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摘要:目前青少年心理健康受到国内外学者广泛关注。家庭是青少年生活的主要场所,其中家庭功能是对青少年心理健康影响因素之一。本文从家庭功能动态轨迹发展及家庭环境对青少年心理健康影响进行总结(1)家庭功能的动态轨迹发展大致可以分为4个亚类别:“低—升高组”、“低—下降组”、“高—升高组”、“高—下降组”四个亚类别。家庭功能紊乱的发展轨迹可以分为“家庭功能紊乱—低持续组”、“家庭功能紊乱—中持续组”、“家庭功能紊乱—高持续组”以及“家庭功能紊乱—升高组”四种不同类别。与“家庭功能紊乱—低持续组”的学生相比,其他组学生心理韧性得分均较低,

其中,“家庭功能紊乱—高持续组”对随后心理韧性的负面影响最大,“家庭功能紊乱—升高组”和“家庭功能紊乱—中持续组”次之。家庭功能和心理韧性呈正相关,而家庭功能和心理健康呈负相关。相对于高水平家庭功能持续组,其他家庭功能发展轨迹亚组可以通过降低青少年的心理韧性,增加其心理健康问题的风险。(2)家庭环境包括学生自觉父母间关系、自觉家庭经济条件、父母是否离异、留守情况(父、母在外地工作)等内容。女生的心理亚健康状态、情绪问题维度和品行问题维度的检出率均高于男生。自觉父母间关系不好/很差的青少年的心理亚健康状态、情绪问题维度、品行问题维度和社会适应困难维度的检出率均高于自觉父母间关系很好的青少年。自觉家庭经济条件不好/很差的青少年的品行问题维度的检出率高于自觉家庭经济条件很好/比较好的青少年。母亲在本地工作的青少年的心理亚健康状态和情绪问题维度的检出率低于母亲在外地工作的青少年。

关键词: 家庭功能,家庭环境,心理健康,青少年

Early-Life Adverse Experiences As Mediators Between Polygenic Risk Scores for Schizophrenia and Psychotic-Like Experiences Trajectories in Adolescents

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Objective Adolescent psychotic-like experiences (PLEs) exhibit diverse symptom trajectories over time and are heavily influenced by genetics. Research has shown associations between adverse childhood experiences (ACEs), polygenic risk scores (PRS), and PLEs or other psychiatric conditions. Investigating the impact of ACEs and the genetic underpinnings of heterogeneous PLEs trajectories is crucial for understanding disease etiology, prediction, and early intervention. This study aimed to explore associations between schizophrenia genetic risk, adolescent PLEs trajectories, and the potential mediating role of ACEs.

Methods This cohort study employed the Adolescent Brain and Cognitive Development (ABCD) study (N = 11,876). Included were adolescents with genetic information, ACEs assessed at baseline, and PLEs measured at up to four occasions. Trajectories were derived via growth mixture modeling of longitudinal PLEs. PRS for schizophrenia (PRS_{scz}) were computed in individuals of European ancestry. Logistic regression analysis was used to examine the association between PRS_{scz} and PLEs trajectories. Spearman correlation analysis assessed associations between PRS_{scz}, ACEs, and PLEs trajectories. Mediation analysis explored the mediating effects of ACEs on the relationship between PRS_{scz} and PLEs trajectories

Results The study included 11,876 adolescents (mean [SD] age at baseline, 118.98 [7.50] months; 6,187 males [52.43%]) from the ABCD cohort. Distinct PLEs trajectories were identified: 1) stable low (10,660, 89.83%), 2) decreasing (768, 6.47%), and 3) increasing (439, 3.70%). Logistic regression analysis indicated that PRS_{scz} and ACEs were associated with an increased risk of PLEs (OR = 1.422, 95% CI = 1.327-1.523, $p < 0.001$; OR = 1.307, 95% CI = 1.244-1.374, $p < 0.001$, respectively). Furthermore, ACEs partially mediated the association between PRS_{scz} and PLEs trajectories (proportion mediated: 11.32%)

Conclusion This cohort study revealed that PRS for schizophrenia and ACEs are both risk factors for decreasing and increasing PLEs symptom trajectories. ACEs potentially mediate the pathway from PRS_{scz} to PLEs trajectories

关键词: psychotic-like experiences, polygenic risk scores, adverse childhood experiences

“双减”前后精神科 6~16 岁患儿患病类型及病前生活事件分析

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目的 探索“双减”政策前后内蒙古自治区某精神专科医院门诊 6~16 岁首诊患儿的患病类型及病前生活事件的变化。

方法 回顾 2018 年 9 月 1 日~2022 年 8 月 31 日首次就诊于内蒙古某精神专科医院门诊的 6~16 岁患儿的诊断及病前生活事件,采用 Pearson χ^2 检验进行组间比较,采用 Bonferroni 检验进行事后检验,分析在“双减”政策实施前的 3 年和实施后的 1 年,就诊患儿的患病类型和生活事件的变化。

结果 共计 4910 例患儿纳入分析,其中 2018~2019 学年 897 例,2019~2020 学年 1262 例,2020~2021 学年 1762 例,2021~2022 学年 989 例。不同学年首次就诊的患儿诊断为非神经发育障碍的比例依次为:2018~2019 学年:69.23%,2019~2020 学年:80.90%,2020~2021 学年:80.99%,2021~2022 学年:77.35%,组内差异具有统计学意义($\chi^2=55.94$, $P<0.001$);2018~2019 学年在门诊首次就诊的非神经发育障碍患儿的比例低于其他 3 个学年($P<0.05$)。病前生活事件中只有受惩罚、丧失、学习压力事件的患儿比例在不同学年之间不完全相同,差异有统计学意义($P<0.05$)。其中 2018~2019 学年首次就诊的患儿中有学习压力的比例(14.27%)低于其后的 3 个学年(依次为 20.05%、20.43%、21.13%)($P<0.05$),而其后的 3 年之间无统计学差异。而首诊的非神经发育障碍患儿的病前生活事件中有人际压力、学习压力、适应事件的比例在不同学年之间无统计学差异($P>0.05$)。2021~2022 学年首次就诊的有受惩罚事件的患儿比例(8.24%)低于 2018~2019 学年(13.85%)和 2020~2021 学年(12.75%)($P<0.05$)。

结论 在精神科就诊的儿童青少年人数在“双减”政策实施后 1 年较前 2 年明显减少;自“双减”政策实施前 2 年起,就诊患儿中诊断为非神经发育障碍的比例开始增加,病前有学习压力事件的发生率也同时升高;而“双减”政策实施后 1 年和之前的 3 年相比,非神经发育障碍患儿中病前有学习压力事件的发生率并无差异,但受惩罚事件的发生率降低。

关键词: 儿童青少年,精神障碍,生活事件,“双减”政策

Analysis of The Diagnostic and Predictive Value of Inflammatory Factors in The Occurrence of Depression

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Objective With the development of social modernization and the increase of life pressure, the incidence rate of depression in China is rising rapidly. However, some patients have limited disease control with existing treatment options, and lack laboratory testing indicators for disease diagnosis and efficacy monitoring. Numerous studies have shown that NLRP1, NLRP3, NLRP6, NLRP12, AIM2, and NLRC4 collectively constitute the inflammasome family. Among them, NLRP3 inflammasome is widely involved in the occurrence and development of various diseases, while NLRP1 inflammasome is the earliest known inflammasome, and its regulation and role in diseases are still unclear. In recent years, studies have shown that NLRP1 inflammasomes are also expressed in glial cells and neurons. Studies have suggested that in a mouse depression model induced by long-term exposure to glucocorticoids, inflammatory complexes such as NLRP1, ASC, and Caspase-1 are expressed at higher levels in their brains. This study aims to analyze the expression of inflammatory factors in the serum of depressed patients, clarify the diagnostic and predictive value of inflammatory factors in the occurrence of depression, and explore new diagnostic methods and treatment targets for depressed patients

Methods From January 2023 to January 2024, depression patients and 40 healthy individuals who underwent physical examinations during the same period were recruited from the First Affiliated Hospital of Dali University for the study. Treat patients with depression as the diseased group and those undergoing health examinations as the healthy group. Collect general clinical data of all enrolled patients and PHQ-9 scores of patients in the diseased group before and after treatment; Simultaneously collect the serum of all enrolled patients upon admission and test the levels of immune inflammatory factors, including IL-1 β , IL-18, TNF - α , IL-10,

NLRP1, Caspase-1, ASC, etc

Results There was a statistically significant difference in IL-1 β , IL-18, TNF - α , IL-10, NLRP1, and ASC levels between the diseased group and the healthy group ($P < 0.05$), while there was no statistically significant difference in Caspase-1 levels ($P < 0.05$); Multivariate binary logistic regression found that NLRP1 and ASC levels were considered independent risk factors for depression ($P < 0.05$); ROC curve analysis shows that NLRP1 and ASC levels have good clinical predictive value for the occurrence of depression

Conclusion The levels of NLRP1 and ASC are independent risk factors for depression and have certain predictive value for the occurrence of depression

关键词: Depression; NLRP1 inflammasome; ASC.

Clinical Symptomatology As Predictors of Early Treatment Response in Adolescents and Young Adults with Major Depressive Episode

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Objective The objective of this study was to predict early-stage treatment response in adolescents and young adults with Major Depressive Episodes (MDE) undergoing inpatient treatment, focusing on identifying baseline clinical predictors

Methods This study included 218 patients aged 13-25, diagnosed with major depressive disorder (MDD) or bipolar disorder (BD), and experiencing MDE. They were recruited from Nanjing Medical University Affiliated Brain Hospital's inpatient services. Standardized clinical interviews and symptom severity scales were used for diagnosis and assessment. Participants underwent a two-week treatment regimen with medications such as lithium and quetiapine, standardized to real-world clinical practice. Treatment response was primarily evaluated by the change in the Hamilton Depression Rating Scale (HAMD) from baseline

Results Baseline assessments showed that early-

stage treatment responders had higher depressive symptom severity but lower psychiatric symptom severity compared to non-responders. Post-treatment, both groups exhibited symptom improvement, with responders showing significantly greater reduction. Logistic regression analysis revealed that high baseline HAMD scores and low thought disorder scores from the Brief Psychiatric Rating Scale (BPRS) were significant predictors of positive treatment response

Conclusion The study identified significant baseline predictors of treatment response in young patients with MDE, highlighting the potential of using clinical symptomatology to guide early intervention strategies. These findings suggest a basis for enhancing treatment protocols in clinical settings to improve outcomes for adolescents and young adults experiencing MDE. Further research is needed to validate these predictors across larger and more diverse populations

关键词: major depressive episodes, HAMD-17, early-stage treatment response, adolescents

Lipid Metabolic Characteristics in Adolescents with Major Depressive Disorder: An Integrated Metabolomic Approach

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Objective The objective of this study is to investigate the role of lipid metabolism in the pathophysiology of adolescents with major depressive disorder (MDD). The study aims to identify alterations in plasma lipid profiles and explore tissue-specific lipid metabolic changes, which could potentially inform the development of new therapeutic approaches for MDD

Methods An integrated metabolomic analysis was conducted, beginning with a non-targeted approach to identify changes in plasma lipid profiles of adolescents with MDD. This was followed by a targeted lipid metabolomic study to confirm specific lipid species and affected pathways. Additionally, an animal model was

utilized to further investigate tissue-specific lipid metabolic changes associated with MDD

Results The non-targeted metabolomic analysis revealed alterations in plasma lipid profiles in adolescents with MDD. The subsequent targeted study confirmed these findings and identified specific lipid species and pathways that are affected. The use of an animal model provided further evidence of tissue-specific metabolic disturbances related to lipid metabolism in the context of MDD

Conclusion This study's findings provide valuable insights into the complex metabolic underpinnings of MDD in adolescents, particularly highlighting the significance of lipid metabolism. Understanding these metabolic disturbances may contribute to the development of novel therapeutic strategies for adolescents suffering from MDD

关键词: Adolescent with Major Depressive Disorder, Lipid Metabolism, Metabolomics, Non-Targeted Metabolomics, Targeted Metabolomics

青少年精神障碍患者家庭照顾困境的质性研究

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目的 探讨青少年精神障碍患者家庭照顾困境及需求,为制订针对性服务对策提供参考。

方法 采用目的抽样法选取青少年精神障碍患者家庭照顾者 20 例,进行半结构式深度访谈,采用 Colaizzi 7 步分析法分析、归纳、提炼主题。

结果 提炼出 5 个核心主题及 12 个亚主题:一是照顾者心身及家庭压力大,包括巨大的心理压力,如对孩子病情的担忧及自责,病耻感,照顾过程中精力不足;此外是巨大的家庭经济压力,来源于患者就医导致的医疗支出以及由于照顾误工影响家庭收入。二是照顾知识技能储备不足,疾病知识缺乏,对儿童青少年身心发展规律不了解,不能应对日常康复过程中各种状况,亲子沟通技巧不足,难以建立良好的亲子关系,日常亲子冲突多且应对困难。三是精神科药物副作用多,照顾者担心药物对孩子

身体造成伤害,部分患者不愿意吃药,照顾者不知如何应对。四是患者康复期间存在诸多社会适应问题,如作息紊乱、复学困难、手机及游戏成瘾、社交困难等,给照顾者造成较大心理负担。五是照顾者对专业服务的需求大,他们希望能得到可及的心理咨询及健康指导服务及面向家庭的学习培训项目。

结论 需重视照顾者心理困境,提高照顾者对青少年精神障碍的认知及应对能力,提供多样化常态化心理健康支持及亲子教育服务,以提高家庭照顾者照顾能力及心理健康水平。

关键词: 青少年, 精神障碍, 照顾者, 家庭照顾困境, 质性研究

艾司西酞普兰联合焦点解决短程治疗对青少年抑郁患者负性情绪、认知功能的影响

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目的 分析艾司西酞普兰联合焦点解决短程治疗对青少年抑郁患者负性情绪、认知功能的影响。

方法 选取 2021 年 12 月至 2023 年 6 月在杭州市第七人民医院就诊的 60 例抑郁症青少年患者,根据随机数字表法分为观察组(30 例)和对照组(30 例)。对照组使用艾司西酞普兰(规格:5 mg,国药准字:J20100165,丹麦灵北药厂),起始剂量 10 mg/d,1 周后根据患者的个体反应,可以增至 20 mg/d,早晨或晚上口服。服药 1 个月。观察组在对照组治疗的基础上联合焦点解决短程治疗。对比两组患者的临床疗效、负性情绪、认知功能、不良反应。

结果 治疗后 2~6 周两组患者健康问卷(PHQ-9)评分均降低,观察组较对照组更优(均 $P < 0.05$);两组的汉密尔顿抑郁量表(HAMD)评分、广泛性焦虑自评量表(GAD-7)评分均降低,观察组较对照组更低(均 $P < 0.05$);两组的精神状态评定量表(MMSE)评分均上升,观察组较对照组的认知功能更优(均 $P < 0.05$)。与对照组相比,观察组的不良反应总发生率更低($P < 0.05$)。

结论 艾司西酞普兰联合焦点解决短程治疗不仅可缓解青少年抑郁患者的焦虑和负面情绪,还能提高患者的认知功能,降低不良反应发生率,值得在临床推广应用。

关键词:艾司西酞普兰;焦点解决短程治疗;抑郁;负性情绪;认知功能

神经调控技术联合认知治疗快速抑制青少年非自杀性自伤

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目的 现阶段青少年因学习问题、家庭问题、社会支持问题等多种因素导致焦虑抑郁,进而产生非自杀性自伤行为的情况逐年递增,而父母多数不愿意接受药物治疗,考虑到神经生物学影响,在常规认知治疗干预的基础上利用磁脉冲、微电流作用于颅脑中枢或外周神经系统,调节神经系统兴奋或抑制活动,对来访者进行联合干预,用以在短时间内快速抑制不良行为及情绪。

方法 实验法、问卷调查法。在门诊患者中选取存在非自杀性自伤行为并同时存在抑郁、焦虑情绪的且不愿意使用药物治疗的青少年患者。选取实验组 25 人,对其进行经颅磁刺激治疗辅助认知治疗,另外选取 25 人为对照组,仅做相应次数的认知治疗。选用焦虑自评量表(SAS)、抑郁自评量表(SDS)、青少年自杀意念量表(PANSI)、自杀态度测评量表(QSA)四个测评量表,对干预未实施、联合干预实施一周后、联合干预实施三周后分别进行问卷评估。

结果 在未做联合干预前,实验组与对照组在测评问卷的分值上,差异均无统计学意义($P>0.05$);干预后,观察组患者的 SAS、SDS 评分显著低于对照组;自杀态度和意念评分显著低于对照组,差异均有统计学意义($P<0.05$)。表明联合干预方式可以在时间进程上更快速的起到有效的行为控制作用。

结论 神经调控技术联合认知治疗对青少年非自杀性自伤行为可以起到良好的控制和改善作用,且经实证研究表明,联合干预法可以有效抑制青少年的自杀想法,也可以起到很好的情绪调节作用。

关键词:焦虑,抑郁,非自杀性自伤,青少年,经颅磁刺激治疗

生活习惯的改变对初中生自伤行为的影响:一项纵向研究

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目的 本研究旨在探讨生活习惯的变化对青少年自伤行为的影响,为家庭和学校提供促进青少年心理健康发展的理论依据,并据此制定更为有效的预防与干预措施。

方法 研究采用问卷调查法,对荆州区两所学校在 2021 年是初一的学生和 2023 年是初三的学生的心理健康状况进行了追踪调查,内容包括一般人口学资料问卷及一些标准化问卷。通过姓名、学号等个人信息精确匹配两份问卷数据,以 $P<0.05$ 为统计学差异的显著性标准。

结果 (1)共匹配 666 份调查问卷,有效问卷 585 份,有效率 87.84%。男生 292 人(49.91%),女生 293 人(50.09%);2021 年初一学生平均年龄 12.2 ± 0.43 岁,2023 年初三学生平均年龄 14.2 ± 0.48 岁。(2)2021 年有 129 名学生发生自伤行为,检出率为 22.05%。男生检出自伤 43 人(14.73%)、女生检出 86 人(29.35%);2023 年 50 名学生发生自伤行为,检出率为 8.55%。男女生分别检出自伤 17 人(5.82%)、33 人(11.26%),两次调查的男女生自伤检出率均有统计学差异($\chi^2=18.577, 5.658$);(3)两年内自伤行为消失 105 人(81.40%)、新增自伤行为 26 人(5.70%)、持续自伤 24 人(18.60%)、一直无自伤行为 430 人(73.50%)。(4)单因素分析:运动习惯的改变($\chi^2=9.353$)、网络依赖行为的改变($\chi^2=20.378$)、网络依赖行为程度的改变($\chi^2=16.837$)、失眠程度的改变($\chi^2=42.320$),对初中生发生自伤行为的影响有统计学差异(P 均 <0.05);(5)二元 logistic 回归分析:①从不运动变为运动($OR=0.19, 95\% CI=0.06-0.61$)、运动者的运动频率不变($OR=0.10, 95\% CI=0.02-0.54$)和运动频率增加($OR=0.17, 95\% CI=0.04-0.73$)与自伤检出率下降有关, P 值均有统计学差异。②无网络依赖行为变为有网络依赖行为($OR=2.97, 95\% CI=1.10, 8.02$)、长期网络依赖($OR=2.66, 95\% CI=0.94, 7.57$)、长期失眠($OR=11.74, 95\% CI=2.67, 51.59$)、心理压力增加($OR=3.47, 95\% CI=1.34, 8.96$)与初中生的自伤检出率

增加有关, P 值均有统计学差异。

结论 本研究发现, 青少年保持运动习惯、运动频率增加与自伤检出率下降有关; 而网络依赖行为、失眠及心理压力的增加与自伤检出率增加有关。这些发现强调了培养健康生活习惯在预防青少年自伤行为中的重要性。

关键词: 荆州区; 初中生; 生活方式; 非自杀性自伤

Clinical Features and Influencing Factors of Depressive Adolescents with Non-Suicidal Self-Injury Behaviors

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Objective Non-suicidal self-injury (NSSI) behaviors refer to individuals' intentional behaviors to destroy their bodies, which are still not recognized by society even without suicidal intent. Depending on the definition of NSSI and adopted evaluation tools, the lifetime prevalence of self-reported NSSI among adolescents varies from 7% to 66%, they are becoming a serious global public health problem. This study investigates the clinical features and influencing factors of depressive adolescents with non-suicidal self-injury (NSSI) behaviors

Methods 203 hospitalized depressive adolescents were grouped according to with or without NSSI behaviors. Their clinical features were compared through a self-made questionnaire of clinical data. The risk factors of NSSI behaviors were determined by a multivariate logistic regression model

Results The proportions of females in the NSSI group, unemployed mothers, and those distrusting their mothers were higher than the other group. Introverted irritability (OR=1.467, 95% CI 1.254-1.716), obsessive symptoms (OR=2.290, 95% CI 1.537-3.413), and overt aggressive behavior (OR=1.180, 95% CI 1.093-1.274) are the risk factors of NSSI behaviors. The mother having a job (OR=0.087, 95% CI 0.019-0.389) is a protective factor

Conclusion There are gender differences in depressive adolescents with NSSI behaviors, which are also related to mother's occupation, introverted irritability, obsessive symptoms, and overt aggressive behavior

关键词: Non-suicidal self-injury; Depression disorder; Adolescent; Influencing factors

伴与不伴非自杀性自伤的青少年抑郁障碍患者临床特征及应对方式比较

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目的 非自杀性自伤是指个体直接、反复对机体某个组织产生伤害行为, 此类行为虽然无法直接让人死亡, 但是也不被大众所接受。目前为止, 由于自伤行为界定的时间、构成样本及调查方法等不同, 所得出的结果也不同, 因此不能得出一个明确的自伤行为发生率, 相关研究表明, 中国青少年中发生 NSSI 者大约占比 5.4%-23.2%, 而在青少年抑郁障碍患者的发生率更高, 大约为 44%-61.2%。本研究旨在通过现状调查, 探讨青少年抑郁障碍患者 NSSI 的检出率、实施方式、发生原因、目的、外部刺激事件等及伴与不伴 NSSI 的青少年抑郁障碍患者临床特征、应对方式、心理防御方式的差异性, 为实施针对性的干预措施、减少青少年抑郁障碍患者发生 NSSI 提供理论依据。

方法 纳入 193 例 2020 年 12 月至 2022 年 5 月在山东省精神卫生中心就诊的青少年抑郁障碍患者, 根据是否伴有 NSSI 行为进行分组, 使用汉密尔顿焦虑量表 (HAMA)、汉密尔顿抑郁量表 (HAMD)、症状自评量表 (SCL-90)、心理防御方式量表 (DSQ)、应对方式量表 (CSQ)、激惹、抑郁和焦虑自评量表 (IDA) 及自制一般情况调查表以收集临床相关资料。比较两组患者各项资料, 从而发现伴 NSSI 组患者自伤方式及频率、抑郁焦虑程度及其应对防御方式等的特点。

结果 NSSI 组女性比率、对母亲不信任比率较高, 且抑郁、焦虑、激惹程度更重, 更多使用不成熟应对方式 ($P<0.05$); 不成熟防御机制因子、退避因子对患者实施 NSSI 有正向预测作用 ($P<0.05$)。

结论 青少年抑郁障碍患者伴 NSSI 行为存在

性别差异, 且与不成熟型心理防御机制及退避的应对方式相关。

关键词: 青少年; 抑郁障碍; 非自杀性自伤; 临床特征; 应对方式

Non-suicidal Self-injury in Adolescent Depression Patients

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Objective This review aims to explore the pathological mechanism, related influencing factors and treatments of non-suicide self-injury (NSSI) in adolescent depression patients

Methods 1 Data Source

The experimental data were obtained from database retrievals (CNKI, VIP, Wanfang, et al). The retrievals range from the establishment of the databases to April 2023.

2 Retrieval Strategy

Search formula: non-suicide self inquiry * [Tianb] AND Depressive Disorder * [Tianb] AND adult [Tianb].

3 Inclusion Criteria

The literature is cross-sectional or prevalence study; The study subjects are adolescents 12-18 years old. Their depressive disorders meet the diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders (5th edition) (DSM-5) or the International Classification of Diseases (10th edition) (ICD-10), and their NSSIs meet the diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders (5th edition) (DSM-5).

4 Exclusion Criteria

Literature with incomplete data or information; Repeated publications by the same author; Research subjects accompanied by other mental disorders or severe physical diseases.

Results 52 articles that meet the standards were selected

Conclusion Adolescent NSSI has become one of the most concerned public health problems around the

world. However, because the pathogenesis is complex, further research is essential. Moreover, current research on NSSI is mainly cross-sectional, and further longitudinal studies are necessary to probe into the outcomes of NSSI adolescent patients

关键词: non-suicidal self-injury; adolescent depression; influencing factors; pathological mechanism

团体绘画治疗在青少年抑郁症患者情绪与睡眠中的应用

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目的 探讨团体绘画治疗在青少年抑郁症患者不良情绪和睡眠中的应用效果。

方法 2021年11月-2023年6月选择100例青少年抑郁障碍患者, 随机分为常规组和观察组, 各50例。常规组进行精神科常规护理干预, 包括为患者提供有关抑郁症的知识, 使患者自身认知度提高; 主动与患者相互沟通, 为患者提供心理安抚方法等; 加强与陪护家属的沟通交流, 为患者提供更多的家庭支持; 对患者及家属进行药物相关知识的宣教, 并告知患者按时服药的重要性。观察组在常规组的基础上增加8次团体绘画治疗, 绘画主题包括: 水粉自由画、曼陀罗静心画、雨中人、树木画、主题画-勇敢的我、多重接龙形式的随意画、生命线和理想摩天轮。每次绘画结束后, 鼓励小组成员进行作品回顾, 对作品内容讲解, 护理人员再根据内容帮助患者分析问题, 共同探讨解决方式。干预前和干预4周后分别使用汉密尔抑郁量表 (HAMD 量表)、汉密尔顿焦虑量表 (HAMA 量表) 对患者的抑郁、焦虑情绪进行评估, 匹兹堡睡眠质量指数量表 (PSQI 量表) 评估患者的睡眠状况。使用 SPSS 25.0 软件进行数据分析, 计量资料以 ($\bar{x} \pm s$) 描述, 组间比较采用独立样本 t 检验, 以 $P < 0.05$ 表示差异有统计学意义。

结果 干预前, 常规组与观察组患者 HAMD 量表、HAMA 量表和 PSQI 量表得分差异不具有统计学意义 ($P > 0.05$)。干预后, 常规组 HAMD 量表得分为 (9.23 ± 0.94) 分高于观察组 (5.67 ± 0.67) 分, 差

异具有统计学意义 ($P < 0.05$)；常规组 HAMA 量表得分为 (10.34 ± 0.95) 分高于观察组 (6.02 ± 0.94) 分，差异具有统计学意义 ($P < 0.05$)；常规组 PSQI 量表得分为 (13.66 ± 3.26) 分高于观察组 (5.32 ± 1.22) 分，差异具有统计学意义 ($P < 0.05$)。

结论 绘画治疗以笔和画纸为媒介，帮助患者将内心无法言说的焦虑、抑郁情绪，通过绘画作品表达出来，既能帮助患者表达不良情绪，又能帮助患者发泄情绪。

关键词：绘画治疗；护理干预；青少年；抑郁症

奥尔夫音乐治疗对改善儿童孤独症谱系障碍症状的临床研究

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目的 探讨奥尔夫音乐治疗对儿童孤独症谱系障碍 (autism spectrum disorder, ASD) 发育情况和临床症状的改善效果。

方法 在 2023 年 4 月至 2023 年 9 月开展随机、单盲、对照试验，招募了 68 名 2 至 6 岁的 ASD 儿童，随机分配到研究组和对照组，每组 34 例。研究组在维持原有常规康复治疗 (行为疗法-结构化教学-社交发展) 基础上增加奥尔夫音乐治疗，对照组仅接受常规康复治疗，干预 8 周。研究组接受每周 5 次的奥尔夫音乐治疗，每次治疗持续 40 分钟，由专业音乐治疗师进行指导，包括唱歌、乐器演奏和音乐聆听等。在基线和干预后，使用 Gesell 发育诊断量表 (GDS)、儿童孤独症评定量表 (CARS) 和孤独症儿童行为量表 (ABC) 评估 ASD 儿童的发育情况和临床症状。

结果 在治疗前，两组 GDS、CARS、ABC 得分对比未见统计学差异 (均 $P > 0.05$)。治疗后，治疗后两组儿童 GDS 量表适应性行为、粗大、精细、语言及个人-社会等 5 大能区评分均较治疗前提升，且研究组在个人-社会能区评分明显优于对照组 ($P < 0.05$)；两组在 ABC 评分总分均较治疗前降低，且研究组中交往、语言因子评分效果优于对照组 ($P < 0.05$)。

结论 奥尔夫音乐治疗联合常规康复治疗能改

善孤独症儿童的发育水平，提高社会生活能力，有利于孤独症儿童的预后。

关键词：孤独症谱系障碍，奥尔夫音乐，干预

感知社会支持对青少年抑郁障碍患者智能手机成瘾的不同影响：孤独感和表达抑制的作用

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目的 青少年智能手机成瘾 (smartphone addiction, SA) 日益严重，尤其是在患有抑郁症的青少年中。本研究旨在探讨青少年抑郁障碍患者感知社会支持与 SA 的关系，并区分家庭支持与朋友/重要他人支持对 SA 的不同影响。同时，本研究还将探讨孤独感及表达抑制在感知社会支持与 SA 关系中的作用。

方法 本研究选取 2341 名 12-18 岁的青少年抑郁障碍患者作为研究对象。通过多维感知社会支持量表 (MSPSS)、孤独感量表 (UCLA)、手机成瘾指数 (MPAI) 和情绪调节问卷 (ERQ) 等量表，测量研究对象的感知社会支持、孤独感、手机成瘾和表达抑制水平。采用结构方程模型探讨感知社会支持对 SA 的预测作用；还将探讨在不同来源社会支持与孤独感关系中，孤独感的中介作用和表达抑制的调节作用。

结果 1. 感知社会支持总分对 SA 具有显著的正向预测作用；2. 孤独感在感知社会支持与 SA 的关系中起完全中介作用，其中家庭支持对 SA 有显著负向预测作用，朋友/重要他人支持对 SA 有显著正向预测作用；3. 表达抑制在朋友/重要他人支持与孤独感之间的关系中表现出显著的调节作用。

结论 本研究提示家庭支持和朋友/重要他人支持对抑郁青少年 SA 的影响机制不同，研究结果有助于理解抑郁青少年 SA 的影响因素，并为开发针对性的干预措施提供理论依据。具体来说，针对来自家庭的支持不足，可以通过加强家庭支持来降低青少年的孤独感，从而减少 SA。而对于来自朋友/重要他人的社会支持不足，则需要关注表达抑制的作用，可以通过教授情绪表达技巧，鼓励青少年积

极表达情绪,从而降低孤独感,减少对智能手机的依赖。

关键词:抑郁症青少年,智能手机成瘾,感知社会支持,孤独感,表达抑制

青少年抑郁症的心理社会因素

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目的 探索青少年抑郁症患儿心理社会相关因素。

方法 比较 108 例青少年抑郁症和 280 例健康对照结果。采用儿童抑郁量表(CDI) 评定抑郁严重程度、多伦多述情障碍 20 条目量表中文版(TAS-20)、中文版儿童用家庭功能评估量表(FFAS-C)、青少年生活事件量表(ASLEC)、应付方式问卷(CSQ)和领悟社会支持量表(PSSS)对两组被试进行评定。

结果 (1)青少年抑郁症组 CDI 总分及各因子分、TAS-20 总分及因子分、FFAS-C 总分和各因子分均显著高于正常对照组 ($P<0.001$); 抑郁症组 PSSS 总分及因子分均显著低于对照组 ($P<0.001$)。抑郁症组 CSQ 量表自责、退避因子分高于对照组 ($P<0.001$), 求助、合理化因子分低于对照组 ($P<0.01$); 青少年抑郁症组 ASLEC 量表学习压力、人际关系、健康适应因子分均高于对照组 ($P<0.005$), 受惩罚、丧失和其他因子低于对照组 ($P<0.01$), ASLEC 总分两组无差异 ($P=0.419$)。 (2) 抑郁症组 TAS-20 总分高于 60 的百分显著高于对照组 (88.2% vs 26.1%, $\chi^2=146.37, P=0.000$); 抑郁症组 FFAS-C 总分异常比例 48.3%, 明显高于对照组的 13.3% ($\chi^2=68.204, P<0.05$)。 (3) 相关分析显示: 青少年抑郁患儿 CDI 总分和 TAS-20 难以识别情感、难以描述情感及 TAS-20 总分均正相关 ($P<0.01$)。青少年抑郁 CDI 总分和 FFAS-C 量表家庭优势、家庭困难、家庭沟通因子分和 FFAS-C 总分均正相关 ($P<0.05$)。青少年抑郁 CDI 总分和 PSSS 量表总分及各因子分均负相关 ($P<0.05$)。青少年抑郁 CDI 总分和 ASLEC 量表的人际关系、学习压力健康适应因子均正相关 ($P<0.01$)。

结论 青少年抑郁症存在述情障碍问题和家庭功能问题、学习压力和人际关系压力以及健康适应

压力高及社会支持少。青少年抑郁症症状严重程度和述情障碍及家庭功能、负性生活事件正相关、和社会支持负相关。

关键词: 青少年; 抑郁症; 心理社会因素

核磁共振正电子发射断层扫描在孤独症谱系障碍中的应用: 研究进展和未来方向

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目的 孤独症谱系障碍(ASD)是一种严重的发育障碍类疾病,其特征是社交缺陷,狭窄的兴趣和重复刻板的行为,目前对于 ASD 的病因学分析已经进入了新的阶段,如核磁共振正电子发射断层扫描(MR-PET)等技术有助我们更好地理解 ASD 的病理生理机制,为疾病的诊断和治疗带来了新的希望。

方法 我们检索了来自 PUBMED 和 GOOGLESCHOLAR 的文章,检索表达式: (“mr”or“magnetic resonance”or“mri”or“magnetic resonance imaging”and (“pet”or“Positron emission tomography”) and (“asd”or“Autism spectrum disorder”or“child autism”or“infantile autism”))

结论 目前关于孤独症谱系障碍的 MR-PET 的研究尚处于起步阶段,既往的研究一经发现 ASD 患者在脑葡萄糖代谢、脑血流灌注、神经递质系统异常、中枢神经系统炎症的病理生理变化具有重要意义,新的技术如机器学习的应用能产生更精确地 MR-PET 图像,未来进一步引入人工智能、机器学习等方法,引入更多的放射性配体和靶标将有助于我们加深对于疾病的理解,对未来的诊断和治疗发挥作用。

关键词: ASD, MR-PET, 机器学习

探讨童年创伤经历和抑郁青少年非自杀性自伤行为的因果关联 ——基于双重机器学习的异质性分析

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目的 非自杀性自伤 (non-suicidal self-injury, NSSI) 是指在缺乏明确自杀意图的情况下, 个体故意、反复伤害自己身体的行为。现有理论与实证研究均指出, 童年时期的创伤经历对于青少年 NSSI 行为的形成与发展具有深远影响。然而, 目前针对这一主题的异质性研究尚显不足。本研究旨在深入剖析童年创伤经历与 NSSI 之间的因果关系, 并探讨不同群体间的异质性特征。

方法 本研究采用覆盖全国的多中心抑郁青少年数据集, 包含了 2500 名 12-18 岁的青少年截面数据。使用双重机器学习模型估计不同类型童年创伤对抑郁青少年 NSSI 行为的因果效应。借助 SHapley Additive exPlanations 模型量化每个特征对于预测结果的贡献。通过 Policy Tree 模型得到异质性结果。

结果 双重机器学习模型表现出良好的泛化性能, 儿童期遭受的躯体忽视与抑郁青少年 NSSI 行为之间存在显著的负向因果效应: 在训练集上得到的平均干预效应 (ATE) 为 -0.089 (置信区间 [-0.134, -0.043], $P=0.0$), 在测试集上的 ATE 为 -0.088 (置信区间 [-0.136, -0.040], $P=0.0$)。而躯体虐待、情感忽视、情感虐待及性虐待与抑郁青少年 NSSI 行为之间不存在显著因果效应。教师评价重视程度、是否留守和自我感觉家庭年收入为对结果贡献最重要的特征。异质性分析显示, 非留守儿童, 或对老师评价较为重视的留守儿童中, 经历童年躯体忽视的抑郁青少年 NSSI 行为有所减少。

结论 本研究突显了早期环境因素在心理健康发展中的重要性, 并为针对特定群体的干预策略提供了依据, 展现了因果机器学习方法在精神医学研究领域的应用前景。

关键词: 童年创伤经历, 非自杀性自伤, 双重机器学习, SHAP, 抑郁青少年

青少年非自杀性自伤患者家庭互助支持模式干预方案的构建研究

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目的 构建科学、系统的青少年非自杀性自伤患者家庭互助支持模式干预方案, 为青少年非自杀性自伤患者的家庭管理提供实践指导。

方法 采用描述性现象学研究方法, 通过目的抽样法对 18 名青少年非自杀性自伤患者家庭照顾者进行半结构式访谈, 了解其参与家庭互助支持项目的行为意向及需求, 明确其参与该项目的促进和阻碍因素。采用文献分析法, 检索国内外数据库关于家庭互助支持模式的干预性文献, 为青少年非自杀性自伤患者家庭互助支持模式的干预方案初稿提供指导; 运用德尔菲法对方案初稿进行两轮函询, 汇总专家意见后对原条目进行修改, 形成青少年非自杀性自伤患者家庭互助支持模式的干预方案终稿。

结果 根据 18 名青少年非自杀性自伤患者家庭照顾者的质性访谈, 提炼出 3 个主题和 11 个副主题, 主题包括: 照顾者的需求、参与家庭互助支持活动的促进因素、参与家庭互助支持活动的阻碍因素。文献检索最终纳入 12 篇文献, 全部为英文文献。德尔菲函询问卷有效回收率为 92.31%、100%, 专家权威系数为 0.867、0.873。两轮函询的肯德尔和谐系数 (W) 检验均具有统计学意义 ($P<0.001$), 第一轮函询肯德尔和谐系数值为 0.188~0.250, 第二轮函询肯德尔和谐系数值为 0.301~0.410, 最终形成青少年非自杀性自伤患者家庭互助支持模式的干预方案, 包括青少年非自杀性自伤患者家庭照顾者志愿者遴选、培训、考核与维持以及志愿者开展家庭互助支持活动的整体方案。

结论 大多数青少年非自杀性自伤患者家庭照顾者缺乏青少年非自杀性自伤行为的信息知识与照护技能, 对专业知识、照顾技能、情感支持等存在诸多需求, 对参与家庭互助支持项目持肯定态度, 但也存在部分阻碍因素。本研究根据质性访谈结果, 结合文献分析初步拟定青少年非自杀性自伤患者家庭互助支持模式的干预方案初稿, 运用德尔菲法形成干预方案终稿。该方案具有科学性与可行性, 可用于指导青少年非自杀性自伤患者家庭间互助支持的临床实践。

关键词: 非自杀性自伤; 青少年; 家庭照顾者; 家庭互助支持

伴与不伴对立违抗的 ADHD 患儿的症状严重

程度及其父母对家庭的不满程度的研究

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目的 探讨伴有对立违抗障碍的ADHD患儿相较于不伴有对立违抗障碍的ADHD患儿其多动症状以及其父母对于家庭亲密度与适应性的差异。

方法 我们收取2021年-2023年于安徽省精神卫生中心儿童青少年科门诊就诊的首诊ADHD患儿88例,根据范德比尔特量表将ADHD分为对立违抗组(24例)和不伴对立违抗组(64例)的两组,并且用SNAP-IV问卷调查的总分作为其ADHD患儿多动症状严重程度以及对他们的损害的评判标准,将患儿家庭亲密度和适应性量表(FACESII-CV)中的理想与现实亲密度与适应性差值用以评判患儿父母对家庭的不满程度,将分组后的数据导入SPSS26程序进行分析,采用独立样本t检验的方式,分析伴或不伴有对立违抗症状的ADHD患儿其多动症状严重程度以及他们父母对家庭的亲密度与适应性的不满程度是否有无显著性的统计学差异。

结果 伴有对立违抗组的SNAP-IV分值显著高于不伴有对立违抗症状组($p < 0.01$),并且对立违抗组父母对其家庭亲密度不满程度显著高于不伴对立违抗组($p < 0.05$),但在对家庭适应性的不满程度上两组无统计学差异($p > 0.05$)。

结论 伴有对立违抗障碍症状的ADHD患儿其表现出的多动症状严重程度以及对他们所造成的损害相较于不伴有对立违抗症状的ADHD患儿更加严重,同时伴有对立违抗的患儿的父母对家庭亲密度的不满相较于不伴有对立违抗的父母更加强烈。

关键词: ADHD、对立违抗、SNAP-IV、家庭亲密度、家庭顺应性

自伤青少年压力情境下内隐自我认知探究

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目的 本实验旨在通过内隐联想测验(IAT)实验范式探究自伤青少年在经历高、低压力的社会情

境后,内在不良自我认知图式的改变。

方法 正式实验开始前,先采用《青少年自我伤害行为问卷》在学校进行大规模被试筛查,然后基于自愿原则对符合条件的被试进行招募,对报名的被试进行一对一结构化访谈,再次确认其是否符合条件。最终招募有自伤行为的青少年93人、无自伤行为的青少年97人,共190名被试。

实验采用2(被试类型:自伤/非自伤)×2(情境类型:高压/低压)×4(评价维度:消极/我、积极/他、积极/我、消极/他)的三因素混合设计。首先,本研究采用改编过的蒙特利尔社会应激测试,给被试制造高/低不同的压力情境,自伤/非自伤被试被随机分配到两种不同的压力条件下,待被试经历压力情境后,需填写情绪感受量表,以评估其情绪状态。最后,被试还需完成内隐联想测试(IAT)。本IAT测验中,将“我”与积极词、“他”与消极词的联结设定为相容任务,而“我”与消极词、“他”与积极词的联结设定为不相容任务。每位被试均需完成高或低压力情境,及IAT测试。

因变量包括:(1)被试执行相容任务与不相容任务的反应时均值;(2)被试完成IAT任务的效应指标——D值,D值大于0说明被试对“我”持积极的内隐自我认知评价,D值小于0说明被试对“我”持消极的内隐认知评价。(3)4组被试在4类不同评价维度上的平均反应时。

结果 结果显示:(1)所有组别中,相容任务的反应时显著小于不相容任务,被试对“我”与积极词、“他”与消极词的联结设定反应时间更短。(2)被试类型主效应显著,自伤被试对“我”-消极词任务反应时显著低于非自伤被试,情境类型的主效应不显著,但情境类型与被试类型的交互效应显著,即在低压力社会情境下,自伤与非自伤组在评价维度上的反应时无明显差异;但在高压情境下,自伤被试对“我”-消极词任务的反应时显著低于非自伤被试。

结论 结果表明:(1)被试在内隐认知中普遍倾向于认为自我是积极的,而他人是负面的。(2)但在高压情境下,自伤青少年迅速转变对自我的认知,产生更高的自我消极认知,以及更高的负面情绪体验,不良的自我认知及负面情绪或在压力事件与青少年自伤行为中起重要介导作用。

关键词: 自伤行为;不良自我认知图式;压力性生活事件;青少年

The Diagnosis Utility of Central Symptoms for Major Depressive Disorder in Adults with Attention-deficit/hyperactivity Disorder : a Network Analysis

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Objective The screening and diagnosis of Major Depressive Disorder (MDD) in adults with Attention-deficit/hyperactivity disorder (aADHD) is important for both clinical intervention and the exploration of the underlying pathogenesis. Instead of the use of routine scales containing all related items, we try to use network analyses to identify the central symptoms which could present the MDD features and support the clinical MDD diagnosis in aADHD effectively, and whether the central symptom related imaging feature could reflect the MDD-related neurobiological alteration successfully

Methods We constructed a network of ADHD and MDD symptoms assessed via the ADHD Rating Scale (ADHD-RS) and Self-rating Depression Scale (SDS) in 433 adults with ADHD (aADHD). Central depressive symptoms were sequenced based on their Expected Influence (EI) and were used to built the diagnostic model. Receiver operating characteristic curves (ROCs) were built to compare their diagnostic utilities. Then, we calculated the cutoff of central symptoms in the optimal model and compare brain functions between two groups defined using this cutoff

Results Five items were defined as the central symptoms, including “I feel down-hearted and blue” (EI=1.684), “I feel more irritable than usual” (EI=1.641), “I still enjoy the things I used to”(trans-item, EI=1.045), “My mind is as clear as it used to be”(trans-item, EI=0.832) and “I feel that others would be better off if I were dead” (EI=0.820). ROCs analyses supported that these five central symptoms should be included in the diagnostic model. Under the cutoff of 14, the diagnostic utility of this 5-item model was no worse than the 20-item model ($z = -0.453, p = 0.650$), even showing higher specificity. Based on this cutoff, aADHD+MDD patients (5-items score ≥ 14) showed increased ALFF and

ReHo in the left anterior cingulate compared to aADHD-MDD patients. Correlation analysis showed a significant positive correlation between the ALFF and ReHo value of left anterior cingulate and the 20-items SDS score, as well as 5-items central symptom score

Conclusion Central depressive items identified using network analyses could predict the MDD diagnosis in aADHD effectively. In addition, these central items could be used to detect MDD-related brain functional alteration. For future study and clinical evaluation, these five symptoms may be used as prior diagnostic indicators for MDD in aADHD and greatly promote the efficiency of screening MDD in aADHD

关键词: Adults with Attention-deficit/hyperactivity disorder, Major Depressive Disorder, network analysis, diagnostic utility

儿童青少年精神障碍患者家长自杀倾向及危险因素分析

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目的 儿童青少年日益增长的心理行为问题,已成为关系国家和民族未来的重要公共卫生的一大挑战,给个人和家庭带来严重的负面影响。临床医务工作者在对儿童青少年精神障碍患者的诊疗时,极易忽视患儿的家长的心理健康状况。极少有研究对儿童青少年精神障碍家长的心理健康问题及自杀风险进行调查。本研究拟调查儿童青少年精神障碍家长自杀倾向,探讨其危险因素,并构建预测模型。

方法 采用横断面调查的方法,收集2022年8月至2023年7月就诊于安徽省内两所医院(安徽医科大学附属巢湖医院和宿州市第二人民医院)共299名儿童青少年精神障碍家长的社会人口学资料,并采用自杀相关的标准化问题、患者健康问卷-9(PHQ-9)以及多伦多述情障碍量表(TAS-20)分别评估调查对象自杀倾向、抑郁症状及述情障碍的程度。

结果 自杀倾向的总体检出率为15.4%,其中自杀意念、自杀计划和自杀未遂检出率分别为11.0%、3.3%和8.0%。Logistic回归分析结果显示,躯体疾

病史、抑郁症状、述情障碍以及情感辨别不能因子与较高的自杀倾向风险有关(均 $P < 0.05$)。基于回归分析结果,构建预测患儿家长自杀倾向风险预测模型,并绘制受试者工作特征(ROC)曲线下面积(AUC)。结果显示,抑郁症状和述情障碍两项联合 AUC 为 0.79 (95% CI: 0.70-0.87); 抑郁症状和情感辨别不能因子两项联合 AUC 为 0.80 (95% CI: 0.72-0.87)。相比于抑郁症状、述情障碍和情感辨别不能因子单独应用,两项联合的曲线下面积更大,对自杀倾向有更好的识别预测能力。

结论 儿童青少年精神障碍患者家长自杀倾向检出率较高,提示临床上在注重青少年精神障碍患者的同时,亦不能忽视患儿家长的心理健康,应加强对患儿和家长的护理,必要时提供个体化的综合干预措施。

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关键词:儿童青少年;精神障碍;家长;自杀倾向

精神障碍患儿家长病耻感水平与心理健康状况、自杀倾向的相关性研究

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目的 全球有近 10 亿人口存在精神健康问题,尤其儿童青少年人群受到尤为关注。污名化和歧视往往造成的患病个体被社会排斥以及个人基本权利被剥夺等严重负面影响。既往研究多集中在评估患者本身的病耻感,本研究旨在调查精神障碍患儿家长的病耻感、心理健康状况以及自杀倾向,并其之间的关系。

方法 调查对象为 2022 年 8 月至 2023 年 7 月就诊于安徽省内两所医院共 299 名儿童青少年精神障碍家长。收集其社会人口学资料,并采用贬低-歧视感知量表(PDD)、患者健康问卷-9(PHQ-9)、广泛性焦虑障碍量表(GAD-7)、中文版失眠严重程度指数(ISI)以及自杀相关的标准化问题分别评估调查对象的病耻感水平、抑郁、焦虑、失眠和自杀倾

向。以 PHQ-9 ≥ 10 、GAD-7 ≥ 10 以及 ISI ≥ 15 定义临床抑郁、焦虑以及失眠,将 PDD 的平均得分以量表中间点分 2.50 划分为存在高水平或低水平病耻感进行组间比较。

结果 共有 82 名(27.4%)家长划为病耻感高水平组。(1)组间比较一般资料显示:病耻感高水平组的月收入 < 2000 元的比例较低水平组高(45.1% vs 33.6%, $P = 0.029$),存在躯体疾病史的比例较高(18.3% vs 4.6%, $P < 0.001$),其余变量如患儿疾病类型、年龄分段、性别、受教育程度与精神疾病史无差异;(2)组间比较心理健康状况显示:病耻感高水平组抑郁(24.4% vs 9.2%)、焦虑(18.3% vs 6.9%)以及失眠的检出率(14.6% vs 3.7%)显著高于低水平组(均 $P < 0.01$);(3)组间比较自杀倾向显示:尽管病耻感高水平组自杀意念(15.9% vs 9.2%)、自杀计划(6.1% vs 2.3%)以及自杀未遂的检出率(9.8% vs 7.4%)数值上高于低水平组,但差异无统计学意义(均 $P > 0.05$)。控制月收入和躯体疾病史混杂因素,病耻感高水平组患儿家长的抑郁(OR=2.289, 95%CI: 1.100-4.764, $P = 0.027$)和失眠风险(OR=2.879, 95%CI: 1.050-7.892, $P = 0.040$)仍高于病耻感低水平组患儿家长,焦虑差异不再具有统计学意义(OR=2.076, 95%CI: 0.909-4.738, $P = 0.083$)。

结论 精神障碍患儿家长病耻感水平较高,与一系列不良心理健康问题密切相关。政策制定者、医疗服务机构以及社会组织应立即采取行动,共同努力消除对精神健康问题的污名化和歧视。

基金项目:安徽省高等学校科学研究项目(2022AH050671);安徽省省属公立医疗卫生机构引进高层次人才奖补项目

关键词:污名化;病耻感;儿童青少年;家长;抑郁;自杀

伴自杀未遂的青少年抑郁患者心理理论损害与脑影像的相关性研究

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目的 探讨伴与不伴自杀未遂青少年抑郁障碍患者心理理论的损害及其与静息状态功能磁共振成

像的低频波动振幅差异的相关性。

方法 本研究包括 45 例伴自杀未遂的青少年抑郁障碍患者(SU 组)、45 例不伴自杀未遂的抑郁障碍患者(NSU 组)和 20 例健康对照组(HC 组)。采用 17 项汉密尔顿抑郁量表(17-item Hamilton depression scale,HAMD-17)、国际神经精神科简式访谈问卷版本 6.0.0 中文版(mini-international neuropsychiatric interview,M. I. N. I.)对所有被试进行抑郁严重程度和自杀特质相关临床心理量表评定。采用静息状态功能磁共振成像(rs-fMRI)计算 zALFF 值(低频波动振幅),并比较各组间的差异。心理理论故事图片任务(theory of mind-picture sequencing task,ToM-PST)包括初级信念、初级错误信念、次级信念、次级错误信念、三级错误信念、现实感、理解互惠、理解欺骗和欺骗侦测、图片排序总分、心理理论总分指标,用于测试三组被试的心理理论水平。采用 SPSS 25.0 对数据进行统计分析,单因素方差分析比较 3 组被试心理理论水平的差异,采用 Pearson 相关分析探讨特定脑区 zALFF 值与心理理论损害的相关性。

结果 三组患者左侧背外侧额上回的 zALFF 值有显著差异(GRF 校正),与健康对照组相比,自杀未遂组和非自杀未遂组 zALFF 值均有所增加。

青少年自杀未遂组在理解初级错误信念、图片排序总分显著低于健康对照组,在理解现实感分、欺骗、欺骗侦测、心理理论总分显著高于非自杀未遂组,非自杀未遂组在理解初级错误信念、现实感、欺骗、欺骗侦测、图片排序总分、心理理论总分显著低于健康对照组(均 $P < 0.05$)。三组被试者理解初级信念、次级信念、次级错误信念、三级错误信念、互惠均差异无统计学意义(均 $P > 0.05$)。

Pearson 相关分析显示,青少年自杀未遂组的左侧背外侧额上回的 zALFF 值与图片排序总分呈显著负相关($r = -0.417, P < 0.05$),青少年自杀未遂组的初级信念、初级错误信念、次级信念、次级错误信念、三级错误信念、现实感、互惠、欺骗、欺骗侦测、心理理论总分无显著相关性(均 $P > 0.05$)。

结论 伴与不伴自杀未遂的青少年抑郁障碍患者理解图片排序的能力与静息状态功能磁共振成像的低频波动振幅值在左侧背外侧额上回存在显著的负性相关性。

关键词: 自杀未遂;抑郁障碍;青少年;低频波动振幅;心理理论;

基于网络的普遍预防性心理干预对青少年抑郁症状的改善效果: Meta 分析和系统评价

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目的 本研究评估基于网络的普遍预防性心理干预对青少年抑郁症状的改善效果,并探索改善效果的影响因素。

方法 在 CNKI、PubMed、Embase、Web of Science、Cochrane Library、Scopus、ProQuest 以及 PsycINFO 的 8 个中英文数据库中,检索截止至 2024 年 5 月 20 日发表的符合纳入标准的随机对照试验研究报告。纳入文献的研究对象为平均年龄 12~18 岁未作抑郁症状或抑郁症诊断筛查的普通青少年人群,实验组措施为包含自助式网站、移动设备应用程序等的任何基于网络的预防性心理干预,对照组措施包含无任何处理、等候控制、注意控制、安慰剂控制等,主要结局指标为各组后测时间点的抑郁症状严重程度。对纳入 Meta 分析的文献进行质量偏倚风险评价,提取文献中有关受试对象、干预内容、统计学方法等特征,提取抑郁症状的测量数据并采用均数差或标准化均数差计算干预措施的效应,针对异质性进行敏感性分析和亚组分析。本研究通过 PROSPERO 注册,注册号为 CRD42024557571。

结果 文献检索的初步结果为 2023 篇,通过排除重复文献、非随机对照试验、研究对象和方法不符合纳入标准、无法提取想要数据的文献,最终纳入 18 篇文献进行 Meta 分析,基线时间点样本量为实验组 6756 例、对照组 6323 例,总计 13079 例。文献质量评价结果显示,6 篇研究(33.3%)被评为“低偏倚风险”,5 篇(27.8%)为“未知偏倚风险”,7 篇(38.9%)为“高偏倚风险”。对于平均年龄 12~18 岁的普通青少年,网络预防性心理干预组相比于对照组在后测时间点的抑郁症状分数显著更低,标准化均数差(SMD)较小而具有统计学意义,异质性较低: $SMD = -0.07, 95\%CI (-0.11, -0.03), p = 0.001, I^2 = 41\%$ 。亚组分析结果发现,干预的内容特征、干预持续周数、心理治疗师或教师指导方式以及干预实施形式影响干预效果。主要结果无显著的发表偏倚。

结论 基于网络的普遍预防性心理干预可在短

期内有效改善平均年龄 12~18 岁普通青少年的抑郁症状。亚组分析结果发现,干预的内容特征、干预持续周数、心理治疗师或教师指导方式以及干预实施形式影响了干预效果,包含认知或情绪训练模块、干预持续时长在 5 周以内、心理治疗师或教师仅提供程序技术指导、在学校集中实施的网络化预防性心理干预对青少年抑郁症状的改善效果可能更优。

关键词:网络心理干预,预防,青少年,抑郁症状,Meta 分析

父母患有精神疾病儿童的心理状态研究综述

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目的 父母患有精神疾病的儿童(COPMI)发生心理问题和其他不良健康结果的风险更大,在世界范围内,数以百万计的儿童在父母一方或双方患有精神障碍的家庭中长大。例如,12.1%-15.6%的加拿大儿童、16%的荷兰儿童和 21%-23%的澳大利亚儿童暴露于父母的精神疾病。对 COPMI 精神障碍的遗传估计值通常在 50%以上,直系亲属患有精神疾病是已知精神障碍的最大危险因素。COPMI 的经历可以被认为是一种特定类型的不良童年经历(ACE)。在患有精神疾病的家庭中长大的儿童,身体和情感虐待、忽视和其他不良情况可能较普遍。此外,COPMI 经常经历额外的社会心理挑战,如经济问题、父母离婚、入学率低和父母预期寿命缩短等,这些也被认为是 ACE。与患有精神疾病的父母一起长大的遗传和环境因素可能会增加患多种心理和身体疾病的风险。

方法 父母的精神疾病会对儿童产生强烈影响。与同龄同龄人相比,他们发生行为、发育和情绪困难的风险更高。具体结局包括:辍学率增加、被寄养或亲属照料的可能性增,以及可能发生药物滥用障碍。儿童表述他们对父母的“好日子”和“坏日子”很敏感,儿童将好日子定义为互动、沟通、父母工作和家务完成时间的增加。坏日子被描述为父母不那么专心、脾气暴躁或有可能大喊大叫。

父母患有精神疾病的子女通常得不到足够的父母心理健康信息。他们只能“猜测”或“弄清楚”父母

发生了什么。儿童可能会对精神疾病产生误解,例如将父母的疾病归咎于自己,或者认为精神疾病可以像感冒一样感染并传染给朋友。对儿童保守秘密会导致他们感到困惑,与疾病相关的话题可能是儿童讨论的“禁区”,因此关于精神疾病的亲子交流有限或者没有。此外,儿童可能难以理解或担心父母的行为,由于无法获得准确、非污名化的心理健康信息,许多儿童似乎在寻找自己对父母行为的理解,这往往导致困惑和痛苦。父母可能认为儿童没有意识到这种疾病,儿童倾向于通过观察父母的行为来描述心理健康障碍。只有部分儿童能够理解精神疾病诊断,或被明确告知父母的精神疾病。

结果 有证据表明,具有 COPMI 背景的个体在 18 岁之前发生精神障碍的风险要高出 2-4 倍。18 岁以后,这一风险比父母无精神疾病的成年子女高 13 倍。据估计,约三分之二的 COPMI 在成年后出现社会心理和/或精神障碍。COPMI 背景的长期后果包括焦虑障碍、重度抑郁和物质使用障碍。

结论 鉴于这些儿童的患病率和风险,为他们提供适当和可获得的支持和干预措施非常重要。这些干预措施中旨在向儿童提供心理健康教育和有关父母疾病的知识。通过改善应对、提高自尊和无害暴露于可容忍的风险水平来提高儿童的心理弹性,帮助儿童应对未来的挑战和逆境。

关键词:父母患有精神疾病的儿童,心理状态

Testing The Efficacy of Computer-assisted Executive Function Training in Adolescents with Major Depressive Disorder: Study Protocol for A Randomized Clinical Trial

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Objective Given the limitations of medication in improving executive function impairment in patients with major depressive disorder, computerized executive

function training has been proposed as a possible intervention option, but there is a lack of research results in the adolescent population. This study investigated the efficacy of computer-assisted executive function training in adolescents with major depressive disorder, including in terms of clinical symptoms and executive function impairment

Methods A single-blind randomized controlled clinical trial in 58 adolescents with major depressive disorder. Participants were randomly assigned to a control group and a study group. The control group was given only drug treatment. The study group received 8 weeks of computer-assisted executive function training on the basis of drug therapy. Changes in depressive symptoms and executive function were assessed using the Childhood Depression Scale(CDI) and neuropsychological tests before and after the intervention

Results The total effective rate was 89.2% in the study group and 66.7% in the control group ($\chi^2=0.421$, $p=0.039$). CDI scores, total interval errors of spatial working memory and persistent errors in Wisconsin card sorting test (WCST) decreased, and the digit span backward score and the WCST conceptualization level increased in both groups after treatment. At the end of the 8th week of treatment, the CDI scores ($t=3.213$, $p=0.002$), the total interval errors of spatial working memory ($t=2.741$, $p=0.008$) and the persistent errors in WCST ($t=2.552$, $p=0.013$) of the study group were significantly lower than those of the control group, and the digit span backward score ($t=-0.3895$, $p < 0.001$) and the WCST conceptualization level ($t=-2.734$, $p=0.008$) of the study group were significantly higher than those of the control group

Conclusion Computer-assisted executive function training is effective for adolescents with depression, which can not only reduce depressive symptoms, but also improve impaired executive function. If the findings are conclusive, computer-assisted executive function training could be added to the therapeutic arsenal for depression in adolescents

关键词: adolescent, major depressive disorder, computer training, executive function, efficacy

医疗失效模式与效应分析联合根因分析法在精神科用药安全中的运用

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目的 医疗失效模式与效应分析联合根本原因分析法探索精神科住院患者用药潜在风险及其用药错误发生的原因, 针对原因制定相应的控制方案, 保障患者用药安全, 提升医疗治疗。

方法 应用前瞻性质量改进工具医疗失效模式及效应分析(HFMEA) 联合根因分析法(RCA)。对精神科住院患者用药流程中潜在的风险因子进行评估分析, 运用决策树分析整改价值, 进一步进行根因分析, 结合科室的实际情况从制度、培训、医嘱、药品管理、用药过程、人员管理六个方面制定控制方案, 比较实施前后口服用药流程风险值(RPN)、用药错误不良事件发生率、医嘱错误率、医护人员发现隐患的能力及患者满意度。

结果 实施医疗失效模式及效应分析(HFMEA) 后用药流程的潜在失效风险 RPN 值及用药相关不良事件发生率显著低于实施前, 医嘱错误率下降, 医护人员发现隐患的能力及患者满意度明显提升。

结论 医疗失效模式及效应分析(HFMEA) 联合根因分析法(RCA) 找到威胁用药安全的主要危险因素及不良事件的特征分布, 科室结合用药错误中主要危险因素及其特点采用针对性的预防措施, 降低用药错误不良事件发生率, 提升医护人员综合能力, 提高医疗质量, 保障患者安全。

关键词: 用药安全; HFMEA; RCA; 精神科

Causal Associations between Attention Deficit Hyperactivity Disorder and Obstructive Pulmonary Diseases: A Two-sample Mendelian Randomization Study

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Objective Previous observational studies have

suggested an increased risk of respiratory system diseases in individuals with attention deficit hyperactivity disorder (ADHD). However, whether the genetic associations between ADHD and obstructive pulmonary disease (OPD), including chronic obstructive pulmonary disease (COPD), asthma, and chronic bronchitis is unclear. This study aims to investigate the causal relationship between ADHD and OPD, along with the association with pulmonary function test (PFT) parameters

Methods Our study used Genome-wide association study (GWAS) summary data of European individuals, including the following: ADHD (20,183 cases and 35,191 controls); summary statistics for COPD, including UK Biobank participants, resulting in 3,871 cases and 459,139 controls; asthma (56,157 cases and 352,255 controls); chronic bronchitis (10,159 cases and 440,263 controls); Three PFTs parameters included forced expiratory volume in 1 second (FEV1) (sample sizes of 421,986); forced vital capacity (FVC) (sample sizes of 307,638); and FEV1/FVC<0.7 (55,907 cases and 297,408 controls.). In this study, 2-sample mendelian randomization (MR) tested potential causal associations between genetic variants of ADHD and OPD and PFT parameters. The inverse-variance weighted (IVW) method was used as the primary analysis. The study dates were November 2023 to February 2024

Results Significant causal associations were observed between ADHD and COPD (OR=1.003, 95%CI: 1.002,1.005, P<0.001), asthma (OR=1.069, 95%CI: 1.017,1.124, P=0.046) and chronic bronchitis (OR=1.270, 95%CI: 1.124,1.435, P<0.001). Additionally, ADHD was significantly linked to both FEV1 (β = -0.034, 95%CI: -0.056,-0.012, P=0.005) and FEV1/FVC<0.7 (OR=1.013, 95%CI: 1.005,1.020, P=0.004), yet the correlation between ADHD and FVC did not remain significant after FDR correction

Conclusion This study reported a significant causal association between ADHD and OPD. Individuals with ADHD were at an increased risk of developing OPD, accompanied by unfavorable PFT parameters. These findings offered valuable insights for early intervention strategies targeting ADHD, potentially reducing the incidence of chronic diseases later in life

关键词: Attention deficit hyperactivity disorder,

Obstructive pulmonary disease, Pulmonary function test, Mendelian randomization.

抚慰孩子的心灵~青少年抑郁症

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目的 提高心理健康意识, 用科学的方法缓解压力, 预防心理问题。中国古代学者蒲辅周曾提出“无病善防、提高体质; 有病驱邪, 慎毋伤正”的理论, 更强调了预防的重要性。

中国科学院心理研究所曾经发布的调研显示, 约 14.8%的青少年存在不同程度的抑郁风险, 其中 4.0%的青少年属于重度抑郁风险群体。其实相比成人, 情感发育尚未成熟的青少年更容易出现情绪问题乃至抑郁障碍。这是因为, 大脑中负责感知情感的杏仁核在 15 岁时就发育成熟, 而负责控制情感的前额皮质要到 25 岁左右才会成熟, 成熟状态不一致的生理结构, 使发育中的青少年可以像成人一样感知情绪, 却无法控制情绪和行为, 而青春期受激素影响, 更增加了青少年抑郁障碍的风险。

另外, 慢性压力也是抑郁障碍的诱因, 慢性压力会让感知情绪的杏仁核变得更大、更敏感, 导致青少年持续感到抑郁。比如生活环境的变化, 家庭关系紧张、父母不和睦, 学校中人际交往不畅等情况, 使得缺少父母关心、照顾与陪伴的青少年更容易产生抑郁、孤独、手机成瘾等问题, 心理健康风险更高。

方法 青少年抑郁障碍的常见表现有: 大部分时间不开心、感到无聊、什么都不愿做, 容易发火, 有时有身体不适, 经过很多检查却无器质性问题的头疼、肚子疼, 睡眠、饮食不规律, 以及常被人误以为是身体疾病导致的二便问题。肠道堪称“第二个大脑”, 非常容易受情绪影响, 很多青少年在情绪紧张时腹泻, 考虑可能为肠易激综合征, 也有在情绪问题时出现便秘的情况。

第一, 多关注孩子的情绪, 倾听他们行为背后的动机、情绪, 而不只是关注孩子的学习, 让孩子多维度发展。

第二, 适当与孩子沟通交流, 通过谦虚真诚的心态, 站在孩子的角度理解、倾听他们的感受。可以

使用心理学常用的“空椅子技术”，帮助父母更加理解孩子。

第三，要更加关注青少年睡眠、运动与心理健康之间的相互影响，更充足的睡眠和运动有助于降低青少年的抑郁、孤独和手机成瘾。

结果 在兴趣爱好、人际交往、团队协作等方面的才能也尤为重要。

充足的睡眠会消除疲劳，保护大脑，促进生长发育，增强免疫力，减轻压力；适当的运动，不仅增强孩子们的身体素质，更加强了孩子们人际交往能力，提升团队意识，实现真正意义上的身心健康。

互相理解、平等尊重的家庭和学校氛围可以满足青少年的心理需求，真正促进孩子心智和情绪的健康成长。

结论 作为医疗机构的工作人员，如何针对青少年群体的心理健康状况更好服务，我有以下四点建议：一是建立医校共联体，进一步完善青少年心理健康筛查和检测机制；二是加强宣讲活动，着力青少年的心理健康工作；三是倡导青少年健康使用手机，减少手机成瘾风险；四是加强对高风险群体心理健康的精准预防和干预工作。

关键词：青少年，抑郁症，杏仁核，空椅技术，手机成瘾

ALFF-Based Functional Connectivity Changes of Cognitive Improvement with Mood Disorder in Adolescents and Young Adults

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Objective Patients with mood disorders, whether adolescents or adults, frequently exhibit varying degrees of cognitive impairment. However, Little is known about the neural basis of cognitive improvement following treatment. Therefore, the aim of this study was to investigate the relationship between cognitive function and ALLF-Based FC in adolescents and young adults with mood disorder

Methods A total of 197 patients with mood disorder, aged 12-25 years, underwent rs-fMRI scans at

baseline and after hospitalization. Brain regions showing significant differences between the two scans were identified as regions of interest (ROI), and whole-brain functional connectivity (FC) was subsequently calculated. The Cognitive function was assessed by the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). Finally, the correlation between ALFF-based FC values of these abnormal brain regions and cognitive function scales was analyzed

Results The ALFF value of the left precentral gyrus after treatment was lower than baseline. The seed-based functional connectivity showed that the FC value between the left precentral gyrus and the right lingual gyrus increased ($P < 0.05$), and the FC value between the left precentral gyrus and the left superior temporal gyrus, left middle frontal gyrus decreased compared with baseline ($P < 0.05$). In addition, the FC value changes associated with RBANS - speech function total score. In baseline, The FC value between the seed area and the right lingual gyrus shows a positive correlation with the changes in RBANS-speech total score, while the change in FC value after treatment exhibits a negative correlation. The FC value between the seed area and the left superior temporal gyrus is negatively correlated with changes in the RBANS speech total score, while the change in FC value after treatment exhibits a positive correlation. The FC value between the seed area and the left middle frontal gyrus shows a negative correlation with changes in the RBANS speech total score. After treatment, changes in the FC value exhibit a positive correlation with changes in RBANS speech total score. When using the FC values of various brain regions at baseline as independent variables and the changes in the RBANS speech total scores before and after treatment as the dependent variable in a regression model, the R value was found to be 0.275, and the R^2 was 0.076. This indicates that the independent variables explain 7.6% of the variance in the dependent variable. Following this, the FC changes were used as independent variables, and the changes in total RBANS-speech scores before and after treatment were used as dependent variables for linear regression analysis. It was found that the FC changes between the seed area and the lingual gyrus were neg-

atively correlated with changes in RBANS-speech function after treatment

Conclusion The negative correlation between FC changes between the left precentral gyrus and the right lingual gyrus and changes in RBANS-speech scores suggests that alterations in functional connectivity between the left precentral gyrus and the right lingual gyrus may represent a potential mechanism underlying improvements in speech function

关键词: adolescent and young adults; mood disorder; cognitive improvement; rs-fMRI; ALFF-Based FC

Resolving Heterogeneity of Depression Through Individual Differential Structural Covariance Network Analysis

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Zhanjie Luo

Objective Major depressive disorder (MDD) is characterized by its significant heterogeneity, hindering progress in MDD research. Traditional case-control studies, like group-level structural covariance network, struggle to capture individual heterogeneity among MDD patients

Methods In this study, T1-weighted structural images were obtained from 350 participants, including an adolescent original dataset (103 early-onset MDD patients, 82 healthy controls (HCs)) and an adult validation dataset (108 adult-onset MDD patients, 57 HCs). A subject-level individual differential structural covariance network (IDSCN) were constructed for each patient based on the concept of normative modeling

Results Our study identified two neuroanatomical subtypes. The identified IDSCN subtypes were distinguished more by specific features of individual symptoms rather than overall severity of depression and anxiety. The low-covariance subtype is characterized by significant neural maturation gaps across the whole brain and more pronounced anxiety somatization symp-

toms. Conversely, the high-covariance subtype demonstrates simultaneous mature of brain structures

Conclusion Our findings provide valuable insights into the neuroanatomical heterogeneity of MDD patients, highlighting the importance of considering individual symptom profiles in subtype classification. These findings have substantial clinical implications for personalized treatment and precision medicine, offering more effective treatment choices and accurate diagnoses

关键词: Depression, Heterogeneity, Individual differential structural covariance network, Neuroanatomical subtypes

青少年重性抑郁疗效的早期预测研究

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目的 青少年抑郁具有症状不典型, 治疗难等特点, 越早的识别患者对抗抑郁的反应, 找出与疗效相关的早期标记物有助于青少年抑郁治疗方案的选择和修正。

方法 本研究为单中心真实世界研究, 在南京医科大附属脑科医院早期干预科病房纳入 95 个年龄在 13-18 之间的青少年患者, 符合精神疾病诊断和统计手册第四版 (DSM-IV) 的情感障碍 (BD 或 MDD) 诊断标准。使用 17 项的汉密尔顿抑郁评分量表(HAMD-17)、汉密尔顿焦虑症评分量表(HAMA)来测量患者抑郁及焦虑的严重程度。纳入标准为 HAMD 评分 ≥ 17 分。分别在治疗前 (基线)、治疗 1 周 (极早期)、出院前通过量表对临床症状进行评估。采用相关性分析进行治疗前、治疗 1 周后症状变化与出院时 HAMD 减分率间的关系分析。使用线性回归分析与治疗效果相关的临床症状。

结果 基线时 HAMD 得分与出院时 HAMD 减分率呈正相关($r=0.211, p=0.04$), 治疗 1 周后 HAMD 减分率与出院时 HAMD 减分率呈正相关($r=0.342, p=0.001$), 治疗 1 周后 HAMA 减分率与出院时 HAMD 减分率呈正相关 ($r=0.385, p<0.001$)。把基线时 HAMD 得、治疗 1 周后 HAMD 减分率、HAMA 减分率当作自变量, 出院时 HAMD 减分率作为因变量, 纳入多元线性回归, 结果提示模型成立

($R^2=0.134$, $F=4.69$, $p=0.04$)。

结论 基线时抑郁症状越重, 治疗后症状改善越好, 治疗 1 周后焦虑、抑郁症状改善越多, 出院时效果越好。

关键词: 青少年, 重性抑郁, 疗效, 早期预测

Electroencephalogram Microstate and Spectral Power Analysis for Attention Deficit Hyperactivity Disorder in Children and Adolescents

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Objective Attention-Deficit/Hyperactivity Disorder (ADHD) is a widely recognized neurodevelopmental disorder characterized by inattention, hyperactivity, and impulsivity. Behavioral assessment, the current gold standard for diagnosis, is subject to inaccuracies due to its subjective nature and is limited to post-symptom onset evaluations. Early diagnosis is pivotal for enhancing the quality of life in ADHD patients

Methods This study introduces a novel machine learning (ML) approach for the objective diagnosis of ADHD in medicated and unmedicated individuals, leveraging electroencephalogram (EEG) data features. We also investigated the utility of resting-state EEG microstates in discerning ADHD patients from healthy controls and in predicting symptom severity

Results Our analysis revealed that resting-state EEG microstates effectively differentiated ADHD patients from controls. The 8-feature Linear Discriminant Analysis model emerged as the most predictive ML model for ADHD, achieving an AUC of 0.967 in the training set, with sensitivity = 0.914, specificity = 0.927, and accuracy = 0.921. In the validation set, the model's performance remained robust with an AUC of 0.747, sensitivity = 0.695, specificity = 0.716, and accuracy = 0.706. Additionally, these EEG features accurately forecasted the severity of ADHD symptoms

Conclusion The development of an ML model

utilizing EEG data features presents a promising diagnostic tool for early and objective identification of ADHD. This advancement may facilitate earlier clinical intervention and contribute to the improvement of ADHD patients' quality of life through targeted therapeutic strategies

关键词: ADHD, EEG, children and adolescents, Diagnostic markers

基于临床症状-人格特征-童年创伤的青少年抑郁自杀预测模型

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Background Major depressive disorder (MDD) is the most common psychiatric disorder among adolescents who die by suicide. Childhood maltreatment and personality features act as risk factors. Therefore, it is necessary to construct and validate a predictive model of suicide in adolescents with MDD.

Methods Participants were assigned to suicide attempt (SA) group and non-suicide attempt (NSA). Univariate logistic, random forest, and lasso regression model were used to identify potential suicide predictors to establish a nomogram

Results The 6 optimal predictors of SA were screened out. These were HAMD, PHQ-15, BSSI, extroversion, emotional neglect, physical neglect. The AUC of the nomogram constructed from these predictors was 0.803. The specificity and sensitivity were 0.875 and 0.579. Results of DCA curve showed model yields net benefit to a wide range of approximately 9% to 94%

Conclusion We have developed a simple and effective prediction tool for suicide attempt risk among adolescent with MDD. It enables the easy and exact prediction of suicide risk in adolescents with MDD.

关键词: teenage depression, suicide, prediction model, personality features, childhood maltreatment

男性青少年抑郁症患者的免疫与性激素变化研究

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目的 本研究主要通过探究男性青少年抑郁症患者的 IgA、IgM 及性激素的变化规律,进一步揭示抑郁症的病理机制。

方法 (1)对 175 名男性青少年抑郁症患者的 IgA、IgM 检测并分析。(2)对 175 名青少年抑郁症患者和对照组 175 名青少年的性激素(雌二醇,泌乳素,孕酮,卵泡激素,促黄体生成素)检测并分析。

结果 (1)175 名被试的 IgA、IgM 值分别为 $1.95\pm 0.78\text{g/L}$ 和 $1.02\pm 0.33\text{g/L}$,值均在正常值范围内。

(2)研究组雌二醇水平 ($97.41\pm 42.59\text{pmol/L}$) 显著低于对照组 ($113.39\pm 21.21\text{pmol/L}$; $t=-4.420, p=0.000$),研究组中有 18 人 (10.29%) 低于正常值。研究组泌乳素水平 ($24.33\pm 12.38\text{ng/ml}$) 显著高于对照组 ($9.86\pm 2.56\text{ng/ml}$; $t=15.141, p=0.000$),研究组中有 138 人 (78.86%) 高于正常值。研究组孕酮水平 ($0.98\pm 0.55\text{nmol/L}$) 显著高于对照组 ($0.32\pm 0.10\text{nmol/L}$; $t=15.505, p=0.000$),研究组中有 140 人 (80.00%) 高于正常值。研究组睾酮水平 ($15.58\pm 5.73\text{nmol/L}$) 与对照组 ($16.32\pm 4.50\text{nmol/L}$) 不存在显著差异 ($t=-1.337, p=0.182$),但研究组中有 20 人 (11.42%) 低于正常值。研究组卵泡激素、促黄体生成素水平 ($4.46\pm 1.95\text{mIU/ml}$, $5.11\pm 1.69\text{mIU/ml}$) 与对照组 ($4.43\pm 2.06\text{mIU/ml}$, $5.02\pm 1.65\text{mIU/ml}$) 不存在显著差异 ($t=0.177, p=0.860$; $t=0.487, p=0.620$)。

结论 (1)男性青少年抑郁症患者不存在 IgA、IgM 异常。(2)低水平的雌激素及高水平的泌乳素和孕酮与抑郁有密切关系,同时低水平的睾酮可作为抑郁的参考值。

关键词:青少年抑郁 免疫 性激素

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Background Early life chronic stress, such as adverse childhood experiences (ACEs), has been regarded as high-risk factor for developing psychiatric disorders later in life. ACEs during preadolescence may underline deviations of brain morphology. In this study, we aim to investigate the association between ACEs and structural brain networks.

Methods Subjects aged between 107 to 133 months in the Adolescent Brain Cognitive Development (ABCD) Study were included in our research. Self-reported ACEs includes physical abuse, sexual abuse, emotional abuse, parent substance use, parent incarceration, household mental illness, physical neglect, emotional neglect, marry status, and exposure to domestic violence. After being preprocessed by Freesurfer, cortical measures and image intensity measures were extracted with Destrieux Atlas parcellation, including cortical area, sulcal depth, cortical thickness, cortical volume, T1w, T2w, T1 cortical contrast, and T2 cortical contrast. We constructed the morphometric similarity network (MSN) of the whole brain with the measures above. Graph-based global network metrics were calculated based on MSN through GREYNET, including small-world parameters of the clustering coefficient (C_p), the shortest path length (L_p), and the Sigma (Σ), local efficiency (E_{loc}) and global efficiency (E_g). We investigated the relations between network metrics and total and subscale ACEs scores with controlling age, sex, handedness, and education level.

Results We have discovered a significant relationship between ACEs and the structural brain network. Total score of ACEs was negatively associated with E_{loc} ($r = -0.027, P = 0.01$), E_g ($r = -0.044, P < 0.001$), and Sigma ($r = -0.026, P = 0.013$), and positively associated with L_p ($r = 0.04, P < 0.001$). The higher the ACEs total score, the worse the local efficiency, global efficiency, and Sigma of network, and the longer of the shortest path length of the network. In addition, subscales of ACEs, such as criminal status, mental illness, and substance abuse in the household also have the same

The ABCD Study: Association Between Adverse Childhood Experiences and Structural Brain Network Efficiency

trends with total score of ACEs.

Conclusion Structural brain network connectivity is associated with ACEs. Adolescents who experienced more adversities have brains that worked less efficiently. Specific causal relationships hope to be explored soon.

关键词: adverse childhood experiences, morphometric similarity network, global network metrics, structural brain networks

M115 单倍体不足导致小鼠肠道菌群及代谢物异常

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目的 孤独症谱系障碍(Autism spectrum disorder, ASD) 是一种以社会交往障碍、交流障碍、兴趣狭窄及刻板重复行为为基本特征的神经发育障碍性疾病。近年来 ASD 的患病率逐年升高, 美国疾病预防控制中心的调查显示到 2016 年已经升至 2.76%。ASD 是居于儿童精神致残首位的神经发育障碍性疾病, 给家庭和社会造成沉重的疾病负担。研究发现与健康儿童相比, ASD 儿童的粪便细菌谱显示致病细菌和有益细菌丰度平衡变化, 同时通过肠道菌群干预可以改善 ASD 样行为。研究发现, 肠道共生菌群可以影响小鼠大脑发育和功能调节, 并参与许多神经精神疾病(如焦虑和抑郁)的病理过程, 影响多种复杂行为, 包括社交行为和焦虑样行为。这些研究表明, 肠道菌群可能对 ASD 的发展有重大影响。M115 作为一种 ASD 风险基因, 参与肠道菌群稳态调节以及介导 ASD 样行为的具体机制尚不清楚。本研究旨在探讨 M115 单倍体不足小鼠肠道菌群结构变化对其 ASD 样行为的影响及具体作用机制。

方法 通过超声发声实验等行为学实验检测 M115 单倍体不足小鼠 ASD 样行为; 通过 16sRNA 测序检测 M115 单倍体不足小鼠肠道菌群结构; 通过血清中的异硫氰酸荧光素强度以及 qPCR 检测 M115 单倍体不足小鼠肠道通透性; 通过代谢组测序检测 M115 单倍体不足小鼠血清和海马代谢物变化; 通过免疫荧光实验、分子实验实验检测 M115 单倍体不足小鼠海马小胶质细胞的状态以及吞噬功能。

结果 初期研究成果表明: M115 单倍体不足小鼠出现 ASD 样行为; 16sRNA 测序结果显示 M115 单倍体不足小鼠肠道中毛螺菌科、拟杆菌属、丁酸弧菌属、副拟杆菌属等菌群出现差异变化。血清及海马代谢组学测序显示 M115 单倍体不足小鼠显示和 ASD 相关血清代谢物 SIP 等显著上升并出现新的潜在的 ASD 血清变化标志物。

结论 本研究发现 M115 单倍体不足小鼠肠道菌群结构及其代谢物紊乱并介导 ASD 样行为。

关键词: M115; 孤独症谱系障碍; 肠道菌群; 代谢物;

ADHD 儿童静息态脑电中的非周期性特征与非周期性校正后的 α 振荡特征研究

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目的 本研究旨在探索 ADHD 儿童静息态脑电活动中的非周期性特征和非周期性校正后 α 波段的振荡特征, 重点关注不同头皮区域和偏侧化对这些神经相关性的影响。

方法 共有 62 名患有 ADHD 的儿童和 52 名典型发育儿童(年龄在 6 至 12 岁之间)参与了研究。在闭眼情况下记录至少进行 6 分钟的脑电图(EEG)。使用 Python 包‘FOOOF’计算非周期性参数(指数和截距), 以及非周期性校正后的 α 波段振荡特征, 主要包括中心频率(CF)、校正后的功率(AP)和带宽(BW)。我们进行了包含两个被试间水平(ADHD 组和对照组)和两个被试内因素(偏侧化和头皮区域)的混合设计 ANOVA 分析, 以及考虑性别和年龄后的 ANCOVA 分析。

结果 结果表明 ADHD 组显示出显著低于对照组的非周期性指数, 这一差异不受偏侧化、头皮区域或性别等因素的显著影响。其他测量指标在组间没有显著区别。我们注意到 α 波段的 CF 随年龄增加而增加, 而只有额区的 AP 与年龄呈显著正相关。性别和偏侧化在截距这个指标上存在显著主效应, 同时性别和偏侧化在 CF 上存在显著交互效应。

结论 我们的研究结果表明, 年龄在 6 至 12 岁 ADHD 儿童的非周期性指数显著较低, 提示这一测

量指标可能作为 ADHD 的生物标记物。未来的研究应在探索非周期性和非周期性校正后的周期特征时考虑年龄、性别、偏侧化和头皮区域等因素。

关键词: ADHD, 儿童, 静息态, 脑电图

青少年抑郁障碍患者急性期治疗有效后 2 年内再住院的影响因素分析

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目的 探讨青少年抑郁障碍患者急性期治疗有效后 2 年内的再住院的影响因素。

方法 入组 2018 年 1 月 1 日至 2018 年 12 月 31 日在首都医科大学附属北京安定医院经急性期治疗有效的青少年抑郁障碍患者 (n=304 例), 根据 2 年内是否再住院, 分为再住院组 (n=31) 和未住院组 (n=273), 收集一般人口学资料、病史、临床特征、药物治疗等资料, 分析再住院情况, 采用单因素和二元 Logistic 回归对再住院的相关因素进行分析。

结果 单因素分析显示, 两组患者在性别、年龄、是否有家族史、是否自杀未遂、是否转躁、是否门诊治疗、2 年内是否急诊就诊、连续门诊治疗时间这 8 个因素间存在统计学差异 ($p<0.05$), 二元 Logistic 回归结果显示, 阳性家族史 (OR =3.901, 95%CI: 1.425~10.678, $P=0.008$), 转躁 (OR =6.282, 95%CI: 2.178~18.125, $P=0.001$)、2 年内急诊就诊 (OR =10.756, 95%CI: 3.499~33.060, $P<0.001$) 是患者 2 年内再住院的重要影响因素。

结论 青少年抑郁障碍患者有阳性家族史, 在 2 年内转躁, 在急诊就过诊, 再住院的风险增高。

关键词: 青少年抑郁障碍, 再住院, 影响因素

The Efficacy of CATCH-IT in Adolescents with Moderate To Severe Depression

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Objective The incidence of adolescent depression is increasing year by year, which has caused serious social burden. For moderate to severe depressive disorder, the guidelines recommend drug therapy combined with psychotherapy. However, face-to-face psychotherapy has problems such as high cost and low accessibility. The emergence of digital psychotherapy can improve the accessibility, timeliness and diversity of medical services. In this study, we aim to assess the feasibility and effectiveness of the Chinese adaptation of the program Competent Adulthood Transition with Cognitive-behavioral Humanistic and Interpersonal Training (CATCH-IT) in addressing depression and anxiety symptoms among adolescents diagnosed with moderate to severe depression

Methods Using a purposive sampling method, consecutive enrollment, and concurrent control approach, we designed an exploratory, single-center, randomized study to recruit a total of 89 adolescents with moderate to severe depression who met the inclusion criteria. The recruitment took place from January 2022 to October 2022 at the child psychiatric ward of Beijing An Ding Hospital. These participants were then randomly assigned to either the intervention group or the control group, with 44 adolescents in the intervention group and 45 adolescents in the control group. The intervention group received a combination of conventional treatment and CATCH-IT treatment, while the control group received conventional treatment and standardized health education. Both the CATCH-IT treatment and standardized health education interventions lasted for a duration of 2 weeks, consisting of a total of 14 units. To assess the outcomes, we employed various assessment tools, including the Hamilton Depression Inventory (HAMD-17), Patient Health Questionnaire Depression Scale (PHQ-9), Generalized Anxiety Disorder Scale (GAD-7) and Acceptability Self-administered Questionnaire. Data was collected at multiple time points: before the intervention (T0), at the end of the second week after the intervention (T1), at the end of the fourth week after the intervention (T2), and at the end of the eighth week after the intervention (T3). We analyzed whether there were significant differences in depression and anxiety symptoms between the two

groups at each time point

Results (1) During the recruitment period, a total of 93 patients met the inclusion criteria, out of which 89 patients agreed to participate in the study, resulting in a recruitment rate of 96.8%. Among them, 31 patients in the intervention group and 30 patients in the control group completed the intervention and follow-up assessments. The retention rates were 70.5% in the intervention group and 66.7% in the control group, with no significant difference observed between the two groups ($p>0.05$)

(2) The baseline characteristics and demographic data of the two groups were comparable, with no significant differences observed ($p>0.05$). At the end of the eighth week (T3) after the intervention, there were no statistically significant differences in depression and anxiety scores between the two groups ($p>0.05$). However, in the subgroup analysis of patients with severe anxiety at baseline, a significant difference in HAMD scores was found between the two groups at the end of the second week (T1) ($d = -1.25$, 95% CI: $-2.35 \sim -0.15$, $p=0.03$). The intervention group demonstrated a greater reduction in HAMD scores compared to the control group, indicating a larger treatment effect ($d=0.26$, 95% CI: $-0.70-0.18$, $p=0.25$), although the difference was not statistically significant.

Conclusion (1) The feasibility of CATCH-IT treatment for adolescent patients with moderate to severe depression is acknowledged and accepted to some extent, although there is potential for further improvement and optimization.

(2) No significant disparity was observed between CATCH-IT treatment and standardized health education in terms of improving depressive and anxiety symptoms among adolescents with depression in both groups. However, CATCH-IT treatment demonstrated a rapid alleviation of persistent depressive symptoms, particularly in individuals with severe co-occurring anxiety. Future clinical randomized controlled trials could consider conducting long-term multi-experimental studies in this specific co-occurring group.

关键词: adolescent; depression; CATCH-IT; health education

基于积极心理品质课程的青少年情绪问题干预

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目的 青少年是学业发展的黄金时期, 也是压力引起的情绪问题的关键期。如何促进个人心理健康成长成为家长、学校甚至全社会关注的问题。与以往干预手段不同的是, 积极心理学倡导重视激发人的潜能, 培养人的积极情绪, 引导人们追求幸福和成功, 从而促进抑郁和焦虑等情绪问题的发生。本研究采用积极心理品质课程, 对青少年群体进行干预, 并采用纵向追踪手段, 提升初一学生的主观幸福感, 改善其抑郁焦虑的情绪。

方法 采用问卷法对总计 387 名初一学生进行基线和干预后评估。所有学生按班级随机分为实验组 ($n=240$) 和对照组 ($n=147$), 实验组进行长达两个月的积极心理品质课程干预, 对照组继续维持原有的心理课程, 于干预前、基线和干预后分别测量抑郁 (PHQ-9)、焦虑 (GAD-7)、幸福感 (EPOCH) 以及积极心理品质 (PP)。并通过重复测量方差分析和 t 检验, 揭示积极心理品质课程的干预效果。

结果 在对照组中, 抑郁、焦虑、主观幸福感、积极心理品质均在观察结束后 (期末考试前) 有所升高 ($P_s < 0.05$); 但实验组中, 抑郁、焦虑均在干预结束后有所下降 ($P_s < 0.05$); 我们进一步发现, 其中主观幸福感、积极心理品质反而表现出升高 ($P_s < 0.05$)。在组间检验中发现, 所有变量均在前测无显著差异, 在经过积极心理品质课程干预后, 在实验组中, 以上变量均具有显著差异 ($P_s < 0.05$)。在组内检验中发现, 在对照组中, 除了主观幸福感外所有变量均具有显著的组内差异 ($P_s < 0.05$); 在实验组中, 除了抑郁、焦虑外所有变量均具有显著的组内差异 ($P_s < 0.05$);

通过重复测量分析发现, 在抑郁和焦虑中, 组间均存在差异 ($P < 0.05$), 交互作用显著 ($P < 0.05$), 但主效应不显著 ($P > 0.05$); 在主观幸福感和积极心理品质上, 交互作用和主效应均显著 ($P < 0.05$); 组间差异不显著 ($P > 0.05$);

进一步,我们探索了主观幸福感的变化是否能够中介抑郁分数的改善。在不分组的情况下,我们揭示了主观幸福感提升部分中介了初一学生在抑郁水平上的获益(总效应 $\beta=0.57$, BoostSE=0.04, 95% Booststrap CI=[0.487, 0.662]; 直接效应 $\beta=0.681$, BoostSE=0.04, 95% Booststrap CI=[0.599, 0.763]; 间接效应 $\beta=-0.10$, BoostSE=0.03, 95% Booststrap CI=[-0.171, -0.009])。

结论 积极心理品质课程作为一种干预手段,在初一学生的心理干预中的作用具体体现在对正性情绪起到了促进作用,对负性情绪起到了一定的缓解作用。

关键词:青少年、积极心理品质、幸福感、抑郁、焦虑

注意缺陷多动障碍儿童执行功能和核心症状的行为表现研究

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目的 比较注意缺陷多动障碍(ADHD)儿童执行功能和核心症状的行为表现,探讨 SNAP-IV 量表维度总分数与 BRIEF 各维度总分数以及 SNAP-IV 量表各核心症状分数与 BRIEF 各维度总分数反映的行为表现问题的相关性。

方法 选取 2022 年 7 月至 2023 年 5 月于首都儿科研究所附属儿童医院神经内科门诊和多动症门诊就诊的 ADHD 儿童共 89 例,进行 SNAP-IV 量表评估、BRIEF 量表评估。通过 SPSS23.0 软件包,采用 Spearman 和 Pearson 相关系数分析,分别比较 SNAP-IV 量表维度总分数与 BRIEF 各维度总分数相关性、SNAP-IV 量表注意力不集中各维度分数与 BRIEF 各维度总分数相关性和 SNAP-IV 量表多动-冲动各维度分数与 BRIEF 各维度总分数相关性。

结果 SNAP-IV 量表多动-冲动维度总分数与 BRIEF 抑制维度总分数呈中度的正相关($r=0.557$, $P<0.01$); SNAP-IV 量表注意力不集中维度总分数与 BRIEF 工作记忆、计划、元认知维度总分数呈中度正相关($r=0.462-0.523$, $P<0.01$)。

其中 SNAP-IV 量表注意力不集中维度反映的行动力不足行为分数与 BRIEF 抑制维度总分数、畏

难行为分数与 BRIEF 工作记忆和元认知维度总分数、遗失行为与 BRIEF 组织维度总分数呈中度的正相关($r=0.417-0.465$, $P<0.01$); BRIEF 抑制维度总分数与 SNAP-IV 量表多动-冲动维度反映的自制力缺乏行为分数、行为管理指数维度总分数与抢答行为分数呈中度的正相关($r=0.414-0.570$, $P<0.01$)。

结论 ADHD 儿童的部分核心症状和执行功能在行为学上的表现有相关性,注意力不集中、多动-冲动维度的部分症状与执行功能的一些维度呈现出相关性。可以进一步对 ADHD 儿童的神经心理内表型进行研究和探讨。

关键词:ADHD,儿童,执行功能,行为表现

青少年不良同伴关系和网络成瘾:自伤成癮的中介作用

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目的 网络成瘾是危害青少年身心健康的重要因素,不仅影响青少年的学业表现,还和焦虑、抑郁、非自杀性自伤(Non-Suicidal Self-Injury, NSSI)等精神心理疾病有关,但其内在动机有待进一步探究。本研究旨在探讨自伤成癮是否可以作为同伴关系和网络成瘾之间的中介变量,进一步揭示三者之间的深层次关系。

方法 选取于北京安定医院住院的 107 名 NSSI 青少年为研究对象,使用学生同伴关系量表、网络成瘾量表、渥太华自伤量表进行评估,并采用 SPSS26.0 以及 Process 插件进行数据分析。

结果 共纳入 NSSI 青少年男性 11 人,女性 96 人;独生子女 50 人,非独生子女 57 人;农村户籍 31 人,城市户籍 76 人。相关性分析结果显示,同伴关系和 NSSI 成癮呈显著负相关($r=-0.268$, $P<0.01$);同伴关系和网络成瘾呈显著负相关($r=-0.358$, $P<0.01$);NSSI 成癮和网络成瘾呈显著正相关($r=0.305$, $P<0.01$)。中介效应检验发现自伤成癮在同伴关系和网络成瘾之间起部分中介作用($\beta=-0.06$, 95% CI: -0.145 ~ -0.007, $P<0.05$, 中介效应占总效应的 17%)。

结论 青少年不良同伴关系既可以直接作用于也可通过 NSSI 成癮间接作用于网络成瘾;NSSI 成

瘾在不良同伴关系和网络成瘾之间起部分中介作用。

关键词：网络成瘾,同伴关系,非自杀性自伤,青少年

孤独症谱系障碍患儿血清维生素 B12、叶酸及氨基酸水平分析

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目的 探讨孤独症谱系障碍(autism spectrum disorder, ASD) 患儿是否存在血清维生素 B12、叶酸及氨基酸水平异常, 为建立 ASD 的早期预警信号和开展 ASD 儿童的靶向营养干预提供依据。

方法 收集 2020 年 7 月—2023 年 12 月期间在郑州大学第三附属医院儿童发育行为科就诊和接受康复训练的典型 ASD 患儿 40 名作为病例组, 另选取 35 名性别、年龄匹配的正常儿童作为对照组。采用化学发光免疫分析法测定血清维生素 B12、叶酸水平, 采用循环法测定血同型半胱氨酸水平, 采用串联质谱法检测苯丙氨酸、色氨酸、酪氨酸、丙氨酸、瓜氨酸等血清氨基酸水平, 并进行统计学分析。

结果 ASD 组血清维生素 B12 和叶酸的水平低于对照组, 血清同型半胱氨酸、苯丙氨酸、色氨酸的水平高于对照组, 酪氨酸水平低于对照组, 差异均具有统计学意义(t 值分别为 6.21, -2.34, -7.36, 5.71, 3.75, -4.98, P 值均 <0.05);

结论 ASD 患者血清维生素 B12、叶酸、同型半胱氨酸、苯丙氨酸、色氨酸及酪氨酸水平存在异常, 这些异常指标有可能成为 ASD 的预警信号, 应及时开展靶向营养干预。

关键词: 孤独症谱系障碍, 维生素 B12, 叶酸, 氨基酸水平

学龄前 ADHD 执行功能与情绪失调的关系研究

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目的 情绪失调是学龄前注意缺陷与多动障碍(ADHD) 儿童常见的伴随症状, 既往研究表明 ADHD 儿童至少会在一个情绪失调环节中出现问题。作为 ADHD 的核心缺陷, 执行功能与情绪失调有着密切联系。本研究拟使用多种研究工具, 探讨学龄前 ADHD 儿童执行功能与情绪失调的关系, 以更好地了解学龄前 ADHD 情绪失调的发生机制, 并为干预学龄前 ADHD 儿童的情绪失调问题提供理论基础。

方法 于复旦大学附属儿科医院精神心理科门诊、合作幼儿园初筛招募有注意缺陷多动障碍倾向的学龄前儿童 44 名, 经过排除边缘情况, 最终纳入 38 名确诊为学龄前 ADHD 儿童, 并采用被试内实验设计进行研究。采用标准化剑桥神经心理成套测试(CANTAB)和家長版学龄前儿童执行功能行为评定量表(BRIEF-P), 对学龄前 ADHD 儿童的执行功能进行全面评估; 采用情绪理解测验(TEC)和情绪调节检核表(ERC)分别对学龄前 ADHD 儿童情绪失调中的情绪理解能力、情绪调节能力及情绪不稳定性进行评估。

结果 根据儿童的测验结果显示, 学龄前 ADHD 儿童在停止信号任务(SST)中的反应时间与情绪理解显著正相关($r=0.368$, $p<0.05$), 在空间工作记忆任务(SWM)中的总错误数与情绪理解显著负相关($r=-.344$, $p<0.05$)。家長报告的量表结果显示, 学龄前 ADHD 儿童的总体执行功能受损与情绪调节显著负相关($r=-.396$, $p<0.05$), 抑制自我调控、认知灵活性和元认知各分指数与情绪调节均呈显著负相关(均 $p<0.05$); 此外, 学龄前 ADHD 儿童的执行功能受损总分与情绪不稳定性显著正相关($r=0.753$, $p<0.01$), 各分指数也均呈显著正相关(均 $p<0.01$)。

结论 执行功能在学龄前 ADHD 儿童情绪失调中发挥这重要作用, 未来的干预方案需重点关注对学龄前 ADHD 儿童的执行功能的训练和干预, 以减少学龄前 ADHD 儿童的情绪失调症状, 促进其身心健康和发展。

关键词: 学龄前 ADHD; 执行功能; 情绪失调

分析青少年非自杀性自伤患者的心理护理效果评价

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目的 通过对非自杀性自伤的青少年患者进行心理护理,分析心理护理对抑郁患者自伤情况和心理症状的影响,研究心理护理在治疗 NSSI 方面的潜力。

方法 纳入 2021 年 3 月-2022 年 12 月至我院就诊的非自杀性自伤患者 80 例,将研究对象随机等比例分入研究组(心理护理)或对照组(常规护理)。给予所有研究对象常规非自杀性自伤药物和物理治疗,对照组给予患者常规护理,包括评估自杀和自我伤害风险、减压正念练习、及时阻止患者的自伤行为、叮嘱患者按时服药等;研究组在此基础上,给予患者心理护理(包括建立心理护理团队、建立良好的护患关系、专业心理治疗、增强自我效能感、团体心理治疗)。为了分析比较两组患者的自伤情况,使用青少年自伤量表评估非自杀性自伤患者近 1 个月的自伤频率和严重程度;为了分析比较两组患者的心理症状,使用蒙哥马利-阿斯伯格抑郁量表(MADRS)衡量抑郁发作的严重程度。实验数据采用 SPSS 26.0 进行分析,计量数据以平均值±标准差表示,组间比较使用独立 t 检验,若为分类资料则用个数和百分数表示,组间比较使用卡方检验, $P < 0.05$ 被认为具有显著性差异。

结果 针对 NSSI 患者焦虑、抑郁的易感因素及相关因素,对研究组进行系统的心理护理。通过 2 周的干预后,研究组患者的自伤频率及自伤程度随着干预时间的增长而逐渐减小,干预效果更好,表明研究组患者的自伤情况明显优于对照组,两组间差异有统计学意义($P < 0.05$);干预前,两组患者的抑郁程度大致相同,干预后,研究组患者的抑郁程度明显下降,表明研究组患者的心理症状明显轻于对照组,两组间差异有统计学意义($P < 0.05$)。

结论 通过专业的心理干预,可以在一定程度上降低患者的焦虑和抑郁水平,并通过护患有针对性的沟通,使患者得到缓解。同时,集体心理治疗使兴趣爱好不多的非自杀性自伤患者在同伴的影响下重新找到了自己的兴趣爱好,也在一定程度上缓解了患者的焦虑和抑郁情绪。结果表明,给予青少年非自杀自伤患者心理护理,可有效降低患者焦虑和抑郁的负面情绪,减少自伤频率和程度,值得临床推广。

关键词:青少年;非自杀性自伤;心理护理;自残;负面情绪

校园欺凌对寄宿初中生心理健康问题的影响:学校归属感与心理韧性的中介效应

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目的 近年来,校园欺凌已成为全球范围内的重要教育和公共卫生问题。校园欺凌对学生的心理健康具有显著的负面影响,而寄宿学生长期处于封闭的校园环境,远离家庭支持系统,更有可能成为校园欺凌的卷入者,面临更大的心理健康风险。本研究旨在探讨校园欺凌对寄宿初中生心理健康的影响,并分析学校归属感和心理韧性的中介效应。

方法 采用分层随机整群抽样的方法对河北省几所寄宿中学初中三个年级的学生进行问卷调查。使用特拉华欺负受害量表、中学生心理健康量表(MSSMHS)、学校归属感量表、中文版心理韧性量表(CD-RISC-10)调查寄宿初中生的校园欺凌、心理健康问题、学校归属感、心理韧性的情况。运用 SPSS 26.0 软件对研究收集的数据进行分析与处理,采用 t 检验、方差分析等对性别、年级等人口学变量以及校园欺凌、心理健康问题等相关因素得分进行差异性检验。运用 Amos 28.0 构建结构方程模型并用 Bootstrap 方法进行中介效应检验,用 Bollen-Stine Bootstrap 估计拟合指数。检验水准 $\alpha = 0.05$ 。

结果 本研究共收集问卷 949 份,剔除不合格问卷后(前后有明显逻辑错误、重要的人口学变量缺失或存在异常值等)有效问卷 851 份,问卷有效率为 89.7%。其中男生 424 名(49.8%),女生 427 名(50.2%);初一学生 245 名(28.8%),初二学生 256 名(30.1%),初三学生 350 名(41.1%)。校园欺凌得分为 5.0 ± 8.1 ,心理健康问题得分为 1.6 ± 0.8 ,学校归属感得分为 4.5 ± 0.8 ,心理韧性得分为 24.7 ± 9.9 。校园欺凌对心理健康问题的直接效应显著,效应值为 0.035 (0.024-0.046),而学校归属感、心理韧性在校园欺凌与心理健康问题之间均起到部分中介作用,其中学校归属感的中介效应占总效应的 31.2%,心理韧性占总效应的 3.3%,中介效应值分别为 0.017

(0.012-0.022)、0.002 (0.001-0.004)。模型拟合度良好, $c^2/df=1.59$, $RMSEA=0.03$, $AGFI=0.99$, $CFI=0.99$ 。

结论 校园欺凌不仅能直接影响寄宿初中生的心理健康问题的发生, 也会通过降低学校归属感和心理韧性, 显著增加心理健康问题风险。因此, 提高学生的学校归属感、增强学生的心理韧性可能是缓解校园欺凌负面影响的有效策略, 例如建立积极的校园文化、提供心理支持和辅导、开展心理健康教育等。本研究为进一步研究校园欺凌对青少年心理健康的影响提供了重要的实证依据, 并为制定有效的干预策略提供了理论依据。

本研究由国家心理健康和精神卫生防治中心资助。

关键词: 校园欺凌, 寄宿中学生, 心理健康, 学校归属感, 心理韧性

计算机认知行为治疗中失眠对童年创伤和抑郁的中介作用研究

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与传统的面对面治疗相比, 基于计算机的认知行为疗法在几个方面具有优势。然而, 它仍然有几个局限性, 其中缺乏个性化是最常关注的问题之一。本研究旨在探讨如何通过 ICBT 干预减轻经历过童年创伤事件的患者的抑郁症状, 以探讨是否应该更有针对性地提供治疗。根据先前的研究结果, 失眠被确定为一个潜在的目标。筛选出 150 名处于抑郁状态 PHQ-9 总分 25 分且无严重自杀意念、无其他精神障碍的参与者, 使用《失眠严重程指数》(IS)和《儿童创伤问卷-28 项简式》获得干预前数据。随后参与者被随机分配为立即接受干预或 4 周后接受干预作为对照条件, 干预后再测抑郁严重程度和失眠严重程度。以童年创伤为自变量, 以抑郁严重程度的变化为因变量, 以失眠的变化为中介变量, 以性别和年龄为控制变量, 进行中介效应分析, 建立中介模型, 检验模型的拟合度和每条途径的显著性。中介分析表明, 失眠部分中介了童年创伤和抑郁之间的关系, 具体而言, 失眠在儿童期情绪虐待与抑郁之间的关系中起部分中介作用, 在情绪忽视、性

虐待、身体虐待和身体忽视与抑郁之间分别起完全中介作用。失眠的变化部分中介了抑郁的改善和童年创伤中的情绪忽视的关系。

研究表明, 针对抑郁症状的患者, 治疗师可以通过是否失眠、是否有童年创伤进行更个性化、更有针对性的干预, 以最大限度的提高治疗效果。

关键词: 童年创伤, 失眠, 中介作用, 计算机认知行为疗法, 抑郁

孤独症谱系障碍早期成人社交与非社交认知灵活性的行为学研究

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目的 孤独症谱系障碍 (autism spectrum disorder, ASD) 是一种以社交困难以及刻板重复行为为核心特征的神经发育障碍。其发生率近年来不断攀升, 成为全球性的公共卫生议题。既往研究发现 ASD 个体的认知灵活性存在不同程度受损, 导致日常生活受到影响, 但目前对于 ASD 个体在社交与非社交两种不同情景下认知灵活性表现的研究较少, 有待进一步探索。

方法 本研究纳入 30 例 ASD 早期成人 (年龄范围: 18-33 岁, 男:女=13:17) 及 29 例年龄、性别及智力发育水平可比的典型发育 (typical development, TD) 对照 (年龄范围: 19-31 岁, 男:女=15:14), 采用概率反转学习 (probabilistic reversal learning, PRL) 任务, 设计了社交与非社交两种不同情景, 通过 2x2 方差分析, 考察诊断 (ASD vs. TD) 与情景 (社交 vs. 非社交) 及其交互效应对受试者在 PRL 任务中行为学指标的影响。

结果 方差分析结果显示在任务的习得阶段, 诊断x情景存在显著的交互效应 ($F=6.338$, $P=0.015$), 在社交情景中, ASD 组无效失败转换的比例显著低于 TD 组, 在非社交情景中, ASD 组则显著高于 TD 组。在反转阶段, 对于无效失败转换比例, 情景存在显著的主效应 ($F=5.766$, $P=0.020$), 无论何组被试, 非社交情景的无效失败转换比例都显著高于社交情景; 对于有效失败转换比例, 诊断 ($F=4.992$, $P=0.030$)

存在显著的主效应, 诊断×情景存在显著的交互效应 ($F=6.023, P=0.018$), 提示在社交情景中 ASD 组的有效失败转换比例显著高于 TD 组; 对于有效成功转换, 情景 ($F=5.667, P=0.021$) 存在显著的主效应, 提示在无论何组被试, 非社交情景的有效成功转换比例都显著高于社交情景。隐马可夫模型参数显示, ASD 组在两个情景中都体现出高于 TD 组的趋势; 在非社交情景中, ASD 组对积极反馈的敏感性低于 TD 组 (89% HDI: [-0.11, 0.00]), ASD 组对消极反馈的敏感性也显著低于 TD 组 (89% HDI: [-0.13, -0.01])。

结论 在 PRL 任务总体表现中, TD 在认知灵活性方面优于 ASD 个体, 但两组受试者 PRL 任务相关行为学指标的差异也可能揭示 ASD 受试者存在不同的策略, 尤其是在社交情境中。另外, ASD 组在两种情境下都倾向于高估任务环境的不确定性, 对积极和消极反馈的敏感性也低于 TD 组, 提示 ASD 个体对情境的反馈和环境变化有不同的感知和反应模式, 从而影响其不同情景下认知灵活性的表现。

关键词: 孤独症谱系障碍, 认知灵活性, 概率反转学习任务

青少年抑郁非药物干预研究进展

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目的 以往在青少年和成人的研究中发现自尊、非适应性完美主义、反刍思维与其抑郁情绪的发生密切相关, 但较少有研究探索非适应性完美主义、反刍倾向在自尊对抑郁影响中的作用, 因此本研究旨在进一步探讨自尊、非适应性完美主义、反刍倾向与抑郁的链式中介关系。

方法 采用方便抽样的方法对在校中学生进行问卷调查, 调查内容包括学生的基本信息 (性别、年级、是否为独生子女、是否有留守经历)、病人健康问卷 (PHQ-9)、自尊量表 (SES)、青少年反刍倾向-风格量表 (RTSS)、完美主义问卷 (FMPS)。通过问卷星线上发放问卷, 共收回有效问卷 1111 份。学生的平均年龄为 14.96 岁, 男生的平均年龄为 14.96 岁, 男生 633 人 (57.0%), 女生 478 人 (43.0%); 初中

597 人 (53.7%), 高中 514 人 (46.3%); 其中独生子女 176 人 (15.5%), 非独生子女 939 人 (84.5%); 有留守经历 338 人 (30.4%), 无留守经历 773 人 (69.6%)。使用 SPSS26.0 和 PROCESS 插件, 对数据进行统计分析。

结果 相关分析发现人口学变量中, 性别、独生子女与自尊负相关 (均 $P < 0.05$); 性别、年级、独生子女、有无留守经历均与反刍倾向相关 (均 $P < 0.05$), 性别、年级、有无留守经历与抑郁相关 (均 $P < 0.05$); 非适应性完美主义、反刍倾向、抑郁均与自尊呈显著负相关 (均 $P < 0.05$); 反刍倾向、抑郁均与非适应性完美主义呈显著正相关 (均 $P < 0.05$); 抑郁与反刍倾向呈显著正相关 ($P < 0.05$)。中介效应分析发现, 自尊能够直接负向预测青少年抑郁, 直接效应量为 -0.388, 直接效应占比为 70.29%; 非适应性完美主义在自尊与抑郁之间起中介作用, 中介效应量为 -0.027, 中介效应占比为 4.89%; 反刍倾向在自尊与抑郁之间起中介作用, 中介效应量为 15.94%; 且非适应性完美主义-反刍倾向的链式中介作用也显著, 中介效应量为 -0.050, 中介效应占比为 9.06%。

结论 研究发现青少年自尊水平越高, 抑郁程度可能越低。自尊可以直接影响青少年抑郁, 还可以通过非适应性完美主义和反刍倾向的独立中介, 以及非适应性完美主义-反刍倾向的链式中介间接作用于抑郁。

关键词: 自尊; 非适应性完美主义; 反刍倾向; 抑郁

学龄前注意缺陷多动障碍儿童事件相关电位 P300 研究

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目的 通过对 3-5 岁学龄前 ADHD 儿童进行事件相关电位 P300 的检测, 比较分析学龄前 ADHD 患儿与正常儿童 P300 的特点, 以期对学龄前 ADHD 患儿认知功能的研究提供新的参考。

方法 选取 2021 年 3 月至 2024 年 3 月于首都儿科研究所附属儿童医院神经内科及保健科门诊就诊的 3-5 岁学龄前儿童共 69 例, 分为 ADHD 组 (41

例)、正常儿童组(28例),对所有儿童进行事件相关电位 P300 的检测,记录 P300 的潜伏期和波幅。按照 10-20 系统记录中线(Fz、Cz、Pz 和 Oz)和双侧中央顶叶电极(C3 和 C4)的脑电活动。利用 SPSS 26.0 软件包对两组儿童的 P300 波幅和潜伏期进行分析。计量资料符合正态分布,两组间比较采用两独立样本 t 检验;不符合正态分布,两组间比较采用 Mann-Whitney U 检验。 $P < 0.05$ 则认为差异有统计学意义。

结果 ADHD 组患儿在各个电极点(Fz, Cz, Pz, Oz, C3, C4)P300 的潜伏期均长于健康对照组,差异具有统计学意义($P < 0.05$)。ADHD 组 Pz 点和 Oz 点 P300 的波幅均高于正常对照组,差异具有统计学意义($P < 0.05$)。

结论 学龄前 ADHD 患儿 P300 显示中央线及双侧中央区潜伏期延长,顶叶、枕叶波幅增高,提示学龄前 ADHD 患儿已存在注意认知功能受损。

关键词: 注意力缺陷多动障碍;学龄前;事件相关电位;P300

数据驱动下的抽动障碍的亚型分析的相关研究进展

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目的 抽动障碍(tic disorder, TD)是儿童常见的神经发育障碍,在 DSM-5 诊断标准下可分为暂时性抽动障碍(provisional tic disorder, PTD)、慢性运动或发声抽动障碍(chronic motor or vocal TD, CMT 或 CVT)和抽动秽语综合征(Tourette syndrome, TS)。目前在这些亚型中的早期诊断分类是比较困难的,目前基础上的新发病抽搐症状较难以鉴别。机器学习工具已广泛用于精神疾病的早期诊断分类。然而,目前很少有机器学习模型被建立用于 TD 患者的诊断分类。在这篇综述中,我们描述了抽动障碍在不同维度下的数据驱动分类。我们讨论了这些发现的潜在机制和治疗意义,描述了有待开发的领域,并为未来的研究提供了可测试的假设。

方法 通过 PubMed, Web of Science 检索文献,采用年份过滤范围 2000 年至 2024 年,对研究方法不进行限制,包括临床特征、社会特征、影像学、免

疫系统、遗传基因等分类特征。

结果 研究结果显示,从数据驱动的角度对抽动障碍进行亚型分析是完全可行并且是有显著临床意义的。临床特征和社会行为特征分析表明,通过 HAC、EFA 和 LCA 等方法,抽动症患者可分为多个簇和因子,每个簇与不同的行为和共病症状相关,如强迫障碍(obsessive-compulsive disorder, OCD)、注意缺陷多动障碍(attention deficit hyperactivity disorder, ADHD)和自闭症等复杂关联。此外,一些高遗传性的表型(如高社会去抑制率)比传统诊断更能准确反映 TS 的生物网络,对称/精确、攻击性冲动、对伤害的恐惧和囤积等特征与 TS、OCD 和 ADHD 存在复杂的遗传联系,可能代表这些疾病共同的认知控制脆弱性。这些研究强调图雷特综合征不是一种单一的疾病,而是一种异质性综合征,根据不同的亚型分类方法,有不少于两个主要的集群定义了从简单图雷特综合征到复杂图雷特综合征的严重程度/复杂性梯度。

结论 目前抽动障碍的临床特征和相关危险因素对有效识别高危人群是非常重要的。识别和定义“抽动障碍谱系”中的各种表型对早期干预和预防工作具有重要的临床意义。通过综合观察各种临床特征,我们可以了解更多导致抽动障碍的原因,这表明需要更好地了解抽动障碍内部的差异。目前的研究可能为 TD 的神经生物学机制提供更深入的了解,并具有推进 TD 精准治疗方法和个性化预后预测的研究和实践的重大潜力。

关键词: 数据驱动,抽动障碍,分型,亚型分析

青少年抑郁症患者家庭照顾者照护能力要素的质性研究

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目的 探索我国青少年抑郁症患者家庭照顾者照护能力内涵,为开展针对性的照护能力干预提供借鉴和参考。

方法 采用目的抽样方法,于 2021 年 12 月—2022 年 1 月在杭州市两所三甲医院儿童心理门诊选取 17 名抑郁症青少年家庭照顾者进行半结构化访谈,采用主题分析法确定主题。

结果 共提炼出五大主题,即疾病知识,包括知识获取途径,疾病相关知识等;照护技能,包括疾病管理,情感支持,生活照护等;照护态度,包括缓解病耻感,接受理解,降低要求等;个人应对,包括照护问题应对,情绪应对等;寻求支持中包括非专业支持,专业支持等。

结论 照护能力内涵丰富,抑郁症照顾者照护能力有待提升。医务人员应提供专业化的健康教育,以期提升照顾者照护能力,维护并促进其身心健康。本研究从照顾者照护情况和实际需求出发,初步探讨了青少年抑郁症患者家庭照顾者照护能力要素。研究结果反映,照顾者在照护方面具有一定的局限和困难,建议增加照顾者专业照护知识和照护技能的培训,提供多途径的支持以提升照顾者个人应对能力,健全照顾者支持系统,以期为青少年抑郁症患者提供优质的照护。但由于本研究访谈对象均来自杭州两家三甲医院,可能导致研究结论的局限性。后期研究者将扩大研究区域进行更深入的探究。

关键词: 抑郁症,青少年,家庭照顾者,照护能力,质性研究

注意缺陷多动障碍的视听注意反应与 P300 的相关性研究

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目的 探讨视听整合持续操作测验 (IVA-CPT) 和事件相关电位 P300 在注意缺陷多动障碍 (ADHD) 患者中的相关性及其临床诊断中的应用价值。

方法 将符合 DSM-V 中 ADHD 诊断标准的 30 例患儿和 30 例健康儿童进行 IVA-CPT 检测和注意缺陷多动障碍筛查量表中文版 (SNAP-IV) 评估。同时运用视觉 oddball 范式,记录 P300 脑电信息参数。

结果 在 IVA-CPT 测试中,ADHD 患者的综合注意力商数、综合控制力商数、听觉/视觉控制力商数和听觉/视觉注意力商数均显著降低 (均 $P < 0.01$)。ADHD 患者及三个亚型与对照组相比,P300 的潜伏期延长、波幅降低 ($P < 0.05$ 或 0.01),尤在 Cz 更显著;但是波幅下面积各组间无统计学差异。另外,ADHD 患者 IVA-CPT 的视觉注意力

商数和视觉控制力商数与 P300 波幅呈正相关 ($P < 0.05$ 或 0.01);而与 P300 潜伏期呈负相关 ($P < 0.01$)。

结论 ADHD 患者的 P300 有显著改变,主要表现为 P300 潜伏期延长和波幅降低,可能与注意反应延缓和抑制控制损害有关。提示 ADHD 患者存在神经认知功能异常。

关键词: 注意缺陷多动障碍 事件相关电位 P300 注意缺陷多动障碍筛查量表 视听整合持续操作试验

中高考学生轻度抑郁的早期干预研究

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目的 本综述旨在探讨中高考学生因学业压力导致的轻度抑郁产生原因,并提出有效的早期干预建议,以期通过学校、家庭和社会的多方支持,帮助中高考学生在心理教育、家庭支持和自我调节等方面得到全面帮助,降低抑郁风险,促进心理健康。

方法 本文通过系统回顾和分析现有文献,综合各类研究成果,探讨中高考学生轻度抑郁的成因。首先,本文通过检索 PubMed、PsycINFO、Web of Science 等数据库中 2000 年至 2023 年间发表的相关研究,筛选出与中高考压力和青少年抑郁相关的文献。其次,对这些文献进行分类整理,重点关注学业压力、家庭环境、社会支持等因素对抑郁症的影响。本文结合心理学、教育学和社会学的理论与实践,提出具体的干预策略和建议。

结果 通过对 130 篇相关文献的分析,发现中高考学生因学业压力大,抑郁症发病率显著高于其他青少年群体。数据显示,约有 30% 的中高考学生报告经历过不同程度的抑郁症状,而这一比例在普通青少年中约为 20%。学业压力、父母期望、高强度的学习时间和缺乏休息是主要的压力源。研究表明,心理健康教育的普及、优化家庭支持环境以及培养学生自我管理和情绪调节技能是有效的干预措施。

心理健康教育: 通过在学校中开展心理健康课程和讲座,帮助学生识别和管理压力与情绪。例如,

一项研究表明,经过 8 周的心理健康课程后,学生的抑郁症状显著减少 ($p < 0.05$)。

家庭支持: 优化家庭环境,增强父母对孩子学业压力的理解和支持。研究显示,父母参与的心理教育项目能够显著降低学生的抑郁水平 ($d=0.4$)。

自我调节技能: 通过训练学生的自我管理和情绪调节技能,如正念冥想和认知行为疗法 (CBT),可以有效缓解抑郁症状。一项包含 200 名学生的研究发现,经过 12 周的正念冥想训练,学生的抑郁评分下降了 15% ($p < 0.01$)。

结论 通过系统化的早期干预策略,可以有效帮助中高考学生应对学业压力,降低抑郁症发病率,促进心理健康。本文为教育工作者、心理学家和政策制定者提供了有价值的参考,提出了通过心理健康教育、家庭支持和自我调节技能训练来构建支持性环境的具体方法。这些干预措施不仅有助于改善中高考学生的心理健康状态,还为未来的研究和实践提供了科学依据和实践指导。

关键词: 青少年,轻度抑郁,早期干预

学龄期注意缺陷多动障碍伴情绪失调与其执行功能及静息态功能连接异常的相互作用关系

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目的 情绪失调在注意缺陷多动障碍 (Attention-Deficit/Hyperactivity Disorder, ADHD) 儿童中非常普遍,显著影响其功能损害和不良预后。本研究旨在探索 ADHD 伴情绪失调儿童的执行功能及以“眶额叶皮层”为种子点的功能连接特征,同时在 ADHD 儿童中探索三者间的相互作用关系。

方法 共纳入 ADHD 儿童 160 名,健康对照 80 名参与研究。使用 CBCL 量表 (Anxiety/depression, Attention, Aggressive, AAA) 条目将 ADHD 儿童分为伴有与不伴有情绪失调的两个亚组。参与者完成剑桥神经心理自动化成套测试软件 (Cambridge NeuroPsychological Tests Automated Battery, CANTAB) 及行静息态功能磁共振扫描。经过数据质量检查后,最终纳入 ADHD 伴情绪失调组 66 例、ADHD 不伴情绪失调组 40 例和 TDC 组 52

例进行统计分析。使用协方差分析及事后检验比较三组间执行功能及以“眶额叶皮层”为种子点的静息态功能连接特征。同时,以异常功能连接为自变量,以异常执行功能为中介变量,以情绪失调为因变量,在 ADHD 儿童中建议中介模型。

结果 以“性别、年龄、智力”为协变量的协方差分析及事后检验发现,与不伴情绪失调的 ADHD 儿童相比,伴有情绪失调的 ADHD 儿童抑制控制功能 (IED) 更差 ($P=0.01^{**}$)。以“性别、年龄、智力、核心症状严重程度、平均头动参数”为协变量的协方差分析及事后检验的结果发现,与不伴情绪失调的 ADHD 儿童相比,伴有情绪失调的 ADHD 儿童存在“眶额叶皮层-内侧额上回”功能连接异常 (左侧眶部额中回—右侧内部额上回: $P=0.04^*$; 右侧眶部额中回—左侧内部额上回: $P=0.01^*$; 右侧眶部额中回—右侧内部额上回: $P=0.01^*$)。IED 在 ADHD 儿童“右侧眶部额中回-左侧内部额上回”功能连接对其情绪失调的影响中起部分中介作用,总效应值为 0.27 ($P=0.01^*$),直接效应值为 0.21 ($P=0.04^*$),间接效应值为 0.06 ($P=0.001^{**}$),中介效应值占总效应值的 22%。

结论 伴有情绪失调的 ADHD 儿童存在执行功能受损及以“眶额叶皮层”为种子点的功能连接异常。ADHD 儿童情绪失调、执行功能及功能连接之间存在相互作用关系。

关键词: 注意缺陷多动障碍; 情绪失调; 执行功能; 功能连接; 额叶皮层

小儿脑瘫合并孤独症谱系障碍康复观察——杜春红

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目的 探索孤独症谱系障碍合并脑瘫患儿的康复治疗方法

方法 患儿为三级精神专科医院康复医学科在训儿童,均经儿童精神科确诊为 CP 合并 ASD。患儿 A,女,5 岁 3 个月就诊,四肢运动障碍,肌张力无增高,躯干控制差,坐位平衡 2 级,站位平衡 0 级,追视差,呼名反应差,有刻板行为,无法正常交流,并发癫痫。患儿 B,男 6 岁 1 个月,右侧肢体

运动障碍,右侧腓肠肌肌张力增高,坐位平衡3级,站位平衡2级,可追视,呼名反应尚可,有刻板行为,无法正常交流。患儿C,女,3岁10个月,右侧肢体运动障碍,肌张力无明显增高,追视差,呼名反应差,有刻板行为,无法正常交流,并发癫痫。观察3例孤独症谱系障碍合并脑瘫患儿,分别进行运动疗法、感觉统合治疗、认知知觉功能障碍训练、言语训练等康复治疗6个月,并于治疗前后进行肌力评定、Ashworth肌张力评定、孤独症儿童发展评估表评估。观察患儿各项功能改善情况。

结果 患儿认知能力、追视能力、粗大运动提高明显。

结论 CP与ASD共患病,兼具两种疾病特点,同时治疗难度远远大于单病种。临床中多种治疗方式相结合,兼顾运动、感觉、言语、认知、社交等领域,并加强照顾者教育实现共同干预,对患儿康复更有意义。若患儿合并癫痫等其他疾病,治疗难度更大。

关键词:脑瘫 孤独症谱系障碍 康复治疗

223 例青少年非自杀性自伤行为影响因素分析

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目的 探讨青少年非自杀性自伤(NSSI)的影响因素,为早期发现与预防提供。

方法 选取2020年9月~2022年9月桐乡市4所初中及4所高中学生,随机抽取每年级2个班级共690例,采用青少年自伤行为问卷(ASIS)筛选NSSI。应用一般情况调查问卷收集患者的个人一般情况,采用单因素分析筛选影响NSSI患者一般资料;对比NSSI与非NSSI者的症状自评量表(SCL-90);对比初中组及高中组青少年的ANSAQ评分;采用多因素分析筛选出影响青少年出现NSSI的危险因素。

结果 符合NSSI者223人,非NSSI者467人,其中初中组127人,高中组96人。NSSI组在性别、母亲文化程度、是否独生子女、是否有留守经历、是否寄宿、学习成绩以及是否有抑郁病史与无NSSI组比较差异有统计学意义($P<0.05$);NSSI组较无NSSI

组比较SCL-90得分明显升高,且平均值高于160分的临界值($P<0.05$);高中NSSI组在自伤频率、初发年龄、疼痛体验次数均高于初中NSSI组($P<0.05$);初中NSSI组在他人在场次数及抵制自伤行为方法高于高中NSSI组($P<0.05$);留守经历、学习成绩及抑郁病史是出现NSSI的潜在危险因素。

结论 NSSI影响因素较多,负性生活刺激、女性和抑郁病史是导致NSSI发生的主要因素。

关键词:青少年;非自杀性自伤;影响因素

147例青少年非自杀性自伤患者的临床和人格特征

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目的 探讨青少年非自杀性自伤患者的临床和人格特征。

方法 对2020年09月—2022年08月嘉兴市康慈医院门诊就诊的147例伴有非自杀性自伤的青少年作为研究对象,对其自伤方式、心理特征(SCL-90)、人格特征(EPQ)进行研究。

结果 发现147例青少年患者有10种NSSI行为方式,割伤113例(占76.9%)、击打自己40例(占27.2%)、撞头或拳击37例(占25.2%)、咬23例(占15.6%)、服药过量18例(占12.2%)、用针、笔扎13例(占8.84%)、干扰伤口愈合11例(占7.48%)、烧灼9例(占6.12%)、用力抓6例(4.1%)、拽头发2例(占1.36%)等。其中:一种自伤方式81例(占55.1%);两种自伤方式40例(占27.2%);三种自伤方式22例(占15.0%);3种以上自伤方式的4例(占2.7%)。艾森克人格问卷提示青少年非自杀性自伤患者的神经质得分高于无自伤自杀行为组,内外向、精神质、掩饰性得分显著低于无自伤自杀行为组。SCL-90提示人际关系敏感、抑郁、焦虑、强迫等4个因子分高于全国青年组常模,且中度异常。

结论 青少年非自杀性自伤的方式具有多样性、反复性,多有特定的心理和人格特征。

关键词:青少年;非自杀性自伤;艾森克人格问卷;临床特征;SCL-90;人格特征

创伤经历对青少年抑郁障碍患者事件性前瞻记忆的影响

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目的 前瞻记忆是指记忆将要执行的预期动作的能力,即对在未来特定情境或事件没有世界的外部提示的情况下,从事先前计划好的活动的记忆。在青少年儿童的学业成就和人际关系中起着至关重要的作用。本研究旨在探讨有创伤经历的青少年抑郁障碍患者,事件性前瞻记忆的特点。

方法 纳入 60 名青少年抑郁障碍患者和 60 名健康对照青少年,采用儿童抑郁量表(CDI)、流调用抑郁自评量表(CES-D)、童年期创伤量表(CTQSF)对青少年抑郁障碍患者进行调查,所有被试进行意图记忆测验(MIST; Raskin, Buckheit, & Sherrod, 2010),这是一种标准化和有效的 PM 测量工具。采用双重任务研究范式,选取由三角形和多边形并列组成的 380 张图片,作为实验材料,分析非靶线索反应时和控制条件的反应时;通过采集 N110、P170,分析不同条件下波幅及潜伏期的差异,探究童年创伤个体事件性前瞻记忆的特点。

结果 对于有创伤经历的青少年抑郁障碍患者,非靶线索的反应时长于控制条件的反应时;控制条件下,可观察到 N110 的潜伏期和波幅均大于健康对照组。

结论 创伤经历是影响前瞻性记忆的重要因素。有创伤经历的青少年抑郁障碍患者在靶线索未出现时,事件性前瞻记忆存在缺陷。

关键词: 创伤,青少年,抑郁,前瞻性记忆

每日症状指数减少预测抑郁儿童青少年重复经颅磁刺激疗效

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目的 重复经颅磁刺激(Repetitive transcranial magnetic stimulation, rTMS)已成为治疗儿童和青少

年抑郁症的新兴疗法,但如何早期预测疗效仍是一大挑战。本研究旨在探讨 rTMS 治疗过程中预测远期疗效的潜在因子。

方法 本研究采用回顾性队列研究设计,纳入 2014-2020 年间在某精神专科医院接受 ≥ 20 次 rTMS 治疗的 234 名抑郁症患儿。采用每日症状指数(DI-5)和儿童抑郁量表(CDI)评估抑郁症状。定义 DI-5 减分 $\geq 50\%$ 为治疗有效。使用 t 检验、卡方检验比较组间差异,重复测量方差分析探讨 DI-5 的变化趋势, Pearson 相关分析 DI-5 与 CDI 的关系。

结果 在基线和治疗后, DI-5 与 CDI 均呈显著正相关(基线 $r=0.73$, 治疗后 $r=0.75$, 均 $P<0.001$)。105 名(45%)患儿治疗有效。两组患儿在第 11 次治疗时 DI-5 差异显著(中位数差 2 分, $P=0.010$)。第 11 次治疗时 DI-5 减分 < 2 分的患儿,第 20 次治疗无效的概率为 97.4%;减分 ≥ 2 分者有效概率为 85%。

结论 第 11 次 rTMS 治疗时 DI-5 减分 ≥ 2 分可能是预测儿童青少年抑郁症 rTMS 疗效的早期预测因子。该发现有助于优化个性化治疗,提高临床获益。但本研究为回顾性设计,尚需前瞻性研究加以验证。

关键词: 重复经颅磁刺激; 儿童青少年; 抑郁症; 结局预测; 每日症状指数

亚历山大病的类脑模型建立与致病机制研究

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目的 亚历山大病(AxD)是一种原发性星形胶质细胞疾病,由 17 号染色体上的 GFAP 基因功能获得性突变引起,导致髓磷脂生成障碍和脑白质损伤。AxD 死亡率高,尚缺乏有效治疗手段,迫切需要研究其发病机制并开发治疗药物。然而,关于 AxD 的研究多局限于啮齿类动物模型,难以呈现人类大脑的结构和功能多样性,限制了相关的研究进展。类器官模型是一种新型的体外三维培养技术,能够模拟人体器官的复杂结构和功能,相较于细胞模型及啮齿类动物模型具有独特优势,运用类器官模型能

够更全面的研究 AxD 的相关机制。

方法 本研究通过重编程 AxD 新生突变患者外周血细胞为多能干细胞，并进一步诱导分化为富含星形胶质细胞的大脑类器官，通过免疫荧光等分子实验及电生理等技术验证发育过程中的表征变化。通过单细胞测序、转录组检测技术，探究 AxD 发生的分子机制，确定潜在的生物标记物和治疗靶点，并通过计算设计和筛选药物技术辅助抗 AxD 先导化合物的发现。

结果 初期研究已收集 3 例 AxD 新生突变家系病例，其突变类型分别为：c.715 (exon4) C>T, c.716 (exon4) G>A 和 c.262 (exon1) C>T，且均已成功转为 LCL 细胞。

结论 本研究拟通过构建三维类脑模型研究 AxD 的发病机制，辅以计算机辅助药物设计技术，发现新型的抗 AxD 先导化合物，为 AxD 的治疗提供新方法。

关键词：类脑模型，亚历山大病，作用机制，治疗

儿童青少年阿立哌唑和脱氢阿立哌唑血浆浓度与催乳素水平的关系研究

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目的 阿立哌唑是目前儿童、青少年精神疾病患者使用最广泛的非典型抗精神病药物之一，其主要优势是不良反应发生率低，安全性好。由于阿立哌唑是一种部分多巴胺受体激动剂，因此可降低催乳素分泌水平。降低的催乳素水平可能与免疫功能障碍和其它健康问题相关。本研究的目的是在接受阿立哌唑治疗的儿童和青少年精神疾病患者中，探索血浆中阿立哌唑及其代谢产物脱氢阿立哌唑浓度与催乳素水平之间的关系。

方法 本研究为横断面研究，研究对象为 52 名（其中男 17 名，女 35 名），年龄为 13-18 岁，接受阿立哌唑治疗的儿童和青少年精神疾病住院患者。采用高效液相色谱-串联质谱法检测血浆阿立哌唑和脱氢阿立哌唑的浓度，采用化学发光免疫分析方法测定血清催乳素水平。

结果 在接受阿立哌唑治疗的儿童和青少年住

院患者中，约有 15% 患者表现出血清催乳素水平低于正常参考范围。在女性儿童和青少年中，阿立哌唑和脱氢阿立哌唑的血浆浓度与血清催乳素水平呈负相关。

结论 该研究结果提示，在临床实践中，除了定期监测血清催乳素水平外，对阿立哌唑及其主要代谢物脱氢阿立哌唑进行治疗药物监测有助于减轻催乳素降低带来的不良后果。因此，临床医生在为儿童和青少年患者（尤其是女性患者）开阿立哌唑处方时，应考虑阿立哌唑引起的催乳素水平下降。

关键词：阿立哌唑、脱氢阿立哌唑、催乳素、儿童和青少年

人文护理模式在精神科护理中的应用

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目的 本文主要针对人文护理模式在精神科护理中的应用进行分析研究。方法：随机选取 2022 年 1 月至 2023 年 1 月我院收治的 50 例精神疾病患者，将其按照随机数字表法均分为对照组和观察组，对照组应用常规护理，观察组应用人文护理模式，两组护理前后焦虑(SAS)、抑郁(SDS)评分对比。结果：两组护理前 SAS、SDS 评分对比无统计学意义， $P > 0.05$ ，护理后观察组 SAS、SDS 评分均低于对照组，具有统计学意义， $P < 0.05$ 。结论：在精神科护理中应用人文护理模式可以有效缓解患者焦虑，抑郁的不良情绪，值得推广应用。

方法 对照组使用常规护理，包括基础病情护理、用药护理、饮食护理、日常生活护理等。观察组使用人文关怀护理：（1）营造人文关怀氛围。对科室护理人员进行人文关怀护理系统培训，灌输人文关怀的价值观和信念，形成人文关怀护理文化。（2）人身安全检查。患者入院时护理人员查看危险物品，将这些物品专柜放置，并向患者承诺，如确实需要，护理人员会提供给患者。（3）营造舒适宽松病房环境。将人文理念融入病房每个细节满含温馨，营造宽松、舒适、自由的环境，营造病房温馨氛围。（4）加强心理沟通。了解患者内心的痛苦和真实需求，用亲切慰问、关心关怀、引导患者宣泄不良情绪。（5）重视生活人文关怀。遵循人人平等的原则，做

好解释及防护工作,取得患者理解和配合;(6)精神科护理人员需培养自身无私奉献及爱岗敬业的职业道德素质。从满足精神障碍患者的身心两方面需求出发,为他们创造舒适安全、充满关怀、充满爱心的治疗环境。(7)精神科护理人员要加强护患间的有效沟通。在面对患者及其家属的疑问时,能以专业认真的态度进行详细解答,提高他们的信任度,促使患者配合治疗。(8)精神科护理人员要有专业熟练的护理技能。对精神科急救方法要熟练掌握,才能在护理过程中高效保障患者的生命安全,促进患者的病情恢复。

结果 两组护理前 SAS、SDS 评分对比无统计学意义, $P>0.05$, 护理后观察组 SAS、SDS 评分均低于对照组,具有统计学意义, $P<0.05$ 。

结论 本次研究数据提示,采取人文关怀的研究组患者家属护理满意度及疾病临床治疗总有效率均优于对照组,提示人文关怀在精神科应用价值突出。人文关怀护理属于以人为本的护理干预模式,将常规的变被动护理转变为主动护理,护理人员的服务态度及护理质量均可得到显著提高,可了解患者存在的心理问题,给予有效的心理支持。人文关怀护理模式下,可帮助患者逐步建立自信心。

综上所述,人文关怀在精神科护理中的实施及效果确切,提升了康复效果,提高了患者生活和社会能力,值得在临床推广使用。

关键词:精神科;人文护理;应用

催产素对成人孤独症治疗现状综述

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目的 孤独症谱系障碍(Autism Spectrum Disorder, ASD)是一种严重的神经发育性疾病,相比于儿童期,成年 ASD 患者面临更大的生存需求及挑战。目前其致病机制尚不明确,有关的药物治疗研究非常有限,至今为止没有特效药物,同时也缺乏有效的治疗方法。近年来,ASD 发病率呈现迅速上升趋势,引起研究者的广泛关注。有大量研究显示,催产素(Oxytocin, OT)在缓解 ASD 患者核心症状方面发挥着重要作用,是 ASD 治疗的研究热点,但目前大部分研究针对于儿童及青少年,而对于成年 ASD

的治疗效果尚无明确定论。本文对 OT 在成人 ASD 治疗中的现状进行总结,包括其作用机制及研究进展,为成人 ASD 的治疗提供参考。

方法 研究使用文献检索法,检索时限为建库至 2023 年 12 月 31 日之前发表的相关实证研究。进行文献检索时,以“成人孤独症/自闭症”与“催产素”为组合,在中国知网、万方数据库进行中文文献检索;以“Autism”、“ASD”、“Adult”与“Oxytocin/OT”为组合,在 PubMed 以及 Web of science 核心数据库进行外文文献检索,排除重复、无关文献,最终获取有效实证研究英文文献 16 篇,中文 10 篇,共计 26 篇。

结果 现有研究结果提示单剂量 OT 可以改善成人 ASD 患者的社交障碍、减少重复刻板行为,连续使用 OT 对成人 ASD 患者的治疗结果存在较大的争议。ASD 患者的年龄、性别、智商、症状的严重程度,OT 的给药方式、剂量、给药频率以及治疗时间等因素都可能对药物的疗效产生影响。

结论 目前的研究结果尚未明确 OT 对成人 ASD 患者治疗的最佳剂量、给药频率、持续给药时间。因此,未来需要大量研究进一步探索并验证 OT 对成人 ASD 患者核心症状的作用及治疗机制。

关键词:催产素;成人孤独症;治疗;综述

结构化健康教育对青少年情绪障碍患者照顾者压力的影响研究

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目的 本研究拟在青少年情绪障碍的照顾者中,对比分析结构化健康教育相较于常规健康教育对照顾者压力的改善效果。

方法 选取 2020 年 6 月—2022 年 7 月绵阳市某三甲综合医院儿童心理卫生病区收治住院的青少年情绪障碍患者及其照顾者作为研究对象,应用随机数字表法将其分对照组和研究组。对照组采取常规日常护理及教育方案,研究组在对照组基础上采取结构化健康教育模式,共分为 4 个板块(疾病相关知识、药物作用与副反应、家庭压力的管理,日常生活指导)。分别于入院当天、出院当天、出院后 1、3、6 月对两组患者进行问卷调查,采用自行设计的

一般资料调查表采集基本信息,采用照顾者压力指数(The Caregiver Strain Index, CSI)评估干预效果。

结果 本研究共纳入 169 名照顾者,其中研究组 85 人,对照组 84 人,一般人口学资料均未见显著差异。两组患者经过干预后压力值均显著下降,研究组压力下降值较对照组明显($z = -4.011, P < 0.05$),广义估计方程(Generalized Estimating Equation, GEE)分析结果显示,两组间不存在统计学差异($P > 0.05$),但两组的 CSI 得分随时间存在下降趋势(Wald $\chi^2 = 790.347, P < 0.05$),且时间与干预之间存在显著交互效应(Wald $\chi^2 = 10.047, P < 0.05$)。

结论 结构化健康教育相较于常规健康教育方式能更好的改善青少年情绪障碍患者照顾者的压力。

关键词: 健康教育;青少年情绪障碍;照顾者

抑郁严重程度与血浆促甲状腺激素、BDNF 水平对青少年抑郁障碍患者的激越症状预测价值

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目的 探索抑郁严重程度和血浆促甲状腺激素、BDNF 水平对青少年抑郁障碍(MDD)患者的激越症状预测价值。

方法 2022 年 9 月至 2023 年 3 月入组符合《精神疾病诊断与统计手册》第 5 版(DSM-5)抑郁障碍诊断标准的患者 91 例,根据外显攻击行为量表修订版(Modified Overt Aggression Scale, MOAS)评估激越程度;24 汉密尔顿抑郁量表(HAMD24)测定抑郁严重程度;采用化学发光免疫分析(CLIA)测定血浆促甲状腺激素(TSH)水平;采用电化学发光免疫分析测定血浆脑源性神经营养因子(BDNF)。采用 SPSS 26.0 对数据进行统计分析,采用 Spearman 相关分析抑郁严重程度和血浆 TSH、BDNF 水平与激越程度的关系,多元线性回归分析青少年 MDD 患者激越程度的影响因素,二元 Logistic 回归分析青少年 MDD 患者伴发激越的危险因素,并通过受试者工作特征曲线(ROC)评估各项独立危险因素对伴发激越的预测价值。

结果 青少年 MDD 患者血浆 TSH、BDNF 水

平显著低于健康对照组($Z = -2.757, -4.019$, 均 $P < 0.05$);激越组与非激越组比较显示,激越组 HAMD24 总分($t = -4.972, P < 0.001$)显著高于非激越组,血浆 TSH 水平($Z = -3.631, P < 0.001$)、血浆 BDNF 水平($Z = -3.308, P = 0.001$)。Spearman 相关性分析显示,青少年 MDD 患者激越程度与 HAMD24 总分呈正相关($r = 0.483, P < 0.001$);与血浆 TSH、BDNF 水平呈负相关($r = -0.286, -0.293$, 均 $P < 0.05$)。多元线性回归分析显示,HAMD24 总分和血浆 BDNF 水平均是激越程度的危险因素($\beta = 0.261, -0.255$, $95\%CI = 0.037 \sim 0.390, -6.138 \sim -1.048$, 均 $P < 0.05$)。二元 Logistic 逐步回归分析显示,HAMD24 总分、血浆 TSH、BDNF 水平均是青少年 MDD 患者伴发激越症状的危险因素。ROC 曲线分析显示 HAMD24 总分(AUC=0.771, $P < 0.001$),血浆 TSH 水平(AUC=0.733, $P < 0.001$),血浆 BDNF 水平(AUC=0.712, $P = 0.001$),三项联合(AUC=0.889, $95\%CI: 0.822 \sim 0.956, P < 0.001$)的曲线下面积更大,对伴发激越症状有更好的识别预测价值。

结论 青少年 MDD 患者伴发激越症状与 HAMD24 总分和血浆 TSH、BDNF 水平紧密联系,且三项联合具有较好的预测能力。

关键词: 抑郁障碍;激越;BDNF;促甲状腺激素;青少年

儿童青少年抑郁症患者校园欺凌、心理韧性 与自杀未遂的关系

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目的 探究儿童青少年抑郁症患者校园欺凌、心理韧性与自杀未遂的关系。

方法 从昆明医科大学第一附属医院门诊及病房招募 10-18 岁符合 DSM-5 诊断标准的抑郁症患者。通过 Beck 自杀意念量表中文版评估有无自杀未遂;中文版 Olweus 儿童欺凌问卷中受欺凌维度评估言语欺凌、间接欺凌和身体欺凌情况;青少年心理韧性量表评估心理韧性水平,并采集社会人口学信息。采用卡方检验和秩和检验对有和无自杀未遂患者进行差异性分析,并进行单因素及多因素逐步 logistics 回归分析。

结果 (1)共招募 784 名抑郁症患者,男性 224 (28.6%)人,女性 560(71.4%)人,其中 342(43.6%)人有自杀未遂,354 (45.2%)人遭受过欺凌,心理韧性总分的中位数为 81 分。(2)有和无自杀未遂患者在年龄、性别、居住地、独生子女、父母婚姻状态、受欺凌、言语欺凌、间接欺凌、身体欺凌、心理韧性总分、目标专注、积极认知及家庭支持得分方面有统计学差异(P 均 <0.05)。(3)将有统计学差异的 5 个人口学因素作为协变量,自杀未遂作为因变量,行单因素回归分析,发现自杀未遂与受欺凌和每种类型欺凌均呈正相关(OR: 1.733-2.392, P 均 <0.05),与心理韧性总分及目标专注、积极认知和家庭支持维度得分均呈负相关(OR: 0.864-0.972, P 均 <0.01)。(4)纳入有统计学差异的 5 个人口学因素及研究变量作为自变量,自杀未遂作为因变量,进一步构建 4 个逐步回归模型。模型 1 纳入三种类型欺凌,发现间接及身体欺凌和自杀未遂呈正相关(OR: 1.585-1.970, P 均=0.005);模型 2 纳入心理韧性的五个维度,发现目标专注、积极认知及家庭支持得分与自杀未遂正向关联(OR: 0.890-0.956, P 均 <0.05);模型 3 纳入受欺凌及心理韧性总分,发现自杀未遂与受欺凌存在正相关性(OR: 1.631, 95%CI: 1.028-2.201),与心理韧性总分呈负相关(OR: 1.631, 95%CI: 1.028-2.201);模型 4 纳入三种类型受欺凌及心理韧性的五个维度,发现自杀未遂与身体欺凌(OR: 2.061, 95%CI: 1.294-3.281)正向关联,与目标专注(OR: 0.896, 95%CI: 0.855-0.939)、积极认知(OR: 0.942, 95%CI: 0.893-0.995)及家庭支持(OR: 0.955, 95%CI=0.915-0.996)得分呈负相关。

结论 校园欺凌,特别是身体欺凌可能是儿童青少年抑郁患者自杀未遂的风险因素,而心理韧性,尤其是目标专注、积极认知、家庭支持方面可能是其保护因素。

关键词: 抑郁症 自杀未遂 校园欺凌 心理韧性 儿童青少年

青少年欺凌受害、抑郁症状与领悟社会支持之间的相关研究

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目的 了解新乡市初中生校园欺凌的现状;探讨青少年欺凌受害、领悟社会支持、抑郁之间的关系,分析领悟社会支持在青少年欺凌受害与抑郁之间的中介作用。

方法 采用整群随机抽样的方法,在新乡市 12 所中学随机抽取 25 个班级,在取得学生及家长知情同意后,以班级为单位进行了施测。共 1400 名学生完成问卷调查,剔除无效问卷,回收有效问卷 1365 份,回收率 97.5%。被试统一填写一般情况调查问卷、青少年欺凌与网络欺凌量表中文版、领悟社会支持量表、病人健康问卷抑郁量表。使用 SPSS 25.0 对数据进行统计分析,并使用 PROCESS 插件 3.3 进行中介效应检验。

结果 在 1365 名被试中,遭受欺凌的青少年共 224 人,检出率为 16.4%,遭受身体欺凌检出率为 8.0%,言语欺凌 13.3%,关系欺凌 5.5%,网络欺凌 4.5%。不同年级的学生在欺凌受害总分、身体欺凌、关系欺凌维度上存在差异($H=14.380$, $P<0.001$; $H=8.418$, $P=0.015$; $H=10.019$, $P=0.007$)。男生在欺凌受害总分、身体欺凌、言语欺凌、关系欺凌、网络欺凌四个维度得分高于女生($Z=-2.909$, $P<0.001$; $Z=-6.825$, $P<0.001$; $Z=-4.115$, $P<0.001$; $Z=-2.193$, $P=0.004$; $Z=-2.909$, $P<0.001$)。不同主要生长地的学生在网络欺凌上存在差异($H=13.718$, $P<0.001$)。青少年欺凌受害总分及四个维度在学生是否在学校寄宿上不存在显著差异。不同成绩的学生在欺凌受害总分与身体欺凌上存在差异($H=9.903$, $P=0.007$; $H=12.152$, $P=0.019$)。青少年欺凌受害及四个维度与领悟社会支持均呈显著负相关($P<0.01$),与抑郁呈显著正相关($P<0.01$);领悟社会支持与抑郁呈显著负相关($P<0.01$)。领悟社会支持在青少年欺凌受害与抑郁之间起部分中介作用,中介效应占比为 15.25%。

结论 在 1365 名被试中,青少年欺凌受害总检出率为 16.4%,遭受身体欺凌检出率为 8.0%,言语欺凌 13.3%,关系欺凌 5.5%,网络欺凌 4.5%。年级、性别、主要生长地、成绩对青少年欺凌受害均有着显著影响。领悟社会支持在青少年欺凌受害与抑郁之间起部分中介作用,青少年欺凌受害不仅可以直接预测抑郁,还可以通过领悟社会支持间接预测抑郁。

关键词: 青少年欺凌受害;抑郁症状;领悟社会支持;中介效应

非自杀性自伤和自杀意念对抑郁障碍青少年脑白质纤维的影响研究

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目的 非自杀性自伤(non-suicidal self-injury, NSSI)和自杀意念(suicidal ideation, SI)是导致青少年自杀死亡的危险因素。阐明青少年 NSSI 和 SI 的脑白质纤维束完整性改变的神经生物学特征是很有必要的,以便为今后干预并制定基于大脑的治疗方案提供信息。

方法 对 86 名抑郁障碍青少年患者和 77 名健康对照者进行临床评估来明确 NSSI 和 SI 的病史。44 名抑郁障碍青少年诊断为 NSSI 纳入 NSSI 组,40 名评估后纳入 SI 组(26 名患者重叠)。所有参与者都进行颅脑磁共振扫描,获取 DTI 数据。采用纤维束自动定量法,在三组中比较纤维束 100 个节点弥散指标的组间差异,并将节点弥散参数与临床变量进行偏相关分析。

结果 与健康对照组相比伴有 NSSI 或 SI 的抑郁障碍青少年在 38.89%(7/18)的纤维束出现了广泛的弥散指标改变。在 NSSI 组中,有 16.67%(3/18)的纤维束各弥散指标与渥太华自伤量表(Ottawa self-injury inventory, OSI)中的成瘾量表存在显著偏相关(所有 $P < 0.05$)。在 SI 组中,有 33.33%(6/18)的纤维束与贝克自杀意念(Beck suicidal ideation, BSI)量表存在显著偏相关(所有 $P < 0.05$)。

结论 伴有非自杀性自伤和自杀意念的抑郁障碍青少年脑白质纤维存在广泛的异常改变,且与更高的自伤成瘾性和自杀意念相关。

关键词: 抑郁障碍青少年;非自杀性自伤;自杀意念;弥散张量成像;纤维束自动定量

贵阳市中职学生手机成瘾现状及其影响因素分析

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目的 了解贵阳市中职学生手机成瘾现状,分析其影响因素,为中职学生心理健康干预及手机有效管理提供科学依据。

方法 采用分层整群随机抽样的方法,于 2019 年 09 月对贵阳市两所中等职业技术学校在校 2408 名学生进行问卷调查,采用宗氏焦虑自评量表(SAS)、宗氏抑郁自评量表(SDS)、青少年心理弹性量表(RSCA)、青少年自杀意念量表(PANSI)、自我控制量表(SCS)、同伴压力量表、家庭关怀度指数问卷(APGAR)、手机依赖指数量表(MPAI)进行问卷调查。采用多因素 Logistic 回归分析手机成瘾的影响因素。

结果 贵阳市中职学生手机成瘾检出率为 19.31%,成瘾组与非成瘾组中职学生在年龄、民族、每周运动次数、SDS 评分、SAS 评分、RSCA 评分、SCS 评分、APGAR 评分、PANSI 评分、同伴压力评分差异有统计学意义($P < 0.05$)。多因素 Logistic 回归分析显示,年龄($OR = 1.097, 95\%CI: 1.026 \sim 1.172$)、SAS 评分($OR = 1.039, 95\%CI: 1.018 \sim 1.060$)、同伴压力评分($OR = 1.069, 95\%CI: 1.037 \sim 1.101$)是中职学生手机成瘾的危险因素;RSCA 评分($OR = 0.976, 95\%CI: 0.964 \sim 0.988$)、SCS 评分($OR = 0.919, 95\%CI: 0.904 \sim 0.934$)是中职学生手机成瘾的保护因素。

结论 贵阳市中职学生成瘾检出率较高,年龄、焦虑情绪、同伴压力、心理弹性、自控能力与中职学生手机成瘾相关,有必要采取更有针对性的措施以减少手机成瘾的发生,促进中职学生健康成长。

关键词: 中职学生;手机成瘾;影响因素

艾司西酞普兰联合短程创伤稳定化技术治疗青少年抑郁症疗效初探

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目的 探索使用艾司西酞普兰联合短程创伤稳定化技术治疗青少年抑郁症患者的有效性。

方法 选取 80 例在我院心身科住院的青少年抑郁症患者,随机分为艾司西酞普兰联合短程创伤

稳定化技术组(研究组)和艾司西酞普兰联合心理健康宣讲组(对照组)。分别于入院时评定患者的青少年生活事件量表(Adolescent Self-rating Life Events Check-list, ASLEC)、事件影响量表-修订版(IES-R)、汉密顿抑郁量表(Hamilton Depression Scale-17, HAMD-17-17)、汉密顿焦虑量表(Hamilton Anxiety Scale, HAMA),治疗2周及4周时评定患者的IES-R、HAMD-17-17、HAMA。

结果 入组时两组ASLEC、IES-R、HAMD-17和HAMA评分无显著意义($P>0.05$)。研究组IES-R评分在治疗第2周较常规组有所改善($P<0.05$);在治疗第4周,研究组IES-R评分较对照组有明显改善,差异有极显著性意义($P<0.01$)、HAMD-17和HAMA评分较常规组均有所改善($P<0.05$)。

结论 艾司西酞普兰联合短程创伤稳定化技术对青少年抑郁症患者的治疗更为有效,值得进一步探索。

关键词: 创伤稳定化技术;艾司西酞普兰;青少年;抑郁症

辩证行为疗法在表现出自杀意念和自伤行为儿童中的应用研究

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目的 探索辩证行为疗法干预表现出自杀意念和自伤行为的儿童有效性可行性和有效性。当前,对于患有情感和行为失调的儿童,尤其是表现出自杀意念和自伤行为的儿童,尚无有效的干预措施。本研究评估DBT在这一年龄段的适用性,并探讨其对儿童情绪和行为困难的影响。

方法 通过本地学校招募11名来自常规教育班级的通过学校心理筛查表现出自杀意念和自伤行为的儿童,年龄范围为8至11岁。参与者接受为期6周的DBT技能训练,每周一次,每次进行技能训练和作业回顾。训练内容包括正念、压力耐受、情绪调节和人际交往等技能的教学和实践。DBT技能训练包括使用卡通、简化的文本和活动来吸引儿童注意力,促进技能的学习。每节技能训练后,儿童会收到手册并分配家庭作业,家庭作业在下一课程中回顾。参与者的情绪和行为困难通过自我报告问卷

(包括儿童抑郁自评量表、自杀意念问卷、适应性应对策略问卷、儿童自我控制评级量表)在干预前后进行评估。

结果 技能理解和接受度:大多数儿童表示他们理解并能使用所学技能。家长也认为这些技能对儿童有帮助,且适合儿童学习。干预结束后,儿童报告适应性应对技能显著增加,抑郁症状和自杀意念显著减少,问题行为显著减少。抑郁症状:从干预前的平均13.2($SD=9.58$)减少到干预后的5.76($SD=5.03$), $t=3.91$, $p<0.05$ 。自杀意念:从干预前的平均0.87($SD=1.05$)减少到干预后的0.12($SD=0.32$), $t=2.13$, $p<0.05$ 。适应性应对技能:从干预前的平均106.55($SD=14.81$)增加到干预后的123.32($SD=20.51$), $t=2.03$, $p<0.05$ 。问题行为:从干预前的平均7.87($SD=2.81$)减少到干预后的6.86($SD=2.36$), $t=2.26$, $p<0.05$ 。

结论 本研究初步表明,适应于儿童的DBT技能训练具有可行性和接受性,且在减少儿童抑郁症状、自杀意念和问题行为方面有显著效果。然而,研究存在样本量小、无对照组和干预时间短的局限性,需要通过更大规模和长期的随机对照试验进一步验证其有效性。

关键词: 儿童,辩证行为疗法,自伤行为,自杀意念

一项双相情感障碍青少年患者出院后病情稳定影响因素分析

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目的 本研究旨在分析2018年1-12月份出院诊断为双相情感障碍青少年患者,出院后病情是否稳定及其影响因素,为临床治疗提供参考。

方法 本研究为单中心,利用本院电子病历系统数据,采用回顾性研究设计。例数不进行估算,拟纳入自2018年1月至2018年12月期间在北京安定医院住院并在出院时年龄 ≤ 18 岁,诊断为双相情感障碍的患者。收集这些患者性别、首发年龄、住院前发作次数、首次发病到首次诊断BPD时间、疾病发作形式、是否伴有精神病性症状、住院治疗情况、出院后1年是否病情稳定,2年内是否再住院等信息。

由两名主治医师及以上医师查阅每次就诊病历,采用 CGI-S 评分判定患者出院后 1 年病情是否稳定,定义出院后 1 年连续每次就诊情绪状态 CGI-S 评分平均分为 1 或 2 为病情稳定。使用 SPSS 26.0 统计分析软件,采用单因素分析比较组间差异;以 1 年后病情是否稳定作为结局,纳入性别、首发年龄、住院前发作次数、首次发病到首次诊断 BPD 时间、疾病发作形式、是否伴有精神病性症状、住院服用药物类型等作为自变量,使用 logistic 回归探索影响病情稳定影响因素。

结果 1)本研究共纳入共 210 人双相情感障碍青少年患者(年龄 11-18 岁, 16.3 ± 1.66);约 90%共 189 名患者在出院后进入门诊治疗流程。约 47.6%共 100 人出院后 1 年病情稳定,约 52.4%共 110 人出院后 1 年病情不稳定。约 95.2%共 200 人 2 年内未再住院,约 0.48%共 10 人 2 年内再住院。2)对出院后 1 年病情不稳定和稳定组卡方检验分析结果显示:两组在是否有自杀风险、住院是否服用抗抑郁药物、疾病发作形式方面差异有统计学意义($P < 0.05$)。有自杀意念/想法/企图 47.3% (不稳定组) VS 28% (稳定组)、无自杀意念/想法/企图 52.7% (不稳定组) VS 72% (稳定组)。服用抗抑郁药 34.5% (不稳定组) VS 16% (稳定组)、未服用抗抑郁药 65.5% (不稳定组) VS 84% (稳定组);抑郁发作 24.5% (不稳定组) VS 12% (稳定组)、躁狂发作 20.9% (不稳定组) VS 31% (稳定组)、混合发作 54.5% (不稳定组) VS 57% (稳定组)。3)进一步二元 logistic 回归分析表明,有自杀意念/想法/企图 ($P=0.013$, $OR=2.142$)、住院期间服用抗抑郁药物 ($P=0.016$, $OR=2.416$) 是出院后 1 年内患者病情不稳定的危险因素。

结论 有自杀意念/想法/企图、住院期间服用抗抑郁药物可能增加双相情感障碍青少年患者出院后 1 年内病情波动的风险。

关键词: 青少年, 双相情感障碍, 治疗, 病情复发, 危险因素

未用药注意缺陷多动障碍儿童和青少年的功能连接异常:诊断分类和症状理解

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目的 注意缺陷多动障碍(ADHD)患病率高,鉴于其症状表现的多样性及非特异性,客观可靠的生物标志物仍需继续寻找。本研究拟探索未用药的 ADHD 儿童青少年的脑电异常,求证其在诊断分类和症状解释两方面的价值,并核验其是否能作为解释注意缺陷症状和多动/冲动症状间关联的神经电生理证据。

方法 研究纳入了 33 例未服药的 ADHD 患者及 41 例典型发育对照,采集了所有被试的静息态脑电、基本信息、SNAP-IV 量表及韦氏智力测验。选用和计算对容积传导不敏感的 iCOH 为功能连接指标。使用广义线性模型(GLM),在将年龄和智力作为协变量后比较两组差异,并通过 FDR 校正。随后使用带有递归特征消除算法的随机森林(RF-RFE)和单变量特征选择法(SelectKBest)进行特征选择,取二者交集为输入特征用以构建分类模型。使用支持向量机(SVM)构建分类模型,使用重复十折交叉验证模型性能。然后对所有被试的注意缺陷程度和多动/冲动程度分别进行线性回归,以确证分类特征在症状解释层面的价值。最后使用 PROCESS 和 Bootstrap 法检验特定特征在两大症状间的中介效应。

结果 (1) ADHD 组在 beta 频段上 Fp1-Cz、F7-Cz 及 Fp2-F4 的功能连接显著更弱,在 theta 频段上 P3-Cz、P3-C4、O1-O2、P3-P7、C3-P7、C3-P3、F3-C3 的功能连接显著更强;(2)特征选择发现 theta 频段 P3-Cz、C3-P7 以及 beta 频段 Fp1-Cz 的功能连接是重要特征,三者建模可达到 $AUC=0.89$ 的分类效能;(3) theta 频段 P3-Cz ($\beta=0.41$, 95%CI: 20.56~59.03)和 C3-P7 ($\beta=0.21$, 95%CI: 0.16~36.27)的功能连接与注意缺陷的程度有关,theta 频段 C3-P7 ($\beta=0.30$, 95%CI: 6.62~38.83)的功能连接与多动/冲动的程度有关;(4) theta 频段 C3-P7 在注意缺陷和多动/冲动间的中介效应成立(间接效应 95%CI: 0.01~0.12;直接效应 95%CI: 0.24~0.59),占比 9.71%。

结论 ADHD 在 beta 频段上额叶的功能连接较弱,而在 theta 频段的连接过强且集中在顶叶,并呈现出左侧化的倾向。theta 频段上左侧顶叶的过度连接对 ADHD 的分类和解释一致地发挥着重要作用。这提示 ADHD 可能不仅是额叶自上而下进行抑制控制的功能不良,顶叶自下而上调节环路的异常可能有着更大的价值。此外,这种过度连接还可作为 ADHD 两大症状群间的桥梁,为注意缺陷症状是前

驱、多动/冲动症状是适应和补偿这一观点提供支持。

关键词：注意缺陷多动障碍；静息态脑电；功能连接；机器学习

A Multimodal Neuroimaging Meta-analysis of Functional and Structural Brain Abnormalities in Attention-deficit/hyperactivity Disorder

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Objective Numerous neuroimaging studies utilizing resting-state functional imaging and voxel-based morphometry (VBM) have identified variations in distinct brain regions among individuals with attention-deficit/hyperactivity disorder (ADHD). However, the results have been inconsistent

Methods A comprehensive voxel-wise meta-analysis was performed on studies employing resting-state functional imaging and grey matter volume (GMV), examining discrepancies between individuals with ADHD and non-ADHD controls. The analysis utilized the Seed-based d Mapping with Permutation of Subject Images software

Results A systematic review of the literature identified 21 functional imaging studies (595 ADHD and 564 controls) and 50 GMV studies (1907 ADHD and 1611 controls). In general, individuals with ADHD exhibited increased resting-state functional activity in the right parahippocampal gyrus and bilateral orbito-frontal cortex (OFC), as well as decreased resting-state functional activity in the bilateral cingulate cortex (including the posterior cingulate cortex [PCC], median cingulate cortex [MCC], and anterior cingulate cortex [ACC]). The VBM meta-analysis revealed decreased GMV in the bilateral OFC, right putamen (extending to right superior temporal gyrus [STG]), left inferior frontal gyrus (IFG), right superior frontal gyrus (SFG), ACC, and precentral gyrus among individuals with ADHD

Conclusion The multimodal meta-analyses indicated that individuals with ADHD exhibit abnormalities in both function and structure in the bilateral OFC. In addition, a few regions exhibited only functional or only structural abnormalities in ADHD, such as in the limbic, prefrontal, primary sensorimotor regions

关键词：attention deficit hyperactivity disorder; meta-analysis; multimodal; voxel-based morphometry; resting-state functional imaging

Association between Gut Microbiota and Autism Spectrum Disorder: A Two-sample Mendelian Randomization Study

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Background It is well known that there has been a focus of research on the relationship between gut microbes and autism spectrum disorders, but the relationship between gut flora and autism spectrum disorders is unclear, and this study used Mendelian randomization analysis to clarify the relationship between the two

The exposure group data are the most comprehensive and sample-sized pooled data on gut microbes in a meta-analysis of genome-wide association studies to date.

The exposure group data is the most comprehensive and extensive sample size of gut microbial data to date, and it is pooled from meta-analyses of genome-wide association studies.

Methods The exposure group data is the most comprehensive and largest sample size of gut microbial data published to date, and it is pooled from meta-analyses of genome-wide association studies. Autism spectrum disorder data from the iPSYCH-PGC consortium release, which included 18,382 people with autism spectrum disorder (ASD) and 27,969 controls. We explored the causal relationship between gut microbiota and autism spectrum disorders using various methods such as inverse variance weighting (IVW), simple

model, MR-Egger regression, weighted median, weighted model, and MRPRESSO

Results Dorea, Ruminiclostridium5, RuminococcaceaeUCG005, Ruminococcus1, Sutterella, Turicibacter. IVW results showed that Dorea (OR=0.810, 95%CI=0.685-0.958, P=0.014), Ruminiclostridium5 (OR=0.812, 95%CI=0.687-0.960, P=0.015), RuminococcaceaeUCG005 (OR=0.775, 95%CI=0.669-0.898, P=0.0006), Ruminococcus1 (OR=0.831, 95%CI=0.704-0.980, P=0.014), Sutterella (OR=0.821, 95%CI=0.684-0.987, P=0.036) were protective factors for ASD, but Turicibacter (OR=1.140, 95%CI=1.008-1.290, P=0.037) was a hazardous factor for ASD

Conclusion This study suggests a causal relationship between gut flora and autism spectrum disorders. Several gut bacteria were found to block the development of autism spectrum disorders, which lays the foundation for improving autism spectrum disorders by modulating the gut microbiota.

关键词: Mendelian randomization study, Gut microbiota, Autism spectrum disorder, Causal inference, Influencing factors.

基于辩证行为治疗干预研究父母在儿童青少年情绪行为问题的作用

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目的 儿童和青少年的情绪和行为问题 (Emotional and behavioral problems, EBP) 是家长和社会普遍共同关注的问题, 常见表现是注意力不集中、自我伤害、情绪波动等, 严重者有自杀、自残等, 对学习、生活影响非常严重。并且 EBP 对父母来说可能是一种痛苦和创伤的经历, 并对其他家庭成员产生“连锁反应”, 普遍存在幸福感低, 社会支持低, 家庭沟通差问题。辩证行为疗法 (Dialectical behaviour therapy, DBT) 辩证行为疗法是一种多成

分的认知行为疗法, 其目标是参与治疗, 减少自伤和自杀, 并侧重于教授增强情绪调节、痛苦容忍和建立有价值生活的技能, 其第五个模块是家长教练, 即依据 DBT 的理念, 通过教授家长认可、问题解决和自身情绪管理技能。既往研究证明 DBT 在治疗严重情绪失调、减少自杀企图和自伤方面的有效性, 然而尚未有研究 ERP 父母在 DBT 干预后作用和好处。

方法 本研究采取方便抽样法, 选取 57 名 2023 年 7 月-2024 年 3 月在南京脑科医院儿童心理卫生中心就诊的儿童青少年情绪行为的父亲或母亲, 参加 DBT 方案的家长教练部分, 分两次, 通过线上方式, 持续干预 10 周, 每周 90min。干预前后分别采用抑郁-焦虑-压力自评量表、家庭功能评估量表及儿童行为检查表等进行评估, 并在干预后获得定性书面反馈。对干预前数据采用相关分析、Process 中介效应检验, 干预前后数据进行 t 检验等统计分析。

结果 根据干预前 57 名父母基本情况, 发现父母负性情绪、家庭功能、儿童行为均相关 ($r=0.26\sim 0.49$, $P<0.05$), 家庭功能在父母负性情绪与儿童异常行为之间存在部分中介作用 (间接效应值为-0.40, 占总效应的 32.35%)。共 42 名参与者 (73.81%为母亲, 26.19%为父亲) 参加了这项研究。DBT 家长教练干预后与干预前比较, 家长负性情绪总体显著降低 ($t=2.75$, $P<0.01$), 焦虑、抑郁、压力均显著下降 ($P<0.05$), 家庭功能明显改善 ($t=2.55$, $P=0.02$)。并均报告且 DBT-家长教练有帮助, 并且对他们自己和他们孩子的需要是有用的。

结论 父母情绪可直接影响儿童青少年问题, 也可通过家庭功能的中介作用影响儿童青少年问题。通过 DBT 家长教练干预后父母情绪及家庭功能得到明显改善, 展示对儿童青少年及父母的帮助, 具有较高的临床价值和社会意义。

关键词: 辩证行为治疗; 父母; 儿童青少年; 情绪行为问题;

青少年非自杀性自伤的家庭相关因素及干预策略

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目的 分析目前已发表的非自杀性自伤家庭因素及家庭治疗相关研究, 评估家庭治疗对非自杀性自伤的临床疗效。

方法 在知网、万方和维普数据库中检索非自杀性自伤相关中文文献, 在 Web of Science 集中检索相关英文文献, 进行文献回顾与综述。

结果 非自杀性自伤是多种因素相互作用的结果, 主要包括个体因素、环境因素和神经生物学因素三个方面。家庭在青少年身心发展中起着至关重要的作用, 父母养育行为本身就包含了情绪调节的社会化过程, 家庭因素对青少年的认知行为、情感表达和情绪调节等有着长期而深远的影响。

家庭因素(亲子互动、感知支持、情绪表达、虐待经历、父母冲突和父母心理健康)是与儿童和青少年自伤相关的重要危险因素。有研究表明, 家庭环境因素在诸多危险因素与青少年非自杀性自伤之间起到重要中介作用, 可通过多方面影响自伤行为的发生与发展。家庭教养方式可有效预测子女的自伤行为。父母教养方式中忽视与否定、身心虐待、过度保护、过分干涉、冷漠拒绝、严厉惩罚等, 会引起孩子强烈的负性情绪和情绪失调, 与非自杀性自伤行为呈正相关。也有研究显示, 家庭成员之间的亲密度是非自杀性自伤的保护因素, 与认知重评和表达抑制分别呈正相关和负相关。健康的家庭动力与自伤行为呈负相关。

家庭治疗是指任何明确关注和改变家庭成员之间的互动, 并寻求改善家庭功能的治疗方式。目前针对非自杀性自伤的家庭干预, 包括基于依恋的家庭治疗, 以家庭为中心的认知行为治疗, 心智化的家庭治疗和多系统家庭治疗。但目前针对非自杀性自伤的家庭干预的临床研究很少, 有效证据并不充分。

结论 家庭治疗旨在利用和调动儿童和家庭的现有优势和资源, 可能成为未来早期干预工作的重要途径。目前针对非自杀性自伤的家庭干预证据并不充分, 需要进一步开展高质量的临床研究评估其有效性。

关键词: 青少年; 非自杀性自伤; 家庭环境; 家庭治疗

Preadolescent Non-suicidal Self-injurious Behaviour and Its Association with Emotional

and Behavioural Problems: A Cross-sectional Study in China

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Objective Nonsuicidal self-injury behaviour in preadolescent children implies a higher risk of suicide and a more severe clinical presentation, however, research on NSSI in this group is extremely limited. The aims of this study were to examine the prevalence of NSSI in preadolescent children and the impact of emotional and behavioural problems on NSSI

Methods The study, comprising 2006 children, was based on a survey of eight primary schools in Tianjin, China. NSSI behaviours, emotional and behavioural problems were evaluated by self-reports and parent reports. Logistic regression was used to test the effect of emotional and behavioural problems on NSSI

Results 506 (25.2%) participants reported having experienced at least once NSSI in the last 6 months. The NSSI group scored significantly higher than the non-NSSI group on emotional symptoms, conduct problems, hyperactivity, and peer relationship problems. Multivariate analysis showed a significant positive correlation between emotional and behavioural problems and NSSI in preadolescent children. Multivariate analysis showed that parents reported emotional symptoms (OR=1.164, 95%CI 1.087-1.247, $P<0.001$), conduct problems (OR=1.151, 95%CI 1.044-1.269, $P=0.005$), hyperactivity problems (OR=1.097, 95%CI 1.036-1.157, $P<0.001$) were risk factors for NSSI, student self-reported emotional symptoms (OR=1.337, 95%CI 1.252-1.428, $P<0.001$), hyperactivity problems (OR=1.174, 95%CI 1.101-1.252, $P<0.001$), peer communication problems (OR=1.145, 95%CI 1.066-1.231, $P<0.001$) were risk factors for NSSI

Conclusion This study suggests that NSSI is not uncommon in preadolescent children. Emotional and behavioural problems may enhance susceptibility to NSSI in preadolescent children

关键词: nonsuicidal self-injury, preadolescent children, emotional and behavioural problems, cross-sectional.

抑郁症青少年与健康青少年肠道菌群结构及多样性差异分析

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目的 通过深入分析抑郁症青少年与健康志愿者肠道菌群结构与多样性的差异,揭示抑郁症青少年特有的肠道微生物特征。旨在为青少年抑郁症的预防与干预提供基于肠道微生态调控的潜在理论依据,以期在心理健康领域开辟新的治疗视角。

方法 在中国广东省招募了共计 48 名受试者,分为两组: NOR2 组包含 24 名抑郁症青少年, NOR1 组则为 24 名健康青少年。收集所有受试者的一般临床数据以及粪便样本,使用 24 项汉密尔顿抑郁量表和简明国际神经精神访问卷(MINI)进行心理测评。采用了 16S rDNA 基因测序进行微生物学分析,用组间 α 多样性指数差异描绘肠道菌群分类构成,用 LEfSe 软件对菌群相对丰度进行分析,并借助线性判别分析(LDA)方法筛选出组间差异显著的物种,采用测量统计软件分析类群间不同分类信息的丰度差异。

结果 抑郁症青少年组与健康青少年组间一般临床资料、OTU 数及 2D、3D PCA(主成分)分析差异不显著,在肠道菌群 Alpha 盒形图分析及多样性指数(包括 observed species、chao、ace、shannon 和 simpson 指数)上亦无统计学差异($P>0.05$)。通过 LEfSe 分析,抑郁症组在 β -变形菌纲、厌氧菌属、多形杆状菌_脆弱类杆菌种及拟杆菌属及其相关分类等特定菌群的相对丰度显著高于健康组,而在瘤胃球菌属、结肠杆菌科、维尔塞尔科等菌群上则显著较低($P<0.05$),其中,拟杆菌科在抑郁症组的粪便微生物群落中占据显著优势。Metastat 分析显示,两组在类、目、科、属、种等分类水平上存在差异,尤其在抑郁症组中放线菌和柔膜体纲、双歧杆菌等菌群的相对丰度较健康组显著降低($P<0.05$),而厌氧孢子杆菌、多形杆状菌等菌群的相对丰度则显著升高($P<0.05$)。

结论 抑郁症青少年与健康青少年在肠道菌群结构上存在显著差异,特别是 β -变形菌纲、厌氧菌属等有害菌群的丰度较高,而瘤胃球菌属、结肠杆

菌科等益生菌的丰度较低。本研究为青少年抑郁症的预防与干预提供了新的理论依据,更为后续开发基于益生菌的抑郁症辅助治疗策略提供了强有力的科学依据。

关键词: 抑郁症; 基因测序; 肠道菌群; 青少年

人工智能在孤独谱系障碍早期筛查与诊断中的研究进展

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孤独症谱系障碍(Autism Spectrum Disorder, ASD)被定义为一种由神经系统发育问题导致的广泛性的发育障碍性疾病,通常起病于婴幼儿期。其核心特征为社交交流和社会互动方面存在持续性的缺陷及受限的、重复的行为模式、兴趣或活动。在西方的流行病学研究报道中显示,ASD 的患病率逐年增加,从 2012 年的 1/69 到 2020 年的 1/36(数据均来自美国疾病控制与预防中心自闭症和发育障碍监测网络的 11 个社区,儿童年龄均为 8 岁)。而在 2014-2016 年间我国进行的第一个全国性儿童孤独谱系障碍流行病学研究中,发现我国估计的 ASD 患病率为 0.70%,相当于 143 名儿童中可能会出现 1 名 ASD 儿童。在如此巨大的疾病隐患面前,ASD 却缺乏治疗核心症状的药物,多以康复训练为主;且越早进行康复,干预效果越好。这提示了疾病早期筛查及诊断的重要性。但是家庭照顾者往往在儿童 2-3 岁才能发现较为明显的发育与行为异常并带其主动就医。此外,ASD 诊断主要依据医生及专业人员的经验,目前使用的评估方法也较为主观:耗时长、培训成本高等缺点造成了 ASD 儿童筛查诊断不及时而影响儿童其预后。截止目前,行业仍缺乏更为高效和客观的辅助筛查手段。因此,为提高 ASD 康复效果和减轻疾病负担,现亟待使大规模低龄儿童 ASD 筛查诊断成为可能。人工智能(AI)指用计算机以最少的人为干预来模拟智能行为。近年,计算机视觉技术、智能传感、语音识别、大数据分析技术已被广泛运用于医学诊断领域的研究中,并显示其特有的优势。本文对近年基于不同表征的智能化 AS 早期筛查诊断的文献进行整理归纳,并剖析现有的不足,同时希望为我国 ASD 筛查与诊断提供新思路。

关键词: 人工智能,孤独症谱系障碍早期筛查,机器学习,深度学习

青少年抑郁症患者非自杀性自伤行为及影响因素研究

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目的 探讨青少年抑郁症患者非自杀性自伤(NSSI)行为及影响因素。

方法 选择在丽水市第二人民医院诊治的 140 例青少年抑郁症患者为研究对象,根据患者是否存在 NSSI 行为分为 NSSI 组和对照组。采用一般情况调查表、NSSI 行为调查表、认知情绪调节量表、青少年生活事件量表及家庭亲密度和适应性量表(中文版)对青少年抑郁症患者进行调查,比较 NSSI 组和对照组患者的差异,并采用多因素 logistic 回归分析影响青少年抑郁症患者 NSSI 行为的主要因素。

结果 有 62 例(44.29%)患者出现 NSSI 行为,其中出现 1 种 NSSI 行为者 2 例(3.22%),2 种者 10 例(16.13%),3 种者 15 例(24.19%),4 种者 11 例(17.74%),5 种者 9 例(14.52%),≥6 种者 15 例(24.19%)。2 组患者的抑郁症严重程度、合并睡眠障碍差异有统计学意义(均 $P < 0.05$);多因素 logistic 回归分析结果显示,责难自己、责难他人、沉思、人际关系、受惩罚是影响青少年抑郁症患者 NSSI 行为的促发因素(均 $P < 0.05$);积极重新关注、积极重新评价、家庭亲密密度、家庭适应性则是影响青少年抑郁症患者 NSSI 行为的保护因素(均 $P < 0.05$)。

结论 青少年抑郁症患者容易发生 NSSI 行为,与认知情绪、社会关系、家庭环境等因素密切相关。

关键词: 青少年,抑郁症,非自杀性自伤行为

不同社交亚型孤独症儿童的注视模式研究

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目的 孤独症谱系障碍 (Autism Spectrum Disorder, ASD) 是一种神经发育障碍,从生命早期起病,延续终生。全球范围内 ASD 的发病率逐年上升,已经成为亟待重视的公共卫生问题。ASD 人群往往对各种视觉刺激表现出非典型的视觉注意,已有多项眼动追踪研究发现 ASD 人群与健康人群之间存在显著的视觉注意差异,但 ASD 人群内部也存在注视模式的异质性。因此,本研究旨在使用眼动追踪技术探索不同 ASD 社交亚型的视觉注意特征。

方法 对 24-60 月龄的 ASD 和典型发育 (typical development, TD) 儿童进行眼球追踪测试。使用北京孤独症分型问卷 (Beijing Autism Subtyping Questionnaire, BASQ) 将 ASD 儿童分为主动但怪异组、被动组、冷漠组。主要观察指标为各个感兴趣区的注视时间,使用 SPSSAU 完成统计分析,首先比较四组儿童之间差异,随后比较组内不同感兴趣区的注视差异,将显著差异的眼动数据与行为学评估数据进行相关分析。

结果 研究最终纳入 TD 组 29 例;主动但怪异组 18 例,被动组 46 例,冷漠组 60 例。社交互动范式中眼睛区域的注视时间在四组间存在显著差异 ($H=16.863, p=0.001$),嘴巴区域的注视时间在四组间存在显著差异 ($H=33.606, p=0.000$)。人造面孔偏好范式中四组儿童注视人物头部的时间存在显著差异 ($H=51.237, p=0.000$),两组间比较显示三个 ASD 组注视时间都显著低于 TD 组 ($p_{\text{主动}}=0.023, p_{\text{被动}}=0.000, p_{\text{冷漠}}=0.000$); TD 组儿童注视人物图像的时间显著多于卡通图像 ($z_{\text{TD}}=-3.242, p_{\text{TD}}=0.001$),而被动组和冷漠组儿童注视人物图像的时间显著少于卡通图像 ($z_{\text{被动}}=-2.760, p_{\text{被动}}=0.006; z_{\text{冷漠}}=-3.139, p_{\text{冷漠}}=0.002$)。局限兴趣偏好范式中人物区域的注视时间在四组间差异显著 ($H=57.236, p=0.000$),两组间比较显示三个 ASD 组注视时间都显著低于 TD 组 ($p_{\text{主动}}=0.000, p_{\text{被动}}=0.000, p_{\text{冷漠}}=0.000$); TD 组儿童注视人物区域的时间显著高于物体区域 ($z=4.617, p=0.000$),而冷漠组儿童注视人物区域的时间显著低于物体区域 ($z=3.408, p=0.001$)。

结论 本研究使用眼动追踪技术,验证了不同社交亚型 ASD 儿童之间的视觉注意特点有显著差异,其中主动但怪异型儿童的眼动特征虽然最接近正常发育儿童,但仍然存在差距;而冷漠型 ASD 儿童的注视倾向与正常发育儿童差距最大。

关键词: 儿童,孤独症谱系障碍,眼动追踪,分

型, 注视模式

阿斯伯格综合征诊疗现状和展望

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目的 本文旨在综述 AS 的诊疗现状和最新进展, 包括诊断标准、干预治疗方法和研究领域的突破。

方法 检索知网、万方、维普、Embase、MEDLINE 等数据库查阅文献, 对过往相关文献进行梳理和总结, 并对未来诊疗方向进行展望。

结果 共引用 32 篇中外文献, 对 AS 的诊疗现状进行总结, 作出展望。

结论 目前, 孤独症是导致我国儿童精神残疾的最大病种。而 AS 作为其一种不伴有智力损害和语言损害的特殊类型, 在临床上识别较为困难, 诊断标准不一, 在国内精神病学教科书中甚至都没有 Asperger 综合征的症状内容。早期诊断和治疗对 AS 儿童及成人的生活改善意义重大, 因此对其进行规范的诊疗是必要的。AS 是一种与 ASD 相关的神经发育障碍疾病, 然而, 它更侧重于协调性差和社交技能的缺陷, 而非语言和智力发展的迟缓。一些诊断问卷、测试等有助于 AS 的诊断和评估; 药物治疗对于共病的症状改善显著, 但对核心症状影响甚微, 甚至至今医护人员和治疗师们对其听觉触觉和视觉方面的脱敏工作几乎无能为力。我们仍需要更多关于 AS 的研究 (在查阅文献的过程中发现国内相关文献较少), 也希望未来人们会以更积极和鼓励的态度去对待 AS 人士, 帮助他们提高自信心。

关键词: 阿斯伯格综合征, 诊断, 治疗

注意缺陷与多动障碍系统式正念家庭养育云课堂医护合作的实践研究

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目的 随着现代社会生活节奏的加快, ADHD

在儿童中的发病率逐渐上升, 给患儿及其家庭带来了极大的困扰, ADHD 的发生发展结局受家庭环境的显著影响。ADHD 不仅影响儿童的学习成绩和社交能力, 还可能导致家庭关系的紧张和冲突。因此, 探索有效的 ADHD 干预方法, 提高儿童的行为自我管理能力和行为自我管理能力, 减轻家庭压力, 具有重要的现实意义。

方法 系统式正念家庭养育云课堂致力于整合医护资源, 提供个性化服务, 以正念为基础, 结合家庭环境, 为 ADHD 患者及家庭提供全方位的支持。正念家庭养育强调家长在育儿过程中保持积极的心态和正确的育儿观念, 通过关注孩子的内心需求和情感变化, 建立亲密的亲子关系, 促进孩子的健康成长。家长参与度是影响 ADHD 患者恢复情况的关键因素。家长应积极参与云课堂, 学习如何有效地支持孩子的成长。同时, 医护团队也应积极引导家长参与, 提供专业的指导和支持, 确保干预措施的有效性和可持续性。从而提高儿童的注意力集中度和行为自我管理能力, 并减轻家庭压力。

首先, 通过筛选和评估确定符合条件的 ADHD 儿童及其家庭作为研究对象。然后, 为这些家庭提供系统式正念家庭养育干预, 通过云课堂的形式进行训练, 包括家长执行功能训练、儿童注意力训练, 亲子互动训练、情绪管理及行为矫正等方面。同时, 医护合作参与指导与支持工作, 确保干预措施的专业性和有效性。

结果 通过对干预前后数据的分析, 本研究发现系统式正念家庭养育与医护合作能够显著提高 ADHD 儿童的注意力集中度和行为自我管理能力。具体而言, 儿童在云课堂上的注意力集中时间明显延长, 课堂行为问题减少; 在家庭生活中, 儿童的行为更加规范, 亲子关系得到明显改善。同时, 家长的育儿压力也有所减轻, 家庭生活质量得到提高。

结论 系统式正念家庭养育云课堂结合医护合作, 为 ADHD 患者提供了更有效、全面且持续性的治疗支持。通过整合医护资源、提供个性化服务, 云课堂帮助 ADHD 患者在注意力、行为能力和情绪调节方面取得显著进步。

关键词: 注意缺陷; 多动障碍; 正念家庭养育; 云课堂; 医护合作

腺样体切除术对学龄期腺样体肥大患儿心理行为状况的效果分析

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目的 探讨腺样体切除术对腺样体肥大患儿心理行为状况的改善程度。

方法 纳入 103 例符合腺样体肥大临床诊断的学龄期儿童,其中接受腺样体切除术的 72 例儿童为研究组,接受药物保守治疗的 31 例儿童为对照组,在两种干预方法实施前 3 天内及干预后 4 周、8 周、16 周时,通过 Conner 父母症状问卷(PSQ)、儿童社交焦虑量表(SASC)、注意缺陷多动障碍评定量表(SNAP-IV)等测量工具对两组腺样体肥大患儿的心理行为状况进行分析,采用重复测量方差分析、独立样本 t 检验等统计学方法

结果 重复测量方差分析结果显示:两组 PSQ ($F=595.141, P<0.01$)、SASC ($F=595.141, P<0.01$)、SNAP-IV ($F=595.141, P<0.01$) 得分主效应差异有统计学意义;且 PSQ ($F=388.944, P<0.01$)、SASC ($F=3.986, P<0.05$)、SNAP-IV ($F=94.808, P<0.01$) 得分在测量时间*组别之间存在交互作用;对不同时点两组各量表得分差异比较显示:在进行干预后 16 周研究组 PSQ、SNAP-IV 得分较对照组明显降低,差异有统计学意义 ($P<0.01$);不同测量时间点成对比较显示:研究组 PSQ、SASC、SNAP-IV 得分在干预后 4 周、8 周、16 周与干预前比较差异均有统计学意义 ($P<0.01$);对照组 PSQ、SASC、SNAP-IV 得分在干预后 8 周、16 周与干预前比较差异均有统计学意义 ($P<0.05$)。

结论 腺样体切除术可以显著改善学龄期儿童心理行为状况;相比药物保守治疗,腺样体切除术能较短的时间内更大幅度改善学龄期儿童心理行为状况。

关键词: 心理行为状况;腺样体切除术;学龄期儿童

The Influence of Parenting Styles and Coping Strategies on Anxiety Symptoms in Adolescents: A Comparative Study of Groups with and without Non-Suicidal Self-Injury Behavior

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Objective Furthermore, parenting styles and the coping strategies of adolescents are directly or indirectly related to an individual's level of anxiety and the occurrence of NSSI. Examining these multivariate interactions is essential to understanding and intervening in NSSI behaviors

Methods This cross-sectional survey collected data from both NSSI-diagnosed patients at Ningbo Kangning Hospital and healthy adolescents in urban schools, including background information, parenting styles, coping strategies, and levels of anxiety. The data were analyzed using independent sample t-tests, multivariate analysis of variance (MANOVA), and regression analysis including main effects and interactions with NSSI

Results The results of the single-factor analysis showed that the NSSI group of adolescents scored significantly higher than the non-NSSI group ($p < 0.001$) on measures of generalized anxiety, somatization/panic, social phobia, and school phobia. The NSSI group of adolescents perceived less emotional warmth and understanding from their fathers and experienced more punishment and interference ($p < 0.001$). They were more inclined to use emotion-oriented coping strategies, while the non-NSSI group tended to use problem-oriented strategies ($p < 0.001$). Further multivariate analysis of variance (MANOVA) and regression analysis showed significant impacts of NSSI behavior, parenting style, and adolescent coping strategies on anxiety levels

Conclusion This study found that the anxiety levels of NSSI adolescents were significantly higher than those of non-NSSI adolescents, which was closely related to less emotional warmth from parents, more punishment and interference, and emotion-focused coping strategies. The results demonstrate that family environment and coping strategies play a critical role in NSSI behavior and anxiety levels, highlighting the importance of emphasizing emotional support and positive coping strategies in the prevention and intervention of NSSI behavior

关键词: Parenting Styles; Adolescent Coping

Strategies; Anxiety Symptoms; Non-Suicidal Self-Injury (NSSI); Adolescent Psychology

青少年抑郁障碍与社会支持及童年心理创伤的相关性

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目的 抑郁障碍 (Major depressive disorder, MDD) 是一种常见精神障碍, 其主要临床表现为显著和持续的情绪低落, 兴趣丧失和精力减退。社会支持会影响个体对负性事件的应对方式, 尤其是青少年抑郁障碍患者往往缺乏有效的社会支持, 同时, 童年期创伤是预测青少年是否具有良好的社会支持的重要因素。因此, 本研究旨在探讨青少年抑郁障碍与社会支持及童年心理创伤的相关性, 为促进青少年心理健康发展提供一定的理论依据。

方法 本研究采用便利抽样法, 选取于 2024 年 1-3 月首次在成都市第四人民医院就诊的 33 例青少年抑郁症患者作为研究对象, 采用一般情况调查表、宗氏抑郁自评量表 (Self-rating Depression Scale, SDS)、童年创伤问卷 (Childhood Trauma Questionnaire, CTQ)、社会支持评定量表 (Social Support Rate Scale, SSRS) 进行问卷调查。采用 SPSS 27.0 统计软件进行数据处理, 采用单因素分析、相关分析和回归分析等方法进行分析。以上所有分析均采用双尾检验, 显著性水平 $P < 0.05$, 则认为结果有统计学意义。

结果 (1) 在青少年抑郁障碍患者中, 情感虐待的发生率为 63.6%, 躯体虐待为 42.4%, 性虐待为 12.1%, 情感忽视为 33.3%, 躯体忽视为 63.6%。

(2) 抑郁与童年创伤呈正相关 ($r=0.358, P < 0.05$); 社会支持与抑郁、童年创伤呈负相关 (r 值分别为 -1.191、-2.231, 均 $P < 0.05$); 童年创伤与社会支持呈负相关 ($r=-2.31, P < 0.05$)。

(3) Logistic 回归分析结果显示, 有童年期创伤性经历, 尤其是经历过较严重的情感虐待和躯体忽视 ($P < 0.05$), 是青少年抑郁患者抑郁发作的危险因素。

结论 (1) 童年创伤经历作为早期应激, 是导

致青少年抑郁障碍发生的重要危险因素。童年期创伤经历总分及躯体虐待、躯体忽视、情感虐待、情感忽视四个创伤因子对青少年抑郁症的主效应显著, 可显著正向预测青少年抑郁症的发生风险。性虐待创伤因子对青少年抑郁症的主效应不显著。

(2) 青少年抑郁障碍患者往往伴有童年创伤经历, 不愉快的童年生活事件可能是青少年抑郁发作的一个危险因素。社会支持与抑郁、童年创伤呈负相关, 有效的社会支持系统有助于降低青少年抑郁障碍的发病率, 减少童年时期不愉快的事件发生率。

(3) 经历过严重的情感虐待和躯体忽视的中重度童年创伤者比无童年创伤经历者, SDS 评分更高, 抑郁程度更重。这表明, 情感虐待和躯体忽视可能是青少年抑郁障碍发病的危险因素。

关键词: 抑郁障碍; 青少年; 社会支持; 童年创伤

注意缺陷多动障碍患儿临床表现及智能水平的相关性

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目的 通过 SNAP-IV 量表、Conners 量表及韦氏儿童智力测验第四版 (WISC-IV), 探索注意缺陷多动障碍 (ADHD) 患儿的临床表现及其智能水平的相关性。

方法 1. 对符合 DSM-5 中 ADHD 诊断标准的 6-16 岁患儿 ($n=305$) 采集性别、年龄、生长发育情况等一般人口学资料, 使用 SNAP-IV 量表、PSQ 量表采集患儿的行为学数据, 生成症状 (注意缺陷、多动冲动、对立违抗 3 个维度) 和社会功能 (品行问题、学习问题、心身障碍、多动-冲动、焦虑、多动指数 6 个维度) 分数。

2. 对所有 ADHD 使用韦氏儿童智力量表-第四版 (WISC-IV) 进行智力测验评估其认知水平, 生成总智商和言语理解、知觉推理、工作记忆、加工速度、一般能力、认知效率 6 个指数。

3. 对 ADHD 患儿的症状、社会功能及智力水平进行相关性分析。

结果 1. ADHD 患儿症状与智力水平的相关性 ADHD 患儿的注意缺陷症状与言语理解 ($P <$

0.001)、知觉推理($P=0.006$)、工作记忆($P<0.001$)、一般能力($P<0.001$)、认知效率($P=0.010$)、总智商($P<0.001$)呈负相关;多动冲动症状与知觉推理($P=0.036$)呈正相关。

2. ADHD 患儿社会功能与智力水平的相关性

ADHD 患儿的品行问题与加工速度($P=0.045$)呈正相关;学习问题与言语理解($P<0.001$)、知觉推理($P=0.001$)、工作记忆($P<0.001$)、一般能力($P<0.001$)、认知效率($P<0.001$)、总智商($P<0.001$)呈负相关;焦虑与言语理解($P=0.036$)、一般能力($P=0.033$)呈负相关;多动指数与工作记忆($P=0.030$)呈负相关。

结论 1. ADHD 患儿的症状与智力水平存在相关性,具体而言,总智商及智力的各维度(除加工速度外)指数越低,注意缺陷症状越严重;知觉推理能力越高,多动冲动症状越严重。

2. ADHD 患儿的社会功能与智力水平存在相关性,具体而言,总智商及智力的各维度(除加工速度外)指数越低,学习问题越严重;言语理解及一般能力越低,焦虑水平越高;工作记忆能力越低,多动水平越高;加工速度指数越高,品行问题越严重

关键词:注意缺陷多动障碍,临床表现,智能水平

幼儿儿童人格发展评定相关研究进展

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人格特征被视为心理个性的基石和基本单位。性格特征指的是广泛的人格内部维度,被认为可以解释在不同情况下观察到的行为、思想和感觉的总体一致性。从性格的因素分析研究中反复得出的五大因素被视为它的五大特征:外向性、神经质、开放性、宜人性和尽责性。

气质是人格特质发展的“早期生活框架”。然而,追踪这种发展是当今人格科学面临的巨大挑战之一。越来越多的研究人员和理论家试图将最完善的气质维度排列起来,主要基于母亲的评分和实验室观察,并将自我报告的成人人格特征纳入五大人格特征和相关分类(Hampson et al 2007, Shiner 2006)。

在人格特征的发展过程中,基因与环境在多个层面上以复杂的方式相互作用。研究表明后天环境

和养育方式对性格的发展产生了重大影响。因此在幼儿或儿童早期气质人格的评估和测评具有重要意义,可以帮助父母在养育过程中及时发现问题,调整养育方式,以帮助儿童在人格发展过程中给与合理的引导和积极的支持。

儿童的个性特征(通常被视为气质的各个方面)通常通过父母报告或实验室观察来评估。John、Caspi、Robins、Moffitt(1994)在青少年中发现了一个与成人大五人格(即“小五人格”)相对应的五因素结构。研究表明人格的五因素模型可以用于儿童和成人的评估。对于幼儿及学龄前的儿童 Putnam(2006)有两个幼儿量表对应不同年龄 9-12 个月及 20-24 个月。

关于儿童气质类评定量表目前有: Carey 儿童气质的系列评估问卷,20 世纪七八十年代由 Carey 和 McDevitt 等依据 Thomas 和 Chess 的儿童气质理论陆续发展起来,根据年龄段分别形成了小婴儿、婴儿、幼儿、学龄前、学龄儿 5 个不同年龄阶段的量表。1996 年西安交大姚凯南教授将其引入中国,形成了中国儿童气质量表,根据年龄段分别形成了婴儿、幼儿、学龄前、学龄儿 4 个不同年龄阶段的量表。

关于儿童青少年个性类评定量表目前主要有:中国儿童创造性人格倾向量表(2018 年程淮、程南华等编制)、幼儿人格发展趋向评定量表(2002 年由陈学诗、郑毅等编制)及艾森克个性问卷(于 1985 年引入中国)。

因此,近 20 年国内关于幼儿儿童气质性格类的评定方法相关研究较少,尚待进一步研究开发。本文将针对以上既往的测评方法做深入的综述和分析,为以后的研究发现新的方向。

关键词:幼儿 儿童 人格发展 评定

The Relationship between Pain Perception, Emotional Status and Empathy in Non-suicidal Self-harm Adolescents

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Objective The impact of emotional distress and physical pain perception on non-suicidal NSSI patients

is crucial in understanding their behavior. Empathy can activate the individual's perception of emotions and pain. This suggests that understanding the relationship between emotion and somatic perception, and the two through empathy, may be an entry point to help us explore the relationship between empathy and tactile perception in non-suicidal NSSI patients. Hence, this research will explore the connection among empathy, emotions, and pain perception, as well as examining their commonalities and distinctions

Methods This study recruited 66 non-suicidal NSSI adolescents aged 12-19 years in Zhejiang province between May and November 2023, China, to participate in tactile pain assessment, pain/emotional empathy experiment, and psychological questionnaires to assess tactile pain perception, pain/emotional empathy ability, and emotional characteristics

Results Depression, anxiety, alexithymia, and pain empathy of NSSI adolescents were mostly reflected in the speed of empathy response. In terms of the degree of empathy and response speed of NSSI adolescents, pain perception was significantly associated with pain empathy. Touch perception was more significantly correlated with emotional empathy. Touch threshold and depression, anxiety, and alexithymia were significantly related. However, pain perception was not significantly associated with depression, anxiety, and alexithymia

Conclusion This study discusses the relationship between empathy and emotion, pain perception and unique patterns in non-suicidal NSSI patients

关键词: Non-suicidal self-injury, Emotional Empathy, Pain Empathy, Pain Sensitivity, Emotional Status

注意缺陷多动障碍儿童父母情绪调节和儿童情绪调节的相关性

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目的 探讨注意缺陷多动障碍 (ADHD) 儿童父母的情绪调节特点及其对 ADHD 儿童情绪调节的影响。

方法 纳入 140 例符合美国精神障碍诊断与统计手册第四版 (DSM-IV) ADHD 诊断标准的儿童及其父母之一, 68 例正常儿童及其父母之一。采用情绪调节困难量表 (DERS)、情绪调节问卷 (ERQ) 和儿童情绪调节量表 (ERC) 对父母和儿童情绪调节分别进行评估。

结果 ADHD 儿童父母 DERS 的策略使用、冲动控制和目标行为得分较正常对照组高 (均 $P < 0.05$)。ADHD 儿童 ERC 情绪不稳得分与父母的策略使用和冲动控制得分正相关, ERC 儿童情绪调节得分与父母的策略使用、冲动控制和目标行为得分负相关 (均 $P < 0.01$)。ERC 儿童情绪调节得分在父母策略使用、冲动控制得分与儿童情绪不稳得分之间存在部分中介效应。

结论 本研究是对 ADHD 儿童父母情绪调节特征及其与 ADHD 儿童情绪调节关系的首次探索, 研究发现 ADHD 儿童父母在策略使用、冲动控制、目标行为等方面存在调节困难, 且影响 ADHD 儿童的情绪调节和情绪不稳。研究结果有望为未来 ADHD 儿童情绪的干预策略提供一定的方向, 即可以针对父母存在缺陷的情绪调节维度进行干预, 进而提高 ADHD 儿童的情绪调节技能及相关表现。本研究存在一定的不足: 除了当前采用的情绪调节困难量表, 未来可以尝试纳入不同的评估工具对父母情绪调节能力进行更为全面的评估, 例如情绪社会化量表等; 对父母精神疾病的评估采用自我报告的方式, 缺少严格的诊断评估, 在一定程度上无法完全排除父母自身精神疾病的影响, 未来可以通过对父母进行临床诊断访谈及症状评估以进一步验证本研究的结论; 对于儿童情绪评估为他评量表, 未来可以尝试纳入儿童情绪自评量表进一步评定儿童情绪, 多角度刻画儿童情绪调节的 ADHD 儿童父母存在多个维度的情绪调节缺陷, 可对 ADHD 儿童情绪调节产生影响而加重情绪不稳表现。

关键词: 注意缺陷多动障碍; 情绪调节; 父母; 儿童

儿童青少年甲状腺结节与情绪障碍的研究进展

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目的 本文回顾甲状腺结节与儿童青少年情绪障碍之间的关系。文章还将回顾可能影响这种关系的相关因素因素。

方法 综述相关文献。

结果 甲状腺结节 (thyroid nodule) 是甲状腺细胞在局部异常生长所引起的散在病变, 是内分泌系统多发病和常见病。一般人群中通过触诊的检出率为 3%~7%。高分辨率超声检查获得的甲状腺结节患病率为 20%~76%, 儿童甲状腺实性结节的患病率为 1%~1.7%, 20%~57% 的儿童因各种适应症而接受颈部超声检查时会出现甲状腺异常, 包括结节或囊性病变。下丘脑-垂体-甲状腺轴已确立为应激反应神经内分泌系统之一, 焦虑和抑郁等持续不良情绪可能导致躯体疾病。有研究表明, 甲状腺结节与负性情绪存在共病概率, 二者互相影响。近年来有学者提出负面情绪可能是甲状腺结节发生的危险因素之一。也有学者将负性情绪作为甲状腺癌发生的独立危险因素, 认为压力和应激引起大脑皮质和下丘脑发生变化, 直接或间接削弱免疫系统, 导致恶性结节发生率增高。早期的研究表明, 年龄和性别是引发甲状腺结节的最主要危险因素, 女性本身具有感情细腻, 情绪不稳定等特点, 以及青少年青春期激素水平不稳定, 导致内分泌更易发生紊乱。同时也有研究认为, 现代社会竞争压力大, 儿童青少年承受着高学业压力和高敏感人际关系, 易引发精神焦虑等不良情绪, 而精神刺激会影响机体免疫反应异常, 诱导甲状腺细胞增生。儿童青少年甲状腺结节与其情绪问题的评估和治疗需要多学科团队方法和具有该领域经验的专家的参与。

结论 本综述仅针对甲状腺结节与儿童青少年情绪问题之间相关因素进行综述, 为将来甲状腺结节与儿童青少年情绪问题的研究提供新思路。

关键词: 儿童青少年, 情绪障碍, 甲状腺结节, 综述

Working Memory and Its Brain Imaging Mechanism in Adults ADHD Co-morbid with Major Depressive Disorder

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Objective Attention-Deficit/Hyperactivity Disorder (ADHD) and Major Depressive Disorder (MDD) both exhibit working memory (WM) impairments and frequently co-occur. However, the impact of comorbid MDD on WM in ADHD patients and the underlying mechanisms remains unclear and needs further investigation. Therefore, this study aims to explore the characteristics of WM and the underlying neuroimaging mechanisms in adults with ADHD comorbid with MDD.

Methods The study included 412 adult participants, comprising 125 ADHD patients with co-morbid MDD (ADHD+MDD), 148 ADHD patients without comorbid MDD (ADHD-MDD), and 139 healthy controls (HC). Among them, 63 ADHD+MDD, 83 ADHD-MDD, and 120 HC completed resting-state fMRI scans

ANCOVA explored differences in the Working Memory (WM) subscale of the Behavior Rating Inventory of Executive Function-Adult Version, and the Self-Rating Depression Scale (SDS) scores among the three groups. Partial correlation analyses examined relationship between WM and SDS scores in ADHD patients, and hierarchical regression analysis was performed on WM.

Functional connectivity (FC) analysis using the left/right dorsolateral prefrontal cortex (DLPFC) as the region of interest (ROI) was conducted. First, the correlation between FC and WM in ADHD and HC groups was analyzed separately (Gaussian Random Field (GRF) correction: voxel-level $P < 0.001$, cluster-level $P < 0.05$, two-sided test). Then, partial correlation analysis explored the relationship between WM-related FC and SDS/co-morbid MDD. Finally, a mediation analysis tested a potential 'SDS/co-morbid MDD→FC→WM' relationship.

Results For WM impairment, the ADHD+MDD group was significantly more severe than ADHD-MDD ($P = 0.027$), and the ADHD-MDD group was significantly more severe than HC ($P < 0.001$). SDS scores were positively correlated with the WM subscale scores ($r = 0.649$, $P < 0.001$), and explained 10.2% of the variance in WM ($P < 0.001$)

In ADHD patients, WM-related FC was identified

between the left DLPFC and the right supramarginal gyrus (FC[DLPFC/L - SMG/R]), which was significantly associated with co-morbid MDD ($r=-0.174$, $P=0.037$), but not with SDS scores ($r=0.126$, $P=0.134$). Mediation analysis showed FC[DLPFC/L - SMG/R] partially mediated the relationship between co-morbid MDD and WM. In HC, WM-related FC was found between the left DLPFC and the left superior frontal gyrus (FC[DLPFC/L - SFG/L]), but this FC was not significantly associated with SDS scores ($r=0.05$, $P=0.594$).

Conclusion MDD in adult ADHD patients aggravated WM impairment, which may be related to FC[DLPFC/L - SMG/R]. This study revealed the role of DLPFC in ADHD comorbidity with MDD, providing a scientific basis for a deeper understanding of the pathogenesis and brain biomarkers of ADHD comorbidity with MDD

关键词: ADHD, Working memory, Depression, DLPFC.

Associations between Suicidal Ideation and Clinical Features As Well As Inflammatory Cytokines in Adolescents with Major Depressive Disorder

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Objective Suicidal ideation is often associated with increased levels of inflammatory biomarkers. However, such associations have not been adequately explored in adolescents with major depressive disorder (MDD). This study aimed to examine the associations between suicidal ideation with clinical features as well as inflammatory cytokines in adolescents with MDD

Methods From January to December 2021, this study included 156 adolescents with MDD. The Positive and Negative Suicidal Ideation Scale (PANSI), the Center for Epidemiological Studies Depression Scale (CES-D), the Childhood Trauma Questionnaire (CTQ) and the Insomnia Severity Index Scale (ISI) were used to assess

suicidal ideation, depressive, childhood trauma and insomnia symptoms, respectively. Also, plasma levels of interleukin (IL)-1 β , IL-6, IL-10, IL-17A and tumor necrosis factor- α (TNF- α) were measured

Results Correlation analyses showed that PANSI score was negatively correlated with age and age at onset, and positively correlated with duration of illness, CES-D score, CTQ score, ISI score as well as levels of IL-1 β , IL-6 and TNF- α in adolescents with MDD (all $p < 0.05$). A further multivariate stepwise linear regression analysis showed that PANSI score was independently associated with age at onset ($\beta = -0.118$, $t = -2.496$, $p = 0.014$), CES-D score ($\beta = 0.614$, $t = 11.627$, $p < 0.001$), CTQ score ($\beta = 0.238$, $t = 4.539$, $p < 0.001$) and IL-1 β levels ($\beta = 0.143$, $t = 3.111$, $p = 0.002$)

Conclusion Suicidal ideation is associated with depressive, childhood trauma and insomnia symptoms as well as elevated levels of inflammatory cytokines in adolescents with MDD. The findings suggest that inflammatory cytokines may relate to the pathogenesis of suicidal ideation in adolescents with MDD, but further longitudinal studies are needed to explore the causal association between suicidal ideation and inflammatory cytokines in MDD

关键词: suicidal ideation, inflammatory cytokines, adolescents, major depressive disorder

抑郁青少年非自杀性自伤行为的相关因素中介分析

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目的 既往研究表明, 近期压力生活事件与青少年非自杀性自伤(Non-suicidal self-injury, NSSI)之间存在强烈的关联。内化症状和情绪调节困难(Difficulty in emotion regulation, DER)可能介导近期压力生活事件与NSSI行为之间的关联。因此, 本研究旨在评估近期压力生活事件与青少年NSSI严重程度之间的关系, 以及内化症状和DER在两者之

间的潜在中介作用。

方法 共有 224 名重度抑郁障碍 (major depressive disorder, MDD) 青少年住院患者 (78.60% 为女性) 参与了这项研究, 年龄范围为 12-18 岁 ($M=15.30$, $SD=1.83$)。采用临床医生评定问卷收集了青少年近期压力生活事件、内化症状、DER 和 NSSI 行为的相关数据。构建结构方程模型对假设的模型进行了检验。

结果 在过去的 12 个月内, MDD 青少年 NSSI 报告率为 65.20%。近期压力生活事件被发现与 NSSI 严重程度直接相关 ($\beta=0.128$, $P=0.023$), 而内化症状在两者之间起显著的中介作用 ($\beta=0.076$, $P=0.023$)。同时, 还证实了近期压力生活事件和 NSSI 之间存在链式中介效应 ($\beta=0.034$, $P=0.023$), DER 和内化症状发挥链式中介作用, DER 通过内化症状与 NSSI 有显著的间接联系。这些发现为近期压力生活事件与 MDD 青少年 NSSI 行为之间的联系提供了更深一步的理解。我们讨论了针对近期压力生活事件、DER 和内化症状的干预措施对防治青少年 NSSI 行为的影响。

结论 近期压力生活事件似乎在青少年 NSSI 行为的病因中发挥了作用, 特别是受惩罚和人际关系事件值得被特别关注。DER 和内化症状在近期压力生活事件与 NSSI 之间起链式中介作用。青少年 NSSI 的干预应侧重于个人素质与压力来源两个方面。减少近期压力生活事件、筛查内化症状、提高情绪调节能力可能会降低青少年的 NSSI 行为。

关键词: 非自杀性自伤, 青少年, 近期压力生活事件, 内化症状, 情绪调节困难, 结构方程模型

儿童注意缺陷多动障碍及其不同亚型与情绪失调的关系

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目的 探究情绪失调与儿童注意缺陷/多动障碍 (ADHD) 及其不同亚型的特异性关系。

方法 纳入 47 名确诊且无共病的 6-12 岁 ADHD 儿童和 50 名典型发育 (TD) 儿童。采用自编问卷收集人口学信息、中文版 ADHD 斯诺佩评

估量表第 4 版 (SNAP-IV) 父母版进行评定 ADHD 亚型、情绪调节核量表 (ERC) 测量情绪消极/易变性维度, 情绪调节量表 (ERQ) 测量认知重评维度, 人际反应量表 (IRI) 测量认知同理心维度和单一面孔识别实验测量情绪识别能力。运用独立样本 t 检验, 多因素协方差和逻辑回归分析进行统计学分析。

结果 ① ADHD 组的情绪识别能力得分、EDQ 的认知重评维度得分和 IRI 的认知同理心维度得分均显著低于 TD 组 ($t=-2.849$ 、 -3.779 、 -5.244 , p 均 <0.01), 而 ERC 的情绪消极/易变性维度得分则显著高于 TD 组 ($t=4.928$, $p<0.001$)。② 在控制智商、年龄和性别情况下, ADHD 注意缺陷型组、ADHD 混合型组和 TD 之间在情绪识别能力 ($F(2, 82)=3.4$, $p<0.001$)、EDQ 的认知重评维度得分 ($F(2, 82)=7.37$, $p<0.001$)、IRI 的认知同理心维度得分 ($F(2, 82)=16.73$, $p<0.001$) 和 ERC 的情绪消极/易变性维度得分 ($F(2, 82)=19.56$, $p<0.001$) 上均存在显著差异。③ 逻辑回归分析结果进一步显示, 在控制智商、年龄和性别情况下, ERC 的情绪消极/易变性维度对 ADHD 混合型组的影响具有统计学意义 ($OR=5.68$, $CI=1.73-281.79$, $p<0.05$), 但对 ADHD 注意缺陷型组的影响不具有统计学意义 ($OR=4.6$, $CI=0.52-40.50$, $p>0.05$)。

结论 ADHD 儿童存在明显的情绪失调特征, 其中, 情绪消极/易变性是最突出的情绪失调问题, 且与 ADHD 混合型的关系较为密切。这提示, 在对 ADHD 儿童的临床评估和干预中, 应重视情绪失调, 重点为混合型的 ADHD 儿童提供情绪调节训练。

关键词: 注意缺陷/多动障碍; 儿童; 情绪失调

Network Analysis of Tourette Syndrome and Attention-deficit/hyperactivity Disorder Symptoms in Children and Adolescents

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Objective While Tourette syndrome (TS) and attention-deficit/hyperactivity disorder (ADHD) often co-occur, the nature of the relationship between their symp-

toms is not well understood. Network analysis of psychopathology allow for detailed examinations of symptom interactions, providing an effective approach to explore the patterns of comorbidity between TS and ADHD symptoms.

Methods This study included 3,958 participants (male/female = 3,004/954, age mean \pm SD = 8.60 \pm 2.25 years). We collected data on TS symptoms using the Motor Tic, Obsessions and Compulsions, Vocal Tic Evaluation Survey (MOVES), and ADHD symptoms using the Swanson, Nolan, and Pelham Rating Scale-IV (SNAP-IV). Network analysis was employed to construct a combined network of TS and ADHD symptoms at the symptom level. We utilized the expected influence (EI) and bridge EI metrics to explore the core and bridge symptoms within the network.

Results The network structure demonstrated a moderate number of non-zero connections between TS and ADHD symptoms, constituting 23.06% of all potential connections. Core symptoms in the comorbidity network included "Often has difficulty sustaining attention in tasks or play activities," "Certain bad words or thoughts keep going through my mind," and "Words come out that I can't stop or control." Bridging symptoms identified were "Words come out that I can't stop or control," "I do certain things like jumping or clapping over and over," "I can't control all my movements," and "Often talks excessively."

Conclusion The core and bridging symptoms identified in this study serve as potential therapeutic targets for the treatment of TS and ADHD comorbidity in clinical children and adolescents

关键词: Tourette syndrome; Attention-deficit/hyperactivity disorder; Network analysis; Children and adolescents.

青少年抑郁障碍患者自杀意念与童年创伤的关系: 抑郁症状和维生素 D 的双中介作用

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目的 探讨青少年抑郁障碍患者自杀意念与童年创伤、抑郁症状及维生素 D 的关系, 并分析潜在的中介作用。

方法 2021 年 1 月至 12 月, 纳入 168 例青少年抑郁障碍患者和 89 例健康青少年。采用儿童期虐待问卷 (CTQ)、流调抑郁量表 (CES-D)、自杀意念量表 (PANSI) 评估童年创伤、抑郁症状和自杀意念, 同时检测血浆 25-羟维生素 D [25 (OH) D] 水平。采用 SPSS 23.0 进行统计分析, 使用 Pearson 或 Spearman 相关分析检验 PANSI 总分与其他因素的相关性, 并通过 PROCESS 宏程序分析抑郁和 25 (OH) D 在童年创伤与自杀意念之间的中介作用。

结果 与健康对照相比, 青少年抑郁障碍患者的自杀意念和各类型童年创伤水平均更高 (均 $P < 0.001$), 而血浆 25 (OH) D 水平更低 ($P < 0.001$)。相关分析显示, 青少年抑郁障碍患者自杀意念与童年创伤、抑郁以及 25 (OH) D 水平均存在显著相关性 (均 $P < 0.05$)。此外, 中介分析显示, 抑郁症状和维生素 D 在 CTQ 总分及情感虐待和情感忽视与自杀意念之间发挥部分中介效应, 间接效应值分别为 0.280 (95% CI [0.161~0.407]) 和 0.024 (95% CI [0.003~0.054]); 0.634 (95% CI [0.295~0.987]) 和 0.070 (95% CI [0.008~0.151]); (95% CI [0.306~0.941]) 和 0.051 (95% CI [0.003~0.120])。同时, 抑郁症状和维生素 D 在躯体忽视与自杀意念之间发挥完全中介效应, 间接效应值分别为 1.034 (95% CI [0.629~1.496]) 和 0.087 (95% CI [0.012~0.203])。

结论 青少年抑郁障碍患者的抑郁症状和维生素 D 水平是童年创伤导致自杀意念的潜在机制。临床中应对合并童年创伤的青少年抑郁障碍患者积极开展心理健康教育或提高其维生素 D 水平, 以减少自杀意念的发生, 提高临床预后。

关键词: 抑郁障碍; 青少年; 自杀意念; 童年创伤; 维生素 D

心理治疗联合药物治疗对青少年抑郁患者抑郁情绪、睡眠障碍、认知功能的治疗效果研究

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目的 本文通过研究心理治疗联合药物治疗对青少年抑郁患者抑郁情绪、睡眠障碍、认知功能的治疗效果,探讨抑郁情绪、睡眠障碍、认知功能的相关性。为该疾病的临床治疗提供参考依据。

方法 本次研究选取我院从2019年9月至2023年9月期间收治的12-18岁青少年抑郁症患者150例为研究对象,将其随机分成研究组和对照组各75例,对照组患者采用药物治疗方式进行临床治疗,观察组则在对照组基础上联合心理治疗进行。通过研究观察患者在治疗前后的焦虑自评量表(SAS)、抑郁自评量表(SDS)、汉密尔顿抑郁量表(HAMD-17)、汉密尔顿焦虑量表(HAMA)、睡眠状况自评量表(SRSS)、匹兹堡睡眠质量指数(PSQI)以及中文精神分裂症认知功能成套测验(MCCB)中7个认知领域的认知功能,并比较7个认知领域得分和总得分。

结果 (1)两组患者在治疗前的SAS、SDS、HAMD-1、HAMA、SRSS、PSQI评分比较无显著差异($P>0.05$),经过相应的治疗后均较治疗前有显著的改善,且观察组患者治疗后的SAS、SDS评分由于对照组($P<0.05$)。(2)两组患者经过治疗在信息处理速度、注意/警觉性、工作记忆、词语学习、推理和问题解决能力、社会认知、视觉学习、总分等方面均具有显著差异($P<0.05$)。

结论 心理治疗联合药物治疗可以显著改善青少年抑郁患者抑郁情绪、睡眠障碍、认知功能,探讨抑郁情绪、睡眠障碍、认知功能。值得临床推广使用。

关键词: 心理治疗;青少年抑郁;抑郁情绪;睡眠障碍;认知功能;

正念疗法干预在青少年创伤后应激障碍的临床护理价值分析

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目的 分析正念疗法干预对青少年创伤后应激障碍效果方法

方法 纳入2020年10月-2023年10月70例

青少年创伤后应激障碍患者。常规护理干预组(35例):普通护理。正念疗法干预组(35例):正念疗法干预。比较遵医嘱依从性优良率、焦虑(HAMA)、抑郁(HAMD)、斯坦福急性应激反应问卷(HAMARQ)评分、不良事件发生率、临床护理满意率。

结果 正念疗法干预组的遵医嘱依从性优良率更高, $p<0.05$ 。护理4周后,正念疗法干预组的HAMA、HAMD评分、HAMARQ评分、不良事件发生率,均低于常规护理干预组, $p<0.05$ 。护理4周后,正念疗法干预组的临床护理满意率,均更高, $p<0.05$

结论 正念疗法干预青少年创伤后应激障碍患者,更具有优势。这是因为,实施正念疗法干预模式下,成立小组,根据患者的具体情况,方便制定符合患者实际的正念疗法干预对策,同时以小组化模式开展,利于定期评估和监管患者病情。实施成立微信群策略,利用现代互联网技术,帮助患者有效掌握正念疗法干预的相关知识,获取帮助,并能够规范化实施正念疗法干预。实施正念疗法干预护理,正念减压疗法的作用机制主要是提供足够的训练刺激,改变患者的认知偏差,增强正念状态及元认知能力,消除或减少其对负性情绪的关注[14],提高遵医嘱依从性,改善病情,调整情绪,改善应激反应症状,从而避免不良反应发生。并且能够弥补单纯常规干预的不足,更有效改善病情,提高生活质量,让患者更满意[1]

关键词: 正念疗法;青少年创伤后应激障碍;焦虑;抑郁

非自杀性自伤对青少年抑郁症患者纹状体结构协变的调节作用

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目的 青少年重度抑郁症(AO-MDD)是一种严重威胁青少年成长和健康的疾病,约有三分之一的MDD患者曾有非自杀性自我伤害(NSSI)的经历,而这部分患者往往面临着更高的自杀风险。越来越多的研究发现,纹状体的异常与抑郁症密切相关,尤其是皮质-纹状体回路的改变。此外,纹状体作为奖赏系统的核心,其与系统内其他脑区之间的

异常连接, 已被发现与青少年重复性 NSSI 行为相关。与功能性磁共振成像相比, 结构协变分析技术能够在更长的时间尺度上评估大脑连通性, 且不易受伪影影响, 是一种分析大脑区域间解剖关联的有效方法。

方法 本研究运用结构协变分析技术, 旨在探讨 AO-MDD 患者是否显示出纹状体结构协变量的异常变化, 以及 NSSI 如何调节这些变化。通过收集 92 名 AO-MDD 患者和 81 名健康对照组 (HCs) 的 T1 加权解剖图像, 并采用基于体素的形态学分析评估每位参与者的灰质体积, 我们分析了纹状体的异常结构协方差及其受 NSSI 各维度调节的情况

结果 我们发现, 相比 HCs, AO-MDD 患者在皮质-纹状体回路的关键脑区显示出结构协变值的增加, 这反映了疾病早期发展或是一种代偿现象。此外, NSSI 调节了纹状体与奖赏系统 (内侧眶额叶皮质、额上回、扣带皮质和丘脑) 中关键脑区的异常。具体来说, 尾状核与奖赏系统显示出结构协方差增加, 这可能导致脑区过度同步发育, 引起多巴胺的释放异常增加, 破坏正常奖赏机制, 使个体对 NSSI 行为成瘾依赖, 同时, 我们还发现苍白球和壳核与奖赏系统间的结构协方差值降低, 反映出这些脑区间的神经发育不同步, 这种不协调可能导致认知和执行控制能力下降, 进而促发重复性 NSSI 行为。

结论 综上所述, 我们的研究突显了皮质-纹状体回路在 AO-MDD 患者早期发展中的关键作用, 并明确了 NSSI 在 AO-MDD 神经生理学改变中的重要生理意义。

关键词: 青少年抑郁症; 非自杀性自伤; 结构协变分析; 皮质-纹状体; 奖赏网络

人际创伤与青少年抑郁障碍患者症状间的关系: 一项网络分析研究

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目的 不同类型的人际创伤往往是共同存在的, 但对个体发展的影响可能不同, 其中某一类型的人

际创伤可能对儿童青少年精神病理症状有特别突出的影响, 既往研究多仅考虑单一类型人际创伤, 这可能会高估该风险因素影响, 忽视关键因素的作用。此外, 抑郁症状是一组高度异质性的多维度症状群, 不同维度的抑郁症状可能有着不同的病理发展机制。基于儿童青少年抑郁人际理论, 人际创伤与儿童青少年存在密切关系, 但对于不同类型人际创伤与不同维度抑郁症状间的关联缺乏深入研究。基于此, 本研究拟构建人际创伤与青少年抑郁障碍患者症状间的网络分析模型, 识别不同类型人际创伤与青少年抑郁障碍患者不同维度症状间的中心变量和差异关联, 找到优先干预的核心症状。

方法 本研究为横断面调查研究, 选取 2021 年 6 月至 2022 年 2 月在山东省精神卫生中心门诊就诊及住院的青少年抑郁障碍患者 413 人。被试完成了一般人口学调查表、童年创伤问卷 (CTQ)、社会同伴排斥量表 (SPR)、儿童抑郁问卷 (CDI) 等量表调查。采用 R 3.4.3 软件进行数据的整理和分析, 构建网络分析模型。

结果 相关分析结果显示, 除性虐待经历外, 不同类型人际创伤 (家庭方面: 情感虐待、躯体虐待、情感忽视、躯体忽视, 同伴方面: 同伴忽视、同伴侮辱、同伴躯体攻击、同伴谴责) 与青少年各维度抑郁症状 (负性情绪、人际问题、低效能、快感缺乏、低自尊) 均呈显著正相关 ($r=0.30-0.64, ps<0.01$); 网络分析结果显示, 人际创伤中的情感虐待是中心性最高的症状节点, 其次是抑郁症状中的低自尊和快感缺乏。与不同维度抑郁症状最强相关的人际创伤分别是, 1) 与低自尊相关性最强的情感忽视 (权重=0.23), 2) 与人际问题相关性最强的躯体忽视 (权重=0.18), 3) 与快感缺乏相关性最强的忽视 (权重=0.08), 4) 与效能低下相关性最强的情感虐待 (权重=0.08), 5) 与负性情绪相关性最强的情感虐待 (权重=0.07)。

结论 在抑郁障碍的青少年中, 童年期的虐待经历与同伴排斥均为抑郁症状的风险因素, 较同伴排斥而言, 童年期的虐待经历对抑郁症状的影响更大, 其中情感虐待是网络中最重要核心症状, 是青少年抑郁障碍患者症状干预和治疗的重要靶点。

关键词: 青少年; 抑郁症状; 人际创伤; 童年期虐待; 同伴排斥

青少年非自杀性自伤与家庭亲密度、人际关系及心理弹性的分析

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目的 非自杀性自伤 (NSSI) 指个体在无自杀意图时故意地、直接地对自身躯体进行伤害的行为。美国精神障碍诊断与统计手册第 5 版中指出, NSSI 最早发生年龄多为 10 岁且持续多年, 采取 NSSI 行为的个体多将其视作减压发泄的方法, 以此解决其创伤性体验所带来的影响。全球范围内, 青少年 NSSI 终生和 12 个月患病率分别为 22.1% 和 19.5%, 中国约 1/5 的中学生都存在自伤行为。有研究显示, 发生 NSSI 行为的青少年中有 33%~70% 有过至少一次的自杀企图。NSSI 的发生是家庭因素、社会环境及个人因素的相互影响的结果。本研究通过对青少年 NSSI 行为与家庭亲密度、人际关系及心理弹性的关系进行分析, 探寻影响 NSSI 发生的危险因素。

方法 于 2021 年 1 月至 2023 年 12 月期间对住院患者问卷调查共获得 2139 份有效问卷, 根据是否伴有 NSSI 行为分为 NSSI 组 235 例和非 NSSI 组 1904 例, 问卷包括一般资料、家庭亲密度、人际关系及心理弹性的调查。使用 Spearman 相关性分析青少年 NSSI 行为与家庭亲密度、人际关系及心理弹性的相关性; Logistic 回归分析影响青少年 NSSI 行为的因素。

结果 NSSI 组青少年有 48.09% 处于极端型家庭, 非 NSSI 组青少年有 40.55% 处于极端型家庭, 两组在家庭分型中差异显著 ($P < 0.05$); NSSI 组青少年同伴关系得分显著高于非 NSSI 组 ($P < 0.05$); 两组师生关系分型差异显著 ($P < 0.05$); NSSI 组心理弹性量表得分显著低于非 NSSI 组 ($P < 0.05$); Spearman 相关性分析结果显示家庭分型、师生关系分型以及坚韧性、力量性和乐观性得分与 NSSI 的发生之间呈负相关关系 ($r = -0.730, P < 0.05$; $r = -0.406, P < 0.05$; $r = -0.736, P < 0.05$; $r = -0.614, P < 0.05$; $r = -0.649, P < 0.05$), 与同伴关系得分呈正相关关系 ($r = 0.830, P < 0.05$); Logistics 回归分析结果显示极端型家庭倾向、较差的同伴关系以及较弱的坚韧性、力量性和乐观性为影响青少年 NSSI 发生的因素 ($P < 0.05$), OR 值分别为 1.829、0.317、0.405 **结论** 青少年非自杀性自伤行为的发生与家庭亲密度、人际关系状况及心理弹性有显著相关性。临床上, 对家庭功能差、人际交往

技能缺乏及心理弹性不足的青少年需多加关注。

关键词: 青少年非自杀性自伤; 家庭亲密度; 人际关系; 心理弹性。

Functional Connectivity of The Posterior Cingulate Cortex Moderates The Relationship between Tic Symptoms and Premonitory Urge in Tourette Syndrome

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Objective The neural mechanisms underlying the relationship between PU and tics remain unclear. This study investigates the potential role of the posterior cingulate cortex (PCC) in moderating the relationship between premonitory urge (PU) and tic severity in patients with Tourette syndrome (TS)

Methods We recruited 58 children and adolescents (47 males) with TS. Tic and PU severity were assessed using the Yale Global Tic Severity Scale (YGTSS) and the Premonitory Urge for Tics Scale (PUTS). Resting-state functional MRI was used to evaluate the functional connectivity of PCC regions, and degree centrality analysis was performed

Results A significant positive correlation was found between PUTS and YGTSS scores ($r = 0.541, p < 0.001$). The degree centrality (DC) of the right dorsal PCC showed significant negative correlations with both YGTSS ($r = -0.347, p = 0.011$) and PUTS scores ($r = -0.425, p = 0.002$). Moderation analysis indicated that the DC of the right dorsal PCC moderated the relationship between PU and tics. The higher the DC of the right dorsal PCC, the smaller the effect of PU on the tic; and vice versa. The above modulatory effects were also true before PU and vocal tics, but neither motor tics.

Conclusion The PCC plays a crucial role in

modulating tic symptoms and PU in TS. Enhancing PCC connectivity could be a promising therapeutic strategy for managing TS symptoms. Further research is needed to explore the PCC's potential as a treatment target in TS

关键词: Tourette syndrome, Posterior cingulate cortex, Tic symptoms, Premonitory urge, Functional connectivity

ADHD and Family Life: A Cross-sectional Study of ADHD Prevalence Among Pupils in China and Factors Associated with Parental Stress.

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Objective To examine the prevalence of attention deficit hyperactivity disorder in a community sample of children aged 6-13 years, and the extent to which it impacts parental mental health.

Methods Cross-sectional study of primary school pupils (number=2497) in Deyang, Sichuan Province, South-West China. We used standardized instruments to identify children with ADHD symptoms and parent depression.

Results The prevalence of ADHD was 9.8%. Factors associated with the likelihood of ADHD, included family environment($P=0.003$), time spent with children($P=0.01$), parenting style($P=0.01$), and parental relationship, pupils self-harm and lower academic ability ($P=0.001$). After controlling for other factors, having a child with ADHD increased the likelihood of parents' depression ($OR=4.35$, $CI=2.68\sim 7.07$), additional factors included parent relationship.

Conclusion ADHD may be a common disorder among Chinese children, the symptoms of which may increase the likelihood of parent depression. There is a need for greater detection of ADHD in schools,

acknowledgement of the challenges the disorder creates for academic success and family wellbeing, and psychoeducational tools for supporting parents of children with ADHD

关键词: ADHD, family life, prevalence, parental stress, cross-sectional

Longitudinal Associations between Perceived Discrimination and Suicide Behaviors in 9-10 Years Old Children: The Mediating Roles of Victimization and Perpetration

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Objective Although multiple studies have found that colored people commonly experience racial discrimination, available studies have yet to examine how perceived racism might be related to suicide vulnerability in youth. The purpose of this study was to examine how perceived racial discrimination contributes to subsequent suicidality and non-suicidal self-injury (NSSI), as well as the mediating roles of victimization and perpetration.

Methods In a large longitudinal sample from the ABCD cohort study, we used mediation analyses to study whether bullying assessed at 1-year follow-up may mediate the effects of perceived discrimination assessed at baseline on later outcomes of suicidality and NSSI assessed at 2-year follow-up.

Results Correlation analysis showed that perceived discrimination, bullying and suicidality and NSSI were positively correlated with each other. In addition, victimization partially mediated the relationship between perceived discrimination and suicidality and NSSI.

Conclusion Screening for discrimination, bullying may help identify individuals and groups of racial/ethnic minorities at risk for suicidality and NSSI. Reducing school bullying is of great significance for reducing suicide related behaviors of teenagers

关键词: Preadolescent Suicidality Nonsuicidal

self-injury bullying

团体绘画疗法在儿少病房对青少年情绪障碍应用效果分析

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目的 探讨用团体绘画疗法在儿少病房对青少年情绪障碍应用的效果。

方法 将 2023 年 10 月—2024 年 4 月住院 80 例青少年情绪障碍患者作为研究对象,采用随机分组为观察组 (n=40) 和对照组 (n=40)。两组患者均进行常规的药物及一般心理治疗,在此基础上对对照组进行绘画疗法,疗程 8 周,比较两组患者的焦虑自评量表 (SAS)、抑郁自评量表 (SDS),采用护士住院患者观察量表 (NOSIE) 评估患者的精神与社会功能,护理满意度调查问卷进行评分。

结果 治疗前两组患者 (SAS、SDS) 评分比较,差异无统计学意义 ($P>0.05$) 治疗后两组患者 (SAS、SDS) 评分比较有所降低,差异有统计学意义 ($P<0.05$),住院患者观察量表 (NOSIE) 评估患者的精神与社会功能,护理满意度调查问卷进行评分,治疗后患者满意度明显高于治疗前。

结论 团体绘画疗法治疗青少年情绪障碍患者效果显著,可降低患者 (SAS、SDS) 评分,促进青少年精神和社会功能的恢复。

不足之处 本研究对青少年情绪障碍患者实施绘画疗法,能有效降低患者的不良情绪,认识能力及控制能力,但只评估了绘画干预对患者影响,未来的研究应该长期随访时间,关注绘画疗法对青少年情绪障碍患者的长期影响及改善功能随访,同时也要求家庭成员的参与及关注。

关键词: 团体绘画疗法; 儿少病房; 青少年; 情绪障碍; 效果分析 **作者:** 周英、鲁平、凌琪 **单位:** 安徽省安庆市精神病医院 **电话:** 13956530656 **地址:** 安徽省安庆市迎江区华圣路 22 号

首发未用药的儿童青少年精神分裂症患者脑功能网络拓扑属性与幻听严重程度的相关性

研究

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目的 儿童青少年精神分裂症是精神分裂症中较罕见且严重的亚型,也被称作早发精神分裂症 (early-onset schizophrenia, EOS),且幻听是精神分裂症患者的典型症状。本研究利用图论分析法探讨首发未用药的 EOS 患者脑功能网络的拓扑属性变化以及与幻听严重程度的相关性。

方法 纳入 EOS 患者 83 例,采用 SAPS 量表中的幻听条目评估患者幻听的严重程度,并将其分为无幻听组 (20 例)、轻度幻听组 (30 例)、重度幻听组 (31 例),同时匹配 32 名健康对照。对所有受试者采集头部静息态磁共振成像数据,利用 Brainnetome Atlas 脑图谱将大脑划分为 246 个脑区,构建脑功能网络,计算网络的节点和全局拓扑参数。以拓扑属性在组间有显著差异的节点为感兴趣区域计算全脑的功能连接,寻找功能连接异常的脑区,采用 Pearson 相关性分析观察有显著差异脑区的功能连接值与幻听评分之间的相关性。

结果 1. 所有被试在整个稀疏度阈值范围内 (0.1~0.34) 均满足小世界网络属性,即 $\gamma>1$, $\lambda\approx 1$ 。四组样本之间脑功能网络的全局拓扑属性 (聚类系数、特征路径长度、局部效率、全局效率) 均未发现明显差异。2. 在节点属性方面,度中心性 (DC) 及节点效率 (NE) 均发现有显著差异的大脑区域为左侧颞上回 ($P<0.05$, FDR 校正),事后多重比较发现,随着幻听严重程度的增加,DC 和 NE 均增强。3. 以左侧颞上回为种子点的脑功能连接发现,左侧颞上回与左侧扣带回之间的功能连接在四组间存在显著性差异;将左侧颞上回与左侧扣带回之间的功能连接值与幻听评分进行相关性分析后发现,随着幻听严重程度的增加,功能连接增强。

结论 首发未用药的儿童及青少年精神分裂症患者静息态脑功能网络具有小世界网络属性,随着幻听严重程度的增加,左侧颞上回在脑功能网络中的信息传递能力增强,且左侧颞上回与左侧扣带回之间的功能连通性增加,这些改变有可能是精神分裂症患者出现幻听症状的潜在神经生理学机制,并有可能成为早发精神分裂症准确诊断的潜在生物标

志物。

关键词：静息态磁共振成像；脑功能网络；图论分析；拓扑属性；早发精神分裂症

Frontoparietal Network Homogeneity As A Predictor of Early Treatment Response in Major Depressive Di

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目的 The pathological mechanism of how modified electroconvulsive therapy (MECT) regulates frontoparietal network (PFN) is unknown, and there is a lack of predictive factors for predicting the efficacy of MDD.

方法 The samples included 30 first-episode, drug-naive adolescent patients with MDD and 34 healthy controls (HCs) from Sample 1 and 28 first-episode, drug-naive adolescent patients with MDD and 43 HCs from Sample 2. The patients received MECT and underwent scanning at two time points (baseline and posttreatment). Network homogeneity (NH) and support vector regression (SVR) analyses were employed to analyze the imaging data.

结果 Compared with HCs, patients at pretreatment exhibited decreased NH values in the right MSFG and left IPL. At posttreatment, patients exhibited increased NH values in the right AG. Additionally, SVM and receiver operatin

结论 This study provides evidence that MECT modulates PFN in adolescent MDD

关键词：Major depressive disorder; Modified electroconvulsive therapy; Network homogeneity; Neuroimaging biomarker; Treatment response

Subtypes of Tic Disorders in Children and Adolescents: Based on Clinical Characteristics

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Objective Tic disorder (TD) is a diverse neurodevelopmental disorder with various symptoms and comorbidities. Traditional classifications based on age onset and duration fail to adequately characterize the full clinical features of TD. This study aims to redefine TD subtypes by a comprehensive analysis of clinical features and comorbidities.

Methods We assessed 139 children and adolescents aged 6-18 years using 14 scales covering 43 dimensions. The k-means clustering algorithm was used to identify distinct TD subtypes. Differences between these subtypes were analyzed using t-tests and network analysis, with high expected influence (EI) metric representing key symptoms within each subtype.

Results We identified two distinct subtypes of TD, with 21.6% of participants classified as subtype1 and 78.4% as subtype2. Subtype1 exhibited more severe symptoms across TD, obsessive-compulsive spectrum disorders, and attention deficit hyperactivity disorder assessments compared to subtype2, with significant differences observed in 81.4% of the scale features. Network analysis revealed differences in core symptoms between the two subtypes; subtype1 primarily involved hyperactivity and vital activities, whereas subtype2 primarily involved attention deficit, hyperactivity and conduct. Furthermore, comparisons with DSM-5 classifications revealed distinct patterns, indicating the novel nature of the identified subtypes.

Conclusion Our study uncovered two novel subtypes of TD in children and adolescents, highlighting the internal heterogeneity within this disorder. Through detailed analysis of the clinical features of these subtypes, we deepen our understanding of TD, potentially enhancing diagnostic and treatment strategies

关键词：Tic disorder; Subtype classification; Clinical characteristics; Cluster analysis

ADHD 儿童孤独症特质及其与 ADHD 核心症状、生态执行功能关系的网络分析研究

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目的 注意缺陷多动障碍(ADHD)儿童存在孤独症特质(ATs),但 ATs 及 ADHD 核心症状关系尚不清楚。心理病理学网络理论强调症状间的相互激活驱动精神障碍的发生与维持,本文采用网络分析方法,探索 ADHD 儿童 ATs 症状网络特征及其与核心症状、生态执行功能因子间的关联。

方法 共招募 264 例 ADHD 儿童。采用注意缺陷多动障碍筛查量表(SNAP-IV)、孤独症谱系障碍筛查问卷(ASSQ)、执行功能行为评定量表父母版(BRIEF)分别进行 ADHD 核心症状、ATs 及生态执行功能评定,基于 R4.3.2 构建偏相关网络模型和贝叶斯网络模型,获取强度、接近、中介、预期影响(EI)中心性,可预测性等网络指标。

结果 1. 构建 ASSQ 症状网络 整体网络中最强关联主要出现在社会互动问题与重复刻板行为(RRBs)和社交交流问题间,包括:“陈腐或早熟的”与“古怪教授”,“异常的面部表情”与“异常的姿势”,“缺少好朋友(S6)”与“仅以自己的方式表现社交性(R5)”,“缺乏同理心”与“字面意义上的理解”。其中, S6、R5、“语言不适合社交”的 EI 值最高,是网络中重要核心症状。DAG 分析显示,社会互动问题主要位于上方,对下方的其它症状存在可能的驱动作用。 2. 构建 SNAP-IV 和 ASSQ 因子网络 两组症候群因子中“注意缺陷”与“社会互动问题”存在关联。“社会互动问题”、“多动”的 EI 值最高,在整体网络中发挥更为重要的作用。 3. 构建 SNAP-IV、ASSQ、BRIEF 因子网络 ADHD 与 ATs 间的直接关联较少,但均与 BRIEF 因子存在较为明显的关联,如:注意缺陷与工作记忆、计划,多动与抑制;社会互动问题与抑制、启动,社交交流问题与工作记忆,RRBs 与转换。执行功能中的计划、监控、工作记忆及 ADHD 症状中的多动是整体网络中比较重要的核心因子(EI 值最高)。抑制因子是网络中最重要桥梁症状(桥梁最强)。DAG 显示,计划和工作记忆位

于顶部,对下部其他症状存在驱动作用。ADHD 和 ATs 主要通过执行功能连接,ATs 的社会互动问题、ADHD 的多动由抑制功能缺陷驱动,ATs 的社交交流问题和 ADHD 注意缺陷由执行功能中的工作记忆缺陷驱动。

结论 社会互动问题是 ADHD 儿童孤独症特质的核心症状;孤独症特质与 ADHD 核心症状间的关联主要通过执行功能的缺陷驱动连接。

关键词: 注意缺陷多动障碍,孤独症特质,执行功能,网络分析

Brain Functional Connectivity Alterations of Wernicke's Area in Individuals with Autism Spectrum Conditions in Multi-frequency Bands: A Mega-analysis

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Objective The objective was to detect abnormal functional connectivity (FC) between Wernicke's area and other language-related functional regions, and identify frequency-specific altered FC using Wernicke's area as the seed region in ASC.

Methods The current study carried out a mega-analysis to attain a comprehensive understanding of the neural mechanisms underpinning ASC, particularly in the context of language processing. The study employed the Autism Brain Image Data Exchange (ABIDE) dataset, which encompasses data from 443 typically developing (TD) individuals and 362 individuals with ASC.

Results The findings revealed that increased FC

in individuals with ASC has frequency-specific characteristics. Further, in the conventional frequency band (0.01-0.08 Hz), individuals with ASC exhibited increased FC between Wernicke's area and the right thalamus compared with TD individuals. In the slow-5 frequency band (0.01-0.027 Hz), increased FC values were observed in the left cerebellum Crus II and the right lenticular nucleus, pallidum.

Conclusion These results provide novel insights into the potential neural mechanisms underlying communication deficits in ASC from the perspective of language impairments

关键词: Autism spectrum conditions (ASC); Autism spectrum disorders (ASD); Language impairments; Wernicke's area; Functional connectivity; Frequency-specific

儿童青少年精神障碍患者家长病耻感的危险因素分析及预测模型构建

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- 4.脑库构建及资源利用安徽省重点实验室

目的 探讨儿童青少年精神障碍患者家长病耻感及其危险因素, 并构建病耻感的预测模型。

方法 采取横断面调查, 收集 2022 年 8 月至 2023 年 7 月就诊于安徽医科大学附属巢湖医院及安徽省宿州市第二人民医院精神科的 283 名儿童青少年精神障碍家长的社会人口学资料, 并采取精神疾病病耻感量表、患者健康问卷-9 (PHQ-9)、广泛性焦虑障碍量表 (GAD-7)、失眠严重指数量表 (ISI) 以及数字评价量表 (NRS) 评估患者家长的病耻感状况、抑郁症状、焦虑症状、失眠症状及疲劳程度。

结果 病耻感的总体检出率约为 43.4%。患者住院治疗且收入低的家长更易产生病耻感 (均 $P < 0.05$)。并且较无病耻感患者家长, 产生病耻感的患者家长 PHQ-9 总分更高 ($P = 0.016$)、失眠程度更重 ($P = 0.001$) 以及疲劳程度更加严重 ($P = 0.009$)。

对具有统计学意义的指标进行二元 Logistic 回归分析, 结果显示患者治疗方式及家长失眠程度与是否产生病耻感有关联 (均 $P < 0.001$)。基于回归分析结果, 构建预测患者家长产生病耻感的风险预测模型, 并绘制受试者工作特征 (ROC) 曲线下面积 (AUC) 为 0.667 (95% CI: 0.614-0.741, $P < 0.001$)。

结论 儿童青少年精神障碍患者家长病耻感检出率较高, 提示在注重儿童青少年精神障碍患者的同时, 亦应该关注患者家长的心理健康, 应该加强对患者家长的关注, 必要时提供适当的个人化干预措施。

关键词: 儿童青少年精神障碍; 家长; 病耻感; 危险因素; 失眠

A Study of The Interactive Mediating Effect of ADHD and NSSI Caused by Co-disease Mechanisms in Males and Females

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Objective Non-suicidal self-injury (NSSI), of which the predisposing factors are complex and diverse, profoundly affects the physical and mental health of young people. Therefore, this work established an NSSI intermediary network model considering the interaction of multiple factors. A mediating effect between attention deficit/hyperactivity disorder (ADHD) and NSSI, considering the influence of comorbidities, such as depression, anxiety, and impulsive personality, was proposed based on sex differences.

Methods A total of 2,689 middle school students in Ningbo City, Zhejiang Province, China, were randomly sampled and participated in this study. Data regarding their demographic characteristics, attention deficit, hyperactivity/impulsivity, NSSI, anxiety, depression, internet addiction, and other comorbid symptoms were collected and analyzed. After initially screening the data, variables were assessed for significance using a single-factor inter-group difference analytic method,

and a binary logistic regression analysis was performed. The intermediary effect of factors influencing NSSI in males and females was also analyzed.

Results The overall NSSI rate was 15.16%. The results showed that the impact of individual impulsivity characteristics (impulsiveness, the ADHD with hyperactivity/impulsivity subtype) on NSSI behavior was not significant (regression results, $P > 0.05$). The degree of association between ADHD with attention deficit and ADHD with comprehension deficit subtypes, and other comorbid symptoms (depression, anxiety, and internet addiction disorder) and NSSI, with odds ratios (ORs) of 7.6/6.42/436.68/3.82/1.86, and 95% bootstrap confidence intervals (CIs) of 4.64, 12.87/3.46, 12.67/137.42, 2659.13/2.32, 6.37/1.31, 2.82, respectively. The results also showed significant effects of ADHD subtypes on comorbid symptoms and the path effects of NSSI ($P < 0.01$). Among them, the mediating effect was the strongest when anxiety was the mediating variable, and the mediating effect of girls was higher than that of boys.

Conclusion The results of this work demonstrated the influence of ADHD symptoms on NSSI behavior. Among patients with ADHD, patients with subtypes with obvious attention deficit characteristics were more likely to exhibit NSSI behavior, whereas the hyperactive impulse subtype had no direct impact on NSSI. We conclude that adolescent impulsivity may not be directly related to NSSI behavior and that impulsive characteristics jointly affect NSSI behavior through a series of NSSI comorbid symptoms. Notably, the probability of symptom onset and the degree of comorbidity was significantly higher in girls than in boys of the same age, and girls were more prone to NSSI behavior. These findings provide effective theoretical support for the prevention and treatment of adolescent NSSI behavior

关键词: NSSI, ADHD, Mediation effect, Comorbidity mechanism, Multi-parameter interactive effect

Parenting Styles and Adolescent Coping Methods: A Comparative Study of Non-Suicidal Self-Injury and Non-Non-Suicidal Self-Injury Groups

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Objective This study aims to explore in depth how parental parenting styles affect coping strategies among adolescents, with a particular focus on the differences in this influence between the NSSI and non-NSSI adolescent populations.

Methods A cross-sectional survey was conducted on NSSI patients diagnosed at Kangning Hospital in Ningbo, China, as well as healthy adolescents in urban schools. Data including family background, parenting styles, and adolescent coping strategies were collected. Descriptive statistics, chi-square test, independent samples t-test, correlation analysis, and stepwise regression analysis were used to analyse the data.

Results Significant correlations were found among family disharmony, parental education level, and adolescent NSSI behaviour. In non-NSSI groups, excessive maternal preference was negatively correlated with adolescent problem-solving abilities, while in NSSI groups, negative parenting styles of parents were positively correlated with negative coping strategies.

Conclusion This study reveals a close relationship between parental parenting styles and adolescent coping strategies, with significant differences between NSSI and non-NSSI populations. The research findings emphasize the importance of considering family environment and parenting styles when preventing and intervening in adolescent NSSI behaviour. Future psychological interventions should focus on cultivating positive parenting styles, especially in promoting emotional support and understanding from parents, to help adolescents develop healthier coping mechanisms

关键词: Non-Suicidal Self-Injury (NSSI); Adolescent Coping Strategies; Parenting Styles; Youth Mental Health; Family Influence

综合医院精神心理研究协作组

以精神异常为首发的大面积颅脑占位性病变 1 例

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目的 帮助精神科医师、规培医生增强对躯体疾病引发精神异常的认识,避免误诊、漏诊,保障医疗安全。同时,我们希望通过本案例,促进临床医师对此类问题的识别与处理,为临床诊疗提供借鉴意义。

方法 本文分析归纳 1 例以典型精神病性症状(自言自语、行为怪异、易激惹、不饮不食、夜间不眠,情感反应不协调、治疗不合作)为主要表现的左顶枕叶大面积占位性病变患者的诊治过程作回顾性分析。患者女,73 岁,因“胡言乱语伴脾气大 1 个月”于 2024 年 5 月 27 日入住我院治疗。入科情况:右侧肢体肌力 IV 级,左侧 V 级,四肢肌张力正常,生理反射存在,病理反射未引出。精神状况检查:神清,对时间、人物及地点部分定向不准,接触交谈被动,不合作。可疑被害妄想、幻听、幻视。记忆粗测下降、智能粗测正常。情绪不稳定,易激惹,情感反应不协调。意志活动尚可,有自言自语怪异行为,否认自伤自杀观念及行为,自知力缺乏。既往存在多次可疑摔倒史。诊疗经过:入院即刻完善相关检验及检查:血常规未见明显异常。血生化:总胆红素 25.6 $\mu\text{mol/L}$ ↑,直接胆红素 7.5 $\mu\text{mol/L}$ ↑,间接胆红 18.10 $\mu\text{mol/L}$ ↑, α -羟丁酸脱氢酶 196U/L↑,肌红蛋白 107 $\mu\text{g/L}$ ↑,肌酸激酶 94U/L,肌钙蛋白 10.64 $\mu\text{g/L}$ 。凝血功能:纤维蛋白原 4.34 g/L ↑,D-二聚体 5460 $\mu\text{g/LFEU}$ ↑。急诊床旁心电图:1.窦性心律 2.S-T 段抬高(请结合临床,建议急查心酶)3.V1R/S>14.异常 q 波备注:QTc437ms。5 月 28 日头颅 CT 结果示:1.左侧顶枕叶占位性病变(左侧顶枕叶见不规则稍高、低混杂密度影,边界模糊不清,大小约 5.0 cm ×7.4 cm ,周围见片带状稍低密度影,相连脑沟、脑池变窄模糊,胼胝体压部受累);2.双侧基底节区腔隙性脑梗死;3.脑萎缩。入院诊断:精神障碍查因(器质性精神障碍?),涉及多学科间联合诊治。

结果 经急会诊后立即转至神经外科继续治疗。

结论 本文对患者临床资料进行回顾并进行相关文献的复习,分析颅脑占位性病变的特点,提示

诊治精神疾病中要细致查体、问诊的重要性,以及及时进行系统全面的体检和相关的检查,以明确诊断、及时治疗,旨在帮助提高精神科临床医师的甄别能力,为后续临床工作提供经验指导。

关键词: 颅脑大面积占位性病变,精神异常,影像学检查

精神科护理观察量表在伴有精神病性症状的重度抑郁发作患者的应用分析

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目的 探讨精神科护理观察量表在伴有精神病性症状的重度抑郁发作患者的应用价值。

方法 选取 2022 年 1 月至 2023 年 1 月来我科就诊住院,采用 ICD-10 诊断标准为伴有精神病性症状的重度抑郁发作患者 54 例作为研究对象,入院后使用精神科护理观察量表进行纵向的观察与评价。评定员由经过量表评定训练的病区责任护士担任。评定时间为患者住院期间,每天评定一次。根据量表结果,通过纵向比较分析病人的行为障碍、病情的演变及治疗效果进行客观评定,为临床治疗、护理提供科学依据。

结果 通过量表分值变化情况,比较分析伴有精神病性症状的重度抑郁发作患者在治疗前后的效果,可以发现使用精神科护理观察量表的评价结果与临床表现以及预后比较符合。同时使临床护理工作重点难点一目了然,护理工作开展有章可循。

结论 在精神科临床护理工作中通过精神科护理观察量表可以观察到伴有精神病性症状的重度抑郁发作患者的治疗效果、疾病进展等情况,是评价病程变化的合理工具。根据评价结果进行有针对性地制定合理的“人性化”护理方案,实施合理有效的临床护理措施,有效促进患者的康复,有利于患者缩短住院时间,早日回归社会。同时对护理质量提高也起到了积极的促进作用。

关键词: 精神科护理观察量表,伴有精神病性症状的重度抑郁发作,护理措施

雷公藤多苷及其有效单体通过脑肠轴交流快速改善脓毒血症相关脑病诱发的情绪认知障碍

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目的 雷公藤多苷是中药雷公藤的醇提物,已广泛用于治疗多种炎性疾病。雷公藤内酯醇是雷公藤多苷的主要活性成分之一,可以下调脂多糖(LPS)诱导的系统性炎症小鼠模型的腹腔巨噬细胞中的炎症细胞因子。

方法 通过一次性腹腔注射大剂量(15mg/ml) LPS和盲肠结扎手术(CLP)构造模拟脓毒血症的急性炎症小鼠模型,给予人体等效剂量的雷公藤多苷灌胃或雷公藤内酯醇腹腔注射治疗3天。之后通过旷场、悬尾、强迫游泳、Y迷宫等行为学实验测试各组小鼠的抑郁焦虑相关情绪表现。通过流式微球技术和荧光定量PCR技术检测外周血和脑中细胞因子表达水平。通过尼氏染色检测大脑神经细胞损伤程度。通过16s rDNA测序检测各组个体的盲肠内容物、腹腔灌洗液的菌群多样性。

结果 两种脓毒血症小鼠模型的体重均出现显著下降,外周血和脑内细胞因子水平显著升高,出现类似脓毒血症的急性系统性炎症表现。模型组小鼠在强迫游泳实验中不动时间增加、进入不动状态的潜伏期缩短,在悬尾试验中进入不动状态的潜伏期缩短,在旷场实验中静止时间显著增加,表现出明显的抑郁样行为;在旷场实验中进入中央次数显著增加、进入中央潜伏期明显变长、待在四角持续时间增加,表现出明显的焦虑样行为;Y迷宫中工作记忆行为受损。免疫组化结果显示,模型组小鼠脑内神经元损伤,显示出脓毒血症相关脑病的部分表现。而无论是雷公藤多苷灌胃,还是雷公藤内酯醇腹腔注射,均可以回升小鼠体重,显著降低外周血和脑内细胞因子水平,修复脑内神经元损伤,并且在行为实验中改善焦虑样行为和抑郁样行为,其中,雷公藤内酯醇对抑郁样行为的改善效果更突出。菌群测序发现脓毒血症模型小鼠腹腔菌群和肠道菌群组成高度相似,而雷公藤多苷治疗后,腹腔和肠道的菌群关联度下降,提示雷公藤多苷有助于脓毒血症中受损的肠屏障重新建立。

结论 雷公藤多苷已被中国药监局批准用于治疗克罗恩病、类风湿性关节炎等长期炎症性疾病。

本研究虽然仅是初步在动物模型上探索,但其研究结果提示,对于脓毒血症这种急性重症型炎症疾病,短期服用低剂量雷公藤多苷或可成为有效治疗脓毒血症及其脑病相关的情绪认知障碍症状的补充方案。

关键词: 脓毒血症相关脑病,雷公藤多苷,情绪认知,炎症风暴

个案报道:一例门诊精神分裂症患者持刀看诊行为干预措施

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目的 报道一例门诊精神分裂症患者身着红色印迹白大褂并持刀到精神科门诊看诊,门诊医务工作者知晓该患者病情,采用积极接纳、正面劝导等方法安抚患者,予以干预患者持刀可能出现任何的不良后果。探讨门诊精神分裂症患者持刀看诊行为干预措施,为探索门诊医务工作者处置类似患者制定规范的干预方案提供参考。

方法 回顾我科门诊医务工作者干预的一例门诊精神分裂症患者持刀看诊行为,包括病例资料、看诊经过、干预措施。该患者为青年男性,多次在我科住院治疗,诊断“精神分裂症”,治疗效果欠佳。出院后不规律服药,病情反复,家属难以管理,患者不定时会自行到我科门诊看诊。在某一次到门诊看诊时,患者身着红色印迹白大褂并一手持刀,情绪平稳,导诊护士热情接待患者后,立即实施干预措施:

- 1、协调处置:及时拨打医院保安班电话,请求保安人员第一时间到现场协助保障门诊所用人员的人身安全;
- 2、请示报告:及时向门诊医生、科室主任、科室护士长进行报告,请求科内专科人员共同协助干预;
- 3、积极干预:掌握心理知识,积极接纳患者,与患者快速建立良好的医患或护患关系,以对患者进行正面劝导和安抚;
- 4、联系家属:通过患者既往的住院信息中查找家属的联系电话并进行联系,告知家属患者此次看诊的异常行为表现及可能会出现的不良后果,建议要加强对患者的家庭支持及管理;
- 5、事件记录:以备总结和查验。

结果 该门诊精神分裂症患者顺利看诊后离开医院,并将白大褂脱下、刀具交由医院保安人员处置。

结论 采用规范的干预措施,有助于帮助和指导门诊医务工作者对门诊患者持刀看诊行为进行干预,提高医务人员能力建设和职业成就感,会成为阻止门诊精神分裂症患者看诊时持刀伤人的有效方式。

关键词:精神分裂症,门诊持刀看诊,干预措施,正面劝导

Analysis of Functional Connectivity Changes in Attention Networks and Default Mode Networks in Patients with Depression and Insomnia

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Objective Multiple past studies have indicated widespread neural network dysfunction in patients with depression and insomnia. However, it remains unclear whether there's a specific correlation in the neural networks of patients experiencing both depression and insomnia. This study aims to analyse the functional connectivity changes in attention networks and default mode networks in patients with depression and insomnia

Methods The resting-state functional magnetic resonance imaging (fMRI) was used to compare alterations in the seed-based whole-brain voxel-wise functional connectivity within attention networks and default mode networks in patients with major depressive disorder (MDD, n=38), insomnia disorder (ID, n=37), comorbid depression with insomnia (n=49), and a healthy controls (n=50). Specific brain regions including bilateral dorsolateral prefrontal cortex, bilateral orbitofrontal cortex, bilateral anterior and posterior cingulate gyrus, bilateral hippocampus, bilateral precuneus, and bilateral thalamus were selected as regions of interest. Functional connectivity at the voxel level across the entire brain was established from these regions. Moreover, statistically significant differences in brain regions

were correlated with scores from HAMD-17, PSQI, and ISI using Pearson correlation analysis

Results Functional connectivity in the left orbitofrontal cortex, left precuneus, and left thalamus was altered in the four patient groups. Patients with depression and insomnia exhibit functional changes across multiple networks

Conclusion Anomalies in the attention network's functional connectivity might represent a latent pathophysiological mechanism underlying both depression and insomnia, potentially contributing to attentional dysfunction. Similarly, abnormal functional connectivity in the default mode network might contribute to increased emotional sensitivity and selective attention biases observed in patients

关键词: Major Depression Disorder, Insomnia Disorder, Functional Connectivity, Attention Networks, Default Mode Network

非自杀性自伤青少年父母照护能力提升需求的混合性研究

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目的 目的 描述和分析非自杀性自伤 (Non-Suicidal Self Injury, NSSI) 青少年父母照护能力提升需求, 以期为 NSSI 青少年父母提供更为有效的支持, 促进青少年健康成长。

方法 方法 采用质性与量化相结合的研究方法, 对广州市某三级甲等医院就诊的 19 名 NSSI 青少年父母采用面对面半结构式访谈, 并对 242 例 NSSI 青少年父母培训需求进行横断面调查。

结果 结果 NSSI 青少年父母照护能力提升需求分析出二大主题: 一、NSSI 青少年父母目前存在的困境: 1. 精神、经济负担沉重 2. 沟通障碍、无效应对。二、NSSI 青少年父母照护能力提升需求: 1. 获取专业知识; 2. 提升沟通能力; 3. 增强应对能力。 There are two main themes in the analysis of NSSI adolescent parents' needs for improving their care ability: 1. Current difficulties of NSSI adolescent parents: ①.

Heavy mental and economic burden ②. Communication barriers and ineffective responses. 2.NSSI adolescent parents need to improve their care ability: ①. Access to professional knowledge; ②. Improve communication skills;③. Improve your coping skills.

结论 NSSI 青少年父母承受着沉重的负担且缺乏有效的应对策略,亟需在专业知识、沟通能力、应对方法方面得到提升,需关注其需求,提高父母的沟通能力以及应对 NSSI 的策略,以提升 NSSI 青少年的家庭支持能力。

关键词: NSSI; 青少年; 父母; 照护需求; 混合研究;

青少年非自杀性自伤行为的护理现状

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目的 近年来,青少年非自杀性自伤行为的发生率呈上升趋势,其行为的严重程度及危害性已引起广泛关注。为提高对青少年非自杀性自伤行为护理现状的认识,本文对青少年非自杀性自伤行为的护理现状进行综述,以期为今后进一步开展相关研究提供参考依据。

方法 1、心理支持和家庭支持

非自杀性自伤行为是青少年中最常见的心理健康问题之一,护理人员应根据非自杀性自伤行为的特点,从生理、心理和社会层面评估青少年非自杀性自伤行为的发生风险,制定相应的护理措施。护士应给予患者更多的情感支持,在帮助其疏导不良情绪的同时,鼓励其进行社交活动,帮助他们建立良好的人际关系。另外,护士应在患者治疗期间给予心理支持和心理辅导,以改善其不良情绪并降低再次出现自伤行为的可能性[2]。

对非自杀性自伤行为的青少年来说,家庭成员也是一个重要的支持系统。护士应为此类患者提供更多的有效情感支持和心理疏导,最大程度的帮助患者减轻其不良情绪。父母和家庭成员应该了解非自杀性自伤行为并给予关爱和鼓励,共同关注非自杀性自伤行为患者。

2、构建良好的护患关系

良好的护患关系是护理工作中的重要环节,护

士要认真倾听患者诉说,正确理解患者的情感体验。对患者所诉的问题,要耐心倾听,不要打断患者的诉说,使其感到自己被人尊重。鼓励和帮助他们参加有意义的活动,增加人际交往机会,建立良好人际关系。要仔细观察病情变化,如发现有自伤行为时应及时报告医生并协助其处理。

3、护理专业技术在青少年非自杀性自伤行为心理宣教中的应用

团体心理辅导是在团体的情境下进行的一种心理辅导形式,通过团体内人际交互作用,促使个体在交往中观察、学习、体验,认识自我,探索自我等,学习新的态度与行为方式,以促进良好的适应与发展的助人过程。青少年自伤行为的发生,通常有个体或群体干预,可以有效地控制个体或群体的行为。

结果 通过促进家庭成员之间的沟通和合作,帮助青少年建立良好的人际关系,使其积极配合治疗和护理工作。同时团体心理干预可让受助者在团体中感受到安全和支持,进而产生一种归属感和归属感。

结论 综上所述,青少年非自杀性自伤行为是一个亟待关注和解决的问题。通过加强研究、制定有效干预措施并改善护理现状,有望为青少年提供更好的支持和帮助,促进其身心健康发展。

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关键词: 青少年; 非自杀性自伤行为; 护理

某军队综合医院护士情绪衰竭现状及影响因素研究

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目的 情绪衰竭是指个体由于情感资源被过度消耗儿感到疲惫不堪、工作无助的负面心理状态。护士的情绪衰竭会降低护士的身心健康和工作质量。

工作场所压力如工作负荷是引发员工情绪衰竭的主要因素。依据内在动机理论,当人们从事自己选择的活动时,通常会产生更高的幸福感和满足感。本研究旨在探究军队医院护士情绪衰竭现状水平,不同特征护士情绪衰竭水平的差异,以及探索角色过载这一主观工作负担和职业妥协对其的影响,为护理管理工作提供参考依据。

方法 采用方便抽样法,于2024年5-6月以某军队综合医院507名护士为研究对象,采用一般资料调查表、情绪衰竭量表、职业妥协量表表和角色过载量表进行横断面调查。

结果 军队医院护士情绪衰竭得分(11.98 ± 7.95)分,其中180人得分高于临界值(15分),结果显示:不同性别、年龄、工作年限、职称、岗位、夜班数、工作后学历提升及个人职业规划情况的护士的情绪衰竭总分差异有统计学意义($P<0.05$)。军队医院护士职业妥协得分(31.48 ± 10.47)分,角色过载得分(16.03 ± 4.65)分;护士职业妥协、角色过载与情绪衰竭均呈正相关($r=0.499\sim 0.679, P<0.001$);多元线性回归分析结果显示:年龄、个人是否有明确职业规划、职业妥协和角色过载进入回归方程($P<0.001$),共解释总变异量的51.1%。

结论 本组研究对象中三分之一护士存在情绪衰竭,军队医院护士情绪衰竭水平与地方医院相当,均处于中等低下水平。随着年龄增长护士情绪衰竭水平逐渐降低,个人有明确职业规划的护士情绪衰竭程度较无规划护士低,护士主观感受到的工作负荷和职业妥协感对护士的情绪衰竭程度产生影响。护理管理者应更加关注年轻护士,做好护士职业规划的引导,多举措降低护士职业妥协水平和主观工作负担,以期持续降低护士情绪衰竭水平。

关键词:情绪衰竭;职业妥协;角色过载

1 例精神疾病患者住院期间外出检查外走行为分析与处置

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目的 分析精神疾病患者住院期间外出检查外走行为,并制定针对性地处置对策,提高精神科工作人员对精神疾病患者住院期间外出检查外走行为

的防范能力和规范处置。最大限度地降低或避免患者外走行为的发生。

方法 在临床中,发现1例酒精所致精神障碍患者外出检查时外走的病例。

患者男,46岁,因“饮酒20余年,多疑伴记忆力下降5月余”第1次入院,患者于20年前开始饮酒,喝醉后行为冲动,脾气暴躁,骂老婆孩子、动手打人,砸家里的东西,夜间睡眠差,入睡困难。现为了进一步治疗,遂于今日至我科门诊就诊,门诊拟诊“记忆下降查因:器质性精神障碍?”收入我科。

精神状况检查:神清,定向准,查及可疑幻听,有牵连观念,情绪不稳,焦虑紧张,醉酒后脾气暴躁,情感反应尚协调,有冲动伤人毁物行为。自知力不全。

事件经过及处置流程:2023-12-11,16时患者在护工人员陪护下外出检查时趁护工人员不注意擅自外走,根据查医院监控录像发现,患者独自乘坐门诊大厅入目的出租车离开医院,车牌号为桂Axxxx。已第一时间报告科室及医院卫勤医疗总值班室,到中山派出所报警、联系家属告知患者外走情况。通过公安协助及出租车司机提供信息,明确买者从医院打车到琅东客运站,得知患者有可能前往藏庙方向、后接患者家属电话告知患者已回家,在工作人员协同下去到患者家中,经与患者及家属积极沟通,患者及家属愿意回医院积极配合治疗,并将患者及家属一起接回医院。

结果 通过规范处置,患者及时找回,并形成住院期间外出检查规范流程。

结论 在分析精神疾病患者住院期间外出检查外走行为的基础上制定有针对性的防范摄施和处置规范,能有效降低患者外出检查期间外走不良事件发生率及处置的有效性减少住院患者因外走行为而引起的医疗纠纷,确保患者安全。

关键词:精神疾病 住院外走 预防措施

精神科病房如何做好危险品管理与防范分享

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目的 精神科护理质量管理中的重要组成部分,而病房安全管理主要内容是危险品的管理,下面分

享如何做好危险品管理与防范,从而提高精神科临床护士的工作质量,保证患者安全。

方法 从以下案例分享:某天凌晨,患者小李坐在床边,迟迟不睡觉,护士李某(工作2年)问她,你怎么不睡啊。她说等一会,李某护士说那你坐一会休息。患者小李点了下头,护士就巡视病房去了,巡视回来看见小李的左手腕处有划痕,及时通知医生处理。病史回顾:小李,男,12岁,入院时,情绪低落,交流无障碍,曾有自伤行为,自伤自杀量表评分10分,已作为重点看护。目前入院10天,配合治疗,睡眠改善,交流顺畅,没有发现异常情况,说有人控制自己大脑让自己自伤,于是摔坏了塑料喝水杯,拿塑料碎片划破左手腕部。原因分析:1.对小李的自伤自杀风险缺乏预见性。2.护士李某对小李的情绪变化没有及时疏导。3.夜班值班人员少,没有和同伴沟通患者的情况。4.护士李某工作经验不足,对患者的心理变化不能及时发现。精神疾病的特殊性,患者的行为控制能力较低,发生不良事件的比率高于普通病房,危险物品的管理不到位,导致不良事件时有发生。为保证患者的住院安全,危险物品的管理尤其重要。精神科危险物品汇总 1.易碎品:2.利器类:3.绳索类:4.药物类:5.易燃易爆类:6.金属类:7.饮品类。针对以上7类危险物品,精神科对危险物品进行管理和防范必须做到以下①各类危险品,严格管理。②建立台账,定点放置,做好记录。③医疗器械,要注意保护,防止丢失,用后清点数目放回原处。④患者入院时,仔细检查危险品,发现危险品,立即交给家属带回或登记保管。⑤住院期间,患者外出检查或会客后回病区时,注意检查危险物品,防止流入病房。⑦病房应每月进行安全检查,杜绝安全隐患。使用危险物品务慎重,在护理人员监管下使用。⑧外人来访,入病房后,要有护理人员陪同,任务完成后进行安全检查,确保安全。⑨患者活动范围,不能随意进入工作区域。⑩工作人员养成自觉关门的习惯,严格做到随走随关门。⑪座谈会时对患者进行危险物品的健康宣教,使患者知晓危险物品的危害性。

结果 精神科危险物品未进入病区,患者未发生自残自杀现象,患者住院安全得到提高。

结论 做好精神科安全管理,就能对患者安全得以保障。精神科的安全工作是事无巨细,管理上不放过任何一个细小的环节,就能杜绝或减少各种不安全因素的发生。

关键词:精神科;危险物品;管理与防范

如何改善精神科护士的职业压力分享

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目的 精神病患者易出现自伤自杀、冲动毁物现象,对各种治疗与护理极不配合。精神科护理人员大多时间直接与患者接触,容易受到患者言语及肢体的伤害。精神科护理人员在工作中,面对这种特殊的患者,要遭受暴力行为的攻击,还需时刻提高警惕,防止患者意外事件的发生,精神高度紧张。在多重因素的影响下,精神科护士严重不足,精神科护士的执业倦怠感也很明显,通过以下分享,精神科护士如何改善临床护士的心理压力。

方法 通过心理干预对策,看看如何改善护士的心理压力。1.改善工作环境,提高工资待遇,精神科采用封闭式管理模式,精神科本身起步较晚,在药物配置、发放及物资下收下送等方面也落后于其他机构及科室,无形增加护士人力成本。管理部门改善医院工作环境,完善配套的后勤管理系统,减轻护士工作量,还护士于患者。2.加强人性化管理,护士长对护理人员的管理与支持可以减轻他们的工作压力。因此,护士长要善于学习管理理论知识及技巧,护理部可以安排护士长参加各种培训,定期组织护士长经验交流会,鼓励护士长加强交流,分享个人经验。重点关注特殊人群、特殊时期护理人员的思想动态,尽可能提供帮助。医院可以设置“减压坊”或者采取小组心理减压的方式,缓解临床护理人员的心理压力。护理部每年可以选派一些优秀护理人员到外院进行参观学习,提升护理人员工作积极性。3.鼓励护理人员提高心理素质(1)医院层面:院内成立心理辅导专家团队,定期了解护理心理状态,进行心理培训和辅导,在护理人员受到各种伤害或遇到意外时间后,心理辅导专家第一时间对护理人员进行心理援助,必要时采取巴林特减压模式。(2)个人层面:护理人员学习心理学知识与技能,培养护理人员健全的人格,保持稳定的情绪及乐观的精神,必要时采取正念减压法,环节心理压力。4.建立良好的社会与家庭支持系统(1)医院层面:精神卫生知识的宣传,让更多的人了解并关注精神卫生工作。(2)家庭层面:鼓励精神科护理人员的家

人,为他们营造和谐的家庭氛围。特别是单独家庭,管理部门应督促家长与子女做好沟通,帮助他们解决生活和工作中的困惑。(3)同事层面:工作中大家要形成互助友爱的工作氛围,齐心协力处理好各项日常工作。

结果 通过以上干预对策,精神科护士心理压力有所改善。

结论 通过系统的干预,有助于精神科护士对职业的认同感,改善护士的职业倦怠,提升职业成就感。

关键词:如何改善;精神科护士;职业压力

甲状腺功能与青少年非自杀性自伤相关性的研究进展

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目的 非自杀性自伤(NSSI)是指个体故意伤害自己身体但无自杀意图的行为,这一行为在青少年中尤为常见,严重影响了青少年的身心健康和社交活动。近年来,甲状腺功能异常与NSSI之间的关系逐渐受到关注。本研究旨在归纳总结甲状腺功能与青少年NSSI行为之间相关性的研究进展。

方法 本文通过文献回顾的研究方法,整理分析了近年来关于甲状腺功能与青少年NSSI行为之间关系的相关临床或试验研究,并按甲状腺功能的指标分类进行文献汇总归纳,总结各项甲状腺功能指标与青少年NSSI行为之间相关性的研究进展。

结果 文献回顾显示,甲状腺功能异常与NSSI行为有显著的相关性。其中多数研究发现T₄、FT₄与青少年NSSI行为具有正相关性,T₃、FT₃以及FT₃/FT₄的比值水平与青少年NSSI行为具有负相关性,这可能与NSSI患者T₄到T₃的异常转换有关。而各项研究中TSH水平与青少年NSSI的关系结果不一,高TSH水平与低TSH水平均可见于青少年NSSI患者。甲状腺功能异常可能导致情绪调节障碍、认知功能及应激反应出现异常等,这些因素可能共同促进了NSSI行为的发生。此外,甲状腺激

素对青少年神经发育和成熟以及心理健康都具有重要作用,青少年处在青春期的特殊阶段,其甲状腺激素水平的变化可能与NSSI行为的出现有关。

结论 本研究结果提示,甲状腺功能异常可能是青少年NSSI行为的一个潜在风险因素。未来的研究需要进一步探索甲状腺功能与NSSI行为尤其是青少年NSSI行为之间的因果关系,并评估甲状腺功能相关指标水平作为青少年NSSI风险评估和干预的潜在生物标志物的可行性、敏感性及特异性。甲状腺功能的评估和管理对预防和治疗青少年NSSI行为具有重要意义,未来的研究应持续关注甲状腺功能对NSSI行为的影响,并开发针对青少年NSSI群体甲状腺功能异常的相关预警及干预治疗措施。

关键词:甲状腺功能;青少年;非自杀性自伤;研究进展

青少年自尊与非自杀性自伤的关系-疏离感的中介作用

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目的 探讨青少年疏离感在自尊和非自杀性自伤之间的中介作用,以期为青少年非自杀性自伤的防治提供理论基础和参考依据。

方法 选取南宁市某医院精神心理科门诊就诊的60例伴有非自杀性自伤行为的青少年为研究组,社会上招募与其性别、年龄、受教育年限与之相匹配的60例不伴有非自杀性自伤行为的青少年作为对照组,分别用青少年自我伤害问卷(adolescents self-harm scale)、自尊问卷(Self-esteem Scale)、青少年学生疏离感问卷(adolescent students'alienation scale, ASAS)进行测评。使用SPSS 22.0软件对数据进行Spearman相关分析。采用Process v3.5程序对疏离感在自尊与非自杀性自伤之间的中介效应进行分析,设置模型序号为4,采用偏差校正的非参数百分位Bootstrap法对中介效应进行检验。

结果 自尊和青少年非自杀性自伤呈显著负相关($r=-0.467, p<0.01$)、疏离感和青少年非自杀性自伤呈显著正相关($r=0.615, p<0.01$),自尊和疏离感呈显著负相关($r=-0.489, p<0.01$);疏离感在青少年自尊和非自杀性自伤之间起到完全中介作用($\beta=-$

1.6781, 95% CI: -3.1031~-0.7664)。

结论 疏离感在青少年自尊和非自杀性自伤之间起完全中介作用,自尊影响青少年非自杀性自伤,主要通过疏离感间接影响青少年非自杀性自伤。

关键词:非自杀性自伤;青少年;自尊;疏离感;中介效应

人工智能赋能通识课《医学心理学与健康生活心理学》的设计与思考——以“梦的解析”为例

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人工智能作为 21 世纪的新兴技术,为教育领域带来了深远影响。本文以通识课《医学心理学与健康生活》“梦的解析”为例,分析传统课堂中“梦的解析”教学设计和优劣,进而设计人工智能赋能对教学环节的优化过程,并对其展开了思考和讨论。

传统课堂中的“梦的解析”教学设计是基于弗洛伊德的理论,旨在揭示学生梦境背后的潜意识愿望和冲突,以达到心理治疗的效果。该设计将“梦的解析”作为课程的一部分,通过课堂引导和作业,促进学生对自己内心世界的理解和认知。然而,传统教学存在一些优劣势。优势方面,该设计有助于学生深入思考并理解自己的内心世界,提升他们对梦境和心理冲突的认知水平。通过授课教师的指导和评价,学生可以获得专业的心理建议,有助于缓解心理压力,提升心理健康水平。劣势方面,学生作业的批改需要大量时间和精力,教师的评价标准可能存在主观性,影响了评分的公正性和客观性。

人工智能可以优化教学设计。以“梦的解析”为例,在教学环节上,AI 不仅可以提升教学效率,还能实现个性化教学和学生作业的深度评价。AI 辅助教学可以提取学生作业的主要内容,并与学生进行互动。在这一过程中,AI 提供的内容评价可作为独立的体验模考,为对自我梦境感兴趣的人群提供专业的参考建议。在辅助功能上,AI 可实现的功能有通用功能、专用功能和拓展功能。通用功能包括对学生提交的作业进行批改评价,学生和教师之间进行信息传递和交流等;专用功能包括对教学内容和任务进行具体分析和评价并提供相关专业建议;拓

展功能则包括根据学生提交的作业和表现,对学生的学习和成长进行个性化引导和建议,帮助学生理解自己的梦境,认识自己的内心冲突和矛盾,以及处理心理压力的方法等。

心理学课程具有独特的社会学和医学双重背景,AI 赋能课程的设计需要考虑到具体时间、伦理问题和心理健康促进的挑战,以避免让学生产生过度依赖和心理负担。同时,AI 技术本身也需要不断完善和更新,以适应教学实践的需求。个体化的学习过程和心理健康促进也需要更加细致的考量和设计。因此,在 AI 赋能课程的实践过程中,需要综合考虑教学、伦理和心理健康的多重因素,更好地运用人工智能技术来促进心理学教育实践和学生心理健康的发展。

关键词:人工智能,高等教育,通识课,心理学

抑郁障碍青少年复学困难的思考

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目的 抑郁障碍青少年在症状控制后复学阶段,可能出现复学失败、抑郁复发等情况。本文深入讨论了这一阶段可能存在的困难并提出了相应建议。

结果 复学困难的社会因素包括学习压力、社交压力和环境压力。抑郁障碍青少年在学习过程中可能出现注意力不集中、学习能力下降等问题,导致学习压力增加,进而影响复学的难度。学校教师 and 同学对抑郁障碍的认知不足,可能导致对患者的不理解和不接受,影响其社交能力和交友动力以及复学过程中的心理状态和情绪波动。

复学困难的深层原因包括获得感、幸福感和安全感的缺失。抑郁障碍青少年更需要获得感作为学习的动力,但是反复出错、被批评等负面体验可能导致获得感下降,进而复学失败;其次,青少年处于成长阶段,需要得到他人和社会的认同和支持,但是成绩下降和社交问题可能导致幸福感的减少,进而影响学习和生活的体面和尊严;最后,抑郁障碍青少年可能在复学后面临转型问题,家庭和患者对于职业选择和发展的了解不足,可能导致安全感的缺失,进而影响学业的顺利进行。

因此,对于抑郁障碍青少年而言,应该家庭、学

校、医疗、社会等多方支持,重视他们的获得感、幸福感和安全感,提供支持和指导,帮助他们建立积极的学习态度和规划未来,顺利复学。为了提升获得感,各方应注重抑郁障碍青少年在复学前的准备工作。家庭应接纳患者的厌学、拒学情绪和行为,给予支持和缓冲空间。学校应评估患者学习能力和注意力,并逐渐适应学校作息。为了提升幸福感,各方应帮助患者增加自我认同。学校和社会应正视抑郁障碍青少年群体,建立对疾病的正确认识,并加强社会认同带来的幸福感。为了提升安全感,各方应加强对患者的学业规划和职业规划的支持,让患者和家庭清晰了解未来的职业和所需的学业储备。家庭应意识到休学是治疗的需要,支持患者进行职业探索。学校可以提供线上教学支持,帮助患者维持学业。

结论 通过以上建议,可以为抑郁障碍青少年复学困难问题提供一定的解决方案和帮助,促进他们顺利完成复学过程,减轻其复学困难,有助于改善社会对抑郁障碍的认识和理解,促进社会心理健康事业的发展。

关键词: 抑郁障碍,青少年,复学

肿瘤相关性抑郁的研究进展

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肿瘤相关性抑郁是指肿瘤诊断、治疗过程中出现情绪化,体验快乐的能力下降,失眠,精神运动迟钝,疲劳,无价值或内疚感,难以集中注意力,以及重复的自杀或死亡想法的疾病。现阶段恶性肿瘤已成为威胁人类健康的重要疾病,而肿瘤相关性抑郁在肿瘤患者中普遍存在,其中女性以及晚期癌症患者比例更高,病种上以乳腺癌占比最高。肿瘤相关性抑郁的发生在一定程度上影响着肿瘤患者的生存率。而且研究发现癌症患者照料者出现肿瘤以及抑郁的概率更高,以癌症患者的伴侣最易发生。目前肿瘤相关性抑郁的机制研究较少,主要围绕炎症-神经机制以及神经-免疫机制展开,诱发肿瘤相关性抑郁的原因则有诊断肿瘤时的心理应激以及缺乏社会支持等社会-心理因素以及肿瘤治疗产生的病理性质

因素等。临床上,肿瘤相关性抑郁的筛查与评估尚不完善,筛查以 PHQ-2 问卷推荐较多,评估主要以筛查出程度较重的抑郁为主,如情绪不良(情绪低落、悲伤或焦虑)、快感缺乏(丧失兴趣或快乐)、无价值感或过度内疚、专注力和决策能力受损、自杀意念和行为 5 个方面中出现 3 个或者患者出现自杀意念,可能提示肿瘤患者存在重度的肿瘤相关性抑郁,需转专科干预治疗。此外,肿瘤相关性抑郁的治疗推荐使用阶梯式、渐进式的管理模式,即先评估严重程度并予以相同等级的干预治疗措施,并提出在药物治疗前,非药物治疗手段应首先加以考虑。非药物治疗有健康教育、正念疗法、认知行为疗法、接纳和承诺治疗等方法,推荐程度较高的为正念疗法和认知行为疗法,但有研究表明接纳和承诺治疗可能更适合肿瘤相关性抑郁患者。药物治疗以传统抗焦虑、抑郁治疗为主,如 5-羟色胺类/去甲肾上腺素类抗抑郁药、苯二氮卓类、三环类和杂环类药物以及单胺氧化酶抑制剂等药物的应用,但需注意考虑与抗肿瘤药物之间的相互作用,避免出现不良反应,保证用药的安全性。此外,近几年传统医学在治疗肿瘤相关性抑郁方面也取得一定疗效。当前针对肿瘤相关性抑郁的研究越来越多,但现阶段仍存在临床样本量少、质量参差不齐等问题,肿瘤相关性抑郁仍有待进一步研究。

关键词: 抑郁,肿瘤,肿瘤相关性抑郁,研究进展

The Analysis of The Risk Factors and Prevention Measures of Nosocomial Infection in Psychiatric Patients under Different Management Mode

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Objective To study the difference in risk factors of nosocomial infection in psychiatric patients under the mode of containment management and non-containment management, and to develop targeted prevention

Methods The patients with nosocomial infection were selected in the Affiliated Brain Hospital of Guangzhou Medical University during the period of non-containment management from January 2016 to December 2018 and the period of containment management from January 2020 to November 2022. The data pertaining to patients with infection was retrospectively analyzed in our study, and the influencing factors of nosocomial infection were analyzed by univariate and multivariate Logistic regression models

Results Hospitalized patients who developed nosocomial infections during containment and non-containment management differed in terms of gender, psychiatric diagnosis, infection diagnosis, seasonality, fever occurrence, duration of antibiotic use, and the admission to ICU. Multivariate Logistic regression model showed that among patients with schizophrenia, depression and bipolar affective disorder who developed nosocomial infection, there was a binary logistic regression relationship between the occurrence of fever and whether to take containment management, the cause of infection, the number of days of antibiotic use, and the admission to ICU

Conclusion In psychiatric wards, there are obvious differences in the factors affecting nosocomial infection under the mode of containment management and non-containment management. Under the mode of containment management, Patients with nosocomial infections in psychiatric wards are primarily affected by the disease itself. Patients with depression and bipolar disorder are more susceptible to both the mode of containment management and nosocomial infection. Conversely, patients in psychiatric wards under non-containment management are more likely to be affected by seasonal and environmental factors. In order to prevent nosocomial infections and promote the physical and mental recovery of patients, targeted preventive measures should be implemented in psychiatric wards based on the hospital management mode and the type of mental illness

关键词: psychiatric, nosocomial infection, risk factors, public health events, hospital management mode

A 簇人格障碍患者的催眠暗示性与人格障碍功能风格之间的关联

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目的 人际关系高度敏感和不信任是 A 簇人格障碍(偏执型、分裂样、分裂型人格障碍)患者的主要特征,这可能是与他们极易受到来自环境的负面暗示有关。然而,催眠暗示性与这类患者人格障碍功能风格之间的确切关联还有待阐明。

方法 我们分别在杭州一家三甲医院和一所综合性高校中随机邀请了 36 名 A 簇人格障碍患者(患者组,男性 19 人,女性 17 人)和 115 名健康志愿者(对照组,男性 52 人,女性 63 人),完成 Parker 人格问卷(Parker Personality Measure)和斯坦福催眠暗示性量表 C 式(Stanford Hypnotic Susceptibility Scale: Form C)测试。分析方法如下:(1)分别采用 t 检验和 Mann-Whitney U 检验比较两组的人口学变量、Parker 人格问卷因子分、斯坦福催眠暗示性量表 C 式总分和各项目通过率;(2)采用多元方差分析和事后 Bonferroni 检验分析分组(患者组/对照组)和催眠水平(低/中/高)对人格障碍功能风格的主效应和交互作用;(3)分别采用皮尔逊相关和多元线性回归分析检验患者组中催眠项目通过率与 Parker 人格问卷因子分之间的相关关系和预测作用。

结果 (1)两组年龄、性别、受教育程度、既往催眠经历无显著差异。

(2)与对照组相比,患者组在 Parker 人格问卷的偏执型、分裂样、分裂型、边缘型、回避型和依赖型人格障碍功能风格上得分更高;在催眠暗示性总分和其中的挑战暗示、手下垂暗示、手臂僵硬暗示、梦境暗示和手臂固定暗示项目上通过率更高。

(3)在患者组中,梦境暗示负向预测了分裂样人格风格,幻听暗示负向预测了分裂型人格风格,蚊子幻觉正向预测了表演型和依赖型人格风格,手臂固定暗示负向预测了回避型人格风格。

结论 对他人感知方面暗示的不敏感性和对身体的高度控制加剧了 A 簇人格障碍患者的偏执态度

和人际回避倾向。这一发现有助于了解 A 簇人格障碍患者人际关系问题的原因，以进行针对性的暗示治疗。

关键词：A 簇人格障碍，催眠暗示性，偏执型，分裂样，分裂型

Practical Implications of ICD-11 Personality Disorder Classifications

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Abstract Personality disorders (PDs) are associated with an inferior quality of life, poor health, and premature mortality, leading to heavy clinical, familial, and societal burdens. The International Classification of Diseases-11 (ICD-11) makes a thorough, dramatic paradigm shift from the categorical to dimensional diagnosis of PD and expands the application into adolescence. We have reviewed the recent literature on practical implications, and severity and trait measures of ICD-11 defined PDs, by comparing with the alternative model of personality disorders in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), by mentioning the relevance in forensic and social concerns, and by referencing the developmental implication of life span, especially in adolescence. Study results strongly support the dimensional utility of ICD-11 PD diagnosis and application in adolescence which warrants early detection and intervention. ICD-11 permits the diagnosis of PDs at any age if a special trait persists over two years. By incorporating a continuum of severity, ranging from none to difficulty and from mild to severe, ICD-11 moves away from specific disorders, which may contribute to a reduction of stigma associated with PDs. More evidence-based research is needed along the ICD-11 PD application, such as its social relevance, measurement simplification, and longitudinal design of lifespan observation and treatment.

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关键词：Dimensional diagnosis; DSM-5; ICD-11; Personality disorder assessment; Personality disorder in adolescence.

团体沙盘游戏在精神心理科住院患者中减压的应用

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目的 团体沙盘游戏是一种多人共用一个沙盘进行的团体心理干预方式，本研究探讨其对精神心理科住院患者的减压作用。

方法 选取 2022 年 2 月份-6 月份的精神心理科住院患者，在团体沙盘游戏前进行广泛性焦虑自评量表 (GAD-7) 评估，在团体沙盘游戏前、后使用量表询问评估患者的压力分值 (0~10 赋值法，压力越大则分数越高)。团体沙盘游戏治疗干预 90 分钟，包括 4 个环节：(1) 治疗前交谈和成员间熟悉 (15 分钟)；2、创作沙盘和分享 (45 分钟)；3、治疗性对话与讨论 (20 分钟)；4 拍照留念，记录及整理 (10 分钟)。

结果 共纳入住院患者 59 例，GAD-7 结果显示轻度焦虑 16 例，中度焦虑 19 例，重度焦虑 12 例。82.5% 的患者在团体沙盘游戏后的压力分值下降，团体沙盘游戏后压力分值 (2.68±2.60) 显著低于团体沙盘游戏前 (4.71±3.06) (P<0.05)。其中 69% (11/16) 轻度焦虑者，79% (15/19) 中度焦虑者和 50% (6/12) 重度焦虑患者在团体沙盘游戏后得到改善。

结论 团体沙盘游戏可有效缓解精神心理专科住院患者的压力情绪，尤其伴有轻度和中度焦虑者，值得推广。

关键词：沙盘游戏；团体治疗；心理减压；焦虑
关键词：团体沙盘游戏；精神心理科；住院患者；减压

伴寄生虫病妄想的躯体形式障碍 1 例

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患者女, 55岁, 因“右上腹隐痛、口干、乏力10余天”入感染科住院, 诊断为肝功能不全, 因身上虫爬眠感、眠差请精神科会诊。

【病史补充】患者20年前无明显诱因出现多种躯体不适, 感觉血管里有虫爬感, 但不能说出其的形状和大小, 无法确定其来源, 称其可能是坐月子期间妇科炎症打青霉素的时候进入体内的, 在血管里单路线钻动, 钻到哪里就哪里不舒服, 有时钻到背部血管, 就会背痛, 钻到心脏就会出现胸闷心慌, 爬到肺部就会得肺炎, 爬到肚子就会出现腹痛, 爬到头部就会头晕头痛, 无皮肤瘙痒感。称虫子在身上就会“免疫力差, 容易感冒”, 全身乏力, 上述症状时好时坏, 感冒时加重, 影响情绪和工作。10年前开始出现失眠, 超过半小时才能入睡, 曾在当地医院及我院其他科室就诊, 诊断为“焦虑状态”、“植物神经功能紊乱”、“失眠”, 患者认为病情严重, 反复要求检查, 要求做冠脉介入手术取出虫子, 接受过中药、“芬必得”、“黛力新”、“天舒胶囊”治疗, 虫爬感可通过转移注意力及中药调理减轻, 其他疗法无明显疗效。

患者自幼体健, 产后容易感冒。性格中间性格, 文盲, 已婚, 育有1子, 家庭关系和睦, 目前为家庭主妇, 曾做过保洁工作, 家族中无精神疾病患者。

【体检】入院时右上腹轻微压痛、反跳痛, 住院后腹痛减轻, 余未见明显阳性体征, 全身皮肤无黄染, 皮肤无明显搔抓痕迹。

【精神检查】意识清, 定向全, 接触好, 问答切题, 存在寄生虫病妄想及多种体感不适, 存在抑郁及焦虑情绪, 反复就医, 入睡困难, 既往无持续性情感高涨体验, 无消极言行, 有部分自知力。

【其他检查】丙氨酸氨基转移酶558U/L, 肺炎支原体抗体弱阳性(+/-), 呼吸道合胞病毒抗体弱阳性(+/-)。甲状腺及颈部淋巴结超声: 双侧甲状腺结节性病灶: TI-RADS3类, 随访; 左侧颈部IV区可疑淋巴结。冠脉CTA: 左前降支少许肺钙化斑块伴轻微狭窄, CAD-RDS 1, 上腹部CT平扫、乙肝检测、甲胎蛋白、血尿粪常规等检查未见明显异常。汉密尔顿焦虑量表: 有较明显焦虑症状(22分)。汉密尔顿抑郁量表: 目前有些抑郁症状(23分)。

【诊断】躯体形式障碍、寄生虫病妄想

【治疗】予护肝、护胃、抗感染治疗以及艾司唑

仑、度洛西汀联合阿立哌唑治疗, 患者腹部不适、口干等躯体症状好转出院, 但仍有虫爬感, 建议患者出院后到我院精神科门诊就诊。

关键词: 躯体形式障碍, 内脏幻觉, 寄生虫病妄想

探讨慢性心力衰竭患者的认知功能损伤情况及其相关影响因素分析

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目的 探讨有氧运动及其联合认知行为治疗(CBT)对慢性心力衰竭(CHF)患者认知功能损伤的改善作用。

方法 使用蒙特利尔认知评估量表(MoCA)对江苏省荣军医院住院治疗及无锡市山北街道社区康复的CHF患者进行评估, 选取认知功能损伤的CHF患者90例, 根据各自需要完善强心、利尿、扩血管等常规临床抗心衰治疗, 随机分成有氧运动干预组、有氧运动联合CBT干预组及对照组, 每组30例。采用MoCA、汉密顿焦虑量表(HAMA)、汉密顿抑郁量表(HAMD)评价3组患者在有氧运动干预及其联合CBT干预3个月前后得分并进行比较, 同时比较3组患者左心室射血分数(LVEF)的变化。

结果 干预前, 有氧运动干预组和对照组、有氧运动联合CBT干预组和对照组、有氧运动干预组和有氧运动联合CBT干预组分别进行MoCA评分、HAMA评分、HAMD评分及LVEF比较, 差异均无统计学意义($P > 0.05$); 干预后有氧运动干预组及有氧运动联合CBT干预组MoCA评分、HAMA评分、HAMD评分及LVEF均优于对照组, 存在统计学差异($P < 0.05$), 有氧运动联合CBT干预组MoCA评分、HAMA评分、HAMD评分均优于有氧运动干预组, 有统计学差异($P < 0.05$)。

结论 有氧运动对CHF患者认知功能损伤具有明显的改善作用, 在其基础上联合CBT能够进一步促进认知功能的恢复, 全面提高患者生活质量。

关键词: 慢性心力衰竭; 认知功能损伤; 影响因素

血管紧张素转换酶抑制剂对慢性心力衰竭患者认知功能障碍的改善作用

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目的 探讨血管紧张素转换酶抑制剂(ACEI)对慢性心力衰竭(CHF)伴认知功能障碍患者认知功能的改善作用。

方法 选取江苏省荣军医院住院治疗及无锡市山北街道合并认知功能障碍的CHF患者60例,采用随机数表法将患者分为治疗组和对照组,各30例。对照组患者的治疗包括病因治疗、去除诱因、改善心力衰竭等传统疗法,治疗组在对照组基础上给予ACEI治疗。分别采用蒙特利尔认知评估量表(MoCA)、汉密顿焦虑量表(HAMA)和汉密顿抑郁量表(HAMD)分别评估患者的认知功能、焦虑和抑郁状况。采用SPSS 21.0统计软件分析数据。

结果 干预前,2组患者MoCA各项评分及总分比较,差异均无统计学意义($P > 0.05$)。干预后,与对照组相比,治疗组患者MoCA各项评分均有所增加,其中视空间及执行能力 $[(4.27 \pm 0.52) \text{ vs } (2.70 \pm 0.54) \text{ 分}]$ 和总分值 $[(24.70 \pm 1.09) \text{ vs } (22.23 \pm 1.43) \text{ 分}]$ 差异有统计学意义($P < 0.01$)。与干预前比较,治疗组干预后各项MoCA评分均增加,其中总分 $[(24.70 \pm 1.09) \text{ vs } (22.60 \pm 1.54) \text{ 分}]$ 和视空间及执行能力 $[(4.27 \pm 0.52) \text{ vs } (2.77 \pm 0.68) \text{ 分}]$ 差异有统计学意义($P < 0.05$)。干预前及干预后,2组患者间心功能、左室射血分数、焦虑、抑郁评分比较差异均无统计学意义($P > 0.05$);各组干预前后上述指标比较差异亦无统计学意义($P > 0.05$)。治疗期间2组患者心功能始终处于稳定状态,均未诱发急性心功能衰竭,药物治疗种类及方案也未调整。2组患者均未出现严重不良反应,亦未出现新的合并症。

结论 ACEI类药物能够改善CHF患者的认知功能,提高患者的执行能力。

关键词: 血管紧张素转换酶抑制剂;慢性心力衰竭;认知功能障碍

单相和双相抑郁障碍之间临床特征差异的Meta分析

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目的 综合评价单相抑郁症(Unipolar Depression, UD)和双相情感障碍抑郁发作(Bipolar depressive episode, BDE)之间的临床特征差异,为临床精准诊断提供依据。

结果 最终纳入15篇文献,其中中文文献10篇,英文文献5篇,UD患者3110例,BDE患者2043例为研究对象。Meta分析结果显示:两组之间具有统计学差异($P < 0.05$)的各临床特点以及OR值(95%CI)分别为:首次发病年龄6.41(2.60, 10.21),发病年龄 < 25 岁0.56(0.45, 0.71),性别(男)0.53(0.31, 0.92),发作无诱因4.24(2.80, 6.43)、每次抑郁发作间隔 < 3 个月0.57(0.45, 0.73),抑郁发作次数 > 3 次0.58(0.40, 0.84)、心境不稳定0.67(0.53, 0.85),精神病性症状0.43(0.29, 0.63),精神运动性迟滞0.59(0.46, 0.76),睡眠过多0.58(0.50, 0.68),食欲下降0.81(0.66, 0.99)。

结论 BDE多表现为首发年龄更年轻,多 < 25 岁,男性比例更高、抑郁发作更频繁,且多无发作诱因,临床特征为心境不稳定,多伴有精神病性症状、精神运动性迟滞,以及更多的非典型抑郁特征(如睡眠过多、食欲下降等);而UD患者发病多有诱因刺激,女性比例更高,且存在明显的生物节律紊乱。上述临床特征有助于早期识别单相和双抑郁障碍,继而降低误诊率,为临床提供有效服务。

关键词: 单相抑郁;双相抑郁发作;临床特征;荟萃分析

中国道家认知治疗的临床实践——有与无

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目的 优秀传统哲学思想可在心理治疗中应用,道家即为其中之一。道家倡导天人合一的思维方式、顺应自然的行为原则、返朴归真的价值取向、崇俭抑奢的生活信条、柔弱不争的处世之道。中国道家

认知治疗是在西方认知治疗的框架上,结合中国人的性格特征,把道家处世养生哲学用于调整焦虑抑郁强迫障碍等心理治疗。作者以个案实践来探讨该法疗效及相关的有无思考。

方法 用道家认知疗法进行 3-6 个月的干预。按照中国道家认知治疗的 ABCDE 技术,依次进行。A 为评估精神压力;B 为调查信念或价值系统;C 为分析心理冲突和应付方式;D 为道家哲学思想的导入;E 为评估和强化。其中 D 为关键步骤,让患者了解、认同、牢记并遵循 32 字保健诀即:利而不害,为而不争;少私寡欲,知足知止;知和居下,以柔胜刚;清静无为,顺其自然。每次治疗 50 分钟,每 1-2 周一次。单纯心理治疗或合并药物治疗。个案治疗前后进行 SCL-90, EPQ 等相关心理测评,并描述患者感悟体验。

结果 心理测评显示个案心理症状减轻,个人体验则人际和谐度增加。来访对“知足知止”“止境”“有无相生”等各有体悟。A.感觉“顺其自然”最有效,“不要太强求身体”,以前晚上钻研产品,效率不高,现作息也更规律,更符合自然。变化:不发不刷朋友圈、抖音,不看小红书,不打游戏。症状消除之后的空白,“无之以为用”再次的领悟。B. 利而不害:可以赚钱获益,共赢,不伤害他人。C. 有无相生:有为、无为相生,不刻意做什么,也不刻意不做什么;D. 止境:同辈竞争,自愿加班,甚至周末,文件反复修改,耗费太多,最后不愿再看,家庭关系受损,身心疲惫,于是止境,文件的时间,每天的工作时间。

结论 按照道家认知治疗的理论和技术,在心理治疗过程中找出影响患者行为和情绪背后的价值观,了解其生活事件与应对方式,根据道家处世养生原则调整认知方式,促成行动的改变,能够起到较好的治疗效果。有助于缓解症,平衡人生。特别是有无、有为无为对症状的理解,或达跳出的领悟

关键词: 中国道家认知治疗,强迫症,社交焦虑症,有无

The Chinese Version of The Self-Injurious Thoughts and Behaviors Interview-Revised (C-SITBI-R): Assessing NSSI and Suicidal Behaviors Among Adolescents in Clinical Settings

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Objective Self-injurious thoughts and behaviors (SITBs) are rising among youth, with significant prevalence in China post-COVID-19. Existing assessment tools often lack comprehensiveness. The revised Self-Injurious Thoughts and Behaviors Interview (SITBI-R) addresses these gaps but hasn't been adapted for Chinese adolescents. This study translated and validated the SITBI-R for use among Chinese adolescents in clinical settings to improve diagnosis and risk evaluation of non-suicidal self-injury (NSSI) and suicidal behaviors

Methods A total of 170 adolescents were recruited from two hospitals. The Chinese version of SITBI-R (C-SITBI-R), the MINI-International Neuropsychiatric Interview, the Revised Version of Adolescents Self-Harm Scale, the Chinese Version of Functional Assessment of Self-Mutilation, the Beck Scale for Suicide Ideation-Chinese Version, and NSSI and suicidal behavior disorder (SBD) diagnoses criteria from the DSM-5 were utilized. Data analysis included the Item-Content Validity Index, Universal Agreement Scale-Content Validity Index, Spearman's rank coefficient of correlation, Intraclass Correlation Coefficients, Cohen's Kappa and Fleiss' Kappa

Results The C-SITBI-R demonstrated perfect content validity (I-CVI=1.00, S-CVI/UA=1.00). The construct validity shows significant correlations to other validity measurement tools in terms of total scores compare and independent items. Test-retest reliability and interrater reliability were excellent. The C-SITBI-R showed high consistency with DSM-5 criteria for NSSI ($\kappa=1.00$) and SBD ($\kappa=0.86$), and for the current suicide risk in M.I.N.I. ($\kappa=0.94$)

Conclusion Overall, the C-SITBI-R exhibited excellent psychometric properties comparable to the original version. This study provides evidence supporting the reliable use of the C-SITBI-R in clinical settings

关键词: Self-injurious thoughts and behaviors, non-suicidal self-injury, suicidal behavior disorder, DSM-5 diagnoses criteria, Chinese adolescents, clinical

settings

Network Connectivity between Internet Addiction, Depression, and Insomnia in College Students

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Objective The COVID-19 pandemic has increased the prevalence of Internet addiction, insomnia, and depression, particularly among college student. This study aimed to investigate the complex inter-relationships among symptoms of Internet addiction, insomnia and depression in college students through network analysis

Methods This study was conducted in Guangzhou, China, from Jan 2023 to Mar 2024. Participants were recruited through consecutive sampling from Guangdong Mental Health Center and Guangdong Peizheng College. All participants completed the Internet Addiction Test (IAT), Insomnia Severity Index (ISI), and Patient Health Questionnaire (PHQ-9). Network analysis was employed to investigate the network structure, central symptoms, bridge symptoms, and network stability of these disturbances. All participants completed the Internet Addiction Test (IAT), Insomnia Severity Index (ISI), and Patient Health Questionnaire (PHQ-9). Network analysis was employed to explore the network structure, central symptoms, bridge symptoms, and network stability of these disturbances

Results A total of 1235 college students participated in this study. Depressive and insomnia symptoms were more central in the model compared to IAT symptoms. The most central nodes within the network were 'motor' (#PHQ8, strength = 1.418) and 'Do you feel depressed, moody, or nervous when you are offline, which goes away once you are back online?' (#IAT20, strength = 1.350). The least central node was 'Problems waking

up too early' (#ISI3, strength = 0.615). Several depressive symptoms (e.g., 'suicide', 'sleep', and 'guilty') acted as important bridging symptoms connecting internet addiction, depression and insomnia communities. The network stability of this model was high (CS=0.597)

Conclusion Depressive symptoms, particularly 'suicide', acted as important trans-diagnostic symptoms that connect different communities. These findings suggest that interventions targeting suicide and sleep issues may be effective in preventing or reducing symptoms of Internet addiction, depression, and insomnia

关键词: college student, depression, internet addiction, insomnia, network analysis

锌指蛋白 A20 在精神疾病中的研究进展

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目的 精神疾病是一组具有高发病率和高复发率的复杂疾病。随着研究的深入,其神经免疫机制逐渐成为研究的热点。锌指蛋白 A20 是一种多功能的胞质蛋白,在多种炎症疾病的发展中扮演重要的角色。近期研究发现, A20 通过神经免疫机制作用于精神疾病,调节脑部神经炎症,缓解精神症状。因此,本文将详细讨论 A20 的结构特征、生物学功能,以及其在精神疾病中的研究进展,旨在为精神疾病的发病机制提供新的视角,并为未来的治疗策略提供可能的靶点。

方法 本文通过 Pubmed、中国知网、万方数据知识服务平台、维普中文期刊服务平台和中国生物医学文献数据库查阅 A20 和精神疾病相关文献,时间不限,对搜索结果整理和归纳。

结果 A20 在抑郁症、双相情感障碍和精神分裂症等疾病中具有重要作用,可通过多种信号通路调控炎症反应,促进胶质细胞向炎症表型转变,同时在多种药物中发挥抗炎作用,增强机体免疫,改善精神症状。

结论 A20 具有抗神经炎症和神经保护作用。它作为抗炎蛋白,可多靶点抑制 NF- κ B 通路激活,保护细胞免受促炎因子诱导的细胞凋亡和炎症反应。在精神疾病中, A20 表达水平降低,与疾病严

重程度负相关。研究发现, A20 可调控精神疾病的炎症反应, 发挥神经保护作用。多种药物、中药成分和活性化合物可上调 A20 的表达, 在精神疾病中具有重要作用。

关键词: 锌指蛋白 A20, 精神疾病, NF- κ B, 神经免疫

护士心灵成长工作坊的初步构建与实践

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目的 探索护士心灵成长工作坊的建设、管理规范及运行模式, 并评价其实践效果。

方法 依托医院心理护士队伍, 以护理部、工会、基层党组织建设及身心融合模式的开展为助力, 成立护士心灵成长工作坊, 建立完善相应规章、制度、流程及保障机制, 围绕临床各层级护理人员开展心理评估、筛查、干预及心理科普系列服务。

结果 护士心灵成长工作坊成立于 2022 年 5 月, 2022 年 6 月—2023 年 6 月, 面向临床护理人员开展线上+线下心理评估与筛查 1609 人次, 个体心理治疗 23 人次, 团体心理治疗 38 次, 开展心理科普讲座 4 次, 心理护士咨询门诊坐诊人员由 2 人增加至 6 人, 培养家庭心理治疗师 5 人。全院护士季度满意度调查显示总体满意率由 91.3% 上升至 93.6%, 心理护理人才队伍专科化水平稳步提升, 课题论文等科研产出持续增加。工作坊成立后, 心理护士职业认同感各维度和总评分均高于成立前 ($P < 0.05$), 职业倦怠中情感衰竭评分低于成立前, 个人成就感维度评分高于成立前 ($P < 0.05$), 护理队伍焦虑、抑郁情绪检出率低于成立前 ($P < 0.05$), 但仍高于国家常模。

结论 护士心灵成长工作坊的建立, 有助于缓解临床护士焦虑抑郁情绪, 满足临床护士心理需求, 提升心理护士的职业认同感, 降低职业倦怠的发生, 为专科护理人才的培训与运用提供了更多思路。

关键词: 护士; 心灵成长工作坊; 构建与实践

综合医院精神科住院患者跌倒预防流程的优化和应用

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目的 综合医院精神科住院患者跌倒预防流程的优化和应用

方法 依托医院护理不良事件上报系统, 将 2022 年 1 月 1 日~12 月 30 日实施综合医院常规跌倒预防措施的精神卫生科住院患者作为对照组, 其总床日数为 11156 例; 2023 年 1 月 1 日~2023 年 12 月 31 日常规跌倒预防措施基础上精神卫生科住院患者跌倒预防方案的患者作为实验组, 其总床日数为 11024 例。实验组成立精神科跌倒预防管理小组, 回顾分析 2022 年我科住院患者跌倒不良事件, 结果显示: 跌倒多发生于 60 岁以上老年人, 并多发生在清晨和夜间, 患者如厕、上下床、走廊行走时。下肢功能障碍、精神障碍患者更容易发生跌倒。60% 的患者在有陪护情况下发生跌倒, 38% 跌倒风险评估非高危的患者发生跌倒。52% 跌倒患者受到不同程度的伤害。使用鱼骨图对跌倒原因进行分析, 根据二八定律, 得出改善重点是: 患者及家属依从性差、患者风险意识不足、护士风险评估不全面、患者高估自我能力。通过优化环境管理, 组织多部门联合行动; 针对精神科患者进行个性化的跌倒预防; 开展《跌倒风险评估》专项活动, 对跌倒高风险患者进行动态评估; 丰富宣教形式, 鼓励患者及家属主动参与式健康宣教方式等举措进行跌倒预防。比较两组患者住院期间跌倒发生率、跌倒伤害占比。

结果 对照组跌倒发生率 0.06/1000, 实验组跌倒发生率下降至 0.02/1000; 跌倒伤害占比下降至 18%。

结论 优化后的精神卫生科跌倒预防方案, 可有效降低精神科住院患者跌倒及跌倒伤害发生率, 使跌倒管理更为全面有效, 值得借鉴及推广。

关键词: 跌倒预防; 患者主动参与; 安全管理; 精神科住院患者; 综合医院

聚焦安全感的存在团体心理治疗的疗效观察

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目的 存在主义团体治疗(EGP)是一种起源于西方文明的心理治疗方法,旨在通过“死亡、自由、孤独、无意义”等主题找寻人生的意义,然而其对来访者的安全感提升作用仍未得到明确。该研究主要探究存在主义团体治疗对来访者安全感的疗效。

方法 共有 20 名质性心理障碍来访者被随机选取参与团体治疗,每周以小组形式提供治疗,持续 10 周。并在治疗前后通过量表对来访者的安全感进行检测,其他感兴趣的变量主要包括焦虑抑郁、失眠、简易应对方式、社会支持、死亡焦虑等方面。同时还通过对门诊对来访者半年及一年的心理状况及使用药物情况进行了随访。

结果 通过量化研究与质式研究相结合的方式,可以发现经过团体治疗后,来访者人际安全感($p<0.05$)有着显著的改善。焦虑抑郁、失眠、积极应对方式均($p<0.05$)有着明显改变。但是也可以发现来访者在死亡焦虑($p<0.05$)有所提升,社会支持、死亡态度等方面($p>0.05$)无明显改善。在 1 年的门诊随访中,有 11 名来访者(55%)在相继停药,余患者也均有不同程度降低药物使用量。质式研究则发现以团体凝聚力、希望重塑及利他主义等治疗因子在团体治疗中具有关键作用。

结论 EGP 能够显著提升来访者安全感,并改善心理健康水平。

关键词: 安全感,存在主义团体治疗,疗效,心理健康水平

焦点解决护理对中青年腹膜透析患者心理状态及生存质量的影响

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目的 研究焦点解决护理对中青年腹膜透析患者心理状态及生存质量的影响。

方法 将 2022 年 03 月~2023 年 03 月在我院肾内科住院的中青年腹膜透析患者 88 例作为研究对象,采用随机数字法分为对照组和观察组,两组各 44 例。对照组患者给予常规护理,观察组患者在常规基础上实施焦点解决模式护理。比较两组患者的肾脏病和透析相关生存质量(KDTA)、汉密尔顿焦

虑量表(HAMA)、汉密尔顿抑郁量表(HAMD)及实验室生化指标。

结果 实施焦点解决护理模式干预后,观察组患者 KDTA 总分、疾病负担、认知功能、社交质量、睡眠、社会支持、医护鼓励及患者满意度 8 个项目中评分均高于对照组,具有统计学意义($P<0.05$);HAMA、HAMD 评分显著低于对照组($P<0.05$);白蛋白及血红蛋白指标均较对照组升高,差异具有统计学意义($P<0.05$);Ca、P、Scr、BUN 指标较对照组均降低,差异具有统计学意义($P<0.05$);观察组患者 Kt/V 指数更加优于对照组,差异具有统计学意义($P<0.05$)。

结论 在中青年腹膜透析患者中应用焦点解决护理模式,通过积极引导,发挥患者自身潜能,有效应对疾病状态,缓解患者负性情绪,使患者透析依从性更好,从而提升生存质量。

关键词: 中青年;腹膜透析;焦点解决护理;焦虑抑郁;生存质量

反刍思维与青少年拒学行为的关系

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目的 全世界近五分之一的青少年存在拒学行为,对青少年心理健康及其家庭、社会发展造成持续不良影响,应该对拒学行为及其影响因素进行早期识别与干预。本研究探讨反刍思维与拒学行为的关系,为拒学行为的干预提供参考。

方法 选取 2023 年 11 月至 2024 年 3 月在山西医科大学第一医院精神卫生科就诊的、符合拒学行为标准的 25 例青少年为研究对象,年龄 12-18 岁($M=15.2$; $SD=1.78$)。使用反刍反应量表(RRS)、修订版拒学评估量表(SRAS-R)、儿童拒绝上学行为问卷(CSRBQ)、贝克抑郁量表(BDI-II)和儿童焦虑相关情绪障碍筛查(SCARED)对青少年的反刍思维、拒学情况和焦虑抑郁情绪进行评定。

结果 结果表明,拒学青少年的 RRS 评分与拒学程度(CSRBQ 评分)呈正相关($r=0.426$, $p<0.05$),与拒学行为功能(SRAS-R)中的回避消极负面情绪和引起重要他人关注呈正相关($r=0.454$, 0.452 , $p<0.05$);RRS 评分与青少年焦虑(SCARED)、抑郁

(BDI-II) 情绪评分呈正相关 ($r=0.637$ 、 0.657 , p 均 <0.01); 拒学程度与焦虑、抑郁情绪的相关关系未达到统计学意义。

结论 反刍思维与青少年拒学行为相关, 可能是诱发拒学行为主要的认知原因。

关键词: 青少年拒学行为; 反刍思维; 焦虑; 抑郁

浅谈心身科门诊人文关怀在医院高质量发展中的应用

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目的 门诊是患者就诊的第一站, 门诊医疗和护理服务质量直接影响医院的社会形象和经济效益。心身医学科门诊患者多数自知力不完整而拒绝治疗、情绪低落、易激惹、冲动行为、伤人等特点。因此, 推行改善医疗服务, 建立以患者需求为导向的心身医学科门诊服务模式将有效提高患者的诊疗效率, 提升患者就医体验尤为重要。探讨心身医学科门诊人文关怀在医院高质量发展中的应用, 以及其研究进展, 为针对性改善患者就诊体验工作提供依据。

方法 ①研究对象: 心身医学科门诊就诊患者, 其具体定义为: 在心身医学科医院挂号就诊且诊断为精神类疾病的患者。②研究内容: a. 人文关怀在心身医学科门诊护理服务中的实践。b. 人文关怀在心身医学科门诊对于医院高质量发展做出的贡献。③研究方法: 通过文献评阅法对国内外研究进行文献检索和再次分析。

结果 ①就诊患者就医体验良好, 满意度显著上升。②医务人员通过人文关怀更加有归属感。③医疗服务中实施人文关怀能显著提高就医人员健康水平。

结论 对心身医学科门诊患者实施基于人文关怀理念, 能够减轻患者其内心焦虑、抑郁情绪, 提高患者满意度持续落实改善医疗服务工作要求, 通过优化门诊候诊时间的服务流程、加强一站式门诊服务建设、提升门诊质量服务能力等系列工作, 推进门诊服务模式优化创新, 探索构建公立医院高质量发展门诊管理新体系, 为建立健全现代医院门诊管理制度提供实践经验。

关键词: 人文关怀; 心身医学科门诊; 满意度; 医院高质量发展

老年肺结节合并焦虑患者肺功能变化特征

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目的 探究老年肺结节合并焦虑患者肺功能变化特征

方法 收集 2022 年 1 月至 2024 年 4 月在南京医科大学附属脑科医院 (胸科院区) 住院拟手术治疗的符合肺部结节诊治中国专家共识中肺结节诊断标准的老年肺结节患者 524 例。抑郁自评量表 (SDS) 评估患者抑郁严重程度, 焦虑自评量表 (SAS) 评估患者焦虑严重程度, 其中 SAS 标准分 ≥ 50 分的为焦虑组, 共 319 例; SAS 标准分 < 50 分的为非焦虑组, 共 205 例。受试患者完成 SAS 量表的当天进行肺功能检测, 比较两组的肺功能指标, 用力呼气容积 (FVC)、第一秒用力呼气容积 (FEV1)、第一秒用力呼气容积/用力呼气容积 (FEV1/FVC)。

结果 两组患者的性别、年龄、肺结节部位、肺结节大小、肺结节个数及发现病程无统计学差异 ($p > 0.05$)。焦虑组的 SDS 标准分显著高于非焦虑组 (50.52 ± 3.65 : 32.74 ± 8.22 ; $p < 0.01$); 焦虑组 FVC 百分比值显著低于非焦虑组 (88.73 ± 18.21 : 95.06 ± 24.27 ; $p < 0.01$); 焦虑组与非焦虑组 FEV1 百分比值及 FEV1/FVC 值无统计学差异 ($p > 0.05$)。

结论 老年肺结节合并焦虑患者 FVC 下降。

关键词: 肺结节, 肺功能, 焦虑, 用力呼气容积

轻度认知障碍 APOE E4 等位基因携带者记忆损害特征的 Meta 分析

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目的 探讨轻度认知障碍 (Mild cognitive impairment, MCI) 患者载脂蛋白 E (Apolipoprotein E, APOE) ϵ 4 等位基因携带者与非携带者记忆损害的特征。

方法 检索了 Pubmed、Embase、Cochrane Library、中国知网、重庆维普、万方数据库、中国生物医学文献服务系统, 收集从建库至 2023 年 6 月公开发表的关于 MCI 患者 APOE ϵ 4 等位基因与认知行为的研究, 并由 2 名研究员独立筛选文献、提取资料并评价纳入研究的偏倚风险后, 采用 RevMan 5.3 软件对记忆认知损害特征进行 Meta 分析来评价不同分类变量的结果概况。

结果 共纳入 14 篇符合条件的文献纳入 Meta 分析。Meta 分析结果显示, APOE ϵ 4 等位基因携带者记忆损害更严重 (SMD=-0.33, 95%CI:-0.49~-0.18, $P<0.01$), 亚组分析结果显示, 长延迟回忆 (SMD=-0.42, 95%CI:-0.7~-0.15, $P<0.01$); 瞬时记忆 (SMD=-0.39, 95%CI:-0.77~-0.02, $P=0.04$); 视觉学习与记忆 (SMD=-0.31, 95%CI:-0.55~-0.07, $P=0.01$); 工作记忆 (SMD=-0.04, 95%CI:-0.32~0.24, $P=0.8$)。

结论 轻度认知障碍患者 APOE ϵ 4 等位基因携带者的认知功能比非携带者存在更大的损害, 未来针对 APOE4 出发的针对性干预可能是有效防止认知进行损害的靶点之一。

关键词: 轻度认知障碍; APOE ϵ 4 等位基因; 记忆损害; Meta 分析

青少年抑郁共病网络成瘾的现状与机制的研究进展

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目的 网络成瘾和抑郁症这两种心理健康问题在青少年群体中均有较高的患病率, 且两者的共病现象也比较常见。本文旨在描述青少年网络成瘾与抑郁症的共病的情况, 归纳共病的核心心理机制与神经生理机制。

方法 采用文献综合分析方法, 通过在 PubMed 数据库、Web of Science、CNKI 等数据库中以 “Internet Addiction”、“Problematic Internet Use”、“Pathological Internet Use”、“adolescent”、“depressive

disorder”、“网络成瘾”、“青少年抑郁症”等关键词进行检索, 梳理和整合已有文献的研究成果并进行归纳总结。

结果 在网络成瘾的青少年群体中抑郁症的累计患病率为 32%; 青少年抑郁症样本中, 网络成瘾的患病率为 27.2%, 抑郁症是网络成瘾的诱发因素, 网络成瘾者也更容易罹患抑郁症。

究其原因, 共病的心理机制可以用社交迁移理论、补偿理论、自我疗愈理论与共同因素理论解释。在神经生理方面, 奖赏功能紊乱和执行功能损伤被认为是共病的核心病理机制。

结论 在青少年群体中, 网络成瘾与抑郁症之间存在复杂的双向关系, 现有的研究结果并不能得出一个统一的结论。通过对共病原因的归纳总结, 本综述指出未来研究应更深入地探索共病群体相较于单独一种疾病群体的特点, 以提供更有针对性的干预措施。

关键词: 青少年; 网络成瘾; 抑郁症; 心理机制; 奖赏功能; 抑制控制

聚焦解决模式在临床护理中的研究进展

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摘要 本文通过介绍聚焦解决模式 (solution-focused brief therapy, SFBT) 的概念、起源和发展以及理论基础、评估工具、干预实践的步骤、原则和使用技术等, 概括聚焦解决模式在国内外精神病患者、癌症患者以及慢性疾病患者中的干预现状和效果。聚焦解决模式是在积极心理学发展起来的一种新型干预模式, 是一种充分尊重和相信个体潜能的临床心理干预模式, 于 20 世纪 70 年代末提出, 最初是在以家庭治疗为中心的基础上逐渐发展起来的, 主要应用于治疗心理学和临床心理咨询中, 与 Bowen 的家庭系统理论及 A.T.Beck 的认知行为疗法共称为北美家庭治疗师最常引用的 3 种方法之一。该模式由 McAllister 引入护理领域, 于 2007 年被引入中国。随着其干预体系和内容的丰富以及充分尊重患者并激发患者主动参与自我管理的优势而受到

临床护理工作者的广泛认可及应用。近年来已在国际临床护理领域受到越来越多的关注。该模式下的干预将重点放在更关注个体的优势资源,更关注系统的综合作用,干预的方法较易学习和掌握。尤其是在各种慢性疾病患者的干预中。本文为研究者基于我国基本卫生服务实际情况,贴合我国社会文化环境,开发构建适合我国护理领域的聚焦解决模式的临床护理干预方案,为医护人员实施临床护理心理干预提供参考。

关键词: 聚焦解决,护理,负性情绪,心理护理,综述

Bedtime Music Therapy for College Students with Insomnia: A Randomized Assessor-blinded Controlled Trial

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Objective Insomnia, a prevalent sleep disorder in contemporary society, frequently coexists with other mental health conditions such as depression, schizophrenia, and obsessive-compulsive disorder. Sleep disorders can compromise daytime functioning and overall quality of life. While music has been explored as an adjunct therapy for insomnia, its efficacy in improving insomnia among students remains unclear

Methods Seventy-five students, aged between 18 and 30 years with an average age of 20.97 years (SD: 1.92), presenting sleep issues were randomly allocated to one of three groups: the classical music group, the jazz music group, and the control group, each with 25 participants. Participants in the classical and jazz music group were instructed to listen to classical or jazz music for a minimum of 30 minutes preceding bedtime. This was paired with deep breathing and relaxation techniques, practiced two consecutive nights per week from 23:00 to 01:00 over a five-week intervention period. Conversely, participants in the control group were only directed to follow the deep breathing and relaxation techniques before sleep on two consecutive nights weekly. Insomnia severity with the Insomnia Severity

Index (ISI), sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI), depressive symptoms with the Beck Depression Inventory-II (BDI-II), and anxiety symptoms with the Self-rating Anxiety Scale (SAS). Measurements were taken at baseline, after the second week of intervention, at the intervention's conclusion (five weeks), and two months post-intervention (follow-up)

Results 1. The music groups showed a significant difference in insomnia severity compared with the control group after five weeks of intervention ($p < 0.001$). 2. Music groups exhibited significant enhancements in sleep quality relative to the control group after a five-week intervention ($p < 0.001$). 3. Regarding mood enhancement, music groups showed significant improvements in depression and anxiety symptoms compared to the baseline after the five-week intervention ($p < 0.05$). Notably, the control group also displayed improvements in these symptoms post-intervention

Conclusion 1. Integrating music into a consistent bedtime routine ameliorates sleep quality and insomnia severity. However, no specific genre of music emerged as the superior choice for pre-sleep listening. 2. While music can considerably enhance mood indicators like depression and anxiety, techniques such as deep breathing and mindfulness also contribute positively

关键词: Bedtime music therapy, college students, insomnia

经颅磁刺激治疗抑郁症不同症状群的研究进展

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目的 抑郁症是常见精神疾病之一,严重影响患者的日常工作及生活。近年来,经颅磁刺激技术(transcranial magnetic stimulation, TMS)在抑郁症的临床应用中显示出了一定的疗效。本文以不同症状为切入点,系统回顾了TMS治疗抑郁症不同症状群的临床研究,以期TMS技术对抑郁症的个体化治疗提供科学借鉴意义。

方法 采用文献综合分析方法,通过在 PubMed 数据库、Web of Science、CNKI 等数据库中以“Transcranial Magnetic Stimulation”、“depressive disorder”等关键词进行检索,梳理和整合已有文献的研究成果并进行归纳总结。

结果 各种 TMS 方案已在 MDD 中进行了大量临床实验,其中,高频 rTMS 应用于 DLPFC 区对 MDD 患者的抑郁症状具有明显的抗抑郁疗效,视觉 V1 区及眶额叶等区域可能同样为治疗 MDD 的潜在靶点。TBS 及 dTMS 作为 rTMS 衍生而来的技术,近年来,越来越多的研究也已经肯定了其抗抑郁疗效,加速 TBS 刺激方案更是为短程抗抑郁治疗提供了可能,dTMS 的其他线圈可能同样是干预抑郁症的潜在方案。TMS 对 DLPFC 的刺激不仅能改善 MDD 患者的抑郁症状,还能缓解伴随的焦虑症状。在认知功能方面,rTMS 显示出改善 MDD 患者执行功能、注意力和记忆力等受损维度的潜力。TBS 和 dTMS 对 MDD 患者的认知功能也显示出初步的改善效果,而 TBS 是否作为一种更优的认知功能增强技术,仍需进一步的研究来验证。综合来看,针对 MDD 患者的躯体症状,rTMS 无论是单独使用还是与其他治疗方式联合,均被认为是一种有效的治疗方法。rTMS 已经被证明可以减少 MDD 患者的自杀意念和行为,但其起效较慢,可能需要数周甚至数月才能显著见效。相比之下,iTBS 及其加速形式 aiTBS 在抗自杀方面表现出更为突出的效果,并且起效速度更快。

结论 TMS 技术在干预 MDD 不同症状群中展现出了潜力,通过利用 TMS 技术来调节不同症状群相关脑环路的皮质兴奋性与神经可塑性,可以开发出更多有效的个体化干预策略,与其他治疗模式的联合也可能导致更为全面和有效的治疗方案。

关键词: 经颅磁刺激,抑郁症,情感症状,认知功能,躯体症状,行为症状

舍曲林致凝血障碍(消化道出血、尿路出血)一例【罕见病例】

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目的 探讨舍曲林在抑郁障碍治疗中对凝血功

能的影响

方法 案例报告 一例 77 岁老年女性,因抑郁障碍服用舍曲林 50mg qd,4 天后加至 50mg bid,入院时血常规、尿常规、凝血未见异常,7 天后出现血便量约 100ml,血尿;立即复查凝血:凝血酶原时间测定 $\geq 120S$,国际标准化比值 ≥ 5 ;尿常规:尿潜血+3,红细胞(RBC-J)4016;粪便隐血试验(OB)阳性,泌尿系超声、胃镜、肠镜未见明显异常。立即停用舍曲林,予以输注血浆纠正凝血、补充维生素 K1,2 天后未再有血便、血尿,复查凝血 凝血酶原时间测定 15.30S,国际标准化比值 1.240。1 月后、2 月后、3 月后的随访未再出现血便和血尿、凝血正常。

结果 本例患者因抑郁障碍单药服用舍曲林,服药前辅助检查未见明显异常,口服舍曲林后抑郁症状好转,但同时出现凝血功能障碍,血便、血尿,排除相关因素及停用舍曲林后,凝血功能逐渐恢复正常,血便、血尿停止,可能这与舍曲林能将华法林从血浆蛋白中置换出来,增加凝血酶原时间这一因素有关。因此其凝血障碍(消化道出血、尿路出血)与舍曲林可能存在因果关系。

结论 舍曲林作为一种常见抗抑郁药物,其不良反应发生率低,凝血障碍发生率更少见,甚至罕见,但仍会发生。因此我们精神科医生要充分了解舍曲林的点,适时监测,减少罕见的不良反应的发生。

关键词: 舍曲林 凝血障碍 出血

Experience and Attitude of Psychiatric Nurses in Caring for Patients with Repeated Non-suicidal Self-injury in China: A Qualitative Study

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Background The incidence of non-suicidal self-injury (NSSI) is high and often occurs repeatedly. Psychiatric nurses play a vital role in the care and treatment of NSSI patients, as they have the most frequent contact with patients. The attitude of nurses has a direct affect on the quality of care they provide to patients. Negative

care experiences and attitudes of patient aversion on behalf of nurses may delay the observation and treatment of changes in the patient's condition, leading to irreversible risks. Although cross-sectional studies have investigated the attitudes of medical staff toward NSSI patients, quantitative research results cannot comprehensively reflect the emotional experiences and complex psychological changes of the study subjects. A few studies have focused on the psychiatric nurses' care experiences and attitude toward patients with repeated NSSI

Objective This study aimed to explore psychiatric nurses' care experiences and attitudes toward patients during repeated NSSI

Methods A qualitative descriptive design using individual, semi-structured interviews. Using purposive sampling, 18 psychiatric nurses were recruited from a mental health center in Chengdu, China. Semi-structured interviews were conducted and audio-recorded. Audio-recordings were transcribed verbatim and analyzed using thematic analysis

Results Four themes emerged from the analysis: psychiatric nurses' care experience, perceptions, care attitude and coping style toward repeated NSSI patients. Psychiatric nurses have experienced negative care experiences and severe career burnout during the patient's repeated NSSI. Nurses' attitudes toward NSSI patients changed during repeated NSSI, from understanding to indifference to anger and resentment. At the same time, it was found that nurses' coping style with NSSI patients could be divided into three stages, namely, active coping, neglect and perfunctory, and criticism and punishment

Conclusion The findings have implications for health care systems regarding interventions to improve nurses' care experience and attitude toward repeated NSSI patients. These findings suggest that enhancing nurses' understanding of NSSI, establishing standardized emergency response and intervention programs, guiding positive professional values and responsibility, and improving nurses' caring attitudes can promote the early detection and timely intervention of NSSI.

关键词: Non-suicidal self-injury, repeated NSSI, psychiatric nurses, care experience, care attitude, qualitative study

青少年精神障碍患者服药感受调查分析

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目的 改善青少年精神障碍患者服药主观感受不良体验,从而提高服药依存性及用药治疗效果。

方法 使用用药满意度问卷(MSQ)评估37名青少年精神障碍患者对服用抗精神病药物的感受。量表得分使用SPSS 25.0统计软件进行分析。本文采用描述统计分析。

结果 评估对象的服药感受,其中,服药感觉满意例数共21人(56.8%);服药感觉既无不满意也不觉满意共11人(29.7%);服药感觉不满意共5人(13.5%)。

结论 青少年精神障碍是指某种不正常、不合理的行为引发的功能障碍综合征,对青少年的正常生活与学习、社会功能造成严重影响。有研究显示,目前临床使用的抗精神病药、抗抑郁药、抗焦虑药及催眠药等多都缺少药品说明书的应用许可,其表述多为“目前缺少足够临床经验”或“儿童和青少年的安全性和有效性尚未进行评价”,因此临床对于儿童精神疾病的药物治疗一定程度上缺少法律上的支持。本文作者调查中,服药感觉既无不满意也不觉满意共11人(29.7%);服药感觉不满意共5人(13.5%)。可见,有约50%青少年精神障碍患者对服药治疗感受不佳。因此,改善青少年精神障碍患者服药主观感受不良体验,从而提高服药依存性及用药治疗效果,也是目前治疗青少年精神障碍领域亟待解决的问题。

关键词: 青少年,精神障碍,服药,主观感受

Biochemical Metabolism in Youth Major Depressive Disorder Patients with Or without Cognitive Impairments

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Background Major depressive disorder (MDD) and insomnia have been linked to deficiencies in cognitive performance. However, the underlying mechanism of cognitive impairment in MDD patients with cognitive impairment (CI) remains unclear. This study aimed to explore the effects of IS in patients with MDD by comparing cognitive function indices among those with IS, those without Cognitive impairment (CI), and healthy controls (HCs). In addition, we assessed whether the dysfunction of central nervous system (CNS) is one of the important pathophysiologic mechanisms of CI in patients with MDD by comparing the biochemical metabolism ratios in the anterior cingulate cortex (ACC) and putamen

Method 39 MDD with CI, 66 MDD without CI, and 68 demographically matched HCs underwent the MATRICS Consensus Cognitive Battery (MCCB) assessment and proton magnetic resonance spectroscopy (1H-MRS). MCCB cognitive scores and biochemical metabolism in ACC and putamen were assessed and compared between groups

Results Compared to the HCs group, CI and NCI groups scored significantly lower in seven MCCB cognitive domains (speed of processing, attention/vigilance, working memory, verbal learning, visual learning, reasoning problem solving and social cognition). CI group also showed significantly lower score in seven MCCB cognitive domains than NCI group. And CI group showed higher Cho/Cr ratio in the right ACC vs. NCI group and HCs. CI group and NCI group both showed higher Cho/Cr ratio in the left putamen vs. HCs

Conclusion Patients with comorbidity of MDD with CI may exhibit more serious MCCB cognitive impairments than those without CI in all seven MCCB cognitive domains. Also, dysfunction of ACC may underlie the neural substrate of cognitive impairment in MDD with CI. Dysfunction of putamen may underlie the common neural substrate of MDD with or without cognitive impairment

关键词: Anterior cingulate cortex; Putamen; Cognitive impairment; Major depressive disorder; Proton magnetic resonance spectroscopy.

精神障碍患者静脉血栓栓塞的风险因素研究进展

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目的 静脉血栓栓塞(venous thromboembolism, VTE)是一种静脉回流障碍疾病,主要包括深静脉血栓(deep venous thrombosis, DVT)和肺血栓栓塞(pulmonary embolism, PE)。VTE具有高发病率、高漏诊误诊率、高死亡率和疾病负担重等特点。研究显示精神障碍患者有较高的VTE风险,住院的精神障碍患者中VTE的发生率约为43/10000人年,是普通人群VTE发病率的1.5至6倍,约4%的精神障碍患者意外猝死与PE相关。VTE的临床表现多不典型,精神症状影响医生对患者躯体状况的判断,不配合的精神障碍患者不能充分描述其躯体不适等,这些因素使得VTE在精神专科医院易被漏诊。早期识别VTE可以提高精神科临床诊疗的安全性。

方法 本文主要就VTE在精神障碍患者中常见的风险因素进行综述,为精神科医师早期识别VTE提供一定的线索指导。

结果 精神障碍患者疾病本身的特点、共病、不同精神类药物、物理治疗、身体约束等因素都会增加精神障碍患者VTE的风险。

结论 VTE临床症状不典型,导致诊疗延迟,增加猝死风险。当精神障碍患者存在多种VTE的风险因素时,医务人员应尽早安排患者完善静脉血管彩超和/或肺动脉CT血管造影(CT pulmonary angiography, CTPA),早期识别VTE,减少漏诊率,以确保临床诊疗安全。

关键词: 精神障碍; 风险因素; 静脉血栓栓塞; 肺血栓栓塞

早期识别与分析大学生中精神病风险综合征的临床特征

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目的 预防精神分裂症发生过程中,应早期识

别以及干预前驱期,可将疾病转化率下降,可将临床结局改善。本研究旨在早期识别大学生中的精神病风险综合征,并对其临床特征进行深入分析。

方法 本研究分为两个阶段进行。在第一阶段,我们使用包含 16 条目的前驱期问卷对 600 名大学生进行筛查。第二阶段则采用精神病风险综合征结构化访谈(使用诊断测评工具 SIPS)进行进一步评估。为此,我们随机选择了 90 名前驱期问卷结果为阴性的大学生和 90 名结果为阳性的大学生。对于符合精神病风险综合征(根据 SIPS)诊断标准的个体,我们还使用了简明国际神经精神访谈来评估其可能存在的共病情况。

结果 在我们的样本中,精神病风险综合征的检出率为 15.00%。与其他症状相比,轻微阳性症状更为普遍,尤其是知觉异常/幻觉和异常思维内容。在诊断为精神病风险综合征的学生中,有 63.33% (57/90)的学生目前或既往共病至少 1 种精神障碍,其中最为常见的是特定恐惧症和抑郁障碍。

结论 临床应对大学生中精神病风险综合征演变过程、特征等情况进行纵向分析,可以针对大学生进行符合伦理规范早期干预,将预防模式探索,这一措施意义重大。此外,这类学生中,共病抑郁障碍和焦虑障碍的现象相当常见,这为我们提供了关于预防和早期干预策略的重要线索。

关键词: 大学生;精神病风险综合征;早期识别;临床特征;

双相障碍缓解期患者内观认知疗法干预研究

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目的 双相障碍(Bipolar Disorder, BD)患者即使在缓解期,仍存在社会功能缺陷和认知功能障碍,并且由于其服药依从性较差,使其有较高的复发率和再住院率,这些因素导致了 BD 患者治疗成本的增加和生活质量的降低。因此,本研究旨在探究内观认知疗法(Naikan Cognitive Therapy, NCT)对 BD 缓解期患者服药依从性、社会功能以及认知功能的干预效果,为 NCT 作为辅助治疗应用到 BD 缓解期患者上提供数据支持和临床依据。

方法 将 2023 年 1 月至 2024 年 1 月于天津市

安定医院住院的 BD 患者当中,符合入排标准的 70 名患者纳入本研究,并采用随机方法分成 NCT 组和对照组,两组各 35 名;NCT 组和对照组分给予持续 4 周的 NCT 干预和健康教育。两组在干预前后采用药物依从性量表(Medication Adherence Rating Scale, MARS)、社会功能缺陷量表(Social Disability Screening Schedule, SDSS)、重复性成套神经心理状态测验(Repeatable Battery For the Assessment of Neuropsychological Status, Rbans)、stroops 色词测验等进行相关指标的评估和测量。通过比较干预前后 NCT 组和对照组各指标的得分,探究 NCT 对 BD 的干预效果。

结果 (1)NCT 组和对照组在一般人口学资料和疾病相关信息方面无显著差异($P>0.05$)。(2)两组在干预后,SDSS 得分均较干预前有所降低($P<0.05$),但 NCT 组的减分更加明显,两组差异具有统计学意义($P<0.05$)。(3)NCT 组和对照组的 MARS 总分和各因子评分,在干预前差异不显著,干预结束后,均显著高于对照组($P<0.05$)。(4)通过对 NCT 组和对照组在干预前后 Rbans 各领域和 stroops 色词测验测评结果比较显示,NCT 组和对照组在即时记忆、延迟记忆、视觉空间能力等方面前后得分没有差异($P>0.05$),而 NCT 组干预后在语言功能、执行功能、注意力方面得分的提高显著高于对照组($P<0.05$)。

结论 内观认知疗法能够提高双相障碍缓解期患者服药依从性,减少其社会功能缺陷,改善其社会功能,并且还可以改善语言功能、执行功能、注意力等方面认知功能缺陷,因此在临床中,可以应用作为双相障碍患者的辅助治疗。

关键词: 内观认知疗法,双相障碍,社会功能,服药依从性,认知功能

双相障碍躁狂发作期认知功能研究进展

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双相障碍(bipolar disorder, BD)是一类既有躁狂发作或轻躁狂发作,又有抑郁发作的常见精神障碍,其复发率和致残率高,病程迁延。认知功能损伤是双相情感障碍的核心症状之一,认知功能损伤会导

致患者的日常生活能力受损和生活质量下降。因此, 认知功能恢复已成为当前临床治疗的新靶点和新目标。既往多项研究表明双相障碍患者在躁狂发作期、抑郁发作期和缓解期都存在不同程度的认知功能损伤。因此, 更好的理解双相障碍患者不同情绪状态下的认知功能尤为重要。本文综述了双相障碍患者躁狂作期认知功能损伤的特点、认知功能的影响因素以及治疗对认知功能的影响。双相情感障碍躁狂发作患者的神经认知功能和社会认知功能均存在显著的缺陷。神经认知功能损伤主要体现为持续性思维和持续注意受损、冲动应答、决策制定受损、计算概率判断力差、难以控制的冒险行为、语言记忆损害、视觉记忆损害、工作记忆损害。社会认知障碍主要体现在心理理论和情绪认知方面, 社会认知障碍会导致深刻而持久的人际、社交和工作能力受损。既往躁狂发作的次数、病程、发病年龄、住院次数和治疗方案都会对认知功能产生影响。本文对上述内容进行综述, 以期深入了解双相障碍躁狂发作患者的认知功能, 将认知评估贯穿于治疗始终, 为其制定更有效的预防及治疗方案, 为帮助其进一步提高生活质量和社会功能提供理论基础。

关键词: 双相障碍,躁狂发作,认知功能

首发青少年抑郁症患者自杀意念的静息态脑电研究

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目的 本研究旨在探讨静息态脑电相关指标与青少年抑郁症患者自杀意念的关系, 探究其作为青少年抑郁症自杀风险预警的生物标志物的可能性。

方法 本研究共纳入 99 名 12-17 岁的青少年研究对象, 包括 47 例伴自杀意念的青少年抑郁症患者 (SI 组)、26 名不伴自杀意念的青少年抑郁症患者 (noSI 组) 及 26 名青少年健康对照 (HC 组)。收集所有研究对象的社会人口学资料, 并在入组时使用汉密尔顿抑郁量表 (HAMD-17)、9 项患者健康问卷抑郁量表 (PHQ-9) 评估研究对象的抑郁症状, 使用哥伦比亚自杀严重度评估量表 (C-SSRS) 来评估患者过去一个月的自杀意念。对所有患者采集 64 导的静息态脑电, 并将脑电结果进行微状态和功率谱密

度的分析。

结果 本课题通过脑电微状态分析方法, 发现伴自杀意念的青少年抑郁症组相比于不伴自杀意念的病例组微状态 B 发生频率和覆盖范围更低, 也更难从微状态 D 转换至 B。同时, 与健康对照组相比, 伴自杀意念的青少年抑郁症组微状态 A 的发生频率更低。不同微状态间的转换概率是非随机的, 伴或不伴自杀意念的青少年抑郁组与微状态 C 有关的转换概率与健康对照组相比具有更明显的差异。通过功率谱密度分析方法发现伴自杀意念的青少年抑郁组相比健康对照在 δ 频段的右侧颞叶、枕叶; θ 频段的额区、中央区、顶区、枕区; β 频段的额区、枕区的脑电活动强度减弱。

结论 伴自杀意念的抑郁症青少年有独特的神经电生理特征, 脑电微状态和脑电功率谱密度分析方法可作为潜在的青少年抑郁症自杀风险监测的重要工具。

关键词: 青少年, 抑郁症, 脑电, 自杀意念

天麻多糖在精神疾病中的神经调节作用及应用前景

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目的 精神疾病是一类在各种环境因素影响下, 大脑神经功能失调, 导致认知、情感、意志和行为等精神活动异常且病因未明的疾病。随着疾病发病率的不断上升, 又无明显减缓疾病进展的有效药物, 这严重影响了患者的心身健康和生活质量。天麻多糖是天麻主要有效成分之一, 随着植物多糖的深入研究, 天麻多糖的活性及药理作用逐渐被发掘出来, 并且在抑郁症的神经调节中发挥着显著作用。本文对天麻多糖的生物活性, 及其在抑郁症中的神经调节作用机制和潜在应用价值进行综述, 为抑郁症的机制研究提供新方向, 为天麻多糖在抑郁症的预防和治疗中的活性研究提供参考。

方法 本文从天麻多糖的结构和分类、天麻多糖的生物活性 (包括抗炎、抗氧化应激、抗凋亡) 及神经调节作用机制出发, 对天麻多糖对精神疾病的保护作用进行综述, 为寻找精神疾病的新药开发和治疗方式提供思路。

结果 天麻多糖作为天麻中重要的活性成分,在中枢神经系统中具有广泛的神经调节作用,比如免疫修饰、延缓衰老、抗炎、抗氧化等。目前已有研究表面天麻乙醇提取物、天麻水提取物、天麻素、等均具有抗抑郁作用,可通过特有的神经调节功能发挥神经保护活性进而改善神经元损伤和认知障碍,在神经精神疾病的研究中表现出明显的活性作用。

结论 天麻多糖的神经调节作用并不是某个单独的生物活性在起作用,而是表现出所有活性相互促进共同作用的结果。对天麻多糖有效的结构成分以及神经精神疾病方面的活性潜力进行深入的药理学研究,能为精神疾病的药理作用机制研究提供新方向。

关键词:天麻多糖;抑郁症;神经调节

凯斯勒心理疾患量表(K10)在中国医务人员中的信效度研究

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目的 对中国医务人员样本中凯斯勒心理疾患量表(Kessler 10 Psychological Distress Scale, K10)的因素结构进行探索性与验证性分析,并对其信效度进行检验。

方法 通过方便抽样的方法在线收集中国医务人员的K10数据(N=8602),总样本用于K10的内部一致性信度检验,将总样本分为两份,样本1(n=4301)用于探索性因素分析,样本2(n=4301)用于验证性因素分析和量表的内部一致性信度检验。

结果 通过探索性因素分析和碎石图,提取出抑郁、焦虑2个因素,可累计解释总方差的75.91%;通过验证性因素分析,支持K10的2因素结构,具有良好的结构效度($\chi^2=1495.921$, $df=34$, $\chi^2/df=43.998$, $GFI=0.939$)且优于单因素结构($\chi^2=2100.157$, $df=35$, $\chi^2/df=60.004$, $GFI=0.908$),量表的内部一致性信度 α 系数为0.952。

结论 本研究探索并验证了K10在中国医务人员

的样本中具有抑郁、焦虑的2个因素,且有良好的内部一致性信度和结构效度,可以用于测量中国医务人员的心理疾患风险状况、抑郁症状、焦虑症状。

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关键词:中国医务人员,心理疾患,抑郁症状,焦虑症状

一线医护人员工作场所的支持与感知压力和职业倦怠的关系研究 ——基于有调节的中介模型

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目的 探讨重大公共卫生事件结束后一线医护人员工作场所的支持与感知压力和职业倦怠的关系,以及自我同情和复原力在其中的作用,为制定相应干预措施提供理论依据。

方法 2024年1月2日至2024年1月10日对中国西部某市的484名医护人员进行线上问卷调查。采用Harman单因素分析检验有无共同方法偏差。SPSS PROCESS插件分析复原力的中介作用和自我同情的调节作用。

结果 共同方法偏差影响本研究结果的可能性低。男性参与者的复原力水平较女性更高;工作年限3-6年以及精神科的参与者相较于其他组别感知压力水平较低;年龄 ≤ 35 岁、工作性质为医生以及非精神科的医护人员职业倦怠水平较高。高水平的工作场所的支持与较低水平的感知压力和职业倦怠相关,复原力显著介导了这一联系。自我同情调节了工作场所的支持对感知压力和职业倦怠间接影响的前半部分。自我同情水平过低可能会让工作场所的支持对复原力的正向效应消失,与中等水平自我同情的医护人员相比,高水平自我同情的医护人员其工作场所的支持对复原力的正向影响更强。

结论 在重大公共卫生事件后,一线医护人员高水平的复原力和自我同情可能会让他们更好的利

用工作场所的支持来减轻感知压力和职业倦怠的影响。

关键词：医护人员,工作场所的支持,感知压力,职业倦怠,自我同情,复原力

综合医院精神科开放式病区患者管理策略思考

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目的 在精神科治疗领域,综合医院的开放式病房管理一直是一个具有挑战性的话题。开放式病房在增加患者自由度的同时,也带来了更多的管理难题。本文旨在通过住院患者、陪护者和探视者的管理探讨综合医院精神科开放式病房管理策略。

结论 住院患者的管理需要考虑开放式病房的特点和住院患者的特点。相比于专科医院和精神科封闭病房,综合医院的精神科开放式病房给患者更多的自主空间,这让一些有病耻感的患者更容易接受住院治疗。开放式病房的住院患者病情相对较轻,部分患者在药物和心理治疗的帮助下,病情相对稳定,已经进入到了在监护人陪同下的适应社会的治疗阶段。然而,不可忽视的是,一些患者在刚入院时存在自伤自杀、藏药外跑等风险,因此应注意动态评估患者病情和其处于开放式病房的安全性。开放式病房旨在让患者更好地适应并回归社会,在执行过程中,应向患者宣教规定的细则,如请假制度、外出时间要求、外出地点限制等,强调虽然开放式病房允许外出,但首先是住院治疗,应遵从规定,对不能遵从者予以限制外出,以确保安全和疗效。

陪护者的管理需要明确陪护的目的和职责,确保病区和外出陪护的有效实施。陪护者可以是患者的家属或护工,主要目的是协助患者在病房的生活,并起到一定的监督责任,如及时制止患者的藏药行为并告知医务人员,帮助记录和反馈患者的症状等。陪护是为了保证患者安全,帮助患者配合治疗,从而尽快控制病情,好转出院。通常要求陪护者不离开患者,即尽量避免患者在病房而陪护者在楼道等其他地方的情况,以防止患者脱离陪护者视线。外出陪护时,陪护者应服从病房的管理安排,尤其是在开放式病房陪同患者外出时,完成监护职责,确

保患者安全,并及时反馈患者在外出社会适应阶段的表现,便于整体规划治疗方案。

探视者的管理需要明确探视的目的、探视人员的选择和病区探视的规范。探视主要指非陪同人员对患者的探望,包括护工陪护时的家属探视和家属陪护时的其他家属探视。其主要目的是从家庭的角度,与医务人员联动,共同帮助患者改善病情,尽早达到出院目的。探视人员以患者家属为主,经主管医师同意可放宽至关系密切、交流有助于病情恢复的非亲属。探视人员的进入应征求患者的意见,如患者对某位家属有被害妄想或害怕情绪,应经医务人员评估后决定是否适合探视。探视人员即使有医学或心理学背景,也不应在病区内为患者提供“治疗”,以避免对患者造成伤害。病区探视应对时间做出严格限定,确保病区的治疗优先完成,且不能打扰到其他患者。探视者应遵从病区的规定,接受物品检查,不协助患者携带违禁品进入病区。如酒等成瘾性物质应严格禁止,常用药品应与主管医师沟通,尽量由医务人员保存发放,而非交给患者本人。

关键词:综合医院;精神科;开放式病房;病房管理

儿童青少年前额叶任务态脑功能成像特征的回顾性队列研究:公共卫生事件对心理健康的影响

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目的 本研究旨在探索公共卫生事件对儿童青少年前额叶血氧动力反应的影响及其心理健康相关性,为相关心理健康领域的干预策略效果提供评价依据。

方法 采用回顾性队列研究方法,以横跨新型冠状病毒肺炎(COVID-19)疫情前后,自2019-2023年5年间在北京清华大学玉泉医院8-17岁青少年的脑功能检查队列数据为对象,结合疫情后的约85%的有效跟踪随访和心理评测结果及2020-2022年公共卫生数据,评估儿童青少年在疫情前、期间和疫情后前额叶血氧动力反应的群体特征。该特征通过临床上使用的近红外脑功能成像系统(fNIRS)

进行采集,采集区域为前额叶的45通道。所采用的任务范式为言语流畅任务范式(VFT),其中包含4段类别举例(蔬菜、水果、四条腿动物和家用电器),任务总时长共240秒。本研究重点观察4段子任务所有通道的加权平均脑功能活化水平暨含氧血红蛋白激活水平,并对不同年龄(8-12岁/13-17岁),不同临床症状(有无情绪障碍)分组进行亚组分析。

结果 最终共纳入283例儿童青少年个体,研究发现13-17岁年龄组的含氧血红蛋白激活水平疫情后较之前有明显下降(2019:0.183,2020:-0.079,单位mmol/mmHg·mm·s),其中可观察到前额叶背外侧右侧,额中回存在激活损伤,该损伤在疫情进入第3年后逐渐恢复正常(-0.005)。

结论 研究表明青少年在重大公共卫生事件下存在着前额叶血氧动力激活程度下降,尤以负责情感及语言的部分激活显著降低,需要长时间的恢复。结合心理评测结果,间接证明公共卫生事件对青少年情绪及认知功能的负面影响是持续的。

关键词: 关键词:突发公共卫生事件,儿童青少年心理健康,队列研究,近红外脑功能成像

综合医院精神科开放式病房青少年活动设置的思考

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目的 在综合医院的精神科开放式病房中,青少年的活动设置对其精神康复和心理健康有重要影响。本文将探讨如何通过科学合理的活动设置,有效支持青少年的心理健康和社会适应。

结论 青少年处于生长发育的快速阶段,逐渐开始独立思考。其长大成人、拥有独立性的强烈渴望与其阅历潜、经历少、敏感脆弱、经济依赖直接产生矛盾,导致其希望家庭满足其欲望但不要过多干涉其行为的现实问题。同时,青少年的可塑性大,情绪不稳定。青少年正处于教育阶段,社会背景单一。情绪障碍常对完成学业产生负面影响,尤其是当出现缺勤甚至休学时,会给青少年恢复社会功能带来严重压力,出现厌学、拒学、恐学等心理特点。促进青少年心理健康的方法主要包括发展良好的自我意

识,心理健康教育,客观评价自己,保持稳定情绪,增强抗逆力,提高自我价值感,学会自我负责。掌握人际沟通技巧,与家庭改善隔阂、增强理解和互动。

在青少年治疗活动的设置上,研究表明,重复经颅磁刺激、光照治疗、生物反馈治疗等物理治疗方法适用于青少年患者群体。实践过程中发现,在最初的治疗阶段,青少年对治疗的实施过程充满了好奇,也有对新事物的些许恐惧。在实施治疗前,应向青少年讲解操作的具体过程和可能出现的感受,在满足好奇的同时,消除恐惧,增加治疗的依从性。另外,常规团体心理治疗应固定、有计划的开展,以满足其对于稳定的需求,内容上开展灵活多样的、有竞争性或游戏特征的治疗,例如舞动治疗、游戏治疗、音乐治疗、绘画治疗、诗歌治疗、戏剧治疗等丰富的治疗主题。还可以设计人际团体治疗,以提高患者的人际交往能力。当然,家庭治疗是非常有必要的,不仅帮助家庭更好的协助青少年治疗疾病,也帮助家庭重新审视家庭的困境和难题,以及解决问题的方法和策略。

在青少年娱乐活动的设置方面,青少年具有不喜欢老师或家长约束,喜欢同龄人集群的特点,治疗之余,应鼓励青少年间的游戏与交流,为其提供适当的娱乐设施。共同参与游戏、完成任务,建立新的社群友谊。鼓励患者父母参与患者的治疗,共同学习,调节与子女的关系,增加家庭成员之间有效理解。建立24小时陪住制度,帮助青少年与其父母建立亲近且具有陪伴性质的新的关系。治疗的最终目的是回归社会,青少年应更多地接触自然,体验自然。应鼓励监护人在外出时间带领青少年进行室外活动,让阳光与爱共同治愈。

关键词: 青少年心理健康;物理治疗;团体心理治疗;家庭治疗;娱乐活动设置

青少年非自杀性自伤行为的研究现状

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目的 非自杀性自伤行为是指个体在没有自杀意图的情况下,故意对自己身体进行的一系列伤害行为。非自杀性自伤行为是一种复杂的行为,其与

自杀未遂、自杀行为不同,大部分的目的是在发泄缓解情绪或惩罚自己。近些年来,自伤行为在全球范围内整体呈上升趋势,特别是在青少年群体中越来越普遍,这可能与青少年正经历生理和心理的发展与过度阶段有关。有研究表明,非自杀性自伤行为是自杀行为的独立危险因素,不仅给青少年个体带来严重的身心健康问题,而且也给家庭和社会带来了巨大的负担。本文旨在研究青少年非自杀性自伤行为,以阐述其流行病现状及潜在影响因素之间的关系。

方法 使用中国知网和 PubMed 等国内外数据库进行系统检索,并使用了以下术语“青少年、非自杀性自伤、流行率、影响因素”。对符合条件的文献整理分类,并对相关研究进行归纳总结。

结果 青少年非自杀性自伤行为的总体患病率正逐步增长,主要集中在中学这一阶段,而在不同国家及地区之间也存在相应的差异。其潜在影响因素如人口学因素、个人因素、精神障碍、负性环境因素等与非自杀性自伤行为存在一定相关性。

结论 非自杀性自伤行为正逐步成为一个严重的公共卫生问题,引起了各界的广泛关注与担忧。一些研究发现,人口学因素、个人因素、精神障碍、负性环境因素等可以影响青少年非自杀性自伤行为的发生,或是更严重的自杀行为。应针对青少年不同的潜在影响因素制定个体化的治疗与干预策略。

关键词:非自杀性自伤,青少年,影响因素,现状

日间病房模式下 DBT 对青少年 NSSI 的疗效研究

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目的 非自杀性自伤(NSSI)行为目前已成为世界范围内重要的精神卫生问题,除了药物治疗外,国际上主要以心理治疗为主,辩证行为治疗(DBT)具有最多的支持证据。日间病房的治疗模式因其时间灵活性和经济性,在国外已经发展较成熟。本文通过引进日间病房模式,探讨了在该模式下 DBT 技能培训作为青少年 NSSI 患者高自杀风险的辅助干预的临床有效性。旨在提出治疗青少年 NSSI 的新治疗模式,为发展我国本土化的 DBT 日间病房提供参考。

方法 在重庆医科大学附属大学城医院心理卫生中心招募 50 名青少年 NSSI 患者被分配到 2 周的 DBT 组 ($n=25$),和单纯药物组 ($n=25$)。对照组给予常规精神科 SSRI 药物治疗 2 周;实验组在此基础上实施 DBT 方案干预 2 周。主要结局指标是非自杀性自伤(non-suicidal self-injury, NSSI)发作的严重程度。在第 0 周和第 2 周(即干预组的前、后测)运用于丽霞(2013)修订的青少年自我伤害行为问卷进行评估。采用 t 检验进行统计学分析。

结果 两组治疗前自我伤害严重程度评分差异均无统计学意义 ($p>0.05$)。治疗后, DBT 组 (18.16 ± 3.06)的自伤程度评分显著降低 ($t=5.928, p<0.001$)。单纯药物组 (2.00 ± 1.12)的自伤评分无显著差异 ($p>0.05$)。

结论 日间病房模式下的 DBT 有助于改善青少年 NSSI 患者自伤情况。这种简化干预是一种可行的选择,可能是治疗与 NSSI 急性期相关的高危行为的有用辅助干预。

关键词:日间病房;非自杀性自伤;辩证行为疗法;青少年

精神心理科护理中团体治疗的效果评价与探索

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目的 本研究主要目的在于评估和探索团体治疗在精神心理科护理中的效果,比较传统护理模式与团体治疗模式在患者治疗响应和心理健康恢复方面的差异,提供更加有效的护理策略以促进精神患者的康复过程。

方法 本研究采用随机对照试验设计,分为对照组和观察组两部分。对照组患者接受传统护理模式,包括基本生理和心理需求的照顾、定期的药物管理、个体化的心理咨询以及日常健康和病情监测。观察组患者则接受团体治疗与护理模式,包括团体心理治疗、社交技能训练、支持性团体会议以及定期的团体动力学评估。

结果 研究结果显示,在观察组中,团体治疗显著提高了患者的社交技能和心理适应能力。借助团体互动,患者在社交参与和情绪管理方面表现出

更好的进步,相比之下,对照组患者在此类方面的提升较为有限。此外,观察组患者在治疗后的心理健康总评分上也有更为显著的提高。

结论 团体治疗在精神心理科护理中具有显著的优势,特别是在提升患者的社交能力和心理健康方面。借助团体互动,患者可以在安全和支持的环境中学习和练习新的社交技能,这对于患者的长期康复和社会功能恢复至关重要。鉴于此,团体治疗应被视为精神健康护理中的一个重要组成部分,对于提高治疗效果和患者满意度具有重要意义。

关键词:精神心理科;护理;团体治疗;效果;评价

应用沟通技巧促进患者治疗依从性的精神心理科护理研究

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目的 本研究主要目的在于探讨应用沟通技巧在精神心理科护理中促进患者治疗依从性的有效性。借助比较传统护理模式和沟通技巧应用护理模式,本研究分析了沟通技巧在提高患者治疗依从性方面的具体效果。

方法 本研究采用随机对照试验的方法,共纳入精神心理科的患者 200 名,随机分为对照组和观察组,每组 100 人。对照组:接受传统护理模式,基础生理和心理需求的照顾;定期的药物管理;个体化的心理咨询;日常健康和病情监测。观察组:接受沟通技巧应用与护理模式,应用动机访谈技术、情感倾听和反馈技巧;沟通技巧训练包括非语言沟通和开放式问题的使用;定期评估患者对治疗计划的理解和接受程度。

结果 研究显示,观察组患者在治疗依从性方面表现明显优于对照组。观察组中,患者对治疗计划的接受度提高,药物依从性增加,定期随访中表现出更高的积极性和满意度。数据表明,观察组的治疗依从性提高了 30%,与对照组相比有统计学上的显著差异 ($P<0.05$)。

结论 应用沟通技巧在精神心理科护理中显著提高了患者的治疗依从性。有效的沟通不仅增强了患者对治疗计划的理解和接受,还增强了患者的自

主管理能力和对护理过程的积极参与。研究结果强调了在精神心理科护理实践中加强沟通技巧培训的重要性,为提高患者治疗效果提供了有力的策略和证据。

关键词:沟通技巧;治疗依从性;精神心理科;护理

从中医“伏邪致病”理论探讨阿尔茨海默病的发病与治疗

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目的 阿尔茨海默病(AD)是一种隐匿发病的慢性中枢神经变性疾病,主要表现为记忆力进行性减退,对外界和自我的认知能力严重不足,最终导致认知、语言、执行功能障碍,以及人格和行为的改变、自理能力丧失等。西医认为 AD 是由神经系统病变、血管硬化、遗传等多种因素造成的,但治疗方法有限。中医作为补充替代医学,对 AD 的治疗有极大的辅助作用,具有毒副作用小、多靶点、多通路等优势。本文结合 AD 隐匿起病的特点,从“伏邪”致病探讨 AD 的发病与治疗,以期加深对 AD 的认识,为中医临床防治 AD 提供参考。

结果 中医对 AD 的认识历史悠久,早在《黄帝内经》中就有“善忘”症状的表述,这为中医认识呆病奠定了基础。中医将 AD 归属于“呆病”、“健忘”、“善忘”、“不慧”、“癡证”、“郁证”等范畴。目前,中医主流思想认为 AD 与心脾两虚、肾精亏虚导致的气血不足、痰浊毒瘀阻于脑窍有很大关系,与“伏邪”有着紧密联系。伏邪理论起源于《素问·生气通天论篇》中的“冬伤于寒,春必温病”。吴又可在《瘟疫论》中进一步提出“邪伏膜原”病机。伏邪指的是藏伏于体内而不立即发病的病邪,具有藏匿日久、反复发作、迁延难愈、耗散正气的特点,分为潜伏期和发作期。

伏邪与 AD 的发病体现在以下方面。一为肾精亏虚为伏邪藏匿之机,脑髓由肾精所化生,肾精亏虚可导致脑髓机能下降,进而引发 AD。二为藏而后发为伏邪致病之象。AD 发病前表现较为隐匿,存在轻度认知损害(MCI)阶段。MCI 患者的症状类似

于伏邪之伏而未发阶段。AD 的发生发展与伏邪侵袭后藏于机体，与正气抗衡，逐渐击退正气的过程相类似，符合伏邪的致病特点。

基于伏邪治疗 AD 有以下三个方面。一以调和阴阳为指导原则。AD 是在肾之阴阳亏虚、机体阴阳失衡状态下发病的，恢复机体阴阳平衡是治疗 AD 的重要原则。二以分期论治为基本治法。根据伏邪的致病特点，AD 的不同阶段采用不同的治疗方法。平台期以补虚为主，波动期以祛邪为主，兼顾扶正；下滑期以祛邪为主，兼顾扶正。三以补肾扶正贯穿始终。肾虚是 AD 发病之本，补肾法应贯穿 AD 的整个治疗过程。补肾法可以改善 AD 患者的认知功能，提高患者的日常生活能力。

结论 AD 的发病与伏邪致病相类似，具有因虚而发、藏匿日久、迁延难愈的特点。正虚，尤其是肾虚，是 AD 致病的根本；痰浊、瘀血等伏邪因虚而生、累积日久而阻于脑络，是 AD 致病的标志。根据伏邪致病的特点，对 AD 进行早期干预、分期论治，并以补肾法贯穿始终，能够充分发挥中医药的优势，延缓病程，提高患者的生活质量。

关键词：阿尔茨海默病；呆病；伏邪

持久性公共卫生事件对青少年心理健康状况的影响：情绪控制与人际协助的中介效应研究

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目的 评估持久性公共卫生事件对青少年心理健康状况影响，特别关注情绪控制与人际协助因子在其中的中介效应。通过分析，可以更准确地预测和识别未来类似公共卫生事件中青少年可能出现的心理问题，并有助于制定有效的预防和干预措施，减少心理问题的发生。

方法 本研究采用问卷调查法，并对问卷进行电子设计和收集统计，结合文献综述和数据分析方法，深入探讨了情绪控制与人际协助因子在青少年心理健康中的中介效应。

将初、高中组 3 个时间段观察到的焦虑和抑郁的结果作为自变量，以心理韧性、创伤后改变内各

因子作为单层中介变量，当期学习倦怠和网络依赖、新冠恐惧结果作为因变量，不考虑人口学（性别及年龄）等协变量，对“情绪-学习”因果链路进行独立中介分析，通过对重叠相关因子进行考察。

结果 经过 40 个独立的中介效应的中介效应分析结果综合，得到 4 个显著的中介效应路径。其中，在由焦虑导致的学习倦怠中，情绪控制能力是一个中介特质。特别值得注意的是，抑郁情绪可能导致的网路沉迷现象也是显著地由情绪控制能力影响着。创伤后改变的各项结果、体育时间、A、E、F、G、H、M、Q1、Q2 人格特质在两个标签上均没有特别突出的线性相关，但在考察中介效应的时发现，人际协助成为了一个特出的中介因子，可以显著改善（或恶化）因为抑郁导致的学习倦怠的结果。

结论 为了应对青少年可能出现的心理问题，提前制定预防和干预措施，减少心理问题的发生、注重人际协助的中介作用。(1)可以通过青少年的人际交往能力训练和社会支持网络，来提升他们面临不良处境时的调节能力。提升他们的心理韧性，使他们更好地应对压力和挑战；(2)研究的结果可以为政策制定者提供科学依据，如何更有效地分配心理健康资源。在未来的极端化事件中，需要医学、心理学、社会学等多个领域的专家共同合作，为青少年提供更综合的心理健康服务。因此，研究如何通过情绪控制和人际协助来减轻其负面影响，具有重要的现实意义和理论价值。

关键词：公共卫生事件、青少年心理健康、抑郁、学业倦怠、人际协助

乳酸片球菌 CCFM6432 改善抑郁障碍患者快感缺失症状的临床及事件相关电位研究

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目的 快感缺失是抑郁障碍的核心症状之一，与预后不良有关且对常规抗抑郁药物的反应不佳。前期研究发现乳酸片球菌 CCFM6432 能够改善焦虑或抑郁障碍患者的整体疗效且可能具有改善快感缺失症状的潜力，本研究拟系统论证乳酸片球菌 CCFM6432 辅助改善抑郁障碍患者快感缺失症状的

效果,并利用事件相关电位技术探索其潜在的神经相关性。

方法 自2023年2月至2024年6月在无锡市精神卫生中心招募符合入组条件的成年抑郁障碍患者为对象,随机分为研究组和对照组,其中研究组在常规治疗的基础上联合乳酸片球菌 CCFM6432 连续治疗30天,对照组在常规治疗的基础上联用无生物学活性的乳酸片球菌 CCFM6432 模拟剂(主要成分为麦芽糊精),两组均在基线水平和治疗30天后接受汉密尔顿焦虑量表(HAMA)、汉密尔顿抑郁量表(HAMD,17项版本)、愉快情绪体验量表(TEPS)评估,并在完成猜门任务的同时接受同步脑电检测。HAMA和HAMD总分分别反映患者焦虑和抑郁症状的严重程度,TEPS因子分TEPS-A和TEPS-C分别反映期待性快感和消费性快感主观体验程度高低,刺激前负波(SPN)和反馈相关负波(FRN)波幅分别反映与奖赏期待和奖赏反馈相关的神经加工活动强弱。分析比较各项指标在两组治疗前后的变化情况及组间差异。

结果 在剔除失访或脑电数据质量低下的被试后,研究组和对照组最终分别有27例和28例被试数据纳入分析,两组在平均年龄、性别构成比、体质指数、利手性、受教育年限等一般人口学资料上的差异均无统计学意义,且两组在抗抑郁药物种类及折合剂量、基线水平的HAMA、HAMD评分、TEPS总分与因子分上的差异亦无统计学意义。经过治疗后,两组HAMA、HAMD评分均显著降低,研究组的减分率显著高于对照组(皆 $p<0.05$),提示该组焦虑和抑郁症状改善幅度更明显;对照组的TEPS总分及因子分在治疗后无明显变化,而研究组TEPS总分及TEPS-A因子分在干预后明显升高($p=0.015$),提示该组被试的期待性快感主观体验显著改善。混合设计方差分析结果显示,SPN波幅的组别*干预前后交互作用显著($p=0.031$, $\eta^2=0.085$),简单效应分析显示研究组治疗后SPN波幅显著增大,且大于对照组,提示该组患者在干预后与奖赏期待相关的神经活动增强。FRN波幅的交互作用及组间或组内主效应均不显著,提示两组在干预前后与奖赏反馈相关的神经加工活动无明显变化。

结论 本研究结果表明乳酸片球菌 CCFM6432 对常规抗抑郁治疗具有增效作用,并且有效改善抑郁障碍患者的期待性快感缺失症状,增强与奖赏期待相关的神经加工活动。

关键词: 抑郁障碍,快感缺失,益生菌制剂,事件

相关电位,刺激前负波,反馈相关负波

基于 CiteSpace 可视化探析非药物治疗治疗阿尔茨海默病的现状与热点

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目的 阿尔茨海默病(Alzheimer's disease, AD)是一种以隐匿起病和进行性认知损害为特征的神经变性疾病,占有痴呆原因的60%-70%。目前全球约有5000万AD患者,预计到2050年将增至1.52亿。AD的典型病理特征包括 β -淀粉样蛋白(A β)沉积形成的老年斑和Tau蛋白过度磷酸化导致的神经纤维缠结(NFTs)。AD的病因尚不明确,且尚无特效治疗方法。研究发现,针刺、运动、经颅磁刺激(TMS)、芳香疗法、认知干预及心理、音乐等非药物治疗在防治AD方面具有一定效果。CiteSpace软件可通过绘制科学图谱分析该领域的研究热点和趋势,探索研究前沿和预测未来发展方向。本研究采用CiteSpace软件对非药物治疗治疗AD的相关研究进行可视化分析,旨在为后续研究提供思路。

方法 检索Web of Science核心合集数据库自2004年1月至2023年6月收录的关于非药物治疗治疗AD的相关文献,采用数据库自带分析功能、表格统计功能及CiteSpace软件对发文趋势、机构、期刊、作者、关键词进行分析。

结果 共纳入1128篇文献。年发文量分析上,2004-2007年,发文量较低。2008-2018年,发文量逐年增加,2018年达到76篇。2018-2023年,发文量迅速增加,2022年达到最高峰132篇。说明非药物治疗干预AD仍是研究热点。发文机构上,395个机构形成的网络图谱显示,哈佛大学和哈佛大学医学院发文量最多。中国的广州中医药大学、北京中医药大学等形成了研究团队,但缺乏与国际间的交流合作。作者合作分析上共有657个作者参与研究,Koch, Giacomo 发文最多。形成以美国和中国为首的研究团队,但国际间的合作仍不足。文献共被引分析上,被引频次最高的文献主要涉及TMS治疗AD的随机对照试验和系统回顾,针灸的有效性和安全性也得到了证实。关键词分析上,关键词主要集中在

于 TMS、针刺、认知疗法、抑郁症和认知损伤等,表明这些是当前研究的热点。

结论 随着人口老龄化,AD 已成为重大课题。现有的药物治疗手段有限,非药物治疗因其有效性和较少的副作用受到了越来越多的关注。本文分析显示,该领域的研究机构主要集中在美国,中国的研究机构需要加强与国际间的合作。研究热点集中在 TMS、针灸和认知疗法,未来应进一步挖掘中医非药物疗法如艾灸、拔罐等在 AD 治疗中的作用,并探索其具体机制,以期为 AD 患者提供更有效的治疗手段。

关键词: 阿尔茨海默病,认知疗法,针灸,经颅磁刺激,CiteSpace,文献计量学

基于 R 语言探析化痰祛瘀法治疗阿尔茨海默病的用药规律

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目的 AD 在中医学中被归类为“呆病”。清代陈士铎在《辨证录》中认为老年健忘是肾水之竭,应以滋肾填精为主,心肾兼补治之。目前的共识认为,AD 的病机“启动于肾虚,进展于痰瘀火,恶化于虚极毒盛”。根据病机,早期以补肾为主;中期化痰、祛瘀、泻火交替或并行;晚期因痰、瘀、火日久而化生毒浊,需补肾固元,解毒化浊。许多医者在临床中以化痰、祛瘀为治疗大法,取得了显著疗效。然而,目前缺乏针对痰、瘀等邪实为主的 AD 用药规律的系统研究。本研究通过检索现代文献,收集以化痰祛瘀法治疗 AD 的中药处方信息,并使用 R 语言进行数据挖掘,以探索化痰祛瘀法治疗 AD 的用药规律,为临床提供参考。

方法 通过计算机检索中国知网、万方、维普三大中文数据库,收集中药或中成药治疗 AD 的文献。运用 EndNote 软件对文献进行管理,运用 Microsoft Excel 软件,以方名、药物组成、功效分类、药物四气、五味、归经为关键词构建方剂数据库。采用 R 语言对中药使用频次、功效、性味归经、关联规则、相关性进行数据分析。

结果 共检索到 1158 篇文献,经过筛选,最终

纳入文献 68 篇,提取得到经验方药共 72 首,共包含 130 味中药。对 72 首经验方进行中药频次分析,使用频次最高的中药依次为石菖蒲、川芎、丹参、黄芪、远志、熟地黄、陈皮、茯苓、当归、桃仁、赤芍、半夏。中药的功效主要为补虚、活血、化痰,药物的四气以温为主,五味以甘、苦、辛为主,归经以肝经为主。设置最小支持度和置信度,得到 16 条有效关联规则,石菖蒲、川芎、郁金、桃仁、赤芍、红花为核心组方。相关性系数较高的药物组合主要为化痰药物如陈皮、半夏、茯苓、白术、石菖蒲、郁金等,以及祛瘀药物如桃仁、红花、赤芍等。

结论 痰瘀为 AD 患者的重要致病因素与病理产物。且化痰祛瘀法治疗 AD 的用药中包含大量补虚药物,体现了对于 AD 攻补兼施、标本兼治的治疗原则,也是中医整体观和辨证论治的具体体现。中医治疗 AD 具有巨大的优势,探索 AD 的用药规律,可以为临床提供一定的参考。

关键词: 阿尔茨海默病,数据挖掘,R 语言,中药

基于网络药理学和分子对接技术探讨桂枝茯苓丸治疗阿尔茨海默病的作用机制

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目的 阿尔茨海默病(AD)是一种严重的神经退行性疾病,表现为逐渐的认知损伤和神经病理学标志,包括 β 淀粉样蛋白斑块的沉积和 Tau 蛋白的神经原纤维缠结。尽管大多数治疗策略集中在单一靶点上,但疗效有限且伴有不良反应。因此,多靶点药物成为新的研究方向。中医药在治疗 AD 方面展示出多靶点作用和较少的不良反应,其中桂枝茯苓丸尤为显著。该方出自《金匮要略》,由桂枝、茯苓、桃仁、赤芍、牡丹皮五味中药组成,具有活血化瘀的功效。现代药理研究表明,桂枝茯苓丸中的活性成分通过减轻炎症反应和抑制氧化应激来保护神经细胞。

方法 本研究采用网络药理学方法,筛选桂枝茯苓丸的有效成分,并对其作用靶点和通路进行分析。

结果 通过 TCMS 数据库获取桂枝茯苓丸的

76种活性成分,筛选出223个潜在靶点。通过多种数据库筛选得到1414个AD相关靶点,并与药物靶点取交集,得到84个桂枝茯苓丸防治AD的潜在靶点。利用Cytoscape软件构建成分-靶点网络,发现槲皮素、 β -谷甾醇、山奈酚等成分为关键作用成分。进一步的PPI网络分析和基因本体(GO)及KEGG通路富集分析显示,桂枝茯苓丸的关键靶点包括AKT1、IL-6、TNF等,涉及PI3K/AKT、炎症反应等重要通路。

分子对接结果表明,桂枝茯苓丸的关键成分与靶点具有良好的结合能力,尤其是槲皮素、山奈酚、常春藤素等。槲皮素通过下调促炎细胞因子,减轻神经炎症,山奈酚通过激活PI3K/AKT信号通路抑制细胞凋亡,常春藤素通过降低炎症因子水平缓解神经炎症。研究表明,PI3K/AKT信号通路在中枢神经系统中发挥重要作用,通过调节细胞存活、自噬、神经炎症等过程,可能是桂枝茯苓丸治疗AD的重要机制。

结论 综上所述,本研究揭示了桂枝茯苓丸通过多种活性成分和多靶点、多通路减轻AD病理过程的可能机制,尤其是通过PI3K/AKT通路及其介导的炎症反应。这为桂枝茯苓丸在临床上治疗AD提供了理论依据。下一步研究将验证其在AD动物模型中的疗效,为中医药治疗AD提供更多支持。

关键词: 桂枝茯苓丸,阿尔茨海默病,网络药理学,分子对接,PI3K/AKT信号通路

基于五脏相关理论论治阿尔茨海默病

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阿尔茨海默病(AD)是一种以隐匿起病和进行性认知损害为特征的神经退行性疾病,目前全世界有5000万患者,预计到2050年将增至1.52亿。AD不仅极大地影响了年老者的生活质量,还对患者家庭和社会公共卫生系统造成重大负担。虽然市面上已有的药物能缓解部分症状,但无法治愈AD,因此,寻找有效的防治方法成为亟待解决的问题。

中医学的整体观和“五脏一体”理论认为,五脏(肝、心、脾、肺、肾)通过经络系统和精、气、血、

津液的联络共同维持生命活动。脑的功能变化与脏腑功能异常密切相关,AD患者的脑病变与五脏功能异常存在联系。本文从五脏理论出发,探讨其与AD的关系及治疗方法。

首先,肝和心与情志密切相关。肝主疏泄,调畅气机,舒畅情志;心主神,影响记忆、思想和认知。AD患者常表现出情志异常,肝气不舒、心神失调是其病因之一。疏肝解郁、平肝清心是治疗AD的重要方法。其次,脾和肾为后天和先天之本,主导精、气、血、津液的代谢和相互转化。脾主运化,提供气血补充;肾藏精生髓,滋养脑髓。脾肾功能异常导致脑髓失养,引发AD。温补脾肾、补益精血是治疗的关键。第三,肺、脾、肾共同主司水液代谢,避免痰毒留滞。肺主治节,调节全身水道;脾主运化,转化水液为津液;肾主水,气化津液。三脏功能失调导致水液停滞、痰浊壅塞,阻碍脑络,引发AD。调理肺脾肾,消除痰瘀是治疗的重要途径。在病理方面,肝气不舒、心肝火旺、肺脾肾不足是AD的主要病因。肝气郁结、气机郁滞导致痰浊、瘀血阻脑;心肝火旺、神乱致呆,引发精神行为症状;肺脾肾功能失调,水液代谢紊乱,形成痰浊、瘀血。温补脾肾、调理气血、清心安神、疏肝解郁是治疗AD的有效方法。

综上所述,从五脏整体观出发,调理五脏功能、平肝清心、温补脾肾、调理气血,五脏同调,能够更全面地改善AD的临床症状,提高疗效。五脏理论为AD的中医治疗提供了新的视角和方法,有望在未来研究和临床实践中取得更好的应用和效果。

关键词: 五脏,阿尔茨海默病,中医

与精神科患者及家属交流的思考与注意

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精神科患者通常面临多种复杂的心理问题,这不仅影响患者的生活质量,也对家庭成员带来巨大压力和挑战。本文将探讨患者及其家庭在精神科治疗中的角色和重要性,分析交流原则及其在治疗过程中的实际应用,旨在为医务人员提供有效的指导和支持,促进患者的康复和家庭的稳定。

精神科患者通常面临复杂的心理问题,包括情

绪障碍、认知障碍和行为障碍。患者的症状可能随时间波动，生活充满不确定性，需要长期治疗和支持。医务人员在交流时应避免刺激性语言，以尊重和理解为基础，提供积极反馈以缓解患者焦虑。

家庭在患者康复中起重要作用。支持性的家庭环境能减轻患者压力，提升治疗效果，而家庭冲突则可能加重患者病情。积极的家庭互动有助于缓解症状。家庭的稳定和支持是精神科患者康复的重要保障，医务人员应重视家庭作用，提供相应指导和支持。

在与精神科患者及其家属交流时，保持公平公正、始终安慰帮助以及慎独是至关重要的原则。首先，公平公正意味着医务人员应客观对待每位家庭成员的意见和感受，避免偏袒，促进家庭内部和谐。其次，医务人员应始终给予患者和家属安慰和支持，包括情感上的倾听和理解，以及提供实质性帮助，如疾病信息和应对策略。此外，通过建立支持小组和联系社区资源，可以进一步增强患者和家属的应对能力和心理韧性。最后，慎独要求医务人员在交流时避免将个人观点强加于人，尊重患者和家属的看法和决定，特别是对文化差异的尊重。这些原则的遵循，有助于建立信任关系，减少冲突，提高治疗效果和患者的康复质量。

在与精神科患者及其家属交流时，倾听、澄清事实和商量建议是关键技巧。首先，耐心倾听患者和家属的观点和感受，即使这些观点与医务人员的认知不一致，通过倾听可以更全面地了解他们的需求和困惑。其次，澄清事实是必不可少的，因为精神科疾病的复杂性容易导致误解。医务人员应解释病情和治疗方案，帮助家属理解患者的行为和情绪，从而减少冲突和误会。最后，商量建议时，应以委婉且具有商量性质的方式提出。通过这些交流方式，医务人员可以为患者和家属提供更有针对性的帮助，增强治疗的有效性。

与精神科患者及家属的交流是一个需要高度专业性和敏感度的过程。通过遵循公平公正的原则，始终给予安慰和帮助，以及慎重对待自己的经验和观点，医务人员可以有效地支持患者及其家属。在具体的交流方式上，通过倾听、澄清和商量，可以建立更深的理解和信任，从而为患者的康复创造更好的条件。

关键词：精神科患者,家庭支持,医患交流,心理障碍,治疗效果

标准化病人在精神科教学中的思考

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在精神科教学中，使用真实病人案例虽然能提供丰富的实践经验，但也存在一些不可忽视的问题。为了解决这些问题，标准化病人案例的使用成为一种有效的替代方法。

真实病人案例用于教学存在一些问题。首先是精神科病人情绪不稳定，甚至有打人毁物等疾病导致的行为。在教学中，难以保证病人的配合程度，和学生的人身安全。与躯体疾病不同，精神科病人的病史中提及的心理问题在重复叙述时可能给病人再次带来创伤，尤其是在教学环境下，面对多为经验极为有限的实习医生的提问，可能增加这种创伤程度。而病区首先保证患者的诊治，精神科疾病的住院病人很难在短期达到出院标准，普遍住院时间较长。然而教学则希望在短期内见到尽可能多的不太疾病的典型病人，难以实现。

标准化病人案例用于教学的优劣分析包括以下几个方面。首先，标准化病人案例的准备建议由精神科医护人员进行演示和录制，以确保基于专科医护人员丰富的临床经验，尽可能真实地显示出病人的特点。其次，标准化病人案例的优势分析显示，标准化病人解决了真实病人用于教学存在的问题，如病人难以配合、反复叙述病史对病人产生创伤和病区病人难以保证充分典型等。此外，录制后的标准化病人案例可以随时暂停、反复观看，便于教学中对特征性的精神科症状、综合征、诊断等的讲解和学生对重难点的理解。然而，标准化病人案例也有不足之处，部分精神科疾病有独特的面容、行为等，如抑郁症患者淡漠的表情，锥体外系反应的震颤等，这些都是标准化病人演示者难以模拟出的，因此需要通过适当的真实照片和视频进行补充。

标准化病人案例在教学中的应用和注意包括以下几个方面。首先，在教学适用范围方面，针对不同层次的医学学生和心理学学生，应准备不同的标准化病人案例，显示不同的侧重点。例如，心理学学生重点在于识别什么程度的病人需要转至精神科就诊，而不同程度的精神专科学学生则在问诊与专科检查、诊断与鉴别诊断、治疗与调护等方面各有侧重。其

次, 在应用注意方面, 标准化病人是对临床实习的有效补充, 应注意其典型性, 在一个案例中尽可能多地显示出病人可能共同出现的症状, 同时注意这些症状与疾病严重程度关系, 避免出现单纯的症状堆叠而不符合临床实际的情况。最后, 在教学反馈方面, 教学过程中和教学结束后均应注意与学生的互动, 邀请学生反馈学习体验, 提出改进建议, 也可邀请学生参与新案例的录制, 以加深对疾病的理解。

关键词: 标准化病人, 精神科, 教学

综合医院精神科开放式病房助力大专院校学生心理健康的思考

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在现代社会, 大学生的心理健康问题日益引起关注。综合医院精神科开放式病房在助力大专院校学生健康管理中扮演着重要角色。与封闭式病房相比, 开放式病房更容易被学生及其家庭接受, 有助于学生在较为宽松的环境中进行治疗和康复。本文将探讨综合医院精神科开放式病房如何通过建立绿色通道, 与大专院校和家庭紧密合作, 提供及时、专业的心理健康服务, 帮助学生有效应对心理问题, 促进他们的全面发展和健康成长。

大专院校的学生来自五湖四海, 入学后面临着生活习惯差异的适应。有别于高中应试教育的强目的性, 大专院校教育拥有更多的选择, 需要学生进行自主规划, 完成自己的学业和就业设计。大专院校的学生面临着学习和经济的压力, 需要学会自主学业规划, 平衡学习生活, 学会步入社会, 独自面对压力。大专院校学生在面对难以疏解的压力时, 可能需要心理辅导和帮助。除常规的学业和生活压力导致的心理问题, 家庭变故、突发疾病、重大学习生活事件通常是心理需求的主要诱因。

大专院校学生的健康管理模式包括以下几个方面: 本科生通常以班级为单位, 由院校选派班主任作为管理者和联络人, 学生遇到问题首先通过班主任协调解决, 因此班主任成为了学工系统下学生心理健康的首要管理者。研究生通常以师门为单位, 导师既是学习的引领者, 也是学生的管理者, 学

生遇到问题首先通过导师协调解决, 因此导师成为了学工系统的学生心理健康的首要管理者。心理筛查是新生入学和每学期开学的必要筛查项目, 对于可能存在心理问题的学生或正在接受心理治疗的学生, 通常由心理中心统筹管理, 由院系负责具体联络。

大专院校学生人数众多, 专职或兼职心理咨询师有限, 辅导员虽然经过心理培训, 但更多是辅助预警和管理, 对存在心理问题的学生难以提供专业帮助。大专院校缺乏专业的精神科医师, 当学生出现严重心理问题时, 通常采用家校联动的送诊方式, 但由于与专科医院的联系有限, 学生及时就诊和报销等问题不可避免。相比于封闭式病房, 开放式病房更容易被学生和家庭接受, 精神科应在力所能及的范围内, 与大专院校建立绿色通道, 帮助学生快速就诊。应当建立医院-学校-家庭联动的学生心理健康管理模式, 以应对学生不同的心理健康促进需求, 包括医院的专业诊疗, 学院的综合管理和家庭的长期支持。

关键词: 大学生心理健康, 综合医院精神科, 开放式病房, 学校-家庭-医院联动, 绿色通道

综合医院精神科开放式病房中年活动设置的思考

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在综合医院的精神科开放式病房中, 中年患者的活动设置是一个关键因素, 对他们的康复和心理健康有着重要影响。本文将探讨在综合医院精神科开放式病房中, 如何通过科学合理的活动设置, 有效地支持中年患者的心理健康和社会适应。

中年是从逐渐成熟到开始衰退的阶段, 其智力不断增长并达到顶峰。积累的理论知识和实践经验能帮助中年人做出分析, 解决实际问题。中年人多年形成的认知行为模式已经成为定式, 一旦出现不能自洽的扰动, 其认知行为很难改变, 从而引发问题。中年人面对着来自家庭和社会的压力, 赡养父母、养育孩子、夫妻共处的家庭压力和熬夜加班、工作不顺等工作压力让中年人缺少释放压力的时间和空间。促进中年心理健康的方法主要包括合理安排

时间,平衡工作与家庭,平衡脑力与体力活动。保持和平心态,量力而行,学会取舍。学会缓解压力,找到适合自己的宣泄情绪的方式,给负面情绪一个缺口。

对于中年治疗活动的设置,研究表明,重复经颅磁刺激、光照治疗、生物反馈治疗等物理治疗方法适用于中年患者群体。实践过程中发现,中年患者对治疗的疗效更为关注,希望得到专业的讲解。治疗前应向患者讲解治疗的方式、疗程和预期效果,消除其对治疗的疑惑和顾虑,增加治疗的依从性。应尝试认知行为疗法等适青年的方式,以缓解焦虑、改善睡眠、增加动力等为主题,帮助中年患者改善症状,面对社会。

在中年娱乐活动的设置上,中年人逐渐成熟,也更加独立,使得这一群体更多的是与同龄人有限程度的相处和独自承担压力。促进中年患者间的团体活动和充分交流,鼓励经验分享,让朋辈互助助力改善疾病。共同参与活动、完成任务,是调节与家庭成员的关系,增加家庭成员之间理解的有效方法。病区内的家庭任务设置,应侧重帮助家庭成员理解患者,增加交流,促进情感。治疗的最终目的是回归社会,中年应更多的接触社会,适应社会,最终回归社会。应鼓励监护人在外出时间带领中年患者进行室外活动,适当的参与社会工作,逐渐适应。

关键词:心理健康,物理治疗,团体心理治疗,家庭治疗,娱乐活动设置

综合医院精神科开放式病房老年活动设置的思考

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在综合医院的精神科开放式病房中,老年患者的活动设置是一个关键因素,对他们的康复和心理健康有着重要影响。本文将探讨在综合医院精神科开放式病房中,如何通过科学合理的活动设置,有效地支持老年患者的心理健康和社会适应。

老年人在生理功能逐渐衰退的同时,感知觉功能下降,记忆减退,情绪趋于不稳定,表现为易兴奋、激惹、爱唠叨等。其人格也可能逐渐改变,出现

猜疑、偏执等情况。老年人退休后可能因为工作强度突然下降而出现空余,觉得自己缺乏社会价值等负面的情感体验。一些老年人开始与邻里一同活动,找到新的生活规律。另一些老年人则可能进去病态。促进老年心理健康的内容主要包括适应退休生活,把退休当成成功生活经历的一部分,通过参加老年大学、参加团体活动等方式,寻找和培养兴趣,保持适当的人际交往,以促进身心健康。

在老年诊疗活动的设置上,研究表明,重复经颅磁刺激、光照治疗、生物反馈治疗等物理治疗方法适用于老年患者群体。实践过程中发现,老年人可能存在感觉减退的情况,对于触觉、压力觉、痛觉、温度觉等都没有年轻人敏感,在设备调试的过程中,操作者应确保安全性,避免患者受伤,增加患者的依从性。应尝试正念治疗等动作舒缓的适宜老年人的方式,以改善睡眠、调节情绪等为主题,帮助老年患者改善症状,通过团体交流的方式,帮助老年患者寻找社会价值。老年在治疗后终究要回归家庭,调节老年与儿女的关系至关重要。应通过促进老年与儿女的交流,减少老年通过过度的症状描述和表现,从而引发儿女关注的行为,让交流回归正规。

老年娱乐活动的设置上,老年人退休后空余时间逐渐增多,开始回归集群活动。病区应适当为老年患者提供活动空间和设备,估计老年人进行棋牌、书画等益智活动。指导儿女体验老年人的感官世界,帮助儿女理解老年人的生活状态,是调节与儿女的关系,增加家庭成员之间理解的有效方法。病区内的家庭活动设置,使得儿女必须在一定时间内放下工作,陪伴父母,增加交流,促进情感。治疗的最终目的是回归社会,老年应更多的接触自然。应鼓励监护人在外出时间带领中年患者进行室外活动,增加运动,维持机体功能和身体健康。

关键词:心理健康,物理治疗,团体心理治疗,家庭治疗,娱乐活动设置

不同的院内感染防控背景下中国某精神专科医院院内感染诊断与精神疾病诊断相关性的回顾性研究

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目的 探讨精神病院医院感染(nosocomial infection, NI)不同防治措施与精神疾病患者之间的关系,了解精神病院医院感染的特点,为精神专科的院感防控提供参考依据。

方法 选取中国东南部某精神病院 NI 监测系统记录的资料,其中 2016 年 1 月 1 日至 2019 年 11 月 30 日住院的精神疾病 NI 患者归为非 COVID-19 疫情防控组(NC19C, n=898),2020 年 1 月 25 日至 2022 年 11 月 30 日住院的精神疾病 NI 患者归为 COVID-19 疫情防控组(C19C, n=840)。数据采用 SPSS 22.0 版本进行分析,独立样本 t 检验、卡方检验、多元逻辑回归分析被用于分析数据。经过 Bonferroni corrected 检验, $P < 0.0024$ 被认为具有统计学意义。

结果 在罹患院内感染的精神分裂症患者中,C19C 期发生医院获得性肺炎的概率是 NC19C 期的 3.103 倍($OR=3.103, 95\%CI=2.204\sim 4.370, P=0.000$),C19C 期发生医院获得性泌尿道感染的概率是 NC19C 期的 3.081 倍($OR=3.081, 95\%CI=1.719\sim 5.519, P=0.000$)。在罹患院内感染的抑郁症患者中,由于 P 值均大于 0.0024,此类患者的院内感染诊断在 C19C 期和 NC19C 期不存在统计学差异。在罹患院内感染的双相情感障碍患者中,C19C 期发生医院获得性肺炎的概率是 NC19C 期的 7.484 倍($OR=7.484, 95\%CI=5.020\sim 11.157, P=0.000$),C19C 期发生医院获得性泌尿道感染的概率是 NC19C 期的 3.411 倍($OR=3.411, 95\%CI=2.119\sim 5.491, P=0.000$)。

结论 在不同院感措施前提下,精神专科的院感特点不同。在加强院感防控的背景下,精神专科的院感诊断可能和精神疾病的诊断有关系。

关键词: 精神疾病,医院院内感染,院内感染诊断,不同的院感防控背景

针灸治疗椎体外系症状的 Meta 分级及理论探讨

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目的 系统评价针灸疗法治疗椎体外系症状的临床疗效。

方法 计算机检索中国知网期刊全文数据库(CNKI)、万方学术期全文数据库(Wanfang)、维普中文科技期刊数据库(VIP)、中国生物医学网、Web of Science、美国医学在线(PubMed)、荷兰医学文献数据库(Embase)及国际循证医学图书馆(Cochrane Library)等各大数据库。检索语言为中文和英文;检索时间从 2010 年 1 月 1 日至 2024 年 4 月 1 日;检索关于针灸治疗椎体外系症状的随机对照临床试验。由 2 名研究者独立筛选文献、提取资料并评价纳入研究的偏倚风险后,采用 Stata 17 软件进行 Meta 分析。

结果 共纳入 20 项高质量临床研究,纳入研究总受试者 1603 例。Meta 分析针灸结合其他疗法较单纯其他疗法改善情况结果显示:(1)UPDRS-III 示[$MD=-3.43, 95\%CI=(-4.53, -2.32), Z=-6.086, P=0.00 < 0.1$]。(2)UPDRS-III 肌强直部分示[$MD=-1.21, 95\%CI=(-2.31, -0.12), Z=-2.172, P=0.03 < 0.1$]。(3)UPDRS-III 震颤部分示[$MD=-0.38, 95\%CI=(-0.72, -0.03), Z=-2.161, P=0.031 < 0.1$]。

结论 本研究结果表明,针灸疗法对椎体外系症状均有改善,针灸联合其他疗法的效果优于单纯其他疗法,说明针灸可以作为一种辅助疗法以提高椎体外系症状的临床疗效。

椎体外系症状归属于中医学“颤证”、“挛证”、“颤振”等范畴,主要病机肝肾阴虚,兼有肝风、阳亢、血瘀等次证。肾主骨生髓,肾虚无以化精生髓,脉络空虚,四肢百骸缺少濡养,则不能主司肢体的正常运动功能;肝阴不足,筋失所养,可致手足颤动、屈伸不利等症状。临床选穴用太冲、太溪、肝俞、肾俞穴以滋补肝肾;丰隆穴作为胃经之络穴,补益脾胃,祛痰利水;足三里穴等以补养为主的腧穴,能够调整脏腑虚实,补益气血,充养筋脉,濡养脑髓。穴位所在经脉主要集中在督脉、大肠经、胃经等。督脉统摄全身阳经,在治疗中起着重要的作用,尤其是百会穴,作为诸阳之会,能够统摄和调控一身阳气。“颅底七穴”中哑门属督脉,也是督脉与阳维脉的交会穴,督脉总督人体一身之阳;阳维脉维系一身之阳经,哑门穴可看作一身之阳的聚结点。阳明乃后天之本,生化之源,故气血皆多,为气血亏虚者提供

了良好的支持。

关键词：针灸,椎体外系症状,Meta 分析,系统评价

Use of A Holistic Music Therapy Approach in The Treatment of Premature Infants and Caregivers in The Neonatal Intensive Care Unit (NICU): A Case Study

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Objective Literature has shown that premature infants represent a unique patient population characterized by extreme physical and emotional vulnerability, rendering them incapable of independent survival. Following premature birth, premature infants are immediately placed in the highly mechanized environment of the Neonatal Intensive Care Unit (NICU), where they face significant challenges, including stress, deprivation, overstimulation, and the abrupt transition from the predictable and safe environment of the womb. The experience of having a premature baby can be profoundly traumatic for parents, primarily due to the uncertainty surrounding their child's survival and the potential developmental impacts of premature birth. Additionally, witnessing the invasive medical care required for their child can be extremely distressing for parents. This case study aims to explore how the use of a holistic music therapy approach helps a 27-week-and-4-day gestational age very low birth weight infant (VLBW) and his family deal with physical, emotional, developmental, neurobehavioral, social, cognitive, and environmental challenges during the hospitalization at NICU.

Methods This case provides a holistic perspective on the treatment of a premature infant and his family from referral, assessment, treatment planning, implementation, family education, and termination. After surviving 72 days alone in the incubator, the infant was finally able to reunite with his parents in the daytime family care ward. The premature infant was initially referred by the neonatologist to enhance parent-infant

bonding. A pediatric psychiatrist and a music therapist conducted an assessment to evaluate the baby's vitals, psychosocial needs, comfort sounds, feeding and weight gain, environmental stimulation, pain, and as well as the parents' needs. The treatment planning, including identifying the appropriate goals, approach, setting, and frequency, was discussed by the team made up of neonatologists, psychiatrists, music therapists, and nursing staff. The music therapy sessions were administered three times per week, each lasting 20 minutes, by a U.S.-trained, board-certified music therapist (MT-BC). These sessions addressed concerns across various domains, including physical, emotional, developmental, social, cognitive, and environmental aspects. Specific goals included stabilizing vital signs, enhancing parent-infant bonding, improving self-regulation, organizing and tolerating stimuli, facilitating feeding and weight gain, promoting neurodevelopment, and improving sleep quality. Various music therapy interventions including individually provided sustained music, music and multimodal neurologic enhancement stimulation, music-reinforced nonnutritive sucking, breathing entrainment, singing as entrainment, environmental music therapy, contingent singing, infant-directed singing, auditory stimulation with the mother's voice. were implemented. The use of "Song of Kin" and lullabies was also introduced in the treatment, particularly in terms of offering support to the parents. Family education, including disease education, the importance of using live music, appropriate ways of using music to interact with the infant, and music choice, was introduced by the music therapist as well. A total of 27 sessions were implemented before the infant was discharged. A series of follow-up sessions were provided every two weeks at the outpatient program. Standardized instruments were used as pre- and post-treatment evaluation tools for the infant's levels of developmental as well as parents' moods and quality of life. Qualitative interview with the parents about their experiences and perceptions of receiving music therapy during their NICU stay was also conducted during the termination.

Results During the hospitalization period, while receiving music therapy, the infant was able to self-regulate and maintain stable oxygen saturation and heart

rate, gradually wean off the ventilator, tolerate feeding well, achieve consistent weight gain, and exhibit age-appropriate interactive and social behaviors. Additionally, parents reported better scores on quality of life at the end of the treatment.

Conclusion The findings suggest that integrating music therapy into the care plan for premature infants in the NICU can enhance not only the infants' developmental outcomes but also provide substantial emotional and psychological support to their families. This holistic approach underscores the importance of addressing both the medical and psychosocial needs of this vulnerable population, highlighting the potential benefits of music therapy as a standard component of NICU care.

关键词: Music Therapy; Neonatal Intensive Care Unit (NICU); Premature Infants; Holistic Approach

高校科研人员失眠严重程度和焦虑抑郁现状及其影响因素分析

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目的 随着科技创新的重要性日益凸显,高校科研人员作为创新型国家建设的中坚力量,其心理健康问题却鲜有得到应有的关注和研究。高校科研人员失眠、焦虑、抑郁的发生率、严重程度及其对日常生活和工作的影响不得而知。同时工作压力、工作环境质量以及个人心理弹性等可量化因素如何影响心理健康的深入研究。本研究旨在填补这一研究空白,通过深入分析高校科研人员的心理健康状态,识别影响其身心健康的关键因素,为改善他们的心理健康状况提供理论依据和实践指导。

方法 采用线上问卷调查高校科研人员。问卷包括自编题目和失眠严重程度指数量表、广泛性焦虑量表、9项患者健康量表、心理弹性量表和家庭功能量表,以收集高校科研人员人口学信息、科研环境信息和评估科研人员心理健康状态。采用SPSS软件进行数据分析,使用卡方检验、秩和检验、单因素分析和多因素logistic回归分析方法, α 均取值0.05。

结果 回收问卷样本涉及全国19个省份共821

份问卷,其中经过质控后纳入654份有效样本进行分析。645名科研人员中,中重度失眠有271位(42%),中重度焦虑有283位(43.8%),中重度抑郁有273位(42.4%)。logistic回归分析结果显示:非常投入科学研究、中等心理弹性水平是失眠的危险因素,单位举办/参加学术会议的机会比较多、家庭功能优秀是失眠的保护因素。工作年限大于10年、中等评分心理弹性是焦虑的危险因素,单位举办/参加学术会议的机会比较多、家庭功能优秀是焦虑的保护因素。工作年限6-10年、成果指数35-45是抑郁的危险因素,单位举办/参加学术会议的机会比较多、高心理弹性水平、家庭功能优秀是抑郁的保护因素。

结论 本研究揭示了高校科研人员中普遍存在的心理健康问题,其中失眠、焦虑和抑郁的发生率较高。科研人员参与学术会议的机会、心理弹性水平以及家庭功能是影响其心理健康的关键因素,更多的学术交流机会和良好的家庭支持环境有助于高校科研人员的心理健康。基于这些发现,我们建议制定针对性的心理健康干预计划,以提高科研人员的心理弹性,并优化其家庭和工作环境,从而改善他们的整体心理健康状态。

关键词: 科研人员, 失眠, 焦虑, 抑郁, 影响因素

抑郁障碍患者情感灵活性异常的神经相关性: 一项事件相关电位研究

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目的 既往研究表明抑郁障碍患者存在情感灵活性异常,这可能是疾病发生发展的重要影响因素,但相关神经生理机制尚不明确。本研究旨在行为学研究的基础上,结合事件相关电位(ERP)技术,探索与抑郁障碍患者情感灵活性异常相关的神经电生理特征。

方法 自2022年3月至2023年3月,在无锡市精神卫生中心招募符合DSM-5中抑郁障碍诊断标准的患者及在周边社区招募健康志愿者作为研究对象,在完成情感转换任务范式(AST)时同步记录

脑电活动进行 ERP 分析。基于平均反应时计算出不同类型的情感转换成本（例如，正性情感转换成本=从判断正性图片人物数量转换至判断情绪图片效价时的反应时-重复判断正性图片情绪效价时的反应时）；ERP 成分晚期正电位（LPP）主要反映的是大脑对情绪刺激的加工强度或注意力资源分配多少，类似于情感转换成本，计算不同类型的情感转换时的 LPP 波幅差（例如，负性情感转换 LPP 波幅差=从判断负性图片人物数量转换至判断情绪图片效价时的 LPP 波幅-重复判断负性图片情绪效价时的 LPP 波幅）。以组别（患者组 vs. 对照组）为组间因素，以情绪图片效价（正性 vs. 负性）和任务类型（判断情绪效价 vs. 判断人物数量）为组内因素，采用混合设计方差分析比较两组被试不同类型情感转换成本及 LPP 波幅的差异，采用 Bonferroni 法进行多重比较校正；使用 Pearson 相关分析探索各指标之间的相关性。

结果 最终患者组和对照组各有 29 例被试数据纳入分析，两组在平均年龄、性别构成比、体质指数、利手性、受教育年限等一般人口学资料上的差异均无统计学意义。混合设计方差分析结果显示，情感转换成本存在效价×任务类型交互作用 ($p < 0.001, \eta^2 p = 0.244$)、组别主效应 ($p = 0.043, \eta^2 p = 0.071$) 和任务类型主效应 ($p < 0.001, \eta^2 p = 0.432$)，简单效应分析显示患者组的正性情感转换成本高于对照组 ($p = 0.028$)；情感转换 LPP 波幅差的组别×效价×任务类型交互作用显著 ($p = 0.015, \eta^2 p = 0.101$)，简单效应分析显示患者组的负性情感转换 LPP 波幅差显著小于对照组 ($p = 0.023$)。Pearson 相关分析显示，汉密尔顿抑郁量表 (HAMD) 总分与抑郁障碍患者的正性情感转换成本 ($r = 0.538, p = 0.008$) 及负性非情感转换 LPP 波幅差 ($r = 0.463, p = 0.026$) 均显著正相关。

结论 本研究结果表明，抑郁障碍患者转入正性情感判断时的耗时更长，转入负性情感判断任务时所需的神经加工与注意资源分配更少，而且患者转入正性情感判断的难度和转出负性情感所需的脑资源消耗都随着抑郁症状的加重而增加。

关键词：抑郁障碍,情感灵活性,情感转换任务,事件相关电位,晚期正电位

伴发精神病性症状的病毒性脑炎后脑脊液 TBA 阳性（未知抗体）自身免疫性脑炎：双

峰脑炎

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目的 报告 1 例伴发精神症状的病毒性脑炎继发脑脊液 TBA 阳性的自身免疫性脑炎 (AE) 的患者的临床表现及诊治经过，提高临床医生对该类疾病的认识。

方法 收集 1 例伴发精神症状的病毒性脑炎继发 AE 的患者的临床资料，对其诊断和治疗过程结合文献进行分析总结。

结果 男性，38 岁，以高热、头痛、抽搐、意识障碍急性起病，外院经抗感染、抗病毒等对症治疗后神志清楚，病情好转后出院，半个月后患者出现精神病性症状：冲动、易激惹、失眠、被害感，记忆力下降，入住我科后完善头部磁共振示：左侧丘脑及双侧海马区异常信号影，相关检测提示脑脊液白细胞升高、IgG 指数及 IgG24 小时鞘内合成率升高、寡克隆区带 II 型，脑脊液病原微生物宏基因检测 (NGS) 发现 EBV、脑脊液神经抗体 TBA 法阳性（考虑为未知抗体），后经过神经元染色确定为细胞膜表面抗体，考虑为致病性抗体，患者血液、脑脊液经 CBA 法检测自身免疫性脑炎抗体、副瘤综合征抗体、小脑共济失调抗体等筛查均为阴性，后续拟经过免疫共沉淀、质谱分析、CBA 验证等检测来进一步明确新抗体。经多学科联合会诊诊断为病毒性脑炎继发 AE，给予激素、免疫球蛋白冲击、抗精神病药物治疗后患者精神病症状消失，病情明显好转出院，后续予以吗替麦考芬脂、激素治疗，随访 9 个月，又经过 3 次腰穿术检测脑脊液，白细胞均正常，IgG 指数及 IgG24 小时鞘内合成率逐渐下降至正常，TBA 法检测抗体滴度逐渐变弱至阴性，头部磁共振丘脑异常信号消失，海马信号变弱，遗留记忆力稍下降，可正常生活。

结论 病毒性脑炎经抗病毒等治疗有效的患者，在恢复期再次出现临床症状，尤其是边缘系统症状，应高度怀疑继发 AE 可能，此时应完善神经抗体检测 (CBA+TBA) 等，以早期诊断、早期治疗、改善预后。

关键词：自身免疫性脑炎；病毒性脑炎；精神病性症状；神经免疫抗体；TBA

以精神病性症状起病的多重抗体阳性副肿瘤性神经系统综合征 1 例

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目的 探讨副肿瘤性神经系统综合征 (Paraneoplastic neurological syndromes, PNS) 的临床表现和诊治特点, 提高精神科医师及神经内科医师对 PNS 的认识。

方法 回顾收集 1 例以精神病性症状起病的副肿瘤性神经系统综合征患者的临床表现, 影像学资料、实验室检测数据等, 并结合文献进行分析。

结果 该患者为中年男性, 以睡眠障碍及幻觉起病, 随后 2 年内症状逐渐加重, 并出现共济失调、行为异常、肌无力、肌肉疼痛、自主神经功能障碍等症状。检查发现 AchRAb、抗 CASPR2 抗体、AQP4 抗体、SP100 抗体、抗 CV2/ CRMP5 抗体均阳性, 头部 MR 可见右侧桥脑、左侧尾状核及右侧丘脑病灶, PET-CT 考虑胸腺瘤, 术后病理为(纵隔)胸腺瘤, 符合 B3 型, 最终, 诊断为胸腺瘤合并副肿瘤性神经系统综合征、抗 CASPR2 抗体阳性相关脑炎及重症肌无力 (MG), 经过多学科 (精神科、神经内科、胸外科及影像科等) 讨论, 予以激素、丙球、溴比斯的明等对症及外科手术治疗, 患者达到临床痊愈, 头部磁共振右侧桥脑病灶消失, 左侧尾状核头、右侧丘脑病灶信号明显变弱, 随访患者可以正常生活和工作, 无复发。

结论 副肿瘤性神经系统综合征、自身免疫性脑炎属于罕见病, 预后不佳, 需要早期完善神经抗体检测及排查相关肿瘤, 多学科联合诊疗, 早期明确诊断和有效治疗可以给患者带来显著的效果。

关键词: 副肿瘤性神经系统综合征; 精神病性症状; 神经免疫抗体; 胸腺瘤

以抑郁症状起病的母系遗传性糖尿病伴耳聋 1 例

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目的 探讨母系遗传性糖尿病伴耳聋 (maternally inherited diabetes mellitus with deafness, MIDD) 的临床表现和诊治特点, 提高临床医生对 MIDD 的认识。

方法 回顾收集 1 例以抑郁症状起病的母系遗传性糖尿病伴耳聋患者的临床表现, 影像学资料、实验室检测数据等, 并结合文献进行分析。

结果 该患者为中年男性, 以抑郁症状及认知障碍起病, 伴有糖尿病及耳聋, 10 余年来多次被误诊为抑郁障碍及 2 型糖尿病。检查发现头部 CT 显示双侧基底节区、小脑半球、丘脑多发斑片状钙化灶; 头部 MRI 显示: 双侧尾状核头、双侧豆状核、丘脑内见对称异常信号影; 听力检测为神经性耳聋, 经过多学科 (精神科、内分泌科、神经内科、耳鼻喉科及影像科) 讨论, 考虑可能为 MIDD, 经查患者和其父母基因, DNA 基因突变 (MT-TL1 基因的 3243 位点上, m.3243A > G 基因突变), 诊断为母系遗传性糖尿病伴耳聋, 予以抗抑郁、控制血糖等对症支持治疗, 患者抑郁症状及认知功能有所好转。遗憾的是由于发病时间长, 患者双耳听力不可逆下降, 但目前可以正常生活, 现无明显抑郁症状, 无复发。

结论 母系遗传性糖尿病伴耳聋属于罕见病, 极少见有病人以抑郁症状及认知障碍为首表现, 这可能扩大了母系遗传性糖尿病伴耳聋的临床表型。

关键词: 母系遗传性糖尿病伴耳聋、抑郁障碍、认知障碍、基因

The Pathogenic Mechanism of Intestinal Microbial Metabolites in The Comorbidity of Depression and Cardiovascular Diseases

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In recent years, the comorbidity rate of depression and cardiovascular diseases has been continuously increasing, posing challenges to clinical diagnosis and treatment. Currently, it is believed that the comorbidity of depression and cardiovascular diseases involves a complex network of pathogenic mechanisms, including

inflammatory responses, platelet aggregation, and abnormalities in the hypothalamic-pituitary-adrenal (HPA) axis function. Further research in fields such as "gut-brain axis" and "gut-heart axis" has revealed that intestinal microbiota and their metabolites directly or indirectly participate in the regulation of emotions and cardiovascular system health, forming complex networks of metabolism, inflammation, and neuron that link gut, heart, and brain. Intestinal microbiota products including short-chain fatty acids (SCFAs), trimethylamine N-oxide (TMAO), secondary bile acids (SBAs), and others. These factors influence emotional and cardiovascular health by altering intestinal barrier integrity, immune activity, and vagus nerve stimulation. Intestinal microbiota also generates essential neurotransmitters such as gamma-aminobutyric acid (GABA), serotonin (5-HT), dopamine, and norepinephrine, which play crucial roles in regulating gastrointestinal immune function, endocrine activity, and neural circuits related to human emotions. Interventions targeting intestinal microbiota have emerged as novel therapeutic strategies for depression and cardiovascular diseases. This article summarizes the pathogenic mechanisms of intestinal microbiota and their metabolites in the common pathogenic factors of depression and cardiovascular diseases, as well as related treatment strategies.

关键词: Depression, cardiovascular diseases, intestinal microbiota metabolites, inflammation; probiotics

学龄期孤独症谱系障碍患儿合并紧张症的相关因素

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目的 探讨学龄期(6-17岁)孤独症谱系障碍患儿合并紧张症的相关因素。

方法 通过对中山大学附属第三医院儿童行为发育中心和精神心理科门诊就诊和住院患者以及社会性广告招募的形式,共纳入学龄期(6-17岁)孤独症谱系障碍患儿共222人,依据《精神障碍诊断

与统计手册(第五版)》(DSM-5)紧张症的诊断标准将患儿分为孤独症谱系障碍合并紧张症组(n=45)和孤独症谱系障碍组(n=177),采用中文版的减弱行为量表(ABQ)、中文版儿童简化情绪量表、斯宾思儿童焦虑量表、汉密失能量表、重复行为量表修订版(RBS-R)进行心理因素的量表评估。对两组间的一般情况与临床特征进行比较,并采用 Logistic 回归方法对孤独症谱系障碍合并紧张症的相关因素进行分析。

结果 孤独症谱系障碍合并紧张症组和孤独症谱系障碍组在社会功能损害($z=4.91, p<0.001$)、抑郁($\chi^2=12.54, p<0.001$)、重复刻板行为($z=5.02, p<0.001$)、强迫症($\chi^2=7.49, p=0.006$)方面有统计学差异。多因素二元 Logistic 回归分析结果显示,重复刻板行为增加了孤独症谱系障碍合并紧张症的风险,具有统计学意义[OR=1.045, 95%CI (1.02-1.07), $P<0.001$]。

结论 紧张症导致了孤独症谱系障碍患儿社会功能的进一步损害;重复刻板行为、抑郁、强迫与孤独症谱系障碍患儿合并紧张症有关,其中重复刻板行为是孤独症谱系障碍患儿合并紧张症的独立风险因素,重复刻板行为越突出,合并紧张症的风险越高。

关键词:紧张症,孤独症谱系障碍,重复刻板行为

综合医院精神科联络会诊特点分析

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目的 了解综合医院住院患者精神科会诊的状况和特点。

方法 收集北京某精神科专科医院近4年(2016-2019)会诊病例214例患者,对患者的人口统计学、科室分布、诊断和治疗方案进行分析。

结果 患者年龄10岁-95岁(平均年龄 60.85 ± 20.82),男性:113例(占52.8%),女性101例(占47.2%)。二级以上综合医院30家,其中三级以上医院16家,会诊人数128例(占总数59.8%)。请求会诊的科室26个,排名前五位的分别为康复科:26例(占12.1%),血液科:25例(占11.7%),神

经内科: 21 例(占 9.8%), 急诊科: 17 例(占 7.9%), 脑病科 16 例(占 7.5%)。精神科会诊的诊断主要为, 谵妄: 53 例, 占 21%, 抑郁状态: 45 例, 占 21%, 痴呆: 21 例, 占 9.8%, 脑器质性精神障碍: 15 例, 占 7.6%, 焦虑状态, 13 例, 占 6.1%, 幻觉妄想状态: 11 例, 占 5.1%, 精神分裂症 12 例, 占 5.6%。会诊后的治疗方案: 非药物治疗: 22 例, 占 10.3%, 药物治疗: 192 例, 占 89.7%。其中精神病药: 116 例, 占 54.21%, 抗抑郁剂: 87 例, 占 40.65%, 非苯二氮卓类催眠药: 55 例, 占 25.70%, 苯二氮卓类抗焦虑药: 44 例, 占 20.56%, 心境稳定剂: 13 例, 占 6.07%。

结论 综合医院有必要加强精神科会诊服务, 特别对老年合并神经精神科疾病患者, 需进一步提高非精神科医师对精神疾病的识别和处理。

关键词: 综合医院; 会诊联络精神病学; 回顾分析

智慧型幸福量表在临床护士中的测量及对职业妥协的影响

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目的 检验智慧型幸福量表在临床护士群体中的信效度, 并探讨智慧型幸福对护士职业妥协的影响。职业妥协通常指个体在职业发展过程中因外部因素而做出的非自愿性调整或牺牲。智慧型幸福则是指个体在面对生活挑战时展现出的积极心理状态, 包括自我接纳、生活目标明确和对环境的适应能力等。

方法 研究采用横断面问卷调查法, 对西安市三所三甲医院的护士进行调查。共收集问卷 580 份, 有效回收率为 96.89%。统计分析采用 SPSS 26.0 软件。测量智慧型幸福对护士职业妥协的影响采用多元阶层回归, 同时, 为了剔除常见的人口统计学变量混杂干扰, 我们将样本的年龄、性别、婚姻状况、学历和职称作为控制变量纳入回归模型。

结果 探索性因子分析共提取 1 个公因子, 累计方差贡献率为 74.933%, 总量表的 Cronbach's α 系数为 0.941, 折半系数为 0.903, KMO 值为 0.929, Bartlett's 球形检验的 χ^2 值 $P < 0.05$ 。智慧型幸福量表

每个测量条目的均值在 3.65~4.06 分之间, 处于中等水平; 智慧型幸福可以显著降低护理人员的职业妥协 ($\beta = -0.265$, $P < 0.01$)。

结论 本研究证实智慧型幸福量表在临床护士中的信效度。同时, 提升护士的智慧型幸福水平可能是减少职业妥协的有效途径。建议护理管理者和人力资源部门重视护士的心理健康和幸福感, 通过提供心理支持、职业发展机会和积极的工作环境等措施, 促进护士的智慧型幸福水平。

关键词: 护士, 智慧型幸福量表, 职业妥协

心理脱离对职业妥协的影响分析: 智慧型幸福的中介作用

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目的 本研究聚焦于心理脱离对护士职业妥协的影响, 并探讨了智慧型幸福在这一过程中的中介作用。研究的目的在于为护士的职业发展和心理健康提供科学的干预策略, 以期改善护士的工作状态和生活质量。

方法 采用了便利抽样法, 选取了 2024 年 5 月至 2024 年 6 月期间, 陕西省西安市三所三甲医院的 580 名护士作为研究对象。通过职业妥协量表、心理脱离量表和智慧型幸福量表, 进行了为期两个月的横断面调查。研究采用 SPSS 26.0 进行统计分析, process 插件进行中介分析。

结果 护士职业妥协、心理脱离、智慧型幸福得分分别为 (31.60 ± 10.30) 分、 (10.71 ± 4.18) 分及 (27.29 ± 4.98) 分。职业妥协与心理脱离呈正相关 ($r = 0.247$); 心理脱离与智慧型幸福呈正相关 ($r = 0.145$); 职业妥协与智慧型幸福呈负相关 ($r = -0.271$), 均 $P < 0.01$ 。智慧型幸福在职业妥协与心理脱离之间起到显著的中介作用, 中介效应占 11.21%。

结论 心理脱离不仅直接对护士职业妥协产生显著的正向影响, 而且可以通过提升护士智慧型幸福水平, 间接减少职业妥协。护理管理者和教育者应重视提升护士的心理脱离能力和智慧型幸福水平, 以减少职业妥协, 促进护士的心理健康和职业发展。

关键词: 心理脱离, 智慧型幸福, 职业妥协, 护士

精神病专科医院患者伴躯体疾病 及抗精神药物应用情况调查

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目的 调查精神病专科医院住院患者伴发躯体疾病, 以及临床应用精神病药物的现状。

方法 2023年10月芜湖安定精神病医院(二级)住院的461例精神疾病患者, 采用自编的患者情况调查表进行登记, 调查患者一般人口资料、所患躯体疾病, 以及临床所使用的精神药物情况。

结果 ①一般人口学资料: 年龄: 47.09 ± 12.78 岁。性别: 男性333例(72.1%), 女性128例(27.7%)。精神疾病诊断: 精神分裂症296例(64.2%), 双相情感障碍45例(9.8%), 器质性精神障碍10例(2.2%), 精神发育迟滞88例(19.1%), 使用酒精引起的精神和行为障碍6例(1.3%), 其他6例(1.3%)。②躯体疾病情况: 心脏疾病91例(19.7%), 高血压病55例(11.9%), 糖尿病56例(12.1%), 血液系统病16例(3.5%), 呼吸系统病8例(1.7%), 低血钾21例(4.5%), 其他疾病13例(2.8)。③精神药物使用: 一种抗精神病药物364例(79.0%), 二种抗精神病药物联用87例(18.9%), 三种抗精神病药物联用1例(0.2%), 未用抗精神病药物9例(2.0%)。奥氮平等效剂量: 平均 7.10 ± 4.65 mg/d, 最小剂量0.33mg/d, 最大剂量35.0mg/d。④奥氮平等效剂量伴躯体疾病患者(6.53 ± 4.17 mg)较不伴躯体疾病患者(7.52 ± 4.94 mg)低, 差异具有统计学意义($Z=2.006$, $P=0.045$)。

结论 精神病专科医院住院患者年龄较大, 患者伴躯体疾病较多, 抗精神病药物联合应用比率偏高, 提示临床应着重注意年龄大和伴躯体疾病患者的医疗风险管理。

关键词: 躯体疾病 抗精神药物应用

DIP 付费下抑郁症患者住院费用的灰色关联及结构变动分析 ——以江苏省扬州市某综合性医院为例

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目的 分析综合性医院心理科按病种分值付费(DIP)改革前后抑郁症患者住院费用的变化情况, 为完善医保支付方式改革提供实证数据支持。

方法 根据我院DIP实际执行时间收集抑郁症住院患者相关信息, 分为改革前和改革后两组, 比较两组患者基本情况、住院天数、费用情况等。符合正态分布的计量资料用均数标准差表示, 组间比较采用t检验;计数资料组间比较用卡方检验。采用结构变动度分析研究各单项费用对次均住院总费用的结构变动值、结构变动度及结构变动贡献率。采用灰色关联分析法比较各单项费用与次均住院总费用之间的关联系数、关联度及关联序。

结果 DIP改革前后, 患者年龄、性别差异无统计学意义($P>0.05$);住院天数缩短($P<0.05$);DIP改革前人均次住院总费用8275.10(± 1950.38)元, 改革后7401.87(± 1707.73)元, 统计学差异有显著意义($P<0.01$)。灰色关联分析显示患者次均住院费用中治疗费与总费用的关联度最高, 关联系数为0.930, 医技诊断项目费0.906、综合医疗服务费0.755、药品费0.737、护理费0.727依次递减;材料费的关联度最低为0.702;结构变动分析显示2021-2023年抑郁症患者次均住院费用结构变动度(DSV)为33.08%, 变动较大;单项次均住院费用结构变动贡献率(CSV)排名前三的依次为治疗费、医技诊断项目和药品费, 是导致抑郁症患者住院费用变动的最大影响因素。

结论 DIP改革可通过改进住院流程, 缩短平均住院日, 优化费用结构, 降低住院费用。住院医疗费用受主客观因素影响, 药品费、材料费下降已成必然趋势, 体现医务人员劳动价值的心理治疗费用有所增加。付费方式改革对提高医务人员合理控费有促进意义, 但仍有进一步提升的空间。

关键词: 按病种分值付费; 抑郁症; 付费方式; 灰色关联分析; 结构变动度

前额工作记忆神经网络——基于多项认知任

务的近红外脑功能成像

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目的 在中国，精神障碍已经成为显著的公共卫生挑战。目前，诊断和治疗策略主要依据患者的病史、精神状态评估和心理评估量表，结合临床经验和诊断准则来制定，缺乏科学量化依据。近年来，尽管近红外光谱脑功能成像技术在精神卫生领域已被广泛探索，但认知任务范式的多样性和功能成像图谱理论解析的不足，限制了 NIRS 在精神疾病领域的广泛应用。制定一套适用于中国人群的标准化近红外任务，并建立对图像的理論解析，将促进 NIRS 在国内精神科的辅助诊断和推广。

方法 我们的研究团队将利用近红外脑功能成像仪，探索所创建的“多项认知任务近红外脑成像图谱采集及分析系统”这一套近红外测试标准，并进行相关的图谱数据分析。多项认知任务有四个认知任务组成，依次是情绪图片任务、言语流畅任务、对指运动任务以及症状刺激任务，以充分发挥近红外脑功能成像的时间依赖特性和对精神状态的检测潜力。

结果 通过静息态与任务态交替的刺激模式，发现了六种典型的与症状相关的脑功能成像波形，并初步宏观的归纳出前额工作记忆网络的三种网络联合工作模式的表征，即注意工作记忆主协调网络、感知觉内容工作记忆次级网络和情绪行为工作记忆决策执行网络。

结论 这是首次尝试用功能成像的方式表征前额工作记忆网络在认知、情绪和行为调节功能，将可能促进近红外脑功能成像在临床研究中的应用。我们以临床诊断以及六种波形为依据，对工作记忆这一认知和心理机制进一步划分，从认知角度对患者注意、感知觉内容、情绪行为执行功能的考察将促进相关神经机制研究，对于认知科学以及医学内表型标志物的发展具有重要意义。

关键词：近红外脑功能成像，言语认知任务，前额，工作记忆网络，精神障碍

奥氮平致多形性红斑药疹 1 例

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目的 本文报告一例奥氮平所致多形性红斑药疹的临床病例。多形性红斑典型表现为多在肢端呈对称分布的靶形或虹膜状红斑，是一种急性炎症性皮肤病。该病多见于病毒或细菌感染，亦见于抗生素等药物不良反应。

方法 奥氮平所致多形性红斑药疹的不良反临床罕见，本病例回顾奥氮平所致多形性红斑的临床表现、治疗方案，帮助临床医师更容易识别奥氮平所致不良反应，及时应对处理。

结果 奥氮平出现多形性红斑性药疹的治疗目前没有统一的规范，一般认为出现多形性红斑等严重不良反应后应立即停用奥氮平，并使用抗过敏药物。但临床实际工作中，突然停用奥氮平可能会引发恶性综合征等严重撤药反应，给患者带来更大的损害。本例患者在出现多形性红斑后，临床处理为将奥氮平逐渐减量并维持小剂量继续治疗，同时予以抗过敏药物治疗。最终患者的红斑得到了有效的治疗，也未发现给患者带来临床损害。

结论 熟悉奥氮平可能出现的不良反临床医师尤为重要，监测常见和罕见的不良反应可以显著降低与奥氮平治疗相关的致残率和死亡率。此外，如果患者充分了解其不良反应的性质和风险，并且临床医生认识到并试图治疗这些不良反应，则可以显著提高对奥氮平治疗的依从性。对其他奥氮平不良反应的适当管理有助于最大限度地提高奥氮平治疗的益处，所以奥氮平等抗精神病药物罕见的不良反应需要更多的被报道出来。

关键词：脑器质性精神障碍、奥氮平、多形性红斑、不良反应

Fronto-limbic Network Homogeneity As An Imaging Biomarker for Bipolar Disorder and Early Treatment R

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目的 The fronto-limbic network is implicated in the neurobiology of bipolar disorder (BD). However, no studies are designed to assess directly the abnormalities network homogeneity (NH) of the fronto-limbic network in BD.

方法 This study included 117 patients with BD [42 depression in BD (BipD), 38 BipM, and 37 remitted BD (rBD)] and 83 healthy controls (HCs). All participants underwent resting-state functional magnetic resonance imaging (rs-fMRI) and scale tests. NH, support vector machine (SVM) and support vector regression (SVR) were employed to analyze the data

结果 The NH values were significantly different in the frontal lobe, temporal lobe, and left precuneus among the four groups. SVM and receiver operating characteristic curves indicated that the NH values of the abnormal brain could be used to differentiate BD and HCs.

结论 NH changes may offer value as a neuroimaging biomarker capable of differentiating BD and predicting early treatment response in patients with B

关键词: Bipolar disorder; Fronto-limbic network; Biomarker; Network homogeneity; Support vector machine

骑电动车摔倒无明显脑外伤而急起精神障碍一例

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目的 以期精神科医疗护理人员增强对摔倒无明显脑外伤而急起精神病性症状的认识。同时, 摔倒无明显脑外伤而急起神病性症状案例为研究精神障碍的病程发展机制提供了一个特别的研究机会。希望通过本案例, 促进精神科临床医务人员对此类问题的识别与处理, 为临床治疗及护理提供鉴别意义。

方法 患者, 男, 17 岁。因“反复行为异常、敏

感多疑 1 周”于 2024 年 2 月 20 号入院治疗。病例资料: 2024 年 2 月 13 号患者骑电动车摔倒, 没有明显脑外伤, 出现怪异行为, 夜间不睡觉, 在床上撒饼干、方便面后并踩碎, 咬充电线等。因为摔倒时脚外踝受伤, 一直不配合换药, 自语自笑, 敏感多疑。家属无法管理患者, 保证患者安全。既往史、个人史、家族史均无特殊。精神专科检查, 患者意识清晰, 时间、地点、人物及自我定向差, 接触交谈欠合作。自知力缺乏。思维逻辑性差, 查及可疑的关系妄想、被害妄想, 记忆力、计算力明显下降。情感焦虑, 伴有轻微的抑郁情绪。意志无明显增强或减退。辅助检查: X 线: 左外踝骨折, 左外踝周围软组织肿胀。磁共振头部 MR: 考虑病理性脑萎缩: 1、脑实质欠饱满。2、脑室形态扩张、脑沟及脑裂增宽, 透明隔间腔增宽。患者有明确的脑部器质性病变, 主要以精神症状、认知功能下降等表现为主, 考虑精神症状和脑部病变相关。入院诊断 1. 器质性精神障碍 2. 左外踝骨折 3. 脑萎缩。

结果 予以酮可可碱注射液改善脑循环, 遵神经内科会诊意见加用吡拉西坦分散片营养脑神经, 予盐酸哌罗匹隆片抗精神病治疗、奥沙西洋片改善睡眠等对症处理。患者共住院治疗 14 天, 期间: 患者情绪、认知功能逐渐改善, 未再有怪异行为及敏感多疑, 睡眠改善。出院精神状况检查: 意识清晰, 定向准确。接触主动、合作, 问话能答, 基本切题。否认幻觉、妄想, 思维贫乏改善, 认知功能改善, 情感反应较前协调。自知力部分恢复。

结论 器质性精神障碍是指由严重创伤、脑血管疾病、感染、脑部肿瘤引起的精神障碍, 所以又称脑器质性精神病。器质性精神障碍既有器质性疾病的临床症状, 又有精神障碍性疾病的临床症状, 严重威胁患者的健康。对于该患者, 骑电动车摔倒无明显脑外伤史, 磁共振头部 MR 显示 1、脑实质欠饱满。2、脑室形态扩张、脑沟及脑裂增宽, 透明隔间腔增宽。患者有明确的脑部器质性病变, 主要以精神症状、认知功能下降等表现为主, 考虑精神症状和脑部病变相关。

关键词: 关键词 无明显脑外伤; 精神障碍; 发病机制

器质性抑郁障碍急起尿潴留一例

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目的 以期精神科医务人员增强对器质性抑郁障碍的认识。同时，器质性抑郁障碍引起急性尿潴留病例为此提供一个学习研究机会。我们希望通过本病例，促进精神科临床医务人员对此类问题的识别与处理，为临床治疗提供借鉴意义。

方法 患者男，73岁。因“心情差1月”于2024年4月26日入住我院治疗。2024年4月28日，患者夜间下腹部胀痛，诉一日未排尿，予留置尿管导尿。既往史、个人史、家族史：无特殊。精神检查：神清，定向准，接触交谈被动合作。否认幻觉、妄想。情绪低落、愉悦感丧失、精力下降、动力下降，情感反应尚协调。记忆、智能粗测下降。意志减退。曾有自杀行为，自知力部分存在。入院检查：头颅MRI：左侧基底节及右放射冠区腔隙灶。2、脑白质高信号（Fazekas2级）3、脑萎缩4、椎基底动脉扩张延长症；其余无特殊。入院诊断：器质性抑郁障碍。

结果 入院后给予盐酸米那普仑片 50mg/d，1周内缓慢加量至 100mg/d，在此过程中，患者急性尿潴留症状逐渐减轻，直至2024年5月4日拔除尿管，我们观察到，患者后续在住院期间，未再次发生急性尿潴留的情况。

结论 通过相关文献学习，我们总结器质性抑郁障碍的几点假设机制，其中一些较为公认的假设包括脑结构的变化、生理功能的退化、炎症[1]。对于该患者来说，整个急性尿潴留过程中未出现脑结构的负性变化，也从未使用改善脑血管疾病等药物治疗。因此脑白质病变引起脑神经功能紊乱使患者出现抑郁障碍的同时，也导致神经递质功能出现失调，使得支配排尿的神经功能出现问题，继而引发急性尿潴留症状。参考文献：[1]张孝玲,肖谦.老年期抑郁障碍危险因素的研究进展[J].现代医药卫生,2023,39(05):869-873.

关键词：器质性抑郁障碍；尿潴留；发病机制

精神分裂症研究协作组

探讨住院精神分裂症患者用药管理安全性的调查

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目的 调查住院精神分裂症患者的用药管理的安全性，为临床用药的合理性提供帮助；

方法 选择2018年3月至2019年7月入住该院住院部的精神分裂症患者128例，采用完全随机方法将患者分为观察组（64例）及对照组（64例），观察组采用阿立哌唑治疗，对照组采用利培酮治疗，对比治疗前后两组患者的药物副作用（TESS量表）及患者的严重程度（PANSS量表）评分情况；

结果 采用阿立哌唑的观察组患者在用药1疗程时与对照组比较TESS评分显著减少（ $P < 0.05$ ），且与本组用药7d相比显著下降（ $P < 0.05$ ）；对照组患者用药1疗程及用药7d比较无显著差异（ $P > 0.05$ ）；同时发现其与对照组相比，治疗后阴性症状评分显著低于对照组阴性症状评分（ $P < 0.05$ ），但总分比较无显著差异（ $P > 0.05$ ）；

结论 1. 精神分裂症绝大多数患者治疗以口服抗精神病药物治疗为主，阿立哌唑作为D1和5-HT1A受体，而利培酮主要作用于5-HT2A受体，对于患者的阴性症状来说，采用阿立哌唑起效更快。

本研究结果显示，采用阿立哌唑的患者在用药1疗程时TESS评分更低，服用阿立哌唑1疗程的患者副作用更低，阿立哌唑治疗后阴性症状评分显著低于对照组阴性症状评分，可见，在临床针对阴性症状为主的精神分裂症患者，建议选用阿立哌唑进行治疗，起效更快，副作用更低，安全性好。

总之，住院精神分裂症患者采用阿立哌唑及利培酮均能够获得较好的疗效，患者副反应小，阿立哌唑的耐受度更高，对患者的阴性症状缓解更快，可以依据患者个体情况进行针对性选择用药。

关键词：精神分裂症；安全性；用药管理；

免疫衰老与精神分裂症认知障碍的关系研究

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目的 精神分裂症 (Schizophrenia, SCZ) 患者较普通人群寿命减少约 15-20 年, 研究表明, 过早或加速衰老、免疫系统功能障碍在 SCZ 的病理机制中发挥重要作用。认知障碍是 SCZ 的核心特征, 是导致 SCZ 患者临床疗效差和预后不佳等的主要原因之一。有证据显示, T 细胞衰老与神经退行性疾病相关的认知受损有关, 但其与 SCZ 患者中认知障碍的关系目前尚不明确。基于上述内容, 本研究旨在探索免疫衰老相关 T 细胞表型与 SCZ 患者认知障碍之间的关联。

方法 从 2021-2022 年共纳入符合入组标准的慢性 SCZ 患者 65 例和健康对照 (healthy control, HC) 58 例。使用流式细胞术检测免疫衰老标志物, 包括 CD4⁺ 和 CD8⁺ 幼稚 (CD45RA⁺) 和记忆 (CD45RO⁺、CD95⁺) T 细胞的百分比; 并检测 CD8⁺CD45RA⁺/CD45RO⁺CD95⁺ 细胞亚群中细胞因子 (IFN- γ 、IL-1 β 、IL-6 和 TNF- α) 的水平, 以反映幼稚及记忆 T 细胞的功能。采用 T1 加权成像和弥散张量成像获取皮层下体积、皮层厚度和白质纤维束的分数各项异性 (fractional anisotropy, FA)。分别采用中文版 MATRICS 共识认知能力测验 (MCCB) 和阳性与阴性症状量表 (PANSS) 评估被试的认知功能或精神病理症状。

结果 (1) 与 HC 组相比, 慢性 SCZ 组中幼稚 T 细胞亚群的数量较低, 而记忆性 T 细胞亚群的数量较高。(2) 在有调节的中介模型中, 右侧顶下小叶厚度在 CD8⁺CD45RA⁺CD95⁺ 幼稚 T 细胞来源的 IL-1 β 水平对工作记忆维度得分的影响中起中介作用, 且右侧扣带束的 FA 值在 IL-1 β 水平与右侧顶下小叶厚度之间的间接路径中起调节作用。

结论 本研究从免疫衰老的角度揭示了生理性加速衰老在慢性 SCZ 患者认知缺陷中的潜在作用。能够为将来针对免疫衰老的治疗手段在临床实践中的应用与推广提供初步理论依据。

关键词: 精神分裂症; 免疫衰老; 认知障碍

Trans-scale Study of Blood-based Gene Expression, Neuroimaging Brain Phenotypes and Cognitive Performance in Schizophrenia

and Healthy Individuals

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Objective Cognitive impairments are prominent features of schizophrenia, yet the underlying biological mechanisms remain poorly understood. We aimed to explore the connections between gene expression, brain imaging characteristics, and cognitive abilities in patients with schizophrenia and healthy individuals

Methods To address this gap, we conducted a comprehensive study involving 43 individuals with schizophrenia and 60 healthy controls. Our trans-scale dataset included mRNA sequencing, brain imaging, and cognitive assessments. Multivariate correlation analysis was used to examine associations across cognitive assessments, brain volume and connectivity, and gene expression.

Results We discovered significant cognitive deficits in individuals with schizophrenia compared to controls, along with reduced grey matter volume in the hippocampal/parahippocampal (HIP/PHG) region. Additionally, we observed altered connectivity patterns between the superior temporal gyrus and the right HIP/PHG, as well as differential gene expression associated with these regions. Intriguingly, only healthy individuals exhibited significant relationships between gene expression, brain characteristics, and cognitive performance, indicating disrupted or heterogeneous relationships in schizophrenia. Moreover, we developed a diagnostic test that successfully differentiated individuals with schizophrenia from healthy controls, achieving high accuracy with AUC values exceeding 90% in independent replication and test sets

Conclusion Our study provides valuable insights into the intricate relationships between genes, brain structure/function, and cognition in schizophrenia

关键词: cognitive impairments, schizophrenia, transcription, hippocampus

不同分型精神分裂症患者事件相关电位差异性研究

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目的 了解不同分型慢性康复期精神分裂症患者事件相关电位(ERP)检查结果的差异。

方法 将 2019 年 3 月至 2020 年 3 月期间住院治疗的 206 例缓解期精神分裂症患者去除合并脑血管疾病及高血压、糖尿病、冠心病等慢性全身性疾病患者,保留偏执型及单纯型精神分裂症患者共 105 例为研究对象,其中偏执型 63 名为观察 1 组,单纯型 42 名为观察 2 组。对两组患者分别进行事件相关电位检查,比较两组患者 MMN、P300 相关靶点检测指标。

结果 两组患者事件相关电位(ERP)检查结果中的 Fz、Cz、Pz 三个电极 MMN、P300 的潜伏期均显示延迟,波幅降低。两组患者事件相关电位(ERP)检查结果中的 P300 的潜伏期值以及波幅值有明显差异,有统计学意义。两组患者事件相关电位(ERP)检查结果中的 MMN-Fz 及 MMN-Cz 潜伏期值及波幅值有明显差异,有统计学意义。两组患者事件相关电位(ERP)检查结果中的 Cz 电极 P50 门控/抑制的比值两组间比较无明显差异。

结论 比较两组患者的事件相关电位(ERP)发现单纯型精神分裂症患者 MMN 及 P300 的认知电位潜伏期延迟较偏执型患者显著。单纯型精神分裂症患者的认知功能受损与偏执型精神分裂症患者相比可能较重。

关键词: 事件相关电位,精神分裂症分型

桃红四物汤对精神分裂症患者性激素指标的影响及临床疗效的观察

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目的 探讨桃红四物汤治疗慢性精神分裂症患

者的性激素指标的影响及临床疗效的观察。对象 选取包头市第六医院 2023 年 1 月-12 月住院女患者 50 例,患者年龄为 18-50 岁,平均年龄为(36.25±5.21) 岁。

方法 将被试随机分为观察组和对照组,各 25 例,观察组在因服用抗精神病药而停经的基础上服用桃红四物汤,每日一剂,用量为 400ml / 日,早晚服用各 200 ml,7 天为一个疗程,停药 2 天后再继续服用直到来潮,连续服用 2 个月经周期,对照组单独服用抗精神病药。在治疗前、后通过静脉采血做性激素六项检查,比较两组性激素(卵泡生成激素(FSH)、黄体生成激素(LH)、雌二醇(E2)、孕酮(P)、睾酮(T)、催乳激素(PRL)指标的变化以及精神分裂症临床疗效的评定。

结果 ① 治疗后,观察组催乳激素(PRL)指标有所降低,($P < 0.05$),而对照组没有明显变化;其他 5 项激素治疗前后均无显著变化,无统计学意义,② 治疗前后,观察组和对照组 PANSS 总分、阳性症状、阴性症状、精神病理症状各项得分都显著降低,有显著差异($P < 0.01$)。

结论 桃红四物汤辅助治疗慢性精神分裂症,降低抗精神病药物引起的催乳素升高的副反应,减少女性患者闭经的发生,调节月经不调,降低药物引起的副反应,提高了临床治疗效果,值得临床上推广和应用。

关键词: 桃红四物汤 慢性精神分裂症 性激素指标 临床疗效

精神科护理带教中标准化患者微课教学的应用分析

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目的 探究精神科护理带教中基于标准化患者采用微课教学的效果。

方法 选择 2022 年在精神科实习的 17 名护生作为对照组,选择 2023 年在精神科实习的 18 名护生作为研究组。对照组中男性护生 1 名,其余均为女性护生;年龄 21-24 岁,平均年龄(21.12±1.11) 岁。研究组中男性护生 2 名,其余均为女性护生;年龄 21-24 岁,平均年龄(21.39±1.07) 岁。两组护

生在性别、年龄等一般资料上比较,差异无统计学意义 ($P>0.05$),具有可比性。纳入标准:(1)所有护生都为应届护理学本科学生。(2)护生在精神科进行 2 周的实习。排除标准:(1)护生缺勤率高。

(2)护生不能配合完成考核。

结果 研究组实习护生理论、操作考核成绩明显更高,对带教满意度评分更高 ($P<0.05$)。

结论 精神科护理带教过程中基于标准化患者采用微课教学方式,能够有效提高实习护生的理论水平、操作技能以及对带教的满意度。

精神科护理带教是培养合格精神科护理人员的重要环节[1]。随着医学教育的不断发展和创新,越来越多的教学方法被引入到精神科护理带教中。微课教学作为一种新兴的教学方式,已经在多个学科领域得到了广泛应用。本研究旨在探究精神科护理带教中基于标准化患者采用微课教学的效果。

关键词:精神科护理带教;标准化;微课

Insights Into Causal Associations between Type 2 Diabetes and Common Human Diseases: A Phenotype-wide Bi-directional Mendelian Randomization Analysis

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Objective There is substantial evidence showing the significant comorbidity between Type 2 Diabetes (T2D) and various diseases. However, there is still a need to develop a detailed understanding of the pairwise causal associations within the comorbidity networks of T2D

Methods The phenome-wide Mendelian ran-

domization (MR) analyses were conducted to investigate the bidirectional causal relationship between type 2 diabetes (T2D, with 180,834 cases) and 892 common diseases in the FinnGen datasets (with 377,277 cases). Inverse variance weighting was the primary method used, supplemented by weighted median and MR-Egger approaches for sensitivity analyses

Results In the MR analysis, a total of 41 diseases were causally associated with T2D risk (average b: 0.124). This included 9 neurological diseases (average b: 0.178), 8 psychiatric and behavioral diseases (average b: 0.003), 7 circulatory diseases (average b: 0.120), and 5 digestive system diseases (average b: -0.002). Our reverse MR analysis showed that T2D was causally linked to the risk of 120 disease phenotypes (average b: 0.103). This included 35 circulatory diseases (average b: 0.118), 24 genitourinary system diseases (average b: 0.132), 15 skin, muscle, bone, and connective tissue diseases (average b: 0.067), 11 endocrine system diseases (average b: 0.114), 10 digestive system diseases (average b: 0.109), among others. Bidirectional causality was observed between T2D and 16 diseases. Most MR analyses showed little evidence of heterogeneity and pleiotropy

Conclusion Our findings highlight the broad yet limited causal effect that T2D exerts on other human diseases. Conversely, analyses investigating the impact of other diseases on T2D show a more confined scope but a greater magnitude of effect

关键词: Type 2 Diabetes; GWAS; Phenome-wide; Bi-directional; Mendelian randomization; FinnGen

The Expression of Immune Related Genes and Potential Regulatory Mechanisms in Schizophrenia

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Objective This study aimed to investigate the role of immune dysfunction in the pathogenesis of schizophrenia through single-cell transcriptome and

bulk RNA data analyses

Methods The single-cell RNA sequencing (scRNA-seq) was selected to assess the cellular composition and gene expression profiles of the brain tissue. Further, bulk RNA sequencing data was utilized to corroborate findings from the single-cell analyses and provide additional insights into the molecular changes associated with the disease. Gene-drug interaction data was also included to identify potential therapeutic drugs targeting these dysregulated immune-related genes in schizophrenia

Results We discovered significant differences in cellular composition within schizophrenia tissue, including increased infiltration of fibroblasts, horizontal basal cells, monocytes, mesenchymal cells, and smooth muscle cells. The investigation of immune-related genes revealed significantly different expression of genes such as S100A2, CCL14, IGHA1, BPIFA1, GDF15, IL32, BPIFB2, HLA-DRA, S100A8, PTX3, TPM2, TNFRSF12A, GREM1 and others. These genes possibly contribute to the progression of schizophrenia through various pathways such as humoral immune response, IL-17 signaling pathway, adaptive immune response, antigen processing and presentation, and gut IgA production. Our findings also suggest possible transcriptional regulation in schizophrenia's immune dysfunction by transcription factors in monocytes, neutrophils, endothelial cells, and epithelial cells. Lastly, potential therapeutic drugs were identified through gene-drug interaction data, such as those targeting HLA-A and HLA-B

Conclusion The cellular heterogeneity and immune-related gene dysregulation play important roles in schizophrenia, which provides a foundation for understanding the pathogenesis and developing new treatment methods

关键词: Schizophrenia, scRNA, bulk RNA, immunity related genes, mechanism

首发和复发未用药精神分裂症患者的新型炎症指标水平与攻击性的相关分析

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目的 探讨新型炎症指标水平与首发和复发未用药精神分裂症患者攻击行为发生的相关性, 以期减少精神分裂症患者攻击行为的发生提供参考。

方法 前瞻性选取 2022 年 10 月-2024 年 4 月期间在安徽医科大学附属巢湖医院新入院的、符合《诊断与统计手册: 精神障碍(第 5 版)》(DSM-V) 精神分裂症诊断标准的 168 例从未服药或至少两周未服药精神分裂症患者为研究对象, 根据是否首次发病分为首发组 58 例与复发组 110 例, 使用改良版外显攻击行为量表(Modified Overt Aggression Scales, MOAS) 分别对两组患者进行攻击性评估。使用自制问卷收集患者的一般人口学资料和临床资料, 采集入院第二天的血液学数据(中性粒细胞、单核细胞、淋巴细胞和血小板计数以及高密度脂蛋白)。同期招募年龄和性别相匹配的 110 例健康对照人群(健康对照组)。采用 Spearman 相关性分析精神分裂症患者的炎症指标水平与 MOAS 总分的关系, 采用二元 logistic 回归分析精神分裂症患者攻击性评分的影响因素。

结果 与健康对照组相比, 首发组和复发组的 NLR、MLR、PHR、MHR 显著升高, NHR 显著降低, 首发组的 PLR 显著升高。Spearman 相关性分析显示, 首发组中 MOAS 总分未发现与任何炎症指标存在相关性; 复发组中 MOAS 总分与 NLR、MLR、PLR 呈正相关($r=0.234, 0.192, 0.234$, 均 $P<0.05$)。复发组有攻击性患者 NLR、PLR、MLR[分别 2.69(1.83,3.78) 比 2.11(1.50,2.50)、129.91(94.85,166.03) 比 100.00(81.44,122.49)、0.24(0.18,0.32)比 0.19(0.14,0.26)]显著高于无攻击性患者, LHR[1.64(1.23,2.17)比 1.87(1.62,2.26)]显著低于无攻击性患者。二元 Logistic 回归分析发现 NLR 是复发精神分裂症患者攻击行为发生的影响因素。

结论 NLR 与复发精神分裂症患者攻击行为的发生存在相关性, 对减少精神分裂症患者攻击行为的发生具有参考价值。

关键词: 精神分裂症; 首发; 复发; 炎症指标; 攻击性

精神分裂症快感缺失及社会认知加工缺陷的

P300 证据

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目的 快感缺失(Anhedonia) 作为精神分裂症的核心症状之一, 患者通常难以识别愉快情绪, 对快乐情绪的感受力下降。本研究旨在利用事件相关电位中 P300 成分检测精神分裂症患者快感缺失与社会认知加工缺陷的相关关系, 为临床精神分裂症患者的预后好坏及社会认知功能评估指标提供理论依据。

方法 本研究经过医院伦理委员会批准, 随机招募近 3 年来符合 DSM 5 精神分裂症诊断标准的住院患者 30 例, 及自愿参与研究的正常对照组 31 例, 通过观看愉快面孔情绪图片诱发其愉快情绪(快感体验)及中性面孔情绪图片任务(作为对比刺激), 情绪图片均来源于中国化面孔情绪图片系统(Chinese Facial Affective Picture System, CFAPS)。本实验采用经典的 Oddball 范式, 在实验室条件下, 模拟真实的人际交往互动, 设置愉快情绪面孔为快乐情绪的诱发条件(快感唤起)。利用 ERP 技术同步记录大脑在快感体验的认知加工过程, 通过对比精神分裂症组及健康组的 P300 成分的波幅及潜伏期。

结果 P300 波幅反映面孔识别加工过程, 与情绪表情的辨认和识别有关, 反映了对刺激物注意力的资源分配, 当模拟人际交往的快感唤起时, 与健康人群相比, P300 成分在精神分裂症患者中的波幅降低($2.839 \pm 0.453 \mu\text{V}$, $P < 0.05$), 这说明精神分裂症的愉快情绪无法被等价唤起。P300 潜伏期反映大脑对情绪诱发事件进行识别、加工的所需时间, 精神分裂症在快感唤起时, 与健康组相比 P300 成分潜伏期延长($321.613 \pm 31.754 \text{ms}$, $P < 0.05$), 这说明精神分裂症患者在快感唤起时需要更多的加工时间。

结论 精神分裂症患者存在快感缺失, 在识别及加工愉快情绪面孔的能力受损, 识别加工的时间更长。精神分裂症患者在识别及加工愉快情绪面孔的能力受损, 在人际交往中, 无法准确识别及提取愉快信息。该研究在脑加工水平揭示关于精神分裂症患者快感缺失与认知加工缺陷研究的临床证据。

基金项目: 福建医科大学启航基金项目

关键词: 精神分裂症, 快感缺失, 社会认知功能, P300 成分, 振幅, 潜伏期

鲁拉西酮与利培酮对女性精神分裂症患者疗效比较

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目的 分析女性精神分裂症患者选择利培酮、鲁拉西酮治疗的效果。

方法 选择 2021 年 3 月-2023 年 3 月期间我院接收的女性精神分裂症患者, 共计 80 例展开研究, 以随机数表的方式实施分组, 给予对照组患者实施利培酮药物治疗, 研究组选择鲁拉西酮药物治疗。通过 PANSS 减分率, 对患者临床疗效进行评估, 当减分率在 25%—49% 代表有效; 在 50%—74%, 代表显效; $\geq 75\%$ 代表痊愈; $< 25\%$ 代表无效。PANSS 阴性和阳性量表进行评分, 分值越高, 表明患者的症状越严重, 血清催乳素比较, 副反应量表比较不良反应发生情况。

结果 研究组的临床疗效 92.5% 与对照组 87.5% 之间数据差异不明显, 不存在统计学价值 ($P > 0.05$); 对照组、研究组的 PANSS 评分差异, 没有统计学价值 ($p > 0.05$); 治疗 6 周、12 周、24 周后, 对照组血清催乳素水平明显高于研究组, 差异没有统计学价值 ($P < 0.05$); 对照组与研究组都没有发生严重不良事件, 两组不良反应发生率不存在统计学差异 ($P > 0.05$)。

结论 比较利培酮与鲁拉西酮药物治疗女性精神分裂症患者的效果可知, 两种药物都能用于治疗女性精神分裂症患者, 且不良反应较少, 可在临床中防范应用。

关键词: 女性精神分裂症患者, 利培酮, 鲁拉西酮

Analyses of Single-cell and Bulk RNA Sequencing Combined with Machine Learning Reveal The Expression Patterns of Disrupted Mitophagy in Schizophrenia

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Objective Mitochondrial dysfunction is an important factor in the pathogenesis of schizophrenia. However, the relationship between mitophagy and schizophrenia remains to be elucidated

Methods Single-cell RNA sequencing datasets of peripheral blood and brain organoids from SCZ patients and healthy controls were retrieved. Mitophagy-related genes that were differentially expressed between the two groups were screened. The diagnostic model based on these genes was constructed using two machine learning methods, and the relationship between mitophagy and immune cells was analyzed. Single-cell RNA sequencing data of brain organoids was used to calculate the mitophagy score (Mitoscore)

Results We identified seven mitophagy genes that were differentially expressed in schizophrenia patients, and this gene signature was an independent risk factor for schizophrenia. The mitophagy genes were related to the infiltration of neutrophils, activated dendritic cells, resting NK cells, regulatory T cells, resting memory T cells, and CD8 T cells. In addition, we identified 12 cell clusters based on the Mitoscore, and the most abundant neurons were further divided into three subgroups. Results at the single-cell level showed that Mitohigh_Neuron established a novel interaction with endothelial cells via SPP1 signaling pathway, suggesting their distinct roles in SCZ pathogenesis

Conclusion We identified a mitophagy signature for schizophrenia that provides new insights into disease pathogenesis and new possibilities for its diagnosis and treatment

关键词: Schizophrenia, Mitophagy, Bulk RNA analysis, Single-cell RNA analysis, Machine learning.

母体免疫激活雄性子代大鼠行为学异常表达与年龄变化的相关研究

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目的 分析母体免疫激活大鼠模型雄性行为学的异常表现与年龄之间的关系。

方法 在 SD 大鼠孕 9 天尾静脉注射 10 mg/kg 的 Poly I:C (n=14) 或等体积生理盐水 (n=14), 3 小时后尾静脉采血做孕鼠血浆的炎症因子水平, 判断母体免疫激活成功; 挑选出生后的雄性后代, 随机分为 Poly I:C 组和 Saline 组, 在子代大鼠出生 40 天、60 天 (postnatal day 40, P40, postnatal day 60, P60) 进行行为学检测。

结果 1. 孕鼠血浆结果显示: Poly I:C 组 IL-6 ($P < 0.001$)、IL-1 β ($P < 0.001$) 和 TNF- α ($P < 0.001$) 炎症因子水平均显著高于 Saline 组。

2. 行为学检测结果 开放旷场实验中 P60 两组大鼠运动总距离无显著统计学差异, 中心区域活动距离明显减少 ($P < 0.001$); 在黑白箱实验中 P60 的 Poly I:C 在白箱中逗留的时间显著减少 ($P < 0.001$), 在 P40 中两组未有差异; 在高架十字迷宫中 P60 的 Poly I:C 组入开放臂的时间显著减少 ($P < 0.001$), 进入开放臂的次数无显著统计学差异; 在 PPI 实验中 P60 的 Poly I:C 组在 75dB ($P < 0.05$)、80dB ($P < 0.01$) 及 85dB ($P < 0.001$) 抑制率均显著降低, P40 的两组间未见差异。

结论 母体免疫激活可导致后代的发育特异性行为障碍。

关键词: Poly I:C; 母体免疫激活; 行为学; 大鼠

棕榈酸帕利哌酮注射液治疗稳定期精神分裂症患者依从性的影响因素分析

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目的 研究棕榈酸帕利哌酮注射液治疗稳定期精神分裂症患者依从性的影响因素。

方法 纳入 2020 年 8 月-2022 年 12 月在上海市虹口区精神卫生中心门诊就诊并使用棕榈酸帕利哌酮注射液治疗的稳定期精神分裂症患者 122 例。收集患者基本信息、疾病特征及治疗情况、康复支持等资料, 进行随访 1 年, 观察患者使用棕榈酸帕

利哌酮注射液治疗的依从性,采用多因素 Logistic 回归分析法分析棕榈酸帕利哌酮注射液治疗稳定期精神分裂症患者依从性的独立影响因素。

结果 1 年随访期内, 1 例失访(死亡), 有效随访 121 例, 其中 36 例中断治疗, 85 例患者仍在接受棕榈酸帕利哌酮注射液治疗, 依从率为 70.25%。单因素分析显示工作情况、病程、副反应、监护人年龄、监护人文化程度、家庭人均月收入、患者参加个案管理是影响治疗依从性的相关因素。多因素 Logistic 回归分析显示, 病程(OR=5.214,95%CI=1.777-15.297,P=0.003)、副反应(OR=6.065,95%CI=2.310-15.921,P<0.001)、监护人文化程度(OR=0.260,95%CI=0.097-0.701,P=0.008)、患者参加个案管理(OR=0.186,95%CI=0.055-0.635,P=0.007)是棕榈酸帕利哌酮注射液治疗稳定期精神分裂症患者依从性的独立影响因素。

结论 长病程、出现副反应可能是稳定期精神分裂症患者棕榈酸帕利哌酮注射液治疗依从的危险因素, 监护人文化程度高及患者参加个案管理是保护因素, 选择合适的患者、加强患者家属对疾病的认知、减少治疗副反应及针对患者开展个案管理是提升依从性的举措。

关键词: 棕榈酸帕利哌酮注射液; 稳定期; 精神分裂症; 依从性; 影响因素

鲁拉西酮联合舍曲林治疗精神分裂症伴强迫症状 1 例

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目的 本文报道了 1 例鲁拉西酮联合舍曲林治疗精神分裂症伴强迫症状的案例, 旨在提高对本病的识别能力, 提高治疗的有效率。

方法 病史摘要 患者, 男性, 20 岁, 未婚, 无业, 汉族。患者缘于 2021 年 1 月无明显诱因出现凭空闻声, 听到别人说他坏话, 感到被监控, 疑人害, 常对空谩骂, 无法工作。曾就诊本院诊断为“偏执型精神分裂症”, 予“奥氮平、利培酮”等治疗, 病情好转后出院。在门诊规律随诊, 后反复出现双眼上翻, 持续 5-30 分钟, 每周 2-7 次, 出现此症状前一般提

前会有预感, 多在情绪紧张、凭空闻声后出现, 并不感到痛苦, 后反复在我院门诊就诊, 考虑为“1.精神分裂症 2.锥体外系反应”, 先后予“奥氮平、利培酮、氨磺必利、氯氮平、齐拉西酮、丙戊酸钠、苯海索”等足量足疗程治疗, 妄闻多疑好转, 双眼上翻并未缓解。于 2023 年 4 月再次入住本院精神科。症状体征 凭空闻声、疑人害、双眼上翻。身高 179 cm, 体重 75kg, T 36.6°C, P 89 次/分, R 19 次/分, BP 137/82mmHg。

入院检查: 血常规、心电图、颅脑 MRI 等相关检查未见明显异常; 入院量表评估: PANSS87 分, BPRS 45 分, Y-BOCS18 分, HAMA 17 分, HAMD 8 分, YMRS 9 分, RESESE 4 分, ADL 17 分, GAS 40 分。**精神检查:** 感知觉及思维: 可引出假性幻听, 语量、语速适中, 思维逻辑欠条理, 引出关系妄想、被害妄想。存在反复双眼上翻的强迫行为, 出现此行为前自身会提前感知, 多继发于情绪紧张及幻听, 东莨菪碱、苯海索治疗后无效。部分自知力, 余精神检查无特殊。

诊断 根据 ICD10 诊断标准, 诊断: 精神分裂症。

治疗方法 治疗逐渐滴定鲁拉西酮及舍曲林, 予鲁拉西酮 80mg qn 联合舍曲林 150mg qd 系统治疗, 结合认知行为治疗, 治疗 2 周后, 患者双眼上翻症状明显减轻, 发作频率及持续时间明显减少。治疗 1 个月后, 患者凭空闻声、多疑明显减轻, 双眼上翻症状基本消失, 情绪平稳。经药物联合认知行为治疗, 患者好转出院。

出院时 PANSS 51 分, BPRS 17 分, Y-BOCS 3 分, RESESE 2 分, HAMA 6 分, HAMD 4 分, YMRS 5 分, ADL 15 分, GAS 75 分。在出院后第 2 周、第 1 个月、第 2 个月、第 3 个月、1 年随访中, 除了随访第 1 个月时患者出现了 1 次双眼上翻, 持续约 1 分钟, 其他时间未再出现双眼上翻症状。

结果 临床转归 患者强迫症状基本消失, 凭空闻声、多疑明显减轻, 在出院后 1 年内的随访中, 病情稳定, 可正常工作、生活。

结论 鲁拉西酮联合舍曲林可治疗精神分裂症伴强迫症状。

关键词: 鲁拉西酮; 舍曲林; 精神分裂症; 锥体外系副反应; 强迫症状

精神分裂症合并周期性血小板减少性紫癜的认识

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目的 帮助精神科护士对精神分裂症合并血小板减少性紫癜的认识,同时为血小板减少患者护理提供一个独特研究机会。我们希望通过本案例,促进临床精神科护士对此类问题的识别与处理,为临床护理提供借鉴意义。

方法 在临床中我们发现一例精神分裂症合并血小板减少性紫癜的病例。通过症状检查及检验:白细胞计数 $17.02 \times 10^9/L \uparrow$, 血红蛋白浓度 $89g/L$, 血小板计数 $197 \times 10^9/L$, 网织红细胞计数 $20.11\% \uparrow$, 网织红细胞绝对值 $556.2010^6/g/L \uparrow$, D-二聚体 $1500\mu g/L$ FEU t, 红细胞碎片手工计数 15.0% , 直接抗球蛋白试验(抗 C3)弱阳性(士)。入院后患者出现乱语、自语自笑自哭等行为,失眠,思维较散漫,否认幻觉等精神病性症状,注意力欠集中,情绪易激,协调精神运动性兴奋,自知力缺乏。

结果 周期性血小板减少性紫癜(CTP)临床特征为周期性血小板减少与血小板增多,血小板数在一定范围内波动,谷值与峰值间隔有一相对的规律性,可出现不同程度的出血倾向。由于 CTP 有一些临床特征与 ITP 相似,CTP 常误诊为原发免疫性血小板减少症(primary immunologic thrombocytopenic purpura, ITP),不少患者被误诊为 ITP 并接受包括皮质类固醇、血小板生成素受体激动剂、利妥昔单抗和脾切除术的治疗,随后血小板计数短暂增加,不久后再次出现血小板减少,这被错误地归因于不可避免的“复发”而再次治疗,造成疾病负担和痛苦,当诊断 CTP 时需注意与 ITP 相鉴别。CTP 可以通过频繁的血小板计数监测来诊断,揭示周期性血小板循环的典型模式。CTP 的出血表型通常是轻微的,包括血小板计数处于最低点时的皮肤黏膜出血,其他部位可能发生严重出血,但少见。CTP 可能与血液恶性肿瘤或甲状腺疾病有,目前主要认为与周期性的血小板生成和/或破坏的变化有关,包括可能的病因及发病机制:①巨核细胞数的周期性变化。②血清 TPO 水平变化。③巨核细胞在对 TPO 新陈代谢的调控中的重要的作用。④与自身免疫有关。⑤大颗粒淋巴细胞疾病导致周期性血小板减少。⑥随月经周期变化。本例患者为女性精神分裂症患者,存

在月经周期性失血等因素造成的血小板改变。

结论 结合病史及检测结果,诊断血小板减少性紫癜明确,该病是由于血管性血友病因子裂解酶(ADAMTS13)活性缺乏引起广泛微血管血栓形成,导致微血管内容血、消耗性血小板减少。血浆置换是主要治疗手段,现患者临床症状缓解、血小板计数恢复正常,可考虑降低血浆置换频次,必要时复查 ADAMTS13 活性。

关键词: 精神分裂症; 血小板减少性紫癜; 认识

精神科椎体外系反应识别和护理

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目的 帮助精神科护士对抗精神病药物所致锥体外系反应(Extrapyramidal symptoms, EPS)的识别与护理,保证患者安全,提升护理质量,通过本案例,促进临床精神科护士对类似问题的识别与处理,为临床提供经验。

方法 临床护士牢记以下症状:急性肌张力障碍,出现最早,儿童和青少年较多见。可引起扭转、重复运动以及异常姿势,其好发于舌头、脸和脖子,如咀嚼肌受累--下颌不能闭合。面,颈和舌肌受累--口眼歪斜,眼球向上凝视(动眼危象),斜颈,伸舌卷舌,张口,扮相。喉肌受累--言语、吞咽困难。四肢、躯干肌受累--角弓反张,扭转痉挛,步态不稳。静坐不能,治疗 1-2 周后最常见,表现为不可控制的激越不安、不能静坐,来回走动或原地踏步。重者可出现焦虑,易激惹。类帕金森综合征,一般于治疗 1-2 月发生,发生率可高达 56%。特征:运动不能;肌肉强直;震颤;植物神经功能混乱。临床表现:动作笨拙,迟缓,少动,肌肉僵硬,面具脸,慌张步态,静止性震颤和流涎,多汗及皮脂溢出。迟发性运动障碍(TD),多见于持续用药几年后。服药,减药或停药时均可出现,老人和有躯体病者为高危人群。临床表现:不由自主,有节律的刻板式运动为特征。颊-舌-咀嚼综合征,表现为吸吮、舔舌,鼓腮,躯干或四肢舞蹈或指划样运动。

结果 通过牢记症状,护理人员熟悉精神药物的基本知识及其副作用的护理。常见原因:①病人

个体差异对药物的耐受性不同、产生副作用也各异。
 ②不同种类的药物及给药途径。③疾病的不同时期。
 ④药物的蓄积作用。必要的处理：医护沟通，分析患者发生的锥体外系反应症状，对严重的副反应，应及时更改药物的种类及给药途径。吞咽的处理：轻者进食水发生呛咳，重者可发生窒息死亡。故对一般困难者，给半流或流质饮食，要小心喂食；严重者停止口腔进食，可鼻饲饮食或静脉输液，保证摄入量。便秘的处理：属一般副作用，不影响治疗，但病人极为痛苦。应鼓励病人多运动，适量多饮水，多吃蔬菜。如三日无大便应予灌肠或给予导泻药物处理。心理护理：护理人员以心理学理论为指导通过语言、表情、态度、姿势、行为、文字和周围环境的合理安排，对病人进行科学的启发、教育或暗示，改变患者的感受、认识、情绪和行为等，从而达到改善其心态、行为方式，促其病情好转或康复的一种重要的护理形式。

结论 采取牢记主要的症状，可以为临床护士简单的掌握患者发生的锥体外系反应，提升临床护理质量，保证患者的治疗及安全。

关键词：锥体外系；识别；护理

1 例精神分裂症伴股骨粗隆间骨折精细化护理

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目的 精神分裂症是一种以个性改变，思维、情感和行为分裂、精神活动与环境不协调为主要特征的精神疾患，当患者行为紊乱又合并股骨骨折时会大大增加护理工作的难度和治疗的复杂性，影响愈后及增加并发症的机会，现报道 1 例青年精神分裂症伴股骨粗隆间骨折的住院患者，探讨精神分裂症伴股骨粗隆间骨折患者的精细化管理。

方法 病例介绍：患者男，20 岁，6 年前诊断为精神分裂症，因骑电动车不慎摔倒，右髌部着地后疼痛、活动受限就诊，急诊 X 光检查提示右侧股骨粗隆间骨折，于全身麻醉下行右股骨粗隆间骨折切开复位钢板、螺丝钉、空心钉内固定术。术后五天患者出现言语混乱、精神狂躁，易激惹，不配合卧床休息和康复，自行下床随意移动术肢，转入我科治

疗。

精细化护理措施：1.心理护理：建立良好信任的护患关系，给予更多的关心和爱护，精神分裂症患者多缺乏自知力而精神科住院环境封闭特殊，肢体约束，患者会缺乏安全感，不安心住院者居多，护理操作尽量集中进行，建立良好的护患关系，承诺配合治疗能减轻术肢疼痛和早日出院，以取得患者信任与配合。2.治疗护理原发病：控制精神症状是减少行为紊乱的关键。3.安全管理：评估并制定合理化的安全防护措施，床头挂“防跌倒坠床”“禁止下床”标识，给予床栏，做好健康教育，加强巡视和床头交接，注意晚夜班管理。4.病情观察：注意观察精神症状和术肢情况，防止移位、感染，行为紊乱必要时给予保护性约束和使用镇静药或安眠药。5.鼓励感兴趣的事情转移患者注意力。5.满足患者的日常需求：将常用物品及食物放在伸手可取的位置，减少患者因取物而自行下床。6.预防压疮：卧床期间注意翻身，髌部放置软垫。7.饮食护理：进食高蛋白、高维生素、高钙、高纤维易消化的食物以加快切口及骨折的愈合，防止便秘。8.功能锻炼：向患者及家属交待术后注意事项及功能锻炼的必要性，早期积极活动，指导帮助进行踝关节背伸屈活动，根据病情协助床上坐起，给与及时的表扬与肯定，可使用零食等东西适当奖励，提供患者积极性和治愈信心。

结果 患者精神状态好转，无术肢畸形脱位，可依靠拐杖下床活动，解除保护性约束能控制，顺利出院。

结论 以往报道的精神分裂的股骨骨折患者多为老年，体力及行为紊乱程度容易在可控范围，当年轻力壮的中青年患者，股骨骨折需严格卧床与行为紊乱不配合卧床的矛盾冲突时大大的增加了治疗护理难度，建立良好信任的护患关系，根据患者的生理及心理特点来加强精神专科治疗和术后护理，有针对性的预防和控制并发症可大大提高患者治疗依从性及减少并发症的发生。

关键词：精神分裂症 股骨粗隆间骨折 精细化护理 功能锻炼

TDCS Combined with RTMS for The Treatment of Negative Symptoms in Patients with Schizophrenia: Study Protocol for A Randomized Controlled Trial

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Objective Despite the significant advancements in the field of psychopharmacology, the majority of patients with schizophrenia retain disabling symptoms, most commonly a variety of negative symptoms. Physiotherapy techniques, due to their high compliance and safety, are increasingly being used in the treatment of schizophrenia. Neuroimaging and neurophysiological studies have shown that negative symptoms are associated with abnormal brain activity in the combined right and left dorsolateral prefrontal and temporoparietal joint regions, and that physical therapy techniques can modulate cortical activity. Therefore, we aimed to investigate the efficacy of combining transcranial direct current stimulation (tDCS) with repetitive transcranial magnetic stimulation (rTMS) on negative symptoms in patients with schizophrenia and explore the possible mechanisms

Methods This is a double-blind, randomized, placebo-controlled study investigating the efficacy of tDCS combined with rTMS over a 4-week treatment period, and with a 2-week follow-up period in patients with predominantly negative symptoms of schizophrenia. There are 4 intervention modalities, including active tDCS stimulation combined with active rTMS stimulation, active rTMS stimulation combined with sham tDCS stimulation, active tDCS stimulation combined with sham rTMS stimulation, and sham tDCS stimulation combined with sham rTMS stimulation. The primary outcome measure will be changes in the Negative Symptom Assessment Scale (SANS), with secondary outcomes including changes in Positive and Negative symptom scale (PANSS) total and negative total scores, changes in the MATRICS Consensus Cognitive Battery (MCCB), changes in local brain activity (functional magnetic resonance imaging, fMRI) and white matter integrity (diffusion tensor imaging, DTI), changes in laboratory examination indices and changes in psycho-behavioral and EEG indices

Results This is the first clinical trial combining tDCS with rTMS for the treatment of schizophrenia patients with predominantly negative symptoms. This study will provide robust evidence for the efficacy of combining tDCS with rTMS for the treatment of negative symptoms in schizophrenia. In addition, our study will help to further explore the mechanisms of tDCS combined with rTMS for the treatment of negative symptoms in schizophrenia in terms of imaging and behavior

Conclusion 关键词: tDCS; rTMS; negative symptoms; schizophrenia

精神分裂症患者左侧中央后回核磁功能异常

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目的 来自核磁共振的结构和功能研究表明,精神分裂症(SZ)患者存在异常的大脑结构及功能。大部分研究中是横断面的观察性研究,纵向队列研究较少,而且目前研究结果异质性大,结论不一致。

方法 我们招募 110 名 SZ 患者,在抗精神病药物治疗的基线和第 8 周进行大脑结构和静息状态功能成像扫描,同时对 100 名健康对照(HC)进行基线扫描以进行比较。计算个体基于体素的大脑灰质体积(GMV)、区域一致性(ReHo)、低频振幅(ALFF)、度中心性(DC)和功能连接(FC)。应用 PANSS 和 MCCB 评估 SZ 患者的精神病性症状和认知功能。

结果 与基线 HC 相比, SZ 患者大脑 GMV 减少,右侧尾状核 ALFF 和 ReHo 值较高,双侧中央后回 ALFF 和 ReHo 值较低。治疗 8 周后,右侧小脑下部、左内侧额上回、右背外侧额上回、右侧额中回 ALFF 和 ReHo 值增高,左侧枕中回、左侧中央后回 ALFF 和 ReHo 值降低。左侧中央沟盖 DC 和 ReHo 值降低。在 PANSS 五因子、三因子模型中,发现多个治疗前后差异脑区与 PANSS 评分变化具有相关性。以差异脑区为 ROI 进行 FC 计算得出,8 周治疗后左侧中央后回与右侧眶部额上回、左侧眶部额中回、右侧枕下回、左侧眶部额上回、左内侧额上回、左侧中央后回连接减弱。

结论 这些发现为 SZ 结构和功能活动异常假

说提供了新的证据,提示多个异常脑区的功能变化与疗效反应相关,特别是SZ患者左侧中央后回存在功能的缺陷,其功能指标的变化与抑郁症状、认知症状相关。

关键词:精神分裂症,核磁共振,左侧中央后回,ALFF,ReHo,FC

药物基因组学检测在难治性精神分裂症患者中的临床效能研究

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目的 为提升难治性精神分裂症患者用药有效性、安全性,本文重点探讨药物基因组学检测在难治性精神分裂症患者中的应用效果。

方法 选择2021年11月—2022年9月间在衢州市第三医院诊治的难治性精神分裂症男性患者100例纳入研究,依据随机数表法将患者分为对照组(基于医生经验用药)和观察组(基于药物基因检测用药),每组50例。比较2组治疗依从性、临床疗效、自知力、生活质量、出院1个月及1年的社会适应状况、复发率、不良反应发生率。

结果 治疗1个月后,观察组患者阳性症状、阴性症状、一般精神病理症状评分均低于对照组[(20.11±2.67)分 vs. (23.89±3.10)分, (15.02±1.88)分 vs. (18.27±2.33)分, (30.35±2.93)分 vs. (35.24±3.80)分,均 $P<0.001$];观察组自知力评定量表(SAI)与简明健康状况调查问卷(SF-36)评分均明显高于对照组[(10.27±1.71)分 vs. (7.24±1.62)分, (88.06±18.37)分 vs. (73.41±16.82)分,均 $P<0.001$]。出院1个月及1年后,观察组个人和社会功能量表(PSP)评分均明显高于对照组[(68.30±6.10)分 vs. (59.24±5.68)分, (81.32±7.30)分 vs. (75.49±6.29)分,均 $P<0.001$];观察组药物相关不良反应发生率明显低于对照组($P<0.05$)。出院1年后,观察组复发率明显低于对照组($P<0.001$)。

结论 依据药物基因组检测结果指导难治性精神分裂症临床用药优势明显,患者依从性高,缓解症状快,改善患者生活质量、社会适应性,复发率及不良反应率低,值得临床推广应用。

关键词:难治性精神分裂症;药物基因组学检

测;自知力评定量表;简明健康状况调查问卷

养心疏肝汤加减联合阿立哌唑治疗精神分裂症患者的影响

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目的 观察养心疏肝汤加减联合阿立哌唑治疗精神分裂症患者的效果。

方法 对照组采用西药治疗:阿立哌唑片(江苏恩华药业股份有限公司,国药准字H20140121,规格10mg,批号201611022)10mg/次,1次/d,2周后可酌情加量,最高不超过30mg/d。观察组采用中西医结合治疗:阿立哌唑片的用量用法与对照组相同,中药养心疏肝汤组成为茯神15g,黄芪15g,柴胡15g,龙眼肉12g,柏子仁12g,郁金12g,半夏9g,生地15g,川芎12g,远志12g,牡丹皮9g,石菖蒲9g,酸枣仁15g,炙甘草9g,肾虚甚者加牡蛎9g、龙骨9g,瘀血内停加桃仁9g,痰瘀甚者加茯苓12g、苍术9g,水煎取汁400ml,分成200ml/次,于早9:00和晚9:00服用。4周为1个疗程,两组治疗2个疗程。

结果 观察组总有效率为88.10%高于对照组的69.05%($P<0.05$);观察组PANSS各量表评分与CGI-SI评分均低于对照组($P<0.05$);观察组不良反应发生率为7.14%低于对照组的28.57%($P<0.05$)。

结论 采用养心疏肝汤联合阿立哌唑治疗精神分裂症,患者病情得到明显控制,疗效优于单用阿立哌唑,并能减少不良反应发生,值得推荐。

关键词:精神分裂症;养心疏肝汤;阿立哌唑;不良反应

轻微精神病综合征患者认知功能障碍研究进展

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目的 轻微精神病综合征 (attenuated psychosis syndrome, APS) 是指具有高度精神病风险的临床障碍, 梳理 APS 患者的认知功能特征及干预进展, 为 APS 患者早期识别和有效干预提供有价值的参考。

方法 课题组以“attenuated psychosis syndrome”、“ultra high risk psychosis syndrome”、“cognitive impairment”、“brain mechanism”、“cognitive intervention”为关键词, 系统检索 PubMed、EMBASE、Scopus、中国知网、万方数据知识服务平台、维普网数据库等数据库。检索时间为从建库至 2024 年 3 月 1 日, 限定语种为英文或中文。按照纳入、排除标准严格筛选后对文献进行综述。

结果 APS 患者通常表现出明显的多维度认知功能受损, 尤其是注意力和记忆力。APS 患者认知功能障碍与额叶、颞叶及皮层下脑区的功能和结构异常有关。针对 APS 患者的认知功能干预, 国际指南推荐认知行为治疗 (cognitive behavioral therapy, CBT) 作为一线治疗。如果心理治疗无效, 可为成年患者短暂使用低剂量的第二代抗精神病药物。此外, 营养治疗、计算机认知训练也显示出一定的疗效, 这为临床认知功能干预提供了重要的补充。

结论 APS 患者的认知功能对疾病转归及预后至关重要。已有认知功能干预方法对 APS 患者具有一定的疗效, 然而干预方法相对传统, 未来可利用计算机、虚拟现实、人工智能等技术, 开发新型认知功能干预程序。同时, 结合脑影像、电生理等客观生理学指标探究 APS 认知功能干预脑机制, 为深入认识 APS 认知功能障碍神经病理机制, 探寻更优的认知功能干预方式提供重要方向。

关键词: 轻微精神病综合征, 认知功能障碍, 脑机制, 干预

患者死亡的一个重要原因, 自杀相关的高发生率给社会和家庭带来了沉重的负担。因此, 精神分裂症患者自杀风险相关因素的早期识别, 并且制定相应的干预治疗措施, 对减少自杀导致的不良后果具有重要意义。本文将从精神分裂症患者产生的自杀行为为相关影响因素、干预措施等方面进行综述。以期早期发现精神分裂症患者的自杀行为, 从而为更好的选择干预措施提供参考依据, 旨在为精神分裂症患者自我伤害预防工作提供思路和科学根据。

方法 我们采用关键词检索的方式, 以“自伤 (self-injury)、自残 (self-harm)、自杀 (suicide)、精神分裂症 (schizophrenia)”等作为关键词组合检索在 2014 年 04 月至 2024 年 04 月发表在中国知网、万方数据知识服务平台、维普数据库、中国生物医学文献数据库、PubMed、Web of Science、Cochrane 数据库等数据库中的中英文文献。

结果 精神分裂症患者发生自杀未遂的终生风险达到 25%~50%, 我国精神分裂症患者存在自杀观念的比例达 25.8%, 其中自杀死亡的患者为 5%。目前的研究显示精神分裂症患者发生自杀的影响因素包括年龄、性别、家庭、智商、抑郁症状、物质依赖性、躯体疾病、精神症状的严重程度和入院次数等。对这一部分人的干预措施包括风险的评估、药物干预、物理治疗、心理、社区及家庭的干预。

结论 精神分裂症患者出现自杀因其发病率高、病残率高、危害性大已经成为影响患者生命最主要的原因, 危险因素较多并且复杂。不同的危险因素对不同精神分裂症患者的自杀风险影响程度也不尽相同。因此, 提高对自杀风险因素的认识, 实施有效的预防措施, 可以降低精神分裂者患者的自杀率, 改善他们的生活质量和预后。

关键词: 精神分裂症, 自杀, 影响因素

精神分裂症患者自杀相关因素的研究进展

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目的 精神分裂症是精神科常见精神障碍, 其发病机制复杂, 临床症状丰富多样, 具有高致残率、致死率的特点。有研究显示, 精神分裂症患者的预期寿命缩短 15~20 年, 其中自杀是导致精神分裂症

3 种干预方法对抗精神病药物致高催乳素血症的影响

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目的 探究 3 种干预方法对抗精神病药致高催乳素血症的疗效影响。

方法 招募 2019 年 1 月至 2020 年 12 月因服用

抗精神病药致高催乳素血症而住院治疗的 90 例患者为研究对象,采用随机数字表法分为阿立哌唑组、逍遥丸组、维生素 B6 组,各 30 例,疗程 8 周。治疗前、治疗 4 周及 8 周比较血清催乳素水平、阳性和阴性精神症状评定量表(PANSS)、治疗伴发症状量表(TESS)及不良反应发生情况。

结果 治疗后 3 组血清催乳素水平降低,阿立哌唑组、逍遥丸组低于维生素 B6 组,差异有统计学意义($P<0.05$);3 组 PANSS 评分均有所降低,但差异无统计学意义($P>0.05$);治疗后 TESS 评分及不良反应发生率,阿立哌唑组 $>$ 逍遥丸组 $=$ 维生素 B6 组,差异具有统计学意义($P<0.05$)。

结论 3 种干预方法对抗精神病药致高催乳素血症都有显著疗效,阿立哌唑和逍遥丸的疗效优于维生素 B6,逍遥丸和维生素 B6 安全性高于阿立哌唑。

抗精神病药物在治疗精神分裂症、双相情感障碍和抑郁症等精神疾病中发挥着关键作用。由于精神病的治疗过程较为漫长,长期服药可能会导致高催乳素血症(hyperprolactinemia, HPRL),进而依从性差及病情恶化[1]。抗精神病药物诱导的 HPRL 已被估计发生在高达 70%的精神分裂症患者中[2]。研究表明,HPRL 可能引起不孕、性欲降低、勃起功能障碍、乳汁分泌过多、男性乳房女性化、月经失调、闭经、骨质疏松和乳腺癌等[3]。已有研究表明,阿立哌唑能有效改善抗精神病药物所致的 HPRL[4],逍遥丸治疗抗精神病药致 HPRL 疗效显著、不良反应少[5],大剂量的维生素 B6 能持续改善精神分裂症患者的 HPRL[6]。本研究通过比较阿立哌唑、逍遥丸以及维生素 B6 对抗精神病药所致 HPRL 的疗效及安全性,为临床治疗提供依据。

关键词: 阿立哌唑;逍遥丸;维生素 B6;抗精神病药;高催乳素血症

稳定期精神分裂症述情障碍与面部情绪识别和社会功能的关联性研究

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目的 探讨稳定期精神分裂症述情障碍与面部情绪识别和社会功能的关系。

方法 选取在本院门诊就诊的 60 例稳定期精神分裂症患者,选用阳性与阴性症状量表(Positive and Negative Syndrome Scale, PANSS)评估稳定期精神分裂症患者的精神症状;多伦多述情障碍量表(Toronto Alexithymia Scale-20, TAS-20)评估患者的述情障碍水平;面部情绪识别测验评估患者面部情绪识别能力;社会功能缺陷量表(Social Disability Screening Schedule, SDSS),评估患者社会功能。

结果 TAS-20 总分与面部情绪识别总分呈负相关($r=-0.495$, $P<0.01$),与 SDSS 评分呈正相关($r=0.528$, $P<0.01$),面部情绪识别得分与 SDSS 总分呈负相关($r=-0.620$, $P<0.01$),面部情绪识别能力在述情障碍和社会功能之间有一定的中介作用($\beta=-0.410$, $t=-4.006$, $P<0.01$)。

结论 稳定期精神分裂症患者的社会功能损害与述情障碍及面部情绪识别能力密切相关。面部情绪识别在患者述情障碍与社会功能间存在中介作用。

关键词: 面部情绪识别;述情障碍;社会功能;精神分裂症

精神分裂症代谢指标与工作记忆相关性研究

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目的 探索精神分裂症患者代谢指标与工作记忆间的相关性

方法 测量 47 例入院一周内使用利培酮治疗的精神分裂症患者体重(weight,WT)、空腹血糖(glucose,GLU)、甘油三酯(triglycerides,TG)、高密度脂蛋白(high density lipoprotein,HDL)、腹壁脂肪厚度,使用阳性和阴性症状量表(positive and negative syndrome scale,PANSS)评定精神症状,运用 N-back 工作记忆测验精神分裂症患者工作记忆。治疗 6 个月后再次测量 WT、GLU、TG、HDL、腹壁脂肪厚度、评定精神症状、测验工作记忆,进行前后对照,并结合一般资料问卷所得结果进行分析

结果 治疗后 WT、TG、腹壁脂肪厚度、药物剂量明显高于治疗前,HDL、PANSS 明显低于治疗前,差异有统计学意义($P<0.05$);1-back.RT(反应时)、2-back.RT 明显高于治疗前,差异有统计学意义($P<0.05$);甘油三酯差值与 1-back.RT 差值呈正相

关 ($r=0.353$, $P<0.05$), 腹壁脂肪厚度差值与 1-back.RT 差值呈正相关 ($r=0.322$, $P<0.05$)

结论 精神分裂症患者甘油三酯、腹壁脂肪厚度与工作记忆存在一定相关性, 通过控制甘油三酯水平及腹壁脂肪厚度, 可能会改善患者工作记忆

关键词: 精神分裂症; 代谢指标; 工作记忆

磁休克治疗对精神分裂症患者皮层厚度的影响

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目的 精神分裂症是一种严重的精神疾病, 具有广泛的症状谱, 包括行为、情绪和认知障碍, 几乎每个患者都检测到某种程度的残疾。许多抗精神病药物可用于治疗, 但 40% 的患者仅获得部分反应, 而 10% 的患者几乎没有反应。对于对药物反应有限的患者, 电休克疗法 (ECT) 是一种潜在的选择, 因为 ECT 可以提供快速的整体症状改善。然而, 认知不良反应很常见, 如健忘症和发作后迷失方向。作为替代方案, 磁力发作疗法 (MST) 在减轻症状方面的效果与 ECT 相当, 但认知障碍较轻。然而, 目前尚不清楚磁休克治疗 (MST) 对精神分裂症患者皮层厚度的影响。

方法 51 名精神分裂症患者, 其中接受电休克 (ECT) 治疗 33 例, 接受 MST 治疗 18 例。通过阳性与阴性症状量表 (PANSS) 和重复性成套神经心理状态测验 (RBANS) 测定临床症状和认知功能。FreeSurfer 6.0 软件对患者皮层厚度进行分析。

结论 使用 FreeSurfer 的标准自动重建算法计算皮层厚度, 以重建皮层表面。所有重建的图像都由训练有素的研究人员仔细检查。将每个样本投影到 fsaverage 上, 并使用 30mm 高斯核进行平滑。但是无论在 ECT 组或是 MST 组我们均没有发现治疗前后皮层厚度的显著改变。磁休克对精神分裂症患者皮层厚度影响较弱, 可能与其认知保留机制有关。

关键词: 电休克; 磁休克; 精神分裂症; 皮层厚度

伴有代谢综合征的精神分裂症患者认知功能损害 及其危险因素的研究

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目的 通过对 58 例明确诊断为伴有代谢综合征的精神分裂症患者认知功能损害的研究, 探讨代谢综合征与精神分裂症认知功能损害之间的关联, 分析其发生的危险因素, 提出干预措施, 为科学、有效的降低伴有代谢综合征的精神分裂症患者认知功能损害提供临床思维。

方法 以 2023 年 1—12 月入住宁夏宁安医院的 362 例精神分裂症患者为研究对象, 将其分为二组, 一组为代谢综合征(non-MetS)组: 即被明确诊断为伴有代谢综合征的 58 例 (发生率为 16.05%); 一组为非代谢综合征组 ($n=304$)。采用阳性和阴性症状量表 (PANSS) 评估患者精神病性症状, 使用蒙特利尔认知评估量表 (MOCA)、语言流畅性测试 (VFT) 评估认知功能。采用全自动生化分析仪测定甘油三酯、高密度脂蛋白、低密度脂蛋白、空腹血糖等血清生化指标。采用描述统计、单因素分析及多因素回归分析方法对代谢综合征发生率及影响因素进行分析。所有数据采用 SPSS 22.0 进行统计分析。

结果 二组受试者在年龄、性别、教育、职业、居住方式、饮食等一般背景资料上无显著差异 ($P>0.05$), 患者组在用药情况和精神症状方面无显著差异。单因素方差分析发现, 非代谢综合征组和代谢综合征组在定向力和语言流畅度“自”开头一字的障碍方面存在显著差异 ($F=9.63$, $P<0.001$; $F=8.47$, $P<0.001$)。多因素回归分析显示, 精神病理症状、高腰围和高甘油三酯是定向力和语言流畅性的预测因子 ($\beta=-0.247$, $t=-3.105$, $P=0.0029$; $\beta=0.198$, $t=2.213$, $P=0.038$)。预测分析结果显示, 甘油三酯、腰围、PANSS 总分、PANSS 精神病理评分、PANSS 阴性症状评分在预测代谢综合征组认知功能损害方面具有较高的可靠性。

结论 代谢综合征可加重精神分裂症患者认知障碍损害程度。应加强精神分裂症患者代谢综合征指标的监测, 并将引起代谢综合征的风险纳入制定治疗方案的评估范围, 尽可能降低精神分裂症发生代谢综合征的可能性。

关键词: 精神分裂症; 代谢综合征; 认知功能损害

一例发热后引起的精神障碍的诊疗

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中国人民解放军联勤保障部队第 923 医院

目的 坚持服药在治疗精神疾病的意义

方法 我院于 2022 年 12 月 30 日收治的一例发热及四肢抽搐后引起的精神障碍。患者男性,于 2022 年 11 月 27 日出现一次发热及四肢抽搐,后出现行为异常,表现为自笑,不主动进食,上厕所须他人督促,动作、反应迟钝,问话不答,外院治疗未见改善后于 12 月 30 日送至我科住院治疗,诊断“精神分裂症”、“慢性乙型病毒性肝炎”,予阿立哌唑片抗精神病症状,奥沙西洋片改善睡眠及护肝治疗,治疗一周好转后出院。出院后患者外出玩耍暂停服药一天后,患者症状再发,表现情绪不稳,乱砸东西,攻击家人,自笑及自言自语,答非所问,自知力缺乏,家属于 2023 年 3 月再次送入我科住院治疗,入院后予肌注盐酸氯丙嗪注射液+盐酸异丙嗪注射液治疗控制精神症状效果不佳,患者仍表现兴奋躁动,攻击性强,自语自笑,夜间难以入睡,后予利培酮联合无抽搐电休克治疗,及肌注盐酸氯丙嗪+盐酸异丙嗪后症状缓解,停止无抽搐电休克治疗及停止肌注盐酸氯丙嗪注射液+盐酸异丙嗪注射液,药物治疗观察恢复效果较佳后出院。

结果 患者出院后坚持服药,目前仍持续门诊治疗,现能正常工作及生活。

结论 坚持服药积极治疗是能够有效控制精神症状,帮助患者回归正常工作生活。

关键词: 坚持服药,精神分裂症,无抽搐电休克治疗精神疾病

音乐治疗对精神分裂症患者反刍思维及攻击行为的影响

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目的 精神分裂症(Schizophrenia, SCH)是一

类以思维,情感和和行为障碍为主要表现的精神科常见疾病。有研究表明 SCH 患者有更多的攻击行为和一定程度认知功能的损害。反刍作为一种表达痛苦的自我生成思维的特定形式,是一种自我集中,面向过去的消极的思维形式。反刍思维促进负面情绪的产生,加重病情严重程度。过去精神分裂症的治疗主要以抗精神病药物为主,而随着医学由单纯生物模式向生物-社会-心理综合模式的发展,音乐治疗逐渐成为调节精神心理状态的最佳手段之一。本研究旨在探讨音乐治疗对精神分裂症患者反刍思维及攻击行为的影响。通过汉密顿抑郁量表(HAMD)、反刍反应量表(RRS)和攻击行为问卷(AQ),证实音乐治疗对减轻精神分裂症患者反刍思维的有效性,同时可以改善精神分裂症患者的抑郁情绪及攻击行为。

方法 本研究选自在山西医科大学精神卫生中心精神科接受治疗且符合纳排标准的 40 例精神分裂症患者,收集病例时间为 2024 年 6 月~2024 年 9 月。受试者分别按照就诊的先后顺序分为音乐组和对照组各 20 例。对照组进行常规药物治疗,音乐组在常规药物治疗基础上进行音乐治疗。规范干预 14 天后,应用汉密顿抑郁量表(HAMD)、反刍反应量表(RRS)和攻击行为问卷(AQ)评定精神分裂症患者反刍思维、攻击行为及抑郁情绪的改善情况。

结果 1.基线标准

干预前,对两组患者基线资料(年龄、性别、文化程度、婚姻状况、音乐受训年限)和精神分裂症发病相关因素(病史、病程、病变性质)进行组间比较,均无明显差异($p>0.05$),两组患者基线基本一致。

2.反刍思维与攻击行为严重程度分级

(1) 干预 14 天后,对照组和音乐组患者 RRS 和 AQ 分数均有不同程度的下降,经统计学分析 $p<0.05$,差异具有统计学意义。

(2) RRS 和 AQ 分数,音乐组与对照组相比下降明显,差异具有统计学意义($p<0.05$)。

3.抑郁状态评分

(1) 干预 14 天后,音乐组和对照组 HAMD 评分均较干预前降低,差异具有显著统计学意义($p<0.01$)。

(2) 音乐组较对照组抑郁状态评分,与对照组相比音乐组的总分降幅更大,差异具有统计学意义($p<0.05$)。

结论 1.本次研究中利用音乐治疗进行训练,可以明显降低精神分裂症患者反刍思维及攻击行为。

在本次研究中选择的音乐为4/4拍慢速,节奏舒缓、音量适合,有利于缓解精神分裂症患者的负性情绪,改善其攻击行为。

2.音乐治疗可有效缓解精神分裂症患者的抑郁症状。听喜欢的音乐可募集与积极情绪状态相关的大脑区域,从而调动积极情绪相关脑区的活跃度,进而增加患者的训练积极性,提高患者依从性,积极促进其身体各项功能的康复。

关键词:精神分裂症;音乐治疗;反刍思维;攻击行为

双相抑郁患者 ADCY-2 基因多态性与认知功能及 MECT 疗效关系

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目的 探讨双相抑郁患者腺苷酸环化酶-2 (ADCY-2)基因多态性与认知功能及改良电休克治疗(MECT)疗效关系

方法 选取1年内在我院诊治的双相抑郁患者80例作为研究对象,采用TaqMan基因分型技术检测ADCY-2基因rs2892609、rs1864071单核苷酸多态性的分布,采用事件相关电位检测(P300)和威斯康辛卡片分类测验(WSCT)评估双相障碍患者的认知功能,对患者进行8次MECT治疗,以汉密尔顿抑郁量表(HAMD)总分评估MECT疗效,分析ADCY-2基因多态性与认知功能及MECT疗效关系

结果 ADCY-2基因rs2892609位点GG型的CC评分明显高于GT型、TT型,RE、潜伏期评分明显低于GT型、TT型,rs1864071位点AA型的PE评分明显低于AG型、GG型,波幅评分明显高于AG型、GG型,差异显著($P < 0.05$)。ADCY-2基因rs2892609位点GG型与GT型、rs1864071位点AA型与AG型治疗前、第8次治疗HAMD评分比较,差异无显著性($P > 0.05$);rs2892609位点GG型第2、4、6次治疗HAMD评分明显高于GT型,rs1864071位点AA型第2、4、6次治疗HAMD评分明显高于AG型($P < 0.05$)

结论 双相抑郁患者ADCY-2基因rs2892609、rs1864071位点的基因多态性与认识功能障碍有关,

rs2892609位点的GT基因型、rs1864071位点的AG基因型患者接受MECT治疗时起效更快,效果更好

关键词:双相抑郁;腺苷酸环化酶-2;基因多态性;认知功能;改良电休克治疗

经颅交流电刺激对精神分裂症患者认知功能的影响

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目的 探讨经颅交流电刺激(transcranial alternating current stimulation, tACS)对精神分裂症患者认知功能的影响,为精神分裂症伴认知功能损害患者的治疗提供参考。

方法 选取23例在芜湖市第四人民医院处于维持期治疗的精神分裂症住院患者为研究对象,随机分为干预组($n=12$)和对照组($n=11$),两组均维持原有的药物治疗方案不变。干预组采用tACS真刺激,对照组采用tACS伪刺激。干预组使用非侵入式tACS刺激设备,刺激频率40Hz,电流强度1-2mA,每次刺激时间持续20分钟。选择左侧背外侧前额叶和右侧顶叶作为刺激位点,即国际10-20脑电系统的F3与P4两个位点。对照组采用同样的电流强度,但仅持续30秒,随后患者继续佩戴电极,持续20分钟。采用重复测量方差分析比较两组在干预前(基线)、干预后即刻(2周末)、随访时(6周末)的MATRICS公认认知成套测验(MATRICS Consensus Cognitive Battery, MCCB)、同步听觉连续加法测试(Paced Auditory Serial Addition Test, PASAT)评分的差异。

结果 两组在MCCB各测验比较显示,连线测验($p < 0.05$)、持续操作测验($p < 0.05$)的组间效应显著;时间和组别对迷宫测验($p < 0.05$)、持续操作测验($p < 0.05$)的交互效应显著。在MCCB中的持续操作测验任务表现上,tACS干预组在干预后即刻、随访时的评分均较对照组有显著提升;在MCCB的连线测验评分中,干预组在随访时较对照组有显著提升。两组均无明显不良事件发生。

结论 tACS可以改善精神分裂症患者的注意力和信息处理速度,且安全性高,可以作为精神分

裂症患者认知功能缺陷的潜在治疗方法。

关键词：经颅交流电刺激,精神分裂症,认知功能

CNS Drugs-induced Akathisia: A Disproportionality Analysis of The FAERS Database

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Purpose This study aims to evaluate the occurrence of drug-induced akathisia using real-world data from the FDA Adverse Event Reporting System (FAERS), describe its clinical characteristics, and identify drugs most closely associated with drug-induced akathisia

Methods We retrieved relevant reports of drug-induced akathisia from the FAERS database and analyzed their clinical characteristics, including incidence rates, gender distribution, age distribution, and reporting sources. Through statistical methods, we determined drugs most strongly associated with drug-induced akathisia and compared them with their drug labels

Results We found that various drugs can lead to drug-induced akathisia, including antiemetics, antipsychotics, and antidepressants. Consumers constituted the main reporting source, with the United States being the country with the highest number of reports. Among the drugs, antipsychotics accounted for half of the top 30 drugs. Additionally, some drugs did not have a clear mention of akathisia risk on their labels

Conclusion This study underscores the importance of drug-induced akathisia in clinical practice, especially concerning psychiatric medications. While the FAERS database provides valuable real-world data, caution is warranted in interpreting the results due to the spontaneous nature of reporting, which may introduce biases. Further epidemiological investigations are needed to delve deeper into the relationship between drugs and akathisia to guide clinical practice

关键词：Disproportionality analysis' Drug-induced akathisia' FAERS database' Pharmacovigilance' Real-world data

阶段相宜护理在精神分裂症患者的应用效果

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目的 探讨阶段相宜护理用于精神分裂症的临床效果。

方法 研究对象 100 例精神分裂症患者均选自我院收治,按照计算机随机分配法,分成对照组和观察组,各 50 例。对照组接受常规护理,即:遵医嘱指导患者用药,加强体表体征监测,给予心理支持等。观察组接受阶段相宜护理干预,即:1.培训与质控:成立护理小组,负责评估病情、制定计划、告知方案等,全程指导和监督护理计划执行情况。根据疗效,优化计划,每日总结照护,每周集体讨论。以文字交接特殊护理情况,保证护理动态、连续。护士长定期或不定期抽查,惩劣奖优,持续改进。2.具体方案:(1)入院阶段:行精神科专科风险评估,并于患者入院 24h 内,拟定个体化护理方案,提交给护理小组,组员知晓后并执行落实。开展疾病宣教,加强症状体征、用药、饮食等情况,动态化呈报给小组,以便及时调整方案,并落实方案。(2)疾病急性发作阶段:安置于一级护理病房,2h 内完成评估检查,掌握患者用药、睡眠及饮食情况。根据患者具体情况及病情进展,制定适宜健康教育,纠正患者不良生活习惯,嘱咐患者按时按量用药、规范进食、保持睡眠充足,行自我生活料理活动。及时掌握患者精神异常症状,如:妄想、幻觉等,鼓励患者参加工娱活动,分散注意力。(3)疾病康复阶段:联合专业心理工作者,于适当时机,行护患沟通,掌握患者状态及特点,用心理学技巧疏导患者情绪,给予心理康复建议,提高安全感和信赖感。鼓励患者参加人际交往、文娱及日常生活活动,促进患者精神障碍症状改善,促进患者正常生活能力恢复。(4)患者出院后,连续随访,督导、鼓励行疾病控制康复行为。

结果 1.两组患者护理依从性、住院时间和住院费用的比较,观察组护理依从性高于对照组,住院时间短于对照组,住院费用少于对照组($P<0.05$)。

2.两组患者 SSPI 因子评分的比较, 观察组 SSPI 各因子评分高于对照组 ($P<0.05$)。

结论 本研究显示, 实施阶段相宜护理模式, 能给予患者高效、及时的康复护理支持, 确保患者入院后, 得到严密、周全的护理措施, 从而在急性发作期取得较好的症状控制效果, 在疾病康复期实施及时日常生活、社会交往引导, 最终实现康复效果的优化。

关键词: 阶段相宜护理 精神分裂症 应用效果

计算机化认知行为治疗与舍曲林联合应用在精神分裂症后抑郁中的疗效评估

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目的 精神分裂症后抑郁 (PPD) 是一种常见且严重的临床现象, 影响患者的生活质量和社会功能。本研究旨在评估计算机化认知行为治疗 (CCBT) 联合舍曲林对 PPD 患者的疗效及其对生活质量的影

方法 本研究纳入 68 例符合 PPD 诊断标准的患者, 随机分为两组: 对照组 (34 例) 接受舍曲林治疗, 实验组 (34 例) 在舍曲林治疗基础上接受 CCBT 干预。治疗为期 12 周, 每周进行 2 次 CCBT, 每次 45-60 分钟。研究在第 2、4、8、12 周时, 使用卡尔加里精神分裂症抑郁量表 (CDSS)、蒙哥马利抑郁量表 (MADRS)、日常生活自理能力评定表 (ADL)、认知领域评分 (MCCB)、生活质量评分 (SF-36) 评估两组患者的抑郁、焦虑、认知功能、生活质量及不良反应率。

结果 实验组在 CDSS、MADRS、ADL、MCCB 和 SF-36 评分上均显著优于对照组 ($p<0.05$), 显示 CCBT 联合舍曲林在改善抑郁症状、提高生活质量、增强日常生活自理能力和认知功能方面具有显著优势。不良反应率两组无显著差异 ($p>0.05$)。

结论 CCBT 联合舍曲林治疗 PPD 患者效果显著, 能够有效改善抑郁情绪和生活质量, 促进社会功能的恢复。该方法具有良好的临床应用前景, 建议推广应用。

关键词: 精神分裂症后抑郁 (PPD), 计算机化

认知行为治疗 (CCBT), 舍曲林, 生活质量, 临床疗效。

塞来昔布辅助治疗精神分裂症的有效性、安全性及机制研究

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目的 本研究旨在探究塞来昔布辅助治疗精神分裂症的有效性、安全性及可能机制。

方法 1. 前瞻性收集 2019 年 4 月至 2020 年 10 月在新乡医学院第二附属医院住院的 90 例精神分裂症患者的资料, 采用随机数字表法将患者分为安慰剂组和塞来昔布辅助治疗组。安慰剂组有 46 例完成 6 周随访, 其中男 29 例, 女 17 例, 年龄 21~34 (27.46 ± 6.50) 岁; 塞来昔布组有 44 例完成 6 周随访, 其中男 32 例, 女 12 例, 年龄 21~39 (30.52 ± 8.69) 岁。

2. 采用阳性与阴性症状量表 (Positive and Negative Syndrome Scale, PANSS) 评估 2 组患者的精神病症状, 对比分析治疗后 PANSS 评分变化量以评估塞来昔布辅助治疗的有效性。采集体重、糖脂等代谢相关指标, 血压、心电、血常规等心血管相关指标, 利用不良反应量表评估不良反应, 进而分析塞来昔布辅助治疗的安全性。使用酶联免疫吸附试验检测患者血清肿瘤坏死因子 α (tumor necrosis factor- α , TNF- α)、白细胞介素 (interleukin, IL)-4、干扰素 γ (interferon- γ , IFN- γ) 水平, 采用 Pearson 相关分析 2 组患者细胞因子水平与 PANSS 评分、PANSS 减分率 [(治疗前评分-治疗后评分)/治疗前评分 $\times 100\%$] 及糖脂代谢指标的关系, 分析炎症在塞来昔布辅助治疗中的作用。

结果 塞来昔布辅助治疗组 6 周 PANSS 阳性评分变化量显著高于安慰剂组 [(-8.00 ± 6.12) 分比 (-4.78 ± 5.19) 分, $H=-0.55$, $P=0.008$]。塞来昔布辅助治疗组 6 周体重、体重指数、总胆固醇、甘油三酯的变化量均显著低于安慰剂组 ($F=-7.37$ 、 -7.30 、 2.56 、 -2.54 , 均 $P<0.05$); 塞来昔布辅助治疗未发现严重不良反应。基线期 TNF- α 与基线期阴性症状、6 周 PANSS 减分率呈正相关 ($r=0.260$ 、 0.330 ; 均

$P < 0.05$), 与 6 周体重呈负相关 ($r = -0.311$; $P < 0.05$); 基线期 IL-4 水平与 6 周 PANSS 总分、6 周 PANSS 阴性症状评分呈正相关 ($r = 0.320, 0.397$; 均 $P < 0.05$), 与 PANSS 减分率、6 周血糖 ($r = -0.316, -0.331$; 均 $P < 0.05$) 呈负相关; 6 周 IFN- γ 水平与低密度脂蛋白水平负相关 ($r = -0.306$; $P < 0.05$); 塞来昔布辅助治疗组无该相关性。

结论 塞来昔布辅助治疗可改善精神分裂症阳性症状, 未见不良反应。炎症状态与精神分裂症症状、疗效以及代谢不良反应相关。

关键词: 精神分裂症; 塞来昔布; 代谢; 炎症

饮酒与精神分裂症的因果关系: 一项双向孟德尔随机研究

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目的 观察性研究显示饮酒与精神分裂症(SZ)存在关联, 被认为是 SZ 的危险因素。然而, 由于观察性研究的限制, 确定两者之间的因果关系是困难的。因此, 本研究旨在利用双向孟德尔随机化(MR)研究方法明确每周饮酒量(DPW)与 SZ 之间的因果关系。

方法 本研究使用欧洲个体全基因组关联研究(GWAS)的汇总统计数据进行了双向 MR 分析。在评估因果关系时, 主要采用了反方差加权法(IVW)作为主要分析方法。此外, 为了补充 IVW 的结果, 还使用另外两种 MR 方法, 即 MR-Egger 和加权中位数法。研究运用 MR-Egger 截距来检测水平多效性, 并进行留一敏感性分析, 评估结果的稳健性。

结果 IVW 方法的 MR 结果表明, DPW 不会增 SZ 的风险。然而, 反向 MR 分析显示, SZ 与 DPW 呈显著正相关 (优势比 (OR) = 1.01, 95% 置信区间 (CI) 1.00-1.02, $P = 0.01$)。MR-Egger 回归检验显示, 定向多效性不会对 MR 结果产生偏倚 (截距 = 9.70×10^{-4} , $P = 0.52$)。MR-Egger 分析显示 SZ 与 DPW 之间没有因果关系 (OR = 1.00, 95% CI: 0.95-1.04, $P = 0.92$)。然而, 加权中位数方法显示 SZ 与 DPW 之间存在因果关系 (OR = 1.01, 95% CI: 1.00-1.02, $P = 8.78 \times 10^{-3}$)。留一敏感性分析的结果显示, 每个 SNP 均不影响 IVW 估计值, 漏斗图表明

没有异质性的证据。

结论 本项 MR 研究明确了 SZ 与 DPE 之间存在的因果关系, 及时干预 SZ 患者与饮酒相关的不良生活习惯, 如: 减少或戒除饮酒, 将有效预防与饮酒相关的疾病在 SZ 患者中的发生。

关键词: 精神分裂症, 每周饮酒量, 全基因组关联研究, 单核苷酸多态性, 孟德尔随机化, 因果关系

BDNF 与氧化应激交互作用在双相情感障碍患者中的性别差异

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目的 探讨双相情感障碍患者脑源性神经营养因子(BDNF)、氧化应激(OxS)及两者交互作用与临床症状之间的关系是否存在性别差异。

方法 本研究共招募了 86 名双相情感障碍患者和 90 名健康对照, 测定血浆 BDNF、超氧化物歧化酶(SOD)、谷胱甘肽过氧化物酶(GSH-Px)、过氧化氢酶(CAT)和丙二醛(MDA)水平。应用 HAMD-17、HAMA、YMRS 及斯奈思-汉密尔顿快感量表(SHAPS)来评估抑郁、焦虑、躁狂及快感缺失症状。采用双因素方差分析、偏相关分析和多元回归分析等方法进行统计。

结果 1、将受教育年限和 BMI 作为协变量进行双因素方差分析显示, 诊断对 MDA 有主效应($F = 10.061, p = 0.002$), 表明患者与对照组 MDA 水平存在差异。性别对 CAT 水平有主效应($F = 62.243, p < 0.001$), 诊断及性别交互作用对 CAT 水平有显著影响($F = 5.45, p = 0.021$), 表明 CAT 水平存在性别差异并且在患者和对照组不同。ANCOVA 显示, 男性患者和男性对照组的 MDA 水平分别高于女性患者和女性对照组($F = 34.627; F = 27.273, p < 0.001$)。

2、将年龄、BMI、教育程度、吸烟和发病年龄作为协变量, 偏相关分析显示女性患者 MDA 和 CAT 水平分别与 HAMA 和 SHAPS 评分负相关 ($r = -0.29, P_{Bonferroni} = 0.03$; $r = -0.303, P_{Bonferroni} = 0.023$), 但在男性患者中未发现相关性 ($r = -0.033, P_{Bonferroni} = 0.864$; $r = -0.21, P_{Bonferroni} = 0.266$)。男性患者 CAT 水平与 HAMA 评分负相关 ($r = -0.403, P_{Bonferroni} = 0.027$)。

3、将年龄、BMI、教育程度、吸烟和发病年龄作为协变量，多元回归分析显示，在女性患者中BDNF×CAT、BDNF×GSH-Px均与SHAPS评分相关（ $B = -0.124$ ， $t = -2.055$ ， $P_{Bonferroni} = 0.045$ ； $B = -0.336$ ， $t = -2.041$ ， $P_{Bonferroni} = 0.047$ ），但在男性患者中均无相关关系（ $B = -0.206$ ， $t = -0.301$ ， $P_{Bonferroni} = 0.766$ ； $B = 0.274$ ， $t = 0.173$ ， $P_{Bonferroni} = 0.864$ ）。

结论 本研究结果表明，双相情感障碍患者血浆CAT、MDA水平及BDNF与CAT、BDNF与GSH-Px交互作用与其焦虑、快感缺失症状之间的相关性均存在性别差异。

关键词：性别差异，双相情感障碍，BDNF，氧化应激，交互作用

MECT对精神分裂症患者脑功能的影响--基于fNIRS的研究

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目的 探讨精神分裂症患者脑功能的异常，及MECT治疗前后患者脑功能的变化与临床症状改善情况。

方法 依据纳入与排除标准，选取2024年1月-2024年12月于齐齐哈尔医学院附属第四医院住院，需要行MECT的精神分裂症患者30例。由主治医师及以上的精神科医师对其脑功能和临床症状进行评估，同时入组30名正常被试，比较精神分裂症患者与正常被试之间脑功能异常。而后，精神分裂组患者采用MECTA 5000Q电休克治疗仪进行为期4周的MECT治疗。采用fNIRS技术和PANSS量表评估患者治疗前后脑功能和临床症状的变化及治疗前后患者脑功能的变化与临床症状改善之间的关系。

结果 入组时，与正常组人群相比，患者组9个前额叶区域均未激活（ $P > 0.05$ ），对照组均激活（ $P < 0.05$ ），患者组9个前额叶区域的oxy-Hb变化值均低于对照组（ $P < 0.05$ ）。4周后患者组PANSS总分均较入组时下降（ $P < 0.05$ ），有6个前额叶区域激活（ $P < 0.05$ ，其中左腹外侧前额叶及左侧颞上皮质的oxy-Hb变化值较入组时提高（ $P < 0.05$ ）。未发现PANSS评分与oxy-Hb变化值间存在统计学相关性

（ $P > 0.05$ ）。

结论 MECT可明显改善精神分裂症患者脑功能异常，另外，fNIRS可以评估特定状态下脑组织中氧合血红蛋白、脱氧血红蛋白以及总血红蛋白的浓度变化，值得今后在临床推广应用。

关键词：MECT,精神分裂症,功能近红外光谱成像技术

作业疗法对慢性精神分裂症患者认知功能的影响分析

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目的 探讨作业疗法对慢性精神障碍患者认知功能的影响。

方法 入组2023年1月在沈阳市精神卫生中心住院的慢性精神分裂症患者120名，采集基本信息，将患者随机分为2组，一组为干预组入组患者65人，每日给予作业疗法，共持续3个月。作业疗法需提前拟定训练计划，内容包括破冰游戏，诗朗诵，唱歌，手工制作，操作电脑，家务活动等。另一组为观察组，入组患者55人。采用蒙特利尔认知评估（MoCA），评估2组基线认知功能，此后3个月每个月进行一次认知功能评估。两组年龄，教育年限，MoCA对比采用独立样本T检验，性别比较采用卡方检验。

结果 1.2组性别，年龄，病程，教育程度以及基线MoCA得分均无显著差异（ $p > 0.05$ ）。2.2组对比第一个月MoCA无显著差异（ $p > 0.05$ ），各分项得分无显著差异。3.2组对比第二个月干预组MoCA总分显著高于观察组（ $p < 0.05$ ），分项分中语言功能显著高于观察组（ $p < 0.05$ ），第三个月干预组MoCA显著高于观察组（ $p < 0.01$ ），其中语言功能显著高于对照组（ $p < 0.01$ ），视空间与执行功能显著高于观察组（ $p < 0.05$ ），抽象能力显著高于观察组（ $P < 0.01$ ）。

结论 1、1个月以内短期的作业疗法对认知功能无显著影响。2、2个月以上的作业疗法对慢性精神分裂症患者认知功能有显著改善。其中语言功能改善显著。3、3个月的作业疗法对慢性精神分裂症患者认知功能改善的效果最佳，其中语言功能，视

空间与执行功能，抽象能力均明显改善。

关键词：慢性精神分裂症 作业疗法 认知功能

非典型抗精神病药物与精神分裂症患者糖脂代谢异常关系的研究进展

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精神分裂症是常见的一种精神系统疾病，临床多表现为情感、意志行为、感知及思维等多方面障碍，且病程较长、病情反复发作，随着病情发展，可给患者认知功能造成不可逆损伤，严重影响日常生活。本文综述了精神分裂症患者使用非典型抗精神病药物引发的糖脂代谢异常及干预策略，旨在为长期用药患者提高生活质量和疾病预后提供依据。精神分裂症治疗通常需要长期依赖抗精神病药物，典型抗精神病药物氯丙嗪问世以来，显著改变了精神科治疗，使许多重症患者重返社会。而氯氮平的引入带来非典型抗精神病药物概念，其后陆续有利培酮、奥氮平、喹硫平、齐拉西酮、阿立哌唑等问世。非典型抗精神病药物较典型药物更显著地阻断 5-羟色胺 2 (5-HT₂) 受体，副作用较少，在精神分裂症治疗中得以广泛应用。然而，长期使用非典型抗精神病药物可能引发不良代谢效应，如葡萄糖耐量下降、血糖升高和血脂异常，增加心血管疾病和 2 型糖尿病风险。非典型抗精神病药物与精神分裂症患者糖脂代谢异常关系复杂。药物可能通过多种途径导致糖脂代谢异常，包括血糖升高、胆固醇和甘油三酯水平异常，从而增加心血管风险。在应对这种情况时，可以采取多种干预对策，包括谨慎选择药物、药物干预、生活方式改变以及个体化治疗计划。通过综合管理，可以有效降低患者可能面临的代谢异常风险，提高其整体健康水平。然而，未来仍需要深入研究药物对糖脂代谢的具体影响机制，以及更精准的治疗策略，以促进精神分裂症患者的综合康复。

关键词：精神分裂症；非典型抗精神病药物；糖脂代谢

Alterations of Eye Tracking Measure in First-episode Schizophrenia Are Mediated by COVID-19 Impact

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Objective This study aims to assess the effects of coronavirus disease-19 (COVID-19) on clinical symptoms and eye movement alterations of patients with first-episode schizophrenia (FES).

Methods Psychological distress in 37 patients and 50 healthy controls were evaluated. Eye-tracking performances were also collected. Participants were divided into high-impact and low-impact subgroups, according to the median score of CIS. The effects of group × coronavirus impact level on eye movement characteristics were investigated.

Results The depression, anxiety, perceived stress scores, and coronavirus impact scores of patients were significantly higher than healthy controls. The average saccade amplitude of the free-viewing task, and the average saccade velocity of anti-saccade of FES were lower than those of healthy controls. There were significant interactive effects between the group and the coronavirus impact level on average fixation duration in the free-viewing test, and reaction time in the anti-saccade test. The anxiety and depression scores of patients were positively correlated with the coronavirus impact score

Conclusion FES patients who were more affected by the coronavirus showed more severe eye movement abnormalities. This study provides valuable information for exploring the neuropsychological mechanism of COVID-19 in patients and provides evidence for formulating psychological intervention measures

关键词：COVID-19; schizophrenia; eye movement; anxiety; depression

小檗碱治疗奥氮平致精神分裂症患者胰岛素

抵抗的疗效及对炎症因子相关蛋白的影响

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目的 探讨奥氮平所致精神分裂症胰岛素抵抗患者使用小檗碱治疗的疗效, 及对炎症因子肿瘤坏死因子- α (TNF- α)、白细胞介素- 1β (IL- 1β)、白细胞介素-6 (IL-6) 和相关蛋白表达水平的影响。

方法 选取 2018 年 6 月至 2020 年 8 月金华市第二医院收治的 60 例首发精神分裂症患者为研究对象, 随机分为 3 组, 各 20 例。对照组给予奥氮平及小檗碱模拟剂治疗, 低剂量组在对照组治疗的基础上给予低剂量小檗碱 (300 mg/d) 干预治疗, 高剂量组在对照组治疗的基础上给予高剂量小檗碱 (900 mg/d) 干预预防治疗, 均连续治疗 12 周。观察患者治疗前后患者炎症因子 TNF- α 、IL- 1β 、IL-6 水平、血浆核因子- κ B (NF- κ B) 水平、糖脂代谢相关指标空腹血糖 (FBG)、总胆固醇 (TC)、三酰甘油 (TG) 水平及胰岛素抵抗指数 (HOMA-IR) 水平。

结果 治疗后, 高剂量组和低剂量组 TNF- α 、IL- 1β 、IL-6、NF- κ B、FBG、TC、TG、HOMA-IR 水平均低于对照组 (均 $P < 0.05$), 且高剂量组均低于低剂量组 (均 $P < 0.05$)。

结论 小檗碱治疗奥氮平所致精神分裂症胰岛素抵抗, 可显著降低患者炎症因子 TNF- α 、IL- 1β 、IL-6 水平、血浆 NF- κ B 和糖脂代谢相关指标 FBG、TC、TG 及 HOMA-IR, 提高临床疗效, 具有临床应用价值

关键词: 小檗碱; 奥氮平; 精神分裂症; 胰岛素抵抗; 疗效; 炎症因子相关蛋白

Association Between Altered Hormones and Network Structure of Brief Psychiatric Rating Scale in Drug-naïve, First Episode Schizophrenia

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Objective We aimed to explore alteration of thyroid and sex hormones in patients with SCZ. This study

also performed a network analysis of Brief Psychiatric Rating Scale (BPRS) to identify central symptoms and its association with hormone levels

Methods Thyroid and sex hormones level and were measured using radioimmunoassay methods. This study uses BPRS to evaluate mental symptoms severity in patients with SCZ. BPRS five domains were anxiety/depression, activation, thought disturbance, anergia, hostility. We estimated a network structure for both BPRS five domains (symptom-dimensions) and 18-items (symptom-items)

Results Total thyroxine (tT4) and free thyroxine (FT4) were higher in patients with SCZ than that of HCs (p 's <0.0001). Sex hormones estradiol (E2) ($p=0.018$), Progesterone (PROG) ($p=0.026$) and testosterone (TESTO) ($p<0.0001$) are decreased in patients with SCZ than in HCs. Network analysis showed that the connection between domain "activation" and "anxiety-depression" was the strongest positive edge, followed by the edges between "activation" and "hostility" at symptoms-dimension levels. Expected influence showed that "activation" was the central symptoms domain, followed by "hostility". At symptoms-items levels, BPRS10 ("hostility") and BPRS14 ("uncooperativeness") was the strongest positive edge, followed by the edges between BPRS11 ("suspiciousness") and BPRS12 ("hallucination"). Nodes BPRS3 ("emotional withdrawal"), BPRS6 ("tension"), BPRS14 ("uncooperativeness") and BPRS10 ("hostility") might be central symptoms of SCZ. FT4 and TESTO levels were significantly correlated with central symptoms

Conclusion This study implicates that FT4 and TESTO may be potential markers of SCZ. Central symptoms identified by network analysis might be potential targets for clinical intervention

关键词: Schizophrenia, Hormones, Network analysis, Symptoms severity

心理弹性在精神分裂症患者照顾者病耻感和 社会支持间的中介作用

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目的 探讨精神分裂症患者照顾者病耻感现状及与社会心理学因素的相关性，并分析其心理弹性在社会支持与病耻感之间的中介效应，旨在为其制订有效的干预措施提供理论依据。

方法 2022年10月-2023年11月，采用便利抽样法选取165例在某院就诊的精神分裂症患者照顾者为研究对象，采用一般资料调查问卷、贬低-歧视量表、病人健康问卷（PHQ-9）、广泛性焦虑自评量表（GAD-7）、心理弹性、应对方式、社会支持对其进行横断面调查。

结果 精神分裂症患者照顾者的贬低-歧视量表得分（ 33.56 ± 7.24 ）、PHQ-9量表得分（ 5.74 ± 5.63 ）、GAD-7量表得分（ 5.76 ± 4.88 ）、心理弹性得分（ 20.28 ± 10.16 ）、应对方式总分（ 29.32 ± 11.69 ）、社会支持总分（ 37.80 ± 9.48 ），Pearson相关性分析显示：贬低-歧视量表与心理弹性、应对方式以及社会支持呈负相关，与PHQ-9、GAD-7量表成正相关。以社会支持为自变量，病耻感为因变量，心理弹性为中介变量构建中介效应模型，中介效应分析结果显示直接效应不显著（ $P>0.05$ ），间接效应为-0.076，模型总效应为-0.165，中介效应均显著（ $P<0.05$ ），心理弹性起完全中介作用。

结论 医护人员应重视精神分裂症患者照顾者的病耻感水平，可采用有效措施提升其心理弹性水平，改善其病耻感水平，帮助减轻心理负担。

关键词：精神分裂症；照顾者；病耻感；心理弹性；社会支持

3.0T 磁共振评价抗精神病药物治疗后心功能改变的应用研究

赵果城*

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目的 探讨分析使用3.0T磁共振心脏扫描评价规律抗精神病药物（APS）治疗后心脏结构及功能特点，为早期发现心功能损伤提供临床依据。

方法 参照ICD-10诊断标准纳入2022年1月至2023年12月成都市第四人民医院诊断为精神分裂症并规律服用APS 6月至2年患者38例为实验

组，同时纳入健康对照组35例，收集并分析其临床资料及心脏磁共振（CMR）数据。

结果 1.一般资料：38例实验组中男性22例，女性16例，平均年龄 39.61 ± 9.50 岁，服用药物2~24个月，心率 79.34 ± 13.79 次/分钟；正常对照组35例，男性20例，女性15例，平均年龄 41.26 ± 10.31 岁。2.左心室：实验组左心室结构未见明显异常，左心功能未见明显减低（ $EF=60.03\pm 8.97\%$ ）；实验组左心输出量（LVCO）较对照组增高 [5.78 ± 1.61 l/(min \times m²) 比 5.02 ± 1.31 l/(min \times m²)， $t=2.197$ ， $P=0.031$]，差异具有统计学意义。3.右心室：实验组较对照组右心收缩末期容积（RVESV）（ 62.66 ± 23.41 ml 比 53.24 ± 15.38 ml）及右心每搏输出量（RVSV）（ 66.14 ± 19.80 ml 比 57.61 ± 14.57 ml）增大，且差异具有统计学意义（ $P<0.05$ ）；右心输出量（RVCO）较对照组增高 [5.11 ± 1.44 l/(min \times m²) 比 4.31 ± 1.42 l/(min \times m²)， $t=2.197$ ， $P=0.031$]。

结论 服用APS患者早期在心脏结构及功能未见明显改变及减低情况下，左右心输出量（LV/RVCO）可能已经发生代偿性增高。临床应密切结合CMR结果，高度重视无症状的亚临床影像学改变，有助于降低服用APS导致心肌损伤病死率，改善患者生存质量和预后。

关键词：3.0T；磁共振；心功能；抗精神病药物；治疗

计算机认知矫正疗法联合团体绘画治疗对慢性精神分裂症患者认知功能及社会功能的影响

谢平*

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目的 探讨计算机认知矫正疗法（CCRT）联合团体绘画治疗对慢性精神分裂症患者认知功能及社会功能的影响。

方法 选取2022年12月-2023年12月我院收治的慢性精神分裂症患者60例为研究对象，随机分为对照组（ $n=30$ ）和观察组（ $n=30$ ）。对照组给予患者常规康复治疗（有氧训练、作业治疗、改良森田治疗等）指导患者进行连续治疗3个月。观察组在对照组基础上采用CCRT联合团体绘画治疗，均

持续治疗 3 个月。对比两组的认知能力筛查量表测评(CASI)评分及社会功能缺陷筛选量表(SDSS)评分。具体如下:(1)CCRT:对患者进行简单的电脑操作培训,经电脑系统认知能力筛查量表评估根据范式提示对其进行指导,引导患者循序渐进地进行计算机认知作业练习。CCRT系统涵盖了6个治疗模块18项训练,包括:感知运动能力、综合注意力、学习和记忆能力、执行能力、语言能力、社会认知能力。每个模块包括2~5项不同的练习,每项练习涵盖了难易不同的练习任务。整个操作过程依照患者认知水平进行,同时需保证治疗过程的系统性及准确性,并给予患者一定的正反馈。CCRT治疗30min/次,1次/d,5次/周,连续治疗3个月。(2)团体绘画艺术治疗,为患者设置一个主题,指导其采用不同的绘画方法表达出自己内心的想法及完成绘画任务;分享时鼓励其上台介绍自己的绘画作品,表达绘画意图;在绘画艺术治疗结束后,指出患者绘画过程中出现的问题并帮助其解决。团体绘画治疗60min/次,1次/3d,2次/周,连续治疗3个月。

结果 治疗后,观察组的CASI中连线时间,符号检索评分分别为(33.19±2.02)分,(18.95±1.58)分,均低于对照组,数字正序、数字倒序评分分别为(11.21±1.60)分,(9.48±0.77)分,均高于对照组,组间差异有统计学意义($P<0.05$)。治疗后,观察组的SDSS评分为(4.16±0.51)分,低于对照组,差异有统计学意义($P<0.05$)。

结论 慢性精神分裂症患者采用CCRT联合团体绘画治疗的效果显著,能有效改善认知功能及社会功能,值得临床推广使用。

关键词: 计算机认知矫正疗法;团体绘画治疗;慢性精神分裂症;认知功能;社会功能

Decoding the striatum of drug-naive patients with obsessive-compulsive disorder: a transcriptome and longitudinal functional magnetic resonance imaging study

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Objective The striatum's role in the pathology of obsessive-compulsive disorder (OCD) is recognized. However, the specific contributions of individual striatal subregions (SSs) to OCD pathology are underexplored

Methods We recruited 49 drug-naive OCD patients and 53 healthy controls, conducting clinical assessments and resting-state functional magnetic resonance imaging (rs-fMRI) scans pre- and post-4-week paroxetine treatment. Inter-group comparisons were conducted to investigate baseline and treatment-related changes in the patients' striatum using certain fMRI metrics. Furthermore, these metrics, functional connectivity (FC), and effective connectivity (EC) of SSs were analyzed. Associations between gene expression patterns and altered information flow patterns of SSs were investigated, followed by enrichment analysis of relevant genes

Results While no significant alterations were observed in the patients' striata, significant changes in degree centrality, FC, and EC were identified in SSs pre- and post-treatment. In particular, the EC analysis unveiled an enhanced top-down control and diminished bottom-up regulation in drug-naive OCD patients. Following treatment, bottom-up EC improved, along with an improvement in clinical symptoms. Additionally, information flow alteration-related genes were enriched in various biological processes and pathways. They substantially overlapped between bidirectional information flows among SSs and the rest of brain and between information flows among homotopical SSs and the rest of brain

Conclusion This study highlights the diverse contributions of each striatal subregion to OCD pathology. Paroxetine may alleviate the symptoms of OCD patients by enhancing bottom-up regulation. Furthermore, transcriptome and rs-fMRI findings together offer novel insights into the biological substrates underlying the altered EC of SSs in OCD patients

关键词: Granger causality analysis; effective connectivity; functional connectivity; gene

Altered Levels of Cytokine, T- and B-lymphocytes, and PD-1 Expression Rates in Drug-naïve Schizophrenia Patients with Acute Phase

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Objective Many studies have investigated the changes of immune cells and proinflammatory cytokines in patients with acute schizophrenia, but few studies have investigated the functional phenotypes of immune cells and the expression rate of programmed cell death protein 1 (PD-1)/ programmed cell death-Ligand 1 (PD-L1). The aim of this study was to investigate the extent of immune cells activation, PD-1/PD-L1 expressions, and altered cytokine levels in drug-naïve schizophrenia patients with acute-phase

Methods 23 drug-naïve schizophrenia patients in acute-phase and 23 healthy individuals were enrolled in this study as experimental and control groups, separately. Socio-demographic information including gender, age, duration of illness, and smoking status was collected for each subject. Beckman DXFLEX triple laser thirteen-color flow cytometer and self-contained software CytoFLEX flow cytometric analysis software were used to detect the expressions of PD-1/PD-L1 on CD4+/CD8+ T lymphocytes, B lymphocytes, monocytes and NK cells. BD Bioscience was used to examine the levels of cytokines including interferon (IFN)- γ , tumor necrosis factor (TNF)- α , Interleukin (IL)-2, IL-4, IL-6, and IL-10

Results Drug-naïve schizophrenia patients in acute-phase had higher levels of peripheral blood CD4+ T lymphocytes and B lymphocytes, higher PD-1 expression in B lymphocytes, and lower levels of CD8+ T lymphocytes. In addition, IL-6 levels of peripheral blood were higher in schizophrenia patients (all $P < 0.05$)

Conclusion Significant immune stress was present in schizophrenia patients with acute-phase

关键词: schizophrenia; immune; cytokines; programmed cell death protein 1

叶黄素联合低碳水饮食对改善精神分裂症代谢综合征的研究

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目的 本研究旨在探讨补充叶黄素及低碳水饮食对改善精神分裂症患者代谢综合征的影响。叶黄素是一种抗氧化剂,抑制负责激活脂肪细胞的转录因子过氧化物酶体增殖物激活受体- γ (PPAR γ)的活性。PPAR γ 的活化可下调炎症因子,如 TNF- α 、LP 和白细胞介素-6(IL-6)的表达,并诱导脂联素(一种使肝脏和肌肉对胰岛素敏感的脂肪因子)的表达,进而调节胰岛素的敏感性,干预脂肪细胞分化,发挥降脂作用。能够显著降低腹部脂肪组织的重量,并降低血清胆固醇和低密度脂蛋白胆固醇(LDL-C)的浓度。叶黄素可能有助于控制由饮食引起的肥胖及其相关并发症。低碳水饮食可以帮助机体将过多的脂肪以糖异生作用转化为葡萄糖,从而达到促进体内脂肪分解代谢的作用。因此,叶黄素联合低碳水饮食可能对治疗精神分裂症患者代谢综合征提供依据和思路。

方法 1.1 实验对象:选取 100 例精神分裂症伴发代谢综合征患者为研究对象,两组均干预 8 周。1.1.1 实验组 实验组采用叶黄素补剂 20mg/d,低碳水饮食。1.1.2 对照组 本研究对照组参与者将接受安慰剂。采用单纯限能量均衡饮食。1.1.3 观察指标及相关定义 检测干预前后血脂指标(三酰甘油(TG)、总胆固醇(TC)、高密度脂蛋白(HDL)、低密度脂蛋白(LDL)、空腹血糖(GLU)、糖化血红蛋白(GHb)及尿酸(UA))、体质指数(BMI)、胃肠道反应发生率及阳性与阴性症状量(PANSS)。采用 likert10 级评分法记录干预前、干预期间饥饿感程度(饥饿感严重程度:0 分为无饥饿感,1~3 分为轻度饥饿感,4~7 分为中度饥饿感,8~10 分为强烈饥饿感),统计腹泻、腹胀、便秘等胃肠道反应发生率。

结果 研究结果显示,与对照组相比,实验组在以下方面表现出显著改善:体重:实验组平均体重下降了约 2.79 公斤,而对照组体重无明显变化。血脂水平:实验组血清胆固醇和低密度脂蛋白胆固醇(LDL-C)、血糖、尿酸水平显著降低,而对照组

血脂水平无明显变化。饥饿感程度：实验组在干预期间的饥饿感程度明显降低，而对照组无明显变化。两组在胃肠道不良反应及精神症状方面无明显差异。统计学分析显示，实验组与对照组在体重、血脂、血糖、尿酸和饥饿感程度等方面的差异具有统计学意义 ($p < 0.05$)。

结论 结果表明，补充叶黄素及低碳水饮食对改善精神分裂症患者的代谢综合征具有显著效果。然而，本研究仅为初步发现，仍需进一步验证。未来的研究可以进一步探讨叶黄素及低碳水饮食对精神分裂症患者代谢综合征的长期影响。此外，还可以研究叶黄素的剂量和低碳水饮食疗程对治疗效果的影响，以期为临床治疗提供更为精确的指导。

关键词：叶黄素、低碳水饮食、精神分裂症、代谢综合征

关于男性精神分裂症伴骨质疏松症中西医结合多学科诊疗模式的研究

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目的 精神分裂症是临床常见的重性精神疾病，几乎占到精神卫生机构住院患者的 70% 以上。精神分裂症患者经常伴有骨质疏松症，但因其隐匿性发展，往往易被忽视。精神分裂症患者的骨质疏松与精神分裂症本身相关，与抗精神病药的应用相关，同时也与其某些不良生活习惯相关。骨质疏松已成为精神分裂症患者骨痛、骨折及骨折致残的主要原因之一，医院内发生的骨折更可能成为医患纠纷的一个诱导因素。目前，国家大力提倡及发展精神卫生事业，但精神分裂症患者伴随的骨质疏松症仍是一个当下较难解决的问题。本文关注该类患者群，将精神医学、中医学、骨科学、老年医学、内科学、心理学、康复医学、营养学、护理学、照护学等多个学科进行整合并研究规范化诊疗方案，既能解决精神疾患，又能保证其躯体健康，为精神科中西医结合多式探索提供一定帮助和借鉴。

方法 收集我院患者中，明确诊断为精神分裂症共病骨质疏松症患者，随机分为观察组和对照组，各 50 例。对照组给予常规诊疗模式，观察组给予多

学科规范化诊疗模式。治疗期 6 个月。对比分析治疗前后骨密度、泌乳素等各项骨质疏松有关评估指标，简明精神病评定量表 (BPRS) 等精神量表的评分及不良反应发生情况。

结果 经过 6 个月的治疗，观察组和对照组患者的简明精神病评定量表 (BPRS) 治疗前后均无显著差异 ($P > 0.05$)；两组骨密度评分均有所下降，但观察组下降幅度更大，表明中西医结合多学科诊疗模式在改善男性精神分裂症伴骨质疏松症方面具有一定的优势。

结论 本研究结果表明，将中西医结合多学科诊疗模式应用于精神分裂症伴骨质疏松症，疗效显著，拥有极高的有效率。因此，中西医结合多学科诊疗可以作为治疗精神分裂症伴骨质疏松症的一种有效的诊疗模式，值得进一步研究和推广。

关键词：精神分裂症；骨质疏松症；中西医结合；多学科诊疗

从气机升降出入探讨精神分裂症的发病机制

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精神分裂症 (Schizophrenia, SCH) 是临床常见的严重精神疾病，中医学将其为“癫狂”“痴呆”等范畴，临床上多表现为意志、情感、思维等多方面的障碍，因其病程迁延、病情反复发作、致残率高等特点。

精神分裂症多以精神症状为主，患者大部分无有效主诉，单从精神症状角度，难以进行中医的辨证分析，缺乏有效的治疗依据，但是气机紊乱形成的病理产物影响神志则相对较为容易，因此从气机紊乱探讨精神分裂症的病机。

五脏藏神指心和肝、脾、肺、肾共同贮藏人的思维活动，心神统管五脏之神；神既包括神、魂、魄、意、志，又包括其他生命活动力，五脏藏神中，心藏神的神是狭义的神；在五神所在主宰之位，为五脏之主。就人体而言，有广义与狭义之分，广义之神指生命活动的外在表现，狭义之神特指精神活动思维；中医认为心主神明指心主宰精神、情志、意志、思维、活动。在思维意识活动中，心与脑的关系是心为体脑为用；脑在功能上是阴阳气血精明流注的通道，

而且又贮藏精髓，神明流注之所；心是五脏六腑之大主，五脏功能表现神明之体藏于心神明之用发于脑，现代研究也证明心脑对脑对人体的精神活动都具有重要的控制和调节作用。

从气机升降出入讨论癫狂；由于气机逆乱，气血运行不畅，所致虚、火、痰、瘀等形成的病理产物，而影响心脑的神机逆乱，是癫狂发病的根本所在。在治疗上，从调畅气机的角度治疗癫狂，即降逆、升举、收补、开塞。

通过理论阐发，可以从气机升降出入角度来认识癫狂，人的生命活动全依赖于气的升降出入运动来维持，人体的气机升降出入失常，导机体致病理产物的出现，所致神志的逆乱为从气机升降出入角度论述癫狂奠定理论基础。气机升降出入论癫狂详细地论述了癫狂的发病与季节、时间的关系；本文认为可以从气机升降出入角度来阐述癫狂的发病形成机制，用气机升降出入理论指导临床用药，对癫狂治疗提供新的思路。

关键词：神志病，气机升降出入

基于中医整体观与辨证施治原则下中药治疗精神分裂症阴性症状的效果

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目的 本研究旨在探讨基于中医整体观与辨证施治原则下，中药治疗精神分裂症阴性症状的效果，并通过随机对照研究的方式，比较中药与西药（氨磺必利小剂量）在改善精神分裂症患者阴性症状、认知功能、睡眠情况和自我效能方面的差异。精神分裂症是一种复杂的慢性精神疾病，其阴性症状（如情感平淡、社交退缩、意志缺乏等）对患者的生活质量和社会功能造成严重影响。近年来，中医药在精神疾病治疗领域的应用逐渐受到重视。本研究通过随机对照研究，旨在探讨基于中医整体观与辨证施治原则下的中药治疗对精神分裂症阴性症状的影响，以期临床治疗提供新的思路和方法。

方法 本研究共纳入 60 例精神分裂症残留阴性症状患者，随机分为观察组和对照组，每组各 30 例。对照组患者给予氨磺必利 0.2 克晚口服治疗；观察组则根据中医整体观与辨证施治原则，给予中药

汤剂治疗。治疗周期为 8 周。研究过程中，采用阳性与阴性症状量表(PANSS)和阴性症状量表(SANS)作为评价标准，同时评估患者的认知功能、睡眠情况和自我效能。

结果 阴性症状改善情况：经过 8 周的治疗，观察组和对照组患者的 PANSS 和 SANS 评分均有所下降，但观察组下降幅度更大，表明中药在改善精神分裂症阴性症状方面具有一定的优势。认知功能改善情况：通过对比两组患者治疗前后的认知功能评分，发现观察组在认知功能改善方面优于对照组，表明中药在提高精神分裂症患者认知功能方面具有一定的作用。

睡眠情况改善情况：本研究采用匹兹堡睡眠质量指数(PSQI)评估患者的睡眠情况。结果显示，治疗前两组患者的 PSQI 评分无显著差异($P>0.05$)；治疗后，观察组 PSQI 评分为(6.23±2.86)，对照组 PSQI 评分为(5.89±1.98)，明显低于对照组($P<0.05$)，表明中药在改善精神分裂症患者睡眠情况方面具有较好的效果。自我效能改善情况：通过对比两组患者治疗前后的自我效能评分，发现观察组在自我效能改善方面优于对照组，表明中药在提高精神分裂症患者自我效能方面具有一定的作用。

结论 本研究结果表明，基于中医整体观与辨证施治原则下的中药治疗在改善精神分裂症阴性症状、认知功能、睡眠情况和自我效能方面具有一定的优势。这可能与中药具有多靶点、多途径的作用机制有关，能够针对精神分裂症的复杂病理过程进行整体调节。因此，中药可以作为治疗精神分裂症阴性症状的一种有效手段，值得进一步研究和推广。

关键词：中医整体观，精神分裂症，阴性症状

STON2 变异通过调控 Syt1 转运参与突触功能障碍和精神分裂症样行为

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目的 精神分裂症是一种高遗传度的重性精神障碍，以阳性症状、阴性症状和认知功能缺陷为主要临床特征，影响全球约 1% 的人口，并具有较高的致残率、死亡率和沉重的疾病负担。网格蛋白介导的内吞作用(Clatrin-mediated endocytosis, CME)

在突触囊泡的循环和释放中起关键作用，而正常的突触结构和功能对于维持神经环路信号的精确传递有重要作用并参与脑高级功能。大量研究提示包括 CME 受损在内的突触结构和功能异常与精神分裂症的发病相关。然而，潜在的遗传风险因素和致病分子机制目前仍不完全清楚。此外，精神分裂症患者通常需要长期用药，而目前临床仍以“经验化”或“试错法”为主要治疗策略，由于疗效不佳导致的临床换药影响其治疗依从性和预后，因此亟需解析影响药物疗效个体化差异的遗传风险因素及机制并为将来精神分裂症的精准治疗提供相关依据。

方法 本研究基于分子遗传学研究发现精神分裂症易感基因多态性变异线索，进一步通过构建基因修饰小鼠模型，并运用动物行为学评定、免疫电镜、膜片钳电生理以及分子细胞生物学等手段深入研究易感基因变异致病的神经生物学机制，并探索潜在干预策略。

结果 通过大样本精神分裂症和对照人群的遗传分析发现 STON2 的 C-C (307Pro-851Ala) 单倍型增加了精神分裂症的易感性风险。神经生物学机制研究发现 STON2 (307Pro851Ala) 变异与突触前膜的钙传感器蛋白 Synaptotagmin-1 (Syt1) 的相互作用减弱，导致体内 Syt1 分布异常，兴奋性突触前的囊泡内吞和循环释放过程受损。突变敲入小鼠出现突触传递功能障碍，以及社会功能退缩、感觉门控功能受损和对 MK-801 等拟精神病药的敏感性增加等类似精神分裂症样的行为表现。进一步的药物基因组学数据分析表明，在七种抗精神病药物中，携带 C-C (307Pro-851Ala) 单倍型的精神分裂症患者对氟哌啶醇治疗响应优于 T-A (307Ser-851Ser) 携带者。通过急性氟哌啶醇给药可以挽救 STON2 (307Pro-851Ala) 突变敲入小鼠的突触传递缺陷，有效改善突变小鼠的精神分裂症样行为。

结论 精神分裂症相关 STON2 变异对兴奋性突触前的囊泡内吞、循环释放和突触功能的影响，且有望基于 STON2 基因分型分析指导精神分裂症的个体化治疗。

关键词：STON2；精神分裂症；突触功能障碍；氟哌啶醇

伴暴力行为精神分裂症患者的风险决策功能及社会认知特点的研究

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目的 探究伴暴力行为精神分裂症患者的风险决策功能及社会认知 (Social cognition) 功能特点。

方法 选择江南大学附属无锡市精神卫生中心精神科及宜兴市第五人民医院就诊的伴暴力行为精神分裂症患者 40 例作为研究组，诊断符合《美国精神障碍诊断与统计手册第 5 版》(DSM-V) 的精神分裂症的诊断标准，且伴有明显的暴力行为；同时选择无暴力精神分裂症患者 40 例作为对照组，诊断均由副主任医师以上的高年资医师评估。两组均给予失言察觉任务测试 (The faux pas recognition test, FPR) 评估患者的社会认知功能，同时予爱荷华赌博任务 (Iowa Gambling Task, IGT) 评估患者的风险决策功能。应用 SPSS13.0 统计软件包统计结果，对两组所测得结果进行比较，并对研究组的 FPR 评分与 IGT 评分进行相关分析。

结果 一般资料比较，两组性别构成、年龄及受教育年限比较无统计学意义 ($P > 0.05$)。两组 FPR、IGT 评分进行组间比较，研究组的 FPR 总分、失言故事分、控制故事分均低于对照组，差异均有统计学意义 ($t = 2.127 \sim 6.411$, 均 $P < 0.05$)；研究组的 IGT 净得分总分 (-1.36 ± 3.58) 低于对照组 (5.36 ± 4.41) 分，差异有统计学意义 ($t = 7.651$, $P = 0.000$)；IGT 各 Block 的净得分组间比较，重复测量方差分析结果显示组别主效应显著 ($F = 7.575$, $P = 0.007$)，研究组 Block 4、Block 5 的净得分低于对照组，差异有统计学意义 ($t = 4.124$ 、 2.772 , $P = 0.000$ 、 0.023)；研究组 FPR 总分、失言故事分与 IGT 的净得分总分的相关性分析均呈正相关 ($r = 0.558 \sim 0.374$, 均 $P < 0.01$)。

结论 与无暴力精神分裂症患者相比，伴暴力行为的精神分裂症患者的社会认知及风险决策功能均明显受损，且二者间存在明显相关。

关键词：精神分裂症；暴力行为；社会认知；风险决策

精神疾病治疗的闭环疗法

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目的 有效治愈精神疾病.精神疾病始初是不用药,经治疗痊愈后,也是不用药的,即回到原位----闭环疗法

方法 选用的均为首诊的抑郁症和精神分裂症患者,本研究为开放性门诊治疗,药物剂量可调整的临床试验,采用自然观察,预约随诊的研究方法,对 51 例精神分裂者和 57 例抑郁症患者进行为期 12 周的小剂量抗精神病药递减法然后停药进行治疗观察,随访 10 年.

精神分裂症的治疗:利培酮 1-2 毫克每日,治疗 4 周,第五周递减到 0.5-1 毫克每日,治疗 4 周后,再减至 0.25 毫克,维持治疗 4 周停药.

抑郁症的治疗:代力新 2 片每日,治疗 2 周,递减至 1.5 片每日,两周后递减至 1 片每日,治疗 3 周后,减至 0.5 片每日,维持 4 周后停药(代力新总量不超过 90 片)

疗效主要评定指标:精神症状完全消失,社会功能恢复如初,学生能继续上学,工人能继续做工,农民继续种田.

对照组:长期住院的精神分裂症和抑郁症患者,长期用药,久治不愈,已造成药物依赖,反复住院,失去基本社会功能,自杀,代谢综合症,大部分已成残疾.

结果 51 例精神分裂症患者,精神症状缓解充分,已回归社会,即回到原点,有 7 例复发患者,经再次服用利培酮 1 毫克每日,半月后减至 0.5 毫克每日,治疗 2 周停药,症状缓解,完成随访.

57 例抑郁症患者中,治疗过程即没有中断社会活动,治疗过程工作学习没受到影响,精神症状缓解充分,有 11 例复发,再次给予代力新 1 片每日,半月后减至半片每日,两周后停药.57 例均完成随访.

结论 1.精神疾病并不是残疾性疾病,闭环治疗是唯一可治愈疾病的有效、简便、安全、低费用的方法

2.精神药物是一把双刃剑,小量、适量可治愈各种精神疾病;长期、大量应用会导致各种精神疾病,甚至残疾

3.精神疾病的残疾是药物(过度治疗)导致的,这一点应引起同道们的警惕.

关键词: 闭环疗法,社会功能完好

基于五行生克理论对于幻听的病因分析

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目的 幻听是精神分裂症患者最常见的阳性症状之一,精神分裂患者中有 60%-83%的患者存在言语性幻听,其中包括真性幻听和假性幻听,约 23%的双相障碍患者、46%的边缘型人格障碍患者及 10%-15%的健康人群也不同程度的有过言语性幻听体验.幻听作为一种常见的精神病性症状,往往给患者带来了较大的精神痛苦,甚至影响其社会功能,特别是精神分裂症患者,可能在幻听的支配下出现行为异常甚至失控,进而出现伤人毁物的不良行为,对家庭和社会造成极大的危害.但幻听的发病机制至今不能明确,其治疗方法多为精神科药物治疗、经颅磁刺激治疗,以及包括阿凡达疗法在内的心理治疗,但有部分患者的幻听因长期治疗效果欠佳,逐渐演变为难治性幻听.精神分裂症属中医神志病范畴,秦汉时期已有相关记载和描述,如《灵枢·癫狂》曰:“耳妄闻”.通过中医的理论分析辨证论治使幻听的中医病因和治疗逐渐完整.

方法 肾开窍于耳,因此听觉主要取决于肾,但不仅限于肾,根据五行生克理论,肺为肾之母,肝为肾之子,若母病及子,或子盗母气,即肺病伤及肾,或肝病伤肾,则均可出现肾的病变,而出现听觉的异常,此处的听觉异常包括,耳聋、耳鸣、幻听等,又因肝藏魂而肺藏魄,魄的异常包括魄气过强,魄用不足和魄机惑乱,其中魄气过强可出现幻听或幻视,临床上,患者常常因情志不遂而发病,因此部分患者亦有肝气不疏而起病,因此,在辨证上应严格把握患者的发病病因,为肺实肾虚或为肝郁肾虚,在治疗上应区别用药拟方.

结果 通过五行生克的理论对幻听的病因进行中医辨证分析,把握幻听症状出现的主要脏腑及相关脏腑,完善幻听的中医病因理论的完整性和系统性,并在此基础上处方用药,提高临床治疗的有效性,减轻患者的痛苦.

结论 幻听作为精神类疾病患者的常见的阳性症状,治疗上,部分患者效果并不满意,小部分患者长期存在,严重影响了患者的生活质量,多手段,多种治疗方式的使用,使临床医师治疗更加灵活多样,并可取得更好的治疗效果,随着理论的深入和临床实践的丰富,令更多的患者较完整的恢复社会功能.

关键词: 幻听,五行,肾虚,肺实,肝郁

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伴攻击行为男性精神分裂症治疗前后甲状腺激素水平变化

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目的 探讨伴攻击行为的男性精神分裂症患者治疗前后血清甲状腺激素水平变化。

结论 伴攻击行为的男性精神分裂症患者甲状腺激素水平治疗前升高、治疗后下降, FT3、FT4 水平及其变化值可能是攻击行为严重程度的敏感指标。

方法 将 80 例男性精神分裂症患者(患者组)分为攻击组(评分 ≥ 4 分)和非攻击组(评分 < 4 分)各 40 例,匹配健康对照组 40 例,于治疗前及治疗后第 8 周末患者组采用阳性和阴性综合征量表(PANSS)、修订版外显攻击行为量表(MOAS)进行评定,三组测定血清甲状腺素(TT4)、三碘甲状腺原氨酸(TT3)、促甲状腺激素(TSH)、游离三碘甲状腺原氨酸(FT3)、游离甲状腺素(FT4)水平。

结果 治疗后第 8 周末攻击组和非攻击组 PANSS 评分、MOAS 评分、TT4、TT3、FT3、FT4 均较治疗前下降($P < 0.01$);治疗前攻击组 MOAS 评分、TT4、TT3、FT3 均高于非攻击组($P < 0.05$),而治疗后均下降($P > 0.05$);治疗后患者组两组 TT4、TT3、FT4、FT3 均低于对照组($P < 0.05$)。攻击组治疗前 MOAS 评分与治疗前 TT4、FT3、FT4 水平均呈正相关($P < 0.05$);MOAS 评分变化值与 FT3、FT4 水平变化值均呈正相关($P < 0.05$, $P < 0.01$)。

结论 伴攻击行为的男性精神分裂症患者甲状腺激素水平治疗前升高、治疗后下降, FT3、FT4 水平及其变化值可能是攻击行为严重程度的敏感指标。

关键词: 精神分裂症, 攻击, 甲状腺激素水平

电休克和磁休克治疗在精神疾病动物模型的研究进展

刘美琪 杜鑫哲 高耀 刘莎*

目的 随着物理治疗的深入研究,电休克治疗逐渐成为全球范围内治疗精神疾病的常规手段之一,磁休克治疗凭借其“精准性”成为一种潜在的替代疗法,但治疗机制尚不明确,然而以人本身作为实验对象在道义和方法学上还受到种种限制。动物模型的优势就在于它克服了这些限制,在研究精神疾病的发生发展规律上成为了极其重要的手段和工具,同时有助于评估各种治疗措施的疗效。本文综述了电休克和磁休克治疗在精神疾病动物模型的研究进展,以期电休克和磁休克治疗更好应用于临床提供理论依据。

方法 本文围绕“电休克治疗”“磁休克治疗”“精神疾病”在中英文数据库中进行了检索,筛选了关于电休克和磁休克治疗在精神疾病动物模型的研究文献,从以下三个部分进行归纳汇总:(1)电休克和磁休克治疗改善精神疾病动物模型的异常行为学表现即神经调控技术对模型动物行为的影响。(2)电休克和磁休克治疗精神疾病如抑郁症、精神分裂症、自闭症的作用机制。(3)电休克治疗后认知功能损伤的潜在机制及可能的改善机制。

结果 (1)电休克治疗可以改善抑郁模型小鼠旷场实验、糖水偏好实验、强迫游泳实验等行为学实验中表现出的异常行为,精神分裂症大鼠在 PPI 实验中表现出的异常行为也得到控制,此外,电休克治疗还可以改善自闭症小鼠包括社交能力在内的自闭样行为。磁休克治疗可以改善抑郁模型小鼠的抑郁样行为,不同频率的磁休克治疗对抑郁症的改善具有差异性。(2)电休克治疗可能作用于内侧前额叶皮层,通过逆转谷氨酸和谷氨酰胺循环障碍及逆转 Glu 能神经元和 GABA 能神经元比例失衡改善小鼠抑郁样行为。电休克治疗改善精神分裂样行为的机制可能是通过抑制其神经胶质细胞的增生,大脑中可塑性变化可能是电休克治疗自闭样行为的关键。(3)电休克治疗导致认知功能损伤可能与海马 Tau 蛋白磷酸化程度增加、突触可塑性增加、炎症小体激活等相关,麻醉药物异丙酚、丙泊酚可单独或联合抗抑郁药物氯胺酮改善电休克治疗后认知损伤的副反应。

结论 本文围绕电休克与磁休克治疗在精神疾病动物模型的应用,综述了其可能的治疗机制及作用靶点,为我们深入探究精神疾病的神经生物学基础和治疗方法提供了重要的机会,将为后续探索物

理治理新靶点提供思路。

关键词：电休克治疗,磁休克治疗,精神疾病,动物模型

甜菜碱与精神分裂症的因果关系：双向双样本的孟德尔随机化研究

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目的 精神分裂症(Schizophrenia)是一种使人衰弱的常见精神疾病,具有不同的遗传和神经生物学背景,影响早期大脑发育,多在青壮年缓慢或亚急性起病,临床上往往表现为症状各异的综合症,涉及感知觉、思维、情感和行为等多方面的障碍以及精神活动的不协调。它影响着全球约 2400 万人。迄今为止精神分裂症的发病机理层出不穷,比如多巴胺假说、五羟色胺假说等,但仍未完全清楚。近年来精神分裂症代谢组学相关研究的增多为我们揭示了疾病的代谢特征和机制提供了新的视角,在这些研究中,有观察到精神分裂症患者的血液样本中甜菜碱(Betaine)的浓度低于健康对照组,这一发现引起了科研界的关注。然而,精神分裂症与甜菜碱之间的相关关系尚未明确。本研究的目的是基于双向双样本孟德尔随机化研究探索甜菜碱与精神分裂症之间的因果关系。

方法 本研究基于欧洲人群中甜菜碱和精神分裂症的全基因组关联研究(GWAS)的总结数据。使用双向双样本 MR,遗传因素作为工具变量,去除连锁不平衡、弱工具变量后,采用逆方差加权法(IVW)作为主要分析方法,采用 MR-Egger 截距法评估水平多效性。MR 结果以比值比(OR)和对应的 95%置信区间表示,当 $P < 0.05$ 时,结果被认为差异有统计学意义。在 MR 分析中,我们将甜菜碱作为暴露因素,将精神分裂症的风险作为结局;在反向 MR 分析时,精神分裂症的风险被作为暴露因子,并且选择甜菜碱作为结局,以此来评估甜菜碱与精神分裂症之间的潜在因果关系。

结果 甜菜碱和精神分裂症样本量分别为 7086 和 82315,最终我们选择了 13 个甜菜碱相关的 SNPs 作为 MR 分析的遗传工具变量。在 MR 中,甜菜碱与精神分裂症之间存在潜在的因果关系,比值比(OR)为 1.941(95%CI: 1.104-3.414, $P=0.021$)。在反向 MR 中,没有发现精神分裂症与甜菜碱之间潜在的因果关系,比值比(OR)为 1.006(95%CI: 1.000-1.012, $P=0.070$)。通过 MR-Egger 截距法评估后 $P=0.848$,表明不存在多效性。

结论 本研究表明甜菜碱升高可能会增加罹患精神分裂症的风险,但是精神分裂症患者中的甜菜碱含量的变化并无因果关系。该 MR 研究为临床精神分裂症诊断提供新思路,但二者之间因果关系的潜在机制还需进一步研究来探索。

关键词：精神分裂症,甜菜碱,孟德尔研究

血清 BDNF 及其磷酸化、甲基化水平与精神分裂症患者临床症状及认知功能的相关性研究

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目的 探讨脑源性神经营养因子(BDNF)、磷酸化脑源性神经营养因子(p-BDNF)和甲基化脑源性神经营养因子(MBDNF)对精神分裂症患者临床症状及认知功能的影响。

方法 选择 79 例精神分裂症患者作为病例组,健康体检者 63 名作为对照组。精神分裂症患者的临床症状采用阳性和阴性症状量表(PANSS)评估;MATRICS 公认认知功能成套测验(MCCB)用来评估受试者的认知功能;酶联免疫吸附试验(ELISA)方法用于测定病例组与对照组外周血 BDNF、p-BDNF 和 MBDNF 的浓度水平。使用 IBM SPSS25.0 软件进行统计分析。

结果 1.病例组血清 BDNF、p-BDNF 浓度低于对照组,而 MBDNF 浓度高于健康对照组,差异均具有统计学意义($p<0.001$)。2.在认知功能中,信息处理速度、词语学习、推理和问题解决及视觉学习得分病例组均低于对照组,差异具有统计学意义($p<0.01$)。3.病例组阴性量表得分与推理和问题解决得分呈负相关。阴性量表得分与 BDNF、p-BDNF 浓

度呈负相关,而与 MBDNF 浓度呈正相关。4.在病例组中推理和问题解决得分与 BDNF、p-BDNF 浓度呈正相关,与 MBDNF 浓度呈负相关。在健康对照组中,推理和问题解决得分与 MBDNF 浓度呈负相关。5.在病例组中 BDNF 与 p-BDNF 浓度呈正相关、与 MBDNF 浓度呈负相关;p-BDNF 浓度与 MBDNF 浓度呈负相关。在对照组中 BDNF 浓度与 p-BDNF 浓度呈正相关;BDNF 浓度与 MBDNF 浓度存在负相关。6.分别以病例组 PANSS 量表总分、阳性量表、阴性量表、一般精神病理量表得分和 MCCB 各因子得分作为因变量,以 BDNF、p-BDNF、MBDNF、年龄、性别、教育程度、婚姻情况、吸烟情况、BMI 为自变量进行多元线性回归分析,结果表明 BDNF 和 MBDNF 浓度可能是 PANSS 阴性量表得分的影响因素;性别和教育程度可能是信息处理速度的影响因素;BDNF 浓度和教育程度可能是视觉学习的影响因素;p-BDNF 浓度和教育程度可能是词语学习的影响因素;MBDNF 浓度、年龄、性别和教育程度可能都是推理和问题解决的影响因素。

结论 精神分裂症患者外周血 BDNF、p-BDNF 及 MBDNF 浓度与对照组之间存在显著差异,低血清 BDNF、p-BDNF 浓度水平和高血清 MBDNF 浓度水平与精神分裂症患者的阴性症状及推理和问题解决能力损害存在一定的相关性,表明外周血 BDNF、p-BDNF 和 MBDNF 水平对于精神分裂症患者临床症状、部分认知功能损害的评估可能有一定的贡献,为临床治疗评估提供一定的参考依据。

关键词: 精神分裂症;认知功能;脑源性神经营养因子(BDNF);磷酸化脑源性神经营养因子(p-BDNF);甲基化脑源性神经营养因子(MBDNF)

精神分裂症患者的默认模式网络与人格特质之间的关系:大脑偏侧化研究

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目的 精神分裂症是一种严重的精神类疾病,以幻觉、妄想、主动性丧失和认知功能损伤为特点。默认模式网络(Default Mode Network, DMN)是大脑中一组与自我意识、内省、记忆和情绪调节等功能相关的脑区网络。研究表明,精神分裂症患者的

DMN 脑区与正常人在人格特质上可能存在焦虑、抑郁、社交互动、认知弹性和自我意识等方面的区别。本研究旨在通过采用大脑功能和结构的耦合方法,量化精神分裂症患者的默认模式网络(DMN)区域结构和功能之间的耦合强度,进而探讨 DMN 区域左右半脑的差异,并研究其与人格特质之间的关系。

方法 采用大脑功能和结构的耦合方法来量化 DMN 区域结构和功能之间的耦合强度,再根据耦合指数得出 DMN 区域左右半脑的差异,最后结合精神分裂症患者的人格特质评估结果,分析不同人格特质 DMN 活动中的差异。首先,使用功能磁共振成像(fMRI)技术获取精神分裂症患者的 DMN 活动情况和大脑结构信息。通过对 fMRI 数据进行分析,计算 DMN 区域内部的功能连接强度。然后,利用 MRI 数据分析大脑结构连接,计算 DMN 区域结构之间的连接强度。将这两种连接强度结合起来,计算 DMN 区域结构和功能之间的耦合指数。最后,根据耦合指数的结果,比较 DMN 区域在左右半脑的耦合强度差异。进一步分析精神分裂症患者在人格特质上这种耦合强度差异上的表现。

结果 DMN 区域在左右半脑的耦合强度存在显著差异,且不同人格特质在这种差异上表现出不同的模式。研究表明,在精神分裂症患者中,可能存在与神经质特征相关的 DMN 活动异常,包括更高的 DMN 活动水平以及更强的右侧大脑区域连接;外向性倾向的个体在执行认知任务时 DMN 与左侧大脑区域的连接较强。此外,开放性倾向的人在创造性任务中 DMN 活动较高,与双侧大脑区域的连接均衡。

结论 本研究通过大脑功能和结构的耦合方法,揭示了精神分裂症患者的大脑偏侧化与 DMN 活动在不同人格特质表现中的关系。发现 DMN 区域左右半脑的耦合强度差异,以及与人格特质之间的相关性,为理解大脑活动与结构在人格特质形成中的作用提供了新的视角。

关键词: 精神分裂症;DMN;大五人格特质;大脑偏侧化;大脑功能和结构耦合

基于流行病学调查的抑郁障碍与运动相关关系研究

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目的 探讨抑郁障碍患者抑郁程度与运动相关因素之间的关系

方法 调查抑郁障碍患者的流行病学资料,应用自行设计的调查表对患者的年龄、性别、运动相关因素、抑郁程度等进行分析。

结果 本研究共纳入 200 名 MDD 患者,年龄均值为(27.60±9.56)岁;睡眠时长均值为(6.58±1.73)时,每次运动时长均值为(34.165±50.973)分;运动频率均值为每周(2.94±1.914)次。运动时有或无监督的 MDD 患者在睡眠时长、运动频率、焦虑躯体化、阻滞因子上存在显著差异, ($P<0.05$),有监督者较无监督者睡眠时长更长,运动频率更高,焦虑躯体化、阻滞因子、睡眠障碍因子分值更高;运动时不同心率的 MDD 患者在睡眠时长、运动频率及焦虑躯体化、阻滞、睡眠障碍因子上存在显著差异, ($P<0.05$);运动时心率 >120 次/分的患者睡眠时长最长,为(7.06±1.93)时,心率 100~110 次/分的患者运动频率最高、睡眠障碍因子均值最低,心率 110~120 次/分的患者焦虑躯体化、阻滞因子均值最低。抑郁程度及运动相关因素的线性回归结果示运动时长是抑郁程度的危险因素,运动频率与运动强度是抑郁程度的保护因素。

结论 抑郁障碍患者抑郁程度与运动时有无监督情况、运动时心率、运动时长、运动频率、运动强度等具有相关性,运动可能作为防治抑郁障碍的一种有效的方法。

关键词:抑郁障碍;运动;流行病学调查

十八碳四烯酸和脂肪酸去饱和酶 2 基因内 Rs174570 基因型的交互作用和精神分裂症认知功能的关联研究

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目的 探讨十八碳四烯酸(SDA)和脂肪酸去饱和酶 2(FADS2) rs174570 基因型的交互作用对精神分裂症(SCH)认知功能的影响。

方法 本研究为病例对照研究,选取 2017 年 10

月至 2019 年 10 月就诊于郑州大学第一附属医院精神科的首发未用药 SCH 患者作为病例组,选取同期经过广告招募及来医院体检的健康人群作为对照组。采用液相色谱质谱联用(LC-MS)检测外周血 SDA 的水平,采用全基因组关联分析(GWAS)进行全基因组单核苷酸多态性检测,并分析 SDA 关键酶 FADS2 基因位点基因型分布与 SDA 水平的关系。采用阳性和阴性精神症状评定量表(PANSS)和美国认知功能成套测验(MCCB)分别评估精神症状严重程度和认知功能。采用线性回归分析,分析 SDA 和 FADS2 基因位点基因型的交互作用和 SCH 认知功能损害的关系。

结果 本研究共纳入了 98 例首发未用药 SCH 患者(男 43 例,女 55 例)和 95 名健康对照者(男 36 名,女 59 名)。患者组年龄为(22.6±4.9)岁,对照组年龄为(23.1±1.9)岁。SCH 患者组 SDA 水平显著低于对照组($P<0.001$)。在认知功能评分方面,SCH 患者显著低于对照组(P 均 <0.05)。SCH 患者基线期低水平的 SDA 与认知功能领域的信息处理速度(SOP)评分显著正相关($r=0.406$, $P<0.001$)。利培酮治疗半年后,SDA 水平由(3.6±1.9) $\mu\text{mol/L}$ 升高至(4.4±2.3) $\mu\text{mol/L}$, SDA 水平治疗前后变化有统计学意义($t=-2.29$, $P=0.024$)。利培酮治疗前后 SDA 水平的变化与认知功能 SOP 分的变化显著正相关($r=0.327$, $P=0.002$)。SDA 关键酶 FADS2 的 SNP 位点基因型分析,发现 FADS2 rs174570 基因型与 SDA 水平($F=3.74$, $P=0.027$)和认知功能 SOP 分($F=4.28$, $P=0.017$)、AV 分($F=6.74$, $P=0.002$)显著相关。FADS2 rs174570 基因型 CC 人群 SDA 水平 [(4.2±1.7) vs (3.3±1.6)] 和认知功能 SOP [(35.8±10.3) vs (28.8±12.1)] 高于基因型为 CT 的人群 (P 均 <0.05)。且 SDA 水平和 FADS2 rs174570 基因型的交互作用与 SCH 认知功能领域 SOP 分显著正相关 ($\beta=1.82$, $P=0.029$)。

结论 SDA 和 FADS2 rs174570 基因型的交互作用和精神分裂症认知功能水平有关。

关键词:精神分裂症;十八碳四烯酸;脂肪酸去饱和酶;信息处理速度;认知功能;病例对照研究

Abnormalities of Somatomotor Network in Patients with Major Depressive Disorder and Their Unaffected Siblings

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Objective Major depressive disorder (MDD) is a prevalent and significant psychiatric condition. Degree centrality (DC), an index that gauges the significance of nodes within a network, has been extensively employed in investigating neural mechanism of MDD. The differences in network importance between MDD and its unaffected siblings in various brain regions as nodes and their correlation with depressive symptoms are not yet clear. This analysis may help to explore the qualitative and stateful brain network changes related to the pathological mechanism of MDD

Methods Resting-state functional magnetic resonance imaging (MRI) data were collected from a sample of 102 patients with MDD, 35 of their unaffected siblings (SL), and 71 healthy controls (HC). Firstly, a comprehensive analysis examined disparities in DC values across the entire brain among the three groups, including patients with MDD, SL, and HC. Secondly, regions exhibiting significant differences in the DC analysis were chosen as seed points for assessing whole-brain functional connectivity (FC) variations across patients with MDD, SL, and HC. Thirdly, the study conducted correlation analyses between DC values, FC values of notable aberrant brain regions, and total scores of 17-item Hamilton Depression Rating Scale in patients group respectively

Results The analysis of the DC index unveiled differences in medial frontal gyrus and right precentral gyrus among patients with MDD, SL, and HC (PFWE-Corr < 0.05). Post hoc analysis revealed that compared with SL, both patients with MDD and HC had reduced DC values in bilateral medial frontal gyurs. In addition, in right precentral gyrus, the DC values of the three groups change in a stepwise. Additionally, distinctions in FC were detected between the medial frontal gyrus and the right postcentral gyrus across the three groups

($P < 0.05$), post hoc analysis revealed that compared with patients, both HC and SL groups had increased FC values. While both DC and FC values exhibited significant differences, they were not found to correlate with the severity of depressive symptoms

Conclusion The somatomotor Network plays an important role in the neural mechanisms of major depressive disorder. The decreased FC values between the medial frontal gyrus and the right postcentral gyrus and decreased DC values in the right precentral gyrus may be related to the pathological mechanism of MDD; While the increased in DC values in the medial frontal gyrus may be related to the susceptibility mechanism of MDD

关键词: Major depressive disorder; somatomotor network; fMRI

吸烟、性别、种族和感染对氯氮平血药浓度影响及 剂量调整推荐

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目的 氯氮平是治疗难治精神分裂症的唯一推荐药物。氯氮平治疗窗窄, 血药浓度个体间变异大, 探索导致氯氮平浓度差异的因素, 并根据这些因素进行氯氮平给药剂量调整, 将会提高氯氮平临床应用的安全性, 本研究目的, 探索影响氯氮平浓度差异的因素, 为氯氮平剂量个体化提供数据支持。

方法 在 129 名中国住院患者(平均每名患者 8.8 个 TDM 样本)进行性别和吸烟分层后, 我们探讨了总浓度-剂量(C/D)比率与 CYP1A2(* 1C, * 1F 和 * 7)和 CYP2C19 等位基因(* 2 和 * 3)。回顾性分析 129 例患者的临床资料, 包括感染/炎症和/或氯氮平抑制剂的存在和持续时间。系统的文献回顾确定了 22 个氯氮平 TDM 先前的研究(13 在高加索人和 7 在东亚人)。

结果 22 名男性吸烟者的平均总氯氮平 C/D 比(ng/mL/mg/d)为 1.96, 5 名女性吸烟者为 2.07, 36 名男性非吸烟者为 2.47, 66 名女性非吸烟者为 2.95。CYP1A2 和 CYP2C19 的基因型对氯氮平 C/D 值无影响。在 129 例患者中, 发现 5 例患者(4%), 需要

75-115 mg/d 的低剂量氯氮平才能达到治疗浓度。使用同样的方法在一个已发表的意大利样本中, 我们发现了 5 例氯氮平慢代谢表型患者, 发生率约 3.3%(152 个的 3.3%)。此外, (1)876 名东亚人氯氮平 C/D 值的加权平均值为 1.57, 而 1147 名高加索人的加权平均值为 1.07; (2)东亚人氯氮平的 C/D 值 (ng/mL/mg/d) 比高加索人 C/D 值高 ($P < 0.001$)。研究发现, 129 例服用氯氮平治疗的患者住院期间, 有 16 例患者共发生 18 次感染或炎症。18 次炎症期间中有 2 次 (11%) 的感染或炎症期间不需要氯氮平剂量调整, 11 次 (61%) 炎症期间氯氮平剂量需要减半, 5 次 (28%) 炎症期间氯氮平剂量需要降低 2/3。该研究提示氯氮平临床应用过程中炎症或感染非常常见; 同时, 严重感染, 特别是肺炎是导致氯氮平产生严重不良反应, 甚至死亡的高风险原因之一。

结论 未来的 TDM 研究, 需要进一步探讨在对性别和吸烟分层后, 氯氮平慢代谢型患者在东亚和高加索患者的发生频率。与高加索人相比, 东亚人的氯氮平清除具有临床意义的下降。感染/炎症期间会导致氯氮平浓度升高。这可能解释了氯氮平患者在严重感染, 特别是肺炎期间死亡的风险比较高。

关键词: 氯氮平, 感染, 个体化治疗, 浓度/剂量比值 (C/D 值)

Differences in Fractional Amplitude of Low-frequency Fluctuations (fALFF) and Cognitive Function between Untreated Major Depressive Disorder and Schizophrenia with Depressive Mood Patients

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Objective Distinguishing untreated major depressive disorder without medication (MDD) from schizophrenia with depressed mood (SZDM) poses a clinical challenge. This study aims to investigate differences in fractional amplitude of low-frequency fluctuations (fALFF) and cognition in untreated MDD and SZDM patients

Methods The study included 42 untreated MDD cases, 30 SZDM patients, and 46 healthy controls (HC).

Cognitive assessment utilized the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). Resting-state functional magnetic resonance imaging (rs-fMRI) scans were conducted, and data were processed using fALFF in slow-4 and slow-5 bands

Results Significant fALFF changes were observed in four brain regions across MDD, SZDM, and HC groups for both slow-4 and slow-5 fALFF. Compared to SZDM, the MDD group showed increased slow-5 fALFF in the right gyrus rectus (RGR). Relative to HC, SZDM exhibited decreased slow-5 fALFF in the left gyrus rectus (LGR) and increased slow-5 fALFF in the right putamen. Changes in slow-5 fALFF in both RGR and LGR were negatively correlated with RBANS scores. No significant correlations were found between remaining fALFF (slow-4 and slow-5 bands) and RBANS scores in MDD or SZDM groups

Conclusion Alterations in slow-5 fALFF in RGR may serve as potential biomarkers for distinguishing MDD from SZDM, providing preliminary insights into the neural mechanisms of cognitive function in schizophrenia

关键词: Fractional amplitude of low-frequency fluctuations; Gyrus rectus; Major depressive disorder; Repeatable battery for the Assessment of Neuropsychological Status; Schizophrenia with depressed mood.

精神分裂症不同症状之间的小脑功能差异研究

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目的 精神分裂症(SZ)的临床症状复杂多样, 并且阳性症状显著与阴性症状显著的 SZ 患者的治疗、预后不同。然而关于阳性症状显著的 SZ、阴性症状显著的 SZ 和健康对照 (HC) 大脑差异的病理

机制研究较少。在本项研究中,使用低频振幅(ALFF)、低频波动幅度分数(fALFF)、区域一致性(ReHo)、度中心性(DC)和差异脑区的功能连接(FC)进行分析,旨在比较三组被试脑区的差异,探索SZ不同症状发生的影像学机制。

方法 本研究在新乡医学院第二附属医院纳入34例HC,34例SZ(阴性症状显著),32例SZ(阳性症状显著)。使用dpabi进行预处理数据,SPM进行单因素方差分析比较三组之间的ALFF、fALFF、ReHo及DC值,得到三组之间的差异脑区。以三组均有差异的脑区为感兴趣区域得到全脑的FC值,使用单因素方差分析比较三组之间FC,进一步分析与认知功能的相关性。

结果 在SZ(阳性症状显著)、SZ(阴性症状显著)和HC中,右侧小脑上部的ALFF值存在差异(GRF校正, $F=9.3434$, $p<0.001$),左侧眶内额中回的ALFF值存在差异(GRF校正, $F=13.5792$, $p<0.001$),右侧小脑上部的DC值存在差异(GRF校正, $F=13.0471$, $p<0.001$)左侧豆状壳核的fALFF值存在差异(GRF校正, $F=12.9323$, $p<0.001$),右侧角回的fALFF值存在差异(GRF校正, $F=10.9139$, $p<0.001$),左侧颞下回的ReHo值存在差异(GRF校正, $F=11.7736$, $p<0.001$)。在右侧小脑上部,SZ(阳性症状显著)的DC值低于HC,SZ(阴性症状显著)的DC值高于HC,并有显著差异(GRF校正, $F=13.0471$, $p<0.001$)。在阴性症状显著的SZ中,右侧小脑上部和左侧丘脑的功能连接与迷宫得分存在相关性(FDR校正, $p=0.048$, $r=-0.465$)、右侧小脑上部和右侧小脑下部的功能连接与迷宫得分存在相关性(FDR校正, $p=0.048$, $r=-0.469$)、右侧小脑上部和左侧颞上回的功能连接与迷宫得分存在相关性(FDR校正, $p=0.048$, $r=-0.471$)。

结论 右侧小脑上部、左侧眶内额中回、左侧豆状壳核、右侧角回和左侧颞下回是SZ(阳性症状显著)、SZ(阴性症状显著)和HC的差异脑区。相比于阴性症状显著的SZ,阳性症状显著的SZ右侧小脑上部脑功能的异常更为突出。本研究可能对精神分裂症不同亚型的病理生理机制有更全面的了解。

关键词: 精神分裂症,阳性症状,阴性症状,静息态功能磁共振,小脑

Fractional Amplitude of Low-frequency Fluctuations in Sensory-motor Networks and Limbic System As A Potential Predictor of Treatment Response in Patients with Schizophrenia

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Objective Previous investigations have revealed substantial differences in neuroimaging characteristics between healthy controls (HCs) and individuals diagnosed with schizophrenia (SCZ). However, we are not entirely sure how brain activity links to symptoms in schizophrenia, and there is a need for reliable brain imaging markers for treatment prediction

Methods In this longitudinal study, we examined 56 individuals diagnosed with 56 SCZ and 51 HCs. The SCZ patients underwent a three-month course of anti-psychotic treatment. We employed resting-state functional magnetic resonance imaging (fMRI) along with fractional Amplitude of Low Frequency Fluctuations (fALFF) and support vector regression (SVR) methods for data acquisition and subsequent analysis

Results In this study, we initially noted lower fALFF values in the right postcentral/precentral gyrus and left postcentral gyrus, coupled with higher fALFF values in the left hippocampus and right putamen in SCZ patients compared to the HCs at baseline. However, when comparing fALFF values in brain regions with abnormal baseline fALFF values for SCZ patients who completed the follow-up, no significant differences in fALFF values were observed after 3 months of treatment compared to baseline data. The fALFF values in the right postcentral/precentral gyrus and left postcentral gyrus, and the left postcentral gyrus were useful in predicting treatment effects

Conclusion Our findings suggest that reduced fALFF values in the sensory-motor networks and increased fALFF values in the limbic system may constitute distinctive neurobiological features in SCZ patients. These findings may serve as potential neuroimaging markers for the prognosis of SCZ patients

关键词: Fractional amplitude of low frequency fluctuations; Magnetic resonance imaging; Schizophrenia; Support vector machine.

研究首发精神分裂症患者采用自我管理训练的临床效果

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目的 探究自我管理训练对首发精神分裂症患者的临床应用效果。

方法 随机遴选 2021 年 1 月~2023 年 1 月间, 在本院接受治疗的首发精神分裂症患者中, 抽选出 40 例患者, 根据抽签法, 将 40 例首发精神分裂症患者分成对照组与观察组各 20 例。对照组首发精神分裂症患者采取常规治疗护理, 而观察组采取自我管理训练。对比两组患者训练前后生活质量评分 (GQOLI)、韦氏成人智力量表 (WAIS-RC)、简明精神病评定量表评分 (BPRS), 自知力与治疗态度问卷调查量表评分 (ITAQ), 观察两组的效果。

结果 训练前, 两组患者 GQOLI、WAIS-RC、BPRS、ITAQ 各项指标相比较, 均无统计学意义 ($P > 0.05$); 训练后, 观察组患者的生活质量评分显著高于对照组, 认知功能评分显著高于对照组, 而且观察组的 BPRS、ITAQ 指标与对照组相比较均具有统计学差异性 ($P < 0.05$)。

结论 对首发精神分裂症患者采取自我管理训练, 能够明显提高患者的日常生活质量, 还能够改善患者的精神状态, 以及患者的社交技能, 有助于改善患者认知功能, 提升患者自我管理能力, 对患者、家庭, 乃至社会都有很打的帮助, 具有非常高的作用价值, 建议推广。

关键词: 首发精神分裂症; 自我管理训练; 生活质量; 精神状态

Aldosterone and Acylcarnitine: Novel Insights Into The Pathogenesis of First-Episode Schizophrenia

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Objective Schizophrenia (SCZ) is a severe mental disorder with an unclear etiology. The objective of this study is to identify potential metabolites that may play a role in the development of SCZ using untargeted metabolomics

Methods The comprehensive metabolomic profiles of 43 individuals with first-episode schizophrenia and 32 healthy controls were analyzed using ultra-high performance liquid chromatography-high resolution mass spectrometry (UPLC-MS). Non-parametric tests were employed in combination with the OPLS-DA pattern recognition method to identify differential metabolites. KEGG pathway enrichment analysis was conducted, and clinical symptoms were evaluated using the Positive and Negative Syndrome Scale (PANSS). The data was further analyzed using Machine Learning techniques

Results Through metabolomics analysis, 47 differential metabolites were identified and screened compared to the healthy control group. This included an increase in aldosterone levels and a decrease in carnitine. KEGG pathway analysis revealed significant enrichment of aldosterone synthesis and secretion pathways. Correlation analysis showed that aldosterone was negatively correlated with PANSS total score in the SCZ group. In the final analysis, Support Vector Machine and Random Forest algorithms were used to select metabolite panels of aldosterone, RvD1, carnitine C11:DC, and carnitine C12-OH as metabolite panels to distinguish patients with first-episode schizophrenia (FES) and healthy controls (HC). The area under the receiver operating characteristic curve on the validation set was 0.973

Conclusion This study identified metabolic disturbances in individuals with schizophrenia, highlighting the role of aldosterone synthesis and secretion, as well as acylcarnitine metabolic disorders in the development of the disorder. These findings may enhance our comprehension the pathogenesis of schizophrenia, suggesting that metabolite panels could serve as valuable diagnostic tools and aid in the creation of more efficient

treatments

关键词: first-episode schizophrenia, metabolomics, aldosterone, carnitine, metabolite panels, Machine Learning

首发精神分裂症患者高阶脑网络特征提取与分类方法

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目的 脑电信号和复杂网络理论可用于阐明脑疾病的潜在机制。高阶脑功能网络的成功应用为临床脑疾病的诊断和评估提供了新的视角;但现有研究多数从低阶脑网络节点的局部属性和全局属性信息,无法充分利用基于持久同调过滤构建的高阶脑网络的丰富拓扑信息,而对人脑多尺度高阶网络的研究可以为精神分裂症的分类模型提供更丰富、更准确的数据特征。为了解决现有基于持久同调的高阶脑网络分析主要利用单一的持久性特征(如持久性图像),无法充分利用 PH 过滤过程中产生的丰富拓扑信息的问题,本研究提出了一种多模态持久拓扑特征提取及分类方法,旨在提高对首发精神分裂症患者的识别准确性。

方法 基于拓扑数据分析技术的持久同调技术,通过自适应阈值法构建动态脑网络并提取持久拓扑特征的方法。将持久同调过滤提取的持久拓扑特征的分布用热图和持久性熵表示,而持久特征的生成过程则通过 Betti 曲线和持久性景观进行解读,然后利用多种机器学习分类器评估了多模态持久拓扑特征的分类性能,并通过选择表现最佳的分类器,同时选取分类效果最好的分类器,并且进行十折交叉验证得出最后的分类准确率。然后,将多模态持久拓扑特征与基于图论的传统脑网络特征及单一持久拓扑特征进行了比较。此外,本文还用圈比这一指标度量脑网络节点的重要性,以期准确找到首发精神分裂症患者发病的关键脑节点。最后通过显著性明显的高阶拓扑特征与总体 PANSS 分和阳性 PANSS 分呈现相关性分析进一步探索其发病机制。

结果 实验在 104 个首发精神分裂症患者和 94 个健康被试在闭眼静息状态下采集的 59 通道 EEG

上展开。与传统脑网络特征分析方法相比,高阶脑网络特征获得了更好的分类性能(准确率=92.5%,精确度=88.7%,召回率=92.2%,F1=90.4%)。此外,本研究发现的显著高阶脑网络特征与此前已被证明与精神分裂症的临床特征也有关。

结论 本文提出的方法对首发精神分裂症患者的早期识别与诊断具有重要的临床指导意义,也为高阶脑功能网络构建及拓扑结构特征提取提供了新的研究思路。未来的研究可以进一步探索多模态持久拓扑特征在其他精神疾病中的应用,同时结合其他神经影像数据源,如功能磁共振成像(fMRI)和磁脑图(MEG),以便更全面地揭示脑网络的复杂性。此外,进一步优化分类器模型和验证方法也是未来研究的重要方向,以提高分类准确率和稳定性。

关键词: 持久同调;首发精神分裂症;高阶持久拓扑特征;随机森林, LightGBM 算法

基于因子分析和聚类分析的首发精神分裂症认知障碍亚型探究

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目的 针对首发精神分裂症认知功能障碍进行基于数据驱动的亚型分组,探索不同亚型患者独立认知维度的损伤差异。

方法 采用计算机自动化成套剑桥神经认知测试对 253 例首发精神分裂症患者和 293 例健康对照者进行神经认知功能评估,用因子分析方法分离不同的认知维度,并据此对首发精神分裂症患者进行聚类分析,结合阳性和阴性症状量表以及大体功能评定量表评估患者的临床症状,探索不同认知亚型首发精神分裂症的认知损伤机制及临床特征。

结果 首发精神分裂症患者和健康对照者的神经认知功能可分成 7 个维度。据此使用聚类分析,将首发精神分裂症分成低功能和高功能两个不同认知亚型,不同亚型间各个认知维度和临床症状均有显著差异($P < 0.01$)。与健康对照者相比,低功能组表现出更为严重且广泛的认知功能下降,高功能组则相对保留了抑制功能,其他认知维度的受损介

于低功能组和健康对照之间。

结论 首发精神分裂症存在不同认知亚型, 抑制功能在不同亚型患者中受损情况不同, 可能是识别首发精神分裂症不同认知亚型的核心标志。采用数据驱动的方法进行认知亚型分组, 可以尽可能消除治疗干预和研究者主观意愿带来的影响更加全面、客观地探索首发精神分裂症不同亚型患者的认知损伤特点。

关键词: 首发精神分裂症, 认知功能障碍, 异质性, 亚型, 聚类分析

Effect of Fluvoxamine Maleate on Gut Microbiota in Children and Adolescents with Obsessive-compulsive Disorder with Gastrointestinal Symptoms

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Objective To clarify the structural characteristics of gut microbiota in children and adolescents with first untreated obsessive-compulsive disorder (OCD) with gastrointestinal symptoms. Compare the changes in gut microbiota before and after treatment with fluvoxamine maleate in children and adolescents with OCD accompanied by gastrointestinal symptoms, and identify significant differences in gut microbiota and their correlation with clinical efficacy

Methods 1. A total of 30 children and adolescents with gastrointestinal symptoms with OCD were selected as the study subjects and evaluated for clinical parameters and collected the fecal samples. 2. All subjects were given sufficient treatment with fluvoxamine maleate for 12 weeks. CY-BOCS, HAMD, HAMA, GSRS, TESS, and CGI were retested after 4, 8, and 12 weeks of treatment. Fecal samples were collected again after follow-up, and 16S rRNA sequencing was performed on the samples before and after treatment. 3. By comparing the changes in gut microbiota of patients be-

fore and after treatment, as well as the severity of clinical symptoms such as compulsion, anxiety, and depression, the clinical efficacy and safety of fluvoxamine maleate in treating pediatric and adolescent OCD patients with gastrointestinal symptoms were clarified, and the impact of this drug on gut microbiota of pediatric and adolescent OCD patients with gastrointestinal symptoms was further explored

Results 1. After 12 weeks of treatment with fluvoxamine maleate, gastrointestinal symptoms in patients with OCD (OCD12W) were significantly reduced ($P < 0.05$). 2. The diversity indexes of intestinal flora in OCD12W group were significantly increased (obs, $P < 0.05$; chao1, $P < 0.05$; ACE, $P < 0.05$; shannon, $P < 0.05$; simpson, $P < 0.05$). 2. The relative abundance ratio (F/B) of Firmicutes to Bacteroidetes in OCD12W group was significantly increased ($P < 0.001$). 3. The relative abundance of Ruminococcus ($q < 0.01$), Escherichia-shigella ($q < 0.01$) and other bacteria related to gastrointestinal symptoms in OCD12W group was significantly increased. 4. There was a correlation between the changes of clinical parameters and the abundance of specific bacteria in the intestinal flora in the OCD group ($P < 0.05$)

Conclusion 1. After 12 weeks of treatment with fluvoxamine maleate, the gastrointestinal symptoms of first-episode untreated children and adolescents with OCD were significantly improved, and the diversity of intestinal microbiota was significantly increased. 2. The disruption of intestinal homeostasis in first-episode untreated children and adolescents with OCD is related to a significant decrease in the relative abundance of bacteria such as Ruminococcus, which are closely related to gastrointestinal symptoms. 3. There is a correlation between the changes in clinical parameters and the abundance of specific species of gut microbiota in first-episode untreated children and adolescents with OCD

关键词: fluvoxamine maleate; gut microbiota; children and adolescents; obsessive-compulsive disorder; gastrointestinal symptoms

Analysis of Intestinal Flora Metabolomics in

Children and Adolescents with First-episode and Drug-free Obsessive-compulsive Disorder

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Objective Obsessive-compulsive disorder (OCD) is a chronic and disabling psychiatric disorder characterized by recurrent intrusive thoughts or repetitive behaviors. We sought to better understand the relationship between gut microbiota and fecal metabolites in first-episode, drug-free children and adolescents with OCD, and to determine the metabolites changes in gut microbiota after treatment with selective serotonin reuptake inhibitors (SSRIs)

Methods 1. Stool samples were collected from 49 first-episode untreated children and adolescents with OCD and 42 age- and sex-matched healthy controls (HC). Samples were collected after 12 weeks of SSRIs monotherapy for OCD, and all subjects were evaluated for clinical parameters. 2. Fecal samples from 49 cases of OCD, 42 cases of HC and 26 cases of OCD12W were analyzed by metabolomic method based on UHPLS-MS. 3. Correlation analysis was conducted between metabolomics results and clinical parameters to explore the relationship between intestinal flora and OCD symptoms and the possible functional pathways involved in the pathogenesis

Results 1. A total of 43 endogenous differential metabolites were screened from OCD-HC group, and 63 endogenous differential metabolites were screened from OCD0W-OCD12W group. 2. The relative content of Neopterin and Sepiapterin, intermediates of Folate Biosynthesis pathway, increased significantly; Glucocorticoids and corticosterone significantly decreased in regulating Lipolysis in Adipocytes and Prion Diseases. Fumarate, 2-oxoisovalerate, 3-dehydroquinic acid (DHQ) and other metabolites involved in amino acid biosynthesis pathway decreased significantly. 3. Correlation analysis of differential flora and metabolites in

OCD patients showed that intestinal flora was associated with intestinal metabolites

Conclusion 1. The expression of intestinal microflora metabolites in OCD patients is disturbed, resulting in functional abnormalities of related metabolic pathways, which can be partially recovered by drug treatment. Neopterin, as a key factor of folic acid synthesis pathway, may be involved in the pathogenesis of OCD. 2. Glucocorticoid-mediated dysfunction of HPA axis can promote intestinal immune inflammatory response in patients with OCD. 3. Abnormal metabolites of gut microbiota in OCD patients are mainly manifested in folic acid biosynthesis, prion disease pathway and amino acid metabolic network

关键词: Gut microbiota; Obsessive compulsive disorder; Children and adolescents; Metabonomics

五羟色胺再摄取抑制剂对首发未用药儿童青少年强迫症患者肠道菌群的影响

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目的 强迫症是一种以反复持久出现的强迫观念和(或)强迫行为为基本特征的慢性致残性精神障碍。五羟色胺再摄取抑制剂(SSRIs)作为OCD的一线治疗选择,可以增加突触中血清素的浓度,进而改善强迫症状,但目前强迫症治疗的有效率仅为40-60%。本研究旨在通过16S rRNA测序、宏基因组学和代谢组学多组学联合分析的方法,探讨SSRIs治疗对首发未用药儿童青少年强迫症患者肠道菌群结构和功能的影响,为强迫症的早期诊断和疗效提供重要的理论基础。

方法 本研究首先收集了26例首发未用药儿童青少年强迫症患者,对受试者进行随访及各临床参数的评估,并留取粪便样本。对26例经过12周SSRIs药物干预的OCD患者(OCD12W)肠道菌群粪便样本进行多组学分析,利用16S rRNA扩增子测序技术、宏基因组高通量测序,并基于超高效液相色谱系统-质谱联用(UHPLS-MS)技术采用代谢组学的方法对治疗前后样本进行分析,探讨治疗前

后(OCD0W-OCD12W)肠道菌群变化特征,并寻找与疗效相关的特异性菌群标记物和可能涉及到的代谢通路。

结果 1、药物干预后强迫症组(OCD12W)肠道菌群各多样性指数与干预前组(OCD0W)相比均无显著性差异($P>0.05$)。2、随机森林模型在治疗有效组(Respond)和无效组(Nonrespond)患者中识别了13个特异性菌属作为微生物标志物,其AUC为0.8274。3、OCD0W-OCD12W组共筛选出63个差异代谢物,其中叶酸合成通路(Folate Biosynthesis)的中间产物新喋呤(Neopterin)和墨喋呤(Sepiapterin)在OCD12W组的相对含量显著降低($P<0.05$);延胡索酸(Fumarate)、2-氧代异戊酸(2-oxoisovalerate)、3-脱氢奎尼酸(3-dehydroquinic acid, DHQ)等参与氨基酸生物合成通路的代谢物显著升高($P<0.05$)。

结论 1、短期SSRIs治疗可以改善儿童青少年OCD患者临床症状,但不能显著改变其肠道菌群的组成和结构。2、OCD患者对药物干预的疗效也可以通过以丛生放线菌属(Actinospica)为主的特异性生物标记物模型进行预测。3、OCD患者肠道菌群代谢产物表达存在紊乱,并造成相关代谢通路功能异常,药物治疗可部分恢复。

关键词: 强迫症; 儿童青少年; 宏基因组学; 代谢组学

探索精神分裂症患者病程早期、中期及晚期启动帕利哌酮长效针剂治疗的疗效差异

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目的 评估中国精神分裂症患者在病程不同阶段启动每月一次帕利哌酮长效针剂(PP1M)治疗的疗效差异。

方法 这项事后分析纳入三项单臂、开放标签IV期研究(NCT01527305、NCT01947803、NCT01685931)数据,受试者均为中国精神分裂症

患者,接受PP1M治疗并随访13周。本研究评价了精神分裂症患者在不同病程阶段即早期(病程 ≤ 2 年)、中期(2年 $<$ 病程 ≤ 5 年)及晚期(病程 > 5 年)启动PP1M治疗的疗效差异。主要疗效指标为阳性与阴性症状量表(PANSS)总分在治疗13周时较基线的减分值,使用协变量分析方法(ANCOVA)在全分析集(FAS)进行分析,采用末次观测值结转法(LOCF)填补缺失值。

结果 FAS共纳入1053例患者(早期383例、中期290例、晚期380例)。基线时,早期、中期、晚期三组患者平均年龄(标准差,SD)分别为28.8(10.12)、28.9(9.66)、36.6(10.53)岁,男性比例分别为50.7%、63.1%和51.8%,从初次诊断精神分裂症至首次使用PP1M的平均病程(SD)分别为0.8(0.62)、3.5(0.87)、11.1(6.14)年;基线时三组患者的PANSS总分(SD)分别为89.6(13.58)、89.6(13.02)、89.3(13.11)。用ANCOVA方法(基线为协变量,组间、研究以及研究*组间的交互作用为因素)计算的早期、中期、晚期三组患者PANSS总分在13周较基线变化的最小二乘均数(95%CI)为-31.6(-34.1, -29.1)、-28.4(-31.2, -25.5)、-25.6(-27.7, -23.4),组间差异 $P=0.0003$;其中早期vs中期($P=0.2175$)、中期vs晚期($P=0.2783$)、早期vs晚期组($P=0.0011$)间差异最小二乘均数分别为-3.23、-2.78、-6.00;早期、中期、晚期三组患者PANSS总分在13周较基线减分率的最小二乘均数(95%CI)为34.9%(32.2%, 37.7%), 30.8%(27.6%, 33.9%), 27.7%(25.3%, 30.0%),组间差异 $P=0.0001$;其中早期vs中期($P=0.1239$)、中期vs晚期($P=0.2741$)、早期vs晚期组($P=0.0003$)间减分率差异最小二乘均数分别为4.15%、3.07%、7.22%。

结论 在中国精神分裂症患者中,在不同病程阶段启动PP1M治疗均可改善症状;越早使用PP1M,患者症状改善可能越明显。

关键词: 帕利哌酮长效针剂; 精神分裂症; 早期治疗

基于HPA轴构建首发精神分裂症患者真性高泌乳素血症的预测模型

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目的 探讨基于下丘脑-垂体-肾上腺 (HPA) 轴构建的首发精神分裂症患者真性高泌乳素血症 (THPRL) 的预测模型。

方法 选取 2021 年 6 月至 2023 年 6 月期间入院治疗的首发精神分裂症伴 HPRL 患者 102 例, 抽取空腹外周血检测 HPA 轴激素水平[泌乳素 (PRL)、肾上腺皮质激素 (ACTH)、皮质醇 (Cor)]。采用聚乙烯醇沉淀法进行巨泌乳素 (MPRL) 筛查, 以回收率 >60% 作为 THPRL 的判断标准, 分为 THPRL 组及非 THPRL 组, 比较两组的 HPA 轴激素水平及一般资料, Logistic 回归分析影响 THPRL 的危险因素, 并构建 THPRL 列线图预测模型, 进行模型评价。

结果 THPRL 组的女性患者闭经比例、使用典型抗精神疾病药物比例、溢乳比例及血清 ACTH、Cor 水平高于非 THPRL 组, 未辅助应用维生素 B6 比例低于非 THPRL 组 (均 $P < 0.05$)。Logistic 回归分析显示, 溢乳、使用典型抗精神疾病药物、女性患者闭经及血清 ACTH、Cor 水平升高是影响首发精神分裂症患者 THPRL 的独立危险因素 (均 $P < 0.05$)。基于 Logistic 回归分析结果构建的 THPRL 预测模型经 ROC 曲线评价列线图的预测能力良好, 曲线下面积 (AUC) 为 0.876; Bootstrap 法对预测模型进行内部验证, 结果显示模型区分度及拟合度良好, C-index 值为 0.782 (95%CI: 0.702~0.857), 列线图模型的预测概率和实际 THPRL 概率具有良好的一致性 (Hosmer-Lemeshow $\chi^2 = 0.562$, $P = 0.474$)。

结论 血清 ACTH、Cor 水平升高为首发精神分裂症患者 THPRL 的独立危险因素, 基于此构建的列线图预测模型对 THPRL 的发生具有较高的预测效能。

关键词: 精神分裂症; 高泌乳素血症; 下丘脑-垂体-肾上腺轴; 列线图

The Relationship between Mental Disorders and Cognitive Function: A Two-Sample Mendelian Randomization Study

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Objective In 2018, The Lancet Commissions, within the context of the Sustainable Development Goals (SDGs), proposed new objectives for mental health, shifting the focus from reducing the treatment gap for mental disorders to improving mental health across the entire population and reducing the global burden of mental illness. Global Mental Health (GMH) also emphasized an interdisciplinary approach to achieving mental health equity and human rights. Mental disorders, defined by the World Health Organization as including anxiety, depression, schizophrenia, and alcohol and drug dependency, disrupt brain function and activities, leading to cognitive, emotional, behavioral, and volitional disturbances. Over 13% of adolescents globally suffer from mental disorders, with anxiety and depression accounting for approximately 40%. Other common disorders include bipolar disorder, obsessive-compulsive disorder, autism, and attention-deficit/hyperactivity disorder. Cognitive function, involving processes like memory, language, executive function, calculation, and judgment, is a high-level brain activity unique to humans. While mental disorder classifications are based on observed clinical symptoms, cognitive impairment is frequently observed in patients with mental disorders. Since the 1990s, cognitive function has been considered an important predictor of mental illness outcomes, with a better understanding of cognitive impairment potentially revealing the brain mechanisms involved. The purpose of this study is to explore the causal relationship between several high-prevalence mental disorders (depression, anxiety, bipolar disorder, schizophrenia, ADHD, ASD, OCD, and alcohol abuse) and cognitive function using a basic European data sample. Additionally, this study aims to identify new directions for the treatment of mental disorders and the improvement of patients' social functioning

Methods The working model of Mendelian randomization utilizes genetic variations that are strongly associated with exposure factors as instrumental variables to evaluate the causal relationship between genetically predicted exposure and outcomes. This approach effectively eliminates the interference of environmental and external factors, thereby allowing genetic variations to be better used as instrumental variables to study the

causal relationship between the two factors

Results We recommend that IVW results be considered the primary method for analyzing causal associations between exposure factors and outcome variables. This study demonstrated a positive and causal association between SCZ and the risk of Cognitive Function, with an OR of 0.926 (95%CI: 0.896–0.958) in the IVW MR analysis. The weighted median method and MR Egger also yielded consistent and similar estimates that supported the risk effect of SCZ on Cognitive Function, with an OR of 0.927 (95%CI: 0.884–0.972) and an OR of 0.809 (95%CI: 0.714–0.916). None of the three analyses revealed any causal effect of Depression, Anxiety, Bipolar disorder, ADHD, ASD, OCD, and alcohol abuse on Cognitive Function

Conclusion Our MR analysis provides evidence for a causal effect of SCZ on the risk of cognitive function decline. However, Depression, Anxiety, Bipolar disorder, ADHD, ASD, OCD, and alcohol abuse are not associated with the risk of Cognitive Function. This suggests that the need for increased attention to cognitive function decline in SCZ patients and the implementation of timely interventions and treatments. Improving cognitive function may play an important role in the subsequent treatment and prognosis of SCZ

关键词: Mendelian randomization study, schizophrenia, cognitive function

精神分裂症患者治疗依从性及生活质量现状调查研究

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目的 探究精神分裂症患者治疗依从性及生活质量现状。

方法 回顾性分析芜湖四院精神科 2020 年 5 月至 2022 年 5 月收治的 106 例精神分裂症患者的临床资料, 依据《Morisky 8-item Medication Adherence Questionnaire》标准对患者的依从性进行划分, 得分 ≤ 2 分归为高依从性组 (62 例), 得分 > 2 分归为低依从性组 (44 例)。对比两组患者一般资料, 采用多元

Logistic 回归分析探究影响患者治疗依从性的独立性危险因素, 通过生活质量综合评定问卷 (GQOLI-74)、住院精神病人社会功能评定量表 (SSFPI) 评价不同依从性患者生活质量及生活能力情况。

结果 (1) 多元 Logistic 回归分析结果显示, 居住情况、文化程度、用药情况、社会支持程度、一般自我效能感、复发、医患关系均为影响精神分裂症患者治疗依从性的独立危险因素, $P < 0.05$ 。(2) 高依从性组患者 GQOLI-74 量表躯体功能、心理能力、社会功能、物质生活评分 (51.65 ± 6.13 、 53.37 ± 5.99 、 52.32 ± 5.74 、 48.05 ± 5.22) 均明显高于低依从性组 (45.59 ± 5.11 、 44.13 ± 6.29 、 45.47 ± 6.38 、 42.20 ± 5.81), $P < 0.05$ 。(3) 高依从性组患者 SSFPI 量表日常生活能力、活动性和交往情况、社会活动技能评分 (8.60 ± 2.23 、 10.02 ± 1.33 、 7.45 ± 1.84) 均明显高于低依从性组 (7.16 ± 1.95 、 9.01 ± 2.21 、 6.22 ± 1.63), $P < 0.05$ 。

结论 精神分裂症患者治疗依从性不高, 且受到多种因素的影响, 低依从性患者的生活质量及生活能力水平也较低, 故临床应采取针对性措施提高患者质量依从性, 为其预后良好奠定基础。

关键词: 精神分裂症; 治疗依从性; 生活质量; 问卷调查

康复期精神分裂症患者存在焦虑抑郁情绪采取相应护理干预的效果分析

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目的 探究心理护理应用于康复期精神分裂症护理中的效果。

方法 方法 试验时间段为 2020 年 9 月~2021 年 3 月, 选取这期间本科室收治的确诊为精神分裂症患者 50 例, 将其依照随机数字表法分为对照组与试验组, 每组 25 例, 对照组: 给予常规护理方法 治疗前核对好患者的姓名、年龄等相关信息, 监测生命体征, 观察患者面部变化, 判断情绪感受, 向其讲解治疗计划, 治疗过程中注意患者情况, 告知疾病注意事项, 其中包含饮食、作息、生活习惯等方面。试验组: 在常规护理的基础上给予心理护理方法了解患者的姓名、年龄、学历等基本情况, 并注意与患者的交流, 因为患者的性格、喜好都有差异, 所以

在进行护理时,除言语交流外,还应注意与患者的交流以及患者的喜好。与患者保持适当的距离,既能让患者感到安全,也不会有压力。根据患者个性特点选用合适的沟通方法,尽可能使用简单明确的语言,让患者明白治疗过程以及要留意的问题,并用温和的语气与患者进行交流;针对患者的问题要有足够的耐心回答,大部分患者都会因为病情的原因而产生一系列的负面情绪,从而影响到治疗的结果,而且很有可能会拒绝接受任何的医疗。在这种情况下,护士要强化与患者的交流,使其提高配合意识。因为多数康复期的精神分裂症患者在认知能力尚处在恢复的过程中,容易出现对医护人员产生的逆反情绪,所以可以通过定期组织交流,来加强与患者的沟通。护理人员也可以参与进来,把平时相处比较融洽的患者分为一组,并鼓励患者用言语表达自己的担忧和负面的情感,使他们彼此得到安慰;在提问过程中,可以通过询问来提高学生的学习兴趣,帮助他们更好地了解自己的情况,提高自己的主观能动性。通过对患者的焦虑和抑郁的程度进行综合评价,并对其进行细致的心理疏导,通过散步、听音乐等方式缓解紧张的心情,提高睡眠的质量,并通过鼓励的形式,提高治疗的自信心。成立健康讲座,将疾病的相关知识打印成册,发放到各个患者手中,使用通俗易懂的语言为患者详细讲解康复期的治疗重点,指导患者正确服用药物。打扫好病房内卫生,营造一个干净卫生的空间,转移患者注意力。

结果 试验组生活质量得到显著改善,依从性相较于对照组明显更优,试验组整体焦虑抑郁程度评分、心理弹性评分更好,对照组护理满意度低于试验组。两者差异具有统计学方面意义($P<0.05$)。

结论 在临床上对于康复期精神分裂症采用心理护理方法,可以针对心理状态进行改善,并且提升依从性,使得患者病情恢复速度加快,具有良好的护理前景。

关键词:心理护理,康复期精神分裂症,焦虑抑郁程度评分

精神分裂症患者家庭育儿困境影响因素的质性研究

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目的 深入了解患有精神分裂症的患者在养育子女过程中所遇到的问题以及他们的心理感受,为提高其家庭幸福度、社会参与感提供参考。

方法 2023年12月—2024年4月,以目的抽样法对社区在管的11例精神分裂症患者进行半结构式访谈。访谈入组标准:①子女年龄为6~17岁;②根据ICD-10诊断标准,患者诊断为精神分裂症、双相情感障碍其中之一,且目前病情控制稳定;③父母首次发病后,其未成年子女与父母共同生活时间超过半年;④知情同意参加本研究。排除标准:无法理解调查内容或因明显的健康风险不适宜参与调查。

访谈结束后,由访谈者在24h内及时将访谈资料转录成文字,并采用Colaizzi 7步分析法进行资料分析。①仔细、反复阅读访谈内容;②提取重要语句;③编码重复且有意义的观点;④汇集所编码的内容;⑤写出详细的描述;⑥找出相似的观点并升华主题;⑦将结果反馈给受访者进行验证。资料的整理分析始终在对质性研究具有丰富经验的教授(通信作者)的指导下进行,当分析过程存在异议时,为保证分析结果的严谨性,经课题小组共同讨论分析,提炼出最终主题。

结果 共提炼出3个主题及8个亚主题,包括①个人健康与育儿能力(疾病和药物治疗影响育儿能力;病耻感;育儿过程易诱发情绪失控);②家庭因素下的育儿挑战(精神分裂症治疗加重家庭经济负担;子女对患病父母缺乏信任感;加重代替照顾者身心负担);③社会排斥增加育儿难度(家校沟通存在障碍;社会偏见影响子女心理健康)。

结论 本研究通过对11例患者进行半结构式访谈,进一步了解了精神分裂症患者及其家庭这一弱势群体在育儿过程中的体验与挑战。患有精神分裂症的父母在兼顾治病和育儿的同时常常面临复杂的心理挑战,迫切需要获得更多的社会和医疗支持。未来的研究应关注患者的具体需求,帮助其改善家庭功能和生活质量。

关键词:精神分裂症;亲子沟通;未成年子女;家庭干预;质性研究

不同分型精神分裂症患者 P300 与述情障碍相关性研究

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目的 观察分析单纯性与偏执型精神分裂症患者事件相关电位 P300 与述情障碍的差异,并探索 P300 与述情障碍的相关性。

方法 本试验纳入 94 例精神分裂症患者作为研究对象,精神分裂症患者根据不同分型分组,将单纯性精神分裂症纳入观察组 44 例,偏执型精神分裂症纳入对照组 50 例。两组患者分别进行多伦多述情障碍量表(TAS-20)测评及时间相关电位 P300 检测,并对结果进行分析比较。

结果 与对照组相比,观察组 TAS-20 量表中因子 I、因子 II、因子 III 及 TAS-20 总分更高,组间对比差异显著($P < 0.05$)。观察组中央点(Cz)、顶叶点(Pz) N1、P2、N2、P3 潜伏期较对照组明显延长,而 Cz、Pz 点 N2、P3 波幅较对照组下降明显,组间对比差异显著($P < 0.05$)。观察组 Pz 点 N2、N3 潜伏期与 TAS-20 量表中各因子评分及总分呈正相关($r =$, $P < 0.05$),Pz 点 N2、P3 波幅与 TAS-20 量表各因子评分及总分呈负相关($r =$, $P < 0.05$)。观察组 TAS-20 量表中因子 I、因子 II、因子 III 及总分显著高于对照组,表明不同类型精神分裂症述情障碍存在一定差异性,与偏执型精神分裂症相比,单纯型精神分裂症患者述情障碍相对严重,考虑是单纯型精神分裂症患者述情障碍与其阳性症状(意志减退、情感迟钝、思想异常等)存在某种共同病理生理基础。

结论 P300 可反应精神分裂症患者认知功能,与偏执型精神分裂症相比,单纯型精神分裂症患者认知功能损害更严重,且与述情障碍相关。

关键词: 精神分裂症;述情障碍;认知功能;事件相关电位

探讨改良电抽搐治疗对精神分裂症患者血清脑源性神经营养因子的影响

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目的 探讨改良电抽搐治疗对精神分裂症患者

血清脑源性神经营养因子的临床价值。

方法 选取 2021 年 6 月-2023 年 6 月我所收治的精神分裂症患者 50 例,作为观察组,进行改良电抽搐治疗;并选取同一时期在我院体检的健康者 50 例,作为对照组。两组均采用酶联免疫吸附法进行血清的 BDNF 水平检测。对比两组研究对象血清的 BDNF 水平。

结果 对照组研究对象的血清 BDNF 水平为(13.11 ± 1.50)ng/ml;观察组在改良电抽搐治疗前血清的 BDNF 水平为(9.42 ± 3.61)ng/ml,在改良电抽搐治疗后血清的 BDNF 水平为(12.31 ± 3.23)ng/ml,观察组研究对象在进行改良电抽搐治疗前的血清 BDNF 水平低于对照组,经过治疗,血清的 BDNF 水平有明显的升高,并且与对照组血清 BDNF 水平无明显差异。在经治疗前,观察组 PANSS 阳性分为(30.50 ± 8.12)分, PANSS 阴性分为(25.81 ± 9.42)分,一般精神病理分(27.41 ± 7.52)分,总分为(83.71 ± 9.23)分;在经治疗后,观察组 PANSS 阳性分为(18.22 ± 5.21)分, PANSS 阴性分为(16.31 ± 4.32)分,一般精神病理分(19.61 ± 3.82)分,总分为(54.11 ± 5.72)分。观察组研究对象在经改良电抽搐治疗后的 PANSS 总分以及各因子分与治疗前相比都有所降低。

结论 改良电抽搐治疗对精神分裂症患者有显著的治疗效果,可以提高患者血清的 BDNF 水平,有很高的应用价值。

关键词: 改良电抽搐治疗、精神分裂症、血清脑源性神经营养因子

Inflammatory Cytokines Are Differed in Different Genders with Chronic Schizophrenia Treated with Dibenzodiazepine

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Objective Dibenzodiazepines are the most commonly used drugs for patients with chronic schizophre-

nia, which have good therapeutic effects. However, because of their effects on glucose and lipid metabolism, doctors are prevented from choosing these drugs. The causes of metabolic problems may be related to inflammatory response and inflammatory cytokines. This study aimed to investigate the levels of plasma inflammatory cytokines in patients with chronic schizophrenia and the relationship between inflammatory cytokines and gender

Methods We measured the parameters of peripheral blood glucose and lipid metabolism and the levels of proinflammatory cytokines in 284 patients with chronic schizophrenia and 141 healthy people. According to the types of antipsychotic drugs taken, the patients were divided into dibenzodiazepine group and non-dibenzodiazepine group. The general data, fasting blood glucose, blood lipids and cytokines were compared between the healthy control group and the non-dibenzodiazepine and dibenzodiazepine group

Results The general data, blood biochemical indexes and inflammatory factors of 141 healthy controls and 284 patients with chronic schizophrenia (divided into non-dibenzodiazepine group and dibenzodiazepine group according to the types of drugs taken) were compared. The results showed that there were significant differences in education years, BMI, triglyceride, high density lipoprotein, low density lipoprotein, IL-2, IL-6, IL-17 α and TNF- α among the three groups. After sex grouping, we found that there was a certain trend in the distribution of inflammatory factors, which showed that there were significant differences in IL-1 β and IL-2 between female healthy control group and patients with different drugs. IL-6 not only showed the same trend, but also showed the difference between non dibenzodiazepine and dibenzodiazepine, and showed the difference between female group and male group in IL-17 α and TNF- α , respectively. After disassembling and analyzing the relevant biochemical metabolic indexes according to sex, we only found that there were only differences in inflammatory factors among the three groups, but there was no difference in glucose and lipid metabolism

Conclusion Dibenzodiazepines may increase the expression of inflammatory factors in patients with

chronic schizophrenia, and this difference is related to gender, while the difference in inflammatory factors can not directly lead to differences in metabolic indicators

关键词: Cytokines; Dibenzodiazepine; Antipsychotics; Immune system; Schizophrenia

基于代谢组学探讨柴胡加龙骨牡蛎汤对精神分裂症代谢的影响

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目的 分析柴胡加龙骨牡蛎汤(Chaihu-Longgu-Muli Decotion, CLMD)干预精神分裂症患者治疗前后的代谢物差异性,研究精神分裂症潜在标志物及CLMD治疗后相关代谢产物变化规律,为精神分裂症的发病机制及CLMD治疗代谢途径提供科学依据。

方法 纳入32例健康人作为对照(CON)组,67例精神分裂症患者分为奥氮平(OLA)组($n=35$)、奥氮平+CLMD(OLA+CL)组($n=32$)。干预前、干预6周患者组予以阴性及阳性症状量表(PANSS)评估患者的精神病性症状,外显攻击行为量表(MOAS)测量患者的攻击行为,采用超高效液相色谱-高分辨质谱联用(UPLC-MS)技术分析治疗前后血浆代谢产物变化,采用多维统计分析,筛选差异代谢物。

结果 1.精神分裂症患者治疗6周后与治疗前比较:OLA组治疗后(OLA group after treatment, OLA-AT)的PANSS总分、MOAS总分均较OLA组治疗前(OLA group before treatment, OLA-BT)显著下降($t=53.98, P<0.05, t=15.41, P<0.05$);OLA+CL组治疗后(OLA+CL group after treatment, OLA+CL-AT)的PANSS总分、MOAS总分较OLA+CL组治疗前(OLA+CL group before treatment, OLA+CL-BT)均显著下降($t=55.29, P<0.05, t=21.97, P<0.05$);与OLA-AT比较,OLA+CL-AT的PANSS总分($t=4.86, P<0.05$)和MOAS总分($t=6.17, P<0.05$)均显著下降。2.与CON组比较,从OLA组血浆中检测160个差异代谢物,涉及氨酰-tRNA生物合成、D-精氨酸和D-鸟氨酸代谢、亚油酸代谢等52条差异代谢通路;与CON组比较,从OLA+CL组血浆中检测180个差异代谢物,涉及亚油酸代谢、精氨酸和脯氨酸代谢、D-精氨酸和D-鸟氨酸代谢等43条代谢通路;

与 OLA 组比较,从 OLA+CL 组患者血浆中检测 54 个差异代谢物,涉及亚油酸代谢、色氨酸代谢、泛醌和其他萜类醌的生物合成、花生四烯酸代谢、磷酸戊糖途径等 9 条代谢通路。

结论 差异代谢物可作为精神分裂症的潜在生物标志物,研究结果有助于阐述精神分裂症的发病机制,可为精神分裂症临床诊断及 CLMD 治疗提供思路。

关键词: 精神分裂症;CLMD;超高效液相色谱-高分辨质谱;代谢组学;差异代谢物

精神科急危重症患者的临床特征研究

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目的 了解精神疾病患者急慢性躯体合并症情况,分析精神科急危重症病房患者临床特征

方法 本文对杭州市第七人民医院重症医学科成立以来(2021年1月至2024年5月)的1068名急危重症患者的临床特征进行统计分析,包括性别、年龄的分布差异,不同性别和年龄段患者原发精神疾病、合并慢性躯体疾病分布差异等。

结果 在<18岁、18-29岁、30-39岁、40-49岁、50-59岁、60-79岁、≥80岁7个年龄组的精神疾病患者中,均常见的急慢性躯体合并症为:肺部感染、低钾血症、心律失常、急性肝功能不全。药物中毒、急性肝功能不全、横纹肌溶解、高乳酸血症是青壮年组精神疾病患者(18-29岁、30-39岁、40-49岁)最常见的急性躯体疾病;重症肺炎、急性呼吸衰竭、低蛋白性营养不良是老年组患者(60-79岁、≥80岁)较多见的危重躯体疾病;其他精神疾病患者常见的急性躯体疾病还有癫痫、高血压急症、糖尿病急症、消化道出血、新近深静脉血栓形成、急性肾功能不全、肠梗阻等。

结论 精神科患者的急性躯体合并症不容忽视,尤其精神分裂症、使用酒精引起的精神和行为障碍、双相情感障碍、谵妄以及急性而短暂的精神障碍患者,更容易出现肺部感染/重症肺炎、横纹肌溶解、急性肝功能不全、肠梗阻等严重躯体疾病。临床医生应加强精神科急危重症的预判和及时干预,改善精神疾病患者的转归。

关键词: 精神疾病,急危重症,横纹肌溶解,急性肝功能不全,药物中毒

精神疾病对常见急危重症的风险因素研究

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目的 在精神科急危重症患者临床特征研究的基础上,针对精神疾病患者常见而危重的躯体疾病进行风险预测研究。

方法 应用二元 logistics 回归分析方法,建立重症肺炎、低蛋白性营养不良、肠梗阻、横纹肌溶解以及肺栓塞和深静脉血栓形成等精神科急危重症躯体合并症的风险预测模型。

结果 重症肺炎的危险因素分别为精神分裂症(OR=2.272, P=0.014, 95%CI: 1.183-4.466)、双相情感障碍(OR=2.507, P=0.035, 95%CI: 1.067-6.314)、年龄(OR=1.051, P<0.001, 95%CI: 1.183-4.466);低蛋白性营养不良的危险因素分别为痴呆(OR=1.887, P=0.004, 95%CI: 1.887-2.900)、进食障碍(OR=5.981, P=0.046, 95%CI: 1.032-34.648)、年龄(OR=1.049, P<0.001, 95%CI: 1.035-1.062);肠梗阻的危险因素分别为精神分裂症(OR=3.320, P=0.022, 95%CI: 1.192-9.243)、双相情感障碍(OR=3.511, P=0.047, 95%CI: 1.019-12.101)、性别(OR=3.430, P=0.006, 95%CI: 1.418-8.300);横纹肌溶解的危险因素分别为精神分裂症(OR=3.023, P=0.011, 95%CI: 1.294-7.065)、性别(OR=2.085, P=0.034, 95%CI: 1.057-4.115);肺栓塞的危险因素分别为谵妄(OR=6.689, P=0.012, 95%CI: 1.522-29.408)、急性而短暂的精神和行为障碍(OR=143.514, P<0.001, 95%CI: 9.481-212.394)、精神分裂症(OR=10.874, P=0.015, 95%CI: 1.588-74.483)、双相情感障碍(OR=11.314, P=0.012, 95%CI: 1.723-74.273)、分离转换障碍(OR=31.55, P=0.015, 95%CI: 1.953-509.773)。

结论 相较于其他精神疾病患者,精神分裂症患者出现重症肺炎、横纹肌溶解、肠梗阻、肺栓塞的风险分别是 2.27 倍、3.02 倍、3.32 倍以及 10.87 倍;双相情感障碍患者合并出现重症肺炎、肠梗阻和肺栓塞的风险分别是 2.51 倍、3.51 倍和 11.31 倍;男

性会增加横纹肌溶解和肠梗阻的风险。重症精神障碍患者更容易出现肺部感染/重症肺炎、横纹肌溶解、肠梗阻等严重躯体疾病。临床医生应加强精神科急危重症的预判和及时干预,改善精神疾病患者的转归。

关键词:精神疾病,急危重症,横纹肌溶解,低蛋白性营养不良,肺栓塞

精神分裂症药物干预的中文随机对照临床试验的质量评价

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目的 来自中国的临床研究占据世界临床研究数量的较大比例,且这个数字还在不断攀升,但是其影响力却未能达到应有的高度,在国际上仍面临着诸多质疑。因此,我们就精神分裂症文献展开研究,初步探究并评估中文数据库中精神分裂症药物干预随机对照试验的质量。

方法 我们检索国内包括中国知网、万方数据库、中国生物医学文摘数据库和中国台湾中文数据库等在内的中文电子文献数据库中有关抗精神病药物干预精神分裂症的随机对照试验。通过电话、电子邮件和信件联系作者,要求其提供有关随机序列生产、分配隐藏以及盲法等研究方法的具体信息。

结果 我们共从中文数据库中检索到中文文献记录 10298 条,总共筛查出提及随机和盲法的研究 206 篇,只提及随机的研究 4569 篇,只提及盲法的研究 34 篇,提及随机的开放性研究 94 篇。对于提及随机和盲法的 206 篇研究,采用邮件与电话联系作者的方式收集研究方法学的具体信息,发送邮件 76 封,电话联系 176 篇研究的作者;剩余的 4697 篇研究,采用邮件与邮寄信件的方式收集问卷以获得研究方法学的具体内容,发送邮件 441 封,寄出挂号信 6779 封。

关于电话联系 176 篇研究的作者,电话联系完成访谈为 10 (5.7%) 篇,另有 6 (3.4%) 篇的作者选择填写问卷。电话联系失败的原因包括:14 位作者拒绝接受回答,40 位作者已离开当前医院,40 位作者未接电话,29 位作者单位表示无法联系到本人,另有 34 家医院管理部门拒绝提供作者电话号码或无法联系。关于电子邮件联系,共发送 517 封电子邮件。

截至 2024 年 5 月 31 日,通过上述三种渠道共收到 333 条回复,包含 312 篇研究,回复率 4.5%。在 312 篇研究中,233 (74.7%) 篇研究为“试验是真实完成的,所报告的数据都不是编造的”,13 篇为“试验是真实完成的,但有些数据是修改或编造的”,53 篇表示对研究细节“不确定或记不清”,有 13 (4.2%) 篇承认其“试验从未进行过,数据是编造的”。在真实完成的 246 篇研究中,有 162 (66.9%) 篇符合随机对照试验的定义,还有 84 篇被认为不符合随机对照试验的定义。在 162 篇符合随机对照试验定义的研究中,仅 70 (43.2%) 篇为随机化低偏倚风险,29 (17.9%) 篇为分配隐藏低偏倚风险,在盲法方面,仅有 24 (14.8%) 篇为低偏倚风险。

结论 精神分裂症药物干预的中文随机对照研究其真实性和研究质量均有待提升,即便作者在文章中声称是随机对照试验,仍有近三分之一研究不符合随机对照试验的定义,甚至存在修改、捏造数据等情况;而对于真实进行的试验,也存在过程中使用高偏倚风险方法的现象。因此需要进一步重视国内精神障碍临床试验的研究质量。

关键词:精神分裂症,抗精神病药,随机对照试验,中文临床试验,质量评价,偏倚风险

精神分裂症患者血清炎性细胞因子水平与临床症状及疗效的相关性

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2.蚌埠医科大学

目的 探究精神分裂症患者血清炎性细胞因子水平与临床症状及疗效的相关性。

方法 纳入 2021 年 12 月至 2023 年 5 月在首都医科大学附属北京安定医院芜湖医院住院的首发或

停药 4 周以上的精神分裂症患者 50 例, 选择同时期在本院体检的健康志愿者 50 例作为对照组, 在使用奥氮平治疗 6 周前后检测血清白细胞介素 (IL)-2、IL-4、IL-8、IL-10、肿瘤坏死因子 (TNF)- α 的浓度, 使用阳性与阴性症状量表 (PANSS) 对患者精神病症状严重程度进行评估。比较精神分裂症患者治疗前后细胞因子水平、PANSS 评分的变化, 分析炎性细胞因子基线水平与 PANSS 评分及差值 (治疗后-治疗前) 的相关性, 并使用多元线性回归分析探索炎性细胞因子基线水平与 PANSS 评分差值之间的关系

结果 治疗前研究组血清 IL-10、TNF- α 水平较对照组高, 血清 IL-8 水平较对照组低, 差异有统计学意义 ($P < 0.05$)。奥氮平治疗 6 周后患者血清 IL-8 浓度升高, IL-10、TNF- α 浓度降低, 差异有统计学意义 ($P < 0.05$)。治疗前 IL-2 与阴性症状评分、总分负相关, IL-10 与一般病理症状评分、总分正相关, TNF- α 与阴性症状评分、一般病理症状评分、总分负相关 ($P < 0.05$)。TNF- α 基线水平与阴性症状评分差值正相关 ($P < 0.05$)。多元线性回归确定 TNF- α 的预测效应: TNF- α 基线水平与阴性症状评分差值 (调整 R 方=0.198, $\beta=0.445$, $p < 0.001$)

结论 精神分裂症患者血清炎性细胞因子水平与临床症状有一定相关性, 奥氮平可调节精神分裂症患者异常炎性细胞因子水平, TNF- α 可能可以预测奥氮平对阴性症状的疗效。

关键词: 精神分裂症, 炎性细胞因子, 奥氮平, PANSS

Disturbance of Neurotransmitter Metabolites in Peripheral Blood of Schizophrenia Patients Treated with Olanzapine: A Targeted Metabolomic Study

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Objective The aim of this research was to characterize changes in peripheral blood neurotransmitter

metabolites in olanzapine-treated schizophrenia (SCZ) and to identify potential diagnostic biomarkers for SCZ. Concurrently, the relationship between these differential neurotransmitters and cognitive function is explored

Methods We recruited 40 SCZ treated with single-agent olanzapine and 40 healthy controls (HC). Cognitive function and psychopathology were assessed using the MCCB and PANSS, respectively. Neurotransmitter levels were determined by targeted metabolomics approach using liquid chromatography-mass spectrometry (LC/MS)

Results SCZ showed cognitive impairment in all domains of the MCCB compared to HC. Interestingly, a 4-neurotransmitter panel consisting of 3-Methoxytyramine hydrochloride (3-MT), 3,4-Dihydroxyphenylacetate (DOPAC), arginine, and r-aminobutyric acid (GABA) illustrated the highest determinative score between SCZ and HC. Arginine was positively correlated with PANSS general psychopathology scores. 3-MT independently predicted the verbal learning scores only in SCZ, whereas GABA independently predicted the social cognition scores only. Furthermore, GABA independently predicted the working memory scores only in HC

Conclusion The collective assessment of these four neurotransmitters (3-MT, DOPAC, arginine, and GABA) holds significant value in diagnosing SCZ. Moreover,

3-MT and GABA may contribute to the understanding of cognitive dysfunction in SCZ, particularly with respect to verbal learning and social cognitive dysfunction.

关键词: 3-methoxytyramine, r-Aminobutyric acid, neurotransmitters, schizophrenia, cognitive function, biomarker

静息态 f-MRI 在精神分裂症患者脑功能研究中的应用

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目的 精神分裂症是一种严重的精神障碍，影响患者的认知功能和日常生活。研究其脑功能对于理解疾病机制、开发早期诊断工具、制定个性化治疗方案以及改善患者生活质量至关重要。本研究旨在利用静息态功能磁共振成像（f-MRI）技术，深入探讨精神分裂症患者的脑功能活动模式，以识别与该年龄段精神分裂症相关的神经生物学特征。通过比较精神分裂症患者与同龄健康对照组的静息态脑网络，本研究力图揭示疾病特有的脑功能异常，以期揭示精神分裂症的潜在生理学特征。

方法 选取 30 名精神分裂症患者作为患者组与 30 名正常人作为对照组，分别对他们进行静息态 f-MRI 测量，对测量结果进行时间层校正、头动校正、低频滤波、空间标准化等预处理后，分别得到患者组和对照组的 ALFF 和 ReHo 值，对二者分别进行双样本 t 检验，比较患者组和对照组的 ALFF 和 ReHo 的差异。

结果 统计分析表明患者组和对照组的 ALFF 值和 ReHo 值均有部分脑区存在显著性差异，其中患者组右侧舌回（Lingual Gyrus (R)）区域、右侧枕极（Occipital Pole (R)）区域的 ALFF 值显著低于对照组 ($p < 0.05$)，患者组右侧前极（Lingual Gyrus (R)）区域、右侧中央前回（Precentral Gyrus (R)）区域、右侧枕外侧皮质下分区（Lateral Occipital Cortex, inferior division (R)）的 ReHo 值显著低于对照组 ($p < 0.05$)。

结论 精神分裂症患者的静息态 fMRI 低频振幅和局部一致性存在差异，提示神经活动存在异常。

关键词：精神分裂症,静息态 f-MRI,低频振幅 (ALFF),局部一致性 (ReHo),神经生物学特征

宁波市在管严重精神障碍患者肇事肇祸的影响因素分析

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目的 探讨宁波市在管严重精神障碍患者肇事肇祸的主要影响因素。

方法 筛选出宁波市严重精神障碍信息管理系统中 2021 年 1 月-2023 年 12 月因肇事肇祸在司法

鉴定机构进行刑事责任能力评定的 90 例患者作为病例组，抽取系统中无肇事肇祸行为严重精神障碍患者作为对照组，按照年龄 (± 3 岁)、性别、病程 (± 1 年) 进行 1:2 配对病例对照研究。采用卡方检验及 logistic 回归分析严重精神障碍患者肇事肇祸行为的影响因素。

结果 肇事肇祸组城市户口、精神疾病家族史、家庭监护差、经济贫困、住院次数 ≥ 3 次、有妄想症状、不（规律）服药比例高于对照组 (均 $P < 0.05$)，肇事肇祸组社会功能缺陷量表评分高于对照组 (7.56 vs. 6.44, $P < 0.05$)。多因素 logistic 回归分析结果显示，家庭监护中和好 (OR=0.404 和 0.228)、无妄想症状 (OR=0.117)、规律服药/医嘱勿需服药 (OR=0.154) 是肇事肇祸保护因素。经济贫困 (OR=3.749) 和高社会功能缺陷评分 (OR=1.095) 是肇事肇祸危险因素 (均 $P < 0.05$)。

结论 应重点关注家庭监护差、经济贫困、不（规律）服药、有妄想症状、社会功能缺陷严重的严重精神障碍患者，通过采取针对性措施，降低该人群肇事肇祸行为发生。

关键词：严重精神障碍,肇事肇祸,影响因素

利培酮联用不同剂量二甲双胍对精神分裂症患者泌乳素及血脂的影响

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目的 探讨不同剂量二甲双胍对利培酮治疗的精神分裂症患者泌乳素及血脂水平的影响。

方法 选取 2020 年 7 月至 2021 年 4 月于首都医科大学附属北京安定医院芜湖医院住院并使用利培酮治疗的精神分裂症患者 150 例 (男女各 75 例)，按随机数字法随机分为 A 组、B 组、C 组 (每组 50 例患者，男女各 25 例)，A 组、B 组、C 组分别给予二甲双胍 500mg/d、1000mg/d、1500mg/d 治疗 12 周。分别于治疗前及治疗 12 周后检测三组患者的泌乳素、血糖、甘油三酯、高密度脂蛋白胆固醇。组间比较采用方差分析，以 $P < 0.05$ 为差异有统计学意义。

结果 二甲双胍治疗前，三组中女性患者 PRL 均高于男性，比较差异有统计学意义 (P 均 < 0.001)。联合二甲双胍治疗后，三组血糖变化组间比较无差

异 ($P > 0.05$), B 组、C 组患者 TG、HDL、PRL 水平优于 A 组, 差异有统计学意义 (P 均 < 0.05)。

结论 二甲双胍可有效改善利培酮所致的精神分裂症患者泌乳素升高和脂代谢异常。泌乳素降低与二甲双胍使用剂量存在量效关系, 临床工作中可考虑使用二甲双胍来改善利培酮导致的泌乳素分泌增加及脂代谢紊乱, 提高患者对治疗的依从性, 改善预后。

关键词: 精神分裂症, 二甲双胍, 利培酮, 泌乳素, 甘油三酯

Advances in Functional Brain Connectivity in Schizophrenic Patients with Myelin Damage

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Objective Schizophrenia is a severe mental disorder of undetermined etiology, the pathogenesis of which has not been fully elucidated. In recent years, an increasing number of studies have suggested that myelin damage may play an important role in the pathogenesis of schizophrenia, but the specific mechanisms of myelin damage and its role in the disease process are still unclear. In this paper, we summarize the research progress of brain functional connectivity in schizophrenia patients with myelin damage, and discuss the effects of myelin damage on brain functional connectivity and its potential mechanisms

Methods We conducted a systematic literature search in PubMed, Web of Science, Science Direct, EMBASE and Cochrane for studies published in the last five years on functional brain connectivity and myelin damage in schizophrenia patients. Relevant high-quality studies were screened for comprehensive analysis and summarization

Results Studies have shown that patients with schizophrenia with myelin damage have significant abnormalities in the functional connectivity of several brain regions. These abnormalities are centered in areas such as the prefrontal cortex, hippocampus, and default mode network. In addition, myelin damage is closely

associated with dysregulation of neurotransmitter systems, inflammatory responses, and genetic factors, which together affect the integrity and stability of brain functional connectivity

Conclusion Myelin damage plays an important role in brain functional connectivity abnormalities in patients with schizophrenia. Future studies should further explore the specific mechanisms of myelin damage and its role in schizophrenia, with a view to providing new ideas and methods for clinical diagnosis and treatment

关键词: schizophrenia, myelin, brain functional connectivity, prefrontal cortex, default mode network

基于 Lasso 回归的精神分裂症患者磁休克疗效预测模型

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目的 精神分裂症是一种严重的精神疾病, 常有感知觉、思维、情感和行为等障碍, 可导致患者出现严重的功能障碍和明显的社会适应不良。目前精神分裂症首先行抗精神病药物治疗, 然而研究发现约有 20% 的精神分裂症患者对目前治疗精神分裂症的主要抗精神病药物无效, 需要寻求其他治疗方案。磁休克治疗(MST)作为一种治疗重型精神疾病的无创神经调控新技术备受关注。目前已有研究证实了 MST 对于精神分裂症的治疗效果。本研究的目的是探究 MST 治疗精神分裂症的效果, 并构建预测模型来研究影响 MST 疗效的因素。

方法 本研究招募了 14 名精神分裂症患者, 使用阳性和阴性症状量表(PANSS)评估患者的症状严重程度; 使用精神分裂症认知功能成套测验-共识版(MCCB)评估患者的认知功能。采用配对样本 t 检验比较患者在 MST 治疗前后 PANSS 评分的差异。选择人口统计学变量、认知评估分数和基线 PANSS 评分作为自变量, 治疗前后 PANSS 及子量表的分数差

异作为因变量,进行 Lasso 回归分析,以探讨与 MST 治疗效果相关的因素。

结果 在 MST 治疗前后,患者 PANSS 总分有明显下降($p < 0.001$);阳性症状(P)、阴性症状(N)和一般精神病理症状(G)3 个子量表评分也均有明显下降($p < 0.01$)。Lasso 回归分析结果显示: PANSS 总分的下降与基线 PANSS 评分($\beta = 0.308$)、基线 N 子量表评分($\beta = 0.209$)、工作记忆($\beta = -0.081$)和社会认知($\beta = -0.083$)相关; P 子量表评分的下降与基线 P 子量表评分($\beta = 0.233$)相关; N 子量表评分的下降与人际关系($\beta = 0.136$)和基线 N 子量表评分($\beta = 0.605$)相关; G 子量表评分的下降与基线 PANSS 评分($\beta = 0.191$)、基线 G 子量表评分($\beta = 0.041$)和社会认知($\beta = -0.038$)相关。4 个预测模型的标准平均绝对误差均小于 1,均具有一定的预测性。

结论 研究结果表明, MST 能有效改善精神分裂症患者的阳性症状、阴性症状和一般精神病理症状。基线量表的评分是影响 MST 疗效的因素,表明基线症状重的精神分裂症患者在 MST 治疗后改善的程度更大。这可能说明严重精神分裂症患者可以从 MST 中获益更多;也可能是存在着“天花板效应”。此外,工作记忆和社会认知被发现与症状改善的程度呈轻度负相关,未来认知损害与 MST 疗效之间的关系需要进一步研究来验证。本研究表明,精神分裂症患者基线 PANSS 评分可以预测 MST 疗效,精神分裂症患者基线症状的严重程度可能是指导 MST 治疗的潜在指标之一。

关键词:精神分裂症,磁休克治疗,Lasso 回归,预测模型

DISC1 可能参与调节精神分裂症患者的线粒体功能

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目的 DISC1 被认为是一系列精神疾病的潜在易感基因,影响中枢神经系统功能的许多方面,包括神经发育、神经信号和突触可塑性。已有研究表明,DISC1 的基因突变、单核苷酸多态性与精神分裂症发病密切相关。但是 DISC1 参与精神分裂症发病的作用机制还不清楚。值得注意的是,DISC1 被证明

定位于线粒体中,并且可以和多种线粒体相关蛋白相互作用,参与调节线粒体的分布、形态、质量控制等。DISC1 异常则导致线粒体的 ATP 合成、细胞凋亡、钙离子缓冲等功能障碍。有趣的是,线粒体功能障碍在许多关于精神分裂症的脑部研究被观察到,表明线粒体功能障碍与精神分裂症的发病风险增加有关。本文就 DISC1 在线粒体功能和质量控制中的作用及其与 SCZ 的关系作一综述,为该病的诊断和治疗提供新的思路。

方法 使用生物医学文献数据库 Pubmed 输入以下关键词 "DISC1" 或 "schizophrenia" 或 "mitochondria"; "DISC1"和" mitochondrial dysfunction", "schizophrenia"和" mitochondrial dysfunction" 进行检索。结果 DISC1 与精神分裂症中线粒体功能障碍的发生发展关系密切。近年来对 DISC1 在精神分裂症和线粒体中的功能研究的文献有很多,本综述从 DISC1 的生物学特性、DISC1 的功能和分布、DISC1 异常影响线粒体功能、影响线粒体的运输、调控线粒体质量控制方面进行了归纳总结,以期为精神分裂症的诊断和治疗提供新的线索。

结果 DISC1 调节神经元功能,包括突触形成、迁移、增殖和可塑性。DISC1 作为一种多功能支架蛋白而不是一种酶,与不同的线粒体相关蛋白相互作用,如 Miro、Traks、Drp1、MFns、Lc3 和 Mic60。这种相互作用影响线粒体的数量、形状、分布和功能。DISC1 异常导致线粒体的氧化磷酸化障碍、钙失稳态、以及线粒体的运输、融合、分裂,自噬等生理过程紊乱,这些都与精神分裂症的病理机制有关,并且可以被抗精神病药物所逆转。因此,DISC1 可能解释线粒体功能障碍与精神分裂症之间的联系,阐明 DISC1 对线粒体各个生理过程和功能的调节的机制对于理解精神分裂症病理生理至关重要。

结论 DISC1 可能参与调节精神分裂症患者的线粒体功能。

关键词:精神分裂症,线粒体,DISC1

红细胞计数与精神分裂症:双向双样本孟德尔随机化研究

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目的 精神分裂症是一种严重的精神疾病，其典型特征是多维精神症状，包括阳性、阴性症状以及情感和认知障碍，可导致患者出现严重的功能障碍和明显的社会适应不良。研究显示，我国精神分裂症的终生患病率接近 1%，造成了巨大的疾病负担（如耻辱、活动受限、预期寿命缩短和医疗费用增加等）。精神分裂症发病机制非常复杂，目前仍未完全明确，主要存在脑功能连接异常、多巴胺假说、谷氨酸假说及神经发育等多种假说；此外，近日来精神分裂症与红细胞结构及生理特性之间的关联也收到越来越多的关注。已有研究表明，精神分裂症患者的红细胞计数升高；另有研究认为，红细胞计数升高与精神分裂症之间存在一定的相关性。然而，红细胞计数的改变是否与精神分裂症存在因果关系仍不清楚。因此，本研究的目的是基于双向双样本孟德尔随机化研究探索红细胞计数与精神分裂症之间的因果关系。

方法 本研究基于欧洲人群中红细胞计数和精神分裂症的全基因组关联研究(GWAS)的数据，使用双向双样本孟德尔随机化(MR)，遗传因素作为工具变量。使用 1000 个基因组连锁不平衡的欧洲群体作为参考群体，计算了 SNPS 之间的连锁不平衡。在前瞻性 MR 分析中，红细胞计数作为暴露因素，SCZ 风险作为结局；在反向 MR 分析中，SCZ 风险作为暴露因子，红细胞计数作为结局。评估红细胞计数与精神分裂症之间的潜在因果关系。

结果 在排除连锁不平衡及弱工具变量后，将 56 个独立 SNPs 作为遗传工具变量。MR 分析发现，红细胞计数与精神分裂症之间存在因果关系，比值比(OR) = 1.003 (95%CI: 1.000-1.006, $p = 0.023$)；在反向 MR 中，同样没有发现精神分裂症与红细胞计数之间潜在的因果关系，OR = 0.606 (95%CI: 0.011-32.604, $p = 0.805$)。

结论 本研究发现红细胞计数与精神分裂症之间存在因果关系，但由于 OR 值 95%CI=1.000-1.006，因此尚不能说明红细胞计数升高是患精神分裂症的风险因素。之后可能需要进一步研究来探究红细胞计数与精神分裂症之间的关联。

关键词：精神分裂症,红细胞计数,孟德尔随机化

Longitudinal Changes in Brain Structure in First-episode Schizophrenia

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Objective Schizophrenia has been widely confirmed to exhibit abnormal brain structures in neuroimaging studies. However, how these abnormalities evolve over time and how they correlate with antipsychotic drugs remains unclear. This study aims to conduct a longitudinal study on the differences in brain structure between first-episode schizophrenia (FES) and healthy controls (HC), using voxel-based morphometry (VBM) and surface-based morphometry (SBM). Furthermore, it will dynamically track the changes in brain structure before and after antipsychotic treatment, and explore the relationships between drug dosage, clinical symptoms, cognitive function, and these structural changes

Methods The study encompassed 28 FES and 30 HC participants. Post-enrollment, all FES patients received second-generation antipsychotic drugs. Baseline demographic, clinical, cognitive, and sMRI data were gathered from all subjects, while FES patients underwent follow-up assessments after 8 weeks of treatment. VBM and SBM analyses compared gray matter volume and cortical thickness between FES and HC, as well as FES changes over time. Correlation analysis examined the relationship between abnormal brain regions, clinical symptoms, cognition, and drug dosage

Results The FES group showed significantly reduced gray matter volume in multiple brain regions on the left precentral gyrus, inferior frontal gyrus, fusiform gyrus, inferior temporal gyrus, lingual gyrus, superior occipital gyrus, middle occipital gyrus, precuneus, cuneus, anterior lobe of the cerebellum, cerebellar inferior peduncle, and cerebellar tonsil at baseline. Additionally,

the cortical thickness of the left lateral occipital gyrus in the FES group was significantly reduced. After 8 weeks of antipsychotic treatment, the gray matter volume in the left anterior cingulate gyrus and the cortical thickness in the bilateral cingulate gyrus significantly decreased in the FES group, while the volume of the left caudate nucleus significantly increased. The correlation analysis revealed that after 8 weeks of treatment, the degree of reduction in gray matter volume of the left anterior cingulate gyrus was negatively correlated with the degree of reduction in total PANSS score and the degree of increase in social cognition score, while the degree of increase in the volume of the left caudate nucleus was positively correlated with the degree of reduction in PANSS negative symptom score. No relationship was found between brain structural changes and antipsychotic drug dose

Conclusion The brain structure of FES differs from HC in terms of gray matter volume and cortical thickness, and there are longitudinal changes in the structure of specific brain regions in FES after antipsychotic drugs. These changes are related to the clinical symptoms and cognition of FES, but not associated with the dosage of antipsychotic drugs

关键词: First-episode schizophrenia, Magnetic resonance imaging, Longitudinal study

Iclepertin (BI 425809) 在健康志愿者 I 期试验和精神分裂症相关认知损害 II 期试验的安全性数据

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目的 Iclepertin (BI 425809) 是一种强效的 GlyT1 选择性抑制剂, 正在进行精神分裂症相关认知损害 (CIAS) 的 III 期试验。已有的 I 期试验项目包括 330 例健康志愿者 (HV, iclepertin 组 278 例; 安慰剂组 52 例)。II 期试验中, 709 例 CIAS 患者接受了治疗 (iclepertin 组 438 例; 安慰剂组 271 例)。

结果 I 期试验中, 162 例 (58.3%) 服用 iclepertin 和 17 例 (32.7%) 服用安慰剂的 HV 报告任何不良事件 (AE), 其中 0.7% 的 AE 严重程度为重度, 26.9% 的 AE 被研究者定义为与药物相关, 1.9% 的 AE 导致治疗中断, 1.9% 的 AE 具有显著意义 (ICH E3 定义); 无特别关注 AE (AESI) 和严重 AE (SAE)。Iclepertin 组、安慰剂组最常见的 AE 是头痛 (18.0% vs 9.6%)、头晕 (10.1% vs 5.8%)、鼻咽炎 (5.4% vs 5.8%)、背痛 (5.4% vs 3.8%)、恶心 (8.3% vs 1.9%)、疲劳 (6.5% vs 5.8%) 和呕吐 (5.4% vs 1.9%), 两组相比未观察到血红蛋白或红细胞比容的明显下降。未报告自杀意念或行为。

II 期试验中, iclepertin 组 204 例 (46.6%) 和安慰剂组 131 例 (48.3%) 报告了任何 AE。Iclepertin 组、安慰剂组分别有 2.3% 和 1.1% 的 AE 严重程度为重度, 分别有 17.4% 和 18.5% 的 AE 被研究者定义为与药物相关, 3.2% 和 3.0% 的 AE 导致治疗中断, 2.5% 和 2.6% 的 AE 具有显著意义 (ICH E3 定义)。只有 iclepertin 组报告了 AESI (0.2%)。Iclepertin 组、安慰剂组分别有 3.0% 和 2.2% 发生 SAE。两组最常见的 AE 分别是头痛 (9.1% vs 7.4%)、嗜睡 (3.9% vs 2.6%)、头晕 (3.9% vs 2.2%) 和鼻咽炎 (6.6% vs 5.2%)。在 iclepertin 组和安慰剂组中, 分别有 0.5% 和 0.4% 的患者报告精神分裂症 SAE, 0.2% 和 1.1% 报告自杀意念。

结论 Iclepertin 在 HV 和 CIAS 患者中耐受性良好。总体 AE 没有剂量依赖性趋势。血红蛋白降低的类效应在一项 II 期试验的 CIAS 患者中显示剂量依赖性, 但均不认为具有临床相关性。与安慰剂治疗相比, 眼部安全性参数没有观察到有意义的变化。

【声明】 此摘要首发在 2024 年 4 月 3-7 日精神分裂症国际研究协会年会 (SIRS)。

关键词: 安全性, 精神分裂症, 认知损害, CIAS, iclepertin, 不良事件

Independent Deficit of The 2.5-Hz Auditory Steady-state Response in Schizophrenia

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Objective This study primarily aimed to investigate the impairment of the 2.5-Hz auditory steady-state response (ASSR) and its correlation with other auditory cognitive indicators, clinical symptoms, and multidomain cognition in individuals with schizophrenia

Methods In this cross-sectional study, 30 patients with schizophrenia and 30 healthy controls underwent 2.5- and 40-Hz ASSR and mismatch negativity (MMN) assessment. The Positive and Negative Syndrome Scale (PANSS) was utilized to assess the patients' clinical symptoms, and the MATRICS consensus cognitive battery (MCCB) was used to evaluate cognitive function

Results The 2.5-Hz ASSR inter-trial coherence (ITC) was significantly lower among patients with schizophrenia than among healthy controls ($P = 0.012$, Cohen's $d = 0.85$). The 2.5-Hz ASSR ITC alone distinguished these groups, with 53.3% sensitivity, 70.0% specificity, and 61.7% accuracy. In the schizophrenia group, the 2.5-Hz ASSR ITC did not correlate significantly with the MMN amplitude or any clinical symptoms or cognitive measurement. In healthy controls, the 2.5-Hz ASSR ITC correlated positively with verbal learning ($r = 0.381$, $P = 0.038$), although this correlation was not significant after Bonferroni correction

Conclusion The evoked activity maintaining delta-band oscillation entrainment in the auditory system reveals an independent deficit in schizophrenia and is valuable for the objective diagnosis of this disorder

关键词: Auditory steady-state response; Delta-band oscillation; Auditory cognition; Schizophrenia.

精神分裂症患者奖赏动机适应性的行为研究

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目的 奖赏动机是指个体付出努力获得潜在益处的意愿程度, 而动机缺乏是精神分裂症阴性症状的核心症状。以往研究发现, 精神分裂症患者奖赏动机减弱, 但尚不清楚他们是否会随着外在付出-回报比的改变, 动态调整自己的奖赏动机。本研究旨在明确精神分裂症患者奖赏动机在付出-回报失衡条件改善以后, 是否随之提升, 并探究这种适应性与症状、社会功能之间的关系。厘清这些问题有助于进一步了解精神分裂症患者奖赏动机缺损的本质, 揭示阴性症状动机缺乏的认知机制, 并为奖赏动机是否处于健康状态提供评估方法。

方法 本研究共招募 30 名精神分裂症患者和 30 名健康对照被试, 使用基于心算努力的奖赏动机适应性任务(RMAT)测量奖赏动机及适应性。自变量为付出-回报条件, 根据预期奖赏和实际奖赏的相对大小设置付出=回报平衡、付出>回报失衡、付出<回报失衡三种条件; 因变量为每个试次开始时“渴求奖赏”和结束时“喜爱奖赏”的主观评分。测量两组的社会功能、动机和愉快体验等方面的得分, 并评估患者的临床症状。使用 SPSS 22 进行数据分析。

结果 与健康对照组相比, 患者的“喜爱奖赏”显著降低[$F(1, 58) = 4.56$, $p = 0.037$], “渴求奖赏”有降低趋势[$F(1, 58) = 3.14$, $p = 0.082$]; 组别和条件的交互作用均显著[渴求奖赏: $F(1.33, 77.26) = 9.19$, $p = 0.001$; 喜爱奖赏: $F(1.19, 68.93) = 15.17$, $p < 0.001$], 事后检验显示在付出-回报平衡和付出<回报失衡时, 患者的渴求、喜爱奖赏均显著低于健康对照组, 而在付出>回报失衡时两组的渴求、喜爱奖赏差异均不显著。患者渴求、喜爱奖赏的适应性系数均显著低于健康对照组[β 渴求: $t(54.28) = -2.89$, $p = 0.005$; β 喜爱: $t(58) = -3.45$, $p = 0.001$], 且患者的 β 渴求与阴性症状临床评估量表(CAINS)的表达维度显著负相关[$r(28) = -0.42$, $p = 0.022$], β 喜爱与动机与情绪自评量表(MAP-SR)[$r(16) = 0.48$, $p = 0.045$]、首发社会功能问卷(FESFS) 的家庭维度[$r(18) = 0.44$, $p = 0.050$]显著正相关。

结论 精神分裂症患者的奖赏动机并没有像对

照组那样随着付出-回报条件改善而提升,并且减弱的适应性与社会功能、日常生活中的动机与愉快体验均存在关联。这表明精神分裂症患者在外界环境条件变化时奖赏动机适应性调整的能力缺损,这是精神分裂症阴性症状动机缺乏的认知机制之一,一定程度上提示了阴性症状的严重程度及预后情况。

关键词:付出-回报失衡;奖赏动机;适应性;精神分裂症

重复经颅磁刺激在精神分裂症中的研究和治疗应用

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目的 本文综述了近年来重复经颅磁刺激(repetitive transcranial magnetic stimulation, rTMS)在精神分裂症治疗中的应用进展,通过对多篇文献的深入分析与提炼,探讨了其作用机制、治疗靶点、临床研究证据及安全性评估。

方法 检索知网、万方、维普、Embase、PubMed等数据库查阅文献,对过往 rTMS 在精神分裂症干预治疗进行了梳理和总结,从 rTMS 潜在作用机制、作用靶点及频率、分别在精神分裂症阳性症状、阴性症状、认知功能方面的临床应用几个方面分别阐述。

结果 一、 rTMS 治疗精神分裂症的潜在机制 rTMS 可能通过调节多种神经递质释放,对多种受体以及神经元兴奋性有明显影响。高频经颅磁刺激可能是一种通过调节大脑中的 γ 振荡活动来改善精神分裂症患者认知能力的可能方法。高频 rTMS 可促使精神分裂症患者脑血流量和代谢水平增加。利用 rTMS 调节神经功能和连接性的能力,治疗阳性、阴性、认知症状。

二、 rTMS 治疗精神分裂症的常用方案

目前 rTMS 的刺激频率主要分为高频刺激、低频刺激($\leq 1\text{Hz}$)和 TBS,刺激部位常见的有颞顶区(TPC)和 DLPFC,另外,近期研究发现 rTMS 刺激小脑也可改善患者的多种症状。

三、 rTMS 治疗精神分裂症的临床应用

大多研究认为低频($\leq 1\text{Hz}$)作用于左颞顶叶区域的重复经颅磁刺激对难治性幻听有一定的治疗效

果,采用高频($> 1\text{Hz}$)重复经颅磁刺激作用于左侧 DLPFC 对精神分裂症的阴性症状及认知功能有一定的疗效。但研究的结果均异质性的,结果的异质性可能与 rTMS 刺激频率,刺激强度、刺激位点和刺激周期以及患者个人特征有关,如年纪越小,女性,联合抗精神病药剂量越高以及治疗前刺激部位的局部脑血流量与更好的反应相关。此外, rTMS 改善患者认知功能损害的安全性、效果的持久性需要更精细的研究。

rTMS 的安全性

rTMS 的优点在于其安全性。已知最严重的副作用是癫痫发作,这种情况非常罕见,每 60000 次发作不到 1 次。rTMS 最常见的副作用是刺激时的头痛和头皮不适,幸运的是,疼痛可以被大部分人耐受。

结论 总之,相比于 rTMS 治疗抑郁症而言, rTMS 对精神分裂症的疗效并没有那么成功。目前多中心、多样本、高质量的研究很少,并且现有文章的结果存在争议,并不明确其临床效用。对于 rTMS 的适用人群、治疗模式(包括部位、频率、强度、持续时间等)在未来需要多中心的临床试验来探索。同时需要更多的研究来探索 rTMS 治疗精神分裂症的确切机制。

关键词:重复经颅磁刺激(rTMS);精神分裂症;认知功能

DTNBP1 与精神分裂症的关系

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目的 精神分裂症是一种复杂且严重的精神疾病,涉及多个基因和环境因素的相互作用。近年来,研究者逐渐发现, dysbindin 基因(DTNBP1)在精神分裂症的病理生理学中可能扮演着重要的角色。该基因编码的蛋白质在神经元突触功能和神经传递过程中发挥关键作用,其变异可能影响认知功能和行为。本文旨在评估和分析现有文献,探讨 DTNBP1 基因变异与精神分裂症的相关性,特别是其在疾病发病机制和认知功能障碍中的潜在作用。通过综合分析关键研究,本文将揭示 DTNBP1 在精神分裂症中的复杂功能,为未来研究提供新的视角和方向。

方法 综合分析四篇关键文献,这四篇文献的

研究内容分别为：对 DTNBP1 外显子序列变异的全面评估、探索特定保护性单倍型对记忆性能的影响、利用 *sd*y 小鼠模型研究 DTNBP1 缺失对行为的影响，以及 DTNBP1 变异对健康个体和精神分裂症患者认知功能的作用研究。

结果 1.尽管存在多个 DTNBP1 外显子变异，但这些变异并未直接导致精神分裂症。

2.携带 DTNBP1 特定保护性单倍型的健康个体在记忆测试中表现更优，而精神分裂症患者中未观察到这一现象。

3.缺乏 DTNBP1 的 *sd*y 小鼠显示出与精神分裂症相关的行为异常，可能与前脑多巴胺传输减少有关。

4.DTNBP1 基因变异可能影响记忆功能，但不影响智商或其他认知领域。

结论 DTNBP1 基因在精神分裂症的发病机制和认知功能障碍中起到了重要且复杂的作用。这些发现强调了进一步研究 DTNBP1 的遗传变异如何影响精神分裂症发展和认知表现的必要性，为精神分裂症的治疗提供可能的新策略。未来研究需要更深入地探讨 DTNBP1 的分子机制及其在不同人群中的作用。

关键词：DTNBP1,精神分裂症

回旋指数 (Local Gyrfication Index, LGI)。利用 SPSS 统计软件分析两组间皮层厚度及认知功能的差异，在患者组采用 Pearson 偏相关分析探讨皮层结构与认知特征的关系。

结果 患者组在 MCCB 各项认知功能得分以及韦氏智力得分均明显低于健康组 ($p < 0.05$)。患者组与健康组的皮层厚度在双侧脑岛、左侧三角部、右侧距状旁回、右侧前扣带皮层吻侧部脑区存在显著差异 ($p < 0.05$)，且患者组的皮层厚度明显厚于健康组。患者组的 LGI 值在右侧海马旁回显著高于健康组 ($p < 0.05$)。根据偏相关分析的结果，在首发未服药精神分裂症患者组中，左侧脑岛的皮层厚度与情绪管理测验呈显著正相关 ($r = -0.249$, $p = 0.003$)，右侧脑岛的皮层厚度与情绪管理测验呈显著正相关 ($r = -0.268$, $p = 0.001$)。在健康组中未发现两者具有显著相关性。

结论 首发未服药精神分裂症患者存在局部脑区的皮层形态结构异常以及全面的认知损害。在精神分裂症早期阶段，部分脑区的皮层厚度可能存在代偿性增加。精神分裂症患者双侧脑岛皮层厚度的异常与社会认知有关，表明脑岛可能是精神分裂症社会认知损害的神经病理学基础。

关键词：精神分裂症，皮层厚度，局部回旋指数，情绪管理，社会认知

首发未服药精神分裂症皮层结构异常与认知功能损害的相关性研究

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目的 本研究通过对首发未服药精神分裂症患者皮层形态结构的改变以及其认知水平的损害进行探讨，寻找与其认知特征相关的潜在神经生物学标志物。

方法 本研究共纳入 145 例首发未服药精神分裂症患者和 95 例健康对照。采用阳性与阴性症状量表 (PANSS) 评估患者精神症状的严重程度。采用精神分裂症认知功能成套测验 (MCCB) 及韦氏智力测验 (简式版) 评估所有被试的认知水平及智力。所有被试均使用 3.0T 磁共振扫描仪进行全脑扫描，选用 Freesurfer 软件进行磁共振数据处理，根据 Desikan-Kiliany Atlas 图谱获得各脑区的皮层厚度以及局部

门诊慢特病精神分裂症患者服药依从性及生活质量的观察性研究

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目的 精神分裂症是一种慢性病，给患者及其家庭以及社会造成了极大的经济负担和社会负担。政府投入了大量的资金、人力以期促进精神分裂症患者的院外康复，恢复其社会功能，而门诊慢特病医保政策正是在此理念下诞生。我们以享受门诊慢特病医保政策的精神分裂症患者为研究对象，探讨门诊慢特病政策是否可以通过降低患者的治疗费用、减轻患者及家属的经济负担来提高患者的依从性进而改善精神病症状，提高患者的生活质量，降低患者的再住院率，促进精神分裂症患者的院外康复，总结分享经验，以期精神为精神分裂症的治疗及康复提

供有力的参考依据。

方法 享受门诊慢特病政策的名门诊治疗的精神分裂症患者男女各 40 名为观察组,未享受慢特病(院外服药完全自费)的门诊治疗精神分裂症患者男女各 40 名为对照组,分别于基线、6 月后评估两组患者的服药依从性(MARS 量表)、生活质量(生活质量量表,SQLS),精神病性症状严重程度(简明精神病评定量表,BPRS),因病给家庭和成员带来的负担疾病(家庭负担量表,FBS)及再住院率。

结果 ①采用卡方检验,单因素分析显示,入组时两组患者年龄、性别、职业,文化程度、婚姻状况、照料者关系、病程,家庭收入情况、医保类型、用药种类、就诊频次及 MARS、SQLS、BPRS、FBS 量表方面比较,差异无统计学意义($P>0.05$);6 月后,观察组患者 MARS 量表评分高于对照组 $[(6.84\pm 2.68)\text{vs}(5.90\pm 2.16)]$ 、SQLS 量表评分低于对照组 $[(38.34\pm 5.34)\text{vs}(49.31\pm 4.23)]$ 、BPRS 量表评分低于对照组 $[(23.81\pm 5.35)\text{vs}(31.12\pm 6.71)]$ 、FBS 量表评分低于对照组 $[(11.14\pm 0.96)\text{vs}(15.41\pm 0.90)]$ 、观察组患者再住院率为 2.60%低于对照组 11.25%,差异均具有统计学意义($P<0.05$)。

结论 门诊慢特病政策能够提高患者的依从性进而改善精神病症状,提高患者的生活质量,降低患者的再住院率。

关键词: 精神分裂症;门诊慢特病;服药依从性;生活质量

经络放松疗法对改善精神分裂症患者焦虑症状效果研究

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目的 精神分裂症患者多伴有紧张、担心、害怕等焦虑症状,焦虑症状的存在对精神分裂症患者症状的控制是不利因素,治疗上需要同时给予抗焦虑药物。抗精神病药物多有药物不良反应,居家患者服药依从性一般,如同时服用抗焦虑药物可能会进一步影响患者服药依从性。中医针刺治疗焦虑症有显著的临床效果,渐进式放松训练也是一种比较有效的改善焦虑情绪的训练方式,临床上将两种治疗方法结合起来改善精神分裂症患者焦虑症状效果

更佳,同时能够减少药物的用量。

方法 选择伴有焦虑症状的精神分裂症患者 60 例做为研究对象,进行随机分组,观察组及对照组各 30 例。对照组给予常规治疗方案,观察组在对照组治疗的基础上给予经络放松治疗(针刺+渐进式放松训练),根据患者辨证论治结果选择相应治疗穴位,每周治疗 5 次,每次 30 分钟,1 个月为 1 疗程,共治疗 3 个月。

结果 治疗结束后观察组精神分裂症患者焦虑症状改善程度优于对照组,同时观察组患者夜间睡眠改善情况优于对照组,服药依从性更高。

结论 针刺治疗是传统的中医适宜治疗技术,有着数千年的临床应用经验,针刺治疗在神志病方面有着独特的治疗效果,尤其在焦虑症、抑郁症、睡眠障碍、分离转换障碍等疾病的治疗上,效果显著。经络放松疗法将传统针刺治疗与精神心理学中渐进式放松训练结合起来,治疗伴有焦虑症状的精神分裂症患者,能够很好的改善精神分裂患者的焦虑症状,针刺治疗不良反应小,适合推广应用

关键词: 经络放松疗法,精神分裂症,焦虑

基于 OPRL1 及其受体 NOP 介导 BDNF/TrkB/ERK 通路对膝关节损伤术后-PTSD 发病机制的研究

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目的 膝关节损伤是临床常见的疾病,发病率在我国约为 8.1%,患者术后可能发生为创伤后应激障碍(Post-Traumatic Stress Disorder, PTSD),导致患者的日常生活和人际关系受到严重影响,进而影响患者术后康复效果及生活质量。本研究旨在通过文献研究探索 OPRL1 及其受体 NOP 介导 BDNF/TrkB/ERK 通路在膝关节损伤术后-PTSD 发病的机制。

方法 通过文献研究法对近 20 年内关于 OPRL1 及其受体 NOP 介导 BDNF/TrkB/ERK 通路参与膝关节损伤术后-PTSD 的发病机制进行分析总结。

结果 ①在膝关节损伤后,炎症和疼痛刺激可能激活中枢神经系统的 OPRL1 受体,导致疼痛感觉

的增强和敏感化,从而引发 PTSD 症状。OPRL1 可能还参与了多巴胺和乙酰胆碱等神经递质的调节,这些递质与诸多心理状态密切相关。OPRL1 及其受体 NOP 可能影响免疫系统来参与膝关节损伤术后 PTSD 的发生。OPRL1 可能通过调节免疫系统影响心理健康,从而在 PTSD 的发生中发挥作用。OPRL1 可能通过影响神经和突触的可塑性过程来参与 PTSD 的发生和发展。②BDNF (脑源性神经营养因子) 是神经系统中重要的生长因子,它通过与酪氨酸激酶 B (TrkB) 受体结合,激活了 ERK (细胞外信号调节激酶) 通路。该通路在神经细胞的生长、分化、存活及突触可塑性等方面发挥重要作用。膝关节损伤术后, BDNF/TrkB/ERK 通路可能被激活,以促进损伤部位的神经再生和修复。如果损伤严重或处理不当,该通路可能会过度激活,持续传递炎症反应和疼痛信号,从而可能引发心理应激反应,导致 PTSD 的发生。BDNF/TrkB/ERK 通路在膝关节损伤术后,可能影响患者的情绪状态和记忆功能,使患者更容易出现 PTSD 症状,如噩梦、回忆闪回等。BDNF/TrkB/ERK 通路还可能通过影响免疫系统来参与膝关节损伤术后 PTSD 的发生。BDNF 可能通过调节免疫系统影响心理健康,从而在 PTSD 的发生中发挥作用。③OPRL1 及其受体 NOP 可能通过 BDNF/TrkB/ERK 通路影响神经、突触的可塑性。在膝关节损伤后,大脑的神经网络和突触连接可能会发生改变,这些改变可能与 PTSD 的症状有关。OPRL1 可能通过调节 BDNF 的表达和 TrkB 受体的活性,影响 ERK 通路的信号转导。同时 OPRL1 及其受体 NOP 可能通过 BDNF/TrkB/ERK 通路参与了疼痛信号的传递和调控,也能影响免疫系统来参与膝关节损伤术后 PTSD 的发生。

结论 膝关节损伤术后-PTSD 共病模型发病机制可能是基于 OPRL1 及其受体 NOP 调控 BDNF/TrkB/ERK 通路。

关键词: 膝关节损伤; PTSD; OPRL1; NOP; BDNF-TrkB-ERK

Long-term Benzodiazepines Use Is Associated with Impaired Cognitive Function in Schizophrenia: A Longitudinal Observational Study

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Objective To explore the effect of long-term exposure to benzodiazepines drugs on cognitive function in patients with schizophrenia

Methods This study was based on the "Observational Study of the Safety and Related Factors of Long-term Treatment with Atypical Antipsychotics in Chinese Patients with Schizophrenia". 57 patients with long-term exposure (medication ≥ 60 days) to benzodiazepines were recruited. Propensity score matching was used to match a non-exposure control group 1:1 according to age, gender, course of disease, and type of atypical antipsychotic drug. The scores of the Montreal Cognitive Assessment (MoCA) Scale, Positive and Negative Syndrome Scale (PANSS), Clinical Global Impression-severity (CGI-S), and Personal and Social Performance (PSP) Scale were compared between the two groups. Logistic regression was used to analyze the influencing factors of cognitive impairment in schizophrenia

Results We matched long-term benzodiazepines exposure group (n=57) 1:1 with a non-exposure group (n=57) with good Standardized Mean Difference (SMD). The total MoCA of the long-term benzodiazepines exposure group (16.02 \pm 6.69) was lower than the non-exposure group (19.33 \pm 7.11), with a statistically significant difference ($P < 0.05$). The PANSS total score of the study group was 57.50 (49.00, 75.75) and 55.00 (46.75, 70.25) in the non-exposure group, with no statistically significant difference ($P > 0.05$). The CGI-S score of the study group was 4.00 (3.00, 4.00) and 3.00 (3.00, 4.50) in the control group, with no significant difference ($P > 0.05$). The PSP total score of the study group was 60.00 (40.00, 70.50) and 60.00 (45.00, 65.00) in the control group, with no significant difference ($P > 0.05$). Long-term benzodiazepines exposure was a risk factor for cognitive impairment in schizophrenia patients (OR=7.73, $P < 0.05$), while years of education was a protective factor (OR=0.74, $P < 0.05$)

Conclusion Schizophrenia patients with long-term benzodiazepine exposure had poorer cognitive

function. Long-term benzodiazepines exposure is a risk factor for cognitive impairment in schizophrenia patients

关键词: schizophrenia, benzodiazepines, cognitive function, long-term exposure

精神分裂症患者血清 IL-33 表达水平与攻击行为相关性研究

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目的 本研究旨在评估精神分裂症患者血清白介素-33(IL-33)表达水平及其与攻击行为的相关性,探索精神分裂症患者攻击行为潜在预测指标。

方法 63例精神分裂症患者作为精神分裂症组(攻击组 32例,非攻击组 31例),26名健康志愿者作为对照组。采集一般资料。使用修订版外显攻击行为量表(MOAS)评估患者近1周内有无明显攻击行为及其攻击性,MOAS加权总分 ≥ 4 分为攻击组, < 4 分为非攻击组。采用阳性和阴性综合征量(PANSS)评估患者的精神症状。采用酶联免疫吸附试验检测血清 IL-33 的水平。采用 Shapiro Wilk 进行正态性检验,符合正态分布的数据使用 t 检验或单因素方差分析,偏态分布数据使用 Mann-Whitney 检验或 Kruskal Wallis 检验。在精神分裂症组控制年龄、教育程度、婚姻情况后,对 IL-33 原始数据进行 Log 函数转换后进行偏相关分析;同时采用二元 logistic 回归分析攻击与非攻击患者 PANSS 量表评分及血清 IL-33 水平差异。应用 ROC 曲线通过曲线下面积(AUC)分析 IL-33 对攻击行为的判别价值。 $P < 0.05$ 为差异有统计学意义,多重比较使用 Bonferroni 校正。

结果 与非攻击组相比,攻击组患者阳性症状评分、一般精神病理症状评分以及 PANSS 总分更高($P < 0.05$)。精神分裂症组血清 IL-33 水平为 13.09 (9.07, 29.80) pg/ml,高于对照组的 7.86 (3.66, 14.04) pg/ml($P < 0.05$);攻击组为 19.91 (10.44, 40.51) pg/ml,高于非攻击组的 11.53 (8.31, 17.26) pg/ml 和对照组 ($P < 0.05/3$)。偏相关分析显示患者 MOAS

加权总分与阳性症状和 PANSS 总分呈正相关,血清 IL-33 水平与 MOAS 加权总分、阳性症状评分及 PANSS 总分呈正相关。二元 logistic 回归显示患者血清 IL-33 水平(OR=1.072, 95%CI: 1.021-1.125)、阳性症状评分(OR=1.320, 95%CI: 1.125-1.550)以及一般精神病理症状评分(OR=1.088, 95%CI: 1.015-1.167)与患者发生攻击行为呈正相关。血清 IL-33 水平判别患者攻击行为的 AUC 为 0.713,敏感性为 59.4%,敏感性 80.6%;血清 IL-33 水平联合阳性症状评分判别精神分裂症患者攻击行为的 AUC 为 0.766,敏感性为 56.3%,特异性为 90.3%。

结论 本研究提示伴有攻击行为精神分裂症患者的血清 IL-33 水平升高,IL-33 联合阳性症状评分可作为精神分裂症患者攻击行为的辅助预测指标。

关键词:精神分裂症,血清,白介素-33,攻击行为

更改“Catatonia”的中文译名(现译为紧张症)可能加深精神科对该综合征的认识

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Catatonia(现译为紧张症)是一类以精神运动性紊乱为主的临床综合征,其临床特征包括精神运动性增强(极度多动或激越、冲动和好动)、精神运动性减退(凝视、矛盾性、违拗、木僵和缄默等)、及精神运动性异常(扮鬼脸、作态、装相、刻板行为、肌张力强直、模仿言语、模仿行为、言语重复、蜡样屈曲和姿势强直等)。Catatonia 可以在一些特定精神障碍的背景下出现(如精神分裂症、心境障碍和自闭症等),也可以继发性于一些不归于精神障碍的医疗状况或物质/药物因素。

回顾历史,Catatonia 概念的提出始于德国精神病学家 Karl Ludwig Kahlbaum 在 1874 年出版的文章“Catatonia or Tension Insanity”。Catatonia 源自希腊语的词根 keta=down + tonos=tension。他认为 Catatonia 的核心体征是肌肉强直/痉挛,常出现在许多不同的精神障碍病程中,包括抑郁、躁狂、木僵和假性痴呆。在 Kahlbaum 的观察和描述中,Catatonia 主要表现为精神运动性减退或增强,以木僵为典型,

患者保持固定呆滞的表情、沉默不动、肌肉紧张,这些临床表现与 Catatonia 的字面意思“减少/减退 + 紧张”相符,也是中文译名“紧张症”的由来。然而,尽管 Kahlbaum 第一次将 Catatonia 描述为一种独立的诊断实体(与心境障碍、焦虑相关障碍等处于同一层次),但他提出的 Catatonia 概念并未涵盖许多后来被认为同样属于这一综合征的表现 - 精神运动性异常,这一观点也被 Emil Kraepelin 所支持。

因此, Catatonia 的临床表现范围早已超越 Kahlbaum 最初的描述,虽然“紧张症”的中文译名体现了肌肉紧张这一核心体征,但参考 DSM-5, Catatonia 的诊断多基于精神科医生对患者临床表现的观察,而非肌张力检查或肌电图确诊。“紧张症”的译名主要给人以精神运动性减退/增强的印象,以至于 Catatonia 受到了许多临床执业精神科医生的忽视,而更改“Catatonia”的中文译名(现译为紧张症),如果直接以“精神运动性紊乱”进行翻译,可能可以加深我国精神科对该综合征的认识。

关键词:紧张症

绘画心理技术辅助氨磺必利、奥氮平治疗精神分裂症的疗效及对糖脂代谢、认知功能的影响

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目的 探讨绘画心理技术辅助氨磺必利、奥氮平治疗精神分裂症的疗效及对糖脂代谢、认知功能的影响。

方法 选取 2022 年 6 月至 2023 年 6 月在我院诊治的精神分裂症患者 180 例,随机分为 3 组,观察 A 组、观察 B 组和观察 C 组,每组各 60 例,观察 A 组给予奥氮平治疗,观察 B 组给予氨磺必利联合奥氮平治疗,观察 C 组给予绘画心理技术辅助氨磺必利联合奥氮平治疗,比较三组治疗前后的糖脂代谢指标、阳性和阴性症状量表(PANSS)评分、简易精神状态检查评分表(MMSE)评分、威斯康星卡片分类测试(WCST)各维度评分。

结果 治疗后,观察 A 组、观察 B 组空腹血糖(FBG)、甘油三酯(TG)与观察 C 组比较明显较高($P<0.05$),观察 B 组 FBG、TG 与观察 C 组比较

明显较高($P<0.05$),观察 A 组总胆固醇(TC)与观察 B 组、观察 C 组比较明显较高($P<0.05$),观察 A 组低密度脂蛋白(LDL-C)与观察 C 组比较明显较高($P<0.05$),观察 B 组高密度脂蛋白(HDL-C)与观察 A 组、观察 C 组比较明显较高($P<0.05$)。治疗后,观察 A 组、观察 B 组 PANSS 评分与观察 C 组比较明显较高($P<0.05$),观察 B 组 PANSS 评分与观察 C 组比较明显较高($P<0.05$),观察 A 组、观察 B 组 MMSE 评分与观察 C 组比较明显较低($P<0.05$),观察 B 组 MMSE 评分与观察 C 组比较明显较低($P<0.05$)。治疗后,观察 A 组、观察 B 组概念化水平百分数、正确应答数、完成分类数、持续性应答数与观察 C 组比较明显较低($P<0.05$),观察 B 组概念化水平百分数、正确应答数、完成分类数、持续性应答数与观察 C 组比较明显较低($P<0.05$),观察 A 组、观察 B 组持续性错误数与观察 C 组比较明显较高($P<0.05$),观察 B 组持续性错误数与观察 C 组比较明显较高($P<0.05$)。

结论 绘画心理技术辅助氨磺必利、奥氮平治疗精神分裂症,对患者的糖脂代谢影响较小,且可减轻改善精神症状,提高智力和认知功能。

关键词:精神分裂症,氨磺必利,奥氮平,绘画心理技术,糖脂代谢,认知功能

缺陷型精神分裂症肠道菌群与认知的关联性研究

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目的 目前缺陷型精神分裂症与非缺陷型精神分裂症的菌群差异鲜少有人研究,且缺陷型精神分裂症对于人类的危害更大、影响更深,本摘要目的是明确缺陷型与非缺陷型精神分裂症的异质性。

方法 本研究采用横断面设计,共纳入 136 例长期住院使用非典型抗精神病药物治疗且病情平稳的精神分裂症患者,(其中缺陷型精神分裂症 54 人,非缺陷型精神分裂症 82 人),采用 16S rRNA 基因测序法鉴定肠道菌群含量。并对这部分病人进行精神分裂症简易认知评估:符号编码、霍普金斯词语学习测验、简易视觉记忆测验及蒙特利尔认知评估等认知测试。

结果 缺陷型及非缺陷型精神分裂症患者的肠道菌群的 α 多样性无显著差异。 β 多样性分析显示, D-SCZ 患者的肠道菌群的以下属表现出不同的丰度, 包括霍尔德曼氏菌、真杆菌、梭杆菌、厚壁菌门毛螺菌科、厌氧菌、普雷沃氏菌、链杆菌、粪杆菌等。观察到的改变与两组患者的认知表现显著相关, 缺陷型精神分裂症患者的认知包括精神分裂症简易认知评估: 符号编码、霍普金斯词语学习测验修订版、简易视觉记忆测验及蒙特利尔认知评估等得分均低于非缺陷型精神分裂症患者。

结论 本研究结果表明, 患有 D-SCZ 的个体表现出与认知能力相关的肠道微生物群改变的独特特征。

关键词: 精神分裂症; 缺陷型精神分裂症; 肠道菌群; 认知评估

耳穴压豆辅助治疗精神分裂症阴性症状的临床研究

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目的 探讨耳穴压豆联合奥氮平治疗精神分裂症阴性症状的疗效。

方法 选取 2022 年 10 月-2023 年 10 月上海市宝山区精神卫生中心收治的 100 例精神分裂症患者, 按照随机数字表法分为对照组 ($n=50$) 和研究组 ($n=50$)。对照组给予奥氮平治疗, 研究组在对照组的基础上加用耳穴压豆辅助治疗, 两组均治疗 12 周, 分别于 4 周末、8 周末及 12 周末评定两组阳性与阴性症状量表(PANSS)、阴性症状量表(SANS)和成套神经心理测验(RBANS)得分, 比较两组之间治疗后精神症状及认知功能的差异。

结果 治疗前, 两组 PANSS 评分差异无统计学意义 ($P>0.05$), 治疗 12 周、16 周后, 研究组 PANSS 评分分别为 (59.2 ± 10.7) 分和 (58.0 ± 9.9) 分, 明显低于对照组的 (62.9 ± 10.5) 分和 (62.6 ± 10.8) 分, 差异有统计学意义 ($P<0.05$)。治疗前, 两组 SANS 评分差异无统计学意义 ($P>0.05$), 治疗 12 周、16 周后, 研究组 SANS 评分分别为 (52.2 ± 5.7) 分和 (48.7 ± 6.4) 分, 明显低于对照组的 (56.1 ± 9.4) 分和 (55.8 ± 7.8) 分, 差异有统计学意义 ($P<0.05$)。

治疗前, 两组 RBANS 评分差异无统计学意义 ($P>0.05$), 治疗 12 周、16 周后, 研究组 RBANS 评分分别为 (67.4 ± 11.2) 分和 (68.9 ± 10.6) 分, 明显高于对照组的 (60.5 ± 8.7) 分和 (61.3 ± 10.7) 分, 差异有统计学意义 ($P<0.05$)。

结论 耳穴压豆联合奥氮平治疗精神分裂症可改善患者阴性症状和认知功能。

关键词: 精神分裂症; 耳穴压豆; 阴性症状; 奥氮平

奥氮平联合阿立哌唑治疗对难治性精神分裂症疗效、糖脂代谢、安全性的影响研究

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目的 观察在难治性精神分裂症中采用奥氮平联合阿立哌唑的临床诊疗效果。

方法 此研究的难治性精神分裂症病人选取时间为 2019 年 01 月~2020 年 8 月, 共有患者 214 例, 按随机原则分为服用奥氮平的对照组, 患者 107 例, 和服用阿立哌唑的实验组, 有患者 107 例。对两组患者治疗前后的精神状态和生活能力进行比较。

结果 治疗前病人的 MMSE 评分与 ADL 评分均没有明显差异 ($P>0.05$), 用药后实验组病人精神状态与生活能力优于对照组 ($P<0.05$)。在机体糖脂代谢方面的影响中, 实验组患者的空腹血糖水平、甘油三酯、胆固醇相比于对照组患者均相对稳定 ($P<0.05$)。在不良反应发生率方面, 两组间对比不存在可比性差异。同时实验组的生活质量评分高于对照组, 差异有统计学意义 ($P<0.05$)。实验组患者治疗 4 周后的阳性和阴性症状分与 PANSS 总分高于对照组, 差异有统计学意义 ($P<0.05$); 实验组治疗 8 周、12 周后的阳性和阴性症状分与 PANSS 总分低于对照组, 差异有统计学意义 ($P<0.05$)。

结论 研究结论为在治疗难治性精神分裂症病人时使用奥氮平与阿立哌唑能够有效的改善病人的精神状态, 并显著提升病人的生活能力。

关键词: 奥氮平、阿立哌唑、难治性精神分裂症、糖脂代谢、安全性

对比齐拉西酮、奥氮平对老年精神分裂症患者治疗效果对其机体糖脂代谢的影响情况

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目的 研究应用齐拉西酮与奥氮平联合与奥氮平联合治疗老年精神分裂症患者对临床治疗效果和机体糖脂代谢的影响。

方法 参与研究的病例均为在我院接受治疗的患者，从中随机抽取 130 例老年精神分裂症的患者作为研究对象，选取的时间开始为 2020 年 1 月-2021 年 12 月。按照抽签法的方式将所有患者平均分成分析组和对照组两组，其中对照组的 65 例病患接受奥氮平进行治疗，分析组 65 例患者接受齐拉西酮与奥氮平联合进行治疗，对两组患者应该不同方法进行治疗后治疗效果及机体糖脂代谢水平进行分析和对比。

结果 在治疗有效率方面，对照组的疗效与分析组患者相比明显较差，患者治疗前阴性症状和 PANSS 总分与分析组对比，无明显差距，无对比意义 ($P>0.05$)；在治疗后 4 周、8 周、12 周分别进行评分，对照组患者阴性症状分与 PANSS 总分均高于分析组 ($P<0.05$)。在患者的生活质量方面，分析组明显好于与对照组，对比结果具有参考价值 ($P<0.05$)；同时在不良反应发生率方面，分析组明显表现在胃肠反正在上，对照组明显表现在过度镇静上，两组均没有重度的不良反应。在机体糖脂代谢方面的影响中，分析组患者的空腹血糖水平、甘油三酯、胆固醇相比于对照组患者均相对稳定 ($P<0.05$)。

结论 齐拉西酮与奥氮平联合能有效的稳定老年人群精神分裂症者的机体糖脂代谢水平，在治疗中获得了较好的应用效果，降低了药物对糖脂代谢的影响，而奥氮平表现稍差，会增加治疗风险。

关键词：齐拉西酮、奥氮平、老年患者、糖脂代谢

精神分裂症和心衰之间的遗传相关性研究

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目的 心衰是威胁人类精神健康的一个重要的器质性因素。既往研究表明，同时患有精神分裂症和心衰的人群较正常人群寿命平均减少 10-17.5 年，二者之间存在共病关联，但其中的具体机制尚不完全清楚。本研究利用全基因组关联分析(GWAS)数据进行研究，鉴定精神分裂症与心衰之间的遗传多效性位点，探讨两者共病的潜在的遗传机制，为未来的靶向治疗提供线索。

方法 本研究的 GWAS 数据来自自由精神病基因组联盟和全球生物库荟萃分析项目。其中，精神分裂症 GWAS 数据来源于 76,755 例精神分裂症患者和 243,649 例正常人群对照，心衰 GWAS 数据来源于 68408 例心衰患者和 1286331 例正常对照。首先，本研究利用连锁不平衡分析方法来证实在精神分裂症与心衰之间是否存在遗传关联；其次，研究运用遗传基因多效性统计学方法 条件错误发现率 (condFDR) 和联合错误发现率 (conjFDR)，检验与两种疾病显著关联的基因位点和与两种疾病同时显著关联的基因位点。最后，通过 FUMA 网站对所发现的易感位点进行功能注释。

结果 (1) 连锁不平衡分析方法显示精神分裂症与心衰之间存在不显著的基因关联 ($rg=-0.01$, $se=0.02$, $P=0.61$)；(2) 当 condFDR <0.01 时，研究发现 431 个位点与心衰条件相关，而在反向 condFDR 分析中，30 个位点与精神分裂症条件相关，当 conjFDR <0.05 ，研究发现有 13 个位点同时与精神分裂症和心衰显著性相关，其中 12 个位点在之前未曾报道过。其中，8 个位点在精神分裂症和心衰中具有相同的作用方向，而 5 个具有相反的作用方向。

(4) conjFDR <0.05 时，精神分裂症和心衰的共享位点中共有 173 个位点，其中主要位于内含子 ($n=125$, 73.96%)、和基因间 ($n=27$, 15.98%) 区域，仅有 4 个位点位于 3'非翻译区区域，3 个位点位于 5'非翻译区区域，3 个位点位于非编码 RNA 内含子区域，3 个位点位于非编码 RNA 外显子区域，各有 1 个位点分别位于上游和下游区域。

结论 本研究发现精神分裂症和心衰之间存在遗传多效性，利用条件错误发现率发现 431 个位点与心衰条件相关，30 个位点与精神分裂症条件相关，并且在联合错误发现率中发现有 13 个位点同时与精神分裂症和心衰显著性相关，其中 8 个位点具有相同的作用方向，而 5 个具有相反的作用方向。结

果提示二者之间存在复杂的遗传机制。

关键词：精神分裂症，心衰，遗传多效性，条件错误发现率，全基因组关联分析

有氧运动联合生活技能训练在男性慢性精神分裂症患者中的应用

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目的 探讨有氧运动联合生活技能训练对男性慢性精神分裂症患者临床应用效果。

方法 选取 2022 年 6 月~2024 年 5 月芜湖市第四人民医院收治的 90 例男性慢性精神分裂症患者为研究对象，随机分为研究组和对照组各 45 例。对照组采用精神科常规护理，研究组在对照组的基础上实施为期 12 周的有氧运动联合生活技能训练，完成后给予患者适当物质和精神鼓励。每次有氧运动过程中均由两名护士参与，一名护士组织进行运动项目，一名护士做现场安全风险管控。采用阳性和阴性症状量表(PANSS)及简明健康问卷(SF-36)进行评定，比较两组男性慢性精神分裂症患者精神症状和生活质量的改变。

结果 研究组干预 6 周和 12 周后 PANSS 的评分均低于对照组 ($P<0.05$)，两组患者 PANSS 各维度评分随时间变化逐渐降低，差异均有统计学意义 (均 $P<0.05$)；入院后两组患者 PANSS 各维度评分差异均有统计学意义 (均 $P<0.05$)；组别和时间存在交互作用 (均 $P<0.05$)。研究组干预 6 周和 12 周后 SF-36 评分均高于对照组 ($P<0.05$)，两组患者 SF-36 各维度评分随时间变化逐渐升高，差异均有统计学意义 (均 $P<0.05$)；入院后两组患者 SF-36 各维度评分差异均有统计学意义 (均 $P<0.05$)；组别和时间存在交互作用 (均 $P<0.05$)。

结论 有氧运动联合生活技能训练能够有效改善男性慢性精神分裂症患者精神症状，提高患者生活质量，促进患者康复，回归家庭和社会。

关键词：有氧运动；生活技能训练；精神分裂症；生活质量

精神分裂症认知损害的干预与管理

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目的 精神分裂症是导致严重精神残疾的重性疾病之一，给社会及其家庭带来了重大负担。认知损害是其核心症状，严重影响患者的预后和生活质量。改善认知损害对于减轻精神分裂症患者的症状、预防复发、提高生活质量以及减轻社会负担等具有重要意义。本文回顾了精神分裂症认知损害最新治疗进展，探讨了多种治疗手段在精神分裂症认知损害中的优劣，同时对此领域仍然存在的问题提出了相应观点，以期在目前精神分裂症认知损害的治疗提供决策依据。

方法 本文通过文献综述，综合分析了药物治疗、物理治疗、心理治疗、运动疗法和康复训练等在精神分裂症认知损害治疗中的应用，并展望了治疗的发展方向。

结果 药物治疗在改善精神分裂症患者的症状和认知功能方面显示出积极效果。物理治疗虽能有效控制症状，但通常需要与其他治疗手段结合以实现更全面的治疗效果。认知行为疗法(CBT)等心理治疗方法直接针对患者的精神问题，有助于调整错误的认知和思维模式，提升情绪调节与问题解决能力。有氧运动，如跑步机和自行车运动，已被证实能显著改善患者的大脑功能。综合康复训练，包括生活能力和社会功能训练，对提升患者的认知功能具有显著效果。

结论 精神分裂症认知损害的治疗需要综合运用多种方法。药物治疗作为基础，辅以物理治疗和心理治疗，可以提高治疗效果。运动疗法和康复训练有助于患者恢复社会功能，提升生活质量。治疗过程中，患者的积极参与、家属的支持以及医疗团队的专业指导是实现最佳治疗效果的关键。

关键词：精神分裂症,认知损害,治疗

一例氨磺必利治疗使用酒精引起的精神性障碍中迟发性运动障碍的发生与处理策略

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目的 文章首先概述了氨磺必利在治疗中的广泛应用,并指出了其可能带来的 TD 风险。随后,详细描述了患者的临床症状以及具体的诊断过程,让读者对 TD 的复杂性和多变性有了更为直观的了解。通过对患者病例的详细解析,我们深入剖析了 TD 的临床表现,为进一步的治疗策略提供了重要依据。

方法 在应对策略方面,文章提出了多元化的治疗方案。首先,针对药物过量导致的 TD 问题,提出了药物减量的策略;其次,对于某些患者,更换药物种类可能更为适宜;以及康复训练作为辅助治疗手段。文章结合实际操作经验,分享了这些策略在处理 TD 问题时的心得体会,为临床实践提供了宝贵经验

结果 文章结合实际操作经验,分享了这些策略在完全缓解 TD 时的心得体会,并最终为临床实践提供了宝贵经验

结论 文章对氨磺必利引发 TD 的预防措施进行了深入探讨,并提出了具有针对性的建议。这些建议旨在帮助临床医生更加精准地掌握氨磺必利的使用规律,从而减少 TD 等并发症的发生。我们期望这些建议能够在未来类似病例的诊治过程中发挥指导作用,为患者提供更加安全、有效的治疗方案。最后,我们坚信通过不断的临床实践和经验积累,我们能够更好地掌握氨磺必利等抗精神病药物的使用规律,为患者提供更加全面、个性化的治疗服务。这不仅有助于提高患者的生活质量,也将推动精神医学领域的不断进步与发展。

关键词: 氨磺必利;迟发性运动障碍;处理策略;预防措施

精神分裂症住院患者的循环系统疾病共病模式及影响因素分析

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目的 心血管疾病(CVDs)是导致精神分裂症谱系障碍(SSD)患者过早死亡的主要原因,而共病的类型尚未充分研究。本研究旨在表征精神分裂症谱系障碍患者共病循环系统疾病(CSDs)的模式,

并调查其相关因素。

方法 基于电子病例记录开展回顾性横断面研究,从中国三家精神病医院收集出院诊断属于精神分裂症、分裂型和妄想性障碍(SSDD)(ICD-10:F20-F29)的患者。采用潜在类别分析(LCA)识别共病模式,采用多项逻辑回归模型评估多种因素对共病模式的影响,计算其优势比(OR)和95%置信区间(CI)。

结果 在2830例SSDD住院患者中,确定了四种共病模式,根据主要特征命名为:低风险CSDs(47.86%),原发性高血压(30.15%),心力衰竭(12.99%),心脏瓣膜和血管疾病(8.99%)。以低风险CSDs类别作为参照,男性患者的共病模式为原发性高血压类(OR=1.15)和心衰类(OR=5.36)的概率显著高于女性。26岁以上的患者共病原发性高血压类的概率均显著较高。40岁以上的患者共病心脏瓣膜和血管疾病类的概率均较高。几种抗精神病药物的使用与CSDs并发症风险增加有关,包括使用奋乃静和氯丙嗪盐酸盐,分别与心力衰竭共病较高概率相关(OR分别为22.06和7.09)。

结论 这项横断面研究中,精神分裂症谱系患者共病循环系统疾病存在四种模式,其中高血压类和心衰类特异性强。人口学特征和精神类药物使用的差异可为共病的治疗和管理提供依据,为共病机制研究提供线索。

关键词: 共病模式;精神分裂症;抗精神病药物

睡眠障碍、奥氮平对男性首发精神分裂症患者血清超敏C-反应蛋白的影响

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目的 探讨睡眠障碍、奥氮平对男性首发精神分裂症患者血清超敏C-反应蛋白的影响。

方法 采用匹兹堡睡眠质量指数量表(PSQI)选取男性首发精神分裂症患者,PSQI>8分的为睡眠障碍组41例,PSQI≤8分的为非睡眠障碍组41例。同时把41例健康男性志愿者血清超敏C-反应蛋白浓度作为对照组,两组精神分裂症患者均接受奥氮平药物治疗,采用PSQI和阳性和阴性症状量表(PANSS)评定,于入院时、住院1、8周时评估两组的疗效和空腹采血检测血清超敏C-反应蛋白浓度。

结果 睡眠障碍组于治疗 1、8 周时 PSQI 减分明显($P<0.01$)；睡眠障碍组与非睡眠障碍组在治疗 1、8 周时的 PANSS 评分均较同组治疗前下降(均 $P<0.01$)。两组间入院时及治疗 1 周和 8 周时各时点 PANSS 评分的差异均无统计学意义(均 $P>0.05$)；睡眠障碍组于治疗 1 周时 C-反应蛋白浓度较入院时降低，差异具统计学意义 ($P<0.05$)，治疗 8 周时 C-反应蛋白浓度较治疗 1 周时升高，差异具统计学意义 ($P<0.05$)；非睡眠障碍组于治疗 1 周时 C-反应蛋白浓度与住院时无明显差异，差异无统计学意义 ($P>0.05$)，治疗 8 周时 C-反应蛋白浓度较治疗 1 周时升高 ($P<0.05$)，差异具统计学意义 ($P<0.05$)；两组 C-反应蛋白浓度于住院前均高于对照组 ($P<0.05$)。睡眠障碍组于入组时血清 C-反应蛋白浓度高于非睡眠障碍组，差异具统计学意义 ($P<0.05$)，治疗 1、8 周时两组 C-反应蛋白浓度无明显差异，差异无统计学意义($P>0.05$)。

结论 奥氮平对伴睡眠障碍的男性首发精神分裂症患者效果明显，睡眠障碍可能影响患者血清超敏 C-反应蛋白浓度，奥氮平有可能影响血清超敏 C-反应蛋白浓度升高。

关键词：不同睡眠状况，精神分裂症，奥氮平，血清超敏 C-反应蛋白

首发精神分裂症患者住院时间延长风险的列线图预测模型构建与验证

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目的 探索首发精神分裂症患者住院时间延长的影响因素，为针对影响因素进行干预减少患者因住院时间延长带来的不良结局提供理论支持。

方法 本回顾性队列研究纳入 2022-2023 年就诊于上海市宝山区精神卫生中心的首发精神分裂症 203 例。纳入标准包括：年龄 ≥ 18 岁；汉族；受教育年限 ≥ 9 年；首次急性起病且未经过系统治疗。排除标准包括：共病其他类型的精神疾病（如精神发育迟滞、强迫症、人格障碍等）；共病存在酒精或药物滥用或物质依赖史；合并有脑器质性疾病或其他不稳定或严重躯体疾病者；未出院；出院时症状未改善者。统计治疗前及出院前 1 周内的人口统计学、

生物学指标，住院期间主要用药、血药浓度以及住院时间等变量也被纳入分析。本研究主要结局是住院时间延长 (>60 天)。纳入预测模型的患者被分为训练集和测试集，LASSO 回归用于筛选多因素 logistic 回归模型的变量，对 LOS 延长的独立危险因素应用列线图构建预测模型，受试者工作特征曲线 (receiver operating characteristic, ROC)、校准曲线、决策曲线分析用于评估预测模型。

结果 共 155 例首发精神分裂症纳入研究，按照 7: 3 的比例随机分配至训练集和测试集。两个数据集的基线特征、住院治疗用药、住院时间无统计学差异。多因素 logistic 回归分析提示年龄 ($OR=1.042$, $95\% CI=1.012-1.073$, $P=0.006$) 和 25 羟维生素 D (25(OH)D) 水平 ($OR=1.088$, $95\% CI=1.021-1.160$, $P=0.01$) 是住院时间延长的危险因素。构建住院时间延长的列线图预测模型，训练集、测试集的 ROC 曲线下面积分别为 0.698、0.716，校准曲线证明这一模型预测住院时间延长表现良好，决策曲线证明了这一模型能适用于大部分首发精神分裂症患者。对于应用阿立哌唑的患者，在治疗 1 月的阿立哌唑血药浓度与治疗前 25(OH)D 水平呈负相关 ($P=0.03$)。

结论 本研究首次构建和验证了首发精神分裂症住院时间延长的列线图预测模型，年龄较大、较高的 25(OH)D 水平可能导致患者具有较长的住院时间，而较高的 25(OH)D 水平可能通过影响血药浓度从而延长住院时间。

关键词：精神分裂症；住院时间延长；列线图预测模型

Cognitive Effects of Adjunctive Sulforaphane for Schizophrenia: A Systematic Review

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Objective Sulforaphane (SFN), a natural compound derived from broccoli, is considered to be an effective antioxidant, anti-inflammatory agent which

plays an important role in treating cognitive function of schizophrenia. The purpose of this systematic review is to systematically examine the cognitive effects of adjunctive sulforaphane in schizophrenia

Methods Chinese (Chinese Journal Net and WanFang) and English (Cochrane Library, PsycINFO, PubMed, and EMBASE) databases were searched on October 20 2023 by 2 independent authors. Only randomized controlled trials (RCTs) and single-arm perspective studies examining the cognitive effects of adjunctive sulforaphane for schizophrenia were included in this systematic review

Results Two RCTs (n=236) and two single-arm prospective studies (n=76) with 312 patients met the inclusion criteria. A significant superiority of adjunctive sulforaphane over placebo in improving working memory and verbal learning was found in one RCT (n=172) and no group difference was found in another RCT (n=64). In the two single-arm prospective studies, adjunctive sulforaphane was significantly associated with the improvement of cognitive function as measured by CogState or B-CATS. No group differences were found regarding the improvement of psychotic symptoms in two RCTs. Adjunctive sulforaphane was significantly associated with the improvement of psychotic symptoms in one single-arm prospective study (50%). No group differences were found in two RCTs in terms of adverse effects and no severe adverse effects were mentioned in the two single-arm prospective studies. No sulforaphane-related events were reported to be the cause of study discontinuation in all the retrieved studies

Conclusion This systematic review found that adjunctive sulforaphane appears to be effective and safety in improving cognitive function in schizophrenia. Further RCTs with higher quality are essential to confirm and expand these findings

关键词: Sulforaphane; schizophrenia; cognitive function; working memory; systematic review.

Inhibitory Control in Patients with Schizophrenia: A Systematic Review

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Objective Executive dysfunction is widely understood as the core aspect of schizophrenia, and inhibitory control ability is the core component of executive function, which runs through the whole process of executive control. The purpose of this systematic review is to explore the mechanism of inhibition control damage in patients with schizophrenia by understanding the research status of inhibition control (response inhibition and interference control) in patients with schizophrenia, and to provide a reference for the diagnosis and treatment of patients with schizophrenia

Methods The keywords of 'inhibitory control', 'interference control', 'schizophrenia', and 'response inhibition' were used in PubMed, EMBASE, Cochrane Library Databases, and Web of Science. A systematic literature search of all published English studies from January 2000 to May 30, 2024, was conducted

Results First, there are diverse research paradigms for inhibitory control in patients with schizophrenia. In previous studies, interference control research used research paradigms such as continuous operation test task, Hailin sentence completion test (HSCT), and inhibition of current irrelevant memory task (ICIM). The research paradigms of response inhibition include the saccade and anti-saccade paradigm, stop signal task, and Go/NoGo task. Secondly, there are differences in the results of different experimental paradigms and different measurement methods. Finally, the study found that the reduction of active inhibition may be cortical striatum dysfunction, and is related to the activation failure of the right striatum, the right inferior frontal cortex, and the left and right temporal-parietal junction. The working memory span of patients with reduced active inhibition was also the shortest. Response inhibition injury is associated with abnormal activation of the striatum cortex, prefrontal cortex, and related connections

Conclusion First, the research paradigm for the inhibitory control ability of schizophrenic patients has not yet been unified, and different research paradigms need to be further distinguished in the future. Secondly,

there are some common neural mechanisms of different inhibitory control expressions in schizophrenic patients, and there may be simultaneous expressions. In the future, it is necessary to dissociate the inhibitory control components in patients with schizophrenia and to further explore the neural mechanism of inhibitory control damage in patients with high time and high spatial resolution equipment

关键词: schizophrenia, Inhibitory control, response inhibition, interference control

基于多参数功能磁共振成像预测电休克治疗对精神分裂症患者的疗效

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目的 电休克治疗(ECT)已被证明对精神分裂症有效,特别是在需要迅速减轻症状或对药物治疗产生耐药性的情况下。然而,缺乏可用的标记物来预测 ECT 的反应。研究基于多参数功能磁共振成像(MRI)的放射学特征是否可以有效预测精神分裂症患者对 ECT 的反应。

方法 2022年2月至2023年9月采集61例精神分裂症患者 ECT 前后和56例健康对照者的静息态功能磁共振影像数据并进行预处理,计算 ALFF, FALFF, REHO, DC 功能指标。将所有受试者划分为训练组与测试组,提取了差异脑区的放射学特征用于特征选择和预测。为了预测症状的持续改善(Δ PANSS),在训练组中使用基于留一交叉验证框架的支持向量回归模型进行预测过程,并在测试组中进行测试。通过递归特征消除算法优化模型,提取对预测性能做出最大贡献的特征,基于最优预测性能的训练模型计算测试组预测性能。采用预测值与实际值之间的 Pearson 相关系数(r)和均方根误差(RMSE)作为拟合优度的度量。

结果 基于静息态功能 MRI 的放射学模型,包括分别来自右侧额下回、左侧内侧和旁扣带脑回、右侧背外侧额上回、右侧楔前叶和左侧中央前回的5个功能性区域一致性特征,以及来自右侧楔前叶的功能性度中心性特征,其预测性能均方根误差较低,训练队列为15.183,测试队列为14.980。预测值

与实际值的 Pearson 相关系数分别为0.682和0.768。

结论 基于静息态功能MRI的放射学特征可以预测个体患者对ECT的反应。这些特征可以作为预后神经成像生物标志物,为预测精神分裂症的个体化治疗反应提供关键的一步。

关键词: 电休克治疗,功能磁共振,精神分裂症,机器学习

Emerging Trends in Epigenetic and Schizophrenia From 2000 To 2023: A Bibliometric Analysis Via CiteSpace

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Objective To comprehensively understand the current scenario and explore the prevailing research trends related to epigenetics in schizophrenia, thus providing valuable insights for scholars engaged in this field

Methods The literature was obtained from the database of Web of Science Core Collection. The current state of research on the relationship between epigenetics and schizophrenia, including notable trends and points of interest in this field, was visually analyzed using CiteSpace

Results A total of 1349 papers were retrieved. The annual number of publications has increased 1483.3% from 2000 to 2022. Schizophrenia Research was the most active journal. Schahram Akbarian holds significant sway. Harvard University is considered the research institution with the highest level of activity. The USA and China continue to lead in scientific productivity in this field. The current research hot topics in this field focus on DNA methylation, bipolar disorder, gene expression, and the prefrontal cortex. The findings derived from the keywords 'major depression', 'long noncoding RNA', 'blood', and 'stress', unveil novel research prospects within this domain. The identification of long noncoding RNA and microRNA as the foremost

biomarkers for epigenomic dysregulation in schizophrenia is of paramount significance

Conclusion The field of epigenetic for schizophrenia is progressing and has great potential. The research conducted in this field demonstrates a commendable level of excellence and depth. The identification of research areas with high activity and emerging trends provides valuable guidance for scholars engaged in this field. Enhancing global collaboration and communication among researchers is imperative for advancing progress in this field

关键词: schizophrenia, epigenetic, bibliometrics, Citespace

阿立哌唑（10mg）改善服用利培酮引起的催乳素升高的精神分裂症患者的疗效、安全性及社会功能的影响

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目的 比较阿立哌唑（10mg）改善服用利培酮引起的催乳素升高的精神分裂症患者的疗效、安全性及社会功能的影响。

方法 在我院 2022 年 1 月-2023 年 12 期间, 选择 100 例服用单一服用利培酮 4mg/日精神分裂症患者进行比较, 精神分裂症年龄 40~50 岁, 其中男性 50 人, 女性 50 人（无绝经者）。使用随机数字法将 50 例男性患者和 50 例女性患者分为 2 组。其中, 对照组 50 例患者（男女各 25 例）, 只接受利培酮 4mg/日治疗; 研究组 50 例患者（男女各 25 例）接受阿立哌唑 10mg/日与利培酮 4mg/日治疗。对比 2 组患者之前后的催乳素（PRL）水平、阳性和阴性症状量表（Positive and Negative Syndrome Scale, PANSS）评分减分率、社会功能缺陷筛选量表（Socail disability screening Scale, SDSS）评分、不良反应总发生率。

结果 在研究组治疗 4 周后, 研究组 PANSS 量表减分率高于对照组（ $P < 0.05$ ）; 研究组 PRL 水平明显低于对照组（ $P < 0.05$ ）; 研究组 SDSS 评分均低于对照组（ $P < 0.05$ ）; 此外, 研究组不良反应总发生率（10.00%）对比于对照组（12.00%）的, 未观察到

显著差异（ $P > 0.05$ ）。

结论 阿立哌唑（10mg）能有效的改善服用利培酮引起的催乳素升高, 且不增加不良总反应率, 较为安全性; 阿立哌唑改善利培酮引起的催乳素升高时, 能改善精神分裂症患者临床症状及社会功能, 故精神分裂症患者在选用利培酮治疗期间应联合阿立哌唑治疗。

关键词: 阿立哌唑 利培酮 催乳素 精神分裂症 临床疗效 社会功能

Identification of Crucial Biomarkers Relevant To Immune Cell Infiltration in Schizophrenia by Comprehensive Bioinformatics Analysis

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Objective Schizophrenia (SCZ) is a chronic and frequently disabling mental illness. Immune processes have long been recognized as potential triggers of schizophrenia and are supported by epidemiological, genetic, autopsy, peripheral biomarker and other relevant studies. The aim of this paper is to investigate the relationship between mRNAs and immune cells, immune-related genes and functional pathways, as well as the correlation between mRNAs and miRNAs in patients with schizophrenia. Searching for potential biomarkers for schizophrenia

Methods In this study, we recruited 11+15 SCZ patients and 12+15 healthy controls (HCs) in the clinical setting, respectively. Bioinformatics analysis of mRNA and miRNA expression profiles of peripheral blood by high-throughput sequencing. The differential genes obtained from the screening were analyzed for functional enrichment. The protein-protein interaction (PPI) network of target genes was constructed, and key genes were screened by Cytoscape software. The diagnostic value of the immune-related key genes was verified by subject work characteristics (ROC) curves. Analyzed the correlation between mRNAs and miRNAs

Results There were 546 DEGs between SCZ patients and healthy controls, and subsequently, by WGCNA, 15 different co-expression modules were identified. The intersection of DEGs with key module genes in SCZ was 330, and they were mainly enriched in the immune system. Subsequently, a PPI network was constructed, and four key modules were identified, and the top 10 genes were selected as candidate hub genes. Differences in immune infiltration were found between the SCZ and normal groups, and immune cells were shown to potentially interact with the hub genes. Comparing the sample data with two other datasets, a four-gene combinatorial model for four immune-critical genes (area under the curve value of 0.87) screened for genes of clinical value. Finally, we verified that the expression of miRNA, hsa-mir-34a-5p was significantly higher in SCZ than in healthy controls

Conclusion A growing body of evidence demonstrates that immune-related genes play an important role in schizophrenia. Related theories suggest that schizophrenia is accompanied by activation of the immune-inflammatory response system (IRS) and that abnormalities in the immune-inflammatory pathway may contribute to the pathophysiology of schizophrenia spectrum disorders. At the same time, the level of immune-related genes is altered in SCZ, and immune alterations associated with inflammation may further lead to brain abnormalities in schizophrenia patients, thus affecting their neurodevelopmental process

In this study, the relationship between immunity and SZ was analyzed by DEGs analysis, PPI network, and infiltrating immune cells. Four key immune-related candidate genes (CCL3, IL1B, CXCL8 and CXCL10) were identified. These genes are associated with immune processes in schizophrenia and may play a role in early-onset schizophrenia. A disproportionate ratio of immune cells in SCZ compared to healthy controls was noted. Finally, by identifying miRNAs targeting these genes and validating their potential, we found hsa-mir-34a-5p to be a promising biomarker for the detection of SCZ. Our study could provide potential peripheral blood diagnostic candidate genes for SCZ patients.

关键词: schizophrenia, immune infiltration, im-

mune-related pathways, mRNA, miRNA, bioinformatics

二苯二氮卓类药物治疗慢性精神分裂症患者炎症反应及相关胰岛损伤

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目的 探讨慢性精神分裂症患者服用二苯二氮卓类药物可能导致炎症反应及相关胰岛损伤的临床研究。

方法 采用病例对照研究共收集 110 例慢性精神分裂症住院患者,其中 56 人为服用二苯二氮卓类药物者(服药组),54 人为未服用二苯二氮卓类药物者(未服药组)。三组问卷调查后对其进行实验室检测,比较三组研究者相关炎症指标与胰岛功能指标。

结果 未服药组与正常对照组相比在年龄、性别、BMI、血糖、胰岛素均无统计学意义,在受教育年限、HCY、C 肽、胰高血糖素有统计学意义($P<0.05$)。2、服药组与正常对照组相比在年龄、性别、血糖、均无统计学意义,在 BMI、受教育年限、hs-CRP、HCY、C 肽、胰岛素、胰高血糖素有统计学意义($P<0.05$)。3、服药组与未服药组相比在年龄、性别、受教育年限、BMI、血糖、HCY、C 肽、胰岛素、胰高血糖素均无统计学意义,在 hs-CRP、IL-6 有统计学意义($P<0.05$)。

结论 慢性精神分裂症患者(服药组与未服药组)炎症指标均明显高于普通人群,且与对照组相比胰岛相关指标均有差异。服药组与未服药组相比炎症指标出现差异,但胰岛相关指标无明显差异,因此二苯二氮卓类药物治疗慢性精神分裂症患者时存在炎症反应及相关胰岛功能指标异常,与未服药组相比炎症指标变化更为明显。

关键词:慢性精神分裂症;二苯二氮卓类药物;炎症反应;胰岛损伤

A Study of Schizophrenia Based on Retinal Degenerative Changes

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Objective To explore the alterations in the thickness of the retinal macular area and peripapillary optic nerve fiber layer in schizophrenic patients and the correlation between the severity of psychotic symptoms and the structural damage of the retina

Methods 50 schizophrenic patients and 33 healthy controls were recruited, and retinal thickness in the macular region of both eyes of the subjects was collected using Optical Coherence Tomography. SPSS 27.0 was used to compare the count data using the chi-square test, to compare the two groups with normally distributed data using the independent samples t-test, and to compare the bivariate associations using correlation analysis

Results Compared with healthy controls, patients with schizophrenia had a thinner thickness of the central macular area of the retina, [(238.64 μm \pm 20.31 μm) vs. (248.86 μm \pm 17.23 μm), $P=0.002$], and a decrease in the mean thickness of the optic nerve fiber layer [(99.38 \pm 10.30 μm) vs. (100.12 \pm 9.01 μm), $P=0.045$], and the severity of positive symptoms was negatively correlated with retinal thickness ($P<0.05$)

Conclusion Patients with schizophrenia have structural damage to the macular area and optic nerve fiber layer of the retina, and the more severe the positive symptoms, the more severe the retinal damage

关键词: schizophrenia; optical coherence tomography; retina; macula; optic nerve fiber

The Association between Different Symptom Groups of Schizophrenia and Retinal Structures

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Objective Investigate the impairments of retinal macular thickness in the negative and positive symptom groups of schizophrenia

Methods 50 patients with schizophrenia were included. Considering the positive factor and negative factor components in PANSS scale, the patients were classified according to the main symptom groups, 26 patients were collected in the negative symptom group and 24 patients were raised in the positive symptom group. Meanwhile, 33 healthy controls matched with age and gender of schizophrenia group were recruited from hospital staff and adult medical students by using SCI-D NP version evaluation by professional psychiatrists. The age, sex, education level, geographical coordinates, course, first age, medication status, family history and other demographic data and clinical data were collected. SANS was used in the negative schizophrenia symptom group; SAPS was used in the positive symptom group. The scanning information of the eyes were collected by using the Zeiss optical coherence scanner 4000 system (OCT). SPSS 24.0 (Chicago, IL) software was used to analyze the basic data and OCT data of the subjects. The chi square test was used for the comparison of the counting data, the normal test for the measurement data, the independent sample t-test was used for the comparison of the normal distribution data, the single factor variance analysis was used among the groups, and the correlation analysis was used to analyse the relation of the two variables

Results 1.The central macular thickness of schizophrenia patients was thinner [(238.64 μm \pm 20.31 μm) vs. (248.86 μm \pm 17.23 μm), $P = 0.002$]

2. The central macular thickness of the negative symptoms group was thinner [(237.46 μm \pm 23.09 μm) vs. (248.86 μm \pm 17.23 μm), $P = 0.002$], and that of the positive symptoms group was thinner [(239.92 μm \pm 16.95 μm) vs. (248.86 μm \pm 17.23 μm), $P = 0.002$].

3.The macular in inferior quadrant area of the negative symptoms group tended to be thinner than positive group [(309.94 μm \pm 21.97 μm) vs. (313.27 μm \pm

13.19 μ m), $P = 0.059$].

Conclusion 1.The retinal thickness in schizophrenia became thinner in the central area of the macula

2.The retinal impairments were more serious in patients with negative symptoms.

关键词: Schizophrenia; Positive Symptoms; Negative Symptoms; Retina; Macula Optic Nerve Fiber Layer

Sleep Problems As A Risk Factor of First-episode Drug-naïve Schizophrenia: Associated with The Visuospatial/constructional Impairment

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Objective Sleep problems (SPs) occurred frequently in schizophrenia that both of which experienced cognitive impairments. The aims of this study would explore the SPs role of first-episode drug-naïve schizophrenia (FDS) as well as influencing their cognition

Methods 291 FDS patients (non-SPs/SPs = 197/94) and 685 subjects with general population (SGP, non-SPs/SPs = 577/108) were enrolled according to the DSM-IV and Pittsburgh Sleep Quality Index (PSQI) grouping. Cognition and sleep quality were assessed using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) and PSQI. Compared with SGP, FDS patients had the higher SPs prevalence and the higher total PSQI score. Sleep quality influenced the visuospatial/constructional score in 2×2 analysis model

Results In FDS, the visuospatial/constructional score of SPs was lower than that of non-SPs, but not showed in SGP. The Pearson correlation and linear regression analyses showed the negative association of total PSQI score with the visuospatial/constructional score of FDS rather than SGP. In SPs or non-SPs, all RBANS scores of FDS were lower than those of SGP excepted for the visuospatial/constructional score

Conclusion Our data support that the SPs are a

high risk factor of FDS, and FDS patients with SPs experience more serious visuospatial/constructional impairment alleviated via improving sleep quality

关键词: schizophrenia, sleep problems, risk factor, cognitive impairments

探索精神分裂症患者条件推理能力异常的神经相关性：一项事件相关电位研究

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目的 以往研究提示，精神分裂症患者条件推理能力异常。本文旨在探索精神分裂症患者条件推理能力异常的事件相关电位(ERP)特征与神经相关性。

方法 在无锡市精神卫生中心住院部招募符合DSM-5 中精神分裂症诊断标准的患者为研究组(SCZ),在周边社区招募无精神障碍病史及家族史的健康人作为控制组(NC),两组均排除脑外伤、癫痫、严重躯体疾病、妊娠及哺乳期妇女、严重药物滥用或物质依赖、视力缺陷不足以完成研究等情形。采用阴性与阳性症状量表 PANSS 评定 SCZ 组症状严重程度。采用 E-peime3.0 编制改良版沃森选择任务范式。分别对 30 名 SCZ 和 30 名 NC 进行社会契约型、预防型、描述型和抽象型沃森选择任务下的行为学数据测定与 ERP 数据测定。对行为学数据采用 2(组别)×4(试验)混合设计方差分析(ANOVA);对 ERP 数据采用 2(组别)×4(试验)×3(ROI,感兴趣脑区)混合设计 ANOVA。结果未通过球形度检验者则采取 Greenhouse-Geisser 校正。

结果 最终有 24 名 SCZ 与 30 名 NC 通过质控并纳入数据分析,两组在年龄、性别构成、教育年限和利手性等人口学资料上均无统计学差异(均 $p > 0.05$)。混合设计 ANOVA 显示,行为学结果提示,正确率的组别主效应显著($p=0.01$),NC 组的正确率显著高于 SCZ 组;试验主效应显著($p < 0.001$),两组均在预防型任务中表现出更高的正确率,而在描述型和抽象型任务中表现更低;反应时的试验主效应显著($p < 0.001$),被试在抽象型任务中的反应时比在其他类型沃森选择任务中的反应时更小。ERP 数据提示,N1 与 P2 波幅的组别×试验交互作

用显著 (均 $p < 0.05$)；在抽象型任务中，NC 组相较于 SCZ 组诱发了更大的 N1 和 P2 成分波幅；N2 波幅的试验 \times ROI 交互作用显著 ($p < 0.001$)；相较于预防型任务，枕叶在社会契约型任务中诱发了更大的 N2 波幅；在抽象型任务中，枕叶诱发的 N2 波幅显著大于中央区，额叶诱发的 N2 波幅最大；P3 与慢波 (slow wave) 的主效应显著 (均 $p < 0.05$)；NC 组 P3 和 slow wave 的波幅均显著小于 SCZ 组。SCZ 组与 NC 组在不同类型任务与感兴趣脑区下观察到 N1、P2、N2、P3 和 slow wave 成分均有显著差异。

结论 本研究表明，精神分裂症患者与健康人在改良版沃森选择任务下存在 ERP 成分的客观差异，这为探索精神分裂症条件推理能力异常的神经机制提供了新的线索。

关键词：事件相关电位，沃森选择任务，精神分裂症，条件推理，神经机制

首发精神分裂症炎症亚组与色氨酸-犬尿氨酸代谢通路研究

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目的 探索首发精神分裂症不同炎症水平血清和尿液色氨酸-犬尿氨酸代谢物改变，解析疾病异质性，明确疾病潜在的生物标志物。

方法 本研究纳入 38 例首发未服药精神分裂症患者和 43 例年龄、性别相匹配的健康对照。采用阳性和阴性症状量表 (PANSS) 评定患者症状严重程度，使用酶联免疫分析法 (ELISA) 检测所有受试者血清和尿液 IL-6 水平，使用超高效液相色谱串联三重四极杆质谱技术 (UHPLC-QTRAP) 检测血清和尿液色氨酸-犬尿氨酸代谢物，包括色氨酸 (TRP)、犬尿氨酸 (KYN)、犬尿喹啉酸 (KYNA)、喹啉酸 (QUIN)、吡啶甲酸 (PIC) 和黄尿酸 (XA)；通过计算代谢物比值 KYN/TRP、QUIN/KYN、KYNA/KYN、QUIN/KYNA 和 QUIN/PIC，分析两组在代谢通路间平衡的差异。应用 SPSS 26 进行统计分析。根据血清 IL-6 水平的中位数将 81 例受试者分为四组 (低 IL-6 患者组、低 IL-6 对照组、高 IL-

6 患者组和高 IL-6 对照组)，对 TRP 代谢物的原始数据进行对数 (log) 转换。采用 2×2 协方差分析 (炎症亚组 \times 疾病) 进行组间分析，年龄、性别和体重指数作为协变量。 $P < 0.05$ 为差异有统计学意义。

结果 四组间年龄、性别和体重指数均无显著性差异 ($P > 0.05$)。控制协变量后，协方差分析示高 IL-6 患者组血清和尿液 IgQUIN/KYNA 水平高于高 IL-6 对照组，而血清和尿液 IgKYNA 水平低于高 IL-6 对照组 ($P < 0.05$)；高 IL-6 患者组血清 IgQUIN/KYNA 水平高于低 IL-6 患者组，而血清 IgKYNA 水平低于低 IL-6 患者组 ($P < 0.05$)；低 IL-6 患者组血清 IgXA 水平低于低 IL-6 对照组 ($P < 0.05$)；低 IL-6 对照组与高 IL-6 对照组 TRP-KYN 代谢物及其比值均无显著性差异 ($P > 0.05$)。

结论 首发精神分裂症不同炎症亚组 TRP-KYN 代谢物及其比值存在显著差异，高炎症水平的患者神经保护性代谢物 KYNA 减少，神经毒性/神经保护比值 QUIN/KYNA 升高。研究炎症水平和 TRP-KYN 代谢通路的关系有助于揭示精神分裂症病理生理机制，为指导临床实践、制定个体化治疗方案提供依据。

关键词：首发精神分裂症；色氨酸代谢；白细胞介素-6；血清；尿液

Lachnoclostridium 菌引起小鼠神经炎症及行为学改变

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目的 1. 通过粪菌移植，探索 Lachnoclostridium 菌对前额叶皮质炎症和小鼠行为的影响。2. 通过检测前额叶皮质代谢物，探讨 L 菌引起小鼠行为变化的可能机制。

方法 将 6 周龄无特定病原体小鼠随机分为两组，实验组 ($n=20$) 和对照组 ($n=20$)。实验组使用 Lachnoclostridium 菌混悬液口服强饲，对照组使用等量生理盐水口服强饲。于 2 周末肛门刺激排便收集小鼠粪便，用 16S rRNA 测序法分析 L 菌丰度，并进行行为学测试 (包括小鼠新物体识别、强迫游泳和三腔社交在实验等)。取两组小鼠前额叶皮质脑组织，通过酶联免疫吸附试验检测各组小鼠的

前额叶皮质组织中的细胞因子的表达,包括促炎因子:肿瘤坏死因子- α 、白介素-1 β ,抗炎因子:白介素-4、白介素-10和脑源性神经营养因子。并应用亲水相互作用液相色谱柱进行靶向代谢组学检测,利用UPLC-MS/MS技术对其进行定性和定量。

结果 移植第2周末,移植组小鼠粪便L菌相对丰度高于移植前,两者存在显著差异($t=7.969$, $P=0.007$)。行为学结果显示,新物体识别实验中移植组小鼠的辨别指数显著低于对照组($t=2.311$, $P=0.0248$);在强迫游泳实验中,移植组小鼠绝望时间较对照组小鼠显著增加($t=3.641$, $P=0.0011$),移植组的高速运动时间显著短于对照组($t=2.805$, $P=0.0076$);在三腔社交实验中,移植组小鼠在第一只陌生小鼠腔内停留时间长于对照组小鼠($t=3.192$, $P=0.0182$),移植组小鼠在第二只陌生小鼠腔内停留的时间短于对照组小鼠($t=4.203$, $P=0.0001$)。移植组小鼠前额皮质促炎因子TNF- α 水平显著高于对照组($t=10.477$, $P=0.007$);移植组抗炎因子IL-10低于对照组($t=-5.106$, $P<0.001$);移植组小鼠IL-4水平相比于对照组($t=-4.62$, $P<0.001$)低;移植组BDNF水平显著低于对照组($t=-5.232$, $P<0.001$)。代谢组学揭示了20种不同的代谢物,其中16种在移植组中上调(谷氨酸、丙氨酸、 γ -氨基丁酸等)。通路分析结果包含9条差异代谢通路(丙氨酸、天冬氨酸和谷氨酸代谢、淀粉和蔗糖代谢以及三羧酸循环等)

结论 L菌丰度上调导致小鼠学习记忆受损、意志活动减退与社交障碍,前额叶皮质促炎因子上调,抗炎因子和脑源性神经营养因子下调,前额叶皮质代谢改变,其中谷氨酸、GABA的上调是小鼠行为改变的可能分子生物学机制。

关键词: Lachnoclostridium, 神经炎症, 谷氨酸, GABA

首发未服药精神分裂症患者皮层厚度与超重肥胖的关系

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目的 本研究主要以首发未服药精神分裂症患者及健康对照组为研究对象,并对其身体质量指数

以及皮层厚度变化进一步探索,旨在寻找与精神分裂症体重改变相关的潜在神经生物学标志物。

方法 本研究共招募129名首发未服药精神分裂症患者和80名健康对照。将首发未服药精神分裂症患者分为超重/肥胖组40名(身体质量指数 $\geq 24\text{kg}/\text{m}^2$),正常/低体重组89名(身体质量指数 $< 24\text{kg}/\text{m}^2$)。将健康对照组分为超重/肥胖组35名(身体质量指数 $\geq 24\text{kg}/\text{m}^2$),正常/低体重组45名(身体质量指数 $< 24\text{kg}/\text{m}^2$)。收集所有被试者的身高、体重以获取身体质量指数。所有被试者均接受了3.0T磁共振扫描,利用DKT Atlas脑区模板,通过Freesurfer软件计算皮层厚度。通过独立样本t检验对首发未服药精神分裂症患者、健康对照组间及组内的身体质量指数、皮层厚度差异进行分析。同时,通过Pearson偏相关分析,探讨身体质量指数与皮层厚度的关系。

结果 组间结果提示,首发未服药精神分裂症患者组体重指数低于健康对照组($p<0.05$);两者在右侧大脑半球的前扣带回后部、颞中回、前扣带回上部等脑区皮层厚度存在显著差异($p<0.05$),在左侧大脑半球的额下回三角部、颞中回、扣带回峡部、颞下回、楔叶等脑区的皮层厚度也存在显著差异($p<0.05$),且在这些区域首发精神分裂症患者组的皮层厚度值均大于健康对照组。组内结果提示,健康对照组内超重/肥胖组、正常/低体重组在颅内总体积上存在显著差异($p<0.05$),超重/肥胖组大于正常/低体重组。首发未服药精神分裂症患者组内超重/肥胖组、正常/低体重组在左侧顶叶下回、左侧舌回、右侧顶叶下回、右侧扣带回后部等脑区皮层厚度存在显著差异($p<0.05$),除左侧舌回外,超重/肥胖组均小于正常/低体重组($p<0.05$)。偏相关分析结果显示,健康对照组体重指数与颅内总体积呈正相关($r=0.234$, $p=0.04$),在首发未服药精神分裂症患者组中,体重指数与左侧舌回皮层厚度呈正相关($r=0.304$, $p=0.001$)。

结论 该研究中首发未服药精神分裂症患者存在多个脑区皮层厚度增加,且存在更低的体重指数。此外,健康对照组中颅内总体积与身体体重指数呈正相关关系,首发精神分裂症患者组中左侧舌回与身体体重指数呈正相关关系。该研究可能为探索精神分裂症患者体重改变的病理生理机制提供一定线索。

关键词: 首发未服药,精神分裂症,身体质量指数,皮层厚度

精神分裂症社会认知功能研究现状

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目的 社会认知在理解和推断他人心理及行为方面发挥着关键作用,它是人类思维领域中的重要组成部分。精神分裂症是一种严重的精神疾病,患者经常会出现明显的社会认知功能障碍,这对他们回归社会造成了重大阻碍。本文基于生物-心理-社会医学模式,综合分析了近年来相关研究,以期更深入地理解影响精神分裂症患者社会认知功能的关键因素。

方法 在 PubMed 数据库中,以“精神分裂症 AND 社会认知”“精神分裂症 AND 磁共振”“精神分裂症 AND 影响因素”为关键词对近 5 年文献进行检索,经过筛选,共选取 53 篇文献进行综述。

结果 精神分裂症患者的社会认知功能障碍与其大脑中后内侧前额叶和前扣带回的灰质体积、右侧颞上回和语言网络皮层的厚度、颞顶联合区的表面积以及枕颞脑回旋指数等结构变化密切相关。此外,功能上与脑区激活异常、功能连接障碍和脑网络异常有关。白质缺陷也可能是其结构基础。此外,患者的社会认知功能障碍还受到炎症因子、年龄、性别、教育水平、代谢等因素的影响。

结论 精神分裂症给患者、家庭及社会带来了沉重的压力与负担。患者在社会认知方面的障碍可能与大脑特定区域结构和功能的异常有关,同时,性别、年龄、童年创伤和炎症反应等因素也会影响社会认知障碍的程度。为了更深入地理解精神分裂症的诊断、治疗和预后,我们可以利用机器学习等技术,为患者回归社会提供更大的支持。

关键词: 精神分裂症,社会认知,磁共振,社会认知影响因素

抗精神病药物所致代谢综合征的治疗进展

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目的 在于探讨抗精神病药物所致代谢综合征的治疗现状、进展和策略,为相关疾病的治疗、改善预后提供参考。

方法 越来越多服用抗精神病药物的患者出现以过度肥胖、血糖异常、血脂升高、血压异常等症状为主的代谢综合征 (Metabolic syndrome, MS)。DEHertM 等研究认为精神分裂症患者合并 MS 的风险高于普通人群,患病率是他们的 2-3 倍[1]。钱小年[2]等人认为接受 AD 治疗的双相情感精神障碍患者 MS 发病率较高。

在《抗精神病药物的使用与代谢综合征相关性研究》中,研究者对 408 例精神病患者进行全面检查,并发现抗精神病药物引起 MS 的风险较高,典型抗精神病药更突出[3]。而在《非典型抗精神病药物所致代谢综合征的治疗进展》中,指出非典型抗精神病药物所引起的代谢综合征 (MS) 日益引起关注,对患者的生活质量、心脑血管疾病和糖尿病等方面有严重影响[4]。第一代典型抗精神病药物主要作用于中枢多巴胺 (D2) 受体,而第二代是具有较高 5-羟色胺(5-HT)₂ 受体阻断作用的非典型抗精神病药物。由于药物作用受体的差异,两代药物的不良反应也有所不同,第二代药物较少引起锥体外系不良反应,但体重增加、糖脂代谢异常等代谢综合征不良反应较多。有研究表明,服用不同的第二代抗精神病药物(SGA)发生 MS 的风险不同,服用氯氮平和奥氮平的患者 MS 发生风险最高,而服用齐拉西酮和阿立哌唑的患者发生风险最低[5,6]。

《长期服用抗精神病药物的精神分裂症患者的糖代谢异常相关分析》指出长期服用抗精神病药物的精神分裂症患者更易发生糖代谢异常,相关影响因素有年龄、病程等方面[7]。《阿立哌唑对服用抗精神病药物所致代谢综合征的改善效果研究》则提出了阿立哌唑运用于服用抗精神病药物引起代谢综合征患者中的改善效果[8]。徐赫等人的网状 Meta 分析结果显示,奥氮平和喹硫平更容易引起体重、BMI 增加,且奥氮平引起体重明显增加($\geq 7\%$)的风险最高,布南色林、氨磺必利和阿立哌唑则较少引起体重增加;帕利哌酮对 TG 影响较小;阿立哌唑引起 HDL-C 降低较少;氨磺必利引起 FPG 增加较少[9]。此外,齐拉西酮较少导致体重增加、高脂血症或血糖升高等代谢副作用[10]。

发现抗精神病药物所致代谢综合征对患者的生活质量、心脑血管疾病和糖尿病等方面有严重影响,长期服用抗精神病药物的患者更易发生肥胖和糖代

谢异常。同时，一些药物的运用也能够改善患者的症状。

结论 在临床工作中应提高对该类患者躯体健康的关注度，寻求更加有效的治疗方法，减少患者对代谢综合征的发生。

关键词：抗精神病药物 代谢综合征

精神分裂症和双相情感障碍脑白质完整性的神经影像学研究进展

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目的 精神分裂症及双相情感障碍均属于重性精神障碍，已有研究表明精神分裂症及双相情感障碍均存在脑白质完整性受损，但二者在脑白质完整性方面的具体区别仍不清楚。本文综述了近年来关于精神分裂症和双相情感障碍患者脑白质完整性的神经影像学研究，探讨这两种精神疾病与脑白质完整性之间的关系及其临床意义。

方法 通过系统检索 PubMed、Web of Science 等数据库，收集和分析近年来关于精神分裂症和双相情感障碍患者脑白质完整性的神经影像学研究文献，重点关注磁共振成像（MRI）和扩散张量成像（DTI）等技术的应用及其研究结果。

结果 研究显示，精神分裂症患者主要在额叶、颞叶和顶叶等区域存在白质完整性下降，表现为白质体积减少和纤维束完整性受损。双相情感障碍患者则在额叶、胼胝体和情感调节相关区域显示出显著的白质异常。两种疾病的白质损伤部位有所重叠，但程度和特定区域存在差异。DTI 研究进一步揭示了精神分裂症患者白质各向异性（FA）值下降，而双相情感障碍患者则表现出特定区域的 FA 值变化。

结论 精神分裂症和双相情感障碍患者均存在显著的脑白质完整性损伤，但损伤模式和严重程度有所不同。这些差异可能反映了两种疾病不同的病理机制。未来研究应结合纵向研究和大样本分析，进一步明确白质损伤在这两种疾病中的具体作用和机制，为临床诊断和治疗提供更为精准的依据。

关键词：精神分裂症，双相情感障碍，脑白质完整性，神经影像学，磁共振成像（MRI），扩散张量成像

分析基于健康行为改变整合理论的护理干预对精神分裂症患者康复效果的影响

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目的 分析基于健康行为改变整合理论的护理干预对精神分裂症患者康复效果的影响，为促进精神分裂症患者的康复提供指导意见。

方法 选取 2022 年 6 月至 12 月出院的 30 例精神分裂症患者作为对照组，给予常规干预，包括常规的护理、用药、康复治疗、物理治疗等，选取 2023 年 1 月至 6 月出院的 30 例精神分裂症患者作为观察组，在常规干预的措施基础上给予基于健康行为改变整合理论的护理干预，两组的干预时间均为 3 个月，比较两组患者干预后的精神症状严重程度、服药依从性、社会功能及生活质量的情况。

结果 干预前，两组患者的 PANSS 评分、服药依从性、社会功能及生活质量得分均无统计学差异（ $P>0.05$ ），干预 3 个月后，两组患者 PANSS 评分均降低，且观察组低于对照组（ $P<0.05$ ）；两组患者的 MARS 评分、PSP 评分、WHOQOL-BREF 评分均升高，且观察组高于对照组（ $P<0.05$ ）。

结论 将健康行为改变整合理论的护理干预运用到精神分裂症患者中，有助于改善患者精神症状，提高患者的服药依从性、社会功能以及生活质量，促进疾病康复，同时发现，此种干预方法有助于家庭照顾者能力提升，密切了医患关系，临床干预效果满意，值得进一步应用推广。

关键词：健康行为改变整合理论；精神分裂症；社会功能；生活质量

康复期精神分裂症患者应用系统心理护理模式的价值分析

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目的 分析系统心理护理模式在康复期精神分

裂症患者中的应用价值,为进一步促进精神分裂症患者的康复提供指导意见。

方法 选取2020年3月至2022年5月在我院进行康复治疗的100例精神分裂症患者作为研究样本,并运用随机数表策略将患者等分为两个小组,每组各包含50例患者。其中对照组采取常规护理,观察组在常规护理的基础上应用系统心理护理,运用PANSS量表对患者护理前后的阳性与阴性症状进行评价,HAMA、HAMD量表对患者护理前后的心理状态进行评估,使用WHOQOL-BREF量表(该量表由世界卫生组织设计,涵盖生理、心理、环境和社会关系四个领域,每个领域评分从0到100分,分数越高,生活质量越好)评估观察组和对照组患者护理前后的生活质量。

结果 经过护理后发现,观察组中患者生理、心理、环境、社会关系评分优于对照组,观察组护理后的PANSS、HAMA、HAMD评分优于对照组, $P<0.05$,差异具有统计学意义。

结论 系统心理护理在精神分裂症康复期的应用能有效改善患者的心理状态,缓解精神症状,有助于控制疾病的复发,并减轻疾病对生活质量的负面影响,有效提升整体护理效果,值得进行临床推广。

关键词: 康复期精神分裂症;系统心理护理模式;价值分析

TAAR1 激动剂在精神分裂症治疗中的潜力: 研究综述摘要

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目的 精神分裂症是一种复杂的神经精神疾病,影响全球数百万人。尽管现有治疗方法主要靶向多巴胺受体,但这些方法往往伴随着显著的副作用。TAAR1 (微量胺相关受体1) 作为一种G蛋白偶联受体,在调节单胺能和谷氨酸能神经传递中具有重要的作用。近年来,TAAR1成为治疗精神分裂症的新兴靶点,受到了广泛关注。

本文旨在综合分析关键研究,探讨TAAR1激动剂在精神分裂症治疗中的潜力及其作用机制,为靶

向TAAR1开发新型抗精神病药物提供重要的理论基础和实践依据,推动精神分裂症治疗方法的创新和进步。

方法 综合分析相关关键文献,其研究内容分别为:TAAR1与精神分裂症相关的生物学功能、TAAR1激动剂对TAAR1的Gs信号通路的激活作用、利用MK801诱导的精神分裂症小鼠模型研究TAAR1激动剂的治疗潜力,以及在啮齿动物和非人类灵长类动物中进行TAAR1激动剂的临床前和临床研究。

结论 1.TAAR1在调节奖赏回路、边缘系统、认知过程和情感状态等方面起着关键作用。

2.TAAR1激动剂能够缓解动物模型中MK-801诱导的精神分裂样症状。

3.TAAR1激动剂在啮齿动物和非人类灵长类动物中表现出抗精神病药、抗焦虑药和抗抑郁药样特性,以及促认知和REM睡眠抑制作用。

关键词: TAAR1,精神分裂症,治疗潜力,抗精神病药物

多数据集探讨利培酮抗精神分裂症相关孟德尔随机化分析

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目的 精神分裂症作为一种严重的慢性精神障碍,严重影响个体社会功能和生活质量。尽管对该疾病的研究已取得一定进展,其复杂的病因机制仍未完全阐明。目前,抗精神病药物,特别是利培酮,在治疗中发挥重要作用,能够有效改善患者症状,但可能导致代谢副作用。随着遗传学的发展,探索疾病的遗传背景及药物反应成为新趋势。特别是,孟德尔随机化方法的应用,为理解疾病的遗传基础和改善治疗策略提供了新的视角,推动了向更精准治疗的转变。

方法 首先,通过eQTLGen联盟和GEO数据库,获取了关于血液中基因表达的遗传数据和精神分裂症患者的RNA-seq数据。使用Limma软件包对数据进行差异表达分析。再通过Metascape进行基因功能富集分析。孟德尔随机化分析通过IEU数据库筛选的结局ID进行,以解释全血中基因表达对

精神分裂症影响的因果关系。此外，使用 CIBERSORT 方法评估了免疫细胞的浸润情况。GSVA 和 GSEA 分析评估了基因集的富集情况和生物学通路的变化。我们利用 RcisTarget 预测了转录因子的调控网络，并通过 miRcode 数据库构建了 miRNA 网络。整个研究的统计分析基于严格的假设条件，使用 R 语言进行。我们使用 ChAMP 软件包来分析本组 144 例健康对照组和 144 例精神分裂症组的差异甲基化基因 (DMG)，鉴定精神分裂症的差异甲基化探针，筛选条件为 $\text{adj.P} < 0.05$ 。通过 ggplot2 绘制关键基因的甲基化箱线图。

结果 通过以上方法，本研究共筛选出 120 个差异基因，进一步孟德尔随机化分析发现 DKK3、EEF1A1、PRKAA1 与精神分裂症风险相关。通过免疫细胞浸润分析发现关键基因与多种免疫细胞呈显著相关，GSVA 和 GSEA 分析揭示了关键基因在多个信号通路中的富集情况。相关性分析发现 DKK3 与糖脂代谢呈现显著负相关，而 PRKAA1 与糖代谢显著正相关，EEF1A1 和脂代谢显著正相关。继续通过本组的共 288 例样本分析显示，DKK3 甲基化水平也存在明显差异。

结论 本研究的结果不仅增强了我们对精神分裂症药物治疗机制的理解，尤其是在精确医疗领域，还为未来的药物发现和疾病治疗策略提供了新的方向。我们的发现支持了利培酮作为治疗精神分裂症的有效药物的观点，尤其 DKK3 基因的存在与精神分裂症的低风险相关，可能通过降低糖脂代谢紊乱风险来减少精神分裂症的发病率，并强调了在治疗选择和剂量调整时考虑个体遗传背景的重要性，以最大限度地减少副作用并优化疗效。

关键词：利培酮；精神分裂症；孟德尔随机化分析；糖脂代谢

老年精神分裂症患者家庭照顾者照顾负担与生活质量相关性研究

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目的 了解现阶段老年精神分裂症患者家庭照顾者的照顾负担水平及生活质量现状，并探讨两者之间的相关性，为改善老年精神分裂症患者家庭照

顾者生活质量提供指导意见。

方法 通过系统抽样的方法，采用一般资料问卷、家庭照顾负担访谈量表 (FBIS) 和生活质量测定量表简表 (WHOQOL-BREF) 于 2021 年 7 月~2024 年 1 月期间，在西安交通大学附属第一医院精神心理卫生科住院部选入符合纳入排除标准的 130 名精神分裂症老年患者的家庭主要照顾者进行现场调查，对回收数据进行单因素分析和相关性分析得出结果，进行讨论。

结果 老年精神分裂症患者家庭照顾者的 FBIS 得分为 (22.33±10.07) 分，单因素分析显示，不同受教育程度、居住地、与患者共同生活时间、日照时间、家庭月收入、有无精神疾病之间的家庭照顾者照顾负担存在差异；WHOQOL-BREF 得分为 (59.60±9.20) 分，不同受教育程度、职业、居住地、与患者的家属关系、日照时间、家庭月收入、有无精神疾病之间的家庭照顾者生活质量存在差异；老年精神分裂症患者家庭照顾者的 FBIS 得分与 WHOQOL-BREF 得分呈负相关。

结论 家庭照顾者照顾负担和生活质量呈中度负相关。

关键词：精神分裂症；家庭照顾者；照顾负担；生活质量

首发未服药精神分裂症患者激越和眶额叶皮层亚区结构的关系

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目的 分析首发未服药精神分裂症患者激越和眶额叶皮层 (orbitofrontal cortex, OFC) 亚区结构之间的关系，探索精神分裂症患者激越可能发生的基础。

方法 选取 15~44 岁首次发病且未接受过药物治疗的精神分裂症患者 50 例 (患者组) 和性别、年龄、受教育程度与之相匹配的健康对照者 29 名 (对照组) 进行结构磁共振成像 (structural magnetic resonance imaging, sMRI) 检查，利用 freesurfer 软件提取大脑 OFC 亚区灰质体积、皮层厚度、皮层表面积和表面曲率，其中包括折叠指数、曲率指数、平均曲率和高斯曲率。采用阳性和阴性综合量表 (the Positive and

Negative Syndrome Scale, PANSS)评估患者精神病性症状严重程度, 简易激越评定量表(the Brief Agitation Rating Scale, BARS)评估患者激越严重程度。BARS 包含三项分量表: 躯体攻击、言语攻击和非攻击性激越。采用协方差检验、独立样本 t 检验和非参数检验进行组间差异性检验。采用偏相关分析, 分析首发未服药精神分裂症患者激越和 OFC 亚区结构之间的关系, 及精神病性症状和 OFC 亚区结构之间的关系。

结果 与对照组相比, 患者组右侧内侧 OFC ($t=2.38$), 左侧外侧 OFC ($U=1375.00$)和左侧内侧 OFC ($U=1733.50$)折叠指数更小(FDR 矫正, $P<0.05$)。患者组 BARS 量表评分增加与左侧内侧 OFC ($r=-0.375$, $P=0.012$), 左侧外侧 OFC ($r=-0.361$, $P=0.014$), 左侧内侧 OFC ($r=-0.376$, $P=0.018$) 体积呈负相关。患者组非攻击性激越评分增加与左侧外侧 OFC($r=-0.510$, $P<0.001$)和左侧内侧 OFC($r=-0.533$, $P<0.001$) 体积呈负相关。患者组中 OFC 亚区结构与 PANSS 分量表无显著相关性。

结论 首发未服药精神分裂症患者 OFC 亚区结构损伤, 并且与激越严重程度评分呈负相关。尤其左侧 OFC 结构损伤可能参与了精神分裂症激越发生的机制。

关键词: 激越, 眶额叶皮层, 精神分裂症

Sex Differences in The Smartphone Video Games Improving Executive Function in Patients with Chronic Schizophrenia

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Objective Schizophrenia is a common neuropsychiatric disorder that clinically commonly reports psychotic symptoms, motivational and cognitive dysfunction. In recent years, smartphone video games have emerged as a novel treatment option in schizophrenia due to their high appeal, usage rates and excellent efficacy. It is unclear to what extent sex influences the efficacy of smartphone video games in schizophrenia, while changes in serological indicators during this process are also worth exploring.

Methods This study is a secondary analysis of a clinical trial which conducted at the Department of Psychiatry, Chaohu Hospital of Anhui Medical University, from July 2021 to February 2022. A total of 51 chronic schizophrenia patients were recruited in this study, 21 participants who did not meet the criteria were excluded from the study, 1 participant withdrew the consent, 3 participants dropped out, 26 chronic schizophrenia patients completed the study

An effective combination of the smartphone video games was employed. The participants attended a 6 week game training, playing video games on their smartphones for 1 hour daily, five times a week, for 6 weeks. Simultaneously, participants all maintain the original standard antipsychotic regimen, there was no difference in interventions between the two groups.

The Repeatable Battery for the Assessment of Neuropsychological Status (RBANS),

Stroop Color and Word Test (SCWT),

Positive and Negative Syndrome Scale (PANSS),

General Self-Efficacy Scale (GSE) and

Global Assessment of Function (GAF) were assessed at five time points (baseline, 3,6,9,12 weeks)

Results There were no significant sex differences could be found on immediate memory, visuospatial, attention, delayed memory of RBANS. Male group got better performance than female group on two words error and two words time of SCWT. Female group and male group showed no group effects on positive scale, negative scale, general psychopathology scale and total score of PANSS. Male patients got significantly higher BDNF levels than female patients. The statistically sex difference was only manifested in the third week after the end of the game training, the SNAP25 levels of male group were significantly higher than female group

Conclusion In this study, we emphasize that when it comes to treating executive function by smartphone video games in chronic schizophrenia, it may be more effective in male group than in female group. There were no significant sex differences in following domains: cognitive function, psychiatric symptoms, overall functioning and general self-efficacy

关键词: Schizophrenia, Sex, Executive function, Smartphone video games

Successful Treatment of Low-dose Deutetrabenazine in A Tumor Patient with Tardive Dyskinesia: Case Report

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Tardive dyskinesia (TD) syndromes are still a public health concern. Even though second-generation antipsychotics are not less dangerous than first-generation medicines in terms of inducing tardive syndromes, they are increasingly being utilized. It is commonly used to treat schizophrenia, depression, bipolar disorder, and insomnia. To the best of our knowledge, there are not enough reports about the dose, safety, and effectiveness of using deutetrabenazine for the treatment of TD syndromes. We aim to present this case as a reference for the treatment of TD syndromes with low-dose deutetrabenazine and remind psychiatrists to consider the feasibility of low-dose deutetrabenazine during the use of antipsychotic medications. We presented the case of a 57-year-old woman who was diagnosed with schizophrenia when she was 45 years old. Her main clinical manifestations are feeling targeted, cheated, tracked, and auditory hallucination. At first, antipsychotics were effective, however, the patient presented TD after more than 5 years of antipsychotic treatment. After excluding Huntington disease, Tourette syndrome, and other possibilities, we prescribed 6.0-12.0 mg/d deutetrabenazine tablets to the patient. The TD syndrome was gradually relieved without stopping the antipsychotics in a month. As an exploratory successful treatment of TD, the prescribing information recommended that psychiatrists should consider a relatively lower dose of deutetrabenazine to reduce the risk of TD with ziprasidone in standard dose ranges. Although the middle-aged patient demonstrated excellent results in TD and mental status, the effect and safety after TD syndromes after one month would pose great concerns. In addition, we

should not underestimate the TD syndromes caused by second-generation antipsychotic medication. Moreover, it is important to assess and manage TD syndromes as promptly as possible.

关键词: tardive dyskinesia (TD), schizophrenia, deutetrabenazine, antipsychotic medication, case report

首发未用药精神分裂症患者血清丁酸水平和海马亚区体积及其与认知功能的关系

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目的 观察首发未用药精神分裂症患者血清丁酸水平和海马亚区体积及其与认知功能的关系, 探讨短链脂肪酸在精神分裂症中发挥的可能作用。

方法 选取至郑州大学第一附属医院精神科就诊的首发未用药精神分裂症患者 51 例(患者组)和同期健康志愿者 35 名(健康对照组), 采用气相色谱质谱法检测血清丁酸水平, 采用 GE Discovery 750 3.0T 采集结构磁共振成像(sMRI)影像数据, 采用精神分裂症认知功能成套测验(MCCB)评估认知功能, 采用 Python 软件进行随机森林回归模型分析。

结果 (1) 患者组血清异丁酸、总丁酸水平明显低于健康对照组, 差异有统计学意义 ($P<0.05$)。

(2) 患者组右侧半球海马裂体积显著高于健康对照组, 患者组右侧半球海马头部体积明显低于健康对照组, 差异具有统计学意义 ($P<0.05$)。(3) 与健康对照组相比, 患者组在认知功能七大领域中的得分下降较为明显(均 $P<0.05$)。(4) 患者组血清丁酸水平与海马亚区体积的相关性分析显示: 患者组血清正丁酸水平与右侧半球海马尾部体积成正相关 ($r=0.371, P=0.012$)。(5) 患者组海马亚区体积与认知功能的相关性分析显示: 患者组的左侧半球海马裂体积与 SOP T 分、RPS T 分均正相关 ($r=0.301、0.310$, 均 $P<0.05$); 患者组的左侧半球海马头部体积与 SC T 分成正相关 ($r=0.336, P=0.021$); 患者组的左侧半球海马体积与 SC T 分成正相关 ($r=0.357, P=0.014$); 患者组的右侧半球海马头部体积与 Vis.Lrng T 分、SC T 分成正相关 ($r=0.312、0.319$, 均 $P<0.05$); 患者组的右侧半球海马尾部体积与 RPS T 分成负相关 ($r=-0.289, P=0.049$)。(6) 随机森林

回归模型分析发现丁酸、异丁酸预测模型 RMSE 值为 18.74 ± 0.30 ；右侧半球海马头部体积、右侧半球海马尾部体积预测模型的 RMSE 值为 17.98 ± 0.33 ；丁酸、异丁酸、右侧半球海马头部体积和右侧半球海马尾部体积联合预测模型的 RMSE 值为 17.59 ± 0.58 ，其可以更好的预测 Vis.Lrng 水平。

结论 1. 首发未用药精神分裂症患者组血清中丁酸水平发生了改变；海马亚区体积发生改变，部分海马亚区体积减少。2. 患者组血清丁酸水平与右侧半球海马尾部体积成正相关，并与认知功能部分得分具有一定的相关性，提示丁酸水平改变可能参与了精神分裂症的发生。3. 丁酸和海马亚区体积联合做模型预测认知功能，优于分别单个做模型用于认知功能的预估。

关键词：丁酸 海马 认知

重镇安神类中药治疗难治性精神分裂症的疗效观察

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目的 本研究旨在探讨重镇安神类中药在治疗难治性精神分裂症中的临床疗效。难治性精神分裂症作为一种病程长、治疗效果不佳的精神疾病，给患者及家庭带来沉重负担。本文首先介绍了难治性精神分裂症的定义、临床特点及治疗困境，随后详细阐述了重镇安神类中药的种类、药理作用及其在精神分裂症治疗中的潜在优势。通过对照试验设计，本研究对重镇安神类中药在难治性精神分裂症患者中的治疗效果进行了观察和分析。

方法 本研究采用随机对照试验设计，选取符合条件的难治性精神分裂症患者为研究对象。将患者随机分为两组，对照组采用常规西药治疗，实验组则在西药治疗基础上加用重镇安神类中药。治疗过程中，对两组患者进行定期评估，记录症状缓解程度、生活质量改善等指标。

结果 实验结果显示，与对照组相比，实验组患者在症状缓解程度和生活质量提高方面均表现出更明显的改善。具体而言，实验组患者的阳性和阴性症状量表（PANSS）评分较对照组显著降低，而生

活质量评分则显著升高。此外，实验组患者的不良反应发生率也相对较低。

结论 本研究表明，重镇安神类中药在难治性精神分裂症治疗中具有一定的疗效优势，值得临床应用。然而，为了进一步提高治疗效果和减少不良反应发生率，未来研究还需对中药的配方、剂量等进行优化与验证。同时，对于难治性精神分裂症的治疗还需结合心理治疗、康复训练等多种手段进行综合治疗。

关键词：重镇安神类中药 难治性精神分裂症 临床疗效 生活质量

Transcriptomic and Neurotransmitter Insights Into Gray Matter Volume Changes From 1 Hz rTMS in Treating Schizophrenia with Auditory Verbal Hallucinations

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Background Auditory verbal hallucinations (AVH) are prominent positive symptoms of schizophrenia, often resistant to traditional antipsychotic treatments. Low-frequency repetitive transcranial magnetic stimulation (rTMS) has emerged as a potentially effective treatment for AV. However, the neurobiological mechanisms underlying its efficacy are not fully understood.

Objective This study aimed to investigate the impact of 1 Hz rTMS on AVH by examining changes in gray matter volume (GMV) within cortical regions and exploring the underlying neurobiological mechanisms, including alterations in gene expression levels and neurotransmitter receptor densities

Methods In a randomized controlled trial design, 1 Hz rTMS targeting the left temporoparietal junction (TPJ) was administered to patients diagnosed with

schizophrenia experiencing AVH. The changes in GMV in cortical regions were evaluated, with analyses focusing on their correlations with gene transcription expression levels and neurotransmitter distribution densities, utilizing data from the Allen Human Brain Atlas and PET images

Results rTMS treatment not only significantly reduced AVH symptoms but also enhanced GMV in critical cortical areas. These neuroplastic changes were associated with the upregulation of genes involved in neuroplasticity-related ontology pathways, including chromatin remodeling and vesicle cytoskeletal trafficking. Additionally, altered densities of key neurotransmitter receptors including serotonin, dopamine, glutamate, were observed. Notably, specific hub gene expressions, such as ANK1, identified through protein-protein interaction (PPI) analysis, and certain neurotransmitter density, particularly mGluR5, were significant predictors of GMV changes

Conclusion The findings suggest that 1 Hz rTMS may induce beneficial neuroplastic changes in cortical regions, significantly correlated with specific patterns of gene expression and neurotransmitter receptor profiles. These results enhance our understanding of the biological mechanisms through which rTMS exerts its therapeutic effects in treating AVH in schizophrenia patients

关键词: Schizophrenia, Auditory verbal hallucinations, rTMS, Gray matter volume, Gene expression, Neurotransmitter.

基于社交技能训练的稳定期精神分裂症患者社会功能改善研究

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上海市民政第一精神卫生中心

目的 通过实施 12 周的社交技能训练课程,探讨稳定期精神分裂症患者在社会功能方面的改善效果。

方法 本研究选取上海市民政第一精神卫生中心住院稳定期精神分裂症患者 64 人作为研究对象,

随机分为观察组和对照组,每组各 32 人。观察组中的患者进一步分成 4 个小组,进行为期 12 周的社交技能训练,每周两次,每次 50 分钟。对照组的患者则接受常规治疗。社交技能训练课程共 24 次,内容包括四项基本社交技能、会谈技能、有主见的技能、冲突管理技巧、公共生活技能、维护健康技能及职业/工作技能。研究在 0 周、6 周、12 周时,采用阳性和阴性症状量表(PANSS)和个人和社会表现量表(PSP)对患者进行评估。

结果 在研究结束时,通过数据分析发现,观察组患者的阳性和阴性症状量表(PANSS)评分显著降低,个人和社会表现量表(PSP)评分显著提高,与对照组相比具有统计学显著差异($P < 0.05$)。具体而言,观察组患者在精神症状的改善和社会功能的提升方面表现出显著优势。在社交沟通技能方面,观察组患者的倾听他人、提出要求和表达感受的能力均显著提高。情感反应技能方面,观察组患者能够更好地理解和表达情感,处理冲突的能力也得到明显提升。日常生活技能方面,观察组患者在个人卫生、烹饪和家务管理等方面表现出显著进步。工作和学习技能方面,观察组患者在任务管理、时间管理和团队合作方面的能力均有显著提高。进一步分析显示,社交技能训练的效果在不同的社会功能维度上均有显著体现。特别是在处理社会交往和情感反应方面,观察组患者的表现显著优于对照组,表明社交技能训练在提升精神分裂症患者的社会功能和生活质量方面具有显著效果。

结论 12 周的社交技能训练显著改善了稳定期精神分裂症患者的社会功能,提高了他们的生活质量。社交技能训练作为一种有效的心理社会干预方法,值得在精神分裂症的治疗中广泛应用,为患者的社会功能恢复和生活质量提升提供了新的思路和方法。

关键词: 社交技能训练,精神分裂症,社会功能

Correlation between Insulin Resistance and Thyroid Function in Hospitalized Patients with Schizophrenia Spectrum Disorders, and Exploration of Its Risk Factors

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Objective To investigate the correlation between insulin resistance and thyroid function in hospitalized patients with schizophrenia spectrum disorders and explore its risk factors

Methods By searching the electronic medical record system of Beijing Anding Hospital affiliated to Capital Medical University, screen patients with schizophrenia spectrum disorder who were hospitalized from December 31, 2015 to February 22, 2023 with complete information to be extracted. Extracted information includes general demographics (age, gender, marital status), personal history (smoking history, alcohol history), disease characteristics (duration of illness, times of hospitalization), fasting blood glucose, fasting insulin, and thyroid function. Calculate Thyroid Feedback Quantile Index (TFQI), TSH Index (TSHI), and Thyroid Hormone Resistance Index (TT4RI) to assess central thyroid hormone sensitivity, and use FT3/FT4 ratio to evaluate peripheral thyroid hormone sensitivity. Calculate Homeostasis Model Assessment of Insulin Resistance (HOMA-IR) to assess insulin resistance, with HOMA-IR > 2.6 as the cutoff defining insulin resistance. Classify research subjects into non-insulin resistant (non-IR) and insulin resistant (IR) groups. Analyze the correlation of HOMA-IR with demographic, clinical data, and thyroid function, and investigate risk factors for insulin resistance in hospitalized patients with schizophrenia spectrum disorders

Results A total of 8,171 hospitalized patients with schizophrenia spectrum disorders were included with an insulin resistance (IR) prevalence of 28.0% (2,286/8,171). Among them, IR prevalence was 30.3% (1,108/3,654) in males and 26.1% (1,178/4,517) in females. Patients in the IR group showed higher BMI, FT3, TSH, TT4RI, FT3/FT4 ratio, TSHI, and TFQI compared to the non-IR group, along with longer duration of illness and more hospitalizations ($P < 0.05$). Pearson correlation analysis indicated significant correlations between HOMA-IR and age, duration of illness, times of hospitalization, BMI, FT3, TSH, TT4RI, FT3/FT4 ratio, TSHI, and TFQI ($P < 0.05$). Binary logistic regression analysis results showed that high BMI (OR=1.224, 95%

CI: 1.209-1.240) and high TFQI (OR=1.388, 95% CI: 1.180-1.631) were risk factors for insulin resistance

Conclusion Thyroid dysfunction is associated with insulin resistance in patients with schizophrenia spectrum disorders. High central thyroid hormone sensitivity index (TFQI) and high BMI are independent risk factors for insulin resistance in patients with schizophrenia spectrum disorders

关键词: Schizophrenia spectrum disorders, Insulin resistance, Thyroid dysfunction

不同视听通道信息对精神分裂症患者共情能力的影响

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目的 共情是一种复杂的社会认知过程, 指个体感知、理解他人情绪及心理状态的能力。研究表明, 精神分裂症患者的共情能力存在缺损, 但其内在机制尚不明确。视听觉通道是影响共情的重要因素之一。本研究旨在探讨不同视听觉通道信息对精神分裂症患者共情各指标的影响。

方法 本研究选取 50 例精神分裂症患者和 35 例健康对照, 采用中文版共情准确性任务 (EAT)。实验设置了三种条件: 仅音频、虚拟人有声视频、真人有声视频。每种条件下均包含积极和消极两种情绪的视频。通过 3 (实验条件) × 2 (情绪效价) × 2 (组别) 的重复测量方差分析, 比较两组在不同实验条件下共情各指标的表现。

结果 研究结果显示, 在共情准确性、认知共情和情感共情评分上, 精神分裂症患者均显著低于健康对照组 ($F(1, 83) = 18.65, p < 0.001$; $F(1, 83) = 10.57, p = 0.002$; $F(1, 83) = 3.22, p = 0.016$)。在情感共情评分上, 实验条件的主效应显著 ($F(2, 166) = 9.43, p < 0.001$), 其中虚拟人有声视频条件下的情感共情水平显著弱于仅音频和真人有声视频条件。在共情动机评分上, 实验条件和组别的交互作用显著

($F(2, 166) = 3.188, p = 0.044$), 患者组仅在虚拟人有声视频下的共情动机显著弱于健康对照组。在共情准确性和认知共情评分上, 情绪效价的主效应显著 ($F(1, 83) = 20.125, p < 0.001$; $F(1, 83) = 17.58, p < 0.001$), 积极视频下的表现显著优于消极视频。在共情准确性得分上, 实验条件、情绪效价和组别的交互作用显著 ($F(2, 166) = 8.28, p < 0.001$)。积极视频下, 患者在虚拟人有声视频条件下的共情准确性显著低于健康对照组; 消极视频下, 仅音频和真人有声视频条件下患者的共情准确性低于健康对照组。

结论 精神分裂症患者在共情准确性、认知共情和情感共情方面均存在异常, 这些异常受视听通道信息及情绪效价的影响。本研究为理解精神分裂症患者的社会认知缺陷提供了新的视角, 并可能为临床干预提供参考。

关键词: 精神分裂症, 认知共情, 情感共情, 共情准确性, 视听通道信息

盐酸齐拉西酮胶囊致心肌酶谱升高 1 例报道

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目的 分析 1 例临床口服盐酸齐拉西酮胶囊致心肌酶谱升高的不良反应, 提高临床医生对其不良反应的认知并及时复查相关检查, 排除因盐酸齐拉西酮胶囊对心脏毒性致心肌酶谱升高, 并做好处理措施。

方法 对临床 1 例口服盐酸齐拉西酮胶囊致心肌酶谱升高的药物相关不良反应进行回顾性分析并查阅相关文献。

结果 患者口服盐酸齐拉西酮胶囊后出现心肌酶谱明显升高, 治疗过程中多次复查心电图一直正常, 肌酸激酶同工酶升高比例低于肌酸激酶。心梗二项: 超敏肌钙蛋白正常, 肌红蛋白升高, 予以停止服用盐酸齐拉西酮胶囊, 换服阿立哌唑片并予以补液促进代谢后心肌酶谱恢复正常。

结论 盐酸齐拉西酮胶囊作为第二代抗精神病药物, 该药的不良反应最常见的为皮疹, 心电图异常: QTc 间期增加, 口干、便秘、视物模糊, 常见肌痛、肌张力亢进等, 但盐酸齐拉西酮胶囊致肌张力

增高, 进一步导致横纹肌溶解、进行性肌营养不良出现心肌酶谱升高, 并且肌肉溶解形成血栓导致肾栓塞的不良反应罕见。临床医生在使用该药物过程中对其不良反应的认知仍需要进一步加强。定期复查心肌酶谱, 如果出现心肌酶谱升高应及时复查心电图、心梗二项、心脏彩超, 排除盐酸齐拉西酮胶囊诱发心肌损伤, 并做好处理措施。

关键词: 盐酸齐拉西酮胶囊, 心肌酶谱, 药品不良反应, 肾栓塞

重复经颅磁刺激治疗对精神分裂症患者认知功能的疗效

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目的 探讨重复经颅磁刺激 (rTMS) 对精神分裂症患者认知功能的治疗效果, 为减少精神分裂症患者认知功能损害提供参考。

方法 纳入 60 例符合《国际疾病分类 (第 10 版)》(ICD-10) 精神分裂症诊断标准的患者, 根据是否给予 rTMS 干预分组, 研究组接受 20 次 10Hz 高频 rTMS 治疗, 对照组接受伪高频 rTMS 治疗, 连续治疗 8 周。比较两组患者治疗前后阳性和阴性症状量表 (PANSS)、精神分裂症患者生活质量量表 (SQLS)、可重复的成套神经心理状态测量 (RBANS)、治疗效果和生活质量。

结果 基线两组患者在人口统计学信息 (性别、年龄、病程和受教育年限等) 方面无显著差异 (均 $P > 0.05$); 治疗 4 周后, 研究组 PANSS 总分及阴性症状评分显著降低, 且低于对照组, 差异有统计学意义 (均 $P < 0.05$)。研究组 RBANS 总分及即刻记忆、视觉广度、言语功能和延时记忆因子分显著升高, 且高于对照组, 差异有统计学意义 ($P < 0.05$)。治疗 8 周后, 研究组 PANSS 总分、SQLS 分值、RBANS 评分均低于对照组 ($P < 0.05$)。

结论 高频 rTMS 能有效改善精神分裂症患者的阴性症状, 有利于患者认知功能的改善, 对认知功能的损害较小, 且具有较高的安全性。

关键词: 重复经颅磁刺激治疗, 精神分裂症, 认知功能

Safety Assessment of Asenapine in The FAERS Database: Real Adverse Event Analysis and Discussion on Neurological and Psychiatric Side Effects

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Purpose This study aims to comprehensively assess the safety of Asenapine by conducting a comprehensive statistical analysis of adverse event reports in the FAERS database, with a particular focus on potential adverse reactions related to its use in the treatment of psychiatric disorders.

Methods Event reports from the first quarter of 2009 to the third quarter of 2023 were collected and analyzed. Detailed examinations of gender, age, reporter identity, and other aspects were conducted to reveal the fundamental characteristics of Asenapine-related adverse events. Signal mining techniques were employed to systematically evaluate various adverse reactions associated with Asenapine.

Results The study found that adverse event reports involving Asenapine were more common among female patients, with the age group mainly distributed between 18 and 45 years. Physicians were the primary reporters of adverse events, and psychiatric disorders, neurological disorders, and gastrointestinal disorders were the most common areas affected by adverse reactions. In addition to known adverse reactions, potential risks not mentioned in the drug label were identified, such as anosognosia, attentional drift, and psychogenic compensation disorder.

Conclusion Asenapine carries the risk of various adverse reactions alongside its therapeutic effects. In clinical practice, physicians should closely monitor the occurrence of neurological disorders, psychiatric disorders, and gastrointestinal system disorders.

关键词: Asenapine; Schizophrenia; Bipolar Disorder; FAERS Database; Side Effects

奋乃静联合盐酸帕罗西汀治疗精神分裂症引发锥体外系副反应个案分析

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目的 本文通过对一例服用奋乃静联合盐酸帕罗西汀治疗过程中出现锥体外系副反应的个案进行深入分析, 讨论了该现象发生的原因, 临床表现以及处理策略。

奋乃静作为一种典型抗精神病药物, 在治疗精神分裂症阳性症状方面疗效可观, 然而, 部分患者在使用奋乃静治疗过程中会出现锥体外系副反应, 在联合盐酸帕罗西汀后盐酸帕罗西汀重度抑制 2D6 酶, 增加了奋乃静的药物浓度使得锥体外系副反应出现的更多, 给患者的生活质量带来不利影响。因此, 本文旨在通过个案分析, 探讨奋乃静联合盐酸帕罗西汀治疗精神分裂症引发锥体外系副反应现象及其处理策略, 以期提高临床医生对该问题的认识和应对能力。

方法 个案分析

结果 文章总结了奋乃静联合盐酸帕罗西汀引发锥体外系副反应的预防措施及建议, 以期对未来类似病例的处理提供参考。

结论 本文通过对一例奋乃静联合盐酸帕罗西汀引起的锥体外系副反应个案进行分析, 探讨了该现象的发生原因、临床表现以及处理策略。文章强调了临床医生在用药过程中应密切关注患者的症状和体征, 及时发现并处理异常情况。同时, 提出了针对此类情况的处理策略及预防措施, 以期对未来类似病例的处理提供参考。

文章总结了奋乃静联合盐酸帕罗西汀引发锥体外系副反应的预防措施及建议, 以期对未来类似病例的处理提供参考。

关键词: 奋乃静; 锥体外系副反应; 精神分裂症; 处理策略; 预防措施

Quercetin Modulation of The PTEN/AKT/CREB/BDNF Signaling Pathway

Reduces Microglial Activity To Improve Cognitive Deficits in Schizophrenia

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Objective Quercetin has anti-inflammatory and neuroprotective effects and may be used to improve cognitive impairment. Cognitive dysfunction as one of the main clinical manifestations of schizophrenia, and antipsychotic drugs are not effective in improving cognitive impairment in schizophrenia. Therefore, this study verified whether quercetin has the effect of improving cognitive impairment in schizophrenia and the specific mechanism

Methods MK-801 was constructed as a schizophrenia model, and quercetin was administered to the schizophrenia model mice by treatment. We verified whether quercetin has the effect of improving cognitive impairment in schizophrenia by recording the behavioral results of NORT and MWT in mice. The specific mechanisms by which quercetin improves cognitive impairment in schizophrenia were explored using network pharmacological analysis. To verify the specific mechanism of quercetin to improve cognitive impairment in schizophrenia by Western blotting, immunofluorescence, Golgi staining, Nysted, and HE staining

Results Quercetin attenuated MK-801-induced cognitive deficits and neurological damage in a dose-dependent manner. Network pharmacological analyses revealed 57 potential targets of quercetin for the treatment of schizophrenia. KEGG enrichment analyses indicated that quercetin may exert its therapeutic effects by affecting the PTEN/PI3K/AKT signaling pathway. Quercetin was shown to ameliorate MK-801-induced cognitive impairment in schizophrenia-like mice and promote neurogenesis to ameliorate neuronal apoptosis. In addition, quercetin inhibits microglia activation, thus exerting anti-inflammatory effects

Conclusion Quercetin has the ability to improve cognitive impairment in schizophrenia, and our study provides a theoretical basis for the future use of quercetin in the clinic

关键词: schizophrenia, quercetin, cognitive function, PTEN, AKT, BDNF

自身免疫性精神病与急性原发性精神病临床特征的回顾性研究

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介绍 自身免疫性精神病是主要表现为精神症状的自身免疫性脑炎，与急性原发性精神病在早期很难鉴别。

目的 分析自身免疫性精神病与急性原发性精神病患者临床特征，以早期鉴别自身免疫性精神病。

方法 回顾性分析 2020 年 4 月至 2024 年 3 月在广东医科大学附属第一医院精神心理科住院，病程小于 3 个月，表现为急性精神病性症状且均完善了腰椎穿刺术的 62 例患者，分为自身免疫性精神病组即病例组 (n=20) 和急性原发性精神病组即对照组 (n=42)。收集两组患者入院时的一般情况、临床症状、影像学、脑电图、血液和脑脊液相关指标。采用 SPSS26.0 软件进行统计学分析。

结果 1 临床表现: 病例组中情感症状, 意识障碍、认知障碍、癫痫发作、病前感染、应激事件占比多于对照组, 具有统计学意义 ($P<0.05$); 2 实验室结果 病例组血液 WBC、中性粒细胞百分比 (NE%)、中性粒细胞绝对值/淋巴细胞绝对值 (NE#/LY#)、CRP、甘胆酸 (CG) 较对照组高, 有统计学意义 ($P<0.05$)、血液和脑脊液神经免疫抗体阳性率、寡克隆区带异常数、IgG 指数及 IgG24 小时鞘内合成率、脑脊液压力、白细胞较对照组高有统计学意义 ($P<0.01$); 而血液淋巴细胞百分比 (LY%)、ASO、游离三碘甲状腺素氨酸 (FT3)、游离甲状腺素 (FT4)、载脂蛋白 A1 (aPOA1)、胱抑素 C (Cysc) 则较对照组低, 差异均有统计学意义 ($P<0.05$); 3 头部磁共振出现病灶例数、脑电图异常较对照组高, 有统计学意义 ($P<0.05$); 4 年龄、性别、病程、肝肾功能指标、脑脊液蛋白、氯化物、糖差异则无统计学意义。

结论 1 与对照组相比, 病例组前驱感染史, 应激事件、意识障碍、认知障碍、癫痫发作多见; 2

病例组血液 WBC、NE%、NE#、LY#、CRP、CG、血液和脑脊液抗体阳性率、寡克隆区带异常数、IgG 指数及 IgG24 小时鞘内合成率、脑脊液压力、WBC、头部磁共振出现病灶例数、脑电图异常较对照组高；而血液 LY%、ASO、FT3、FT4、aPOA1、Cysc 则较对照组低。

关键词：自身免疫性精神病；急性原发性精神病；自身免疫性脑炎；神经免疫抗体

Understanding The Trends and Patterns in Brain Health: A Bibliometric Analysis of Transcriptomics and Schizophrenia Research

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Objective Schizophrenia is a kind of severe mental disorder related to heredity, so far, there has been a lot of evidence on transcriptional correlates with this disorder. At present, there is no bibliometric analysis on transcriptomics related to schizophrenia. We aimed to conduct a bibliometric study of this association to determine the current status and areas for advancement in this field

Methods Publications related to transcriptomics and schizophrenia were retrieved from the Web of Science Core Collection (WoSCC). The WoSCC literature analysis wire, VOSviewer 1.6.19 and CiteSpace 6.1.R6 (64-bit) were used to conduct the bibliometric analysis

Results In total, 4255 publications were included in our study. A total of 20730 authors from 3724 affiliations and 96 countries/regions contributed to this field. The leading authors were Lewis DA, Weinberger DR, and Kleinman JE. The leading institutions were University of California system, Harvard University,

and Icahn School of Medicine at Mount Sinai. The most productive countries were the United States (US), China, and England. In total, 912 journals contributed to this field. Among them, the top three productive journals were Molecular Psychiatry, Translational Psychiatry, and Biological Psychiatry. The important keywords in the clusters were schizophrenia, gene expression, bipolar disorder, prefrontal cortex, depression, microarray, hippocampus, epigenetics, DNA methylation, and autism

Conclusion Transcription-related schizophrenia studies have a very unique advantage in elucidating the pathogenesis of schizophrenia, and more studies are needed in the future to provide new insights into the pathogenesis and treatment of schizophrenia

关键词：schizophrenia, transcriptomics, VOSviewer, CiteSpace, bibliometric analysis

鲁拉西酮对精神分裂症治疗安全性及疗效的研究

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目的 探讨鲁拉西酮对精神分裂症治疗安全性及疗效的研究。

方法 患者选自丽水市第二人民医院 2021 年 1 月至 2023 年 1 月在本院住院治疗的精神分裂症男性患者 75 例，随机分为治疗组(n = 37) 和对照组(n = 38)，治疗组服用鲁拉西酮 60-80mg/日，对照组给予奥氮平 15-20mg/日，开始 8 周的治疗观察及评估阳性和阴性症状量表(PANSS)、临床疗效总评量表(CGI)以及药物不良反应(TESS)；比较两组的精神分裂症于基线期、2 周末、4 周末及 8 周末评定阳性和阴性症状量表(PANSS) 总分变化、临床疗效总评量表(CGI)判定临床疗效以及药物不良反应(TESS)评估安全性及相关不良反应。

结果 精神分裂症治疗组与对照组有效率分别为 91.89%和 89.47%，精神分裂症治疗组与对照组 PANSS 评分、CGI 评分治疗第 4 周及第 8 周与入组当日比较明显改善，差异有统计学意义(P<0.01)，治疗组与对照组比较差异无统计学意义(P>0.05)；

精神分裂症治疗组与对照组均未见严重药物不良反应, 治疗组不良反应发生率为 32.43%; 对照组为 39.47%。

结论 鲁拉西酮治疗精神分裂症疗效与奥氮平相近似, 鲁拉西酮安全性高、不良反应少。

关键词: 鲁拉西酮; 精神分裂症; 安全性; 疗效。

SALL1 调控小鼠运动兴奋性异常的机制研究

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目的 小胶质细胞功能紊乱会影响中枢神经系统稳态。SALL1 是小胶质细胞的特异性基因, 控制小胶质细胞的命运和独特的转录特征, 使其在中枢神经系统的稳态中发挥作用。通过构建 SALL1 RNAi 小鼠模型探索 SALL1 改变影响前额叶皮层中的转录和神经递质代谢异常, 进一步阐明 SALL1 影响小鼠行为改变的作用机制。

方法 构建 SALL1 RNAi 的腺相关病毒和对照病毒, 利用脑立体定位技术注射于 c57B/L 小鼠双侧内侧前额皮层, 将小鼠随机分为 AAV-CON 对照组和 AAV-SALL1 实验组, 病毒感染 3 周后进行行为学测试, 行为学实验结束后取 mPFC 脑组织通过转录组和靶向神经递质代谢测序并结合生物信息学分析, 探索 SALL1 表达干扰后引起的基因表达变化和神经递质变化, 进一步明晰 SALL1 的生物学功能和机制。

结果 利用旷场实验, 三箱社交实验和前脉冲抑制实验进行小鼠行为学评价, 行为学结果提示: SALL1 敲低的小鼠 (AAV-SALL1) 在旷场实验中运动总路程和运动次数 ($t=4.385$, $P=0.0005$; $t=3.78$, $P=0.0018$) 减少, 表现为运动兴奋性下降; 但三箱社交和前脉冲抑制实验未表现出明显异常。SALL1 表达下调导致 799 个基因差异表达, 差异基因主要富集在免疫应答、炎症反应、细胞黏附、感染等生物学功能和途径; 同时, SALL1 敲低的小鼠在前额皮层中较明显的出现 γ -氨基丁酸、谷氨酰胺、谷氨酸和乙酰胆碱增多 ($P=3.61E-06$, $\text{Log}_2\text{FC}=2.245$; $P=0.0008$, $\text{Log}_2\text{FC}=1.77$; $P=0.015$, $\text{Log}_2\text{FC}=1.63$;

$P=6.59E-05$, $\text{Log}_2\text{FC}=1.36$)。

结论 内侧前额皮层 SALL1 表达降低的小鼠出现运动兴奋性下降的特异性行为表现, 且前额皮层中多种神经炎症基因表达异常, GABA 能神经递质增多。因此, SALL1 可能通过调控神经炎症和神经递质介导小鼠兴奋性异常的发生、发展。

关键词: SALL1, 神经递质, 小胶质细胞, 神经炎症

神经胶质细胞与外泌体在精神分裂症诊疗中的研究进展

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目的 精神分裂症是一种常见的重型精神障碍, 罹患此病的患者往往会合并很高的致残率, 是全球主要的公共卫生问题之一。精神分裂症患者发生的病理过程主要是在脑内, 虽然现有的技术已经能反映一部分病变变化, 但一些早期和实时的脑内微环境变化却不能获得, 这并不利于对精神分裂症患者的早期诊断及预后康复。外泌体具有性质稳定的双层膜结构, 且可以穿越血脑屏障, 几乎存在于身体的各个部位, 并且在神经系统的生理和病理过程中发挥着重要作用, 包括废物清除, 细胞间通讯以及保护性或致病性物质向细胞外空间的运输。本文主要回顾总结了外泌体在精神分裂症发病、诊断及治疗方面的研究成果, 重点聚焦于神经胶质细胞来源外泌体以及作用于神经胶质细胞的外泌体发挥作用参与精神分裂症的研究进展。

方法 主要通过在中国知网、PubMed 中输入关键词: 精神分裂症、小胶质细胞、星形胶质细胞、少突胶质细胞、神经炎症、神经可塑性、外泌体。检索日期主要设限在近 5 年内的文献。将这些检索关键词按需交叉组合后进行检索, 大部分选取发表在 I 区 IF>5 分, 阅读后进行归纳总结。

结果 总结归纳后可以发现, 神经胶质细胞能通过参与神经炎症、神经可塑性, 突触修剪等过程影响精神分裂症的发生发展, 而来源于神经胶质细胞的外泌体和作用于神经胶质细胞的外泌体则是神经胶质细胞影响精神分裂症发生发展的重要介质, 且在精神分裂症的诊疗中具有重要价值。

结论 鉴于外泌体的确参与了精神分裂症的多个发病机制,因此在诊断精神分裂症的过程中,它被视为一个颇具潜力的生物标志物。此外,由于外泌体的生物学特性,能够穿越血脑屏障,分布全身各处的特点,它被视作优良的药物载体,并在一系列细胞和动物实验中证实了它作为药物载体的优势。尽管外泌体在诊断和治疗精神分裂症中颇具潜力和优势,但仍未进一步发展运用到临床检测中来,究其原因在于外泌体来源位置多,但高效分离和提纯的技术有限,且关于外泌体的研究多是选择在细胞和小鼠上研究,缺乏更大、更多样化的队列以及对精神分裂症患者和健康人提取的外泌体研究。因此未来关于外泌体的研究可能需要借助于更精密的仪器和更科学的方法来分离提取和检测外泌体,并通过扩大的样本研究量来增强外泌体作为诊疗精神分裂症生物标志物的可行性。

关键词:神经胶质细胞,外泌体,精神分裂症

首发精神分裂症患者时间整合窗口大小及ERP特点研究

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目的 精神分裂症(Schizophrenia, SCZ)是一种严重影响认知、情感和行为的神经障碍。研究表明,精神分裂症患者表现出明显的视听整合障碍,这与他们的日常功能缺陷密切相关。首发精神分裂症(first-episode schizophrenia, FES)患者作为SCZ的一类特殊人群,对于视听整合能力的系统研究较少,尤其是对患者时间整合窗(Temporal Integration Window, TIW)的神经生理反应的研究。本研究旨在填补这一研究空白,利用行为学实验计算FES人群的TIW大小,通过脑电图(EEG)技术分析FES患者的视听整合过程,从而揭示其认知处理的独特特征和潜在神经机制。

方法 本研究采用病例对照设计,包括FES患者和健康成人各30例。首先,对部分参与者进行多种刺激起始不同步(SOAs)的行为实验,以计算两组参与者的时间整合窗口;第二步,采集两组被试

面对视听刺激时的ERP。

结果 首发精神分裂症组的平均时间整合窗口为 $492.86 \pm 216.94 \text{ms}$,显著高于健康对照组的 $226.36 \pm 46.27 \text{ms}$ 。视听同步刺激下FES患者在枕叶区域的P1振幅低于健康成人($P=0.06$),潜伏期明显延长($P<0.01$)。视听异步刺激条件下所诱发的ERP成分不同,如视觉引导的异步刺激条件下FES患者顶叶N1振幅增大($P<0.01$),潜伏期缩短($P<0.01$);听觉引导的异步刺激条件下FES患者顶叶及枕叶均表现为P2振幅增大($P<0.01$),潜伏期缩短($P<0.01$)。

结论 FES患者TIW显著扩大,面对视听多感官刺激时认知决策过程延迟;FES患者面对不同刺激类型所产生的振幅差异不同,可能与视听刺激不同的加工通路有关。

关键词:首发精神分裂症;时间整合窗口

精神分裂症暴力攻击行为的脑结构及脑功能的荟萃分析研究

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目的 精神分裂症的暴力攻击行为,是目前普遍关注的精神卫生问题,且患者的暴力攻击行为常导致治疗疗效欠佳和患者污名化。研究通过荟萃分析方法,基于脑结构及脑功能的文章,探讨精神分裂症患者暴力攻击行为的神经病理机制,为探索特征性神经生物学标记物提供一定的理论基础。

方法 本研究在Web of Science, Medline and PubMed上分别检索了精神分裂症脑结构、脑任务态功能的研究,研究检索时限从建库至2023年7月7日。由2位研究者独立筛选文献、提取资料并采用纽卡斯尔-渥太华量表的质量评价工具评价纳入研究的偏倚风险后,采用SDMPSI, version 6.2.1软件进行Meta分析。

结果 脑结构和脑功能影像学最终分别纳入了6例和8例研究。前者结果表明,有暴力行为的精神分裂症患者(VSZ)与无暴力行为的精神分裂症患者(NVSZ)的灰质体积无统计学差异。与正常

对照组相比, VSZ 患者的脑岛、颞上回 (STG)、左额下回、左海马旁和右壳核的灰质体积减少。与仅有暴力史的正常人群相比, VSZ 患者右侧脑岛和右侧 STG 的体积减少。荟萃回归分析显示, VSZ 患者的精神分裂症病程持续时间与右侧脑岛体积呈负相关。后者结果发现, 与 NVSZ 患者相比, VSZ 患者枕中回和直肌的脑激活明显增加。与正常人群比较, VSZ 患者的前扣带皮层、小脑 VI 区、舌回和纺锤形区的脑激活明显增加。情绪任务的研究进行的亚组分析显示, 与 NVSZ 患者相比, VSZ 患者枕中回的脑激活增强。

结论 情绪感知和调节异常显著增加了精神分裂症患者的暴力风险。额颞边缘网络结构异常及枕中回和直肌的脑功能异常激活可能是精神分裂症患者发生暴力行为的神经病理学基础。

关键词: 精神分裂症; 暴力; 攻击; 脑结构; 脑影像

利用大脑灰质形态学信息预测女性精神分裂症患者的疗效情况

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目的 针对临床采集的 86 例女性精神分裂症 (SZ) 患者的行为学量表数据及结构磁共振数据, 建立大脑灰质形态学特征与治疗响应情况 (住院-出院前后行为学指标的变化情况) 之间的关联, 为进一步建立基于神经影像的精神分裂症疗效预测模型提供参考。

方法 研究对象为接受住院治疗的 86 位女性 SZ 患者 (年龄的均值 (IQR): 38 (26.05-53.41), 单位: 年), 均记录入/出院时的阳性与阴性症状量表 (PANSS) 以及临床疗效总评量表 (CGI), 并采集了 3D T1 加权核磁影像。计算患者大脑皮层结构的体积、皮层厚度、表面积与患者治疗响应情况之间的相关性; 利用支持向量回归 (SVR) 建立基于皮层形态学特征的疗效预测模型。

结果 1、与 PANSS 变化量的相关分析: 体积方面, 右侧梭状回与 PANSS 阳性症状总分变化量 (PANSS-P) 和 PANSS 一般病理症状变化量 (PANSS-GP) 显著相关 (p 值为 0.038 和 0.049),

右侧颞下回与 PANSS-P 显著相关 ($p=0.044$); 表面积方面, 左侧颞上沟后坡与 PANSS-GP 和 PANSS 总分变化量 (PANSS-T) 显著相关 (p 值为 0.041、0.035), 左侧眶额外皮层与 PANSS-P 显著相关 ($p=0.049$), 右侧前扣带回上部与 PANSS 阴性症状变化量 (PANSS-N) 显著相关 ($p=0.043$), 右侧梭状回与 PANSS-P、PANSS-GP、PANSS-T 显著相关 (p 值为 0.03、0.028、0.031), 右侧颞下回与 PANSS-P、PANSS-T 显著相关 (p 值为 0.028、0.034), 右侧颞极与 PANSS-P 显著相关 ($p=0.017$)

2、与 CGI-SI 变化量的相关分析: 体积方面, 左侧颞极、右侧内嗅皮质与 CGI-SI 变化量显著相关 (p 值为 0.028、0.043); 皮层表面积方面, 左侧颞上沟后坡、左侧颞极、右侧梭状回、右侧颞极与 CGI-SI 的变化量显著相关 (p 值为 0.005、0.047、0.036、0.043)

3、与出院时 CGI-GI、CGI-EI 的相关分析: 体积方面, 右侧颞极与出院时 CGI-GI 显著相关 ($p=0.048$); 皮层厚度方面, 右侧扣带回峡部与出院时 CGI-EI 显著相关 ($p=0.038$)

4、基于 DK 皮层分区的体积指标建立的 SVR 回归模型可以对 PANSS G11 维度 (注意障碍) 的变化量进行预测 (MAE=1.41, $p=0.034$)

结论 大脑灰质形态学特征与治疗响应情况存在关联, 显著相关的脑区涵盖记忆、认知相关脑区, 且可利用皮层形态学特征建立针对住院前后症状改善情况的预测模型, 有望为进一步建立基于神经影像的精神分裂症疗效预测模型提供参考。

关键词: 精神分裂症, 疗效预测, 形态学特征, 机器学习

睡眠质量对社区精神分裂症患者攻击行为的影响: 抑郁的中介作用与个人和社会功能的调节作用

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目的 本研究旨在探讨睡眠质量与攻击行为之

间的相关性,抑郁在二者间关系中的中介效应,以及个人和社会功能对这一中介过程的调节效应。

方法 采用便利抽样法,收集 785 份中国彭州社区精神分裂症患者的自我报告数据,使用匹兹堡睡眠质量指数问卷(PSQI)、抑郁症状快速评估量表(QIDS-SR16)、个人和社会功能量表(PSP)、修订版外显攻击行为量表(MOAS)进行调查。

结果 研究发现,睡眠质量与攻击行为呈显著正相关($\beta=0.212^{**}$),抑郁介导了睡眠质量与攻击行为之间的关系(间接效应 $=0.043$,95%CI [0.013, 0.076])。此外,调节中介检验发现,个人和社会功能调节了睡眠质量对抑郁的影响(调节效应 $=-0.005$,95% CI [-0.008, -0.002])。

结论 睡眠质量通过抑郁影响精神分裂症患者攻击行为发生的可能性。个人和社会功能调节了睡眠质量与抑郁、攻击行为之间的关系。本研究丰富了睡眠质量与攻击行为之间关系的研究,可为今后降低精神分裂症患者攻击行为的项目提供参考。此外,研究中获得的证据有利于制定与构建优质护理的策略,稳定医疗和社会秩序。但本研究仍存在一定的局限性。

关键词: 精神分裂症;睡眠质量;抑郁;个人和社会功能;攻击行为

Lactate Levels in The Brain and Blood of Schizophrenia Patients: A Systematic Review and Meta-analysis

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Objective The pathophysiological mechanisms of schizophrenia are still unclear. Converging evidence suggests that energy metabolism abnormalities are in-

involved in schizophrenia, and support its role in the pathophysiology of this disease. Lactate plays an important role in energy metabolism. Many studies have reported changes in the levels of lactate in the brain and serum of schizophrenia patients; however, the results from these studies are not consistent. To overcome this limitation, the goal of the present meta-analysis is to analyze the changes in lactate levels in the brain and blood of schizophrenia patients.

Methods For this systematic review and meta-analysis, we performed a thorough search of relevant literature in the English language, using the MEDLINE, Cochrane, and Embase databases.

Results In the present meta-analysis, 20 studies were scrutinized, including 13 studies on brain lactate levels, which involved 322 schizophrenia patients and 324 healthy individuals as controls. 7 studies on blood lactate levels, involving 234 schizophrenia patients and 238 healthy individuals, were also included. Brain lactate levels were elevated in schizophrenia patients, both in vivo and in post-mortem studies. Nevertheless, blood lactate levels in schizophrenia patients have revealed no statistically significant difference, as compared with control individuals.

Conclusion In comparison with healthy individuals, schizophrenia patients had higher lactate levels in the brain, rather than in the blood. These findings suggest independent regulatory mechanisms of lactate levels in the brain and peripheral tissues. Abnormal lactate metabolism in the brain may be an important pathological mechanism in schizophrenia

关键词: Schizophrenia; lactate; energy metabolism

利培酮联合益生菌对首发精神分裂症患者治疗效果探讨

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目的 分析对于首发精神分裂症患者通过合用利培酮及益生菌的治疗效果,评价益生菌在预防和

治疗精神分裂症中所起的治疗作用, 开辟益生菌作为食物常规食用预防精神疾病及其它相关疾病的新方法。

结果 治疗总有效率观察组为 97.30%, 对照组为 86.49%, $P < 0.05$; 施治前 PANSS、PSP 量表评分 2 组横向比较差异微小 $P > 0.05$, 施治后与对照组做横向对比 PANSS 量表评分为观察组较低, PSP 量表评分为观察组较高 $P < 0.05$; 药物不良反应率观察组为 2.70%, 对照组为 5.41%, $P > 0.05$ 。

结论 精神分裂症患者受病情影响可出现精神活动与所处现实环境相脱离的情况, 表现为情感、思维以及肢体行为等各个方面的异常障碍, 部分患者甚至可出现冲动、伤人以及自杀等行为。利培酮属于异恶唑衍生物, 能够实现对中枢神经系统和多巴胺的拮抗, 有助于促进多巴胺合成以及释放, 对于改善相关阴性症状有重要价值, 然而单一应用利培酮治疗部分患者的疗效仍然有限。近年来研究发现[3], 肠道微生物和人体大脑之间具有双向联系的关系, 通过脑-肠轴, 经由神经、内分泌系统等能够实现信息交流, 并且肠道内微生物也可对中枢神经系统产生一定的功能调节作用, 例如可对学习、记忆、情绪等相关认知功能产生影响。该益生菌配料有动物双歧杆菌乳亚种 V9、干酪乳酪杆菌 Zhang、植物乳植杆菌 P-8、长双歧杆菌婴儿亚种 B8762、乳酸菌类后生元 Probio-Eco 等, 应用益生菌能够对免疫系统产生优良的调节作用, 进而可改善肠道菌群, 进一步影响患者的大脑功能并促进患者的病情康复。本研究显示, 观察组的治疗总有效率明显高于对照组, 同时治疗后的社会功能量表评分改善情况好于对照组, 且两组的药物不良反应率均较低。表明, 利培酮与益生菌两者联合能够有效提升首发精神分裂症患者的整体疗效。对于首发精神分裂症患者合用利培酮以及益生菌治疗能够显著提升临床疗效, 并改善患者的社会功能, 且用药安全性良好。

关键词: 首发精神分裂症; 利培酮; 益生菌; 疗效

以治疗效果为导向的住院精神分裂症患者针灸治疗穴位配伍方案的改进研究

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目的 研究住院精神分裂症患者针灸治疗过程中的穴位配伍方案对治疗效果影响因素。在针灸治疗过程中依据患者体质及精神症状的变化, 改进穴位配伍方案, 并以疗效作为持续改进的依据, 从而达到提高治疗效果的目的是。

方法 回顾性分析了从 2020 年 3 月到 2023 年 12 月期间住院的 90 例精神分裂症患者, 其中 45 例患者在治疗过程中采用的是针灸联合利培酮进行治疗, 穴位依据常见的精神疾病治疗方案进行配伍, 初始治疗酌情考虑患者的具体情况进行方案微调。另外 45 名患者在治疗过程中是服用利培酮治疗, 针灸治疗过程中依据患者的病情或体质变化, 进行穴位配伍方案的持续改进。患者均以 PANSS 评分作为疗效的评价指标, 并且对结果从性别, 年龄, 出院情况三个方面来评估治疗的效果。

结果 针灸在辅助治疗住院精神分裂症患者效果明显, 通过对患者病情及体质的变化分析, 对穴位配伍方案进行改进, 治疗效果相对于单纯的针灸治疗具有一定程度的提高。在不同症状及性别, 年龄等方面, 患者在阳性症状和阴性症状的表现上存在差异。

结论 对精神分裂症患者实施针灸治疗, 具有确切的疗效。在治疗的过程中, 除考虑患者的精神症状外, 纳入更多的考量因素用以指导穴位配伍方案的改进, 能够在提高患者生存质量的前提下, 达到改善精神症状的效果。

关键词: 针灸; 精神分裂; 穴位配伍; 疗效

家庭干预对社区精神分裂症患者康复的疗效

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目的 探讨家庭干预对社区精神分裂症患者精神症状、社会关系、社交能力、服药依从性及疾病家庭负担的作用。

方法 本研究共纳入上海市虹口区 132 名门诊就诊社区康复的精神分裂症患者, 采用随机数字表法分为干预组与对照组, 对照组给与常规治疗及社区随访, 干预组在此基础上实施 1 年的家庭干预,

使用阳性与阴性症状量表、社会支持评定量表、药物依从性量表、社交回避及苦恼量表和疾病家庭负担量表分别评估其精神症状、社会关系、药物依从、社交情况及家庭负担。

结果 两组治疗前阳性与阴性症状量表、社会支持评定量表、药物依从性量表、社交回避及苦恼量表和疾病家庭负担量表评分差异均无统计学意义 ($P>0.05$)。两组治疗后阳性与阴性症状量表总分及各分量表分均较治疗前有下降,且两组间差异均有统计学意义 ($P<0.05$)。治疗后社会支持评定量表及药物依从性量表干预组得分升高、对照组得分降低,两组得分差异均有统计学意义 ($P<0.05$)。治疗后两组社交回避及苦恼量表和疾病家庭负担量表得分均降低,两组间差异均无统计学意义 ($P>0.05$)。

结论 家庭干预能够有效改善社区精神分裂症患者的精神症状、社会关系及服药依从性,对社交能力及疾病家庭负担无明显影响。

关键词: 家庭干预; 社区; 精神分裂症; 康复

Suicidality, Perceived Chronic Stress, and Stress-induced Cortisol Changes Among Individuals with Schizophrenia.

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Objective High-level stress was related to suicide risk, but less is known about the associations of suicidal ideation or behavior with acute stress fluctuation and stress tolerance. The aim of this study was to determine whether high suicidality was correlated with perceived chronic stress and the cortisol fluctuations under stress tasks in schizophrenia.

Methods High suicidality was defined as a lifetime history of suicide attempts or suicidal ideation in the past two weeks. Individuals with schizophrenia and high suicidality (SZ-HS, $n = 59$), with low suicidality (SZ-LS, $n = 207$), and healthy controls (HC, $n = 196$) finished the Perceived Stress Scale. Then, they participated in an experiment that induced stress using the two cognitive tasks. Negative affect was measured at baseline and after finishing each task. The salivary cortisol

was collected before-, after 20 minutes, and after 40 minutes of the tasks.

Results SZ-HS had elevated perceived stress than SZ-LS and HC, but suicidality was not related to baseline cortisol level. Mixed effect models showed that stress tasks induced cortisol changes in all groups; cortisol of SZ-LS was reduced more than healthy controls, but SZ-HS and SZ-LS did not differ in cortisol fluctuations. SZ-HS and SZ-LS experienced similar negative affect changes during tasks and the difference in withdrawal rates was nonsignificant.

Conclusion Suicidality was correlated with high-level perceived stress but did not result in differences in cortisol levels and cortisol reactivities under stress tasks. It suggests the inconsistency between appraisal of stress and biological stress system disturbance among SZ-HS compared to SZ-LS

关键词: suicide, schizophrenia, stress, cortisol

男性精神分裂症亚型的结构磁共振分析

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目的 精神分裂症有很多类型,本研究通过对精神分裂症患者结构磁共振结果的研究,用来识别偏执型与未分化型这两种亚型之间的差异。

方法 共纳入 55 例精神分裂症男性患者,其中偏执型组 33 例,未分化型组 22 例,采集所有患者的结构磁共振图像,使用 MRICron 软件将 3DT1WI 转换为 NIFIT 格式,使用相同版本 (5.3.0) 的 FreeSurfer 软件及 Ubuntu Linux (版本 3.2.0-29-generic) 来构建大脑皮层,根据 Desikan-Kiliany-Atlas, 每个大脑半球被划分为 34 个脑区域,并计算右、左两侧大脑半球的灰质体积、皮层表面积和皮层厚度。使用 SPSS16.0 软件进行统计分析,采用 logistic 回归构建预测模型,在控制整个脑容积和年龄后,使用一般线性模型比较两组之间的灰质体积、皮层表面积和皮层厚度,并采用了虚拟发现率 (FDR) 进行多重比较校正。

结果 偏执型精神分裂症患者的额中回上部灰质体积、颞下回折叠指数和扣带回峡部折叠指数均

大于未分化型精神分裂症患者，且差异均有统计学意义 ($P < 0.05$, FDR 校正)。使用 logistic 回归构建预测模型，模型的辨别能力为 0.798。

结论 利用患者的结构磁共振结果可以做到偏执型与未分化型在精神分裂症中的分类。

关键词：偏执型精神分裂症；未分化型精神分裂症；结构磁共振成像

深圳某区社区管理精神分裂症患者使用棕榈酸帕利哌酮注射液后脱落及其影响因素分析

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目的 分析 2022 年 9 月 16 日至 2023 年 11 月 15 日深圳市某区社区管理精神分裂症患者棕榈酸帕利哌酮注射液 (PP-LAI) 脱落情况及影响因素。

方法 患者基本信息及管理信息来源于深圳市精神卫生防治管理系统，患者口服药及 PP-LAI 治疗信息来源于医院门诊诊疗系统，采用回顾性队列研究方法，使用 Kaplan-Meier 法拟合生存曲线，利用 Cox 比例风险回归模型分析脱落的影响因素。

结果 480 名精神分裂症患者先后使用 PP-LAI，患者年龄 (38.42 ± 10.68) 岁，男性占 51.46%，非深户籍占 84.79%，5 年以上病程 53.54%，注射前 1 年规律门诊 22.20% 注射后合并使用口服药 44.79%，有副反应患者占 16.67%，转为 PP3M 治疗的患者占 5.83%。68.33% 的社区患者维持 PP-LAI 治疗，脱落占 31.67%，30 天、90 天、180 天、360 天的维持治疗累积生存概率分别为 83.85%、75.54%、68.52%、60.04%。Cox 比例风险回归模型分析结果显示，进入 PP3M 治疗阶段的脱落风险是 PP1M 治疗阶段的 0.11(0.02-0.80) 倍，出现副反应的脱落风险是无副反应的 10.31(7.09-14.97) 倍，B、G 医院治疗的脱落风险分别是 A 医院的 3.78(1.05-13.63) 倍和 2.32(1.24-4.34) 倍，出现提前或超时注射的脱落风险分别是规律注射的 5.13(1.51-17.42) 倍和 2.33(1.55-3.52) 倍。

结论 治疗阶段、副反应、注射医院和注射时间规律性是 PP-LAI 脱落的主要影响因素，实施长效

针剂治疗时，加强医护人员培训、科学处置不良反应、及时进入 PP3M 治疗、做好注射患者跟踪，可以提高 PP-LAI 的规律治疗水平。

关键词：精神分裂症；棕榈酸帕利哌酮注射液；回顾性队列研究；生存分析

不同企业氨磺必利片转换前后患者疗效与安全性的比较

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目的 研究不同企业氨磺必利片转换用药给患者带来的影响，以期对精神专科医院如何更加合理的执行国家集采政策，对精神科医生在给患者换药时采取什么样的态度及如何给患者解释，对企业是否需要改进现有的包装做参考。

方法 多中心、回顾性临床研究，在全国范围招募使用过两家企业氨磺必利片的患者，第一家企业氨磺必利用药 ≥ 4 周，第二家企业氨磺必利片用药 ≥ 2 周，用药剂量 50-1200mg，根据换药前后 BPRS 评分总分值变化判定疗效变化，安全性评估使用精神科常用副反应量表 (TESS)，采用使用第一家企业氨磺必利片最后一轮的评分及使用第二家企业的氨磺必利片两周的评分。

结果 全国共招募到 206 例患者，BPRS 评分两次观察的节点分别是：均值 58.5, 44 ($p < 0.05$)，中位数 59.5, 41，众数 63, 29、54、63。副反应量表 (TESS) 换药后无兴奋激越、情绪抑郁、失眠、嗜睡、出汗、头昏和头晕、食欲减退和厌食的人数占比更高，且换药前后失眠或食欲减退、厌食的变化差距更大。

结论 服用氨磺必利片疗效良好的患者换用第二家企业的氨磺必利片后，病情稳定且原有的不良反应能持续耐受。

关键词：氨磺必利片 BPRS 评分 TESS

CBT 研究协作组

CBT 联合 SSRI 药物治疗抑郁障碍的疗效与影响因素

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目的 抑郁障碍是一类以显著且持久的抑郁症状群为主要特征的心境障碍，其中抑郁症是抑郁障碍的一种典型情况。抑郁障碍的治疗主要依赖于药物治疗、心理治疗和物理治疗等方式，然而在临床治疗中，单一治疗的疗效往往欠佳，尤其是在难治性抑郁障碍的症状改善方面。为了提高疗效，联合治疗的概念被提出，并在本世纪初引发了广泛的关注和研究。目前，CBT 与 SSRI 药物的联合治疗已有大量实证研究，且多数研究支持联合治疗较单一治疗更有优势，但对不同年龄段患者是否均有优势以及疗效的影响因素暂无定论。因此，本文对国内外近二十年已发表的文献进行筛选，对 CBT 联合 SSRI 药物治疗青少年、成人及老年抑郁障碍的疗效与影响因素进行讨论和综述。

方法 计算机检索中国知网数据库、万方数据库以及 PubMed 数据库，检索时限为 2003 年 1 月-2023 年 10 月，检索词包括一个诊断性关键词、至少一个药物治疗关键词以及至少一个心理治疗关键词。初步检索到相关文献 3101 篇，根据文献纳入与排除标准，经过查重、对标题、摘要和全文进行阅读后，最终纳入文献 42 篇，其中包括 36 篇 RCT、3 篇 Meta 分析和 3 篇综述。

结果 大多数研究支持 CBT 与 SSRI 药物的联合治疗较单一治疗在青少年、成人和老年抑郁障碍患者中更有优势，但也有不同结果。本文进一步分析发现，联合治疗的疗效在不同年龄段患者中有所差异，这与患者的抑郁程度、认知功能、文化水平、对治疗的反应性、治疗时长和结束时间等因素有关。此外，在已发表的研究中仍存在不足之处，CBT 与 SSRI 药物联合治疗抑郁障碍的神经机制研究较少，关于联合治疗的生物学证据需进一步探索。

结论 本文梳理了国内外近二十年有关 CBT 联合 SSRI 药物治疗抑郁障碍的相关研究，探讨了 CBT 与 SSRI 药物的联合治疗对青少年、成人及老年抑郁障碍患者的疗效及影响因素。从总体上看，

CBT 联合 SSRI 药物治疗比单纯 CBT 或药物治疗有优势，但这种优势在青少年、成人和老年抑郁障碍患者中受不同因素的影响而有所差异。在青少年中，联合治疗更适合具有共病、低绝望感和自杀意念的重性抑郁障碍患者，而不适合有 CBT 无反应史、接受过联合治疗的患者，其中 CBT 的次数不应小于 9 次，并在尽可能在暑假期间结束治疗。在成人中，联合治疗适用于轻度和轻中度抑郁障碍患者，而不适用于忧郁型抑郁障碍和产后抑郁障碍患者。在老年人中，70 岁以下具有正常认知功能和较高文化水平的老年人更能从联合治疗中获益。并且，联合治疗相比于单纯药物或心理治疗需要更多的资源也更加昂贵，因此，在临床实践中，应全面考虑患者的情况并根据患者的受益-负担平衡和偏好选择是否采取联合治疗方式。

关键词：抑郁障碍；认知行为疗法；选择性 5-羟色胺再摄取抑制剂；联合治疗

精神障碍的认知行为治疗现状与发展方向

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目的 鉴于国内精神心理从业人员真正掌握认知行为治疗 (cognitive-behavioral therapy, CBT) 的人数并不多，且对 CBT 依然存在诸多误解，非常有必要面向国内同行开展连续性的 CBT 培训与督导，以有效提升从业人员的相关知识与技能，促进精神障碍患者的康复。展示 CBT 在精神障碍的临床实践与研究现状、发展方向，以供精神科同行参考。

方法 将 CBT 的文献复习与临床实践结合起来，系统阐述 CBT 在不同精神障碍中的应用情况。

结果 简要概述了精神病理学的认知模型，然后就共情理解与合作联盟、家庭作业、引导性发现、心理健康教育、其他治疗技术在 CBT 中的重要性做了说明，接着就包括抑郁症、焦虑障碍、强迫症、创伤后应激障碍、失眠、进食障碍、物质成瘾障碍、双相障碍、精神分裂症和人格障碍在内的不同精神障碍的 CBT 的理论、临床实践与研究结果进行了综述，指出了目前 CBT 研究的局限性，最后结合自助认知行为治疗 (书籍、计算机化、手机化和网络化 CBT) 简要展望了未来 CBT 的发展方向，即人工智能 CBT

的美好方向。

结论 越来越多的研究证实了 CBT 的疗效,历经七十多年的临床实践证实了 CBT 在精神科领域的风采与价值,国内同行需要在临床上弥补这一短板。

关键词: 认知行为治疗, 精神障碍, 理论, 模型, 进展

强迫障碍共病抽动秽语综合征 1 例

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目的 强迫障碍是一种慢性精神疾病,以强迫思维和强迫行为特征。抽动秽语综合征是一种慢性神经精神障碍,多起病于儿童时期,主要表现为不自主地多种运动和发声抽动。有研究表明,约 20% 的强迫障碍患者存在不自主抽动的症状。本文报道了 1 例强迫障碍共病抽动秽语综合征的诊疗案例,通过采用药物治疗(舍曲林 150 mg 早、阿立哌唑口服液 15 ml 晚),习惯逆转训练及重复经颅磁刺激治疗,使得患者强迫症状及抽动症状明显减少,社会功能较前恢复。为强迫障碍共病抽动秽语综合征的治疗提供参考。

方法 患者,男性,17 岁,因“反复想事情 3 年,肢体不自主抽动 1 年,加重 2 个月”入院。3 年前患者逐渐出现控制不住的想事情,1 年前间断出现不自主肢体抽动,拳打脚踢伴口中谩骂。曾就诊外院 1,诊断为强迫障碍,给予氟伏沙明 50 mg 早、150 mg 晚,后就诊外院 2,诊断抽动障碍,给予丙戊酸镁缓释片 0.5 g 早晚、氟哌啶醇 4 mg 晚、喹硫平 50 mg 晚、氯氮平 25 mg 晚,后减停氟哌啶醇、喹硫平、氯氮平,换用利培酮 2 mg 早、4 mg 晚,奥氮平 10 mg 早、晚治疗,效果不佳。2 个月前病情加重,不愿出门,时发脾气、想打人。为求治疗,来本院住院。

结果 依据 ICD-10 的诊断标准,诊断为强迫障碍、抽动秽语综合征。采用药物治疗(舍曲林 150 mg 早、阿立哌唑口服液 15 ml 晚),习惯逆转训练及重复经颅磁刺激治疗。患者住院治疗 4 周症状好转出院,强迫症状及抽动症状减轻,情绪稳定。患者出院后于门诊随访 6 个月,强迫症状及抽动症状明显减

少,社会功能恢复。

结论 药物治疗、心理治疗结合物理治疗,是改善强迫障碍共病抽动秽语综合征的有效方式,可获得较好的治疗效果。

关键词: 抽动秽语综合征,强迫障碍,儿童青少年,共病

1 例适应障碍产妇“问题管理加”干预的个案报告

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目的 本文介绍了对 1 例适应障碍产妇进行“问题管理加”(Problem Management Plus,简称 PM+)干预的整个治疗过程,并讨论了 PM+干预在此案例中的治疗效果,为 PM+干预技术在提升产妇群体心理健康水平方面提供循证证据。

方法 采用 PM+干预,进行 6 次面对面个体咨询,包括首次评估会谈与 5 次治疗会谈。每周 1 次,每次 90 分钟。在评估会谈中,治疗师确定患者问题在于 5 月前个案经历生产、感染流感(自己与家人)、月子中心拒收等应激源后,产生情绪困扰、家庭冲突以及社会功能受损等症状,同时治疗师从情绪水平、问题严重程度及对社会功能和健康影响、活动功能和社会支持对患者进行综合评估,并与患者签署知情同意后,确定采用 PM+干预方案进行治疗。治疗前后采用 PSYCHLOPS 量表、活动功能量表(WHODAS)、病人健康问卷抑郁症状群量表(Patient Health Questionnaire 9-Item PHQ-9)、广泛性焦虑量表(7-item Generalized Anxiety Disorder Scale,GAD-7)、领悟社会支持量表(Perceived Social Support Scale,PSSS)评估 PM+治疗效果。

结果 治疗结束后患者的 GAD-7 得分由 6 分降至 4 分,PHQ-9 得分由 11 分降至 3 分;PSYCHLOPS 得分从 20 分逐渐降至 5 分;WHODAS 量表得分从 20 分降至 17 分;PASS 量表得分由 58 提高至 69 分。

结论 妊娠分娩作为重大应激事件,容易使女性出现焦虑、抑郁、睡眠、疲乏等问题,孕产期全面心理健康促进(GMHP)理念在《健康中国行动(2019-2030 年)》中提出,心理健康保健成为孕产

期女性健康保健的重要一环。而目前针对孕妇心理健康问题的有效的干预模式研究较少,这是中国目前亟待解决的重要卫生问题。

PM+问题管理加(PM+),是一项基于认知行为疗法(CBT)和人际关系治疗(IPT)理论短程跨诊断的心理干预技术,它具有结构清晰、操作性强等优势,它主要适用于逆境下成人。在本案例中,PM+的减压、问题管理、行为激活、获得支持四大策略可有效帮助适应障碍产妇降低抑郁焦虑水平,恢复社会功能,改善人际关系,提升社会支持水平。PM+干预技术对适应障碍产妇的心理治疗有着重要指导意义。

关键词: 问题管理家,产妇,适应障碍,个案研究

重复经颅磁刺激对青少年抑郁障碍快感缺失的治疗

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目的 随着青少年抑郁障碍的发病率逐年攀升,目前精神科收治的抑郁障碍患者年龄结构开始偏向于青少年为主,因青少年患者年龄小,其在用药安全性和有效性上均存在争议。重复经颅磁刺激治疗具有无创、安全、操作简便和不良反应小的优点,因此非药物治疗--重复经颅磁刺激治疗为临床治疗青少年抑郁障碍带来了新的方向。流行病学调查显示快感缺失为青少年抑郁障碍的主要核心症状之一,探讨重复经颅磁治疗对青少年抑郁障碍社会快感缺失的疗效评价,对于临床上制定青少年抑郁障碍的治疗方案具有重要的理论基础和指导意义。

方法 重复经颅磁刺激治疗(repetitive transcranial magnetic stimulation, rTMS)是运用磁场脉冲所诱发一定强度的感应电流,使治疗脑区的神经细胞去极化以达到双向调节兴奋与抑制之间的关系,具有无创、安全、操作简便和不良反应小的优点。rTMS治疗青少年抑郁障碍快感缺失的方案为10Hz,左侧额叶背外侧。快感缺失作为抑郁症的主要症状之一,使用快乐面孔识别任务探讨 rTMS 治疗快感缺失的疗效。

结果 经过10Hz,左侧额叶背外侧 rTMS 治疗,快感缺失患者提高了面孔识别任务中的正确率以及

反应时间,减少了快感缺失量表分,提示左侧额叶背外侧 rTMS 可以改善抑郁症患者的快感缺失症状及对现实生活中积极情绪线索识别的能力。

结论 目前 rTMS 治疗青少年抑郁障碍快感缺失的治疗方案尚处于初始阶段,刺激靶点、刺激强度、刺激模式和治疗周期等尚无明确指南,根据目前的文献资料,本研究采用10Hz,左侧额叶背外侧 rTMS 治疗方案,以20次为一个疗程,治疗青少年抑郁障碍快感缺失。研究证实, rTMS 能够有效降低青少年的抑郁症状,对于快感缺失情况同样有效果。

关键词: 重复经颅磁刺激,青少年,抑郁障碍,快感缺失,左侧额叶背外侧

阿立哌唑与利培酮治疗女性精神分裂症患者的认知功能及泌乳素水平疗效对比

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目的 传统抗精神病药物存在闭经、泌乳及发胖等不良反应,相比男性患者,对女性患者的影响更大,这也是影响患者服药依从性的主要原因。本研究就阿立哌唑与利培酮治疗女性精神分裂症患者的疗效评估及对女性激素水平,以及事件相关电位P300的影响进行对比研究,从而更加个体化、合理性的指导临床用药。

方法 将2022年7月-2023年7月福建省福州神经精神病防治院符合入组条件的85例女性精神分裂症住院患者随机分成2组,分别给予阿立哌唑(42例)和利培酮(43例)治疗。分析对比两组的一般资料,以及两组在治疗前、治疗8周后阳性与阴性症状量表(Positive and Negative Syndrome Scale, PANSS)评分、P300成分、血清催乳素水平对比。

结果 阿立哌唑组和利培酮组其一般资料无显著差异($P>0.05$);两组 PANSS 量表总评分在治疗前未见显著差异($P>0.05$),治疗后 PANSS 量表总评分较治疗前均有降低($P<0.05$);阿立哌唑组和利培酮组其 P300 潜伏期较治疗前未见显著性差异($P>0.05$),但 P300 波幅治疗后较治疗前明显增高($P<0.05$);阿立哌唑组的泌乳素水平在治疗前后未见显著差异($P>0.05$),而利培酮组的泌乳素水平有所升

高 ($P < 0.05$)。

结论 阿立哌唑和利培酮作为疗效好的临床抗精神病药物,能够有效且快速的控制临床精神症状(阴性症状和阳性症状),改善认知功能,有利于精神分裂症患者预后恢复,具有安全性,且不良反应均较小,患者易于接受,服药依从性较好。此外,阿立哌唑和利培酮相比,基本不引起泌乳、月经紊乱、闭经等现象,更适合推荐女性患者服用。

关键词: 精神分裂症,女性,阿立哌唑,利培酮,P300成分,催乳素水平

首发精神障碍青少年患者父母心理社会轨迹探究

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目的 探索首发精神障碍青少年患者父母心理社会轨迹,为针对性干预提供参考

方法 对 42 例首发精神障碍青少年患者的 43 名父母,采用一般资料调查表、应付方式问卷、SCL-90 问卷于确诊 2 周内进行调查,于 6 个月,12 个月再用 SCL-90 问卷调查;于上述 3 个时间段对患者父母进行半结构化访谈,归的分析其心理社会轨迹

结果 父母 3 个时间段 SCL-90 得分呈下降趋势,差异有统计学意义($P < 0.05$);依据应付方式得分分为速避自责组(22 人)与非退避自责组(21 人),两组 SCL-90 得分比较,第 6 个月及时间效应有统计学意义(均 $P < 0.05$)。访谈资料呈现心理弹性、心理恢复、心理痛苦 3 种心理社会轨迹。弹性轨迹:非退避自责组 21 名父母,他们最初对孩子患病事实难以接受,互相责怪,通过学习和自我调整,在较短的时间内平衡了孩子疾病和生活之间的关系,这一轨迹随着时间推移保持平稳。2.痛苦轨迹:退避自责组后期访谈负反馈型结果 7 名父母,他们长时间拒绝接受现实,被迫求医,情绪崩溃,担忧疗效,害怕熟人知道,影响孩子前途。虽然他们为患者付出了努力,但 12 个月过去,仍持续处于痛苦和焦虑的状态。3.恢复轨迹:退避自责组后期访谈正反馈型结果 15 名父母,他们最初否认、愤怒;接受病情后,愧疚自责;治疗过程,焦虑痛苦、寝食难安,虽信任医生,又忧虑疗效;后 6 个月在家人和社会帮助下,通过

采取积极应对措施,改善了患者和自己的境况,工作基本恢复,虽忧虑孩子前途,但对孩子疾病治疗持积极态度

结论 首发精神障碍青少年患者父母早期心理社会轨迹呈 3 种不同形式,大部分父母心理健康水平随患者病情好转而逐渐恢复,少部分父母心理痛苦持续存在。医护人员应同步对患者父母实施针对性干预,以提高其心理健康水平。

关键词: 青少年;首发精神障碍;父母;心理社会轨迹;心理健康;应付方式;问卷调查;质性研究

社区居民的抑郁症认知状况及影响因素调查

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目的 了解现阶段社区居民对抑郁症在识别、归因、救助方式及对抑郁症患者态度等方面的信息及影响因素,以制定有效的健康教育计划和策略,提高居民对抑郁症的认知水平。

方法 于 2022 年 9 至 11 月采用方便抽样、通过问卷星平台,调查区域划分参照《中华人民共和国国民经济和社会发展第十三个五年规划纲要》四大经济区域的划分方法分别在东部、中部、西部及东北具有代表性的城市选取 18 岁及以上的常住居民共 1171 名进行问卷调查,调查问卷包括自编的社会人口学资料问卷和抑郁症案例问卷两部分;采用 SPSS 25.0 统计软件分析,一般人口学资料如性别、年龄等采用频数、构成比等统计描述,两组调查对象量表评分的比较采用两独立样本 t 检验分析,若方差不齐则改用校正 t 检验,3 组或 3 组以上调查对象量表评分的比较采用单因素方差分析。

结果 1171 份问卷中 1104 份有效,58%的居民能够正确识别抑郁症,64%的居民认为工作压力太大是抑郁症首要因素,“找人做心理咨询”(37%)是居民建议的首位求助方式,不到一半(45%)居民认为抑郁症患者具有是非判断能力,64%居民认为抑郁症患者治疗后能继续工作;过半(52%)居民认为抑郁症患者对他人造成伤害的可能性会增加。

结论 居民对抑郁症识别、归因、救助方式仍有不足,同时也存在公众对抑郁症的污名化现象,需要采取对特定人群的抑郁知识宣教,以提高社区居民的心理健康素养。

关键词:社区居民;抑郁症;态度

Comparison of Mental Health Networks Across Different Educational Stages

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Objective Mental health concerns are growing more prevalent among students of school age. This study employed network analysis to view mental health problems as a network of interconnected symptoms. It aimed to identify central symptoms and connections between mental health symptoms, and to compare how these networks vary across different stages of school age

Methods In this study, a sum of 60,465 Chinese students in Grades 4 through 12 were selected to participate in the Middle School Student Mental Health Inventory. The mental health network and bridge centrality were assessed through network analysis. Network comparison tests were performed to compare the networks among elementary, junior high, and senior high school students

Results The findings indicated that anxiety emerged consistently as a central symptom of mental health issues across all educational levels. Furthermore, distinctive central symptoms were observed at each stage: paranoid ideation was prevalent in both junior and senior high school, whereas emotional disturbance was particularly characteristic of elementary school. Upon comparing the network structures at different educational stages, substantial differences were observed among the three network structures. A comparison of global strength revealed that the mental health network connectivity was more pronounced among senior high school students, indicating closer associations between symptoms in this group

Conclusion Identifying core symptoms and their unique connections, especially the strong links between symptoms in older high school students, and understanding these unique characteristics at each stage is crucial for creating successful mental health symptom prevention and intervention strategies for students in educational settings

关键词: Mental health, School-aged students, Network analysis

精神分裂症脑白质结构与功能耦合的异常

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目的 探讨精神分裂症患者脑白质结构网络和静息态功能网络的异常以及结构和功能网络耦合的差异。

方法 收集2019年4月到2020年12月就诊于齐齐哈尔医学院附属第四医院的共59例精神分裂症患者,其中35例作为原始数据集进行研究比较,24例作为独立验证集用以验证我们实验结果,同期招募了39例健康对照(HC)并对所有人进行弥散张量成像(diffusion tensor imaging, DTI)和静息态功能磁共振成像(resting-state functional magnetic resonance imaging, rs-fMRI)扫描。采用基于图论分析的方法,探讨精神分裂症患者脑白质结构网络和静息态功能网络节点连接属性的变化,及其与精神分裂症症状之间的关系;同时进一步探讨精神分裂症患者结构-功能耦合的异常表现;再结合SVM方法探讨脑区的异常变化是否可以用于精神分裂症的识别。

结果 与对照组相比,患者组在右侧梭状回、双侧尾状核、左侧丘脑、右侧颞极:颞中回的节点属性值在结构和功能脑网络中都存在异常改变;全局指标两组差异无统计学意义($P > 0.05$, FDR校正);在功能网络中,患者组左侧枕下回节点中心度值与PANSS量表总分呈负相关,左侧丘脑的节点中心度值与PANSS量表总分呈正相关(Bonferroni校正, $P < 0.025$);与对照组相比,患者组在右侧回直肌和左缘上回的结构-功能耦合呈现显著增加($P < 0.05$,

FDR 校正); 结构网络中降低的右侧回直肌的节点聚类系数和节点局部效率值的受试者操作特征曲线的曲线下面积为 0.845, 准确度为 81.08%, 敏感度为 100%, 特异度为 71.43%。

结论 精神分裂症患者的白质结构网络和静息态功能网络存在共有的改变; 右侧回直肌和左缘上回结构-功能耦合增加可能对于精神分裂症的识别有提示作用。

关键词: 精神分裂症; 节点属性值; 结构-功能耦合; 支持向量机

Abnormal Structure and Function of White Matter in Obsessive-compulsive Disorder

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Objective Abnormal structure and function of gray matter (GM) have been discovered in the cortico-striatal-thalamic-cortical (CSTC) circuit in obsessive-compulsive disorder (OCD). The GM structure and function may be influenced by the structure and function of the white matter (WM). Therefore, it is crucial to explore the characteristics of WM in OCD

Methods Diffusion tensor imaging and resting-state functional magnetic resonance imaging data of 52 patients with OCD and 39 healthy controls (HCs) were collected. The tract-based spatial statistics, amplitude of low-frequency fluctuations (ALFF), and structural-functional coupling approaches were utilized to explore the WM structure and function. Furthermore, the relationship between the abnormal WM structure and function and clinical symptoms of OCD was investigated using Pearson's correlation. Support vector machine was performed to evaluate whether patients with OCD could be identified with the changed WM structure and function

Results Compared to HCs, the lower fractional

anisotropy (FA) values of four clusters including the superior corona radiata, anterior corona radiata, right superior longitudinal fasciculus, corpus callosum, left posterior corona radiata, fornix, and the right anterior limb of internal capsule, reduced ALFF/FA ratio in the left anterior thalamic radiation (ATR), and the decreased functional connectivity between the left ATR and the left dorsal lateral prefrontal cortex within CSTC circuit at rest were observed in OCD. The decreased ALFF/FA ratio in the left ATR negatively correlated with Yale-Brown Obsessive-Compulsive Scale obsessive thinking scores and Hamilton Anxiety Rating Scale scores in OCD. Furthermore, the features that combined the abnormal WM structure and function performed best in distinguishing OCD from HCs with the appropriate accuracy (0.80), sensitivity (0.82), as well as specificity (0.80)

Conclusion Current research discovered changed WM structure and function in OCD. Furthermore, abnormal WM structural-functional coupling may lead to aberrant GM connectivity within the CSTC circuit at rest in OCD

关键词: Obsessive-compulsive disorder, white matter, fractional anisotropy, amplitude of low-frequency fluctuations, support vector machine

Causality of Genetically Determined Serum Metabolites on Emotional Lability: A Two-sample Mendelian Randomization Study

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Objective Emotional lability, a transdiagnostic feature characterized by rapid emotional shifts, contributes significantly to functional impairment across psy-

chiatric disorders, including depression, bipolar disorder, and schizophrenia. Despite its clinical relevance, the etiology remains poorly understood, hindering effective screening and interventions. Growing evidence suggests metabolic alterations may play a crucial role in psychiatric disorder pathophysiology

Methods A comprehensive Mendelian randomization (MR) design integrated summary-level data from large genome-wide association studies on serum metabolites (8,299 European participants) and emotional lability (3,268 European samples) to investigate causal associations between genetically determined metabolite levels and emotional lability. Instrumental variable assumptions, heterogeneity, horizontal pleiotropy, directionality, and sensitivity analyses were evaluated

Results Of 1,400 metabolites and ratios analyzed, 30 metabolites showed causal associations with increased emotional lability risk based on the inverse-variance weighted method. Sensitivity analyses identified three potential causal metabolites: hydrocinnamate (OR: 1.277, CI: 1.071-1.522, $P=6.3e-03$) associated with increased risk, while glycolithocholate (OR: 0.779, CI: 0.667-0.911, $P=1.7e-03$) and 3β -hydroxy-5-choleonic acid (OR: 0.857, CI: 0.756-0.971, $P=1.5e-02$) associated with decreased risk

Conclusion This MR study supports a causal link between hydrocinnamate, glycolithocholate, and 3β -hydroxy-5-choleonic acid levels and emotional lability incidence, providing potential metabolic biomarkers and therapeutic targets for emotional dysregulation in psychiatric disorders

关键词: Emotional lability, Mendelian randomization, Serum metabolite

童年情感虐待对青少年心境障碍患者非自杀性自伤行为的影响: 有调节的中介模型

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目的 探讨青少年心境障碍患者非自杀性自伤

的影响因素,并且了解童年创伤经历与NSSI的关系

方法 采用方便取样法,使用青少年自我伤害行为问卷、儿童期虐待问卷、多伦多述情障碍量表及贝克自杀意念量表对242名青少年情绪障碍患者进行调查,采用逐步回归分析探讨NSSI行为与各变量间的关系,最后采用Hayes-Process插件检验各模型的中介效应和调节效应。

结果 本研究中NSSI的检出率为81.40%(197例),被霸凌经历($\beta=0.19, P=0.001$)、童年情感虐待($\beta=0.25, P<0.001$)、情绪表达困难($\beta=0.25, P<0.001$)与青少年NSSI严重程度呈正相关,年龄($\beta=-0.12, P=0.046$)与NSSI严重程度呈负相关。情绪表达困难在童年情感虐待与NSSI之间起中介效应,中介作用大小为0.25,95%可信区间为(0.02~0.10),占总效应21%。该中介作用受到被霸凌经历的调节,NSSI严重程度与情绪表达困难和被霸凌的交互项正向关联($\beta=3.23, P<0.001$),调节中介指数为0.48,Bootstrap检验95%CI为0.08~1.14

结论 青少年心境障碍患者童年情感虐待既可以直接作用于也可通过情绪表达困难间接作用于NSSI,被霸凌经历调节了NSSI与情绪表达困难的关系。

关键词: 非自杀性自伤行为,青少年心境障碍,童年情感虐待,情绪表达困难

伴睡眠障碍首发抑郁症患者心率变异性与CRP、IL-6、TNF- α 相关性分析

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目的 本文研究并探讨伴睡眠障碍首发抑郁症患者24小时动态心电图心率变异性与C-反应蛋白、白细胞介素-6、肿瘤坏死因子- α 相关性分析。

方法 本文拟采用横断面设计,选取2023年12月到2024年4月期间于新疆维吾尔自治区人民医院临床心理科门诊和住院就诊的首发抑郁症患者,将伴睡眠障碍首发抑郁症患者、不伴睡眠障碍的首发抑郁症患者作为研究对象,通过收集受试者外周血液炎症标志物C-反应蛋白、白细胞介素-6、肿瘤坏死因子- α ,并检测受试者24小时动态心电图分析

心率变异性参数 SDNN 以及 RMSSD 指标, 使用适当的统计分析方法, 得出这些指标之间的相关性分析结果, 探讨可能机制和相互影响关系。

结果 研究发现, 伴睡眠障碍的首发抑郁症患者的心率变异性 SDNN 以及 RMSSD 指标明显降低。同时, 这些患者的血清 C-反应蛋白、白细胞介素-6 和肿瘤坏死因子- α 水平也呈现升高的趋势。进一步的相关性分析显示, 伴睡眠障碍首发抑郁症患者的心率变异性 SDNN 以及 RMSSD 指标与血清 C-反应蛋白、白细胞介素-6 和肿瘤坏死因子- α 水平炎症标志物的水平呈负相关关系

结论 伴睡眠障碍首发抑郁症患者的心率变异性与 C-反应蛋白、白细胞介素-6、肿瘤坏死因子- α 存在相关性。

关键词: 抑郁症; 睡眠障碍; 炎症标志物; 心率变异性; 相关性分析

伴非自杀性自伤精神障碍患者静息态功能磁共振成像研究

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目的 探讨伴非自杀性自伤 (non-suicidal self-injury, NSSI) 的精神障碍患者静息态下功能磁共振成像特征。

方法 选取 2019 年 10 月至 2022 年 12 月在全国范围内不同地区的 12 家医院精神科和医学心理科门诊中, 入组伴发 NSSI 的精神障碍患者 149 例, 其中符合 NSSI 诊断(NSSI-Disorder)的患者 83 例, 不符合 NSSI 诊断 (NSSI-Behavior) 的患者 66 例, 并通过广告招募了 63 名年龄、性别、受教育程度与患者组相匹配的健康对照组。核磁共振扫描采用德国西门子公司最新型号的超高场 Verio MRI 机 (磁场强度 3.0T, 梯度场强 45mT, 切换率 150mT), 进行静息态功能磁共振成像 (rs-fMRI) 数据采集。计算低频振幅 (amplitude of low frequency fluctuation, ALFF) 和区域一致性 (regional homogeneity, ReHo) 等脑影像学指标, 研究大脑局部自发活动的特征, 在确定异常脑区后, 进行功能连接 (Functional connectivity, FC) 分析。

结果 与健康对照组比较, NSSI-Behavior 组和

NSSI-Disorder 组患者 ALFF 值增高的脑区是右侧内侧额上回, 降低的脑区是左侧楔前叶, ReHo 值增高的脑区是右侧额下回三角部, 并且在右侧额下回内部 FC 值显著增强, 差异有统计学意义 (P 均 <0.01 , Alphasim 矫正)。与 NSSI-Behavior 组相比, NSSI-Disorder 组患者 ALFF 值增高的脑区为右侧内侧额上回, 差异有统计学意义 (P <0.01 , Alphasim 矫正)。

结论 伴 NSSI 的精神障碍患者在静息态下表现出多个脑区的神经元异常活动, 主要包括右侧内侧额上回、左侧楔前叶和右侧额下回。此外, 内侧额上回在区分 NSSI-Behavior 和 NSSI-Disorder 患者方面具有较高的敏感度和特异度。

关键词: 精神障碍 非自杀性自伤 低频振幅 区域一致性 功能连接

精神障碍患者非自杀性自伤的危险因素分析

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目的 探讨伴发 NSSI 的精神障碍患者在人格障碍、正念觉知、述情障碍、童年创伤及父母教养方式等表现出的心理特征及危险因素。

方法 在全国范围内不同地区的 12 家医院精神科和医学心理科门诊中, 入组伴发 NSSI 的精神障碍患者 275 例, 其中符合 NSSI 诊断(NSSI-Disorder) 的患者 162 例, 不符合 NSSI 诊断 (NSSI-Behavior) 的患者 113 例, 采用自编一般人口学资料问卷、简易自杀行为问卷、汉密尔顿抑郁量表、边缘症状清单缩减版、人格障碍诊断问卷、正念注意觉知量表、述情障碍量表、童年创伤问卷、父母教养方式量表对两组被试进行调查。采用 Logistic 回归分析导致 NSSI 行为的危险因素。

结果 NSSI-Disorder 组与 NSSI-Behavior 组在年龄、性别、教育背景、户籍所在地等人口学资料方面, 未表现出统计学差异; 相较于 NSSI-Behavior 组, NSSI-Disorder 组患者在边缘症状清单、人格障碍问卷的偏执型、分裂样、反社会型及回避型人格障碍评分、多伦多述情障碍量表中识别情感与躯体感受能力不足的评分、童年创伤量表的情感虐待、情感及躯体忽视评分和量表总分, 以及父亲惩罚严厉和

父母过分干涉的教养方式评分,均呈现出显著升高。而在正念注意觉知量表、多伦多述情障碍量表的少幻想维度和情感温暖理解的父母教养方式评分方面,则呈现出显著降低。运用 backward 算法进行二元 logistic 回归分析,分裂样人格障碍 OR 值为 1.221 (95%CI: 1.045~1.427),多伦多述情障碍中少幻想维度 OR 值为 0.917 (95%CI: 0.858~0.980),父亲情感温暖理解的教养方式 OR 值为 0.976 (95%CI: 0.955~0.998)。

结论 NSSI-Disorder 组的患者表现出显著的人格改变,特别在边缘型、偏执型、分裂样、反社会型和回避型人格障碍中,NSSI 出现的频率更高,症状表现更明显;在正念觉知方面,患者对当下的注意和觉知水平低,并且缺乏有效的情绪调节方法;在述情障碍方面,患者对情感与躯体感受的认识和区分能力不足,想象力增加;在童年创伤方面,患者在幼年时期经历更多的情感虐待、情感忽视与躯体忽视;在父母教养方式方面,患者缺少了父母温暖理解的教育方式,更多地经历了父亲严厉惩罚和父母过度干涉的教育方式。其中,分裂样人格障碍与 NSSI 发生的严重程度呈正相关,是精神障碍患者伴发 NSSI 的独立危险因素;少幻想和父亲情感温暖理解的教养方式与 NSSI 发生的严重程度呈负相关,是精神障碍患者伴发 NSSI 的保护因素。

关键词:精神障碍 非自杀性自伤 危险因素

非侵入性神经调控治疗广泛性焦虑障碍的临床研究进展

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背景 焦虑障碍是我国发病率最高的精神疾病之一,而广泛性焦虑障碍又是其最常见的亚型。安全、有效、起效快的非侵入性神经调控技术成为广泛性焦虑障碍的研究热点,目前已经有不少研究结果证明其治疗广泛性焦虑障碍有效,但在刺激靶点、参数设置等选择上存在争议。

目的 本文将述评近年来非侵入性神经调控技术在广泛性焦虑障碍治疗中的研究进展,提供最佳刺激靶点、参数和治疗方案的参考,以期为非侵入

性神经调控技术的临床实践提供新思路。

方法 在 PubMed、Web of science、中国知网、维普中文科技期刊数据库和万方数据库中检索文献,英文数据库以“anxiety disorders”、“generalized anxiety disorder”、“Non-invasive”、“neuromodulation”、“repetitive transcranial magnetic stimulation”、“transcranial direct current stimulation”、“transcranial alternating current stimulation”、“theta-burst stimulation”为检索词;中文数据库以“焦虑障碍”、“焦虑症”、“广泛性焦虑障碍”、“非侵入性”、“神经调控”、“重复经颅磁刺激”、“经颅直流电刺激”、“经颅交流电刺激”、“θ 波爆发刺激”为检索词,检索时限为建库至 2024 年 4 月,发表语言限定中文或英文。文献类型既包括系统综述,也包括临床研究,以随机对照试验为主。

结果 重复经颅磁刺激与经颅直流电刺激对广泛性焦虑障碍患者的治疗具有巨大的潜力,临床常用 DLPFC 作为刺激靶点,探索发现 OFC 可能是一个新兴靶点。对于重复经颅磁刺激,临床常用低频 ($\leq 1\text{Hz}$) 干预患者右侧 DLPFC 作为参考,干预 20~30 次为宜;对于经颅直流电刺激,高强度足疗程 (2mA, 20 分钟,每天 2 次,间隔 20 分钟,连续 5 天) 的刺激参数可能具有更明显的改善效果,此外,与药物、心理相结合的联合治疗方式临床疗效可能更好。

结论 非侵入性神经调控对广泛性焦虑障碍神经机制和治疗方案的研究和应用存在挑战与机遇,有望成为治疗广泛性焦虑障碍的有效手段。

关键词:非侵入性神经调控;广泛性焦虑障碍;重复经颅磁刺激;经颅直流电刺激

自我伤害行为的动物模型综述

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目的 非自杀性自伤 (Non-Suicidal Self-Injury, NSSI) 行为在青少年和成年早期人群中的发生率呈上升趋势,严重影响身心健康。目前对 NSSI 行为发生因素的研究多集中于社会心理方面,也有一些人类研究发现 NSSI 行为与生物学因素有关,但深入的生物学机制研究较少。动物模型为研究人类 NSSI 提

供了一种替代方法。人们可以在实验条件下直接观察到动物自伤的频率和严重程度，也能够通过药物或环境刺激来对动物自伤行为进行控制，因此自伤动物模型为研究人类 NSSI 的生物学机制提供了更多的可能性。本文通过对不同的自我伤害行为 (Self-Injury Behavior, SIB) 动物模型研究现状的总结分析，探讨 SIB 动物模型在人类 NSSI 行为研究中的适用性。

方法 本文检索了 2003 年至 2023 年在 PubMed、Web of Science、中国知网等公开发表的文献，检索的英文关键词为 Non-suicidal self-injury behavior、Self-injury behavior、Animal models、Animal experiments、Rats、Mice、Monkeys 等，检索的中文关键词为非自杀性自伤行为、自我伤害行为、动物模型等，总结了现有的几种 SIB 动物模型，包括鼠、猴和水貂，对不同模型的特点、原理、优势与劣势进行整理和评价。

结果 目前关于 SIB 动物模型多集中在啮齿动物和恒河猴，其中又以鼠模型居多，SIB 鼠模型主要通过药物诱导来构建，而猴模型、水貂模型主要是环境因素导致自发形成的。

结论 这些 SIB 动物模型研究能够提供更多的 SIB 相关神经生物学信息、鉴定 SIB 的生理机制和行为的相关性以及开发新的治疗方式等，有助于进一步探讨人类 NSSI 的生物学机制，并可能显著提高对 NSSI 病因学、现象学和临床治疗的认识，为开展动物研究及进一步优化和发展 SIB 动物模型提供思路。

关键词：非自杀性自伤行为；自我伤害行为；动物模型；动物实验

青少年心境障碍伴非自杀性自伤行为患者自我病耻感的影响因素研究：自尊、社交回避与苦恼的中介作用

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目的 探讨青少年心境障碍伴非自杀性自伤行为 (NSSI) 患者自我病耻感的影响因素及自尊、社交回避与苦恼在 NSSI 与自我病耻感间的中介效应。

方法 采用方便取样的横断面调查研究方法，选取 204 例青少年心境障碍患者进行青少年非自杀自伤性问卷 (ANSSIQ)、精神疾病自我病耻感量表 (ISMI)、自尊量表 (RSES)、社交回避及苦恼量表 (SADS)、社会支持评定量表 (SSRS) 的评估，采用多元线性回归分析青少年心境障碍伴 NSSI 组患者自我病耻感的影响因素，并采用 Bootstrap 方法检验自尊、社交回避与苦恼在 NSSI 严重程度与自我病耻感之间的中介效应。

结果 心境障碍伴 NSSI 组 ISMI 得分高于不伴 NSSI 组 ($P < 0.001$)；伴 NSSI 组患者的 ISMI 总分与 ANSSIQ 行为量表分、SADS 总分呈显著正相关 ($r = 0.316, r = 0.644, p < 0.01$)，与 RSES 总分、SSRS 总分呈显著负相关 ($r = -0.724, r = -0.548, P < 0.01$)；将与自我病耻感存在相关性的变量 (RSES 总分、ANSSIQ 行为量表分、SSRS 总分、SADS 总分) 与自我病耻感 (ISMI 总分) 进行多元线性回归分析。多元线性回归分析结果显示回归方程显著 ($P < 0.001$)，以上变量共同解释自我病耻感 60.5% 的变异，其中 NSSI 严重程度 ($\beta = 0.126, P < 0.05$)、社交回避与苦恼 ($\beta = 0.261, P < 0.01$) 显著正向预测 ISMI 总分，自尊水平 ($\beta = -0.438, P < 0.01$)、社会支持 ($\beta = -0.166, P < 0.01$) 显著负向预测 ISMI 总分。自尊、社交回避与苦恼在 NSSI 严重程度与自我病耻感之间起部分中介作用，中介效应值为 0.236，占总效应比例高达 56%，其中由 NSSI → 自尊 → 自我病耻感的间接效应为 0.163。

结论 NSSI 严重程度、自尊、社交回避与苦恼、社会支持是青少年心境障碍伴 NSSI 患者自我病耻感的重要影响因素。NSSI 严重程度既可以直接作用于也可通过自尊、社交回避与苦恼间接作用于自我病耻感，尤其是自尊的中介作用。

关键词：青少年心境障碍 非自杀性自伤行为 自我病耻感 自尊

Impaired Emotional Response Inhibition Among Adolescents with Bipolar Depression: Evidence From ERPs

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Objective Impaired inhibition for inappropriate responses in the emotional context is a core feature in patients with bipolar disorder. However, there has been little research exploring its underlying mechanism of impaired response inhibition for emotional stimuli within adolescents with bipolar depression was unclear. To explore this issue, we employed the event-related potentials (ERPs) to investigate the underlying neuroelectrophysiological mechanisms of inhibition to inappropriate emotional stimuli in adolescents with bipolar depression

Methods Twenty-five adolescents with bipolar depression and nineteen healthy controls completed an emotional Go/No-Go task during electroencephalography (EEG) recording. Reaction time, with reaction time, discriminability (d') and response bias (β) was measured as behavioral performance indicators. ERPs components, theta-band oscillation and inter-trial coherence (ITC) were compared between the two groups

Results Behavioral performance analysis found that adolescents with bipolar depression showed smaller d' values than healthy controls. Nogo-P3 amplitude was decreased within adolescents with bipolar depression than healthy controls. The theta-band oscillation and ITC, compared to healthy controls, were reduced within adolescents with bipolar depression for emotional stimuli, especially negative stimuli

Conclusion These findings suggested that adolescents with bipolar depression exhibited abnormal response inhibition in the emotional context. Attenuated P3 amplitude and theta-band oscillation could be an electrophysiological indicator for this impaired inhibitory processing in the emotional context

关键词: bipolar depression, adolescents, response inhibition, emotion regulation

正念减压疗法在 NSSI 患者照顾者中的应用

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目的 探讨正念减压疗法对非自杀性自伤患者照顾者的负性情绪的影响。

方法 本研究采用类实验设计, 选取 2022 年 2 月 1 日~2023 年 1 月 31 日在河北省某三级甲等专科医院儿少精神科收治的 78 例发生非自杀性自伤的青少年作为研究对象, 根据随机数字表法分为对照组和观察组各 39 例, 干预组除患者接受正念减压疗法干预和健康教育外, 对 NSSI 患者照顾者同时进行为期 6 周的正念疗法护理干预, 对照组患者接受正念减压疗法干预和健康教育, 照料者只接受常规心理护理及健康教育, 干预结束后分别运用五因素正念度量表 (Five Facet Mindfulness Questionnaire)、焦虑自评量表 (SAS)、抑郁自评量表 (SDS)、匹兹堡睡眠质量指数 (PSQI) 对患者及照料者都进行评分, 将干预前后的评分最终导入 SPSS 23.0 软件进行统计学处理, $P < 0.05$ 的结果代表数据间的差异存在统计学意义, 比较两组照顾者负性情绪。

结果 在干预结束后, 干预组的五因素正念度量表评分明显高于对照组, 焦虑和抑郁评分低于对照组, 差异均有统计学意义 ($P < 0.05$)。

结论 正念减压疗法对于患者及照顾者都有效, 可增加非自杀性自伤行为患者照顾者的正念能力, 减轻其焦虑抑郁情绪。

关键词: 正念疗法; 非自杀性自伤; 照顾者; 负性情绪; 护理

正念减压训练对孤独症照护者正负情绪的影响

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目的 本研究对孤独症儿童照护者进行正念练习, 对训练前后照护者情绪状态、正念水平及病耻感变化进行评价, 旨在提高孤独症照护者的正念水平和身心健康, 间接提高对孤独症儿童的照顾质量, 从而促进患儿康复, 减轻照护者身心负担。

方法 选取孤独症儿童主要照护者 30 例作为对照组, 给予心理健康宣教, 固定 1 名护士进行宣

教,内容包括运用语言或非语言的沟通技巧,与照护者交谈感兴趣的话题,促进关系等,为期8周;同期选择孤独症儿童主要照护者30例作为试验组,在心理健康宣教的基础上给予系统正念减压训练,固定由1名治疗师带领每周进行一次正念训练,内容包括身体扫描、自我关怀、正念运动与饮食等,为期8周。入组时及干预8周后采用正性负性情绪量表、及五因素正念量表对两组照护者者进行评价。

第一周

见面会,课程说明

第二周

初识正念,建立身体觉察

科学认识孤独症

第三周

巩固身体觉察

有效的康复训练有哪些?

第四周

心情与情绪觉察

如何处理孤独症行为问题

第五周

情绪觉察与处理

如何进行家庭综合干预

第六周

念头想法觉察

孤独症长大后怎么样

第七周

正念人际沟通

如何吸引孤独症的注意力

第八周

活在当下的快乐与力量

家长如何应对孤独症孩子情绪问题

第九周

正念融入生活

如何区分低功能和高功能孤独症

结果 干预8周后试验组正性情绪与五因素正念量表得分高于对照组($P<0.05$),负性情绪量表得分低于对照组($P<0.05$)。

结论 正念减压训练可以帮助孤独症儿童照护者更好地管理自己的正负性情绪,提高情绪的稳定性 and 积极性。这将有助于他们更好地应对照护工作中的压力和负性情绪,增强自我幸福感和生活满意度。

关键词: 孤独症;照护者;正念减压训练;负性情绪

心率变异性指标对惊恐障碍患者的辅助诊断价值

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目的 探讨心率变异性(heart rate variability, HRV)在辅助诊断惊恐障碍中的应用价值。

方法 收集2023年9月至2024年3月在首都医科大学附属北京安定医院焦虑门诊就诊的32例未服药惊恐障碍患者(惊恐障碍组)的临床资料,另招募32名性别、年龄匹配的健康对照者(健康对照组)。使用心率变异分析系统(SA-3000P)测量HRV数据,分析指标包括平均心率(mean heart rate, mHR)、窦性心博间隔标准差(standard deviation of the normal-to-normal interval, SDNN)、NN间期均方根(root mean square of successive differences, RMSSD)、低频(low frequency, LF)、高频(high frequency, HF)和低频高频比例(low frequency to high frequency ratio, LF/HF)。采用双独立样本t检验和非参数Mann-Whitney U检验分析惊恐障碍患者与健康对照者之间的指标差异,采用二元logistic回归模型,结合10折交叉验证方法分析HRV指标对惊恐障碍的诊断效能。

结果 与健康对照组相比,惊恐障碍组的mHR显著升高(84.1 ± 12.7 比 76.8 ± 10.0 , $P=0.013$),SDNN(33.3 比 42.1 , $P=0.046$)、RMSSD(25.3 比 39.3 , $P=0.026$)及HF(5.2 ± 1.0 比 5.8 ± 1.1 , $P=0.046$)显著降低。二元logistic回归分析显示,mHR显著影响惊恐障碍患病($OR=1.091$, $P=0.039$)。单变量分析结果进一步表明,mHR、SDNN、RMSSD和HF在区分惊恐障碍患者和健康对照者方面具有显著的统计学意义(均 $P<0.05$)。基于全部数据集的模型评估结果显示,准确率为0.734,灵敏度为0.781,特异度为0.688,精确率为0.714,F1分数为0.746,AUC为0.774。基于10折交叉验证的结果显示,模型的准确率为0.600,灵敏度为0.675,特异度为0.842,精确率为0.650,F1分数为0.635,AUC为0.650。

结论 本研究初步揭示了HRV指标在辅助诊断惊恐障碍中的潜在价值。未服药惊恐障碍患者静息态HRV指标整体降低,特别是mHR、SDNN、

RMSSD 和 HF 指标与健康受试者差异显著, 基于 HRV 指标构建的二元 logistic 模型在 10 折交叉验证中展现了较好的诊断效能。

关键词: 惊恐障碍, 心率变异性, 未服药, 辅助诊断, 机器学习

The Association between Expressive Suppression and Anxiety in Chinese Left-Behind Children in Middle School: Serial Mediation Roles of Psychological Resilience and Self-Esteem

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Objective Left-behind children (LBC) have become a special population to be concerned due to the negative consequences of parental absence during their physical and psychological development both physically and psychologically in China. Expressive suppression (ES) is a response-focused emotion regulation and may be frequently used by LBC to suppress their emotions resulting in different forms of internalizing problems. The objective of the present study was to investigate the influence of ES as an emotion regulation strategy on anxiety in Chinese left-behind children in middle school (LBC-MS) by considering the mediating role(s) of psychological resilience and self-esteem

Methods 820 middle school students aged between 12 and 17 years ($M_{age} = 13.74$) were included. Screen for Child Anxiety Related Emotional Disorders (SCARED), Emotion Regulation Questionnaire, Resilience Scale for Chinese Adolescents (RSCA), and Rosenberg Self-Esteem Scale (SES) were administered. Descriptive statistics were used to present general characteristics, and regression-based statistical mediation was conducted using the PROCESS macro for SPSS

Results This study revealed that LBC-MS had higher anxiety and ES scores and lower psychological

resilience and self-esteem scores than non-left-behind children in middle school (non-LBC-MS) ($P_s < 0.01$). ES was found positively associated with anxiety in LBC-MS and negatively associated with psychological resilience and self-esteem ($P_s < 0.05-0.01$). Specifically, both psychological resilience and self-esteem significantly mediated the association between ES and anxiety, accounting for 7.50% and 10.68%, respectively, of the total associations. Moreover, psychological resilience and self-esteem had a chain mediating effect on ES and anxiety in LBC-MS

Conclusion The findings indicated that LBC-MS in China may frequently engage in the use of ES and have higher level of anxiety, and psychological interventions should be paid attention to this group. Intervention approaches that improve emotion regulation strategies (i.e., decreasing the ES) and increase psychological resilience and self-esteem may help to alleviate anxiety in LBC-MS

关键词: Left-Behind Children in Middle School, Anxiety, Expressive Suppression, Psychological Resilience, Self-Esteem

血浆炎症因子水平改变可能是重性抑郁障碍患者的生物标志物

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背景 重性抑郁障碍 (Major Depressive Disorder, MDD) 是一种以情绪低落、兴趣减退、思维迟缓为主要特征的精神疾病。多项研究证实炎症因子在 MDD 的发病中发挥了作用。因此, 我们试图探索炎症因子水平是否能区分 MDD 患者与健康对照 (HC) 并且是否能预测抑郁症状的严重程度。

方法 本研究纳入 MDD 组 78 人和健康对照组 98 人。通过多因素试验检测血浆炎症因子水平。采用汉密尔顿抑郁-17 量表、汉密尔顿焦虑-14 量表和简易精神病学评定量表收集 MDD 患者的临床症状并进行评定。采用马氏距离法以及箱式图检测两组炎症因子的异常值, 采用 Kolmogorov-Smirnov 检验炎症因子的正态性。采用 Mann-Whitney 检验对不

同诊断的炎症因子进行比较, 并采用 Spearman 相关性分析评估炎症因子水平与汉密尔顿量表之间是否存在关系。

结果 MDD 组的 CXCL10 水平低于 HC 组 ($z=-2.018$ $p=0.044$), 且 TNF- α 也明显低于 HC 组 ($z=-2.990$ $p=0.003$)。外周细胞因子水平与汉密尔顿抑郁量表和汉密尔顿焦虑量表无相关性, 不能预测抑郁症状的严重程度。

局限性: 我们的横断面方法无法纵向评估所考虑的细胞因子水平的任何时间波动。

结论 本研究发现, 患者的 CXCL10 趋化因子和 TNF- α 血浆水平明显低于 HC 组。

关键词: 炎症因子, CXCL10, TNF- α , 重性抑郁障碍

疼痛加工神经环路对非自杀性自伤患者的预测

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目的 非自杀性自伤 (non-suicidal self-injury, NSSI) 是指不以自杀为目的, 使用不被社会所认可的方法直接且故意地伤害身体组织, 在青少年和青年人群中非常普遍, 并且是自杀的已知风险因素, 其潜在机制仍有待进一步探索。既往神经影像学研究发现, NSSI 患者的疼痛加工神经环路与正常对照组相比存在异常激活。本研究基于既往疼痛加工过程激活的相关 NSSI 患者脑区构建了基于 NSSI 个体疼痛加工多模态网络, 并结合图神经网络 (graph neural network, GNN) 对 NSSI 患者进行风险预测。

方法 本研究纳入了 129 名 11~26 岁之间的被试, 其中 NSSI 患者 50 名, 健康对照者 79 名, 并选择 10 名 NSSI 患者和 16 名健康对照者作为人口学信息匹配的测试数据集。本研究使用 3T 磁共振获取静息态功能磁共振和扩散张量成像数据, 利用 DPABI 和 PANDA 工具箱进行预处理, 并使用自动解剖标记 (automated anatomical labeling, AAL) 图谱定位脑区, 根据既往研究提取双侧岛叶、杏仁核、海马旁回、额下回岛盖部、额下回三角部、额下回眶额部、前扣带皮层、颞上回和丘脑共 18 个疼痛相关的脑区, 计算每个区域平均时间序列之间的

Pearson 相关性作为节点之间的功能连接 (functional connectivity, FC), 计算平均分数各向异性 (fractional anisotropy, FA) 作为节点间的白质连接, 构建疼痛加工神经环路模型, 利用 GNN 进行 NSSI 风险预测, 并探索对预测准确率贡献最大的脑区间连接。

结果 利用影像数据构建的 NSSI 疼痛加工模型对 NSSI 患者的预测准确率 80.0%, 曲线下面积 79.3%, 特异性达到 60.0%, 灵敏度达到 93.0%。在所有脑区间连接中, 杏仁核-海马旁回及岛叶-额下回眶额部连接对该模型的预测准确率贡献最大。

结论 本研究使用 GNN, 利用疼痛加工神经环路对 NSSI 患者进行风险预测, 该 NSSI 疼痛加工模型在 NSSI 患者风险预测中达到了较高准确率, 表明疼痛加工可能是 NSSI 行为的重要潜在机制, 其中杏仁核-海马旁回及岛叶-额下回眶额部连接在预测准确率中贡献最大。本研究提供了一种探索 NSSI 潜在机制的新方法, 预示疼痛加工神经环路中的额叶及边缘系统脑区对 NSSI 行为具有重要影响。

关键词: 非自杀性自伤, 功能磁共振

精神类疾病患者常用治疗药物 TDM 回顾性研究

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目的 探索精神类疾病患者常用治疗药物的治疗药物监测 (Therapeutic Drug Monitoring, TDM) 的临床价值。

方法 对本院 2022 年 8 月至 2023 年 12 月期间收治的 457 例精神类疾病患者进行回顾性分析, 了解患者常用治疗抗精神药物 (氯氮平、奥氮平、利培酮)、抗抑郁药物 (舍曲林、帕罗西汀)、抗焦虑药物 (阿普唑仑) 及抗癫痫/情绪稳定药物 (丙戊酸钠) 的 TDM 情况, 对比药物的 TDM 频次分布及在控率。

结果 氯氮平 TDM 前的在控率为 42.99%, TDM 后在控率为 92.52%; 奥氮平 TDM 前的在控率为 31.58%, TDM 后在控率为 61.84%; 利培酮 TDM 前的在控率为 66.67%, TDM 后在控率为 90.74%; 舍曲林 TDM 前的在控率为 43.14%, TDM 后在控率

为 86.27%；帕罗西汀 TDM 前的在控率为 70.21%，TDM 后在控率为 93.62%；阿普唑仑 TDM 前的在控率为 57.50%，TDM 后在控率为 85.00%；丙戊酸钠 TDM 前的在控率为 62.20%，TDM 后在控率为 82.93%；差异均具有统计学意义 ($P < 0.05$)。

结论 实行 TDM 有助于提高药物治疗的安全性和有效性，指导临床合理用药，为精神类疾病患者群体提供个体化治疗。

关键词：精神类疾病,治疗药物监测,个体化治疗.

丙戊酸镁缓释片联合盐酸齐拉西酮治疗双相情感障碍躁狂发作的临床疗效

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目的 分析丙戊酸镁缓释片联合盐酸齐拉西酮治疗双相情感障碍躁狂发作的临床疗效。

方法 以 2021 年-2022 年期间在我科室治疗的双相情感障碍躁狂发作患者 106 例为研究对象，按照入院顺序奇偶性划分为两组，即观察组和对照组，每组各 53 例。两组患者均给予丙戊酸镁缓释片进行治疗，观察组患者在此基础上同时联合给予盐酸齐拉西酮进行治疗。

结果 相比对照组 (73.58%)，观察组患者的临床治疗总有效率 (90.57%)，明显更高，组间比较差异有统计学意义 ($P < 0.05$)。两组患者治疗前的 BRMS 评分，均相当，组间比较差异无统计学意义 ($P > 0.05$)；两组患者治疗 1 周、3 周和 6 周后的 BRMS 评分，均较治疗前有明显降低，组内间比较差异有统计学意义 ($P < 0.05$)；但两组患者治疗 1 周后的 BRMS 评分，组间比较差异无统计学意义 ($P > 0.05$)；但治疗 3 周和 6 周后，观察组患者的 BRMS 评分，均显著低于对照组，组间比较差异有统计学意义 ($P < 0.05$)。观察组患者的 TMT 评分，显著低于对照组，组间比较差异有统计学意义 ($P < 0.05$)；但两组患者的 TESS 评分相当，组间比较差异无统计学意义 ($P > 0.05$)。

结论 丙戊酸镁缓释片联合盐酸齐拉西酮治疗双相情感障碍躁狂发作，不仅疗效显著，且能够显著改善患者的躁狂症状、提升患者的认知功能，且不会明显增加患者的脂代谢异常的风险。

关键词：丙戊酸镁缓释片；盐酸齐拉西酮；双相情感障碍躁狂发作

碳酸锂联合阿立哌唑治疗双相障碍抑郁发作的临床疗效和安全性

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目的 探讨碳酸锂联合阿立哌唑治疗双相障碍抑郁发作的临床疗效及其安全性。

方法 将 150 例在 2020 年 6 月-2021 年 6 月时间段内我院接诊的双相障碍抑郁发作患者作为研究样本，随机分为观察组和对照组，各组均纳入 75 例患者。对照组单用碳酸锂，观察组则联合应用碳酸锂和阿立哌唑进行治疗。

结果 观察组患者的 HAMD-17 评分，在治疗前与对照组相当， $P > 0.05$ 差异没有统计学意义；在治疗 4 周后、治疗 8 周后和治疗 12 周后，均显著低于对照组， $P < 0.05$ 差异具有统计学意义。观察组患者的临床治疗总有效率 96.00%，明显高于对照组的 80.00%， $P < 0.05$ 差异具有统计学意义。观察组患者的临并发症发生率 29.33%，与对照组相当的 26.67%， $P < 0.05$ 差异具有统计学意义。

结论 碳酸锂联合阿立哌唑治疗双相障碍抑郁发作，可明显改善患者的抑郁状态，不仅能够获得更高的临床治疗效果，且具有较高的临床治疗安全性。

关键词：碳酸锂；阿立哌唑；双相障碍；抑郁发作；临床疗效；安全性

探究丙戊酸镁缓释片联合碳酸锂治疗双相情感障碍躁狂发作的效果

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目的 探讨丙戊酸镁缓释片联合碳酸锂治疗双相情感障碍躁狂发作患者的临床疗效

方法 采取方便抽样法从 2020 年 10 月—2021

年 9 月期间我院收治的双相情感障碍躁狂发作患者中选取 120 例,以随机原则分成两组,包括观察组(例数=60)和对照组(例数=60)。对照组患者单纯口服碳酸锂进行治疗,观察组患者在对照组基础上,同时联合应用丙戊酸镁缓释片进行治疗。

结果 观察组患者的治疗总有效率为 95.00%,显著高于对照组的, $P<0.05$ 组间差异明显。两组患者治疗前的 BRMS 评分和 PANSS 评分,均相当, $P>0.05$ 组间差异不明显;两组患者在治疗 1 周后和治疗 4 周后的 BRMS 评分和 PANSS 评分,均较治疗前有明显降低, $P<0.05$ 组内差异明显;但观察组患者治疗 1 周后和治疗 4 周后的 BRMS 评分和 PANSS 评分,均显著低于对照组, $P<0.05$ 组间差异明显。观察组患者治疗期间的不良反应发生率 31.67%,与对照组的 28.33%相当, $P>0.05$ 组间差异不明显。

结论 采取丙戊酸镁缓释片联合碳酸锂的用药方案对双相情感障碍躁狂发作患者实施治疗,可强化其症状改善效果,从而显著提高其临床疗效,且不会增加不良反应,安全性较高。

关键词: 丙戊酸镁;碳酸锂;双相情感障碍躁狂发作

阿立哌唑与喹硫平在治疗老年精神分裂症患者的临床疗效及安全性对比分析

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目的 分析阿立哌唑与喹硫平治疗老年精神分裂症患者的临床疗效及安全性。

方法 研究对象为 114 例老年精神分裂症患者,研究时间为 2019 年 6 月到 2020 年 7 月,按研究需求分成观察组和对照组,每组例数均=57。A 组患者采用阿立哌唑进行治疗, B 组患者采用喹硫平进行治疗。

结果 A 组患者的临床治疗总有效率 92.98%,显著高于 B 组 78.95%, $P<0.05$ 组间比较差异有统计学意义。两组患者治疗前的阳性症状、阴性症状、病理症状及 PANSS 总分,均相当, $P>0.05$ 组间比较差异无统计学意义;两组患者治疗后的以上评分,均较治疗前有显著降低, $P<0.05$ 组内比较差异有统计

学意义;但 A 组患者治疗后的各项评分均显著低于 B 组, $P<0.05$ 组间比较差异有统计学意义。A 组患者的嗜睡、头晕、失眠、恶心、便秘、心动过速、静坐不能等不良反应发生 28.07%,显著低于 B 组 50.88%, $P<0.05$ 组间比较差异有统计学意义。

结论 阿立哌唑在治疗老年精神分裂症,较喹硫平具有明显的临床优势,不仅能够显著改善患者的临床症状,提升其临床治疗效果,且不良反应明显更少,治疗安全性更好。

关键词: 阿立哌唑;喹硫平;老年精神分裂症;临床疗效;安全性

坦度螺酮与丁螺环酮治疗广泛性焦虑症的效果观察

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目的 观察广泛性焦虑症采用坦度螺酮与丁螺环酮治疗的效果。

方法 选取 2016 年 8 月至 2018 年月收治的广泛性焦虑症患者 58 例,根据数字随机法进行分组,分别为观察组和对照组,每组各 29 例,对照组采用丁螺环酮治疗,观察组实施坦度螺酮治疗,对比治疗效果、不良反应、焦虑(HAMA)评分等。

结果 观察组治疗总有效率、生活质量各维度评分、不良反应发生率、HAMA 评分均优于对照组,对比有统计学意义($P<0.05$);但两组治疗效果、临床疗效评分并无差异,对比无统计学意义($P>0.05$)。

结论 坦度螺酮与丁螺环酮治疗广泛性焦虑症相当,但是在改善患者焦虑情绪方面更优,且安全性较高,更能改善患者的生活质量,值得推广。

关键词: 广泛性焦虑症;丁螺环酮;坦度螺酮;治疗效果

盐酸美金刚联合多奈哌齐治疗老年痴呆的临床疗效

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目的 分析盐酸美金刚联合多奈哌齐治疗老年痴呆的临床疗效

方法 两组患者在参与研究前均停药一周, 随后接受降压、抗血小板聚集、扩张冠状动脉以及降糖等常规治疗措施。

对照组患者在常规治疗基础上, 每日口服一次多奈哌齐 (由重庆植恩药业生产, 国药准字 H20010723), 剂量为 5mg。观察组则在对照组治疗方案的基础上, 每日口服一次盐酸美金刚片 (由广州白云山制药股份有限公司生产, 国药准字 H20193268), 剂量为 20mg, 两组治疗均持续 6 个月。2021 年 1 月 2024 年 1 月共计收治 60 例老年痴呆患者, 随机分为 30 例采取多奈哌齐治疗的对照组, 30 例采取盐酸美联合多奈哌齐治疗的观察组, 对比两组患者临床治疗疗效、精神性症状、认知水平评分及生活能力及不良反应发生率。

结果 治疗 6 个月后, 观察组治疗总有效率、认知水平评分及生活能力均显著高于对照组 ($p < 0.05$), 精神性症状显著优于对照组 ($p < 0.05$); 不良反应发生率均低于对照组 ($p < 0.05$)。

结论 盐酸美金刚联合多奈哌齐治疗老年痴呆相较于单独使用多奈哌齐, 在临床疗效、精神性症状、认知水平及生活能力方面均表现出显著优势。同时, 联合用药还能有效降低不良反应发生率。因此, 盐酸美金刚联合多奈哌齐治疗老年痴呆是一种更为有效且安全的治疗策略, 值得在临床实践中进一步推广和应用。

关键词: 盐酸美金刚; 多奈哌齐; 老年痴呆; 临床疗效

失眠对孕晚期女性焦虑、抑郁影响的研究: 一项基于健康生态学的研究

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目的 探究孕晚期女性失眠、焦虑、抑郁的普遍程度, 并分析失眠对焦虑、抑郁的具体影响, 通过健康生态学模型进一步揭示其相关因素。

方法 1. 采用方便抽样方法于 2021 年 5 月-2022 年 7 月在山东某妇幼保健门诊进行横断面调查, 招

募孕早期检查的孕晚期女性作为研究对象;

2. 利用自编的人口学问卷、阿森斯失眠量表 (AIS-8)、广泛性焦虑障碍量表 (GAD-7) 及抑郁症筛查量表 (PHQ-9) 来评估孕晚期女性的失眠、焦虑、抑郁状况。根据 AIS-8 分值, 将孕妇分为失眠组 (AIS 总分 ≥ 6 分) 和对照组 (AIS 总分 < 6 分)。

3. 借助 SPSS 26.0 统计软件, 对收集到的数据进行描述性统计分析、卡方检验、秩和检验、t 检验、Pearson 相关分析以及二元 Logistics 回归分析, 以探讨失眠与焦虑、抑郁之间的关系, 并识别其他潜在影响因素。

结果 共有 247 名孕妇参与研究, 经筛选后有效问卷为 200 份, 有效率达 81.0%。研究结果显示, 孕晚期女性中失眠、焦虑、抑郁的检出率分别为 58.0%、17.0%、19.0%。对比两组孕妇的一般资料, 发现失眠组与对照组在夫妻关系上存在显著差异 ($p \leq 0.001$)。失眠组的 GAD-7 和 PHQ-9 分值均高于对照组, 且差异显著 ($p < 0.01$)。Pearson 相关分析显示, 失眠与焦虑 ($r = 0.604, p < 0.01$) 及抑郁 ($r = 0.687, p < 0.01$) 均存在显著相关性。通过二元 logistic 回归分析, 发现失眠 (OR=1.453, 95%CI=1.260-1.676, $p < 0.001$) 及与丈夫的关系 (OR=0.244, 95%CI=0.076-0.784, $p < 0.05$) 是影响孕晚期女性焦虑的重要因素; 同时, 失眠 (OR=1.700, 95%CI=1.425-2.029, $p < 0.001$) 及与丈夫的关系 (OR=0.268, 95%CI=0.076-0.950, $p < 0.05$) 也是影响孕晚期女性抑郁的重要因素。

结论 本研究表明, 孕晚期女性失眠、焦虑、抑郁的检出率较高。失眠及与丈夫的关系欠佳可能是导致孕晚期女性焦虑、抑郁的重要因素。这一发现对于孕期保健和心理健康服务的提供具有重要的指导意义。未来研究可进一步扩大样本量, 从更多维度深入探讨相关因素, 以期为孕期女性提供更为全面、有效的心理健康支持。

关键词: 孕产妇; 失眠; 焦虑; 抑郁; 健康生态学模型;

A Study on Influencing Factors of Disability Caused by Depressive Disorders in Shandong Province

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Objective To explore the disability situation of depressive disorders and related risk factors, and construct a risk factor model for the disability of depressive disorders, so as to provide a basis for the social function rehabilitation of depressive disorders

Methods The study participants were exclusively selected from the 2015 Epidemiologic Survey of Mental Disorders among Individuals Aged 18 and Older in Shandong Province. Among the 1237 surveyed individuals who met the diagnostic criteria for MDD, dysthymia, or unspecified depressive disorder as outlined in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), a total of 871 participants from eight cities were selected. A follow-up study in 2020 involved 543 participants. Questionnaires included a general form, Global Assessment of Function (GAF)、Simple Quality of Life Questionnaire、Pittsburgh Sleep Quality Index (PSQI)、Global Pain Scale (GPS)、Simplified Coping Style Questionnaire (SCSQ)、Childhood Trauma Questionnaire (CTQ)、Social Support Rating Scale (SSRS)、Montreal Cognitive Assessment (MoCA)。Clinical data related to patients' episodes of illness, use of various psychiatric medications, hospitalization for mental illness, and suicidal behaviors were collected through a self-administered clinical information questionnaire over a 5-year period

Strict quality control was implemented throughout the two surveys. A database was created using Epidata,

and statistical analysis was performed using SPSS 23.0 and Amos 22.0 software. Descriptive analysis, chi-square test, Fisher's exact probability method test, hierarchical chi-square test and rank sum test were conducted to analyze the data according to the type of data, and Bonferroni method was used for post hoc multiple comparisons. The relationship between various influencing factors and the disability of depressive disorder was analyzed using logistic regression. Structural equation modeling was used to analyze the relationship between risk factors for disability of depressive disorder.

Results A multifactorial logistic regression analysis of the factors influencing disability in patients with depressive disorder found that activity restriction due to fear of something (OR=4.21), poor sleep quality (OR=1.65), use of hypnotic drugs (OR=1.48) in 2015 and poor general health at the time of the survey in 2020 (OR=1.21) were risk factors for depressive disorder as a risk factor for disability ($P < 0.05$); good psychosocial status and good social support (OR = 0.93) in 2015 (OR = 0.62) and 2020 (OR = 0.43) were protective factors for psychiatric disability in depressive disorder ($P < 0.05$)

Structural equation modeling analysis showed that social support, 2015 and 2020 mental health level, 2015 sleep quality, and 2020 quality of life could directly affect mental disability with standardized path coefficients of -0.12, 0.10, 0.26, 0.22, and -0.15, respectively; 2020 mental health level and quality of life, and 2015 sleep quality could also serve as mediating variables and thus influence mental disability. In addition, the factor loadings of each of the 2020 quality of life latent variables on economic status and psychiatric-psychological status were 0.61 and 0.80, respectively, and the factor loading of the 2015 sleep quality latent variable on the sleep quality factor was 0.70, indicating their strong ability to predict disability due to depressive disorder.

Conclusion Risk factors for the disability of depressive disorder include: poor general health, poor sleep quality, and application of hypnotic drugs; the protective factors are: good psychiatric condition and social support. The factors that directly affect the disability of depressive disorder are: social support, mental health level, sleep quality, and quality of life; the mediating

factors were: mental health level, sleep quality, and quality of life

关键词: depressive disorder; disability; influencing factors ; follow-up study

睡眠质量在山东省成年人群抑郁与疼痛程度之间的中介作用

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目的 探讨睡眠质量在抑郁与疼痛程度之间的中介作用, 为强化抑郁障碍患者的疼痛管理提供依据。

方法 从 2015 年山东省 18 岁及以上人群精神障碍流行病学调查数据库中, 选取 8 个市的 871 例符合《精神障碍诊断与统计手册第四版》重性抑郁障碍、心境恶劣障碍或未特定抑郁障碍诊断标准者作为抑郁障碍患者组, 以及按照同性别、同年龄组(相差不超过 ± 5 岁)、同村或街道的原则进行 1:1:1 配对, 随机抽取出的 825 例经一般健康问卷筛查阳性, 但无精神障碍诊断者作为高危组, 825 例筛查阴性者为低危组。于 2020 年对上述人群开展横断面研究, 随访到 2122 例(84.17%), 排除因各种原因未能完成调查者 274 例(10.87%)后, 最终成功接受调查并纳入分析者共计 1848 例(73.30%)。采用一般健康问卷及相关风险问题作为筛查工具, 美国精神障碍诊断与统计手册第四版作为诊断标准, 采用《DSM-IV-TR 轴 I 障碍定式临床检查研究版(用于病人)》进行抑郁障碍诊断, 采用自制的一般资料调查表、匹兹堡睡眠质量指数(Pittsburgh Sleep Quality Index, PSQI)及整体疼痛评估量表(Global Pain Scale, GPS)进行问卷调查。

结果 抑郁障碍患者组 GPS 总分高于高、低危组($F=59.26, P<0.01$)。研究人群抑郁诊断与 PSQI 总分、GPS 总分均呈正相关($r=0.40, 0.33; P<0.01$), PSQI 总分与 GPS 总分呈正相关($r=0.47, P<0.01$)。睡眠质量在抑郁与疼痛程度中起部分中介作用(间

接效应占总效应的 44.46%)。

结论 抑郁可以直接影响疼痛程度, 也可以通过睡眠质量间接影响疼痛程度, 因此改善睡眠质量有助于缓解抑郁障碍患者的疼痛。

关键词: 抑郁障碍; 疼痛; 睡眠质量; 横断面调查; 山东省

价值取向短程治疗对轻中度抑郁症患者临床症状、反刍思维、决策能力及认知功能的效果分析

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目的 探讨价值取向短程治疗(value orientation brief therapy, VBT)对轻中度抑郁患者的临床症状、决策功能、反刍思维及认知功能的改善效果。

方法 选择 2022 年 8 月-2023 年 12 月收治的符合 DSM-V 诊断标准 80 例抑郁障碍患者为研究对象, 根据随机数字表法将患者分为实验组($n=40$)与对照组($n=40$)。对照组使用常规治疗, 实验组在常规治疗基础上进行价值取向短程疗法干预, 共 6 周。分别于基线水平、干预 6 周后, 采用汉密尔顿抑郁量表 24 项(HAMD-24)及汉密尔顿焦虑量表(HAMA)对患者的抑郁及焦虑症状的严重程度进行评估; 采用反刍思维量表中文版(RRS-CV)评估患者反刍思维状况; 使用爱荷华博弈任务(IGT)评估患者模糊决策功能; 采用探索性眼球轨迹运动的凝视点数(NEF)和反应探索评分(RSS)评估患者的认知功能。

结果 两组患者在用药种类及剂量方面差异无统计学意义($P>0.05$)。实验组患者干预后在 HAMD-24、HAMA、症状反刍、反省深思、强迫冥想、RRS-CV 总分、IGT 净利分、NEF 及 RSS 方面与干预前及对照组比较差异存在统计学意义($P<0.05$)。两组患者在 HAMD-24、HAMA、症状反刍、反省深思、强迫冥想、RRS-CV 总分、IGT 净利分、NEF 及 RSS 干预前后变化值之间的差异存在统计学意义($P<0.05$)。

结论 价值取向短程治疗有效的治疗轻中度

抑郁患者的抑郁焦虑症状，并改善其决策功能、反刍思维及认知功能。

关键词：价值取向短程治疗；抑郁症；决策能力；反刍思维；认知功能

The Subtyping of Insomnia Disorder Based on Clinical, Psychological, and Sleep Electroencephalographic Characteristics: Preliminary Results From A Prospective Study

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Objective Although several subtypes of insomnia disorder (ID) have been proposed, there is little objective evidence for its subtyping and subtype-guided treatment. This study aimed to explore data-driven ID subtypes based on clinical, psychological, and sleep EEG features

Methods In a prospective observational study, 136 subjects aged 18-65, diagnosed with ID according to DSM-5, underwent comprehensive assessments, including clinical-psychological evaluations and polysomnographic monitoring. Data analysis involved feature selection through a random forest algorithm, data standardization, dimensionality reduction, and clustering analysis to identify ID subtypes. Subtypes were evaluated for their clinical outcomes, including subjective sleep quality and total sleep time

Results We identified three distinct subtypes of insomnia, each with significantly different characteristics. Subtype 1, "biological insomnia" (N=30), had a significantly higher average age than other subtypes (H=28.932, $p<0.001$) and showed a notable lack of N3 sleep (H=71.550, $p<0.001$). Subtype 2, "stress-related insomnia" (N=53), is associated with prominent clinical symptoms such as depression (F=10.831, $p<0.001$), anxiety (F=3.220, $p=0.043$), and fatigue (F=7.408, $p=0.001$). Subtype 2 displayed the highest levels of insomnia susceptibility (F=3.704, $p=0.027$), pre-sleep arousal (F=6.903, $p=0.001$), rumination (F=6.155,

$p=0.003$), and childhood trauma (H=13.252, $p=0.001$). Subtype 3, "insomnia with reduced spindles" (N=53), showed more positive experiences (F=6.399, $p=0.002$) and lower stress levels (F=4.658, $p=0.011$). EEG characteristics of this subtype indicate poor slow wave- σ coupling (H=14.464, $p=0.001$) and weaker spindle oscillations (H=40.430, $p<0.001$)

Conclusion Identifying distinct ID subtypes through a data-driven approach can significantly influence clinical outcomes, offering a path toward more effective management of ID

关键词：Insomnia Disorder, Data-Driven, Subtype Analysis, Psychological Characteristics, Electroencephalographic Features, Outcome

尼古丁依赖吸烟者的前扣带回神经代谢改变

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目的 吸烟对身心健康危害巨大，长期吸烟导致尼古丁依赖或成瘾是戒烟难的主要原因。前扣带回 (Anterior Cingulate Cortex, ACC) 被认为是成瘾相关的重要脑区。以往研究发现尼古丁依赖者 ACC 存在代谢紊乱，但研究结果不尽一致，且戒烟后能否改善尚不清楚。因此，本研究结合纵向随访，拟进一步阐明尼古丁依赖的脑代谢特征，并探索短期戒烟对该特征的影响，为寻找到更有效的戒烟方法提供依据。

方法 本研究共纳入了 104 例尼古丁依赖吸烟者 (SM 组) 和 43 例不吸烟的健康对照者 (HC 组) 基线期磁共振波普数据。同时，为吸烟者提供为期 4 周的基于认知行为疗法 (CBT) 的线上干预戒烟。在线上干预结束之后，对 21 例戒烟者 (qSM 组) 和 25 例持续吸烟者 (cSM 组) 进行了磁共振波普数据的二次采集。本研究采用线性回归分析分别探究了 ACC 脑区代谢物 (NAA/Cr、MI/Cr、Glu/Cr 和 Cho/Cr) 在 SM 组和 HC 组两组之间、qSM 组和 cSM 组两组之间的差异；采用配对样本 t 检验分别探究了在 qSM 组和 cSM 组 4 周前后的差异；采用皮尔逊相关分析探究了各代谢物与吸烟相关特征 (吸烟指数、每日吸烟量等) 在基线期吸烟组中的相关性。

结果 本研究发现,与HC组相比,SM组Glu/Cr降低($p=0.0124$),MI/Cr($p=0.021$)和Cho/Cr($p=0.032$)有降低的趋势;与持续吸烟者相比,戒烟者的Cho/Cr有升高的趋势($p=0.015$),NAA/Cr有降低的趋势($p=0.023$)。遗憾地是,本研究没有发现戒烟组和持续吸烟组在4周前后的差异。此外,本研究还发现SM组的Glu/Cr与吸烟指数(包年)($r=-0.292$, $p=0.003$)、每日吸烟量($r=-0.206$, $p=0.036$)均存在负相关。

结论 尼古丁依赖吸烟者存在前扣带回脑区的代谢紊乱。戒烟4周之后,与持续吸烟者相比,部分代谢紊乱有改善的趋势。以上的研究发现可能会为寻找到更有效的戒烟方法提供一定的依据。

关键词: 尼古丁依赖, 吸烟, 前扣带回, 神经代谢物, 戒烟

中药酸枣仁汤联合重复经颅磁刺激治疗原发性失眠的疗效分析

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目的 分析中药酸枣仁汤联合重复经颅磁刺激治疗原发性失眠的疗效。

方法 以2021年10月至2022年07月在我院就诊的原发性失眠患者作为研究对象,共200例,采用随机方式将患者分为观察组(中药酸枣仁汤联合重复经颅磁刺激治疗(rTMS),100例)和对照组(传统西药阿普唑仑片口服治疗,100例),对不同治疗方式下患者治疗前和治疗后后的匹兹堡睡眠质量指数(Pittsburgh sleep quality index; PSQI)、阿森斯失眠量表(Asens Insomnia Scale; AIS)、中医症候评分以及治疗和症状改善时间进行比较分析。

结果 治疗前组间差异不显著($P>0.05$),治疗后,观察组患者PSQI得分明显低于对照组患者,组间有统计学意义($P<0.05$),治疗后,观察组患者AIS得分明显低于对照组患者,组间有($P<0.05$),观察组患者治疗后中医症候各项评分、症状改善时间、治疗时间均低于对照组患者,组间治疗效果差异较小, ($P>0.05$),但观察组患者治疗后不良反应发生率更低($P<0.05$)。

结论 中药酸枣仁汤联合重复经颅磁刺激

(rTMS)治疗原发性失眠症患者的治疗效果更好,患者在经过治疗后,睡眠质量更高,失眠症状明显改善,患者中医症候评分明显降低,且无明显的药物副作用及躯体不适的感觉,建议该方式在临床治疗中推广使用。

关键词: 中药,酸枣仁汤,重复经颅磁刺激,原发性失眠,疗效

CCBT联合米氮平对广泛性焦虑的疗效以及生活质量的影响

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目的 探讨计算机化认知行为治疗(Computerized cognitive-behavioral therapy, CCBT)联合米氮平治疗对广泛性焦虑(Generalized anxiety, GAD)患者的效果及生活质量的影响。

方法 选取2022年3月至2024年3月期间福州市第二总医院神经精神病防治院收治的126例广泛性焦虑患者作为研究对象,按抽签法分为对照组和联合组各63例,对照组患者采用米氮平片治疗,联合组采用米氮平片联合计算机化认知行为治疗,两组均连续治疗8周后,比较两组患者治疗前后汉密尔顿焦虑量表(Hamilton anxiety scale, HAMA)、匹兹堡睡眠质量指数(Pittsburgh sleep quality index, PSQI)、生活质量评分。

结果 治疗前,两组HAMA评分中的各项评分比较差异均无统计学意义($P>0.05$);治疗后症状缓解的时间比较,联合组显著低于对照组($P<0.05$);联合组患者的治疗总有效率为93.65%,明显高于对照组的79.37%,差异有统计学意义($P<0.05$);治疗前,两组患者PSQI评分中的各项评分比较差异均无统计学意义($P>0.05$);治疗后,两组患者PSQI评分中的各项评分均明显降低,且联合组明显低于对照组,差异均有统计学意义($P<0.05$);治疗前,两组患者生活质量评分中的各项评分比较差异均无统计学意义($P>0.05$);治疗后,两组患者生活质量评分中的各项评分均明显升高,且联合组明显高于对照组,差异均有统计学意义($P<0.05$)。

结论 米氮平片联合计算机化认知行为治疗较单纯米氮平片治疗广泛性焦虑患者,能够更快速,有

效的控制广泛性焦虑症状,显著改善患者睡眠状况,并提高患者的生活质量。

关键词:广泛性焦虑;计算机化认知行为治疗;生活质量;米氮平;睡眠,传统认知行为疗法

加速重复经颅磁刺激对青少年抑郁症患者的自杀意念和快感缺失的疗效探究

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目的 探究重复经颅磁刺激(Repetitive ranscranial magnetic stimulation, rTMS)应用于青少年抑郁症患者的疗效,以及探究在青少年抑郁症患者中改善快感缺失症状、降低年自杀意念方面的疗效,探究1天2次的加速rTMS方案相比1天1次的常规rTMS方案的最终疗效是否具有差异性。

方法 选取了我院收治的19例青少年抑郁症患者作为研究对象,随机分为实验1组和实验2组,所有入组病人除了常规接受SSRI类抗抑郁药(Slective serotonin reuptake inhibitors)以及必要时使用苯二氮卓类药物之外,均接受为期2周、每周5天的rTMS治疗,治疗方案均为左侧DLPFC、10HZ、120%MT,其中实验1组每天接受1次rTMS治疗,实验2组以加速方案每天接受2次rTMS治疗,每次间隔1小时以上。所有入组病人在治疗开始前(T0)、治疗1周时(T1)、治疗2周时(T2),分别采用汉密尔顿抑郁量表(Hamilton depression Scale-24, HAMD-24)、斯奈思快感缺失量表(Snaith-Hamilton Pleasure Scale,SHAPS)、贝克自杀意念量表中文版(Beck Scale for Suicide Ideation Chinese Version, BSI-CV)评定症状严重程度。

结果 实验1组和实验2组之间HMAD-24、BSI-CV、SHAPS的T0时的分数无显著性差异($p=0.463$, $p=0.322$, $p=0.165$)。采用重复测量方差分析对比两组分数变化的差异,与T0期相比,两组在T2期的HAMD-24、BSI-CV分值均有不同程度的下降($p<0.05$),SHAPS的分值虽有下降,但无统计学意义($p>0.05$)。实验2组的HAMD-24平均减分25.78,大于实验1组的19.6,但差异无统计学意义($p>0.05$)。实验2组的BSI-CV平均减分13.11,大于实验1组的6.4,但差异无统计学意义($p>0.05$)。

实验1组T2时的HMAD-24、BSI-CV分数和实验2组T1时相比无显著性差异($p>0.05$)。2组治疗期间不良反应发生率无统计学差异($p>0.05$),且均未发生严重不良反应。

结论 加速rTMS治疗和常规rTMS治疗可以改善青少年抑郁症患者的抑郁症状及降低自杀意念,2种方案疗效相似,这可能与本研究样本量偏少有关,后期可以增大样本量进行进一步研究。加速rTMS方案相比常规rTMS方案能够更快速的改善抑郁症状及降低自杀意念。

关键词:重复经颅磁刺激,青少年,抑郁症,自杀意念,快感缺失

伴和不伴非自杀性自伤行为青少年抑郁症的共情损伤研究

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目的 共情是个体人际关系的重要影响因素,而人际因素也常是青少年抑郁症患者实施非自杀性自伤行为(NSSI)的诱发因素之一,因此,本研究旨在探究伴和不伴非NSSI青少年抑郁症患者共情损伤的特点。

方法 本研究共纳入66名被试,其中,伴NSSI行为青少年抑郁症患者33名,不伴NSSI行为青少年抑郁症患者14名,正常对照被试19名。所有被试均完成汉密尔顿抑郁量表(HAMD)、中文版人际指针反应量表(IRI-C)及疼痛共情任务。

结果 三组被试HAMD和IRI-C得分One-Way ANOVA分析显示,HAMD得分主效应显著,LSD事后检验显示,伴NSSI行为青少年抑郁症组的HAMD得分显著高于不伴NSSI行为青少年抑郁症组及正常对照组,IRI-C中的个人痛苦因子分主效应显著,LSD事后检验显示,伴和不伴NSSI行为青少年抑郁症组的个人痛苦因子得分显著高于正常对照组,此外,伴NSSI行为青少年抑郁症组的观点采纳因子得分显著高于正常对照组。疼痛共情任务正确率的ANOVA分析显示,任务类别主效应显著,组别主效应显著,其中,伴NSSI行为青少年抑郁症组正确率低于不伴NSSI行为青少年抑郁症组,任务

类别和组别的交互效应显著,简单效应分析显示,伴 NSSI 行为青少年抑郁症组在疼痛判断任务中的正确率低于其他两组。疼痛共情任务反应时的 ANOVA 分析显示,任务类别主效应显著,组别主效应显著,其中,伴 NSSI 行为青少年抑郁症组反应时长于其他两组,效价类别和组别的交互效应显著,简单效应分析显示,伴 NSSI 行为青少年抑郁症组在疼痛刺激下的反应时长于其他两组。

结论 伴和不伴 NSSI 青少年抑郁症患者均表现出不同程度的共情损伤,相较于不伴 NSSI 青少年抑郁症患者,伴 NSSI 青少年抑郁症患者对疼痛刺激的敏感性降低。

关键词:非自杀性自伤;青少年;抑郁症;共情

阿里地区人民医院 221 名医务人员身心健康状况

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目的 阿里地区海拔高,人口少,医务人员作为一个特殊群体,每天面对大量需要帮助及诊治的患者压力巨大。如果压力不能很好的缓解和释放,容易产生心理问题。故对医院的医务人员进行了此次心理状况调查。

方法 1.调查时间与调查对象:2024年4月1日至4月30日,调查对象为阿里地区人民医院在岗的医务人员 221 名。2.调查方法 采用问卷星线上调研,自制问卷和 PHQ-9、GAD-7、ISI 量表收集信息。3.统计方法 SPSS24.0 进行统计分析。

结果 1.临床和人口统计特征:参与此次调查的阿里地区人民医院医务人员 221 人,男性 64 人,女性 157 人。汉族 113 人,藏族 99 人,其他民族 22 人。年龄 20-40 岁,193 人,40 岁以上 28 人。未婚 89 人,已婚 124 人,离异 8 人。家庭关系融洽 175 人,不融洽 46 人。医生 57 人,护士 113 人,医技 28 人,行政后勤人员 23 人。初级职称 173 人,中级 41 人,高级 7 人。平均每天工作时长小于等于 6 小时 12 人,6-8 小时 107 人,大于 8 小时 102。需要上夜班 161 人,不需要 60 人。完全实现理想人生 7 人,大部分实现 35 人,实现一半 51 人,小部分实

现 97 人,没实现 31 人。有躯体疾病 44 人,没有 177 人。

2.心理健康基本情况:221 位医院医务人员均存在抑郁症状,14 位有轻度抑郁症状,65 位有中度抑郁症状,66 位为重度抑郁症状,76 位有极重度抑郁症状。均存在焦虑症状:69 位轻度焦虑症状,79 位中度焦虑症状,73 位重度焦虑症状。

3.睡眠状况:221 名医务人员中,41 名不存在失眠问题,70 名存在亚临床意义的失眠,76 名存在临床中度失眠,22 名存在临床重度失眠。

4.以是否上夜班分层发现和是否达到理想状态分层发现,PHQ-9、GAD-7、ISI 量表在组间都有显著性差异, p 均 <0.05 。上夜班和未实现理想状态的医务人员评分较高。

5.以 PHQ-9、GAD-7 和 ISI 分别为因变量,以临床和人口统计特征项为自变量,发现以 PHQ-9 为因变量,建立的回归方程是 $y=1.719x$ 是否实现理想生活状态+17.095;以 GAD-7 为因变量,建立的回归方程是 $y=-2.078x$ 是否上夜班+1.154x 是否实现理想生活状态+12.885;以 ISI 为因变量,建立的回归方程是 $y=-2.361x$ 是否上夜班+2.082x 是否实现理想生活状态+14.565。

结论 1.医务人员普遍存在心理健康状况问题,医务人员发生睡眠问题也较明显。

2.上夜班人群及没有达到理想生活状态的人群,抑郁、焦虑及睡眠问题更加突出。是否实现理想生活状况和焦虑、抑郁及睡眠的关系最密切,上夜班和焦虑关系最密切。

关键词:高原,医务人员,焦虑,抑郁

Cognitive Function Characteristics and Influencing Factors in Patients with Depressive Disorders: A 5-year Follow-up Report Based on The Epidemiological Survey of Mental Disorders

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Objective Cognitive impairment represents a notable feature of depressive disorders. Comprehending its characteristics and influencing factors is vital for patient rehabilitation.

Methods This study is based on the 2015 Shandong Province Epidemiological Survey of Mental Disorders (completed with 27,917 participants) and selected a total of 871 cases of depressive disorder patients diagnosed according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) from 1,237 cases across eight cities as the study group. Using a 1:1:1 matching method based on the same age group, gender, and place of residence as the study group, a total of 825 positive and 825 negative cases identified through general health questionnaires and additional risk assessment questions from the 2015 survey were randomly selected to form the high-risk and low-risk control groups. A five-year follow-up survey was conducted in 2020 on these three groups, employing tools such as a general information questionnaire, General Health Questionnaire-12 and additional risk assessment questions, SCID-I/P, Global Pain Scale, Quality of Life Questionnaire, Pittsburgh Sleep Quality Index, Montreal Cognitive Assessment, and clinical data questionnaire.

Results The current depressive group scored lower on the MoCA than the non-depressive group ($t=8.86$, $P<0.01$). The study group scored lower on the MoCA than the elevated and minimal risk group ($F=11.98$, $P<0.01$). The depression-unremitted group scored lower than the depression-remitted group ($t=6.44$, $P<0.01$). The Analysis indicated that males, with better life quality, and longer education were associated with higher MoCA scores. Conversely, older age, rural residency, employment, current depression, and poor marital were associated with lower MoCA scores.

Conclusion Individuals with depression commonly suffer cognitive impairment, which tends to partially improve as depression remits. Analysis indicates that males, better quality of life, and higher educational level are protective factors against cognitive impairment,

while older age and rural residency are risk factors for cognitive impairment.

关键词: depression disorder; cognitive function; case-control study; epidemiological survey; Shandong Province.

The Relationship between Depression and Cognitive Function Among Individuals Aged 18 and Above in Shandong Province: The Mediating Role of Sleep Quality

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Objective Investigating the mediating role of sleep quality in the relationship between depression and cognitive function, providing a basis for interventions in the recovery of cognitive functioning in patients with depressive disorders

Methods This study is based on the 2015 Shandong Province Epidemiological Survey of Mental Disorders (completed with 27,917 participants) and selected a total of 871 cases of depressive disorder patients diagnosed according to the DSM-IV from 1,237 cases across eight cities as the study group. Using a 1:1:1 matching method based on the same age group, gender, and place of residence as the study group, a total of 825 positive and 825 negative cases identified through general health questionnaires and additional risk assessment questions from the 2015 survey were randomly selected to form the high-risk and low-risk control groups. A five-year follow-up survey was conducted in 2020 on these three groups, employing tools such as a general information questionnaire, General Health Questionnaire-12 and additional risk assessment questions, SCID-I/P, PSQI, and MoCA

Results A negative correlation was observed between depression in 2015 and the MoCA total score in 2020 ($r=-0.11$; $P<0.01$), while a positive correlation was found with the PSQI total score in 2015 ($r=0.48$; $P<0.01$). There was a negative correlation between the MoCA total score in 2020 and the PSQI total score in 2015 ($r=-0.27$, $P<0.01$). Sleep quality in 2015 served as a complete mediator between depression in 2015 and cognitive function in 2020. Conversely, depression in 2020 was negatively correlated with the MoCA total score in 2020 ($r=-0.20$; $P<0.01$) and positively correlated with the PSQI total score in 2020 ($r=0.40$; $P<0.01$). A negative correlation was also noted between the MoCA total score in 2020 and the PSQI total score in 2020 ($r=-0.30$, $P<0.01$). Sleep quality in 2020 acted as a partial mediator between depression in 2020 and cognitive function in 2020, with the indirect effect accounting for 61.96% of the total effect

Conclusion Depression disorders are influenced by sleep quality in their relationship with cognitive function, and this influence persists over time. Enhancing the sleep quality of patients with depressive disorders can contribute to the recovery of their cognitive function

关键词: Depressive disorders; Cognitive Function; Sleep Quality; Epidemiological survey; Shandong Province.

社交焦虑障碍虚拟现实暴露系列个案研究

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目的 社交焦虑障碍 (social anxiety disorder, SAD) 的传统暴露治疗存在拒绝率和脱落率高、难以控制暴露等级等问题。虚拟现实暴露已在 SAD 等疾病中初步表现出改善临床症状的有效性, 但仍然存在暴露场景暴露刺激因素单一、情绪诱发程度不理想等问题致使治疗效果不佳。此外, 单一虚拟现实暴露对患者注意力调节有限, 而改善 SAD 重要因素之一是对其注意偏向调节。因此, 本研究将注意训练任务与虚拟现实暴露结合, 采用系列个案研究

初步验证基于注意引导的虚拟现实暴露治疗联合方案的疗效。

方法 (1) 对象: 北京安定医院焦虑障碍门诊招募符合入组标准的 SAD 患者, 不限制药物治疗, 共 12 例被试参与。(2) 评估工具: 采用简明国际神经精神访谈 (MINI) 中文版诊断, 利博维茨社交焦虑量表 (LSAS)、汉密尔顿焦虑量表 (HAMA) 和抑郁量表 (HAMD) 于基线、第 2 周和第 4 周末评估社交焦虑障碍严重程度和焦虑抑郁情绪。采用社会交往焦虑量表 (SIAS) 和社交恐惧量表 (SPS)、特质性事后加工过程量表 (PEPI-T)、自我关注量表 (SFAS)、注视焦虑评定量表 (GARS) 于基线和第 1、2、3、4、6、8、12 周末评估。采用沉浸感量表中文版 (IPQ)、模拟器不适感量表 (SSQ) 和自编的现场暴露动机及注意力评估量表于每次治疗后评估适宜性和注意方面的变化。(3) 干预方法 12 例个案治疗以 2 次/周频率, 每次 90 分钟, 共 8 次的设置进行, 会谈内容包括初始访谈、注意引导 VR 暴露干预和总结性会谈。

结果 12 例 SAD 患者 8 次治疗后, LSAS 量表平均分由 73.58 ± 27.05 下降至 49.83 ± 34.92 , 平均减分率为 32.43%。HAMA 和 HAMD 减分率分别为 28.57% 和 50.00%。PEPI-T 量表分数由基线 41.42 ± 12.85 下降至 32.42 ± 12.43 , 自我关注量表平均分由 57.75 ± 7.55 下降至 52.25 ± 10.79 , 注视焦虑量表由基线 39.58 ± 11.53 下降至 33.00 ± 17.80 。治疗期间 VR 沉浸感平均分由 38.92 提高到 39.42, VR 副作用平均分由 13.41 下降至 3.94。现场暴露动机由基线 47.08, 提高至 72.92 分。

结论 完成 12 例基于注意引导的虚拟现实暴露个案治疗, 结果初步表明 VR 暴露联合药物治疗有效改善 SAD 被试社交焦虑症状并提高现场暴露动机, 且一定程度上缓解焦虑、抑郁情绪。结合注意引导训练的 VR 暴露减轻被试注视焦虑程度, 但在自我关注量表、事后反刍此类认知功能干预效果甚微。未来需要优化虚拟情境和注意引导任务的操作, 从而进一步提高基于注意引导的 VR 暴露治疗的有效性和适宜性。

关键词: 社交焦虑障碍, 虚拟现实, 暴露与反应阻止, 个案研究

细胞因子与焦虑障碍相关性研究进展

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目的 总结现有细胞因子与焦虑障碍的相关性研究,探索新的焦虑障碍生物标志物,以辅助临床对焦虑障碍患者的诊断与治疗。

方法 本综述结合当前研究现状,从横向的相关性研究以及纵向因果性研究两个层次描述了被研究最多的 10 个细胞因子与各 AD 亚型的关系,在此基础上从机制、疾病相关性入手总结了现有研究的成果并对未来的研究进行了展望。

结果 各细胞因子与 AD 的人类横向相关性研究存在许多空白领域,已有的研究结果也很难得到统一。目前得到人类纵向研究证实相关的炎症因子较少,现有研究认为细胞因子(IL-6、CRP、IL-8)水平虽然与病程相关并受到治疗影响,但高水平炎症因子并不能指示未来的发病与否,无法被证明是病因性因素。在机制研究中除 IL-1 β 与 GM-CSF 在动物实验中被证明可以直接引发或抑制焦虑样行为,其他大多数细胞因子都通过影响包括神经发生、色氨酸代谢、血清素受体调控、血脑屏障完整性等通路与 AD 间接关联。

结论 细胞因子作为整体与 AD 的相关性是明确的,但是要将其作为 AD 的生物标记物以辅助临床诊断、治疗仍然要解决包括细胞因子特异性较低、干扰因素较多、因果性验证不足许多的问题。这提示我们在未来应当以更标准化的方法开展更多纵向研究确定各细胞因子与 AD 亚型的相关性,从机制上寻找更加特异性的指标,以及引入其他生物学标志与细胞因子结合以提高特异性,从而为 AD 临床诊断、分型、辅助治疗和判断预后提供新的可能性。

关键词: 焦虑障碍,细胞因子

跨诊断过程的认知行为治疗研究进展

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一、概念

2004 年, Harvey 提出跨诊断过程(Transdiagnostic process),指出一个心理过程要被

视为跨诊断,需满足两个条件:1.与健康对照组相比时,在不同障碍/疾病中出现;2.必须在心理病理学的发展和/或维持中起因果作用。跨诊断 CBT 侧重于识别常见和核心的适应不良的气质、心理、认知、情感、人际和行为过程。

二、不同疾病的跨诊断过程的 CBT 有效性

不同疾病的跨诊断过程的 CBT (tCBT) 最早使用在进食障碍患者(Fairburn, 2003),之后开始应用到焦虑障碍(Norton, 2004; 2008)、抑郁障碍(Clark, 2009)、强迫障碍(Hawley, 2017)等疾病。

Fairburn 等进食障碍强化型 CBT 针对饮食障碍的低自尊、情绪调节困难等问题,显示 CBT-E 在改善患者的体重、BMI 和心理症状方面是有效的,且有较好的依从性,持久性疗效。Newby 分析 tCBT 对焦虑和抑郁的疗效。发现在减少焦虑和抑郁症状方面显示出更有效, Dear, 等(2015)用 tCBT 治疗 GAD, 显示与传统 CBT 疗效相当。Bowers (2024) 的治疗也显示对 GAD 消极情感显著改善。团体治疗在治疗焦虑共病抑郁障碍中也有良好效果(Talkovsky 2017)。

三、起效机制

1.认知重构:帮助患者识别和挑战不合理思维模式,促进认知重构;2.行为实验:学会减少回避并增加对这些情境的控制感。3.情绪调节:通过深呼吸、放松、正念和其他策略更好地理解和管理情绪体验。4.加强自我效能感。5.神经网络:Fang (2024)发现 tCBT 自我聚焦注意力相关的大脑连接模式是有效标志物。

四、不同群体的有效性

Jeppese 等对青少年情绪和行为问题有效,减少家长报告的功能损害显著优于对照组。Sherrill (2024) 退伍军人中实施 UP-IOP 的 tCB, 发现依从性 94%。减少症状严重性方面有效。

五、计算机及网络形式

Orgilés(2024)通过计算机对儿童青少年进行 Super Skills for Life, 表明 SSL 预防儿童情感问题的有力工具。Riddle (2024) 研究家长引导的 tCBT, 减少青少年疫情期间情感问题。Benjet (2024) 比较自我指导的网络 tCBT 在减少大学生的焦虑和抑郁具有显著效果。Abramovitch(2024)发现,使用应用程序组在完美主义、强迫、功能损害和情感负担有显著减少。

以后的研究需要对 tCBT 的长期疗效、不同文化背景下的适用性,以及基于大数据和开发个性化治疗方案,关注 tCBT 改变心理状况的具体机制,包

括神经生物学变化、认知重构过程等。

关键词：跨诊断 CBT, CBT, 焦虑障碍, 进食障碍, 抑郁障碍, iCBT

错失恐惧研究现状与展望

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目的 随着互联网的发展,以微信、QQ、微博为代表的社交网络工具迅速兴起,社交媒体成为了世界各地许多人日常生活的一部分,人们可以随时随地与庞大的社交网络保持联系,分享信息。但与此同时,社交媒体使用也可能会引发人们的反思和恐惧,认为别人在自己不在场的时候正在经历令人难忘的事件,错失恐惧成为了当下的研究热点。因此,全面了解错失恐惧研究的现状,进一步完善相关领域的研究成果,并对未来的研究方向提出建议是很有必要的。

方法 本文整合国内外相关研究,从错失恐惧的概念、分类、理论、相关影响因素及干预措施等方面对错失恐惧的研究现状进行了综述。

结果 认知心理学家 Przybylski 于 2013 年首次开展了错失恐惧的概念研究,将错失恐惧定义为个体因担心错过他人的有意义经历而产生的一种弥散性焦虑,它会导致个体经常查看社交媒体软件或不停地参与各种社交活动,以便得知他人的实时状态。根据自我决定理论,错失恐惧源于基本心理需要缺失,个体寻求需要的满足,而社交媒体方便快捷,可满足个体的关系需要、自主需要、胜任需要。研究证明,年龄、人格特质、心理需要和社交媒体使用都会对错失恐惧产生影响。与此同时,错失恐惧对个体的认知、情绪、行为也会产生影响:(1)认知方面:国内外研究表明,错失恐惧会使个体的认知失败现象增多,能显著预测个体的低自尊、消极社会适应等,与生活满意度呈显著负相关;(2)情绪方面:国内外多项研究指出,错失恐惧对个体的情绪呈负向影响,与抑郁、焦虑、孤独感、压力水平等均呈显著正相关;(3)行为方面:研究表明,错失恐惧可导致个体睡眠质量下降,并能显著预测社交网络成瘾和低头症。目前对于错失恐惧的干预研究主要集中在

认知行为疗法、正念疗法中。

结论 已有研究仍旧存在一些不足,例如大多数研究为横断研究,只有少部分纵向研究,无法理清错失恐惧形成的具体路径;研究对象多为青少年和大学生,缺乏对特定职业群体、不同种族或跨文化领域的研究;测量方式较为单一,多为问卷法;干预措施较少,且缺乏其有效性的验证。在未来的研究中,可结合现场研究、实验室研究等方式,进一步探寻错失恐惧在不同情境下的变化及其内在机制;与此同时,可将软件工程、社会心理学、临床与咨询心理学等学科相结合,充分发挥社交媒体功能设计的作用,跨学科设计错失恐惧的干预措施。

关键词:错失恐惧,社交媒体,研究现状

中国医务人员心理健康服务需求研究

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目的 医务人员的精神心理状况与医疗服务的质量密切相关,随着我国社会经济的快速发展,我国医务工作者以抑郁、焦虑为代表的心理健康问题发生比例不容忽视,但现有的心理健康服务体系尚不能满足医务人员日益增长的精神心理健康服务的需求。

鉴于现有的我国医务人员心理健康服务的供给缺口,为了解医务人员心理服务的需求,我们设计了医务人员心理服务需求调查问卷,以了解我国医疗卫生系统医务人员心理健康服务的需求现状。

方法 基于前期研究团队具体维度的质性研究分析和讨论,设计了心理健康服务需求的自编在线问卷,在 2023 年 9 月-10 月采用方便抽样,在线发放给医务人员自愿作答。采用描述性统计整理一般人口学资料,采用独立样本 t 检验、卡方检验比较不同人群特征的心理服务需求差异,将有差异的因素纳入二元 logistic 回归模型中进一步分析需求差异。

结果 共有来自 31 个省市自治区的 8602 名医务人员参与调查,平均年龄 38.79±9.89 岁,以女性

为主(71.8%)。既往接受过心理服务的医务人员仅有16.98%，且2/3为所在医疗机构提供，他们对这些心理服务的满意度较高。有24.83%(2136人)医务人员有心理服务的需求，不同人群特征的医务人员对心理服务的需求存在差异：有罹患精神障碍风险、既往接受过心理服务者对心理服务的需求较高。从心理服务目前的供需状况来看，医务人员较易获得的心理服务种类前三位为心理测试、心理专题讲座和个别心理咨询与治疗。有需求但获取难度较高的心理服务种类为医院员工帮助计划，精神专科门诊，数字化的心理咨询与治疗。

结论 我国医务人员当前心理服务需求满足度有待提高，还需加强重点人群筛查机制，关注重点人群的心理健康状况及需求，按需提供心理健康服务。

在心理健康服务的供给方面，需要提供更多样化、便捷化的服务方式，特别是顺应新兴数字技术发展的趋势，提高心理健康服务的便捷性和可及性，以满足医务人员日益增长的心理健康服务需求。

关键词：医务人员；心理健康；心理治疗；心理服务需求

艾司西酞普兰和度洛西汀治疗女性 抑郁症临床疗效及安全性观察

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目的 观察艾司西酞普兰和度洛西汀治疗女性抑郁症临床疗效及安全性。

方法 选取了78例女性抑郁症患者作为研究对象，将其按随机数字表法分为A组和B组，每组各36例。A组患者采用艾司西酞普兰治疗，B组患者采用盐酸度洛西汀治疗，两组患者均共治疗8周的时间，比较两组患者的临床疗效及用药安全性。结果显示：治疗后，两组患者的HAMD评分及烧愈率对比无统计学差异($P>0.05$)；A组患者的主要不良反应为疲劳和失眠，B组患者的主要不良反应为食欲降低、失眠和便秘，所有患者症状均较轻微，可自行恢复或经对症处理后恢复。**结论**：艾司西酞普兰和度洛西汀治疗女性抑郁症均安全有效，疗效相当。

结果 两组患者治疗前后HAMD评分比较治

疗前后，两组患者各时间点的HAMD评分均未见明显差异，两组患者临床疗效的比较治疗后第1周的起效率，A组患者15例起效，B组13例起效，两组患者的起效率比较无统计学差异($\chi^2=0.509, P>0.05$)；治疗后第2周时，A组患者23例起效，B组25例起效，两组患者的起效率比较无统计学差异($\chi^2=0.823, P>0.05$)。

结论 艾司西酞普兰和度洛西汀治疗女性抑郁症患者均安全有效，疗效相当

关键词：抑郁症；女性；艾司西酞普兰；度洛西汀；疗效；安全性。

无抽搐电休克治疗对抑郁症患者记忆 功能、认知功能及疗效的影响分析

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目的 目的探讨无抽搐电休克治疗(modified electric convulsive therapy, MECT)对抑郁症患者记忆功能、认知功能及疗效的影响。

方法 方法选取2013年4月-2015年8月共82例抑郁症患者作为调查对象，将其按数字表法分为对照组和研究组各41例。对比观察记忆功能、认知功能、疗效及安全性。不同治疗时间计量资料比较应采用重复测量资料方差分析，两两比较采用LSD法，计数资料比较采用 χ 检验或确切概率法， $P<0.05$ 为差异有统计学意义。

结果 不同治疗时间汉密顿抑郁量表(Hamilton depression scale, HAMD)评分比较，差异有统计学意义($P<0.05$)；两组患者HAMD评分比较，差异有统计学意义($P<0.05$)。与治疗前比较，对照组患者急性期治疗结束的HAMD评分明显下降，而研究组患者急性期治疗结束、维持治疗6周末、维持治疗16周末的HAMD评分陆续下降，差异均有统计学意义(均 $P<0.05$)。不同治疗时间背数、联想、图片、再认分值比较，差异均有统计学意义(均 $P<0.05$)；两组患者背数、联想、图片、再认分值比较，差异均有统计学意义(均 $P<0.05$)。研究组急性期治疗结束后1d的背数、图片、再认等分值较治疗前显著降低，差异均有统计学意义(均 $P<0.05$)，维持治疗6周末、维持治疗16周末4项分值较治疗前差异均无统计学意义(均

$P>0.05$),但与急性期治疗后 1 d 对比, 差异有统计学意义($P<0.05$)。

结论 MECT 治疗中患者无恐惧感, 且对记忆、认知的影响较小, 易被家属及患者所接受, 值得临床推广。

关键词: 无抽搐电休克治疗; 抑郁症; 记忆功能; 认知功能

血清性激素及 5 羟色胺在更年期抑郁 患者体内的表达及临床价值

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目的 对更年期抑郁女性血清性激素和 5-羟色胺检测水平的临床价值进行深入分析。

方法 方法对照组 60 例为我院安排体检的健康围绝经期女性, 观察组 90 例为我院就诊的更年期抑郁女性, 对比两组血清卵泡刺激素、雌二醇及 5-羟色胺检测数值, 结果观察组血清卵泡刺激素检测值与对照组比较明显较高.血清雌二醇和 5-羟色胺检测值与对照组比较明显较低, 差异均有统计学意义($P<0.05$).结论雌激素和 5-羟色胺表达水平在女性更年期抑郁患者体内明显下降、卵泡刺激素水平明显升高, 可以适当采用激素替代疗法。

结果 两组患者治疗前后 HAMD 评分比较不同治疗时间 HAMD 评分比较, 差异有统计学意义($P<0.05$); 两组患者 HAMD 评分比较, 差异有统计学意义($P<0.05$)。与治疗前比较, 对照组患者急性期治疗结束的 HAMD 评分明显下降, 而研究组患者急性期治疗结束、维持治疗 6 周末、维持治疗 16 周末的 HAMD 评分陆续下降, 差异均有统计学意义(均 $P<0.05$)。

结论 女性绝经期抑郁症患者雌激素和 5-羟色胺表达水平降低, 卵泡刺激素水平明显升高, 可以采用激素替代疗法。此外, 除了药物干预, 心理干预和良好社会支持也是减少绝经期妇女抑郁症的正确方法。

关键词: 卵泡刺激素;雌二醇;5-羟色胺;更年期. 抑郁

冰雪运动员心理因素研究

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目的 近年来越来越多关注于运动员心理健康的研究逐渐发现了运动锻炼与心理健康之间存在的互惠关系: 运动参与和锻炼对精神状态有益, 可以改善情绪和提高生活质量; 良好的心理健康也会带来更好的身体状况和运动表现。因此, 本研究检测冰雪运动员的心理因素, 比较其与健康对照是否存在显著差异, 为更好地监测运动员健康状态进而使其在运动竞技状态下达到的更高的水平和更稳定的发挥提供理论依据。

方法 本研究共纳入 55 名冰雪运动员及 62 名健康对照, 使用抑郁症筛查量表 (PHQ-9)、广泛性焦虑障碍量表 (GAD-7)、匹兹堡睡眠质量指数 (PSQI) 量表等评估受试者心理状态, 并比较冰雪运动员与健康对照的人口学资料与心理因素差异及其内部相关性。

结果 冰雪运动员的简易应对方式问卷 (SCSQ) 得分高于健康对照 ($P=0.035$), 其青少年生活事件量表 (ASLEC) 中的成绩压力分低于健康对照 ($P=0.024$), 且两者在健康对照 ($r=-0.291$, $P=0.019$) 及整体人群 ($r=-0.285$, $P=0.002$) 中存在负相关。

结论 冰雪运动员与健康对照相比更倾向于采取积极的应对方式, 冰雪运动员的成绩压力小于健康对照, 且积极的应对方式可以缓解成绩压力。

关键词: 冰雪运动员;心理因素

First Study of Inhibitory Function and Brain White Matter Diffusion Tensor Imaging in Adolescents with Obsessive-compulsive Disorder

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Objective This study aims to investigate the correlation between the white matter structure and inhibitory function in adolescents with first-episode obsessive-compulsive disorder (OCD) using neuropsychological measurement and Diffusion Tensor Imaging (DTI) technology, providing scientific evidence for clinical prevention and treatment

Methods Twenty-one adolescents with first-episode OCD who met the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) were collected using convenience sampling in the Psychological Outpatient Department of the Second Affiliated Hospital of Zunyi Medical University as the study subjects. Meanwhile, 16 healthy adolescents were recruited as a control group. Clinical symptoms were assessed using the Yale-Brown Obsessive Compulsive Scale (Y-BOCS). go/no-go/NO-GO Association Task (GNAT) was used for cognitive function assessment. Whole brain white matter Diffusion Tensor Imaging (DTI) scanning was performed on all enrolled subjects using 3.0TGE MRI from the USA. The anisotropic anisotropy (FA) values and mean diffusivity (MD) of the white matter of the two groups were analysed to compare the differences in cognitive functions between the two groups, and the FA values, Yale-Brown Obsessive-Compulsive Disorder Scale (OCD) scores, onset times, and reaction times and correct rates in go/no goGo/No-Go tasks between the two groups were also compared in the white matter regions. Pearson correlation analyses were performed on indicators such as reaction time and correctness in the task

Results In terms of inhibitory function, there was a significant difference between the case group and the control group in terms of mean reaction time ($417\pm 36.93\text{ms}$) vs ($410.88\pm 25.30\text{ms}$) ($P < 0.05$), and in terms of correctness ($73.71\pm 3.67\%$) vs ($78.58\pm 2.26\%$) ($P < 0.05$). In terms of brain structure, the case group showed a statistically significant difference ($P < 0.05$) in terms of lower FA values in the middle temporal gyrus, posterior thalamic radiation, corpus callosum, geniculate corpus callosum, cingulate gyrus, and middle cerebellar peduncle with significant changes. In terms of inhibitory function, the mean correct rate was lower while the mean response time was longer compared to

the control group, and the difference was statistically significant ($P < 0.05$). Further Pearson correlation analysis revealed that the FA value was positively correlated with the mean correct rate ($r=0.49, P < 0.05$) and negatively correlated with the mean reaction time ($r=-0.84, P < 0.05$). the MD value was negatively correlated with the mean correct rate ($r=-0.46, P < 0.05$) and positively correlated with the mean reaction time ($r=0.47, P < 0.001$)

Conclusion 1. Compared to the healthy control group, adolescents with OCD showed decreased average accuracy rates and increased average reaction times in the go/no-go task, indicating significant cognitive impairment, particularly in inhibitory function 2. Adolescents with OCD exhibited reduced FA values and increased MD values in specific brain regions, including the middle temporal gyrus, corpus callosum body, genu, cingulate gyrus, and cerebellar peduncles. 3. A values in specific brain regions of adolescents with OCD were positively correlated with average accuracy rates and negatively correlated with average reaction times, while MD values were negatively correlated with average accuracy rates and positively correlated with average reaction times. These findings suggest that the middle temporal gyrus, corpus callosum body, genu, cingulate gyrus, and cerebellar peduncles may play a critical role in the impaired inhibitory function of adolescents with OCD.

关键词: Obsessive-Compulsive Disorder; Adolescents; Inhibitory Function; Diffusion Tensor Imaging; White Matter

ChatGPT 应用于网络认知行为治疗的初步探讨

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目的 ChatGPT (Generative Pre-trained Transformer) 是人工智能技术驱动的自然语言处理工具, 能够通过理解和学习人类的自然语言来进行对话,

并能根据聊天的上下文进行互动。ChatGPT 已显示其在诊断复杂医疗问题的巨大潜力，但在精神医学中的系统性研究较少。本研究拟系统综述 Chat GPT 在网络认知行为治疗领域的使用前景、研究进展和局限性，为将来有效合理使用人工智能技术帮助精神疾病患者探讨未来研究的方向和实践建议。

方法 使用 Chat GPT 为关键词，检索 PubMed 与精神医学、临床心理学、网络认知行为治疗相关的研究文献，并进行筛选和分类。我们使用系统性综述的方法分析研究文献，并进一步对 Chat GPT 在精神医学或心理疾病，特别是网络心理治疗中的应用情况进行总结。纳入标准为 ChatGPT 应用于精神医学或心理障碍的相关领域论文，排除标准为排除评论性文章、技术类文章等。

结果 根据纳入标准和排除标准，通过筛选共系统分析其中 35 篇与 Chat GPT 在医学领域的应用相关的论文。结果发现 Chat GPT 在心理治疗、药物依从性管理、患者自助健康管理、医学教育和研究等多个领域具有显著的应用优势。Chat GPT 在心理治疗中认知行为治疗的使用较为广泛，多个研究表明使用 Chat GPT 进行网络认知行为治疗的效果不劣于传统的面对面 (face to face) 心理治疗。在药物管理方面，使用 Chat GPT 可以帮助患者更好地管理药物使用，改善药物治疗的依从性。

结论 通过系统综述及总结 Chat GPT 在医学特别是精神或心理疾病中的应用情况，并提出了未来研究的方向和实践建议。尽管 Chat GPT 在医学领域的应用前景非常广泛，但其应用也存在一些限制，例如不能替代医生的面对面诊断和体格检查及精神检查。此外，由于 Chat GPT 的模型训练和推导需要海量的文本数据，使用不当可能会面临数据隐私保护的问题。将来需要更多的研究来探讨 Chat GPT 在精神医学领域的应用，并制定相关的标准和规范。

关键词：人工智能，认知治疗，行为治疗，网络治疗

香兰素吸嗅联合 SSRIs 类抗抑郁药治疗抑郁症的疗效观察

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目的 观察香兰素吸嗅联合 SSRIs 类抗抑郁药治疗抑郁症的疗效。

方法 在这项随机对照试验中，我们旨在评估香兰素吸嗅治疗结合常规 SSRIs 类抗抑郁药物对抑郁症患者的疗效和安全性。我们将 80 例抑郁症患者随机分为两组，每组 40 例。治疗组患者在常规 SSRIs 类抗抑郁药治疗的基础上接受香兰素吸嗅治疗，而对照组仅接受常规 SSRIs 类抗抑郁药治疗。

为了评估治疗效果，我们将使用汉密尔顿抑郁量表 (HAMD) 来评估患者在治疗前、治疗后 2 周和治疗后 4 周的抑郁情绪。HAMD 是一种广泛使用的评估抑郁症状严重程度的工具，包括多个项目，如情绪低落、睡眠障碍、食欲减退等。通过比较两组患者的 HAMD 评分，我们可以评估香兰素吸嗅治疗是否能够显著改善患者的抑郁症状。

结果 疗效分析结果表明治疗后第 2 周和第 4 周，治疗组的 HAMD 评分相较于对照组均显著降低，且下降程度更高，差异具有统计学意义 ($P < 0.05$)。在治疗过程中，两组患者均未出现严重的过敏反应或其他不适感。TESS 评分显示两组患者在行为不良反应、实验室检查指标及神经系统反应等方面均未见显著性差异 ($P > 0.05$)。

结论 本研究结果表明香兰素吸嗅联合 SSRIs 类抗抑郁药治疗对抑郁症患者的抑郁情绪具有显著的改善作用，香兰素吸嗅治疗安全、无副作用，为抑郁症患者的抑郁情绪治疗提供了新的思路和方法。

关键词：抑郁症；SSRIs；香兰素；芳香疗法

不同等级冰雪运动员唾液代谢谱系特点及其心理状态相关性的研究

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目的 冰雪运动的训练和比赛环境有其独特性。然而，人们对冰雪运动员的新陈代谢特征及其与心理状态的相关性知之甚少。本研究拟通过对比不同等级冰雪运动员的唾液代谢特点与心理状态，总结发现冰雪运动员的唾液代谢特点与心理状态，探寻冰雪运动员的特征代谢物与其心理状态的相关性，为理解冰雪运动员的生理心理状态对赛训表现的影响提供理论基础。

方法 本研究共纳入被试冰雪运动员组 68 人。所有受试者的心理状况均通过以下心理量表进行评估: 运动员流畅状态量表、患者健康问卷-9 (PHQ-9)、广泛性焦虑量表-7 (GAD-7)、心境状态量表 (简式 POMS)、匹兹堡睡眠质量指数 (PSQI)、竞技状态焦虑量表。采用液相色谱法 (LC) 和串联质谱法 (MS/MS) 鉴定差异代谢物。

结果 1、不同等级运动员在运动员流畅状态量表中的平衡、目标、集中、控制、融合、反馈、调控、享受、总分以及竞技状态焦虑量表中的认知状态焦虑和躯体状态焦虑得分上有显著差异 ($P < 0.05$)。2、不同等级的冰雪运动员在唾液代谢谱系主成分分析中没有显著差异, 在国家级运动员组与省级运动员组发生显著改变的通路是卟啉和叶绿素 II 的代谢; 国家级运动员组与其他等级赛事运动员组发生显著改变的通路是精氨酸和脯氨酸代谢和亚油酸代谢。3、不同等级冰雪运动员的前 20 位特征代谢物与心理状态量表得分有相关性。

结论 1、等级较高的冰雪运动员的运动流畅水平更高, 竞技状态焦虑水平较低。2、不同等级的冰雪运动员唾液代谢谱系主成分没有显著差异。3、冰雪运动员的唾液特征代谢物与冰雪运动员心理状态相关。

关键词: 冰雪运动员; 心理状态; 代谢组学; 唾液

Needs Assessment for Psychotherapy Training Among Psychiatric Residents: Qualitative Interview and Focus Group Study

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Background /Aim: As psychotherapy has growing demands in the clinic, psychotherapy training programs for psychiatric students to develop and master psychotherapy are in urgent need. In order to establish and improve high-quality psychotherapy training programs, the present study explored psychiatric students' insights, needs, preferences, and expectations for future

psychotherapy programs

Methods We established a qualitative study through Focus Group Interviews (FGIs) with three major interview questions and twenty-one specific questions. Fourteen Chinese psychiatric students (five females) participated in the online focus group interview, and their answers were collected and analyzed

Results No participants had ever received any form of psychotherapy training. During the interview, they offered their comments, expectations, and suggestions for current and future psychotherapy training. Based on the order of interview questions and significant, meaningful statements that participants brought up, we organized and refined participants' perspectives of psychotherapy training into thirteen categories and sixty-three themes

Conclusion The study found that even though no psychiatric students had received systematic training and had limited knowledge of psychotherapy, they had a strong and positive willingness to learn and apply psychotherapy in future clinical practice. They also offered many unique perspectives and expectations for future training, which should be considered for program improvement

关键词: CBT training, medical residents, psychiatrists, mastery, application

产妇心理复原力和依恋与产后抑郁的关联

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目的 探讨合肥市产妇发生产后抑郁情况及其与心理复原力和依恋关系, 为产后抑郁的预防和干预提供基础资料。**方法** 采用问卷调查的方法, 对安徽省妇幼保健院某产科病区 301 名产妇进行一般人口特征、心理复原力、依恋、爱丁堡产后抑郁量表等方面调查。

方法 采用问卷调查的方法, 对安徽省妇幼保健院某产科病区 301 名产妇进行一般人口特征、心

理复原力、依恋、爱丁堡产后抑郁量表等方面调查。

结果 产妇产后抑郁状态检出率为 22.3% (67/301)。在不同文化程度、是否介意孕期形体改变和是否恐惧分娩方面,产妇产后抑郁检出率差异均有统计学意义。心理复原力总分及坚韧性、力量性、乐观性分量表分均减少产妇发生产后抑郁的风险(坚韧性: $OR=0.924$, 95%CI: 0.894~0.954, 力量性: $OR=0.882$, 95%CI: 0.838~0.928, 乐观性: $OR=0.748$, 95%CI: 0.671~0.833, 总分: $OR=0.954$, 95%CI: 0.936~0.971)。依恋总分及回避、焦虑分量表分均能增加产妇发生产后抑郁的风险(回避: $OR=1.025$, 95%CI: 1.055~1.046, 焦虑: $OR=1.031$, 95%CI: 1.014~1.049, 总分: $OR=1.025$, 95%CI: 1.012~1.038)。心理复原力三个维度中的乐观性显著降低了产妇出现产后抑郁的风险(乐观性: $OR=0.823$, 95%CI: 0.699~0.970); 依恋中的焦虑显著增加了产妇出现产后抑郁的风险(依恋: $OR=1.026$, 95%CI: 1.007~1.046)。此外,心理复原力总分和依恋总分也分别减少和增加了产妇产后抑郁的风险(心理复原力总分: $OR=0.958$, 95%CI: 0.941~0.975, 依恋总分: $OR=1.022$, 95%CI: 1.009~1.035)。

结论 心理复原力、依恋与产后抑郁关系密切。可通过提高产妇的心理复原力水平及降低不安全依恋来预防产后抑郁的发生。

关键词: 产后抑郁; 心理复原力; 依恋

基于 CBT 方法调节痴呆患者家属情绪的思考

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痴呆作为神经退行性疾病,给家属带来了持续增加的照护负担,诱发焦虑情绪,本文基于 CBT 方法,探讨其调节痴呆患者家属情绪的可行性。

痴呆患者对家属的影响是多方面的。首先,痴呆患者的主要症状包括记忆减退、认知下降、日常生活能力下降,甚至昼夜颠倒、不识人物、不能自理等,痴呆还常伴有精神行为症状,如幻觉、妄想和急躁易怒。随着痴呆的加重,家庭需要一位劳动力全职陪护,这导致了家庭收入的降低。同时,持续陪伴

痴呆患者但又难以有效沟通,增加了家属的心理压力,诱发焦虑情绪。家属对父母亲人的正面情绪与久病照护的负面情绪交织,产生了矛盾心理。良好的照护可以延长患者的存活时间,但也增加了家属的照护时间。放弃照护会带来良心谴责和可能的亲属邻里的指责,导致照护患者和个人压力之间的选择矛盾。

家属的认知和情绪变化可以分为确诊前后的变化以及病情日久后的变化。在确诊前,家属因四处求医积累的压力在确诊瞬间得以释放,但随之而来的是痴呆疾病导致的长期问题。虽然宣传普及让家属接受了痴呆是疾病的观念,但他们对疾病照护的难度缺乏充分认识。家属应改变对痴呆的认知,充分认识到合理的照护可以使患者在疾病减轻阶段停留更长时间,从而减小对家庭的影响。随着病情日久,儿女在照护老人和需要工作挣钱的现实之间产生矛盾。老伴相互照顾似乎解决了人力不足的问题,但实际上,健康老年人能否长期照护患病老伴缺少研究支持。家属应改变希望患者帮助完成家务的观念,客观分析老伴在照护中的承担能力,改变只能家人亲自照护患者的观念,寻求社区工作者等社会力量的帮助。基于 CBT 方法,医生应在指导患者治疗的同时,进行充分的家庭教育,让家属认识到好的照护可以使患者维持在较轻阶段,保留大部分日常生活能力,实现安全监护下的生活自理。家庭应充分认识到老伴相互照护存在的潜在问题,避免因照护患者而导致老伴出现身体和心理问题,改变照护观念。

家属在照护痴呆患者过程中会经历行为上的改变。确诊前后,一些家属在确诊后放弃药物治疗,另一些家属则采取积极治疗,这些行为受其独特的家庭背景因素影响。医生应在家庭力所能及的范围内对其进行治疗和生活指导。随着病情日久,长久的照护使行为成为习惯,但同样的照护方式并不能一直适应病情进展的患者,家属应对照护方式做出改变,并逐渐接受来自社会的帮助。基于 CBT 的行为改变,医生应主动提供不同程度痴呆患者的照护建议,帮助家属形成合适的照护行为和经历。家属应在聚焦问题、改变认知的基础上,做出行为改变,平衡照护和工作生活,释放压力,稳定情绪。

关键词: 认知行为疗法,痴呆,家属情绪

基于CBT方法调节帕金森病患者家属情绪的思考

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帕金森病是一种慢性神经退行性疾病，主要症状包括震颤、肌肉僵硬、运动迟缓和平衡障碍。这些症状不仅影响患者的日常生活，也给家属带来巨大压力。家属在照顾过程中常面临情感负担、经济压力和社会孤立等问题。此外，家属的心理健康也可能受到影响，出现焦虑和抑郁情绪。基于认知行为疗法(CBT)的聚焦问题方法，可以有效帮助家属应对这些挑战。通过CBT，家属可以学会识别和改变负面思维模式，增强应对压力的能力，并建立积极的支持网络，从而减轻照顾负担，提高生活质量。

在帕金森病确诊前，家属可能经历焦虑、不确定和担忧等情绪。当确诊后，家属的情绪变化会更加剧烈，可能会出现悲伤、恐惧和无助感。他们的认知也会从怀疑转变为接受现实，开始面对照顾患者的实际挑战。随着病情的进展，家属的情绪和认知会进一步变化。长期照顾的压力可能导致情绪的耗竭，出现抑郁、愤怒和无力感。同时，他们的认知也可能变得更加消极，认为自己的努力无法改变现状。基于认知行为疗法(CBT)的方法，可以有效帮助家属应对这些变化。通过CBT，家属可以识别并调整负面的思维模式，学习更积极的应对策略，从而减轻情绪负担，提高照顾患者的能力和自身的生活质量。

在帕金森病确诊前，家属的行为可能主要集中在寻找医疗帮助和解答疑问上，表现出频繁就医、咨询专家等行为。当确诊后，家属的行为会出现明显变化，他们开始更多地关注患者的日常照顾，如帮助患者进行日常活动、管理药物和安排医疗检查。随着病情的进展，家属的行为也会随之改变。他们可能需要承担更多的照顾责任，如协助患者进食、洗浴和移动，甚至在经济和情感上提供更多的支持。这种长期的照顾会导致家属的生活方式发生显著变化，可能减少社交活动和个人时间。基于CBT的行为改变方法，可以帮助家属更有效地应对这些挑战。通过CBT，家属可以学会制定合理的照顾计划，设定现实的目标，并通过积极的行为策略来减轻照顾压力，从而改善他们的整体生活质量和应对能力。

关键词：认知行为疗法,帕金森病,家属情绪

穴位贴敷联合耳穴压豆对精神分裂症患者便秘的护理观察

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目的 探讨分析穴位贴敷联合耳穴压豆对精神分裂症患者便秘的护理观察。

方法 选取2022年1月-2023年10月在本院收治的80例精神分裂症的患者，根据入院时间将其分为对照组(实施常规护理干预)和中医组(在对照组基础上实施穴位贴敷联合耳穴压豆护理干预)，每组患者各40例，两组均持续干预1个月，比较两组患者的症状缓解时间，于干预前后，比较两组患者的便秘程度、生活质量、护理满意度。

结果 中医组的临床症状腹胀、便质干结、排便困难缓解时间均短于对照组，差异有统计学意义($P<0.05$)；干预后，中医组的便秘程度Wexner评分较对照组低，生活质量较对照组高，差异有统计学意义($P<0.05$)；中医组护理总满意度为95.00%比对照组的护理总满意度80.00%高，差异有统计学意义($P<0.05$)。

结论 本研究结果显示，中医组的临床症状改善时间较对照组短，便秘程度Wexner评分较对照组低，生活质量较对照组高，中医组护理总满意度为95.00%比对照组的护理总满意度80.00%高，这说明了穴位贴敷联合耳穴压豆能缩短精神分裂症患者便秘的临床症状，改善患者的便秘程度和护理满意度，提高患者的生活质量。分析其原因可能是因为，耳穴压耳为诸脉汇集之所，脏腑之气经血脉汇集于耳，对其进行刺激，可调节脏腑机能。综上所述，穴位贴敷与耳穴压豆能缩短精神分裂症患者便秘的临床症状，改善患者的便秘程度和护理满意度，提高患者的生活质量。

关键词：穴位贴敷；耳穴压豆；精神分裂症；便秘

重复经颅磁刺激在抑郁障碍治疗中的应用进

展

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目的 抑郁障碍是指在临床上由各种原因引起的以显著和持久的抑郁心境、精神运动性迟滞与激越、兴趣丧失等抑郁症状群为主要特征的一类常见精神障碍,具有共病率高、躯体不适症状多等特点。抑郁障碍在我国的终生患病率约为 6.8%,是现今国内常见的精神障碍,全球疾病负担研究显示,抑郁障碍已占非感染性疾病导致失能的比例达 10%。近几年抑郁障碍的患病率和社会负担呈上升趋势,仅在 2019~2020 年间,世界范围内抑郁障碍患病率增加 27.6%,患者增加约 5320 万例。

经颅磁刺激是目前具有代表性的治疗抑郁障碍的非侵入性神经刺激技术之一,其利用电磁转换原理在脑内产生聚焦的感应电流并形成脉冲刺激,重复经颅磁刺激以此原理按固定的刺激频率产生连续脉冲串,调节大脑相关功能区的兴奋性,刺激神经元并引发一系列生理生化反应,具有无痛、无创、安全性高、不良反应小等优点,是临床上较安全的物理治疗手段。近年来,基于循证医学证据的临床治疗指南已纳入重复经颅磁刺激用于治疗多种神经精神疾病,如抑郁障碍、强迫及相关障碍、焦虑障碍等,在精神障碍治疗的临床实践中广泛使用。

方法 本文以“TMS”“depression”为主题词检索了 EMBASE 数据库、PUBMED 数据库,并以“经颅磁刺激”“抑郁”为主题词检索了中国知网、万方数据库,年限限定为近 10 年。

结论 现就 rTMS 在抑郁障碍中的机制及应用进展进行综述,旨在探索重复经颅磁刺激未来可能的发展方向,为抑郁障碍临床治疗提供新的思路。

关键词:经颅磁刺激,抑郁障碍,磁共振成像

焦虑障碍不同亚型间影像学改变的相似性和异质性研究进展

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目的 焦虑障碍是一组以过分恐惧、忧虑和相

关的行为异常为主要表现的精神障碍,对患者的社会功能和生活质量造成极大影响,给家庭和社会带来巨大负担。《Lancet Psychiatry》杂志最新报道焦虑障碍在我国年患病率为 4.98%,终生患病率 7.57%,位居所有精神疾病之首,根据现行的 DSM-5 的诊断标准各个焦虑障碍的区分主要依据焦虑的形式和内容,并且现行诊断标准与病因学的关联性不足。

方法 本文以“fMR”“Anxiety disorder”“NeuroImage”为主题词检索了 EMBASE 数据库、PUBMED 数据库,年限限定为近 10 年。

结论 本文综述了近年来利用 rsfMRI 方法对 PD、SAD、GAD 三种最常见焦虑障碍患者进行脑连接的研究。常见的改变涉及 DMN、SN 和 CEN 中的异常连接。我们发现 PD、SAD、GAD 在某些上述网络内和网络间存在相似的功能连接的改变,不仅是改变性质相同,改变的程度也并无显著差异。此外,在相同诊断的中,我们也可以看到在相同的脑区间产生了不同的功能连接的差异,由此反映出现行诊断存在的两个关键性问题:1 因为症状不同而将机制相同的疾病划分为不同的分类群。2 无法区分症状相同却由两种不同机制引起的疾病。并且为焦虑障碍较为精准的客观病理诊断和发病机制的探索与治疗提供新的观点。

关键词:焦虑障碍;功能磁共振;神经影像;脑网络

自我怜悯和宽恕对产后抑郁的影响调查

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目的 探讨合肥市产妇发生产后抑郁情况及其与自我怜悯及宽恕关系,为产后抑郁的预防和干预提供心理方面的基础资料。

方法 采用问卷调查的方法,对安徽省妇幼保健院某产科病区 301 名产妇进行一般人口特征、自悯、宽恕、爱丁堡产后抑郁量表等方面调查。

结果 产妇产后抑郁状态检出率为 22.3% (67/301)。在不同文化程度、是否介意孕期形体改变和是否恐惧分娩方面,产妇产后抑郁检出率差异

均有统计学意义。以产妇是否有产后抑郁作为因变量（是=1，否=0），分别将自悯的6个维度和总分与产后抑郁进行单因素 logistic 回归分析。研究结果显示，自我友善、自我评判、孤独感、正念、过度认同和自悯总分与产后抑郁之间均呈负向相关（ $P<0.05$ ）。在控制产妇文化程度、是否介意孕期形体改变和是否恐惧分娩后，分别将自悯的6个维度和总分与产后抑郁进行多因素 logistic 回归分析。研究结果显示，自我评判、孤独感、过度认同和自悯总分与产后抑郁之间均呈负向相关（ $P<0.05$ ）。宽恕自己、宽恕他人和宽恕总分与产后抑郁之间均呈负向相关（ $P<0.05$ ）。其中，与宽恕自己相比，宽恕他人对产后抑郁的风险比高（宽恕自己： $OR=0.936$ ，95%CI：0.902~0.971，宽恕他人 $OR=0.943$ ，95%CI：0.915~0.973）。同时将自悯和自我宽恕与产后抑郁进行多因素 logistic 回归分析。结果显示，仅有自悯总分和自我宽恕总分与产后抑郁之间存在负向关联（ $P<0.05$ ）。其中，与自悯相比，自我宽恕对产后抑郁的风险比高（自悯： $OR=0.968$ ，95%CI：0.937~0.999，自我宽恕： $OR=0.971$ ，95%CI：0.946~0.997）。

结论 自我怜悯及宽恕能力对产后抑郁有一定的影响。提示提高产妇的自我怜悯及宽恕能力对预防产后抑郁的发生有重要的意义。

关键词：产后抑郁；自我怜悯；宽恕

短时正念自助训练对焦虑和主观幸福感的效用研究

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目的 探索1周正念自助训练对个体焦虑状态、主观幸福感以及行为反应抑制能力的影响，验证短时正念自助训练的效果，为其推广提供实证支持。

方法 研究采用积极对照实验设计，在线公开招聘报告明显焦虑，且有缓解压力需求的大学生与社会人群共104名。通过随机数字排序随机分为正念自助组（ $n=37$ ）、正念音乐组（ $n=33$ ）、音乐训练组（ $n=34$ ）。比较正念自助训练（MBSH）、正念音乐训练（MBLM）和音乐训练（MT）三组之间在训练前（第0天）、单次训练后（第1天）和持续训练7次后（第7天），个体在正念（五因素正念量表，

FFMQ）、焦虑（焦虑自评量表，SAS）和主观幸福感成分（生活满意度量表，SWLS、积极消极情绪量表，PANAS）的变化，并采用 Go/Nogo 范式测试了被试的情绪刺激的反应（击中率、判断标准）变化。

结果 对量表和行为数据进行重复测量方差分析以及进一步的简单效应分析，发现：（1）MBSH 和 MT 在训练前期表现出一致的训练效果，单次训练后显著降低焦虑，1周训练后显著提高正念；1周的 MBLM 则未表现出在正念和焦虑方面的显著训练效果。其中，MBSH 显著提高被试的观察、有意行动水平；MT 显著提高被试的观察、描述水平；MBLM 仅显著提高被试的观察水平。（2）MBSH 可以显著提高生活满意度，降低消极情绪水平，对积极情绪水平没有影响；MBLM 与 MBSH 对主观幸福感三个成分的训练效果模式一致，但7天训练后的效果没有正念自助组效果明显；MT 对生活满意度和积极情绪均没有影响，仅显著降低消极情绪水平。（3）仅 MBSH 可以显著提升在悲伤和快乐刺激下，被试对平静面孔的击中率，并显著降低被试的判断标准，使之更加宽松。

结论 与正念音乐训练和音乐训练相比，短时正念自助训练表现最优，显著改善正念、焦虑和主观幸福感，并提高个体在悲伤和快乐情绪刺激下的反应准确率，降低判断标准。

关键词：正念，自助训练，焦虑，主观幸福感

Altered Functional Connectivity of Locus Coeruleus in Depression

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Objective It has been a long time to propose the involvement of noradrenergic dysfunction in the pathology of depression, although the neuropathological process involved norepinephrine (NE) in depression remains elusive. The locus coeruleus (LC), as the primary source of NE, rarely comes into view in current literature, which may result in poor knowledge of the role of NE in depression. This study aims to map the whole

brain functional connectivity of the LC in depressive patients, which may help to provide a new understanding of the role of NE in depressive pathology.

Methods A total of 480 participants (253 patients with depression) were recruited from two clinical centers using two MRI machine types (Philips and Siemens 3.0T scanners). Dataset #1 from Xiangya, including 52 patients with major depressive disorder (MDD) and 78 healthy controls (HC) scanned by Philips 3.0T scanner, was employed as the discovery sample. Dataset #2 (MDD/HC=95/90) scanned by Siemens 3.0T scanner from Xiangya was utilized as a replication sample across MRI machine types. Dataset #3 (MDD/HC=88/53) from Inner Mongolia was utilized as a replication sample across centers. In order to investigate the anti-depressive effect on the LC-NE system, we followed the patients for 8 weeks after they received escitalopram treatment and a total of 48 patients completed the follow-up clinical and resting-state fMRI measurements. Bilateral LC were selected as regions of interest for whole-brain functional connectivity (FC) analysis. Two-sample t-test was performed on the FC maps between patients and HCs first. Then by using the brain regions with FC alterations at the baseline as masks, the paired t-test was performed to identify the longitudinal changes of FC in patients between the baseline (T1) and after treatment (T2). Finally, the Pearson correlation was evaluated to explore the association between FC and clinical symptoms in MDD

Results Compared to HCs, MDD patients showed decreased LC functional connectivity with the regions associated with higher-order cognitive functions such as the dorsolateral prefrontal cortex (DLPFC), medial prefrontal cortex, precuneus, insula, caudate and cerebellum, and increased connectivity with the primary sensory/motor cortex including the lingual gyrus, the postcentral gyrus, precentral gyrus (PreCG) and superior parietal gyrus. Correlation analysis showed that the decreased FC with DLPFC and cerebellum was negatively associated with depressive symptoms and the increased FC with the PreCG and the SPG was positively associated with the clinical symptoms in patients. These findings were consistently replicated in both independ-

ent samples. After 8 weeks of escitalopram drug treatment, HAMD total score, work and interest score, and depressed mood score were significantly decreased. However, no significant changes of FC with the bilateral LC were observed after treatment in patients

Conclusion The present study reveals an imbalanced connectivity pattern of LC in MDD, characterized by decreased connectivity with the superior association cortex and increased connectivity with the primary sensory/motor cortex. Along with their associations with clinical symptoms, the findings provide a novel insight into the potential role of the LC-NE system involved in the neuropathological mechanism of depression. The limited effect of drug treatment in this study implies that short-term SSRI treatment prominently targeting the serotonin system may not be sufficient to normalize underlying neuropathological deficit related to the LC-NE system in depression

关键词: locus coeruleus, LC-NE system, functional connectivity, resting-state fMRI, major depression disorder

重度抑郁障碍患者的决策行为及其与抑郁焦虑症状的关系

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目的 探讨 MDD 在概率翻转学习 (Probability Reversal Learning, PRL) 任务中的决策特征, 并分析其与临床症状的关系。

方法 纳入 2020 年 10 月至 2023 年 5 月期间在西南医科大学附属医院精神科就诊并符合《精神疾病诊断与统计手册》(DSM-IV) 重度抑郁症诊断标准的 MDD 组 48 名, 以及年龄性别匹配的健康对照 (Healthy Controls, HCs) 组 52 名。分别通过贝克抑郁自评量表 (BDI)、贝克焦虑自评量表 (BAI) 评估受试者抑郁和焦虑症状, 并通过 PRL 任务考察受试者的决策特征, 分析指标包括达标试次、固执错误、赢后保持率、输后转移率等。采用独立样本 t 检验比较组间差异, 使用 Spearman 相关分析考查各临床症状与 PRL 指标间的相关性。

结果 MDD 组的输后转移率显著高于对照组 ($t=3.684, P<0.01$), 而两组在达标试次、固执错误和赢后保持率上差异无统计学意义 ($t=0.329, 0.132, 0.609, P>0.05$)。此外, BDI 和 BAI 得分与赢后保持率呈显著正相关 ($r=0.450, 0.398, P<0.01$)。

结论 MDD 患者在面对负性结果时更倾向于改变选择策略, 而抑郁和焦虑症状越严重, 患者在得到正反馈后越倾向于维持已有的决策。

关键词: 重度抑郁症; 决策行为; 概率翻转学习任务; 抑郁焦虑症状

基于 DBT 的情绪调节技巧对青少年抑郁症状改善作用的探索

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目的 本研究旨在探讨基于辩证行为疗法 (DBT) 的情绪调节技巧对青少年抑郁症状的改善作用。青少年时期是身心快速发展的时期, 情绪不稳定性是该阶段的重要特征, 难以区分是身心发展或疾病的影响。因此, 本研究通过实施基于 DBT 的情绪调节技巧, 期望能有效减轻青少年抑郁症状, 并为其临床干预提供科学依据。

方法 本研究选择了 2023 年 9 月至 2024 年 6 月间, 临床心理科收治的 32 名青少年抑郁症住院患者作为研究对象。这些患者接受了为期 8 周的 DBT 团体干预, 内容包括关系建立、正念训练、情绪调节、压力应对和人际效能等多个关键模块。干预前后, 采用汉密尔顿抑郁量表 (HAMD)、自评抑郁量表 (SDS) 以及患者健康问卷-9 项 (PHQ-9) 等标准化量表来评估患者抑郁症状的改善情况。

结果 经过 8 周的 DBT 干预后, 结果显示青少年患者的抑郁症状得到了显著的缓解。量表评估显示, 患者的抑郁症状评分明显降低, 并且这种改善具有持续性的趋势。更重要的是, 患者在掌握了情绪调节技巧后, 能够更有效地应对日常生活中的情绪挑战, 进而提升了整体的生活质量。

结论 基于 DBT 的情绪调节技巧对青少年抑郁症状具有显著的改善作用。该疗法不仅有效减轻了患者的抑郁症状, 还提高了患者及家属的情绪管

理能力。因此, 建议在青少年抑郁的临床治疗及日常心理健康教育中进一步推广和普及基于 DBT 的情绪调节技巧。

关键词: 辩证行为疗法, 青少年抑郁, 情绪调节

团体正念疗法对更年期女性抑郁症患者的疗效研究

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目的 女性进入更年期, 抑郁症患病率明显增高。本研究探讨团体基于正念的干预 (Mindfulness-Based Intervention, MBI) 对更年期女性抑郁症患者的治疗效果。

方法 患者来自于 2023 年 4 月至 2024 年 5 月在复旦大学附属华山医院精神医学科就诊的 98 位门诊患者。采用随机数字法, 将患者随机分配进入团体 MBI+常规治疗组和团体支持组+常规治疗组, 两组患者除进行常规的门诊药物治疗外, 分别给予 8 周的团体 MBI 和团体支持。治疗前后, 采用患者健康问卷-9 (Patient Health Questionnaire-9, PHQ-9) 和 17 项汉密尔顿抑郁量表 (17-Hamilton Depression Scale, HAMD) 评估患者基线及治疗 8 周后抑郁症状的程度。

结果 8 周治疗结束时, 团体 MBI 组及团体支持组患者的自评及他评抑郁量表评分均较基线降低 (均 $P<0.001$), 但团体 MBI 组有效率和临床治愈率均高于团体支持组, 差异具有统计学意义 ($p<0.05$)

结论

团体正念疗法可能对更年期女性抑郁症患者的抑郁症状具有良好的疗效, 由于操作方便, 患者更容易接受配合, 值得扩大样本量进一步深入研究。

关键词: 团体正念疗法, 更年期, 抑郁症, 女性

Impact of Genetic Risk on Cognitive Functions: The Mediating Role of Cortical Thickness

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Objective This study aims to elucidate the intricate relationship between cortical features, genetic predispositions, and cognitive function in schizophrenia. Specifically, it delves into the correlations between polygenic risk scores (PRS) and synaptic-based polygenic risk scores (SPRS) with cognitive performance and cortical thickness among individuals diagnosed with schizophrenia

Methods Total of 245 participants, comprising 114 schizophrenia patients (SCZ), 42 unaffected siblings (SCB), and 89 healthy controls (HC), was recruited from the Second Xiangya Hospital of Central South University between 2020 and 2022. Cortical structural data were meticulously acquired utilizing a Siemens 3.0T MRI scanner. Cognitive function was comprehensively assessed using a battery of neuropsychological tests encompassing six dimensions: working memory, processing speed, executive function, visual memory, verbal memory, and verbal fluency

Polygenic risk scores (PRS) and synaptic-based polygenic risk scores (SPRS) were calculated based on SNPs identified through targeted genomic sequencing. Statistical analyses included rigorous variance analysis, partial correlation analysis, and mediation analysis, with covariates such as age, gender, and educational years duly considered to ensure robust and reliable results.

Results The results revealed that PRS was significantly negatively correlated with visual memory ($r=-0.303$, $p<0.001$), verbal memory ($r=-0.271$, $p<0.001$), working memory ($r=-0.260$, $p<0.001$), and executive function ($r=-0.263$, $p<0.001$). Similarly, SPRS demonstrated significant negative correlations with visual memory ($r=-0.211$, $p<0.001$), executive function ($r=-0.208$, $p<0.001$), working memory ($r=-0.195$, $p<0.001$), and verbal memory ($r=-0.195$, $p<0.001$). Furthermore, cortical thickness in the left pars opercularis and right postcentral gyrus was negatively correlated with PRS and SPRS, respectively

Mediation analysis further revealed that cortical

thickness of the right postcentral gyrus mediated the relationship between SPRS and visual memory, whereas the left pars opercularis was found to mediate the relationship between SPRS and verbal memory. These mediation effects underscore the intricate pathways through which genetic predispositions influence cognitive outcomes in schizophrenia, mediated by structural brain changes.

Conclusion This study underscores that memory-related cognitive functions exhibit heightened sensitivity to genetic risk factors in schizophrenia. The cortical thickness of specific brain regions, notably the right postcentral gyrus and left pars opercularis, plays a pivotal mediating role in the genetic influence on cognitive functions. These findings accentuate the significance of cortical structural changes in elucidating the genetic underpinnings of cognitive impairments in schizophrenia. Understanding these relationships offers crucial insights into potential intervention strategies targeting cognitive deficits in schizophrenia

关键词: Schizophrenia, Polygenic Risk Score, Cortical Thickness, Cognitive Function

强迫障碍的短程强化认知行为治疗研究进展

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目的 回顾强迫障碍短程强化认知行为治疗的研究进展,对短程强化认知行为治疗的定义进行讨论。对比短程强化认知行为治疗与药物治疗以及其他心理治疗的疗效。对比不同类型/不同人群(如:青少年儿童强迫障碍,产后强迫障碍)的治疗疗效,总结不足并展望未来研究方向。

方法 强迫障碍(Obsessive Compulsive Disorder, OCD)是一种以强迫思维和强迫行为为主要表现的临床常见精神障碍,目前其一线治疗方案包含认知行为治疗(Cognitive Behavioral Therapy, CBT),尤其是暴露与反应预防(Exposure and Response Prevention, ERP)。本研究对目前未明确的短程强化认知行为治疗定义进行讨论,即缩短常规认知行为治疗

次数并在四周内集中进行的治疗可称为短程强化认知行为治疗(Intensive Cognitive Behavioral Therapy)。文中回顾了强迫障碍短程强化认知行为治疗的发展历程、优势劣势以及具体治疗流程。回顾在不同类型/不同人群(如:青少年儿童强迫障碍,产后强迫障碍)中短程强化CBT的治疗疗效。最后对本方法的问题和不足进行总结,同时展望未来研究方向。

结果 总结了短程强化认知行为治疗对强迫障碍患者疗效研究的研究方法等方面,回顾短程强化认知行为治疗对强迫障碍的疗效研究,将其与药物治疗或药物联合短程强化CBT相比以及与心理健康教育等其他心理治疗方法进行比较,短程强化CBT疗效均等同或更优,但会随时间推移疗效有所下降。

结论 关键词:短程强化认知行为治疗;强迫障碍;研究进展

病共病失眠障碍患者和不同年龄段失眠障碍患者的残留症状、脱落率和配合度等方面存在短板。

结论 失眠认知行为治疗对于常见精神疾病共病失眠障碍患者和不同年龄段失眠障碍患者是一种非常有效且安全的方法;在应对失眠障碍患者残留症状、高脱落率和配合度低等问题时,及时调整治疗策略和治疗方法,帮助患者解决浮现的问题,以达到患者既定的治疗目标。

关键词:失眠障碍;精神疾病;年龄段;失眠认知行为治疗;综述

CBT-I 在精神疾病共病失眠障碍及不同年龄段失眠障碍患者中的应用

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目的 失眠障碍是常见的睡眠问题之一,易复发、患病率高是其主要特点,除药物治疗以外,失眠认知行为治疗在失眠障碍中的应用逐渐广泛。尽管失眠认知行为治疗在精神疾病共病失眠障碍和不同年龄段失眠障碍患者中取得了一定的成果,但仍有许多争议和不足。因此,本综述的目的旨在为将来应用失眠认知行为治疗改善常见精神疾病和不同年龄段失眠障碍患者症状的临床实践与研究提供一定的参考价值。

方法 现对常见精神疾病共病失眠障碍和不同年龄段失眠障碍的失眠认知行为治疗相关文献进行回顾,从其研究现状、存在问题和未来展望等方面进行论述。

结果 失眠认知行为治疗在常见精神疾病共病失眠障碍患者和不同年龄段失眠障碍患者中有显著治疗效果,失眠认知行为治疗是一种高效且安全的方法。同时也发现失眠认知行为治疗对某些精神疾

焦虑障碍研究协作组

延续护理对老年抑郁症、焦虑症患者护理疗效研究

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目的 探讨延续护理在老年抑郁症患者、焦虑症患者的护理疗效,不仅能提高患者的生活质量还能降低反复住院次数。

方法 选取2023年03月至2024年2月医学心理科出院的老年抑郁症患者、焦虑症患者330例中选160作为研究对象,随机将其分为对照组和干预组(各80例),对照组给予常规的电话随访,干预组在对照组的基础上采取延续护理模式。比较两组患者的服药依从性、抑郁及焦虑程度、心理应急状况、社交情况、睡眠质量及饮食情况。

对照组患者给予常规的电话随访及疾病知识指导(干预6次)。干预组除了给予对照组常规电话随访基础上增加延续护理措施(干预6次),具体如下:

1.参与延续护理条件。精神科能级及年资高的护士、糖尿病及高血压专科小组护士、沟通能力强的护士。

2.建立信任。护理人员专科知识扎实,态度温和,要让患者对护理人员比较信任,是实施延续护理模式的基础。

3.制定延续护理计划。通过对患者的情绪、兴趣、注意力、服药依从性、睡眠、饮食等了解后及时对患者及家属干预、心理疏导、社交功能训练、康复指导及健康宣教、伴有高血压、糖尿病的现场监测及饮食指导等。

4.选择患者的条件。我院周边的患者,与社区精神障碍管理人员一起将患者集中在社区会议室进行干预。

5.积极倾听、认真观察、正确指导。护理人员要认真、耐心倾听患者的讲述,及时给予鼓励和安慰,帮助患者正确应对各种生活事件,改善对服药的依从性,预防复发。

6.风险评估培训。延续护理同时也给予社区精神障碍管理人员进行专业知识培训,提高风险识别能力。

1.3 观察指标

干预后对比两组患者的服药依从性效果,通过差、一般、较好、好等结果进行划分。采用抑郁量表及焦虑量表对老年抑郁症患者、焦虑症患者进行评价,得分越高表明症状越严重。

1.4 统计学方法

采用统计学软件SPSS22.0进行数据处理,技术资料采用率(%)表示,计量资料以“ $\bar{X}\pm S$ ”表示,组间比较采用 χ^2 检验,以 $P<0.05$ 为差异具有统计学意义。

结果 干预后,干预组患者的服药依从性高于对照组($P<0.05$),抑郁量表及焦虑量表评分显著低于对照组($P<0.05$),干预组患者的社交能力高于对照组($P<0.05$),积极应对得分显著高于对照组,并且消极应对得分明显低于对照组($P<0.05$),睡眠质量及饮食情况高于对照组($P<0.05$)。

结论 延续护理模式对出院的老年抑郁症患者、焦虑症患者具有良好的护理效果,能降低患者反复住院,有效缓解抑郁、焦虑程度,提高生活质量,降低自杀风险。

关键词: 延续护理;老年抑郁症、焦虑症;生活质量;护理疗效

脑电生物反馈对焦虑障碍患者治疗影响效果分析

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目的 探讨脑电生物反馈训练对焦虑障碍患者治疗效果的临床影响。

方法 在我科2023年4月至2024年3月期间所收治的焦虑障碍患者中选取40例作为此次研究对象,采用脑电生物反馈训练对患者进行治疗,治疗时间为4周。每周一至周五上午由1名取得培训证书的护理人员在综合训练室给患者进行集体训练,脑电生物反馈训练的内容包括:开放式情景训练、开放式引导训练、团队对抗训练、团队协同训练等,每次训练时间为30分钟,共分为4个周期,每个周期时间为一周。练习结束后患者相互之间可以进行探讨,交流感受和训练心得体会,并对患者提出的问题进行答疑解惑。每个周期使用汉密尔顿焦虑量表及宗氏焦虑自评量表评估患者的治疗效果,使用

社会功能缺陷筛选量表评估患者的社会功能。

结果 通过脑电生物反馈训练,对改善焦虑障碍患者的心理健康和社会功能恢复具有促进作用。患者治疗前后的汉密尔顿焦虑量表评分、宗氏焦虑自评量表评分、社会功能缺陷筛选量表评分明显优于治疗前 ($P < 0.05$),具有统计学意义。

结论 脑电生物反馈训练对于焦虑障碍患者具有治疗效果,能够帮助患者有效改善焦虑情绪、减轻症状、提高生活质量以及社会功能,从而更好的适应社会生活,值得推广和应用。

关键词: 脑电生物反馈;焦虑障碍;效果分析;汉密尔顿焦虑量表

Effects of Comorbid Alexithymia on Cognitive Impairment in Chronic Schizophrenia: A Large Sample Study Based on Chinese Han Population

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Objective Alexithymia and cognitive dysfunction are common in patients with schizophrenia. However, few studies have investigated the cognitive performance of patients with schizophrenia comorbid alexithymia. The main purpose of this study was to investigate whether and how alexithymia was correlated with neuro-cognitive impairment in patients with schizophrenia

Methods A total of 695 patients who met the DSM-IV diagnostic criteria for schizophrenia were recruited in this cross-sectional study (male/female=464/231). Demographic and clinical data were collected using self-reported questionnaires. We assessed alexithymia using the Toronto Alexithymia Scale (TAS-20), cognitive function using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS), and psychiatric symptoms using the Positive and Negative Syndrome Scale (PANSS)

Results The prevalence of comorbid alexithymia in chronic schizophrenia patients was 31.40%. Patients

with Alexithymia were more likely to be male, have higher scores on the Negative symptom subscale and PANSS total score than non-Alexithymia patients (all $p < 0.05$). Moreover, patients with alexithymia exhibited more cognitive dysfunction in immediate memory, language, delayed memory, and total score of RBANS than patients without alexithymia. Stepwise multivariate regression analysis showed that alexithymia was risk predictors for language and RBANS total scores

Conclusion Our results indicate that chronic schizophrenia patients with alexithymia have poorer cognitive dysfunction than those without alexithymia. Some demographic and alexithymia symptoms are risk factors for cognitive dysfunction in chronic schizophrenia patients

关键词: Schizophrenia; Alexithymia; Cognitive impairment; RBANS

强迫型人格障碍症状预测强迫症临床治疗疗效

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目的 强迫型人格障碍症状在强迫症中很常见,但目前尚不清楚强迫型人格障碍症状对于强迫症临床治疗效果的影响。探索强迫型人格障碍症状与强迫症治疗疗效之间的关系对于了解探索强迫型人格障碍症状在强迫症患者中的作用非常重要,同时也具有临床价值。本研究旨在探索强迫型人格障碍症状与选择性 5-羟色胺再摄取抑制剂和团体认知行为治疗疗效的关系。

方法 本研究共纳入了 80 名未接受治疗的强迫症患者。其中,40 名患者接受了为期 12 周的选择性 5-羟色胺再摄取抑制剂治疗,另外 40 名患者接受了为期 12 周的团体认知行为治疗。治疗前通过人格障碍结构化临床访谈评估强迫型人格障碍症状,治疗前后耶鲁-布朗强迫量表总分的减分率代表了临床治疗疗效。

结果 5-羟色胺再摄取抑制剂和团体认知行为治疗都能有效降低耶鲁-布朗强迫量表的得分。然而,强迫型人格障碍症状只能显著预测 5-羟色胺再摄取抑制剂的疗效,但不能预测团体认知行为治疗的疗效。线性回归表明,强迫型人格障碍症状每增加 1 分,5-羟色胺再摄取抑制剂治疗后的耶鲁-布朗强迫量表减分率下降 4.4%。

结论 强迫型人格障碍症状可能是强迫症药物治疗的不利因素,需要在未来的临床实践中被进一步关注。

关键词: 强迫症,强迫型人格障碍,选择性 5-羟色胺再摄取抑制剂,团体认知行为治疗,疗效预测

一例氘丁苯那嗪治疗迟发性运动障碍的案例报告

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目的 迟发性运动障碍(tardive dyskinesia, TD)是药物诱发的多动性运动障碍,多由于长期接触多巴胺受体拮抗剂(DRA)引起,改善非常困难,对患者身心及社会功能造成持续性影响,进一步加重社会疾病负担。目前 TD 治疗的方法主要有药物治疗及非药物治疗。药物治疗包括苯二氮草类药物、银杏叶提取物 EGb-761、金刚烷胺、胆碱能药物、抗氧化剂(如维生素 B6 和维生素 E)、钙通道阻滞剂、普萘洛尔、肉毒素等。非药物治疗包括深部脑刺激治疗及电休克治疗。但是目前并未取得令人满意的疗效。氘丁苯那嗪是 FDA 和我国均批准用于治疗 TD 的新一代 VMAT-2 抑制剂,目前该药已在临床使用。本文为一例氘丁苯那嗪治疗迟发性运动障碍的案例报告,探讨氘丁苯那嗪治疗的疗效及安全性。

方法 患者男性,54 岁,主因“重复行为、重复回忆、伴不安、痛苦 8 年余,口唇不自主运动 3 年”于 2023 年 2 月就诊于我院。患者 2015 年无明显诱因起病,表现反复检查,每次出门必须反复检查门锁是否关好,反复多次仍然不放心,爱做某一个重复动作,有时反复询问一个问题,别人给予回答后,仍然多次询问同样的问题,脑子里反复回想发生过的某一个事情或者反复出现一个念头,每天花费很多的时间在这些行为或者想法上,不能正常生活及

工作,自己感到非常痛苦,心情差,焦虑,夜眠差,2017 年到我院门诊就诊,先后服用舍曲林 200mg/日、阿立哌唑 25mg/日、利培酮 4mg/日、氟哌啶醇 20mg/日,2020 年初患者出现口唇不自主的运动,反复做咂嘴及吞咽的动作,讲话口齿不清。曾加用苯海索 4mg/日,无效果,停用,不自主运动评定量表评分为 7 分。诊断 1 强迫性障碍、2 迟发性运动障碍。治疗上换用氟伏沙明改善精神症状,并予氘丁苯那嗪对症治疗。

结果 调整治疗后,给予氟伏沙明 200mg/日、氘丁苯那嗪 24mg/日治疗 12 周,不自主运动量表评分为 3 分,患者 TD 症状明显改善,口唇不自主运动、反复咂嘴及吞咽动作明显减少,交谈吐字较清晰,焦虑情绪减轻,强迫症状减轻,治疗中患者无明显不适,患者及家属对治疗效果表示满意。

结论 TD 对于大多数患者来说似乎都是不可逆的,目前关于 TD 的发病机制还不完全清楚,多巴胺受体的超敏反应是较为被认可的一种理论假设。氘丁苯那嗪主要作用是促进细胞质单胺类物质进入突触前囊泡,通过抑制囊泡单胺转运蛋白 2 来减少突触前多巴胺等单胺类物质的存储和释放,进而被细胞质中的单胺氧化酶降解,导致突触前多巴胺的消耗。避免突触后多巴胺神经遭受过多刺激,从而达到减轻 TD 症状的效果。本例患者采用氘丁苯那嗪治疗 TD,疗效和安全性较好,远期疗效及安全性还有待进一步观察及研究。

关键词: 迟发性运动障碍;氘丁苯那嗪

Plasma Orexin-A Combined with Inflammation Indices Predicts Acute Withdrawal Symptoms and Craving in Male Patients with Alcohol Dependence

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Objective This study aimed to evaluate the diagnostic effectiveness of combining plasma Orexin-A levels with inflammatory indices in predicting the severity of withdrawal symptoms and psychological cravings in male patients with alcohol dependence (AD)

Methods A total of 63 male patients with AD and 60 healthy controls (HC) were recruited from Shandong Mental Health Center and Qianfoshan Hospital between January 2018 and January 2020. Plasma Orexin-A levels and inflammatory indices (neutrophil to lymphocyte ratio (NLR), derived neutrophil to lymphocyte ratio (dNLR), platelet to lymphocyte ratio (PLR), lymphocyte to monocyte ratio (LMR)) were measured at baseline and after two weeks of alcohol abstinence. The Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar) and Visual Analogue Scale for Craving (VAS-Craving) were used to assess the severity of AWS and cravings, respectively. Binary logistic regression analyses and receiver operating characteristic (ROC) curve analysis was used to determine the predictive efficacy of Orexin-A and inflammatory indices

Results At baseline, plasma Orexin-A levels were significantly higher in the AD group compared to the HC group ($t = 2.21, p < 0.001$). After two weeks of abstinence, Orexin-A levels in the AD group decreased significantly compared with baseline ($t = 2.21, p = 0.03$). Inflammatory indices (NLR, dNLR, and LMR) also decreased significantly after two weeks of abstinence ($t = 2.38, p = 0.02$; $t = 3.40, p = 0.00$; $t = 2.10, p = 0.04$). Correlation analysis revealed that plasma Orexin-A levels were positively associated with CIWA-Ar and VAS-Craving scores ($r = 0.34, P = 0.00$; $r = 0.21, P = 0.03$). Binary logistic regression showed that increased Orexin-A levels were significantly associated with higher CIWA-Ar (OR=1.01, 95% CI [1.22 to 1.02], $p = 0.02$) and VAS-Craving (OR=1.01, 95% CI [1.00 to 1.02], $p = 0.03$) and LMR levels were significantly associated with higher CIWA-Ar (OR=1.24, 95% CI [1.01 to 1.53], $p = 0.04$) and VAS-Craving (OR=1.34, 95% CI [1.06 to 1.68], $p = 0.01$). ROC curve analysis demonstrated that plasma Orexin-A combined with LMR levels had an area under the curve (AUC) of 72.08% (90%CI: 62.52%-78.54%; $p = 0.00$) for predicting AWS severity and 72.11% (90%CI: 62.52%-81.70%; $p = 0.00$)

for predicting craving severity

Conclusion Plasma Orexin-A levels in combination with inflammatory indices, are effective in predicting the severity of acute withdrawal symptoms and psychological cravings in male patients with alcohol dependence

关键词: Alcohol dependence, Orexin-A, Inflammatory indices, Acute withdrawal syndrome, Craving.

A Study on Mahjong Intervention To Improve Cognitive Impairment in Patients with Schizophrenia: A Pilot, Single-blind, Randomized, Controlled Trial

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Objective Despite advancements in various therapy, cognitive impairments in schizophrenia remain inadequately addressed. Mahjong, a traditional Chinese tile-based game, has been widely reported to be closely associated with better cognitive function. However, its effects on the cognitive function of patients with schizophrenia have not yet been studied

Methods In a pilot study, 49 patients diagnosed with schizophrenia (DSM-5) were randomly assigned to the intervention group (Mahjong combined with standard treatment) and the control group (standard treatment). The intervention group engaged in cognitive training through Mahjong for 2 hours per day, 4 days per week for 12 weeks. Primary cognitive outcomes were assessed using Cambridge Neuropsychological Test Automated Battery (CANTAB), while secondary outcomes were evaluated with the Positive and Negative Syndrome Scale (PANSS), and the Self-report Quality of Life Measure for People with Schizophrenia (SQLS). Assessments were conducted at baseline (T0), the 4th week (T1), the 8th week (T2), and the 12th week (T3)

Results There is a significant group-by-time interaction effect in RTI and time effect in PAL. The intervention group showed significant improvements in reaction time and movement time of response to a visual target, visual memory and new learning at T3 compared to baseline. Additionally, the intervention group exhibited significant improvements in SQLS over time

Conclusion While this pilot study suggests that prolonged Mahjong intervention may benefit certain cognitive functions and quality of life in patients with chronic SZ, these findings should be interpreted with caution. Further research with larger, more diverse samples and longer follow-up periods is necessary to confirm and extend these findings

关键词: schizophrenia, cognitive function, Mahjong

A Study on The Correlation between Inflammatory Cells and Sleep and Psychiatric Symptoms in First-episode Schizophrenia Patients

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Objective To explore the correlation between inflammatory cell count, sleep quality, and psychiatric symptoms in first-episode schizophrenia patients

Methods A total of 103 first-episode schizophrenia patients (patient group) admitted to the Anhui Provincial Mental Health Center from November 2021 to August 2022 were included in the study, while 57 healthy individuals (control group) who met the criteria were recruited as the study subjects. The Positive and Negative Symptom Scale (PANSS) and Pittsburgh Sleep Quality Index (PSQI) were used to evaluate the mental symptoms and sleep status of the patients. Blood analysis results were used to determine the peripheral blood white blood cells (WBC) and lymphocytes (L) of the two groups. Count neutrophils (N), monocytes (M), and platelets (PLT) of the two groups. The neutrophil lymphocyte ratio (NLR), monocyte lymphocyte ratio

(MLR), and platelet lymphocyte ratio (PLR) were calculated. Differential, correlation, and regression analysis were performed on survey data using SPSS 26.0

Results (1) The WBC, N, M, NLR, and MLR of the patient group were significantly higher than those of the control group, and the differences were statistically significant (all $P < 0.05$). (2) The correlation analysis between WBC, N, M, NLR, MLR, PANSS, and PSQI scores in the patient group showed a negative correlation between M and sleep time factors ($r_s = -0.205$, $P = 0.037$), and a negative correlation between MLR and excitatory factors ($r_s = -0.204$, $P = 0.039$). (3) The results of linear regression analysis using variables with significant correlation in correlation analysis showed that MLR had a positive impact on excitatory factor scores ($\beta = 7.196$, $t = 2.781$, $P = 0.006$); M had a negative impact on the sleep time factor score ($\beta = -0.851$, $t = -2.157$, $P = 0.033$). (4) The ROC curve analysis results of WBC, N, M, NLR, and MLR for predicting the prognosis of SCZ showed that the area under the curves of WBC (AUC=0.744, 95% CI), N (AUC=0.779), M (AUC=0.815), NLR (AUC=0.728), and MLR (AUC=0.791) were all greater than 70%, indicating that these biomarkers can potentially predict the prognosis of SCZ

Conclusion The levels of inflammatory cells in first-episode schizophrenia patients, as indicated by the biomarkers WBC, N, M, NLR, and MLR, are associated with psychiatric symptoms and sleep disorders

关键词: Schizophrenia; Inflammatory cells; Mental symptoms; Sleep;

血清 IGF-1 对精神分裂症患者认知功能的预测价值分析

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目的 分析血清胰岛素样生长因子 (IGF-1) 对精神分裂症患者认知功能的预测价值。

方法 纳入我院 2021 年 7 月~2022 年 5 月收治

的 151 例精神分裂症患者, 按照其 MATRIS 成套神经认知测试 (MCCB) 评估结果, 将 $MCCB < 40$ 分者纳入认知功能异常组、 $MCCB \geq 40$ 分者纳入认知功能正常组。使用多因素 Logistic 回归分析, 归纳影响精神分裂症患者认知功能的相关因素; 使用 Pearson 相关性分析, 分析精神分裂症患者血清 IGF-1 与 MCCB 评分、阳性和阴性症状量表 (PANSS) 评分的相关性; 使用受试者工作特征曲线 (ROC) 分析血清 IGF-1 等因子预测精神分裂症患者认知功能的曲线下面积 (AUC)、灵敏度、特异性。

结果 151 例患者中, 60 例 MCCB 量表评分 < 40 分, 患者认知功能异常率为 39.74%。认知功能异常组血清 IGF-1 水平、MCCB 评分低于认知功能正常组, 其 PANSS 量表阳性症状、阴性症状、一般精神病量表评分和总分均高于认知功能正常组 ($P < 0.05$)。Logistic 多因素回归分析示, 年龄 > 51 岁、病程 > 1.5 年、文化程度初中及以下、复发性精神分裂症和 $IGF-1 < 65.11$ ng/mL 为导致精神分裂症患者认知功能异常的独立危险因素 ($P < 0.05$)。Pearson 相关性分析示, IGF-1 与 MCCB 评分呈正相关, 与 PANSS 总分呈负相关, MCCB 评分与 PANSS 总分呈负相关 ($P < 0.05$)。ROC 曲线示, IGF-1 联合年龄、病程、文化程度、精神分裂症发病情况预测患者认知功能异常的截断值为 65.11, 其 AUC 为 0.917, 灵敏度、特异性分别为 85.37%、90.44%。

结论 血清 IGF-1 的下降伴随着精神分裂症患者认知功能损伤的进展, 且 $IGF-1 < 65.11$ ng/mL 能够为患者认知功能异常的预测提供可靠参考。

关键词: 胰岛素样生长因子-1, 精神分裂症, 认知功能, 预测

Association between Atherosclerosis Index of Plasma and Psychotic Symptoms in Chinese Patients with First-episode Drug-naïve Major Depressive Disorder

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Objective Atherosclerosis index of plasma

(AIP), as a comprehensive index for assessing lipid metabolism, has received extensive attention from researchers in recent years. However, the relationship between AIP and psychiatric symptoms (PS) in patients with major depressive disorder (MDD) is still unclear. The purpose of this study was to investigate the relationship between AIP and PS in the Chinese population with first-episode drug-naïve major depressive disorder (FEDN MDD)

Methods A total of 1718 FEDN MDD patients were included in this cross-sectional study. Sociodemographic information, clinical data, and lipid parameters were collected. The positive symptom subscales of the Positive and Negative Syndrome Scale, the Hamilton Depression Scale, and the Hamilton Anxiety Scale were used to evaluate the psychiatric symptoms, depressive symptoms and anxiety symptoms, respectively. Multivariate binary logistic regression analysis was used to estimate the association between the AIP and PS. To investigate the potential threshold effect inherent in a non-linear correlation, a two-stage linear regression model should be employed

Results Multivariate logistic regression analysis showed that after adjusting for confounding factors, there was no correlation between AIP and PS (OR = 1.97, 95% CI: 0.70 to 5.50, $P = 0.197$). The smooth plot showed a non-linear relationship between AIP and PS, with an inflection point of 0.99. On the left side of the inflection point, a positive correlation was detected between AIP and PS (OR = 21.70, 95% CI: 2.41 to 195.28, $P = 0.006$), while no significant correlation was observed on the right side of the inflection point (OR = 0.26, 95% CI: 0.04 to 1.63, $P = 0.150$)

Conclusion The relationship between AIP and PS was non-linear and exhibited a threshold effect in Chinese patients with FEDN MDD. When AIP was less than 0.99, they showed a significant positive correlation

关键词: atherosclerosis index of plasma, Major depressive disorder, psychotic symptoms, Non-linear relationships

益生菌、益生元及合生元对焦虑、抑郁和睡眠

的疗效：随机对照临床试验的系统评价和 Meta 分析

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目的 由于传统治疗的局限性，最近越来越多的研究使用益生菌、益生元和合生元作为焦虑和抑郁的辅助疗法。我们进行了系统回顾和 meta 分析，旨在评估它们在缓解焦虑抑郁方面的疗效。

方法 计算机系统检索 PubMed, Web of Science, Embase。检索时间从建库至 2023 年 10 月止，并对纳入的文献进行质量评价与数据提取。采用 Revman 5.3 用于质量评估。采用 stata15.0 进行 Meta 分析、Egger 检验和剪补法分析，以解决潜在的发表偏倚。

结果 最终纳入 49 篇文献，共 2352 例患者和 1832 对照，其中益生菌组纳入了 40 项研究包含 1715 位患者和 1408 例对照，益生元组纳入 9 项研究包含 432 位患者和 414 例对照，合生元组纳入 8 项研究 205 位患者和 194 例对照。Meta 分析结果显示：益生菌/益生元/合生元有助于降低抑郁（SMD = -0.68, 95% CI: -0.87 to -0.49, P < 0.001）和焦虑（SMD = -0.42, 95% CI: -0.60 to -0.23, P < 0.001）评分，同时益生菌可以缓解睡眠情况（SMD = -0.46, 95% CI: -0.75 to -0.18, P = 0.001）。亚组分析显示：益生菌和合生元单独使用时均能缓解焦虑抑郁，益生元单独使用可以缓解焦虑。除此之外，益生菌单独干预在焦虑和抑郁的不同人群中体现出不同的效果，并且不同干预时间在结果上也存在些许差异，同时益生菌的类型也会对结果产生影响。

结论 益生菌/益生元/合生元能缓解焦虑、抑郁和睡眠状况，这些发现有望为患有心理健康问题的人群提供更加精准、有效的辅助治疗选择。未来还需要更大规模的长期随访研究来验证我们的发现。

关键词：益生菌；益生元；合生元；焦虑；抑郁；对照临床试验

结合脑功能网络指标及临床指标共同预测强迫症患者的临床疗效

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目的 通过构建难治性强迫症的全脑功能网络，利用功能网络特征及临床特征建立临床疗效预测模型，以期进一步阐明强迫症发病及转归的神经机制。

方法 研究基线期收集了 36 例强迫症患者及 80 例性别、年龄相匹配的健康被试，入组的受试者完成临床访谈、量表评估（耶鲁-布朗强迫量表 Y-BOCS、强迫信念问卷 OBQ、贝克抑郁量表 BDI 和贝克焦虑量表 BAI）以及磁共振扫描。其中 21 例强迫症患者经过 8 周的规范抗强迫治疗后，再次完成上述的量表评估及磁共振扫描。基于被试静息态磁共振数据，采用基于图论的方法计算大脑网络的网络参数，进行全脑网络功能模块化分析，比较了强迫症患者与健康成人脑功能网络差异。针对纵向数据，利用机器学习多核支持向量机的分析方法，分别建立基于单一临床指标和多模态指标的疗效预测模型，并对比了它们在临床疗效预测方面的差异。

结果 （1）独立样本 t 检验结果报告基线期，强迫症患者相比健康被试存在更高的强迫信念总分（ $t=4.03, p<0.001$ ）及各亚量表得分（包括责任感得分 $t=3.74, p<0.001$ 、完美主义得分 $t=3.51, p<0.001$ 和对思维的控制 $t=3.81, p<0.001$ ）；经过 8 周抗强迫治疗后，强迫症患者的症状 Y-BOCS 得分较前下降（ $F=9.17, p<0.001$ ），强迫信念量表得分也较前下降（ $F=2.44, p=0.009$ ）。

（2）全脑网络分析结果报告相比于健康成人，强迫症患者在额顶网络及默认模式网络内的连接子数目更多，模块内参与系数更高。两组的模块化属性比较结果显示，两组模块内连接未发现显著性差异；强迫症患者的额顶-边缘模块、默认模式-中央模块、边缘-枕叶模块的模块间连接值高于健康成人，而额顶-枕叶模块、额顶-中央模块、中央-边缘模块的模块间连接值低于健康成人。

（3）多核支持向量机分析结果显示通过结合临床及影像学的多模态指标，能够更好的拟合临床疗效预测模型（ $R^2=0.425, RMSE=3.771, p<0.001$ ），优于仅纳入单一临床指标（ $R^2=0.276, RMSE=4.219, p=0.001$ ）。

结论 与健康被试相比，强迫症患者表现出异常的认知信念及功能网络连接，结合临床指标及神经影像学指标有助于更好地预测强迫症的临床疗效。

关键词：强迫症，模块化，功能脑网络，强迫信

念

体重调整腰围指数与非酒精性脂肪肝病患者抑郁症之间的关系：性别和 BMI 的调节作用

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目的 体重调整腰围指数(WWI)是一种新型肥胖指标。然而, WWI 与非酒精性脂肪肝病(NAFLD)患者抑郁症之间的关联尚不明确。本研究旨在通过全国代表性的横断面分析探讨 WWI 与 NAFLD 患者抑郁症的关系, 并考察性别和身体质量指数(BMI)在这一关联中的调节作用。

方法 本研究纳入了 2017-2020 年 NHANES 数据库中诊断为 NAFLD 的成年参与者。WWI 的计算方法为腰围(cm)除以体重(kg)的平方根。NAFLD 的诊断基于振动控制瞬时弹性成像(VCTE), 其中受控衰减参数(CAP)超过 248 dB/m 以指示肝脏脂肪变性。抑郁症通过患者健康问卷-(PHQ-9)评估, 得分 ≥ 10 表示存在重度抑郁症。研究采用多变量逻辑回归分析和限制立方样条分析评估 WWI 与抑郁症的关系, 并在调整协变量后考察性别和 BMI 的调节作用。

结果 在 4524 名符合条件的 NAFLD 参与者中, 366 人 (7.769%) 被诊断为重度抑郁症。研究发现, WWI 与 NAFLD 中的抑郁症显著正相关 (OR = 1.725, 95% CI: 1.442-2.063, $p < 0.00001$), 且呈剂量反应关系。性别分层分析显示, 该关联在男性 NAFLD 患者中更为显著 (男性 OR = 2.315, $p < 0.0001$; 女性 OR = 1.502, $p = 0.0001$)。BMI 分层分析显示, WWI 与抑郁症的关联在较低 BMI 组中更强 (BMI $< 25 \text{ kg/m}^2$: OR = 2.552, $p = 0.0027$; BMI $25-30 \text{ kg/m}^2$: OR = 2.143, $p < 0.0001$; BMI $\geq 30 \text{ kg/m}^2$: OR = 1.412, $p = 0.002$)。进一步调整 BMI 后, WWI 与抑郁症的关联仍然显著 (OR = 1.643, 95% CI: 1.357-1.989, $p < 0.00001$), 而 BMI 与抑郁症的关联在调整 WWI 后消失。

结论 本研究首次揭示了 WWI 与 NAFLD 患者重度抑郁症之间的显著正相关关系, 并发现这一关联独立于 BMI 存在。性别和 BMI 在这一关联中起到了显著的调节作用, 其中男性和瘦型 NAFLD 患

者的关联更为显著。研究结果表明, WWI 可能是 NAFLD 患者抑郁症的一个独立预测指标, 具有潜在的临床应用价值。未来的研究应进一步探讨 WWI 在其他慢性疾病中的应用及其对心理健康的影响。

关键词: 体重调整腰围指数 (WWI), 抑郁症, 非酒精性脂肪肝病 (NAFLD), NHANES

大学生自尊与社交回避行为的关系：心理弹性及社交苦恼的链式中介效应

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目的 探讨大学生自尊、心理弹性、社交苦恼与社交回避行为之间的关系, 并验证心理弹性和社交苦恼在自尊与社交回避行为之间的链式中介作用, 以期为干预大学生社交苦恼与社交回避提供理论依据和方法。

方法 采用便利整群抽样方法在宁夏银川市便利选取某大学的全部大一新生作为调查对象, 获取学生的知情同意, 使用问卷星进行在线填写调查问卷, 包括一般情况调查问卷、自尊量表、心理弹性量表和社交回避及苦恼量表。共计有 2497 名在校大一学生填写了问卷。

结果 (1)不同性别、父母婚姻状态、自尊水平、心理弹性乐观性水平、心理弹性力量性水平、心理弹性坚韧性水平大学生的社交苦恼及社交回避差异均有统计学意义 (均 $P < 0.05$)。 (2)自尊、乐观性、力量性、坚韧性与社交苦恼得分均呈负相关且有统计学意义 (分别 $r = -0.256, p < 0.000; r = -0.045, p < 0.05; r = -0.047, p < 0.05; r = -0.118, p < 0.000$)；自尊、坚韧性与社交回避得分均呈负相关且有统计学意义 (分别 $r = -0.282, p < 0.000; r = -0.062, p < 0.05$)；社交苦恼与社交回避得分正相关且有统计学意义 ($r = 0.527, p < 0.000$)。 (3)在链式中介效应分析中, 自尊-社交回避路径效应量是 0.1993, 中介效应比为 33.5%；自尊-坚韧-社交回避路径效应量是 0.0536, 中介效应比为 9.01%；自尊-力量-社交回避路径效应量是 0.0872, 中介效应比为 14.66%；自尊-乐观-社交回避路径中介效应统计学意义不显著；自尊-社交苦恼-社交回避路径效应量是 0.1226, 中介效应比为 20.61%；自尊-坚韧-社

交苦恼-社交回避路径效应量是 0.0617, 中介效应比为 10.37%; 自尊-力量-社交苦恼-社交回避路径效应量是 0.0705, 中介效应比为 11.85%; 自尊-乐观-社交苦恼-社交回避路径中介效应无显著统计学意义。

结论 大学生性别、父母婚姻状态、自尊、心理弹性对社交苦恼及社交回避有一定的预测作用, 心理弹性和社交苦恼在大学生自尊和社交回避中的链式中介作用成立。大学教育过程中应提高大学生的自尊水平、心理弹性水平, 进而缓解社交焦虑情绪的发生和发展, 预防社交回避行为的进展。

关键词: 社交焦虑, 社交苦恼, 社交回避, 自尊, 心理弹性, 链式中介效应

The Heart Rate Variability In Depression And Anxiety Patients

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Objective Depression and anxiety is a common mental disorders, and many studies have found that they have influence on the cardiovascular system. Heart rate variability (HRV) is a method for studying cardiovascular function. However, the findings on the effects of depression on HRV are inconsistent, and most studies focus on the state of the patients at a particular moment, without continuous tracking. Our study explored the changes of HRV in patients with depression or anxiety through continuous follow-up

Methods All patients were diagnosed with depression and anxiety spectrum disorder. All the patients were assessed by Hamilton Anxiety Scale (HAMD), Patient Health Questionnaire-15 (PHQ-15), Pittsburgh Sleep Quality Index (PSQ) and heart rate variability (HRV) were assessed at baseline, one month and three months after the initial assessment. Mann-Whitney U tests and Chi-squared tests were used to examine the group differences. Friedman's rank tests were used for clinical and HRV data

Results Depression had an impact on heart rate variability. For patients, the severity of depression is

negatively correlated with RRIV. SSIRs also had a negative impact on RRIV

Conclusion This study found that the severity of symptoms in patients with depression and antidepressants were negatively correlated with heart rate variability

关键词: depression, anxiety, antidepressant, heart rate variability

配偶参与式干预联合强化降压对冠心病多支病变预后及负性情绪的影响

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目的 探讨配偶参与式干预联合强化降压改善冠心病多支病变预后及负性情绪的影响。

方法 选取 2021 年 4 月至 2023 年 11 月本院收治的 152 例老年冠心病多支病变患者作为研究对象, 随机分为对照组、观察组, 每组 76 例。对照组予以常规降压治疗以及常规干预, 观察组以配偶参与式联合强化降压治疗; 分析两组患者血脂指标及血脂比值 (TG、TC、HDL-C、LDL-C、VLDL-C、TC / TG、TG / HDL-C、TG / LDL-C、LDL-C / HDL-C), 焦虑量表 (HAMA), 总体幸福感量表 (GWB), Beck 绝望量表 (Beck hopelessness scale, BHS), 自杀意念自评量表 (self-rating ideation of suicide scale, SIOSS) 评估两组患者的预后及负性情绪。

结果 与对照组相比, 观察组 TC、LDL-C、TC / TG、LDL-C / HDL-C 水平均明显降低, TG / LDL-C 水平明显升高; 而两组间 TG、HDL-C、VLDL-C 差异不显著 ($P > 0.05$)。两组患者干预后 HAMA、BHS、SIOSS 评分均明显低于干预前, 且观察组 HAMA、BHS、SIOSS 评分的降低幅度明显大于对照组。两组患者干预后 GWB 评分均明显高于干预前, 且观察组 GWB 评分的升高幅度明显大于对照组。

结论 配偶参与式干预联合强化降压可更加有效地改善冠心病多支病变预后, 并改善患者负性情绪。

关键词: 负性情绪, 配偶参与式干预, 强化降压, 冠心病, 干预, 预后

暗示治疗对强迫性焦虑患者的作用

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目的 随着现代社会压力的增加,有较多数据显示强迫症(OCD)患者数量与日俱增。强迫症是一种以反复出现的强迫性思维和行为为特征的心理障碍,患者常因难以控制的强迫行为或强迫思维而焦虑。虽然认知行为疗法和药物治疗是目前主流的治疗方法,但部分患者并未获得显著疗效,仍深陷其中无法自拔。本文旨在研究暗示治疗在缓解强迫性焦虑患者症状中的作用及其临床效果。

方法 本研究采用随机对照试验法,将符合ICD-11诊断标准的60例强迫性焦虑患者随机分为两组,每组各30例。治疗组在常规CBT治疗的基础上,加入为期8周的暗示治疗,每周2次,每次45分钟;对照组仅进行CBT治疗。暗示治疗包括心理暗示和催眠暗示等,通过潜意识层面的正向引导,期望减轻患者的强迫性症状和焦虑情绪。所有患者均在治疗前、治疗4周后和治疗8周后接受强迫症状量表(Y-BOCS)和焦虑自评量表(SAS)的评估,以测量治疗效果。

结果 研究发现,治疗组在接受暗示治疗后,其Y-BOCS和SAS评分的改善显著优于对照组($P < 0.05$)。具体表现为,治疗组在第8周末的Y-BOCS评分从基线的平均28.5降低至12.1,对照组则从28.3降低至18.4;治疗组的SAS评分从基线的平均58.2降低至32.3,对照组从57.9降低至40.6。通过数据分析,治疗组的强迫症状和焦虑水平的减轻幅度均显著高于对照组,且未观察到严重不良反应。

结论 暗示治疗对强迫性焦虑有较好的治疗效果

关键词:强迫,焦虑,暗示治疗,认知行为疗法

酒精使用障碍人群伴随症状间的网络特征

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目的 酒精使用障碍,是全球最常见的慢性且反复发作的精神疾病之一,不仅高度致残,而且与多种健康问题相关,显著增加患者的早逝风险。酒精使用障碍者常伴有焦虑、抑郁和睡眠质量下降等症状,虽非诊断标准,却可能加剧依赖风险并增加治疗难度。因此,本研究旨在通过流行病学抽样调查结合网络分析,深入分析酒精使用障碍患者的并发症现状及其间的复杂关系,以提高临床酒精使用障碍者治疗成功率并减轻患者负担。

方法 本研究在全省16个市进行,采用多阶段分层整群系统随机抽样方法。精神科护士使用扩展一般健康问卷(GHQ-12)进行初筛,由精神科医生使用DSM-IV轴I诊断的SCID-P进行诊断,并对所有筛查的对象进行匹兹堡睡眠质量(PSQI)和简易应对方式(SCSQ)量表评估。使用R 4.4.0软件进行网络分析和可视化分析。使用R软件qgraph和bootnet包,通过estimateNetwork函数得到酒精使用障碍人群的心理健康、睡眠质量及应对方式的偏相关网络分析和节点的中心性;使用bootnet包评估网络的准确性和稳定性。使用R软件中的bnlearn包,通过贝叶斯爬山算法来构建酒精使用障碍人群的有向无环图。

结果 初始筛查发现1324例酒精使用障碍患者。剔除未完整回答问卷者后,最终有1239名患者被纳入研究,在偏相关网络中,“焦虑/抑郁情绪”与“信心缺失”相关性最强。“睡眠时间”与“睡眠效率”关系最紧密。三大伴随症状类别间,“焦虑/抑郁情绪”与“主观睡眠质量”的关联最强。“焦虑/抑郁情绪”与“主观睡眠质量”显示出最高的节点中心性,而“入睡时间”的中心性亦不可忽视。有向无环图结果表明“入睡时间”是具有最高概率优先级,它不仅直接影响“焦虑/抑郁情绪”和主要睡眠质量症状(如“主观睡眠质量”、“睡眠障碍”、“睡眠时间”、“睡眠效率”),还间接影响其他症状。在此模型中,“社会功能低下”、“催眠药物”和“应对方式”被视为结果症状,受到其他症状直接或间接的影响。

结论 酒精使用障碍的诸多伴随症状中,睡眠问题尤为突出,深刻影响患者的心理健康和行为方式。入睡时间在酒精使用障碍者伴随症状间起到了激活源的作用,而主观睡眠质量和焦虑/抑郁情绪也是关键症状与其他症状密切关联。因此,在治疗酒精使用障碍时不应仅限于降低饮酒频次,同样需要关注睡眠问题的管理。改善睡眠质量,尤其是缩短

患者的入睡时间,改善患者的夜间睡眠质量,增强他们心理和社会功能,从而有效地促进长期康复。

关键词:酒精使用障碍,睡眠质量,焦虑/抑郁情绪,应对方式,网络分析

中小学生对厌学拒学现象的心理评估及“家校医”系统干预研究

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目的 学习是中小学生的核心行为,是中小学生的主体活动,厌学拒学现象和心理健康水平密切相关。近年来,随着教育竞争的加剧和社会压力的增大,和学业压力相关的中小学生的心理健康问题引起了广泛关注。和时代“内卷”现象并行的是中小学生对厌学拒学现象愈发突出,成为影响中小学生对心理健康发展的突出矛盾。本研究就中小学生对厌学拒学现象,进行从多维度的心理分析,并建立心理评估与“家校医”干预体系,提出有效的预防和干预策略。

同时,本研究将阐明影响中小学生对厌学拒学行为的关键因素,并提出了包括家庭教育、学校支持和医疗干预在内的“家校医”系统干预策略及操作实施建议。旨在深入剖析中小学生对厌学拒学的心理机制,识别其成因,并探寻系统干预机制,具有理论和应用方面的多重意义。

方法 本研究聚焦于中小学生对厌学拒学现象的心理分析和“家校医”系统干预措施。内容包括

(1) 进行影响因素分析,形成评估方案;编制的《北大六院“厌学”专业心理门诊问卷》,临床问卷,结构化访谈等,进行系统评估。

(2) “家校医”系统干预策略研究。在上述研究基础上,本研究进一步提出了切实可行的“家校医”系统干预策略。

通过文献回顾与实证研究相结合的方式,系统整合厌学拒学现象的相关研究,建立起一个包含个体心理、家庭环境和学校环境三大维度的影响因素模型。在此基础上,结合北京大学第六医院厌学门诊的前期工作基础,以系统理论为指导,以探索源为导向,设计包含家庭、学校和医疗系统在内的干预措施和策略。

结果 通过本研究取得以下成果

(1) 评估工具的完善和评估效能提升;

(2) 相对固化的干预模式和差异化、个性化的干预;

(3) 系统干预中的协调和协同。

通过构建“家校医”系统的协同干预模型,探析中小学生对厌学拒学的心理机制,提出综合性干预方案并加以验证,以期达成预防与改善厌学拒学现象的目标,并在理论与实践层面为学生全面健康成长保驾护航。

结论 在相对有限的医疗资源支持下,各部门相互协同配合,开展“家校医”联合工作,通过高效的问卷筛查和有针对性的工作,通过家、校层面的支持得到解决,部分厌学拒学的青少年需要进一步的医疗介入,同时在家、校层面给予相应的支持,帮助学生尽快走出厌学拒学的困境。在家庭和学校层面,尊重家长和学校对学生的学业期待和学生的个人发展需求,将本土化的心理干预落地。

关键词:中小学生对,“厌学”,心理评估,家校医,系统干预

Effect of Acceptance and Commitment Therapy for Adolescent Depression: A Meta-analysis

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Objective This study conducted a systematic review of published randomized controlled trials (RCTs) to evaluate the efficacy of acceptance and commitment therapy (ACT) for adolescent depression, while also examining its pertinent characteristics

Methods Electronic database searches were performed adhering to PRISMA guidelines, which are recommended for the screening, data extraction, and quality assessment processes in systematic reviews and meta-analyses. The study utilized fixed-effect or random-effect models, as appropriate, and conducted subgroup analyses

Results The analysis of 12 studies, which included a total of 1317 participants, indicated that ACT

significantly reduced depressive symptoms in adolescents (SMD = -1.09, 95% CI: -1.83 ~ -0.35, $p = 0.004$), while also enhancing psychological flexibility (SMD = -0.86, 95% CI: -1.57 ~ -0.15, $p = 0.02$). Subgroup analysis revealed that ACT was significantly more effective than the wait-list control group at the immediate post-test (SMD = -1.58, 95% CI: -2.67 ~ -0.50, $p = 0.004$). Offline ACT reduced depressive symptoms in adolescents (SMD = -1.39, 95% CI: -2.44 ~ -0.34, $p = 0.009$). Group ACT intervention was found to be highly effective (SMD = -1.32, 95% CI: -2.24 ~ -0.39, $p = 0.005$) than individual intervention and had a greater impact on clinical samples (SMD = -1.66, 95% CI: -2.71 ~ -0.62, $p = 0.002$). A protocol for this review was preregistered with PROSPERO (CRD42023494677)

Conclusion ACT has been shown to be highly effective in reducing depression among adolescents compared to wait-for-treatment groups. However, compared to active treatment groups, like those receiving conventional therapy or medication, ACT's effects are not statistically significant. This indicates that although ACT is as effective as established treatments, it does not exceed them in reducing depressive symptoms. Furthermore, ACT significantly improves psychological flexibility in adolescents, a central element of its therapeutic approach. Additionally, ACT is especially effective in reducing depression symptoms in adolescents who have been diagnosed with the condition. Offline group format interventions are more effective in alleviating adolescent depression compared to IACT; while the sample size for IACT is smaller, its results still hold significant reference value

关键词: Acceptance and Commitment Therapy, Adolescent, Depression, Randomized Control, Meta-analysis

Association between Lipid Parameters and Severity of Depressive Symptoms in Patients with First-diagnosed Drug-free Major Depressive Disorder

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Objective The association between lipid biomarkers and the severity of depressive symptoms remains uncertain in patients with major depressive disorder (MDD), as previous findings have been debatable. The objective of this research was to examine the correlation between lipid parameters and the severity of depressive symptoms in patients with first-diagnosed drug-free (FDDF) MDD in Chinese

Methods

From 2016 to 2018, a total of 1718 individuals diagnosed with FDDF MDD were recruited. Detailed sociodemographic details and anthropometric measurements were gathered from each patient. An assessment of anxiety and depressive symptoms was conducted using the Hamilton Anxiety Scale (HAMA) and the 17-item Hamilton Rating Scale for Depression (HAM-D-17), respectively. Furthermore, thyroxine hormones, fasting blood glucose (FBG) levels, and lipid profiles were ascertained using blood samples taken by a trained clinician. Univariate and multivariate linear regression analyses were then employed to ascertain if there was an association between patient lipid profiles and depressive symptom severity. Additionally, a two-segmental linear regression analysis was used to investigate threshold effects.

Results Subsequent to adjusting for covariates, multivariate linear regression analysis unequivocally demonstrated a positive correlation between total cholesterol (TC), triglyceride (TG), and low-density lipoprotein cholesterol (LDL-c), but not high-density lipoprotein cholesterol (HDL-c), and the manifestation of depressive symptoms in patients with FDDF MDD. Intriguingly, the relationship between TC, TG, LDL-c, and depressive symptoms exhibited a non-linear pattern. By employing a two-segmental linear regression model, distinct inflection points at 6.17 mmol/l for TC, 1.80 mmol/l for TG, and 4.12 mmol/l for LDL-c were unveiled. At values higher than each inflection point, we observed a positive association between TC, TG, LDL-c, and depressive symptoms (all $P < 0.05$). However, this relationship between lipids and depressive symp-

toms appears to plateau at values higher than each inflection point (all $P > 0.05$). Notably, the correlation between HDL-c and depressive symptoms, on the other hand, appeared to exhibit a "U"-shaped pattern, where 1.10 mmol/l was found to be optimal

Conclusion Our investigation shed light on the intricacies regarding the association between lipid markers (TC, TG, LDL-c, and HDL-c) and the severity of depressive symptoms in patients with FDDF MDD, thereby offering valuable insights into the underlying mechanisms involved

关键词: association, lipid parameters, cholesterol, depressive symptoms, major depressive disorder

食源性 γ -氨基丁酸通过调节神经免疫稳态缓解焦虑: 蛋白组学机制研究及验证

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目的 应用蛋白组学分析和平行反应监测技术聚焦食源性 γ -氨基丁酸(GABA)对缓解焦虑状态的疗效及其分子作用机制。

方法 利用慢性束缚应激(CRS)诱导小鼠焦虑样行为后进行焦虑行为学实验(高架十字和旷场实验)检测 GABA 干预对小鼠焦虑行为的影响。对小鼠海马进行蛋白质组学分析,并利用平行反应监测(PRM)技术对蛋白质组学中确定的候选蛋白和通路进行验证。最后,通过 ELISA 技术测定小鼠前额叶中的 GABA 水平以及通过炎症因子抗体芯片检测抗炎因子(IL-10、TGF- β 1、IL-4、IL-13)的变化。

结果 口服 GABA (20mg/kg) 14 天后, CRS 小鼠的焦虑样行为显著改善,并且其小鼠的前额叶皮层中的 GABA 水平明显提高。进一步的蛋白质组学分析显示 CRS 和 GABA 干预对免疫相关过程产生影响,如“体液免疫反应”、“补体激活”和“急性炎症反应”等。而与之相关的免疫蛋白如 C3、C4b、Cfh、Cfi、B2m、Fgb、Pzp 等在 CRS 鼠中呈现下降趋势,但经过 GABA 干预后,这些蛋白水平得到了恢复($p < 0.05$)。此外, CRS 导致前额叶皮层中的抗炎细

胞因子(IL-10 和 TGF- β 1)减少,而 GABA 干预显著逆转这一下降趋势。

结论 食源性 GABA 能够有效减少焦虑样行为,这可能是通过增加大脑中的 GABA 含量并促进免疫系统的稳态来实现的,特别是通过调节补体和炎症反应来发挥作用。

关键词: γ -氨基丁酸; 焦虑症; 神经免疫稳态; 补体; 炎症反应

Alterations in Fatty Acid Metabolism in Patients with Schizophrenia in A Multi-omics Perspective

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Background Gut microbes are involved in most fatty acid metabolic processes, and these roles in host energy homeostasis and metabolism have been extensively studied recently. However, the overall profile of fatty acid metabolites in schizophrenia and the link to gut microbes has been little studied.

Method The present study investigated the gut microbiome composition of 63 individuals, including 35 patients with schizophrenia (SZ) and 28 demographically matched healthy control (HC) subjects. Stool and serum samples were collected, and stool samples were examined using 16S rRNA sequencing of region V4 and untargeted metabolomics, while serum samples were examined using untargeted metabolomics.

Results A total of 21 different genus-level species were identified in the SZ and HC groups. Predictive analysis of gut flora pathways suggests abnormal fatty acid degradation in schizophrenia. There were 17 abnormalities in faecal fatty acid metabolites and 43 abnormalities in serum fatty acid metabolites, with a significantly higher proportion of abnormalities in serum fatty acid metabolites than in faecal fatty acid metabolites. The major pathways enriched in fatty acid metabolites were biosynthesis of unsaturated fatty acids, arachidonic acid metabolism and linoleic acid metabolism. There was a significant correlation between intestinal

flora and fatty acids, as well as potential interactions between intestinal flora, faecal fatty acids and serum fatty acids.

Conclusions Our multi-omics study provides new insights into the pathogenesis of schizophrenia, which may inform the treatment of neurodevelopmental disorders by modifying fatty acid metabolism through modulation of the gut microbiota

关键词: schizophrenia; metabolism

伴非自杀性自伤抑郁障碍患者唾液褪黑素节律紊乱更加明显

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目的 褪黑素节律紊乱可能与抑郁障碍和非自杀性自伤 (non-suicidal self-injury, NSSI) 有关, 我们进行了一项对照研究, 以调查共病 NSSI 的重性抑郁障碍患者是否存在更加明显的褪黑素紊乱, 以及褪黑素水平是否和 NSSI 的感受和停止有关。

方法 研究共纳入 100 例样本, 其中正常对照组 30 例, 抑郁障碍患者 70 例, 抑郁障碍亚组中, 伴 NSSI 组的患者 35 例、不伴 NSSI 的抑郁障碍患者 35 例 (非 NSSI 组); 我们采用酶联免疫吸附试验测量了所有被试 6 个时间节点的唾液褪黑素水平 (0AM、8AM、11AM、1PM、4PM、10PM)。并使用渥太华自伤量表 (Ottawa self-injury inventory, OSI) 对 NSSI 组患者的自伤感受和停止自伤的动力进行量化评估。

结果 NSSI 组 6 个时间点的唾液褪黑素水平均比非 NSSI 组和正常对照组明显降低 ($P < 0.05$), 褪黑素昼夜节律消失; 我们发现褪黑素水平与 NSSI 的几个维度存在明显的相关性, 特别是: 1PM 褪黑素水平和“冲动是侵入性的或者有攻击性的”得分 ($r = 0.487, P < 0.05$), OSI 第 7 项 (停止自伤的动力) 得分与 8AM 褪黑素水平呈负相关 ($r = -0.427, P < 0.05$), 11AM 褪黑素水平呈正相关 ($r = 0.345, P < 0.05$)。

结论 褪黑素水平的降低和昼夜节律紊乱, 可能会增加抑郁障碍患者发生 NSSI 的风险, 但其机制有待进一步探讨。

关键词: 非自杀性自伤; 褪黑素; 昼夜节律; 渥太华自伤量表

首发精神分裂症患者 α -防御素水平及相关性研究

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合肥市精神病医院

目的 探讨首发未用药精神分裂症患者唾液 α -防御素水平是否异常, α -防御素水平与患者临床症状和认知功能的相关性。

方法 招募符合《精神障碍诊断与统计手册》(DSM-5) 精神分裂症诊断标准的首次发作未用药患者 95 例、正常对照组 90 例; 采用酶联免疫法检测被试唾液中 α -防御素水平, 采用阴性和阳性症状量表 (PANSS) 对患者进行评估, 使用中国简版神经认知成套测验 (C-BCT) 对患者进行认知功能评估。

结果 精神分裂症组 α -防御素水平明显高于对照组, 差异有统计学意义 ($P < 0.05$); 精神分裂症组在 C-BCT 数字广度、持续操作、符号编码测试得分低于对照组 ($P < 0.05$), 精神分裂症组 α -防御素水平与 PANSS 量表阳性因子分和总分呈正相关 ($r = 0.412, P < 0.05$; $r = 0.438, P < 0.05$), 与阴性症状无相关性 ($r = 0.013, P = 0.093$)。与连线测验 ($r = 0.139, P = 0.180$)、数字广度 ($r = -0.095, P = 0.359$)、持续操作 ($r = 0.047, P = 0.652$)、符号编码 ($r = 0.072, P = 0.491$) 测试得分均无相关性。

结论 α -防御素有作为精神分裂症筛查和严重程度评估的生物标记物的潜力, 但是对精神分裂症患者认知功能损害的预测能力不佳。

关键词: 精神分裂症 α -防御素 阴性和阳性症状量表 中国简版神经认知成套测验

机器学习和外周血炎症指标对抑郁症患者自杀的预测

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目的 研究外周血炎症因子与重度抑郁症 (Major depressive disorder, MDD) 患者自杀未遂之间的关系以及预测功能。

方法 将 2022 年 5 月至 12 月期间住院的 167 例 MDD 患者作为研究对象。计算每个患者的中性粒细胞-淋巴细胞比值 (neutrophillymphocyte ratio, NLR)、单核细胞-淋巴细胞比值 (monocytelymphocyte ratio, MLR)、血小板-淋巴细胞比值 (platelet-lymphocyte ratio, PLR) 及全身免疫-炎症指数 (systemic immune inflammation index, SII) 值。基于外周血炎症因子, 使用一般线性模型 (General Linear Model, GLM)、随机森林 (Random Forest, RF) 和支持向量机 (Support Vector Machine, SVM) 三种机器学习算法构建 MDD 患者自杀未遂的预测模型, 确定最佳算法。

结果 伴有自杀未遂的 MDD 患者的 NLR 和 SII 值高于不伴有自杀未遂的患者, 且差异有统计学意义 ($P < 0.05$)。基于 NLR 和 SII, 三种机器学习算法构建的预测模型中, GLM 的表现最佳, 其 ROC 曲线下面积 (Area of ROC, AUC) 值为 0.722。

结论 外周血炎症因子与抑郁症患者自杀未遂有关, 且起着有效的预测作用。

关键词: 机器学习; 抑郁

Decline in Working Memory in Stable Schizophrenia May Be Related To Attentional Impairment: Mediating Effects of Negative Symptoms

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Objective Cognitive deficits and negative symptoms are prevalent in individuals with schizophrenia and are crucial indicators of functional recovery. However, the specific relationship between attention, working memory, and negative symptoms in stable schizophrenia remains unclear. This study aims to explore these associations and provide valuable insights for the subsequent treatment of schizophrenia

Methods We conducted a comprehensive assessment of 145 patients with stable schizophrenia using the

Chinese Brief Neurocognitive Suite of Tests (C-BCT) and the Positive and Negative Symptom Scale (PANSS)

Results Patients with abnormal cognition exhibited significantly higher PANSS total scores, cognitive symptom scores, and negative symptom scores than those with normal cognition ($P < 0.05$). Pearson's correlation analysis revealed significant positive correlations between digital breadth and sustained operation ($r = 0.389$, $P < 0.001$), as well as a significant negative correlation between digital breadth and negative symptoms ($r = -0.291$, $P < 0.001$). Moreover, continuous manipulation showed a negative correlation with negative symptoms ($r = -0.173$, $P < 0.05$). However, no significant correlations were found between the digital breadth conformity score and persistent manipulation or negative symptoms ($r = 0.148$, $P > 0.05$; $r = -0.068$, $P > 0.05$). Notably, negative symptoms were identified as a mediator in the relationship between attention and working memory (effect size = 0.024)

Conclusion Our findings highlight significant associations between working memory, attention, and negative symptoms in individuals with stable-phase schizophrenia. Moreover, attention not only directly impacts working memory but also indirectly influences it through negative symptoms. Addressing cognitive deficits and negative symptoms in the treatment of schizophrenia may lead to improved overall outcomes for affected individuals

关键词: Stable schizophrenia; Working memory; Attention; Negative symptom; Intermediary effect

“阳光新芽”线上科普对中学生抑郁及病耻感的效果分析

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目的 在当前社会背景下, 中学生的心理健康问题日益凸显, 抑郁情绪和病耻感对青少年的学业、社交乃至整体发展都可能产生深远影响。本研究的主要目的是探索自主开发的线上心理健康科普平台

“阳光新芽”对中学生抑郁情绪及其病耻感的影响。

方法 本研究采用了方便取样法,选取 196 名中学生作为研究对象。根据性别和年级进行分层后,利用随机数字表法将学生随机分为干预组和对照组,每组各 98 人。干预组学生接受了“阳光新芽”平台提供的系列科普内容和练习活动,而对照组学生接收心理健康科普教材进行自学。研究前后,通过儿童抑郁量表(CDI)和抑郁病耻感量表(DSS)对两组学生进行了评估。

结果 研究结果显示,在干预后,对照组学生的 CDI 和 DSS 评分与干预前相比没有显著差异。而干预组学生的 CDI 评分在干预后显著下降($p<0.05$),表明“阳光新芽”平台的科普内容和练习对于降低中学生的抑郁情绪具有积极作用。此外,干预组学生的 DSS 总分以及个人病耻感得分也显著下降($p<0.05$),说明该平台在降低抑郁病耻感方面同样有效。然而,感知社会歧视的得分在干预前后没有显著变化,这提示社会对抑郁的歧视观念需要更广泛的教育和宣传来改变。

结论 “阳光新芽”线上科普平台通过提供专业的心理健康知识、实用的自我调节技巧以及互动式的学习体验,能够有效地帮助中学生改善抑郁情绪,并降低他们对抑郁的病耻感。这一发现对于学校、家庭以及社会在青少年心理健康教育方面的工作具有重要的启示意义。未来,可以进一步扩大该平台的影响力,为更多的中学生提供心理健康支持,同时也需要社会各界共同努力,消除对抑郁的偏见和歧视,创造一个更加包容和支持的环境,促进青少年的健康成长。

关键词:线上科普;抑郁;病耻感

无抽搐电休克治疗对重度抑郁症患者注意偏向中长期影响

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目的 探究重度抑郁症(MDD)患者在经过无抽搐电休克(MECT)治疗后,随访患者在治疗刚结束、结束后一个月、三个月及半年后中长期,患者注意偏向的改变。

方法 本研究纳入病例组取自合肥市第四人民

医院的 26 名重度抑郁症患者,健康对照组(HC) 26 名性别、年龄文化程度匹配的健康受试者,采用改良无抽搐电休克疗法,比较患者治疗前、疗程刚结束时、结束后一个月、三个月及半年注意偏向改变情况及不良反应。

结果 MECT 治疗后重度抑郁症(MDD)患者抑郁症状明显改善;MECT 治疗刚结束时及疗程结束一个月后的重度抑郁症(MDD)患者组对负性面孔刺激注意偏向与 HC 组有明显差异,差异有统计学意义($P<0.05$),疗程结束后三个月、半年后,重度抑郁症患者对负性面孔刺激注意偏向与 HC 组无明显差异($P>0.05$)。

结论 重度抑郁症患者对负性面孔刺激存在注意偏向,且 MECT 治疗对抑郁症患者病情具有改善,且对重度抑郁症患者未存在长期注意偏向的不良影响。

结果 显示 MECT 治疗对于 MDD 患者中长期影响是阳性结果,有助于患者改善抑郁症状,减少患者痛苦度,对负性注意偏向有着矫正性作用。可减少患者对于 MECT 治疗远期影响的顾虑。

关键词:重度抑郁症;无抽搐电休克治疗;注意偏向

带状疱疹后神经痛患者的负性情绪现状及影响因素

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目的 了解带状疱疹后神经痛(post-herpetic neuralgia, PHN)患者的负性情绪现状及影响因素。

方法 抽取 2023 年 1 月至 2023 年 12 月于四川省人民医院疼痛科病区住院的带状疱疹后神经痛患者进行问卷调查。调查内容包括一般资料调查表、广泛性焦虑量表(generalized anxiety disorder-7, GAD-7)、健康问卷抑郁症状群量表(patient health questionnaire-9, PHQ-9)、数字评价量表(numerical rating scale, NRS)评分等。

结果 191 例 PHN 患者参与问卷调查, GAD-7 评分结果显示中, 191 例 PHN 患者中 117 例(61.25%)出现焦虑状态(评分 >4 分);在 PHQ-9 评分结果显示中, 191 例 PHN 患者中 101 例(52.87%)

出现抑郁状态(评分>4分)。另外,在191例患者中同时罹患焦虑和抑郁(GAD-7评分>4分和PHQ-9评分>4分)的病人有61例,占比为31.93%。文化程度、家庭人均月收入、病程、疼痛持续时间、疼痛强度是PHN患者负性情绪的影响因素,患者焦虑、抑郁水平与疼痛持续时间和疼痛强度成正相关。

结论 PHN病人负性情绪发生率较高,疼痛强度、疼痛持续时间为PHN病人产生负性情绪的高危因素,临床应重视PHN病人的负性情绪筛查,并开展预防性干预措施,改善患者慢性疼痛结局。

关键词: 带状疱疹后神经痛;负性情绪;数字评价量表;健康问卷抑郁症状群量表;广泛性焦虑障碍量表

特质正念对新冠肺炎疫情期间基层医务人员身心健康的相关性研究

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目的 探讨基层医务人员特质正念水平在长期应激状态下的变化及对焦虑、抑郁、职业倦怠、躯体症状和睡眠质量之间的关系。

方法 调查选取成都市成华区750名基层医务人员作为研究对象,使用一般资料表、正念注意觉知量表(Mindful Attention Awareness Scale,MAAS)、应激感受量表(Perceived Stress Scale,Pss-10)、职业倦怠量表(MBI-General Survey,MBI-GS)、心理弹性量表(Connor Davidson Resilience scale,CD-RISC)、匹兹堡睡眠质量指数(Pittsburgh Sleep Quality Index,PSQI)、广泛性焦虑量表(Generalized Anxiety Disorder-7 Scale,GAD-7)、抑郁自评量表(Self-Rating Depression Scale,SDS)、躯体症状群健康评定量表(Patient Health Questionnaire-15,PHQ-15)分别于2022年1月和2022年9月进行问卷调查。

结果 根据正念注意觉知量表(MAAS)得分,参与者被分为三个不同的正念水平组。基线资料显示,三组受试者性别、年龄、婚姻状态、岗位和职称均无显著差异($p=0.92$, $p=0.996$, $p=0.771$, $p=0.944$, $p=0.997$),学历水平在三组受试者之间显示出显著

差异($p=0.041$)。在基线(T0)及8个月后(T1)的调查中,各组的特质正念水平相对稳定($p>0.05$)。相较于T0,T1时应激感受得分(Pss-10)在MAAS得分较差和中等组显著上升($p<0.001$),较好组无显著变化($p>0.05$)。职业倦怠(MBI-GS)、广泛性焦虑(GAD-7)和抑郁自评(SDS)得分在较差和中等组显著上升($p<0.001$),较好组变化不显著($p>0.05$)。躯体症状(PHQ-15)在较差组中显著上升($p<0.001$),睡眠质量(PSQI)在较差组和中等组显著下降($p<0.001$),较好组在这两项指标上变化不显著($p>0.05$)。多因素逻辑回归分析显示较好的特质正念水平显著降低了职业倦怠、焦虑和抑郁的风险,调整后的比值比(adj.OR)分别为0.26($p=0.013$)、0.09($p<0.001$)和0.11($p<0.001$),显示出其对医务人员心理健康的独立预测作用。

结论 在长期应激状态下,基层医务人员特质正念水平显示出一定的稳定性,高特质正念水平有助于减轻焦虑、抑郁和职业倦怠。

关键词: 特质正念、基层医务人员、心理健康

首发抑郁障碍的综合干预研究

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目的 对首发抑郁障碍患者采用不同的干预方法,了解各种干预方法的疗效和依从性。

方法 首发抑郁障碍的患者56人,随机分为药物治疗组(33人)、心理治疗组(7人)、联合治疗组(16人)。在基线、第2周、第6周、第12周、第6个月进行蒙哥马利抑郁量表(MADRS)、汉密尔顿抑郁量表(HAMD-17)、工作和社交量表(WSAS)、幸福的生活质量和满意度量表(Q-LES-Q)评估。

结果 在2周时,三组患者蒙哥马利抑郁量表减分率的差异有统计学意义($P<0.05$),其中心理治疗组和联合治疗组的减分率显著高于药物组($P<0.05$);在第12周时,三组患者汉密尔顿抑郁量表减分率的差异有统计学意义($P<0.05$),其中联合治疗组的减分率显著高于药物治疗组($P<0.05$);在其他时点三组患者的蒙哥马利抑郁量表和汉密尔顿抑郁量表减分率差异无统计学意义($P>0.05$)。在基线、第6周、第12周、第6个月三组Q-LES-Q总分、WSAS

各因子分的比较差异无显著性 ($P>0.05$)。三组在 6 周、12 周、6 月缓解情况,心理治疗组和联合治疗组在治疗 6 周后缓解率高于药物治疗组,在 12 周和 6 个月时,三组间缓解率无差异 ($P>0.05$);三组坚持治疗的比率分别为:6 周时心理治疗组>药物治疗组>联合治疗组,12 周时心理治疗组>联合治疗组>药物治疗组,6 个月时心理治疗组>联合治疗组>药物治疗组,但差异无统计学意义。

结论 首发抑郁障碍的总体疗效较好,生活质量和社会功能恢复较理想。同药物治疗相比,在早期疗效中心理治疗显示出更强的优势,患者对心理治疗的依从性更好。但首发抑郁障碍患者对治疗的依从性较差、对维持治疗的认识不足。

关键词: 首发抑郁障碍; 认知行为治疗

天然生物碱类成分 ELP 改善阿尔茨海默症小鼠记忆缺陷的机制研究

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目的 阿尔茨海默病 (Alzheimer's disease, AD) 是一种以进行性认知功能障碍为主,逐渐影响日常生活能力的神经退行性疾病,研究表明神经炎症与 AD 的发生发展密切相关。由于目前批准的 AD 化学治疗药物不能有效阻止或缓解 AD 的进展,而天然产物及提取物具有多靶点、多途径、作用温和、不良反应小的特点,对于防治 AD 具有巨大潜力。本课程旨在探索天然生物碱类成分 ELP 对于阿尔茨海默症模型小鼠的疗效及其分子作用机制。

方法 通过盐酸东莨菪碱 (Scopolamine) 注射诱导记忆缺陷,构建阿尔茨海默症小鼠模型。利用 Morris 水迷宫和旷场行为学测试,分别观察 ELP 干预对 AD 小鼠学习记忆和运动能力的影响,在正式开始实验前,我们预先给药了 5 天。最后,使用炎

症因子抗体芯片检测小鼠前额叶炎症因子 (GM-CSF、INF-g、IL-2、IL-23) 的变化水平。

结果 水迷宫结果显示,与空白模型组相比,ELP 高剂量治疗组 (10mg/kg) 小鼠在测试阶段找到平台区的潜伏期明显缩短、平台区穿越次数显著增加。其次,与空白模型组相比,所有 ELP 干预对小鼠旷场运动距离均无明显影响,但 ELP 低剂量治疗组 (5mg/kg) 的中心区域活动时间增加。ELISA 检测结果也显示,ELP 高剂量治疗组 (10mg/kg) 小鼠前额叶的炎症因子 (GM-CSF、INF-g、IL-2、IL-23) 水平相较于空白模型组显著下调。

结论 ELP 可以有效改善阿尔茨海默症模型小鼠的记忆缺陷,相应机制可能涉及对关键炎症因子的调节。

关键词: ELP; 阿尔茨海默症; 神经炎症; 认知功能

Research on Protective Factors of Mental Health Literacy of Residents in Bengbu City, China

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Objective To investigate the level of mental health literacy of residents in Bengbu City, China and analyze related influencing factors, so as to provide scientific basis for improving the level of mental health of residents

Methods A stratified multi-stage random sampling method was used to select 3122 permanent residents aged 18 and above in Bengbu City, China, and the national mental health literacy questionnaire was used to investigate

Results A total of 3029 valid questionnaires were collected. In 2023, 20.76% (849/3029) of Bengbu residents met the standard in mental health literacy. There were statistically significant differences in the level of mental health literacy among residents of different regions, ages and education levels ($P<0.05$). The

results of the Logistic-regression analysis showed that, The resident area is a city (OR = 1.971, 95% CI = 1.588~2.447), Age ranged from 18 to 29 years (OR = 1.922, 95% CI = 1.335~2.768), 30 to 44 years old (OR = 1.587, 95% CI = 1.195~2.109), Junior degree (OR = 1.436, 95% CI = 1.101~1.873), undergraduate degree (OR = 1.568, 95% CI = 1.143~2.152), master's degree or above (OR = 6.723, 95% CI = 1.703~26.543) is a protective factor for mental health literacy

Conclusion Bengbu City, China residents have a high level of mental health literacy, which is closely related to the region, age and educational background

关键词: Mental health; Mental health literacy; Current investigation

惊恐障碍患者杏仁核亚区功能连接与临床症状、儿童期创伤的相关性研究

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目的 儿童期创伤是惊恐障碍的发病重要危险因素,杏仁核已被证明和儿童期创伤有关,然而惊恐障碍患者杏仁核的神经机制以及与临床症状和儿童期创伤的关系尚不清楚。本研究运用基于种子点的静息态功能磁共振技术,探索惊恐障碍患者相较正常人杏仁核及其亚区的异常功能连接,并进一步探讨异常功能连接与惊恐患者临床症状和儿童期创伤的关联。

方法 本研究为横断面实验设计,根据简明国际神经精神访谈(中文版)纳入符合标准的47名惊恐障碍患者及52名性别年龄匹配的健康对照。采集了被试的人口学资料、临床量表及静息态功能磁共振数据。临床量表包括惊恐症状严重度量表、汉密尔顿焦虑量表、7项广泛性焦虑障碍量表、特质焦虑量表、汉密尔顿抑郁量表评估和儿童期创伤问卷。

采用双样本 t 检验对人口学资料及临床量表得分进行组间比较。将杏仁核分割为基底外侧杏仁核、中央内侧杏仁核、浅表杏仁核和杏仁核纹状体过渡区。然后以双侧杏仁核整体及其亚区为种子点进行基于体素的功能连接分析,将性别、年龄、头动作为协变量,采用双样本 t 检验比较惊恐障碍患者组和

健康对照组两组间的差异。提取惊恐障碍组有差异的异常功能连接值与患者的临床症状评分和儿童期创伤问卷得分进行皮尔逊相关分析。

结果 与健康对照相比,惊恐障碍患者双侧杏仁核与额中回之间的功能连接显著减弱,双侧杏仁核亚区与内侧前额叶、额中回、额下回、中扣带回、膝下前扣带回、颞中回和楔前叶存在广泛的异常功能连接,且异常功能连接与临床症状严重程度、儿童期创伤相关。

结论 惊恐障碍患者杏仁核存在功能异常,可能与儿童期创伤经历相关,提示儿童期创伤对惊恐障碍患者脑功能异常的影响值得进一步研究。

关键词: 惊恐障碍; 杏仁核; 功能连接; 儿童期创伤

Identify Latent Subtypes of Symptom Trajectories in Major Depressive Disorder Patients and Their Predictors

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Objective This study aimed to identify different symptom trajectories based on the severity of depression symptoms within a 2-month follow-up, and to explore predictive factors for different symptom trajectories

Methods Three hundred and ninety-two adults diagnosed with major depressive disorder (MDD) were recruited from two longitudinal cohorts. Patients received antidepressant treatment as usual, and the depression symptoms were evaluated by the 17-item Hamilton depression rating scale (HAMD-17) at baseline, two weeks, and eight weeks. Based on the HAMD-17 scores, different trajectories of symptom change were distinguished by applying Growth Mixture Modeling (GMM). Furthermore, the baseline sociodemographic, clinical, and cognitive characteristics were compared to identify potential predictors for different trajectories

Results Though GMM, three unique depressive

symptom trajectories of MDD patients were identified: (1) mild-severity class with significant improvement (Mild, $n = 255$); (2) high-severity class with significant improvement (High, $n = 39$); (3) moderate-severity class with limited improvement (Limited, $n = 98$)

Sociographic traits including age ($H = 20.656$, $P < 0.001$), education ($H = 21.913$, $P < 0.001$), smoking ($H = 6.349$, $P = 0.042$), and marital status ($H = 15.337$, $P = 0.018$) were different among the three classes. The High trajectory patients had higher age (M vs H , $P = 0.006$; H vs L , $P < 0.001$), lower years of education (M vs H , $P = 0.003$; H vs L , $P = 0.001$), and a lower rate of smoking (M vs H , $P = 0.012$; H vs L , $P = 0.034$) than the other two classes.

Considering the predictors in clinical features, age of onset, drug naïve or not, the types of antidepressants, anxiety symptoms, and childhood maltreatment would be the potential indicators. More specifically, results showed that the lowest level of somatic and psychic anxiety symptoms were found in the Mild class (all $P < 0.001$). Patients in the High trajectory were most likely prescribed SSRIs (all $P < 0.001$) and anti-anxiety agents (M vs H , $P = 0.047$; H vs L , $P = 0.007$) compared to other two classes. The Limited class individuals were the youngest at the first episode (M vs L , $P = 0.024$; H vs L , $P < 0.001$), and they were less likely to be drug naïve than other patients (M vs L , $P = 0.002$; H vs L , $P < 0.001$). Moreover, the Limited class had the highest level of emotional abuse (M vs L , $P = 0.001$; H vs L , $P = 0.045$).

As for the cognitive predictors, we did not find a significant difference in attitude dysfunction among the three trajectories ($H = 0.995$, $P = 0.609$). The High class had shown the worst performances in all executive function, attention, and processing speed tests (all $P < 0.05$). For the Intelligent Memory Test in site 2, three trajectories were presented differently ($H = 13.456$, $P = 0.001$), in which the Mild class performed better than the other two classes (M vs H , $P = 0.012$; M vs L , $P = 0.017$).

First, our study revealed a high levels of anxiety in both High trajectory and Limited trajectory, whereas patients in the Mild trajectory exhibited low levels of anxiety symptoms at baseline. Anxiety is a prominent focus in clinical research, it is often comorbid with depression

and is recognized as a risk factor for depression. Growing evidence has shown that high anxiety symptoms are associated with poor symptom trajectory in MDD patients. Although anxiety symptoms at baseline could not differentiate the High trajectory and the Limited trajectory, our findings suggested that lower levels of anxiety attributed to a better treatment outcome. In other words, in our results, severe anxious symptoms may not necessarily increase the risk of developing inferior treatment response in MDD patients. Further, in the subdimensions of anxiety, we also found that low levels of somatic anxiety and psychic anxiety were associated with better symptom trajectories, and high levels of somatic or psychic anxiety were not necessarily leading to poor symptom trajectory

Second, our study showed that the High trajectory was associated with worse cognitive dysfunction and a lower degree of education compared to the other two classes. More specifically, the High trajectory patients exhibited significant impairments in all executive function, attention, and processing speed tests. Additionally, we observed that the patients with High trajectory tend to exhibit a low level of education. It is suggested that the degree of education might contribute to severe cognitive dysfunctions. However, we did not find a correlation between cold cognitive dysfunction and poor treatment trajectory. The absence of cold cognition as a predictor in our study, since our sample is predominantly young adults. Therefore, taking age factors into consideration might elucidate the relationship between cognitive impairment and treatment response and might help determine the most suitable candidates for cognitive interventions.

Last, we found that the Limited trajectory was associated with high levels of childhood maltreatment compared to the other two classes. Specifically, individuals with high levels of emotional abuse were more likely to develop limited symptom improvement trajectory. Notably, the early age of onset observed in the Limited patients might be associated with childhood maltreatment. It has been suggested that the negative events experienced during early childhood may impede one's normal developments in neural circuits, which may increase one's vulnerability to develop depression

in early adulthood. Notably, such a long-term accumulated neural abnormality could not be easily remedied in a short-term treatment. These results showed that childhood trauma, especially emotional abuse, could predict antidepressant treatment response in MDD patients. Early intervention for childhood trauma may help patients in the Limited trajectory achieve a better symptom trajectory.

Conclusion The present study used GMM to explore the distinct trajectories of depressive symptoms among MDD patients who were followed up for 2 months. We identified three different symptom trajectories in MDD patients. One trajectory with limited improvement consisted of a quarter of the samples. The other two trajectories account for the rest of the sample, were distinguished by baseline depression severity. And participants categorized into these two trajectories demonstrated significant symptom improvement across 2-months follow up. Meanwhile, the identified predictors associated with each trajectory may provide a valuable foundation for further exploring the optimal treatment strategies and tailoring treatment plans for patients with different symptom trajectories

This study aimed to build a trajectory modeling based on the severity of depression within a 2-month follow-up period using GMMs, and three distinct symptom trajectories were identified. Our results suggested that anxiety symptoms, childhood maltreatment, and cold cognitive function could contribute to distinct different symptom trajectories in MDD patients. These findings could extend our recognition on the heterogeneity of depressive patients and might have clinical implications for selecting and tailoring treatment for patients with different symptom trajectories.

关键词: major depressive disorder; growth mixture modeling; symptom trajectory; trajectory predictors

广泛性焦虑障碍患者杏仁核功能连接变化特征

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目的 杏仁核被认为是恐惧和焦虑反应的核心脑区,接受从皮质-丘脑传输来的威胁刺激信号并向外输出应激反应信号,并且存在左侧偏侧性。广泛性焦虑障碍(generalized anxiety disorder, GAD)是以对不确定事物的焦虑为核心症状的精神疾病。杏仁核的异常活动被认为是 GAD 发生发展的重要原因。本研究目的在于①发现健康人与 GAD 患者左侧杏仁核功能连接的差别;②经过治疗后 GAD 患者的左侧杏仁核功能连接变化。

方法 本研究收集了 68 名 GAD 患者及 68 名健康对照的静息态功能磁共振数据,其中 19 名 GAD 患者收集了基线与治疗后 2 月的核磁数据。基于 Brainnetome246 模板,以左侧杏仁核为种子,比较 GAD 患者与健康被试和 GAD 患者自身前后的杏仁核功能连接变化。

结果 在基线 GAD 与健康被试的比较中,共有 51 条与杏仁核连接的边有显著差异。这些边主要位于颞上回(10/51)、脑岛(6/51)、眶回(5/51)、顶下小叶(4/51)、颞下回(4/51)、额上回(4/51)。杏仁核与颞上回、脑岛的功能连接在 GAD 患者中减弱,与眶回、颞下回、额上回的功能连接增强。杏仁核与顶下小叶的功能连接变化不一。

在 GAD 患者治疗前后的比较中,共有 26 条边有显著差异。主要位于基底节(4/26)、海马旁回(4/26)、颞下回(3/26)、丘脑(3/26)、梭状回(2/26)、额中回(2/26)。杏仁核与基底节连接的边,治疗后显著增强;与海马旁回、颞下回、丘脑、梭状回、额中回连接的边,治疗后强度减弱。其中左杏仁核与右伏隔核的功能连接与焦虑症状呈负相关。

结论 在本研究中, GAD 患者杏仁核异常变化的边主要集中于颞叶、额叶及皮质下区域。其中,左杏仁核与右伏隔核的功能连接与焦虑症状呈负相关。在面对不确定的威胁信息时,伏隔核的参与尤为显著。伏隔核接收包括基底外侧杏仁核在内的多个脑区的信息输入以评估环境刺激,进而调节对威胁刺激的反应。杏仁核与伏隔核的功能连接增强,或许能帮助 GAD 患者更好的评估所处环境,从而改善焦虑症状。

关键词: 广泛性焦虑障碍;杏仁核;功能连接

Comparative Meta-analysis of Functional

Brain Abnormalities in Obsessive-compulsive Disorder and Anxiety Disorders

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Background In 2013, obsessive-compulsive disorder (OCD) was moved into a separate new category called obsessive-compulsive and related disorders (OCRDs) from anxiety disorders in Diagnostic and Statistical Manual of Mental Disorders V (DSM-V). However, both disorders frequently co-occur in clinical and are thought to be associated with abnormalities in the processing and regulation of anxiety. It is unclear whether these symptom profiles are mediated by common or distinct neural profiles. This comparative multimodal meta-analysis assessed and shared disorder-specific neurofunction in the two disorders.

Methods A comparative meta-analysis of 49 voxel-based resting state functional magnetic resonance imaging (rs-fMRI) studies was conducted comparing activation abnormalities between patients with OCD (1553) and anxiety disorders (339) and healthy control subjects

Results Disorder-differentiated functional abnormalities were both hyperactive in the left median cingulate/paracingulate gyrus (BA 24) and the left medial superior frontal gyrus (BA 32) in OCD patients relative to anxiety disorders patients where the regions above were hypoactive relatively. Additionally, we found hyperactivation in bilateral striatum (including the right lenticular nucleus/putamen) in OCD patients relative to control subjects and anxiety disorders patients where they are reduced relatively. However, this meta-analysis did not reveal significant between-group differences in the amygdala, and the

functional abnormalities shared by the two diseases were not highly significant.

Conclusion This comparative multimodal meta-analysis shows that different topdown dorsal prefrontal control over emotional regulation in OCD and anxiety disorders. Increased neural activation was shared in the dorsal lateral prefrontal cortex in both disorders, but disorder-differentiated functional abnormalities were both

hyperactive in dorsal anterior cingulate cortex/medial prefrontal cortex in OCD patients relative to anxiety disorders patients where the regions above were hypoactive relatively. Additionally, hyperactivation in striatal regions may be a disorder-specific neural structural biomarker for OCD relative to anxiety disorders

关键词: obsessive-compulsive disorder, anxiety disorders, rs-fMRI, metaanalysis

酒精依赖大鼠不同戒断时期促炎因子、氧化应激与戒断症状的相关性研究

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目的 酒精戒断 (Ethanol Withdrawal, EW) 通过一系列生理和病理效应对机体产生损害, 并可能出现神经系统症状、精神症状、心血管系统症状等, 这一系列症状称之为酒精戒断综合征 (alcohol withdrawal syndrome, AWS)。研究表明, EW 期间体内氧化应激加剧, 自由基生成增加, 抗氧化防御能力显著降低, 导致细胞和组织损伤。此外, EW 还显著增加了促炎因子, 如: TNF- α 、IL-1 β 和 IL-6 的水平, 进一步加剧炎症反应和细胞损伤。本研究旨在进一步探究酒精依赖大鼠不同戒断时期促炎因子、氧化应激与戒断症状的相关性。

方法 选用 SPF 级 Wistar 雄性大鼠 29 只, 对其随机分为 A (n=5)、B (n=8)、C (n=8)、D (n=8) 四组。A 组为健康对照组, 予喂养普通固体饲料及蒸馏水饲养 28 d。B、C、D 三组为实验组, 均予喂养普通固体饲料及含有 6% (v/v) 的乙醇溶液作为唯一引用水来源饲养 28 d。A 组在第 29d 进行麻醉取血。B、C、D 组在第 29d 通过《酒精依赖大鼠戒断行为体征和听源性癫痫发作评分标准》(以下简称《量表》) 进行建模的评定, 并将笼内乙醇溶液更换为蒸馏水。以上 3 组在分别在停止酒精饲养的第 0h、6h、18h 时通过《量表》进行评分, 后麻醉取血。四组血液标本离心处理后取上层血浆。采用双抗夹心法酶联免疫吸附实验 (ELISA) 测定血浆中促炎因子 (IL-1 β 、IL-4、TNF- α)、氧化应激指标 (MDA、SOD、GSH-Px) 的浓度。

结果 四组大鼠血浆 GSH-Px 水平总体存在统

计学差异 ($H=9.217, p=0.027$)。其中,酒精依赖大鼠戒断 0h GSH-Px 水平高于戒断 18h 组大鼠 ($adj.p=0.032$)。四组大鼠血浆 SOD 水平总体存在统计学差异 ($F=7.687, p=0.001$)。其中,健康对照大鼠 SOD 水平高于戒断 18h 组大鼠 ($p=0.012$),酒精依赖大鼠戒断 0h SOD 水平高于戒断 6h 组大鼠 ($p=0.013$),酒精依赖大鼠戒断 0h SOD 水平高于戒断 18h 组大鼠 ($p<0.001$)。Spearman 相关分析发现,酒精依赖大鼠不同戒断时期血浆 SOD 水平与戒断症状存在负相关 ($r=-0.462, p=0.012$),酒精依赖大鼠不同戒断时期血浆 IL-1 β 水平与戒断症状存在正相关 ($r=0.430, p=0.020$),酒精依赖大鼠不同戒断时期血浆 TNF- α 水平与戒断症状存在正相关 ($r=0.369, p=0.049$)。

结论 酒精依赖大鼠不同戒断时期血浆中 SOD、IL-1 β 、TNF- α 水平与戒断症状相关。

关键词: 酒精戒断,促炎因子,氧化应激,戒断症状

枸橼酸坦度螺酮联合九味镇心颗粒治疗焦虑症的临床观察

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目的 焦虑症,也称为焦虑性神经症,是神经症这类疾病中最常见的一种,可分为广泛性焦虑障碍、社交焦虑障碍和惊恐障碍,即急性障碍。目前,全国的焦虑症患者数目仍在逐年上升。患者应该要早期重视、积极治疗,以防止疾病恶化。为了安全而高效的治疗焦虑症,广大医务工作者们在不断的进行探索与研究。西医主要使用抗焦虑及抗抑郁药物干预治疗,枸橼酸坦度螺酮为临床常用抗焦虑药,也具有较高的安全性和有效性,但是存在有副作用、起效缓慢、费用高等缺陷。中医药治疗郁病已有一千多年的历史,九味镇心颗粒为中成药,具有特异的抗焦虑作用,治疗广泛性焦虑障碍具有较好的疗效和安全性[4]。基于此,本次研究将枸橼酸坦度螺酮联合九味镇心颗粒联合进行治疗焦虑症,现对其临床效果进行探讨。

方法 选取 2023 年 1 月~2023 年 12 月我院收治的焦虑症患者 72 例作为研究对象,随机分为 2 组,

对照组采用枸橼酸坦度螺酮治疗,观察组采用枸橼酸坦度螺酮联合九味镇心颗粒治疗。比较两组临床疗效(采用汉密尔顿焦虑量表(HAMA))、不良反应发生情况并按 HAMA 减分率评定疗效。

结果 观察组治疗有效率高于对照组,差异有统计学意义 ($P<0.05$); 治疗 4 周、8 周及 12 周后两组患者 HAMA 评分均低于治疗前,差异有统计学意义 ($P<0.05$); 而治疗 4 周、8 周及 12 周后观察组患者 HAMA 评分均低于对照组,差异有统计学意义 ($P<0.05$);

两组患者不良反应比较,差异无统计学意义 ($P>0.05$)。

结论 枸橼酸坦度螺酮联合九味镇心颗粒治疗焦虑症的临床效果较佳,且安全性较好。

关键词: 焦虑症; 治疗; 九味镇心颗粒; 枸橼酸坦度螺酮

不同工作记忆负荷对强迫障碍患者注意偏向特征的影响

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目的 强迫障碍 (obsessive-compulsive disorder, OCD) 患者对威胁刺激的注意偏向在强迫症状的诱发、维持中起着重要的作用,但目前研究对于 OCD 患者的注意偏向特征尚未得出一致结论。因此,本研究旨在进一步探究 OCD 患者与健康人群之间注意偏向特征的差异以及不同工作记忆负荷条件对注意偏向特征的影响。

方法 选取 2021 年 12 月至 2024 年 5 月于北京安定医院就诊的 OCD 患者 60 例及社会招募的健康人群 60 例,采集两组受试者的人口学资料、症状以及情绪等临床资料,使用眼动技术,结合自由浏览与视觉空间工作记忆任务范式进行注意偏向特征的测量。使用独立样本 t 检验和卡方检验分析 OCD 患者和健康对照之间的人口学指标及临床量表的差异;使用重复测量方差分析、简单效应分析等对眼动指标与组别、工作记忆负荷之间的关系进行数据分析;对眼动指标和临床数据之间的关系进行相关分析。

结果 健康对照完成眼动视觉空间工作记忆任

务的正确率显著高于 OCD 患者，在低负荷和高负荷条件下均有显著差异，且两组受试者高负荷条件下的正确率均低于低负荷条件下的正确率。整体来看，OCD 患者对强迫图片表现出了显著的注意偏向。在高工作记忆负荷条件下，注意警觉指标与强迫洗涤症状的严重程度呈负相关。

结论 OCD 患者对强迫图片存在注意偏向，不同工作记忆负荷条件会影响受试者的注意偏向表现。为进一步探索 OCD 患者注意偏向的机制，优化临床治疗方案提供了基础。

关键词：强迫障碍；注意偏向；工作记忆负荷

青春期触觉干预早期应激所致焦虑样行为的作用及机制研究

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目的 早期应激可影响儿童时期和青春期的的大脑结构和功能，增加个体成年后患焦虑障碍的易感性。近年来社交触觉因涉及情感和奖赏相关脑区的激活，成为潜在的治疗焦虑障碍的策略。开展触觉与早期应激相关焦虑障碍的研究有助于阐明触觉缓解焦虑的作用机制，为开发潜在的临床干预技术提供新方向。因此，我们探索了青春期触觉干预对早期应激所引起的抑郁和焦虑样行为的治疗效果及作用机制。

方法 在 SD 大鼠出生后 (postnatal day, PND) 的第 4 至 20 天，对幼鼠进行不可预测母婴分离。分离结束后，大鼠被分配到触摸组 (ST)、假处理组 (SHAM) 和不可预测母婴分离组 (UMS)；另设出生后标准饲养的对照组 (CTRL)。在 PND21-34，给 ST 组的大鼠触觉干预，给予 SHAM 组的大鼠假处理。在 PND35-39，采用糖水偏好测试、旷场实验和高架十字迷宫实验评估大鼠青春期的抑郁和焦虑样行为。在 PND64-68，复测大鼠成年后的抑郁和焦虑样行为。通过 c-Fos 免疫荧光染色初步确定触觉差异激活的脑区。采用化学遗传学技术操纵该脑区的活动以探索其在触觉干预发挥抗焦虑的作用机制。

结果 青春期触觉干预可减少不可预测母婴分离应激大鼠在青春期和成年后的焦虑样行为，对抑

郁样行为无影响。与假处理组相比，经历触觉干预的大鼠在青春期和成年后在旷场箱的中心区停留时间更长，在高架十字迷宫的开放臂探索时间占比更高，这表明青春期触觉干预可改善早期应激所致的焦虑样行为，且该效益可从青春期延续至成年后。c-Fos 免疫荧光染色实验表明，触觉可激活内侧前额叶皮质。采用化学遗传学技术抑制内侧前额叶皮质的谷氨酸能神经元的活动可阻断触觉干预的抗焦虑作用，激活内侧前额叶皮质的谷氨酸能神经元的活动对雄鼠的焦虑样行为无影响，这表明内侧前额叶皮质的谷氨酸能神经元的激活对触觉干预发挥抗焦虑作用是必要的。

结论 青春期触觉干预可在青春期可改善不可预测母婴分离所致的焦虑样行为，且这种干预效益可持续至成年。而内侧前额叶皮质的谷氨酸能神经元的激活介导触觉干预的抗焦虑作用。

关键词：焦虑障碍，早期应激，耐受性，触觉，前额叶皮质

正念减压疗法对焦虑性障碍患者心理状态的对照研究和机制探讨

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目的 本研究将在心理治疗师的指导下，进行标准化正念减压 (mindfulness based stress reduction, MBSR) 干预对焦虑性障碍患者负性情绪的研究，并且评估相关可能机制。这项随机对照研究将通过分析干预前后的精神心理状态相关量表来评估 MBSR 的疗效。此外，本研究还将评估细胞因子水平，以探索 MBSR 发挥疗效的生物学机制。

方法 研究于 2023 年 9 月开始至 2024 年 12 月结束，实施单位为河北医科大学第一医院，这项随机对照试验将以 1: 1 的比例将符合纳入标准的 100 例焦虑性障碍患者随机分为试验组和对照组。试验组参与者接受为期 8 周的 MBSR 治疗结合药物治疗，对照组仅接受药物治疗，药物选用草酸艾司西酞普兰 10-20mg/日。主要结果包括汉密尔顿焦虑量表、汉密尔顿抑郁量表、匹兹堡睡眠质量指数量表、状态-特质焦虑问卷、五因素正念量表。次要结果包括血清细胞因子 IL-6(interleukin-6)、IL-10(interleukin-

10)、IFN- γ (Interferon- γ) 和 TNF- α (Tumor Necrosis Factor- α) 的浓度测定。采用 SPSS 25.0 软件、GraphPad Prism 8 软件进行数据分析,符合正态分布的计量资料描述为均值 \pm 标准差,组间比较采用 t 检验、非正态分布计量资料描述为中位数(四分位数间距),组间比较采用非参数检验(Wilcoxon 秩和检验)、计数资料采用 χ^2 检验,相关性分析采用 Pearson 相关分析。

结果 后期的研究正在进行中,前期的结果显示,相对于对照组,试验组患者的焦虑情绪 ($P=0.003$)、抑郁情绪 ($P=0.021$) 有更为明显的改善,状态焦虑 ($P<0.001$) 及特质焦虑 ($P<0.001$) 改善程度均优于对照组,正念得分 ($P=0.01$) 更高。外次,两组的匹兹堡睡眠质量指数量表得分 ($P=0.496$) 未表现出统计学差异。

结论 MBSR 是一种无风险、操作灵活、成本效益高的干预措施,会改善焦虑性障碍患者的心理状态。这项研究中的初步结果提示这种非药物干预结合常规药物治疗下疗效相较于单纯药物治疗更具有优势,可以更加明显的改善患者焦虑、抑郁的程度。

关键词: 焦虑性障碍; 正念减压; 抑郁; 细胞因子

惊恐障碍中恐惧网络模型相关脑区的功能和结构改变: 静息态功能磁共振和 T1 加权成像研究

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目的 随着研究的深入,已有证据表明惊恐障碍患者的恐惧网络模型相关脑区在功能连接上存在异常。然而,关于这些脑区的局部功能和结构特性,以及它们之间有效连接的具体变化,仍需我们进行更深入的探讨。因此,本研究旨在进一步探明惊恐障碍中恐惧网络模型的结构与功能特征。

方法 我们招募了 33 名惊恐障碍患者和 35 名健康对照者,并收集了他们的磁共振成像数据。通过评估灰质体积、度中心性、区域同质性和低频波动振幅等指标,我们深入分析了惊恐障碍患者恐惧网络模型相关脑区的结构与功能特点。在此基础上,

我们进一步探讨了这些异常脑区的功能连接和有效连接模式,并分析了这些异常连接与临床特征之间的潜在关联。

结果 与健康对照者相比,惊恐障碍患者的恐惧网络模型脑区在灰质体积、区域同质性和低频波动振幅方面未显示出显著差异。然而,我们发现惊恐障碍患者的双侧杏仁核度中心性显著增强,这表明这些脑区在恐惧网络中的连接强度有所增加。此外,杏仁核及其亚核与中央沟盖、岛叶、内侧额上回、缘上回、岛盖部额下回和颞上回等区域之间的有效连接均出现异常变化。更为值得注意的是,惊恐障碍患者的汉密尔顿焦虑量表得分与其左侧杏仁核外侧核(背侧部分)到右侧中央沟盖和左侧颞上回的有效连接强度之间存在正相关关系。

结论 本研究揭示了惊恐障碍中涉及内-外感受信号调节、情绪调节与躯体症状相关的脑区功能网络发生了显著的重塑。这些发现不仅加深了我们对惊恐障碍神经生物学机制的理解,也为该疾病的诊断提供了新的神经影像学标记,并可能为未来的治疗干预提供潜在的靶点。

关键词: 惊恐障碍, 恐惧网络模型, 静息态功能磁共振成像, 灰质体积, 功能连接, 有效连接

Metabolomic Profiling of Pediatric and Adolescent Depression: A Systematic Review of Biomarker Discovery

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Objective This systematic review aimed to synthesize metabolomics research on depressive disorders in the pediatric and adolescent population. The goals were to identify key metabolites that are substantially altered, elucidate the associated metabolic pathways, and assess the potential of metabolomics in the diagnosis and prognosis of depressive disorders in this age group

Methods A literature search was conducted from January 2010 to December 2023 across databases including PubMed, ScienceNet, Embase, and MENDA. A

systematic analysis was performed to identify and consolidate differential metabolites. Metabolic pathways were analyzed using the Metabolic Analyzer, an online tool. Additionally, the Metscape plugin within Cytoscape was employed to generate metabolite-gene network diagrams

Results The study incorporated 11 pertinent articles. Metabolites that were frequently reported to be differentially expressed include tryptophan, inosine, kynurenic acid, arachidonic acid, and others. The implicated metabolic pathways were found to be lipid metabolism and amino acid metabolism. The metabolite-gene interaction network analysis revealed that amino acid metabolism encompasses 24 metabolites and 38 genes, while C21-steroid hormone biosynthesis involves 28 metabolites and 38 genes

Conclusion This review encapsulates the significant metabolic shifts observed in depressive disorders among children and adolescents. Further exploration indicates that these metabolites are predominantly associated with lipid and amino acid metabolism, offering valuable insights for the predictive and diagnostic approaches to depression in this demographic

关键词: adolescent, children; depression, metabolism, lipid metabolism, amino acid metabolism

跨诊断视角下习惯特征在不确定性不容忍与精神病理症状维度之间的中介作用

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目的 不确定性不容忍 (IU) 是许多精神疾病的跨诊断脆弱性, 指的是一种对不可预测和不确定性的未来事件产生恐惧的特质, 并且相信感到不确定是不可取的。IU 是引起各种精神疾病的核心认知偏差, 例如广泛性焦虑症、抑郁症、创伤后应激障碍、强迫症、进食障碍和物质滥用障碍等。IU 被认为是一种普遍的脆弱性因素, 解释了各种精神疾病之间的高共病率, 并且是影响心理健康的一个跨诊断的机制。当前关于 IU 与精神类疾病关联等研究集中在与情绪相关的构造, 如恐惧、反刍等。鉴于不确定

性妨碍人们为未来事件做准备的能力, 并促使其采取减少不确定性的行为, 有必要考虑节省认知资源的习惯行为作为将 IU 与症状维度联系起来潜在机制。最新研究发现, 负责主观不确定性体验的大脑核心系统包括尾状核, 该区域也是一个对习惯学习和表达也至关重要的区域。基于此, 本研究采用跨诊断视角, 探讨在中国社区样本中, 习惯特征在症状维度和不确定性不容忍之间的中介作用。

方法 本研究招募了 4102 名年龄在 18 至 67 岁之间的中国成年人 (平均年龄 $M=26.9$ 岁, 标准差 $SD=8.01$), 以提取精神病理症状维度并探索习惯特征的中介作用。本研究使用了: 郁-健康问卷抑郁症状群量表 PHQ-9、广泛性焦虑量表 GAD-7、进食态度问卷中文版 EAT-26、应激感受量表 PSS、精使用障碍筛查量表 AUDIT、强迫症状行为问卷 OCI-R 等问卷作为症状维度测量问卷, 并使用无法忍受不确定性量表 IUS、习惯特征量表 COHS, 分别测量个体对不确定性的不容忍性及习惯倾向。

结果 研究提取了三种症状维度 (强迫性、成瘾性和情感压力维度)。所有症状维度、不确定性不容忍 (IU) 和习惯特征之间均显著相关 ($p<0.01$)。IU 对所有三个维度都有直接的正向影响 (强迫性: 效应值 = 0.41; 情感压力: 效应值 = 0.58; 成瘾性: 效应值 = 0.13), 并且通过自动化的习惯特征也产生间接的正向影响 (强迫性: 效应值 = 0.095; 情感压力: 效应值 = 0.062; 成瘾性: 效应值 = 0.050)。此外, IU 通过重复的习惯特征对强迫性维度产生正向影响 (效应值 = 0.053), 对情感压力维度产生负向影响 (效应值 = -0.026)

结论 本研究从中国社区样本中提取出三种症状维度 (强迫性、情感压力和成瘾性)。从维度角度来看, 本研究还发现较高水平的不确定性不容忍 (IU) 可以通过自动化的习惯特征加剧精神病理症状, 而重复的习惯特征可以缓解情感压力维度, 并加重强迫性维度。

关键词: 跨诊断; 强迫; 成瘾; 不确定性难容忍性; 习惯

情绪障碍的非适应性情绪调节策略及其心理干预进展

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目的 情绪失调作为一种跨诊断现象常见于多种情绪障碍，与不适应的情绪调节策略有关，这些策略可能导致疾病维持和恶化。本文通过回顾文献，总结抑郁障碍、焦虑障碍和双相情感障碍中非适应性情绪调节策略及其心理干预措施，为临床干预情绪障碍提供有效的靶点、优化治疗方案。

方法 本综述通过检索国内外相关文献，总结归纳情绪调节策略在抑郁障碍、双相情感障碍和焦虑障碍中的特征，发现其共性和特异性，并梳理相应的心理干预技术，为临床治疗情绪障碍提供依据。

结果 通过对已有文献的回顾我们发现，情绪失调是多种精神疾病共有的特征，与不适应的情绪调节策略紧密相关，这些策略可能导致疾病的持续和恶化。反刍、表达抑制、回避等策略更常被情绪障碍患者使用，通过正念、认知行为治疗、辩证行为疗法、情绪调节疗法等心理治疗可以有效提高患者的情绪调节能力，增加认知重评、接纳等策略的运用频率和成功率，从而有助于症状的缓解。

结论 未来的研究可以更多地利用生物标志物（如心率变异性、皮肤电反应等）来更客观地评估情绪调节策略。利用神经成像技术（如功能性磁共振成像）来探索情绪调节策略在大脑中的神经机制。另外，情绪调节策略的适应性与非适应性不是完全绝对的，将来可以更多研究情绪调节策略在不同情境下的适应性，例如在压力情境、社交互动或决策过程中，关注情绪调节策略的灵活性。

关键词：情绪障碍，情绪调节策略，非适应性，心理干预，反刍，回避

网络正念减压疗法对围术期 0-II 期乳腺癌患者负性情绪的影响

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目的 了解乳腺癌患者负性情绪现状，分析乳腺癌患者负性情绪的相关影响因素，探究网络正念减压疗法对围术期 0-II 期乳腺癌患者负性情绪的影响效果。

方法 第一部分：患者负性情绪的现况研究。选取 2023 年 8 月至 2023 年 11 月，处于围术期的 0-II 期乳腺癌患者 102 名作为研究对象，通过一般资料调查表、汉密尔顿焦虑量表（HAMA）、汉密尔顿抑郁量表（HAMD）、匹兹堡睡眠质量指数量表（PSQI）、癌症复发恐惧量表（FCRI）、五因素正念量表（FFMQ）调查患者的负性情绪及正念水平，并分析患者负性情绪的相关因素。第二部分：网络正念减压疗法对乳腺癌患者负性情绪的影响。选取符合纳入排除标准的 70 名参与者，通过随机数表法将其分为干预组（n=35）与对照组（n=35）。对照组给予常规健康教育，干预组在对照组的基础上给予为期 8 周的网络正念减压干预课程。干预前后采用一般资料调查表、HAMA、HAMD、PSQI、FCRI、FFMQ 对参与者进行评估。采用 SPSS 25.0 软件、GraphPad Prism 8 软件进行数据分析，符合正态分布的计量资料描述为均值±标准差，组间比较采用 t 检验、非正态分布计量资料描述为中位数（四分位数间距），组间比较采用非参数检验（Wilcoxon 秩和检验）、计数资料采用 χ^2 检验，相关性分析采用 Pearson 相关分析。

结果 年龄、居住地、疾病分期对焦虑情绪的影响具有统计学意义（ $P < 0.05$ ）。线性回归显示，抑郁和癌症复发恐惧是焦虑的影响因素（ $P < 0.05$ ）。干预前后结果组内比较显示，对照组 HAMA、HAMD、PSQI、FCRI 总分差异无统计学意义（ $P > 0.05$ ）；干预组 HAMA、PSQI、FCRI 得分较前下降，FFMQ 得分较前增加，差异具有统计学意义（ $P < 0.05$ ）。干预后两组间比较显示，干预组 HAMA、PSQI、FCRI 得分较低，FFMQ 得分较高，差异具有统计学意义（ $P < 0.05$ ）。

结论 0-II 期乳腺癌患者在围术期广泛存在焦虑、抑郁及癌症复发恐惧情绪，睡眠质量差；年龄、居住地、癌症分期会影响患者的焦虑情绪。网络正念减压干预能够改善 0-II 期乳腺癌患者的焦虑情绪，缓解癌症复发恐惧，改善睡眠质量，提高正念水平。

关键词：乳腺癌，网络正念减压疗法，焦虑，睡眠障碍，癌症复发恐惧

Social Support and Sleep Health: A Cross-sectional Study in China

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Objective Healthy sleep is essential for human beings to experience a general sense of wellbeing, whereas, a significant percentage of people have difficulties in enjoying natural sleep health due to a variety of reasons. Social support has been found to be associated with quality of sleep, however, the puzzle of social support and sleep health is not yet complete. Current study sought to identify a clear relationship between social support and sleep health in general Chinese population

Methods An online cross-sectional survey was established in mainland China from June to July 2022. Individuals' social support level was measured with Perceived Social Support Scale (PSSS) and identified as high social support and low-to-middle social support. In addition, sleep health was evaluated with sleep quality, sleep duration, sleep pattern, and the presence of any sleep disorder or disturbance including insomnia, excessive daytime sleepiness, obstructive apnea syndrome, and narcolepsy

Results A total of 41,061 individuals who completed the online survey were included in the final analysis, among whom, 13,633 individuals reported to have high social support level, while 27,428 had low-to-middle social support level. Multivariable logistic regression analysis was applied to explore social support associated with sleep health outcomes. After adjusting for covariates, participants with high social support were associated with a higher likelihood of good sleep quality (OR=1.47, 95% CI=1.40-1.55), normal sleep duration (OR=1.36, 95% CI=1.30-1.43), and healthy sleep pattern (OR=1.50, 95% CI=1.43-1.58). What's more, compared to those with low-to-middle social support, individuals with high support were shown to have lower risks of sleep problems such as insomnia (OR=0.65, 95% CI=0.61-0.69), excessive daytime sleepiness (OR=0.78, 95% CI=0.72-0.83), obstructive apnea syndrome (OR=0.58, 95% CI=0.53-0.62), and narcolepsy (OR=0.74, 95% CI=0.68-0.81)

Conclusion To conclude, higher social support can facilitate better and healthier sleep experience. The

findings will be an essential puzzle piece in the improvement of human sleep health

关键词: social support, sleep health

智能手机使用对青少年抑郁障碍患者负性情绪的影响研究

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目的 探讨智能手机使用的时间及动机对抑郁障碍青少年焦虑、抑郁、负性情绪的影响。

方法 选取2023年10月—2024年6月在山东省精神卫生中心就诊的116例青少年抑郁障碍患者为观察组,选取周围中学的185名健康青少年为对照组。采用一般资料问卷、手机使用动机量表、问题性手机使用量表(MPPUS-10)评估两组青少年的智能手机使用状况;采用抑郁自评量表(SDS)、焦虑自评量表(SAS)、负性情绪量表(PANA)评估两组青少年的负性情绪状况。

结果 ①观察组手机使用时间与健康组存在显著差异($p<0.01$);观察组手机使用动机量表中休闲娱乐、唤醒、信息获取维度评分均显著低于对照组($p<0.01$);逃避、习惯维度评分均显著高于对照组($p<0.01$);观察组问题性手机使用量表评分显著高于对照组($p<0.01$);②观察组抑郁自评量表评分、焦虑自评量表评分、负性情绪量表评分均显著高于对照组($p<0.01$);③相对于每日使用手机2小时以下,每日手机使用时间在4-6小时会显著增加患抑郁的风险,差异具有统计学意义(OR=11.342, 95%CI 2.182-58.958, $p<0.01$);④以逃避为动机的手机使用可以显著正向预测观察组及对照组的抑郁、焦虑及负性情绪($p<0.01$);以休闲娱乐为动机的手机使用可以显著负向预测观察组的焦虑及负性情绪($p<0.05$);以信息获取为动机的手机使用可以显著负向预测对照组的抑郁及负性情绪($p<0.05$)。⑤问题性手机使用可以显著正向预测观察组及对照组的抑郁、焦虑及负性情绪($p<0.01$)。

结论 每日使用手机时间在4-6小时会显著增加抑郁风险;以休闲娱乐、信息获取为动机的手机使用可能对抑郁、焦虑等负性情绪可以起到暂时的缓解作用;而以逃避为动机的手机使用以及问题性

手机使用可能会加重抑郁、焦虑等负性情绪。

关键词：智能手机使用；青少年；抑郁障碍患者；焦虑；抑郁；负性情绪

Advances in Basic and Clinical Research on Misophonia

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Objective Misophonia is a complex multifactorial psychophysiological and behavioral disorder characterized by abnormally intense emotional and physiological responses to specific sounds, such as chewing, coughing, and tapping noises. The awareness of misophonia among psychiatrists in China is still very low. This study aims to review the clinical characteristics, epidemiology, pathogenesis, diagnosis, classification, and treatment of misophonia to enhance understanding and recognition among Chinese psychiatrists and clinical practitioners, thereby facilitating more research on misophonia in Chinese populations

Methods A comprehensive literature review was conducted, covering both Chinese and international studies on misophonia

Results **Concept and Clinical Characteristics:** Misophonia involves strong negative reactions to certain sounds, causing disgust, anxiety, fear, and anger, along with physical responses like muscle tension and increased heart rate. Common triggers include sounds from the human mouth, nose, and throat, as well as mechanical and animal sounds. Patients often use earplugs or headphones to avoid these sounds.

Epidemiology: Prevalence varies globally. In Florida, USA, 19.9% of university students are affected, while in China, about 6% report moderate symptoms. Misophonia typically starts in childhood or adolescence, with an average onset age of 12.61 years, and often worsens over time.

Pathogenesis:

Genetic Susceptibility: There is some association with obsessive-compulsive traits and familial clustering,

but the exact genetic link is unclear.

Neurobiological Mechanisms: Abnormal activation in brain regions like the anterior insular cortex and ventromedial prefrontal cortex has been observed. Increased connectivity between auditory and motor areas suggests abnormal sensory-motor integration.

Psychological Mechanisms: Misophonia may develop through associative learning, where neutral sounds are linked to negative emotions. Interoception, cognitive biases, and selective attention also play roles, exacerbating emotional responses.

Disease Classification and Diagnosis: There is no consensus on diagnostic criteria. Tools include the Amsterdam Misophonia Scale (A-MISO-S), Misophonia Questionnaire (MQ), and MisoQuest self-report questionnaire. Misophonia is not recognized in DSM-5 or ICD-11, leading to debates about its classification as a distinct disorder or part of other conditions.

Intervention and Treatment:

Audiological Treatment: Tinnitus retraining therapy (TRT) uses white noise to reduce attention to aversive sounds and has shown early success.

Psychological Treatment: Effective therapies include cognitive behavioral therapy (CBT), acceptance and commitment therapy (ACT), and dialectical behavior therapy (DBT). These therapies address maladaptive thoughts, encourage acceptance of negative experiences, and use mindfulness and emotion regulation techniques.

Pharmacological Treatment: Medications like fluoxetine, sertraline, and risperidone have shown some effectiveness, primarily for managing comorbid conditions like anxiety and obsessive-compulsive disorder, but more research is needed.

Conclusion Misophonia requires further investigation for its classification, diagnostic criteria, and treatment methods. Future research should focus on understanding its characteristics, differentiating it from other disorders, and establishing standardized diagnostic criteria. Expanding research to diverse populations and validating treatments through large trials are essential. Multidisciplinary collaboration can improve diagnostic and treatment frameworks, enhancing patient quality of life

关键词: Misophonia; Pathogenesis; Clinical characteristics; Diagnosis and Classification; treatment

网络自助式正念疗法对焦虑障碍的疗效研究

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目的 随着对焦虑障碍治疗研究的深入,传统药物治疗的局限性逐渐显现,长期服药可能伴随多种副作用。互联网自助式正念干预作为一种新兴的心理治疗方法,其在焦虑障碍治疗中的效果日益受到关注。本研究旨在评估,在常规治疗的基础上,结合互联网自助式正念干预,对于焦虑障碍患者情绪改善情况的潜在效益。我们期望通过这一研究,为焦虑障碍患者提供更加全面、有效的治疗方案。

方法 本研究为随机对照试验,在同济医院焦虑抑郁专科门诊纳入 51 名 DSM-5 确诊的焦虑障碍患者,随机分为线上正念组(28 人)和常规治疗组(23 人)。两组均接受常规治疗,线上正念组还接受为期 8 周的网络自助正念干预,每周一节课,每节课 50 分钟左右,同时完成每周 6 天的课下练习。使用汉密尔顿抑郁量表-21 项(HAMD-21)、汉密尔顿焦虑量表(HAMA)、匹兹堡睡眠量表(PSQI)评估线上正念组和常规治疗组在基线和治疗 4 周、8 周、12 周时的情绪、睡眠及社会功能变化情况。数据分析使用 SPSS 25.0 进行,采用 t 检验、Mann-Whitney U 检验等用于分析,以 $p < 0.05$ 认为差异具有统计学意义。

结果 本研究中,线上正念治疗组与常规治疗组各有 23 人和 19 人完成了为期 8 周的干预。(1)在干预前,线上正念和常规治疗组在 HAMD-21 (16.71 ± 4.53 vs 15.39 ± 6.24 , $p = 0.401$), HAMA (18.04 ± 6.58 vs 16.39 ± 7.58 , $p = 0.411$), PSQI (11.71 ± 3.9 vs 11.91 ± 3.15 , $p = 0.844$), SDSS (4.71 ± 2.96 vs 3.96 ± 3.39 , $p = 0.398$) 得分无显著差异 ($p > 0.05$),具有可比性。(2)干预 8 周结束时,线上正念和常规治疗组相比,线上正念组焦虑症状好转率 (93.3% vs 61.5% , $p = 0.041$) 和抑郁症状的好转率 (100% vs 61.5% , $p = 0.008$) 显著高于常规治疗组,两组差异具有统计学意义 ($p < 0.05$)。线上正念组 PSQI 量表 ($35.8\% \pm 12.6\%$ vs $20.9\% \pm 14.3\%$,

$p = 0.027$)、SDSS 量表 ($73.4\% \pm 26.9\%$ vs $39.4\% \pm 43.5\%$, $p = 0.036$) 减分率高于常规治疗组,两组差异具有统计学意义 ($p < 0.05$)

结论 本研究结果表明,在针对焦虑障碍患者的治疗中,将线上正念疗法作为常规治疗的辅助手段,能够更有效地减轻患者的焦虑与抑郁症状,改善睡眠质量,并提升社会功能。这一发现为焦虑障碍的综合治疗提供了新的实证支持,证明了线上正念治疗作为一种附加疗法,在增强治疗效果方面具有重要的临床应用价值。

关键词: 焦虑障碍, 线上正念

Cognitive Reappraisal As A Mediator between Anxiety Sensitivity and Negative Attentional Bias in Panic Disorder Patients

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Objective This study aims to explore the mediating role of cognitive reappraisal in the relationship between anxiety sensitivity and negative attentional bias among patients with panic disorder

Methods The study included 125 patients diagnosed with panic disorder according to the criteria set forth in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Anxiety sensitivity was assessed using the Anxiety Sensitivity Index-3 (ASI-3); cognitive reappraisal was measured using the Cognitive Emotion Regulation Questionnaire (CERQ); and negative attentional bias was evaluated using the Positive and Negative Attentional Bias Questionnaire. Mediation analysis, using the Bootstrap method, was employed to examine the mediating effect of cognitive reappraisal on the relationship between anxiety sensitivity and negative attentional bias

Results Anxiety sensitivity (ASI-3 scores) was significantly correlated with cognitive reappraisal (CERQ scores) and negative attentional bias, with correlation coefficients of $R = 0.5701$ ($P < 0.001$) and $R = -$

0.1919 ($P < 0.001$), respectively. Mediation analysis indicated that cognitive reappraisal partially mediated the relationship between anxiety sensitivity and negative attentional bias, with an indirect effect of 0.1233 and a 95% Bootstrap confidence interval of [0.0768, 0.1771]

Conclusion Anxiety sensitivity is positively associated with negative attentional bias, and cognitive reappraisal partially mediates this relationship. As an emotion regulation strategy, cognitive reappraisal can modulate the link between anxiety sensitivity and negative attentional bias. These findings suggest that cognitive reappraisal may serve as a crucial target for intervention in the treatment of panic disorder

关键词: Panic disorder; Anxiety sensitivity; Cognitive reappraisal; Attentional bias; Mediation effect

焦虑障碍患者接受 CBT 疗法后在功能磁共振成像中的脑活动变化综述

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焦虑障碍是一种常见的精神障碍, 对患者的生活质量和心理健康造成严重影响。认知行为疗法 (CBT) 已被广泛应用于焦虑障碍的治疗, 但其作用机制尚未完全明确。本综述旨在探讨焦虑障碍患者接受 CBT 疗法后在功能磁共振成像 (fMRI) 中的脑活动变化, 以揭示 CBT 对焦虑障碍的神经机制。

目的 本研究旨在分析焦虑障碍患者接受 CBT 疗法后在 fMRI 中的脑活动变化, 探讨 CBT 对焦虑障碍患者大脑功能的影响, 为临床实践提供神经生理学依据。

材料与方法 本综述涵盖了近年来关于焦虑障碍患者接受 CBT 疗法后 fMRI 结果的相关研究。研究采用了系统性文献综述的方法, 对不同研究的研究对象、研究设计、fMRI 扫描参数等进行了综合分析。

结果 研究结果显示, 焦虑障碍患者接受 CBT 疗法后在 fMRI 中的脑活动出现了一系列变化。大多数研究表明, CBT 治疗可以显著改变焦虑障碍患者的大脑活动模式, 主要变化发生在以下部位: 1. 杏仁核 (Amygdala): 杏仁核是情绪加工的重要脑区,

焦虑障碍患者在接受 CBT 疗法后, 杏仁核的活动可能减少, 这可能与焦虑情绪的调节有关; 2. 前额叶皮层 (Prefrontal Cortex): 前额叶皮层是情绪调节和认知控制的核心脑区, CBT 治疗可能导致前额叶皮质活动的增加, 有助于患者更好地调节情绪和认知; 3. 海马 (Hippocampus): 海马是与学习和记忆相关的脑区, 焦虑障碍患者接受 CBT 疗法后, 海马可能显示出活动的增加, 这可能有助于患者更好地处理焦虑情绪和记忆; 4. 前扣带皮质 (Anterior Cingulate Cortex): 前扣带皮质是情绪调节和认知控制的重要脑区之一, CBT 治疗可能导致前扣带皮质活动的增加, 有助于患者更好地调节情绪和认知冲突。这些变化可能反映了 CBT 对焦虑障碍患者的情绪调节和认知重建的影响。

讨论 通过对焦虑障碍患者接受 CBT 疗法后 fMRI 结果的综合分析, 我们可以更好地理解 CBT 对焦虑障碍患者大脑功能的影响机制。这些神经生理学的变化可能有助于解释 CBT 治疗焦虑障碍的有效性, 为临床实践提供更具针对性的治疗方案。

综上所述, 焦虑障碍患者接受 CBT 疗法后在 fMRI 中的脑活动变化是一个备受关注的研究领域。通过深入研究 CBT 对焦虑障碍患者大脑功能的影响, 我们可以更好地理解焦虑障碍的神经机制, 为临床治疗提供更科学的依据。

关键词: 焦虑障碍, CBT 疗法, fMRI

青少年抑郁障碍患者冗思干预的有效性与依从性——一项荟萃分析与系统综述

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目的 近年来青少年抑郁障碍的发病率急剧上升, 给家庭和社会带来了巨大的负担。值得注意的是, 青少年患者处于不稳定的、身体和心理变化迅速的青春期阶段, 这使得他们容易陷入一种难以控制的, 对负性事件或消极情绪反复回想、过度自我聚焦的反刍思维, 即冗思。冗思会加重抑郁患者的症状, 延长发作时间, 导致复发风险增高。然而, 现有研究对青少年抑郁障碍的各类型干预手段在冗思水平改善方面的效果尚无确切结论。本荟萃分析旨在对青少年抑郁障碍冗思干预相关的随机对照试

验和队列试验结果进行综述,分析抑郁治疗手段改善青少年抑郁患者冗思水平的有效性与依从性。

方法 我们检索了PubMed、Web of Science 和Cochrane 英文数据库,采用PICO 原则进行文献检索:目标人群为确诊重度抑郁障碍的青少年;所有形式的干预均可纳入;对照组不限;主要结局指标为治疗前后冗思量表分数的变化;次要结局指标为因任意原因中断研究的人数。由两名人员独立筛选可纳入荟萃分析的研究,汇总后由一名人员进行数据的提取和分析。最后两名人员再分别进行文献质量的评估。

结果 荟萃分析最终纳入了18个研究。其中,心理治疗9个、无创神经调控6个及药物治疗3个。基于随机效应模型的荟萃分析结果显示,心理治疗后患者冗思分数较治疗前显著降低($SMC = -0.76$, $95\%CI: -0.90$ 至 -0.62 , $P < 0.001$);神经调控治疗后也较治疗前显著降低($SMC = -0.70$, $95\%CI: -0.98$ 至 -0.42 , $P < 0.001$);由于三篇报道药物治疗的文献提供的评估冗思的统计学指标各不相同,未能进行合并分析,但通过系统综述,发现四种药物治疗后患者冗思分数均降低,前后差值依次为赛洛西宾($Mean = -7$, $SD = 12.40$),艾司西酞普兰($Mean = -0.3$, $SD = 8.36$),氯胺酮($Median = -9$)和人类食欲素-2受体选择性拮抗剂($Mean = -8.6$)。依从性分析结果则显示,心理治疗组与对照组相比全因脱落率无明显差异($OR = 0.94$, $95\% CI: 0.54$ 至 1.63);神经调控组与对照组相比也无明显差异($OR = 0.40$, $95\% CI: 0.09$ 至 1.72),但具有较低的趋势。

结论 心理治疗和神经调控均能显著改善青少年抑郁障碍患者的冗思水平,且神经调控与心理治疗的疗效趋同;另外上述四种药物对于改善冗思水平均具有一定的疗效。心理治疗与神经调控确为有效的、依从性佳的冗思干预手段。未来我们需要更多的研究数据,进一步分析和比较抑郁干预手段对改善冗思水平的有效性,从而为临床治疗手段的选择提供更全面的参考。

关键词: 青少年抑郁,冗思,心理治疗,神经调控,荟萃分析

Mental Health Literacy Among Graduate Students in China: A Cross-Sectional Study

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Objective Mental health literacy is an important aspect of mental health. A high level of mental health literacy contributes to the prevention, identification, and management of mental disorders. This study aims to investigate mental health literacy among Chinese graduate students and associated factors to fill the gap in data on mental health literacy among this group in China

Methods A cross-sectional study was conducted from December 7, 2023, to January 5, 2024, at Central South University in Changsha, Hunan, China. The Mental Health Knowledge Questionnaire (MHKQ) and the Mental Health Literacy Questionnaire (MHLQ) were used to assess the mental health literacy of medical students. Descriptive analyses, independent t-tests, and multiple linear regression were performed to assess mental health literacy and associated factors among graduate students

Results A total of 1917 students participated in this study, with 95.83% showing basic mental health knowledge. While postgraduate students exhibit a strong capacity for maintaining their mental well-being, they are relatively ill-equipped to deal with mental illnesses. Additionally, a portion of these students hold misconceptions about mental health disorders. Unmarried, raised in urban environments, or those without acquaintances having a mental disorder history possessed more extensive mental health knowledge. Female students and those residing in urban areas at present have higher mental health literacy. Graduates with acquaintances with a history of a mental disorder showed disadvantages in first aid skills and help-seeking behavior, but exhibited fewer misconceptions regarding mental health conditions

Conclusion This study indicates a relatively high level of mental health literacy among Chinese graduate students. However, there is a critical need to focus on students from rural backgrounds and those from lower-income families to ensure equitable mental health literacy levels. Moreover, there is a broader necessity to enhance education with practical mental

health skills and theoretical knowledge, emphasizing a comprehensive approach to improve mental health literacy

关键词: Mental health literacy, Graduate students, China, Mental health

基于症状网络分析的抑郁症患者认知功能与病程进展研究

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目的 抑郁症是一种常见的精神障碍,其症状包括主观和客观认知功能的损伤、动力下降和疲乏。尽管已有多种治疗方法,但抑郁症患者在病程进展过程中症状网络的变化仍需进一步研究。本研究利用网络分析探讨抑郁症患者在不同病程阶段的症状网络结构和功能的动态变化,重点关注主观和客观认知功能的中心地位。

方法 本研究采用网络分析方法,对两个不同病程阶段(Time1和Time2)的抑郁症患者进行横断面分析。研究样本包括172名抑郁症患者,分别在基线(Time1)和8周后(Time2)进行评估。使用的指标包括主观认知(如注意力/集中、前瞻记忆、回顾记忆、计划/组织)、客观认知(如执行功能、注意力、处理速度、记忆)以及抑郁症状(如工作和活动、一般躯体症状)。数据通过网络不变性测试、整体强度不变性测试、中心性不变性测试及边缘权重差异分析进行处理。

结果 结果显示,两个网络结构在网络不变性测试统计上没有显著差异,但接近显著性水平;整体强度不变性测试中,两个网络在整体强度上的差异在统计上没有显著差异,但接近显著性水平。中心性不变性测试中,有5个节点(工作和活动、一般躯体症状、注意力/集中、前瞻记忆、计划/组织)在两个网络中的中心性差异显著。边缘权重差异统计中,没有边缘权重的差异在统计上显著。上述结果显示,随着抑郁症患者病程的进展,症状网络的整体结构和强度保持相对稳定。然而,主观认知损伤、动力下降和疲乏的中心地位显著下降,而客观认知功能,特别是执行功能和处理速度,在症状网络中始终保持核心地位,并未随病程发生明显改变。

结论 本研究揭示了抑郁症患者病程进展过程中症状网络的动态变化。尽管整体网络结构和强度保持稳定,但特定症状的中心性发生了显著变化。客观认知功能在整个病程中始终处于核心地位,这一发现为抑郁症的诊断和治疗提供了重要的参考。未来研究应进一步探讨这些变化的潜在机制,以优化抑郁症的干预策略。

关键词: 抑郁症, 症状网络, 主观认知功能, 客观认知功能

Disconcordance between Objective and Subjective Cognitive Performance in Major Depressive Disorder Patients with Comorbid Anxiety Symptoms

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Objective Studies have shown that there is a poor correlation between subjective and objective cognition in major depressive disorder (MDD) patients, posing difficulties for clinicians to identify the patients with cognitive impairments. As a common subtype of MDD, it is still unclear whether MDD patients comorbid anxiety (MDDA) also exhibit significant cognitive discrepancy, risk factors for cognitive disconcordance in MDDA, and whether comorbid anxiety is a risk factor for developing cognitive disconcordance in MDD patients

Methods A comprehensive neurocognitive test battery and Perceived Deficit Questionnaire (PDQ-D-5) were used to assess the objective cognition and subjective cognition respectively in 184 patients with MDD and 83 healthy controls (HCs). 14-item Hamilton Anxiety Rating Scale (HAM-A) was used for anxiety symptoms and MDD patients with HAM-A total score >14 were classified into MDDA group. Comprehensive demographic, clinical and other data were also collected. Whether he/she exhibiting cognitive disconcordance was judged by the cut-off points setting from the score of cognitive discrepancy (CD) deriving from HCs. Sta-

tistical analyses were conducted to assess the correlation between subjective and objective cognitive performance and to compare the differences in multi-dimensional characteristics between groups. Risk factors of cognitive discordance were evaluated through binary logistic regression analysis

Results There was a significant correlation between subjective and objective cognitive performance in HCs but not in MDD whether in MDDA or patients without anxiety. Individuals with CD score between -1.042 and 0.976 were assigned to the cognitive concordance group, while those with a $CD \geq 0.976$ or ≤ -1.042 were classified into the cognitive discordance group. In MDDA group, the cognitive discrepancy score was -2.519 ± 1.492 , with a significant higher proportion of patients with cognitive discordance compared to HCs. Nevertheless, in the preliminary exploration of factors contributing cognitive discordance in MDDA group, none of a clinical, psychological or any dimensional variables showed significant difference between groups, and an effective predictive regression modal was failed to established after conducting binary logistic regression analysis. Last, in the total MDD samples, MDDA were more prone to cognitive discordance compared to those without anxiety, indicating that comorbid anxiety may be a risk factor for cognitive discordance in MDD patients

Conclusion For MDDA patients, their subjective and objective cognitive performance also showed poor correlation, and the cognitive discrepancy was significant, with more patients exhibited cognitive discordance. Cognitive discordance was not related to any disease or psychological characteristics, revealing that cognitive discordance may be independent. For MDD patients, especially those comorbid anxiety, when evaluating their cognitive impairments, it is not enough to rely solely on subjective or objective measurements. It is necessary to assess both subjective and objective cognitive performance to precisely identify and develop targeting treatment strategy for MDDA patients with cognitive impairments

关键词: Major depressive disorder, comorbid anxiety, subjective cognition, objective cognition, cognitive discordance

荆州市初中生焦虑、抑郁情绪问题与家庭功能的关系研究

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目的 通过对荆州市在校初中生焦虑、抑郁情绪的调查,探讨初中生焦虑、抑郁情绪问题与家庭功能的关系,为预防和干预焦虑、抑郁情绪问题提供参考。

方法 于2023年9月至2023年11月采用自行整编《“阳光少年”调查问卷》调查工具,采用整群抽样的方法选取荆州市十八所中学的初中生作为研究对象,采用问卷星线上调查的方式,内容包括一般人口学资料、广泛性焦虑障碍量表(GAD-7)、抑郁自评量表(PHQ-9)、Epstein等编制的家庭功能评定量表(FAD)等问卷进行心理健康状况调查。采用SPSS 26.0软件对所得数据进行统计分析。

结果 (1)共收回12343份问卷,男性6488人,女性5855人。有效问卷10925份,有效率88.51%;(2)男生5703人,女生5222人;七年级4432人,八年级3317人,九年级3176人。GAD-7标准分的分界值为5分,其中5-9分为轻度焦虑,10-14分为中度焦虑,15-21分以上为重度焦虑。结果显示焦虑的总均分(4.63±1.14)分。轻度焦虑占18.7%。中度焦虑占5.7%,重度焦虑占1.2%。PHQ-9标准分的分界值为5分,其中5-9分为轻度抑郁,10-14分为中度抑郁,15分以上为重度抑郁。结果显示抑郁总均分(5.47±1.69)分,轻度抑郁17.9%,中度抑郁占6.5%,重度抑郁占2.3%。单因素分析显示在性别、年级与焦虑、抑郁情绪之间存在显著关联($P < 0.05$)。多因素分析结果显示,在初中阶段,女性(OR=1.47, 95% CI=1.14, 1.78)、年级(OR=1.64, 95% CI=1.43, 1.87)的初中生发生焦虑、抑郁情绪的风险增加。(3)家庭功能与抑郁、焦虑存在显著的相关($P < 0.05$),回归分析发现,角色、总的功能、情感反应和行为控制4个维度可以显著地预测个体的抑郁水平($F=17.89, P=0.00$),总的功能和问题解决能够显著地预测个体的焦虑水平($F=11.38,$

P=0.00)。

结论 荆州市初中生存在较严重的焦虑、抑郁情绪，应重点关注女性、九年级学生，家庭功能可能能够较好的预测焦虑、抑郁情绪。

关键词：家庭功能 焦虑 抑郁情绪 初中生

Correlation Between Reduced Neurite Density in The Medial Prefrontal Cortex and Hamilton Anxiety Rating Scale Scores in Generalized Anxiety Disorder: A Cross-Sectional Study

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Objective To investigate the differences in neurite density in the medial prefrontal cortex (mPFC) between patients with generalized anxiety disorder (GAD) and healthy controls, aiming to deepen the understanding of the neurobiological mechanisms of GAD. The mPFC plays a key role in emotional regulation and cognitive control, and its functional abnormalities are closely related to anxiety disorders. However, research on specific changes in neurite density in the mPFC in GAD is still limited. Additionally, this study aims to examine the correlation between reduced neurite density in the mPFC and Hamilton Anxiety Rating Scale (HAMA) scores

Methods In this cross-sectional study, we recruited 35 patients diagnosed with generalized anxiety disorder (GAD) and 71 matched healthy controls. Diagnoses were confirmed using the Structured Clinical Interview for DSM Disorders (SCID). Neurite density in the medial prefrontal cortex (mPFC) was assessed using advanced neuroimaging techniques, specifically diffusion magnetic resonance imaging (dMRI). Statistical analyses were performed to compare the neurite density between the GAD and control groups, controlling for potential confounding variables such as age, sex, and overall brain volume. Additionally, correlation analysis was conducted to explore the relationship between neurite density in the mPFC and Hamilton Anxiety Rating

Scale (HAMA) scores

Results The analysis revealed that patients with generalized anxiety disorder exhibited significantly lower neurite density in the medial prefrontal cortex compared to healthy controls (P = 0.019). This difference remained significant after adjusting for confounding factors. Furthermore, there was a significant negative correlation between neurite density in the mPFC and HAMA scores (P=0.027), suggesting that higher anxiety levels are associated with lower neurite density in this region

Conclusion This study provides evidence that generalized anxiety disorder is associated with reduced neurite density in the medial prefrontal cortex. The significant correlation between reduced neurite density and higher HAMA scores underscores the importance of the mPFC in the pathophysiology of GAD. These results may inform future research and treatment strategies aimed at targeting neural circuits implicated in anxiety disorders. Further studies are needed to explore the causal relationships and potential therapeutic interventions to address these neural deficits

关键词：Generalized Anxiety Disorder; Neurite Density; medial prefrontal cortex

情绪困扰与特应性皮炎发病及严重程度之关联：一项横断面研究

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目的 特应性皮炎是一种常见的慢性炎症性皮肤病疾病，其发病率逐年增加，给患者的生活质量和心理健康带来了重大影响。许多研究已经证实，心理压力、焦虑和抑郁等精神困扰因素与特应性皮炎的发病和病情恶化存在密切关联。因此，探讨情绪困扰与特应性皮炎之间的关系，对于深入理解皮肤疾病的发病机制，提高治疗效果具有重要意义。本研究旨在通过一项横断面研究，探讨精神困扰与特应性皮炎发病及严重程度之间的关联，进一步揭示心理因素对特应性皮炎的影响机制，为临床治疗和综合干预提供科学依据。

方法 我们招募了 2023 年 1 月–2024 年 1 月于中南大学湘雅医院皮肤病医院就诊的 163 名特应性皮炎患者以及 36 名健康志愿者作为研究对象,通过问卷调查收集他们的基本信息以及与情绪困扰相关内容,包括心理压力、焦虑、抑郁、睡眠、生活质量等方面的评估。同时,我们收集患者的临床资料和特应性皮炎相关指标,分析精神困扰对于特应性皮炎的发病及病情严重程度的影响。通过单因素相关及回归分析统计学方法进行分析,探讨精神困扰与特应性皮炎之间的关联。

结果 在 199 名年龄在 10 - 68 岁的参与者中,共 36 例无特异性皮炎,163 例有特异性皮炎,其中轻度 31 例,中度 63 例,重度 69 例。199 名参与者的平均年龄为 28.68 岁。与非特异性皮炎受访者相比,特异性皮炎受访者患有情绪困扰的可能性更大,并且与 BMI、教育水平、吸烟情况和睡眠障碍有关。利用多元变量回归分析调整相关变量后发现,重度特异性皮炎和情绪困扰之间的关联在 5 种不同模型中均得到显著统计学结果。

结论 本研究结果表明,情绪困扰与特应性皮炎发病及严重程度存在一定关联,心理因素可能对特应性皮炎的病情有一定影响。因此,在特应性皮炎治疗过程中,应综合考虑患者的心理健康状况,采取有效的心理干预措施可能会提高治疗效果和有效改善患者的生活质量。

关键词: 情绪困扰,焦虑,抑郁,特应性皮炎,生活质量,治疗

经颅磁刺激联合放松训练疗法对广泛性焦虑症的疗效观察

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目的 探讨经颅磁刺激(r-TMS)和放松训练疗法在广泛性焦虑症治疗中的作用

方法 选择 2022 年 3 月-2024 年 2 月在我们医院西山院区儿童精神科住院的广泛性焦虑症的患者 48 例作为研究组,同时将同期在我院心身医学病区住院的广泛性焦虑症患者 48 例作为对照组,两组患者入组前在一般情况、疾病严重程度等方面无明显差异,对照组给予帕罗西汀 20-40mg/日联合放松训

练治疗,研究组除了药物帕罗西汀和放松训练治疗之外,同时给予经颅磁刺激(r-TMS)治疗,经颅磁治疗 10 次为一个疗程,一般 30 次左右,治疗前治疗中治疗后采用汉密尔顿焦虑量表(HAMA)和汉密尔顿抑郁量表(HAMD)以及副反应量表(TESS)来比较两组疗效及副反应;此外在治疗前治疗 2 周,4 周末及 6 周时给予复查血常规、肝功能、肾功能、心电图等常规检查。

结果 研究组和对照组的总有效率在治疗前后比较差异有统计学意义($P<0.05$),研究组在治疗第 2 周、4 周及 6 周时评定时的疗效都优于对照组($P<0.05$),治疗结束时两组的副反应比较无明显差异($P>0.05$);

结论 对于广泛性焦虑症患者,经颅磁刺激联合放松训练的疗效显著优于单纯药物治疗和放松训练,经颅刺激磁疗法安全无副作用,值得临床推广应用。

关键词: 经颅磁刺激,放松训练,广泛性焦虑症

青少年情感障碍患者非自杀性自伤行为相关风险因素分析

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目的 探索青少年情感障碍患者非自杀性自伤行为(Non-suicidal self-injury, NSSI)相关风险因素。

方法 回顾性分析 2022 年 7 月至 2024 年 5 月就诊于复旦大学附属华山医院精神医学科门诊的 400 例青少年情感障碍患者的病例资料,年龄 14-19 岁。以来院当天的简明国际神经精神访谈(International Neuropsychiatric Interview, MINI)自杀模块评估结果为指标,根据既往 1 个月内是否有自杀行为分为 NSSI 组($n=280$),非 NSSI 组($n=120$)。比较两组的社会人口学特征、临床特征、性激素水平、甲状腺激素指标、焦虑自评量表(Self-Rating Anxiety Scale, SAS)、抑郁自评量表(Self-Rating Depression Scale, SDS)、症状自评量表(Symptom Checklist 90, SCL-90)、艾森克个性测验(Eysenck Personality Questionnaire, EPQ)、青少年生活事件量表(Adolescent Self-rating Life Events Check list,

ASLEC)、童年期虐待问卷(Childhood Trauma Questionnaire, CTQ)的评分,使用 logistic 回归分析近 1 个月内 NSSI 行为的危险因素。

结果 相比非 NSSI 组, NSSI 组的患者精神病性症状、共病躯体疾病、既往有过自杀行为更常见(均 $P < 0.05$)。量表评分方面, NSSI 组的 SAS 得分更高; ASLEC 总分及其人际关系因子得分更高(均 $P < 0.05$); SCL-90 中躯体化得分、人际关系敏感得分更高(均 $P < 0.05$); CTQ 中的情感忽视因子分也更高(均 $P < 0.05$)。激素指标中, 睾酮水平更高, 而 T3/T4 和 FT3、TSH 水平更低(均 $P < 0.05$)。回归分析显示, 既往有过自杀行为、存在精神病性症状、共病躯体疾病、童年创伤是近 1 个月内自杀行为的危险因素(均 $P < 0.05$)。

结论 既往有过自杀行为、存在精神病性症状、共病躯体疾病、童年创伤可能是近 1 个月内青少年情感障碍自杀自伤行为风险因素。

关键词: 情感障碍; 非自杀性自伤; 性激素; 甲状腺激素; 青少年

Development and Validation of The Chinese Versions of The Childhood Perceived Poverty and Wealth Questionnaire(C-CPPWQ) and The Childhood Perceived Unpredictability Questionnaire (C-CPUQ)

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Objective Childhood subjective socioeconomic status (operational definition of harshness) and unpredictability significantly influence life history strategies and subsequent psychological and behavioral patterns. Existing research on Chinese populations has been limited by inconsistent metrics and inadequate measurement items. This study aimed to develop and validate the Chinese versions of the Childhood Perceived Poverty and Wealth Questionnaire (C-CPPWQ) and the Childhood Perceived Unpredictability Questionnaire (C-CPUQ), addressing cultural differences and expanding measurement subjects.

Methods We conducted Exploratory Factor

Analysis (EFA) with 493 students and Confirmatory Factor Analysis (CFA) with 1217 students to validate the factor structures. Convergent validity was assessed using correlations with life history strategies (Mini-K) and childhood trauma (CTQ-SF). Construct validity and reliability were also evaluated

Results The C-CPPWQ's two-factor model (perceived wealth and perceived poverty) demonstrated good fit (CFI = 0.95; TLI = 0.94; SRMR = 0.05; RMSEA = 0.08) and strong internal consistency ($\alpha = 0.90$), with significant correlations with Mini-K ($r = -0.28, p < 0.001$) and childhood trauma ($r = 0.29, p < 0.001$). The C-CPUQ's three-factor model (Unpredictability of Parenting, Unpredictability of External Environment, and Unpredictability of Daily Happening) also showed a good fit (CFI = 0.96; TLI = 0.95; SRMR = 0.04; RMSEA = 0.07) and high reliability ($\alpha = 0.95$), with significant correlations with Mini-K ($r = -0.39, p < 0.001$) and childhood trauma ($r = 0.72, p < 0.001$)

Conclusion The newly developed 14-item C-CPPWQ and 16-item C-CPUQ for Chinese contexts exhibit satisfactory psychometric properties, making them valuable tools for researching and evaluating childhood adversity

关键词: Childhood perceived wealth and poverty, Childhood perceived Unpredictability, Childhood harshness, factor analysis, validity; Psychometrics

父母心理控制对青少年抑郁情绪的影响: 心理灵活性和压力知觉的中介调节作用

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目的 父母心理控制是家庭环境中父母对青少年的一种消极教养方式, 与其青少年的心理问题紧密相连, 也是导致青少年抑郁情绪的一个重要潜在因素。本研究通过建立有调节的中介模型探讨父母心理控制对青少年抑郁情绪的影响机制, 并特别关注心理灵活性和压力知觉的中介调节作用。

方法 采用父母心理控制量表、流调用抑郁自评量表 (CES-D)、压力知觉量表 (CPSS) 和心理灵

活性问卷 (AFQ-Y8) 对安徽省阜阳市一所普通中学七至九年级共 1056 名 (男生 583 人 (55.2%), 女生 473 人 (44.8%)) 学生进行问卷调查, 使用 SPSS 以及 PROCESS 进行相关分析和中介效应检验等。

结果 ①多元线性回归模型显示, 母亲的心理控制对青少年抑郁情绪的影响更为显著 ($\beta=0.227$, $t=4.547$, $p<0.001$)。②在父母心理控制对青少年抑郁情绪的影响中, 父母心理控制水平正向预测抑郁情绪 ($\beta=0.071$, $p=0.145$; $\beta=0.042$, $p=0.354$), 心理灵活性负向预测抑郁情绪 ($\beta=-0.456$, $p<0.05$; $\beta=-0.430$, $p<0.05$)。③压力知觉在父母心理控制与抑郁情绪之间起部分中介作用, 中介效应为 0.058 (95%CI[0.044,0.072]), 中介效应占总效应的 28.330%。④心理灵活性在父母心理控制、压力知觉和抑郁情绪之间起正向调节作用 (IMM=0.001,95%CI[0.0001,0.002])。

结论 父母心理控制与青少年抑郁情绪和压力知觉、心理灵活性有密切关系; 母亲心理控制对青少年抑郁情绪影响更明显; 在父母心理控制中介调节模型中, 压力知觉发挥中介作用, 心理灵活性调节父母心理控制与压力知觉, 进而影响青少年抑郁情绪。

关键词: 父母心理控制, 青少年抑郁情绪, 压力知觉, 心理灵活性

NLRP3 炎症小体介导的小胶质细胞活化参与炎症性肠病伴抑郁的机制研究

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目的 抑郁是炎症性肠病 (IBD) 常见并发症, 炎症性肠病的炎症严重程度与抑郁症状的发生率呈正相关, 目前尚没有稳定的 IBD 伴抑郁动物模型, 小胶质细胞活化介导的神经炎症被认为是炎症性肠病伴抑郁的重要病理改变, 但其潜在的机制尚不明确。

方法 采用 DSS 制备 IBD 伴抑郁模型, 探讨不同 DSS 剂量诱导下 IBD 小鼠的抑郁样行为、外周炎症水平、中枢小胶质细胞激活和神经炎症改变等情况。采用分子生物学等技术手段, 检测血清、结肠、海马和皮质组织中炎症因子表达情况。免疫荧光技

术检测小胶质细胞状态, 及其活化标志物和 NLRP3 的共表达情况。

结果 1.5%组、2.0%组、2.5%组和 3.0%组血清和结肠组织中, 促炎性细胞因子表达增加, 抗炎性细胞因子表达减少; 当 DSS 浓度到达 1.5%及以上时, 可以成功复制 IBD 模型。2.0%组、2.5%组和 3.0%组小鼠总移动距离缩短(OFT), 强迫游泳的静止时间增加(FST), 蔗糖偏好减少(SPT)。当 DSS 浓度到达 2.0%及以上时, 可以成功复制 IBD 伴抑郁模型小鼠。2.0%及以上浓度 DSS 可以激活大脑海马和皮质区域的小胶质细胞和增加 NLRP3 表达, MCC950(NLRP3 抑制剂)可以挽救这一现象。

结论 2.0%浓度 DSS 制备 IBD 伴抑郁的动物模型最具稳定性。NLRP3 炎症小体激活介导的小胶质细胞活化为特征的神经炎症是 IBD 伴抑郁的关键病理环节。

关键词: 抑郁, NLRP3 炎症小体, 小胶质细胞, 神经炎症

Comparative Performance of Patient Health Questionnaire-9 and Edinburgh Postnatal Depression Scale for Screening Antenatal Depression in Chinese Pregnant Women

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Background The Patient Health Questionnaire-

9 (PHQ-9) and Edinburgh Postnatal Depression Scale (EPDS) are the two most widely used scales for antenatal depression assessment in China. However, there is no clear consensus to guide the standards of the utilization of PHQ-9 and EPDS in Chinese pregnant women. The different measures and standards of antenatal depression are disadvantageous for the continuity of prenatal mental care and the facilitation of academic research. Thus, we sought to evaluate the psychometric properties of two widely used screening scales PHQ-9 and among pregnant women in China

Methods The cross-sectional study included 44220 women receiving prenatal care from January 1, 2020, to January 31, 2024. All the participants underwent a psychological screening during their maternity check-ups at the Shenzhen Baoan Women's and Children's Hospital, China. We examined reliability, construct and concurrent validity between two scales using internal consistency indices, factor structures, correlations, and Cohen's kappa.

Results PHQ-9 (Cronbach's $\alpha = 0.800$) and EPDS (Cronbach's $\alpha = 0.783$) had good internal consistency. The correlation between PHQ-9 and EPDS scores was fair ($\rho = 0.61$). Based on exploratory factor analysis (EFA), both scales yielded a two-factor structure. EFA including all items from PHQ-9 and EPDS yielded four factors, namely, "somatization", "negative cognitive bias and suicidal ideation", "anxiety and depression", and "anhedonia". The agreement between the two scales was generally fair at different cutoff scores with the highest Cohen's kappa being 0.493

Conclusion Both the PHQ-9 and EPDS are reliable and valid scales for antenatal depression assessment. The PHQ-9 captures somatic symptoms, while EPDS detects depressive symptoms comorbid with anxiety during early pregnancy. Our findings suggest simultaneous administration of both scales may improve the identification of antenatal depressive disorders in clinical settings.

关键词: PHQ-9, EPDS, antenatal depression, psychometric properties

Prevalence and Risk Factors of Antenatal Depression in The First Trimester: A Real-world Cross-sectional Study in A Developed District in South China

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Background Antenatal depression may result in adverse outcomes for both the mother and the offspring. However, few studies have focused on the screening of pregnant women at a higher risk for antenatal depression in the first trimester. The present study aimed to assess the effect of lifestyle and family relationships on antenatal depression in the first trimester in a large Chinese population.

Methods Cross-sectional population data were obtained from a real-world cross-sectional survey conducted in Shenzhen, China from 2020 to 2024. The data on sociodemographic characteristics, lifestyle, and family relationships were obtained using self-reported questionnaires. Antenatal depression was assessed using the Edinburgh Postnatal Depression Scale (EPDS), with a score of ≥ 13 indicating the presence of probable antenatal depression. A binary logistic regression model was used to identify the risk factors of antenatal depression.

Results A total of 42,363 pregnant women in the first trimester were recruited in the cross-sectional survey, among whom 3,107 (7.3%) had probable antenatal depression. We found (1) age < 25 years, (2) low or moderate economic status, (3) smoking, (4) partner

smoking, (5) alcohol use, (6) lack of physical exercise, (7) poor or moderate living environment, (8) low or moderate marital happiness, and (9) never talking about problems were associated with antenatal depression. However, level of education, employment status, partner alcohol use, and living alone were not significantly related to antenatal depression in the first trimester.

Limitations

The cross-sectional design and the use of self-report measures must be considered while interpreting the results.

Conclusions This study suggested that the prevalence of antenatal depression in the first trimester was 7.3%. Public health prevention efforts aimed at reducing the prevalence of antenatal depression are recommended. Early identification of women at a higher risk in early pregnancy is necessary for preventing antenatal depression and improving quality of life.

关键词: Antenatal depression, lifestyle, family relationships, risk factors, EPDS

Insomnia Moderates The Association between Positive Symptoms and Suicidal Ideation: A Large-scale Cross-sectional Study in Chinese Patients with Chronic Schizophrenia

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Objective Both insomnia and positive symptoms are linked to suicidal ideation (SI) in schizophrenia, yet their interaction remains unexplored. This study aims to investigate whether insomnia moderates the relationship between positive symptoms and SI in a large sample of Chinese patients with chronic schizophrenia.

Methods We recruited 1,407 patients and assessed them using the Positive and Negative Syndrome Scale (PANSS), Insomnia Severity Index (ISI), and

Beck Scale for Suicide Ideation (BSSI). We also collected demographic information and lifetime history of suicide attempts (SA). Positive symptoms were evaluated using the PANSS positive factor. Multivariate logistic regression identified independent correlates of SI, and Process Model 1 was used for moderation analysis (BSSI as the outcome, PANSS positive factor as the predictor, and ISI as the moderator)

Results The prevalence of insomnia and SI was 13.5% and 9.7%, respectively. Insomnia, positive symptoms, mood symptoms, and lifetime SA were independently associated with SI. Moderation analysis revealed that insomnia amplified the association between positive symptoms and SI. Specifically, higher levels of insomnia significantly strengthened this relationship, while the association was negligible in patients with low levels of insomnia

Conclusion Both insomnia and positive symptoms are independently related to SI in patients with chronic schizophrenia. Insomnia moderates the relationship between positive symptoms and SI, highlighting the importance of regular suicide risk assessments in patients with pronounced positive symptoms and insomnia. Interventions targeting insomnia may effectively reduce SI, particularly in patients with severe positive symptoms

关键词: Schizophrenia, Suicidal ideation, Insomnia, Positive symptoms, Moderation analysis

Metabolic and Endocrine Correlates of Subclinical Hypothyroidism in Young Adults with First-Episode Drug-Naive Major Depressive Disorder

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Objective Major Depressive Disorder (MDD) and Subclinical Hypothyroidism (SCH) are both prevalent conditions with significant health implications.

This study aims to explore the clinical and biochemical characteristics of young, drug-naive patients experiencing their first episode of MDD and their association with SCH

Methods A cross-sectional study was conducted with 917 young Chinese patients (aged 18-35 years) diagnosed with first-episode drug-naive MDD. Participants were recruited from the psychiatric outpatient clinic of the First Hospital of Shanxi Medical University between 2015 and 2017. Clinical assessments included the Hamilton Depression Rating Scale (HAMD), Hamilton Anxiety Rating Scale (HAMA), and Positive and Negative Syndrome Scale (PANSS). Biochemical analyses measured thyroid function (TSH, fT3, fT4) and metabolic parameters (fasting blood glucose, total cholesterol, triglycerides, HDL cholesterol, LDL cholesterol). Binary logistic regression was used to identify predictors of SCH

Results The prevalence of SCH among the study population was 43%. Significant differences were found between patients with and without SCH in terms of suicide attempts (11.7% vs. 25.4%, $p < 0.001$), severe anxiety (5.3% vs. 14.9%, $p < 0.001$), and psychotic symptoms (4.1% vs. 12.8%, $p < 0.001$). SCH patients had higher HAMD (28.71 ± 2.67 vs. 31.25 ± 2.69 , $p < 0.001$) and HAMA (20.07 ± 3.05 vs. 21.13 ± 3.56 , $p < 0.001$) scores. Biochemically, SCH patients had higher TSH (6.6 ± 1.83 vs. 2.56 ± 1.12 , $p < 0.001$), lower fasting blood glucose (5.08 ± 0.54 vs. 5.58 ± 0.63 , $p < 0.001$), lower total cholesterol (4.55 ± 0.88 vs. 5.62 ± 1.06 , $p < 0.001$), and higher HDL cholesterol (1.32 ± 0.22 vs. 1.16 ± 0.30 , $p < 0.001$). Logistic regression identified lower levels of thyroid peroxidase antibodies (TPOAb), fasting blood glucose, body mass index (BMI), systolic blood pressure (SBP), and total cholesterol, along with higher HDL cholesterol as significant predictors of SCH

Conclusion This study highlights the need for comprehensive metabolic and endocrine evaluations in young MDD patients. Regular monitoring of thyroid function, glucose levels, BMI, blood pressure, and lipid profiles is crucial for early detection and management of SCH, potentially improving clinical outcomes and overall well-being in this vulnerable population. Further

research should focus on longitudinal studies to elucidate causal pathways and effective treatment strategies

关键词: Major Depressive Disorder; Subclinical Hypothyroidism; Thyroid Function; Lipid Profiles

Impact of Anxiety, Depression, and Personality Traits on Career Expectations Among Chinese Medical Students During The COVID-19 Pandemic: A Large-scale Cross-sectional Study

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Objective The COVID-19 pandemic has reshaped career expectations among Chinese medical students, historically inclined towards non-medical professions due to limited opportunities and challenging work environments

Methods This large-scale cross-sectional study, conducted between December 10 and December 27, 2022, aimed to investigate the influence of the COVID-19 pandemic on the career expectations of Chinese medical students. Data were collected through an online survey, utilizing the Wenjuan Xing platform. Demographic information, anxiety, depression, sleep quality, and various factors potentially affecting career choices were assessed. Statistical analyses, including chi-square tests and binary logistic regression, were employed to identify predictors of medical students' career aspirations

Results Out of 538 participants, nearly 70% expressed a desire to pursue a medical career after graduation, challenging prevailing beliefs about medical career preferences. Factors such as personality traits, living situations, academic pressure, depression, and anxiety were identified as significant predictors of medical students' career aspirations during the pandemic. Intriguingly, introverted students, those living with family members, students experiencing academic pressure, and those with symptoms of depression and anxiety were more inclined to pursue a medical career

Conclusion The pandemic appears to have impacted medical students' career preferences, with potential shifts towards the healthcare sector. Understanding these dynamics is crucial for guiding and supporting the evolving aspirations of future healthcare professionals

关键词: COVID-19, medical students, career expectations, personality traits, mental health

Prevalence and Correlates of Sleep Disturbance Among Frontline Nurses in China During and after The COVID-19 Pandemic

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Objective The COVID-19 pandemic has exerted unparalleled strain on healthcare systems globally, with frontline nurses encountering substantial difficulties in delivering care despite heightened susceptibility to infection and onerous workloads. Sleep disruption is a common problem among frontline nurses, but there is less understanding of how often it occurs and what factors are associated with it during and after the epidemic, especially in the Chinese context

Methods An extensive multicenter study was carried out among frontline nurses in China to investigate the frequency and factors associated with sleep disruption during and after the COVID-19 pandemic. Data on demographic characteristics, job-related stressors, and psychological distress were collected using online surveys. The assessment of sleep disturbance was conducted using the Pittsburgh Sleep Quality Index (PSQI), while anxiety levels were measured using the Zung Self-Rating Anxiety Scale (SAS), and depression levels were determined using the Self-Rating Depression Scale (SDS)

Results A total of 1,555 frontline nurses participated in the study, with 801 recruited during the COVID-19 pandemic and 754 recruited after the pandemic. The incidence of sleep disturbance was significantly higher among nurses during the pandemic compared to those recruited after the pandemic (89.9% vs.

62.5%, $P < 0.001$). Factors such as regular night shifts, elevated job-related stress, anxiety, and depression were linked to a higher likelihood of sleep disruption among frontline nurses. While the overall incidence of sleep disturbance decreased after the pandemic, certain risk factors persisted, including infrequent exercise and high financial stress

Conclusion The findings highlight the significant impact of the COVID-19 pandemic on the sleep quality and mental well-being of frontline nurses in China. Interventions targeting modifiable risk factors, such as promoting work-life balance and providing psychosocial support, are crucial for mitigating the adverse effects of the pandemic on nurses' mental health

关键词: Sleep disturbance, Frontline nurses, COVID-19 pandemic, Multicenter survey, Mental health

Gender Differences in The Association Between Childhood Trauma, Clinical Symptoms, and Cognitive Function in Chinese Patients with Chronic Schizophrenia

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Objective This study aims to explore gender differences in the relationship between childhood trauma, clinical symptoms, and cognitive function among Chinese patients with chronic schizophrenia

Methods A total of 601 patients with chronic schizophrenia were evaluated using the Childhood Trauma Questionnaire-Short Form (CTQ-SF), the Positive and Negative Syndrome Scale (PANSS), and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). Correlation and regression analyses were performed to explore the relationships between childhood trauma and clinical symptoms and cognitive function, considering gender differences

Results The overall prevalence of childhood

trauma showed no significant gender differences. In male patients, physical neglect predicted PANSS Positive symptoms ($\beta = 0.123$, $p = 0.013$). In female patients, emotional abuse predicted PANSS Positive symptoms ($\beta = 0.225$, $p = 0.002$) and Depressive symptoms ($\beta = 0.186$, $p = 0.013$); sexual abuse predicted language scores ($\beta = -0.194$, $p = 0.007$), and physical neglect predicted delayed memory scores ($\beta = -0.153$, $p = 0.037$)

Conclusion This study highlights distinct gender differences in the impact of childhood trauma on clinical symptoms and cognitive function in patients with chronic schizophrenia. In males, physical neglect was significantly associated with positive symptoms, while in females, emotional and sexual abuse were linked to specific cognitive impairments and depressive symptoms. These findings underscore the importance of considering gender-specific therapeutic interventions to address the unique needs of male and female schizophrenia patients with a history of childhood trauma

关键词: Schizophrenia; Childhood Trauma; Clinical Symptoms; Cognitive Function; Gender Difference

Prevalence and Clinical Correlates of Suicide Attempts in Young MDD Patients with Subclinical Hypothyroidism

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Objective Subclinical hypothyroidism (SCH) has been reported to be associated with depression; however, its role in suicide risk in young patients with major depressive disorder (MDD) remains unclear. The objective of this study was to explore suicide attempts in young MDD patients with SCH in a large sample of first episode drug naïve (FEDN) MDD patients, which has received little systemic investigation

Methods A total of 917 FEDN MDD outpatients aged 18-35 years were recruited. Socio-demographic, clinical data, and thyroid function parameters were collected. The Positive and Negative Syndrome Scale

(PANSS) positive subscale, Hamilton Anxiety Rating Scale (HAMA), and Hamilton Depression Rating Scale (HAMD) were used to measure psychotic, anxiety, and depressive symptoms, respectively. The clinical global impression of severity scale (CGI-S) was used to assess the overall mental status of patients

Results Young MDD patients had a high SCH prevalence (56.8%). In young MDD patients with SCH, suicide attempts were associated with HAMA score, TSH, CGI score, and TPOAb. The combination of HAMA score, TSH, and CGI score differentiated suicide attempters from non-suicide attempters (AUC was 0.792) in young MDD patients. HAMD, HAMA, illness duration, TSH, and TPOAb were independently associated with the number of suicide attempts

Conclusion

Our findings suggest an extremely high prevalence of co-morbid SCH in young MDD patients and a high incidence of suicide attempts in young FEDN MDD patients with comorbid SCH. Several clinical characteristics and thyroid function indicators are independently associated with suicide attempts in young MDD patients with SCH.

关键词: Major depressive disorder, subclinical hypothyroidism, young adults, suicide attempts, first episode

Comparative Study of Clinical Symptoms, Cognitive Functions, and BDNF Levels in First-Episode and Chronic Schizophrenia Among Chinese Patients

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Objective This study investigates clinical symptoms, cognitive functions, and BDNF levels among first-episode schizophrenia (FES), chronic schizophrenia (CS), and healthy controls (HC) in a Chinese population. The aim is to provide a comprehensive analysis

across different stages of schizophrenia

Methods A cross-sectional study design was employed, comparing PANSS and RBANS scores as well as BDNF levels among 142 FES patients, 150 CS patients, and 184 HC participants. Statistical analyses included ANOVA, correlation analysis, and regression models to examine group differences and predictors of cognitive functions

Results FES and CS patients had significantly higher PANSS and RBANS scores compared to HC. BDNF levels were lowest in FES, intermediate in CS, and highest in HC. In FES patients, age, education, and gender were significantly associated with cognitive functions, while negative symptoms significantly predicted worse immediate memory, language, attention, and total RBANS scores. Total PANSS score negatively predicted visuoconstructional ability and delayed memory. In CS patients, age, education, onset age, and smoking were significantly associated with cognitive functions. Negative symptoms negatively predicted cognitive outcomes, and total PANSS score positively predicted language but negatively predicted total RBANS score. BDNF levels significantly predicted attention in CS patients

Conclusion Our findings highlight distinct clinical and cognitive profiles and the progression of schizophrenia from FES to CS. The differential impact of BDNF on cognitive functions, particularly attention, underscores the importance of early intervention and continuous treatment to mitigate cognitive decline and improve outcomes

关键词: Schizophrenia; Clinical Symptoms; Cognitive Functions; PANSS; RBANS; BDNF

Factors Influencing The Age of First Hospitalization in Patients with Chronic Schizophrenia: Role of Clinical Features and Blood Parameters

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Objective This study aims to identify the factors influencing the age of first hospitalization in patients with chronic schizophrenia, focusing on clinical features and blood parameters

Methods A total of 1271 patients diagnosed with chronic schizophrenia were recruited from 17 psychiatric hospitals across China. Demographic and clinical data, including age of first hospitalization, were collected. The study also included assessments of psychiatric symptoms, duration of untreated psychosis (DUP), and various blood parameters. Statistical analyses were conducted to examine the relationships between these factors and the age of first hospitalization

Results The average age of first hospitalization was 28.07 ± 9.993 years. Single patients and those with a family history of mental illness were hospitalized at a younger age. Patients with suicidal ideation or behavior also had an earlier hospitalization age compared to those without such history. Regression analysis revealed that marital status (single), family history of mental illness, and suicide ideation or behavior were significant risk factors for earlier hospitalization age. Conversely, DUP, total protein (TP), and low-density lipoprotein (LDL) levels were positively correlated with the age of first hospitalization, while antipsychotic medication dosage and albumin (ALB) levels were negatively correlated

Conclusion The study identifies significant demographic, clinical, and biochemical factors associated with the age of first hospitalization in chronic schizophrenia patients in China. These findings underscore the importance of early intervention and targeted support for high-risk groups to improve treatment outcomes

关键词: Chronic Schizophrenia, Age of First Hospitalization, Clinical Features, Blood Parameters, Duration of Untreated Psychosis

Gender Differences and Risk Factors for Psychotic Symptoms in First-episode Drug-naïve Major Depressive Disorder Patients with Suicide Attempts: A Large-scale and Cross-sectional Study

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Objective This cross-sectional study aimed to investigate the prevalence and gender differences of psychotic symptoms in Major Depressive Disorder (MDD) patients with suicide attempts, as well as the risk factors that contribute to these symptoms

Methods This study enrolled 1718 first-episode and drug-naïve patients. Patients were recruited from the Department of Psychiatry at the First Clinical Medical College of Shanxi Medical University. Demographic and clinical data were collected, and various rating scales were used to assess depression, anxiety, and psychotic symptoms. Fasting serum samples were collected to measure thyroid hormones, fasting blood glucose levels, and lipid profiles

Results Of the MDD patients, 20.1% had a history of suicide attempts. Compared to patients without suicide attempts, those with suicide attempts had a higher prevalence of psychotic symptoms in MDD. Significant gender differences were observed in psychotic symptoms, age of onset, education, marital status, FT3 levels, and systolic blood pressure among MDD patients. In the female MDD subgroup with suicide attempts, risk factors for psychotic symptoms included HAMD score, HAMA score, and TSH

Conclusion We found no gender differences in the prevalence of psychotic symptoms in MDD with suicide attempts. Anxiety and depression severity and high TSH levels were identified as risk factors for psychotic symptoms in female MDD patients with suicide attempts

关键词: Major Depressive Disorder, psychotic symptoms, suicide attempts, risk factors, gender differences

The Relationship between Serum Lipid Levels and Self-Harm Behavior in Adolescents with Mood Disorders

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Objective Increasing evidence suggests that serum lipid levels are associated with self-harm behavior, particularly in adolescents with mood disorders. This study aims to identify serum lipid levels in adolescents with mood disorders who exhibit self-harm behavior and explore whether these levels influence susceptibility to self-harm behavior

Methods The study included 544 adolescents aged 12-18 years diagnosed with mood disorders based on ICD-10 criteria and currently experiencing a major depressive episode. Self-harm behavior was identified using medical records, physical examinations, and reports provided by patients or their guardians. Participants were categorized into two groups: the Self-Harm group (SH, n=401) and the Non-Self-Harm group (NSH, n=143). The Hamilton Depression Scale (HAMD) and Childhood Trauma Questionnaire (CTQ) were administered. Levels of total cholesterol (TC), triglycerides (TG), high-density lipoprotein cholesterol (HDL), and small dense low-density lipoprotein cholesterol (sdLDL) were measured. Statistical analyses included t-tests and binary logistic regression

Results The SH group exhibited higher HAMD and CTQ scores, as well as elevated HDL levels, but lower TG and sdLDL levels compared to the NSH group (all $p < 0.05$). Regression analysis further revealed that sdLDL levels were significant factors associated with self-harm behavior among adolescents with mood disorders

Conclusion The study demonstrates that changes in serum lipid levels, particularly in sdLDL, are significant risk factors for self-harm behavior in adolescents with mood disorders. These results provide a potential basis for identifying objective biomarkers to guide clinical prevention and treatment strategies for self-harm behavior

关键词: Lipids, Self-harm behavior, Adolescents, Mood disorders, Biomarkers

艾司西酞普兰与文拉法辛治疗焦虑症的临床分析

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目的 焦虑症属于神经症疾病，主要特征为焦虑情绪体验，可分为急性焦虑与慢性焦虑，患者处于紧张、恐惧、害怕的内心体验中，甚至可出现濒死感，若得不到有效诊治，患者反复就医，极其影响正常生活。

目前焦虑症的治疗包括药物治疗与心理治疗两个方面，以药物治疗为主，心理治疗为辅，常见的药物治疗种类包括安定类药物、抗抑郁药物、5-羟色胺1A(5-HT-1A)受体激动剂等。艾司西酞普兰、文拉法辛均属于抗抑郁药物，在焦虑症临床治疗中应用广泛，但二者联合治疗焦虑症的应用研究报道较少。基于此，本研究旨在探讨艾司西酞普兰与文拉法辛在焦虑症患者中的应用效果。

方法 回顾性分析2017年3月-2019年6月期间于我院诊治的98例焦虑症患者的临床资料，将其以治疗方案不同分为艾司西酞普兰组(33例，常规治疗+艾司西酞普兰治疗)，文拉法辛组(33例，常规治疗+文拉法辛治疗)，联合组(32例，常规治疗+艾司西酞普兰+文拉法辛治疗)，比较三组汉密尔顿焦虑量表(HAMA)与不良反应情况发生情况。

结果 治疗后，三组HAMA评分均下降，且联合组HAMA评分低于艾司西酞普兰组、文拉法辛组，差异有统计学意义($P < 0.05$)；艾司西酞普兰组不良反应发生率为9.09%，文拉法辛组不良反应发生率为9.09%，联合组不良反应发生率为15.63%，组间比较，差异无统计学意义($P > 0.05$)。

结论 艾司西酞普兰、文拉法辛均可缓解焦虑症患者临床症状，但两种药物联合用于焦虑症治疗可起到更好的治疗效果，且用药安全性相对较高，利于患者接受。

关键词：焦虑症；艾司西酞普兰；文拉法辛

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目的 探讨常见精神障碍患者的尿酸(Uric acid, UA)水平的差异。

方法 回顾性纳入2011年6月至2022年11月在中南大学湘雅二医院住院的12到60岁精神障碍患者14485例(包括抑郁障碍3928例、双相障碍3760例、焦虑障碍1004例、精神分裂症5469例、强迫障碍324例)，使用非参数检验分析5组人群的UA水平，使用K-W检验方法，按照男女分组分别比较5组人群的血清UA水平，按照青少年(12-17岁)与成年(18-60岁)进行年龄分层分别比较5组人群的血清UA水平，分析血清UA水平与精神障碍的关系。

结果 5组精神障碍人群的血清UA平均值由高到低为：精神分裂症(342.1 ± 94.9)、双相障碍(339.0 ± 90.2)、强迫障碍(324.6 ± 90.3)、抑郁障碍(309.4 ± 82.8)、焦虑障碍UA水平最低(285.9 ± 75.7)。非参数检验显示，精神分裂症与双相障碍的UA水平没有显著性差异，其余各组之间UA水平的差异均有统计学意义。男性尿酸水平(377.5 ± 87.5)显著高于女性(292.3 ± 75.3)，各疾病组中男性尿酸水平均显著高于女性。按性别分组进行K-W检验显示，女性患者中，强迫障碍与焦虑障碍的UA水平没有显著性差异，男性患者中，强迫障碍与抑郁患者、焦虑患者的UA水平没有显著性差异，其余各组之间UA水平的差异均有统计学意义。青少年人群UA水平(338.7 ± 85.9)较成年人群更高(323.9 ± 92.6)。按年龄分组进行K-W检验显示，青少年人群中，抑郁障碍和双相障碍、抑郁障碍和精神分裂症之间的UA水平有显著性差异，其余各组间没有差异；而在成年人群中，强迫障碍、双相障碍、精神分裂症之间的UA水平没有显著性差异，其余各组均有显著性差异。

结论 不同精神障碍UA水平存在差异，重性精神障碍尿酸水平更高，性别、年龄可能是影响因素。

关键词：尿酸,精神障碍

尿酸水平与精神障碍的相关性回顾性研究

U-shaped Relationship between Triglyceride

Glucose-body Mass Index and Suicide Attempts in Chinese Patients with Untreated First-episode Major Depressive Disorder

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Objective Triglyceride glucose-body mass index (TyG-BMI) has been suggested as a substitute measure for assessing insulin resistance (IR). Nevertheless, the relationship between TyG-BMI and suicide attempts (SA) remains ambiguous. This study aimed to examine the association between TyG-BMI and SA in patients with first-episode drug-naïve (FEDN) major depressive disorder (MDD) of Shanxi province

Methods Between September 2016 to December 2018, a cross-sectional study was conducted at the First Hospital of Shanxi Medical University in Taiyuan, Shanxi Province, China, enrolling 1,718 individuals with FEDN MDD who had an average age of 34.9 ± 12.4 years. We employed a multivariable logistic regression analysis to assess the relationship between TyG-BMI and the risk of SA. We investigated threshold effects using a two-piecewise linear regression model

Results After accounting for confounders, multivariate binary logistic regression analysis indicated that there was no significant relationship between TyG-BMI and SA (all p value >0.05). However, smoothing plots demonstrated a nonlinear association between TyG-BMI and SA, with a TyG-BMI inflection point observed at 210. On either side of the inflection point, the effect sizes were 0.985 (95% CI: 0.972-0.999, $P=0.031$) and 1.012 (95% CI: 1.003 to 1.047, $P=0.001$), along with their corresponding confidence intervals

Conclusions A U-shaped association between TyG-BMI and SA in FEDN MDD patients was found, with the lowest risk of SA at a TyG-BMI of 210, indicating that both the lower and higher TyG-BMI levels may lead to an increased risk of SA

关键词: Triglyceride glucose-body mass index, Suicide attempts, Insulin resistance, Major depressive disorder

童年创伤介导的尿酸代谢异常与青少年心境障碍患者自我伤害性为的关联性研究

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目的 青少年心境障碍患者是自我伤害行为的高风险人群,目前缺乏客观生物学标记的引导仍是临床防治困难的关键因素之一,本研究旨在探究嘌呤能代谢系统功能紊乱是否增加青少年心境障碍患者自我伤害行为的易感性,以及其与环境因素的关联。

方法 本研究共招募了符合 ICD-10 心境障碍诊断标准的 544 名青少年心境障碍患者,根据病史及患者自我报告明确既往有无自我伤害史,进而分成自我伤害组(SH 组, $N=401$)、非自我伤害组(NSH 组, $N=143$)。1、明确两组间社会人口学特征(性别、年龄、受教育年限等)、汉密尔顿抑郁量表(HAMD)、童年期创伤量表(CTQ)、贝克自杀意念及强度量表(BSS)以及嘌呤代谢终产物(尿酸)是否存在显著差异;2、利用逐步回归分析,以单因素分析中差异指标为自变量,以有无自我伤害行为为因变量,明确尿酸是否为自我伤害行为的独立风险因素;3、在自我伤害组内分析尿酸与自杀意念的内在关联。

结果 1、相对于 NSH 组,SH 组患者血清尿酸水平显著降低($t=-6.429, P<0.001$);2、逐步回归分析后向选择法纳入了四个显著变量,其中尿酸($\beta=0.456, P<0.001$)、CTQ 情感忽视因子($\beta=0.018, P<0.001$);3、相关性分析示 CTQ 总分与尿酸间存在显著相关性($R=-0.145, P=0.036$),尿酸与自我伤害风险间存在显著相关性($R=-0.137, P=0.009$)。

结论 童年创伤性经历可能导致青少年心境障碍患者嘌呤能代谢系统功能紊乱,进而增加了自我伤害行为的易感性。进一步探索其病理机制,有助于为临床防治提供客观生物学标记。

关键词: 童年创伤,尿酸,自我伤害行为

基于线性回归分析的青少年情绪对同伴交往质量的影响:来自一项中国江苏省大型队列研究

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目的 青少年时期是个体出现心理问题的高风险期,不良的心理健康状态可能会损害个体的社会功能,同伴关系作为青少年时期最主要的人际关系,对青少年的社会适应和人格发展起到了至关重要的作用。本研究旨在解析青少年情绪问题和同伴交往质量的关系,为及时进行青少年心理干预、改善其社会功能提供理论依据。

方法 本研究数据来自一项大型中国青少年“家校一体”心理健康队列(School-based Evaluation Advancing Response for Child Health, SEARCH),该队列面向中国江苏省的青少年及其照料者和教师,使用数字平台综合评估心理健康状况。在筛选有效问卷后,最终28个班级共1154名12-16岁的初中年级的青少年(Mage=13.73,SD=0.93)被纳入研究,采用抑郁症状长处与困难问卷(Strengths and Difficulties Questionnaire, SDQ)的同伴交往因子评估学生的同伴交往质量,抑郁-焦虑-压力量表(Depression Anxiety and Stress Scale, DASS-21)的抑郁分量表评估学生抑郁情绪问题,以SDQ的同伴交往问题因子评分作为因变量,DASS-21的抑郁分量表评分作为自变量,建立线性回归模型。

结果 线性回归模型分析显示:青少年SDQ同伴交往问题因子得分与DASS-21抑郁分量表得分呈正相关,抑郁症状可以显著负向预测青少年同伴交往质量。这表明抑郁症状对青少年同伴交往质量有显著的负向影响,即抑郁症状越严重,青少年与同伴的交往问题越多,交往质量越低。

结论 抑郁症状是青少年同伴交往恶化的危险因素,青少年抑郁症状越严重,其同伴交往质量越差。这一发现提示我们,在关注青少年心理健康时,不仅需要关注其抑郁症状本身,还应重视其抑郁症状对社交能力和人际关系的负面影响。早期识别和干预青少年的抑郁症状,对于改善其同伴交往质量具有重要意义。

关键词: 青少年,同伴交往,抑郁,线性回归模型

一例特定惊恐障碍诊治的思考

目的 探讨一例特定惊恐障碍诊治的思考

方法和结果 患者董X,男,25岁,患者于3年前在外打工时,一次开早会时突然晕倒、急送综合医院救治,经一系列检查考虑为“低血糖”经治疗后恢复正常,以后每次想到此事便感到恐惧害怕,害怕站的时间长了再晕倒,不敢长时间的站立,有时站的时间长了(开会、工作时),不自主的产生一种晕倒的感觉,表现身体不自主前倾,浑身晃,心慌等植物神经功能紊乱表现,曾多次打120急救电话送综合医院诊治,上述表现大约20分钟左右都能自行缓解。3年来,患者因上述不适放弃工作,不敢外出,整天在家里(自己房间)呆着,看手机、睡觉,很少与家人交流,亦不与家人共处,整天无所事事,睡觉、玩手机,家人多次与其交流均沟通不了,有时自己外出游玩均正常,后经介绍来我院就诊,收治入院。自发病以来,无情绪低落与情绪高涨交替发作。患者入院前饮食差,睡眠一般,生活能自理。既往史、个人史:无特殊。病前性格:内向、胆小、不善交流。家族史:阴性。体格检查:未见明显异常。辅助检查:血常规、心电图、头颅CT、肝功、肾功、血脂、血糖、电解质、心肌酶谱均未见明显异常。入院诊断为“特定恐惧障碍”给予小剂量抗焦虑药坦度螺酮及帕罗西汀对症治疗,同时给予认知行为治疗及健康教育指导,让患者明白疾病的性质,增进患者在治疗中的合作,在焦虑发作时对焦虑体验有正确的认知,避免进一步加重焦虑。鼓励患者进行适当的体育锻炼,并坚持正常生活工作。

结论 总体而言,综合医院心理障碍患者总体识别率低,尤其当焦虑和抑郁障碍与躯体疾病并存时,其识别和治疗率更低。综合医院心理障碍总体识别率和治疗率如此低,原因之一是绝大多数焦虑或抑郁障碍患者主诉是躯体症状,而非情绪问题,给各科医师识别造成困难,尤其当躯体疾病和焦虑、抑郁障碍共病时更为突出。例如当抑郁症状与糖尿病症状互相重叠,或抑郁症状和糖尿病症状相似时,患者和临床医师常忽略了可能并发抑郁,简单将病情变化归结于糖尿病,延误了抑郁识别。其他原因还有患者羞耻感或通科医师对精神科诊疗相关知识和技能匮乏,对心理疾病重视不足和诊疗时间不足。由于焦虑障碍患者常表现多种情绪相关躯体症状,反复就诊于临床各科,成为各级医疗保健机构医疗

资源高使用者。识别临床症状是诊治的第一步综合医院临床各科常见到的焦虑及抑郁多数为躯体疾病伴发，可能是躯体疾病症状的一部分，或是由治疗躯体疾病的药物导致；部分患者可能并无躯体疾病，而是以躯体症状为主诉的焦虑、抑郁。为此，加大综合医院对精神科常见病、多发病的识别及诊治是必要和必须的。

关键词：探讨 特定惊恐障碍诊治 思考

General Adherence Status and Associated Factors in General Hospital Inpatients: A Cross-sectional Study

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Objective Medical adherence is important for medical quality and medical safety. There are still few investigations on the status quo and influencing factors of general adherence among inpatients in general hospitals

Methods This was a cross-sectional study. From July 2022 to November 2023, inpatients were recruited from 9 wards of Peking Union Medical College Hospital, China. Sociodemographic characteristics and some related psychological features were collected. General adherence was assessed by the General Adherence Scale (GAS)

Results A total of 746 patients were included. The average GAS score was 86.01 ± 18.91 . The GAS score of the nonsurgical wards ($n = 412$, $GAS = 82.72 \pm 22.27$) was significantly lower than that of the surgical wards ($n = 334$, $GAS = 90.08 \pm 18.72$) ($t = -2.22$, $p = 0.027 < 0.05$). The GAS score was negatively correlated with age ($r = -0.075$, $p = 0.040 < 0.05$), positively correlated with the score of the Hospitalized Patients' Expectations for Treatment Scale-Patient version ($r = 0.300$, $p < 0.01$) and negatively correlated with the

Union Physio-Psycho-Social Assessment Questionnaire (UPPSAQ-70) -pain subscale score ($r = -0.390$, $p = 0.011 < 0.05$)

Conclusion The adherence of hospitalized patients is generally high. Adherence in nonsurgical wards was lower than that in surgical wards. For older and less educated patients, more attention needs to be given to adherence. A reasonable setting of treatment expectations and positive improvement in patients' pain symptoms can improve adherence

关键词：patient adherence, medical recommendations, patients' expectations

中国成年首发未服药重度抑郁障碍患者首次自杀未遂风险因素研究

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目的 本研究聚焦于中国成年首发未服药重度抑郁障碍（FEDN）患者，旨在识别这些患者在过去14天内发生首次自杀未遂（FSA）的潜在社会-人口、生理及心理风险因素

方法 通过一项横断面调查，我们纳入1718名FEDN成年患者，系统地评估抑郁、焦虑症状以及自杀企图，并收集生物样本进行了检测，采用逻辑回归分析，深入探讨影响FEDN MDD患者在过去14天内FSA发生的风险因素。

结果 在参与调查的FEDN MDD患者中，有12.11%（即208人）报告了近期（过去14天内）的首次自杀未遂经历。逻辑回归分析的结果显示，焦虑症状的严重程度（ $OR = 1.37$, $95\%CI: 1.275-1.477$, $p < 0.001$ ）、总胆固醇（TC）水平的升高（ $OR = 1.42$, $95\%CI: 1.129-1.774$, $p = 0.003$ ）以及促甲状腺激素（TSH）水平的异常上升（ $OR = 1.13$, $95\%CI: 1.030-1.247$, $p = 0.01$ ）均为FSA发生的重要风险因素。回归模型在预测FSA方面展现出了良好的判别能力，曲线下面积（AUC）高达0.82。

结论 本研究发现, 对于 FEDN MDD 患者而言, 严重的焦虑症状、高水平的总胆固醇 (TC) 以及异常升高的促甲状腺激素 (TSH) 水平可能增加他们在短期内发生首次自杀未遂的风险。这些发现不仅为我们提供了预防自杀行为的重要线索, 也为临床实践中早期干预措施的制定提供了科学依据

关键词: 首次自杀未遂, 首次发病, 未服药重度抑郁障碍

Prevalence and Clinical Correlates in Older Major Depressive Disorder Patients with Comorbid Abnormal Lipid Metabolism

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Objective Older Major depressive disorder (MDD) patients have complex clinical symptoms and high ALM rates. This study aimed to compare clinical differences between those with and without ALM in a large sample of older first-episode drug naïve (FEDN) patients

Methods We recruited 266 older MDD patients. Socio-demographic variables, clinical data, and lipid parameters were obtained. The Hamilton Depression Rating Scale, the Hamilton Anxiety Rating Scale, and the positive symptom subscale of the Positive and Negative Syndrome Scale were conducted to evaluate patients' depressive, anxiety and psychotic symptoms, respectively

Results Compared with the NALM group, the ALM group had a higher duration of illness, the clinical global impression of severity scale (CGI-S), Hamilton Rating Scale for Depression (HAMD), thyroid stimulating hormone (TSH) and glucose level. Furthermore, logistic regression analysis indicated that higher CGI-S scores and longer duration of illness were linked with ALM in older FEDN MDD patients

Conclusion In this study, we found the prevalence of comorbid ALM was 86.1 % in older major depressive disorder (MDD) patients. And we also showed the higher duration of illness, HAMD and CGI-S score, and significant differences in blood glucose and TSH levels in the ALM group compared with the NALM group, indicating the specificity of clinical correlates and metabolic markers for ALM in older patients with FEDN MDD. The importance of regular lipid assessment in older MDD patients needs to be taken into account

关键词: Prevalence, older, major depressive disorder, abnormal lipid metabolism

Development and Validation of A Risk Prediction Model for Moderate-to-severe Anxiety in First-episode and Drug Naïve Patients with Major Depressive Disorder

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Objective Moderate-to-severe anxiety symptoms are severe and common in patients with major depressive disorder (MDD) and have a significant impact on MDD patients and their families. The main objective of this study was to develop a risk prediction model for moderate-to-severe anxiety in MDD patients to make the detection of moderate-to-severe anxiety more accurate and effective

Methods We conducted a cross-sectional survey and tested biochemical indicators in 1718 first-episode and drug naïve (FEDN) patients with MDD. Using machine learning, we developed a risk prediction model for moderate-to-severe anxiety in these FEDN patients with MDD

Results Four predictors were identified from a total of 21 variables studied by LASSO regression anal-

ysis, namely psychotic symptoms, suicide attempts, thyroid stimulating hormone (TSH) and HAMD total score. The model built from the four predictors showed good predictive power, with an area under the ROC of 0.903 for the training set and 0.896 for the validation set. The DCA curve indicated that the nomogram could be applied to clinical practice if the risk thresholds were between 13 % and 40%. In the external validation, the risk threshold was found to be between 14 % and 40 %

Conclusion The inclusion of psychotic symptoms, suicide attempts, TSH and HAMD in the risk nomogram may improve its utility in identifying patients with MDD at risk of moderate-to-severe anxiety. It may be helpful in clinical decision-making or for conferring with patients, especially in risk-based interventions

关键词: risk model, moderate-to-severe anxiety, major depressive disorder, machine learning

Resilience, Rumination, and Emotional Intelligence: Pathways To Professional Efficacy in Pharmacy Practice

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Objective Within a high-pressure pharmaceutical practice environment, understanding the factors that enhance professional efficacy is essential for optimizing job performance and satisfaction. This study investigates the relationship between psychological resilience

and professional efficacy among pharmacists, with rumination and emotional intelligence as potential mediating factors

Methods We employed a cross-sectional design and structural equation modeling to analyze data from a sample of 576 pharmacists conducted in the Punjab province between September 2023 and January 2024. Psychological resilience was assessed using the six-item Brief Resilience Scale (BRS), the ten-item Ruminative Response Scale (RRS) measured rumination, emotional intelligence was evaluated using the ten-item Emotional Intelligence Scale (EIS), and professional efficacy was measured by the ten-item General Self-Efficacy Scale (GSS)

Results Our results demonstrated that psychological resilience significantly enhances professional efficacy both directly ($\beta = 0.396, p < 0.001$) and indirectly through reducing rumination ($\beta = -0.341, p < 0.001$) and increasing emotional intelligence ($\beta = 0.452, p < 0.001$). Additionally, a smaller chain mediation effect was observed, indicating that the combined influence of rumination and emotional intelligence contributes positively to professional efficacy ($\beta = 0.028, p < 0.05$)

Conclusion These findings underscore the importance of fostering psychological resilience and emotional intelligence while addressing negative cognitive patterns like rumination. The study's results have important implications and relevant evidence for developing focused interventions to bolster job performance and enhance well-being through supportive organization policies

关键词: Professional efficacy, Psychological resilience, Rumination, Emotional intelligence, Pharmacists, Pakistan

Differences in The Prevalence and Clinical Correlates between Early-onset and Late-onset Major Depressive Disorder Patients with Comorbid Abnormal Lipid Metabolism

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Objective There is growing evidence that patients with major depressive disorder (MDD) are more likely to suffer from abnormal lipid metabolism (ALM); however, few studies have compared ALM in early-onset and late-onset MDD patients. The purpose of this study was to compare the differences in the prevalence and correlates of ALM between early-onset and late-onset patients with first-episode and drug-naive (FEDN) MDD patients

Methods A total of 1718 FEDN MDD outpatients were recruited for this study. We collected basic clinical information, as well as serum total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), triacylglycerols and glucose (TG). We used the 17-item Hamilton Rating Scale for Depression (HAMD-17), The Hamilton Anxiety Rating Scale (HAMA), Positive and Negative Syndrome Scale (PANSS) positive subscale, and Clinical Global Impression- Severity Scale (CGI-S) to assess their depressive, anxiety, and psychotic symptoms and clinical severity, respectively

Results The prevalence of ALM in the late-onset group was significantly higher than that in the early-onset group. In both the early-onset and late-onset groups, patients with ALM had higher scores on HAMD, HAMA, PANSS positive subscale and CGI scores, higher thyroid stimulating hormone (TSH) levels, blood glucose concentration, systolic blood pressure (DBP), diastolic blood pressure (DBP), and a higher rate of psychotic symptoms compared with those without ALM (all $P < 0.05$). Only in patients with late-onset MDD, patients with ALM had higher rates of suicide attempts and anxiety, greater age, age at onset and duration of illness, as well as higher BMI and anti-thyroglobulin (A-TG) levels (all $P < 0.05$). Further logistic regression analysis showed that HAMD was significantly associated with ALM in early-onset MDD patients ($P < 0.05$), whereas HAMD, CGI, TSH, blood glucose concentration and anxiety were significantly associated with

ALM in late-onset MDD patients ($P < 0.05$)

Conclusion Our results suggest that there are significant differences in the prevalence and clinical factors of comorbid ALM between early-onset and late-onset FEDN MDD patients

关键词: Major depressive disorder, Abnormal lipid metabolism, Age onset, Outpatients

Abnormal Lipid Metabolism in Chinese Han Patients with Schizophrenia: Relationship with Cognitive, Demographic and Clinical Variables

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Objective The diverse effects of abnormal lipid metabolism (ALM) on human health have prompted researchers to investigate its impact on neuropsychiatric disorders, particularly on schizophrenia. The aim of this study was to investigate the incidence, clinical characteristics and cognitive function of ALM in Chinese patients with chronic schizophrenia

Methods We obtained data on ALM from 763 schizophrenia inpatients. All patients were assessed using the Positive and Negative Syndrome Scale (PANSS), the Mini-Mental State Examination (MMSE), the Insomnia Severity Index (ISI), and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)

Results Of all the patients, 460(60.3%) had ALM. Patients with ALM were heavier, had more women and higher rate of divorce or widowed compared to patients without ALM (all $p < 0.05$). Further, patients with ALM had higher RBANS immediate memory and total scores compared to patients without ALM ($p < 0.05$). Logistics regression analysis confirmed that female, higher weight and divorce or widowed status were independently associated with ALM in patients

with schizophrenia

Conclusion In summary, the results of this study showed that the rate of ALM among Chinese Han schizophrenia inpatients was 60.3%, which was significantly higher than that of the general population. Schizophrenia inpatients with ALM were more likely to be female, divorced or widowed, have a higher bodyweight, and perform better in RBANS. However, given the methodological limitations of this study, our findings should be considered preliminary and require further investigation. Future large-scale longitudinal studies are necessary to elucidate the relationship between lipid levels and schizophrenia severity

关键词: schizophrenia, prevalence, discrepancies, ALM, cognition

Graves 病与亚急性甲状腺炎所致甲状腺毒症患者焦虑状态的临床观察

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目的 在内科疾病中, 甲状腺疾病与精神活动的关系比较密切。甲状腺激素在神经系统的正常发育中起到至关重要的作用, 大脑皮层中的甲状腺激素生理水平控制一个很严格的范围内, 即使甲状腺激素发生轻微改变也可能对情绪产生影响。本文以甲状腺毒症患者为研究对象, 选以弥漫性毒性甲状腺肿 (Graves disease, GD) 为代表的甲亢性甲状腺毒症和亚急性甲状腺炎 (Subacute thyroiditis, SAT) 为代表的破坏性甲状腺毒症, 比较两种病因所致甲状腺毒症患者焦虑状态的差异, 初步探讨甲状腺毒症患者焦虑状态与甲状腺激素水平的相关性。

方法 从2021年3月至2022年12月期间初次就诊于辽宁中医药大学附属医院内分泌科门诊的未经治疗的甲状腺毒症患者中选取符合纳入及排除标准的甲状腺毒症患者, 根据甲状腺毒症的病因分为GD组和SAT组。采集患者的信息包括性别、年龄, 以及患者填写的ISI失眠严重指数量表、SAS焦虑自评量表; 理化指标包括血清FT3、FT4、TSH、TRAb、TPOAb和TGAb。采用SPSS 22.0软件进行统计学分析, $P < 0.05$ 认为有统计学意义。

结果 (1) 两组患者在年龄、性别、睡眠质量评分上比较无统计学差异, 两种疾病均以女性患者居多 ($P > 0.05$)。GD组患者FT3、FT4、FT3/FT4、TRAb、TPOAb、TGAb均大于SAT组患者, 而TSH低于SAT组 ($P < 0.05$)。(2)GD组焦虑评分大于SAT组 ($P < 0.05$)。GD组患者焦虑评分与睡眠质量评分、FT3呈正相关 ($P < 0.05$)。SAT组患者焦虑评分与睡眠质量评分呈正相关, 与年龄呈负相关 ($P < 0.05$)。

结论 1.GD患者的焦虑情绪更严重且受FT3水平的影响, SAT患者的焦虑情绪与甲状腺激素水平无关, 与年龄相关。2.两种病因甲状腺毒症患者的焦虑情绪均与睡眠质量有关。

关键词: Graves病; 甲状腺激素; 焦虑状态;

Incidence and Associated Factors of Psychotic Symptoms Associated in Older Major Depressive Disorder with Subclinical Hypothyroidism

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Objective In patients with major depressive disorder (MDD), thyroid dysfunction is highly associated with depression severity and psychotic symptoms. However, the prevalence and risk factors of psychotic symptoms in older MDD patients with subclinical hypothyroidism (SCH) are rarely reported in China

Methods We recruited 172 older patients with first-episode and untreated MDD (aged ≥ 50 years). The Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), Positive and Negative Syndrome Scale (PANSS) positive subscale, and Global Impression of Severity Scale (CGI-S) were used to assess depression, anxiety, psychotic symptoms, and disease severity, respectively

Results The prevalence of psychotic symptoms was 18.6% (32/172) in older MDD patients with SCH. Compared to the non-PD patients, PD patients had higher HAMD scores, HAMA scores, PANSS positive

subscale scores, CGI scores, higher levels of TSH, systolic and diastolic blood pressure, TC, TG, and Fasting blood glucose, and were more likely to attempt suicide (all $P < 0.05$). TSH and HAMA scores were risk factors for psychotic symptoms in older MDD patients with SCH

Conclusion Our findings suggest that psychotic symptoms is common in older MDD patients with SCH. Higher TSH levels may indicate more psychotic symptoms in older MDD patients with SCH. Screening of serum thyroid hormones is crucial in older MDD patients

关键词: Major depressive disorder; Older adult; Subclinical hypothyroidism; Psychotic symptoms; Risk factor; First-episode

强迫症患者一级亲属的心理健康状况调查

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目的 了解强迫症患者一级亲属的心理健康状况。

方法 按照 DSM-5 的诊断标准, 收集 2023 年 1 月至 2023 年 6 月于郑州大学第一附属医院精神科就诊的强迫症患者的父亲或者母亲 24 例, 采用单样本 t 检验检测强迫症患者一级亲属的症状自评量表 SCL-90 各维度与中国常模的差异。

结果 共收集强迫症患者父亲 11 例, 母亲 13 例, 平均年龄: 49.71 ± 5.94 岁, 平均受教育程度: 12.29 ± 2.10 年; SCL-90 各项维度分析比较: 强迫症患者一级亲属组在强迫 (2.23 ± 1.02 , 常模 1.62 ± 0.58 , $t = 2.95$, $P = 0.007$)、抑郁 (2.05 ± 0.64 , 常模 1.50 ± 0.59 , $t = 4.22$, $P = 0.001$) 和焦虑 (1.83 ± 0.53 , 常模 1.39 ± 0.43 , $t = 4.11$, $P = 0.001$) 维度方面高于中国常模组。在躯体化 (1.50 ± 3.77 , 常模 1.37 ± 0.48 , $t = 1.63$, $P = 0.118$)、人际关系敏感 (1.58 ± 0.40 , 常模 1.65 ± 0.61 , $t = -0.88$, $P = 0.388$)、敌对 (1.46 ± 0.40 , 常模 1.46 ± 0.55 , $t = -0.02$, $P = 0.988$)、恐惧 (1.29 ± 0.25 , 常模 1.23 ± 0.41 , $t = 1.19$, $P = 0.247$)、偏执 (1.47 ± 0.45 , 常模 1.43 ± 0.57 , $t = 0.47$, $P = 0.477$) 和精神病性 (1.39 ± 0.28 , 常模 1.29 ± 0.42 , $t = 1.79$, $P = 0.086$) 维度方面的差异无统计学意义。

结论 强迫症患者的一级亲属也存在一定的心理健康问题, 需要引起临床重视。

关键词: 强迫症; 一级亲属; SCL-90

Subclinical Hypothyroidism and Risk Factors in Young and Middle-aged Adults with Major Depressive Disorder: A Large-scale Cross-sectional Study

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Objective Major depressive disorder (MDD) is a prevalent psychiatric disorder with concomitant thyroid dysfunction, but the link between them is unclear. The aim of this study was to elucidate the prevalence and correlates of subclinical hypothyroidism (SCH) in different age subgroups of first-episode and drug-naïve (FEDN) MDD patients

Methods 1717 FEDN MDD outpatients were divided into a younger group (≤ 45 years) and a middle-aged group (> 45 years). Serum thyroid function and lipid level parameters were measured. The Hamilton Depression Scale (HAMD) was used to assess patients' depressive symptoms

Results The prevalence of SCH was higher in middle-aged MDD patients (66.9%). Middle-aged patients had a longer duration of illness, a later age of onset, a higher proportion of female patients, and a lower level of education. Further logistic regression indicated that serum TC and HDL-C levels as well as overweight and obesity were significantly associated with SCH in both groups; however, LDL-C was an independent risk factor associated with SCH in the middle-aged group

Conclusion Our results suggest that the prevalence of SCH is higher in middle-aged MDD patients than in younger patients, and that LDL-C is associated with SCH in middle-aged FEDN MDD patients

关键词: Subclinical hypothyroidism; Major depressive disorder; Middle-aged adults; LDL-C

The Causal Associations of Depression, Anxiety, and Sleep Disorders with Constipation: A Bidirectional and Multivariable Mendelian Randomization Study

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Objective Some previous studies have reported bidirectional associations between depression, anxiety, sleep disorders, and constipation. However, the existing observational studies yielded conflicting results and might be biased by residual confounding factors and reverse causality

Methods The associations were examined through a two-sample, bidirectional, univariable, and multivariable Mendelian randomization (MR) study. The inverse-variance weighted method was applied as the principal analytical approach, and other additional MR methods (maximum likelihood, robust adjusted profile score, and MR-Pleiotropy Residual Sum and Outlier) were used for sensitivity analyses. Multivariable MR analysis was performed to assess the independent effects of selected exposures

Results The univariable MR analyses indicated that major depression (MD) (odds ratio [OR], 1.28; 95%

confidence interval [CI], 1.12-1.46), broad depression (BD) (OR, 3.72; 95% CI, 1.55-8.97), depressed affect (OR, 1.41; 95% CI, 1.13-1.76), and worry (OR, 1.42; 95% CI, 1.13-1.77) were associated with an increased risk of constipation. There was no evidence supporting the causal effects of anxious feelings, sleep duration, and sleeplessness on constipation. The reverse MR analyses found no reverse causal association of constipation with depression, anxiety, and sleep disorders. In Multivariable MR, only MD still had a robust causal association with constipation, while the effect of worry was attenuated to null, and the effects of BD and depressed affect were completely reversed

Conclusion Our findings demonstrated that MD is causally associated with constipation. Worry might also increase the risk of constipation, but this finding needs to be further investigated

关键词: depression, anxiety, sleep disorders, constipation, causal association, Mendelian randomization

中职生抑郁与失眠间的关系：压力知觉的中介作用

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目的 探讨中职生抑郁和失眠的关系,以及压力知觉在抑郁和失眠间的中介作用。

方法 采用病人健康问卷(Patient Health Questionnaire-9,PHQ-9)、压力知觉量表(Perceived Stress Scale,PSS)、失眠严重指数问卷(Insomnia Severity Index,ISI)对 1426 名中职生开展问卷调查,评估其抑郁症状、压力知觉水平、失眠严重程度,以 ISI≥8 为是否失眠划界分。应用 SPSS23.0 对数据进行描述统计、相关分析、分层回归分析;采用 PROCESS V3.4 插件进行 Bootstrap 中介效应检验。

结果 1. 中职生失眠发生率为 65.5%。2. 失眠组在 PHQ-9[(17.02±6.09)分 vs(8.80±7.61)分, $t=21.20, p < 0.01$]、PSS[(25.44±7.12)分 vs(18.22±7.50)分, $t=17.75, p < 0.01$]显著高于无失眠组,均差异有统计学意义。3. 相关分析结果表明,失眠

与抑郁和压力知觉均呈显著正相关 ($r=0.71, r=0.56$, 均 $p<0.01$, 95%CI 1.111-1.167)。4. 控制性别(混杂因素)后, 双变量回归分析显示抑郁症状 ($\beta=0.130, OR=1.139, p<0.001, 95\%CI 1.022-1.072$), 压力知觉 ($\beta=0.046, OR=1.047, p<0.001$) 是失眠的风险因素。5. 中介效应分析结果表明 压力知觉在抑郁与失眠间起着部分中介效应(直接效应值为 0.430, 95%CI 0.370-0.490, 间接效应值为 0.127, 95%CI 0.049-0.183), 间接效应占总效应的 22.8%。

结论 中职生社会压力大, 失眠率发生率高, 抑郁症状不仅直接影响失眠, 还可通过压力知觉加重失眠。心理健康促进工作可通过减轻中职生的压力知觉水平, 改善情绪对睡眠不良影响, 提升整体心理健康水平。

关键词: 压力知觉; 失眠; 抑郁; 中职生

基于事件相关电位的单相抑郁和双相抑郁鉴别诊断及对 MECT 疗效预测研究

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目的 单相抑郁(UD)和双相抑郁(BD)鉴别诊断困难, 部分患者对改良电休克治疗(MECT)反应差。利用事件相关电位(ERP)辅助鉴别诊断及预测疗效逐渐成为热点, 但既往研究多为单一指标、结论不一致, 本研究拟基于 N170、P300、MMN 等指标为 UD 和 BD 鉴别诊断及预测 MECT 疗效提供依据。

方法 本研究纳入中山大学附属第三医院精神科 UD 和 BD 患者 58 例, 接受脑电实验并使用 HAMD 及 MCCB 评估抑郁症状及认知功能, 提取 N170、P300 和 MMN 成分的振幅和潜伏期。排除 6 例后分为 UD 组(24 例)和 BD 组(28 例), 接受 MECT 的 24 例以治疗前后 HAMD-24 减分率 50% 界值分为有效组(13 例)和无效组(11 例)。对临床数据和 ERP 指标进行差异分析和回归分析。

结果 (1) UD 组与 BD 组之间、MECT 有效组与无效组之间的性别、年龄、病程、HAMD 总分、MCCB 总分及因子分无显著差异。

(2) UD 和 BD 患者的 N170 潜伏期(UD 组

145.3±13.1ms, BD 组 157.7±12.4ms)和 P300 峰幅值(UD 组 4.0±2.6μV, BD 组 6.3±3.3μV)具有显著差异。

(3) 二元 logistic 回归显示 N170 潜伏期 ($OR=1.078, 95\%CI=1.017\sim 1.142, p=0.012$) 和 P300 振幅 ($OR=1.534, 95\%CI=1.059\sim 2.223, p=0.024$) 是诊断 BD 的危险因素。ROC 显示 P300 振幅的 AUC 值为 0.717 (95% CI=0.570~0.863), 最佳截断值为 6.22μV, 敏感度为 52.0%, 特异度为 91.3%, 约登指数为 0.433; N170 潜伏期的 AUC 值为 0.763 (95% CI=0.629~0.897), 最佳截断值为 154ms, 敏感度为 56.0%, 特异度为 82.6%, 约登指数为 0.386。二者联合指标的 AUC 值为 0.781 (95% CI=0.649~0.913), 最佳截断值为 0.344, 敏感度为 92.0%, 特异度为 60.9%, 约登指数为 0.529。P300 振幅、N170 潜伏期及二者联合指标对 UD 和 BD 的鉴别诊断有一定价值。

(4) 有效组和无效组之间的 N170、P300 和 MMN 振幅及潜伏期无显著差异。

结论 单相抑郁和双相抑郁的 N170 潜伏期和 P300 振幅具有显著差异, P300 振幅、N170 潜伏期及其联合指标对二者的鉴别诊断有一定价值, 但未发现 P300、N170、MMN 指标预测电休克治疗抑郁症状疗效的价值。

关键词: 脑电图; 事件相关电位; 单相抑郁; 双相抑郁; 疗效预测

Silent Acute Cerebral Infarction with Psychotic Episode As The Primary Manifestation During Liver Transplantation: A Case Report and Comprehensive Review about The Risk Factors

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Objective Postoperative neurological and neuropsychiatric complications (NCC) has become the research emphasis, with long-term survival after liver transplantation (LT) gradually improving. The causes of NCC are highly variable, but among them, acute cerebral infarction is an extremely rare complication of LT

Methods We report our experience with a case of acute cerebral infarction during LT. Also, we retrospectively analyze the entire diagnostic and treatment process of this case to explore its pathogenesis and the predictive diagnostic value of each factor

Results In this case, we report a middle-aged man with multiple and fluctuating psychiatric symptoms for nearly 2 weeks after LT, with significant personality changes in between, no overt neurologic signs, and partial response to antipsychotics. The patient underwent a magnetic resonance imaging (MRI) scan of the head to detect an acute cerebral infarction, and symptomatic and rehabilitative treatment was promptly initiated by the clinician. At the last follow-up, he was doing well with stable liver function and resolution of clinical neuropsychiatric symptoms. In this paper, we retrospectively analyze the entire diagnostic and treatment process of this case to explore its pathogenesis and the predictive diagnostic value of each factor

Analysis showed that hepatic encephalopathy active in the immediate preoperative period (OR=4.1, $p=0.00$), hepatorenal syndrome (OR=4.5, $p=0.02$), child-Pugh score C (OR=2.6-4.0, $p<0.05$), hepatic encephalopathy history ($p<0.05$), higher bilirubin levels (Cohen's $d=0.22$, $p<0.05$), 24-hour change in serum sodium (Cohen's $d=0.59$, $p<0.05$), total cholesterol level (Cohen's $d=-0.93$, $p<0.05$), HDL cholesterol level (Cohen's $d=-1.1$, $p<0.05$), adult (Cohen's $d=0.66$, $p=0.01$), acute liver failure (HR=4.95, $p=0.00$), Wilson disease (HR=6.64, $p=0.00$), increased preoperative creatinine (HR=1.33, $p<0.05$), seizure or intracranial hemorrhage history (HR=4.97, $p=0.00$), graft failure (HR=4.94, $p=0.00$), preoperative infection (OR 2.83, $p<0.05$), alcohol-related liver disease C including (including patients with alcohol and chronic hepatitis C infection) and metabolic liver disease (OR=9.90, $p=0.01$), mechanical ventilation pre-LT (OR=4.50, $p<0.05$) were significant risk factors for NCC after LT.

Conclusion This case is the first report of a combined acute stroke after LT with psychotic symptoms as the first and primary manifestation. Data on this are few and far between. In a 4-year follow-up case study, 60 of 1730 patients who underwent LT had definite neuroimaging changes, and only 3 (5%) of them had acute

stroke. Patients with vascular-related neurologic complications often present with seizures and coma, and have very high mortality rates. Difficulties arise with the diagnosis of the majority subclinical form of NCC

Careful consultation and follow-up will help identify this group of patients, and we have compiled a list of predictive factors that may aid in clinical diagnosis and prediction.

关键词: psychotic episode, liver transplantation, acute cerebral infarction, case report, comprehensive review

母亲状态焦虑如何影响孩子焦虑：家庭和父母行为的中介作用

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目的 本研究旨在探讨母亲的状态焦虑如何通过家庭系统功能和父母的顺应行为影响孩子的焦虑症状。具体来说，本研究检验了家庭系统功能在母亲状态焦虑与父母顺应行为之间的中介作用，以及父母顺应行为在母亲状态焦虑与孩子焦虑症状之间的中介作用，进而分析母亲状态焦虑对孩子焦虑症状的链式中介效应。

方法 本研究采用横断面调查数据，样本包括109对母亲及其孩子，来自上海精神卫生中心临床上参与焦虑儿童父母干预项目的家庭。通过问卷收集母亲状态焦虑、家庭系统功能、父母顺应行为和孩子焦虑症状的数据。使用链式中介模型进行数据分析，评估母亲状态焦虑对孩子焦虑症状的直接和间接影响。

结果 研究结果表明，母亲的状态焦虑通过家庭系统功能和父母的顺应行为对孩子的焦虑症状产生显著影响。具体而言，家庭系统功能在母亲状态焦虑与父母顺应行为之间起到显著的中介作用，而父母顺应行为在母亲状态焦虑与孩子焦虑症状之间也起到显著的中介作用。此外，链式中介效应显著，表明母亲的状态焦虑通过这两个中介变量对孩子的焦虑症状产生重要影响。

结论 本研究发现，母亲的状态焦虑可以通过家庭系统功能和父母的顺应行为间接影响孩子的焦

虑症状。家庭系统功能和父母顺应行为在其中起到重要的中介作用。这一发现强调了家庭环境和父母行为在儿童焦虑干预中的重要性,建议未来的干预策略应关注家庭系统功能的改善和父母顺应行为的调整,以有效降低孩子的焦虑水平。

关键词: 母亲状态焦虑,家庭系统功能,父母顺应行为,孩子焦虑症状,链式中介效应

Prevalence of Dyslipidemia and Its Correlates in First-episode Drug-naive Major Depressive Disorder Patients with Comorbid Anxiety Symptoms: A Large-scale Cross-sectional Study

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Objective Studies before have found that individuals diagnosed with major depressive disorder (MDD) often experience issues with dyslipidemia. Also, people with MDD suffer from anxiety symptoms. However, few studies have looked into what factors contribute to dyslipidemia in individuals with both MDD and anxiety symptoms. Consequently, the objective of this study was to ascertain the prevalence of dyslipidemia and to identify potential correlates in individuals experiencing first-episode drug-naive (FEDN) MDD with anxiety symptoms (MDDA)

Methods A cumulative sample size of 1718 FEDN MDD patients was recruited. The Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), and Positive and Negative Syndrome Scale (PANSS) positive subscale were the measures for the assessment of patients' mental states. Several metabolic panels were collected, including total cholesterol (TC), high-density lipoprotein cholesterol (HDL-C), triglycerides (TG), low-density lipoprotein cholesterol (LDL-C) and thyroid hormone levels

Results The reported incidence of dyslipidemia

in MDDA patients was 91.67%, which was significantly above that of MDD patients who did not suffer from anxiety symptoms (85.47%). In comparison with MDDA patients without dyslipidemia, those patients with dyslipidemia had higher body mass index (BMI), systolic blood pressure (SBP) and diastolic blood pressure (DBP), they also had increased levels on the HAMD, HAMA, and PANSS positive subscale. Additionally, greater levels of TC, HDL-C, TG, LDL-C, thyroid stimulating hormone (TSH), and fasting blood glucose (FBG) were found. Furthermore, the combination of HAMD, TSH, SBP and DBP distinguished MDDA patients with dyslipidemia from those without dyslipidemia

Conclusion Our results suggested an increased incidence of dyslipidemia among MDDA patients. Various blood indicators and hormone levels were independently associated with dyslipidemia in MDDA patients. Furthermore, the combination of these factors may differentiate between MDDA patients with and without dyslipidemia

关键词: First-episode drug-naive, Dyslipidemia, Anxiety symptoms, Major depressive disorder

The Correlation of Overweight/obesity and Suicide Attempts in Young First-episode and Drug-naïve Major Depressive Disorder Patients and The Effect of Overweight/obesity on Factors Associated with Suicide Attempts: A Cross-sectional Study

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Objective In recent years, with the increase of various social pressures, patients with depression are gradually younger. Obesity has a high incidence in young depressed patients, while the correlation of obesity and suicide in young depressed patients is still inconclusive. The purpose of this study was to explore the correlation of overweight/obesity and suicide attempts

in young patients with major depressive disorder (MDD) and the related factors of suicide attempts in patients with/without overweight/obesity

Methods 17-item Hamilton Rating Scale for Depression (HAMD-17), 14-item Hamilton Anxiety Rating Scale (HAMA-14) and Positive and Negative Syndrome Scale (PANSS) positive subscale were used to assess depressive, anxiety and psychotic symptoms, respectively. After excluding samples with incomplete data, a total of 520 young first-episode and drug-naïve (FEDN) MDD patients were finally included in this study for analysis

Results Overweight/obesity was a separate factor influencing suicide attempts in young FEDN MDD patients ($p < 0.05$, $OR = 0.57$, $95\%CI: 0.34-0.95$). Overweight/obese patients who attempted suicide had higher HAMD, HAMA scores, higher levels of total cholesterol (TC), thyroid stimulating hormone (TSH), and higher prevalence of thyroid peroxidase antibody abnormalities (all p values < 0.01). While in patients without overweight/obesity, those who attempted suicide had higher HAMD, HAMA, PANSS positive subscale scores, higher levels of TSH, fasting blood glucose, TC, blood pressure, lower levels of high-density lipoprotein cholesterol, and higher prevalence of TSH abnormalities (all p values < 0.01)

Conclusion In young FEDN MDD patients, overweight/obesity had an impact on suicide attempts

关键词: major depressive disorder, overweight, obesity, suicide attempts, young

Neurobiology of Obsessive-Compulsive Disorder From Genes To Circuits: Insights From Animal Models

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Obsessive-compulsive disorder (OCD) is a chronic, severe psychiatric disorder that has been ranked by the World Health Organization as one of the leading causes of illness-related disability, and first-line interventions are limited in efficacy and have side-effect issues. However, the exact pathophysiology underlying this complex, heterogeneous disorder remains unknown. This scenario is now rapidly changing due to the advancement of powerful technologies that can be used to verify the function of the specific gene and dissect the neural circuits underlying the neurobiology of OCD in rodents. Genetic and circuit-specific manipulation in rodents has provided important insights into the neurobiology of OCD by identifying the molecular, cellular, and circuit events that induce OCD-like behaviors. This review will highlight recent progress specifically toward classic genetic animal models and advanced neural circuit findings, which provide theoretical evidence for targeted intervention on specific molecular, cellular, and neural circuit events. Here, building on the fine-grained gene and circuit-level insights afforded by animal models, we gain a better understanding of specific circuits and cell pathology in OCD. Despite the limitations in using animal models to study psychiatric disorders, these findings in the evolutionally conserved gene and circuitry provide promising avenues for future therapeutic discovery and might help to guide future translational studies.

关键词: Obsessive-compulsive disorder (OCD); Animal models; Genes; Circuits; Neurobiology.

Sex Differences in Prevalence and Clinical Correlates of Subclinical Hypothyroidism in Chinese Patients with First-episode Untreated Major Depressive Disorder

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Objective Previous studies showed sex differences in the prevalences of both major depressive disorder (MDD) and subclinical hypothyroidism (SCH). This study aimed to further compare the prevalence and correlates of moderate-to-severe SCH between male and female Chinese MDD patients

Methods A total of 1706 first-episode drug naïve Chinese patients with MDD were recruited. Depressive symptoms were assessed by the 17-item Hamilton Depression Rating Scale, psychotic symptoms by the Positive and Negative Syndrome Scale and anxiety symptoms by the Hamilton Anxiety Rating Scale. Serum thyroid stimulating hormone (TSH), free triiodothyronine (fT3) and free thyroxine (fT4) concentrations were measured by chemiluminescence immunoassay. Moderate-to-severe SCH was defined as serum TSH > 8 mIU/L with normal fT4

Results The prevalence of moderate-to-severe SCH was 10.4% in male patients and 15.1% in female patients ($\chi^2 = 7.22, p < 0.01$). In female patients, binary logistic regression showed that systolic blood pressure (SBP), suicide attempts and psychotic symptoms (all $p < 0.001$) were associated with moderate-to-severe SCH, and severe anxiety was marginal significantly associated with moderate-to-severe SCH ($p = 0.070$). In male patients, SBP and psychotic symptoms were associated with moderate-to-severe SCH (both $p < 0.001$), while suicide attempts and severe anxiety were not ($p > 0.05$)

Conclusion Our findings reveal a higher prevalence rate of moderate-to-severe SCH in female untreated first-episode MDD patients compared with males. Moreover, there is a positive association between suicide attempts and moderate-to-severe SCH only in female MDD patients

关键词: major depressive disorder; subclinical hypothyroidism; thyroid stimulating hormone; anxiety; suicidal behavior

Prevalence and Clinical Correlates of Anxiety Symptoms in Chinese Never-treated First-episode Major Depressive Disorder Patients with Co-morbid Subclinical Hypothyroidism

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Objective Previous studies have highlighted the relationship between subclinical hypothyroidism (SCH) and depression. Moreover, SCH patients are often accompanied by anxiety symptoms. Therefore, this study aimed to further investigate the prevalence and clinical correlates of severe anxiety symptoms in major depressive disorder (MDD) patients with co-morbid SCH

Methods A total of 1706 never-treated first episode MDD patients were recruited from a hospital-based psychiatric clinic. Blood specimens and thyroid hormone parameters were assessed. The Positive and Negative Syndrome Scale (PANSS) positive subscale, Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA) and Clinical Global Impression of Severity Scale (CGI-S) were used to assess psychotic symptoms, depressive symptoms, anxiety symptoms and overall illness severity

Results The prevalence of severe anxiety symptoms in MDD patients with co-morbid SCH was 37.4%, and suicide attempts and psychotic symptoms were associated with severe anxiety symptoms (both $p < 0.05$). The combination of suicide attempts and psychotic symptoms distinguished anxious and non-anxious MDD patients with co-morbid SCH (AUC: 0.91)

Conclusion Our findings suggest a high prevalence of severe anxiety symptoms in MDD patients with co-morbid SCH. For MDD patients with co-morbid SCH and severe anxiety, suicide attempts and psychotic symptoms may be critical for medication or intervention

关键词: hypothyroidism; depression; anxiety; psychotic symptoms; suicide

Modeling Brain Network Dynamics in Depressive Rumination Using Energy Landscape Analysis

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Objective Rumination is a repetitive self-focused cognitive style that can persist in the overall course of depression. Previous neuroimaging studies have revealed the neural correlates of rumination associated with the aberrant functional connections among multiple large-scale brain networks. However, the temporal dynamics of these brain networks during rumination in depression remain unclear

Methods We collected rumination and distraction induction functional magnetic resonance imaging (fMRI) data from 42 remitted depression patients (35 major depressive disorders and 7 bipolar II disorders). The energy landscape analysis was applied to characterize the brain network dynamics, and the metrics of appearance frequency and transition frequency were defined and compared between rumination and distraction conditions

Results The same four brain states were identified in both two conditions, which consisted of complementary activation of specific network modules. During rumination, the appearance frequency of one dominant state (state 1) was decreased, while the frequencies of two less dominant states (states 3 and 4) were increased, and the transition frequencies between states 2/3 and states 3/4 were also increased compared to distraction. Moreover, such metrics values were associated with the functional segregation related to salience / default-mode / fronto-parietal network module

Conclusion Our study revealed the altered dynamic characteristics of brain states composed of network modules during active rumination, which provided new insights into the temporal dynamics of large-scale brain networks in depressive rumination

关键词: rumination, energy landscape, brain states,

large-scale network, depression

Prevalence and Clinical Correlates of Suicide Attempts in Young MDD Patients with Subclinical Hypothyroidism: A Large-scale Cross-sectional Study

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Objective Subclinical hypothyroidism (SCH) has been reported to be associated with depression; however, its role in suicide risk in young patients with major depressive disorder (MDD) remains unclear. This study was to explore suicide attempts in young MDD patients with SCH in a large sample of first episode drug naïve (FEDN) MDD patients, which has received little systemic investigation

Methods A total of 917 FEDN MDD outpatients aged 18-35 years were recruited. Socio-demographic, clinical data, and thyroid function parameters were collected. The Positive and Negative Syndrome Scale (PANSS) positive subscale, Hamilton Anxiety Rating Scale (HAMA), and Hamilton Depression Rating Scale (HAMD) were used to measure psychotic, anxiety, and depressive symptoms, respectively. The clinical global impression of severity scale (CGI-S) was used to assess the overall mental status of patients

Results Young MDD patients had a high SCH prevalence (56.8%). In young MDD patients with SCH, suicide attempts were associated with HAMA score, TSH, CGI score, and TPOAb. The combination of HAMA score, TSH, and CGI score differentiated suicide attempters from non-suicide attempters (AUC was 0.792) in young MDD patients. HAMD, HAMA, illness duration, TSH, and TPOAb were independently associated with the number of suicide attempts

Conclusion Our findings suggest an extremely

high prevalence of co-morbid SCH in young MDD patients and a high incidence of suicide attempts in young FEDN MDD patients with comorbid SCH. Several clinical characteristics and thyroid function indicators are independently associated with suicide attempts in young MDD patients with SCH

关键词: Major depressive disorder; subclinical hypothyroidism; young adults; suicide attempts; first episode

犬尿氨酸途径在抑郁症的神经生物学角色： 一项影像-代谢联合分析研究

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目的 免疫炎症可能介导抑郁症患者焦虑及植物神经等症状，然而炎症在抑郁症患者这些症状中具体作用机制尚未明确。犬尿氨酸途径(Kynurenine pathway, KP)是脑内色氨酸(Tryptophan, TRP)代谢的重要生物学途径，该通路受多种促炎介质的调节，可能介导抑郁症患者核心神经环路结构和功能异常，参与焦虑、植物神经等症状。因此，本研究旨在基于影像-代谢联合分析技术，解析KP在抑郁症患者中的神经生物学机制。

方法 本研究收集了188名抑郁症患者临床数据、静息态功能磁共振数据以及犬尿氨酸途径。采用汉密尔顿抑郁量表(HAMD-17)和汉密尔顿焦虑量表(HAMA)评估患者抑郁症状。采用基于功能连接组建模(connectome-based predictive modeling, CPM)筛选与HAMD、HAMA及其因子分具有稳定与各相关的功能连接，即在留一交叉验证中每次迭代过程中稳定出现的功能连接。计算与症状正相关的功能连接(FC-POS)和负相关的功能连接(FC-NEG)。计算FC-POS和FC-NEG与犬尿氨酸代谢物浓度的关系。

结果 所有CPM筛选得到的功能连接中，发现HAMA总分相关的功能连接，以及抑郁中阻滞因子分相关的功能连接和犬尿氨酸途径代谢物显著相关。其中FC-POS-HAMA和3-羟基犬尿氨酸($r=0.205$, $p=0.007$)、喹啉酸($r=0.235$, $p=0.002$)、犬尿氨酸

($r=0.403$, $p<0.001$)均显著相关，FC-NEG-HAMA和3-羟基犬尿氨酸($r=-0.194$, $p=0.007$)、喹啉酸($r=-0.239$, $p=0.002$)、犬尿氨酸($r=-0.395$, $p<0.001$)均显著相关。而FC-POS-HAMD阻滞和3-羟基犬尿氨酸($r=-0.178$, $p=0.02$)、喹啉酸($r=-0.222$, $p=0.003$)、犬尿氨酸($r=0.371$, $p<0.001$)均显著相关，FC-NEG-HAMD阻滞和3-羟基犬尿氨酸($r=-0.160$, $p=0.007$)、喹啉酸($r=-0.221$, $p=0.004$)、犬尿氨酸($r=-0.341$, $p<0.001$)均显著相关。

结论 这些发现表明抑郁患者的焦虑症状以及阻滞相关的功能连接与犬尿氨酸途径代谢物相关，提示该通路可能介导抑郁症患者相关神经环路功能异常，参与焦虑及阻滞症状。这些结果为理解KP在抑郁症中的作用提供了新的视角，但KP在抑郁症患者症状中的具体作用机制仍需进一步研究，未来的研究可以深入探讨KP如何影响神经环路，以及如何通过调节KP来改善抑郁患者的焦虑和植物神经症状。

关键词: 犬尿氨酸; 抑郁症; 静息态磁共振

Prevalence and Clinical Correlates of Anxiety Symptoms in First-episode and Drug-naïve Major Depressive Disorder Patients with Dyslipidemia at Different Ages of Onset: A Large Cross-sectional Study

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Objective Major depressive disorder (MDD) patients often have different clinical manifestations at different age of onset. Anxiety symptoms are frequently seen in patients with MDD, and dyslipidemia is also prevalent in these populations. There is limited report-

ing on the frequency of anxiety symptoms and their associations with clinical factors in patients with abnormal lipid metabolism who have MDD

Methods Our study included 1718 first-episode untreated MDD outpatients aged 18-60 years, 1408 of whom had dyslipidemia. We collected basic information, clinically relevant data, and biochemical indicators from these patients. Anxiety, depression and psychiatric symptoms were evaluated by Hamilton Anxiety Scale (HAMA), Hamilton Depression Scale (HAMD) and Positive and Negative Syndrome Scale (PANSS) positive subscale, respectively

Results Anxiety symptoms were found in 57.8% of depressed outpatients with dyslipidemia, a rate significantly higher than in MDD patients with normal lipid levels. No statistical difference was observed in the prevalence of anxiety symptoms between the early adulthood onset (EAO) group and mid-adulthood onset (MAO) group. Anxiety symptoms were significantly correlated with both HAMD and PANSS scores, regardless of the age of onset. Thyroid-stimulating hormone (TSH), total cholesterol (TC) levels and suicide attempts were independently associated with anxiety symptoms in the EAO group, whereas fasting blood glucose (FBG) was independently related to anxiety symptoms in the MAO group

Conclusion Our research findings indicated that the age of MDD onset in patients with dyslipidemia did not impact the presence of anxiety symptom. The clinical factors linked to anxiety symptoms varied between the EAO and MAO groups, potentially aiding in the prediction of anxiety symptoms in the specific population

关键词: Major depressive disorder, Anxiety, Dyslipidemia, first-episode, Age of onset

Prevalence and Risk Factors for Suicide Attempts in First-episode and Drug-naïve Middle-aged Major Depressive Disorder Patients with Impaired Fasting Glucose

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Objective Impaired fasting glucose (IFG) is prevalent among the middle-aged population. Recent studies have found an association between suicide attempts and abnormal glucose metabolism in patients with major depressive disorder (MDD). However, there are fewer studies on suicide attempts in middle-aged MDD patients with comorbid IFG. The aim of this study was to investigate the prevalence and risk of suicide attempts in first-episode, untreated middle-aged MDD patients with IFG

Methods A total of 830 middle-aged (35-60 years) patients with first-episode and drug-naïve(FEDN) MDD were included in the study. Among them, 119 patients comorbid abnormal glucose metabolism. Socio-demographic and clinical information, as well as depression, anxiety, and psychotic symptoms, were collected and evaluated. Blood glucose levels, lipid levels, and serum thyroid function were also measured. The predictors of suicide attempt risk of middle-aged FEND MDD patients were identified by binary logistic regression

Results Prevalence of suicide attempts in middle-aged MDD patients with IFG was 38.66% (46/119). Significant differences in disease duration, anxiety symptoms, depressive symptoms, psychiatric symptoms, blood pressure, anti-thyroglobulin(TGAb),thyroid peroxidases antibody(TPOAb), thyroid stimulating hormone(TSH), and total cholesterol (TC) were found in patients who attempted suicide as compared to those who did not. Furthermore, Hamilton anxiety rating scale(HAMA) score, TGAb and disease duration were predictors of suicide attempts in middle-aged MDD patients with comorbid IFG

Conclusion This study showed a high prevalence of suicide attempts in middle-aged MDD patients with comorbid IFG, and we had further identified

HAMA, TGAb and disease duration as predictors of suicide attempts in MDD patients with IFG

关键词: Major depression disorder, Suicide attempts, Impaired fasting glucose, Anxiety, Thyroid antibodies, HAMA score

Prevalence and Correlates of Past-month Suicide Attempts Among Adolescents with Depressive Episodes

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Objective This study assessed the prevalence and correlates of past-month suicide attempts in adolescents with depressive episodes

Methods 801 patients (70% female, 11-18 years) in a psychiatric hospital completed self-report questionnaires and the Chinese MINI Suicide Scale upon admission for routine clinical monitoring. We analyzed demographic and clinical correlates of past-month suicide attempts using descriptive statistics, logistic regression, random forest, and ROC curve analyses

Results

41.82% (335/801) of patients reported past-month suicide attempts. Significant factors included gender (OR=1.56, 95%CI=1.09-2.25), depressive symptoms (OR=1.09, 95%CI=1.06-1.12), rumination (OR=1.02, 95%CI=1.00-1.03), and childhood maltreatment (OR=1.03, 95%CI=1.02-1.04). The ROC curve analysis showed an area of 0.774 (95% CI=0.742-0.806), effectively distinguishing patients with and without past-month suicide attempts.

Conclusion

The study confirmed a high incidence of past-month suicide attempts and validated the risk prediction

model's effectiveness in differentiating between adolescents with and without attempts. It underscores the urgent need for enhanced screening, prevention, and intervention strategies for high-risk adolescents in psychiatric settings.

关键词: Depressive episodes; Past-month suicide attempts; Adolescent; Risk factor

Association between Depressive Symptoms and Cognitive Impairment in Chinese Patients with Chronic Schizophrenia

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Objective Schizophrenia patients frequently experience depressive symptoms and cognitive impairment. The objective of the present study was to explore the potential link between depressive symptoms and neurocognitive deficits in chronic schizophrenia patients

Methods Psychopathologic symptoms in patients with schizophrenia were assessed using the Positive and Negative Syndrome Scale (PANSS), depressive symptoms were assessed using the 24-item Hamilton Depression Rating Scale (HAMD-24), and neurocognitive function was assessed using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)

Results 283 patients (44.85%) fulfilled the criteria for comorbid depressive symptoms. Further, patients with comorbid depressive symptoms had higher levels of PANSS general psychopathology, negative symptoms, positive symptoms and total score, but lower language index score compared to patients without depressive symptoms. The HAMD-24 total score showed a significant negative correlation with language and a significant positive correlation with all subscale and total

scores on the PANSS scale. In addition, multiple regression analysis identified that PANSS negative symptom score and HAMD-24 score were independently associated with language index

Conclusion Our findings suggest a high prevalence of depressive symptoms in patients with chronic schizophrenia, and depressive symptoms are associated with psychopathology, neurocognitive dysfunction and especially language impairment

关键词: Schizophrenia, depressive symptoms, neurocognitive function, RBANS

首发成人重度抑郁症患者不同发病年龄自杀企图与焦虑的相关性研究

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目的 自杀是全球卫生系统需要面临的巨大挑战,为了有效干预自杀,减少自杀对个人及社会的影响,本研究主要探讨首发成人重度抑郁症(MDD)患者不同发病年龄自杀企图与焦虑的相关性。

方法 对 1716 名首发成人重度抑郁患者采用横断面设计,以 45 岁为节点,分为早发抑郁障碍组(EAO)1256 例(73.2%)及晚发抑郁障碍组(LAO)460 例(26.8%),采用方差分析、非参数检验比较两组间的测量数据。采用卡方检验对数据进行人口统计学比较。采用协方差分析控制性别、婚姻状况和教育背景、病程对汉密尔顿抑郁量表(HAMD)、汉密尔顿焦虑量表(HAMA)、临床疗效总评量表(CGI)、阳性和阴性症状量表(PANSS)阳性症状评分的影响。采用 Logistic 回归分析,寻找与自杀企图独立相关的因素。采用斯皮尔曼相关系数探讨焦虑症状、抑郁症状和自杀企图之间是否存在中介作用。最后,采用交互效应回归分析,探讨 MDD 患者自杀企图与焦虑症状的关系是否存在差异。

结果 EAO 及 LAO 两组患者自杀企图差异无统计学意义($P>0.05$)。在 EAO 患者中,将差异因素进入 logistics 回归,显示 HAMA(OR=1.36),HAMD(OR=1.13),猜疑(OR=0.60),过氧化物酶抗体(TPOAb)(OR=1.00),低密度脂蛋白(LDL-C)

(OR=0.77),高密度脂蛋白(HDL-C)(OR=0.48),收缩压(OR=1.03)对自杀企图影响有统计学意义。在 LAO 患者中,同样将分析中具有差异的条目进入 Logistic 回归分析显示,HAMA(OR=1.22)对自杀企图的影响有统计学意义。在 EAO 组的中介模型结果显示,抑郁症状对自杀企图的影响系数显著性消失,CGI 起到了完全中介效应的作用。采用带有交互效应的逻辑回归模型结果显示,在成年早期发病的患者中,抑郁症状严重程度、焦虑症状严重程度其差异均有统计学意义($p<0.05$),存在主效应,但该模型的拟合 r^2 为 0.09,说明预测意义不大。在成年晚期发病的患者中,抑郁症状严重程度、焦虑症状严重程度和抑郁症状严重程度*焦虑症状严重程度差异均无统计学,不存在无交互左右。

结论 EAO 患者与 LAO 患者在有无自杀企图方面无差异。不同发病年龄的 MDD 患者,共病焦虑症状越严重,自杀企图的风险也就越高。除焦虑症状外,在 EAO 患者中,我们还发现了抑郁症状、猜疑、TPOAb、HDL-C 是自杀企图的显著影响因素。

关键词: MDD,发病年龄,自杀企图,焦虑

Oxidative Stress Markers Predict Treatment Outcomes in Patients with Generalized Anxiety Disorder Treated with Selective Serotonin Reuptake Inhibitors

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Objective The etiology of generalized anxiety disorder (GAD) remains unknown; oxidative stress may potentially contribute to its pathogenesis. However, there is no published evidence concerning the potential influence of oxidative stress on antidepressant treatment outcomes. This study investigated the ability of oxidative stress markers to predict treatment outcomes in GAD patients treated by selective serotonin reuptake inhibitors (SSRIs)

Methods 101 GAD patients and 100 healthy controls (HCs) were included in this study. The 101

GAD patients were selected for treatment with escitalopram (n=52) or sertraline (n=49) for eight weeks. Hamilton Anxiety Rating Scale (HAM-A) assessments were conducted before and after treatment. The levels of eight oxidative stress makers, malondialdehyde (MDA), lipid hydroperoxides (LPO), superoxide dismutase (SOD), glutathione peroxidase (GSH-Px), catalase (CAT), cortisol, high-density lipoprotein (HDL), and nitric oxide (NO) were measured using enzyme-linked immunosorbent assays (ELISA) before and after SSRIs treatment in GAD patients and at the time of HCs enrollment

Results The serum levels of MDA, cortisol, and LPO in GAD patients were higher than in HCs (all $p < 0.001$), while SOD, GSH-Px, and CAT were lower than in HCs (all $p < 0.001$). The baseline MDA, LPO, NO, and cortisol levels were positively correlated with anxiety severity, while GSH-Px was negatively correlated. After eight weeks of SSRI treatment, the GSH-Px levels increased, and MDA and LPO decreased (all $p < 0.05$). Alterations in the levels of MDA and LPO co-varied with changes in anxiety measures (all $p < 0.05$). The receiver operating characteristic (ROC) area of baseline MDA levels in predicting SSRIs endpoint treatment response was 0.804 ($p < 0.05$)

Conclusion The pathogenesis of GAD may involve oxidative stress. Moreover, serum MDA levels may predict treatment response to SSRIs. However, more research is warranted to confirm these findings

关键词: oxidative stress markers, generalized anxiety disorder, selective serotonin reuptake inhibitors, treatment response

Comparison of The Prevalence of and Factors Associated with Disorders of Glucolipid Metabolism in Young and Middle-aged Patients with First Episode Drug Naïve Major Depressive Disorder

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Background Few studies have examined the prevalence and risk factors for glucolipid metabolism disorders (GLMD) in MDD patients. The aim of this study was to compare the prevalence of and risk factors of GLMD in young versus middle-aged patients with first episode drug naïve (FEDN) MDD, which has not been reported yet

Methods 1718 consecutive MDD outpatients aged between 18-60 years were recruited. Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), Positive and Negative Syndrome Scale (PANSS) positive subscale, and Clinical Global Impression Severity Scale (CGI-S) were used to assess the clinical symptoms. In addition, fasting blood glucose (FBG) and lipid levels were measured

Results The prevalence of GLMD in all MDD patients, young and middle-aged MDD patients was 86.9%, 87.0% and 86.5%, respectively. In both young and middle-aged MDD patients, the HAMD and CGI-S scores, FBG, total cholesterol (TC), triglycerides (TG), and low-density lipoprotein cholesterol (LDL-C) levels were higher but the high-density lipoprotein cholesterol (HDL-C) levels were lower in those with than without GLMD (all $p < 0.05$). Further logistic regression analysis showed that FBG, TC, and TG were independently associated with GLMD in young MDD patients, whereas TG and LDL-C levels were associated with GLMD in middle-aged MDD patients

Limitations: The main limitations are cross-sectional design and inability to control selection bias.

Conclusion The prevalence of GLMD in young MDD patients was similar to that in middle-aged MDD patients. Factors associated with GLMD differed in young and middle-aged patients with FEND MDD.

关键词: Major depressive disorder; Glucolipid metabolism abnormalities; Fasting blood glucose; Triglycerides; High density lipoprotein cholesterol; Low density lipoprotein cholesterol

Effects of Childhood Trauma on Executive Functioning in Adolescents with Major Depressive Disorder Suffering From Non-suicidal Self-injury: A Cross-sectional Study

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Objective Childhood trauma is a risk factor for a variety of psychological and behavioral problems, but there is little research on how executive functioning is altered in adolescent major depressive disorder (MDD) patients with non-suicidal self-injury (NSSI) who have experienced childhood trauma. The purpose of this study was to examine the relationship between childhood trauma and executive functioning in adolescent MDD patients with NSSI and the factors that may influence executive functioning.

Methods This cross-sectional study recruited 1690 adolescent MDD patients with NSSI. Depression, anxiety symptoms, and childhood trauma were assessed by the Patient Health Questionnaire-9 (PHQ-9), the Generalized Anxiety Disorder Scale-7 (GAD-7), and the Chinese version of the Childhood Trauma Questionnaire (CTQ). Executive functioning was assessed by the Wisconsin Card Sorting Test (WCST).

Results Overall, 1472 patients (87.10%) had at least one type of childhood trauma. Among adolescent MDD patients with NSSI, those with childhood trauma had significantly lower perseverative errors and number of categories completed on the WCST test, but higher nonperseverative errors and learning to learn than those without childhood trauma. Furthermore, executive functioning in adolescent MDD patients with NSSI who had childhood trauma was correlated with physical neglect, emotional neglect, and sexual abuse.

Conclusion Our results suggest that childhood trauma is extremely common in adolescent MDD patients with NSSI and that childhood trauma is associated

with several demographic and clinical characteristics as well as executive functioning in these adolescent MDD patients with NSSI.

关键词: Major depressive disorder; Non-suicidal self-injury; Childhood trauma; Adolescent; Executive functioning

奖赏正波在儿童青少年精神障碍中的研究进展

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目的 青春期是个体奖赏回路发育的关键时期,其特征是神经奖赏敏感性增强。奖赏正波(reward positivity, RewP)作为反映奖赏处理的神经电生理指标之一,与多种儿童青少年精神障碍有关。通过对其进行综述研究,以期儿童青少年精神障碍发病机制的基础研究提供参考,有助于更有效地识别儿童青少年精神病理学的危险因素,为儿童青少年精神障碍的临床诊治寻找新的靶标。

方法 本文综述了近几年 RewP 在儿童青少年不同精神障碍中的异常变化,及 RewP 与快感缺乏、压力性生活事件及睡眠障碍等不同因素相互作用的研究结果。

结果 大量横向研究表明 RewP 异常与儿童青少年的焦虑障碍、抑郁障碍等精神障碍密切相关。此外,多个纵向研究证明快感缺乏、压力性生活事件及睡眠障碍等因素会影响与奖赏相关的大脑活动,可能会增加儿童青少年不同精神病理学的风险。除此之外,这些因素与 RewP 相互作用,可以预测青春期不同精神障碍的程度。

结论 奖励处理的个体差异与儿童青少年各种精神疾病的发生和维持有关。其中, RewP 与多种儿童青少年精神障碍密切相关,包括抑郁障碍、焦虑障碍及自杀等。异常的 RewP 可能是这些精神障碍发展风险的神经生物学标志物。

关键词: 奖赏正波,精神障碍,儿童青少年

Clinical Characteristics, Metabolic Parameters, and Determinants of Psychotic Manifestations in Anxiety-related Depressive Disorder Patients: Extensive Cohort Examination in China

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Background Psychotic manifestations (PM) often emerge in individuals diagnosed with anxiety-related depressive disorder (ARDD), yet research into the predictors of PM within this demographic remains sparse. This investigation seeks to determine the prevalence and associated factors of PM, focusing on a considerable cohort of first-onset and treatment-naïve (FOTN) ARDD patients

Methods Involving a cohort of 697 FOTN patients newly diagnosed with ARDD. Clinical symptoms were evaluated using the Positive and Negative Syndrome Scale positive subscale, the Hamilton Depression Rating Scale (HAMD), and the Hamilton Anxiety Rating Scale (HAMA), with systematic collection of biochemical markers

Results The findings revealed that PM prevalence in ARDD patients was 3.45-fold higher (23.10%) than in those without ARDD. Significant predictors of PS in this group included levels of Thyroid Stimulating Hormone (TSH), total cholesterol (TC), triglycerides (TG), as well as scores on the HAMD and HAMA. Notably, an Area Under the Curve (AUC) of 0.88 efficiently discriminated between ARDD patients with and without PM

Conclusion The results underscore the relationship between PM in ARDD patients and factors such as anxiety, depression, TSH, TC, and TG levels. Effective

treatment of PM in ARDD patients should therefore encompass both clinical and metabolic considerations to optimize outcomes.

关键词: anxiety-related depressive disorder, psychotic symptoms, first-onset and treatment-naïve, thyroid-stimulating hormone

Clinical Correlates and Thyroid Hormones of Metabolic Syndrome in First-episode and Drug-naïve Major Depressive Disorder Outpatients with and without Hyperglycemia: A Comprehensive Cross-sectional Study

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Objective Hyperglycemia and metabolic syndrome (MetS) are common in patients with major depressive disorder (MDD). This study aimed to explore the prevalence and clinical factors of MetS in first-episode and drug-naïve MDD (FEDND) patients with and without hyperglycemia.

Methods total of 1,718 FEDND patients' symptoms were assessed using the Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAMA), and positive subscale of the Positive and Negative Syndrome Scale (PANSS). Blood glucose levels, metabolic index, and thyroid hormones were measured during fasting.

Results The prevalence of MetS in FEDND patients with hyperglycemia was 35.67 times higher than in FEDND patients without hyperglycemia. FEDND patients with MetS were older, had later age of onset, and were predominantly married than those without MetS ($p < 0.05$). Among FEDND patients without hyperglycemia, suicide attempts, severe anxiety, HAMD, HAMA, PANSS subscale scores, thyroid stimulating hormone, antithyroglobulin, and total cholesterol levels were all higher in patients with MetS than those without MetS

(all $p < 0.05$). In FEDND patients without hyperglycemia, the combination of age and TgAb distinguished those patients with and without MetS.

Conclusion Our results suggest a high prevalence of MetS in FEDND patients with hyperglycemia. Several clinical variables and thyroid function-related hormones impact MetS in patients with FEDND.

关键词: Major depressive disorder; hyperglycemia; Metabolic syndrome; Anti-thyroglobulin; Thyroid-stimulating hormone;

Associated Factors and Network Analysis of Fertility Anxiety: A Cross-Sectional Study of Chinese Adults

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Objective Demographic change and ageing as a result of declining fertility has become a pressing issue globally. Especially in China, fertility anxiety has become a problem that cannot be ignored as the pressure of modern society increases. This study examined the influencing factors and interactions of fertility anxiety among Chinese adult residents

Methods A nationwide survey involving 30,054 participants was conducted in China from 20 June to 31 August 2023 to assess fertility anxiety using a subjective scale (0~100). We used Random Forest Classification to select potential correlates based on a socio-ecological model. We also conducted univariate analyses and multivariate stepwise regression analyses to explore factors associated with fertility anxiety. Network analysis was used to explore the network structure of fertility anxiety and related factors

Results The results of multivariate stepwise regression analyses showed that fertility anxiety was significantly correlated with several factors, including depression ($\beta = 0.04$, 95% CI = 0.02~0.06), body intention ($\beta = 0.09$, 95% CI = 0.08~0.10), anxiety ($\beta = 0.04$, 95% CI = 0.02~0.06), and mediated motivation ($\beta = 0.08$, 95% CI = 0.07 to 0.09) and public service motivation ($\beta =$

0.06, 95% CI = 0.05~0.08), family health ($\beta = -0.10$, 95% CI = -0.11~ -0.09), psychological resilience ($\beta = -0.03$, 95% CI = -0.05~ -0.02) and social support ($\beta = -0.05$, 95% CI = -0.06 ~ -0.03). In addition, females ($\beta = 0.09$, 95% CI = 0.07~0.12), married ($\beta = 0.05$, 95% CI = 0.02~0.09), undergraduate/college degree ($\beta = 0.118$, 95% CI = 0.09~0.15), and master's/doctoral degree ($\beta = 0.168$, 95% CI = 0.11~0.23) were more likely to have fertility Anxiety. 'Depression' and 'body intention' showed the highest node strengths in the network, while 'anxiety' and 'mediated motivation' showed the highest node strengths. 'anxiety' and 'media motivation' showed the highest predictability

Conclusion Based on the theoretical framework of the socio-ecological model, this study revealed the specific correlates and interactions of social and personal factors that shape fertility anxiety among adult Chinese residents. These findings have important implications for public health interventions targeting fertility anxiety and may help reduce the burden associated with fertility anxiety

关键词: Fertility anxiety, Network analysis, Socio-ecological model

EEG Microstates in Anxiety Disorders

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Objective Anxiety disorders are a group of prevalent and highly disabling mental disorders and are often associated with cognitive dysfunction. EEG microstates (EEG-ms) refer to electric potential topographies recorded in a multichannel array across the scalp, that remain quasi-stable for 60-120ms before rapidly transitioning to a different microstate. The EEG-ms have gained increasing attention for their association with neuropsychiatric disorders, such as depression disorders, Schizophrenia, and bipolar disorders. However, there are relatively few studies on the microstate of anxiety disorders. Therefore, the objective of this study was

to explore the microstate differences between patients with anxiety disorders and healthy controls and whether there is a possible association between the EEG microstate pattern and anxiety symptoms

Methods A total of 58 patients with anxiety disorders and 35 healthy controls were recruited in this study. Brain activities during the eyes-closed state were recorded using 64-channel electroencephalography, and the patients' microstates were clustered into four maps according to their topography (labeled A, B, C, and D). The microstate analysis was conducted based on the CARTOOL. Microstate properties (the mean duration, occurrence frequency, and Time Coverage) were compared between the two groups with the independent samples t-test. Spearman correlation coefficients were calculated to identify the relationships between the anxiety symptoms and microstate parameters

[Result] The mean duration, occurrence, and time coverage of microstate C decreased significantly in patients with anxiety disorders compared with healthy controls. In addition, a significant increase was found in the mean duration, occurrence, and time coverage of microstate D in patients with anxiety disorders compared with healthy controls. No significant difference was found in the microstate parameters of A and B microstate classes.

Conclusion The EEG microstate analysis revealed significant differences in most of the parameters (mean duration, time coverage, and occurrence) of C and D microstate classes in patients with anxiety disorders compared with healthy controls. As the microstates A, B, C and D indicate a correlation with auditory, vision, saliency and frontal-apical network respectively, these results suggested a potential cognitive impairment in patients with anxiety disorders

关键词: EEG Microstates, Anxiety disorders, cognitive impairment

Induction of Anxiety-Like Phenotypes by Knockdown of Cannabinoid Type-1 Receptors in The Amygdala of Marmosets

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Objective The amygdala is an important hub for regulating emotions and is involved in the pathophysiology of many mental diseases, such as depression and anxiety. Meanwhile, the endocannabinoid system plays a crucial role in regulating emotions and mainly functions through the cannabinoid type-1 receptor (CB1R), which is strongly expressed in the amygdala of non-human primates (NHPs). However, it remains largely unknown how the CB1Rs in the amygdala of NHPs regulate mental diseases

Methods Using in vivo gene editing, Sanger sequencing, in situ hybridization, fluorescence staining, behavioral testing, and biochemical measurement, we studied the function of CB1Rs in the amygdala of adult marmosets

Results We found that AAV-mediated delivery of the CRISPR/Cas9 system successfully knocked down CB1Rs in the amygdala of adult marmosets and this induced anxiety-like behaviors. These symptoms included disrupted night sleep, agitated psychomotor activity in a new environment, decreased desire for vocal communication, and increased plasma cortisol levels

Conclusion These results indicate that the knockdown of CB1Rs in the amygdala induces anxiety-like behaviors in marmosets, and this may be the mechanism underlying the regulation of anxiety by CB1Rs in the amygdala of NHPs. This improves our understanding of the eCB system in the amygdala of NHPs and advances the clinical application of eCB for diagnosing and treating of psychiatric disorders, such as anxiety

关键词: Cannabinoid type-1 receptor · Amygdala · Marmoset · Anxiety · CRISPR/Cas9

海马 CA2 区域神经元的胞外 4-O-硫酸软骨素修饰介导焦虑和社交记忆

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目的 神经元胞外网状基质 (PNN) 高度富集硫酸软骨素蛋白多糖 (CSPG), 是一系列用硫酸软骨素 (CS) 多糖修饰的核心蛋白。其中 4-O-硫酸基序 CS-A 的表达增加与 PNN 的成熟和成长关键期的可塑性时间窗相一致。成年后, CS-A 基序占大脑中总 CS 的近 90%, 且被发现与衰老和突触可塑性的降低有关。因此, 软骨素 4-O-硫酸化传统上被视为抑制神经可塑性的“分子制动器”。然而, 它在成年大脑中 PNN 的形成和大脑中的功能尚未得到直接研究。因此, 解析 PNN 结构中 CS-4-O 硫酸软骨素修饰的特定功能, 将可能为神经元的功能连接和可能疾病的识别和治疗提供新的靶点。

方法 该研究将糖化学和神经生物学相结合, 通过构建突变小鼠, 并结合病毒敲降、动物行为学、免疫组化、细胞生物学, 研究了 4-O-硫酸软骨素 (CS) 多糖调控小鼠海马神经元胞外网络 (PNN) 和突触可塑性的关键机制, 并探索了该修饰位点对小鼠脑功能和行为学的影响。

结果 该研究首先通过构建神经元特异性的 CS-4-O 硫酸转移酶突变小鼠, 实现了小鼠脑内 CS 4-O-硫酸化的完全缺失。突变小鼠海马 CA2 区域的 PNN 密度显著增高, 并且伴随了神经元兴奋性与抑制性突触传递的失衡, CREB 激活减少, 因而小鼠的焦虑水平加剧, 出现社交记忆功能障碍。在小鼠成年阶段通过选择性消融 CA2 区域的 CS 4-O-硫酸化, 可以再现 PNN 的密度上调、CREB 活性和社交记忆的损伤。值得注意的是, 过量 PNN 的酶切降低了小鼠的焦虑水平并恢复了社交记忆, 而 CS 4-O-硫酸化水平的化学操作可逆地调节了海马神经元周围的 PNN 密度以及兴奋性和抑制性突触的平衡。

结论 这些发现揭示了 CS 4-O-硫酸化修饰在成人脑可塑性、社交记忆和焦虑调节中的关键作用, 并表明靶向 CS 4-O-硫酸化可能是解决与社交认知功能障碍相关的神经精神疾病的一种策略。

关键词: 神经元胞外网状结构 (PNN), 硫酸软骨素, 海马 CA2, 焦虑, 社交认知功能

重复经颅磁刺激治疗广泛性焦虑障碍的研究现状

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目的 广泛性焦虑障碍 (GAD) 是一种常见的精神障碍。大多患者存在认知功能的下降, 如执行能力、注意力转移、抑制控制、工作记忆等, 认知功能紊乱是焦虑障碍维持和发展的因素。目前常规的治疗方法有药物治疗、心理治疗, 但仍有约 50% 患者对此无应答, 探索新的治疗方法如重复经颅磁刺激 (rTMS) 具有重大的临床意义。本文旨在对 rTMS 治疗广泛性焦虑障碍的现状进行系统性回顾, 探讨其疗效、最佳刺激部位及参数, 并为寻求更有效且个性化的辅助治疗方法提供新思路。

方法 本文在万方、中国知网、PubMed 等搜索引擎中, 以“广泛性焦虑障碍、焦虑障碍、重复经颅磁刺激、认知功能、anxiety、rTMS”等关键词进行文献检索, 最终选择 62 篇文献进行综述。回顾了 rTMS 治疗 GAD 的神经生物学机制、作用机制、不同频率和部位的治疗效果、对认知功能的影响、评估工具以及安全性评价。

结果 rTMS 作为一种无创、非侵入性的治疗手段, 通过改变大脑区域的电活动来调节神经元功能, 对 GAD 患者有一定的积极效应。低频和高频 rTMS 均可改善 GAD 患者的焦虑症状, 但最佳刺激部位和频率尚不明确。rTMS 联合药物治疗可改善患者的认知功能, 但具体机制需要进一步研究。评估工具主要依赖量表, 未来可能需要更多客观指标。rTMS 的安全性较高, 但需注意癫痫发作的风险。

结论 rTMS 对 GAD 具有潜在的治疗效果, 但目前疗效、最佳刺激位置和频率尚无一致性结论。未来研究需开展大样本、严格的随机双盲对照、多中心对照研究以进一步证实 rTMS 的有效性, 并探索其作用机制和生物学效应, 以实现精准医学治疗。

关键词: 广泛性焦虑障碍, 焦虑障碍, 重复经颅磁刺激, 认知功能

The Chinese Versions of The Childhood Perceived Poverty and Wealth Questionnaire (C-CPPWQ) and The Childhood Perceived Unpredictability Questionnaire (C-CPUQ): Evaluation of Dimensionality,

Validity, and Measurement Invariance with Bifactor Model and Latent Profile Analysis

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Objective The Chinese versions of the Childhood Perceived Poverty and Wealth Questionnaire (C-CPPWQ) and the Childhood Perceived Unpredictability Questionnaire (C-CPUQ) have shown promising psychometric properties for measuring childhood subjective socioeconomic status (harshness) and unpredictability among university students. However, further validation in community samples is still needed. This study aims to examine the dimensionality, measurement invariance (across gender), reliability, and validity of the C-CPPWQ and C-CPUQ in a large community sample

Methods Data from 4,102 adults were analyzed to confirm the structures of the C-CPPWQ and C-CPUQ. Two bifactor models were established: one for the C-CPPWQ with one general and two specific factors, and one for the C-CPUQ with one general and three specific factors. Latent profile analysis (LPA) was used to identify subgroups based on the C-CPPWQ and C-CPUQ dimensions, allowing exploration of subgroup differences on concurrent validity measures

Results The bifactor models for both the C-CPPWQ and C-CPUQ fit well. Further testing confirmed the unidimensionality and measurement invariance of both questionnaires, demonstrating their suitability as unidimensional scales for total score calculation. In gender-based samples, the two-factor structure of the C-CPPWQ and the three-factor structure of the C-CPUQ met the requirements for configural, metric, scalar, and error variance invariance ($|\Delta CFI| < 0.01$, $|\Delta TLI| < 0.01$). LPA revealed six subgroups for each questionnaire, with distinct psychological characteristics and emotional symptom risks across subgroups

Conclusion The findings provide strong evidence for the validity of the C-CPPWQ and C-CPUQ in assessing the psychological impact of childhood poverty and unpredictability across the lifespan. Both overall and factor-specific scores of the C-CPPWQ and C-CPUQ offer valuable insights for studies on childhood

adversity

关键词: the Childhood Perceived Poverty and Wealth Questionnaire, the Childhood Perceived Unpredictability Questionnaire, validity, measurement invariance, latent profile analysis

嗅觉评估在焦虑障碍患者中的临床研究

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目的 研究表明,嗅觉与情绪,如焦虑、抑郁等相关。正常情况下,气味等嗅觉信息从嗅球传递到初级嗅觉皮层,包括内嗅皮质区等;再进一步投射到次级嗅觉皮层等,而情绪管理的神经环路可能与嗅觉感知功能拥有共同神经环路,两者之间有着紧密联系。本文主要通过研究嗅觉识别、内嗅皮质体积与焦虑患者的关系,探讨嗅觉评估在识别焦虑患者的作用。因此,我们寻求客观的检查手段为焦虑患者的诊断及治疗提供新思路。

方法 取 2023 年就诊于门诊符合入组标准的焦虑患者 35 例(注:14≤患者汉密尔顿焦虑量表;未曾服用过抗焦虑药物),与之相匹配的正常对照组 33 例。首先,需要收集入组人群的一般临床资料,再者给予应用宾夕法尼亚大学嗅觉识别测验(University of Pennsylvania Smell Identification Test, UPSIT)和头磁共振(Magnetic Resonance Imaging, MRI)影像中内嗅区皮质(Entorhinal Cortex, EC)体积(mm³)主观或客观评估嗅觉功能。应用 ITK-SNAP 3.8 软件在 sMRI 序列中冠状位手工逐层勾画双侧 EC 作为感兴趣区域,自动计算出相应的体积。分析嗅觉评估在两组的差别,以及嗅觉评估识别焦虑的效能。使用 SPSS 26.0 软件统计数据与分析。

结果 (1)正常对照组与焦虑障碍组的 UPSIT 评分均值分别为(19.61±5.83)和(15.25±6.51)($P < 0.05$),即正常对照组>焦虑障碍组。(2)正常对照组与焦虑障碍组的 EC 体积均值分别为(1709.42±421.72)和(1598.67±657.32)($P < 0.05$),即正常对照组>焦虑障碍组。(3)两组间 UPSIT 评分与 EC 体积相关,且呈正相关($r = 0.55$; $P < 0.05$),即 EC 体积随 UPSIT 评分升高而增加;(4) UPSIT

评分、EC 体积及 UPSIT 评分联合 EC 体积对区分曲线下, 敏感性与特异性分别为: 90.2%与 44.2%、89.3%与 51.2%、84.9%与 56.7%。

结论 (1) UPSIT、EC 在焦虑障碍患者中可出现相应的评分或体积的下降, 焦虑患者的嗅觉功能有所降低。(2) EC 体积、UPSIT 联合 EC 体积可能更好的用于焦虑障碍的诊断。

关键词: 嗅觉、焦虑障碍

并对其他精神障碍有潜在的疗效, 如物质使用障碍和创伤后应激障碍。

关键词: 致幻剂; 裸盖菇素; 死藤水; LSD; MDMA; 精神障碍; 安全性; meta 分析

致幻剂治疗精神障碍的有效性和安全性: 一项系统综述和荟萃分析

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目的 研究的目的是通过定量分析评估致幻剂 (LSD、死藤水、裸盖菇素和 MDMA) 对情感障碍 (物质使用障碍[SUD]和绝症患者的抑郁、焦虑、负面情绪) 和其他精神障碍 (如酒精使用障碍和创伤后应激障碍) 的潜在疗效, 并系统评估其安全性。

方法 检索了截止至 2024 年 2 月 Web of science、Cochrane、EBSCO 和 PubMed 数据库中, 关于裸盖菇素、死藤水、LSD、MDMA 的研究。比较了实验组和安慰剂对照组在治疗和随访期间的效应量 Hedges' g 及其 95% 置信区间。使用 I² 统计量对异质性进行量化, 对不同致幻剂、疾病类型、疗效持续时间和疗效指数进行亚组分析。

结果 结果显示, 裸盖菇素治疗情绪障碍的文章最多(N = 28), 其次是死藤水(N = 7)和 LSD (N = 6)。总体而言, 致幻剂对抑郁、焦虑等精神障碍有治疗作用。具体来说, 在四种致幻剂中, 裸盖菇素 (Hedges' g = -1.49, 95% CI[-1.67, -1.30]) 的治疗效果最强, 其次是死藤水(Hedges' g = -1.34, 95% CI[-1.86, -0.82])、MDMA (Hedges' g = -0.83, 95% CI[-1.33, -0.32])和 LSD (Hedges' g = -0.65, 95% CI[-1.03, -0.27])。少量证据也支持致幻剂改善烟瘾、饮食失调、睡眠失调、边缘型人格障碍、强迫症和身体畸形障碍。致幻剂最常见的不良反应是头痛。近三分之一的文章显示没有参与者报告有持续的不良反应。

结论 总体结果表明致幻剂可以改善消极情绪,

老年精神病学组

老年人口腔衰弱与阿尔兹海默病相关性研究进展

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目的 为了提高医护人员对口腔衰弱与阿尔兹海默病的认识度,我们强调了这两种疾病之间的关联性和相互影响。我们建议在临床实践中,医护人员应关注老年人的口腔健康状况,及时发现并干预口腔衰弱问题。同时,对于已经患有阿尔兹海默病的老年人,我们也应关注其口腔衰弱状况,以制定更为全面和有效的治疗方案。

方法 本研究通过文献阅读,在中国知网、万方, Pubmed、Web Of Science 数据库等简要回顾老年人口腔衰弱与阿尔兹海默病的概述、评估工具、相关关系。

结果 结果发现,我们发现口腔衰弱与阿尔兹海默病之间存在密切的关联。口腔衰弱可能导致老年人咀嚼、吞咽和消化功能下降,进而影响营养吸收和全身健康状况。同时,口腔衰弱还可能引发口腔感染、炎症等问题,这些因素可能进一步加剧阿尔兹海默病的发展。

结论 本研究通过回顾老年人口腔衰弱与阿尔兹海默病的概述、评估工具和相关关系,提高了医护人员对这两种疾病的认识度,并为制定针对性的防治策略提供了参考。未来,我们期待更多的研究能够深入探讨口腔衰弱与阿尔兹海默病之间的复杂关系,为改善老年人的健康和生活方式提供新的思路和方法。早期发现和治疗口腔衰弱可能有助于预防阿尔兹海默病。针对口腔衰弱的预防策略应包括维持和改善口腔功能和营养状况,以减少衰弱和口腔功能障碍的负担。

关键词: 口腔衰弱; 阿尔兹海默病; 老年人

社区失能老人孤独状况及影响因素研究

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目的 了解社区失能老人的孤独现状及其影响因素,为提高失能老人心理健康水平和生活质量提供依据。

方法 便利抽样选取西安市 5 家社区 325 位失能老人为研究对象,采用一般资料调查表、UCLA 孤独感量表简化版(the short-form of the UCLA Loneliness Scale, ULS-8)、Herth 希望量表(Herth Hope Index, HHI)、罗森伯格自尊量表(Rosenberg Self-Esteem Scale, SES)和社会支持量表(Social Support Rate Scale, SSRS)进行问卷调查。使用 SPSS18.0 进行数据统计分析,运用 Pearson 相关进行失能老人孤独感、希望水平、自尊水平及社会支持水平的相关性分析,运用多元线性回归分析失能老人孤独感的影响因素。

结果 ULS-8 得分(16.41 ± 5.44)分, HHI 得分(34.09 ± 6.66)分, SES 得分(29.58 ± 5.32)分, SSRS 得分(35.95 ± 8.15)分。Pearson 相关分析结果显示孤独感与希望水平($r=-0.694, P<0.001$)、自尊水平($r=-0.612, P<0.001$)、社会支持水平($r=-0.543, P<0.001$)均呈显著负相关。多元线性回归结果显示婚姻状况、与子女关系、对自身健康满意度、与他人交往的频率、希望水平、自尊水平、社会支持水平是影响社区失能老人孤独感得分的主要因素。

结论 影响社区失能老人孤独水平的因素众多,应加强对非在婚失能老人心理状况的关注,打造适老化小区,提高老人社会参与,进一步强化家庭及社会支持体系的构建,加强老年心理护理,降低失能老人的孤独感,提高生命质量。

关键词: 失能老人; 孤独; 希望; 自尊; 社会支持

MCI 老年人群午睡习惯与夜间睡眠质量、认知功能及血清指标的关系

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目的 探讨轻度认知功能障碍(MCI)老年人群午睡习惯与夜间睡眠质量、认知功能、血清维生素 D 水平及炎症因子水平的相关性,为临床干预提供理论基础。

方法 2023年2月-2024年2月在社区老人展开筛查, 入组372例MCI受试者, 抽取空腹静脉血测量维生素D、IL-6水平, 其中午睡组210人和非午睡组162人, 比较两组一般情况、简易智力状态检查量表(MMSE)、蒙特利尔认知评估量表(MoCA)、匹兹堡睡眠指数(PSQI)分数及维生素D、炎症因子水平的差异。

结果 与非午睡组相比, 午睡组MMSE的即刻记忆, 回忆, 阅读, 表达能力, 总分, MoCA语言, 抽象, 定向力, 总分明显增高(均 $P < 0.05$)。午睡组PQSI入睡时间、睡眠障碍、日间功能障碍、总分明显降低($P < 0.05$)。午睡组维生素D3水平、维生素D总水平、IL-6水平明显升高。午睡与吸烟、饮牛奶、食用鱼类等生活习惯及PSQI量表睡眠时长、日间功能障碍存在回归关系($P < 0.05$)。PSQI量表总分、睡眠质量、入睡时间、睡眠时长、睡眠效率、睡眠障碍等与维生素D水平及炎症因子IL-6水平存在回归关系($P < 0.05$)。

结论 MCI午睡人群较非午睡者有更好的认知功能和夜间睡眠质量, 夜间睡眠质量与血清维生素D及IL-6水平有关。

关键词: 午睡; 轻度认知障碍; 睡眠质量; 维生素D; 认知功能; 免疫

Prevalence of Potentially Inappropriate Medication Using PIM Criteria in Hospitalized Older Patients with Depression

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Objective To investigate and analyze the current situation of potential inappropriate drug use (PIM) in elderly patients with depression in a hospital, so as to provide basis for safe and rational drug use in elderly patients with depression

Methods according to the PIM standard of Chinese elderly, 206 hospitalized elderly patients with depression over 65 years old were evaluated and analyzed, and the influencing factors of PIM were analyzed by multiple linear regression

Results A total of 206 elderly patients with depression were collected, with an average age of (71.46 ± 0.39) years; Average length of stay (23.25 ± 1.03) ; The average number of drug varieties was 4.72 ± 0.13 , of which 32.54% of patients used ≥ 2 antidepressants at the same time. According to the PIM standard of Chinese elderly, the incidence of PIM in hospitalized elderly patients with depression was 167 cases (81.07%). Multiple linear regression analysis showed that according to the Chinese PIM standard, the main influencing factor of PIM was the number of drug varieties ($\beta = 0.316, t = 4.614, P < 0.001$)

Conclusion The incidence of PIM in elderly patients with depression is high. It is necessary to strengthen medication education, improve the rationality of multi drug combination and reduce the safety risk of medication

关键词: Elderly depression; Potential inappropriate medication use; Medication evaluation; Influence factor

精神病医院医务人员线上指导利培酮口服液精准治疗老年精神障碍的效果分析

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目的 探寻新时代医药学服务领域新质生产力的新思维的拓展方向和路径! 探讨精神病医院医务人员借助"微信+"模式, 采用语音、文字、视频等形式, 远程指导老年精神病患者正确使用利培酮口服液治疗的效果。

方法 精神病医院医务人员随机抽取56名长期(大于两年的)居家服用利培酮口服液治疗患有精神分裂症的老年(大于50岁)患者为研究对象, 与患者(和/或家属), 在2023年3月至2024年5月期间, 借助"微信+"模式, 采用点对点(微信群)或点对点(一对一微信)的语音、文字、视频通话、公众号、视频号等形式互动交流, 远程普及推送精神健康知识、答疑解惑、指导患者正确量取利培酮药液的操作方法、准确执行医嘱用药的用法用量、告知个体化精准治疗方案的目的意义、提前预告可

能出现的哪些 ADR、提醒患者定期作血压血糖血脂血粘度肝心脑肾肺胃肠等脏器功能检查以便及早预防或发现 ADR、如出现 ADR 后及时帮助应对和采取正确处置方法、收集监测并网上填报 ADR 信息报表,线上发放调查表,统计测评开展线上延伸药学服务期间,患者量取药液的操作方法正确率、执行医嘱的准确率、药物不良反应知晓及正确处置率、精神症状改善有效控制率、对远程医药学服务的满意度等,数据化统计、量表化分析,并与前一年度同期数据作比较。

结果 相关统计数据明显优于前一年度的数据。

结论 精神病医院医务人员采取线上延伸医药学服务,对长期居家服用利培酮口服液治疗的精神分裂症老年患者有益,体现新时代“智慧医疗”的深度、广度和温度!值得推广。

关键词: 微信+模式、精准医药学服务、居家服药患者、线上家庭药师

MCI 老年人群血清饮茶习惯与认知功能、抑郁情绪及血清维生素 D、炎性因子水平的相关性研究

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目的 探讨轻度认知功能障碍(MCI)老年人群饮茶习惯与认知功能、抑郁情绪、血清维生素 D 及炎性因子水平的相关性,为临床干预提供理论基础。

方法 2023 年 2 月-2023 年 8 月在社区老人展开筛查,入组 315 例 MCI 受试者,采血测量维生素 D、IL-6、TNF- α 水平,其中非饮茶组 149 人和饮茶组 166 人,比较两组一般情况、简易智力状态检查量表(MMSE)、蒙特利尔认知评估量表(MoCA)、老年抑郁量表(GDS)、流调用抑郁自评量表(CES-D)分数及维生素 D、炎性因子水平差异。

结果 与非饮茶组相比,饮茶组 MMSE 的即刻记忆,计算,复述,结构,MoCA 视空间,命名,注意力,语言明显增高(均 $P < 0.05$)。饮茶组 GDS 总分[8.00(6.00,11.00)分 vs.6.00(3.00,9.00)分]、CES-D 总分[12.00(10.00,16.00)分 vs.11.00(9.00,14.00)分]明显降低($P < 0.05$)。饮茶组维生素 D3 水平

[(24.45 ± 6.050) ng/ml vs. (26.69 ± 7.698) ng/ml]、维生素 D 总水平 [(25.23 ± 6.602) ng/ml vs. (27.53 ± 7.665) ng/ml] 明显升高,IL-6 水平[$1.50(1.00,3.77)$ ng/L vs. $1.50(1.00,2.12)$ ng/L]、TNF- α 水平[$9.73(6.73,14.50)$ ng/L vs. $8.77(5.93,11.44)$ ng/L]明显降低。饮茶与性别、文化程度、吸烟、吃鱼、抑郁情绪、TNF- α 、MMSE 量表注意力、复述能力、MoCA 命名能力存在回归关系($P < 0.05$)。

结论 MCI 人群饮茶习惯与认知功能、抑郁情绪、维生素 D 水平及炎性因子存在相关关系。

关键词: 饮茶;轻度认知障碍;维生素 D;认知功能;抑郁;免疫

重复经颅磁刺激对男性精神分裂症患者抑郁焦虑情绪的疗效观察

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上海市民政第一精神卫生中心

目的 探索重复经颅磁刺激(rTMS)对男性精神分裂症患者抑郁、焦虑情绪的改善作用,便于今后临床应用提供依据。

方法 根据纳入标准与排除标准选取我院 2021 年 2 月~2023 年 12 月住院的男性伴有焦虑、抑郁情绪的精神分裂症患者共计 80 例作为研究对象,按照随机数字表法分为对照组(40 例,常规精神科药物治疗),研究组(40 例常规精神科药物治疗基础上另予为期 4 周的重复经颅磁治疗)。对比两组患者治疗前后阳性和阴性症状评定量表(PANSS)、汉密尔顿焦虑量表(HAMA)、汉密尔顿抑郁量表(HAMD)分值改变情况。

结果 治疗前两组患者 HAMA 评分、HAMD 评分、PANSS 量表分值无显著性差异($P > 0.05$),治疗 4 周后研究组 HAMA 评分、HAMD 评分、PANSS 量表分值均低于对照组($P < 0.05$)。

结论 精神分裂症是一种以精神活动不协调、情感、精神、行为、感知等障碍为特征的慢性、严重性精神疾病。针对长期住院的精神分裂症患者,抑郁、焦虑症状的预防及干预不容忽视,需要结合患者实际情况,筛查相关危险因素,给予针对性干预措施。当前精神分裂症的主要治疗手段包括药物治疗、心理治疗和物理治疗,其中重复经颅磁刺激是

一种治疗精神分裂症的常用物理治疗方法, 可通过形成磁信号影响机体脑代谢。本研究表明, 治疗前两组患者的 PANSS 评分、HAMA 评分、HAMD 评分比较差异均无统计学意义 ($p > 0.05$)。研究组经为期 4 周的 rTMS 治疗后, PANSS 评分、HAMA 评分、HAMD 评分均低于对照组, 差异有统计学意义 ($p < 0.05$), 提示应用重复经颅磁刺激治疗可以有效的缓解焦虑、抑郁症状, 提高治疗依从性。综上所述, 重复经颅磁刺激对男性精神分裂症患者抑郁焦虑情绪有改善作用, 是一种安全、有效的治疗方法, 临床值得推广。

关键词: 重复经颅磁刺激 精神分裂症 焦虑 抑郁

Factors Influencing The Marriage Status Among Severe Mental Disorders Patients: A Study of 5206 Patients in The Chinese Community

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Objective People with severe mental disorders (SMD) have higher rates of unmarriage and divorce than the general population. The purpose of this study was to investigate the factors influencing the marriage status of SMD patients in the community

Methods The cases and follow-up data were collected from SMD patient Information Management system in Jiangning District, Nanjing, Jiangsu Province. The demographic and clinical data of the patients were described and analyzed. Disordered multi-classification logistic regression analysis was used to find out the most relevant factors with marital status in SMD patients

Results Among 5206 SMD patients in Jiangning

District, 33.9% (1765/5206) were unmarried and 6.4% (335/5206) were divorced. The disordered multi-classification logistic regression analysis indicated that age, male gender, more hospitalizations, longer duration of disease, guardians being parents or siblings, no mental disability certificate and diagnosis of mental retardation with mental disorder were associated with the unmarried in SMD patients (compared to married patients). Compared with married SMD patients group, junior high school education degree and above and more hospitalizations were risk factors for divorce in community SMD patients, and guardians being spouses or children, guardians being parents or siblings were protective factors for divorce in these patients

Conclusion Our findings suggest that community SMD patients have a higher incidence of being unmarried and divorce. Given that marriage helps strengthen family-based support and care, it provides valuable information for policy makers around the world to develop plans to increase marriage rates among people with SMD. In this way, SMD patients can get better monitoring, improve the quality of life of patients, reduce the recurrence of patients' diseases and the occurrence of dangerous behaviors, and better maintain social security

关键词: Severe Mental Disorder; Marital status; Severe mental disorder patient; Multi-classification logistic regression analysis

Efficacy of Standard Operating Procedures for Fall Protection in Hospitalized Patients with Schizophrenia

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Objective Fall-related injury is the most common cause of functional disability and mortality in the older population. Falls in patients with schizophrenia are one of the major concerns in psychiatric hospitals. This study aimed to examine the impact of standardized operating procedures (SOP) on falls in veterans with

schizophrenia

Methods Patients with schizophrenia were allocated to the control group (n=345) and to the fall protection standardized operating procedures (FP-SOP) group (n=342). Patients in the control group were given routine nursing for falls, and patients in the FP-SOP group were intervened with FP-SOP plus routine nursing. All patients were observed for one year. The study methods comply with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist

Results We found a fall rate of 1.5% in the FP-SOP group and 4.6% in the control group, with a significant difference in the fall rate between the two groups. In addition, the difference in patient satisfaction between the two groups was statistically significant

Conclusion Falls are a significant problem for the healthcare system. This is an ambitious attempt to develop a standard FP-SOP for fall prevention and management in psychiatric hospitals. Patients in psychiatric units have unique risk factors for falls. Most previous studies about in-hospital fall prevention have focused on general acute care rather than on psychiatric units. The FP-SOP procedure has focused on patients with mental disorders in psychiatric units. Our studies demonstrate the importance of implementing FP-SOP for fall prevention in nursing care in psychiatric units. It is not only effective in preventing falls, but also in increasing patient satisfaction

关键词: Schizophrenia; Standard operating procedures; Fall prevention; Prospective study

睡眠呼吸暂停综合征与免疫细胞性状的因果关系——一项孟德尔随机化研究

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目的 已有研究发现睡眠呼吸暂停综合征(SAS)患者的免疫功能相关指标有异常,然而免疫调节紊乱到底是疾病的因还是果尚不明确。为此,我们采用双向两样本孟德尔随机化(MR)研究方法

分析了SAS与免疫细胞性状之间的因果关系,讨论了免疫反应在SAS发生发展中扮演着的的重要作用。

方法 我们从全基因组关联研究(GWAS)中选取了单核苷酸多态性(SNPs)作为遗传工具,以SAS和免疫细胞性状互为暴露和结局进行了正向和反向MR研究。

结果 基于逆方差加权法(IVW),在以SAS为暴露的正向MR中我们发现9个免疫细胞性状的变化与SAS发病有关,其中有4个免疫细胞性状表现为负相关,包括CD14+ CD16- monocyte Absolute Count ($\beta = -0.447$, FDR = 0.007), Monocyte Absolute Count ($\beta = -0.383$, FDR = 0.015), CD14+ CD16- monocyte %monocyte ($\beta = -0.315$, FDR = 0.034), CD14- CD16- Absolute Count ($\beta = -0.308$, FDR = 0.049),另外5个免疫细胞性状表现为正相关,包括CD14- CD16+ monocyte %monocyte ($\beta = 0.403$, FDR = 0.017), CD16+ monocyte %monocyte ($\beta = 0.318$, FDR = 0.034), CD11c+ monocyte %monocyte ($\beta = 0.394$, FDR = 0.047), CD62L- monocyte %monocyte ($\beta = 0.401$, FDR = 0.047), CD11c+ CD62L- monocyte %monocyte ($\beta = 0.394$, FDR = 0.047)。在以免疫细胞性状为暴露的反向MR中,我们未发现SAS的保护性或危险性因素。

结论 我们发现了SAS与个别免疫细胞性状之间存在因果关系,反映出SAS对免疫功能影响的复杂性,同时也强调了预防和治疗SAS在改善个体免疫功能上的潜在价值。

关键词: 睡眠呼吸暂停综合征; 免疫功能; 免疫细胞; 孟德尔随机化研究

Emotion Suppression and Grief in Chinese Culture with Concern of Face

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Aim Explore the role of 'face' culture in the bereavement process within Chinese society, examining how it influences emotional expression and the grieving process.

Methods The article reviews various cultural,

philosophical, and religious influences on emotional restraint in bereavement, including Confucian philosophy, Buddhist beliefs, and the concept of 'face'. It also discusses the impact of emotional suppression on health and psychological outcomes, drawing on studies that highlight the potential negative effects of suppressing emotions

Results The results indicate that the cultural imperative to maintain 'face' often leads to the suppression of grief, which can increase psychological distress and hinder the natural grieving process. Emotional suppression is common, and while it may be initially beneficial, long-term reliance can lead to negative health effects and complicate the grieving process. The article also points out that the effects of emotional suppression may vary across cultures, with East Asians potentially experiencing fewer adverse effects due to the cultural acceptance and normalization of this behavior.

Conclusion The article concludes that there is a need for further research to understand the impact of emotional suppression on the grieving experience within Chinese culture. It suggests that cultural norms and practices must be considered when developing support and intervention strategies for the bereaved. The study aims to provide a more nuanced understanding of the relationship between emotional suppression and grief, with the goal of informing more culturally sensitive approaches.

关键词: Key Words: Face Culture Bereavement Emotional Suppression Psychological Flexibility

Clinical significant of calmodulin-dependent protein kinase II γ subunit mRNA levels in peripheral blood of patients with Alzheimer's disease

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Objective To investigate the expression of calmodulin-dependent protein kinase II γ subunit mRNA in the peripheral blood of the patients with Alzheimer's

disease (AD), and explore the relationship between the calmodulin-dependent protein kinase II γ subunit mRNA levels and mini-mental state examination (MMSE) scores in AD patients

Methods A total of thirty-one patients with AD, twenty-eight with mild cognitive impairment (MCI) and forty healthy subjects were recruited in the study. The blood was collected in the fasting state and the expression of calmodulin-dependent protein kinase II γ subunit mRNA in peripheral blood leukocytes was detected by real-time PCR. The correlation between calmodulin-dependent protein kinase II γ subunit mRNA levels and MMSE scores in AD patients was analyzed

Results The calmodulin-dependent protein kinase II γ subunit mRNA levels in AD and MCI were significantly lower than that in healthy group ($p < 0.05$). the calmodulin-dependent protein kinase II γ subunit mRNA levels were correlated with MMSE scores in AD patients ($r = 0.4339$, $p = 0.0046$). Interestingly, calmodulin-dependent protein kinase II γ subunit mRNA levels decreased with age in AD patients

Conclusion the levels of calmodulin-dependent protein kinase II γ subunit mRNA in peripheral blood leukocytes of AD patients decreased, and the levels of calmodulin-dependent protein kinase II γ subunit mRNA is associated with age and the severity of AD in AD patients

关键词: Alzheimer's disease; calmodulin-dependent protein kinase II γ subunit; mini-mental state examination

Influencing Factors of Different Metabolic Status in Hospitalized Patients with Schizophrenia

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Objective The aim of this study was to explore the risk factors for different metabolic status in patients

with schizophrenia

Methods A total of 968 hospitalized patients with schizophrenia were recruited. Fasting blood glucose (GLU) and lipid profile, including total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), and triglyceride (TG) were measured. Patients were divided into four groups: normal metabolism and normal weight (NMNW), abnormal metabolism and normal weight (AMNW), normal metabolism and overweight/obesity (NMO), and abnormal metabolism and overweight/obesity (AMO)

Results Our results showed NMNW, AMNW, NMO and AMO accounted for 25.3%, 12.7%, 25.4% and 36.6% respectively. There were significant differences in age, disease duration, BMI, waist circumference, chronic disease, SBP, DBP, GLU, TG, TC, HDL-C, LDL-C among these four groups (all $P < 0.05$). With NMNW group as the reference, the disordered multiple classification regression analysis showed that chronic disease was a significant risk factor for AMNW (OR = 5.271, 95% CI = 3.165 to 8.780, $P < 0.001$) and AMO (OR = 3.245, 95% CI = 2.004 to 5.254, $P < 0.001$), age was an important protective factor for NMO (OR = 0.968, 95% CI = 0.943 to 0.994, $P = 0.015$) and AMO (OR = 0.973, 95% CI = 0.948 to 0.999, $P < 0.042$), waist circumference was a significant risk factor for NMO (OR = 1.218, 95% CI = 1.180 to 1.257, $P < 0.001$) and AMO (OR = 1.252, 95% CI = 1.212 to 1.291, $P < 0.001$), and with college education was an obvious protective factor for AMO (OR = 0.343, 95% CI = 0.123 to 0.953, $P < 0.040$) among patients with schizophrenia

Conclusion The findings of our study underscored the importance of factors such as age, education level, chronic disease and waist circumference when exploring the influencing factors and biological mechanisms of obesity-related metabolic problems in schizophrenia patients

关键词: schizophrenia, obesity, metabolism, risk factor, glucose, lipid

Epistaxis Following Electroconvulsive Therapy: A Case Report

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Introduction Electroconvulsive therapy (ECT) is a medical procedure performed under general anesthesia, which induces seizures by applying electrical currents to the skull. It is effective in treating various psychiatric illnesses such as depression, bipolar disorder, and schizophrenia. Despite its clinical efficacy, ECT is associated with a range of side effects. The estimated mortality rate associated with ECT is very low (2.1 deaths per 100,000 treatments), and serious adverse events related to ECT are rare, including cardiac arrhythmias with or without hemodynamic changes, respiratory distress, prolonged apnea, aspiration, and prolonged paralysis and seizures. Common self-limiting or symptomatic side effects include nausea, headache, muscle pain, increased blood pressure and acute cognitive adverse effects. Post-ECT epistaxis is rare, with scant documentation in medical literature. We report a unique case of epistaxis following ECT. The patient developed epistaxis after ECT, and the subsequent ECT session resulted in more difficult-to-control epistaxis. Our case indicated that for patients who have already experienced epistaxis, the efficacy and risks of ECT should be re-evaluated

Case presentation An 18-year-old female with a history of depression lasting over a year presented to our hospital due to low mood and suicidal ideation. Upon admission, she exhibited significant depressive symptoms, psychomotor retardation, and auditory and visual hallucinations, diagnosed with severe depressive episode with psychotic symptoms, confirmed through ICD-11 diagnosis. The patient had no history of hypertension or diabetes and had not used anticoagulant medications. Following admission, she received pharmacotherapy with sertraline and aripiprazole. Given the severity of her symptoms and the potential efficacy of ECT, we recommended ECT. After obtaining the pa-

tient's informed consent, routine examinations, including complete blood cell counts, liver and kidney function tests, electrolytes, coagulation tests, head magnetic resonance imaging (MRI), and computed tomography (CT) of the chest, revealed no abnormalities. Similarly, this patient underwent induction anesthesia with S-ketamine and muscle relaxation with succinylcholine, followed by the application of bilateral electrodes to elicit a seizure, which lasted approximately 30-60 seconds. Following the third session, the patient experienced minor bilateral epistaxis, which was controlled by the anesthetist by applying pressure to the nasal wings. No acute increase in blood pressure was observed during ECT. Subsequent nasal endoscopy revealed marked vasodilation in the patient's bilateral Little's area, with the right side exhibiting more pronounced dilation. Despite some improvement in mood post-treatment, the patient remained passively engaged and had reduced speech, thus ECT was continued. However, after the fourth ECT session, the patient experienced bilateral epistaxis again, which was managed by the anesthetist (nasal injection of adrenaline, nasal packing with gauze, and pressure on the nasal wings) for approximately 20 minutes, after which the epistaxis was controlled. Repeat complete blood cell counts and coagulation tests showed that hemoglobin decreased from 128g/L at admission to 108g/L, with normal coagulation function. Considering the substantial decrease in the patient's hemoglobin levels and the disappearance of suicidal ideation, further ECT was not administered. Two weeks later, the patient's mood stabilized, suicidal ideation and hallucinations disappeared, and there was no further epistaxis. She was discharged and followed up. At one month follow-up, the patient remained stable with no further episodes of epistaxis during this period.

Conclusion While ECT remains a highly effective treatment for various psychiatric disorders, awareness and management of rare adverse effects like epistaxis are vital. Our cases highlight the potential risk of epistaxis following ECT, even in patients not on anticoagulant therapy. The hemodynamic changes induced by ECT, along with the sympathomimetic effects of the anesthetic S-ketamine, may contribute to increased arterial

blood pressure and subsequent nasal bleeding. Particularly, repeated ECT sessions may exacerbate this issue, making it increasingly difficult to control epistaxis. Therefore, it is essential for clinicians to be aware of this potential complication and consider a thorough nasal examination prior to ECT, meticulous airway management to minimize trauma, and the use of anesthetics with lower sympathomimetic activity. For patients who experience epistaxis, a reevaluation of the risks and benefits of continuing ECT is warranted. Further research is needed to better understand the incidence and mechanisms of post-ECT epistaxis, ultimately improving patient care protocols in this context

关键词: Electroconvulsive therapy; Epistaxis; Depression; Case report

高龄老人认知功能的变化轨迹及其影响因素

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目的 探讨高龄老人与普通老人的认知变化轨迹及影响这些轨迹的因素的差异。

方法 研究纳入了 2008-2018 年中国老年健康调查 (Chinese Longitudinal Healthy Longevity Survey, CLHLS) 在基线期的 60 岁以上认知正常的 4401 例老人, 根据年龄分为低龄组 (<85 岁, 3359 例) 及高龄组 (≥85 岁, 1042 例)。使用简易精神状态评价量表 (MMSE) 评估认知功能, 用组基轨迹建模 (Group-based trajectory modelling, GBTM) 的方法分别拟合两组认知功能的变化轨迹, 并用 Logistic 回归分析基线期特征, 包括年龄、性别、婚姻状况、身体质量指数 (BMI)、业余活动、目前饮酒及运动、睡眠、工具性日常生活能力 (IADL)、心脑血管疾病及基线 MMSE 分数等与这些轨迹的关联程度。

结果 一般人口学特征方面, 相比低龄组, 高龄组老人的女性占比更高 (56.5% vs. 48.9%), 受教育程度低及独身占比高 (74% vs. 34.9%)。在其他指标上, 高龄组有更显著的低体重 (BMI < 18.5kg/m²)、IADL 残障, 锻炼不足、睡眠时长过长及基线认知差等表现, 而低龄组在饮酒及心脑血管疾病上更多见。

根据 MMSE 分数的变化趋势,两组老人的认知功能变化轨迹均可分为稳定组及衰退组。低龄组中,稳定组占比 89.9%,衰退组占比 10.1%;而高龄组的认知衰退更为突出,占比分别是 67.8%和 32.2%。在影响认知功能的关联因素中,高龄、低受教育水平、IADL 残障以及基线 MMSE 得分低是认知衰退的共同危险因素。而在高龄组,独身状态 (OR=1.58, P=0.019) 及低频业余活动 (OR=1.58, P=0.025) 也与认知衰退显著相关。

结论 与低龄老人类似,高龄老人的认知功能也表现出稳定及衰退两种变化趋势。但是,高龄老人的认知衰退更为显著。除去高龄、低受教育水平、IADL 残障以及基线 MMSE 得分低等认知衰退的共同危险因素,高龄老人还应关注婚姻及业余活动等因素。这些影响认知功能变化趋势的因素对于实现健康老龄化及预防认知衰退具有指导价值。

关键词: 老年人,高龄,认知衰退,组基轨迹建模,影响因素

文盲老人认知功能的变化轨迹及其影响因素

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目的 探讨文盲老人与非文盲老人的认知变化轨迹及影响这些轨迹的因素的差异。

方法 研究纳入了 2008-2018 年中国老年健康调查 (CLHLS) 在基线期的 60 岁以上认知正常的 4393 例老人,根据受教育程度分为文盲组 (2159 例) 及非文盲组 (2234 例)。使用简易精神状态评价量表 (MMSE) 评估认知功能,用组基轨迹建模 (GBTM) 的方法分别拟合两组认知功能的变化轨迹,并用 Logistic 回归分析基线期特征,包括年龄、性别、婚姻状况、身体质量指数 (BMI)、业余活动、目前饮酒及运动、睡眠、工具性日常生活能力 (IADL)、心脑血管疾病及基线 MMSE 分数等与这些轨迹的关联程度。

结果 一般人口学特征方面,相比非文盲组,文盲组老人的平均年龄更大 (80 岁 vs.75.3 岁),女性占比高 (72.2% vs. 29.9%) 及独身占比高 (43.1% vs. 68.2%)。除外心脑血管疾病及饮酒,文盲组在其

他指标上均处于劣势,如低体重 (BMI<18.5kg/m²)、IADL 残障,锻炼不足、睡眠时长异常及基线认知差。根据 MMSE 分数的变化趋势,两组老年人的认知功能变化轨迹可分为三组:慢速衰退组,快速衰退组及稳定组。其中非文盲组,三组占比分别是 8%, 5.4%和 86.6%;而文盲组的认知衰退更为突出,占比分别是 16.3%, 12.5%和 71.2%。在影响认知功能的关联因素中,高龄、IADL 残障以及基线 MMSE 得分低是认知衰退的共同危险因素,与慢速及快速衰退组均显著相关。在非文盲组,低体重与认知的慢速衰退显著相关 (OR=1.56, P=0.047),而睡眠时长 <6h 则是认知慢速衰退的保护因素 (OR=0.46, P=0.034);低频业余活动与认知的快速衰退相关 (OR=1.6, P=0.045)。相对而言,在文盲组,独身状态与认知的慢速 (OR=1.48, P=0.012) 及快速衰退 (OR=2.03, P<0.001) 均显著相关;女性 (OR=1.51, P=0.019) 还与认知的慢速衰退显著相关。心脑血管疾病 (OR=0.7, P=0.038) 是认知快速衰退的保护性因素,睡眠时长 ≥10h (OR=1.54, P=0.01) 则是认知快速衰退的危险因素。

结论 文盲老人的认知功能呈现出三种不同的变化趋势。相较非文盲老人,文盲老人的认知衰退更为突出,除去高龄、IADL 残障以及基线 MMSE 得分低等认知衰退的共同危险因素,文盲老人还应该关注婚姻及睡眠时长等因素。这些影响认知功能变化趋势的因素对于实现健康老龄化及预防认知衰退具有指导意义。

关键词: 老年人,文盲,认知衰退,组基轨迹建模

认知治疗对精神分裂症效果分析

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目的 评价在精神分裂症临床治疗中应用认知治疗的价值。

方法 在 2020 年 9 月至 2023 年 9 月期间收集试验样本,96 例均为就诊于本院的精神分裂症患者,将其依照掷硬币法分组,接受常规抗精神病药物治疗的 48 例设置为对照组,在此基础上配合认知治疗的 48 例为研究组,就两组 PANSS 评分变化、临床疗效、自知力与治疗态度、社会功能、服药依从性、

生活质量等进行统计比较。

结果 临床治疗总有效率展开比较, 研究组与对照组差异不明显, $P > 0.05$; 治疗后两组阳性因子、阴性因子、一般精神病理、总分均比治疗前低, 其中研究组各项分值的降低幅度更大, 优于对照组, $P < 0.05$; 治疗前相比较, 组间 ITAQ 评分、SDSS 评分未有统计学意义, $P > 0.05$; 治疗后相比较, 研究组 ITAQ 评分更高于对照组, SDSS 评分更低于对照组, 数据差异明显, $P < 0.05$; 研究组与对照组入院前的服药依从性评分作比, $P > 0.05$, 而其出院时、出院后半年、出院后 1 年的服药依从性评分则均高于对照组, 存在统计学差异, $P < 0.05$; 两组未在治疗前的躯体功能、心理功能、社会功能、物质生活等分值上表现出统计学意义, $P > 0.05$; 治疗后相比, 研究组 4 个维度的分值均高于对照组, 且均有统计学意义, $P < 0.05$ 。

结论 认知治疗可有效改善精神分裂症患者的临床症状、治疗态度与自知力, 提高社会功能、服药依从性、生活质量, 具有在临床治疗工作中进一步推广的价值。

关键词: 认知治疗对精神分裂症效果分析

The Associated Factors of Comorbidities of Depression and Anxiety in The Community Elderly

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Objective To analyze the mental health status (depression and anxiety) of older people ≥ 60 years old and its related factors in Ningbo, China

Methods 7771 elderly people aged 60 years and over were selected from Ningbo. Depressive and anxiety symptoms were determined by PHQ-9, and GAD-7. Multiple logistic regression model was used to analyze the influencing factors of mental health

Results There were 190 patients (2.4%) with depression and without anxiety, and 159 patients (2.1%) with comorbidities. After adjusting for relevant confounders, the elderly lived in rural areas (ORdepression=1.584, ORcomorbidities=3.217), exercised less

than 3 times/week (ORdepression=1.483, ORcomorbidities=1.911), reported normal and poor health (ORdepression=6.767 and 2.892, ORcomorbidities=5.968 and 1.925) were the positive correlation factor for depressive symptoms without anxiety symptoms and symptom comorbidity. Sedentary time < 3 and $3-5$ h/day (ORdepression=0.570 and 0.522, ORcomorbidities=0.323 and 0.425) and good sleep quality (ORdepression=0.406, ORcomorbidities=0.394) were the negative correlation factors with depressive symptoms without anxiety symptoms and symptom comorbidities

Conclusion The detection rate of mental health problems in the elderly was high in Ningbo, which needs to be paid more attention, and to actively take intervention measures to reduce the mental health problems of the elderly by the society and the government

关键词: Elderly, depression, anxiety, symptom comorbidities

精神专科医院抗菌药物使用现状与分析

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目的 本文通过研究某精神专科医院近四年住院患者抗菌药物的使用情况, 分析该精神专科医院抗菌药物使用现状。

方法 通过对住院各科室、各类抗菌药物的使用情况, 以及对抗菌药物使用率、使用强度、使用频度、使用金额等方面分析了该精神专科医院抗菌药物使用情况和现状, 并进一步随机抽取抗菌药物使用率较高的老年精神科抗菌药物出院病历 100 份进行用药合理性评价。

结果 精神专科医院住院患者抗菌药物使用以注射剂为主 (DDD_s 占 70% 以上), 主要使用类别为头孢菌素类、青霉素类和喹诺酮类, DDD_s 分别占 50.85%、21.72% 和 22.38%。从近四年的抗菌药物使用情况发现, 前三年抗菌药物使用率和使用强度呈下降趋势, 但 2023 年两项指标均上升并超过 2020 年。在精神专科医院, 老年精神科抗菌药物使用率

最高,以下呼吸道感染和泌尿道感染最为多见,2023年抗菌药物例次占全院的54.64%。随机抽样调查老年精神科抗菌药物使用合理率约75%。

结论 精神专科医院需要医生、药师以及医护人员的共同努力,并结合精神科患者疾病特征与专科用药的特点,降低患者感染风险,同时提高抗菌药物合理使用水平,从而降低抗菌药物使用率和使用强度。

关键词: 精神专科医院; 抗菌药物; 使用率; 使用强度; 合理性

T 淋巴细胞亚群检测对长期住院精神分裂症患者医院感染的相关性研究

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目的 探讨T淋巴细胞亚群联合炎性因子检测与长期住院精神分裂症患者医院感染的相关性。

方法 从2022年6月到2023年5月,从97例接受住院治疗的精神分裂症病人中抽样,同时从同期接受治疗的85例病人中抽样,并使用流式细胞术检测T淋巴细胞及其亚群以及炎性因子的含量,以此来评估两组病人的免疫炎性反应以及院内感染的可能程度。

结果 经过12周的住院治疗,研究发现,与未住院的患者相比,观察组的CD4+/CD8+、CD4+/CD8+、Th1/Th2、Th1/Th2的比值明显降低,而CD8+、cd8+、Th2的比值明显升高,这些变化都是可以统计出来的($P<0.05$)。此外,研究发现,在住院期间,观察组的IL-6、IL-8、TNF- α 的比值也都较之前的患者要高。最终,通过Logistic回归分析,得出了这些发现。长期住院精神分裂症患者的血液中CD4+/CD8+、Th1、Th1/Th2、IL-6、IL-8和TNF- α 浓度均与其疾病有显著的相关,其中 $P<0.05$ 。

结论 对长期住院精神分裂症患者进行T淋巴细胞亚群线粒体损伤检测,依据检测结果对免疫功能低下患者采取针对性免疫干预措施减少院感发生率方面值得推广。

关键词: 长期住院精神分裂症 T 细胞亚群检测 医院感染

老年期精神分裂症患者自知力与治疗态度现状及影响因素

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目的 探讨精神分裂症患者自知力与治疗态度及其影响因素,为提高精神分裂症患者自知力与治疗态度提供参考。

方法 选取144例老年期精神分裂症患者作为研究对象,使用自知力与治疗态度问卷进行横断面研究,采用统计学软件SPSS 25.0处理,单因素分析采用独立样本t检验或单因素方差分析;计数资料采用例数和百分比表示,采用多元logistic回归分析探讨影响精神分裂症患者ITAQ得分的因素, $P<0.05$ (双侧)表明差异具有显著性。

1.研究对象 选取2021年3月至2023年11月在本院住院接受治疗的144例精神分裂症患者作为研究对象。1.1纳入标准 ①符合国际疾病分类第10版(ICD-10)中精神分裂症诊断标准,年龄 ≥ 60 岁;②处于疾病稳定期,能理解并配合研究;③自愿参与,签署知情同意书。

1.2排除标准 ①合并其他类型精神系统疾病或存在神经病变;②有严重攻击行为或企图自杀者;③调查表填写不完整者。

结果 单因素分析结果显示,精神分裂症患者的自知力与治疗态度的影响因素为服药依从性、入院方式和主要照顾者,差异具有统计学意义($P<0.05$)。多元logistic回归分析结果显示,服药依从性、入院方式、主要照顾者是精神分裂症患者自知力与治疗态度的影响因素($P<0.05$)。服药依从性较高者的老年期精神分裂症患者的自知力和治疗态度更好。服药依从性高的患者对疾病的认识更为清晰,对治疗措施接受度也会更高,服药依从性低的患者对药物认知不全面,过度关注药物副作用,或由于被害妄想症状的影响,自行停药,从而影响治疗。规律服药是预防精神分裂症复发的关键因素,大部分精神分裂症患者进入反复发作、迁延加重的疾病发展过程,患者自知力也在此过程中逐渐降低。因此,对老年患者及其家属需进行药物健康宣教,明确药物治疗在精神分裂症治疗中的重要性,不可自行减药、停药。同时也应重视所出现的不良反应,及时根

据患者状况调整药物使用,尽量减少患者的不适感。及时解答患者用药疑惑,帮助其树立正确用药观念。

结论 老年期精神分裂症患者自知力与治疗态度得分较低,与服药依从性、主要照顾者、入院方式密切相关。临床需加强对这些患者的重视,及时采取针对性干预措施。同时良好的治疗环境、护患良好的沟通可以改善非自愿入院患者的负性感受。因此,针对非自愿入院的特殊患者,医护更应重视心理护理,同时完善入院评估机制,确保只在必要情况下采取非自愿入院措施,保障精神分裂症患者权益。

关键词:精神分裂症;自知力与治疗态度;影响因素

Association between The Sarcopenia, Frailty, and Intrinsic Capability Score on Falls in Hospitalized Patients with Stable Schizophrenia

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Objective We aimed to evaluate the role of geriatric measures of sarcopenia, frailty, and intrinsic capability (IC) score as predictors of falls in hospitalized patients with stable schizophrenia aged 50 years and older

Methods This was a retrospective cohort study of patients with schizophrenia from two mental health centers in western China. Sarcopenia was diagnosed following the diagnostic criteria, defined by the Asian Working Group for Sarcopenia (AWGS) 2019. Frailty was measured by the FRAIL scale, while IC was evaluated through assessment of five characteristics: cognition, psychological, sensory function, vitality and locomotion. The IC score was used as both a categorical and a continuous variable. As a categorical variable, patients were divided into two groups based on IC score, namely, the high IC-score group (IC score ≥ 3 points) and the low IC-score group (IC score 0-2 points). Data were collected on falls that occurred between September 1, 2019, and August 30, 2020. The outcome measure (falls) was obtained by checking medical records and interrogating

patients and medical staff in person to obtain information on patients' falls during the past year. The association between sarcopenia, frailty, IC score, and falls was analyzed by logistic regression analysis

Results 339 patients diagnosed with stable schizophrenia were recruited in the study. 55 (16.22%) of them reported falls in the past year. Patients diagnosed with sarcopenia and frailty were 180 (53.1%) and 47(13.86%), respectively. 321 (94.69%) were diagnosed with IC decline, of which 22.74%, 40.5%, 21.18%, 13.71% and 1.87% were impaired in one, two, three, four, and five dimensions, respectively. The number of patients in the high IC-score group was 118 (34.81%), and the number of patients in the low IC-score group was 221 (65.19%). The incidence of falls in patients with sarcopenia was higher than that in patients without sarcopenia (20% vs. 11.95%, $P=0.045$). The incidence of falls among patients in the high IC-score group was higher than that in the low IC-score group (23.73% vs. 12.22%, $P=0.006$). In addition, the IC score of the fall group was higher than that of the non-fall group (2.65 ± 1.17 vs. 2.12 ± 1.11 , $p=0.001$). However, there was no significant difference in the incidence of falls between frail and non-frail patients. Logistic regression analysis showed that compared with the low IC-score group, patients with stable schizophrenia in the high IC-score group had a greater risk of falling (OR=1.865, 95%, CI: 1.019-3.412). Moreover, the higher the IC score, the higher the risk of falls in patients with stable schizophrenia (OR=1.321, 95%, CI: 1.005-1.736). However, sarcopenia and frailty were not associated with the risk of falls in patients with stable schizophrenia

Conclusion The findings demonstrated that patients with stable schizophrenia in the high IC-score group had a higher risk of falling than those in the low IC-score group. Moreover, the higher the IC score, the higher the risk of falls in patients with stable schizophrenia. However, sarcopenia and frailty were not associated with the risk of falls in patients with stable schizophrenia

关键词: sarcopenia, frailty, intrinsic capacity, schizophrenia, fall

SARC-F, SARC-CalF, and SARC-F-EBM As Practical Predictive Tools for The Risk of Pneumonia in Patients with Stable Schizophrenia—a Prospective Study

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Objective Pneumonia incidence and death rates are high in individuals diagnosed with schizophrenia. Sarcopenia is one of the risk causes of pneumonia among individuals diagnosed with schizophrenia. Here, we investigate the efficiency of three simple sarcopenia screening questionnaires, SARC-F-EBM, SARC-CalF, and SARC-F, for predicting pneumonia in stable schizophrenia patients

Methods This was a prospective study that enrolled patients with stable schizophrenia aged ≥ 50 years from two psychiatric hospitals in western China. The patients' medical data were collected between September 1 and 30, 2020. The patients' pneumonia data referred to pneumonia that occurred between October 2020 and October 2021. Three hundred thirty-five stable schizophrenia patients, among whom 229 were males (68.36%), were enrolled in the prospective study. Our study applied three screening questionnaires: SARC-F-EBM, SARC-CalF, and SARC-F. SARC-F, SARC-CalF, and SARC-F-EBM scores ≥ 4 , 11, and 12, respectively, indicate sarcopenia. The gathered data were examined using logistic regression analysis to determine the link between the scores of these screening tools and the risk of pneumonia in individuals with stable schizophrenia

Results The rate of pneumonia in stable schizophrenia individuals was 24.5%. Among the included stable schizophrenia patients, the incidence of pneumonia in individuals with SARC-CalF scores ≥ 11 was higher than in those with SARC-CalF scores less than 11 (29.91% vs 14.88%, $P=0.002$). In individuals with SARC-F-EBM scores ≥ 12 , the pneumonia occurrence was higher than that in those with SARC-F-EBM scores

less than 12 (37.33% vs 20.77%, $P=0.003$). However, this pattern was not observed in patients with stable schizophrenia with SARC-F scores ≥ 4 and less than 4. After applying logistic regression data quantitation, we found that individuals with SARC-CalF scores ≥ 11 had a higher danger of developing pneumonia than patients with SARC-CalF scores < 11 (OR=2.441, 95%CI: 1.367-4.36). After adjusting the possible confounders, patients with SARC-CalF scores ≥ 11 had a greater danger of pneumonia (OR=2.518, 95%CI: 1.36-4.665). Correspondingly, the comparison between patients with SARC-F-EBM scores < 12 and ≥ 12 confirmed that SARC-F-EBM values ≥ 12 predicted a higher risk of developing pneumonia (OR=2.273, 95%CI: 1.304-3.961). We have set possible confounders, and the results showed that the patients with SARC-F-EBM scores ≥ 12 had a greater danger of developing pneumonia (OR=2.181, 95%CI: 1.182-4.026). However, in stable schizophrenia patients with SARC-F scores ≥ 4 and < 4 , we have not yet observed a similar pattern for pneumonia risk

Conclusion In conclusion, these findings show that SARC-F-EBM and SARC-CalF scores are related to pneumonia risk in stable individuals with schizophrenia. We advocate utilizing them to determine the likelihood of pneumonia in these individuals, particularly in medical facilities that cannot diagnose sarcopenia

关键词: Sarcopenia; SARC-F-EBM; SARC-CalF; SARC-F; Stable schizophrenia; Pneumonia

Simple Measurement Indicators Instead of Sarcopenia Obesity for The Risk of Pneumonia in Patients with Stable Schizophrenia—a Prospective Study

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Objective Sarcopenia obesity (SO) is associated with a variety of adverse outcomes, however, one of our previous results showed that SO as defined by ESPEN

was not associated with the occurrence of pneumonia. Therefore, this study intends to explore other indicators to establish SO and whether it can predict the occurrence of pneumonia

Methods This was a prospective study that enrolled patients with stable schizophrenia aged ≥ 50 years from two psychiatric hospitals in western China. Baseline data was established between September 1 and 30, 2020, while the pneumonia was collected within the following year. We composed SO by three variables: hand-grip strength (HGS), calf circumference (CC) and waist-to-hip ratio (WHR). The cutoff values for both HGS and CC are recommended by the AWGS2019 consensus. The WHR ratio is divided according to the threshold Chinese reference standard. When all three variables were abnormally defined as SO, we analyzed the correlation between SO and pneumonia according to logit regression

Results We included a total of 335 people in the analysis, 25.07% of whom were SO and 24.48% developed pneumonia in the following. The prevalence of pneumonia increased in the normal group compared with the low HGS and low CC group and SO groups (normal vs. low HGS and low CC vs. SO: 18.62% vs. 26.98% vs. 35.71%, $p=0.009$). Further logistic regression analysis showed that compared with the normal group, patients in the SO group had a higher risk of pneumonia (OR=2.429, 95%CI: 1.363-4.329). After adjusting for potential confounding factors, the results still showed that patients in the SO group had a higher risk of pneumonia (OR=2.461, 95%CI: 1.306-4.639). However, there was no difference in the risk of pneumonia between patients in the low HGS and low CC group and those in the normal group

Conclusion The indicators we constructed were associated with the development of pneumonia. It is thus recommended that these scores be utilized to assess the likelihood of pneumonia in these individuals

关键词: Schizophrenia; Pneumonia; Muscle mass; Obesity; sarcopenia

基于精神科记忆门诊评价阿尔兹海默病患者

的精神行为症状

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目的 探索精神科记忆门诊就诊的阿尔兹海默病(AD)患者中精神行为症状(BPSD)的患病特点,以提高对 BPSD 的识别率,达到临床早发现、早治疗的目的。

方法 本研究按纳入标准收集 2019.4 至 2023.10 于成都市第四人民医院记忆门诊就诊的 AD 患者共 463 例,收集每个被试的一般人口学资料、既往史、家族史、婚姻史等。采集简易精神状态量表(MMSE)、日常生活能力量表(ADL)、神经精神问卷(NPI)等神经心理问卷。根据 MMSE 得分将患者分为轻度(123 例)、中度(178 例)及重度(162 例)AD 组。采用 SPSS27.0 统计学软件进行数据分析。组间比较采用单因素方差分析和卡方检验;相关性分析采用 Pearson 相关分析。以 $P<0.05$ 为差异有统计学意义。

结果 轻中重 AD 组患者的人口学资料无显著差异,但 MMSE、ADL、NPI 得分均有显著性差异,越重的 AD 患者,MMSE 得分越低,ADL 得分越高,NPI 得分越高。三组出现 BPSD 的几率分别为(66.7%, 91.6%, 100%, $P<0.05$)。整个人群中最常见的症状为易激惹(51.2%),而重度 AD 组患者最常见的 BPSD 为异常运动行为(67.9%)。是否患脑出血、慢阻肺对 BPSD 的出现几率有显著影响,其中患脑出血出现幻觉的概率增高(80% vs 33.7%, $P<0.05$),患慢阻肺出现异常运动行为概率增加(66.7% vs 42.6%, $P<0.05$)。女性 AD 患者妄想的发生率明显高于男性患者(38.9% vs 29.5%, $\chi^2=4.305$, $P=0.038$),NPI 总分与 MMSE 呈负相关($r=-0.408$, $P<0.01$),与 ADL 呈正相关($r=0.416$, $P<0.01$)。

结论 随着 AD 病程的进展,患者痴呆严重程度加重,生活自理能力愈加下降,出现 BPSD 的几率也随之增加。重度 AD 患者出现 BPSD 的几率为 100%,提示我们在 AD 患者中精神症状的识别和治疗的重要性。基础疾病影响着 BPSD,脑出血对大脑功能直接造成影响,慢阻肺则通过氧气的减少间接影响着脑功能,这些因素均会增加 BPSD 的概率和发生发展。生物学因素提示男女性别差异对 BPSD 的种类有影响,女性更容易产生妄想,这或许与女性的性格特点有一定关系。本研究提示,在精神科

记忆门诊就诊的 AD 人群中, BPSD 的识别率远高于社区调查和综合医院, 这可能与患者就诊目的有关, 也可能与精神科医生对精神症状的高识别率有关, 未来应加强对非精神科医生 BPSD 识别率的培训; 本研究还提示, 生物学因素影响 BPSD 的种类和程度, 未来应进一步开展 AD 患者 BPSD 的危险因素的研究, 有利于此类疾病的防治。

关键词: 阿尔兹海默病; 记忆门诊; 精神行为症状

以情绪障碍为首表现的抗 NMDA 受体脑炎 1 例

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抗 N-甲基-D-天门冬氨酸(N-methyl-D-aspartate, NMDA)受体脑炎是一种中枢神经系统的自身免疫性疾病, 其由抗 NMDA 受体抗体介导, 属于边缘叶脑炎的一种, 主要累及海马、杏仁核、岛叶等边缘结构, 临床表现以精神行为异常、自主神经功能障碍、癫痫发作为特点。NMDA 受体脑炎临床表现不具有特异性, 症状常多变、不典型, 临床上极易漏诊和误诊, 预后较差。

本案例报道了我院收治的抗 NMDA 受体脑炎合并早发阿尔茨海默病男性患者 1 例, 该病例以情绪低落, 反应速度变慢, 注意力不集中, 兴趣下降为主要表现, 入院后头部核磁共振 (magnetic resonance imaging, MRI), 液体衰减反转恢复序列 (fluid-attenuated inversion recovery, FLAIR) 像显示皮质下点状高信号影, 双侧海马头、海马旁回、扣带回皮质层高信号, 脑脊液常规及生化未见异常, 脑脊液副肿瘤综合征抗体为阴性, 脑脊液抗 NMDA 受体抗体 IgG: 1:3.2, 血清 NMDA 受体抗体阳性, 滴度: 1:10。从而确诊抗 NMDA 受体脑炎。

给予抗抑郁药物、激素冲击治疗后病情得到大部分改善, 治疗后 6 个月随访, 患者抑郁综合征基本痊愈。该病例提示我们抗 NMDA 受体脑炎会以情绪障碍为首发症状, 在精神科临床实践时, 应注意及时甄别和尽早治疗。

关键词: 抗 NMDA 受体脑炎; 情绪障碍; 精神科

运动治疗在抑郁患者治疗中的研究进展

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体育锻炼是一种健康而重要的生活方式, 因其能够促进心理健康、协助预防和管理心理健康障碍而受到越来越多的关注。体育锻炼对于情绪问题的改善作用也较为突出。抑郁症作为一种常见的精神障碍, 其特征是持续情绪低落和(或)对日常活动缺乏兴趣或乐趣, 伴有精神运动和认知症状。抑郁症的治疗一直是研究的重点, 目前仍需要更多并且有效的治疗方法来解决社会中不同群体的抑郁。

体育锻炼是一个有效且方便的方法, 可以广泛应用并融入日常生活。研究证实, 体育锻炼能够明显的减低抑郁症状, 并且体育锻炼是临床和亚临床环境中具有潜在缓解抑郁症状作用的一种可调整的健康行为。体育锻炼通过增加行为活动来提供愉悦感并减少疲劳, 这有助于缓解抑郁症状患者的社会和心理因素, 从而能够明显的减低抑郁症状; 而体育锻炼较少者的快感缺失和疲劳症状等抑郁症状可能更为多见, 对于久坐不动的人来说, 更高水平的体育锻炼可以防止抑郁症的风险。体育锻炼能够显著降低了抑郁的风险, 而抑郁同样可能会导致体育锻炼的减少, 而体育锻炼和抑郁之间这种的双向影响的生物学机制可能涉及大脑皮层的相关变化, 激素和细胞水平的变化以及体育锻炼-抑郁症关联的心理社会学机制等。

体育锻炼对于身体健康的影响可能涉及到体育锻炼的频率、强度以及锻炼的类型。研究显示, 跑步和球类运动对自我健康状态的影响更为显著, 并且一个人在一周内不同类型的体育锻炼越多, 身体健康状态评定为良好的可能性就越大。所以说, 慢跑和球类运动的相结合可能是最为有益的锻炼方式。在临床上, 体育锻炼仍然是一个未被充分利用的治疗手段。考虑到体育锻炼易于获得和操作, 可以优先将其作为预防和治疗抑郁的补充干预措施, 以便辅助药物治疗, 从而更为快速的达到改善抑郁的效果。

关键词: 抑郁, 焦虑, 体育锻炼, 运动治疗

Schizophrenia, Bipolar Disorder and Major Depressive Disorder Are Probably Not Risk Factors for Cardiovascular Disease: a Mendelian Randomized Study

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Objective Individuals with severe mental illnesses (SMI) like schizophrenia, bipolar disorder (BD), and major depressive disorder (MDD) have an increased risk for cardiovascular diseases (CVD), but the causal relationship remains unclear

Methods Mendelian randomization (MR) was used to investigate the potential causal relationship between SMI and CVD and its five subtypes of disease, coronary heart disease, myocardial infarction, stroke, heart failure, and atrial fibrillation. Subsequently, the MR results of SMI with CVD and its subtypes were meta-analyzed separately. To assess the robustness of the findings, Cochran's Q test, MR-Egger intercept test, MR-PRESSO, and leave-one-out analysis were used

Results MR analyses have revealed correlations between schizophrenia and BD with CVD and their subtypes in certain datasets. No significant evidence of an association between MDD and CVD or its subtypes was observed in our MR analyses. After meta-analysis, no significant impact of genetically predicted schizophrenia, BD, or MDD on CVD and their subtypes was found

Conclusion Our MR study did not provide conclusive evidence for a causal association between genetic predisposition to SMI and CVD. Based on the available evidence, it would be more appropriate to consider SMI as potential risk markers for CVD and its subtypes rather than definitive risk factors

[Highlights]

1. This Mendelian randomization (MR) study includes more GWAS databases than other studies as-

sessing the risk of serious mental illness with cardiovascular diseases (CVD).

2. MR analysis showed a correlation between schizophrenia and bipolar disorder with CVD and its subtypes in some datasets, but the correlation disappeared after meta-analysis.

3. Based on the available evidence, it would be more appropriate to consider SMI as potential risk markers for CVD and its subtypes rather than definitive risk factors.

关键词: Severe mental illness, Schizophrenia, Bipolar disorder, Major depressive disorder, Cardiovascular disease, Mendelian randomization

肌少性肥胖症对轻中度阿尔茨海默病患者认知功能的影响

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目的 探讨轻中度阿尔茨海默病 (AD) 患者肌少性肥胖症 (SO) 与认知障碍的关系。

方法 取 2021 年 1 月至 12 月苏州大学附属第二医院神经内科记忆障碍门诊确诊的 120 例轻、中度 AD 患者和同期体检中心体检的 56 名对照者 (NC)。按照是否合并肌少症和/或肥胖, 将 AD 患者分为正常组、肌少症组、肥胖组、肌少性肥胖 (SO) 组共 4 个亚组。收集一般资料, 测定人体成分及肌少症相关指标, 进行神经心理学量表评估。比较 NC 组及轻、中度 AD 一般资料、身体成分、肌少症相关指标及 SO 的患病情况; 比较 AD 患者 4 个亚组间一般资料、身体成分、肌少症相关指标、认知功能各领域评分间的差异, 并进行两两之间进行偏相关分析; 用 Logistic 回归分析探讨 SO 与 AD 患病风险的相关性。

结果 120 例 AD 患者中, SO 患者在轻度 AD 组 9 例 (16.7%), 中度 AD 组 16 例 (24.2%), NC 组 4 例 (7.1%)。中度 AD 组 SO 患病率 ($P < 0.05$) 高于 NC 组。相较 NC 组, 轻、中度 AD 组握力较低 ($P < 0.05$), 三组中, 中度 AD 组四肢骨骼肌量指数 (AMSI) 最低, 体脂百分比 (PBF) 最高, 受教育年限最低 (均 $P < 0.05$)。AD 患者四个亚组之间 SO

组平均年龄(75.2±3.5)最大,高血压、糖尿病患病率较正常组高(P<0.05)。相较正常组,肌少症组及SO组的MMSE、MoCA、CDT、MES-T、MES-M、MES-E、BDST、VFT得分较低(均P<0.05),ADL得分较高(均P<0.05);与肥胖组相比,肌少症组及SO组MMSE、MoCA、画图、MES-T、MES-E、FDST、VFT得分较低,ADL得分较高(均P<0.05)。AD患者ASMI、PBF、腰臀比、内脏脂肪面积与多个认知功能领域及ADL评分具有相关性(均P<0.05)。经Logistic回归分析,调整潜在混杂因素后,与正常组相比,肥胖与AD患病风险无关,肌少症(OR=5.351,95%CI:1.274-22.463)、SO(OR=5.843,95%CI:1.259-27.111)与AD患病风险仍具有显著相关性(P<0.05),且相较肌少症组,SO与AD患病风险的相关性更高。

结论 SO与轻中度AD患者广泛性认知功能受损相关,相比肌少症而言,SO可能对AD影响更为显著。早期识别、有效干预SO或许可以预防和延缓AD的发生和发展。

关键词: 阿尔茨海默病;肌少性肥胖;认知功能;肌少症;肥胖

轻中度女性阿尔茨海默病患者肌少症与睡眠状况及认知功能的关系

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目的 睡眠障碍和肌少症均是认知功能恶化的危险因素,促使阿尔茨海默病(AD)的发生发展。然而,很少有研究评估女性AD患者肌少症与睡眠障碍间的关系。本研究旨在探讨轻中度女性AD患者肌少症与睡眠状况的关系。

方法 采用横断面研究,收集门诊女性AD患者112例,年龄60~85岁。收集人口统计学资料、四肢骨骼肌质量指数(ASMI)、握力和6m步速指标。根据亚洲肌少症工作组的标准诊断肌少症。匹兹堡睡眠质量指数(PSQI)量表评估睡眠变量。简易精神状态量表(MMSE)和蒙特利尔认知评估量表(MoCA)评估认知功能。二元逻辑回归模型探讨睡眠变量与认知功能和肌少症间的关系,并调整了潜在的混杂因素。

结果 门诊女性AD患者分为有肌少症(ADSa)36例和无肌少症(ADSa)76例,肌少症患病率为32.1%。ADSa组ASMI较低,握力较弱,步态速度较慢,睡眠质量差的发生率较高,认知功能较差。多因素二元逻辑回归分析显示,PSQI总分(OR=1.23)、睡眠质量(OR=3.67)、主观睡眠质量(OR=2.03)、睡眠效率(OR=2.54)、日间功能障碍(OR=1.70)、MMSE(OR=0.75)和MoCA(OR=0.71)与肌少症相关。与入睡时间≤15min相比,31-60min(OR=4.61)和>60分钟(OR=6.34)与肌少症相关,入睡时间延长有统计学意义的增加趋势(P for trend=0.026)。与睡眠持续时间7-8h相比,6h(OR=1.51)、8-9h(OR=7.48)和≥9h(OR=8.21)与肌少症有关。

结论 伴肌少症的女性AD患者存在更多的睡眠症状和更差的认知障碍。PSQI总分越高、主观睡眠质量越差、睡眠潜伏期越长、睡眠时间过多或不足、睡眠效率越低、白天功能障碍、认知功能越差,轻中度女性AD患者发生肌少症的几率越高。

关键词: 阿尔茨海默病,认知功能,女性,肌少症,睡眠质量

Bibliometric Analysis of The Research Status and Global Trends in Behavioral and Psychological Symptoms of Dementia in Alzheimer's Disease From 2002 To 2022

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Objective Several reviews on behavioral and psychological symptoms (BPSDs) in patients with Alzheimer's disease (AD) have summarized the current state of this field, but global trends are unclear. This study utilized CiteSpace to provide a global overview of the current (from 2002 to 2022) state of research on AD and its BPSDs and to predict future research trends in the field

Methods Data were retrieved from the Web of

Science Core Collection. Bibliometric and co-occurrence analyses were performed using CiteSpace software. In total, 787 valid publications were included in the analysis

Results Publications on AD and BPSD have shown an increasing trend since 2002. The United States and the University of Toronto were the countries and institutions with the highest total number of publications, respectively, whereas Japan and China were the second and third most influential in the field in terms of number of publications. Clive Ballard was the top author in terms of the number of publications. Journal of Alzheimer's Disease had the highest number of publications on this topic. Co-occurrence analysis showed that AD, behavioral symptoms, cognitive impairment, and early markers are hot topics in this area. Non-drug management of BPSDs, pharmacological treatment, and physiotherapy will be a hot topic in this field in the future

Conclusion Our study visualized the relevant articles over the past 21 years to detect global hotspots and trends. Our findings may help researchers to identify research hotspots in this field and will help in the selection of appropriate research topics, while possibly leading to cross-regional cooperation

关键词: Alzheimer's disease, behavioral and psychological symptoms of dementia, bibliometrics analysis, CiteSpace, global trends.

A Study on The Potential Role of Mango Extract Mangiferin in Relieving Parkinson's Disease (PD)

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Objective As the global population ages, the incidence of Parkinson's disease (PD) continues to escalate, imposing significant social and economic burdens.

Mangiferin (MGF), a polyphenolic bioactive compound has been shown to play a role in the prevention and treatment of PD. This study is set to investigate the neuroprotective effects of MGF in a MPTP-induced zebrafish PD model

Methods MPTP is used to induce zebrafish PD animal model, MGF treatment is performed to relieve the PD-related symptoms in zebrafish PD animal model. Initially, optimal concentrations for modeling were established using various MPTP and MGF combinations. The zebrafish were then divided into control, MPTP-treated, and MGF co-treated groups. Subsequent evaluations included hatching rates, mortality rates, growth and development conditions, and spontaneous motor abilities, as well as measurements of enzymatic activities of SOD, CAT, and levels of GSH. Ultimately, the therapeutic efficacy of MGF on the PD model in zebrafish was assessed through transcriptomic sequencing

Results MGF restored the delayed hatching and reduced embryonic mortality in MPTP-induced zebrafish larvae. In addition, MGF relieved oxidative stress and ameliorated the reduction in locomotor activity in MPTP-induced zebrafish larvae. Moreover, a part of PD-related genes changes were partially restored in MPTP-induced zebrafish larvae after MGF treatment

Conclusion MGF may partially alleviate symptoms in MPTP-induced zebrafish PD model and has a good clinical therapeutic prospect in the future treatment of PD

关键词: Mangiferin, Parkinson's Disease, Zebrafish, MPTP

躯体生活自理能力缺陷老人认知水平现状研究——基于 CHARLS2020 数据的实证分析

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目的 探讨我躯体生活自理能力缺陷老年人认知水平现状及相关影响因素, 为干预政策和措施的

制定提供依据和参考。

方法 使用中国健康与养老追踪调查 (China Health and Retirement Longitudinal Study, CHARLS) 2020 年全国调查数据, 选取受访中躯体生活自理能力量表 (Physical Self-Maintenance Scale, PSMS) ≥ 1 且年龄 ≥ 60 岁以上的老年人作为研究对象, 通过心智状况和情景记忆能力测量评估研究对象的认知水平; 应用单因素分析不同人群的认知水平现状。

结果 最终纳入研究对象 2568 例, 认知得分为 8.53 ± 5.95 分, 其中心智状况 (认知完整性) 得分 4.49 ± 3.53 分, 记忆得分 4.05 ± 2.96 分。认知水平得分在性别、年龄、文化程度、居住地、户口类型、婚姻状况、是否有养老金、睡眠时间、上网、社交、一年内有无发生摔倒等方面均存在差异 (均 $P < 0.05$)。

结论 躯体生活自理能力缺陷的老年人认知水平低于我国老年人常模, 随着年龄增长, 认知水平逐渐降低。同时女性认知水平低于男性; 丧偶或从未结婚的单身老年人认知水平明显低于已婚或离婚人群; 城市优于农村, 有固定的生活伴侣优于独居老年人, 经常参加社交活动会使老年人认知功能得到改善。

关键词: 自理能力缺陷老人; 认知水平; CHARLS2020

老年痴呆患者规范化管理措施及效果研究

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目的 探究对于轻中度老年痴呆病人给予规范化管理之后的效果。**方法** 随机的选取 2022 年 1 月到 2023 年 5 月期间入住我院明确诊断有老年痴呆病人 60 例, 分为对照组和观察组, 对照组给予常规护理, 观察组进行 CST (认知促进治疗) 全病程干预, 对认知功能、生活质量水平以及生活能力进行评价。

方法 随机的选取 2022 年 1 月到 2023 年 5 月期间入住我院的需要进行治疗的明确诊断有老年痴呆的病人 60 例来作为本次的研究对象, 进行观察跟踪分析, 分为两组, 分别为对照组和观察组, 其中对照组共 30 人, 女性 18 人、男性 12 人, 他们的年龄都在 62~75 岁, 均值为 (66.32 ± 2.85) 岁, 病程为 2.2~5

年, 均值为 2.4 年。其中观察组共 30 人, 女性 16 人、男性 14 人, 他们的年龄都在 64~76 岁, 均值为 (67.25 ± 3.04) 岁, 病程为 2.3~4.9 年, 均值为 2.6 年。对照组的病人给予常规的非药物治疗干预。对观察组的病人进行 CST (认知促进治疗) 的非药物干预, 每周干预 1 次, 30-45min/次, 14 周为一个治疗疗程, 收集每周两组病人的简易智能精神状态 (MMSE) 以及阿兹海默症生活质量测量表 (QOL-AD), 对患有老年痴呆的病人的认知功能、生活质量水平以及生活能力进行评价。

结果 CST (认知促进治疗) 全病程干预后, 观察组病人的 MMSE 的总评分、定向力、回忆能力以及语言能力和 QOL-AD 表的得分均要高于对照组, ($P < 0.05$)。

结论 在临床上经过 CST (认知促进治疗) 的全病程干预之后, 病人的认知功能有明显的改善, 延缓了记忆力减退, 提高了病人的生活质量水平, 同时提高病人的自我管理能力和生活能力。

关键词: 规范化管理措施; 老年痴呆; 效果分析

老年精神疾病患者多重用药合理使用的探讨

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目的 本文旨在探讨老年精神疾病患者多重用药的现状、适宜性评估方法、以及科学管理策略。随着全球人口老龄化的加剧, 老年精神疾病患者的多重用药问题日益凸显, 这对医疗系统提出了新的挑战。本文通过分析国内外研究数据, 评估多重用药的适宜性, 并提出有效的管理手段。

方法 本文整理近年来的研究, 分析了国内外关于老年精神疾病患者多重用药的研究报告和指南。通过定量数据和定性分析, 本文对老年精神疾病患者的多重用药发生率、风险因素、以及管理策略进行了综合评估。

结果 老年精神疾病患者的多重用药现象普遍存在, 且与躯体疾病共病情况紧密相关。多重用药不仅增加了药物不良反应的风险, 还可能导致医疗成本的增加和生命质量的降低。国内外的多重用药发生率存在显著差异, 我国华北地区的发生率尤为

突出。此外,本文还发现,多学科团队协作、患者自我管理、以及临床决策支持系统(CDSS)在多重用药管理中发挥着重要作用。

结论 老年精神疾病患者的多重用药问题是一个复杂的公共卫生问题,需要多方面的干预和管理。本文强调了多学科团队协作的重要性,并指出药师在药物审查中的关键角色。同时,患者的自我管理能力提升和临床决策支持系统的合理应用对于优化多重用药管理至关重要。未来的研究和实践应持续探索和优化针对老年精神疾病患者的多重用药管理策略,以适应不断变化的治疗需求和挑战。

关键词: 多重用药,精神科用药,合理用药,老年患者

血糖波动与老年 2 型糖尿病合并慢性疼痛的相关性研究

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目的 探讨血糖波动相关参数及其他临床资料与老年 2 型糖尿病(T2DM)合并慢性疼痛的相关性及其风险预测价值。

方法 收集安徽医科大学第一附属医院老年内分泌科住院的 60 例老年 T2DM 合并慢性疼痛患者的临床资料,由专人对所有研究对象利用数字评分量表(NRS)进行疼痛评分,根据疼痛评分分为轻度疼痛组(NRS≤5 分, n=28)和重度疼痛组(>5 分, n=32)。收集患者一般资料及临床检查数据,通过持续葡萄糖监测系统(CGMS)记录血糖情况, Spearman 相关性分析疼痛评分与血糖波动参数及其他临床资料的相关性,二元 Logistic 回归分析老年 T2DM 合并慢性疼痛程度的影响因素,受试者工作特征(ROC)曲线评价 MAGE、CV、TIR 对慢性疼痛程度的预测价值。

结果 Spearman 相关性分析显示,性别、年龄、病程、疼痛持续时间、MAGE、CV、MBG、SD、MODD、最高血糖值与老年 T2DM 患者合并慢性疼痛的疼痛得分呈正相关,RBC、Hb、eGFR、TIR 与老年 T2DM 患者合并慢性疼痛的疼痛得分呈负相关。Logistic 回归分析显示,性别、年龄、病程、疼痛持续时间、RBC、Hb、eGFR、MAGE、TIR、CV、MBG、SD、

MODD 是老年 T2DM 患者合并慢性疼痛程度的危险因素。ROC 曲线分析显示, MAGE 的 ROC 曲线下面积为 0.741,敏感度为 53.1%,特异度为 89.3%; CV 的 ROC 曲线下面积为 0.668,敏感度为 40.6%,特异度为 89.3%; TIR 的 ROC 曲线下面积为 0.763,敏感度为 67.9%,特异度为 84%。

结论 血糖波动相关指标等与老年 T2DM 合并慢性疼痛有相关性,并可能成为预测老年 T2DM 合并慢性疼痛的潜在观察指标。

关键词: 老年 T2DM,血糖波动,慢性疼痛,持续葡萄糖监测,相关性

Insulin Resistance Paradox of TyG Index and Cognitive Impairment in Older Adults without Diabetes: Evidence From A National Retrospective Cohort Study (CLHLS, 2014–2018)

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Objective There is a significant lack of clarity on the relationship between insulin resistance (IR) and vulnerability to cognitive decline, with conflicting research results. The aim of this research was to conduct a nationwide retrospective cohort study on an older Chinese population without diabetes in order to investigate the relationship between cognitive impairment and triglyceride glucose (TyG) index, which serves as a proxy indicator for IR

Methods The research utilized information from the Chinese Longitudinal Healthy Longevity Survey (CLHLS) 2014–2018 cohort, encompassing 988 non-diabetic adults with an average age of 79.78 ± 9.21 years, of which 572 were male (57.89%) and 416 were female (42.11%). The Mini-Mental State Examination (MMSE) was used to assess cognitive performance. To estimate the relationship between TyG index and cognitive impairment risk, multiple Cox regression analyses were employed. Threshold effects were examined via a two-piecewise logistic regression model. Additionally, interaction and stratified analyses were conducted taking into account characteristics including age, sex, marital

status, exercise habits, smoking, and alcohol consumption

Results Following a 4-year follow-up period, cognitive impairment developed in 201 participants (20.3%) who had normal cognition at baseline. After controlling for variables, the multiple Cox regression analysis revealed no significant link between the TyG score and cognitive impairment (HR = 0.77, 95% CI: 0.56–1.06, P = 0.106). Smoothing plots, however, indicated a non-linear association between the TyG index and cognitive impairment, identifying the inflection point of the TyG index at 7.57 through a two-segmental Cox regression model. A negative connection was found above this inflection point (HR = 0.67, 95% CI: 0.50 - 0.91, P = 0.009), but no significant association was found below it (P = 0.75)

Conclusion This study contributes to the understanding of the "insulin resistance paradox" hypothesis concerning cognitive decline in non-diabetic elderly individuals. The findings offer pertinent insights with implications for informing public health strategies and policy development

关键词: insulin resistance, paradox, triglyceride glucose index, cognitive impairment, older

社区老年人心理状况在慢性躯体疾病和社会支持影响生活质量的中介效应

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目的 探究社区老年人心理状况在慢性躯体疾病患者社会支持对生活质量影响的中介效应,为老年人身心健康管理提供理论依据。

方法 采用多阶段随机抽样法,对某城市社区服务中心 60 岁以上的老年人运用计算机诊断系统开展老年慢性躯体疾病、抑郁症和焦虑症筛查,探讨老年人心理状况对慢性躯体疾病、社会支持影响生活质量的因素及相关性,运用结构方程模型进行假设验证。

结果 社区老年人生活质量得分(82.19±11.99)分,社会支持得分(5.37±1.61)分,抑郁得分(1.48±3.59)分,焦虑得分(6.82±5.25)分,80.29%的老年人患有 1 种及以上慢性躯体疾病;慢性躯体疾病、社会支持与心理状况均对老年人生活质量影响显著,其中心理状况影响效用最强,其次是慢性躯体疾病与社会支持;慢性躯体疾病与社会支持可直接影响老年人生活质量,还可通过心理状况的部分中介作用影响老年人生活质量(P<0.05),中介效应分别占总效应的 53.74%、49.10%。

结论 社区老年人生活质量处于中等偏上水平,社会、心理、躯体健康均会影响老年人生活质量,且心理健康是老年人生活质量最重要的影响因素,建议实施家庭-社区-医院三级监测、评估、干预机制,以提升老年人生活质量。

关键词: 社会支持;慢性躯体疾病;抑郁症;焦虑症;生活质量;中介效应

老年住院患者生物膜阳性 KPBSI 患者危险因素分析及血清 CPR、PCT、SAA 变化对预后的评估价值

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目的 探讨老年住院患者生物膜阳性肺炎克雷伯菌血流感染的危险因素。

方法 回顾性分析 2019 年 1 月~2020 年 12 月在本院收治的 88 例老年肺炎克雷伯菌血流感染患者,根据患者肺炎克雷伯菌生物膜的检出情况,将其分为生物膜阳性组(n=57)和生物膜阴性组(n=31)。记录两组患者年龄、性别、体质指数(BMI)、合并基础疾病、入住 ICU、使用免疫抑制剂、抗菌药物使用情况、抗生素使用时间、糖皮质激素使用时间、侵袭性操作及血流感染前住院时间等一般资料,对比两组老年住院患者肺炎克雷伯菌耐药情况,采用二分类 Logistic 回归分析影响老年住院患者生物膜阳性肺炎克雷伯菌血流感染的危险因素。

结果 88 例肺炎克雷伯菌血流感染患者共分离出 88 例克雷伯菌,其中生物膜阳性肺炎克雷伯菌 57 例(64.77%),生物膜阴性肺炎克雷伯菌 31 例(35.23%)。生物膜阳性肺炎克雷伯菌对氨曲南、氧

氟沙星、诺氟沙星及环丙沙星的耐药性明显高于对照组 ($\chi^2=5.301$ 、 2.134 、 2.098 、 2.327 , P 均 <0.05); Logistic 回归分析显示, 合并糖尿病 ($OR=2.751$, $P=0.016$)、气管切开或插管 ($OR=2.986$, $P=0.007$)、碳青霉烯类抗生素 ($OR=2.959$, $P=0.010$)、抗生素使用时间 >14 d ($OR=2.649$, $P=0.021$) 均为影响老年住院患者生物膜阳性肺炎克雷伯菌血流感染的独立危险因素。建立老年住院患者生物膜阳性肺炎克雷伯菌血流感染的 Logistic 回归风险预测模型模型预测概率 $P=1/[1+e^{-(2.319+1.012\times(\text{糖尿病})+1.094\times(\text{气管切开或插管})+1.085\times(\text{碳青霉烯类抗生素})+0.974\times(\text{抗生素使用时间}))}]$, Hosmer-Lemeshow $\chi^2=7.685$, $P=0.089$; ROC 分析显示, Logistic 回归风险预测模型预测 VAP 的 AUC 为 0.782。

结论 老年住院患者生物膜阳性肺炎克雷伯菌血流感染的 Logistic 回归风险预测模型具有较好的拟合度和预测效能, 临床可重点关注合并糖尿病、长期使用抗生素的患者, 尽量减少气管切开或插管等侵袭性操作, 合理选择抗菌药物, 以降低肺炎克雷伯菌血流感染的发生率。

关键词: 生物膜阳性; 肺炎克雷伯菌; 血流感染; 危险因素

The Potential Diagnostic Accuracy of Urine Formaldehyde Levels in Alzheimer's Disease: A Systematic Review and Meta-analysis

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Objective Formaldehyde (FA), a toxic aldehyde, has been shown to be associated with a variety of cognitive disorders, including Alzheimer's disease (AD). There is increasing evidence that FA levels are significantly increased in AD patients and may be involved in the pathological process of AD. The aim of this study was to assess the potential diagnostic value of urine FA levels in AD using meta-analysis techniques

Methods Original reports of morning urine FA levels in AD patients and healthy controls (HCs) were included in the meta-analysis. Standardized mean differences (SMD) were calculated using a random-effects model, heterogeneity was explored using methodological, age, sex difference and sensitivity analyses, and receiver operating characteristic (ROC) curves were constructed to assess the diagnostic value of urine FA levels in AD

Results A total of 12 studies were included, and the urine FA levels of 874 AD patients and 577 HCs were reviewed. Compared with those in HCs, the FA levels were significantly increased in AD patients. The heterogeneity of the results did not affect their robustness, and results of the area under the curve (AUC) suggested that urine FA levels had good potential diagnostic value

Conclusion Urine FA levels are involved in AD disease progression and are likely to be useful as a potential biomarker for clinical auxiliary diagnosis. However, further studies are needed to validate the results of this study

关键词: Alzheimer's disease, meta-analysis, formaldehyde, biomarkers, diagnosis

老年科患者护理管理中深入中医药文化建设的实践与效果

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目的 研究老年科患者护理管理中深入中医药文化建设的实践与效果。

方法 将 2021 年 1 月到 2021 年 12 月老年科开展深入中医药文化建设的护理管理时状况, 作为实施后阶段。将 2020 年 1 月到 2020 年 12 月老年科未开展深入中医药文化建设的护理管理时状况, 作为实施前阶段。纳入各 40 例老年科患者。纳入各 40 例老年科患者。其中, 实施前阶段中, 男 20 例, 女 20 例, 年龄在 61 岁~79 岁, 平均 (67.33±4.16) 岁。实施后阶段中, 男 19 例, 女 21 例, 年龄在 61 岁~78 岁, 平均 (67.29±4.22) 岁。共纳入科室 10 名护理

人员,其中男性护士2名,女性护士8名。年龄在31岁~43岁,平均(40.61±3.45)岁。

结果 实施后阶段,中医药文化建设水平评分、中医药特色护理文化水平评分、科室中医药文化环境评分、临床护理管理质量评分、中医药文化知识掌握评分、遵医依从性评分、患者满意率,相比实施前阶段的均显著提高($p<0.05$);实施后阶段,患者中医症候积分值,相比实施前阶段的均显著降低($p<0.05$)。实施后阶段,患者症状好转所需时间、下床活动所需时间,相比实施前阶段的均显著缩短($p<0.05$)。

结论 针对老年科患者,开展深入中医药文化建设的护理管理的实践与效果显著。

关键词:老年科;中医药文化;护理管理

双相情感障碍合并糖尿病患者发生认知功能障碍的危险性分析

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目的 探讨合并2型糖尿病(T2DM)的双相情感障碍(BD)患者认知功能的危险因素。

方法 选择2020年3月—2022年4月本院接受治疗的BD患者50例,根据有无认知功能障碍(CI)分为CI组(30例)和正常组(20例)。比较2组患者的临床资料,采用多因素logistic回归分析筛选BD患者认知功能障碍发生的影响因素,并用ROC曲线比较不同危险因素对认知功能障碍的预测价值。

结果 合并T2DM的BD患者的MoCA量表各维度评分除语言和定向力外均显著低于单纯BD患者(t 值分别为2.029、3.079、3.86、2.250、3.497、6.025, $P<0.05$)。多因素logistic回归分析结果显示BMI、T2DM、HAMD评分、HbA1c、LDL-C水平均为BD患者发生认知功能障碍的影响因素($P<0.05$)。

本研究局限性是样本量较小,仍需进一步增加样本量来验证该结论,而且有关BD和T2DM的共同发病机制尚未明确,仍需进一步的体内外实验进行验证。最后,有关脂代谢异常与BD患者认知功能障碍的研究机制也尚不明确,还需进一步

研究寻找相关作用基因和信号通路。总之,本研究结果显示BMI、T2DM、HAMD评分、HbA1c、LDL-C水平可能为

关键词:双相情感障碍合并糖尿病

老年痴呆合并隐匿性肺炎的CT征象与死亡预后的相关研究

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目的 分析老年痴呆患者合并隐匿性肺炎的CT征象特点,以及与死亡预后的相关性,为评估临床预后提供客观的CT风险评分。

方法 回顾性总结2018年10月至2022年10月我院老年痴呆患者93例为研究对象,年龄 ≥ 70 岁,平均(78.6±6.9)岁,卧床39例。其中52例合并隐匿性肺炎(观察组),另外41例未合并隐匿性肺炎(对照组)。比较两组患者的临床资料和CT征象。观察组根据临床预后分为存活36例和死亡16例,对照组分为存活36例和死亡5例。

结果 单因素比较发现,观察组卧床比例高于对照组,痴呆病程延长,基础肺部疾病增多,CT征象(斑片状浸润影、肺气肿和积液)增多($P<0.05$),但两组血清白细胞计数、中性粒细胞百分比、C反应蛋白(CRP)和降钙素原(PCT)水平无明显差异($P>0.05$)。观察组死亡率显著高于对照组[30.8%(16/52)比12.2%(5/41), $\chi^2=4.524$, $P=0.033$]。双肺采用8区分类法进行CT征象半定量评分,总分24分。死亡患者合并隐匿性肺炎增多,CT评分和PCT升高,而自主进食减少($P<0.05$)。多因素Logistic回归分析显示,隐匿性肺炎($OR=2.659$,95%CI=2.102~3.326, $P<0.001$)和CT评分($OR=3.325$,95%CI=2.589~3.758, $P<0.001$)是老年痴呆患者死亡的危险因素。受试者工作曲线(ROC)显示,CT评分预测老年痴呆患者死亡的曲线下面积(AUC)为0.856(95%CI=0.801~0.899, $P<0.001$),敏感度为85.6%,特异度为89.7%,临界值为15分,即CT评分 >15 提示老年痴呆患者死亡风险较高。

结论 老年痴呆患者有较高的隐匿性肺炎患病率,常常缺乏典型临床症状,常规血生化也无显著

改变，CT 征象是辅助诊断隐匿性肺炎的重要工具。隐匿性肺炎增加了老年痴呆患者的院内死亡风险，采用双肺 CT 半定量评分法能够指导临床识别死亡高风险患者，准确性较好，为临床开发了一款实用性较强的诊断工具。

关键词：老年；痴呆；隐匿性肺炎；计算机断层成像；死亡；危险因素

磁共振薄层扫描结合人工智能脑结构分割技术分析海马体积辅助诊断脑小血管病认知功能障碍

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目的 分析磁共振薄层扫描结合人工智能脑结构分割技术分析海马体积辅助诊断脑小血管病认知功能障碍的应用价值。

方法 选择确诊为脑小血管病患者 84 例，入院采用简易智力状态检查量表 (MMSE) 分为认知功能障碍组 39 例和正常组 45 例。采用 1.43T 磁共振薄层扫描结合人工智能脑结构分割技术分析内侧颞叶区和海马的体积绝对值及百分比。

结果 认知功能障碍组年龄大于正常组 ($t=8.63$, $P<0.05$)，内侧颞叶区和海马的体积绝对值及百分比明显低于正常组 (t 分别=5.86、5.00、6.03、9.63, P 均 <0.05)，而内侧颞叶萎缩视觉 (MTA) 评分明显高于正常组 ($t=4.75$, $P<0.05$)。Spearman 检验显示，内侧颞叶区和海马的体积绝对值及百分比与 MTA 评分呈负相关 (r_s 分别=-0.46、-0.50、-0.60、-0.63, P 均 <0.05)，与 MMSE 评分呈正相关 (r_s 分别=0.41、0.49、0.57、0.60, P 均 <0.05)。受试者工作特征曲线 (ROC) 显示，海马体积百分比预测认知功能障碍的曲线下面积为 0.88, 95%CI 0.82~0.90, 最佳临界值为 0.31%，即海马体积百分比 $<0.31\%$ 诊断认知功能障碍的灵敏度为 80.53%，特异度为 85.62%。

结论 磁共振薄层扫描结合人工智能脑结构分割技术能够精准定位脑功能亚区，通过准确测量海马体积能够辅助诊断脑小血管病的认知功能障碍，海马体积百分比 $<0.31\%$ 有较好的诊断性能。

关键词：磁共振；人工智能脑结构分割技术；海

马；脑小血管病；认知功能障碍；内侧颞叶萎缩视觉

脑卒中合并情感障碍病人的治疗及护理研究进展

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目的 脑卒中是一种常见的神经系统疾病，若其合并情感障碍则需要特殊的治疗和护理。其中，脑卒中合并情感障碍患者的治疗及护理是一个复杂而重要的过程，需要综合运用药物治疗、心理治疗和社会支持等多种手段，以提高患者的康复效果和生活质量。故而对脑卒中合并情感障碍患者的治疗及护理研究进展加以明确就显得尤为重要。

脑卒中是一种常见的神经系统疾病，其发生率和死亡率在全球范围内都呈现出不断上升的趋势。脑卒中不仅给患者的生理功能带来严重的影响，还常常导致患者出现各种情感障碍，如抑郁、焦虑等。这些情感障碍不仅给患者的康复和生活质量带来了极大的困扰，也给其家人和社会带来了重大的负担。随着医学科技的不断发展，对脑卒中合并情感障碍病人的治疗和护理研究也在不断深入。许多学者和医生们致力于探索有效的方法来改善脑卒中患者的情感障碍，并提高其康复的成功率。这些研究涵盖了药物治疗、心理干预、康复训练等多个方面，取得了一定的进展。

结论 脑卒中合并情感障碍的治疗和护理研究取得了重要的进展，为患者带来了希望和改善。然而，我们仍然面临着挑战和不足之处，需要继续努力提高治疗效果和护理质量。相信在医疗技术和护理理念不断创新的推动下，能够为脑卒中合并情感障碍病人提供更好的治疗和护理，帮助患者重返健康和幸福的生活。

关键词：脑卒中；情感障碍；治疗；护理

针灸联合草酸艾司西酞普兰治疗脑卒中后抑郁临床研究

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目的 探讨针灸联合草酸艾司西酞普兰治疗脑卒中后抑郁的临床疗效及安全性。

方法 按随机数字表法将浙江金华市第二医院2019年1月-2020年12月期间收治的70例脑卒中后抑郁患者分为治疗组与对照组。对照组35例给予草酸艾司西酞普兰治疗,治疗组35例联合针灸治疗。分别检测2组治疗前后各神经功能相关因子[中枢神经系统特异性生物蛋白(S100B)和髓鞘碱性蛋白(MBP)]水平,应用汉密尔顿抑郁量表(HAMD)(17项版)评定抑郁状况,简易精神状态量表(MMSE)筛选认知功能障碍,美国国立卫生研究院卒中量表(NIHSS)评定神经功能缺损状况,功能独立性评定量表(FIM)评定患者日常独立生活能力变化,并记录其疗效及不良反应发生情况。

结果 与对照组比较,治疗组总有效率更高(94.29%vs 74.29%)($\chi^2=5.285, P=0.022$);2组治疗前S100B、MBP因子比较无差异($P>0.05$),治疗组治疗后S100B、MBP因子水平均低于对照组($P<0.05$);两组治疗前HAMD、MMSE、NIHSS与FIM评分比较无差异($P>0.05$);治疗组治疗后HAMD与NIHSS评分低于对照组,MMSE与FIM评分高于对照组($P<0.05$);治疗组不良反应发生率5.71%,对照组为14.29%,2组比较差异无统计学意义($P=1.429, \chi^2=0.232$)。

结论 针灸联合草酸艾司西酞普兰治疗脑卒中后抑郁的临床疗效较理想,能有效改善患者神经功能相关因子水平、卒中后抑郁、认知功能障碍,促进其神经功能恢复,提高日常生活能力,未增加用药不良反应,值得推广。

关键词: 针灸;草酸艾司西酞普兰;脑卒中;抑郁;临床疗效

某院老年精神科中成药应用现状与需求调查

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目的 调查某院老年精神科中成药应用现状与需求。

方法 选择随机等距抽样的方法抽取2021年6

月~2022年6月金华市第二医院老年精神科就诊患者调查其中成药的应用现状与需求。

结果 本研究共计纳入金华市第二医院老年精神科患者1260例,中成药的使用率为71.98%。使用1种中成药的患者占46.43%;使用2种中成药的患者占18.10%。中成药的累积用药频次共1342次。常用中成药功效类型包括养心安神药(33.53%)、补肾安神药(22.73%)、清肝安神药(19.37%)。安神类中成药的累积使用频次为1015次,占75.63%。最常用的9种药物为枣仁安神颗粒、舒眠胶囊、乌灵胶囊、九味镇心颗粒、清脑复神液、百乐眠胶囊、养胃颗粒、麻仁丸、稳心颗粒。使用率排第1位的中成药是枣仁安神颗粒,占18.26%;排在第2位的中成药是乌灵胶囊,占14.90%;排在第3位的是稳心颗粒,占14.01%。1260例患者对中成药的整体需求率达95.24%。患者对口服类中成药的需求率最高,达94.44%。在中成药药物作用方面,具有安神作用的药物需求率最高,达67.78%;在中成药科普知识方面,有超过6成的患者对饮食、生活注意事项、药物贮藏与保存、药物毒性与禁忌、剂量与疗程规范有需求。

结论 该院老年精神科中成药使用率较高,尤其是口服类安神药,包括枣仁安神颗粒、乌灵胶囊等。患者对中成药的需求率高,尤其是具有安神作用的口服类中成药,对中成药科普知识的需求率较高。

关键词: 精神科;中成药;应用现状;需求

血府逐瘀汤联合耳穴埋豆治疗老年失眠的疗效分析

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目的 研究中药联合中医耳穴埋豆在老年失眠中的效果。

方法 回顾性分析2017年7月至2020年3月期间我院纳入研究的124例老年失眠患者的临床资料,将其按照随机数字表法分为实验组和对照组,每组各62例。实验组男性34例,女性28例,年龄为61~86岁,平均年龄(71.34±4.59)岁;病程7.2个月~47.4个月,平均病程(18.2±4.2)个月。对照组:男

性 36 例, 女性 26 例, 年龄为 60~88 岁, 平均年龄 (71.43±4.52 岁; 病程 7.0 个月~48.3 个月, 平均病程 (18.5±4.1)个月。实验组予以血府逐瘀汤联合耳穴埋豆治疗, 对照组予以单纯耳穴压豆治疗, 对两组患者治疗前后的睡眠质量及临床疗效的进行对比。

结果 治疗后, 实验组与对照组患者的睡眠质量量表条目评分及总分均较治疗前降低, 对比存在明显差异($P<0.05$)。治疗后, 实验组患者的睡眠质量量表条目评分及总分均低于对照组患者, 对比存在明显差异($P<0.05$)实验组的总有效率明显高于对照组患者, 两组对比存在明显差异 ($P<0.05$)。

结论 血府逐瘀汤联合耳穴埋豆治疗老年失眠的疗效显著, 且耳穴埋豆疗法具有简便易行、治疗次数少、治疗方式灵活的优点, 是值得临床推广的治疗方法。

关键词: 血府逐瘀汤, 耳穴埋豆, 老年失眠

某三甲医院老年科病区中成药使用情况调查

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目的 对某三甲医院(金华市第二医院)老年科病区中成药的使用情况进行调查, 基于相关数据分析问题, 提出中成药管理建议, 促进中成药合理、安全使用。

方法 通过随机分层抽样的方法对 2021 年 1 月-12 月期间该院老年科病区中成药处方进行分析, 每月抽取的中成药处方绝对数为 36 张, 共计抽取 2021 年的中成药处方数 432 张。由课题组成员对该院老年科病区中成药处方信息进行分类统计, 统计中成药功效、剂型、常用药物等特征, 并开展中成药处方点评以了解用药合理性。

结果 本次调查的 432 张中成药处方中共计包括 26 种中成药, 主要的功效类别为祛瘀药(71.76%)、安神药(24.31%)、扶正药(22.69%)、开窍药(18.52%)。中成药的主要剂型为胶囊剂(37.02%)、丸剂(26.11%)、片剂(22.12%)。常用药物依据累积处方频率从高到低排序依次为脑心通胶囊(17.36%)、速效救心丸(15.28%)、复方丹参滴丸(10.42%)、通心络胶囊(9.95%)、麝香保心丸(9.26%)、复方海蛇胶囊(8.10%)、安脑片(7.41%)、

银杏叶片(6.48%)、复方苻蓉益智胶囊(6.02%)。处方点评发现, 共 24 张处方出现用药不适宜问题, 发生频率为 5.56%。主要包括联合用药不适宜(1.62%)、特殊人群用药不适宜累(1.62%)、有配伍禁忌或不良相互作用(1.16%)、重复给药(0.70%)。

结论 该院老年科病区中成药多用祛瘀药, 多配伍安神、扶正、开窍药, 药物剂型以胶囊剂、丸剂、片剂等传统剂型为主, 常用药物均为医保覆盖药物, 药效理想。应针对目前仍然存在的不合理用药情况加强管理, 规避用药风险, 促进合理用药。

关键词: 三甲医院; 老年科; 病区; 中成药; 使用特征; 用药合理性

中医“象思维”模式在中医老年科临床带教中的应用效果

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目的 观察中医“象思维”模式在中医老年科临床带教中的应用效果。

方法 2019 年 1 月到 2019 年 12 月, 我院中医老年科未实施基于中医“象思维”模式的临床带教, 将此阶段作为实施前阶段, 从中抽取参与科室临床带教的实习医学生 25 名。其中, 实施前阶段, 25 名实习医学生中, 10 名为女性, 15 名为男性, 年龄在 26 岁~28 岁, 平均(27.33±1.19)岁。实施后阶段, 25 名实习医学生中, 10 名为女性, 15 名为男性, 年龄在 26 岁~28 岁, 平均(27.28±1.22)岁。2020 年 1 月到 2020 年 12 月, 我院中医老年科实施基于中医“象思维”模式的临床带教, 将此阶段作为实施后阶段。从中抽取参与科室临床带教的实习医学生 25 名。比较开展基于中医“象思维”模式的临床带教前后的科室疾病管理质量考核评分、临床带教质量水平评分、岗位胜任力评分、中医临床思维能力水平评分、临床带教满意度评分。

结果 实施后阶段中, 实习医学生的科室疾病管理质量考核评分、临床带教质量水平评分、岗位胜任力评分、中医临床思维能力水平评分、临床带教满意度评分, 同实施前阶段比较而言均显著升高($p<0.05$)。

结论 将基于中医“象思维”模式的临床带教用

于中医老年科,在提升实习医学生临床带教水平中的作用显著,更有利于促使中医诊疗质量、岗位胜任力、中医临床思维能力水平提升,让实习医学生对临床带教模式更满意。

关键词:中医“象思维”模式;中医老年科;临床带教

针灸在调节炎性因子并改善认知障碍中的作用与进展

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目的 了解目前针灸对于炎性因子的作用和认知障碍的影响,为进一步明确针灸改善认知功能的脑内作用靶器官或靶点,及是否可能通过针灸抑制炎症通路激活、炎症因子的释放等途径精确导航治疗认知障碍提供新的研究思路。

方法 计算机检索 Embase、PubMed、The Cochrane Library、Web of Science、CBM、维普数据库、万方、中国知网,检索了针灸对于炎性因子和认知障碍的作用随机对照研究,检索时限为建库至2024年6月,阅读并整理。

结果 针灸疗法具有通经脉、调气血,使阴阳归于相对平衡、脏腑功能趋于调和的作用。其疗效确切、副作用小,尤其在调控炎症性疾病中显示出独特的优势。

炎性因子,如肿瘤坏死因子- α (TNF- α)、白细胞介素- 1β (IL- 1β)等,常见于多种疾病中。它们的产生和释放可导致小胶质细胞被大量激活,进一步分化并分泌促炎因子、氧自由基和活性氧等物质,对神经元产生毒性作用,造成不可逆的神经元损伤。这些炎性因子也可诱导脑内神经元-淀粉样蛋白前体蛋白(APP)合成增加和 β 淀粉样蛋白(A β)产生。A β 与炎症因子在脑内形成恶性循环,相互促进,从而增加A β 的生成和神经元的变性死亡。这一过程涉及到阿尔兹海默病认知损害的重要病理机制—神经炎症。近期的研究发现,针灸可以刺激迷走神经,通过作用于巨噬细胞、减轻肥胖体质促进乙酰胆碱释放、抑制海马区小胶质细胞的活化等,从而抑制炎症细胞因子TNF- α 、IL- 1β 、IL-6等的合成与释放,

从而改善学习和记忆能力。这些发现为针灸治疗阿尔茨海默病提供了新的理论依据。

结论 针灸通过调节神经-免疫-内分泌网络,改变神经元内环境,降低炎症因子水平,从而改善认知障碍。但目前针灸对神经炎症的抑制作用具体是通过哪一个靶点器官实现的还未能明确,这对于针灸是否能够通过认知障碍相关抗炎途径精确导航治疗认知障碍具有重要意义,也为认知障碍相关疾病机制研究提供了新思路 and 新的突破点。

关键词:针灸;炎症因子;认知障碍;阿尔茨海默病;淀粉样蛋白

血清 miR-17、miR-34a 与 VEGF 在老年血管性痴呆中的表达与相关性分析

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目的 探讨血清微小核糖核酸-17(miR-17)、微小核糖核酸-34a(miR-34a)与血管内皮生长因子(VEGF)在老年血管性痴呆(VD)中的表达水平与相关性。

方法 收集2022年6月至2023年5月于金华市第二医院就诊的老年VD患者和轻度认知功能障碍(MCI)患者各35例,选取同期健康体检者30例为对照组。采用简易智能状态检测量表(MMSE)对受试者进行评分,采用定量反转录酶-聚合酶连锁反应(qRT-PCR)检测三组受试者血清miR-17、miR-34a水平,采用酶联免疫吸附试验(ELISA)检测VEGF水平,并采用Pearson相关系数和ROC曲线分析三者在VD中相关性和对VD的诊断价值。

结果 VD组和MCI组患者MMSE评分、血清miR-17、VEGF表达水平显著低于对照组($P < 0.05$),且VD组低于MCI组($P < 0.05$)。三组间miR-34a表达水平呈上升趋势,但差异均不显著($P > 0.05$)。Pearson相关性分析表明,MMSE评分与miR-34a水平呈负相关,与miR-17、VEGF水平呈正相关($P < 0.05$)。miR-17、miR-34a与VEGF诊断VD的AUC分别为0.712、0.506和0.898,三者联合检测诊断VD的AUC为0.930。

结论 老年VD患者血清miR-17、VEGF表达下调,而miR-34a表达上调,且与VD的严重程度

密切相关，三者联合检测对 VD 的临床诊断、病情评估具有重要意义。

关键词：miR-17；miR-34a；VEGF；血管性痴呆；表达水平；相关性

老年抑郁认知损害与外周免疫炎症标记物的相关性研究

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目的 探讨外周免疫炎症标记物与老年抑郁伴认知损害之间的相关性及其对认知损害的预测价值。

方法 在这项回顾性横断面的研究中，我们收集了 40 例老年抑郁伴认知损害患者 (LLD+CI+)、38 例老年抑郁不伴认知损害患者 (LLD+CI-) 和 26 例健康对照组(HC)的人口统计学信息、血液学指标、认知功能评分。分析 CRP、中性粒细胞计数、淋巴细胞计数、单核细胞计数、血小板、系统性免疫炎症指数(Systemic immune-inflammation index, SII)、系统炎症反应指数(System inflammation response index, SIRI)、中性粒细胞/HDL 比值(NHR)、淋巴细胞/HDL 比值(LHR)、中性粒细胞/淋巴细胞 (NLR)、单核细胞/HDL 比值(MHR)和血小板/HDL 比值(PHR)的差异及其与认知功能评分的相关性，并采用受试者工作特征(ROC)曲线分析这些参数的诊断预测潜力。

结果 老年抑郁伴认知损害患者在淋巴细胞、CRP、SII 和 NLR 方面显著升高，且与认知功能密切相关。CRP 是老年抑郁伴认知损害的预测因子。

结论 外周免疫炎症标志物为探究老年抑郁伴认知损害相关病理生理变化及预测提供了一种经济有效的方法，为其发病机制和治疗的研究提供了新的见解。

关键词：老年抑郁，认知损害，C-反应蛋白，炎症

A Mediation Analysis of The Role of Total Free Fatty Acids on Pertinence of Gut Microbiota Composition and Cognitive Function in Late-life Depression

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Objective Extensive evidences exist to confirm correlation among gut microbiota, lipid metabolism and cognitive function. However, there is still a lack of such research in the field of Late-Life Depression (LLD). Our research targeted at investigating relationship among gut microbiota, lipid metabolism, and cognitive deficits in LLD

Methods Twenty-nine LLD patients from the Cognitive Outcome Cohort Study of Depression in Older Adults were contained in our study. Cognitive functions of the patients were evaluated via the Montreal Cognitive Assessment (MoCA) scale, blood samples were collected for evaluation on serum lipid metabolism parameters and fecal samples for gut microbiota determination via 16S rRNA sequencing. Spearman correlation analysis, linear regression analysis and mediation analysis were utilized for exploring relationship among gut microbiota, lipid metabolism and cognitive function in LLD

Results Spearman correlation analysis showed that Akkermansia, total Free Fatty Acids (FFAs) and MoCA scores were significantly correlated ($P < 0.05$). Multiple regression analysis showed Akkermansia and FFAs had tremendous predictive influences upon MoCA score ($P < 0.05$). Furthermore, total FFAs acted a tremendous mediating role in effects of Akkermansia on cognitive function in LLD (Bootstrap 95% CI [0.023-0.557]), and the pathway from Akkermansia to FFAs to cognitive deficit produced a moderate effect size of 40.3%

Conclusion This study revealed cognitive impairment in LLD significantly related to Akkermansia and total FFAs. FFAs is a partial mediator of the relationship between Akkermansia and MoCA. These results help to understand the gut microbial-host lipid metabolism axis in LLD cognitive function

关键词：Late-Life Depression, Gut microbiota, Lipid metabolism, Mediation Analysis

Gut Microbiota Dysbiosis and Inflammation Dysfunction in Late-life Depression: An Observational Study

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Objective Late-life depression (LLD) is a commonest mental health disorder among the elderly, and hard to identify. Though many studies have found abnormal gut microbiota and inflammatory cytokines in neuropsychiatric disorders, gut microbiota features and peripheral inflammatory responses of LLD remain unclear. And whether they contribute to the identification of LLD needs further study. We analyzed gut microbiota characteristics and abnormal serum inflammatory cytokines in individuals with LLD to explore the combined use of these two factors in LLD discrimination and to identify potential biomarkers of LLD

Methods Fecal samples from 29 patients suffering from LLD and 33 sex- and age-matched healthy controls (HCs) were collected, along with the participants' demographic, smoking history and alcohol use data. The intestinal flora in feces was analysed by 16S rRNA sequencing. The 12 inflammatory factors in peripheral blood were determined by enzyme-linked immunosorbent assay. We first analyzed differences in diversities and compositions of gut microbiota between samples and HCs, and evaluated relations among gut microbiota, inflammatory factors, and neuropsychological scales. Then, with logistic regression and receiver operating characteristic (ROC) curve analysis, we extracted potential biomarkers to predict LLD utilizing the combination of the microbiota and inflammatory cytokines

Results Elevated systemic inflammatory cytokine levels, increased taxonomic richness and changes in gut microbiota composition were found among patients suffering from LLD in contrast with HCs. Under phylum level, relative abundance of Verrucomicrobia among LLD patients was lower relative to HCs. Abundances of Coprococcus, Lachnobacterium, Oscillospira,

and Sutterella were higher in LLD patients under genus level. In contrast, Megamonas, Citrobacter and Akkermansia levels remained lower among LLD patients. Notably, IL-6, IFN- γ , Verrucomicrobia and Akkermansia levels were correlated with depression severity. Our study identified IL-6, Akkermansia and Sutterella as predictors of LLD, and with a combination of gut microbiota features and inflammatory cytokine levels achieved the area under the curve (AUC) of 0.962 in distinguishing LLD patients from HCs

Conclusion To date, this research initially offers evidences for changes within gut microbiota and systemic inflammation in LLD, and reveals a new way to distinguish between LLD and HC based on gut microbiota and systemic inflammation. These findings possibly help elucidate functions of gut microbiota and systemic inflammation on LLD development and offer fresh ideas on biomarkers for clinical use of LLD

关键词: Late-life depression, gut microbiota, inflammation, inflammatory cytokines

阿尔茨海默病患者肠道菌群改变与认知功能损害的相关性研究

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目的 探讨阿尔茨海默病(AD)患者肠道菌群改变及其与认知功能损害相关性。

方法 该研究使用临床痴呆评定量表(CDR),将35名AD患者分为轻中度组(15名)和重度组(20名),收集两组患者的粪便样本,对粪便标本进行16S rRNA高通量测序分析粪便中微生物群的组成。采用调查问卷及量表调查AD患者的一般情况、抑郁状态及认知损害状况。通过血液检测AD患者白细胞、血脂、胆固醇等指标。

结果 AD重度组(S)组MMSE, RBANS分值均低于AD轻中度组(M)组($P < 0.01$);肠道菌群 β 多样性分析结果提示两组间菌群多样性差异有统计学意义($P < 0.05$);S组和M组肠道菌门相对丰度差异有统计学意义($P < 0.05$);S组和M组肠道菌属相对丰度差异有统计学意义($P < 0.05$);大肠

埃希氏菌、志贺氏菌与 LPA 呈正相关 ($P < 0.01$), 与 LDL 呈负相关 ($P < 0.05$)。; 双歧杆菌与 RBANS、HLP 呈正相关 ($P < 0.05$), 与 LPA 呈负相关 ($P < 0.01$); 克雷伯杆菌与病程、CDR 呈正相关 ($P < 0.01$)。; 阿克曼菌 (Akkermansia) 与高脂血症呈负相关。; 肠球菌与 CDR 呈正相关。; 乳酸杆菌与年龄呈正相关 ($P < 0.05$); 粪杆菌与 CDR、病程、年龄和 MMSE 负相关 ($P < 0.05$)。

结论 肠道菌群的变化与 AD 患者认知功能的损害具有显著相关性。未来抗 AD 药物可以通过改变肠道菌群优势菌的构成、细菌丰度, 或调节肠道菌群代谢产物来发挥阻止 AD 病理机制, 改善认知功能的作用。

关键词: 阿尔茨海默病; 肠道菌群; 认知功能; 16S 核糖体 RNA 测序技术

基于代谢组学探索精神分裂症电休克疗效相关免疫炎症特征研究

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目的 基于非靶向及靶向代谢组学技术, 结合精神分裂症患者的炎症特征探索免疫炎症在电休克治疗精神分裂症中的作用及其与临床疗效相关性。

方法 采用 GC-MS 及 LC-MS 测量 76 名健康对照组及 78 名精神分裂症患者电休克前后血浆样本广泛代谢谱。R 包 ropls 用于主成分分析及偏最小二乘判别分析展示组间血浆代谢谱差异。R 包 limma 用于单变量统计分析确定组间差异代谢物。R 包 WGCNA 用于加权基因共表达网络分析确认与临床特征显著相关代谢物。Spearman's 相关性分析用于确认精神分裂症患者电休克前后与临床特征显著相关的差异代谢物与其炎症特征的关联。

结果 与对照组相比, 精神分裂症患者基线血浆 594 个代谢物下调, 210 个代谢物上调, 富集分析显示差异代谢物主要与能量代谢等炎症异常相关通路有关。6 次电休克治疗后, 精神分裂症患者血浆 175 个代谢物上调, 54 个代谢物下调, 富集分析显示差异代谢物与能量代谢和炎症调节有关。加权基因共表达网络分析结果显示 turquoise 模块中代谢物表达量与精神分裂症患者的临床症状显著负

相关。取电休克前后差异代谢物与 turquoise 模块代谢物交集后共得到 55 个 ECT 临床疗效相关差异代谢物, 进一步分析显示这些代谢物与花生四烯酸代谢、色氨酸代谢、能量代谢等密切相关。此外, 相关性分析结果显示 ECT 临床疗效相关差异代谢物与系统炎症生物标志物 NLR (中性粒细胞计数/淋巴细胞计数) 密切相关。

结论 外周血多条代谢通路异常和免疫失衡参与精神分裂症的发生发展, 电休克可能通过调节代谢紊乱, 改善免疫失衡发挥精神分裂症治疗效应。

关键词: 精神分裂症、电休克、代谢组学、免疫炎症、犬尿氨酸通路

慢病老年人抑郁状况及影响因素分析——基于 CLHLS 研究

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目的 了解我国老年人在不同患慢性病数量情况下的老年抑郁现状及其影响因素。

方法 使用 2018 年中国老年健康影响因素跟踪调查 (CLHLS) 横断面数据, 运用描述性统计分析以及独立样本 T 检验和卡方检验分析 65 岁以上老年人慢性病数量情况及抑郁情况, 并采用多元逐步线性回归分析在不同患慢性病数量状况下的老年人抑郁的影响因素。

结果 老年人在不同慢性病数量状态下抑郁得分存在显著差异 ($\chi^2=4.397, p < 0.001$), 根据分析结果表明, 年龄、焦虑得分与抑郁得分呈明显正相关 ($r=0.501, 0.106; p < 0.01$)。且患有慢性病数量与抑郁得分呈正相关。患一种慢性病老年人的状况下, 文盲、未婚、养老机构居住、年龄越大、焦虑得分越高、无养老保险、生活来源不足够、不喝酒、不锻炼身体、自评生活状况较差、自评健康状况较差老年人抑郁得分高。患两种及以上慢性病老年人, 文盲、未婚、独居或养老机构居住、年纪越大、焦虑得分、生活来源不足够、不喝酒、不锻炼身体、自评生活状况较差、自评健康状况较差老年人抑郁得分高。

结论 患有慢性病种类越多、年龄越大、教育程度越低、自评状况较差的老年人心理健康状况越差。关注不同慢性病状况下老年人的心理健康, 完

善老年人精神卫生服务工作，提高其生命、生活质量。

关键词：老年人；慢性病；抑郁；影响因素

银杏叶治疗老年精神分裂症患者疗效和安全性的 Meta 分析

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目的 银杏叶在传统医学中被广泛应用，被认为具有改善记忆、促进血液循环、抗氧化等多种生物活性。近年来，越来越多的研究表明，银杏叶可能对老年精神分裂症患者的某些症状具有改善作用，但这些研究样本量小，研究结局不一致，且缺乏相关的系统评价。因此，本研究通过文献检索并系统评价银杏叶治疗老年精神分裂症患者的疗效和安全性，为临床合理用药提供循证医学证据。

方法 计算机系统检索英文数据库（PubMed、PsycINFO 和 Cochrane Library）和中文数据库（中国知网、万方数据库），手工检索相关的已发表文献，检索时限为建库至 2024 年 5 月，纳入关于银杏叶治疗老年精神分裂症患者的随机对照试验（Randomized Controlled Trials, RCTs）。由 3 位研究者独立筛选文献、提取数据和方法学进行质量评价，采用 RevMan 5.3 进行 Meta 分析。

结果 共检索到文献 334 篇，最终筛选到符合纳入及排除标准的 RCTs 共 6 篇，包括 492 例老年精神分裂症患者，其中银杏叶组和对照组各 246 例。结果 Meta 分析结果显示，在治疗终点时，银杏叶组的治疗有效率显著高于对照组〔(Risk Ratio, RR) = 1.38, 95% 置信区间 (Confidence Interval, CI): 1.19~1.58, $P < 0.00001$ 〕，差异有统计学意义；银杏叶组阳性与阴性症状量表 (Positive and Negative Symptoms Scale, PANSS) 总分低于对照组〔标准化均数差 (Standard Mean Difference, SMD) = -1.14, 95% CI: -2.01~-0.26, $P = 0.01$ 〕，阴性量表低于对照组 (SMD = -1.23, 95% CI: -1.53~-0.93, $P < 0.00001$)，差异有统计学意义；阳性量表稍低于对照组 (SMD = -0.18, 95% CI: -2.73~3.09, $P = 0.90$)，差异无统计学意义。

结论 银杏叶辅助治疗能提高老年精神分裂症

患者的疗效，能有效改善患者的阴性症状和认知功能，且不会增加不良反应。

关键词：银杏叶；精神分裂症；Meta 分析；疗效。

基于人工智能技术对精神分裂症患者肋骨骨折筛查的研究

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目的 本研究旨在探讨人工智能 (AI) 技术在精神分裂症患者肋骨骨折筛查中的应用效果，评估其在诊断准确性和效率方面的可行性和优势。精神分裂症患者由于认知障碍和行为异常，往往延误骨折的诊断和治疗，同时，长期服用精神类药物导致骨质疏松，使肋骨骨折的风险增加。因此，提高肋骨骨折筛查的准确性和效率对于保障精神分裂症患者的健康安全和减少医疗纠纷具有重要意义。

方法 本研究采用回顾性分析的方法，选取 2023 年 1 月 1 日至 2024 年 5 月 30 日期间收治的精神分裂症老年患者共 1402 例，所有患者均接受胸部 DR、胸部螺旋 CT 及 AI 辅助诊断系统的检查。具体检查方法如下：胸部 DR 片、胸部螺旋 CT 及重建图像和结合 AI 辅助诊断系统进行快速连续扫描和容积性数据采集，基于深度学习算法对胸部 CT 影像进行智能分析，自动检测肋骨骨折并标示位置、错位情况及是否为陈旧性骨折。通过对比分析三种检查方法的诊断准确性和效率，评估 AI 技术在精神分裂症患者肋骨骨折筛查中的可行性和优势。

结果 研究结果显示，螺旋 CT 及重建图像结合 AI 辅助诊断系统在肋骨骨折筛查中的准确性显著高于传统胸部螺旋 CT 和胸部 DR。AI 辅助诊断系统的诊断准确率超过 99%，所有的诊断都进过两位放射诊断，胸部 DR 诊断准确率约为 52.17%，而胸部螺旋 CT 的准确率约为 87.52%。在 1402 例患者中，胸部 DR 诊断出肋骨骨折 60 例；胸部螺旋 CT 通过两位诊断医师发现肋骨骨折 100 例，结合 AI 辅助诊断系统检测出肋骨骨折 115 例，表明 AI 系统在筛查中具有更高的敏感性和准确性。在诊断效率方面，螺旋 CT 及重建图像结合 AI 辅助诊断系统能够在短时间内完成大量胸部 CT 影像的分析和诊断，

显著提高了诊断效率。相比之下,传统胸部 DR 正侧位片需要人工阅片和分析,耗时较长。具体数据显示, AI 辅助诊断系统在平均 10 分钟内完成一个患者的影像分析,而人工阅片平均需要 30 分钟至 1 小时。

结论 研究表明, AI 辅助诊断系统在精神分裂症患者肋骨骨折筛查中表现出显著的准确性和效率优势。AI 系统能够显著减少人工阅片的工作量,提高诊断准确性,降低漏诊和误诊风险。未来应进一步优化 AI 算法,以更好地支持临床诊断和治疗。

关键词: 人工智能; 精神分裂症; 肋骨骨折; 筛查; 诊断

高纤维饮食、肠道菌群与抑郁症: 最新研究进展

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重性抑郁障碍是一种常见的精神疾病,严重影响患者的身心健康、生活质量和社会功能,随着人们工作、生活方式的改变,抑郁症的发病率正逐年上升,而近年新型冠状病毒肺炎的大流行使这一数字呈现出更为明显的上升趋势。传统观点认为,神经递质如 5-羟色胺、多巴胺等的失衡可能是抑郁症的关键病理生理基础。然而,近年来的研究发现,免疫系统的异常、神经可塑性改变、神经炎症反应以及氧化应激等也在抑郁症的发生发展中扮演重要角色。随着肠-脑轴理论的持续发展,肠道菌群与抑郁症之间的关系日益受到关注,肠道菌群不仅能通过代谢产物影响神经递质的浓度和释放,还能调节肠道屏障的完整性和免疫系统的活性,进而影响情绪相关的神经功能。肠道菌群还可以通过产生神经活性分子参与神经发生、可塑性的调控,并能诱导神经炎症和氧化应激反应。高纤维饮食作为一种非药物性的调节手段,通过改善肠道菌群的多样性和组成,促进产生有益代谢产物如短链脂肪酸和调节肠黏膜的

免疫反应对肠道菌群和炎症产生深远的影响。本综述旨在探讨高纤维饮食对肠道菌群调节的机制,以及其通过肠道菌群影响抑郁症的潜在机制,为抑郁症的治疗提供了新的视角和研究方向。

关键词: 高纤维饮食, 抑郁症, 炎症, 氧化应激

文拉法辛导致牙痛一例

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目的 报道一名老年女性因使用文拉法辛所导致牙痛一例。

方法 个案报道

结果 一名 68 岁汉族女性因“反复担心、情绪低落 6 个月”入院。入院前 6 个月,患者的孙子感冒后,患者逐渐开始反复担心孙子的健康,并逐渐扩大到各种家居事务。她还经历了各种躯体不适,如心悸、出汗和乏力等。患者逐渐出现情绪低落和兴趣下降等抑郁症状。既往在门诊使用艾司西酞普兰和劳拉西泮治疗无效。入院后对患者进行症状量表评估提示: HAMA 评分为 25 分, HAMD-17 评分为 29 分。由于患者目前主要表现为焦虑和抑郁症状,因此患者被处方了文拉法辛 75mg qd, 氯硝西泮 0.5mg bid。3 天后,文拉法辛剂量调整为 150mg qd。然而,在调整文拉法辛剂量后的第二天,患者开始经历牙痛,表现为持续的、尖锐痛,并伴有偶尔的尖锐疼痛,当做咀嚼动作时会加重疼痛。值得注意的是,之前患者没有任何关于牙齿不适的报道。由于严重的牙痛,患者甚至无法进食, VAS 疼痛评分为 5 分。查体: 未见面部皮肤及口腔黏膜异常, 龈部无肿胀, 无缺牙, 颞下颌关节无明显功能障碍征象。停用文拉法辛后,患者不再抱怨牙痛。然而,她仍然表现出与心悸有关的不适。随后,我们将抗抑郁药调整为舍曲林, 滴定至 150mg qd 后,患者焦虑抑郁症状明显改善。随后嘱咐患者遵医嘱服药, 定期于门诊评估疗效和副作用情况, 并嘱咐患者定期门诊评估记忆功能变化情况。

文拉法辛是 5-羟色胺和去甲肾上腺素再摄取抑制剂(SNRI), 广泛用于治疗抑郁和焦虑。在临床实践中, 它是一种安全且耐受性良好的抗抑郁药。文拉法辛最常见的副作用是恶心和呕吐。据我们所知,

目前还没有关于文拉法辛或任何 SNRIs 引起牙痛报道。在某些情况下, SNRIs 甚至被用于缓解疼痛。一项系统综述显示文拉法辛是一种安全且耐受性良好的镇痛药物, 可对症治疗神经性疼痛。然而, 先前有一份报告详细描述了文拉法辛剂量相关的感觉异常, 其中年轻男性在达到 150mg/天剂量时表现出上肢刺痛、麻木和瘙痒等症状。当剂量降至 75 mg/d 后症状消失, 但再次增加至 150 mg 后症状又出现。

结论 本病例牙痛的发生和消失与文拉法辛的使用暂时相关, 提示文拉法辛的潜在罕见不良反应。该病例强调了考虑文拉法辛诱导的神经过敏或感觉异常的重要性, 当老年患者在文拉法辛治疗期间出现不明原因的疼痛时, 在这种情况下, 除了充分评估引起疼痛的潜在因素外, 应考虑立即停止文拉法辛并改用其他抗抑郁药物。

关键词: 文拉法辛, 老年, 药物副作用

上海市城区老年居民 BMI 水平对认知功能的影响及其性别差异和风险因素分析

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目的 分析 BMI(身体质量指数)对上海市城区老人认知功能的影响。

方法 以 CLAS 队列中的上海社区老年居民作为研究对象,采用统一编制的调查表采集人口学信息、日常生活信息等一般资料。测量身高体重,使用北京版蒙特利尔认知评估(MoCA)来评估认知功能。调查对象按照 BMI 数值分为体重过轻(<18.5 kg.m⁻²)、正常(18.5 ~ 23.9 kg.m⁻²)、超重(24 ~ 27.9 kg.m⁻²)、肥胖(≥28.0 kg.m⁻²)四组。分别比较各组 BMI 不同人群与认知功能的相关性及其影响因素。

结果 共 1000 名社区老人纳入研究,不同 BMI 指数分组间 MOCA 分值 (P=0.040) 存在差异性。肥胖组 MOCA 分值最低 (21.52±4.884)。男性 BMI 与 MOCA 分值存在相关性 (P=0.034) 而女性无明显相关性 (P=0.684)。Logistics 多因素回归分析显示,罹患高血压病 (P=0.001) 和 (P=0.003) 丙氨酸转移酶升高是肥胖老人出现认知功能损害的主要危险因素。

结论 认知功能在不同 BMI 人群中存在差异,

肥胖老人认知功能水平相对最差, 男性 BMI 指数与认知功能的相关性更强, 罹患高血压病及丙氨酸转移酶升高是肥胖老人出现认知功能损害的主要危险因素。

关键词: 认知功能, BMI, 肥胖, 丙氨酸转移酶

健康老龄化背景下回忆疗法联合认知功能训练对阿尔茨海默病患者记忆功能的影响研究

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目的 探讨健康老龄化背景下回忆疗法联合认知功能训练对阿尔茨海默病患者记忆功能的应用效果。

方法 选取盐城市某三级甲等精神病专科医院老年科于 2023 年 1 月 1 日~2023 年 12 月 31 日收治的 60 例阿尔茨海默病患者,采用随机数字表法进行分组,分为观察组和对照组各 30 例,对照组行常规护理干预,观察组患者 30 例,在对照组基础上实施回忆疗法联合认知功能训练的护理干预。回忆疗法: ①组织护理人员参加培训工作,重点讲解回忆疗法的具体操作步骤; ②护理人员需要从家属或知情者处获取有用信息, 详细掌握患者的生活习惯、兴趣爱好、以往最重要的事件、文化水平等,结合所掌握的信息去寻找患者熟悉的图画、书籍、音乐、照片、录音、视频等作为回忆疗法的引物; ③内容:借助引导物来引出交谈的主题,引导患者回顾以往的生活,交谈的主题集中在患者过去快乐的经历上,诱导启发患者用语言表达经历过的重大事件,如:与家人、好友共同经历的时光、工作上的美好记忆、旅游中的开心时刻,帮助患者完成生命回顾; ④形式:一对一和小组训练相结合; ⑤时间安排:第 1 个月每周 3 次,第 2 个月每周 1 次,第 3 个月每周 1 次,每次活动时间为 0.5—1 h; ⑥环境布置:布置中融入怀旧的元素,触发患者对过去的记忆,以唤起长辈们曾经拥有的存在价值。⑦对家庭照护者进行指导,介绍疾病知识及照顾技巧,提供回忆疗法的相关材料,鼓励其共同参与。

认知功能训练①注意力训练:根据患者喜好和病情程度,选择难度相对应的游戏或手工训练等项目,并根据其个性特征进行引导,促进其参与的积

极性。②记忆力训练③执行功能训练。④知觉功能训练观察两组阿尔茨海默病患者干预前后的简易精神状态量表(MMSE)、日常生活能力量表(ADL)、记忆与执行筛查量表(MES)的变化。

结果 对阿尔茨海默病患者实施回忆疗法联合认知功能训练后,结果显示:研究组简易精神状态量表、日常生活能力量表、记忆与执行筛查量表均高于对照组,差异均有统计学意义($P<0.05$)

结论 健康老龄化背景下回忆疗法联合认知功能训练应用于阿尔茨海默病患者,老年人认知和智能功能方面未有进一步衰退,能提高患者的日常生活能力,改善患者的记忆功能,值得在临床上进一步推广。

关键词:回忆疗法;认知功能训练;阿尔茨海默病;记忆功能;

相关病理变化的预测作用。

结果 与CN受试者相比,MCI和AD受试者的血浆 ptau-181 水平更高,在MCI受试者中,血浆 ptau-181 水平与A β 病理、tau病理、海马体积、内嗅皮层体积以及记忆域和视空间域量表评分均具有相关性。纵向分析发现,具有高水平血浆 ptau-181 的受试者进展为MCI和AD的风险更高,tau病理、A β 病理沉积速度更快,海马、内嗅皮层、梭状回和内侧颞叶体积萎缩更快、记忆、执行、语言和视空间领域的认知量表分数降低也更明显。

结论 血浆 ptau-181 水平与典型AD病理指标具有相关性,基线期的血浆 ptau-181 水平可预测病程进展和AD病理、认知的纵向变化。血浆 p-tau181 作为一种非侵入性生物标志物,在AD早期检测和预测AD病理方面具有潜在的应用价值。

关键词:阿尔茨海默病,血浆标记物,ptau-181,疾病预测

血浆 ptau-181 对阿尔茨海默病的预测效果研究

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目的 评估血浆中磷酸化的 tau181 (ptau-181) 是否可以预测阿尔茨海默病(AD)的病程进展和AD相关的病理变化。

方法 本研究纳入了阿尔茨海默病神经影像学计划(ADNI)数据库中的1055例纵向数据,其中包括378名认知正常受试(CN),496名轻度认知障碍受试(MCI)和181AD痴呆受试。评价指标包括基线期和随访期的A β 病理,tau病理,脑体积和认知量表评分。通过组间比较和偏相关分析分析三组受试者的基线期组间特征和各指标与血浆 ptau-181 的相关性。采用ROC分析对未进展为认知障碍的CN和AD受试者进行分类并确定血浆 ptau181 的划分阈值从而将所有受试者在基线期分为高血浆 ptau181 组和低血浆 ptau181 组。采用COX风险回归模型和线性混合效应模型分析血浆 ptau181 对疾病进展和AD

探究社会技能训练对老年康复期精神分裂症患者社会功能的影响

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目的 探究社会技能训练对老年康复期精神分裂症患者社会功能的影响。

方法 选取60岁以上康复期患者,对照组药物治疗:医生为患者制定治疗方案,每天与患者交流了解病情变化,以调整用药方案。观察组社会技能巽寮:院内治疗:医生根据每名患者症状情况制定药物治疗方案,期间要求患者保持良好的个人卫生习惯。康复治疗过程中培养患者劳动思维改变懒惰习惯,让患者参与娱乐活动调动人际交流能力。在治疗影响下帮助患者逐渐恢复社会功能,改善其退缩和被动行为,以提升其语言表达能力,进而恢复其自信心和人际交往能力。治疗期间组织患者进行社会技能训练,每周2次,每次时间为50min。

结果 应用社会技能训练的老年康复期患者复发少,社会功能恢复好。

结论 精神分裂症具有较高的复发性,该病精神活动不协调,有行为、情感、知觉、思维等方面障碍,对患者社会功能和生活质量均造成严重的影

响。康复期精神分裂症患者会有不同程度心理障碍,存在人际交往困难、抑郁焦虑情绪等,社会技能训练可改善患者不良情绪,以建立积极健康的人生观,进而提升治疗依从性和整体治疗效果。本文研究对老年康复期精神分裂症患者进行社会技能训练干预,实施效果较为理想,可一定程度改善患者对疾病的认知,使其积极配合治疗工作,以促进其恢复社会功能和健康状态。

关键词: 社会技能训练,老年,精神分裂症,社会功能

Research on The Trend of Antipsychotic Drug Use and Its Associated Factors in Persons Living with Dementia

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Objective Behavioral and psychological symptoms are present in over 90% of persons living with dementia, who are often treated with psychotropic medications, particularly antipsychotics. However, the benefit-to-risk ratio of antipsychotic use in persons living with dementia is suboptimal. Foreign research indicates variability in the utilization of antipsychotics within persons living with dementia, but there is a lack of such studies in our country. This study aims to investigate the evolving trends and contributing factors of antipsychotic use in persons living with dementia

Methods A repeated cross-sectional study design was employed to assess the changing patterns of antipsychotic use in persons living with dementia. Study subjects: Persons living with dementia seen at a major comprehensive hospital from January 1, 2009, to December 31, 2021. Inclusion criteria: meeting any ICD-

10 diagnostic criteria for dementia; age ≥ 18 years. Exclusion criteria: meeting ICD-10 criteria for severe mental disorders. Research Methods (1) Data retrieval: Retrieval of persons living with dementia data from the Hospital Information System (HIS); (2) Data integration: Demographic information, type of dementia, medication usage, etc.; (3) Data analysis: Statistical analysis using SPSS 22.0 and R version 4.1.2

Results A total of 35,218 persons living with dementia (48.8% male, 51.2% female), with an average age of 73.98 ± 11.93 years, predominantly diagnosed with Alzheimer's disease. The overall utilization rate of antipsychotic drugs was 30.5%, with a standardized daily dose of 4.29mg. From 2009 to 2021, trends indicated increasing utilization rates of anti-dementia drugs, antidepressants, anxiolytics, antiepileptic drugs/mood stabilizers, and sedative-hypnotics, while the use of antipsychotics exhibited a decreasing trend. Regression analysis demonstrated positive associations of age ≥ 65 years, female gender, Lewy body dementia + Parkinson's disease dementia, vascular dementia, antidepressants, antiepileptic drugs/mood stabilizers, and sedative-hypnotics with antipsychotic use. Negative associations were observed for cholinesterase inhibitors, anxiolytics, and analgesics. Age ≥ 75 years, female gender, vascular dementia, antidepressants, antiepileptic drugs/mood stabilizers, and sedative-hypnotics were positively correlated with increased daily dosages of antipsychotics, while cholinesterase inhibitors, anxiolytics, and analgesics were negatively correlated

Conclusion The utilization of antipsychotic drugs in persons living with dementia is decreasing, without a significant reduction in prescribed dosages. The utilization rates of antipsychotics in persons living with Lewy body dementia and Parkinson's disease dementia have risen, with a 1.2 times higher risk compared to Alzheimer's disease, possibly due to associated psychiatric symptoms. The decreased use of cholinesterase inhibitors, anxiolytics, and analgesics may be related to the decline in antipsychotic drug usage

关键词: Dementia; Antipsychotic drug; Repeated cross-sectional study

老年抑郁症患者血液系统紊乱的研究进展

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目的 随着抑郁症造成的疾病负担不断增加,而其中尤其是老年抑郁症带来的危害占将随着人口老龄化而主要位置,然而现今对老年抑郁症发病机制及相关医疗手段仍不清晰。截至 2019 年,全球 65 岁以上的老年人口已达 7.03 亿,据估计,到 2050 年,这个年龄段的老年人口将超过 15 亿。统计数据显示,约有 13.3% 的老年人患有抑郁症,这意味着全球有近 1 亿名老年抑郁症患者。然而,对于老年抑郁症的发病机制和治疗方案认识仍然缺乏。鉴于目前的紧迫情况,迫切需要深入研究老年抑郁症的致病机制,并寻找特定的相关靶点并及时治疗。

方法 一、资源来源和检索策略

第一作者在 2014 年 3 月至 2024 年 3 月期间,在 Pubmed、Web of Science、中国知网、万方学术期刊等数据库中检索了近 10 年的文献。检索的关键词包括“老年抑郁症”、“血液系统”、“血液”,以及“Late life depression”、“Blood”、“Sanguis”、“Elderly depression”。检索的时间范围为 2014 年至 2024 年,共获得了 694 篇相关文献。

二、文献纳入标准和排除标准

1. 纳入标准:与老年抑郁症和血液系统相关的文献;近十年内发表在公开期刊上的中英文文献。

2. 排除标准:非中文或非英文的文献;案例报告、会议论文或编辑意见等文体的文献;重复的相关文献。

结果 老年人抑郁症的发生和发展与血液系统的变化密切相关。具体表现为红细胞代谢失衡、循环细胞尿酸通路过度激活、炎症介质变化,以及血浆中糖皮质激素、甘油三酯、循环表皮生长因子、成纤维生长因子 2 以及其他代谢物的紊乱。老年抑郁症具有隐匿性和危害性突出的特点,这给早期诊断和治疗带来了巨大困难。Tan 等人构建了多种老年抑郁症的预测模型,能够很好地预测老年人中抑郁症状的存在程度,但由于方法学上的限制,目前尚无法在大范围人群中进行广泛测试,因此需要进一步深入研究。此外,研究显示抗抑郁药物可以降低老年抑郁患者的死亡率并显著改善其生活质量。有关抗抑郁药物的疗效研究发现,抗抑郁药物可以

调节血细胞代谢、缓解循环炎症、改善血液代谢紊乱,从而有效的缓解老年患者的抑郁症状。另一项来自中国农村的研究表明,47.26% 的个人医疗支出与抑郁症状密切相关,故抗抑郁药物的使用还可极大程度减少个人、家庭及社会的沉重负担。

结论 老年抑郁症是全球卫生系统面临的重大挑战,其机制研究与药物研发亟待深入研究。本综述显示,老年抑郁症与血液系统紊乱密切相关。由于老年人群的年龄特殊性,通常伴随血液系统功能的紊乱。因此,血液系统紊乱是一种切入老年抑郁疾病的有效且新颖的视角,亟待更多深入的研究及发现。

关键词:老年抑郁症,血液系统紊乱,血液系统

The Interaction of The GABRB3 Gene Mutation and Brain Structure in Major Depressive Disorder

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Objective Major depressive disorder (MDD) is a complex polygenic disorder, whose pathogenesis has not yet been fully elucidated. This study aims to investigate the low-frequency and rare genetic variation of MDD and its relationship with brain neuroimaging, which provides underlying evidence for genetic imaging mechanism of MDD

Methods This study was approved by the Clinical Trials and Biomedical Ethics Committee of Sichuan University. All patients were diagnosed by the Structured Clinical Interview for DSM-IV Disorders. The low-frequency variants and rare mutations (Minor allele frequencies < 0.05) related to depressive phenotypes were filtered based on whole exome sequencing. Enrichment analyses on the set of genetic mutations specific to the MDD were run to investigate biological

functions in the Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway. The pathogenicity rank order was used to explore the degree of genetic contribution to MDD. Then, this study extracted the structural indicators of each subject, including cortical thickness, cortical volume, gyrus curvature and brain sulcus depth by using the individualized brain region segmentation divided into 92 brain regions. The association between the GABRB3 gene and brain structure was performed by two-way analysis of covariance. The brain regions with statistical differences after multiple comparisons via the False Discovery Rate were analyzed post hoc

Results A total of 87 people with MDD and 62 Health Control (HC) was recruited in this study. There were 146 genes mutated in people with MDD compared to HC, enriched in 17 KEGG pathways. The retrograde endocannabinoid signaling pathway was the most significant in function with MDD, in which GABRB3 gene ranked the highest through pathogenicity rank order, and its rs3751582 locus was screened to the genetic imaging analysis. This study found that the curvature of the left precentral gyrus of MDD was reduced compared with HC group ($F=13.898$, $P_{ad}=0.028$); the interaction between rs3751582 and diagnosis had a statistically significant difference in the curvature of the right middle frontal gyrus ($F=13.592$, $P_{ad}=0.039$). The post-hoc analysis found that compared with the HC unmutated group (TT), the absolute value of the curvature of the right middle frontal gyrus of the MDD unmutated group and the HC mutation group (CC+CT) both increased

Conclusion GABRB3 gene mutation occupied an important position in the genetic pathogenicity of MDD. The curvature of the gyri was an index to evaluate the morphology of the cerebral cortex, which may be involved in the pathogenesis of MDD. Abnormal cortical morphology in the left precentral and right middle temporal gyrus may be potential biomarkers involved in the pathogenesis of MDD. Rs375158 mutation was associated with abnormal morphology of the right middle temporal gyrus cortex, leading to dysfunction of neural signaling of γ -aminobutyric acid type A receptors. But it's not about whether it causes MDD or not

关键词: Major depressive disorder; Gene enrichment analysis; GABRB3 gene; Curvature of gyrus

Cannabidiol in Treatment with Mental Disorders: Mechanism and Clinical Research Progress

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Objective Cannabidiol (CBD), one of the main components of *Cannabis sativa L.*, has higher safety and tolerability compared with Tetrahydrocannabinol (THC). In addition, CBD has been approved by the Food and Drug Administration (FDA) to treat intractable epilepsy in children. The clinical treatment prospects of CBD are more promising. Besides, numerous studies have found that CBD has anti-depressant, anxiety, stress, and addiction effects and is one of the drug candidates for mental disorders

Methods This review primarily summarized the possible mechanisms and clinical research progress of CBD in the treatment of substance use disorder, major depressive disorder, anxiety disorder, post-traumatic stress disorder, and autism spectrum disorder by reviewing domestic and foreign research

Conclusion CBD works through the endocannabinoid system and multiple receptors, and is expected to become a candidate drug for the treatment of mental illness. However, the clinical trials that have been carried out so far have limitations. This paper aims to provide a theoretical basis for further developing new drugs for psychiatric disorders. CBD and its related compounds are expected to become alternative treatments for mental illness. In the future, a large number of high-quality, multi-center clinical trials will be needed to evaluate the effectiveness and safety of CBD in patients with mental illness

关键词: Cannabidiol Mental disorders Treatment Mechanism

Distinct White Matter Abnormalities and Cognitive Impairments in Deficit Schizophrenia: A Cross-sectional Diffusion Tensor Imaging Study

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Objective Deficit schizophrenia (DS), characterized by persistent and primary negative symptoms, is considered a promising homogeneous subtype of schizophrenia. According to the disconnection hypothesis, abnormalities in white matter fibers are common in schizophrenia. However, comprehensive measurement of white matter metrics and exploration of the relationships between neuroanatomical changes and cognitive functions in DS patients are still unknown

Methods A cross-sectional study was conducted, including 35 DS patients, 37 non-deficit schizophrenia (NDS) patients, and 39 healthy controls (HC), all male and matched for age and education level. The tract-based spatial statistics method was performed to detect differences in fractional anisotropy (FA), mean diffusivity (MD), axial diffusivity (AD) and radial diffusivity (RD) among these three groups. Cognitive function in DS and NDS patients was assessed using the Mini-Mental State Examination (MMSE) and Mattis Dementia Rating Scale. Correlation analyses were performed between diffusion metrics in regions showing differences and clinical scales

Results The results showed significant differences in diffusion metrics (FA, RD, AD, MD) across DS, NDS, and HC groups, particularly in the corpus callosum, corona radiata, and thalamic radiations. Compare to NDS, DS patients exhibited more reductions in FA and increases in RD, especially in the right posterior thalamic radiation and right superior longitudinal fasciculus. Correlation analysis revealed that lower FA in specific regions was linked to worse cognitive and clinical symptoms

Conclusion These findings reinforce the dysconnectivity hypothesis of schizophrenia and highlight the distinct pathological mechanisms of white matter impairments in DS. Correlations in crucial white matter regions suggest disruptions in thalamo-cortical feedback loops, potentially contributing to the cognitive impairments observed. This provides a deeper understanding of how structural brain changes relate to clinical symptoms

关键词: Deficit schizophrenia; TBSS; Cognitive function; Disconnection hypothesis

Subcortical Volume Alteration and Correlation with Social Function Under Chlorpromazine Versus Clozapine Treatment in Schizophrenia

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Objective Schizophrenia is a complex psychiatric disorder that affects multiple brain regions, especially those located beneath the cerebral cortex. This investigation examines the differences in subcortical volume between schizophrenia patients treated with chlorpromazine (CPZ) or clozapine (CLZ) and healthy controls and examines how these antipsychotic treatments affect brain structure

Methods High-resolution MRI was used to assess subcortical volumes, with clinical symptoms and social function assessed using PANSS and SSPI scales. Correlate and predictive analyses were performed to explore the relationship between the volume of subcortical structures and social functioning

Results Analysis revealed a significant increase in pallidum and putamen volumes in the CPZ group compared to both the CLZ group and healthy controls.

Thalamic volume was not significantly different between the CPZ and CLZ groups but was reduced compared to controls. A significant correlation between total thalamic volume and improved social function was observed in the CPZ group. According the predictive analysis, only the whole thalamus and bilateral thalamus volume showed statistically significant effects on prediction of SSPI scores

Conclusion Our results highlight distinct neuro-anatomical changes associated with various antipsychotic treatments in schizophrenia. The unique alteration specific of subcortical areas in the different antipsychotic treatment groups reflect different psychopharmacological effect and the thalamus may be a neuroimage biomarker of social function in schizophrenia

关键词: subcortical volume, social function, chlorpromazine versus clozapine, antipsychotic treatment

美金刚治疗阿尔茨海默病性痴呆致活动异常 1 例及分析

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目的 对 1 例阿尔茨海默病性痴呆患者使用美金刚后出现活动异常的临床资料进行回顾并进行相关文献复习, 为临床应用提供参考依据。

方法 阿尔茨海默病性痴呆是最常见老年痴呆类型, 目前尚无法治愈。该病为神经系统退行性疾病具有起病隐袭的特征, 临床上主要表现为记忆障碍、失语、失用、失认、视空间技能损害、执行功能障碍以及人格和行为改变等全面性痴呆。其主要病理改变为老年斑(Senile plaque, SP) 和神经原纤维缠结(Neurofibrillary tangles, NFT)。近年来越来越多的研究证据显示, N-甲基-D 天冬氨酸(NMDA)受体功能损害时, 会影响谷氨酸能神经递质功能, 表现神经退行性痴呆症状, 加速疾病进展。美金刚作为治疗 AD 的常用药物, 可选择性阻断 NMDA 型谷氨酸受体, 增加脑内谷氨酸浓度, 拮抗神经毒性, 延缓神经退行性病变进程。能增加边缘皮质源性神经营养因子的浓度, 进而保护神经细胞, 改善认知功能。其常见的不良反应有头晕、高血压、呼吸困难、

意识模糊、便秘等。活动异常不良反应报道罕见。

结果 本例为 66 岁老年女性, 主诉“记忆进行性下降 3 年, 加重伴言行紊乱半月”, 于 2022 年 8 月 22 日入院。入院体格检查: 血压 142/97 mmHg、心率 90 次/分。精神检查: 意识清, 定向障碍, 未引出感知觉障碍。简单问题可, 难以深入。存在被害妄想, 称自己老伴被邻居害死, 又想害自己的孩子。记忆力下降, 智能明显受损。情绪欠稳定。意志活动总体减退。无自知力。入院辅助检查: 颅脑磁共振: 脑内多发缺血灶、腔隙灶、脑萎缩。韦氏智力: 42; 韦氏记忆: 52; MMSE: 2 分。诊断: 阿尔茨海默病性痴呆(老年型)。入院给予奥氮平、丙戊酸镁缓释片、劳拉西泮等药物治疗, 合并盐酸美金刚 5mg/天改善认知。

结论 患者服用美金刚第二天出现较明显活动异常, 表现起步困难, 行动迟缓, 坐位时身体僵硬后仰。停用美金刚第 2 天上述症状好转, 后活动异常渐消失。

关键词: 美金刚, 阿尔茨海默病性痴呆, 不良反应, 活动异常

Serum Gut Hormone Levels in Patients with Antipsychotic-induced Gastrointestinal Hypomotility

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Objective Constipation is a frequently, however, overlooked side effect in patients treated with antipsychotic medications, which is named as antipsychotic-induced gastrointestinal hypomotility. Gut hormones play important roles in gut motility related to constipation. While gut hormones have not previously been measured together with this side effect. We aimed to investigate serum gut hormones difference in schizophrenia patients prescribed antipsychotic medications

Methods We conducted a cross-sectional study of 88 patients with schizophrenia. Rome IV criteria for constipation and radiopaque markers for colonic transit

time were jointly used to identify gastrointestinal hypomotility in patients with schizophrenia. Moreover, using the self-reported Constipation Assessment Scale (CAS) and the researcher-evaluated Bristol Stool Scale (BSS), we assessed the severity of constipation. Then, Seven gut hormones related to gastrointestinal motility were measured from fasting blood samples. Demographic and clinical data including age, gender, BMI, smoking status, medication, diagnoses, and serum total bile acid levels were further analyzed

Results The age range of patients was between 30 and 65 with an average age of 50.85. There were 44 patients diagnosed with gastrointestinal hypomotility (C), the other 44 patients with normal gastrointestinal hypomotility (NC) had matched age and gender. The main findings were as follows: (1) BSS and CAS scores were significant between the two groups ($p < 0.05$); (2) Gut hormone Ghrelin showed a higher level in the C group than that in the NC group (382.48 (266.79, 467.23) mmol/L v.s. 292.23 (225.55, 417.41) mmol/L, $p = 0.033$); (3) In the C group, there was a negative correlation between Ghrelin level and CAS (Spearman's $r = 0.280$, $p = 0.008$)

Conclusion In addition to antipsychotic pharmacological mechanisms, ghrelin seems to be another way related to antipsychotic-induced gastrointestinal hypomotility. Moreover, patients with antipsychotic-induced gastrointestinal hypomotility seem to have dysregulated enterohepatic circulations of bile acids related to the gut microbiome

关键词: Antipsychotics, Side effect, Gastrointestinal hypomotility

Analysis of The Current Status and Comorbidity Characteristics of Cognitive Impairment in Elderly People in Fujian Region

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Objective To analyze the status quo, comorbidity and related influencing factors of cognitive dysfunction in the elderly in Fujian province

Methods A cross-sectional survey was conducted in 3 districts and 3 townships in Fujian Province from April to May 2023. The enrolled age was ≥ 65 years old. Dementia Community Screening Scale (CSI-D) or 8-item Dementia Screening Questionnaire (AD8) were used as screening tools, in which AD8 scores ≥ 2 or CSI-D ≤ 7 were judged as cognitive dysfunction. The questionnaire was made by ourselves to study the related factors, comorbidity

Results A total of 19385 people completed the survey, The mean age was (71.87 \pm 5.68) years, with the smallest being 65.00 years and the largest being 100.00 years. Among them 3720 cases (19.19%) (2964 people scored AD8 ≥ 2 , 1699 people scored CSI-D ≤ 7 , and 943 people scored AD8 ≥ 2 and CSI-D ≤ 7) had cognitive impairment. There were statistically significant differences in age, education, marital status, residence, insomnia, sleep time, comorbidity and types of comorbidity between the two groups ($P < 0.05$). Chronic gastroenteritis, rheumatoid arthritis, heart disease, cerebrovascular disease, gallstone cholecystitis, cancer and atopic dermatitis were associated with cognitive impairment in the elderly ($P < 0.05$). Multivariate logistic regression analysis showed that age, education level, marital status, residence condition, insomnia, sleep time, number of comorbidities, chronic gastroenteritis, rheumatoid arthritis, cerebrovascular disease, heart disease, gallstone cholecystitis and atopic dermatitis were independent influencing factors. Older age [OR=1.07], widowed OR divorced [OR=1.67], frequent insomnia [OR=1.97], chronic gastroenteritis [OR=1.69], cerebrovascular disease [OR=1.60], heart disease [OR=1.85], gallstone cholecystitis [OR=2.94], allergic dermatitis Patients [OR=2.73] had an increased risk of cognitive impairment. Couples living with two and two [OR=0.63] and three generations living together [OR=0.63] had a significantly lower risk of disease. Conclusion The prevalence of cognitive impairment in the elderly aged ≥ 65 years in Fujian increased with the increase of age, some diseases would increase the risk of cognitive impairment in the elderly, and co-residents could reduce the

risk of cognitive impairment in the elderly

Conclusion The prevalence of cognitive impairment in the elderly aged ≥ 65 years in Fujian increased with the increase of age, some diseases would increase the risk of cognitive impairment in the elderly, and co-residents could reduce the risk of cognitive impairment in the elderly

关键词: the elderly ; cognitive dysfunction ; comorbidity characteristics ; Influencing factors

脑电图相对波段动态检查与帕金森患者认知障碍病情程度的关联性及其疗效评估价值研究

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目的 探讨脑电图相对波段动态检查与帕金森(PD)患者认知障碍病情程度的关联性及其疗效评估价值。

方法 选取2020年6月~2023年7月我院收治的98例PD患者设为研究组,另选取同期健康体检者98例设为对照组。所有受检者均接受脑电图相对波段动态检查及简易智力状态检查量表(MMSE)测评,并给予研究组左旋多巴治疗。统计研究组与对照组、研究组不同认知障碍程度患者脑电图相对波段动态检查情况、MMSE评分,分析脑电图相对波段动态检查情况与PD患者认知障碍程度的相关性,比较研究组治疗前后脑电图相对波段动态检查情况。

结果 研究组 α 、 β 波段低于对照组, δ 、 θ 波段高于对照组($P<0.05$)。研究组MMSE分值低于对照组($P<0.05$)。不同认知障碍程度患者脑电图相对波段动态检查情况存在显著差异($P<0.05$);多重比较,轻度认知障碍者 α 、 β 波段低于认知正常者, δ 、 θ 波段高于认知正常者($P<0.05$);中度认知障碍者 α 、 β 波段低于轻度认知障碍者, δ 、 θ 波段高于轻度认知障碍者($P<0.05$);重度认知障碍者 α 、 β 波段低于中度认知障碍者, δ 、 θ 波段高于中度认知障碍者($P<0.05$)。经Spearman检验证实,脑电图相对波段动态检查中 α 、 β 波与认知功能正相关, δ 、 θ 波与认知功能负相关($P<0.05$)。治疗后研究组 α 、 β

波段较治疗前增高, δ 、 θ 波段较治疗前降低($P<0.05$)。

结论 PD患者脑电图相对波段动态检查情况与认知障碍程度具有密切关联性,可用于疾病认知功能及治疗情况的评估。

关键词: 帕金森; 认知障碍; 脑电图相对波段动态检查; 病情程度; 关联性

阿尔茨海默病患者精神行为症状的照护态度及应对方式

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目的 了解照护者对阿尔茨海默病精神行为症状现状及照护者的照护态度。

方法 对2023年6月-2023年12月于绵阳市第三人民医院住院的阿尔茨海默病住院患者及其照护者进行面对面问卷调查。调查工具为《痴呆病人精神行为症状照顾者问卷(ABS)》、《失智症照护态度量表》。

结果 共有86名阿尔茨海默症患者、86名照护者参与本次调查。86名患者中男性42人,女性44人;年龄分布为58-93岁,平均年龄为77.56岁,病程为0.5年-11年,平均病程为3.74年。86名照护者中家属42名,平均年龄62.05岁;医疗护理员44名,平均年龄58.59岁,平均工作年限4.24年,其中有照护经验的10人,经过照护培训的9人。根据《痴呆病人精神行为症状照顾者问卷(ABS)》,由照护者对阿尔茨海默症患者的精神行为症状进行评估,评估结果显示:阿尔茨海默病患者中出现频次最多的精神行为症状为作息异常,其次是行为异常维度中的幻觉和妄想、言语攻击行为;异常行为中得分最高的是睡眠日夜颠倒,其次是徘徊行为、用餐和如厕行为异常。面对阿尔茨海默病患者的精神行为症状,62.79%的照护者不能有效应对。《失智症照护态度量表》调查结果显示:17.76%的照护者对阿尔茨海默病患者的照护持中立态度,38.27%照护者持消极态度,仅有43.97%持积极态度。

讨论 照护者对阿尔茨海默病患者精神行为症状的照护态度不容乐观,大多数照护者不能有效应对精神行为症状,这可能与照护者年龄偏大,本身

照护能力不足；照护者未接受疾病知识、照护技巧培训；阿尔茨海默病患者最常见精神症状直接影响照护者正常睡眠需求、心理承受能力、照护安全风险有关。

关键词：阿尔茨海默病；精神行为症状；照护态度；应对方式；横断面调查

Efficacy, Acceptability and Tolerability of Second-generation Antipsychotics for Behavioral and Psychological Symptoms of Dementia: A Systematic Review and Network Meta-analysis

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Objective Behavioral and psychological symptoms of dementia (BPSD) are highly prevalent in people living with dementia. Second-generation antipsychotics (SGAs) are commonly used to treat BPSD, but their comparative efficacy and acceptability are unknown

Methods This study was conducted following the guidelines of the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA). Stata/SE (version 15.1) in a frequentist framework was used for the data analysis. The standard mean difference (SMD) was used to pool the fixed effect of continuous outcomes. We calculated odds ratios (ORs) with corresponding 95% credible intervals (CI) for the categorical variable. Efficacy was defined as the scores improved on the standardized scales. The acceptability was defined as all-cause dropout rate. The tolerability was defined as the discontinuation rate due to adverse effects. The Relative treatment rankings were reported with mean ranks and the surface under the cumulative ranking curve

Results Twenty RCTs with a total of 6374 individuals containing 5 types of SGAs (quetiapine, olanzapine, risperidone, brexpiprazole, and aripiprazole) with intervention lengths ranging from 6 weeks to 36 weeks were included in this NMA. For the efficacy outcome, compared with the placebo, brexpiprazole (SMD

= -1.77, 95% CI -2.80 to -0.74) was more efficacious, and brexpiprazole was better than quetiapine, olanzapine, and aripiprazole. Regarding acceptability, only aripiprazole (OR = 0.72, 95% CI 0.54 to 0.96) was better than the placebo, and the aripiprazole was also better than brexpiprazole (OR = 0.61, 95% CI 0.37 to 0.99). In terms of tolerability, olanzapine was worse than placebo (OR = 6.02, 95% CI 2.87 to 12.66), risperidone (OR = 3.67, 95% CI 1.66 to 8.11), and quetiapine (OR = 3.71, 95% CI 1.46 to 9.42), while aripiprazole was better than olanzapine (OR = 0.25, 95% CI 0.08 to 0.78). (Figure and Table)

Conclusion Brexpiprazole has shown great potential efficacy in the treatment of BPSD, with the highest acceptability of aripiprazole and the worst tolerability of olanzapine. The results of this study may be used to guide decision-making

关键词：BPSD, Antipsychotics, Efficacy, Network meta-analysis

Leveraging Diverse Regulated Cell Death Patterns To Identify Diagnosis Biomarkers for AD

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Objective The functions of regulated cell death (RCD) are closely related to Alzheimer's disease (AD). However, very few studies have systematically investigated the diagnosis and immunologic role of RCD-related genes in AD patients

Methods 8 multicenter AD cohorts were included in this study, and then were merged into a meta cohort. Then, an unsupervised clustering analysis was carried out to detect

unique subtypes of AD based on RCD-related genes. Subsequently, differently expressed genes (DEGs) and weighted correlation network analysis (WGCNA) between subtypes were

identified. Finally, to establish an optimal risk

model, an RCD. score was constructed by using computational algorithm (10 machine-learning algorithms, 113 combinations).

Results We identified two distinct subtypes based on RCD- related genes, each exhibiting distinct hallmark pathway activity and immunologic landscape. Specifically, cluster.A

patients had a higher immune infiltration, a higher immune modulators and poor AD progression. Utilizing the shared DEGs and WGCNA of these subtypes, we constructed an RCD. score that demonstrated excellent predictive ability in AD across multiple datasets. Furthermore, RCD.score was identified to exhibit the strongest association with poor AD progression. Mechanistically, we observed activation of signaling pathways

and effective immune infiltration and immune modulators in the high RCD.score group, thus leading to a poor AD progression. Additionally, Mendelian randomization screening

revealed four genes (CXCL1, ENTPD2, METTL7A, and SERPINB6) as feature genes for AD.

Conclusion The RCD model is a valuable tool in categorizing AD patients. This model can be of great assistance to clinicians in determining the most suitable personalized

treatment plan for each individual AD patient.

关键词: Alzheimer's disease, artificial intelligence, mendelian randomization, biomarkers.

22-29 分中度, >29 分重度。BPRS 用作精神病性症状检查内容。

结果 一、AD 病人精神症状出现率 33 例病人 (33%) 伴有精神症状, 其中 11 例出现在近记忆下降之前, 包括被害妄想 2 例, 抑郁 6 例, 性格/人格改变 3 例。其余 22 例精神症状呈现在记忆下降之后。100 例病人中, 伴幻觉 9 例 (9%), 依次为幻听 4 例、幻视 3 例和幻嗅 2 例; 伴妄想 11 例 (11%), 依次为被窃妄想 3 例、被害妄想 3 例、关系妄想 3 例和嫉妒妄想 2 例; 伴抑郁 8 例 (8%), 均为轻度抑郁; 伴焦虑 13 例 (13%), 依次为轻度焦虑 10 例、中度焦虑 3 例、无重度焦虑; 伴行为障碍 14 例 (14%), 依次为易激惹 11 例、攻击 3 例。

二、MMSE 与精神症状

100 例 AD 病人中, MMSE 分 24 - 18 分者 73 例, 17-13 分者 27 例。行为障碍在智能损害较重组中出现率 (14/100=14%) 显著高于智能损害较轻组 (13/100=13%) ($P < 0.05$); 幻觉、妄想、抑郁及焦虑无差异 ($P > 0.05$)。

三、精神症状间相互关系

1. 有妄想或/和幻觉的病人 20 例, 易激惹、攻击行为在有幻觉/妄想组中出现率 (分别为 11/100=11%、3/100=3%) 显著高于无幻觉/妄想组 (3/100=3%、1/100=1%, $P < 0.05$)。2. 8 例病人伴抑郁。焦虑在有抑郁组中出现率 (8/100=8%) 显著高于无抑郁组 (2/100=2%, $P < 0.05$)。

结论 随着 AD 疾病程度的加重, 出现精神行为异常者明显增多, 且重度 AD 患者抑郁程度明显高于轻、中度患者。

关键词: 阿尔茨海默病; 精神症状

阿尔茨海默病精神症状学分析

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目的 探讨 AD 病人的精神症状学特点

方法 一、采用简明精神病量表 (BPRS)、汉密尔顿抑郁量表 (HAMD)、汉密尔顿焦虑量表 (HAMA) 调查 AD 病人精神症状。HAMD 参照 Devis JM 标准: <8 分无抑郁, 8-17 分轻度, 18-35 分中度, >35 分重度。HAMA 参照全国量表协作组提供标准 (1993 年): <15 分无焦虑, 15-21 分轻度,

Association between Window Ventilation Frequency and Depressive Symptoms Among Older Chinese Adults

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Objectives Indoor air pollution exposure is harmful to people's physical and mental health, especially in the elderly population. Depressive symptoms

are the most common mental health issue among elderly individuals. However, evidence linking the frequency of indoor natural ventilation to depressive symptoms in the elderly population is limited

Methods This study included 7887 individuals 65 years and older from 2017 to 2018 the China Longitudinal Healthy Longevity Survey (CLHLS). The frequency of indoor window ventilation was measured as the self-reported times of ventilation of indoor window per week in each season, and the four seasons' scores were added up to calculate the annual ventilation frequency. Depressive symptoms were measured by the 10-item Center for Epidemiologic Studies Short Depression Scale (CES-D). Using three models adjusted for demographic, socio-economic, health status, and environmental factors successively, the correlation between indoor window ventilation frequency and depressive symptoms was verified through logistic regression

Results Among the 7887 elderly people included in this study, 1952 (24.7%) had depressive symptoms. In the fully adjusted model, compared with the lower indoor annual ventilation frequency group, high indoor annual ventilation frequency group was significantly associated with a 33% (OR: 0.67, 95%CI: 0.51–0.88) lower probability of depressive symptoms. Subgroup analysis and sensitivity analysis yielded similar results

Conclusion High frequency of window ventilation is significantly associated with the lower risk of depressive symptoms in Chinese individuals aged 65 and older. This result provides strong evidence for health intervention and policy formulation.

关键词: depression, depressive symptoms, aging, indoor air pollution, ventilation, cross-sectional study.

病程对老年焦虑障碍睡眠结构及认知功能的影响

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目的 探讨病程对老年焦虑障碍患者睡眠结构

及认知功能的影响。

方法 选取 2021 年至 2023 年在杭州市第七人民医院老年睡眠障碍科确诊焦虑障碍的患者共 48 例。根据病程长短分为短病程组 (Short duration of illness, SD<3 个月), 共 24 人, 长病程组 (Long duration of illness, LD≥3 个月), 共 25 人。分别采用自制一般情况调查量表, 汉密尔顿焦虑量表 (HMHA), 汉密尔顿抑郁量表 (HAMD), 匹兹堡睡眠指数量表 (PSQI), 简易智力状态检查量表 (MMSE)、蒙特利尔认知评估量表 (Moca) 以及数字广度量表 (DSST) 对患者进行评估, 利用多导睡眠监测仪监测患者睡眠结构。

结果 两组患者在一般人口学资料上无明显差异, 两组患者在汉密尔顿焦虑量表总分、汉密尔顿抑郁量表总分以及匹兹堡睡眠指数量表方面均不存在明显的组间差异。两组患者非 REM 期所占总睡眠时间百分比组间比较无显著性差异, LD 组患者的 N3 期潜伏期时间、N1 期总睡眠时间较 SD 组显著延长 ($P < 0.05$), LD 组患者的简易智力状态检查量表总分、数字广度量表总分, 蒙特利尔认知评估量表总分显著高于 SD 组患者 ($P < 0.05$), 其中, 蒙特利尔认知评估量表在执行功能分量分数上明显高于 SD 组 ($P < 0.05$), 其他分量表上则不具有显著的组间差异。

结论 病程可显著影响老年焦虑患者的睡眠结构, 导致认知功能下降。

关键词: 老年, 焦虑, 睡眠结构, 认知

A Long-term High-fat Diet Influences Brain Damage and Is Linked To The Activation of HIF-1 α /AMPK/mTOR/p70S6K Signalling

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Objective We investigated the effects of the damage of the brain tissue of mice fed a high-fat diet (HFD) or normal diet (ND) and on the molecular mechanisms of autophagy

Methods In this study, Male C57BL/6J mice (13 months old) were divided into ND and HFD group for 24 weeks. The spatial memory learning and memory

was assessed using Morris water maze (MWM) test. For in vitro experiments, BV2 cells were seeded in 100 μ M culture dishes pre-coated with PA. Immunofluorescence staining and Western blot were used to detect the expression of AMPK/mTOR signaling pathway-related proteins. Autophagy levels were assessed by autophagy-related protein expression and transmission electron microscope

Results In our study, we found that 24 weeks of a HFD effectively induced obesity and a change in fur color in mice. In addition, the mice also exhibited deficits in learning and memory. We further found that autophagic flux was impaired in mice after HFD feeding. Hypoxia-inducible factor 1 α (HIF-1 α) expression was significantly increased in HFD-fed mice, and HFD feeding inhibited adenosine monophosphate-activated protein kinase (AMPK) phosphorylation and induced mechanistic target of rapamycin (mTOR) phosphorylation and p70S6K expression. Treatment of HFD-induced BV2 cell model with PA was used to further verify a similar result

Conclusion We concluded that improving tissue hypoxia or enhancing autophagy through the AMPK/mTOR/p70S6K pathway may be a relevant strategy for improving obesity- and ageing-related disorders

关键词: AMPK/mTOR pathway; HIF-1 α ; ageing; autophagy; high-fat (HF) diet; obesity

老年精神障碍患者暴力攻击行为与临床特征的相关性研究

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目的 探讨首发老年精神障碍患者的暴力攻击行为与临床特征的相关性。

方法 连续纳入 2023 年 4 月-2024 年 4 月首次在我院住院的符合老年精神障碍诊断标准的 126 例患者, 评估其一般资料问卷 (包括性别、年龄、病

程、暴力行为史、BMI 等)、外显攻击行为量表 (MOAS)、神经精神问卷 (NPI)、长谷川痴呆量表 (HDS) 及临床资料, 根据 MOAS 评分是否 ≥ 4 分将患者分为暴力行为组 (n=72) 和非暴力行为组 (n=54), 对比两组的一般资料、临床资料及 NPI 评分和 HDS 评分差异, 进一步使用二元 Logistic 回归模型分析首发老年精神障碍患者的暴力攻击行为的风险因素。

结果 126 例首发老年精神障碍患者年龄在 65-94 岁, 平均 75.85 \pm 6.33 岁, 其中男性 63 例、女性 63 例, 其中有 72 例 (57.1%) 患者伴有暴力攻击行为。单因素分析中, 两组患者在性别 (p=0.03)、抽烟史 (p=0.02)、暴力行为史 (p=0.00)、NPI 总分 (p=0.00) 等方面具有显著统计学差异 (P<0.05)。二分类 Logistic 回归分析显示 NPI 总分 (OR=1.129)、暴力行为史 (OR=13.66) 是老年精神障碍暴力行为的危险因素。进一步分析, 两组患者 NPI 量表中是否伴有激越攻击 (p=0.00)、焦虑 (p=0.02)、激惹 (p=0.00)、睡眠 (p=0.05) 等症状具有统计学差异 (p<0.05)。二分类 Logistic 回归分析显示, 激越攻击 (OR=25.546) 因子是暴力攻击行为的危险因素。

结论 老年精神障碍患者暴力攻击行为发生率较高, 需要重点关注伴有激越攻击症状和既往有过暴力行为史的老年患者。

关键词: 老年精神障碍; 暴力攻击行为; 临床特征; 神经精神问卷; 长谷川量表

青少年抑郁症患者非自杀性自伤行为的心理学机制探讨及风险预测模型构建

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目的 进一步探讨青少年抑郁症患者发生非自杀性自伤 (Non-suicidal self-injury, NSSI) 的心理学相关影响因素及构建风险预测模型。

方法 依据《美国精神障碍诊断与统计手册第五版》的标准, 将 2022 年 5 月至 2023 年 11 月按住院顺序在联勤保障部队第九〇四医院常州医疗院区少儿心理科住院就诊的 127 例青少年抑郁症患者分无 NSSI 组 (59 例) 和 NSSI 组 (68 例)。收集儿童期创伤问卷、自尊量表、特质应对方式问卷、青少年

心理韧性量表和防御方式问卷等。通过单因素检验筛选出有意义的自变量 ($P < 0.05$) 纳入多因素 Logistic 回归分析, 筛选影响 NSSI 发生的独立影响因素, 再进一步使用 R 包“rms”绘制预测模型的列线图, ROC 曲线和校准曲线用于评估列线图模型准确性。

结果 127 例患者有 68 例存在 NSSI 行为, NSSI 发生率为 53%。单因素分析两组患者在情感虐待、躯体虐待、情感忽视、躯体忽视、消极应对、自尊总分、情绪控制、家庭支持、心理韧性总分、成熟防御机制等心理学特质方面差异均有统计学意义 (均 $P < 0.05$)。多因素 Logistic 回归分析显示情感虐待、消极应对、家庭支持和成熟防御机制为青少年抑郁症 NSSI 发生的独立影响因素 (均 $P < 0.05$), 其中, 情感虐待和消极应对是危险因素, 家庭支持和成熟防御机制是保护因素。风险预测模型结果提示, 情感虐待和消极应对量表的评分越高, 家庭支持和成熟防御机制量表的评分越低, 所获得的模型得分越高, 意味着 NSSI 的发生风险也相应的增高。校准曲线发现拟合度与参考曲线拟合度较高。风险预测模型 ROC 曲线下面积 (Area under the curve, AUC) 为 0.863, 而情感虐待、消极应对、家庭支持和成熟防御机制 AUC 值分别为 0.811、0.751、0.703 和 0.720, 提示该模型预测青少年抑郁症患者 NSSI 发生风险较单因素效能更佳。

结论 伴 NSSI 行为的青少年抑郁症患者发生率较高, 这可能与童年情感虐待、消极的应对方式、家庭支持少和较少使用成熟防御机制相关。本研究所构建的风险预测模型对青少年抑郁症患者 NSSI 的发生风险具有良好的预测能力。

关键词: 青少年, 抑郁症, 非自杀性自伤, 独立影响因素, 风险预测模型

老年夫妇行动能力受限轨迹的异质性研究

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目的 本研究目的在于揭示老年夫妇行动能力受限的多样化发展轨迹, 并分析这些轨迹与个体生物、心理、社会特征之间的关联。通过识别不同行动

能力受限轨迹的群体, 进一步探讨了这些特征如何预测老年夫妇随后的幸福感和生活满意度, 以期为制定有针对性的健康干预措施提供依据。

方法 本研究使用了中国健康与养老追踪研究 (CHARLS) 的数据, 选择了 2011 年至 2018 年期间保持持续婚姻和同居状态, 并参与了所有四次调查的 60 岁及以上的夫妇。使用抑郁量表 (CESD-10) 和自我评估的健康、记忆力、生活满意度等问题进行数据收集。应用卡方检验及多元线性回归分析, 评估参与者不同行动能力受限轨迹类别与基线 (2011 年) 生物、心理、社会特征以及随后 (2018 年) 结局之间的关系。

结果 丈夫和妻子的个体行动能力受限轨迹被分为四组, 每组具有不同的轨迹模式。表现出非典型行动能力受限轨迹的亚组 (包括行动能力受限水平高、持续增加和波动降低) 与不利的基线生物、心理、社会特征相关。

结论 老年夫妇个体行动能力受限可分为四种发展轨迹。表现出非典型轨迹的群体, 如行动能力受限水平高、持续增加或波动下降的个体, 与不利的基线特征紧密相关。早期的生物、心理、社会条件对老年夫妇的行动能力有长期影响, 强调了在制定健康干预措施时考虑这些初始条件的重要性。

关键词: 行动能力受限, 配偶, 老年人, 轨迹分析

Frailty Mediates The Association between Activities of Daily Living Disability and Depressive Symptoms: A Prospective Cohort Study

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Objective Globally, depression is a serious public health problem and it has a high incidence and recurrence rate. The underlying mechanism between the activities of daily living (ADL) disability and depression was not well understood. Our study aimed to explore the mediating role of frailty on the longitudinal association between ADL disability and depressive symptoms

Methods This study analyzed data from the China Health and Retirement Longitudinal Study

(CHARLS) from 2011 to 2018. A total of 2,245 participants aged ≥ 45 years old were included. Linear regression, cox regression, and mediation analysis were used to explore the association of ADL disability with development of depressive symptoms and the potential mediating role of frailty

Results The results showed that both scores on ADL and frailty were positively associated with the risk of depressive symptoms ($P < 0.05$). No interaction between ADL and covariates on depressive symptoms was found for all subgroups. The association between ADL disability and depressive symptom scores was partially mediated by frailty (mediated proportion = 16.05%) in the Chinese middle-aged and elderly population

Conclusion There were positive associations between both scores on ADL and frailty and new-onset depressive symptoms. Individuals with high scores on ADL disability had a higher risk of depressive symptoms, and frailty partially mediated this association

关键词: ADL disability, Depressive Symptoms, Mediating effect, Frailty, CHARLS

Unnatural Death in Schizophrenia-spectrum Disorder and Bipolar Disorder in China

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Objective We aimed to systematically investigate the distribution of all forms of unnatural deaths (including suicide, traffic accidents, drowning, accidental falls and others) and their age characteristics in patients diagnosed with schizophrenia-spectrum disorder (SSD) and bipolar disorder (BD) in Jiangsu Province, China, and further to examine the gender patterns of the death age and causes of unnatural deaths among those patients

Methods In the present study, the sample comprised all patients in Jiangsu province with a primary diagnosis of SSD or BD who died by unnatural causes, including suicide, traffic accidents, drowning, acci-

dental falls, and others, between January 2014 and September 2022 inclusive through the Jiangsu Province Management Information System for Patients with SMI

Results A total of 5885 eligible unnatural death were identified, including 4965 with SSD (2484 male and 2481 female) and 920 (431 male and 489 female) with BD. Of the patients with SSD, 25.5% died from suicide, 20.7 died from drowning, 20.3% died from falling, 15.4% died from road accident, and 18.1% died from other unnatural causes. BD patients died from suicide, drowning, traffic accident, traffic accident, drowning, falling and other unnatural causes accounted for 35.1%, 20.2%, 19.8%, 13.0%, 11.8%, respectively. There were significant differences in death age among the five forms of unnatural death groups (SSD: $F = 161.953$, $P < 0.001$; BD: $F = 33.614$, $P < 0.001$). Furthermore, we found that regardless of the type of unnatural death, the number of deaths in SSD and BD increased with age in almost all causes, with at least half of the unnatural deaths occurring in these patients over the age of 50. Interestingly, our results showed that the females had a higher unnatural death age compared to the males (SSD: $t = 11.630$, $P < 0.001$; BD: $t = 4.742$, $P < 0.001$). there were also significant differences in the proportion of unnatural deaths (SSD: $X^2 = 80.758$, $P < 0.001$; BD: $X^2 = 22.436$, $P < 0.001$) and the corresponding age of death (All $P < 0.001$) between males and females both in SSD and BD patients (All $P < 0.05$), except the death age under the traffic accident between males and females with BD ($P > 0.05$)

Conclusion Our results provided evidence demonstrated that suicide is not the only significant unnatural death in SMI, accidental death (including drowning, falling, traffic accident and others) also need draw enough attention. The elderly become the hardest hit of unnatural death among patients with SSD and BD. Age and gender should be fully considered in future when making mental health policies to prevent and reduce unnatural death among patients with SMI

关键词: Schizophrenia, Bipolar, Unnatural death, Suicide, Accident

一例 5-羟色胺综合征患者的护理

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目的 总结 1 例 5-羟色胺综合征患者的病情观察和护理问题及护理经验。

方法 5-羟色胺综合征(SS)是一种由于药物及其相互作用产生中枢和外周神经系统细胞突触间隙 5-羟色胺(5-HT)递质浓度过多所致的药物不良反应综合征,该病临床表现为认知功能和行为改变、神经肌肉异常、自主神经功能不稳定三联征。其一种中毒状态由于存在个体差异病人的症状不一但主要表现为 3 大症候群:①精神状态的改变如兴奋、焦虑、轻度躁狂、混乱;②神经肌肉兴奋性异常如肌阵挛、反射亢进、抽搐、共济失调;③自主神经运动功能障碍如畏寒、发热、腹泻、出汗、心动过速、血压升高或降低。入院以后,护士通过观察、病史收集、身体评估、辅助检查等方式,整体评估患者的文化程度、身体、心理,确定护理方面主要关注的问题有:用药护理、症状护理、安全护理、心理护理、健康教育。

结果 通过停用 SSRI 类相关药物,并对护理问题实施护理措施,最终患者病情好转,好转出院。出院 1 个月后回访,患者恢复正常生活。

结论 护士做好预见性的判断和对症处理,最常见的表现为自主神经系统障碍,其次为神经肌肉症状、精神或意识状态改变。5-羟色胺综合征在国内目前重视度尚不够,早期发现、早期干预对于减少临床不良结局有积极作用。提高对 5-羟色胺综合征的认识,尽早确诊和尽早停用激发 5-羟色胺综合征的药物,警惕医源性造成的危及患者生命的 5-羟色胺综合征。

关键词: 5-羟色胺综合征;病情观察;护理

目的 探讨主观认知下降(Subjective Cognitive Decline, SCD)及轻度认知障碍(Mild Cognitive Impairment, MCI)患者降低痴呆风险的生活方式的水平及其与认知功能的关系,为其制定有针对性的健康管理措施、改善老年人认知功能提供参考依据。

方法 本研究为横断面研究,采用方便抽样法于 2022 年 10 月至 2023 年 6 月,在社区、医院招募 55 岁及以上志愿者 300 名。研究人员指导患者填写一般资料调查问卷、主观认知下降问卷 9(subjective cognitive decline-questionnaire 9,SCD-Q9)、老年人快速认知筛查量表(Quick Cognitive Screening Scale For Elderly, QCSS-E)、降低痴呆风险的生活方式量表(Dementia Risk Reduction Lifestyle Scale, DRRLS)、核心神经认知测验(TMT、VFT、AVLT)、APOE 基因、相关生化指标与部分体格检查,研究老年人群生活行为、APOE 基因对认知功能的影响研究。

结果 NC、SCD 和 MCI 三组 DRRLS 总分差异有统计学意义,除了压力管理和精神成长,SCD 和 MCI 组的 DRRLS 各因子分均低于 NC 组。Spearman 相关性分析显示,SCD 和 MCI 患者 DRRLS 和神经认知测验具有相关性;线性回归分析显示,DRRLS 总分和部分条目是 SCD、MCI 患者 TMT、VFT、AVLT 评分的影响因素。

结论 AD 临床前期患者生活方式、APOE 与认知功能存在关联,生活方式的不同维度对认知领域的影响各有不同,社区脑健康服务应该在评估的基础上针对潜在可改变因素制定个体化、精准化的干预措施。聚焦可控危险因素,加强相关健康教育和预防干预,促使老年人采纳有益于降低痴呆风险和促进脑健康的生活方式,对个人的认知水平、减轻家庭和社会负担具有重大意义。

关键词: 主观认知下降;轻度认知功能障碍;健康生活方式;认知功能;相关性

主观认知下降及轻度认知障碍患者生活方式和认知功能的关系

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Analysis of Clinical Characteristics and Diagnostic and Treatment Patterns of Patients with Geriatric Psychiatric Disorders

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Objective To explore the clinical characteristics and current status of diagnosis and treatment of patients with geriatric mental disorders, and to provide reference for optimizing the diagnosis and treatment plan

Methods A total of 6272 patients with geriatric psychiatric disorders hospitalized from 2017 to 2021 were included. A self-administered survey scale was adopted to collect patients' general information and disease information, including gender, age, disease distribution, medical co-morbidities and other characteristics, for statistical analysis

Results The distribution of geriatric patients with mental disorders by age groups was as follows: 65-70 years old (3508 cases, 55.9%), 71-75 years old (1613 cases, 25.7%), 76-80 years old (786 cases, 12.5%), 81-85 years old (294 cases, 4.7%), ≥ 86 years old (71 cases, 1.1%). 6272 geriatric patients with mental disorders were predominantly female (4144 cases, 66.1%) and fewer male (2128 cases, 33.9%); among them, rural patients were predominantly female patients (4524 cases, 72.1%) and urban patients were less (1748 cases, 27.9%). The composition ratio of the diseases suffered was distributed as follows: the top five were depressive disorders (2796 cases, 44.6%), organic brain mental disorders (894 cases, 14.3%), bipolar disorders (681 cases, 10.9%), medical somatization disorders (632 cases, 10.1%), and schizophrenia (566 cases, 9.0%), with depressive disorders being the most common geriatric mental disorder. Mental and behavioral disorders due to alcohol use (90 cases, 98.9%) and manic episodes (316 cases, 80.6%) were predominantly male, and the rest of the types of mental disorders were predominantly female patients. The co-morbidity rate of geriatric psychiatric disorders was high at 93.8%, and the top five comorbid medical diseases were cerebral infarction (2810 cases, 44.8%), hypertension (2645 cases, 42.2%), coronary artery disease (2481 cases, 39.6%), cerebral atrophy (2081 cases, 33.2%), and thyroid gland disease (1339 cases, 21.3%). Geriatric patients with more comorbid medical disorders and older age would be more inclined to choose the multidisciplinary treatment model (all $P < 0.01$), and geriatric patients with psychiatric disorders who chose the multidisciplinary treatment model had fewer hospitalization days and spent

less on hospitalization costs (all $P < 0.01$)

Conclusion Depressive disorders are the most common mental disorders in geriatrics. Geriatric patients with psychiatric disorders have a higher rate of co-morbidity of medical disorders. A multidisciplinary treatment model is a more optimal choice for patients with geriatric psychiatric disorders

关键词: Geriatric mental disorder, Clinical features, Medical comorbidity, Diagnosis and treatment model

Association of Sleep Patterns and Depression Symptoms in Older Adults: a Cross-sectional Study Using Data From The National Health and Nutrition Examination Survey 2007–2014

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Objective To assess the correlation between sleep behavior and sleep factors (sleep duration, sleep problems, sleep disorders) and the risk of depression in older adults

Methods A total of 5636 participants (2754 males and 2882 females) aged 60 and above from the National Health and Nutrition Examination Survey (NHANES) 2007–2014 waves were included. Sleep duration, trouble sleeping and sleep disorder were asked in the home by trained interviewers using the Computer-Assisted Personal Interviewing (CAPI) system. The combined sleep behaviours were referred to as 'sleep patterns (healthy, intermediate and poor)', with a 'healthy sleep pattern' defined as sleeping 7–9 h per night with no self-reported trouble sleeping or sleep disorders. And intermediate and poor sleep patterns indicated 1 and 2–3 sleep problems, respectively. Weighted logistic regression was performed to evaluate the association of sleep factors and sleep patterns with the risk of depressive symptoms

Results The total prevalence of depression was 7.7% among the 5636 participants analysed, with the

depression rate in elderly women is 1.6 times higher than that in elderly men. Compared to normal sleep duration (7–9 h), short sleep duration (<7h) were linked with a higher risk of depression, but long sleep duration (>9h) has no statistical significance. (short sleep: OR: 2.04, 95% CI: 1.65–2.52; long sleep: OR: 1.47, 95% CI: 0.87–2.48). The self-reported sleep complaints, whether trouble sleeping or sleep disorder, were significantly related with depression (trouble sleeping: OR: 0.3, 95% CI: 0.24–0.37; sleep disorder: OR: 0.35, 95% CI: 0.27–0.45). Furthermore, the correlations appeared to be higher for individuals with poor sleep pattern (OR: 5.6, 95% CI: 4.25–7.39)

Conclusion In this national representative survey, it was shown that there was a dose-response relationship between sleep patterns and depression in older adults

关键词: elderly depression, sleep quality, correlation research, nhanes data base

社区居家老年人衰弱现状及年龄拐点研究

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目的 衰弱包含身体、心理及社会三个层面,本研究了解社区居家老年人衰弱现状,为改善老年人身体及心理健康状况,提高老年人生命质量,预防衰弱提供参考依据;探讨老年人衰弱年龄拐点,能够更加精准地制定预防策略,帮助老年人在衰弱初期便采取有效措施,从而延缓衰弱进程,保持更好的身体和心理状态。

方法 本研究采用多阶段分层整群随机抽样方法对社区居家老年人进行调查,采用描述性分析和卡方检验分析老年人的一般资料差异及衰弱患病率情况,计算最大约登指数,确定最佳截断值为衰弱的衰减拐点,通过绘制 RCS 曲线及 Logistic 回归模型进行拐点验证分析。

结果 社区居家老年人衰弱患病率为 64.6%。总体衰弱发生率排名前五名为:记忆力差(82.6%)、缺乏社会支持(81.3%)、缺乏社会关系(76.3%)、

不善处理问题(53.1%)和行走困难(44.8%)。社区居家老年人衰弱的衰减拐点为 78.5 岁, RCS 曲线和 Hosmer-Lemeshow 检验表明预测模型具有较好的校准度和判别区分度。

结论 社区居家老年人衰弱患病率较高,拐点以上年龄的老年人衰弱风险较高,相关部门需重视衰弱的预防与改善,关注高龄老年人,提高老年人的生命质量。

关键词: 老年人;衰弱;衰减拐点;RCS 曲线

衰老相关分泌表型在老年期抑郁症中的研究进展

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目的 老年期抑郁症(Late-Life Depression, LLD)是一种在老年人群中普遍出现的精神疾病,其特征是发病率高、识别率低、治疗不足,与衰老过程紧密相关。衰老相关分泌表型(Senescent-Associated Secretary Phenotype, SASP)是衰老细胞释放的多种因子的复杂混合物,包括促炎细胞因子、趋化因子、生长因子和基质金属蛋白酶等,对细胞微环境具有显著影响,是衰老过程中的关键特征。SASP 作为调节衰老效应的潜在药物靶点,其与 LLD 之间的联系值得深入探讨。

方法 本研究通过医学数据库检索,系统回顾了 LLD 与 SASP 的相关文献,并对 SASP 与 LLD 的炎症机制、血管损伤、神经递质异常、氧化应激和神经内分泌紊乱等发病机制进行了综合分析。此外,本研究还探讨了 SASP 与 LLD 之间的临床研究关系,以及通过干预 SASP 来缓解 LLD 的潜在策略。

结果 研究发现 SASP 中的细胞因子与 LLD 的多种发病机制假说存在显著关联。在临床研究中, SASP 因子涉及炎症控制、组织重塑、细胞生长、细胞周期控制和代谢调节等多个生物级联反应。单一生物标志物的分析可能无法全面反映 SASP 的复杂性。因此,本研究引入 SASP 指数的概念,以综合反映不同 SASP 因子之间的相互作用,并作为评估系统性细胞衰老负担的单一指标。研究显示,较高

的 SASP 指数与 LLD 的发生、严重程度、认知功能障碍及治疗缓解率低有关。基于 SASP 与 LLD 之间的密切联系,通过调控 SASP 为 LLD 治疗提供了新的视角,包括抗衰老药物、非编码 RNA 调控、组蛋白修饰、线粒体功能调节和天然化合物干预等方面。

结论 SASP 与 LLD 之间的潜在联系为两者的关系提供了新的解释框架。尽管目前关于 SASP 在 LLD 中作用的研究尚不充分,但本研究进一步明确了 SASP 与 LLD 病理机制之间的联系,并提出了 SASP 指数在 LLD 临床研究中的应用价值。深入理解 SASP 的调控机制,为 LLD 的预防和治疗提供了新的策略和方向。

关键词:衰老相关分泌表型,老年期抑郁症,衰老

Enhancing The Precision: A Systematic Review of Metabolomics-Based Biomarkers for Late-Life Depression

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目的 晚年抑郁症 (LLD) 是老年人群常见的精神障碍,其病理机制尚未完全阐明。代谢组学作为一种对小分子代谢物进行高通量定量的技术,为探索 LLD 的潜在机制提供了新的视角。本系统综述的目的是通过对 LLD 代谢组学研究的综合分析,鉴定和评估具有诊断潜力的代谢物,并探讨它们在 LLD 病理生理学中的作用。

方法 2004 年 1 月至 2024 年 3 月,系统检索 Pubmed、Web of Science、Embase 和 MENDA 数据库中的文献。通过严格的筛选和分析,我们确定了与 LLD 相关的代谢物。此外,使用 MetaboAnalyst 在线工具,我们分析了这些代谢物及其代谢途径,以确定 LLD 的生物标志物和受影响的代谢途径。

结果 本综述纳入了 13 项 LLD 代谢组学研究,包括 12 项临床研究和 1 项动物研究。共鉴定出 32 种与 LLD 相关的不同代谢物,这些代谢物在 LLD 患者中显示出显著的水平变化,主要涉及氨基酸、

脂肪酸、磷脂和其他有机酸等关键代谢类别。特别是色氨酸、犬尿里定和 n-3 多不饱和脂肪酸对 LLD 的氨基酸、脂肪酸和葡萄糖代谢途径有显著变化。

结论 本系统综述揭示了与 LLD 相关的多种潜在代谢组学生物标志物,为理解其复杂的病理生理机制提供了新的线索。我们强调需要在更大的样本队列和纵向研究中进一步验证这些生物标志物,这将有助于开发新的诊断工具和治疗策略,以改善 LLD 患者的治疗结果和生活质量。

关键词: late-life depression, metabolomics, systematic review

Cannabinoids for Treatment of Neuropsychiatric Symptoms of Dementia[review]

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Behavioral and Psychological Symptoms of Dementia (BPSD) seriously affect patients' social function and quality of life, imposing a great burden on caregivers and society. Effective treatment of BPSD have become a significant concern for patients, families, and society. Non-pharmacological treatments are preferred for their minimal harm to patients, but they are less effective for severe cases, needing combination with pharmacological treatments. Pharmacological treatments, primarily with antipsychotic drugs, are effective for severe BPSD and are widely used in clinical practice, but they have significant side effects and a low benefit-to-risk ratio. Cannabinoids, specifically the cannabis extracts, esp. tetrahydrocannabinol (THC) and cannabidiol (CBD), have become a hot topic in BPSD research due to their unique brain effects in recent years. This article reviews the basic and clinical research findings related to the treatment of BPD with cannabinoids.

The use of cannabis in human life has thousands of years, mainly used for both recreational and religious purposes as well as the treatment of diseases. Due to its

hallucinogenic and sensory-altering effects, it was listed under international control in 1961.

THC and CBD are the main biologically active substances extracted from cannabis. THC is the main component responsible for psychoactive effects of cannabis including the hallucinogenic and substance dependence, while CBD doesn't have these severe toxic effects. Moreover, it can block the toxic effects of THC and has shown therapeutic effects such as anti-epilepsy, anti-spasms, anti-anxiety, and anti-inflammatory. THC and CBD mainly exert the biological effects through the endocannabinoid system (ECS), which is involved in the homeostasis of many body functions, including cognition (such as learning and memory), anxiety, neurogenesis, pain sensation, immune signaling, and inflammation. CBD has low affinity for CB1R and CB2R, does not activate the central CB1R, and acts as an agonist interacting with the transient receptor potential cation channel subfamily V member 1 (TRPV1), peroxisome proliferator-activated receptor (PPAR) γ , adenosine A2A receptor (A2AR), and 5-HT1A receptor. CBD is also an antagonist of the novel endothelial receptor and G protein-coupled receptor 55 (GPR55) and a moderate inhibitor of FAAH hydrolyzing AEA. In a mouse model of BPSD, CBD inhibits the expression of β -secretase 1 (BACE1) through the inactivation of MAGL and inhibits the generation of A β , playing an anti-inflammatory and neuroprotective role, improving synaptic function and cognitive ability in the animal model; CBD inhibits tau hyperphosphorylation in rat PC12 neuronal cells treated with antibody through glycogen synthase kinase 3 β (GSK-3 β).

In a crossover design, placebo-controlled clinical study of dronabinol (tetrahydrocannabinol-rich preparation) for the treatment of anorexia and behavioral disorders in patients with Alzheimer's disease (1997), cannabinoids were found to reduce the severity of behavioral disorders such as agitation and elation. Mahlberg's research results (2007) showed that, compared with the placebo group, treatment with delta-9-tetrahydrocannabinol or melatonin significantly improved patients' nighttime agitation. Van den Elsen and colleagues' small randomized controlled trial found (2015) that, compared with placebo, CBD did not have an advantage in

NPS (including agitation and aggression), but low-dose tetrahydrocannabinol was well-tolerated and safe, supporting the study of increased dosages. In an open-label pilot study (2006), Walther and colleagues observed the effects of cannabinoid treatment in six elderly patients with Alzheimer's dementia, and the results showed that agitation and nocturnal motor activity in all patients decreased compared to baseline, and irritability, anxiety, and appetite disorders were also improved. In 2016, a prospective open-label trial involving 10 patients with AD-BPSD showed that high-dose THC cannabis extracts could alleviate neuropsychiatric symptoms, including improving agitation, irritability, sleep, apathy, delusions, and the distress of caregivers. Herrmann and colleagues conducted a randomized, double-blind, crossover trial using nabilone, a tetrahydrocannabinol analog, and synthetic cannabinoids, and the results showed (2019) that nabilone treatment was associated with a significant reduction in agitation, significantly reducing the burden on caregivers, with sedation being the most common adverse event. In a prospective observational pilot study of 10 women with severe dementia and BPSD in 2019, after two weeks of oral administration of an average THC/CBD, half of the patients reduced or discontinued other psychoactive medications. The THC tincture or oil (with THC up to 9 mg/day and CBD twice that of THC) reduced neuropsychiatric symptoms, agitation, and rigidity, and improved abnormal behaviors such as screaming and aggression.

CBD may be more effective in managing sleep, agitation, and anxiety in BPSD. Although low-dose THC has not shown positive results in the treatment of BPSD, studies of high-dose oral medications of THC and CBD have shown promising results. As a multi-target molecule, cannabinoids have the potential to become a high-potential drug for the treatment of Alzheimer's disease dementia.

关键词: Cannabinoids, BPSD

一例安非他酮结合 CBT 干预成人阿斯伯格综合征者社交焦虑障碍的案例报告

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目的 探索成人阿斯伯格综合征人士社交焦虑障碍的精神心理干预方法

方法 本研究采用个案研究的形式,对该名患者进行药物治疗结合心理干预的形式开展治疗。具有资质的精神医师嘱安非他酮 450mg 行药物干预(初始剂量为 150mg),接受过系统认知行为疗法培训的心理治疗师行认知行为干预,在良好咨访关系的基础上,开展心理教育、角色扮演、行为实验、系统暴露等心理干预技术,干预频率为一周一次,累计 60 余次,每次干预后书写治疗记录,每 10 次干预整理系统的案例报告。累计开展 10 次家长访谈(包含心理教育、阿斯伯格综合征相关知识学习、信息沟通、情绪疏导、干预指导等),家长访谈的频率为一月一次。同时,心理治疗师就该个案每月接受 1 次个体或团体督导。个案的数据通过社交焦虑量表(LSAS)、焦虑自评量表(SAS)、抑郁自评量表(SDS)进行评估,数据采集 4 次,分别为干预前、干预 3 个月时、干预 6 个月时、干预 12 个月时,数据通过 SPSS 进行量化分析。

结果 社交焦虑量表(LSAS)、焦虑自评量表(SAS)、抑郁自评量表(SDS)的得分显著下降, $P<0.05$,干预 3 个月时与干预 6 个月时的数值差异最大。

结论 安非他酮结合 CBT 干预成人阿斯伯格综合征者社交焦虑障碍显示有效,且在干预 6 个月 after 效果最显著。

关键词: 阿斯伯格综合征,社交焦虑障碍,安非他酮,认知行为治疗

老年期抑郁症患者 PST 疗效及其影响因素

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目的 问题解决心理治疗(Problem-solving therapy, PST)由于具有易于操作、成本低廉的特点,适合中国国情。本研究拟探讨 PST 在中国老年期抑郁症(Late-life depression, LLD)患者中的疗效和疗效的影响因素。

方法 门诊招募老年期抑郁症患者,将患者根据入组顺序 2:1 伪随机分为心理治疗组和对照组,两组分别进行药物联合 12 次团体 PST 治疗和单纯药物治疗。评估员单盲使用 GDS、SAS、HAMD、HAMA 量表进行情绪评估;使用 MoCA、CDR、数字广度、词语流畅度量表进行认知评估;同时采集心理治疗组基线多模态头颅磁共振。在 3 个月和 2 年进行患者情绪和认知随访。将 3 个月随访 HAMD 减分率大于 50%的患者视为治疗有效,比较心理治疗组和对照组的治療有效率。采用意向性分析,将基线和随访评估的差值进行组间比较,探讨在 3 个月和 2 年时, PST 对 LLD 患者情绪和认知的治療疗效。在心理治疗组中,将是否治療有效作为因变量,将人口学资料、生活习惯、既往史、临床特征等共计 31 个特征作为自变量,进行 LASSO 回归,分析心理治療疗效不佳患者可能的影响因素,并比较不同心理治療疗效患者的多模态头颅磁共振差异。

结果 共 114 例老年期抑郁障碍患者纳入研究分析,包括 74 例心理治療组和 40 例对照组。心理治療组和对照组一般人口学资料和临床特征无显著差异。74 例心理治療组患者中 56 例完成心理治療,70 例参与 3 月随访,67 例参与 2 年随访;40 例对照组患者中 34 例参与 3 月随访,32 例参与 2 年随访。3 个月随访,对照组治療有效率为 40.6%,心理治療组有效率为 64.3%;心理治療组患者 GDS, HAMD、MoCA、语言流利度测验分数相较基线的好转较对照组更明显。2 年随访,两组在情绪和认知方面均无显著性差异。LASSO 回归分析 PST 疗效影响因素的结果显示,心理治療次数,基线 CDR 分级和高血压病史是影响心理治療疗效的因素。多模态磁共振结果显示,与治療有效者相比,治療无效患者在左侧和右侧钩束 FA 显著降低,左侧钩束 MD 和 RD 显著升高。

结论 PST 联合药物治疗能够在 3 个月内加速改善中国老年抑郁患者的情绪和认知功能;心理治療次数、基线认知减退、高血压病史和患者大脑钩束完整性对 PST 的疗效存在一定影响。

关键词: 老年期抑郁症,问题解决心理治療,头颅磁共振,治療疗效

老年期精神障碍患者临床特征及早期多学科联合会诊必要性的分析

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目的 探讨老年精神障碍患者的临床症状表象多样性和目前精神科专科医院诊疗现状,为优化诊疗方案提供参考。

方法 归纳出 2019-2023 年住院的老年精神障碍患者共 458 例,采取自病案室归档数据表收集一般资料及疾病信息等,分析其性别、年龄、疾病分布、躯体共病等特点,并进行对比分析。

结果 2019 年至 2023 年期间,老年期精神障碍患者年龄主要集中在 60-85 岁之间(254 例,55.45%),且以女性(171 例,67.32%)显著多于男性老年患者;其中农村患者居多(203 例,79.92%),城镇患者偏少(51 例,20.22%)。所患疾病构成比分布如下:前五位分别为抑郁障碍(138 例)、脑器质性精神障碍(50 例)、双相障碍(26 例)、躯体化障碍(24 例)、精神分裂症(16 例),抑郁障碍是最常见的老年期精神障碍。在本研究中,使用酒精所致精神及行为障碍、躁狂发作以男性居多,其余类型精神障碍的患病率均以女性居多。老年期精神障碍患者躯体疾病共病率较高,达 93.8%,老年精神障碍患者最常见的躯体疾病前五位分别为脑梗死、高血压、冠心病、脑萎缩、甲状腺疾病。共病躯体疾病较多、年龄较大的老年精神障碍患者会更倾向于选择多学科诊疗模式(均 $P < 0.01$),提早选择多学科诊疗模式的老年期精神障碍患者住院天数更少、所花费的住院费用较低(均 $P < 0.01$)。

结论 抑郁障碍为老年人最常见的精神障碍;老年精神障碍患者的躯体疾病共病率较高,多学科诊疗模式是老年精神障碍患者更优的选择。

关键词:老年,精神障碍,优化诊疗方案

临床缓解抑郁症患者累积生态风险对自尊的影响:三阶调节模型

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目的 探究累积生态风险、自动思维、应对方

式和临床缓解抑郁症患者自尊的关系。

方法 使用生活质量综合评定问卷(Generic Quality of Life Inventory-74, GQOLI-74)的因子评估累积生态风险和自尊水平、自动思维问卷(Automatic Thoughts Questionnaire,ATQ)评估负性自动思维、特质应对方式问卷(Trait Coping Style Questionnaire,TCSQ)评估应对策略,对 117 名临床治愈抑郁症患者进行调查,通过 SPSS28.0 和 Process4.0 完成分析。

结果 累积风险指数与自尊负相关($r = -0.523$, $P < 0.01$),负向预测自尊($\beta = -0.200$, $t = -5.428$, $95\%CI: -0.273 \sim -0.127$)。负性自动思维可调节累积风险指数 \rightarrow 自尊的关系($\beta = -0.152$, $t = -3.627$, $95\%CI: -0.235 \sim -0.069$)。积极应对可正向调节负性自动思维的调节作用($\beta = 0.073$, $t = 2.317$, $95\%CI: 0.011 \sim 0.135$),三阶交互项 F 检验显著($\Delta R^2 = 0.029$, $F = 5.369$, $df_1 = 1$, $df_2 = 109$, $P = 0.022$)。消极应对可负向调节负性自动思维的调节作用($\beta = -0.159$, $t = -2.106$, $95\%CI: -0.310 \sim -0.009$),三阶交互项 F 检验显著($\Delta R^2 = 0.024$, $F = 4.434$, $df_1 = 1$, $df_2 = 109$, $P = 0.038$)。

结论 临床缓解抑郁症患者的累积生态风险与自尊间存在三阶调节作用,自动思维和应对方式分别起二阶和三阶调节作用。

关键词:累积生态风险;自尊;临床治愈抑郁症;自动思维;应对方式

肠道微生物在孤独谱系障碍发病及治疗中的研究进展

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目的 探讨肠道微生物在孤独谱系障碍发病及治疗中的研究进展。

方法 在 PUBMED、CNKI 等公共文献数据库中以“肠道微生物”AND“孤独谱系障碍”为关键词检索临床研究型论文,收集并整理相关论文,进行综述。

结果 肠道微生物与孤独谱系障碍的发病有一定的相关性,但具体机制仍不明确。与肠道微生物相关的饮食和 FMT 等治疗对孤独谱系障碍患者的

行为及症状有一定的改善。

结论 肠道微生物能够调节中枢神经系统 (CNS) 和神经发育中的多种过程, 包括影响血脑屏障的通透性、神经发生、神经元信号传导, 以及社交、感官、记忆、学习和压力等行为或情绪。越来越多的关于肠道微生物在 ASD 患者中作用机制的研究表明, 肠道微生物在开发新的诊断工具和治疗方法上具有巨大的潜力。使得肠道微生物与孤独谱系障碍之间的潜在联系成为一个复杂且日益受到关注的研究领域, 尽管研究者对该领域的认知日益增长, 但仍有许多问题未解决, 并且某些研究结果之间也存在冲突。虽然积累了越来越多关于肠道微生物对神经发育及大脑功能影响的证据, 但对某些肠道微生物的代谢及免疫机制研究仍不成熟。关于各种其他微生物衍生代谢产物及微生物细胞壁成分通过免疫、神经和内分泌途径通过表观遗传调节影响神经发育过程的确切机制的数据仍然稀缺。虽然益生菌、益生元、合生元、饮食和 FMT 等治疗干预被视为在 NDDs 中具有前景, 但尽管动物实验提供了大量数据, 人类证据仍然不足。

关键词: 孤独谱系障碍, 肠道微生物, 发病机制, 胃肠道障碍, 治疗

The Impact of Cognitive Impairments and Emotional Symptoms on Risky Decision-making in Aging

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Objective The global aging of the population has intensified, and aging is often accompanied by cognitive dysfunctions, emotional symptoms and decision-making deficits. Although a number of studies have reported age-related alterations in cognitive and mental health, it is still unclear how aging impacts complex behavior under uncertainty such as risky decision-making. The present study aimed to identify subtypes of subtle cognitive decline in the elderly, and characterized risky decision-making among different elderly subtypes, to

explore the relationship of cognitive impairment, emotional symptoms and risk-taking behaviors

Methods The present study recruited 113 healthy older adults (aged 56-80) and 66 healthy younger adults (aged 20-27) in different communities in Shenzhen. For each participant, cognitive function was assessed by the Montreal Cognitive Assessment (MoCA), emotional symptoms were assessed by the Hamilton depression and Anxiety (HAMD/HAMA) Scales, and risky decision-making was measured by the Iowa Gambling Task (IGT). In data analysis, k-means clustering was used to identify subtypes of older adults based on multiple domains in MoCA (i.e., memory, language, executive functions, visuospatial skills, abstraction, attention, concentration, and orientation). Subsequently, ANOVA was used to examine differences in risk-taking behaviors across different subtypes of older and young adults. In the moderation analysis, we examine the role of emotional symptoms in modulating risky decision-making in older adults based on cognitive states

Results In the elderly group, the clustering model defined four subgroups (89.20% precision): cognitively normal group (n=24, 21.24%), memory-deficit group (n=36, 31.86%), executive function(EF)-deficit group (n=13, 11.50%), and composite-deficit group (n=40, 35.4%). After controlling for several covariates, there were significant differences in IGT performance among older and young adults. All subtypes of older adults showed reduced distinguishing ability (Good versus bad selections) than younger adults. Memory-deficit and composite-deficit groups selected less good decks than younger adults ($t_{\text{memory}}=-2.072$, $p<0.05$; $t_{\text{composite}}=-3.489$, $p<0.001$), and EF-deficit group selected more bad decks than young adults ($t=2.043$, $p<0.05$). Furthermore, the moderation analyses showed significantly higher HAMD/HAMA scores with less bad deck selections in cognitively impaired older adults ($b_{\text{HAMD}}=-0.019$, $p<0.001$, 95% CI= [-0.029, -0.010]; $b_{\text{HAMA}}=-0.019$, $p<0.005$, 95% CI= [-0.030, -0.007])

Conclusion The present study suggests that the alteration of risky decision-making in age-related cognitive deficits is domain specific. Interestingly, modest

emotional symptoms reduce risk-tolerance in cognitively impaired older adults, which may be helpful for avoiding high-risk factors in daily life

关键词: aging, risky decision-making, emotional symptoms, cognitive decline

老年期抑郁焦虑的生物标志物研究进展

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目的 我国正步入老龄化时代,抑郁和焦虑是老年人常见的精神障碍。老年期抑郁焦虑患者具有认知下降,症状多样化且不典型,共病复杂等区别于一般患者的特殊性,临床识别难度大、误诊率高。本文概述了老年期抑郁焦虑疾病中生物标志物研究的最新进展。

方法 检索包括 PubMed、Web of Science 等数据库,设定文献筛选标准,包括文献的年代、研究对象、生物标志物类型等方面,以确保选取符合主题的文献进行综述。从选定的文献中提取了关于老年期抑郁焦虑生物标志物研究的重要信息,包括研究设计、样本特征、生物标志物类型、主要结果等内容,随后对这些信息进行了综合分析和总结,以揭示该领域的研究进展和趋势。

结果 目前,关于老年期焦虑抑郁障碍的发病机制提出了多种假说,包括脑结构和功能的改变、应激与炎症反应、神经递质的失衡、神经可塑性的变化、基因表达的异常、代谢途径的紊乱、蛋白稳态的失控以及肠道菌群结构的改变等。为了深入探索这些机制,多种检测技术被广泛应用于临床和研究中,如脑影像检测、传统生化检测以及组学等新型检测技术。通过广泛搜集与分析近年来的研究成果,我们总结了多种与老年期焦虑抑郁障碍相关的生物标志物。这些生物标志物涵盖了多个领域,包括脑成像生物标志物、炎症生物标志物、神经递质生物标志物、神经营养生物标志物等。同时,基因组学、代谢组学、蛋白组学和微生物组学等组学研究也为

揭示疾病的发病机制提供了新的视角。

结论 老年期焦虑抑郁障碍的发病机制复杂多样,涉及脑结构功能、应激反应、神经递质等多个方面。多种检测技术的应用已揭示出多领域的生物标志物,而组学研究的进展为理解其发病机制提供了新视角。未来的研究需要在多个方向上进行深化和拓展。首先,对各类生物标志物背后的分子机制进行更详细的探讨,以揭示它们在焦虑抑郁障碍发生发展中的确切作用。其次,进一步探究生物标志物在不同疾病亚型中的表达模式和意义,以提高疾病分类和诊断的精准性。最后,开展多层次的研究,结合多种生物标志物进行综合分析,以提升在个体水平预测治疗效果和不良反应的能力,为个性化治疗提供更为科学的依据。

关键词: 老年,抑郁,焦虑,生物标志物,组学

肥胖与认知功能相关研究概述

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目的 本文着重描述了肥胖作为一个日益严重的公共卫生问题对认知功能的潜在影响,旨在增强公众对肥胖与认知健康的理解,改善肥胖人群整体生活质量,并为后续研究提供新的视角和方向。

方法 本文采用了文献综述的形式,系统梳理了在肥胖与认知功能关系领域的部分研究成果。通过对国内外文献的分析,总结了肥胖对认知功能的具体影响及其潜在的生物学机制,并概述了一系列面向肥胖和认知功能的综合性干预措施。

结果 研究表明,肥胖与认知功能之间存在显著的负向关联。肥胖状态可能会通过影响大脑结构、神经递质平衡以及炎症反应等生理机制,对个体的记忆力、注意力控制等关键认知领域产生不利影响。为了有效预防和改善肥胖与认知功能问题,本文建议采取综合性的干预措施,包括调整生活方式、改善饮食习惯、加强体育锻炼以及进行认知训练等。

结论 肥胖不仅关乎身体健康,也对认知健康有着潜在威胁。肥胖人群常常会遭遇一系列的认知功能减退,比如记忆力减退、注意力控制能力下降

以及语言表达能力的减弱。这些问题可能与肥胖引起的大脑结构变化、神经递质功能的异常以及慢性炎症反应等因素紧密相关。因此,在对肥胖人群进行管理和治疗时,必须高度重视认知功能的评估和干预工作。通过综合性的干预措施,我们有望减轻肥胖对认知功能的不利影响,进一步提升肥胖人群的整体生活质量。

关键词:肥胖、认知功能、病理生理机制、预防和干预、未来研究方向

MECT 治疗帕金森病病例报道及文献复习

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目的 帕金森病是常见的神经系统变性疾病,表现为运动迟缓、肌张力升高、静止性震颤等运动症状,以及感觉障碍、自主神经功能障碍、精神情绪障碍等非运动症状。多巴胺能药物对改善运动症状有效,但长期用药可能导致异动症等运动并发症,对于非运动症状,目前无有效的药物治疗,且多巴胺能药物可能加重幻觉妄想、直立位低血压、冲动控制障碍等非运动症状。改良电休克治疗(modified electroconvulsive treatment, MECT)在精神科广泛使用,能快速有效的缓解精神情绪症状。本研究拟探究 MECT 对于帕金森病运动症状及非运动症状的疗效及治疗安全性。

方法 本研究报道了 24 例在我院住院治疗的帕金森病患者,使用 MDS-UPDRS 量表分析 MECT 治疗前后患者运动症状及非运动症状变化,使用汉密尔顿抑郁量表、汉密尔顿焦虑量表、简明精神病评定量表评估患者 MECT 治疗前后情绪及精神症状变化,使用多导睡眠图、直立倾斜试验评估患者 MECT 治疗前后自主神经功能变化,使用简明精神状况检查量表、蒙特利尔认知评估量表分析患者 MECT 治疗前后认知水平变化。

结果 21 例患者中男性 7 例,女性 17 例,平均发病年龄 67.5 岁,帕金森病运动症状中位病程为 36.0 月,非运动症状中位病程为 48.0 月,24 例患者均有情绪障碍、精神症状及自主神经功能障碍,11 例患者存在认知障碍。MECT 治疗中位次数为 10 次,MECT 治疗后,帕金森患者运动症状及非运动症状

均得到改善。MECT 治疗副反应包括头痛 1 例、记忆力下降 8 例、心电图提示频发室性早搏 1 例,均为短期可逆的。我们的结果与既往文献报道结论一致。

结论 MECT 能有效改善帕金森病患者的运动及非运动症状,且无明显副反应,具体机制目前仍不明确,尚需进一步研究以阐明。

关键词:帕金森病,运动症状,非运动症状,改良电休克治疗

抗精神病药物对慢性老年精神分裂症患者外周血中性粒细胞与淋巴细胞比值的影响

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目的 研究旨在评估抗精神病药物对慢性精神分裂症患者外周血中性粒细胞与淋巴细胞比值(NLR)的影响,探讨其在老年精神分裂症患者中的作用与可能对免疫功能的影响。

方法 选取 110 例老年慢性精神分裂症患者,根据治疗方案分为两组,一组使用典型抗精神病药物,另一组使用非典型抗精神病药物。收集患者治疗前后的外周血样本,采用自动化血液分析仪检测中性粒细胞和淋巴细胞计数,计算 NLR。同时,使用 SPSS 软件对两组药物进行对比分析,使用 PANSS 量表评估患者症状严重程度,同时对患者外周血中性粒细胞与淋巴细胞比值(NLR)的关系及两组患者的症状严重程度和生活质量进行评估。

结果 与治疗前相比,患者在使用抗精神病药物治疗后,NLR 显著升高($P < 0.05$)。典型抗精神病药物组 NLR 的升高程度显著大于非典型抗精神病药物组($P < 0.05$)。此外,治疗后患者症状严重程度和生活质量评分均显著改善($P < 0.05$),且 NLR 较高者 PANSS 得分较低者更高。

结论 抗精神病药物对老年慢性精神分裂症患者外周血中性粒细胞与淋巴细胞比值具有显著影响,典型抗精神病药物可能导致 NLR 升高更明显。在临床治疗过程中,临床在对患者进行症状评估时也

可使用 NLR 粗略判断患者可能的预后,以优化治疗方案。

关键词:抗精神病药物;慢性老年精神分裂症;外周血中性粒细胞与淋巴细胞比值(NLR)

负性生活事件压力对中年女性抑郁的影响

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目的 本研究旨在了解现代中年女性产生抑郁情绪可能存在的生活事件压力因素;探讨生活事件压力对中年女性的影响,并检验反刍思维和应对方式的中介效应模型及其适用性,从而搭建四个变量之间的关系模型,探索促进中年女性心理健康发展的内在机制。

方法 对前往昆明医科大学第一附属医院就诊及在昆明某社区生活的共 241 名 35-55 岁中年女性进行问卷调查,采用生活事件量表 LES、反刍思维量表 RRS、简易应对方式 SCSQ 及抑郁自评量表 SDS 进行评测。

结果 (1) 负性生活事件压力、抑郁、反刍思维和消极应对方式两两相关显著,负性生活事件压力、反刍思维和消极应对方式是中年女性的抑郁症状的重要影响因素;(2) 负性生活事件压力通过反刍思维对中年女性抑郁症状的中介效应显著;(3) 负性生活事件压力通过消极应对方式对中年女性抑郁症状的中介效应显著;(4) 反刍思维和消极应对方式在负性生活事件压力对中年女性抑郁的影响中起链式中介的作用。

结论 研究结果证实了负性生活事件压力影响抑郁症状及反刍思维和消极应对方式链式中介的心理机制,为中年女性抑郁症状产生机制提供了一种可塑途径,从而为有针对性地解决中年女性心理健康问题提供了参考建议。

关键词:中年女性;反刍思维;应对方式;抑郁;链式中介

中老年抑郁障碍与认知损害的遗传学关联研究

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目的 探究中老年抑郁障碍发病年龄与认知损害的遗传相关性

方法 入组昆明医科大学第一附属医院精神科住院部 50 岁以上病例组 142 例(包括早发及晚发型抑郁);对照组 52 例。收集患者人口学信息、量表测评,进行 GWAS 分析,使用 G-nomAD 数据库进行位点功能注释,并寻找对应基因。此外,通过对相关文献的研究,选择分别与抑郁发病和认知损害有关的 APOE 基因、BDNF 基因(rs6265)以及 COMT 基因(rs4689、rs4818)作为候选基因重点研究。

结果 1.GWAS 分析发现未发现与认知水平相关的显著位点。2.候选基因 COMT(rs4680、rs4818),BDNF(rs6265)及 ApoE 的不同基因型分组在年龄、发病时间等方面无统计学差异。3.回归分析显示:(1) 年龄、中度和极重度焦虑、多种疾病共病、初等教育、COMT(rs4818)、BDNF(rs6265)对认知功能的影响,差异有统计学意义($P<0.05$)。(2) 年龄、极重度焦虑、重度抑郁、初等教育、未婚、兼职、COMT(rs4680),BDNF(rs6265)对视空间和执行功能的影响,差异有统计学意义($P<0.05$)。

结论 1. 研究从 GWAS 及候选基因方面,均未发现同时与抑郁障碍发病年龄和认知水平相关的遗传位点。2. 认知功能较好可能与 COMT(rs4818)、BDNF(rs6265)相关;下降可能与年龄、焦虑程度、既往史、受教育程度相关。下降可能与焦虑程度、既往史相关。(4) 语言功能较好可能与 BDNF(rs6265)相关;下降可能与年龄、受教育程度、职业状态相关。

关键词:老年抑郁障碍;早发性抑郁症;认知损害;全基因组关联分析;候选基因

BDNF、CYP19A1 基因与青少年期、老年期发病女性抑郁症患者遗传学关联分析

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目的 探索 BDNF、CYP19A1 基因与青少年及老年期发病女性抑郁症的遗传关联

方法 本研究收集了昆明医科大学第一附属医院精神科住院部及门诊部青少年女性组(201例)和老年女性组(178例)MDD患者共计379例,所有参与者均符合ICD-10诊断标准,并给予了充分的知情书面同意,通过健康记录、血样采集、问卷调查,收集了病例入院时的抑郁程度、焦虑程度、精神病性症状、自杀行为史等临床表型数据,健康对照组为当地学校和社区招募了215名,其年龄、性别、教育程度与病例相匹配。首先,我们将青少年女性抑郁组、老年女性抑郁组与健康对照组两两之间进行全基因组遗传关联分析(GWAS)以探索两组间的遗传学差异。重点关注了与神经可塑性相关的BDNF、CYP19A1候选基因。将病例样本中BDNF、CYP19A1的MDD风险位点进行基因型提取,与临床表型:精神病性症状、自杀行为、激素水平等进行关联分析。

结果 1 GWAS 结果 青少年女性MDD组与老年女性MDD组中未发现神经可塑性相关的BDNF和CYP19A1基因的显著性遗传差异位点。

2 基因型与临床表型关联结果 BDNF rs6265基因型与抑郁程度、焦虑程度、精神病性症状、自杀行为史均未表现出相关性;CYP19A1基因rs10046的基因型与自杀行为史($\chi^2=10.026, P=0.007$)有显著相关性,同时组间比较发现AG组相比GG组女性患者自杀风险增加($P=0.046$),与抑郁程度、焦虑程度、精神病性症状、自杀行为史均未表现出相关性。

结论 与神经可塑性相关的BDNF、CYP19A1基因在青少年期及老年期发病的女性MDD患者组间可能无遗传学差异;进一步与临床表现关联分析CYP19A1基因rs10046的基因型与自杀行为史相关。

关键词: 抑郁症,遗传学,神经可塑性,BDNF, CYP19A1

帕金森病伴精神症状患者临床及护理特点的回顾性分析

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目的 分析帕金森病伴精神症状患者的临床特点及护理要点。

方法 选取2022年2月-2023年12月北京大学第六医院神经内科收治的101例帕金森病伴精神症状患者为研究对象。采用自行设计的调查表记录一般人口学资料、疾病相关资料、治疗及康复相关资料以及精神症状评估相关资料,分析和总结帕金森病患者精神症状的临床及护理特点。

结果 共纳入101例患者,其中焦虑73例(72.28%);抑郁68例(67.33%);同时患焦虑和抑郁51例(50.50%);精神病性症状36例(35.64%);淡漠9例(8.91%);冲动控制与相关疾病10例(9.90%);关于药物治疗,95例(94.01%)患者进行了药物的优化调整,43例(42.57%)增加了多巴胺受体激动剂;73例焦虑患者中,34例(46.58%)加用了苯二氮卓类药物;68例抑郁患者中,54例(79.41%)使用了抗抑郁剂;36例存在精神病性症状的患者中,27例(75.00%)患者加用了抗精神病药物。关于非药物治疗,步态训练29例(28.71%);嗅觉训练33例(32.67%);重复经颅磁刺激84例(83.17%);经颅直流电刺激32例(31.68%);其他康复治疗,神经肌肉电刺激2例(1.98%);吞咽功能刺激4例(3.96%);血液循环驱动治疗4例(3.97%);红外偏振光治疗6例(5.94%);专项康复治疗75例(74.26%);团体心理治疗26例(25.74%);正念干预39例(38.61%);患者出院时在焦虑、抑郁以及精神病性症状等方面均得到改善($P\leq 0.05$)。

结论 帕金森病患者的精神症状以焦虑、抑郁最为常见。在药物的优化调整和对症治疗的基础上,可辅以非药物治疗,包括物理治疗、心理治疗及康复治疗等,以实现帕金森病伴精神症状患者的个体化、全程化的综合管理。

关键词: 帕金森病;精神症状;护理

外周血生物标记物在老年抑郁症与阿尔茨海默病源性认知障碍鉴别诊断中的效力

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目的 老年抑郁症与阿尔茨海默病源性认知障碍存在症状重叠,临床上较难区分。本研究旨在探讨外周血神经生物标志物 A β 42、A β 40、A β 42/A β 40、pTau 181、pTau 217、GFAP 和 NfL 在老年抑郁障碍 (LLD)、阿尔茨海默病 (AD) 及阿尔茨海默病源性轻度认知障碍 (aMCI) 中的诊断潜力,以期提供一种非侵入性、成本效益高的鉴别诊断工具。

方法 本研究纳入 41 名 LLD、22 名 AD 患者、63 名 aMCI 和 25 名健康对照 (NC)。所有患者均由精神科医生经过 DSM-5 标准诊断,并接受了神经心理学评估和认知功能评估。采集外周血样本进行单分子免疫检测,分析上述生物标志物水平。采用 SPSS 26.0 软件对数据进行统计分析。

结果 对于血清 A β 42、A β 40、pTau 181、pTau 217、GFAP 和 NfL 水平,LLD 患者均显著高于 aAMCI 患者和 NC 组 (LLD vs AMCI vs NC vs AD: 43.60 vs 22.20 vs 20.99 vs 74.94, 785.24 vs 317.21 vs 191.64 vs 767.19, 2.26 vs 1.21 vs 1.26 vs 2.12, 4.41 vs 2.98 vs 2.08 vs 3.97, 14.4 vs 8.64 vs 8.16 vs 25.24, 24.45 vs 11.14 vs 10.63 vs 21.24, 浓度单位 pg/ml, 均 $P < 0.001$); AD 患者的血清 A β 42、A β 42/A β 40 水平显著高于 LLD 患者 (74.94 vs 43.60 pg/ml, $P = 0.039$; 0.11 vs 0.05, $P = 0.045$)。ROC 分析显示血清 A β 40 鉴别 LLD 和 AMCI 患者的 AUC = 0.868 (临界值 = 626.46 pg/ml, 灵敏度 = 82.5%, 特异度 = 77.8%); 血清 pTau217 鉴别 LLD 和 NC 组的 AUC = 0.765 (临界值 = 3.55 pg/ml, 灵敏度 = 62.5%, 特异度 = 83.3%)。Logistic 回归分析显示,根据性别、年龄、血清 A β 42、A β 42/A β 40 比值、GFAP 建立预测模型,用于鉴别 AD 与 LLD 患者的 ROC 曲线下面积 (AUC) 为 0.732 (95%CI 0.599 - 0.865, $P = 0.003$)。

结论 外周血神经生物标志物 A β 42、A β 42/A β 40 比值和 GFAP 在鉴别 LLD 和 AD 源性认知障碍患者方面效力良好,具有潜在应用价值。

关键词: 外周血生物标志物; 老年抑郁障碍; 阿尔茨海默病; 鉴别诊断。

目的 由于失独家庭发生的不幸遭遇、家庭变故、家庭负担增加、心理压力过大等原因使得他们承受巨大的心灵创伤,容易出现睡眠质量问题。目前研究发现失独家庭失眠的国内外检出率约为 41.2%。学界对于这一特殊群体的研究主要遵循着“弱势群体-社会援助”传统模式,研究内容主要集中在社会救助、社会扶助和社会保障等相关层面,却忽视了此类特殊家庭的心理健康及诸多因素带来的失眠问题。因此,关注和改善失独家庭的睡眠状况显得非常重要。本调查旨在调查失独家庭睡眠质量状况,分析失眠的影响因素,为更好地提高失独家庭睡眠质量、促进心理健康发展、实现“老有所养,老有所依,老有所乐”提供科学依据。

方法 采用一般资料调查表、匹兹堡睡眠质量、焦虑自评量表 (SAS)、抑郁自评量表 (SDS)、生存质量及社会支持评定量表、对某市卫生健康委员会人口家庭计划发展处所管理的 286 例失独家庭进行分析调查。

结果 失独家庭睡眠质量总分 (7.66 \pm 3.77), 多元逐步 logistic 回归分析结果显示: 抑郁状态 ($\beta = 0.382$, $P < 0.05$)、焦虑状态 ($\beta = 0.573$, $P < 0.05$)、养老模式 ($\beta = 0.077$, $P < 0.05$)、接受帮扶公益活动 ($\beta = 0.243$, $P < 0.05$)、社会支持 ($\beta = -2.937$, $P < 0.05$) 是失独家庭睡眠质量的影响因素。

结论 政府、社区及相关专业人员应针对失独家庭提供帮扶公益活动,加强对他们心理健康、养老模式及社会支持方面的改进,以提高睡眠质量。心理状态、养老模式、接受帮扶及社会支持对失独家庭睡眠质量有着积极的影响。我们应该关注社会上失独家庭的睡眠情况,特别是重点关注不良心理健康状态、养老模式差、缺少社会帮扶及社会支持不足的失独家庭,有针对性地进行干预,重视以睡眠质量为基础的失独家庭的身心健康保障和扶助体系。

关键词: 失独家庭; 睡眠; 心理健康; 养老模式; 帮扶支持

失独家庭睡眠质量调查及影响因素分析

王桂梅*

抑郁症患者情绪面孔识别与大脑自发活动异常的研究

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目的 重性抑郁障碍 (major depressive disorder, MDD) 患者常表现出情绪加工异常和大脑静息态自发活动的异常。然而情绪面孔处理异常及大脑自发活动的改变是与情绪相关的状态标志还是 MDD 患者的特质目前尚不清楚。本研究旨在探讨 MDD 患者情绪面孔处理异常、静息态脑局部一致性 (regional homogeneity, ReHo) 特征及其与情绪状态的关系。

方法 研究纳入符合《美国精神疾病诊断与统计手册》第五版 (DSM-5) 重性抑郁发作诊断的患者 43 例, 并选取年龄、性别和受教育程度相匹配的健康被试 60 例。所有被试均接受静息态磁共振扫描、情绪面孔识别任务及汉密尔顿抑郁量表 17 项 (HAMD-17) 评估。

结果 在情绪面孔识别任务中, MDD 组对愉快、中性、悲伤面孔的识别率均低于 HC 组 (p 均 < 0.01)。MDD 组在左枕下回、左侧梭状回、左侧颞下回的 ReHo 值相较于 HC 组下降 (单体素 $p < 0.001$, 连续体素值 $k \geq 21$, GRF 校正后 $p < 0.01$)。MDD 组异常脑区的 ReHo 值与 HAMD-17 呈负相关 ($p < 0.01$)。此外, MDD 患者愉快面孔的正确识别数与 HAMD-17 呈负相关 ($p = 0.039$), 将愉快面孔误认为悲伤面孔的次数与 HAMD-17 分数呈正相关 ($p = 0.048$)。

结论 MDD 患者在情绪面孔识别和脑区局部一致性上存在异常, 这些异常均与患者的情绪状态相关。

关键词: 重性抑郁障碍, 面孔情绪识别, 静息态功能磁共振, 局部一致性

团体心理剧联合行为干预对老年人抑郁状态和认知功能的影响

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目的 探讨团体心理剧 (GP) 联合认知行为疗法 (CBT) 对老年人抑郁状态和认知功能的影响, 并分析老年人抑郁症状与认知功能的相互关系。

方法 将西安市某社区 159 名患有轻中度抑郁

症的老年人随机分为对照组、单纯 CBT 组和 GP 联合 CBT 干预组, 每组 53 人。对照组接受常规健康教育; 在对照组的基础上, 单纯 CBT 组进行认知行为治疗; GP 联合 CBT 干预组同时进行团体心理剧治疗和认知行为干预。在干预前和干预 4 个月末, 采用老年抑郁量表 (GDS)、简易精神状态量表 (MMSE)、蒙特利尔认知评估量表 (MoCA) 对各组的抑郁状态和认知功能进行评价, 采用 SPSS 19.0 对数据进行统计分析。

结果 (1) 159 例老年抑郁症患者的 MoCA 评分为 16.59 ± 3.86 , 其中, 视空间与执行功能 2.48 ± 1.30 , 命名 2.61 ± 0.62 , 注意 3.35 ± 1.02 , 语言 1.76 ± 0.68 , 抽象 0.88 ± 0.72 , 延迟回忆 1.49 ± 1.27 , 定向 4.02 ± 0.54 。

(2) Pearson 相关分析显示: GDS 评分与 MoCA 总分、视空间与执行功能、注意、语言得分均呈负相关 ($P < 0.05$, $P < 0.01$)。 (3) 与对照组相比, 单纯 CBT 组及 GP 联合 CBT 组的 GDS、MMSE 和 MoCA 得分均数有统计学差异 ($P < 0.01$); 与单纯 CBT 组相比, GP 联合 CBT 组的上述三项得分差异有统计学意义 ($P < 0.05$)。

结论 (1) 西安市社区患有抑郁症的老年人认知损害较为明显, 尤其是视空间与执行功能、注意、语言、延迟回忆等领域。 (2) 老年人的抑郁症状与认知功能下降密切相关, 应着眼于重点人群进行认知心理干预。 (3) 单纯 CBT 治疗及 GP 联合 CBT 干预均能改善老年人的抑郁状态和认知功能, GP 联合 CBT 干预效果优于单纯的 CBT 治疗。

关键词: 抑郁症; 心理剧; 认知功能; 老年人

多奈哌齐与美金刚联合用于老年痴呆患者治疗对炎症因子水平及认知功能的影响

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目的 探讨美金刚与多奈哌齐联合治疗老年痴呆患者的效果及对炎症因子水平、认知功能的影响。

方法 选择 90 例 2022 年 1 月-2023 年 3 月期间入院诊治的老年痴呆患者作为研究分析目标。纳入者分组方法选用随机数字表法。对照组 45 例, 性别: 男 26 例, 女 19 例; 年龄: 65~85 岁, 平均 (73.45 ± 4.72) 岁; 病程: 6~22 个月, 平均

(17.15 ± 3.26)个月;痴呆程度[4]:轻度28例,中度17例。研究组45例,性别:男30例,女10例;年龄:65~86岁,平均(75.08 ± 5.38)岁;病程:6~21个月,平均(17.10 ± 3.53)个月;痴呆程度:轻度29例,中度16例。纳入病例基础资料组间对比,差异无统计学意义($P>0.05$)。观察患者炎症因子水平、认知功能、日常活动能力变化情况及药物不良反应发生情况。

结果 治疗后与对照组相比较,研究组IL-6、CRP及TNF- α 水平均更低($P<0.05$);治疗后研究组WHO-UCLA AVLT中即时回忆评分、延迟回忆评分相比对照组均更高($P<0.05$);治疗后研究组ADL量表评分相比对照组($P<0.05$);研究组药物不良反应与对照组相比,差异无统计学意义($P>0.05$)。

结论 老年痴呆临床治疗中同时使用多奈哌齐与美金刚,可明显提高机体抗炎效果,促进患者认知功能更好恢复,有助于提高患者日常生活活动能力,且不会增加药物不良反应。

关键词:老年痴呆;美金刚;多奈哌齐;认知功能;炎症因子

伴躯体化症状的老年期抑郁障碍患者急性期抗抑郁治疗的疗效预测研究

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目的 探索伴躯体化症状的老年期抑郁障碍患者在急性期抗抑郁药物治疗效果的潜在预测因素。

方法 在山东省精神卫生中心入组伴有躯体化症状的老年期抑郁障碍患者28例,患者在入组基线时未进行系统的抗抑郁治疗。在治疗前基线,收集患者的人口学资料;同时,使用匹兹堡睡眠质量指数量表(Pittsburgh sleep quality index, PSQI)评估患者主观睡眠质量,使用认知功能缺陷自评量表(Perceived Deficits Questionnaire-Depression, PDQ-D)评估患者的主观认知水平。使用简明幸福与生活

质量满意度问卷(Quality of Life Enjoyment and Satisfaction Questionnaire, Short Form, Q-LES-Q-SF)评估患者的生活质量;计算患者的中性粒细胞与淋巴细胞比率,简称粒淋比(neutrophil/lymphocyte ratio, NLR)水平,评估患者的全身性炎症状态。在基线及抗抑郁药治疗2周后,使用汉密尔顿抑郁量表(Hamilton Depression Scale, HAMD)、汉密尔顿焦虑量表(Hamilton Anxiety Scale, HAMA)量表评估患者的抑郁及焦虑情况。以年龄、病程、PDQ-D评分、HAMA评分、Q-LES-Q-SF评分、主观睡眠质量各项评分和NLR水平为自变量,以HAMD减分率(主要结局指标)作为因变量,使用多元线性回归进行统计分析。

结果 在伴有躯体化症状的老年期抑郁障碍患者中,患者治疗前基线年龄与治疗2周后的HAMD减分率呈负相关($P=0.007$);患者治疗前基线的年龄越大,治疗2周后的HAMD减分率越低。患者在治疗前基线的主观入睡时间得分与治疗2周后HAMD减分率呈正相关($P=0.039$);患者基线的主观入睡时间得分越高,治疗2周后的HAMD减分率越高。同时,患者治疗前基线的主观睡眠时间得分与治疗2周后的HAMD减分率呈正相关($P=0.021$);患者基线的主观睡眠时间得分越高,治疗2周后的HAMD减分率越高。患者在治疗前基线的NLR水平与治疗2周后HAMD减分率呈正相关($P=0.022$);患者基线的NLR水平越高,治疗2周后的HAMD减分率越高。

结论 在伴有躯体化症状的老年期抑郁障碍患者中,治疗前患者的年龄越小、主观入睡越困难、主观睡眠时间越短、全身性炎症水平越严重,则经2周急性期抗抑郁药治疗后的抑郁症状改善可能越明显。未来仍需要进一步扩大样本量进行验证。

关键词:老年期抑郁障碍,躯体化症状,抗抑郁治疗,疗效预测

痴呆患者确诊前精神心理问题的临床特征分析

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目的 轻度行为损害 (Mild Behavioral Impairment, MBI) 是一组在老年期 (50 岁以上) 发生的一系列精神行为症状, 包括抑郁、躁狂以及幻觉、妄想等。这一系列症状被认为可能与认知障碍, 尤其阿尔茨海默病 (Alzheimer's disease, AD) 相关, 并发生在 AD 痴呆症状前多年。然而在临床上, 痴呆前的精神行为症状包括 MBI 和睡眠障碍, 与 AD 的联系往往被忽视, 故本研究对上海住院老人痴呆前发生的精神心理问题进行回顾性研究, 拟进一步明确痴呆确诊前精神心理问题的临床特点。

方法 选取 2023 年 10 月-2024 年 5 月于上海交通大学附属精神卫生中心老年科门诊或住院患者 307 名, 从中筛选出 138 名临床诊断为痴呆的患者, 进行既往病历和既往史回溯, 并分析痴呆患者发病前精神心理异常 (精神病性症状、睡眠障碍、情绪问题) 的发生比率、时间及人群的分布情况。

结果 本研究纳入的痴呆患者中, 年龄为 75.4 ± 9.5 岁, 受教育年限为 10.2 ± 4.3 年, MMSE 为 13.6 ± 7.2 。其中, 诊断为 AD 的共 101 人, 占比 73.1%, 一半以上的患者 (57.9%) 在确诊为痴呆前出现精神心理问题。不同精神心理症状群的发生比例略有不同: 从高到低分别为精神病性症状 (38.4%)、睡眠障碍 (36.2%)、情绪问题 (35.5%); 患者出现精神心理症状到记忆下降的时长差异很大, 总体来说, 出现最早的为睡眠障碍 (58.7 ± 100.8 个月), 随后是情绪问题 (51.5 ± 77.4 个月), 最后是精神病性症状 (18.4 ± 40.0 个月)。不同性别的患病情况也存在差异, 主要是睡眠障碍的分布, 女性患睡眠障碍的比例显著高于男性 (37% vs. 13%), 且出现症状到发生记忆下降的时间也是女性较长 (月) (71.1 vs. 23.4)。研究进一步比较不同痴呆类型的特征, 发现 AD 患者不同症状群的患病率和发生顺序与非 AD 类似, 只在发生时长上略有不同: AD 患者出现睡眠障碍和情绪问题后记忆下降发生较非 AD 稍快 (月) (53.2 vs. 81.6 ; 52.1 vs. 58.4), 而精神病性症状后记忆下降发生较非 AD 稍慢 (月) (25.0 vs. 9.3)。

结论 本研究发现, 痴呆确诊前除记忆缺损外, 超过一半的患者存在精神心理问题, 如精神病性症状、睡眠障碍和情绪问题。老年期精神心理问题与痴呆密切相关, 精神科医生应重视认知功能评估, 开展早期诊断。

关键词: 轻度行为损害, 阿尔茨海默症, 精神心理症状, 睡眠障碍

TCSA 在安徽省农村地区老人认知功能筛查中有效性研究

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目的 探索电子筛查工具在安徽省农村老年人群中认知功能筛查的有效性。

方法 在安庆市农村地区招募 224 名农村老人, 采用电子筛查工具 (Thoven Cognitive Self-Assessment, TCSA)、简明精神状态检查量表 (Mini-Mental State Examination, MMSE) 进行认知功能筛查, 并使用 geriatric depression screening scale-15 (GDS-15)、日常生活功能量表 (activity of daily living scale, ADL) 进行临床评价。

结果 完成评估老人平均年龄为 72.96 ± 7.60 岁, 平均受教育年限为 3.29 ± 3.55 年。TCSA 初筛分 >7 分 (判定为认知功能正常) 有 128 人 (57.1%)。TCSA 初筛分与 MMSE 呈正相关 ($r=0.4871^{**}$, $p<0.001$), 与 TCSA 完整筛查分呈正相关 ($r=0.6498^{**}$, $p<0.001$), TCSA 初筛 >7 分中随机 15 人的 MMSE 平均分为: 24.13 ± 3.14 , 平均受教育年限: 5.93 ± 3.88 。

结论 电子筛查工具 TCSA 适用于农村地区, 与国际通用工具相当, 值得推广。

关键词: 认知筛查工具; 轻度认知障碍; 痴呆; 农村地区

Study on The Correlation between Sleep Quality and Neuroticism Among Elderly People Aged over 65 in The Community

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Objective Sleep has increasingly become a key health concern among the elderly population. Considering that sleep is closely linked to the development and

progression of various illnesses and is a modifiable factor, it is essential to recognize and assess sleep disturbances, as well as to understand their underlying causes. Personality traits, which emerge from the interplay between individuals and their environment, shaping patterns of behavior, cognition, and emotion, are closely tied to overall health and well-being. The objective of this study was to examine the association between sleep quality and personality traits among elderly community members, and to explore the potential impact of personality traits on sleep

Methods This study collected general demographic data from elderly individuals aged 65 and above in the community. The 60-item version of the Big Five Personality Traits Scale was utilized for personality assessment. It encompasses five primary traits: openness, conscientiousness, extroversion, agreeableness, and neuroticism. Each trait is evaluated through 12 items, scored from 1 to 5, with higher scores indicating a stronger alignment with the respective trait. Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI), where higher scores denote poorer sleep quality. PSQI score > 5 served as the criterion for grouping. The Geriatric Depression Scale-15 (GDS-15) was used to assess emotional status, with higher scores indicating poorer emotional well-being

Results The study enrolled a total of 330 elderly participants, with a mean age of 70 ± 4.6 years. Among them, 147 (47.5%) were male. No significant differences were observed between the two groups in terms of age, gender, lifestyle habits (smoking, drinking), and histories (heart disease, diabetes, hyperlipidemia). A comparative analysis of neuropsychological assessments revealed that individuals with poor sleep quality exhibited higher GDS-15 and neuroticism scores, with a statistically significant difference ($p < 0.05$). Furthermore, Spearman correlation analysis indicated a positive correlation between neuroticism and both the PSQI and GDS-15 scores ($p < 0.05$)

Conclusion The sleep quality of elderly individuals is influenced by factors such as emotional state and personality traits. Specifically, those with a neuroticism personality trait tend to experience poorer sleep quality

关键词: sleep quality; personality traits; community screening

改良道家认知疗法对老年精神分裂症患者抑郁焦虑情绪的改善作用

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目的 本研究旨在探究改良道家认知疗法结合角色扮演对老年精神分裂症患者抑郁焦虑情绪的影响。由于老年精神分裂症患者常伴有明显的抑郁和焦虑症状,传统的治疗方法在这一方面的效果有限,因此需要探索新的心理干预手段,以期改善患者的情绪状态,提高其生活质量。

方法 研究选取了上海市民政第一精神卫生中心住院的60名老年精神分裂症患者(年龄 ≥ 60 岁)。通过随机分组,将患者分为研究组和对照组,各30人。两组均接受常规精神科治疗、康复及护理,研究组额外接受改良道家认知疗法干预。治疗包括5个步骤,总共8次治疗,每周1次,每次90分钟。采用阳性和阴性症状量表(PANSS)、卡尔加里精神分裂症抑郁量表(CDSS)、抑郁症筛查量表(PHQ-9)、汉密顿焦虑量表(HAMA)和焦虑症筛查量表(GAD-7)进行评定。

结果 治疗后,研究组在各评定量表上的得分显著降低(P 均 < 0.05),显示出抑郁和焦虑症状的明显改善。与对照组相比,研究组在阳性和阴性症状量表(PANSS)、卡尔加里精神分裂症抑郁量表(CDSS)、抑郁症筛查量表(PHQ-9)、汉密顿焦虑量表(HAMA)和焦虑症筛查量表(GAD-7)上的得分变化均更为显著(P 均 < 0.05)。具体表现为,研究组的精神症状、抑郁情绪和焦虑情绪均显著减少,而对照组在这些方面的变化较小。此外,统计分析显示,研究组的改善程度在各项指标上均显著优于对照组(P 均 < 0.05),进一步验证了改良道家认知疗法的有效性。

结论 改良道家认知疗法结合角色扮演能显著改善老年精神分裂症患者的抑郁和焦虑症状,为老年精神分裂症患者的心理治疗提供了一种新的可能性。这一疗法的应用不仅可以有效缓解患者的抑郁和焦虑情绪,还可能在促进康复、提高生活质量等

方面发挥积极作用。因此,改良道家认知疗法结合角色扮演值得在老年精神分裂症患者的心理干预中进一步推广与应用。

关键词:道家认知疗法,精神分裂症,抑郁,焦虑

国内外老年人失智症照护服务模式综述

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As China experiences a rapid aging process, the number of elderly individuals with dementia has increased significantly. Dementia has emerged as a major cause of disability and the subsequent need for caregiving among the elderly population. The cognitive decline observed in dementia patients often leads to communication barriers and mental and behavioral abnormalities, thereby greatly enhancing the complexity of caregiving services for these individuals. This poses immense challenges to society, the economy, and families. Drawing from the demand for health and elderly care services in an aging society, as well as the evolution of dementia caregiving service models, this article delves into advanced domestic and foreign dementia caregiving service models. Its objective is to offer valuable references and insights that can optimize and enhance the development of dementia caregiving service models in China

关键词:老年失智症;照护服务;养老服务

老年急性缺血性脑卒中患者治疗后发生老年衰弱综合征预测模型的建立及验证

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目的 构建并验证老年急性缺血性脑卒中(AIS)患者治疗后发生老年衰弱综合征的预测模型。

方法 回顾性收集2020年1月至2022年12月解放军联勤保障部队第九〇六医院收治的老年AIS患者156例,根据患者治疗后是否发生老年衰弱综

合征,将患者分为老年衰弱综合征组57例和对照组99例。比较2组临床特征差异,分析老年AIS患者治疗后发生老年衰弱综合征的危险因素并构建预测模型。

结果 老年衰弱综合征组年龄、糖尿病、大面积脑梗死、吞咽困难比例高于对照组($P < 0.05$, $P < 0.01$)。多因素logistics回归分析显示年龄 ≥ 80 岁、糖尿病、大面积脑梗死、吞咽困难是老年AIS患者治疗后发生老年衰弱综合征的独立危险因素($P < 0.05$)。构建列线图预测模型,并将数据集按照7:3的比例随机分为训练集和验证集,训练集和验证集ROC曲线下面积分别为0.840(95%CI:0.754~0.927)、0.676(95%CI:0.518~0.833)。验证集中进行Hosmer-Lemeshow拟合优度检验, $\chi^2 = 14.394$, $P = 0.072$,表明本模型具有良好的可信度和预测价值。

结论 本模型对老年AIS患者治疗后发生老年衰弱综合征具有良好的预测价值。

关键词:急性缺血性脑卒中;老年;老年衰弱综合征;预测模型

The Therapeutic Effects of Theta Burst Stimulation on Negative Symptoms in Chronic Schizophrenia Using Functional Near-Infrared Spectroscopy

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Objective To explore the efficacy of theta burst stimulation (TBS) on the negative symptoms of patients with chronic schizophrenia (CS), and to investigate the alterations of local brain activity using functional near-infrared spectroscopy (fNIRS)

Methods 104 patients with CS were enrolled and divided into experimental group (52 subjects) and control group (52 subjects). The experimental group was given real stimulation of TBS for 4 weeks, and the control group was sham stimulated with the same site. The Positive and Negative Symptom Scale (PANSS) and the Scale for Assessment of Negative Symptoms (SANS)

were used to assess the clinical symptoms. fNIRS was used to detect the Amplitude of low frequency fluctuation (ALFF) of cortical hemoglobin before and after TBS. Correlation analysis was used to explore the associations between altered zALFF and clinical features

Results Compared to baseline, the total scores of SANS and PANSS, and the subscale score of PANSS negative symptom significantly decreased after TBS in the experimental group ($P<0.05$). Compared to control group, experimental group exhibited significant reduction in SANS, PANSS total scores, and PANSS negative symptom subscale scores after treatment ($P<0.05$). fNIRS revealed that the zALFF of deoxyhemoglobin in left dorsolateral prefrontal cortex was decreased in experimental group after TBS. Furthermore, the zALFF of oxyhemoglobin was increased in the right and left frontal pole regions, and decreased in the right superior temporal gyrus in experimental group compared to control group after TBS. Correlation analysis showed that the alterations of zALFF of frontal regions after treatment may associated with the improvement of negative symptoms in CS patients

Conclusion Short-term TBS is effective in the improving of negative symptoms of CS. fNIRS could reveals the changes of brain activity after TBS treatment, providing an effective technique for exploring the efficacy of TBS in schizophrenia

关键词: Repetitive transcranial magnetic stimulation, chronic schizophrenia, negative symptoms, functional near infrared spectroscopy

奥拉西坦+尼莫地平对 ACI 后 VD 患者的氧化应激反应、血液流变学的影响

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目的 探讨急性脑梗死 (ACI) 后发生血管性痴呆 (VD) 的患者采用奥拉西坦联合尼莫地平治疗的效果及其作用机制。

方法 采用单中心临床随机试验, 选取 2019 年 6 月~2022 年 6 月 ACI 后 VD 患者 123 例进行临床

研究。采用信封法随机分为两组, 其中研究组 62 例患者采用基础治疗方案+奥拉西坦+尼莫地平治疗, 对照组 61 例患者采用基础治疗方案+尼莫地平治疗, 均连续治疗 3 周, 观察两组患者的认知功能评分、临床痴呆量表 (CDR) 评分, 血清丙二醛 (MDA)、超氧化物歧化酶 (SOD)、胱抑素 C (cystatin C)、神经元凋亡相关因子 (Bcl-2、Bax、Caspase-3) 蛋白表达、血浆纤维蛋白原 (factor X)、血红蛋白 (PCV) 及全血黏度高切 (BVH)、全血黏度低切 (BVL) 和临床治疗效果的差异。

结果 研究组患者和对照组患者在治疗 1 周、3 周的 MMSE 评分较本组治疗前增高、CDR 评分较本组治疗前显著降低 ($P<0.05$); 研究组治疗 3 周的 MMSE 评分显著高于对照组, CDR 评分低于对照组, 差异均具有统计学意义 ($P<0.05$);

研究组患者和对照组患者在治疗后的 MDA、cystatin C 较本组治疗前降低、SOD 较本组治疗前升高 ($P<0.05$); 研究组治疗后的 SOD 显著高于对照组, MDA、cystatin C 低于对照组, 差异均具有统计学意义 ($P<0.05$);

研究组患者和对照组患者在治疗后的 Bax、Caspase-3 表达水平较本组治疗前降低、Bcl-2 较本组治疗前升高 ($P<0.05$); 研究组治疗后的 Bcl-2 显著高于对照组, Bax、Caspase-3 低于对照组, 差异均具有统计学意义 ($P<0.05$);

研究组患者和对照组患者在治疗后的 BVH、BVL、PCV 水平较本组治疗前降低 ($P<0.05$); 研究组治疗后的 BVH、BVL、PCV 低于对照组, 差异均具有统计学意义 ($P<0.05$); 经过连续 3 周治疗, 研究组患者总体疗效优于对照组患者, 差异具有统计学意义 ($P<0.05$)。

结论 ACI 后发生 VD 的患者采用奥拉西坦联合尼莫地平治疗有利于减轻氧化应激反应、改善血液流变学水平、调节神经元凋亡因子水平, 从而提高临床治疗效果。

关键词: 急性脑梗死; 血管性痴呆; 奥拉西坦; 尼莫地平; 认知功能; 氧化应激; 血液流变学

阿尔茨海默病患者血清 ZnT8, zonulin, LPE 水平与病情及认知功能的关系

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目的 探究阿尔茨海默病患者血清锌转运蛋白8(ZnT8)、连蛋白(zonulin)、溶血磷脂酰乙醇胺(LPE)水平与病情, 认知功能的关系。

方法 观察组选取2021年8月~2023年8月期间在本院收治的131例阿尔茨海默病患者, 根据临床痴呆评定量表(CDR)将其分为轻度组(45例), 中度组(51例), 重度组(35例)。对照组为同期在本院行体检的119名健康者。采用ELISA对各组血清ZnT8、zonulin水平进行检测, 高效液相色谱-串联质谱法检测血清LPE水平, 比较观察组和对照组一般资料; Logistic回归分析影响发生阿尔茨海默病的相关因素; Pearson和Spearman法对阿尔茨海默病患者血清ZnT8、zonulin、LPE水平之间以及与MMSE评分的相关性进行分析。

结果 观察组和对照组文化程度、吸烟史、饮酒史、高血压病史、高血脂病史、婚姻状况、TG等比较, 差异不显著($P>0.05$), TC、HDL-C、LDL-C、MMSE评分等比较, 差异显著($P<0.05$)。与对照组相比, 观察组血清ZnT8、zonulin、LPE水平升高, 差异显著($P<0.05$)。重度组、中度组血清ZnT8、zonulin、LPE水平较轻度组升高, 且与中度组相比, 重度组血清ZnT8、zonulin、LPE水平显著升高($P<0.05$)。TC、LDL-C、HDL-C、MMSE评分、血清ZnT8、zonulin、LPE水平是发生阿尔茨海默病的影响因素($P<0.05$)。Pearson分析显示, 阿尔茨海默病患者血清ZnT8与zonulin、ZnT8与LPE、zonulin与LPE水平均呈正相关($P<0.05$); Spearman分析显示, MMSE评分与血清ZnT8、zonulin、LPE水平均呈负相关($P<0.05$)。

结论 阿尔茨海默病患者中血清ZnT8、zonulin、LPE水平升高且与患者病情, 认知功能相关。

关键词: 阿尔茨海默病; 锌转运蛋白8; 连蛋白; 溶血磷脂酰乙醇胺; 认知功能

The Application, Progress, and Prospects of TACS in The Elderly: A Review.

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In the elderly, the gradual decline in cognitive function can lead to mild cognitive impairment (MCI) and even dementia. Despite the availability of various drugs that can enhance cognitive function, they often come with adverse effects and poor long-term efficacy, thus highlighting the urgent need for a safe and effective approach. This review assesses the extensive application of transcranial alternating current stimulation (tACS) in the cognitive functions of the elderly. tACS is a non-invasive brain stimulation technique that applies low-intensity alternating current to the scalp to stimulate cortical neurons, regulate endogenous neural oscillations, induce synaptic plasticity changes, and improve brain function. Following the PRISMA-DTA guidelines, this review screened 252 studies involving MCI, AD patients, and healthy elderly individuals, ultimately including 21 studies in the analysis. Results indicate that tACS positively impacts various cognitive dimensions in AD and MCI patients, showing superiority over other interventions like cognitive training and tDCS in cognitive function enhancement. Moreover, tACS also significantly benefits the cognition of healthy elderly individuals. The primary aim of this systematic review is to evaluate the therapeutic effect of tACS on cognitive impairment in AD or MCI patients and its feasibility in improving cognitive function in normal aging individuals, while also looking forward to the broad application prospects of tACS in enhancing cognitive function in the elderly.

关键词: Transcranial Alternating Current Stimulation(tACS); Cognitive Function; Alzheimer's Disease (AD); Mild Cognitive Impairment (MCI); Elderly

盐酸美金刚与重酒石酸卡巴拉汀联合治疗中度阿尔茨海默病患者的临床效果分析

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目的 探讨盐酸美金刚与重酒石酸卡巴拉汀联合治疗中度阿尔茨海默病的疗效。

方法 选择2022年1月5日至2023年12月5

日收治的 60 例中度阿尔茨海默病患者为研究对象。我们选取随机抽取法,分别为新式组(30 例)和传统组(30 例)。传统组采用重酒石酸卡巴拉汀治疗,新式组在此基础上联合使用盐酸美金刚治疗中度阿尔茨海默症患者。对比两组患者临床痴呆评定量表(CDR)、日常生活活动能力量表(ADL)和简易精神状态评价量表(MMSE)的评分及出现不良反应的情况。

结果 干预前两组患者在认知评分、精神状态和生活能力方面基本持平。但干预后,新式组在 ADAS-cog、MMSE 和 ADL 评分上均显示出明显进步,优于传统组。新式组在神经递质水平上也展现优势,Ach、5-HT 和 BDNF 值显著提升,而 S100 β 值则降低,这表明其神经元保护效果更佳。在炎症因子方面,新式组 IL-6、IL-1 β 和 TNF- α 水平更低,显示出良好的抗炎效果。这些数据充分证明,新式联合治疗方案在阿尔茨海默病的治疗中表现出显著优势。

结论 盐酸美金刚与重酒石酸卡巴拉汀的联合治疗方案,针对中度阿尔茨海默病疗效显著,有效改善患者症状,提高生活质量。这一创新治疗方法经临床验证,效果卓越,值得广泛应用于相关患者的治疗。

关键词: 盐酸美金刚,重酒石酸卡巴拉汀,联合治疗,中度阿尔茨海默病,效果分析

老年精神分裂症患者主观睡眠质量与认知功能的相关性分析

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目的 调查老年精神分裂症患者主观睡眠质量及认知功能现状,分析患者主观睡眠质量的高低和认知功能水平之间的具体联系。

方法 选取 2021 年 3 月~2022 年 3 月上海市宝山区精神卫生中心在院的 130 名老年精神分裂症患者为研究对象,采用一般资料调查表、阳性和阴性症状量表(PANSS)、重复性成套神经心理状态测验(RBANS)、匹兹堡睡眠质量指数(PSQI)对其进行评测,并根据 PSQI 评分具体分值,若 PSQI 总分 ≤ 7 分纳入睡眠质量好组,总分 > 7 分为睡眠质量差组。

采用单因素分析、Pearson 相关分析对睡眠和认知功能进行比较分析。

结果 睡眠质量好组 PANSS 一般精神病理症状(25.63 \pm 6.43)低于睡眠质量差组(28.40 \pm 7.74),睡眠质量好组的 RBANS 注意评分(92.93 \pm 6.37)高于睡眠质量差组(89.78 \pm 5.68),睡眠质量好组的 RBANS 延迟记忆评分(80.27 \pm 10.83)高于睡眠质量差组(76.24 \pm 8.12)(P 均 < 0.05)。患者的 PSQI 评分与 RBANS 量表的注意力、延迟记忆维度呈负相关($P < 0.05$)。睡眠质量、睡眠效率、睡眠障碍、日间功能障碍分项与注意力均呈负相关($r = -0.184$, $P < 0.05$; $r = -0.299$, $P < 0.05$; $r = -0.175$, $P < 0.05$; $r = -0.244$, $P < 0.05$),睡眠质量分项与延迟记忆呈负相关($r = -0.223$, $P < 0.05$)。

结论 老年精神分裂症患者的睡眠质量与精神症状、认知功能相关,且与认知功能的注意、延迟记忆维度更具相关性。

关键词: 老年;精神分裂症;睡眠质量;认知功能

基于外周血 microRNA 的差异性表达识别早期单相抑郁和双相 II 型

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目的 单相抑郁和双相 II 型因抑郁症状相似而轻躁狂症状难以觉察导致临床鉴别困难,特别是在仅有抑郁发作的早期阶段。双相抑郁被误诊为单相抑郁最长时间可达 8-13 年,严重影响了患者的治疗和预后。本研究旨在早期阶段帮助识别两者。

方法 总入组单相抑郁(MDD)33 例、双相 II 型(BDII)33 例和健康对照(HC)27 例总计 93 例受试者。两病例组总病程小于 3 年,HAMD 评分 > 17 分,并进行至少 1 年以上的随访以排除转相患者。在入组时完成人口学资料收集、HAMD、HCL-32、YMRS 量表评估,以及采外周血 5ml 用于 microRNA 二代测序、microRNA 差异性表达、靶基因 GO 和 KEGG 分析。

结果 MDD 组有 3 例患者转相剔除本研究。三组受试者在性别、受教育年均无统计学差异($P = 0.38$,

$P=0.26$), 而年龄有统计学差异 ($P=0.002$), BDII组年龄小于 MDD 组($P=0.001$)。BDII组与 MDD 组 HAMD 评分无统计学差异($P=0.67$), 病程($P=0.037$) 和 HCL-32 评分 ($P<0.01$) 均有统计学差异。BDII组与 MDD 组相比, 共有 130 个 microRNA 表达有差异 ($p<0.05$), 其中 50 个 microRNA 上调, 80 个 microRNA 下调, 主要参与调控 PI3K-Akt、Hippo、Neurotrophin、ErbB 等信号通路。将三组 microRNA 表达进行方差分析, 共发现 8 个高表达的差异 microRNA ($P<0.001$), 再进行组间两两比较。与 HC 组比较, BDII组 8 个 microRNA 均有差异 ($P<0.01$), 而 MDD 组仅有 2 个 microRNA (miR-16-5p、hsa-miR-7g-5p) 有差异 ($P<0.05$)。选择这两个在病例组与健康对照组均有差异的 microRNA 进行两两比较, 发现 miR-16-5p 在 BDII组与 MDD 组有差异, 且 BDII组 miR-16-5p 表达水平低于 MDD 组($P<0.01$)。

结论 miR-16-5p 表达水平在 MDD 组和 BDII 组均低于健康对照组, 且 BDII组较 MDD 组表达水平更低。miR-16 可能参与 5-HT 转运体调控, 低水平的 miR-16 减弱对 5-HT 转运体抑制作用, 导致抑郁频发或症状持续。miR-16-5p 可能是早期识别单相抑郁和双相 II 型的生物标志物。

关键词: 单相抑郁, 双相抑郁 II 型, 早期识别, miR-16, 5-HT 转运体

High Neutrophil-to-Lymphocyte Ratio in APOE ϵ 4 Allele Carriers Increasing The Risk of Dementia

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Objective The ϵ 4 allele of the apolipoprotein E (APOE) gene is the major genetic risk factor for Alzheimer's disease (AD). Recently, the neutrophil-to-lymphocyte (NLR) have been proposed to be useful peripheral markers of inflammation. However, few studies have explored apolipoprotein E4 genetic effects to inflammation with incident dementia. The objective of this study is to investigate the interaction between the APOE ϵ 4 and dose of NLR with incident AD

Methods Observational cohort study with inflammatory biomarkers and cognitive performance measured over 5760 participants in China from the Shanghai Action of Dementia Prevention for the elderly projects (SHAPE). One longitude external sample from Alzheimer's Disease Neuroimaging Initiative database (ADNI) was assayed to further confirm the results

Results High NLR level was associated with increased prevalence of dementia only in APOE ϵ 4 (odds ratio for highest(Q4) vs lowest quartile(Q1), 2.89, 95% CI, 1.23–6.79; $P=0.015$). Furthermore, this corresponds to a rapid cognitive decline over a 6 years follow-up for APOE ϵ 4 carriers versus for non-APOE ϵ 4 persons in top quartile (Q4) of NLR from the Alzheimer's Disease Neuroimaging Initiative(ADNI)($\beta=-1.694, p<0.001$). In addition, the effects of NLR on cognitive function were mediated by total-tau and A β 42/total-tau pathology (proportion: 23%–40%, $p < 0.05$)

Conclusion This study is the first to found that peripheral inflammation appeared to enhance the association between APOE ϵ 4 status and dementia, whereas total tau appears to be an important intermediate condition. The study provides further insight for individuals with APOE ϵ 4 targeting systemic inflammation, geared towards Alzheimer's risk reduction

关键词: Dementia, Alzheimer's disease, apolipoprotein E, neutrophil to lymphocyte ratio

我国精神障碍患者养老模式现状的研究

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目的 本文旨在通过分析现有文献资料, 探讨我国精神障碍患者养老模式的现状, 并提出相应的改进建议。

方法 本研究通过对相关文献的综述, 通过引用专家学者的观点和相关统计数据, 分析了中国精神障碍患者养老模式的现状, 重点关注现有的养老服务体系、政策支持及社会认知情况, 揭示了当前中国精神障碍患者养老模式的主要特点及存在的问题。

结果 研究表明, 现有养老模式主要有: 家庭照料、社区服务、机构养老; 面临的主要问题: 服务供给不足, 专业人才短缺, 社会认知与歧视。家庭护理仍是主要方式, 超过 70% 的精神障碍患者依赖于家庭护理, 但面临着巨大的压力和挑战; 机构养老、社区服务体系的建设正在逐步发展, 但仍存在资源不足、服务质量不高、城乡分布不均的现象。政策建议与发展展望: 加强社区支持体系的建设和完善, 扩大服务覆盖范围; 提高专业人员培训力度, 确保服务质量; 制定和完善相关政策法规, 保障患者的权益; 提升公众意识, 减少偏见和歧视; 利用科技手段辅助养老, 缓解人力资源紧张。建议未来应加强社区支持体系建设, 提高专业服务水平, 以改善精神障碍患者的养老状况。

结论 中国精神障碍患者的养老模式正处于转型期, 家庭护理依然是主流, 但也面临着巨大挑战。机构养老和社区服务虽有发展, 但尚不足以完全替代家庭的作用。尽管近年来中国政府在完善社会保障体系方面做出了积极努力, 但在精神障碍患者养老服务领域仍有许多工作要做。未来的发展方向应当是多维度的, 既包括政策层面的支持与引导, 也离不开社会各界共同努力, 来改变公众观念和提供更多优质服务资源。形成一个多元化、立体化的养老服务网络, 逐步构建一个更加包容和谐的社会环境, 从而全面提升精神障碍患者的生活质量。

关键词: 精神障碍, 养老模式, 养老服务体系

Aberrant Dynamic Functional Connectivity of Amygdala Subregions in Adolescents with Depression

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Objective Research has indicated that aberrant amygdala is a crucial neurobiological underpinning of juvenile depression. This study aims to further identify resting-state dynamic functional connectivity (dFC) changes between the lateral amygdala (LA), medial amygdala (MeA) and whole-brain voxels, and their correlations with clinical symptoms in adolescents with depression

Methods Materials and Methods The bilateral LA and MeA were selected as regions of interest (ROIs), and the sliding window method was applied for investigating dFC changes in 47 adolescents with depression, compared with 35 sex-, age-, and education-matched healthy controls (HCs). Subsequently, the relationship between the dFC variability values and scores of Patient Health Questionnaire-9 (PHQ-9), the Simplified Coping Styles Questionnaire (SCSQ) in the patient group was investigated

Results The results revealed reduced dFC variability between the left LA, the left MeA and the right precentral gyrus (PreCG), between the right LA, the right MeA and the left median cingulate and paracingulate gyri (DCG), and between the right MeA and the right cuneus in adolescents with depression. The dFC variability between the right MeA and the right cuneus correlated positively with negative coping scores of the SCSQ ($r=0.414$, $p=0.005$) in adolescents with depression

Conclusion These findings confirm abnormal dynamic functional pathways of amygdala subregions in adolescent depression, and suggest that these abnormal dFCs may be involved in the neural mechanisms underlying the pathogenesis of adolescent depression

关键词: Adolescent; depression; resting-state functional magnetic resonance imaging; dynamic functional connectivity; amygdala

Research Progress of Mild Cognitive Dysfunction in The Elderly [Review]

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Mild cognitive impairment (MCI) has subjective complaints of decline in cognitive functions such as memory, and objective examination finds that one or more cognitive functions are impaired beyond the level

appropriate for age and education, but this condition has not reached the level of dementia, and the ability to live daily life has not been significantly affected. MCI has a higher likelihood of dementia development, and 10% to 15% of patients progress from MCI to dementia every year, which is the annual incidence of dementia in the same population. Times. MCI is an important stage in the prevention of AD-related dementia, and effective intervention can reduce the prevalence of dementia in the population. This paper reviews the prevalence of MCI and its influencing factors.

Prevalence of MCI: A systematic review of 11 previous studies in the United States, Europe, Asia, and Australia found that the estimated prevalence of MCI ranged from 5.0% to 36.7%. A large national study that collected data from 2015 to 2018 showed that the prevalence of MCI in people aged 60 years and older was 15.5%, of which 11.9% were aged 60 to 69 years, 19.3% were aged 70 to 79 years, 24.4% were aged 80 to 89 years, and 33.1% were aged 90 years and older. The differences in the prevalence of MCI may be related to the sample size, age range, population culture and survey tools.

Influencing factors of MCI: (1) Sociodemographic factors include: ① Gender: female risk factor. Age: The prevalence of MCI increased with age; (3) Nationality/race: The prevalence of MCI was higher in Han nationality and lower in minority nationality; African Americans are high, white Americans are low. Marital status and residence: living alone is a risk factor, and being married is a protective factor. Education level: Low education level is an independent risk factor. ⑥ Place of residence (urban/rural) : The prevalence in rural areas is higher than that in urban areas. ① Genetic factors: ApoE-ε4 allele is the main genetic risk factor for cognitive impairment, carrying ApoE-ε4 will increase the prevalence of MCI by 57.9%. Disease factors: obesity, hypertension, hyperlipidemia, diabetes and cerebrovascular diseases are risk factors for MCI. (3) Psychological and behavioral factors: ① smoking is a risk factor; The effect of alcohol consumption on mild cognitive impairment is currently inconsistent. Physical and intellectual activities, social support and social partici-

pation are protective factors; (3) Depression is an independent risk factor for MCI, and targeted anti-anxiety and depression drugs have protective effects on MCI.

Summary : Globally, MCI and dementia have caused a serious public health burden, and China, as a large country with an aging population, is more affected by MCI. Paying attention to the elderly group of MCI, understanding the influencing factors of their cognitive function, and active intervention can effectively prevent or delay the occurrence of dementia, improve the quality of life of individuals, and reduce the disease burden of families and society.

关键词: mild cognitive , elderly ,prevalence,influencing factors

Synaptic Vesicle Glycoprotein 2A As A Potential Biomarker in Alzheimer's Disease

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Objective Alzheimer's disease (AD) is the most common neurodegenerative disease, with no specific drugs currently available for prevention and treatment. The lack of reliable predictive biomarkers is a significant challenge in AD research and clinical practice. This study aimed to explore the potential of SV2A in serum as a biomarker for AD

Methods Blood samples from 20 AD patients and 20 healthy controls from Huzhou Third Municipal

Hospital were confirmed by ELISA technology to detect SV2A in human serum; Then, the SV2A content of the cells was detected by Western blot (WB); Additionally, WB and tissue immunofluorescence staining were used to assess the expression of SV2A in the hippocampus of mice

Results (1) SV2A can be detected in human serum, and compared with the control group, The concentration of SV2A in the serum of AD patients was significantly reduced; ROC curve analysis results showed that there was no significant difference between SV2A (AUC=77.5%) and A β , p-Tau, and ApoE, suggesting that SV2A has similar predictive power as the core pathological biomarkers of AD. (2) In the cell, the expression of SV2A was significantly lower in the stable expression of APP gene in SH-SY5Y cells (SAS) compared with SH-SY5Y cells with human bone marrow neuroblastoma cell line. (3) At the level of animal models, the results of WB showed that the expression level of SV2A in the hippocampus of 4-month-old APP23/PS45 double mutant AD transgenic mice was lower than that of wild type mice of the same age. The immunofluorescence staining results showed that the expression of SV2A in the hippocampus of 12-month-old APP^{swe}/PS1^{dE9} double mutant AD transgenic mice was significantly lower than that of wild type mice of the same age

Conclusion Our research indicates that SV2A levels in serum serves as a promising biomarker for Alzheimer's disease

关键词: Alzheimer's disease, biomarker, SV2A

基于颞上沟脑区的结构像对社区认知正常老年人的 MCI 转归预测

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目的 阿尔茨海默病 (Alzheimer's Disease, AD) 作为一种慢性神经退行性疾病, 其早期诊断尤为重要。轻度认知障碍 (Mild Cognitive Impairment, MCI) 是正常衰老与痴呆之间的中间状态, 从认知正常到

MCI 的预测对于实现疾病的早期发现至关重要。近年来, 多项研究均报道了颞上沟后坡 (Banks of Superior Temporal Sulcus, STSbanks) 脑区结构变化可能与早期认知损伤存在关联, 鉴于此, 本研究旨在分析基于 STSbanks 脑区特征在预测社区中认知正常的老年人群进展为 MCI 的可能性。

方法 样本来自上海脑健康队列研究 (SHBAS), 筛选基线调查时认知功能正常, 且完成基线包括磁共振在内的评估和后续长程认知随访的被试。使用全套神经心理量表评估认知心理; 以 Freesurfer 标准流程提取海马、杏仁核体积, STSbanks 脑区灰质、白质体积; 以 Simoa 技术分析外周血 AD 标志物。根据其在后续随访中是否进展为 MCI 分为维持组与进展组, 比较组间差异, 结合回归分析与 ROC 曲线的曲线下面积 (area under curve, AUC) 寻找诊断模型以探寻预测认知下降的预测模型。

结果 共 188 名社区老人纳入研究, 按末次随访 (4.2 \pm 1.8 年) 的诊断结果, 146 人认知维持正常, 42 人进展为 MCI, 分别标记为维持组和进展组。组间比较发现: 两组年龄、性别无显著性差异, 进展组的受教育年限显著低于维持组, 进一步分析比较发现, 两组在瞬时回忆、延迟回忆及左侧海马体积、右侧 STSbanks 皮层厚度上存在显著差异 ($p < 0.05$), 以上结果在控制了年龄、性别、受教育年限后仍具显著性。而在血浆标志物方面, NFL 和 A β 42 存在组间差异的趋势 ($p < 0.1$)。以是否进展为 MCI 为分组构建诊断模型, 依次纳入人口统计学、神经心理测试构建基础诊断模型 (AUC=0.696, $p < 0.001$), 再进一步将 NFL 和 A β 42 纳入诊断模型 (AUC=0.734, $p < 0.001$)。在结合了血浆标志物的诊断模型中分别右侧 STSbanks 皮质厚度和左侧海马体积进行比较, 经 ROC 曲线分析发现颞上沟模型 (AUC=0.746, $P < 0.001$) 的诊断效能优于海马模型 (AUC=0.742, $P < 0.001$)。

结论 颞上沟脑区在认知进展早期存在皮层结构的异常, 其敏感性高于海马, 建立基于颞上沟脑区的诊断模型对于预测认知功能正常老人的 MCI 发生有较好的作用。结合神经心理测试、血浆标志物以及脑影像学检查, 可以较好地预测认知转归, 为 MCI 以及 AD 的早期识别提供了一个潜在可行的检查方案。

关键词: AD, MCI, 颞上沟, 影像学, ROC 曲线

重度抑郁症背外侧前额叶皮层与外周血的综合转录分析

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目的 重度抑郁症 (MDD) 是一种以复杂病因为特征的严重疾病。目前 MDD 的诊断依赖于对临床症状的主观评估, 缺乏可靠的诊断标志物。由于生物标志物研究通常集中在单一样本类型上, 因此本研究旨在通过对两种不同样本类型的综合转录分析来探寻 MDD 的关键基因和发病机制。

方法 从 GEO 数据库中获取 GSE76826 (外周血标本) 和 GSE92538 (死后背外侧前额叶皮层 (DLPFC) 组织) 两个数据集。使用在线工具 GEO2R 提取差异表达基因 (DEGs), 利用 DAVID 对共有的 DEGs 进行 GO 及 KEGG 分析。使用 STRING 数据库构建共有 DEGs 的蛋白-蛋白相互作用 (PPI) 网络, 并选取前 10 个枢纽基因进行进一步分析。

结果 外周血和 DLPFC 组织共有 8 个上调和 92 个下调的 DEGs。下调的 DEGs 在蛋白酶体通路中显著富集, 以及参与多种神经退行性疾病、非酒精性脂肪性肝病、糖尿病性心肌病、致癌和能量平衡相关的代谢过程。在前 10 个枢纽基因中, 有几种差异基因在 MDD 中下调, 即 PSMD6、PSMD7、PSMA4、PSMD4、PSMA2、PSMD13、PSMD2、PSMB1、PSMB10 和 PSMA7。其中 9 个基因参与蛋白酶体介导的泛素依赖性蛋白分解代谢。PSMD13、PSMD6 和 PSMD2 在 MDD 中具有高度的功能相似性。

结论 鉴定出的蛋白酶体表明蛋白酶体相关免疫系统异常、炎症、氧化应激和神经元因子可能与 MDD 的发生发展密切相关。

关键词: 背外侧前额叶皮层 (DLPFC)、基因表达、重度抑郁症 (MDD)、外周血、蛋白酶体。

The Associations of Antihypertensive Drug Targets with Alzheimer's Disease and Its Cog-

nitive Phenotypes: A Mendelian Randomization Study

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Background Alzheimer's disease (AD) is a neurodegenerative disorder that primarily affects cognitive functions. Currently, there is a lack of comprehensive and conclusive evidence on the relationship between antihypertensive medications and AD or cognitive performance (CP). Drug-target Mendelian Randomization (MR) is a method used to explore causal relationships between drug targets and diseases.

Objective To investigate the associations and potential mechanisms between antihypertensive drug targets and AD/CP.

Methods We conducted dual validation using two-sample MR and summary-data-based MR (SMR) analyses to confirm the causal relationship between hypertension drug target genes and both AD and cognitive performance. We performed colocalization and other sensitivity analyses to validate the robustness of IVs, and utilized multi-cohort data and supplementary analyses to confirm gene effects. Finally, through PPI analysis and phenome-wide MR analysis, we explored the potential mechanisms of these genes on AD and cognitive function.

Results We identified 8 antihypertensive drug target genes with dual significant effects, including 2 AD-related targets (ACE and CACNA2D3) and 6 CP-related targets (HIF1A, KCNMA1, SLC12A4, KCNJ11, CACNA1A, and CACNA1D). Increased expression of the ACE (OR=0.660, 95%CI: 0.499-0.872) and CACNA2D3 (OR=0.903, 95%CI: 0.854-0.954) genes reduces the risk of AD, while increased expression of HIF1A (OR=1.039, 95%CI: 1.022-1.057) and KCNJ11 (OR=1.062, 95%CI: 1.023-1.102) genes promotes CP. Increased expression of KCNMA1 (OR=0.985, 95%CI: 0.980-0.991), SLC12A4 (OR=0.943, 95%CI: 0.911-0.977), CACNA1A (OR=0.996, 95%CI: 0.993-0.999), and CACNA1D (OR=0.938, 95%CI: 0.902-0.975)

genes reduces CP. A series of sensitivity analyses, including colocalization analysis, and external validation further support these findings. The exploration of mechanisms suggests their potential roles in brain region expression, protein interactions, and broader effects.

Conclusions This study provides genetic evidence for 8 antihypertensive drug target genes, supporting their potential therapeutic efficacy in treating AD or cognition-related disorders. These findings aid in the development of new drugs based on these genes and contribute to a deeper understanding of the mechanisms underlying AD and cognitive impairments.

关键词: Alzheimer's disease, Antihypertensive drugs, Cognitive performance, Mendelian randomization, Drug target genes, Genetic evidence

TRPC6 的 mRNA 表达辅助诊断阿尔茨海默病的信效度分析

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目的 阿尔茨海默病 (Alzheimer's disease, AD) 是一种逐渐进展的中枢神经系统退行性病变, 随着人口老龄化进展, 患有 AD 的人群数量和疾病负担与日俱增。TRPC (Transient Receptor Potential Canonical) 是瞬时受体电位 (TRP) 通道家族的一个亚群, 其中的 TRPC6 由 6 个跨膜结构域构成, 参与调控多种细胞功能。研究表明, TRPC6 能特异性调节 APP 的 γ -分泌酶裂解进而减少 A β 沉积。本研究旨在探讨 TRPC6 在区分正常老人、阿尔茨海默病源性轻度认知障碍 (aMCI) 及阿尔茨海默病 (AD) 中的诊断潜力, 以期提供一种非侵入性、成本效益高的辅助鉴别诊断工具。

方法 本研究纳入 55 名 AD、18 名 aMCI 和 186 名健康对照 (NC)。所有患者均由精神科医生经过 DSM-5 标准诊断, 并接受了神经心理学评估和认知功能评估, 并行正电子发射断层扫描 (PET) 或脑脊液检查明确诊断。采集外周血样本提取 RNA, 利用实时荧光定量 PCR 获得 TRPC6 基因的相对表达水平。采用 SPSS 27.0.1 软件对数据进行统计分析。

结果 AD 组和 aMCI 组 TRPC6 基因的相对表达水平显著低于 NC 组 (AD vs aMCI vs NC: 1.298 vs 1.231 vs 4.833, 均 $P < 0.001$), 而在 AD 和 aMCI 组间未见显著差异。将 aMCI 纳入 AD 组中, TRPC6 基因的相对表达水平与简易智力状态检查量表 (MMSE) 之间存在显著相关性 (相关系数为 -0.24, $P=0.041$)。ROC 分析显示 TRPC6 相对表达量鉴别 NC 组和 AD 组的 AUC = 0.973 (临界值 = 2.204, 灵敏度 = 94.5%, 特异度 = 95.7%)。风险评估分析表明 TRPC6 阳性患者的疾病风险程度是正常老人的 347.77 倍。Logistic 回归分析显示, 根据性别、MMSE 得分建立预测模型, 用于鉴别 AD 与 NC 所建立的模型有统计学意义 ($\chi^2=120.773$, $P < 0.001$), 对因变量正确分类的准确性为 91.5%, 灵敏度为 86.7%、特异度为 94%, ROC 曲线下面积为 94.8% (95%CI 0.914 - 0.981, $P < 0.001$)。

结论 TRPC6 在 MCI 阶段及 AD 早期阶段即出现明显改变, 提示 TRPC6 的 mRNA 表达可用于阿尔茨海默病的早期辅助诊断。

关键词: 外周血生物标志物, 阿尔茨海默病, 早期辅助诊断

穴位埋线疗法对精神疾病合并代谢综合征的影响

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目的 观察穴位埋线疗法对重性精神疾病合并代谢综合征的治疗作用。

方法 观察临床工作中重性精神疾病合并代谢综合征患者 20 例, 随机分为埋线组和对照组各 10 例, 埋线组经中医辨证论治, 选择足三里、三阴交、关元、气海、大横、脾腧、胃腧穴位, 应用可吸收外科缝线, 严格执行无菌操作下进行穴位埋线治疗, 每次 5-10 个穴位, 每 14 天一次, 同时为患者选择适合的有氧训练和饮食调整, 训练中观察患者心肺功能及体能变化, 对照组仅进行有氧训练和饮食调整, 分别治疗 12 周, 治疗开始前及结束后记录 BMI 指数、血压、血糖、血脂等相关数据。对两组数据进行统计学处理。

结果 埋线组在降低 BMI 指数、血脂方面效果

明显, 在控制血压、血糖方面也具有一定疗效。

结论 代谢综合征是指人体的蛋白质、脂肪、碳水化合物等物质发生代谢紊乱的病理状态, 是一组复杂的代谢紊乱症候群, 是导致糖尿病心脑血管疾病的危险因素。重性精神疾病由于长期口服抗精神病药物及活动量较少等原因, 代谢综合征的发生率较高。同时, 患者多不易配合临床治疗, 且口服降脂药物、降糖药物、降压药物仅解决单一问题, 无法综合调理, 穴位埋线疗法作为安全有效的中医治疗方法, 可根据不同病情辨证施治, 有效控制体重增加及各项指标减少, 临床效果明显, 可进行大样本多模态的对比研究, 推广于临床。

关键词: 穴位埋线疗法, 重性精神疾病, 代谢综合征,

Worsened Frontotemporal Dementia Following Electroconvulsive Therapy: A Case Report

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Frontotemporal dementia (FTD) patients often present with behavioral, functional and language disturbance. It is the second leading cause of presenile dementia (the first being Alzheimer's disease). FTD refers to a group of syndromes often due to frontotemporal lobar degeneration (FTLD), of which, behavioral variant of FTD (bvFTD) is a major subtype. Patients with bvFTD are often misdiagnosed with psychiatric disorders, particularly bipolar disorder, where affective symptoms such as mania and depression are observed in both. A case is presented where this patient was diagnosed with bipolar disorder at a different institution 6 months ago due to obvious personality change observed by her family, including euphoria, mania, decreased need for sleep, proneness to anger and crying, etc. She was given olanzapine, alprazolam and sodium valproate and 6 rounds of MECT. She was discharged after showing slight improvements affectively, however, her memory impaired profoundly, followed by severe functional deterioration, such as losing the ability to shower and use

the remote control. in the meantime, her upper body tilted to the right for no obvious reason, which resided after her medications were reduced. She came to our hospital presenting with obvious orientation, memory and sleep disorder. Her tongue slanted to her left, further physical exam revealed elevated muscle tone of the upper limbs, tendon reflex (+), tremor in the upper limbs, Rossolimo's sign (+), fast rotation (+), finger-to-nose test (+). Her MRI revealed brain atrophy (which was not apparent in her CT scan 6 months ago), and FDG-PET showed frontal and temporal lobe atrophies. Her behavior and cognition worsened drastically, her mood swings in particular. This article surrounds the patient's clinical data and literature regarding FTD and the role MECT plays in it.

关键词: Frontotemporal dementia, FTD, bvFTD, MECT, bipolar disorder

间歇性 θ 短阵脉冲刺激对酒精依赖患者的疗效

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目的 探讨间歇性 θ 短阵脉冲刺激 (iTBS) 对酒精依赖患者的治疗效果。

方法 96 例酒精依赖患者随机分为实验组和对照组, 每组 48 例。两组各项指标比较差异无统计学意义 ($P>0.05$)。两组在给予地西洋替代治疗和常规对症支持治疗基础上, 实验组和对照组分别给予左侧背外侧前额叶皮质 iTBS 刺激和伪刺激。于治疗前及治疗后 4、12 周时, 采用 VAS 和宾夕法尼亚酒精渴求量表 (PACS) 评分评估患者对酒精渴求程度, 贝克抑郁量表 (BDI) 和贝克焦虑量表 (BAI) 评分分别评估患者的抑郁和焦虑情绪, 停止信号反应时间 (SSRT) 评价患者的反应抑制能力, 并于出院后 4、12 周时随访患者的复饮情况。

结果 与治疗前相比, 两组治疗后 4、12 周时 VAS、PACS、BDI、BAI 评分及 SSRT 均减少 ($P<0.05$); 实验组治疗后 4、12 周时 VAS、PACS、BDI、BAI 评分及 SSRT 少于对照组 ($P<0.05$)。实验组出院后 12 周时患者复饮率低于对照组 (4.17% vs. 10.42%)

($P<0.05$)。

结论 本研究所采用的 iTBS 属于高频脉冲刺激,与传统 rTMS 比较,其刺激强度更低,刺激时间更短,易接受程度更高。iTBS 治疗能够有效改善酒精依赖患者的负性情绪、酒精渴求程度、反应抑制能力,并降低复发率。

关键词: 酒精依赖; 间歇性 θ 短阵脉冲刺激; 焦虑; 抑郁

光生物调节疗法在阿尔茨海默病中的研究进展

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目的 光生物调节(PBM)为一种新兴的物理治疗方式,已被证实可以改善阿尔茨海默病(AD)患者的认知能力、情绪与睡眠等,这为AD患者的非药物治疗提供了新的思路,但缺乏对既往有关阿尔茨海默病的光生物调节疗法的研究成果的有效整合。本文旨从AD病理机制的角度,系统、全面地总结PBM在AD中的作用机制,并通过梳理相关文献,概括不同路径的PBM在AD中的应用进展。

方法 通过文献研究法对PBM改善AD的作用机制及不同路径PBM在AD中的临床应用的研究进展进行综述

结果 本文表明PBM改善AD认知功能的作用机制主要为减少脑内 $A\beta$ 蛋白的沉积,抑制大脑内神经炎症,恢复线粒体功能等;在阿尔茨海默病的光生物调节干预中:经血管的PBM因其操作难度大,风险高,故研究较少;经颅光生物调节疗法应用最为广泛,其波长多选择810nm或1060-1080nm,脉冲频率和方式多为10Hz或40Hz的脉冲波模式;经视觉路径的PBM治疗,为一种新兴的刺激方式,多采用可见光中的蓝光或采用40Hz的光闪烁刺激方案,其疗效与机制均有待探究。本文能够为PBM改善认知机制研究的深入开展提供借鉴,并为我国阿尔茨海默病的光生物调节疗法方案的制定和应用提供参考

结论 AD可能的发病机制主要与淀粉样蛋白的异常沉积、线粒体功能障碍和神经炎症等病理变

化有关。PBM作为一种新的物理治疗方式,其对改善AD认知的机制目前得到了初步阐明,无论是单独或联合不同路径的PBM方案,都在一定程度上改善了AD患者认知功能、睡眠和情绪等,但视觉路径的40Hz光闪烁刺激方案的治疗有效性仍存在争议,还需进一步探究其改善认知的机制。此外,PBM治疗效果还受不同路径、相同路径的不同参数(如:功率、波长、脉冲频率和治疗时间等)、AD的不同病程阶段的影响,目前尚无统一的治疗方案。未来需要纳入更多不同AD病程阶段的样本,采用多中心和随机对照研究来进一步探索PBM治疗AD的作用机制,并进一步寻找PBM治疗AD患者的最佳路径和具体参数,从而制定统一标准的最佳治疗策略,为治疗AD患者、改善AD患者认知功能提供更大的帮助

关键词: 阿尔茨海默病,光生物调节疗法,机制,综述

以患者为中心的心理干预对消化道恶性肿瘤患者情绪障碍和生命质量的影响

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目的 分析以患者为中心的心理干预对消化道恶性肿瘤患者情绪障碍及生命质量的影响。方法 选取2023年1月-2023年12月本院80例消化道恶性肿瘤患者,采取随机数字表法分为对照组(常规护理干预)与观察组(以患者为中心的心理护理干预),对比干预效果。结果 观察组干预后焦虑评分、抑郁评分比对照组低($P<0.05$)。干预后,观察组生活质量评分较对照组高($P<0.05$)。观察组干预后睡眠质量评分比对照组低,而日常生活能力评分较对照组高($P<0.05$)。观察组不良事件发生率较对照组低,而护理满意度比对照组高($P<0.05$)。结论 以患者为中心的心理干预有助于消化道恶性肿瘤患者情绪障碍、睡眠质量、生命质量改善,且可以降低不良事件发生率,提升满意度,值得采纳。

方法 选取住院治疗消化道恶性肿瘤的患者为研究对象,对自愿参与本项研究的患者应用焦虑自评量表、抑郁自评量表和日生活力量表进行心理状况调查。焦虑自评得分 ≥ 25 分、抑郁自评得分 ≥ 25

分或日常生活能力量表 ≥ 16 分作为心理筛查标准对所有入组患者进行筛查,筛选出心理状况不良患者。将筛选出的患者按随机数字法等分为理性情绪治疗、正念冥想治疗组和对照组,不同性别不同年龄不同类型的消化道肿瘤随机分组。

纳入标准:①病理诊断为消化道恶性肿瘤,生存期 >6 个月;②年龄 ≥ 18 岁且 ≤ 75 岁;③知情同意,自愿参加者。焦虑自评得分 ≥ 25 分,抑郁自评得分 ≥ 25 分, SF-36。

排除标准:①合并有严重高血压、糖尿病、冠心病、肝肾功能障碍和严重恶液质者;②沟通障碍者、脑转移、精神障碍者。

(1)将入组的受试者随机分为3组,即:对照组、理性情绪治疗组和正念冥想治疗组;每组样本量40;一般特征性资料包括年龄、性别、疾病性质、病程、受教育水平、个性特征等。

(2)入组人员进行 SAS、ADS、SF-36 进行评估,一个月后进行第二次评估。二个月后进行第三次评估。

(3)检测相关指标,数据分析并得出结论。

结果 两组干预前焦虑评分及抑郁评分未见明显差异($P>0.05$);干预后,观察组更低($P<0.05$)。

结论 结果显示,观察组干预后 SDS 评分及 SAS 评分较对照组低,而生活质量评分比对照组高,可见,以患者为中心的心理干预可明显改善患者负面情绪,且有助于其生活质量提高。以患者为中心的心理干预在消化道恶性肿瘤患者护理中应用效果明显,不仅可以改善患者不良情绪、生活质量、睡眠质量,且有助于不良事件发生率降低,值得采纳。

关键词: 消化道恶性肿瘤;心理干预;情绪障碍;生命质量

患者血化验、肌电图等检查资料,并对患者血液标本进行全外显子基因检测及随访2年。

结果 该患者为66岁女性,隐袭起病,症状逐渐进展,突出表现为非流利性失语,目前病程5年,病程3年时已发展为完全性混合性失语并开始出现行为异常,行为幼稚化、不合时宜,频繁外走,随地大小便,暴躁易怒,生活懒散,情感淡漠,缺乏兴趣,外院予丙戊酸镁、氟伏沙明、哌罗匹隆治疗副作用明显,患者吞咽困难、饮水呛咳,伴下肢抖动、静坐不能。头 MR 示额颞叶萎缩、双侧海马萎缩;直立倾斜试验阳性,血管迷走性晕厥,混合型;基因检测示 GBA 基因 c.1453G>T(p.A485S) 突变。诊断为进行性非流利性失语型 FTD。予调整药物后患者吞咽困难、静坐不能及行为异常减轻。出院后每月随访,患者间断出现进食困难及流涎,予减停喹硫平,2023年2月开始不能自行进食,需要家人喂饭,行动慢,3个月体重下降15kg,舌肌及肢体萎缩,四肢腱反射活跃,病理征未引出,肌电图神经传导未见明显异常,患者无法配合 EMG 检查及认知测评。后患者病情相对稳定,体重逐渐恢复,语言功能差,难以交流,仅能发出“啊”声,行为异常在家人可控范围。但2024年3月患者感冒后病情恶化,不会咀嚼食物,只能吃流食及半流食,吞咽功能尚可。6月复诊进食情况稍改善,进食固体食物仍困难,予饮食添加全营养粉、蛋白粉,持续随访中。

结论 本患者以进行性语言障碍为主要表现,后出现行为异常,符合 FTD 诊断,随访过程中存在波动性吞咽困难,伴体重下降、肌肉萎缩、腱反射活跃,基因检测发现 GBA 基因突变,提示 GBA 基因可能参与 FTD 发病过程,支持运动神经元病-FTD 为谱系疾病的学说。

关键词: 额颞叶痴呆、进行性非流利性失语、GBA 基因

GBA 基因突变的额颞叶痴呆一例病例分析

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目的 报道1例以进行性非流利性失语及行为异常为主要表现的额颞叶痴呆(FTD)患者的临床表现、基因特点及随访情况。

方法 分析1例2022年6月就诊于北京大学第六医院的 FTD 患者的临床表现、影像学特征,收集

缺陷型精神分裂症患者的社会认知损害及临床影响因素

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背景 以社会认知损害为切入点,研究精神分裂症的发病机制、干预策略和临床预后,是近年来

探索该病防治策略的重要途径之一。遗憾的是,限于精神分裂症具有高异质性的特点,相关研究中混杂因素太多,目前尚缺乏高水平的研究结果。

目的 观察缺陷型精神分裂症(Deficit Schizophrenia, DS)和非缺陷型精神分裂症(Non-Deficit Schizophrenia, NDS)患者的社会认知损害,并探讨其临床影响因素。

方法 纳入DS患者和NDS患者各100例为研究对象,并招募100例健康常人为对照组。采用复杂眼区情绪识别、色子博弈任务和爱荷华博弈测验进行社会认知功能评测,应用画钟测验和词语流畅性测试、数字广度测验、字色干扰实验、连线实验等进行神经认知功能评测。比较三组间评测结果的差异,并使用Person相关分析来比较社会认知损害和神经认知功能、PANSS评分间之间的相关性。

结果 ①与NDS组患者相比,DS组男性患者更多、家族史阳性者更多、起病年龄更早、病程更长、PANSS阳性症状分更低而阴性症状分更高,差异具有统计学意义($P<0.05$);年龄、婚姻、受教育年限和PANSS一般病理分、总分之间未见统计学意义的差异($P>0.05$)。②三组间社会认知功能评测结果比较发现:与HC组相比,DS组、NDS组的复杂眼区情绪识别测验的情绪识别正确数和性别识别正确数、色子博弈任务的负反馈利用率、爱荷华博弈测验的各区间因子分等观察指标均显著下降,同时在色子博弈任务中的风险选项个数显著增高;且在情绪识别正确数、负反馈利用率、爱荷华博弈测验区间2-4方面,DS比NDS下降更明显,风险选项个数DS也比NDS得分更高,差异具有统计学意义($P<0.05$)。③三组间神经认知功能评测结果比较发现:DS组患者的画钟测验、词语流畅性测试、数字广度测验、字色干扰实验和连线实验等测验结果与NDS组、HC组存在显著差异,同时NDS组数字广度测验逆序分显著低于HC组而连线实验的测验结果显著高于HC组,差异具有统计学意义($P<0.05$)。④Person相关分析结果显示:精神分裂症患者(DS组和NDS组)的社会认知功能评分,与PANSS阳性症状分、阴性症状分及画钟测验、词语流畅性测试、数字广度测验、字色干扰实验、连线实验等神经认知功能之间,存在不同程度的相关性($r=0.128\sim 0.791, p<0.05$ 或 $p<0.01$)

结论 精神分裂症患者在社会信息感知以及社会问题判断、解决等维度均存在不同程度的社会认知损害,且与阳性症状、阴性症状及神经认知功能

关系密切,DS患者存在比NDS患者更为显著的社会认知损害。

关键词: 缺陷型精神分裂症,社会认知损害,神经认知功能,临床影响因素

双相情感障碍患者血清GFAP和GSK-3 β 水平与认知功能的关系

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目的 分析双相情感障碍患者血清胶质纤维酸性蛋白(GFAP)和糖原合成酶激酶-3 β (GSK-3 β)水平与认知功能的关系。

方法 选取2020年1月-2023年1月绍兴市第七人民医院收治的双相情感障碍患者61例作为研究组,另选取同期健康体检者61例作为对照组,采用酶联免疫吸附(ELISA)法检测血清GFAP和GSK-3 β 水平;采用重复性成套神经心理状态测验(RBANS)来评估患者的认知功能;采用Pearson法分析血清GFAP和GSK-3 β 水平相关性;采用spearman相关性分析血清GFAP和GSK-3 β 与认知功能的相关性;采用Logistic回归分析双相情感障碍患者认知功能的影响因素;受试者工作特征(ROC)曲线分析血清GFAP和GSK-3 β 水平对双相情感障碍患者认知功能差的诊断价值。

结果 研究组腰围、收缩压、舒张压、总胆固醇、高密度脂蛋白、血清GFAP和GSK-3 β 水平显著高于对照组,差异有统计学意义($P<0.05$)。研究组延时记忆、言语功能、即刻记忆、注意功能、视觉广度以及RBANS总分显著低于对照组,差异有统计学意义($P<0.05$)。认知功能较好、一般、差的患者血清GFAP和GSK-3 β 水平依次显著升高,差异有统计学意义($P<0.05$)。血清GFAP和GSK-3 β 呈正相关($P<0.05$)。血清GFAP和GSK-3 β 均与延时记忆、言语功能、即刻记忆、注意功能、视觉广度以及RBANS总分呈负相关($P<0.05$)。GFAP和GSK-3 β 升高是影响双相情感障碍患者认知功能的危险因素($P<0.05$)。ROC曲线显示,GFAP和GSK-3 β 联合诊断双相情感障碍患者认知功能差的AUC要优于各自单独诊断(Z联合vsGFAP=2.530、Z联合vsGSK-3 β =2.710, P 均 <0.05)。

结论 双相情感障碍患者血清 GFAP 和 GSK-3 β 水平显著升高,二者与认知功能密切相关。

关键词: 双相情感障碍,胶质纤维酸性蛋白,糖原合成酶激酶-3 β ,认知功能

音乐疗法联合生物反馈对恢复期卒中后抑郁患者睡眠的改善作用

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目的 评估音乐疗法联合生物反馈的干预方式对恢复期卒中后抑郁患者睡眠的改善效果。

方法 选取 2021 年 7 月-2023 年 7 月间我院收治的恢复期卒中后抑郁患者 119 例,随机分为干预组 52 例和对照组 67 例。针对卒中后抑郁相关症状,对照组患者酌情采用常规药物以及心理治疗;干预组在此基础上施加音乐疗法联合生物反馈的干预措施,评估两组患者干预前后组间抑郁程度分布情况与睡眠的改善情况。

结果 干预前,两组患者各项基线数据、抑郁严重程度分布以及睡眠指标组间差异均无统计学意义 ($P>0.05$)。干预后,干预组中/重度抑郁患者构成比显著低于对照组 ($P<0.05$)。干预前后,各组组内患者睡眠指标差异均有统计学意义 ($P<0.05$);干预后,干预组较对照组 PSQI 评分下降更为显著,睡眠总时间 (TST) 更长,睡眠效率 (SE) 更高,睡眠潜伏期 (SOL) 更短,快速眼球运动睡眠百分比 (REM%) 更大,以及微觉醒指数更小,差异均有统计学意义 ($P<0.05$)。

结论 音乐疗法联合生物反馈对改善恢复期卒中后抑郁患者睡眠结构,提高睡眠质量具有积极作用。采用音乐疗法联合生物反馈干预的恢复期卒中后抑郁患者,抑郁缓解程度更佳;其总体睡眠质量显著提升。不论从睡眠总时长,入睡时间,睡眠效率上,还是从睡眠结构中的快动眼睡眠比例以及睡眠过程中的觉醒情况等方面,干预组患者都收获了更加优良的干预结果。

关键词: 卒中后抑郁,睡眠,音乐疗法,生物反馈

To Evaluate The Accuracy of Brain CT Combined with Uric Acid Test in Early Screening for Alzheimer's Disease (AD)

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Objective This study aims to evaluate the accuracy of brain CT combined with uric acid test in the early screening of Alzheimer's disease (AD).

Methods A total of 150 outpatients were selected, including 75 AD patients and 75 healthy controls. Brain CT scan and uric acid test were used to compare the difference between the two groups.

Results The results showed that the brain CT scan of AD patients showed pathological changes such as brain atrophy and cerebral infarction, and the level of uric acid was significantly higher than that of healthy controls ($p<0.05$). In the early screening, the accuracy of brain CT combined with uric acid detection was 98.67%, which was significantly higher than that of single detection method ($p<0.05$).

Conclusion Brain CT combined with uric acid test has high accuracy in the early screening of Alzheimer's disease, and can be used as an effective auxiliary examination

关键词: Brain CT; uric acid test; Alzheimer's disease; early screening; high accuracy

酸奶类益生菌对老年精神科治疗便秘的盲对照实验和分析

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目的 评价酸奶类益生菌对老年精神科治疗便秘的临床疗效,分析目前研究现状并为指导临床提供参考。

方法 选取抚顺市第五医院和沈阳市静安医院精神科 2022 年 6 月至 2024 年 2 月接受治疗的老年患者 70 例,随机分到实验组或者对照组,比较两组

的治疗效果。患者均为男性,对照组年龄 60-80 岁。实验组 35 例,年龄为 60-80 岁,患者 2 天以上未排便,排便的习惯改变,存在排便困难的情况,同时排除伴有其他胃肠道疾病的患者。两组基本资料差异无显著性 ($p>0.05$)。排除标准:合并使用影响酸奶类益生菌的药物(如抗生素或其他微生态制剂,包括酸奶等);合并其他影响肠道微生态的疾病(如炎症性肠病等)。

结果 老年精神科便秘患者干预后的临床效果对比中实验组的总有效率 94.29%明显高于对照组的 65.71%,精神科患者家属的满意度实验组的 91.43%明显高于对照组患者家属的满意度的 65.71%,实验组患者的服药依从性 88.57%优于对照组的 55.71%;

结论 酸奶类益生菌可有效治疗老年精神科便秘,增加老年精神科便秘患者的每周排便频次,增强患者的主观排便顺畅感。安全有效,值得临床推广和应用。患者持续跟踪评定服药依从性,明显高于对照组,有效预防了病情反复波动,得到了患者以及家属的一致好评。治疗时应采取观察评估病情,心理活动、饮食,使患者适当运动、规律排便、合理用药等多种措施相结合以有效减轻患者的病情。

关键词: 酸奶类益生菌;老年精神科;便秘;双盲对照实验

进食障碍研究协作组

双相情感障碍患者睡眠障碍特征及代谢障碍特征分析

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目的 探讨双相情感障碍患者睡眠障碍及代谢障碍特征

方法 选自我院 2020 年 1 月至 2023 年 12 月收治的双相情感障碍患者 80 例作为研究对象,根据患者是够存在睡眠障碍将其分为睡眠障碍组 ($n=47$) 和无睡眠障碍组 ($n=33$),对比其人口学和临床特征、代谢特征。通过 Logistic 回归分析双相情感障碍患者睡眠障碍与其基线资料、代谢特征相关性。

结果 两组患者性别、年龄、婚姻状况、吸烟史、性格冲动、人际关系、饮酒史及职业差异无统计学意义 ($P>0.05$);睡眠障碍组在重大精神创伤史、家族精神异常史、既往自杀史、代谢障碍发生率、病程及 YMRS、HAMD、BPRS、RSESE 评分高于无睡眠障碍组 ($P<0.05$);睡眠障碍组空腹血糖、TG、HSL-C、收缩压、舒张压、甲状腺素、皮质醇水平高于无睡眠障碍组,促甲状腺激素水平低于无睡眠障碍组 ($P<0.05$);Logistic 多因素回归分析结果显示,重大精神创伤史、家族精神异常史、既往自杀史、病程长、代谢障碍综合征、空腹血糖、TG、HSL-C、收缩压、舒张压、甲状腺素、皮质醇水平高及促甲状腺激素水平低是引起患者睡眠障碍独立危险因素 ($P<0.05$);Pearson 相关性分析结果显示,患者 PSQI 评分与病程 ($r=0.476, P<0.01$)、YMRS ($r=0.363, P<0.01$)、HAMD ($r=0.744, P<0.01$)、BPRS ($r=0.529, P<0.01$)、RSESE ($r=0.531, P<0.01$) 评分及空腹血糖 ($r=0.644, P<0.01$)、TG ($r=0.485, P<0.01$)、HSL-C ($r=0.396, P<0.01$)、收缩压 ($r=0.522, P<0.01$)、舒张压 ($r=0.541, P<0.01$)、甲状腺素 ($r=0.608, P<0.01$)、皮质醇 ($r=0.349, P<0.01$) 水平及呈正相关,与促甲状腺激素 ($r=-0.518, P<0.01$) 水平呈负相关 ($P<0.05$)

结论 相情感障碍睡眠障碍患者呈现出代谢障碍加重,且患者重大精神创伤史、家族精神异常史、既往自杀史、代谢障碍发生率及代谢指标均是引起患者睡眠障碍危险因素。

关键词: 双相情感障碍; 睡眠障碍; 代谢; 危险因素

强迫症伴与不伴强迫型人格障碍: 临床特点与大脑形态学特征

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目的 强迫症常常共病强迫型人格障碍。虽然强迫型人格障碍在现象学, 神经认知和治疗反应上与强迫症相似, 但共病强迫型人格障碍对强迫症的复杂影响需要进一步研究。本研究旨在探索共病强迫型人格障碍对强迫症心理病理学症状和大脑形态学特征带来的影响, 以及强迫症状与强迫型人格障碍症状之间的关系。

方法 共 248 名未用药的强迫症患者(45 名共病强迫型人格障碍)被纳入本项研究。所有患者均接受了强迫症状, 强迫型人格障碍症状, 强迫信念, 抑郁症状, 焦虑症状的评估。其中, 145 名患者(23 名共病强迫型人格障碍)接受了磁共振扫描。

结果 大约有 18% 的强迫症患者共病强迫型人格障碍(45/248)。共病强迫型人格障碍的患者表现出了更高的强迫, 强迫信念, 抑郁, 焦虑症状, 且强迫型人格障碍症状与强迫症状存在显著正相关。脑影像学结果发现: 共病强迫型人格障碍的患者左侧顶上小叶和左侧楔前叶的复杂度显著高于未共病强迫型人格障碍的患者, 且与强迫型人格障碍症状存在显著正相关。有调节的中介模型进一步发现: 左侧顶上小叶和左侧楔前叶的复杂度中介了未共病强迫型人格障碍的患者强迫型人格障碍症状与强迫症状之间的关系。

结论 共病强迫型人格障碍可能会导致强迫症患者更严重的心理病理学症状以及大脑形态学特征的改变, 表明这两种疾病之间可能存在不同但相互关联的结构。

关键词: 强迫症, 强迫型人格障碍, 临床特点, 大脑形态学特征

舍曲林对轻度认知障碍伴抑郁的疗效及对神经炎症影响的研究

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目的 探讨舍曲林治疗轻度认知障碍合并抑郁患者的疗效分析以及治疗对患者辅助性 T 细胞 17(T helper cell 17,Th17)和相关炎症细胞因子水平的影响

方法 选取 2020 年 6 月—2021 年 12 月福州神经精神病防治院的 70 例轻度认知障碍患者,选取 35 例汉密尔顿抑郁量表(17 项)(Hamilton depression scale,HAMD 17)评分 ≥ 7 分患者分为轻度认知障碍伴抑郁组,35 例 HAMD 17 < 7 分患者分为轻度认知障碍无抑郁组,35 例健康受试者入选健康对照组。分析比较外周血 Th17 细胞和相关炎症细胞因子的水平。对轻度认知障碍合并抑郁患者进行舍曲林治疗,比较舍曲林对轻度认知障碍合并抑郁患者治疗前后的影响。分析舍曲林治疗前后认知功能和生存能力的影响以及 Th17 细胞及相关炎症细胞因子的变化。

结果 轻度认知障碍伴抑郁组患者外周血 Th17 细胞百分比、IL-1 β 、IL-6、IL-17 和 TNF- α 水平平均高于健康对照组,差异有统计学意义($P < 0.05$)。轻度认知障碍伴抑郁组患者外周血 Th17 细胞、IL-1 β 、IL-6、IL-17 和 TNF- α 水平高于轻度认知障碍无抑郁组患者,差异有统计学意义($P < 0.05$)。舍曲林治疗后轻度认知障碍伴抑郁组的 MoCA 评分和 MMSE 评分均高于治疗前,差异有统计学意义($P < 0.05$)。日常生活活动能力评定量表(activities of daily living,ADL)评分、HAMD 17 总分和各因子分及外周血中 Th17 细胞百分比、IL-1 β 、IL-6、IL-17 和 TNF- α 水平与治疗前相比有所下降,差异有统计学意义($P < 0.05$)。

结论 轻度认知障碍伴抑郁患者体内存在一些免疫系统紊乱导致的神经炎症,舍曲林治疗可以改善轻度认知障碍伴抑郁患者的抑郁症状与认知系统功能。

关键词: 轻度认知障碍; 抑郁症; 辅助性 T 细胞 17; 白细胞介素 1 β ; 白细胞介素 6; 肿瘤坏死因子- α ; 白细胞介素 17; 神经炎症; 免疫;

药物联合无抽搐电休克治疗难治性精神分裂症的疗效评估

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目的 评估难治性精神分裂症阴性症状患者应用氨磺必利、氯氮平与无抽搐电休克联合治疗对促进患者阴性症状及预后改善所发挥的作用。

方法 选择福建省福州神经精神病防治院 2022 年 1 月—2023 年 1 月进行治疗的难治性精神分裂症患者 136 例作为研究对象,随机数表法分为对照组和观察组,各 68 例。对照组患者联合应用氨磺必利及氯氮平治疗,观察组患者在采用氨磺必利与氯氮平治疗的基础上联合应用无抽搐电休克治疗。比较两组阴性和阳性症状量表(positive and negative symptom scale,PANSS)、韦氏记忆力量表(Webster memory strength scale,WMS-RS)、简明精神分裂症认知评估测验(brief assessment of cognition in schizophrenia,BACS)、健康调查简表(health survey summary form,SF-36)及不良反应总发生率。

结果 治疗前,两组患者 PANSS 各维度评分比较,差异无统计学意义($P > 0.05$);治疗后,观察组患者 PANSS 评分均低于对照组($P < 0.05$);治疗后,观察组患者 WMS-RS、BACS 评分显著高于对照组($P < 0.05$);治疗后,观察组患者各维度评分均高于对照组($P < 0.05$)。

结论 难治性精神分裂症阴性症状患者采用氨磺必利、氯氮平联合无抽搐电休克能够促进病情缓解,可使患者记忆力、认知功能与生活质量获得显著改善,安全高效。

关键词: 难治性精神分裂症; 阴性症状; 氨磺必利; 氯氮平; 无抽搐电休克治疗; 记忆力; 认知功能; 生活质量;

团体怀旧疗法对早期血管性痴呆患者社会功能的影响

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目的 探讨早期血管性痴呆患者的疾病干预中团体怀旧疗法对患者社会功能的影响。

方法 选取 2020 年 7 月~2021 年 9 月福州神经精神病防治院收治的 48 例早期血管性痴呆患者为研究对象,按照数字表法,随机将患者分为对照组和观察组各 24 例,观察组进行团体怀旧疗法干预,对照组进行痴呆常规护理干预,对比两组在社会功能、生活质量等方面差异。

结果 干预前两组病情状况、社会功能评分差异无统计学意义($P > 0.05$),干预后两组病情状况的评分高于干预前,社会功能评分低于干预前,且观察组病情状况的评分高于对照组,社会功能评分低于对照组,差异均有统计学意义($P < 0.05$)。两组干预前的躯体、社会、心理、环境和总分评分比较差异无统计学意义($P > 0.05$);干预后两组的躯体、社会、心理、环境和总分评分高于干预前,且观察组高于对照组,差异均有统计学意义($P < 0.05$)。

结论 在早期血管性痴呆患者疾病干预中利用团体怀旧疗法具有显著的价值,其不仅能够提升患者的认知能力,还能够提升患者的认知功能,改善患者的生活质量,促进痴呆情况的改善。

关键词: 团体怀旧疗法;早期血管性痴呆;社会功能;生活质量

柴胡加龙骨牡蛎汤联合西药治疗抑郁症的效果分析

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目的 探讨使用柴胡加龙骨牡蛎汤联合抗抑郁西药临床治疗抑郁症(major depressive disorder,MDD)患者的治疗效果。

方法 通过选取 2020 年 1 月份—2021 年 12 月份在福建省能源集团总医院心理科接受临床治疗的 121 例临床诊断为抑郁症(major depressive disorder,MDD)患者,通过以随机数表法将其分为研究组(60 例)与对照组(61 例)。对照组(61 例)选择采用常规西药抗抑郁进行临床治疗,研究组(60 例)在常规西药抗抑郁临床治疗的基础上加以应用柴胡加龙骨牡蛎汤进行中西医联合临床治疗。针对研究组(60 例)与对照组(61 例)的临床治疗效果、睡眠障碍的情况、

生活质量情况以及药物不良反应情况等进行分析比较。

结果 研究组总有效率为 96.67%较对照组的 83.61%高,差异有统计学意义($\chi^2=5.775, P<0.05$)。

结论 临床上采用柴胡加龙骨牡蛎汤联合常规抗抑郁西药治疗抑郁症(major depressive disorder, MDD)的临床治疗效果确切,其治疗安全性较佳,能够有效的改善患者的抑郁症状,保障其睡眠质量与生活质量,具有临床推广价值。

关键词: 柴胡加龙骨牡蛎汤; 西药; 抑郁症;

百合知母汤联合伏硫西汀治疗对抑郁症患者的影响

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目的 分析临床使用百合知母汤联合伏硫西汀治疗对抑郁症患者治疗效果的影响。

方法 选取 2019 年 1 月 -2020 年 4 月 105 例福建省赋能集团总医院心理科收治的抑郁症患者,根据患者治疗方案的不同将其分别分为观察组(观察组采取百合知母汤联合伏硫西汀进行治疗,共 50 例)与对照组(对照组采取伏硫西汀进行治疗,共 55 例)。比较观察组与对照组的临床疗效及治疗前后汉密顿抑郁量表(Hamilton Depression Scale, HAMD)评分的变化情况,比较观察组与对照组在用药期间的不良反应发生率。

结果 观察组治疗总有效率明显高于对照组($\chi^2=4.719, P=0.030$);两组治疗前汉密顿抑郁量表(Hamilton Depression Scale, HAMD)评分比较差异无统计学意义($t=1.374, P=0.128$),观察组治疗后汉密顿抑郁量表(Hamilton Depression Scale, HAMD)评分明显低于对照组($t=5.465, P=0.044$);两组治疗期间不良反应发生率比较差异无统计学意义($\chi^2=1.428, P=0.133$)。

结论 百合知母汤联合伏硫西汀治疗抑郁症具有较高的疗效与安全性,能够有效改善患者的 HAMD 评分,值得推广应用。

关键词: 百合知母汤 伏硫西汀 抑郁症

肿瘤患者营养相关心理问题研究进展

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目的 肿瘤患者常常面临很多营养问题:没有食欲、早饱、吞咽困难、预期性恶心呕吐、吞咽困难、吞咽困难、消瘦、疲乏无力等。而这些有营养问题的患者往往同时被心理痛苦困扰。为了探索肿瘤患者营养问题与心理问题之间的相互影响,更好的管理肿瘤患者营养相关心理问题,本文尝试梳理肿瘤患者营养相关心理问题的研究进展。

方法 以“肿瘤患者”“营养”“心理问题”等为关键词,大量查阅及梳理国内外相关文献。

结果 (1)胃肠外营养的肿瘤患者常面临抑郁、身体形象的改变、对器官问题的恐惧以及行活动的减少等复杂的心理困扰,这些心理痛苦降低了患者的生活质量。

(2)肠内营养对肿瘤患者生活质量也有影响,因为它可以导致味觉变化和身体上的痛苦。回顾性研究表明肠内营养可能比肠外营养带来更少的压力和产生更少的心理社会问题。

(3)直接进食的肿瘤患者营养相关心理问题主要有:习得性厌食(影响食物的摄入和滞留);食物偏好和选择的改变;预期性恶心和呕吐。

(4)肿瘤患者营养相关心理问题的管理方法有很多,包括:改善情绪的饮食和运动管理、认知行为疗法、放松练习、帮助患者寻找社会支持等。

结论 使用不同营养支持方式的肿瘤患者,包括胃肠外营养、肠内营养和直接进食的肿瘤患者都会面临不同的心理问题,而通过改善情绪的饮食和运动管理、认知行为疗法、放松练习和帮助患者寻找社会支持等方法可以有效地管理肿瘤患者营养相关心理问题。

关键词: 肿瘤患者 营养 心理问题

一例接纳承诺疗法对阿斯伯格综合征患儿的情绪调节

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在临床工作中经常碰到患有阿斯伯格综合征的孩子,他们的智商没有问题,甚至许多人成绩优秀能够考上重点中学,但是情商却显得低下,在与人交往中因为缺乏交往技巧,难以维持良好的人际关系在周围人眼里会觉得是怪人或者“显眼包”,他们有的人兴趣爱好比较特殊,言语交流时直白,不懂得察言观色,不顾及别人的感受,常被同伴孤立,甚至会被戏弄与欺凌,容易造成缺乏自信、焦虑、抑郁和愤怒的情绪,他们有时还在学校里有过激的言行,甚至如本案例一样出现跳楼自杀等冲动行为。

阿斯伯格综合征(1 具有与孤独症同样的社会交往障碍,局限的兴趣和重复、刻板的活动方式,但没有明显的语言和智力障碍,社交困难是本病的核心问题。随着孩子逐渐长大,各种挑战和困境会接踵而至,使孩子适应学校和社会难上加难,乃至出现各种行为问题,甚至是抑郁、焦虑等精神问题。接纳承诺疗法(acceptance and commitment therapy)[2]是认知行为疗法“第三次浪潮”中最具有代表性的治疗方法之一,ACT 通过关注当下、以己为景、明确价值观、承诺行动等过程来帮助患儿认识和接纳自己的情绪,明确自己的价值观,促使个体接纳自己的心理体验,来减少患儿的经验性回避,提升心理灵活性,帮助患儿过有意义的人生。接纳承诺疗法的诞生为阿斯伯格综合征的干预提供了一种新的取向。

关键词: 纳承诺疗法, 阿斯伯格综合征, 个案报告

HIV 防治同伴教育者积极心理资本和压力应对方式关系研究

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现如今高校大学生群体性观念较为开放,但缺乏艾滋病相关知识,已经逐渐成为艾滋病的主要患者群,因此高校大学生群体的 HIV 防控尤为重要。同伴教育作为高校 HIV 防控的主要方式,其实施者

即同伴教育者的理和行为特征是一个值得研究的特点了,在前人的相关研究中,极少从特殊的志愿者群体角度出发。为探讨 HIV 治同伴教育者积极心理资本和压力应对关系,本研究通过福州高校青年志愿者以及红十字会发放线上问卷,共收 128 名同伴教育者为被试,以志愿者心理资本量表和应对方式问卷作为施测量进行研究,了解心理资本和应对方式的关系。

结论 (1)HIV 防治同伴教育者的心理资本总体良好,拥有较高的心理资本;压力应对方式倾向成熟型应对方式。

(2)心理资本量表坚强韧性因子分与三种压力应对方式呈显著负相关;心理资本量表总分与混合型、不成熟型应对方式呈显著负相关;坚强韧性因子分与混合型应对方式有着显著的负向预测作用。

关键词: 同伴教育者, 心理资本, 应对方式, HIV 防治

神经性厌食症的肠道菌群变化: 治疗新视角

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目的 神经性厌食症 (Anorexia Nervosa, AN) 是一种严重的进食障碍,其病理机制尚未明确。近年来,肠道菌群在调节食欲与进食行为方面的重要作用引起了广泛关注。本文旨在综述 AN 与肠道菌群的关系,并探讨肠道菌群调节治疗在 AN 中的应用前景。

方法 通过查阅相关文献,分析了 AN 患者的肠道菌群变化及其可能的病理机制。重点关注肠道菌群通过“微生物—肠道—大脑轴”影响食欲和进食行为的机制。此外,本文还综述了益生菌和粪菌移植 (Fecal microbiota transplantation, FMT) 在神经、精神疾病治疗中的潜力,并探讨其在 AN 中的应用可能。

结果 研究表明,AN 患者的肠道菌群多样性显著降低,革兰氏阳性菌如厚壁菌门减少,革兰氏阴性菌如拟杆菌门增加,厚壁菌门罗氏菌属的减少与肠道通透性增加和肠道低度炎症相关,肠杆菌科大肠杆菌升高与饱腹感信号传递相关。肠道菌群及其代谢产物通过调控神经递质(如 5-羟色胺、 γ -氨基

丁酸和多巴胺)和食欲相关激素(如GLP-1和胃饥饿素),影响宿主的情绪和食欲。此外,益生菌和FMT在调节肠道菌群平衡、缓解精神疾病方面显示出潜力,但在AN中的应用研究尚少。

结论 AN患者的肠道菌群发生显著变化,这些变化可能与AN的病理机制密切相关。通过“微生物—肠道—大脑轴”调节肠道菌群,可能为AN的治疗提供新的方向。益生菌和FMT在AN治疗中的应用尚需进一步研究和验证。未来应通过多学科交叉研究,探索个性化的微生物调节方法,为AN治疗提供新的有效途径。

关键词:神经性厌食,肠道菌群,治疗

神经性厌食患者出现脑桥中央髓鞘溶解症 1例

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脑桥中央髓鞘溶解症(central pontine myelinolysis, CPM)是一种罕见的、非感染性的、对称性的脱髓鞘疾病,主要累及脑桥基底部分,以假性延髓麻痹、四肢瘫痪和意识障碍为特征性临床表现。该疾病进展迅速,多数患者预后不良。不同于国外以慢性酒精中毒为主要病因,国内报道首位病因为水电解质紊乱及快速纠正史,尤其是在迅速纠正低钠血症过程中发生。其他病因有酒精中毒、垂体危象、肝移植术后、肾透析后、神经性厌食等。我们报道了一个13岁的神经性厌食症女孩,病程中并没有发生严重的电解质失衡,而大脑核磁影像检查显示出典型的CPM损伤——脑桥基底部分对称性“蝙蝠翅”、“三叉戟”样长T1长T2信号。尽管该患者的早期临床表现很差,但是经过治疗她的神经性厌食和CPM都得到了明显的缓解。本例患者的临床早期特征以精神症状为主,类似于谵妄的器质性脑病综合征,与脑桥损伤相关的神经系统症状却不典型。神经性厌食是精神科疾病中致死率最高的疾病,患者常伴有一系列行为问题,如过度运动、大量饮水、滥用泻药或利尿剂等,更容易发生躯体问题。尽管电解质紊乱的病因可能被高估,但是精神科医生应该警惕在再喂养的过程中发生CPM的可能。当患者出现意识障碍的时候,尽早完善头颅磁共振检查以减少对

CPM的误诊、漏诊。

关键词:脑桥髓鞘溶解,神经性厌食,电解质紊乱,磁共振

地衣芽孢杆菌在阿尔茨海默病性痴呆终末期患者安宁疗护中的作用

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目的 阿尔茨海默病性痴呆是一类渐进性认知功能退化性疾病,处于疾病的终末期,患者的记忆力严重受损,只剩零星的片段,导致出现包括进食障碍等症状,日常生活完全依赖他人照护,最终常死于器官衰竭等并发症。重度痴呆的患者及患者家属往往最终被动的接受了此病无法被治愈的事实,最后只能寄希望于控制痛苦和不适症状,改善患者的生活质量。起源于英国的安宁疗护,恰恰满足了此类患者及患者家属的需求。本文尝试将“脑-肠-微生物轴”理论融入阿尔茨海默病性患者的安宁疗护中,探讨地衣芽孢杆菌制剂在阿尔茨海默病性痴呆患者安宁疗护中的作用及机制,争取探索出一条适合并服务于我国国情的安宁疗护模式,为阿尔茨海默病性痴呆患者的安宁疗护提供全新的视角和疗护靶点。

方法 收集我院患者中,明确诊断为阿尔茨海默病性痴呆终末期的患者,随机分为观察组和对照组,各25例。对照组患者给予常规安宁疗护,观察组患者给予安宁疗护及地衣芽孢杆菌制剂,并严格按照诊疗方案进行临床各项活动。观察组及对照组患者住院治疗8周后,给予患者简易智能状态检查表(MMSE)、生活质量评估表、动态疼痛评估表、埃德蒙顿症状评估量表等相关量表的评估,对比观察组、对照组患者上述指标的变化情况,进行统计学分析。

结果 经过8周的治疗,观察组和对照组患者的简易智能状态检查表(MMSE)治疗前后均无显著差异($P>0.05$);生活质量量表、动态疼痛评估表及埃德蒙顿症状评估量表的评分均有所下降,但观察组下降幅度更大,表明地衣芽孢杆菌制剂在改善阿尔茨海默病性痴呆终末期患者症状方面具有一定的优势。

结论 本研究结果表明,基于“脑-肠-微生物轴”理论,地衣芽孢杆菌制剂联合安宁疗护在治疗与改善阿尔茨海默病性痴呆终末期症状方面具有一定的优势。这可能与地衣芽孢杆菌制剂不仅与阿尔茨海默病性痴呆疾病本身关系密切,还与其终末期安宁疗护的主要躯体不适症状紧密相联有关,能够针对阿尔茨海默病性痴呆终末期复杂的病理过程进行整体调节。因此,地衣芽孢杆菌制剂联合安宁疗护可以作为治疗阿尔茨海默病性痴呆终末期症状的一种有效手段,值得进一步研究和推广。

关键词: 地衣芽孢杆菌;阿尔茨海默病性痴呆;安宁疗护;脑-肠-微生物轴

一例危险性低体质量神经性厌食症患者的护理

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目的 总结一例危险性低体质量(BMI 18.63kg/m²)神经性厌食症患者的护理经验。

方法 1. 饮食行为管理

- (1) 保证患者的入量,维持水电解质平衡。
- (2) 使用固定体重计每日定时测量患者体重。
- (3) 评估和监测限制饮食、运动及清除行为,

同时记录上述行为发生频次。

(4) 环境监督、进餐管理、观察患者是否在餐后出现运动或呕吐等行为、运动管理、行为强化。

- (5) 家庭心理治疗、支持性心理治疗。

2. 遵医嘱补钾

3. 预防心衰: 控制液体入量: 病入 24 小时内液体入量控制在 2000ML 以内; 抬高下肢, 以利于静脉回流。

4. 预防感染

- (1) 严格执行手卫生。
- (2) 加强口腔护理, 预防口腔溃疡。
- (3) 注意肛周清洁, 预防肛周感染。
- (4) 注意环境卫生, 病房多通风、消毒; 外出戴好口罩。

5. 安全护理。

结果 1. 患者的水、电解质失衡得到纠正。患者出院时, 出入量基本平衡(入院时: 入量

1480 毫升, 出量 523 毫升; 出院时: 入量平均约 2400 毫升/天, 出量平均约 1600 毫升/天)。血清钾由 2.17mmol/L 升至 3.65mmol/L。

2. 患者的营养状况的得到好转。

患者 NT-proBNP 由 933.28pg/ml, 降至 498.5pg/ml, 下肢水肿消退。体重由 23.5kg 增长至 26kg。

3. 患者住院期间未发生意外和不良事件。

结论 神经性厌食症患者营养治疗是最基本也是最重要的治疗手段。但首先, 序贯营养治疗避免再喂养综合征发生, 即遵循循序渐进原则: 热量逐渐增加, 速度由慢到快, 纠正营养状态和水、电解质失衡。其次, 严格控制肠外营养支持量和速度, 预防心衰及其它并发症。最后注意环境卫生、手卫生及皮肤护理, 预防感染的发生。除了上述护理要点外还应包括患者安全管理、支持性心理护理和认知重构等方面的护理。

关键词: 神经性厌食; 重度营养不良; 营养支持; 护理

Altered Gut Microbial Profile in Children and Adolescents with Obsessive-compulsive Disorder Treated with Selective Serotonin Reuptake Inhibitor

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Objective Obsessive-compulsive disorder (OCD) is a chronic disabling mental disorder characterized by repeated and persistent obsessive and/or compulsive behaviors. This study aims to explore the changes of gut microbiota in first-onset children and adolescents with OCD before and after selective serotonin reuptake inhibitor (SSRIs) treatment by Multiple omics analysis of 16SrRNA sequencing, metagenomics and metabolomics, and to find potential biomarkers related to the efficacy of OCD and reveal its pathophysiological mechanism. It provides theoretical basis for the early diagnosis and prognosis of OCD

Methods 1. Stool samples were collected from 26 first-episode untreated children and samples were collected again after 12 weeks of SSRIs monotherapy for OCD, which were evaluated for clinical parameters. 2. Fecal samples from 26 OCD0W and 26 treated with SSRIs for 12 weeks (OCD12W) were analyzed by 16S rRNA sequencing and metabonomic method based on UHPLS-MS. 3. Fecal samples from 14 Responders and 12 Nonresponders were analyzed by Illumina HiSeq sequencing platform using metagenomic high-throughput sequencing method. 4. Association analysis was performed on metagenomic and metabonomics analysis data to clarify the association between differential flora and differential metabolites

Results 1. There was no significant difference in the diversity index of intestinal flora in patients with obsessive-compulsive disorder (OCD12W) after drug intervention compared with those in the pre-intervention group (OCD0W) ($P>0.05$). 2. The random forest model identified 13 specific bacteria as microbial markers in patients in the treatment effective group (Respond) and non-response group (Nonrespond), with AUC of 0.8274. 3. A total of 63 different metabolites were screened in the OCD0W-OCD12W group, among which the relative contents of neopterin and Sepiapterin, the intermediate products of folate biosynthesis, were significantly reduced in the OCD12W group ($P<0.05$); The metabolites involved in amino acid biosynthesis pathway such as fumarate, 2-oxyisovalerate and 3-dehydroquinic acid (DHQ) were significantly increased ($P<0.05$)

Conclusion 1. Short-term treatment with SSRIs can alleviate clinical symptoms, but fails to make the microbial ecosystem of children and adolescents with OCD close to healthy individuals. 2. Microbial markers can also predict treatment outcomes of children and adolescents with OCD. 3. The expression of intestinal microflora metabolites in OCD patients is disturbed, resulting in functional abnormalities of related metabolic pathways, which can be partially recovered by drug treatment. Neopterin, as a key factor of folic acid synthesis pathway, may be involved in the pathogenesis of OCD. 4. Abnormal metabolites of gut microbiota in OCD patients are mainly manifested in folic acid bio-

synthesis, prion disease pathway and amino acid metabolic network

关键词: Gut microbiota; Obsessive compulsive disorder; Children and adolescents; Metagenomics; Metabonomics

基于高通量测序方法的儿童青少年强迫症患者肠道菌群特征分析

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目的 强迫症 (obsessive compulsive disorder, OCD) 是一种病因未明的致残性精神障碍, 其发生发展过程与肠道菌群的关联尚未被完全阐明。本研究旨在通过 16SrRNA 测序和宏基因组学联合分析的方法, 为首发未用药儿童青少年强迫症患者是否存在肠道菌群功能紊乱提供直接证据, 同时寻找强迫症的潜在生物标志物。

方法 1、本研究首先收集了 49 例首发未用药儿童青少年强迫症患者 (OCD) 和 42 例年龄、性别与之匹配的健康对照者 (HC) 的粪便样本, 同时对受试者进行随访及各临床参数的评估。2、采用 16S rRNA 测序的方法对 49 例强迫症组 (OCD 组) 和 42 例健康对照组 (HC 组) 的粪便样本进行分析。3、利用宏基因组学高通量测序方法基于 Illumina HiSeq 测序平台对 19 例 OCD 及 18 例 HC 受试者的粪便样本进行分析。4、将宏基因组测序结果与各临床参数进行关联分析, 探究肠道菌群与强迫症症状之间的关系及其发病机制中可能参与的功能通路。

结果 1、OCD 患者肠道菌群各多样性指数均显著降低 (obs, $P<0.001$; chao1, $P<0.001$; ACE, $P<0.001$; shannon, $P<0.001$; simpson, $P<0.05$; goods, $P<0.001$), 同时其微生物互作网络明显弱于 HC 组。2、OCD 组厚壁菌门 / 拟杆菌门的相对丰度比值 (F/B) 显著降低 ($P<0.001$)。3、OCD 患者肠道罗姆布茨菌属 (Romboutsia, $q<0.01$)、光冈菌属 (Mitsuokella, $q<0.01$)、土孢杆菌属 (Terrisporobacter, $q<0.01$) 等产丁酸盐菌的丰度显著降低。4、随机森林模型识别 30 个特异性菌属作

为生物标记物, OCD 组和 HC 组之间的 AUC 为 0.9011。5、OCD 组各临床参数的变化与肠道菌群中特定细菌的丰度改变之间存在相关性 ($P < 0.05$)。

结论 1、首发未用药儿童青少年 OCD 患者肠道菌群的多样性显著降低, 且微生物互作网络存在明显缺陷。2、首发未用药儿童青少年 OCD 患者肠道稳态被破坏与罗姆布茨菌属 (*Romboutsia*) 等产丁酸盐细菌的相对丰度显著降低有关。3、OCD 组和 HC 组可通过以包特氏菌属 (*Bordetella*) 为主的特异性肠道菌群生物标记物进行区分。

关键词: 肠道菌群; 强迫症; 儿童青少年; 宏基因组学;

P11 (S100A10) 和突触相关蛋白参与卒中后抑郁大鼠的机制研究

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目的 卒中后抑郁 (PSD) 是卒中的常见并发症, 显著影响患者功能恢复和回归社会。既往研究发现 P11 可能通过 BDNF 通路参与了抑郁症发生以及抗抑郁疗效, 但 P11 是否参与 PSD 发生尚不清楚, 本研究旨在通过建立卒中后抑郁动物模型探讨 P11 参与 PSD 的发病机制。

方法 选取 5-6 周龄大小的 SD 大鼠, 随机分为空白对照组, 卒中模型组和 PSD 模型组三组。通过糖水偏爱实验, 强迫游泳, 悬尾实验对大鼠抑郁样行为进行评估; 通过氯化三苯基四氮唑 (*triphenyltetrazolium chloride*, TTC) 染色评估卒中模型大鼠形态学变化, 通过蛋白质印迹法 (*western blot*, WB) 分别检测各组大鼠前额叶皮层和海马区 P11, PSD95 以及 *synapsin1* 突触相关蛋白的表达。

结果 与对照组相比, 卒中组和 PSD 组大鼠糖水偏好显著降低, 游泳测试不动时间、悬尾试验不动时间显著延长, 前额叶皮层以及海马区 PSD95, S100A10, *synapsin1* 蛋白表达水平减少, 差异均有统计学意义 (均 $P < 0.05$)。

结论 S100A10/PSD95/*synapsin1* 的表达水平下降可能参与卒中后抑郁的发生, S100A10 可能通过影响突触相关蛋白的表达调节突触功能参与卒中后抑郁的发病。

关键词: 卒中后抑郁; S100A10; 突触相关蛋白

特质冲动与 mPFC 脑区 GABA 浓度预测舍曲林对强迫症的疗效

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目的 舍曲林作为选择性 5-羟色胺再摄取抑制剂, 是强迫治疗的一线药物, 但此类药物服药周期长, 治疗有效的比例低, 寻找疗效预测指标成为了研究的重点。特质冲动有预测强迫症疗效的潜力, 但并无研究做过实际的探索。内侧前额叶 (*medial prefrontal cortex*, mPFC) 的 γ 氨基丁酸 (*gamma-aminobutyric acid*, GABA) 浓度与特质冲动紧密相关, 但二者在强迫症中的关联还缺少研究。本研究探索特质冲动对强迫症舍曲林疗效的预测效果以及强迫症中特质冲动水平与 mPFC 脑区 GABA 浓度的关系。基于特质冲动与 mPFC 脑区 GABA 浓度的相关性, 我们探索了二者联合是否能够更好地预测强迫症的治疗结局。

方法 研究纳入 51 例未服药强迫症患者与 35 例健康对照, 于基线采集所有被试的人口学及耶鲁布朗强迫量表、贝克抑郁量表第二版、巴瑞特冲动量表第 11 版得分 (*Barratt Impulsivity Scale-11*, BIS-11), 使用质子磁共振波谱技术采集患者与健康对照基线 mPFC 脑区的 GABA 信号。而后强迫症患者完成 12 周舍曲林治疗, 于治疗后再次采集除 BIS-11 外其他量表得分, 并邀请完成治疗的患者进行治疗后的再次扫描。对比两组基线状态下特质冲动、mPFC 脑区 GABA 浓度及症状量表差异; 比较患者组治疗前后症状及 GABA 浓度改变; 统计冲动、GABA 浓度与症状及人口学的关联; 以治疗有效与治疗无效分组比较特质冲动、GABA 浓度及症状的组间差异及各亚组中变量的相关性; 最后使用二元 Logistic 回归构建疗效预测模型, 并比较单独使用特质冲动和联合特质冲动与基线 GABA 浓度对疗效预测效果的差异。

结果 强迫症患者注意冲动水平显著高于健康对照；基线状态下 mPFC 脑区 GABA 浓度显著低于健康对照，与无计划冲动水平有相关趋势；舍曲林治疗前后 GABA 浓度无显著变化。Logistic 回归显示无计划冲动水平对预测舍曲林疗效有显著贡献。mPFC 脑区 GABA 浓度对疗效预测无显著贡献，且联合基线 mPFC 脑区 GABA 浓度并未增强无计划冲动对舍曲林疗效的预测效果。

结论 无计划冲动可预测强迫症患者舍曲林治疗疗效，mPFC 脑区 GABA 浓度无显著预测效果。

关键词：强迫症,疗效预测,特质冲动,质子磁共振波谱,舍曲林

中国进食障碍简明筛查量表的开发及信效度检验

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结论 开发信效度良好的中国本土化的进食障碍简明筛查量表，用以在学生群体中的心理健康普查，在早期对进食障碍风险患者进行初步筛查。

方法 1.通过建立项目池、样本库数据驱动的形式进行项目分析、专家评审形成初版量表，在健康对照群体 (N=146) 和进食障碍群体 (N=34) 中进行预试验，根据项目分析结果对初版量表进行修订，最终形成终版的中国进食障碍简明筛查量表 (CEDBS)。2.将 CEDBS 投放至大样本的高中生群体 (N=1036) 中进行信效度检验，并在 1 个月后随机抽取同一批被试 (N=106) 进行复测。3.检验 CEDBS 的临床适用性，即在进食障碍患者群体 (N=325) 中进行信效度检验，在 1 个月后对前来复诊的患者 (N=51) 进行复测，并通过 ROC 分析计算量表的敏感度、特异性和划界分。

结果 1.CEDBS 终版量表一共包含 10 个条目，采用 6 点计分的形式对受试者过去 28 天的进食障碍核心症状进行评估。2. CEDBS 在高中生群体中的内部一致性系数为 0.932，1 个月后的重测信度 ICC 为 0.741，CEDBS 的前后测总分无显著差异 (p=0.477)。在效度指标上，探索性因子分析结果显示 CEDBS 在高中生群体中表现为单维结构，各条目的因子负荷在 0.70-0.87 之间；CEDBS 与 EDI-1、

EAT-26、EDE-Q 总分之间的相关系数分别为 0.726、0.716、0.849，均达到显著水平 (p<0.01)；CEDBS 能显著预测高中生 1 个月后的 EDI-1 总分情况 (R²=0.213, p<0.001)。3.在进食障碍患者群体中，CEDBS 的内部一致性系数为 0.956，1 个月后的重测信度 ICC 为 0.828，但 CEDBS 的前后测总分存在显著差异 (p=0.002)。在效度指标上，探索性因子分析结果显示 CEDBS 在患者群体中同样表现为单维结构，各条目的因子负荷在 0.70-0.90 之间；CEDBS 与 EDI-1、EAT-26、EDE-Q 总分之间的相关系数分别为 0.758、0.843、0.901，均达到显著水平 (p<0.01)；CEDBS 能显著预测 ED 患者 1 个月后的 EDI-1 总分情况 (R²=0.295, p=0.002)。4.ROC 分析结果显示 AUC 为 0.908，当选取划界分为 17 分时，CEDBS 的敏感度和特异度分别为 0.809 和 0.877，达到最佳水平。

结论 1.CEDBS 的开发过程科学严谨，具有良好的内容效度。2.CEDBS 在高中生和进食障碍群体中均具有良好的信效度，适合在大样本的高中生群体中筛查使用。3.CEDBS 的划界分为 17 分，总分高于此分数表明其存在进食障碍的倾向。

关键词：进食障碍，筛查量表，量表开发，信效度检验，划界分

神经性厌食症患者自我忽视的诠释性现象学研究

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目的 探索神经性厌食症患者自我忽视的体验和原因，为医护人员识别和干预神经性厌食症患者自我忽视行为提供参考。

方法 采用诠释性现象学方法，通过目的抽样，通过专家小组访谈法修订研究方案，以访谈过程中不再出现新主题为标准，选取 2023 年 10 月—2024 年 3 月在山西医科大学第一医院精神卫生科住院的神经性厌食症患者进行半结构式访谈，采用 Van Manen 方法分析质性资料。本研究遵循知情同意原则，所有受访者均签署知情同意书。

结果 本研究共访谈了 11 名神经性厌食症患者，其中女 10 例，男 1 例；年龄(12.6±3.6)岁；婚姻

状况以未婚为主；以学生为主；大部分受访者伴有抑郁、焦虑情绪；自我忽视评估量表得分为(15.5±1.8)分。神经性厌食症患者自我忽视的体验共归纳为4个主题和8个亚主题，包括忽视个人健康（高体型知觉感知、完美主义、高自尊、高冲动人格特质），忽视体重管理（健康意识薄弱、低自我同情），自我照护能力不足（情绪调节能力差、自我行为负强化）和感知支持不足（社会支持较低、情感支持不足）。

结论 神经性厌食症患者自我忽视的体验和原因是多元化的，医护人员需重视神经性厌食症患者自我忽视行为的表现，并积极探索有效的防治措施，科学评估患者的需求，继而实施精准护理服务，提高患者疾病认知及应对能力。

关键词：神经性厌食症；自我忽视；诠释性现象学

Analysis of Clinical Characteristics, Depression Levels, and Treatment Outcomes in Inpatients with Anorexia Nervosa and Bulimia Nervosa

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Objective Anorexia nervosa (AN) and bulimia nervosa (BN) are severe eating disorders, often associated with multiple psychiatric and somatic disorders. Comorbidity of depression and eating disorders is common and may exacerbate each other. However, little research has compared depressive episodes in AN and BN

Methods 160 AN and BN inpatients from 2012 to 2023 were retrospectively reviewed. This study compared the characteristics of AN and BN in hospitalized patients with and without depressive episodes and investigated the factors influencing prognosis

Results The prevalence of depressive episodes is 50% among patients with AN and 67.5% among patients with BN. There were no statistically significant differences in the scores on the Hamilton Rating Scale

for Depression (24 items) (HAMD24) or the Hamilton Anxiety Scale (HAMA) between the AN patients with depressive episodes (AND) and the BN patients with depressive episodes (BND). AND patients exhibited a higher incidence of first episodes ($F=27.941, P<0.001$), self-injurious behaviors ($F=9.769, P=0.016$), and sleep disturbances ($F=33.719, P<0.001$) compared to the two groups without depressive episode. Similarly, BND patients demonstrated a significantly higher prevalence of first episodes ($F=27.941, P<0.001$), suicidal ideation ($F=16.840, P=0.001$) and attempts ($F=8.515, P=0.027$), and sleep disturbances ($F=33.719, P<0.001$) compared to these two groups. No significant differences in prognosis were observed between AN patients without depressive episodes (ANO) and BN patients without depressive episodes (BNO) ($P>0.05$), nor between AND and BND ($P>0.05$). Interestingly, both ANO and BNO patients achieved higher cure rate. Length of hospitalization was positively correlated with prognosis in all four patient groups (all $P<0.05$). In addition, for patients with depressive episodes (AND, BND), lower HAMD24 and HAMA scores at discharge (all $P<0.05$) and greater HAMD24 score reduction rates ($P<0.05$) were associated with better prognosis

Conclusion Patients with BN exhibited a significantly higher prevalence of depressive episodes compared to the AN. Patients with AND and BND Patients exhibited lower cure rates. Also, in both AND and BND patients, prognosis was associated with residual symptoms of depression and anxiety

关键词：Retrospective analysis, Anorexia nervosa, Bulimia nervosa, Depression level, Inpatients, Treatment outcomes

中医治疗神经性厌食症研究进展

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神经性厌食症是以自我饥饿、体质量显著减轻和营养不良为特征的一类进食障碍。西医治疗主要以药物治疗、心理疗法等治疗方式为主，具有一定

的局限性。中医注重形神合一,认为本病以脾胃虚弱为本,以肝气郁结、情志失常为标,并与心、肾关系密切,治疗以健脾养胃、疏肝理气为本,辩证施治,可根据患者症状不同,兼顾温补肾阳、调补冲任等多种治疗方向,对症治疗;治疗手段多样,不论单独治疗或配合西药协同治疗,均可获确切疗效。

神经性厌食症作为进食障碍中的一种主要类型,以反常的进食行为和心理紊乱为特征,伴发生理、社会功能紊乱。该疾病症状复杂、对患者生活质量和生命安全危害严重,进食障碍在国外的研究较为成熟,早在17世纪已有类似神经性厌食的报道,相较国外来说,国内相关研究起步较晚,尤其是应用中医治疗AN;但随着近年来国内研究者及医者的不断研究,现阶段通过中医学治疗AN已经具有许多相对成熟、疗效明确的治疗药物及治疗手段,并且手段多样,如汤药、针灸、按摩等等。在临床应用治疗中,无论是单独治疗或联合西药治疗均具有明显疗效。如何发挥中医药特色,早期诊断治疗,减少误诊率和复发率,为患者减少痛苦,将是未来中医人努力研究发展的方向。

关键词:神经性厌食症;中医;研究进展

QEEG测试在心理疾病症状检出中的应用

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目的 QEEG测试在心理疾病症状检出中的应用

方法 现有的心理疾病的诊断极大的依赖于患者的主诉,对于早期或心理疾病症状表现不明显、患者年龄偏小,或因某种原因自身表达能力欠缺,无法表达清楚自身精神症状,其主诉的内容是患者自身的感受,是非具象的,与神经系统的神经数据表达出脑功能的实际问题存在偏差,如心理问题中的反刍(反刍思维是一种反复关注自身消极情绪及相应事件的思维方式[1]),患者对反刍思维的表达千差万别。针对以上问题,将定量脑电图(QEEG)测试引入心理疾病的症状检出,通过脑电数据的量化和大数据比对后的具体脑数据和脑图像来对心理疾病进行定量和定性的分析,对心理疾病以数字化的、可重

复的、涉及到全脑各脑区的方式实施诊断,而不是依赖患者主观自述或量表的测试,QEEG测试在心理疾病的症状检出成为必要。QEEG测试的快速筛查能力,使得通过大规模群体的主动性筛查成为可能,对心理健康筛查的升级具有重要的作用。QEEG症状检出技术以QEEG测试技术为基础,是脑科学、大数据、计算机技术相结合的产物,应用QEEG症状检出技术完成对包括抑郁症,焦虑症,双相情感障碍等在内的心理疾病的诊断技术已经日臻完善。本文介绍了QEEG症状检出技术及QEEG技术的原理及测试过程,分析了心理疾病各种症状的脑神经原因,心理疾病各相似症状在脑区即点位层面的异同,对QEEG症状检出技术及QEEG测试的实际应用进行总结与分析。

结果 QEEG症状检出技术与测试与传统的量表测量方法相比,具有受主客观干扰因素影响较小、脑电数据经过定性、定量分析后其结果更为客观、不依赖患者的自我感觉,并实现患者症状的主动检出等优点,

结论 QEEG症状检出技术与测试宜在临床中应用和推广,同时开创了一种创新、成熟、准确、全面的心理健康筛查系统技术,是心理健康监测技术的创新并对其技术进步具有重要的意义。

关键词:症状检出;QEEG测试;症状与脑神经;定量分析;定性分析

伴及不伴非自杀性自伤行为的青少年心境障碍患者的临床特征及疗效差异

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目的 非自杀性自伤(Non-Suicidal Self-Injury, NSSI)是指个体采取的一系列故意伤害自己身体的行为,并产生轻度或中度损伤。目前针对NSSI的治疗,有实证研究证据的干预措施主要为心理治疗,药物治疗主要针对其共病的精神障碍,如5-HT再摄取抑制剂类(SSRIs)药物和非典型抗精神病药物等。本研究旨在立足于真实的临床环境中,分析比较伴及不伴NSSI行为的青少年心境障碍患者的一般人口学特征、临床特征以及疗效差异,以期针对伴非自杀性自伤青少年患者的临床治疗提供新思路

科学依据。

方法 选取在精神医学科门诊就诊并符合入组条件的青少年心境障碍患者进行问卷调查,共纳入148例患者。根据1年内是否实施5次以上非自杀性自伤行为将患者分为2组:伴非自杀性自伤行为组(NSSI组),共52例患者;不伴非自杀性自伤行为组(Non-NSSI组),共96例患者。调查工具采用一般人口学和临床特征调查问卷、渥太华自伤量表(OSI)、青少年非自杀性自伤问卷(ANSAQ)、汉密尔顿抑郁量表(HAMD-17)、汉密尔顿焦虑量表(HAMA)、临床实用抑郁混合特征量表中文版(CUDOS-M-C)、中国大五人格问卷简式版(CBF-P-IB)、儿童期虐待问卷(CTQ-SF)、青少年生活事件量表(ASLEC)、家庭环境量表中文版、防御方式问卷以及药物副反应量表。对受试者共进行4次评估,在基线水平分析伴及不伴NSSI的青少年心境障碍患者的一般人口学特征及临床特征;分别在随访第2周、第4周、第8周采集资料分析两组疗效差异。基于GraphPad Prism 10.0版本对数据进行统计学分析以及绘图,检验水平选取双侧 $P < 0.05$ 为有统计学意义。

结果 1. 基线水平上,NSSI组与Non-NSSI在是否为独生子女、临床诊断、共病、HAMD-17、HAMA、CUDOS-M-C、尽责性、宜人性、情感虐待、人际关系因子得分上有统计学差异($P < 0.05$)。

2. NSSI组首次发生自伤行为的平均年龄为(13.04 ± 2.07)岁,实施自伤行为频率最高的身体部位是手(25.00%)及下臂或腕部(23.08%),最常使用的自伤方式为切割(26.92%)。

3. 两组HAMD-17($P = 0.002$)、HAMA($P < 0.001$)得分均随时间推移呈下降趋势,HAMA得分存在组间差异($P = 0.019$),治疗前后得分差异存在组内差异($P < 0.05$)。

结论 抑郁症状、焦虑症状、临床诊断、共病、独生子女、尽责性人格特质、宜人性人格特质、儿童期情感虐待、人际关系是青少年心境障碍患者NSSI的影响因素。

关键词:非自杀性自伤;心境障碍;临床特征;疗效

产后抑郁风险预测模型的构建和验证

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目的 产后抑郁症(PND)是一种严重影响产妇身心健康的疾病,其发病率逐年上升,成为威胁产妇身心健康,更是全球关注的公共卫生问题。目前,尽管已有一些临床指标用于预测PND的风险,但受限于其准确性和敏感性,仍难以满足临床需求。构建产后抑郁发病风险的预测模型,综合考虑心理、社会等多方面的因素,预测模型的建立为产后抑郁的早期识别和干预提供了新的思路和方法,有望为未来的临床实践提供有力支持。

方法 选取了464例产科门诊的孕晚期孕妇(孕28-40周)。通过综合运用问卷调查、临床访谈及心理评估工具,系统地收集了可能与产后抑郁(PND)发病风险相关的数据。所有受试者均接受了产后4-6周的跟踪随访,并据此分为产后抑郁组(PND组)和未抑郁组(NPND组)。

结果 基于心理和社会学因素,成功构建了PND发病风险预测模型。经过筛选最终确定的预测因子包括:GAD-7焦虑得分、PSQI睡眠状况、状态特质问卷-特质维度、经前期烦躁史、婚姻质量问卷中的性格相容度维度,以及艾森克人格特质中蕴含的抑郁质个性特点。该模型在验证人群中的AUC值达0.904,显示较好的区分能力。同时,验证模型的敏感性达到92.9%,特异性为76.90%,进一步印证了模型的有效性。Hosmer-Lemeshow检验值为0.09($p > 0.05$),充分说明模型拟合度良好。

结论 本研究成功构建了一个性能良好的PND发病风险预测模型,该模型综合考虑了心理和社会学等因素,发现孕晚期睡眠状况、焦虑情绪、特质焦虑、性格相容度以及抑郁质人格特征是PND发病的重要预测因子和影响因素

关键词:产后抑郁;影响因素;预测模型;肠道菌群;宏基因组学

Abnormal Dynamic Functional Connectivity in First-episode and Untreatment Patients with Obsessive-compulsive Disorder Based on The Triple-network Model Abstract

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Objective The aim of this study was to assess the triple-network dynamic functional connectivity and topological properties of first-episode and untreated patients with obsessive-compulsive disorder (OCD) and to investigate the clinical correlations of abnormal changes in dynamic functional connectivity and topological properties

Methods Sixty-eight patients in our hospital diagnosed with first-episode OCD and 68 healthy controls (HC) matched for age and sex were included in our study. Resting-state functional magnetic resonance imaging scans were performed on a 3.0-Tesla magnetic resonance scanner. Three temporal metrics of connectivity state expression were calculated: (i) fraction of time; (ii) mean dwell time; and (iii) number of transitions. We further performed dynamic graph-theoretical analysis to examine the variability of topological metrics. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) was used to assess the severity of OCD symptoms, and Wisconsin Card Sorting Test was used to assess the executive function of OCD

Results In the comparison of dynamic functional connectivity indicators, we found that there were significant differences in the fraction of time and the mean dwell time in the state1 and state3, and significant differences in the number of transitions among the four functional connectivity states. The OCD group showed less variability in the local efficiency of the network. Both the total Y-BOCS score and the persistent error rate were positively correlated with the fraction of time and the mean dwell time in the state1, both the total Y-BOCS score and the persistent error rate were negatively correlated with the local efficiency of the network. In the validation analysis, when the size of the sliding window changed, there was still significant differences in the the fraction of time, the mean dwell time and the number of transitions between OCD patients and HC

Conclusion The triple-network of OCD patients have lost the correct dynamic rhythm, which may be

considered as a potential marker for pathophysiological mechanism of OCD

关键词: dynamic functional connectivity, functional magnetic resonance imaging, obsessive-compulsive disorder, resting state, triple-network

Effects of Childhood Experiences on Obsessive-Compulsive and Internalizing Symptoms: A Latent Profile and Network Analysis

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Objective Trauma exposure is linked to adverse psychological outcomes such as anxiety, depression, and obsessive-compulsive (OC) symptoms. The impact of childhood experiences on personality, behavior, and perceived stress may differ across subgroups based on the type and severity of childhood adversities. This study aimed to identify subgroups with different childhood experiences using latent profile analysis (LPA) and explore the relationship between OC and related symptoms and their risk factors through network analysis

Methods A large community sample (N = 4102) provided data on childhood experiences (childhood trauma, perceived unpredictability, and perceived poverty), anxiety, depressive, and OC symptoms, and related risk factors. LPA was conducted to identify subgroups based on childhood adversity experiences. Network analysis (NA) and exploratory graph analysis were used to examine symptom-symptom interactions of OC and related symptoms within each subgroup

Results LPA identified six subgroups: (a) Low childhood adversity, (b) Low childhood adversity with relative poverty, (c) Medium adversity with high unpredictability, (d) High emotional abuse and parental unpredictability, (e) Medium-high adversity, and (f) Highest adversity with highest abuse. Core nodes in the OC symptoms and related risk factors networks varied significantly across subgroups. Network analysis identified

poor self-regulation as a bridging symptom across networks

Conclusion Poor self-regulation appears to be a stable mechanism linking different risk factors and symptoms. Individuals with different childhood experiences may exhibit distinct mechanisms for OC symptoms. These findings highlight potential targets for clinical intervention to improve outcomes for individuals with various types of childhood adversity

关键词: Childhood adversity, latent profile analysis, network analysis, obsessive-compulsive symptoms, risk factors

暴食障碍对减重手术疗效的影响

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目的 减重手术是用于暴食障碍患者肥胖症的推荐治疗手段之一。然而,仍有部分患者在术后最初几年体重下降不理想或体重明显反弹。本文拟就此问题进行综述,从减重手术前或术后两方面探究暴食障碍的发生对减重手术疗效的可能影响,并提出相应建议。

方法 本文通过对相关文献的系统检索和分析,综合多项研究结果,系统评估暴食障碍患者在接受减重手术前后的心理和行为特征以及减重手术前后暴食障碍的发生对手术疗效的影响,并进一步探讨了术前和术后针对暴食障碍的心理和药物干预措施及其效果。

结果 研究表明,寻求减重手术的暴食障碍患者在情绪调节、冲动、抑郁和焦虑方面存在显著问题。尽管如此,术前暴食障碍对术后体重减轻的直接影响较小。术前进行心理干预,如认知行为治疗,对改善术后体重减轻效果有积极影响。术后暴食障碍的发生率增加,并可能导致减重效果下降或体重反弹。术后暴食障碍患者接受短期认知行为治疗可显著改善体重减轻效果、进食障碍的精神病理症状、抑郁症状及自尊。此外,药物干预如托吡酯和益生菌补充在控制术后暴食障碍和改善体重结局方面也

显示出一定的疗效。

结论 尽管术前暴食障碍对术后体重结局影响有限,但术前心理干预仍具有积极意义。术后暴食障碍的管理对于长期减重效果至关重要,综合心理和药物干预可有效控制术后暴食障碍,改善体重结局。

关键词: 暴食障碍,减重手术,认知行为治疗,药物干预

从臧象学说论治神经性贪食

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神经性贪食(bulimia nervosa, BN),又称贪食症,患者紊乱的进食行为,可导致电解质异常、胃肠道疾病、代谢和内分泌紊乱等躯体问题,同时BN也常共病多种精神问题,如抑郁障碍、焦虑障碍、双相情感障碍、物质使用障碍等。

1.神经性贪食表现

中医学中无BN的直接记载,根据其多食、体瘦兼神志障碍的典型特征,将其归属于“百合病”“郁病”“食亦”“中消”等范畴。

BN的行为心理特征有BN主要特征为反复发作难以控制的、冲动性的暴食,继之采取防止增重的不恰当的代偿行为,如禁食、过度运动、诱导呕吐,滥用泻药、利尿剂等,同时伴有情绪波动性大,易产生不良情绪及冲动行为,如愤怒、焦虑不安、抑郁、孤独感、自伤、自杀等行为。

2.机制

中医从臧象学说出发,认为五脏均对BN存在影响,心神接受外界客观事物并作出反应,进行心理、意识和思维活动的器官,人体各项复杂的精神生理活动均是在“心神”主导下,由五脏协作共同完成。肝失疏泄,则魂失所藏,心虚火扰,则神失主宰,脾虚失运,则意失滋养,肺失制节,则魄无所安,肾元亏虚,则志无所依。BN始病于肝脾,因“七情”致病,抑郁伤肝,初则病气,继则及血,中期累及心肺,脾虚气血乏源,末期损肾。

3.治疗

现代医学药物治疗上多选择SSRIs类药物,例如氟西汀、氟伏沙明等药物,有研究表明,曲唑酮、

安非他酮以及部分抗癫痫药也有一定疗效。针对共病精神问题,可根据病情,选用丙戊酸盐、锂盐等药物治疗。

中医治疗根据,肝脾一心肺一肾的病理机制,予以疏肝理气、健脾助运、甘寒清胃、补肺宁心、温补脾肾等综合对症治疗疾病初期,肝为起病之源,胃为传病之所,肝胃郁火,胃腐熟机能亢进,口干口苦、消谷善饥。此阶段应着重于疏肝健脾清胃,中期在初期肝脾胃病变的基础上累及心肺,心神失养,表现为心烦易怒,易激惹,失眠伴多噩梦。在初期调理肝脾胃的基础上滋补心肺,兼顾调理肝脾胃。进展至末期,损肾伤志是必然结果。上下气机闭塞,心肾失交,最终导致肾脏虚衰,表现为怕冷、痛经、腰酸、便溏、记忆力差、性冷淡,甚则耳鸣目眩。此阶段诸脏腑病机杂糅,诸症蜂起,当五脏兼顾,形神同调,以期救大厦之将倾,且清且补。

4.小结

总之,目前大部分神经性贪食未被确诊且未接受专业治疗,某些病情严重的患者甚至会出现厌食症、贪食症交替发作的情况。目前对神经性贪食症的中医研究资料较少中医古籍中又无相应论述故需要更多的中医研究者对其病因病机及辨证分型得出更为准确的认知制定出更准确的中医治则。

关键词:臧象学说,神经性贪食

Exploring Central Traits of Eating Disorders in The Chinese Population: A Comprehensive Network Analysis of A Large Sample

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Objective The treatment of eating disorders (EDs) is challenging due to their complex causes and

clinical symptoms. Targeting the central traits of EDs could help make treatment more effective. This study aims to use network analysis to examine the central traits of EDs within the Chinese population from different perspectives, contributing to a better understanding of these disorders

Methods Network analysis was applied to data from 1001 patients enrolled in the Eating Disorders Registration Project (ED-RP). Multiple undirected weighted symptom networks were constructed using the subscales of the Eating Disorder Inventory (EDI) as nodes, with the importance of each node assessed through expected influence values

Results Network analysis identified three central nodes: Interoceptive Awareness, Drive for Thinness, and Ineffectiveness, which appeared with high consistency across diagnoses and age groups (both above and below 18 years old). Additionally, a strong correlation between Interoceptive Awareness and Ineffectiveness was found in nearly all network models, indicating a robust connection between these traits

Conclusion This study identifies Interoceptive Awareness, Drive for Thinness, and Ineffectiveness as central traits that are relatively invariant across diagnoses and ages. Further evaluation and targeted intervention for these central traits could be crucial in developing effective therapeutic strategies

关键词: Eating disorders, Central traits, Eating Disorder Inventory, Network analysis

焦虑障碍潜在的炎症相关生物标志物研究进展

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目的 焦虑障碍是一种常见的精神障碍,给家庭及社会增加了沉重的疾病负担。目前焦虑障碍的诊断仍依赖于结构性访谈、量表和行为观察等主观方法,亟待探索焦虑障碍潜在的客观生物标志物。

方法 汇总白介素、肿瘤坏死因子(TNF- α)、C反应蛋白(CRP)、中性粒细胞-淋巴细胞比值(NLR)

等炎症指标在焦虑障碍中的研究进展,对文献进行综述。

结果 近年来有关焦虑障碍的炎症神经生理学机制研究明显增加,已有大量文献证实白介素、TNF- α 、CRP、淋巴细胞相关比值等炎症指标与焦虑水平密切相关。尽管确切的分子机制尚不清楚,但已有学者观察到慢性应激性生活事件是导致个体罹患焦虑障碍的重大危险因素之一。应激反应系统是一个复杂的多层次负反馈调节机制,慢性压力事件会激活体内的下丘脑-垂体-肾上腺(HPA)轴,释放肾上腺素、去甲肾上腺素等儿茶酚胺类物质,使交感神经活性增强,肾上腺素能 β_2 受体分别通过NF κ B和ERK信号通路刺激巨噬细胞和单核细胞分泌IL-6、IL-18、IL-1 β 、TNF- α 、CRP等大量细胞因子,产生炎症反应,导致细胞凋亡,促使焦虑样行为的发生。大脑中内侧前额叶皮层(mPFC)和杏仁核、海马广泛相互连接,基于杏仁核环路的神经模型是目前焦虑障碍相关研究中最多的模型之一。中枢炎症细胞因子(包括IL-1 β 、IL-6和TNF- α)会影响调节焦虑或恐惧情绪的结构,通过影响有关大脑区域的活动和连接,从而维持恐惧和焦虑的症状。

结论 目前国内外已对焦虑障碍的生物标志物进行了较多研究,由于外周血相比于其他影像学等评估指标更便宜且易获取,已在躯体疾病的诊断及预后评估中发挥着重要作用,因此有望在焦虑障碍中进行相关研究,探索焦虑障碍的潜在生物标志物。但上述炎症指标如何影响焦虑症状的产生及维持,其具体的神经生理机制尚不清楚,还需要更深入研究来探讨不同生物标志物对焦虑障碍诊断及治疗的价值,以期阐明焦虑障碍的神经机制,为焦虑障碍的预防与干预提供参考依据。

关键词:焦虑障碍 炎症机制 生物标志物

青少年抑郁障碍患者非自杀性自伤行为的影响因素分析及干预策略

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目的 1、探讨青少年抑郁障碍患者非自杀性自伤行为的发生率、临床特征及影响因素。构建青少年抑郁障碍患者非自杀性自伤风险的临床预测模

型。

2、探讨青少年非自杀性自伤的干预策略。

方法 1、本研究共收集郑州大学第一附属医院精神医学科门诊和住院患者符合DSM-5中抑郁障碍诊断标准的青少年患者462例。依据DSM-5中NSSI的建议诊断标准将患者分为伴NSSI组(n=295)和不伴NSSI组(n=167)。采用问卷和量表收集社会人口学及影响因素资料。通过单因素及多因素Logistic回归分析筛选独立影响因素,在此基础上建立青少年非自杀性自伤风险的临床预测模型。

2、以案例实证法探讨对青少年非自杀性自伤的家庭系统干预策略。

结果 1.青少年抑郁障碍患者NSSI行为的检出率为63.85%,女性多于男性。青少年抑郁障碍患者中最常见的NSSI方式为用刀片、玻璃等划伤皮肤。实施NSSI常见的原因因为发泄自己的情绪、惩罚自己、得到更多的关注和帮助。

2.多因素Logistic回归分析结果显示,女性(OR=10.46, 95%CI 3.91-27.94)、抑郁(OR=1.20, 95%CI 1.13-1.38)、冲动性(OR=1.05, 95%CI 1.01-1.09)、母亲拒绝(OR=1.42, 95%CI 1.20-1.70)、母亲情感温暖(OR=0.77, 95%CI 0.70-0.86)是青少年抑郁障碍患者NSSI行为的独立预测因素。

3.基于多因素回归分析模型构建的青少年抑郁障碍NSSI行为预测模型。该模型的受试者工作特征曲线(ROC)线下面积(AUC)为0.965(95%CI 0.035-0.965),提示该模型可以较好区分伴NSSI和不伴NSSI行为的患者;该模型校准曲线中,基于贝叶斯检验与该模型的实际曲线,均围绕理想曲线上波动,提示预测模型预测NSSI行为风险与实际发生风险一致,具有一定的临床适用性。

结论 1.青少年抑郁障碍患者NSSI行为发病率较高。女性、抑郁情绪、冲动性、母亲拒绝、母亲情感温暖是青少年抑郁障碍患者NSSI行为的独立影响因素。

2.青少年抑郁障碍患者NSSI风险临床预测模型具有较好的区分度、校准度及临床适用性,能够识别高风险人群,可以有效预测NSSI行为的发生,为采取预防性措施提供参考。

3.家庭系统视角综合干预方法对青少年抑郁障碍患者非自杀性自伤行为具有良好的效果,值得推广。

关键词:青少年抑郁障碍,非自杀性自伤行为,影响因素,预测模型,家庭系统综合干预

Risk Factors Influencing Cognitive Function in Elderly Patients with Late-Life Depression: A Scoping Review

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Objective The purpose of this study is to examine the current state of negative influencing factors and assessment tools for cognitive impairment in patients with Late-life depression (LLD), thereby providing a theoretical framework for the construction of subsequent targeted intervention programs

Methods The search strategy employed in this study followed an evidence-based approach, utilizing a systematic scoping review to thoroughly explore 6 English and 4 Chinese databases up until Nov. 2023. Two researchers independently conducted article screening and employed thematic analysis to categorize the results into themes

Results Following two rounds of rigorous screening conducted by the evidence-based research team, data were meticulously extracted and succinctly summarized from five distinct themes encompassing socio-demographic, physiological, psychological, genetic, and other related factors. Additionally, a comprehensive compilation of 19 diverse assessment tools was undertaken. Ultimately, a total of 22 articles met the eligibility criteria for inclusion in this study. These comprised 5 longitudinal studies, 9 pathological controlled studies, 5 cross-sectional studies, 2 cohort studies, and 1 randomized controlled study

Conclusion The conclusions regarding risk factors associated with cognitive function exhibit some inconsistencies. Among the aforementioned 5 themes, a relatively consistent consensus is observed in social demography, while genetics still holds promising prospects despite ethical constraints. Additionally, the Mini-Mental State Examination (MMSE), as a widely utilized simple screening scale in clinical research as-

sessments, primarily serves to evaluate overall cognitive function scores. Conversely, there remains no consensus on the optimal combination of assessment tools for each specific dimension of cognitive functions in patients with LLD

关键词: late-life depression, cognitive dysfunction, assessment tools, influencing factors, scoping review

Functional Connectivity Alterations Associated with COVID-19-sleep Problems: A Longitudinal Resting-state FMRI Study

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Objective n: Corona Virus Disease 2019 (COVID-19) infection was widespread. Some people had problems like fatigue and sleep disturbance after COVID-19 infection. Nevertheless, brain function changes related to the development of sleep problems (SP) after COVID-19 infection are still unclear. Therefore, this study aimed to investigate the changes in the brain function of the population with SP after COVID-19 infection

Methods In this study, 55 participants who developed SP after COVID-19 (COVID_SP) and 33 participants whose gender, age and years of education matched without SP (COVID_NSP) were recruited. All the participants measured the Pittsburgh Sleep Quality Index (PSQI) and underwent resting-state magnetic resonance imaging (rs-fMRI) at baseline and two months, respectively. The purpose was to explore the abnormalities in brain function between groups and its changes by the use of functional connectivity (FC). Correlations between FC and clinical data were analyzed by Pearson correlation analysis and were corrected by Gaussian Random Field (GRF)

Results At baseline, the COVID_SP group exhibited significantly higher FC from the right precentral gyrus (PrG) to the left lateral occipital cortex (LOcC)/right PrG, the left inferior parietal lobule (IPL) to the right superior frontal gyrus (SFG), and the left hippocampus to the right inferior frontal gyrus (IFG) compared with the COVID_NSP one. Additionally, it was found that the FC from the left hippocampus to the right SFG had a significant positive correlation with PSQI scores. Two months after follow-up, the FC between brain regions associated with emotion regulation, task decision-making, execution, visual processing and memory was shown to be reduced in the SP group. Meanwhile, the FC between brain regions related to semantics, attention control, long-term and spatial memory, as well as auditory-visual processing showed a direct increase. In addition, it was observed that the changes in FC between the right basal ganglia (BG) and right orbital gyrus (OrG) were negatively correlated with those in PSQI scores. Similarly, the changes in FC in certain brain regions, including frontal, temporal, occipital and parietal lobes, were associated with those in scores of Generalized Anxiety Disorder-7 (GAD-7) and Patient Health Questionnaire-9 (PHQ-9) scales. Moreover, an improvement was detected in various symptoms at the 2-month follow-up compared to the baseline

Conclusion This partly explained the changes in the sleep-related brain areas of people with SP after COVID-19. Changes in brain function associated with SP would fade over time

关键词: COVID-19, SP, rs-fMRI, FC

首发未用药广泛性焦虑障碍患者反应抑制及注意偏向研究

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目的 比较首发未用药广泛性焦虑障碍患者 (generalized anxiety disorder, GAD) 与健康对照者反应抑制及注意偏向的差异, 探讨反应抑制、注意偏向及临床症状的关系。

方法 选取 2023 年 5 月至 2024 年 6 月在首都医科大学附属北京安定医院门诊就诊的 GAD 患者 40 例, 同期在社区、学校招募年龄、性别、文化程度相匹配的健康志愿者 30 例。使用汉密尔顿焦虑量表 (HAMA)、汉密尔顿抑郁量表 (HAMD) 和广泛性焦虑问卷-7 项 (GAD-7) 进行临床症状评估, 采用停止信号任务、点探测任务分别评估 GAD 和健康对照的反应抑制功能及注意偏向。采用卡方检验、t 检验或 Mann-Whitney U 检验比较 GAD 及健康对照组的一般资料、临床资料及认知功能差异, 用多元线性回归分析探讨焦虑症状的影响因素。

结果 GAD 组和健康对照组在年龄、性别、婚姻状况、受教育年限上等差异无统计学意义 ($P>0.05$)。GAD 组 HAMA、HAMD、GAD-7 总分明显高于健康对照组 ($t=13.29, t=20.98, t=16.63$; 均 $P<0.001$)。GAD 组停止信号反应时、负性图片注意偏向值显著高于健康对照组 ($z=1.67, z=1.90$; 均 $P<0.05$)。No-go 条件正确率显著低于健康对照 ($z=-1.66, P<0.05$)。多元线性回归分析结果显示, 停止信号反应时是焦虑症状的影响因素 ($\beta=0.49, P<0.05$)。

结论 广泛性焦虑障碍患者存在反应抑制功能缺陷及对负性的注意偏向, 反应抑制功能缺陷可能是焦虑症状的影响因素, 值得后续进一步研究。

关键词: 广泛性焦虑障碍; 认知功能; 反应抑制; 注意偏向

Comparison Study of Mental Health Status of Adolescent and Youth Students with and without HIV/AIDS after The Lifting of COVID-19 Restrictions in China

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Objective To investigate the mental health status

of adolescent and youth students with HIV/AIDS in Sichuan Province after the lifting of COVID-19 restrictions in China

Methods A comparison study was conducted to compare the mental health status and the influencing factors between adolescent and youth students with HIV/AIDS and those without HIV/AIDS in Sichuan Province after the lifting of the COVID-19 restrictions in China

Results A total of 292 students with HIV/AIDS and 1083 general students matched in R software (matching ratio 1:4) were included in this study. Compared with general students (30.8%, 15.6%, 12.0%), students with HIV/AIDS had significantly higher rates of total mental health problems (56.8%), depression symptoms (32.2%), and anxiety symptoms (24.0%) ($p < 0.05$). Among students with HIV/AIDS, risk factors for mental health problems included poor sleep quality and exposure to school bullying, and protective factors for mental health problems included physical exercise habits and better social support. Among general students, risk factors for mental health problems included infection with COVID-19, poor sleep quality, posttraumatic stress disorders (PTSD) symptoms and school bullying, and social support was a protective factor of mental health problems. Students with HIV/AIDS and general students had different risk factors and protective factors for depression and anxiety symptoms

Conclusion This study revealed that students with HIV/AIDS had significantly poor mental health status than general students without HIV/AIDS, and the influencing factors of mental health problems were different between those two groups. It is crucial to develop specific health policies, mental health services and interventions for students with HIV/AIDS and general students to facilitate social support and physical exercise and improve mental health

关键词: Students with HIV/AIDS, Mental health problems, Depression and anxiety symptoms, Influencing factors, China

Evaluating The Impact of A Two-day Family

Therapy Training on Course Mastery, Trainee Attitude and Therapeutic Competence

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Objective This study aims to evaluate the impact of a two-day family therapy training program on trainees. Then to explore the effectiveness of this training, as well as to explore whether participants' attitudes and self-efficacy toward family therapy are related to demographic characteristics

Methods A total of 127 trainees participated in the training, which included lectures on the application of family therapy in adolescents, real-case demonstrations, and practical exercises. 93 participants completed an evaluation questionnaire measuring their mastery of the training content, attitudes toward family therapy, and self-efficacy at the end of the program. Independent t-tests were used to analyze the differences between trainees with various characteristics, and the paired sample t-tests were used to see trainees' mastery of the course content

Results The analysis of pre- and post-content mastery levels revealed statistically significant improvements across all six content areas. Regarding attitudes toward cognitive-behavioral therapy, there were significant differences among trainees based on gender, prior experience with psychotherapy, and educational level. Also, as the participants' age increased, their attitudes toward family therapy became more positive. Trainees with prior experience in psychotherapy exhibited significantly higher capability and self-efficacy in family therapy compared to those without such experience

Conclusion The results proved the positive effectiveness of the training. Notably, participants with prior relevant experience in psychotherapy scored significantly higher on the family therapy behavior scale, highlighting the critical role of practical experience in mastering therapeutic skills

关键词: training, family therapy, mastery, attitude, effectiveness

Effectiveness of Mixed-method Family Psychotherapy Training on Adolescent Emotional and Behavioral Problems for Practitioners

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Background Family psychotherapy for adolescents still needs promotion in China. Therefore, to develop a proper method to teach the essential skills for this therapy, an effective training program is needed

Objective In this article, we developed a mixed-method program to explore the effectiveness of different method of skill training in practitioners of psychology-related industries

Methods We recruited 93 participants including doctors and nurses in psychiatric departments and other practitioners in psychology-related industries into our mixed-method training programs lasting 2 days. A questionnaire concerning the satisfaction and preference on the detailed settings of our program was distributed to all the participants and their options were collected for further analyses

Results Participants' interest for family psychotherapy was generally higher than cognitive-behavioral therapy ($p < 0.05$). For detailed settings of the program, we found higher satisfaction in real-case presenting, case supervision and PPT teaching than others ($p < 0.05$). In the further analyses, we found that gender as well as major contributed different level of satisfaction in the detailed settings of our program, such as case supervision and group practice ($p < 0.05$)

Conclusion Our study showed that there were profound effectiveness in our program. Further analyses also discovered the difference between different genders and majors in preferences of training details. However, due to the limitations of the trial, we weren't able to apply comparisons between before and after the program to support the effects of our program

关键词: Family psychotherapy, Practitioners, Training program, Adolescent

Changes in Brain Biochemical Metabolites of Cognitive Flexibility Impairment in Non-medicated Obsessive-compulsive Disorder Patients

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Objective Impairment of cognitive flexibility can be found in patients with currently severe Obsessive-compulsive disorder(OCD). However, the imaging mechanisms underlying the decline in cognitive flexibility in OCD remain unclear

Methods The study included 30 patients with untreated OCD (OCD group) and 29 healthy controls (HC). The Yale-Brown compulsion scale was used to score the obsessive-compulsive symptoms. Cognitive function was assessed using a full set of MCCB tests. At 3.0 T, the bilateral metabolic ratios of creatine (Cr) in prefrontal cortex (PFC), anterior cingulate cortex (ACC), pyramidal nucleus (LN) and thalamus were measured by 1H-MRS

Results The information processing speed, visual learning and total cognitive function were decreased in the OCD group compared with the normal control group ($p = 0.007, 0.016, < 0.001$). NAA/Cr values in the left ACC, right ACC and right LN in OCD group were higher than those in HC group ($p = 0.003, < 0.001, 0.017$). However, the NAA/Cr value in the left thalamus was lower than that in the HC group ($p = < 0.001, 0.002$)

Conclusion Changes in ACC, left thalamus and right LN are associated with cognitive flexibility impairment in obsessive-compulsive disorder patients

关键词: OCD, cognitive flexibility, MCCB, 1H protons magnetic resonance spectroscopy

中国人群中进食障碍症状的发展及诊断变迁: 一项回顾性研究

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目的 进食障碍是一组与进食行为异常相关的精神障碍，临床上往往识别率低、症状复杂多变、病程迁延难愈、致死率高，近年来越发引起关注。许多研究发现进食障碍的诊断稳定性会随着时间的推移而发生变化，但很少有研究在国内开展。因此，本研究旨在通过高质量的回顾性检查来探讨在中国文化背景下进食障碍症状的发展和诊断的变迁特征。

方法 回顾性地分析了在 2018-2024 年间诊断为进食障碍且病程大于 2 年的患者。通过审查门诊病历记录，我们收集了患者的起病年龄、身体质量指数、临床表现等数据以确定纵向的症状发展过程，同时根据《精神障碍诊断与统计手册第五版（DSM-5）》确定诊断的变迁过程。

结果 共有 131 名门诊进食障碍患者被纳入，其平均发病年龄为 18.6 ± 3.9 岁。症状层面上，对体型体重的高估是大部分进食障碍亚型首先出现的认知症状，限制进食是首先出现的行为症状，而超过一半的患者在节食行为后出现暴饮暴食和补偿行为。诊断层面上，初始诊断中最常见的是限制型厌食（36.6%），其次是神经性贪食（26.0%）和暴食/清除型厌食（19.8%），其他特定的喂养或进食障碍（13.0%）和暴食障碍（4.6%）出现频率则较低；大约 48.1% 的患者出现诊断的变迁。其中，常见的是从限制型厌食到暴食/清除型厌食（33.3%）或神经性贪食（27.9%），以及从其他特定的喂养或进食障碍到神经性贪食（26.2%），这些变迁往往在疾病发生后的 2 年内最容易出现，而从与暴饮暴食有关的进食障碍到限制性厌食的诊断交叉则很少见，且与暴饮暴食有关的进食障碍的诊断稳定性相对要高于限制性厌食。

结论 在中国文化背景下，同样观察到进食障碍各个亚型不仅在症状上有所重叠，也常表现出诊断的变迁，这可能代表了一种临床现象的自然发展，进一步支持了 Christopher G. Fairburn 所提出的关于进食障碍的跨诊断理论，有助于我们更好地了解、预防、诊治进食障碍，促进康复和减少复发。

关键词：进食障碍，诊断变迁，跨诊断

COVID-19: The Influence Factors and Related Mental Health Problems of Youth Students

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Objective In the post pandemic period of COVID-19, the influence factors of insomnia and the relationship between insomnia severity and mental health in youth are unclear. This study aimed to explore the influence factors and related mental health problems of insomnia in youth students after lifting the COVID-19 restrictions in China

Methods From December 14, 2022 to February 28, 2023, the cross-sectional survey was conducted among young students aged 10-26 in Sichuan, China, and 92.0% (82,873/90,118) of students fully responded. The Insomnia Severity Index (ISI) was used to investigate the prevalence and severity of insomnia. General Health Questionnaire, Patient Health Questionnaire-9, Generalized Anxiety Disorder-7, and PTSD Checklist for DSM-5 were used to assess other psychological

Insomnia in The Post-pandemic Period of

symptoms. Logistic regression analysis was used to explore the influence factors of insomnia and the relationship between insomnia and other mental health symptoms

Results Among 28178 (34.0%) students with insomnia symptoms, 20715 (24.9%) had mild insomnia, 5597 (6.8%) had moderate insomnia, and 1866 (2.3%) had severe insomnia. After China lifting the COVID-19 restrictions, with history of mental disorders (OR [95%CI]=2.20[2.05,2.35]), started drinking during the pandemic(OR [95%CI]=2.01[1.75,2.31]), with neglectful parenting style (OR [95%CI]=1.81[1.70,1.92]) were the top 3 risk factors, while being satisfied with academy (OR [95% CI]=0.38 [0.35, 0.42]) was the most protective factor of insomnia. The prevalence rates and odds ratios (ORs) of the psychological symptoms without insomnia were much lower than the average levels of the surveyed population, and the prevalence rates and ORs increased with the increase of insomnia severity. After adjusting for the confounding effects of demographics and other psychopathologies, depression symptom was most strongly associated with insomnia severity

Conclusion After China lifting the COVID-19 restrictions, the prevalence and severity of insomnia were affected by demographic factors, family status factors, COVID-19 related factors and the lifestyles and behaviors changed by COVID-19. Furthermore, the insomnia severities can also affect other mental health symptoms especially depression symptom. This finding also supports the illness validity of insomnia severity in mental health status. Attention should be paid to students' sleep problems in the post-pandemic period of public health event to improve the long-term mental health. And health policies should be taken to ensure students' sleep duration and improve their sleep quality

关键词: insomnia severity, influence factor, mental health, COVID-19

精神康复协作组

数字技术在精神分裂症康复治疗中的应用进展

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目的 本文旨在探讨数字技术在精神分裂症康复治疗中的应用,并评估其对患者回归社会的促进作用。鉴于精神分裂症是一种慢性致残性疾病,传统的面对面康复治疗方式受限于资源和地域,数字化康复提供了一种可行的替代方案,以扩大服务覆盖面,降低医疗成本,并提高医疗服务的公平性。

方法 通过文献回顾和分析,本文总结了数字化精神康复的主要领域,包括监测和改善治疗依从性、症状识别、社交技能训练、认知功能改善以及家庭干预等。同时,考察了这些技术的应用现状和患者的接受程度。

结果 研究表明,数字化康复技术已被广泛应用于精神分裂症的康复治疗过程中。这些技术不仅提高了患者对治疗的依从性,还有助于更早地识别症状,从而及时调整治疗方案。此外,通过社交技能训练和认知功能改善,患者的社会功能得到了显著提升。家庭干预模块则增强了家庭成员的支持能力,为患者创造了更加有利的康复环境。多数患者对于数字化康复持积极态度,认为它为自己提供了更多的康复机会。

结论 数字技术在精神分裂症康复治疗中的应用显示出巨大的潜力和积极的效果。它不仅扩大了康复服务的可及性,还降低了成本,促进了医疗服务的公平性。未来研究应进一步探索数字化康复技术的优化和应用,以便为精神分裂症患者提供更加个性化和有效的康复治疗方案。

关键词: 精神分裂症; 数字技术; 康复治疗; 综述

阿尔茨海默症发病原因与发病机制的探讨

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目的 阿尔茨海默病(AD),自1906年首次报告发现结果至今,已有一百多年,其真正发病原因及发病机制的研究,并无显著进展和明确答案。本文就是在这样背景下的一个基于脑细胞激活论的启发性观点,是应用细胞的物理生物学原理在分子水平对散发性AD发病原因及发病机制的探讨,其目的是协调统一已有AD病因学说,解决长期以来困扰神经元退行性变疾病研究领域源头问题。

方法 1.论述与已有假说的关系: A β 假说、tau假说、PS假说、ApoE假说、胆碱能假说、炎症假说、金属离子代谢紊乱假说; 2.论证:生物物理学证明、医学病理学证明、生物学模型证明; 3.解释:离子通道与血脑屏障、钾离子与钾通道、离子泵与癫痫与癌症、A β 蛋白与斑点和斑块、有关AD解决方案。

结果 1.A β 不是AD致病原因,而是AD后期事件; 2.引起膜电位巨大改变的K⁺浓度差0.00001%是有效浓度,不可以忽略不计; 3.钾通道异常受损,钠离子提前进入胞内占钾位,与癫痫与癌症与HeLa细胞有关; 4.AD是物理病,治疗应首选物理手段,尤其是经颅磁电刺激技术,能够精准激活异常神经元而不干扰正常神经元。

结论 1.基本内容:过量阳离子从细胞外转入细胞内,在细胞膜内表面与钾离子产生竞争性占位,并因此消减膜电位,使所产生的动作电位无法正常激活钙离子通道,最终导致脑细胞异常凋亡。淀粉样斑点是脑细胞异常凋亡后的遗骸,淀粉样斑块是淀粉样斑点之间通过范德华力、静电吸引力聚集而成,间质为淀粉样蛋白。脑细胞依次包含神经元、小胶质细胞、星形胶质细胞,其遗骸形成斑点的核多为阳离子。2.解决方案:本文核心观点可视为探讨散发性AD病因学说,是脑细胞激活论姊妹篇,脑细胞激活论是对AD等神经元退行性变疾病治疗方法与治疗机理的阐释,适用于脑病又不局限于脑病,解决AD方案应从预防与治疗二方面入手,预防的外因在环境,尤其是重金属离子,内因则是身体酸碱度;治疗应首选物理手段,尤其是经颅磁电刺激技术。

关键词: 精神康复;阿尔茨海默;病因学说;淀粉样斑块;细胞遗骸;物理手段

连续 θ 爆发式经颅磁刺激治疗孤独症谱系障碍儿童临床疗效与安全性研究

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目的 观察连续 θ 爆发式经颅磁刺激(continuous theta burst transcranial magnetic stimulation, cTBS)治疗孤独症谱系障碍(Autism spectrum disorder, ASD)儿童的治疗效果、安全性和可行性。

方法 选取符合美国精神障碍诊断与统计手册第5版(DSM-5)中ASD诊断标准的46例汉族儿童,其中23例分配至cTBS组,另外23例保持既往常规治疗不变。其中cTBS组患儿接受为期3周,每周5天,一共60次的cTBS治疗。cTBS刺激靶点为左侧大脑半球背外侧前额叶皮层(DLPFC)和左侧大脑半球初级运动皮质(M1)。试验流程是先刺激左侧大脑半球的M1和DLPFC靶点,间隔半小时后重复刺激左侧大脑半球的M1和DLPFC靶点。分别在基线时、治疗1、2、3周末、治疗后1、2月使用父母填写的孤独症儿童行为检查量表(ABC)和克氏孤独症行为量表(CABS)对ASD患儿的临床症状进行评估,并比较2组结果。每次治疗结束时由儿童和家长共同报告不良事件,儿童报告在cTBS治疗过程中感受到的疼痛强度。

结果 38例ASD儿童和家长最终完成了所有的治疗和评估,其中cTBS组和常规治疗组各19例。患儿的平均年龄为(6.11 \pm 1.62)岁,其中29人(76.3%)为男性。常规治疗组中,患儿治疗前后ABC量表和CABS量表得分无统计学差异。cTBS组患儿经过3周治疗后,ABC量表和CABS量表得分较治疗前降低20.63分(降幅为23%)和3.6分(降幅为19%),治疗前后分值差异有统计学意义($P < 0.05$)。随访结束时(治疗后2月),ABC量表和CABS量表得分较基线时降低17.84分(降幅为20%)和约2.06分(降幅为10%),和基线间的差异有统计学意义($P < 0.05$)。23名接受cTBS治疗患儿中,有3例患儿报告治疗时治疗部位的疼痛,1例患儿家长报告治疗后患儿多动,均无需特殊治疗。

结论 本探索性试验证明了在ASD患儿大脑左侧半球的DLPFC和M1位点实施3周的cTBS治疗的安全性和短期疗效。本研究初步说明cTBS

治疗可短期改善 ASD 症状,并未出现严重不良反应。

关键词:连续 θ 爆发式经颅磁刺激,孤独症谱系障碍,儿童,疗效,安全性

工作行为教育与训练应用于职业康复的研究进展

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2022年6月17日国家卫生健康委新闻发布会指出,截至2021年年底,全国登记在册的重性精神障碍患者高达660万人。大多精神障碍患者患病后无法回归社会,承担工作,无论给家庭还是社会都造成了很高的疾病负担。研究发现精神障碍患者大多希望回到工作岗位,在我国近80%精神残疾人有康复需求,是各类别残疾中比例最高的,拥有一份“职业”不仅能帮助个体获得生活来源,提高生活质量,还能提供潜在的利益,包括社会身份和地位,建立社会联系和支持,让时间结构化,分配工作和生活的时间,更能建立自我认同感,实现自我价值,从而减少精神症状,而失业可能会导致早亡在内等多种躯体及自杀等心理健康问题的增加。但精神障碍患者手脚健全,却遭受着比肢体残缺者更大的就业歧视,哪怕是社会福利相对完善的香港,仅有20.3%的精神疾病患者被雇佣,在美国也仅有17.8%。

为了精神疾病患者更好的回归社会,工作行为教育与训练技术应运而生,内容包括6个技能领域:与工作相关的社交技能、认知训练、问题解决技能、基本职业技能、求职技能、保职技能,旨在帮助精神障碍患者提高工作能力,从而回归社会。该康复技术在我院开展且工作例数逐年增加,2021年开展11964人次、2022年开展53967人次,2023年开展67751人次,患者辅助就业率提高44%,帮助大量的精神疾病患者部分减轻或消除症状所致精神残疾的作用,提高患者的职业功能和社会功能,促进其融入社会。

关键词:工作行为教育与训练;职业康复

青少年非自杀性自伤的心理康复干预进展

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目的 本文对青少年非自杀性自伤行为(NSSI)的相关心理康复干预的国内外研究现状进行综述,为该行为的进一步临床综合性干预管理提供参考。

方法 综述相关文献,对青少年非自杀性自伤行为(NSSI)的相关心理康复干预进行多角度阐述。非自杀性自伤行为(NSSI)是指不以自杀为目的的,直接的、故意的损伤自己身体组织,而且不被社会和文化所认可的行为。青少年NSSI的发生率居高不下,美国青少年流行病学调查报告($n=61\ 767$),NSSI年检出率约为7.3%,比例逐年上升,已成为重要的公共卫生问题,部分青少年自伤成瘾,对其身心健康管理不利。国内外相关学者对该行为的流行病学调查,成因和功能性,相关影响因素及神经生物学机制等做了初步研究,但没有得出统一结论。该行为可能与心理因素相关,但诱发机制尚不明确,病情迁延,治疗具有困难性。当前,对于青少年NSSI的干预大多以药物或住院治疗精神症状为主,也有一些物理治疗如电休克、经颅磁刺激等,但成效不足。近年来生物-社会-心理模式为大家所熟知,对NSSI的患者来说,关系是很重要的一环,因此加入心理康复干预和患者建立关系能增强治疗效果,尤其帮助青少年患者重建和父母之间的关系。从大量研究来看,心理康复干预可能是该行为的有效治疗方式,除了传统心理康复干预之外,辩证行为治疗(DBT)和心智化治疗作为新技术也在青少年群体的研究中被证实有效。此外,“互联网+”DBT的干预模式能有效降低青少年NSSI患者的自杀意念,提高对情绪控制水平,缓解抑郁状态,改善患者生活质量和社会功能。

结果 国内对非自杀性自伤的心理康复干预目前尚无统一指南或结论,对青少年群体的干预也鲜有所见。在该行为的治疗上,从生物-社会-心理模式来看,心理康复干预成为有效的干预方式,但国内起步尚晚。

结论 建议在国家层面开展针对青少年NSSI综合心理康复干预。精神专科医院设立专职干预团队,对学校教育者、患者父母、非精神专科医务人员等从父母教养方式、早期干预、健康讲座、学校危机干预等全面开展综合性干预,关口前移,作为未来

研究的方向。

关键词：非自杀性自伤,心理康复,DBT,互联网+

节奏听觉刺激(RAS)在帕金森步态训练中的应用个案报道

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目的 观察节奏听觉刺激对帕金森患者步态功能训练改善的作用

方法 音乐治疗方法 采用 RAS 方法进行一对一治疗。共 2 周 6 次,每周 3 次,每次 20 分钟。根据患者行走的速度,治疗师以 4/4 拍子的歌曲加入到平常的行走训练中,用节奏听觉刺激方法增强大脑对运动反应计划和实施,促进患者步行能力的提高。第一次治疗,先用节拍器配合患者的行走速度,然后治疗师用吉他伴奏,使用节拍器的所测的速度,演唱歌曲《东方红》,作为节奏指示信号来促进患者的行走节奏。要求患者听着和唱着音乐进行行走练习。行走 10 分钟后,休息 2 分钟,反复 3 次。治疗后,用节拍器再次测量患者的行走速度,作为下一次治疗的基础速度。第二次治疗,使用第一次最后的速度,演唱歌曲《东方红》,用吉他伴奏,反复两遍。在第一次治疗最后速度的基础上,提高 2%,使用节拍器,并用吉他伴奏,演唱歌曲《东方红》,让患者跟随音乐边唱边走,行走 10 分钟后,休息 2 分钟,反复 3 次。治疗后,用节拍器再次测量患者的行走速度,作为下一次治疗的基础速度。第三次治疗,使用第二次最后的速度,演唱歌曲《东方红》,用吉他伴奏,反复两遍。在第二次治疗最后速度的基础上,提高 2%,使用节拍器,并用吉他伴奏,演唱歌曲《东方红》,让患者跟随音乐边唱边走,行走 10 分钟后,休息 2 分钟,反复 3 次。治疗后,用节拍器再次测量患者的行走速度,作为下一次治疗的基础速度。第四次治疗,使用第三次最后的速度,演唱歌曲《东方红》,用吉他伴奏,反复两遍。在第三次治疗最后速度的基础上,提高 2%,使用节拍器,并用吉他伴奏,演唱歌曲《东方红》,让患者跟随音乐边唱边走,行走 10 分钟后,休息 2 分钟,反复 3 次。治疗后,用节拍器再次测量患者的行走速度,作为下一次治疗的基础速度。第五次治疗,使用第四

次最后的速度,演唱歌曲《东方红》,用吉他伴奏,反复两遍。在第四次治疗最后速度的基础上,提高 2%,使用节拍器,演唱歌曲《东方红》,让患者跟随音乐边唱边走的同时,治疗师又给出新的指令,治疗师手拿铃鼓,让患者每迈一步,用反侧手去敲响治疗师手中的铃鼓,来锻炼患者的身体协调能力,行走 10 分钟后,休息 2 分钟,反复 3 次。治疗后,用节拍器再次测量患者的行走速度,作为下一次治疗的基础速度。第六次治疗,使用第五次最后的速度,演唱歌曲《东方红》,用吉他伴奏,反复两遍。在第五次治疗最后速度的基础上,提高 2%,以此类推用节拍器再次测量患者的行走速度,作为下一次治疗的基础速度

结果 患者治疗前后步态明显改善,自主活动能力加强,生活满意度提高

结论 节奏听觉刺激训练,把运动和音乐相结合,为患者提供安全的,具有目标的,有组织的治疗活动,它有利于身体动能性的康复

关键词:帕金森症、节奏听觉刺激(RAS)、音乐治疗、步态

多家庭干预在精神分裂症中应用的研究进展

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精神分裂症是一种严重的慢性致残性疾病,以认知障碍、精神病性症状、情感障碍和意志活动障碍等为主要临床表现,患者常有复发率高、社会功能损害、较易共病情绪障碍等特点,给个人、家庭和社会带来的负担远超高血压、糖尿病等慢性疾病。目前精神分裂症的发病机制未明,治疗上仍以药物治疗为主,但是药物治疗主要减轻阳性症状,对阴性症状的治疗效果和患者功能的改善并不理想。研究中发现家庭作为精神分裂症患者生活的载体,家庭的功能、成员之间的关系以及患者的生活环境与疾病的发生、发展及预后都息息相关,当家庭某一成员突然被诊断为精神分裂症,一方面,由于家属和患者对疾病的无知,难以处理疾病治疗的相关问题,另一方面,家属和患者可能产生病耻感,表现自责、过度的自我牺牲、焦虑抑郁等负面情绪。而指

责、过度干预等高情感表达(High Expressed Emotion, HEE)的家庭氛围、不良的家庭关系及互动也会影响患者疾病康复和家庭良性发展。对家庭成员和(或)患者进行专业性指导,通过更多学习疾病相关知识,增加对疾病科学认识及应对,同时提供心理教育、情绪处理、支持系统建立、问题解决方法等干预措施可以帮助家庭恢复功能,积极和恰当的介入更有助于患者疾病的治疗及康复。大量研究证实多家庭干预(Multiple Family Therapy, MFT)可以改善阴性症状,提高服药依从性,改善社会功能,因此,本文对MFT在精神分裂症治疗中的研究进行简要梳理和探讨,以期为精神分裂症患者提供更多的循证证据。

关键词:多家庭干预,家庭干预,精神分裂症,精神康复

精神科护士对严重精神障碍患者参与共享决策的认知与态度的质性研究

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目的 为深入剖析精神科护士对严重精神障碍患者参与共享决策的理解与看法,本研究旨在通过实证调查,揭示护士群体的认知与态度,从而为精神科护理实践中共享决策的推进提供有力支持。

方法 本研究为质性研究,采用目的抽样法,于2024年4月-5月对淮安市精神卫生中心12名临床一线的护士进行半结构式访谈,采用Colaizzi的7步分析法对访谈资料进行分析。

结果 共提炼出3个主题:对严重精神障碍患者参与共享决策的认知(普遍认可患者参与共享决策的重要性、护士在共享决策中承担着多重且关键角色、影响护士参与共享决策的因素);对严重精神障碍患者参与共享决策的态度(支持态度、中立态度、反对态度);实行严重精神障碍患者共享决策现存的不足与建议(现存不足、相关建议)。

结论 本研究结果表明,精神科护士普遍认同严重精神障碍患者参与共享决策的重要性。但实践中的诸多挑战,导致共享决策的普及与护士的参与积极性受到了一定程度的限制。因此,我们建议医疗机构应建立健全风险评估机制,强化护患间的沟

通,提升护士的专业素养和沟通技巧,并制定明确的决策流程和参与机制。同时,政府和社会各界也应给予更多关注和支持,通过立法保障和政策引导,共同推动共享决策在严重精神障碍患者中的实施与发展。

关键词:共享决策,精神科护士,认知与态度,严重精神障碍患者,质性研究

精神科护理中人文关怀的应用价值与有效性评价

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目的 研究精神科护理中人文关怀的应用价值与有效性的评价。

方法 对照组患者使用常规护理:注意患者的饮食健康,根据医嘱调整相关所需的营养元素;注意患者的卫生情况,对患者的心理健康多多关注,鼓励患者树立治疗信心并参与院内或家里自行组建的集体活动,获得集体参与感。

研究组在常规护理的基础上融入了更多的人文关怀元素,具体措施如下:①医护人员培训。全面培训科室护士,对其基础医疗知识及人文关怀理念尤其注重培养,对医护人员强调在护理中应当具有的良好心态及服务态度,创造出温馨的人文护理氛围,使得患者获得充分的情感满足[5]。另外,设立专项小组进行护理质量检查,考核结果与绩效挂钩,确保每位成员恪尽职责。②对氛围环境进行符合患者心理的改造。为提升患者的治疗疗效,打造优美温馨的居住环境:根据患者喜好添加花卉、植物装饰;早晚播放让人身心愉悦的轻音乐,以舒缓患者的情绪。③注重病患的安全保障。排查可能威胁患者和医护人员的有害物品,必要的时候可以使用专业的仪器或者专业人员进行帮助。④建立医患沟通的桥梁。初来乍到的患者及家庭进行友好细心的陪同并讲解医院设施环境,减轻他们对医院的焦虑和恐惧。在面对面的接触中始终保持让患者舒适的良好距离,以确保患者的隐私权和个人尊严;当患者持有困惑的时候对其进行耐心的解释,以提升患者对医院的信任度。⑤医疗教育普及化。对患者本人及家属详细的阐述该病情、危害以及后续治疗方针。

对患者的困惑进行耐心的解答并对患者自身问题更进一步的抱有理解态度,提高患者对病情的理解程度[5]。讲解医疗方案的可行性和对病情的针对性,加强患者对其治疗的配合度。医院定期开展治疗讲座,公众号发布精神科疾病讲解,解答患者及家属的疑惑并加深其医疗知识,让患者更深入的了解医护人员的工作增加其满意度。⑥情感护理服务。部分病患可能长期积累精神压力对周围一切事物抱有抗拒心理,所以医护人员需要与患者展开友好积极的沟通,向其展现病例治疗成功的案例,增强患者的治疗信心。在患者的治疗过程中,家属的陪伴至关重要,所以医护人员要积极的与家属进行沟通,引起他们对患者身体、心理情况的关心,增强其对患者内心需求的注重度。

结果 两组患者焦虑自评表比较、两组患者抑郁自评表比较

护理前, 研究组评分与对照组相仿, 护理后却明显低于对照组 ($P < 0.05$)。

两组患者配合度比较

研究组的配合度显著高于对照组 ($P < 0.05$)。

两组患者满意度比较

研究组的满意度显著高于对照组 ($P < 0.05$)。

结论 综上所述, 精神科护理中人文关怀的应用能有效缓解患者焦虑忧郁的情绪、增强其对治疗的信心使其配合度提高, 提升患者对治疗和医护人员的满意度。

关键词: 精神科护理; 人文关怀; 忧郁焦虑自评表; 满意度

一例颅内压升高引起的精神障碍的诊疗

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目的 探讨一例脑器质性病变精神障碍患者的康复过程

方法 我院 2023 年 12 月 9 日收治的一例脑器质性病变所致精神障碍。患者, 男性, 于 3 个多月前无明显诱因下出现言行异常, 表现为在日常生活中不遵守规章制度, 家人与其联系时脾气暴躁, 与人交流明显减少。不参加集体活动, 闭眼重复说话, 自言自语, 反应迟钝, 生活懒散。行为怪异, 有时长

时间发呆, 走路拐弯时拐直角弯。在寝室时喜欢关窗拉上窗帘, 同事打开窗, 患者会生气, 甚至双方发生肢体冲突但患者也不沟通交流, 饮食、睡眠正常。6 天前患者病情加重, 表现为对周围事物无反应, 完全不言语, 拒食, 自行上厕所。12 月 9 日送至我院治疗。2023 年 12 月 6 日武警贵州总队医院头颅 CT: 脑萎缩征象。肌酸激酶 849.2U/L。2023-12-08 九二三医院贵港医疗区: 双侧额叶白质异常信号。入院后完善腰椎穿刺术, 脑脊液病原学: 生化: 腺苷脱氨酶 1U/L, 氯(脑脊液)126mmol/L, 葡萄糖(脑脊液)3.90mmol/L, 蛋白(脑脊液)251mg/l。脑脊液常规: 颜色无色, 透明度清晰透明, 凝集现象无凝块, 潘氏试验阴性阴性, 红细胞计数 1/mm³, 白细胞计数 1/mm³; 测量颅内压:210mmH₂O。

结果 经过使用甘露醇降低颅内压, 舒必利抗精神症状后患者能自主进行日常生活, 并与他人进行有效沟通

结论 通过使用甘露醇降低颅内压合并使用抗精神病药物治疗, 可以有效缓解精神障碍。

关键词: 亚木僵状态, 颅内压升高

抑郁青少年边缘人格特征、情绪调节与非自杀性自伤的关系

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目的 在当今社会, 青少年的心理健康问题日益凸显, 其中非自杀性自伤(Non-Suicidal Self-Injury, NSSI) 现象尤为值得关注。据估计, 全球青少年群体中有 10%至 30%的人曾有过至少一次的 NSSI 经历, 且这一比例在近年来呈现出上升趋势。NSSI 被认为是边缘人格特征的潜在表现, 这与边缘型人格障碍(Borderline Personality Disorder, BPD) 的核心特点——强烈的情绪反应和不稳定的情绪调节能力相吻合。本研究深入探索抑郁青少年中边缘人格特征、情绪调节与非自杀性自伤(NSSI) 的密切关联, 为理解 NSSI 的发生机制和制定有效的预防策略提供了坚实的实证依据。

方法 招募 186 名门诊及住院病人 12-18 岁被专业医生诊断为抑郁症的青少年, 所有青少年完成结构化问卷包括自残功能评估量表、儿童青少年情

绪调节量表和儿童边缘人格特征量表,确保数据的可靠性和有效性。

结果 本研究通过严谨的量化方法,探索了抑郁青少年中边缘人格特征、情绪调节与非自杀性自伤(NSSI)之间的关系。研究发现,近七成的抑郁青少年在过去一年中经历过 NSSI,且以割伤或抓伤最为常见。进一步的分析揭示了 NSSI 与边缘人格特征之间存在显著负相关,与情绪调节能力呈正相关,特别是与情绪表达抑制维度的关系更为紧密。值得注意的是,认知再评价这一情绪调节策略与 NSSI 无显著关联。此外,研究还发现边缘人格特征总体上与 NSSI 发生率正相关。

结论 边缘型人格特征和情绪调节能力与抑郁青少年 NSSI 显著相关。边缘型人格障碍的症状不仅直接影响 NSSI 青少年抑郁症的风险,也可通过情绪调节间接影响 NSSI 风险。这一发现强调了在青少年抑郁治疗中,不仅要关注个体的抑郁症状,还需重视边缘人格特征的识别和情绪调节技能的提升,以降低 NSSI 的风险。这为临床实践提供了新的干预策略,即通过情绪调节策略,可能有助于控制 NSSI 的行为。

关键词:抑郁青少年,边缘人格特征,情绪调节,非自杀性自伤

慢性重精优化治疗科患者长期住院的质性研究

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目的 探讨慢性重精优化治疗科患者发长期住院原因的研究。

方法 选取成都市第四人民医院慢性重精优化治疗科长期住院的 11 名患者采用面对面半结构化访谈收集资料,访谈过程全程录音。访谈内容包括“是否想早日出院?”“为什么长期住院”“家人为什么不早日接你出院”等问题。访谈时,研究者灵活提问,及时追问与澄清,并通过聚焦访谈来丰富范畴的属性、面向。访谈后,研究者立刻撰写访谈笔记,尽快将录音转为 word 字稿。最终 11 名慢性重精优化治疗科患者接受了 13 次访谈(其中,2 名患者接受了两次访谈)采取三级编码,不断比较方法及

撰写备忘录的策略分析资料。

结果 慢性重精优化治疗科长期住院的患者主要是家里父母年迈或者去世,无人照料他们,子女工作忙,无法顾及他们,家人对病员发病的恐惧与失望,病员社会功能退化,害怕病员出院没有按时吃药或者病情复发给家人、社会增加安全隐患。

结论 建议病员能坚持服药,控制病情,与病员家属沟通,做好精神病患者病情好转的普及工作,能够早日将病员接出院,病员有病情变化应该立即寻找医生调整药物,加强患者社会功能锻炼,病员住院的时候做好住院健康宣教,出院的时候做好出院健康宣教,使患者能够更好的配合治疗,控制病情,减少病情复发的几率,减少患者的住院时间,提高患者的生活质量与满意度。

关键词:长期住院患者;质性研究

接纳承诺疗法联合暴露反应预防干预强迫症

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目的 报道 1 例强迫症患者通过接纳承诺疗法(ACT)联合暴露和反应预防(ERP)的应用对其强迫症状、负性情绪及心理社会功能的心理治疗过程。

方法 2023 年 7 月招募江西省南昌大学第一附属医院心身医学科门诊强迫症患者小强为研究对象,在常规药物治疗的基础上开展线下 12 次集中短程接纳承诺疗法联合暴露和反应预防干预。通过访谈了解人口学信息与患者强迫起源,根据强迫症症状分类量表(OCI-R)对其强迫行为与强迫思维侧重程度制定治疗方案有针对性的干预,使用正念呼吸、认知解离、价值澄清、接纳行动、想象与现实暴露、反应阻止等技术,结合面谈与家庭作业方式联动实施治疗。采用耶鲁布朗强迫症量表(Y-BOCS)比较干预前后强迫症状改善程度;采用贝克焦虑量表(BAI)和贝克抑郁量表第 2 版(BDI-II)比较干预前后负性情绪变化程度;采用接纳与行动问卷第二版(AAQ-II)与认知融合分问卷(CFQ-F)比较干预前后心理社会功能变化情况。

结果 干预前后耶鲁布朗强迫症量表评分分别 8 分与 10 分、贝克焦虑量表评分分别 19 分与 11 分、贝克抑郁量表评分分别 15 分与 9 分、接纳与行动问

卷第二版评分分别 46 分与 35 分、认知融合分问卷评分分别 61 分与 46 分。

结论 ACT 结合 ERP 干预方案可增强认知水平高的强迫症患者对强迫思维和强迫行为以及治疗原理的理解,有效改善负性情绪以减轻症状困扰程度,且能改善心理社会功能,提高心理弹性水平促进积极应对,提高生活质量。

关键词: 接纳承诺疗法;暴露和反应预防;强迫症;认知融合

Exploring Chess As A Tool in Decision-Making and Psychiatry Research

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Objective Chess data is used in the fields of psychology, sociology, biology, mathematics, programming, psychiatry, and decision-making. The application of chess in decision-making lacks clarity, and there is currently no established framework that provides guidance on utilizing chess for decision-making purposes. Chess literature delves into diverse facets of the game, exploring certain demographic factors (e.g., age and gender) that contribute to chess expertise, the influence of technology in analyzing and learning the game comprehensively, and its potential cognitive benefits.

Our goal of the manuscript is to find an association between chess moves and complex behavioral factors.

Methods We have examined potential parameters for chess and their application in behavioral research. Additionally, we have incorporated the Python chess package into the discussion. Stockfish chess analysis was used to calculate accuracy of chess moves.

Results We found that chess accuracy is related to cognitive scale scores.

Conclusion In conclusion, chess data can be used in behavioral research. Chess engines and technology related to chess analysis can help us to understand complex human behavior.

Suggestions for Further Studies:

Additional research can establish a connection between genetic variability and the game of chess.

Limitations:

Stockfish parameters may differ according to certain Stockfish parameters. Tiebreaks during tournaments may be one of the confounding factors. Internet speed is also one of the main confounding factors in this study as it may affect success in blitz and bullet chess.

关键词: chess, psychiatry, decision making, chess psychology

精神科应用中医护理技术存在的安全隐患及防范措施

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目的 中医治疗精神疾病有悠久的历史及丰富的临床经验,对于改善精神疾病患者的治疗效果、减少西药治疗的副作用都大有裨益。但由于精神疾患的特殊性,患者的自知力和对治疗的配合度相对较差,对中医治疗的安全实施提出了较大挑战,风险防范要求高。因此我们通过分析可能存在安全隐患的因素,提出相应的护理安全防范措施,进一步完善精神科中医护理规范。

方法 分别从对患者的安全评估、护理人员职业素养、病房管理以及其他相关因素,对精神科病房实施中医护理存在的安全隐患进行分析,有针对性的完善护理操作流程,制定相应护理制度,从而有效排除中医护理操作中的安全隐患,降低精神科病房中由于中医护理引发安全风险,提高科室护理安全质量。

结果 精神科病房在实施中医护理操作技术前、中、后均有一定安全隐患,在护理实施过程中,加强各方面管理监督,能得到有效防范。

结论 在精神科开展中医技术存在的护理安全隐患较多,排除中医护理技术实施过程中的不安全因素,加强中医护理安全管理,提高精神科病房护理质量和水平,是精神科工作需要关注的重点问题。在临床工作中通过完善工作制度和技术操作规范流程,提高护理人员自身职业素养,提高患者认知水平等,能有效确保中医护理技术在精神科安全实施。

关键词: 精神科, 中医护理, 安全隐患, 防范措施

Alpha 个体峰值频率测评在 TMS 治疗精神疾病中的应用

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目的 探索 alpha 个体峰值频率(individual Alpha frequency, IAF)脑电图测评技术[1, 2]在经颅磁刺激(transcranial magnetic stimulation, TMS)治疗精神疾病中的应用价值。

方法 以“Alpha”、“TMS”、“transcranial magnetic stimulation”为搜索关键词, 在 PubMed 上检索对 Alpha 节律引导 TMS 治疗的相关文献 8 项(截至 2024 年 3 月), 进行研究文献系统综述和荟萃分析。

结果 脑电波测评中 Alpha 波段在人类脑电波中占据主导地位, 代表丘脑皮质内源性振荡, 与各种认知领域有关[1]。研究发现首发精神障碍患者的精神障碍与异常的人体内源性神经振荡相关[2]。精神分裂症 IAF 较健康人异常降低, 较慢的 IAF 可预测视觉注意力等认知缺陷[3]。

研究发现 TMS 可通过外在刺激产生对 Alpha 振荡的干扰, 重置重度抑郁症(MDD)患者的不正常的 Alpha 振荡[4]。内源振荡共振的程度和外在刺激的节律是耦合的, 取决于外在刺激的振幅和频率, 刺激越接近内源性频率, 共振越强, 神经可塑性越强。个体 IAF 是一种差异度高且稳定的神经节律[5], 根据 IAF 设定 TMS 频率, 从时间分辨率的角度提高 TMS 频率精度, 疗效可能优于固定刺激频率。

在该荟萃分析中, MDD 采用 IAF 进行 TMS 治疗研究发现依据 IAF 进行治疗的真刺激组的抑郁严重程度降低显著大于伪刺激组, 且对药物反应不佳或不耐受史的患者改善更明显[6,7,8]。另一项抑郁症 TMS 干预中真刺激组前额叶及顶正中的 Alpha 电流源密度发生的变化与症状变化显著正相关。另外两项研究采用 TMS-EEG 闭环的调控形式[9,10], 均以 IAF 为治疗频率, 被随机分配到与额叶 Alpha 节律同步组或不同步组中, 数周治疗后 IAF 同步组患者出现强烈的夹带效应, 且夹带效应会移至前扣带回皮层。关于强迫症的研究中[11], 真伪刺激组采用刺

激频率为 IAF, 刺激靶点为双侧背外侧前额叶, 治疗 1 周后两组患者的强迫症和 HAMA 评分存在显著差异。关于精神分裂症的研究[12], 真刺激组以 IAF 为治疗频率, 靶点为双侧额叶和双侧顶叶, 以 IAF 为刺激频率的治疗, 患者的阳性和一般精神病症状明显改善。此外, 以上研究患者均未出现严重不良事件。

结论 测评 IAF 作为 TMS 定频的精准治疗, 应用到抑郁症、精神分裂症、强迫症的 TMS 治疗效果优于固定刺激频率; 可能机制与 IAF 节律下 TMS 产生的外源性与内源振荡共振节律相耦合, 频率越接近, 共振越强。

关键词: IAF; Alpha 个体峰值频率; TMS; 经颅磁刺激治疗

儿童青少年注意缺陷多动韦氏智力测试结果分析

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目的 本研究主要目的是分析河南省儿童医院儿童保健科的注意缺陷与多动障碍(ADHD)儿童的韦氏儿童智力测试结果。

方法 本研究采用回溯性研究方法, 选择 2014 年 10 月至 2022 年 9 月在河南省儿童医院儿童保健科就诊, 同时完成韦氏智力测试的注意缺陷多动障碍儿童, 采用韦克斯勒儿童力量表(WISC-IV)进行的智力测试评估, 采用描述性分析方法对测试结果进行统计分析。

结果 本研究通过描述性统计分析的结果显示, 注意缺陷与多动障碍儿童中男性患儿多于女性患儿, 统计结果显示: 男: 女=5.68:1; 韦氏儿童智力的总智商的平均分为 87.04 ± 14.46 , 这个结果位于总智商平均分以下水平; 研究结果中不同年龄阶段及性别之间注意缺陷与多动障碍儿童, 并且在认知效率指数和工作记忆指数等认知功能方面, 差异有统计学意义(p 均 < 0.05)。

结论 本研究得出的结论是注意缺陷与多动障碍儿童之间存在性别差异, 注意缺陷与多动障碍儿童的智力水平及其认知功能的存在不同程度的损伤, 这个结果需要引起各位专家及家长的高度重视, 同

时希望各位家长能够早发现、早诊断并给予相应干预措施, 尽早治疗, 使 ADHD 患儿症状能够得到明显的改善和康复。

关键词: 儿童, 注意缺陷多动障碍, 韦氏, 智力

双相障碍抑郁相患者肠道菌群多样性和结构研究

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目的 探索双相障碍(BD)抑郁相患者肠道菌群的多样性和结构, 经喹硫平治疗对肠道菌群的变化与临床参数的相关性。

方法 筛选 2021 年 1 月至 2022 年 12 月我院接受治疗的 40 例双相障碍抑郁相患者和 40 例健康者。入选患者使用蒙哥马利-艾森伯格抑郁量表(MADRS)、17 项汉密尔顿抑郁量表(HAMD)评估患者抑郁程度, 杨氏躁狂量表(YMRS)评估躁狂程度。入选者粪便样本于就诊当日上午 10 点前收集, 经喹硫平治疗后 4 周后再次收集患者粪便样本。采用宏基因组测序技术方法分析 BD 抑郁相患者喹硫平治疗前后的肠道菌群与健康者的差异性, 评估肠道菌群的变化与临床参数的相关性, 分析肠道菌群评估 BD 抑郁相诊断和疗效的临床价值。

结果 观察组患者肠道菌群多样性在 Fisher 水平上小于对照组 ($P < 0.05$), 在 Shannon 水平大于对照组 ($P < 0.05$)。Alpha-多样性的 Simpson 指数与发病次数呈负相关 ($r = -0.643, P < 0.05$); Shannon 指数与发病次数也呈负相关 ($r = -0.475, P < 0.05$), 而 α -多样性与发病年龄、HAMD 评分、YMRS 评分及 MADRS 评分无相关性 ($P > 0.05$)。根据 Lefse 方法, 观察组在厚壁菌门、梭杆菌门、放线菌门、螺旋体门、互养菌门、双歧杆菌科、毛螺菌科、梭菌科、双歧杆菌属、肠道核心菌属、巨球形菌属、链球菌属、大肠杆菌属、梭菌属的相对丰度均高于对照组 ($P < 0.05$); 而在拟杆菌门、拟杆菌科、拟杆菌属、克雷伯杆菌属均较低于对照组 ($P < 0.05$)。观察组患者肠道菌群相对丰度与 HCL33 总分呈负相关 ($r = -0.621, P < 0.05$)。观察组患者肠道菌群相对丰度与 HAMD 总分呈负相关 ($r = -0.432, P < 0.05$)。

结论 BD 抑郁相患者较正常健康者的肠道菌

群多样性和结构上发生明显不同, 肠道菌群有助于评估 BD 抑郁相患者的疗效, 具有较高的临床价值。

关键词: 双相障碍; 抑郁; 肠道菌群; 菌群多样性; 菌群结构

阿立哌唑与利培酮联合氯氮平治疗难治性精神分裂症的临床效果评价

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目的 探讨阿立哌唑与利培酮联合氯氮平治疗难治性精神分裂症的临床效果。

方法 从本院于 2022 年 1 月至 2024 年 1 月间收治的难治性精神分裂症患者中, 随机抽选 110 例进行研究, 应用随机数字表法, 分为实验组与对照组, 对照组给予利培酮联合氯氮平治疗, 实验组给予阿立哌唑联合氯氮平治疗, 两组各 55 例, 比较两组临床效果。

结果 在糖脂代谢指标方面, 治疗后, 实验组的 FBC(5.52 ± 0.31)mmol/L、TC(4.31 ± 0.34)mmol/L、TG(1.51 ± 0.14)mmol/L 均低于对照组 ($P < 0.05$)。在 PANSS 评分方面, 治疗后, 实验组的阳性症状得分(9.42 ± 1.02)分、阴性症状得分(15.36 ± 2.25)分、一般精神病理量表评分(11.16 ± 0.73)分、总分(35.16 ± 3.57)分均低于对照组 ($P < 0.05$)。在炎症因子方面, 治疗后, 实验组的 IL-13(0.72 ± 0.18)pg/ml 高于对照组, 实验组的 TNF- α (7.81 ± 1.08)pg/ml 低于对照组 ($P < 0.05$)。在不良反应情况方面, 实验组总发生率 3.63%, 对照组总发生率 30.91%, 实验组的不良反应发生率明显低于对照组 ($P < 0.05$)。在治疗效果方面, 实验组总有效率 96.36%, 对照组总有效率 74.54%, 实验组的治疗有效率明显高于对照组 ($P < 0.05$)。

结论 在难治性精神分裂症的治疗中, 采用阿立哌唑联合氯氮平治疗, 其效果显著, 能改善患者的糖脂代谢指标与炎症因子, 减少不良反应的同时, 改善其症状表现, 值得临床推广和使用。

关键词: 阿立哌唑; 利培酮; 氯氮平; 难治性精神分裂症; 临床效果

Evaluation of Bidirectional Relationships Between Alcohol Misuse and Bipolar Disorder: A 2-Sample Mendelian Randomization Study

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Objective Increasing evidence shows that alcohol misuse is associated with bipolar disorder. However, the causality and direction of this association are not clear; Therefore, we used Mendelian randomization (MR) to examine bidirectional relationships between alcohol misuse and mood disorder

Methods Genome-wide association studies summary data of risk preference in 151067 participants from UK Biobank and 23andMe were used to identify general risk preference. Data from 413466 samples from The Psychiatric Genomics Consortium were used to identify bipolar disorder (BP). The weighted median, the inverse variance weighted, and the Mendelian randomization-Egger methods were conducted for the MR analysis to estimate a causal effect and detect the directional pleiotropy

Results GWAS summary data were respectively from two combined samples, containing 151067 and 413466 sample sizes of European adult participants. Mendelian randomization evidence suggested that BP raised alcohol misuse ($P < 0.05$). In contrast, there was no reliable results to describe the relationship of alcohol misuse on BP ($P > 0.05$)

Conclusion Using large-scale GWAS data, robust evidence supports a causal relationship about BP on alcohol misuse, but no relationship about alcohol misuse on BP has been found. This study provides new ideas for the treatment and prognosis of BP patients, and more research is still needed with regard to the association about alcohol misuse on BP

关键词: alcohol misuse; bipolar disorder; Mendelian Randomization Study

浅论中医五音疗法在精神疾病中的临床应用价值

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目的 探讨《黄帝内经》中五音疗法思想及其在精神疾病中的临床应用价值。

方法 基于 CiteSpace 6.1.R3 软件对现代文献知识图谱进行可视化分析的结果,通过查阅古代医典古籍,从《黄帝内经》提出的五行-五脏-五音-七情的关系探讨五音疗法在精神疾病治疗中的机制,分析总结五音疗法思想及其在精神疾病中的临床应用价值。

结果 1.CiteSpace 分析显示“五音疗法”在关键词突现分析示频次排名第一。2.药的祖先是音乐,音乐产生之初是为了治病,仓颉造字的药【藥】字是从乐【樂】字而来。3.《黄帝内经》强调阴阳平衡、五脏相因、情志相胜、三因制宜。五脏与精神活动密切相关,心主神明,脾藏意,肺藏魄,肾藏志,肝藏魂,胆主决断,灵机在脑,七情可对五脏产生影响。在精神疾病临床应用中,五音疗法主要根据脏腑之气的差异,运用五音(宫、商、角、徵、羽)调和搭配一个辨证鲜明的治疗方案,尤其通过古琴,因其与天地相应的特殊形制及散音、按音、泛音与自然音律相和的独特频率,可调节五脏十二经及大脑电生理信号,进而改善抑郁障碍、广泛性焦虑障碍、惊恐发作、睡眠障碍、认知功能障碍、肥胖、躯体不适等,达到身心灵的疗愈,臻达“乐与人和”、“天人合一”的境界。

结论 百病生于气而止于音,中医五音疗法历史悠久,其基于中医整体观念对生理与精神心理可起到双向调节作用,通过古琴五音疗法对精神疾病有着良好的应用前景。

关键词: 五音疗法,黄帝内经,精神疾病,情志疾病,古琴

优质护理服务在精神科护理管理工作中的应用价值分析

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目的 目的 探讨分析优质护理服务在精神科护理管理工作中的应用价值,从而为优质护理服务的开展提供科学依据。

方法 方法 选取2016年7月至2019年10月由我院收治的126例住院精神科患者进行研究,将其采用随机数字表法分为对照组和研究组,各63例。对照组患者给予常规护理干预措施,研究组患者则给予优质护理干预措施。比较两组患者对护理服务的满意度、患者对健康知识的掌握情况、护理不良事件发生情况及患者治疗效果。

结果 结果 研究组患者对护理人员工作能力、沟通能力、服务态度、信任度及病区管理情况的满意度相比对照组均显著升高,护理意外事件和投诉事件发生率相比对照组均显著降低,其对疾病健康知识掌握优良率相比对照组明显升高,且1个月后患者治疗总有效率相比对照组也明显升高,比较差异均存在统计学意义($P<0.05$),护理后研究组生活质量及睡眠质量与对照组相比较好,比较具有统计学意义($P<0.05$)。

结论 结论 在精神科护理管理工作中对患者采取优质护理干预模式能有效提高护理服务质量,进而提高患者对护理服务的满意度,减少护理不良事件的发生,还有利于增加患者对疾病的了解,从而提高患者的治疗效果,其临床应用价值较高,值得推广。

关键词: 精神科; 护理管理; 优质护理; 不良事件; 生活质量; 睡眠质量

优质护理干预对老年广泛性焦虑症患者的效果及 HAMA 评分的影响

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目的 利用优质护理模式对老年广泛性焦虑症患者进行干预,探讨其疗效作用及对患者 HAMA 评分的影响。

方法 选择 100 位广泛性焦虑症患者,年龄在

62-86 岁之间,经过随机分组,形成观察组和对照组各 50 人,两组对比没有统计学差异。其中对照组按常规护理进行,观察组则接受优质护理干预。

结果 通过评估两组患者护理前后的睡眠质量,入睡时间,睡眠时间,睡眠效率,睡眠障碍,催眠药物使用情况和日间功能障碍等方面,发现观察组在护理后的各项指标上都显示出显著优于对照组,且统计性差异有意义。同时,观察组患者的焦虑(SAS)和抑郁(SDS)评分护理后明显低于对照组,差异显著($P<0.007$)。观察组在生活质量各方面的得分也明显高于对照组,包括生理功能,躯体疼痛,社会功能,情感职能,精神健康,总体健康,生命活力和心理健

结论 观察组患者在接受优质护理干预后,其社会功能、生命活力及精神健康的评分改善最为显著。优质护理干预能显著改善广泛性焦虑症老年患者的病情,提高其生活质量,改善其睡眠质量,缩短入睡时间,提高睡眠效率,减轻睡眠障碍,并且能显著降低患者的焦虑和抑郁评分。优质护理干预对老年广泛性焦虑症患者具有重要的临床意义。

关键词: 优质护理干预,广泛性焦虑症,老年患者,HAMA 评分,生活质量

有氧运动对青少年抑郁症患者临床症状、快感缺失及自我效能感的影响——一项预试验研究

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目的 目前有充分的证据表明体育锻炼能够辅助治疗抑郁症,近年来研究体育锻炼对青少年抑郁症影响的研究越来越多,但是数量有限,特别是针对临床诊断的青少年抑郁症患者需要进行更多的研究。本研究探究 4 周有氧运动辅助干预对青少年抑郁症的临床症状、快感缺失和自我效能感的影响。

方法 纳入北京某精神专科医院 2023 年 4-12 月收治的 23 名青少年抑郁症患者(年龄为 15.0 ± 1.6 年;性别为男性 5 人,女性 17 人),在常规药物治疗的基础上进行 4 周、4 次/周、30min/次的中等强度有氧运动。使用汉密尔顿抑郁量表(HAMD-17)进行临床症状评价,快感缺失量表(DARS)进行快

感缺失评价,一般自我效能感量表(GSES)进行自我效能感评价;使用配对t检验进行数据分析。

结果 汉密尔顿抑郁量表总分治疗前后(治疗前 27.8 ± 5.0 vs 7.1 ± 3.4)差异有统计学意义($p < 0.05$),患者治疗后抑郁症状改善;快感缺失量表总分治疗前后(治疗前 47.5 ± 14.3 vs 49.7 ± 14.7)差异无统计学意义($p > 0.05$),在各分维度上治疗前后均无统计学意义($p > 0.05$);一般自我效能感量表总分治疗前后(治疗前 11.2 ± 4.4 vs 14.4 ± 6.9)差异有统计学意义($p < 0.05$),患者治疗后自我效能感提高。

结论 有氧运动辅助常规药物治疗能有效改善患者的抑郁症状和提高自我效能感。

关键词: 青少年抑郁症;有氧运动;快感缺失;自我效能感

脑血管病所致精神障碍患者发生代谢综合征的相关危险因素分析

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目的 探讨脑血管病所致精神障碍患者诱发代谢综合征的危险因素。

方法 选取四川某精神专科医院2023年7月-2024年4月住院治疗的68例诊断脑血管病所致精神障碍患者,根据是否存在代谢综合征将其分为脑血管病所致精神障碍伴代谢综合征组56人、脑血管病所致精神障碍不伴代谢综合征组12人,通过分析、Logistics回归分析等统计学方法比较两组之间临床资料以及生化指标的差异与联系。另参考精神分裂症患者代谢综合征管理的中国专家共识,将68例脑血管病所致精神障碍患者进一步分为高风险人群12人、临界人群46人、代谢综合征人群10人,比较三组之间临床资料以及生化指标的异同。结合两次分组比较的结果探讨脑血管病所致精神障碍患者诱发代谢综合征的危险因素。所有数据采用SPSS25.0软件进行统计学分析。

结果 脑血管病所致精神障碍伴代谢综合征组与脑血管病所致精神障碍不伴代谢综合征组在身体质量指数、甘油三酯、高密度脂蛋白水平间差异有统计学意义($P < 0.05$),而性别、年龄、病程、抽

烟、饮酒、合并躯体疾病、空腹血糖水平两组间差异无统计学意义($P > 0.05$)。脑血管病所致精神障碍患者是否会伴发代谢综合征与身体质量指数、甘油三酯水平呈正相关($P < 0.05$),与高密度脂蛋白水平呈负相关。将高风险人群组、临界人群组、代谢综合征组进行三组间ANCOVA分析,结果显示三组人群在身体质量指数及高密度脂蛋白指标上存在组间差异,进行事后分析两两比较。结果显示,高风险人群、临界人群、代谢综合征人群的BMI分别存在差异且具有统计学意义($P < 0.05$, Bonferroni校正)。与高风险人群相比,临界人群、代谢综合征人群的高密度脂蛋白存在差异且具有统计学意义($P < 0.05$, Bonferroni校正)。

结论 身体质量指数、甘油三酯的升高可能是脑血管病所致精神障碍患者发生代谢综合征的危险因素,而高密度脂蛋白的降低可能导致高风险人群发展成真正的代谢综合征人群。

关键词: 脑血管病所致精神障碍,代谢综合征,危险因素

关于将康复融入青少年情感障碍诊治的几点建议

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目的 青少年是罹患情感障碍的高发人群,相当比例患者社会功能显著损害。本文旨在探讨将康复理念融入青少年情感障碍诊治的必要性,优化综合诊治策略,提升治疗效果,促进患者的全面康复。

方法 本文采用文献回顾与临床实践经验相结合的方法,以青少年情感障碍患者为研究对象,结合精神康复的原则和方法,充分讨论了将康复融入青少年情感障碍诊治的可行性和必要性。

结果 作者提出将康复理念融入青少年情感障碍诊治的以下几点建议

(1) 青少年情感障碍常导致休学、辍学,如何减少失学、促进复学以及学业的持续发展是精神康复临床和研究领域需要重点关注的困境;

(2) 精神康复指导下的青少年情感障碍诊治,将促进形成医患同盟和合作关系,促进家人及其他照料者的共同参与,以便提供持续、可及、协调的精

神康复服务:

(3) 青少年情感障碍群体是实践去机构化康复的适宜群体, 在学校、社区、家庭等环境中促进全面整合(物理、社交和心理层面), 并通过改善学习环境、人际关系、家庭关系等全面提高生活质量;

(4) 融合康复诊断(准备状态、功能、资源、认知)与临床诊断, 开展全面的、个性化评估, 以指导技能培养、资源获取和环境优化, 最终制定以患者为中心、康复为导向的综合治疗方案;

(5) 青少年情感障碍康复实践鼓励患者参与与自我管理, 形成“医疗支持、自我支持、同伴支持、家庭支持”多维支持网络, 并对康复过程持续监测评估, 动态调整康复目标, 确保治疗的针对性和有效性。

结论 将康复理念融入青少年情感障碍的诊治过程, 或许是应对当前该群体疾病负担日趋沉重的必要途径, 有助于优化诊疗策略, 以促进痊愈、回归社会并提升生活质量。

关键词: 精神康复; 青少年; 情感障碍

Continuous Theta Burst Stimulation Inhibits Oxidative Stress-induced Inflammation and Autophagy in Hippocampal Neurons by Activating Glutathione Synthesis Pathway, Improving Cognitive Impairment in Sleep-deprived Mice

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Objective Sleep deprivation (SD) has been reported to have a negative impact on cognitive function. Continuous theta burst stimulation (cTBS) shows certain effects in improving sleep and neurological diseases, and its molecular or cellular role in SD-induced cognition impairment still need further exploration

Methods In this study, C57BL/6 mice were subjected to 48 hours of SD and cTBS treatment. Data from morris water maze test showed that cTBS treatment significantly improved SD-triggered impairment of spatial learning and memory abilities in mice

Results Then, through using commercial kits, we found that cTBS reduced malondialdehyde (MDA) levels, increased superoxide dismutase (SOD) activities, and inhibited production of inflammatory cytokines, alleviating oxidative stress and inflammation levels in hippocampal tissues of SD model mice. As shown by western blot assay and immunofluorescence staining, cTBS decreased LC3II/LC3I ratio, Beclin1 protein levels, and LC3B puncta intensity, and elevated p62 protein levels to suppress excessive autophagy in hippocampal tissues of SD-stimulated mice. Through an in vitro cellular model for oxidative stress, we proved that inhibiting oxidative stress alleviated inflammation, autophagy and death of neuron cells. Notably, cTBS treatment increased glutathione (GSH) levels, the nuclear levels of nuclear factor erythroid 2-related factor 2 (Nrf2) and the mRNA expression levels of GSH synthesis-related genes in hippocampal tissues of SD mice. The functional recovery experiments suggested that Nrf2 inhibitor ML385 or GSH synthesis inhibitor BSO reversed the alleviating effects of cTBS treatment on oxidative stress, inflammation and autophagy of hippocampal tissues and cognitive impairment in SD model mice

Conclusion Altogether, our study demonstrated that cTBS mitigates oxidative stress-associated inflammation and autophagy through activating the Nrf2/GSH pathway, improving cognitive impairment in SD mice

关键词: continuous theta burst stimulation, oxidative stress, cognitive impairment, glutathione

家庭心理干预对酒依赖患者复饮率的影响

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目的 探讨心理治疗与家庭干预对酒依赖患者复饮率的影响。

方法 选取 2021 年 5 月-2023 年 5 月我院收治的 30 例酒依赖患者作为观察对象, 随机分为对照组和观察组, 每组 15 例。对照组男性 10 例, 女性 5 例, 年龄 30-40 岁, 平均年龄 (35.67±2.27) 岁; 观察组男性 9 例, 女性 6 例, 年龄 30-40 岁, 平均年

龄(35.66±2.18)岁。对照组给予药物治疗,观察组在对照组的基础上给予心理治疗和家庭干预,随访6个月,比较两组患者的复饮率。

结果 心理治疗和家庭干预对酒依赖患者的生活质量产生积极影响。通过帮助患者建立戒酒目标、改善自我管理技能和情感应对能力,这些治疗方法有助于患者更好地适应戒酒生活。家庭干预可以帮助患者和他们的亲人建立更健康的沟通和支持模式,这不仅对患者的生活质量有积极影响,还有助于减少家庭内部的紧张和冲突,改善整个家庭的幸福感。干预6个月后,观察组的复饮率明显低于对照组($P < 0.05$);观察组患者的不良情绪明显低于对照组($P < 0.05$);观察组患者的生活质量明显高于对照组($P < 0.05$)。

结论 对酒依赖患者在药物治疗的基础上行心理治疗及家庭干预,通过处理心理问题、提高戒酒决心以及提供稳定的家庭支持,能够明显降低患者的复饮率,改善患者的不良情绪,提高患者的生活质量,值得临床推广应用。

关键词: 酒依赖,家庭干预,心理治疗,复饮率

个性化护理在抑郁症护理中的应用效果

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目的 探究个性化护理在抑郁症护理中的应用效果。

方法 选择2019年1月~2023年1月在我院就诊的40例抑郁症患者作为研究对象,用随机数字表法分为对照组20例,实验组20例。对照组接受常规护理,实验组则采用个性化护理,比较两组患者的焦虑抑郁评分、生活质量以及护理满意度。

结果 护理前两组患者负性情绪评分差异不明显($P > 0.05$),护理后两组的HAMA及HAMD评分相较本组护理前有所降低,实验组显著低于对照组,比较有统计学意义($P < 0.05$);护理前两组患者四项生活质量评分差异不明显($P > 0.05$),护理后两组的生理功能、躯体健康、情感职能、社会功能评分相较本组护理前有所提高,实验组的四项评分均显著高于对照组($P < 0.05$);实验组患者对护理工作的满意程度显著高于对照组,差异有统计学意义($P < 0.05$)。

结论 通过关注患者的独特性、提供个性化的心理支持、改善生活质量和提高治疗满意度,个性化护理有助于提高抑郁症患者的康复率和生活质量。个性化护理不仅能够减轻症状,还有助于改善患者的心理健康和整体幸福感。同时还可以提升患者对医院护理工作的满意程度,增加患者对医院的忠诚度,值得推广。

关键词: 个性化护理,抑郁症,应用效果

基于语音指标的抑郁症病情监测研究

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目的 随着人工智能的发展,自动语音检测技术因其便捷无创的优点,在抑郁症的识别中得到了越来越广泛的应用。研究表明,声学客观指标如韵律特征、频谱特征等能够有效区分抑郁患者及健康被试。既往研究多为横断面研究,而抑郁障碍是不断动态变化的,治疗期间对病情的监测具有重要意义,而目前关于声学指标在治疗中随抑郁症严重程度变化的纵向研究尚较缺乏。本研究将使用人机交互中产生的语音数据,在纵向研究中探究相关声学指标是否能够反映治疗早期抑郁病情的变化,以为自动化病情监测提供依据。

方法 对明确诊断的抑郁障碍患者,进行为期8周的真实世界观察性研究。使用我们研发的人机交互症状访谈平台,在基线及治疗8周时,由电脑自动采集患者人机交互过程中产生的语音数据。同时使用汉密尔顿抑郁量表(HAMD-17)对基线及治疗8周时的抑郁严重程度进行评分。提取88个声学指标,并对其进行夏皮洛-威尔克(S-W)检验,发现部分声学指标数据不符合正态分布,故采用配对样本Wilcoxon符号秩检验比较治疗前后声学指标的变化。采用配对t检验比较治疗前后的HAMD-17得分差异。

结果 纳入54例明确诊断的抑郁障碍患者,其中男性13人,女性41人,平均年龄32.83岁($SD=11.80$),治疗前HAMD-17平均得分为20.28分($SD=4.77$),治疗后HAMD-17平均得分为8.56分($SD=6.67$),配对t检验提示,治疗前后HAMD-17得分差异显著($P < 0.01$)。Wilcoxon检验结果发

现共有 16 个声学指标在治疗前后差异显著 ($P < 0.05$), 包括 F0, F1, F3, MFCC 等各项指标。

结论 本研究通过纵向随访发现, 声学指标能够有效反映治疗前后抑郁病情严重程度的变化。这表明声学指标有望成为新的客观生物标记物, 在治疗中提供无创、便捷、远程的病情监测。

关键词: 语音识别, 抑郁症, 人工智能, 病情监测

循证护理服务模式对焦虑伴湿疹皮炎患者疾病认知及并发症的影响分析

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目的 研究循证护理 (EBN) 模式对湿疹皮炎患者疾病认知及并发症的影响。

方法 抽取 2021 年 3 月~2024 年 03 月本院收治的 30 例湿疹皮炎患者, 运用数字分组法分作研究组 (常规治疗+循证护理) 和对照组 (常规治疗), 研究组 15 例, 年龄 11-78 (48.16±4.28) 岁; 对照组 15 例, 年龄 10-78 (48.14±4.24) 岁, 分析护理价值。常规治疗: 曲安奈德酸乙酯尿素乳膏用药, 由安徽先求药业股份有限公司制造, 仅限局部外敷。使用前须彻底清洁疾患部位, 然后用力揉搓 60 秒, 后取合适数量乳膏均匀敷于患处, 日复一日, 每日两遍。在夜间使用时, 要用安全的薄塑料膜紧裹已涂药的区域。研究组实施 EBN 模式: 包括认知行为治疗: 构筑信赖与指导之基、认知调整、行动矫治、家庭情感支持; 实施优质心理护理: 加强与患者的交流, 及时了解其心理情绪变化, 并根据患者的个性特点提供个性化的心理指导。给予优质皮肤护理, 维护皮肤的湿润, 同时防止使用如碱性肥皂、沐浴露、洗涤剂等产品对皮肤造成损伤。如果有皮肤受到损伤, 选择使用温和的清洁剂来清洁, 选择舒适且轻便的衣物, 防止因衣物摩擦而导致疾病恶化; 防止瘙痒和皮肤过度曝光, 如果出现渗出或者肿大的皮疹, 使用硼酸溶液来进行湿敷。实施饮食护, 根据患者的饮食偏好, 制定出科学且适当的营养配餐方案, 以低盐低脂的饮食为主, 避免吸烟和喝酒, 不吃有刺激和高脂肪的食品; 实施优质健康教育。每天循证组对护士的临床护理任务进行两次审查, 记

录下护理过程中遇到的问题并做出总结。每天举行一次会议讨论, 并对方案进行适当的修改。

1.3 观察指标及评价标准

结果 研究组并发症发生率低, $P < 0.05$; 护理后, 研究组焦虑抑郁评分更低, $P < 0.05$; 护理后, 研究组疾病认知水平明显高, $P < 0.05$; 护理后, 研究组自我管理能力强, $P < 0.05$ 。

结论 在湿疹皮炎患者的医疗护理过程中采取 EBN 模式, 可降低并发症发生率, 改善其焦虑抑郁评分、疾病认知水平和自我管理能力强, 预后良好, 建议推广。

关键词: 循证护理, 焦虑, 湿疹皮炎, 疾病认知, 并发症

PERMA 模式下的心理护理在青少年抑郁症患者中的应用价值及 SAS、SDS 评分影响分析

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目的 评价对青少年抑郁症患者进行 PERMA 模式下的心理护理的应用效果。

方法 选取 2022 年 12 月到 2024 年 3 月青少年抑郁症患者 200 例, 分为两组, 对照组患者 100 例, 平均年龄 (15.46±3.57) 岁, 观察组患者 100 例, 平均年龄 (15.52±3.06) 岁。纳入患者年龄 < 18 岁, 经过临床确诊为抑郁症。对照组进行常规护理, 观察组进行 PERMA 模式下的心理护理, 具体方法包括积极情绪培养 (Positive Emotion)、投入与参与 (Engagement)、人际关系建立 (Relationships)、意义与目的寻找 (Meaning)、成就与目标实现 (Achievement)。对比组间患者的焦虑抑郁变化情况、生活质量、心理干预效果和护理满意度。统计学结果由 SPSS26.0 统计学软件统计完成, 若组间数据对比结果差异显著 $P < 0.05$, 则具有统计学意义。

结果 通过对青少年抑郁症患者进行 PERMA 模式下的心理护理, 结果表明, 观察组患者的焦虑抑郁情况轻于对照组 ($P < 0.05$), 生活质量, 心理干预效果和护理满意度优于对照组 ($P < 0.05$)。

结论 通过对青少年抑郁症患者进行 PERMA 模式下的心理护理, 能改善患者的焦虑抑郁水平和

心理状况,提高生活质量和治疗依从性。

关键词:青少年抑郁症,PERMA 模式心理护理,焦虑抑郁,生活质量

丙泊酚联合依托咪酯对无抽搐电休克治疗后不良反应的影响

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目的 探讨丙泊酚联合依托咪酯对精神障碍患者行无抽搐电休克治疗后不良反应的影响。

方法 回顾性分析西安市精神卫生中心近两年所有行无抽搐电休克治疗的精神障碍患者不良反应发生情况,2022年(丙泊酚组)所有患者无抽搐电休克治疗静脉麻醉药物选择单独使用丙泊酚,2023年(丙泊酚+依托咪酯组)所有患者无抽搐电休克治疗静脉麻醉药物选择丙泊酚联合依托咪酯,所有行无抽搐电休克治疗的患者均在全程标准化流程下进行,密切观察两组治疗后不良反应的发生情况。结合两年不良反应发生情况进行对比分析,为电休克治疗患者选择个体化麻醉用药方案。

结果 2022年全年共行无抽搐电休克治疗23156人次,不良反应发生5084人次,不良反应发生率21.96%。2023年全年共行无抽搐电休克治疗28916人次,不良反应发生3496人次,不良反应发生率12.09%。两年间不良反应发生次数从高到低依次为血压变化、心动过速、兴奋躁动、呼吸恢复时间延长、呼吸道分泌物过多、恶心呕吐、头晕头痛、记忆障碍。丙泊酚+依托咪酯组不良反应的发生率均低于丙泊酚组($P<0.05$)。

结论 丙泊酚联合依托咪酯全身麻醉有助于降低精神障碍患者无抽搐电休克治疗的不良反应的发生率。

关键词:无抽搐电休克治疗 丙泊酚 依托咪酯 不良反应

小红章奖励对精神科患者行为矫正护理干预效果的应用研究

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目的 探讨小红章奖励对精神科患者行为矫正护理干预效果的应用,并观察其临床效果

方法 选取在我院2018年7月-2020年6月所住院的精神科患者以随机数字表法分成对照组与观察组。其中选取2018年7月~2019年6月的60名精神科患者为对照组,给予常规护理与药物治疗;再选取2019年7月~2020年6月的60名精神科患者为观察组,在对照组模式基础上给予小红章奖励(每一个病员发一张行为矫正记录单,内容为:按时起床/睡觉,整理床铺柜子,吸烟管理,洗澡洗漱,个人整洁,进食,服药治疗,每完成一项给病员奖励一个小红章,每一周更换一次。病员安排在定时吸烟、打电话、买东西的基础上,还要根据所集的小红章数量来满足其要求。通过小红章激励机制,病员能更好的配合治疗,遵守医院的规章制度,完成个人卫生护理及生活护理)。对观察组与对照组精神科患者的干预效果进行观察与统计。

结果 相较于常规治疗与护理的对照组,观察组精神科患者IPROS(康复疗效)各维度评分明显下降。

结论 绝大多数精神疾病患者绝被家属送入病房接受封闭式住院治疗,而长时间处于封闭的治疗环境,社会功能出现退化,病员的心理也会发生改变,因此行为矫正康复训练对病人十分重要,而小红章的激励对行为矫正的病员起到促进作用,使病人能够恢复正常的生活能力与社会适应能力,提高患者的生活质量,为早日回归社会做好准备。

关键词:小红章奖励,精神科患者,行为矫正护理

行为激活技术在女性抑郁症患者心理护理康复中的应用研究

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目的 探究在女性抑郁症病人心理护理康复中应用行为激活技术的临床效果。

方法 随机选取精神专科医院2021年6月1日至2022年12月30日在妇女心理卫生科住院的成

人抑郁症患者,诊断符合 DSM-5 中抑郁症的诊断标准与排除标准而且 HAMD>17 分的 64 例患者,分为对照组与研究组各 32 例,两组间年龄、文化程度相匹配。对照组的病人给予抗抑郁药治疗,应用 SSRI 类 5 朵金花中的任意一种,常规剂量用药,常规日常护理,研究组的患者在对照组方法的同时实施行为激活技术进行心理护理,评定选用 ADL、HAMD、SDSS,观察护理康复靶目标,统计分析应用统计软件为 SPSS statistics26 版本。

结果 64 例中 4 例脱落,60 例患者完成观察。在心理护理康复中实施行为激活技术干预后 5 个靶目标(医护患关系,不良事件,人际关系,社会适应性,治疗依从性)中,研究组与对照组有显著性的统计学差异($P<0.01$);研究组 HAMD、CGI 和 ADL 以及 SDSS 评分与对照组差异同样具有统计学意义($P<0.05$)

结论 在女性抑郁症患者的心理护理康复中实施行为激活技术,不但能改善患者的抑郁等症状,而且还能改善患者的功能损害,助力提高治疗效果,还使得护理康复靶目标依从性更好,不良事件发生更少,人际关系更协调,社会适应性更强,医护患关系更好,为女性抑郁症患者的心理护理康复模式提供了参考依据和实证研究数据。值得推广应用。

关键词: 行为激活技术;抑郁症;心理护理康复;评定量表

正念疗法对伴有非自杀性自伤青少年抑郁症的疗效

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目的 分析正念认知疗法对伴有非自杀性自伤青少年抑郁症患者认知功能,心理状态的影响。

方法 选取 2020 年 1 月至 2022 年 12 月在我院临床心理科门诊及住院诊治伴有非自杀性自伤青少年抑郁症患者 108 例,根据随机表法分为 2 组,对照组给予口服丙戊酸镁缓释片+盐酸舍曲林的疗法,研究组在对照组的基础上联合正念认知疗法。记录并比较两组在治疗前后的汉密尔顿抑郁量表(HAMD)、五因素正念问卷(FFMQ)、症状自评量表(SCL-90)、认知功能缺陷自评量表(PDQ-D-20)

及每日平均抗抑郁药物剂、疗效分析情况。结果 两组治疗前 HAMD 评分比较,无统计学意义($P>0.05$)。治疗 3 个月后,两组 HAMD 评分均降低,且研究组的 HAMD 评分、平均抗抑郁药物剂量均低于对照组($P<0.05$)。两组治疗前 FFMQ 评分中观察、描述、觉知地行动、不判断、不反应的 5 个因子及总分比较,无统计学意义($P>0.05$)。治疗 3 个月后,两组 FFMQ 评分 5 个因子及总分均提高,且研究组的 FFMQ 评分 5 个因子及总分均高于对照组($P<0.05$)。两组治疗前 SCL-90、PDQ-D-20 评分比较,无统计学意义($P>0.05$)。治疗 3 个月后,两组 SCL-90、PDQ-D-20 评分均降低,且研究组的 SCL-90、PDQ-D-20 评分均低于对照组($P<0.05$)。治疗 3 个月后,研究组的总有效率 92.59%,高于对照组的 77.78%($P<0.05$)。

结果 治疗 3 个月后,两组 HAMD 评分均降低,且研究组的 HAMD 评分、平均抗抑郁药物剂量均低于对照组($P<0.05$)。治疗 3 个月后,两组 FFMQ 评分 5 个因子及总分均提高, SCL-90、PDQ-D-20 评分均降低,研究组的 SCL-90、PDQ-D-20 评分均低于对照组($P<0.05$),FFMQ 评分 5 个因子及总分均高于对照组($P<0.05$)。治疗 3 个月后,研究组的总有效率 92.59%,高于对照组的 77.78%($P<0.05$)。

结论 正念认知疗法联合盐酸舍曲林片可以有效地减轻伴有非自杀性自伤青少年抑郁症患者抑郁症抑郁状态,提高正念能力与认知功能,改善心理疾病,临床疗效良好。

关键词: 正念认知疗法;盐酸舍曲林片;伴有非自杀性自伤青少年;抑郁症;认知功能;心理

心理护理干预改善重症肺炎患者睡眠质量、负性情绪的效果观察

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目的 探讨心理护理干预对改善重症肺炎患者睡眠质量、负性情绪的效果。

方法 从患有重症肺炎的 114 例患者中,随机分为实验组 57 人和对照组 57 人,两组的基本情况如年龄、病程、病型分布没有显著性差异。对照组给予常规护理,实验组在此基础上给予根据他们的个

性和需要定制的个性化的护理计划。这个计划可能包括个人心理咨询、心理支持小组、放松和压力管理技巧的训练,以及符合他们需要的行为疗法。采用 SPSS22.0 软件进行数据分析。选取不同的统计方法根据测量计量的类型和数据的分布。对于符合正态分布的计量资料,选择 t 检验和均值±标准差 (“ $\bar{x}\pm s$ ”)来展示结果。对于计数资料,选用卡方检验并以百分比表示。无论是 t 检验还是卡方检验,取统计学意义的标准为 P 值小于 0.05,即 $P<0.05$ 。若 P 值小于 0.05,表明实验组与对比组之间具有统计学意义的差异,证明的心理护理干预对重症肺炎患者睡眠质量、负性情绪确实有所改进效果。

结果 实验组在治疗后,SDS 评分,SAS 评分,睡眠质量评分较对照组显著改善,而且在恶心呕吐、睡眠过短、入睡困难、便秘等不良反应率上明显低于对照组。实验组护理与生活质量,护理依从度,睡眠时间也优于对照组。并且实验组的护理满意度显著高于对照组。

结论 心理护理干预可以显著提高重症肺炎患者的睡眠质量,缓解其负性情绪,并且不良反应较少,其护理满意度一致性好,对提高患者的生活质量有显著的效果。

关键词:心理护理干预;重症肺炎患者;睡眠质量;负性情绪;生活质量

系统家庭支持下延伸护理对精神分裂症患者居家康复效果影响

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目的 观察系统家庭支持下延伸护理对精神分裂症(SCZ)患者居家康复效果影响。

方法 选择 2020 年 9 月—2023 年 8 月在我院收治的 83 例 SCZ 患者为研究对象,采用随机数字表法将其分为对照组($n=41$)、观察组($n=42$)。对照组予以常规护理干预,观察组在对照组基础上予以系统家庭支持下延伸护理干预,均干预 6 个月。运用家庭功能评定量表(FAD)评估家庭功能;运用康复状态量表(MRSS)评估康复状况;运用简明精神病量表(BPRS)评估精神症状;运用世界卫生组织生存质量测定量表简表(WHOQOL-BREF)评估生活质量;运

用功能独立性评定量表(FIM)评估独立生活能力。

结果 干预 6 个月后,两组家庭功能低于干预前($P<0.05$),观察组家庭功能低于对照组($P<0.05$);干预 6 个月后,两组康复状况低于干预前($P<0.05$),观察组康复状况低于对照组($P<0.05$);干预 6 个月后,两组精神症状低于干预前($P<0.05$),观察组精神症状低于对照组($P<0.05$);干预 6 个月后,两组生活质量高于干预前($P<0.05$),观察组生活质量高于对照组($P<0.05$);干预 6 个月后,两组独立生活能力高于干预前($P<0.05$),观察组独立生活能力高于对照组($P<0.05$)。

结论 系统家庭支持下延伸护理干预可降低 SCZ 患者精神症状严重程度,增强其家庭功能,改善其康复状态,提高其生活质量,进一步恢复其独立生活能力。

关键词:系统家庭支持下延伸护理;精神分裂症;家庭功能;康复状况;生活质量

呼吸康复对精神分裂症住院患者肺通气功能、情绪与生活质量的效应——一项单臂研究

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目的 与健康人群相比,精神分裂症患者罹患呼吸系统疾病的概率高约 2 至 5 倍,是导致精神分裂症患者残疾和寿命缩短的重要原因之一,如何预防与管理精神分裂症患者呼吸系统疾病并提高其生活质量已成为一项亟待解决的问题。本文旨在探讨呼吸康复对对稳定期精神科住院患者肺通气功能、情绪以及生活质量的改善情况。

方法 纳入 2024 年 3 月至 2024 年 6 月在杨浦区精神卫生中心住院的稳定期精神分裂症患者共 23 例。纳入标准为(1)年龄 18-75 周岁,(2)精神分裂症经临床治疗后处于稳定期,(3)简易智力状态检查评分 ≥ 20 分(文盲大于等于 18 分),(4)患者监护人及本人同意并签署了知情同意书。排除标准为(1)高热、出血状态或其他严重躯体疾病例如脑卒中急性期、急性心梗、恶性心律失常等,(2)慢性病的急性发作期,例如未经控制的高血压等,(3)经评估其他不适用于呼吸康复的情况。所纳入患者除常

规精神康复治疗外,进行40分钟的呼吸训练,每周3次,持续4周,包括抗阻呼吸(10分钟)、腹式呼吸(10分钟)、集体呼吸康复操(15分钟)和5分钟的整理运动。在入组后和干预后开展肺通气功能测试,焦虑和抑郁自评量表测试(SAS, SDS),以及WHO生存质量测定简表测试(WHOQOL-BREF)。连续性变量以均值±标准差表示,使用配对t检验分析干预前后评估指标的变化,显著性水平设置为0.05。

结果 共纳入23名精神分裂症住院患者,平均年龄为 60.74 ± 10.13 ,BMI为 24.49 ± 5.97 ,平均住院时长为 280.5 ± 148.5 天。在4周呼吸康复干预后,患者SAS、SDS评分均显著降低($t_{SAS}=2.110, p=0.047$,Cohen's $d=0.450$; $t_{SDS}=4.146, p<0.001$,Cohen's $d=0.884$),WHOQOL-BREF的社会与环境维度显著提高($t_{社会}=-2.193, p=0.039$,Cohen's $d=-0.457$; $t_{环境}=-2.897, p=0.008$,Cohen's $d=-0.604$)。治疗前后患者肺通气功能无显著差异(所有 $p>0.05$)。

结论 短期呼吸康复能够改善精神分裂症患者的焦虑与抑郁情绪,并能够显著提升患者的生活质量。未来需要招募对照组,并延长呼吸康复的干预时间,以改善精神分裂症患者的肺通气功能。同时需要建立患者队列,以观察呼吸康复干预是否能够有效降低未来呼吸系统疾病的发病率。

关键词: 精神分裂症,肺通气功能,呼吸康复,生活质量

社交技能训练联合计算机认知矫正治疗在慢性精神分裂症患者住院治疗中的应用效果

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目的 探讨社交技能训练联合计算机认知矫正治疗在慢性精神分裂症患者住院治疗中的应用效果

方法 选择2022年3月1日至2023年10月30日在山西省社会福利精神康宁医院住院且符合慢性精神分裂症诊断标准的100例患者为研究对象,按随机数字表法将其分为干预组和对照组各50例,实际完成了89例,其中干预组为44例,男23例、女21例,患者平均年龄(47.3 ± 5.2)岁;对照组为45例,男22例、女23例,患者平均年龄(45.1 ± 6.5)

岁。入组患者均接受常规抗精神病药物治疗,干预组在此基础上实施12周的社交技能训练联合计算机认知矫正治疗。社交技能训练次数为每周3次,时间定为每周一、三、五上午,每次训练时间为60min左右。计算机认知矫正治疗次数为每周3次,时间定为每周一、三、五下午,每次治疗时间为40min左右。采用阳性与阴性症状量表(PANSS)、社交技能评定目录量表(SSC)、精神分裂症患者生活质量量表(SQLS)为评定工具,在患者干预前后分别进行康复疗效评定并比较。

结果 实施12周的社交技能训练联合计算机认知矫正治疗后,干预组PANSS量表评分总分为(55.36 ± 9.43)分、阴性症状因子评分为(19.08 ± 3.71)分,两组数据得分均明显低于对照组的(61.06 ± 10.26)分、(22.42 ± 4.32)分,差异均有统计学意义($t=2.790, 3.989$,均 $P<0.01$);干预组干预后SSC量表评分中SSC总分、冲突解决能力、建立关系能力分别为(16.03 ± 6.87)分、(3.38 ± 1.64)分、(3.15 ± 1.82)分,三组数据得分均明显低于对照组的(21.06 ± 8.26)分、(5.91 ± 2.36)分、(6.73 ± 2.52)分,两组差异均有统计学意义($t=2.876, 5.349, 7.003$,均 $P<0.01$);干预组干预后SQLS量表评分(42.56 ± 11.74)明显低于对照组(49.53 ± 12.11),差异具有统计学意义($t=2.818, P<0.01$)。

结论 对住院治疗期间的慢性精神分裂症患者运用社交技能训练联合计算机认知矫正治疗进行科学干预,可以有效改善患者的社交技能缺陷及阴性症状,并显著提升患者的住院生活质量。

关键词: 慢性精神分裂症; 社交技能缺陷; 阴性症状; 社交技能训练; 计算机认知矫正治疗; 生活质量

积极心理学理论在精神分裂症康复护理应用效果

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目的 研究在精神分裂症康复护理中应用积极心理学理论的价值。方法 择选90例精神分裂症患者作为研究对象(2022年6月至2023年6月),随机分配法划分两组,对照组($n=45$)实施常规护理,

观察组 (n=45) 实施积极心理学理论干预, 分析对比两组干预效果。

方法 两组干预后 BPRS、TPROS 评分降低, 且观察组分值更低 ($P<0.05$)。两组干预 1 个月、2 个月、3 个月 HEIQ 评分比对照组更高 ($P<0.05$)。两组干预 1 个月、2 个月、3 个月 SPHMS 评分比对照组更高 ($P<0.05$)。观察组干预满意度 95.56% 比对照组 75.56% 更高 ($P<0.05$)。

择选 90 例精神分裂症患者作为研究对象 (2022 年 6 月至 2023 年 6 月), 随机分配法划分两组, 对照组 (n=45) 实施常规护理, 观察组 (n=45) 实施积极心理学理论干预。对照组男性、女性各 26 例、19 例, 年龄 24-76 (49.18±3.64) 岁, 病程 0.7-8 (4.21±0.70) 年。观察组男性、女性各 25 例、20 例, 年龄 25-76 (48.97±3.58) 岁, 病程 0.6-8 (4.13±0.64) 年。两组基本资料无统计学价值 ($P>0.05$), 存在可比性。本研究已交由医院医学伦理委员会审批, 并获得批准。(1) 纳入标准: 与精神分裂症相关诊断标准相符; 存在意识情感障碍、反复性言语幻听等症状; 知情并在“知情协议”上签字。(2) 排除标准: 继发性意识障碍; 智能障碍患者; 沟通障碍; 并发严重脏器功能不全; 中途退出。

结果 两组干预后 BPRS、TPROS 评分降低, 且观察组分值更低 ($P<0.05$)。两组干预 1 个月、2 个月、3 个月 HEIQ 评分比对照组更高 ($P<0.05$)。两组干预 1 个月、2 个月、3 个月 SPHMS 评分比对照组更高 ($P<0.05$)。观察组干预满意度 95.56% 比对照组 75.56% 更高 ($P<0.05$)。

结论 在精神分裂症患者康复护理中应用积极心理学理论效果突出, 有助于提升患者幸福进取能力, 改善患者健康状态, 增加患者对医护服务的认可, 推广价值较高。

关键词: 积极心理学理论; 精神分裂症; 康复护理

综合个性化护理干预应用于双向情感障碍抑郁发作病人护理效果

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目的 探究双向情感障碍抑郁发作患者行综合

个性化护理干预的效果。

方法 择选 88 例双向情感障碍抑郁发作患者 (2023.01-2023.08) 作为研究对象, 随机数表法划分两组, 对照组 (44 例) 行常规护理, 观察组 (44 例) 行综合个性化护理干预, 对比分析两组护理效果。

结果 护理后两组 MMSE 评分升高, 且观察组评分更高 ($P<0.05$)。观察组护理后 HAMD、HAMA 评分比对照组更低 ($P<0.05$)。两组护理后生活质量改善, 且观察组评分更高 ($P<0.05$)。观察组护理满意度 93.18% 比对照组 77.27% 更高 ($P<0.05$)。

结论 本研究结果显示, 护理后两组 MMSE 评分升高, 且观察组评分更高, 可见对双向情感障碍抑郁发作患者行综合个性化护理干预有助于改善患者认知功能。观察组护理后 HAMD、HAMA 评分比对照组更低, 提示将综合个性化护理干预用于双向情感障碍抑郁发作患者护理中可促进患者情绪状态改善。两组护理后生活质量改善, 且观察组评分更高, 可见将两组护理后生活质量改善, 且观察组评分更高有助于改善患者生活质量。观察组护理满意度 93.18% 比对照组 77.27% 更高, 提示对双向情感障碍抑郁发作患者实施综合个性化护理干预有助于增加患者对护理服务的认可。

综上所述, 将综合个性化护理干预用于双向情感障碍抑郁发作患者护理中效果理想, 有助于促进患者认知功能、情绪状态、生活质量改善, 增加患者对护理服务的认可, 值得推广。

关键词: 综合个性化护理干预; 双向情感障碍; 抑郁发作

共情护理干预对青少年抑郁症患者心理状况及护理观察

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目的 共情护理干预对青少年抑郁症患者心理状况及护理观察。

方法 整理 2023 年 1 月至 2023 年 12 月本院收治的少年抑郁症患者 90 例为研究对象, 采用随机数字表法分为对照组、观察组, 各 45 例。对照组应用常规护理, 观察组应用共情护理干预。对比护理效果。

结果 观察组汉密尔顿焦虑量表(Hamilton Anxiety Scale,HAMA)评分、汉密尔顿抑郁量表(Hamilton depressive scale,HAMD)评分 优于对照组,对比有统计学意义($P < 0.05$);观察组睡眠质量优于对照组,对比有统计学意义($P < 0.05$);观察组生活质量综合评定问卷(Generic Quality of Life Inventory-74,GQO-LI-74)评分优于对照组,对比有统计学意义($P < 0.05$);观察组护理满意度高于对照组,对比有统计学意义($P < 0.05$)。

结论 观察组睡眠质量优于对照组($P < 0.05$)。分析原因是,通过共情护理的实施能促进抑郁情绪缓解,减轻患者的心理压力,这使患者可以更好的进入睡眠,并且在共情护理实施后,还可帮向患者提供有效的社会支持,使患者感受到医务人员的关怀、支持等,强化患者的归属感,进而作用于睡眠质量的提升。同时本研究证实,观察组 GQO-LI-74 评分优于对照组($P < 0.05$)。生命质量是衡量疾病预后的重要指标,而通过此种护理方法的实施,能够减少患者的自我贬低感,给予情感上的支持、肯定,帮助患者稳定情绪状态,减轻抑郁症状,并且通过对患者的深入理解,还可以充分了解患者的实际情况,并在此基础上给予患者具有针对性的治疗、管理,继而强化患者应对疾病的能力,满足患者的特定需求,在此基础上即可提高患者的生命质量。最后本研究还发现,观察组护理满意度优于对照组($P < 0.05$)。在对患者应用共情护理后,能给予患者有效的情感支持,使患者打开心扉,并与医务人员建立信任关系。共情护理干预可减轻患者焦虑、抑郁情绪,改善睡眠质量,且能提升患者生命质量,保证护理满意度,有推广价值。

关键词: 青少年; 抑郁症; 共情护理干预; 心理状况; 睡眠质量

心理护理干预对焦虑症患者睡眠质量的影响观察

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目的 分析心理护理干预对焦虑症患者睡眠质量的影响。

方法 选取本院 2023 年 01 月至 2024 年 01 月

间 60 例焦虑症患者作为观察对象,依照不同护理方法,分为对照组和观察组,各 30 例。对照组男 17 例,女 13 例,年龄为 16~51 岁,平均年龄为(35.49±2.36)岁;观察组男 16 例,女 14 例,年龄为 17~52 岁,平均年龄为(36.06±2.19)岁;对比两组患者的一般资料,差异无统计学意义($P > 0.05$)。

结果 护理前,两组患者的负面情绪评分无明显差别($P > 0.05$);护理后,观察组患者的负面情绪评分低于对照组($P < 0.05$)。观察组患者的睡眠质量改善情况均优于对照组($P < 0.05$)。

观察组患者的依从性高于对照组($P < 0.05$),观察组患者的护理满意度高于对照组($P < 0.05$)。

结论 本次实践结果显示,予以常规护理联合心理护理的观察组,其负面情绪评分低于实施常规护理的对照组($P < 0.05$),可见心理护理对于调整患者负面情绪具有重要作用,这是因为心理护理能够给予患者积极正面的情感支持和心理疏导,有利于改善患者的不良情绪,强化他们的心理承受能力,让患者更好地调节自己的情绪和心态。同时心理护理强调与患者沟通交流,通过满足患者需求,倾听患者想法的方式与患者建立起相互信任的良好关系,从而引导患者更好地释放不良情绪,减轻疾病所造成的压力和负担。另外,心理护理也能够激发出患者内在的积极因素,从而建立起对自身的信心,使其更加积极主动地配合治疗和护理,进一步优化疗效。观察组患者经过护理后,其睡眠质量优于对照组($P < 0.05$),证明心理护理有利于改善患者的睡眠品质,究其原因在于心理护理能够给予患者更多的心理安慰和情绪支持,将护理工作从照顾患者身体方面扩展到关爱患者心理状态方面,有利于促使患者释放压力和负面情绪,从而放松身心,拥有良好的睡眠品质[12]。观察组患者的依从性高于对照组($P < 0.05$),可见心理护理能够促使患者积极主动地配合护理工作,主要是因为心理护理能够照顾到患者的身心需求,因此在护理过程中患者可以表现出更好的积极性和配合度,他们更愿意接受护理人员的建议和指导,并且可以取得理想的护理效果。另外,在心理护理的支持下,患者的心理状态越来越好,情绪也越来越稳定,对于后续治疗的信心也会随之提高。观察组患者的护理满意度高于对照组($P < 0.05$),由此证明心理护理更能够满足患者的需求,对于提高患者满意度具有重要意义。

关键词: 心理护理干预; 焦虑症; 睡眠质量; 影响

数字疗法在精神疾病中的应用现状

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目的 精神疾病是当今社会面临的重要问题,精神病患者往往表现出情绪、思维、行为上的异常,对患者个人、家庭乃至社会均带来重大负担。数字疗法(digital therapeutics, DTx)是近年来备受关注的,一种通过应用程序或者人工智能平台治疗、管理、预防疾病的非药物疗法。本综述旨在探讨 DTx 在精神疾病诊疗中的应用现状,分析其优势、面临的挑战以及未来的发展方向,以期精神疾病的临床治疗提供新的思路和方法。

方法 我们就 DTx 在各种精神疾病中的应用现状进行综述。使用生物医学文献数据库 Pubmed 输入以下关键词“digital therapeutic”或“digital therapy”和“mental illness”或“mental disorder”

结果 数字疗法在精神领域的许多疾病都已有应用的实例并且部分拥有已被证明的疗效,目前主要在以下几种疾病中应用较多,精神分裂症:数字疗法如 PEAR-004 应用程序,提供了认知行为治疗模块,有助于患者管理病情。抑郁症:在线自助治疗产品如 Deprexis,采用认知行为疗法,为轻中度抑郁症患者提供了有效的治疗方式。乙醇成瘾: Vorvida 软件基于认知行为疗法,为患者提供个性化的康复计划。注意缺陷多动障碍(ADHD): EndeavorRx 通过数字游戏提高患儿的认知能力和注意力。失眠症: Somryst 作为处方数字疗法,提供失眠认知行为疗法,改善慢性失眠症状。认知障碍: VR 数字疗法通过虚拟现实技术提供认知功能康复训练。

结论 数字疗法在精神疾病治疗中展现出巨大的潜力和优势,包括个性化治疗、便捷性、灵活性以及降低医疗成本等。然而,数字疗法的广泛应用仍面临技术、隐私保护、数据管理、临床验证、标准化不足以及患者接受度等挑战。未来的研究需进一步完善数字疗法的临床应用效果评估。数字疗法有望在精神疾病领域实现更广泛的应用,为患者提供更高效、个性化的治疗方案。

关键词: 精神疾病; 精神障碍; 数字疗法

Efficacy of Locust Rice in The Treatment of Tardive Dyspraxia

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Objective objective to investigate the efficacy of sophorae in the treatment of tardive dyspraxia caused by antipsychotic drugs

Methods 60 cases of schizophrenic patients with tardis were randomly divided into two groups. In the control group, 30 patients were treated with promethazine, tardy dyspraea rating scale (TDRS) was used to assess the therapeutic effect and adverse drug reactions of the two groups, and treatment was observed for 8 weeks

Results after 8 weeks, the effective rate was 76.7% in the observation group and 83.3% in the control group. There was no statistically significant difference in clinical efficacy between the two groups ($H_c=0.416$, $P>0.05$). TDRS scores in both the observation group and the control group decreased after 8 weeks of treatment compared with those before treatment in the same group (all $P<0.05$), and there was no statistically significant difference in TDRS scores between the two groups ($P>0.05$). The incidence of sleepiness, weight gain, dizziness and nausea in the observation group was significantly lower than that in the control group ($P<0.05$)

Conclusion acacia rice has a good therapeutic effect on tardiness dysparexia caused by antipsychotic drugs, and the adverse reactions are mild

关键词: acacia, promethazine, schizophrenia, tardiness dyspraxia

出院指导服务对精神障碍患者预防复发的干预效果研究

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目的 出院计划是精神卫生服务中的重要内容,研究其对保证治疗护理的连续性、提高患者的依从性、降低再入院率的有效性。

方法 方法 对2015年1-6月在北京大学第六医院住院的精神障碍患者,出院后开展三方会谈,制定出院计划,链接日间康复包括个案管理、团体治疗、健康教育,参与服务3个月后评估病人复发、再住院率。

三方会谈内容:

第一讨论的信息,主要是了解疾病转归中的生物学和医学因素。包括患者通过住院治疗是否能梳理清楚自己精神健康在哪些方面发生变化,积极的变化有什么?重点了解对疾病的自我识别能力。如患者能认识到原来自己想的太多了,疑心大了,没边的事都联想到自己身上。不仅影响自己情绪,还影响了自己的人际关系。认识到药物治疗对自己的帮助。能接受需要系统治疗、定期看门诊。说明患者有一定自知力,药物依从性也比较好,近期复发的风险低。

第二方面重点收集影响疾病转归有什么社会心理因素的影响。如很多青少年患者对学校环境不适应,学习压力大,或家庭环境不和谐,家庭长期处于缺乏交流,互相指责的状态。即使疾病症状康复了,回到生活环境中长期精神不愉快,容易引起疾病的复发。也会影响康复期社会功能的恢复。在出院指导中都会做相应的评估和指导工作。其中评估工作会在访谈之前患者和家庭填写个人生活事件表和家庭功能量表。

第三方面,链接社区、日间康复资源和家庭护理的指导。患者回到社区,可以了解居住地社区卫生服务中心的精神卫生服务资源,如是否有免费服药、社区日间康复站等。患者在康复期不能马上恢复到学习或工作生活中,能参加日间康复活动对充实生活、恢复自信是非常有帮助的。同时很多专科医院也设有日间康复活动中心,组织康复者参加团体活动如预防疾病复发团体、情绪管理团体、恢复自信、社交技能团体活动,还有在康复期起到教练作用的个案管理服务都可以根据自己的需求选择参加。同时医务人员也会结合患者的社会功能状态,探讨复学、社会就业合适的时机,家庭护理中需要注意的事项,如何结合患者的优势丰富康复期的生活等。

结果 参与服务患者年龄 23.74 ± 8.53 岁,性别男 18 例, 47.37%, 女 20 例, 52.63%, 精神分裂症 26 例, 68.42%, 情感障碍 8 例, 21.05% 其它 4 例, 10.53%; 病程 48.45 ± 47.96 (月) 参与服务情况, 均参加三方会谈的出院计划, 个案管理 22 例, 57.89%, 团体 15, 39.47%, 健康讲座 12, 31.58%。参与服务 2.4 月, 3 个月后随访, 复发率 13.16%, 再住院率 7.89%, 明显低于文献报道。

结论 出院指导可以衔接日间康复服务, 提高患者服药依从性, 降低复发率和在住院率。

关键词: 精神障碍 出院指导 复发 再入院

一例先天性颅脑发育异常青年期出现的精神障碍

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目的 探讨先天性颅脑发育异常青年期出现精神障碍的临床特征, 如何快速让患者回归生活

方法 我院 2023 年 10 月 18 日收治的一例脑器质性病变所致精神障碍。患者, 男性, 27 岁, 于 1 年前奶奶去世后感心情差, 感觉难以接受事实。后逐渐出现言行异常, 表现为经常无故傻笑, 少语少动, 不愿外出, 不愿和别人交流, 懒散被动, 经常唉声叹气。有时和家人说自己不安全, 有人要害自己。经常发呆, 反应迟钝, 有时问东答西, 无法听懂他讲话的意思。逐渐和家人疏离, 不懂的关心家人及朋友, 变得淡漠, 不工作, 天天在家里, 不愿就医。家属见其异常, 曾带其就诊于南宁市第二人民医院, 行头颅 CT 检查提示: 胼胝体缺如, 额顶叶脑裂畸形。10 月 18 日送至我院治疗。入院后头颅磁共振显示: 双侧胼胝体及相邻局部大脑镰结构缺如, 中线附近脑回结构紊乱, 双侧侧脑室与第三脑室融合, 考虑先天性发育异常。

结果 治疗上予盐酸哌罗匹隆片改善精神症状、艾地苯醌片改善脑功能, 奥沙西洋片及乌灵胶囊改善睡眠等。护理上加强健康教育, 督促患者进行生活自理, 进行工娱治疗。

结论 抗精神病性药物治疗及改善脑功能药物治疗可以缓解改善精神症状, 督促患者生活自理能促进患者更快恢复日常生活。

关键词: 先天颅脑发育异常, 胼胝体缺如, 精神障碍

近 4 年新疆女性抑郁障碍患者血清-25 羟维生素 D3 水平的现况调查

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目的 观察近 4 年新疆女性抑郁障碍患者血清-25 羟维生素 D3 水平的现况, 探讨其缺乏对于该地区女性抑郁障碍患者的影响。

方法 在研究中, 此次以 2020 年 1 月至 2023 年 8 月于本院临床心理科住院的 147 名女性抑郁症患者为研究对象, 通过不同血清浓度、不同年龄、不同族别来观察该地区女性抑郁障碍患者的血清-25 羟维生素 D3 水平的现况, 通过抑郁自评量表(GAD-7)、焦虑自评量表(PHQ-9)、匹兹堡睡眠质量量表(PSQI)评估不同血清 25(OH)D 水平之间是否具有差异。研究中的女性患者涉及多年龄段、多民族, 其血清-25 羟维生素 D3 水平均明显低于正常充足水平 30ng/mL, 并且差异具有明显统计学意义。不同血清-25 羟维生素 D3 水平之间抑郁、焦虑自评评分具有差异。

结果 研究中的女性患者涉及多年龄段、多民族, 其血清-25 羟维生素 D3 水平均明显低于正常充足水平 30ng/mL, 并且差异具有明显统计学意义。不同血清-25 羟维生素 D3 水平之间抑郁、焦虑自评评分具有差异。

结论 近 4 年新疆女性抑郁障碍患者血清-25 羟维生素 D3 水平均显著低于正常水平, 该人群需要及时关注并且补充维生素 D。

关键词: 抑郁障碍; 血清-25 羟维生素 D3; 女性患者;

首发未用药精神分裂症患者炎症因子、脱髓鞘与认知损害的关联研究

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目的 探究首发未用药精神分裂症群体中, 炎症因子、脱髓鞘与认知损害的关系

方法 选择 2020 年-2023 年于我院就诊的 73 例首发未用药精神分裂症患者, 依据脑部磁共振平扫结果分为首发未用药精神分裂症伴脱髓鞘改变患者组 (n=38) 和首发未用药精神分裂症不伴有脱髓鞘改变患者组 (n=35), 使用精神分裂症认知功能成套测验 (MCCB) 评估两组患者的认知功能, 使用酶联免疫吸附测定法检测血清中的炎症因子水平。

结果 两组患者的年龄、性别、吸烟史、家族史、体质指数无统计学差异 ($p>0.05$)。与首发未用药精神分裂症不伴脱髓鞘改变的患者相比, 首发未用药精神分裂症伴脱髓鞘改变的患者认知障碍更严重, 主要表现在信息处理速度、视觉学习、推理和解决问题的能力方面 ($p<0.005$)。首发未用药精神分裂症伴脱髓鞘改变患者组的 IL-2 水平明显高于不伴有脱髓鞘改变患者组 ($p<0.005$), IL-4、IFN- γ 水平低于不伴有脱髓鞘改变患者组 ($p<0.005$)。中介分析表明, 在精神分裂症患者中, IL-2、IL-4 和 IFN- γ 水平对认知功能的影响由脱髓鞘介导。

结论 与首发未用药精神分裂症不伴脱髓鞘改变的患者相比, 首发未用药精神分裂症伴脱髓鞘改变的患者认知障碍更为严重, 脱髓鞘在精神分裂症患者的炎症因子和认知障碍之间的关系中起着重要的中介作用。

关键词: 精神分裂症, 脱髓鞘, 认知障碍, 炎症因子

自我控制与领悟社会支持对新生社会交往的影响

苗雨*

无

目的 分析自我控制与领悟社会支持对新生社会交往的影响, 为心理健康教育提供依据, 增强新生心理适应性。

方法 采用横断面研究, 用一般人口学量表、自我控制量表 (SCS)、领悟社会支持量表 (PSSS)、社交回避及苦恼量表 (SAD) 对 2013 年河南省某校秋季入学新生进行问卷调查。给予被试者统一的指

导语并现场回收问卷。所有被试者均自愿参与调查且签署知情同意书。剔除无效作答问卷。采用Harman单因素法对所有题项进行同源方差检验。对社交回避及苦恼和自我控制及领悟社会支持量表得分进行回归分析。

结果 共有 891 名新生纳入研究。社交回避及苦恼量表 (8.36±6.031) 分, 自我控制量表 (69.06±10.205) 分, 领悟社会支持量表 (68.00±8.577) 分。3.9% 的学生在社交方面存在明显困难。不同性别、吸烟组与非吸烟组、独生子女组与非独生子女组、不同生源地组间社交得分无明显差异。线性回归分析结果显示新生社交得分和自我控制得分与领悟社会支持得分相关, 回归系数分别为 -0.209 和 -0.177 (P 均 < 0.001)。

结论 存在部分新生需重点关注人际关系, 增强自我控制和领悟社会支持能力可作为改善个体心理健康的依据。

关键词: 社交; 新生; 回归分析

穴位埋线疗法对重性精神疾病合并代谢综合征的影响

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目的 观察穴位埋线疗法对重性精神疾病合并代谢综合征的治疗作用。

方法 观察临床工作中重性精神疾病合并代谢综合征患者 20 例, 随机分为埋线组和对照组各 10 例, 埋线组经中医辨证论治, 选择足三里、三阴交、关元、气海、大横、脾腧、胃腧穴位, 应用可吸收外科缝线, 严格执行无菌操作下进行穴位埋线治疗, 每次 5-10 个穴位, 每 14 天一次, 同时为患者选择适合的有氧训练和饮食调整, 训练中观察患者心肺功能及体能变化, 对照组仅进行有氧训练和饮食调整, 分别治疗 12 周, 治疗开始前及结束后记录 BMI 指数、血压、血糖、血脂等相关数据。对两组数据进行统计学处理。

结果 经过 t 检验, 埋线组在降低 BMI 指数、血脂方面效果明显, 在控制血压、血糖方面也具有一定疗效。

结论 代谢综合征是指人体的蛋白质、脂肪、

碳水化合物等物质发生代谢紊乱的病理状态, 是一组复杂的代谢紊乱症候群, 是导致糖尿病心脑血管疾病的危险因素。重性精神疾病由于长期口服抗精神病药物及活动量较少等原因, 代谢综合征的发生率较高。同时, 患者多不易配合临床治疗, 且口服降脂药物、降糖药物、降压药物仅解决单一问题, 无法综合调理, 穴位埋线疗法作为安全有效的中医治疗方法, 可根据不同病情辨证施治, 有效控制体重增加及各项指标减少, 临床效果明显, 可进行大样本多模态的对比研究, 推广于临床。

关键词: 穴位埋线疗法 重性精神疾病 代谢综合征

中药黄芩在预防精神分裂症复发中的疗效观察

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目的 精神分裂症是一种复杂的慢性神经精神疾病, 以幻觉、妄想、认知功能障碍及情感障碍等为主要特征, 其高复发率一直是治疗中的难点。近年来, 中药黄芩因其在神经精神疾病治疗中的潜在价值, 尤其是在抗复发方面的应用, 受到广泛关注。本研究旨在探究中药黄芩在预防精神分裂症复发中的疗效。

方法 本研究采用随机对照的临床试验方法, 选取近 3 年内复发次数 ≥ 2 的精神分裂症患者为研究对象。参与者被随机分为黄芩治疗组和对照组, 其中黄芩治疗组在常规西药治疗基础上加用黄芩提取物, 对照组仅采用常规西药治疗。研究周期为一年, 期间定期评估患者的精神症状、生活质量及复发情况。在剂量和使用频率方面, 本研究采用的黄芩提取物剂量为每日 300mg, 分两次服用。

结果 经过一年的治疗观察, 黄芩治疗组在预防精神分裂症复发方面显示出一定效果。与对照组相比, 黄芩治疗组的患者在精神症状改善、生活质量提升及复发率降低等方面均表现出明显优势。具体而言, 黄芩治疗组患者的 PANSS 量表得分显著下降, 复发率较对照组低约 30%。

结论 本研究结果表明, 中药黄芩在预防精神

分裂症复发方面具有一定的疗效。其可能的作用机制包括抗氧化、抗炎及镇静等。然而,本研究仍存在一些局限性,如样本量较小、观察时间相对较短等。未来研究可进一步扩大样本量、延长观察时间,并深入探究黄芩预防精神分裂症复发的具体机制。此外,黄芩与其他药物的联合应用也是值得进一步研究的方向。综上所述,中药黄芩在预防精神分裂症复发中显示出一定的疗效和安全性,具有较好的应用前景。未来研究应进一步探究其作用机制及优化治疗方案,以期精神分裂症患者提供更好的治疗选择。

关键词: 中药黄芩 精神分裂症 复发

森田治疗对社区精神分裂症康复期患者社会功能和生活质量的影响

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目的 旨在探讨森田治疗对社区精神分裂症康复期患者的社会功能和生活质量的影响情况。

方法 选取上海市杨浦区社区 60 例精神分裂症康复期患者为研究对象。纳入标准:(1)符合 ICD-10 精神分裂症诊断标准;(2)经药物治疗后病情稳定;(3)在社区进行康复治疗时间大于 1 年;(4)患者及家属知情同意并愿意配合;(5)年龄为 25-55 岁,性别不限。排除标准:合并其他精神科疾病;合并严重慢性躯体疾病;酒精及药物依赖;文盲。将患者随机分为对照组和研究组,每组各 30 例,两组患者一般资料比较,差异均无统计学意义。两组患者均坚持我院门诊随访和社区一般康复训练,研究组在此基础上给予森田治疗,每周治疗 3 次,每次 45 分钟,连续治疗 10 周,治疗在我区示范性阳光心园进行,每次由 1-2 名康复治疗师主持,治疗期间发现患者病情波动或明显不适合继续治疗的给予立即终止。两组患者分别在治疗前后进行阳性和阴性症状评分表(PANSS)、健康状况调查问卷(SF-36)、社会功能缺陷筛选量表(SDSS)评估。

结果 2.1 治疗后研究组患者症状较治疗前及对照组明显改善,差异具有统计学意义。2.2 研究组患者治疗后 SDSS 总分明显低于治疗前及对照组总分。2.3 研究组患者治疗后 SF-36 总分明显高于治疗

前及对照组治疗后 SF-36 总分,差异均具有统计学意义($P<0.05$)。

结论 精神分裂症患者因疾病、药物、家庭、心理等多方面因素的影响,康复期患者多表现出退缩回避、缺乏主动性,不利于进一步治疗效果,且社会功能和生活质量受到不同程度的影响。森田治疗是国际上认同的心理治疗方法之一,经过不断的实践和改进,适合治疗的人群不断扩大,对负性情绪、适应环境不良、交流障碍及精神病后残留症状的患者,可以通过森田治疗让患者的病态注意力从固着于症状逐步转向现实生活,扭转“情绪本位”的心理状态,以达到精神康复、回归社会的目标。本研究显示森田治疗对改善社区精神分裂症康复期患者疗效、社会功能和生活质量有积极影响,是社区精神分裂症患者重要的康复手段。

关键词: 森田治疗 康复期 社会功能 生活质量

托吡酯对药物导致超重的精神病患者认知功能的影响:一项随机双盲研究

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目的 体重增加/肥胖是限制临床使用第二代抗精神病药物治疗精神病患者的主要弊端之一。应对抗精神病药物引起的体重增加有几种策略,如控制食物摄入量、运动、改用其他无体重增加作用的抗精神病药物,或同时服用可减轻体重的药物。不少药物被认为可以有效控制精神分裂症患者的体重增加,包括托吡酯、二甲双胍、雷贝西汀、阿立哌唑等。一项荟萃分析研究显示,与安慰剂相比,托吡酯和二甲双胍能有效对抗抗精神病药物引起的体重增加,且无严重副作用。然而,在针对癫痫和偏头痛患者的临床试验中,发现托吡酯与认知功能障碍有关。托吡酯如何影响抗精神病药物所致体重增加患者的认知能力,还有待进一步研究。本研究目的为:(1)比较使用托吡酯(TPM 组)和二甲双胍(MTF 组)治疗的抗精神病药物所致体重增加患者的认知功能。(2)比较 TPM 组和 MTF 组治疗 12 周后的体重变化。

方法 这是一项双盲随机对照临床实验。受试

者将被随机分为两组，一组接受托吡酯治疗，剂量从 25mg/bid 开始，7 天后增至 50mg/bid，14 天后增至 100 mg/bid；另一组接受二甲双胍治疗，剂量从 0.25mg/bid 开始，7 天后增至 0.50 mg/bid。记录所有受试者在基线、4 周、8 周及 12 周时的体重和腰围。使用 BCAS 量表评估所有受试者治疗 12 周前后认知功能差异。

结果 服用托吡酯和二甲双胍的患者各有 37 人完成了这项研究。与二甲双胍相比，托吡酯治疗没有损伤患者的认知功能；两者均可降低受试者的体重/体重指数。

结论 研究表明，托吡酯和/或二甲双胍附加疗法在接受抗精神病药物治疗的超重/肥胖精神分裂症患者的体重/体重指数是有效的。托吡酯可以作为减轻精神分裂症患者体重指数的一种选择。

关键词：精神障碍；托吡酯；抗精神病药物；抗精神病药物副作用

医院社区联合管理对精神分裂症认知功能影响

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目的 观察分析医院社区联合管理对精神分裂症患者认知功能的影响。

方法 本试验采用基线评定法，纳入截止至 2023 年 6 月 1 日前沙依巴克区长江路街道辖区内的 60 例慢性精神分裂症患者，对患者实施医院社区联合管理，并进行 1 年队列随访研究，观察基线期、第一、二、三、四季度的康复效果及认知功能，统计复发率、再住院率。

结果 第一、二、三、四季度阳性和阴性症状评定量表（PANSS）量表评分、社会功能缺陷量表（SDSS）评分与基线期比较均降低明显（ $P<0.05$ ），且第四季度 PANSS 量表、SDSS 评分与第一、二、三季度更低（ $P<0.05$ ）。与基线期比较，第一、二、三、四季度韦氏记忆量表（WMS）均显著升高（ $P<0.05$ ）。第一、二、三、四季度 Halstead2Retain 神经心理成套试验（HRB2RC）中的连线测验 A 和 B 均显著低于基线期（ $P<0.05$ ）。与基线期比较，第

一、二、三、四季度威斯康星卡片分类测验（WCST）量表持续性错误数（Rpe）、非持续性错误数（nRpe）、完成分类数（Cc）和正确应答数（Rc）显著下降（ $P<0.05$ ）。第一、二、三、四季度字色混淆测验（Stroop）评分较基线期显著提高（ $P<0.05$ ）。随访 1 年，复发率、再住院率、再就业率分别降低。

结论 医院社区联合管理对促进精神分裂症患者全面康复有积极作用，能改善认知功能，减少复发，降低住院率，有利于患者回归社会明显改善精神分裂症患者认知功能，对促进患者全面康复有积极作用，减少复发及再住院率。

关键词：医院社区联合；管理；精神分裂症；认知功能；康复

头颅 CT 在胼胝体发育不全（脑干萎缩）预后评估的临床价值

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目的 探讨头颅 CT 在胼胝体发育不全（脑干萎缩）患者预后评估中的临床价值。通过回顾性分析经头颅 CT 检查的临床确诊患者，评估 CT 图像的解读以及与其他影像学技术的比较，为患者提供更好的预后评估。

方法 回顾性分析经头颅 CT 检查并经临床确诊的胼胝体发育不全患者，评估头颅 CT 在预测患者预后中的作用。分析 CT 图像的影像学表现，包括胼胝体的形态和结构，以及脑干的形态和结构。同时，结合临床资料和患者的临床表现，对 CT 图像进行综合分析，以评估患者的预后。

结果 共纳入 20 例胼胝体发育不全患者，头颅 CT 表现包括胼胝体发育不良和脑干萎缩。通过综合分析 CT 图像，我们发现脑干的萎缩程度与患者的预后密切相关。其中，部分患者经过治疗后症状得到改善，而另一些患者则因病情严重而死亡或遗留长期残疾。这些结果提示，头颅 CT 在胼胝体发育不全的预后评估中具有重要价值。

结论 头颅 CT 在胼胝体发育不全（脑干萎缩）的预后评估中具有重要价值。通过准确的图像解读和综合分析，我们可以更好地了解患者的病情，从而为患者提供更好的预后评估和治疗方案。

关键词: 头颅 CT; 胼胝体发育不全; 脑干萎缩; 预后评估; 治疗方法。

PDCA 循环法在精神科患者影像检查中安全的预判评估分析

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目的 精神科患者在影像检查过程中存在一定的安全隐患, 如焦虑、恐惧、暴力倾向等问题, 可能影响检查的顺利进行和结果的准确性。本研究采用 PDCA 循环法对精神科患者影像检查中的安全预判进行评估分析, 旨在提高检查的安全性和效率。

方法 选取我院的精神科患者作为研究对象, 采用 PDCA 循环法对其影像检查中的安全预判进行评估分析。

结果 通过 PDCA 循环法对精神科患者影像检查中的安全预判进行评估分析, 发现在影像检查过程中存在一些安全隐患, 如患者焦虑、暴力倾向等问题可能影响检查的进行和结果的准确性。通过改进措施的实施, 检查的安全性和效率得到了提高。

结论 采用 PDCA 循环法对精神科患者影像检查中的安全预判进行的评估分析, 取得了一定的效果。然而, 仍有一些问题需要进一步研究和改进, 如如何更好地预判患者的安全风险、如何有效应对患者的不良情绪等。

关键词: PDCA 循环法; 精神科患者; 影像检查; 安全预判; 评估分析

正念减压疗法联合阶段性康复训练在精神科疾病患者康复中的研究进展

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目的 文章综述了正念减压疗法联合阶段性康复训练在精神疾病患者中的应用现状及应用效果方法 首先通过描述正念减压疗法与阶段性康复疗法的基本概念, 然后整合联合应用在精神疾病患

者中的应用现状, 最后分析出正念减压疗法联合阶段性康复疗法的应用效果 结果 精神疾病是指在各种内外环境因素影响下, 患者的脑部功能出现严重失调, 导致各种精神活动均发生不同程度障碍的临床表现。精神疾病患者虽然意识清晰, 但思维和认知功能障碍, 无法正常控制自我行为, 甚至会出现情感障碍和幻觉。若不及时采取有效的控制或治疗措施, 将导致患者的精神严重衰退或残疾, 严重降低患者的生活质量和社会功能。目前, 临床上针对精神疾病的治疗方式主要有药物治疗、心理辅导、康复训练等。虽然药物治疗或心理辅导能够有效控制精神疾病患者的病情进展, 但精神疾病复发率高且预后较差, 长周期的服用药物还会增加患者发生并发症的风险。

结论 除了巩固疗效之外, 还需要采取有效的康复措施改善患者的预后, 恢复患者的社会功能, 提高患者的生活质量。研究表明, 多阶段康复训练能够有效改善患者的精神症状, 缓解患者的精神活动障碍等问题。而正念减压疗法是一种心理治疗方法, 通过指导患者专注于当下的呼吸, 放松身心, 培育正念来减轻心理、精神及身体有关的痛苦, 从而达到辅助治疗的目的。陶凉, 成都市第四人民医院 610000

关键词: 正念减压, 康复训练, 精神科

认知行为治疗联合奥氮平对精神分裂症患者认知功能、治疗态度及生活质量的影响

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目的 探讨精神分裂症患者采用认知行为治疗联合奥氮平治疗后, 对患者的认知功能、治疗态度及生活质量的影响。

方法 选取 2023 年 1 月至 2024 年 1 月于我院确诊的 90 例精神分裂症患者, 按照随机数字表法, 将患者分为对照组 (n=45, 奥氮平治疗) 和观察组 (n=45, 对照组基础上给予认知行为治疗)。比较两组总有效率、认知功能[神经心理状态评定量表评分 (RBANS)]、治疗态度[自知力与治疗态度问卷评分 (ITAQ)]、生活质量[世界卫生组织生存质量测定量表简表 (WHOQOL-BREF) 评分]及不良反应发生

情况。

结果 对照组临床总有效例数 36 例，占比 80.00%，观察组临床总有效例数 43 例，占比 95.56%，两组临床总有效率对比有差异 ($P<0.05$)；治疗后，两组治疗环境认知、言语功能、生理机能、疾病认知、即刻记忆、情感功能、延时记忆、用药态度认知、社会功能评分、注意力、躯体疼痛、视觉广度评分、病情复发及求助评分均升高，观察组升高更显著 ($P<0.05$)；不良反应发生率：对照组的为 8.89%，观察组的为 4.44% ($P>0.05$)。

结论 认知行为治疗联合奥氮平对精神分裂症的治疗效果较好，能改善患者的认知功能及治疗态度，有助于提高患者的生活质量。

关键词：精神分裂症；认知行为治疗；奥氮平；认知功能；治疗态度；生活质量

社区精神康复项目中康复治疗技术的应用及效果评价

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目的 探讨精神康复治疗技术在社区精神康复项目中的应用效果

方法 选取 2022 年 3 月至 2023 年 3 月期间接受精神康复治疗的成人社区康复项目参与者，分为常规治疗组和综合治疗组，每组 35 例。常规治疗组接受传统精神康复方法，综合治疗组则采用新型的精神康复治疗技术。评估两组的康复效果和生活质量。

结果 综合治疗组的康复效果和生活质量显著优于常规治疗组 ($P<0.05$)。

结论 精神康复治疗技术在社区精神康复项目中的应用效果显著，能有效提升患者的康复效果和生活质量。前言 随着对社会对精神心理健康重视程度的提高，精神康复治疗成为精神疾病恢复期的重要康复手段，也是社区日间康复服务的一个重要组成部分。精神康复治疗技术，特别是结合了个性化和集体支持的方法，为提升精神疾病患者康复效果和生活质量提供了新的可行性。本研究旨在评估这些技术在精神日间照护社区康复项目中的应用效果。通过深入分析，我们发现应用这些技术能够显

著增强患者的日常生活适应能力，提升其整体生活质量。精神康复治疗技术的核心在于其个性化治疗方案。康复师依据患者的个体差异，比如年龄、性别、病程、个人偏好和社会支持系统，量身定制一套综合性的康复计划，确保了治疗的针对性和有效性。这种个性化的方法有助于加强患者对治疗的认同感和参与度，提高治疗的响应率。从技术层面来看，精神康复治疗技术不仅限于传统的药物管理和普通康复治疗，它还包括认知行为疗法、社会技能训练、精神动力学治疗和家庭治疗、心理咨询及治疗等。

关键词：精神康复治疗技术；社区精神康复项目；康复效果；生活质量

口腔崩解片在精神卫生科用药中的临床分析

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目的 口腔崩解片这种药物剂型在精神卫生科临床实践中的应用优势体现及具体表现。

方法 通过本院 69 例住院患者服用奥氮平口腔崩解片与服用奥氮平片 73 例患者的临床观察对照以及 86 例住院患者服用利培酮口腔崩解片与服用利培酮片 82 例患者的症状改善情况分析、对比口腔崩解片的剂型优势。

结果 对 35 例拒绝服药伴有注意力分散、夸大、语速加快、自我评价过高，判断力低下，情绪高涨等症状的患者服用奥氮平口腔崩解片后，以上症状改善的时间明显早于 38 例伴有同样症状服用奥氮平片的对照患者（5 天至 8 天）；对 34 例拒绝服药伴有情绪淡漠、少语、反映迟钝、社交淡漠的患者服用奥氮平口腔崩解片后，原有症状的改善程度明显优于 35 例伴有同样症状服用奥氮平片的对照患者。对 45 例拒绝服药伴有敌视、妄想、怀疑、思维紊乱、幻觉等症状的患者服用利培酮口腔崩解片后，原有此类阳性症状的改善明显优于 42 例服用利培酮片的对照组患者；对 41 例拒绝服药伴有负罪感、焦虑、抑郁等精神分裂症有关的情感症状的患者服用利培酮口腔崩解片后，症状改善的时间明显早于 40 例服用利培酮片的对照组患者（6 天至 10 天）。

结论 口腔崩解片这种药物剂型更方便于拒绝服药的精神疾病患者，崩解速度快、患者服药依从

性好、生物利用度高、便于精神卫生科特殊疾患的临床用药。

关键词：口腔崩解 药物剂型 生物利用度

扶阳穴位针灸治疗迟发性运动障碍的临床研究

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目的 迟发性运动障碍 (Tardive dyskinesia, TD) 是一种由于长期使用抗精神病药物引起的锥体外系反应, 临床上以异常不自主运动为主要表现, 多影响患者舌、嘴唇、下颌和面部的运动, 严重影响患者的生活质量。本研究旨在探讨扶阳穴位针灸治疗 TD 的临床疗效, 为临床实践提供参考。

方法 研究自 2023 年 1 月至 2023 年 12 月收集病例进行分析。共 60 例迟发性运动障碍患者, 其中 30 例对照组不做处理, 另外 30 例观察组进行扶阳穴位针灸治疗 (大椎穴、脾俞 (shu) 穴、命门穴、腰阳关穴针灸治疗, 针刺得气后, 再用艾条灸每穴灸 5 分钟, 四穴, 反复灸 3 次, 疗程 8 周), 对比分析两组疗效。

结果 两组不自主运动量表 (AIMS) 评分比较: 两组治疗前的不自主运动量表 (AIMS) 评分差异无统计学意义 ($P>0.05$), 治疗后观察组的不自主运动量表 (AIMS) 评分小于对照组, 差异有统计学意义 ($P<0.05$)。

结论 观察组干预后, 不自主运动量表 (AIMS) 评分低于对照组, 差异显著 ($P<0.05$), 说明扶阳穴位针灸治疗对患者的 TD 症状改善较好, 能在一定程度上改善 TD 症状。扶阳穴位针灸治疗对患者的迟发性运动障碍效果具有良好的改善效果, 有助于提高患者生活质量, 临床应用价值较高。

关键词: 迟发性运动障碍; 扶阳穴位; 针灸治疗; 临床研究

民族心理与精神医学学组

海南省少数民族地区精神科护理管理新思路与新方法

黄海霞 刘辉* 陈盛柏

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目的 精神病患者可能无太大身体上的疾病, 但他们大脑功能受到严重损害, 思维紊乱, 无法正常思考。所以开设精神科的临床意义在于更好的护理管理精神病患者, 并避免他们伤害他人。这次调查针对少数民族地区精神科护理管理, 探讨新思路与新方法, 更好的改善精神科护理管理工作, 同时分析精神科护理人员的执业压力, 为管理工作提供参考。

方法 2023 年 1 月至 2024 年 5 月, 对海南省中部少数民族 6 市县 230 名护士人员进行了聚类抽样, 并展开了问卷调查活动, 所有护士均签署了知情同意书, 表示愿意接受调查。纳入范围: 精神科临床护理的执业护士。总共发放了 230 份调查问卷, 211 份有效问卷, 回收率是 91.74%。以问卷调查的方式对海南省中部少数民族 6 市县 230 位精神科护士做描述性统计。

结果 在 211 名正在调查期间的护士队伍中, 只有 5 名男性护士。女性护理为 206 (97.63%); 平均年龄 (33 ± 7.82) 岁; 学历: 大专 76 名 (36.02%), 本科分别为 80 名 (37.91%)。全部精神科护士人员的执业压力认知准确概论从高到低如下: 医院环境的安全性能占 95.3%, 护理工作量 85.4%, 管理能力 82.1%, 医疗保健的合作为 71.6%, 自我素质能力 66.4%, 了解病人及其家属情况为 63.5%。

综上所述分析结果为少数民族地区精神科护理人员的工作压力主要因素包括医院的环境安全、护理工作量、管理的重要性及护理人员的素质等。

结论 随着时代的发展, 少数民族地区精神科护理人员紧缺是医院护理管理的突出问题, 相关管理者有效地支持与管理有利于缓解护理人员的工作压力, 建立完善的护理安全管理体系, 以减轻护士的心理负担。

关键词: 少数民族; 精神科; 护理管理; 工作压力; 新思路

精神卫生法实施前后海南省少数民族地区精神专科医院住院患者入院情况的对比分析

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目的 非自愿住院制度是国际精神卫生立法过程中备受争议的问题。在《中华人民共和国精神卫生法》立法和实施进程中，非自愿住院制度的实体和程序要件始终处于争议和讨论之中。本次调查就是为了解精神卫生法实施前后海南省少数民族地区精神专科医院封闭式病房精神障碍患者入院相关情况的变化。

方法 参照国内外相关研究设计《海南省平山医院精神病人非自愿住院的调查表》，在相应病房进行问卷调查，要求主管护师在收治患者的时候询问家属相关情况填写，剔除填写不全及有填写错误的问卷。其中危险度评估参照卫生部《重性精神疾病管理治疗工作规范(2018版)》[3]中危险度的6级评估法，采用问卷调查的方式收集精神卫生法实施前后某精神专科医院的两个封闭式病房入院患者的一般资料、入院方式及危险度等信息，比较分析两组数据的差异。

结果 精神卫生法实施前后，住院形式的差异具有统计学意义($\chi^2=29.834, P=0.000$)，自愿住院的比例增加，强制住院的比例的下降；入院患者的诊断均以精神分裂症为主，但是精神卫生法实施后非精神分裂症患者的比例有增加；精神卫生法实施前后入院患者的危险度评估有统计学差异($\chi^2=34.457, P=0.000$)，0级比例上升，但同时3级及以上的比例也稍有增加。

结论 精神卫生法实施后封闭式病房自愿住院的比例虽有升高，但是还是处于偏低的水平，精神专科医院对于住院患者危险度的发掘更加规范、严谨，需要通过采取扩建开放式病房、规范非自愿住院程序等方法来进一步落实自愿住院原则。

关键词：精神卫生法；非自愿住院制度；自愿原则；精神专科医院；对比分析

特色团体心理治疗在白族老年睡眠障碍伴焦虑、抑郁患者中的应用

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目的 本研究旨在分析特色团体心理治疗对白族老年睡眠问题伴随焦虑和抑郁症状的患者的作用。

方法 采用便利抽样法，选取2023年3月至2023年8月在我院住院的白族老年睡眠障碍伴焦虑、抑郁患者，通过随机数表法进行分组，干预组46例，对照组46例。对两组患者的性别比例、年龄和病程等基本信息进行比较后，结果显示两组之间无显著统计差异($P>0.05$)，具有可比性。所有参与者在研究前已签署了知情同意书，此研究得到了本院伦理审查委员会的正式批准。

纳入标准：①患者需符合国际疾病分类第十版(ICD-10)中规定的睡眠障碍并伴有焦虑或抑郁障碍的诊断标准，且需由两位具备至少五年临床经验的精神科医生共同复审诊断；②年龄 ≥ 60 岁，男女均可；③患者为白族。排除条件：①存在严重的身体疾病、脑部器质性疾病、饮酒或药物成瘾以及怀孕者；②受试者在辅导周期内中途退出，未能完整参与，随访期间联系不上失访者。③辅导期间如果连续2周中断，则视为脱落。

对照组接受了抗精神病药物的治疗以及常规心理干预(如心理疏导、将康宣教等)。干预组患者在抗精神病药物的基础上，接受了含有白族特色的团体心理治疗。持续4周，每周进行两次。在干预开始和结束时，两个组别都接受了量表的评估。在此研究中，所有受试者都接受了稳定的药物治疗和指导。

结果 比较两组患者的基本信息后发现，两者之间没有显著的统计学差异(P 值均大于0.05)。干预后，对照组的HAMD、HAMA以及Piper疲劳量表的评分均显著低于干预组，这种差异具有显著的统计学意义($P<0.05$)。

结论 综上所述，特色团体心理治疗针对白族老年睡眠障碍伴焦虑、抑郁患者表现出良好的疗效，团体心理治疗能够有助于缓解患者的不良情绪及疲乏状态。由于研究条件、样本量限制及特色团体心理治疗方案的合理性等诸多因素，同时本研究未对特色团体心理治疗进行长期效应随访和评估，未来的研究需要增加样本量，以便更好地评估团体心理治疗有效性并为未来研究提供指导。

关键词：白族；团体心理治疗；老年；睡眠障碍；

焦虑抑郁

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健脾疏肝润肠方对服用抗精神病药所致便秘患者血清 VIP、Ach 的影响及疗效观察

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昆明市精神病院

目的 观察健脾疏肝润肠方治疗抗精神病药喹硫平所致脾虚肝郁型便秘对患者血清乙酰胆碱(Ach)和血管活性肠肽(VIP)的影响及临床疗效,探讨抗精神病所致便秘的病理机制和健脾疏肝润肠方可能的疗效机理,为中医药治疗抗精神病药所致便秘提供一定的理论依据。

方法 符合纳入标准的 35 例服用抗精神病药喹硫平后出现便秘的患者,采集基线数据后,内服健脾舒肝润肠方治疗 14 天,采用自身对照方法,在治疗前后分别测定患者血清 VIP、Ach 含量,对均值进行比较;同时记录治疗前后患者便秘主要症状分级量化积分表评分、患者便秘症状自评量表(PAC-SYM)评分,对临床疗效进行评估。

结果 治疗后,患者血清血管活性肠肽(VIP)含量较治疗前显著下降,乙酰胆碱(Ach)含量显著升高($P<0.01$),差异有统计学意义;同时,患者的便秘症状得到明显改善,便秘主要症状分级量化积分表评分和便秘患者症状自评量表(PAC-SYM)评分均显著下降,与治疗前比较,差异有统计学意义($P<0.05$)。

结论 健脾疏肝润肠方治疗抗精神病药喹硫平所致便秘,能显著改善患者的便秘症状,且未见明显不良反应,其机制可能与健脾疏肝润肠方对患者血清 VIP、Ach 两种神经递质的调节作用有关。

关键词: 便秘;抗精神病药;脾虚肝郁;乙酰胆碱(Ach);血管活性肠肽(VIP);中医药治疗

青少年精神病性抑郁症临床症状与认知功能间的中介效应

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目的 研究旨在探讨青少年抑郁症患者抑郁症状、焦虑症状和精神病性症状的严重程度与认知功能之间的相关性。

方法 本研究为病例-对照研究,分别纳入首次就诊且未用药的伴有精神病性症状的抑郁症患者(Psychotic Depression, PD) 88 例、不伴有精神病性症状的抑郁症患者(Non-psychotic Depression, Non-PD) 76 例和在性别、年龄、受教育程度上匹配的健康对照 87 例。研究中使用贝克抑郁量表、贝克焦虑量表、简明精神病量表、认知功能用认知成套测量工具(MATRICES Consensus Cognitive Battery, MCCB)来评定患者的临床症状及基线水平的认知功能。首先,对三组间进行一般人口学、临床症状、认知功能的差异性比较;然后,分别对 No-PD 组和 PD 组进行临床症状与认知功能之间的相关性分析;最后针对 PD 组中的相关变量进行中介分析。

结果 1. PD 组在焦虑及抑郁症状量表的评估中所有得分均高于 No-PD 组,且具有统计学意义($P<0.05$)。

2.三组之间在认知功能的差异性比较中,发现三组间在不同认知领域得分及 MCCB 总分比较之间均存在统计学差异($P<0.001$),其中 MCCB 总分以 PD 组得分最低(38.5(29.0,48.0)分)。

3.链式中介效应由 3 个间接途径组成:间接效应 1:一般因子-生理反应因子-注意力/警觉性领域(34.65%);间接效应 2:一般因子-思维障碍因子-注意力/警觉性领域(24.49%);间接效应 3 一般因子-生理反应因子-思维障碍因子-注意力/警觉性(13.61%)。间接效应 1 所对应的 95%置信区间为[-0.0039,-0.2186];间接效应 2 所对应的 95%置信区间为[-0.0133,-0.1502];间接效应 3 所对应的 95%置信区间为[-0.0065,-0.0944],上述区间均不包含 0,因此说明上述 3 条间接效应成立,所以生理反应因子和思维障碍因子在模型中起到了显著的中介作用,而直接效应检验的结果置信区间包含 0,说明直接效应不成立。根据系数检验的结果可以计算中介作用的间接效应为 72.78%,直接效应占比为 27.22%。

结论 对于青少年抑郁症而言,精神病性症状的产生使情绪障碍变得复杂化。本研究结果发现相较于 Non-PD 患者,PD 患者的抑郁及焦虑症状更重,并且更严重的焦虑及抑郁症状与更多认知领域的功能损伤之间存在相关性,以信息处理速度领域和注

意力/警觉性领域中的功能损害最为显著。研究中通过中介效应分析结果发现：在 PD 组中“一般因子-生理反应因子-思维障碍因子-注意力/警觉性领域”链式中介结果成立。

关键词：青少年；抑郁症；精神病性抑郁症；神经认知功能；链式中介效应

青少年精神病性抑郁症认知功能与前额叶神经生化代谢物的相关研究

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目的 研究旨在探讨伴有精神病性症状的青少年抑郁症患者抑郁症状、焦虑症状、精神病性症状及认知功能与前额叶中 GABA、Glu、Cho、NAA 等神经生化代谢物含量的相关性。

方法 本研究为病例-对照研究，分别纳入首次就诊且未用药的伴有精神病性症状的抑郁症（PD）36 例和在性别、年龄、受教育程度上匹配的健康对照 35 例。研究中使用贝克抑郁量表（BDI-II）、贝克焦虑量表（BAI）、简明精神病量表（BPRS）、认知功能用认知成套测量工具（MCCB）来评定患者的临床症状及基线水平的认知功能。使用磁共振波谱成像技术（MRS）进行前额叶神经生化代谢物的测量。利用 J 差异编辑点分辨波谱技术（MEGA-press）及 Gannet 软件对 MRS 数据进行绝对定量分析，获得 GABA/W、Glu/W、GABA/Glu 的比值；利用磁共振系统自带波谱处理软件自动完成基线校准、信号平均、代谢物识别的半定量分析，得到 NAA/Cr、Cho/Cr、NAA/Cho 比值。首先进行两组间一般人口学、临床症状、认知功能的差异性比较；然后对临床症状、认知功能分别与前额叶脑区中的神经生化代谢物含量进行相关性分析；最后，针对相关变量进行线性回归分析。

结果 线性回归分析结果显示：①以 NAA/Cr 为自变量 X1，思维障碍因子为应变量 Y1 构建线性回归方程，结果发现 NAA/Cr 比值大小对思维障碍因子的影响存在统计学差异。线性回归方程为： $Y1 = 12.182 - 4.062 \times X1$ 。②以 NAA/Cr 为自变量 X1，信息处理速度领域为应变量 Y2 构建线性回归方程，

结果发现 NAA/Cr 比值大小对息处理速度领域的影响存在统计学差异。线性回归方程为： $Y2 = 19.791 + 16.430 \times X1$ 。③以 NAA/Cr 为自变量 X1，MCCB 总分为应变量 Y3 构建线性回归方程，结果发现 NAA/Cr 比值大小对 MCCB 总分的影响存在统计学差异。线性回归方程为： $Y3 = 19.304 + 17.409 \times X1$ 。④以 NAA/Cho 为自变量 X2，MCCB 总分为应变量 Y3 构建线性回归方程，结果发现 NAA/Cho 比值大小对 MCCB 总分的影响存在统计学差异。线性回归方程为： $Y3 = 22.941 + 8.681 \times X2$ 。

结论 与健康对照组相比，青少年精神病性抑郁症（PD）患者不仅认知功能存在缺陷，而且在内侧前额叶脑区中神经生化代谢物含量也存在差异。在青少年 PD 患者中，精神病性症状的产生和认知功能会随着内侧前额叶脑区中神经生化代谢物含量的变化而变化，说明青少年 PD 患者中精神病性症状和认知功能存在神经生化的异常。

关键词：青少年抑郁症；精神病性抑郁症；磁共振波谱成像；神经认知功能；神经生化代谢物

一例“嗜铬细胞瘤所致精神障碍”患者的诊疗分析

马学银（宁夏）^{1,2} 马圆圆^{1,2}

1.宁夏回族自治区宁安医院

2.宁夏精神卫生中心

目的 探讨以幻觉妄想为首发症状的躯体疾病的诊疗思路

方法 患者，女性，42 岁。主因“情绪不稳，兴奋话多 2 月余，自杀 1 天”收入院。患者于 2 月前无明显诱因渐出现精神异常，表现为情绪不稳，兴奋话多，易于他人攀比，花钱大手大脚，夜眠差，有时整晚不睡觉。之后上述症状加重，表现为言语夸大，称“自己是神仙，全世界、地球都是自己的；自己是国家领导人”。当时首次在我院住院治疗，诊断为“躁狂发作”，给予“齐拉西酮片 60mg/日，碳酸锂缓释片 1.2g/日”治疗 10 天，患者精神症状有所好转，但病情未完全缓解。出院后患者自行停药，再次出现骂人，打人，言语紊乱，称“自己是神仙”等，不停拍打自己，殴打丈夫，坚信孩子被绑架。后再次住院治疗，住院期间患者总是诉说“心里有一个人和自己说

话”；情感高涨，言行夸大，激惹性增高。诊断为“伴有精神病性症状的躁狂发作”，给予抗精神病药物对症治疗，精神症状无缓解，且有自杀企图及行为，病情逐渐加重，先后3次住院治疗，末次住院诊断“分裂情感性障碍”。患者既往有“晕厥”史，住院期间有过2次“晕厥”现象，血压最高达180/110mmHg，口服两种降压药后血压仍控制不理想。否认高热惊厥。否认癫痫发作病史。家族史无特殊记载。

体格检查及辅助检查：BP155/110mmHg，K⁺2.9mmol/L，意识朦胧，颜面部浮肿。生理反射存在，病理征未引出。腹部B超未发现肝脏、肾脏、脾脏异常结果。精神检查：意识朦胧，对答欠切题，情感反应不协调，可查及幻觉及妄想等精神病性症状；言语夸大，激惹性增高；自知力缺失。

结果 (1)综合患者的精神症状特征、疾病演变及既往躯体疾病情况，初步考虑诊断“分裂情感性障碍”；高血压病；低钾原因待查。(2)处理措施：综合评估患者存在不明原因血压升高、低钾，且经过抗精神病药物治疗后精神病性症状改善无效，故就诊综合医院进一步明确病因。行腹部增强CT示“肾上腺肿瘤”，后诊断为“原发性醛固酮增多症”、“嗜铬细胞瘤”，行手术治疗。疗效评估：行“嗜铬细胞瘤摘除术”后，患者精神症状随之消除，院外生活如常人，坚持上班，工作胜任，未再服用精神科药物。

结论 诊疗思考：针对以精神症状为首发症状的躯体疾病，尤其涉及内分泌疾病时，应全面评估躯体状况，优先考虑躯体疾病亦可能出现精神症状，尤其以精神病性症状更为突出。其次，全面评估躯体症状与精神症状之间的关联性，精神症状难以控制时，要全面分析引起“精神症状”的原发病因，及时处理原发疾病，降低疾病风险及负担。该患者不明原因血压升高、低钾、颜面部浮肿、晕厥、难以控制的精神症状，为最终的疾病诊断提供了强有力的临床线索。

关键词：原发性醛固酮增多症 嗜铬细胞瘤 幻觉妄想 情感症状 高血压 低钾

一例“难治性精神分裂症”患者的诊疗分析

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目的 探讨难治性精神分裂症的诊疗思路

方法 患者，女性，53岁。主因“凭空闻语、怀疑被害16年，复发2月”收入院。患者于16年前因婚姻问题逐渐出现精神异常，主要表现为对亲人冷漠，自言自语，述凭空听到许多声音在议论她，说她坏话。行为怪异，不停挥动手臂。疑心大，怀疑有人迫害她、敲诈她，怀疑当地有一黑社会团伙组织到处跟踪、监控她，坚信电视上的节目与自己的经历有关。曾先后多次住院治疗，均诊断“精神分裂症”，先后给予“利培酮片”“氯氮平”足量、足疗程治疗后症状未充分缓解。期间服用氯氮平时出现白细胞、中性粒细胞缺乏，故未再使用氯氮平。院外患者不规律服药，甚至拒绝服药，病情一直未完全缓解，个人生活能力、人际交往及社会功能明显受损，独居，不与他人交往。后因病情加重再次住院治疗。既往史无特殊记载。家族中其妹妹患有“精神分裂症”，曾住院治疗。

体格检查及辅助检查：生命体征平稳，未发现阳性体征。辅助检查未见明显异常。

精神检查：意识清，定向力完整，接触极差，主动违拗，治疗护理不合作，拒食，拒药。明显情绪不稳，行为冲动，伤人毁物。存在反复出现的言语性、命令性幻听，原发性被害妄想及被跟踪、被监视体验；思维散漫，言语交流困难；行为怪异、愚蠢，随地小便，赤身裸体。存在消极观念，言语表达自杀企图。意志行为明显减退，自知力丧失。未查及显著情绪低落或情感高涨等病理性情感症状。

结果 (1)诊断：综合患者的精神症状特征、疾病演变及既往住院诊疗经过，诊断难治性精神分裂症(TRS)已明确。(2)处理措施：综合评估患者存在营养摄入、冲动伤人、自杀等风险，故首选MECT(无抽搐电休克)治疗及口服利培酮口服液，控制急性期激越症状，降低医疗风险；考虑患者既往院外服药依从性差，故给予棕榈酸帕利哌酮注射液长效剂肌肉注射(每月一次)，提高治疗依从性，期望有效改善精神症状，降低复发风险。(3)疗效评估：经系统治疗后幻觉、妄想及行为瓦解完全消除，病情痊愈出院。院外门诊规律随诊，定期每月肌注棕榈酸帕利哌酮注射液长效针，日常生活能力及社会功能恢复良好，近3年来病情未复发。

结论 诊疗思考：据文献报道，经过初始治疗的首发精神分裂症患者有10%-15%会成为TRs，所

有患者中, 最终有 30% 成为 TRS。(1) 针对难治性精神分裂症患者应全面评估病情, 加强对急性期精神症状的控制, 延缓病情发展, 降低复发风险。(2) MECT、棕榈酸帕利哌酮注射液长效针剂的应用对于难治性精神分裂症的改善是一种较好的治疗措施, 值得临床推广。

关键词: 难治性精神分裂症 MECT 棕榈酸帕利哌酮注射液长效针剂 复发风险

人际心理治疗对产后抑郁障碍疗效的随机对照研究

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目的 了解产后抑郁障碍患者采用人际心理治疗 (Interpersonal therapy, IPT) 联合药物治疗与单用药物治疗对比的疗效差异。

方法 纳入 2020 年 4 月到 2023 年 2 月在我院门诊就诊的发病于产后一年内的抑郁障碍 (Major Depressive Disorder, MDD) 患者共 27 人, 随机将其分入药物治疗组以及药物治疗联合 IPT 治疗组, 药物治疗采取抗抑郁药物治疗, 本研究选择用 SSRIs、SNRIs 类药物, 持续治疗 16 周。有睡眠障碍者可合并使用促眠药物, 但连续使用不超过 1 月, 不合并使用其他精神类药物。IPT 治疗为期 8 周, 每周一次, 每次 50 分钟, IPT 治疗师完成 IPT 治疗的理论培训且获得相应证书, 并在治疗过程中持续接受督导。采用汉密尔顿抑郁量表 (HAMD)、汉密尔顿焦虑量表 (HAMA) 作为主要结局指标。

结果 研究对象在入组基线之后脱落 9 人; 治疗开始之后随访脱落 2 人; 最终纳入分析数据共计 16 人 (其中药物治疗组 7 人, IPT 联合药物治疗组 9 人)。主要疗效指标 HAMD 结果显示, 时间的主效应显著 ($F = 15.312, p < 0.001$), 提示两组在接受治疗后 HAMD 分数均有所改善, 但组别和时间的交互作用不显著 ($F = 0.581, p = 0.744$)。提示两组改变的组间差异不显著。对于药物组, 从治疗后的 8 周 (LS mean difference = 12.273, $t = 4.091, p = 0.003$) 开始后的随访和基线存在显著差异, 即治疗的改善从治疗后的 8 周开始; 而联合 IPT 治疗组的显著改善从

4 周开始 (LS mean difference = 10.750, $t = 4.379, p = 0.001$)。主要疗效指标 HAMA 结果显示, 时间主效应显著 ($F = 21.309, p < 0.001$), 提示两组在接受治疗后的 HAMA 分数均有所改善, 但组别和时间的交互作用不显著 ($F = 0.963, p = 0.459$), 提示两组改变的组间差异不显著。药物组的显著改善从 8 周开始 (LS mean difference = 9.063, $t = 4.617, p = 0.001$); 而联合 IPT 治疗组的显著改善从 4 周开始 (LS mean difference = 7.750, $t = 4.843, p < 0.001$)。

结论 单用抗抑郁药物治疗与抗抑郁药物联合 IPT 治疗对于改善产后抑郁障碍患者的抑郁焦虑症状均有较好的疗效, 本研究提示两组间总体疗效无明显差异, 但联合 IPT 治疗能够帮助更早期改善症状。

关键词: 人际心理治疗, 围产期, 抑郁障碍, 随机对照, 疗效

高焦虑组和低焦虑组患者焦虑症状、生活质量、认知情绪关联性网络分析研究

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目的 不同焦虑障碍患者的焦虑水平和认知情绪调节能力有所不同, 且既往研究提示焦虑水平越高其生活质量越差。本研究旨在通过网络分析的方法探索不同焦虑水平的焦虑障碍患者焦虑症状、生活质量、认知情绪的差异。

方法 研究收集 458 例焦虑障碍受试者, 网络分析纳入的变量有焦虑症状、生活质量、认知情绪。采用汉密尔顿焦虑量表 (Hamilton Anxiety Scale, HAMA) 和 7 项广泛性焦虑障碍量表 (Generalized Anxiety Disorder-7, GAD) 评估患者的焦虑症状, 且以汉密尔顿焦虑量表 (Hamilton Anxiety Scale, HAMA) 得分为分类标准, ≥ 21 分为高焦虑组 ($n_1 = 232$), < 21 分为低焦虑组 ($n_2 = 226$)。使用世界卫生组织生活质量测定简表 (World Health Organization Quality of Life Scale-Brief Form Questionnaire, WHOQOL-BREF) 评估患者的生活质量; 使用认知情绪调节问卷 (Cognitive Emotion Regulation Questionnaire, CREQ) 来评估患者的认知情绪。

结果 高焦虑组和低焦虑组网络比较分析结果

显示两组分在显著差异 ($\text{maximum difference} = 0.353$, $p < 0.01$)。其中,低焦虑组的不自主担忧和难以放松之间的相关、焦虑和易激惹之间的相关、焦虑和躯体化之间的相关、难以放松和自责之间的相关等症状之间的关联均显著大于高焦虑组。

结论 不同焦虑水平的焦虑障碍患者焦虑症状、生活质量、认知情绪等维度之间的关联性存在明显异常。

关键词: 焦虑障碍, 网络分析, 高焦虑组, 低焦虑组

边缘型人格障碍的症状特征的范式研究进展

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目的 边缘型人格障碍指 (Borderline Personality Disorder, BPD) 的是一种以情绪、自我意识以及人际关系不稳定为特点的人格障碍类型。以往针对 BPD 症状的研究主要采用量表的方式,其结果容易受主观性和社会赞许性的影响,使用行为学范式对 BPD 症状的研究能够弥补这一部分,较准确、客观地测量到相对真实的情境下 BPD 患者的外显和内隐模式。本文旨在整理边缘型人格行为学研究范式的结果和未来研究展望,以期扩大针对 BPD 患者的行为学研究的规模及应用场景,结合多种干预方法以及生理测量方法,揭露 BPD 患者深层的认知和行为模式,增进研究者和精神卫生工作实践者对于 BPD 的思考和理解。

方法 本文使用文献检索与梳理的方法,就人际不稳定性、情绪不稳定性、自我观念不稳定性及冲动性四个角度梳理了针对 BPD 症状特征的行为学研究范式及其进展,比较了不同行为学范式中结果的差异并提出未来可能的研究发展方向。

结果 人际不稳定: 主要范式有眼神读心测验、信任博弈范式、情绪 Stroop 范式和情绪 go/no-go 范式。BPD 患者非常在意人际关系中的各种信息,但容易“夸大”社交对象的消极情绪或“曲解”积极情绪相关线索。以往研究缺少对于心理状态与人际模式交互作用的探讨。

情绪不稳定: 主要范式有网络投球范式和材料启动范式。BPD 患者更容易产生强烈的消极情绪,

通常和人际交往有关; BPD 患者会低估自己的外在情绪表露,病尽力放大自己的情绪表现以达成某种“社交目的”。未来研究可进一步探讨人际和情绪之间的交互作用,或者弥补 BPD 积极情绪相关研究的空白。

自我不稳定: 主要范式有自我参照启动和特质判断回忆任务。BPD 患者对自己的评价是负面的,也会预测外界给自己的评价全部是负面的,甚至在得到积极评价时感到“更加不悦”。对 BPD 自我不稳定性的研究相对较少,未来研究可适当增加该方面研究。

冲动性: 主要范式有相似图像配对范式、概率反转范式、延迟折扣任务、停止信号任务、仿真气球风险任务等。BPD 患者所共有的冲动性更多地体现在某些特定的维度上,且某些亚型具有某些特定的冲动性特质,似乎和情绪相关。未来研究可在基于上述结果进一步探讨 BPD 冲动性“共性”和“个性”以及与情绪相关的部分。

结论 相比于量表, BPD 行为学研究少。行为学研究具有标准统一、能测得内隐特征、外部效度高、适合相互比较的优点。未来研究可尝试纳入多种生理测量方法关注干预阶段各项行为学指标的动态变化,并纵向或横向地结合或对比多种行为学范式以深入探讨 BPD 患者异常的思维、情绪和行为模式,为针对性干预提供实证证据。

关键词: 边缘型人格障碍, 范式, 情绪, 人际关系, 自我观念, 冲动性

Sex Differences in Loneliness, Social Isolation, and Their Impact on Psychiatric Symptoms and Cognitive Functioning in Schizophrenia.

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Background Social isolation and loneliness, objective and subjective features of dysfunctional social relationships, are more prevalent in schizophrenia (SCZ) patients. This study aimed to explore sex differences in loneliness and social isolation among Chinese SCZ patients, and to investigate their relationships with psychiatric symptoms and cognition

Methods A total of 323 SCZ patients, comprising 136 males and 187 females, were recruited. Psychopathology, cognitive functioning, loneliness and social isolation were assessed using the Positive and Negative Syndrome Scale (PANSS), the Repeated Battery for Assessment of Neuropsychological Status (RBANS), the UCLA Loneliness Scale (Version 3) and the Social Isolation Index

Results Male patients exhibited higher UCLA total score and social isolation score compared to females ($p < 0.05$). In male patients, both loneliness and social isolation significantly predicted PANSS total score ($p < 0.01$), N subscore ($p < 0.05$) and G subscore ($p < 0.05$). For female patients, loneliness significantly predicted immediate memory ($p < 0.001$), language ($p = 0.013$), delayed memory ($p = 0.017$), and RBANS total scores ($p = 0.002$). Further examination of loneliness components in female revealed that personal feelings of isolation were negatively associated with language ($p = 0.001$) and lack of collective connectedness were negatively associated with delayed memory ($p = 0.048$)

Conclusion Loneliness and social isolation are more pronounced in male SCZ patients than in females. Both loneliness and social isolation are positively related to psychiatric symptoms and cognitive functioning in male patients, while loneliness is negatively associated with cognitive functioning in female patients

关键词: Schizophrenia, Loneliness, Social isolation, Psychiatric symptom, Cognitive functioning

Brief Interpersonal Psychotherapy For Major Depressive Disorder Patients In China: A Pilot Randomized Controlled Trial

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Objective Brief Interpersonal Psychotherapy

(IPT-B) suits Chinese population for its brevity and accessibility. However, evidence supporting its effectiveness for depressive patients in China is scarce. This randomized controlled pilot trial examined the preliminary efficacy of IPT-B for adult major depressive disorder (MDD) patients in China

Methods Thirty-eight patients diagnosed with MDD were randomized to IPT-B + medication group and medication group. IPT-B was delivered in-person with 8 weekly 45-minute sessions. Assessments were conducted at baseline, treatment weeks 2, 4 and post-treatment to track changes in depression and anxiety symptoms (Hamilton Depression Scale-24, Hamilton Anxiety Scale), suicidal risks (Beck Scale for Suicide Ideation), subjective experiences (McGill Pain Questionnaire, Snaith-Hamilton Pleasure Scale, Motivation and Energy Inventory) and cognitive functioning (Perceived Deficits Questionnaire-Depression)

Results For both groups, there were significant pre- and post-treatment decrease in depression symptoms, anxiety, suicidal risk, and sensory and affective pain ($p < 0.05$), as well as significant increase in motivation/energy, cognitive functioning, and pleasure experience ($p < 0.05$). Motivation/energy increased more in the IPT-B + medication group than in the medication group ($p = 0.001$). Significant differences favoured IPT-B + medication group for lower levels of pain at Week 2 and 4, and lower suicidal risk at Week 4

Conclusion IPT-B is promisingly an effective and feasible treatment for depressive patients in China, which can be combined with medication and perform better in many aspects than medication alone. This trial is pioneering in investigating use of IPT-B in China. Future studies should benefit from exploration of its applicability, efficacy and mechanism of change in Chinese population

关键词: brief interpersonal psychotherapy; major depressive disorder; Chinese population; combining medication; symptoms; suicidal risks

Plasma Metabolites and Inflammatory Factor

Characteristics in Obsessive-compulsive Disorder Patients

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Background Individuals with obsessive-compulsive disorder (OCD) frequently exhibit metabolic disorders and atypical inflammatory responses. However, research on specific metabolic characteristics associated with OCD is lacking. This study aimed to investigate alterations in serum metabolites and inflammatory factors in OCD patients and analyze their correlation with the severity of the disorder

Methods The study included 55 patients with moderate-to-severe OCD (either medication-naive or off-medication for at least eight weeks) and 54 healthy controls (HCs). Demographic information and clinical scales were collected for both groups. We assessed obsessive-compulsive symptoms using the Yale-Brown Obsessive-Compulsive Disorder Scale (Y-BOCS). Untargeted metabolomics analyses were performed using ultra-high-performance liquid chromatography with high-resolution mass spectrometry (UHPLC-LC-MS/MS) to detect metabolites in blood samples. An enzyme-linked immunosorbent assay (ELISA) measured levels of interleukin-1 β (IL-1 β), IL-6, IL-2, IL-12, and tumor necrosis factor α (TNF- α). Spearman correlation analysis examined the relationships between blood metabolites, inflammatory factors, and clinical measures

Results A total of 298 metabolites were identified from 109 samples, with 49 showing notable variations. After false discovery rate (FDR) correction, 11 metabolites were statistically significant ($P < 0.05$). These metabolites, mainly lipids, organic acids, and organic compounds, are involved in amino acid, lipid, and vitamin biosynthesis, energy metabolism, and other secondary metabolites. In addition, five inflammatory factors were significantly higher in OCD patients than in

HCs. Spearman correlation analysis revealed significant correlations among metabolites, inflammatory factors, and clinical symptoms in patients with severe OCD (Y-BOCS > 25). Specifically, the neurotransmitter acetylcholine was positively correlated with the Y-BOCS score and compulsion. Phosphocholine was positively correlated with the Obsessive-Compulsive Inventory-Revised (OCI-R), and ordering behavior was positively correlated with lysophosphatidylcholine 20:4 (LPC 20:4) and phosphocholine. IL-1 β was negatively correlated with compulsion, OCI-R total score, and neutralization. IL-6 was negatively correlated with lysophosphatidylethanolamine 22:6 (LPE 22:6), and TNF- α was negatively correlated with hoarding. Using the 4 key metabolites (acetylcholine, dimethyl 4-hydroxyisophthalate, scutellarin, and LPE 22:6) as biomarkers for diagnosing OCD, the receiver operating characteristic (ROC) curve showed an area under the curve (AUC) of 0.89, indicating high diagnostic ability

Conclusion The study found distinct changes in blood metabolites and inflammatory factors in OCD patients, with strong links to clinical symptoms. Specific plasma metabolites have the potential to serve as biomarkers for diagnosing OCD, providing new insights for future diagnostic and therapeutic approaches.

关键词: obsessive-compulsive disorder; metabolite; biomarkers; inflammatory factors

精神分裂症患者加用组胺类药物服用疗效的荟萃分析

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目的 精神分裂症是常见的精神疾病。患者主要临床表现为思维、知觉、情感、意志以及认知功能异于常人，且不同患者的临床表现不尽相同，对患者自身、家庭以及社会均会造成较大的困扰和负担。患者服用的抗精神病药物因为对体内激素，递质的影响，导致目前有一些研究发现组胺类药物，包括H1受体激动类药物及H2受体拮抗类药物可以改善精神分裂症患者服用抗精神病药引起的体重增加及

改善精神症状。本研究旨在通过 meta 分析提高原结果的统计效能,解决各研究结果的不一致性,得出更加合理可信的结论用于指导临床治疗,使更多的精神分裂症患者获益。

方法 本研究选取了 16 篇文献,数据来源于 Pubmed,Embase,Web of Science,Cochrane Library,PsycINFO,and Chinese database。研究数据截止到 2024 年 6 月。Revman5.4 软件被用来分析相关的数据,包括患者的体重,BMI,甘油三酯,胆固醇,高低密度酯蛋白,血糖,PANSS 总分,PANSS 阴性得分等数据,对其用森林图等方法 meta 分析

结果 最后,16 个随机对照实验满足了相关的入排标准,总共包括了 1045 名患者。数据的结果展示了 H1 受体激动类药物及 H2 受体拮抗类药物可以减少精神分裂症患者服用抗精神病药物所引起的患者的体重的增加程度,患者用体重变化进行比较有显著的区别 (SMD=-1.35, 95% CI [-1.67,-1.03], P<0.00001。患者用甘油三酯变化进行比较有显著的区别 (SMD=-0.17, 95% CI [-0.24,-0.11], P<0.00001。患者用 PANSS 阴性变化值进行比较有显著的区别 (SMD=-1.53, 95% CI [-2.59,-0.47], P=0.005; 患者用 BMI 变化进行了比较有显著的区别 (SMD=-1.04, 95% CI [-1.78,-0.3], P=0.01;

结论 精神分裂症患者服用抗精神病药物同时加用组胺类药物,包括 H1 受体激动类药物及 H2 受体拮抗类药物可以减少精神分裂症患者服用抗精神病药物所引起的患者的体重的增加程度并改善精神分裂症患者的阴性症状,且不良反应少,患者依从性高,可以作为辅助精神分裂症患者服用抗精神病药物的一种选择

关键词: 组胺 精神分裂症 体重 精神病症状

Efficacy of Micro-Video Psychological Training Camp in Reducing Symptom of Depression and Anxiety and Improving Mental Resilience

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Objective Digital self-help psychological interventions based on modern new media technology can effectively address the current imbalance between supply and demand in mental health services, with significant economic and social benefits. As an online self-help platform for psychological intervention, Micro-Video Psychological Training Camp (MVPTC) platform was developed for those who suffer from mild to moderate symptoms of depression and/or anxiety and is tasked with the goal of reducing depressive and anxious symptoms while improving mental resilience. Thus, this study will be carried out to verify its efficacy and applicability

Methods A total of 242 individuals with mild to moderate symptoms of depression and anxiety were recruited and randomly assigned to either the micro-video psychological training camp intervention group (N=166) or the wait-list control group (N=76). Both the intervention and assessment were completed by participants online. The appropriateness indicators used in this study, according to its research objectives, included completion rate, dropout rate, overall satisfaction, and user feedback for the intervention group. The effectiveness indicators included differences in scores on self-rating depression scale (SDS), self-rating anxiety scale (SAS), and Connor-Davidson resilience scale (CD-RISC) at different time points (Baseline, post-intervention, 1-month and 3-month follow-up) between the two groups

Results For adherence, one hundred and one participants (60.84%) completed the courses, whose average satisfaction score was 3.06±0.41. Of these, forty-eight patients (73.85%) dropped out during the intervention. For intervention outcomes, the results of linear mixed model showed that the Group × Time effect was significant for SDS scale scores (F(3, 1026) = 6.84, p < 0.001, η²=0.07), SAS scale scores (F(3, 1026) = 6.15, p < 0.001, η²=0.10) and CD-RISC scale scores (F(3, 1026) = 4.50, p = 0.004 < 0.01, η²=0.26). Compared to the Controlled group, participants' depression symptoms and anxiety symptoms in the Intervention group declined faster, and their resilience score improved significantly, which could maintain during the three-month follow-up period

Conclusion MVPTC developed in this study is

applicable to individuals with mild to moderate depression and anxiety symptoms. And its effectiveness has been verified. It can effectively alleviate the depressive and anxious symptoms of individuals with mild to moderate depression and anxiety, which can be maintained during a 3-month follow-up period. At the same time, it can also improve the psychological resilience of individuals with mild to moderate depression and anxiety. Digital self-help psychological interventions can be used for mental health services targeting individuals with mild to moderate depression and anxiety symptoms

关键词: depression and anxiety symptoms, mental resilience, self-service, psychological intervention

The Unique Value of Reading The Bible in The Psychological Treatment of Patients with Depression and Its Deeper Implications

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Objective In exploring the influence of various religious classics on psychotherapy, we can gain a deeper understanding of why the Bible has its unique value and significance in this area. Reading the Bible can be used as an adjunctive therapeutic tool in the treatment of depression, although not a direct medical treatment

Methods Uniqueness of the Bible

The Bible has several unique characteristics compared to the classics of other religions:

1. Formation process and time span: The process of writing the Bible took about 1,600 years to complete, and this long time span reflects its deep historical deposits and continuous religious development. Compared with the classics of other religions, the formation process of the Bible is more complex and time-consuming.

2. Diversity of authorship: The Bible was written by more than forty people of different professions, including kings, farmers, philosophers, fishermen, etc.

This diversity of authorship backgrounds makes the Bible rich and diversified, and able to reflect the life and beliefs of mankind from multiple perspectives.

3. Harmony and consistency of content: Despite the fact that the Bible has many authors and was written at different times and places, its content shows a high degree of harmony and consistency. The volumes interpret each other and together they build a complete and unified religious worldview. Such coherence and unity of content is not common in other religious classics.

4. Popularity and Influence: The Bible is one of the best-selling books in the world, and its popularity and influence are difficult to compare with those of other religious classics. It not only has an important position in the field of religion, but also has a far-reaching influence on many fields such as literature, art and philosophy.

5. Miracle of Preservation and Transmission: Although the Bible has been in danger of being destroyed many times in the course of history, it has still been preserved intact and transmitted to this day. This miracle of preservation and transmission highlights the high status and irreplaceability of the Bible in the hearts of believers.

To summarize, the Bible shows its uniqueness compared to other religious classics in terms of its formation process, the diversity of its authorship, the harmony and consistency of its content, its popularity and influence, and the miracle of its preservation and transmission.

The Bible is more than a fundamental Christian classic; it is a universal guide to morality and behavior. The values embedded in it, such as tolerance, love, kindness and sacrifice, provide a clear direction for patients to live by. In psychotherapy, these values can help patients to re-examine their behaviors and attitudes and guide them towards a more positive and active lifestyle. By reading and understanding these teachings, depressed patients can better think about and adjust their behavior, find more positive and healthy goals in life, and gradually change their negative emotions and mindsets in practice.

In addition, the moral code of the Bible provides a mirror for patients to reflect on their own behavior. It encourages people to do good and avoid ill will, and this

positive moral guidance helps the patient to adjust his or her behavior and thought patterns in psychotherapy.

2. Strong psychological comfort and support

Sufferers of psychological problems, especially those who are emotionally traumatized or who are experiencing psychological difficulties, often need outside comfort and support. Many chapters in the Bible are strongly comforting in nature, and they provide a spiritual pillar for patients to rely on. This comfort comes not only from the text, but from the power of faith, which can help patients regain meaning and purpose in their lives.

3. Community Support and Sense of Belonging

Religious groups usually provide a community environment with common beliefs and values. In such an environment, individuals are able to receive support, encouragement and care from other members, reducing feelings of loneliness and low self-esteem, and this community support plays an important role in the treatment and prevention of depression. Human beings are social animals, and we all need to connect with others and feel belonging and accepted.

4. Clear motivation for behavior change

The teachings in the Bible not only provide patients with spiritual comfort, but also provide them with clear guidance on behavior. It encourages people to pursue truth, goodness and beauty, and to avoid evil and depravity. This clear moral guidance, combined with community support and encouragement, provides patients with a powerful motivation to change their behavior. In psychotherapy, this motivation is crucial in helping patients overcome their own inertia and actively seek to change themselves in pursuit of a healthier lifestyle.

5. Comprehensive Mental Health Enhancement

In summary, the value of the Bible in psychotherapy is all-encompassing. It not only provides spiritual comfort and support, but also offers patients clear moral and behavioral guidance to help them adjust their values and lifestyles. Combined with community support, Bible reading brings about a more comprehensive enhancement of mental health for patients.

At the same time, it is important to note that each person's faith and cultural background is different, and

therefore the individual differences and needs of the patient should be fully taken into account when choosing a psychotherapeutic approach. Bible reading may not be suitable for everyone, but it is certainly a valuable psychotherapeutic resource for those who have a Christian faith or are interested in it.

Results In the field of psychotherapy, the unique value and deep impact of the Bible can be further elucidated through specific examples. Below are some practical examples of how the Bible can be useful in psychotherapy. Examples : Universal values guidance and moral reshaping; The power of psychological comfort and support;

Clear motivation for behavior change; Facing loss and acceptance; Community support and sense of belonging building; Resolving family conflict and restoring harmony; Overcoming Fear and Building Confidence; Cultivating Gratitude and a Positive Mindset.

Through these specific examples, we can see the practical application and effectiveness of the Bible in psychotherapy. Through these examples, we can see the multidimensional value of the Bible in psychotherapy. It can not only provide universal values and moral codes to guide patients to adjust their behavior and attitudes, but also give them strong psychological comfort and support. At the same time, Bible reading can also help patients build community support and a sense of belonging, and stimulate their intrinsic motivation to change their behavior.

Whether it's dealing with loss and acceptance, resolving family conflict, overcoming fears, or cultivating gratitude, the Bible can provide invaluable guidance and support for patients. Of course, this does not mean that the Bible is the only or best approach to psychotherapy, but it is certainly a valuable resource to consider and try. However, we should also realize that the Bible is not a panacea for psychotherapy. In applying the Bible to psychotherapy, full consideration needs to be given to the individual differences and needs of patients, as well as their faith and cultural background. For patients who do not have Christian faith or are not interested in the Bible, it may not be appropriate to forcefully introduce the Bible. Therefore, psychotherapists should apply various therapeutic methods flexibly according to the specific

conditions of the patients in order to achieve the best therapeutic effect.

Conclusion It is worth noting that reading the Bible is not a direct cure for depression, but can be used as an aid to help patients cope with depression. When dealing with depression, a combination of professional medical help, counseling, and possibly medication should be used to comprehensively manage symptoms. Also, an individual's acceptance and attitude toward religious beliefs can affect the effectiveness of the Bible in adjunctive therapy. Overall, the Bible has its own unique value and significance in the field of psychotherapy. More than just a religious classic, it is a valuable resource that can provide spiritual comfort, moral guidance, and behavioral motivation

关键词: Religion, Uniqueness of the Bible, Value of the Bible in Psychotherapy, Depression

强迫症患者共情、情绪调节能力的特征及其对临床症状的影响

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目的 强迫症 (obsessive-compulsive disorder, OCD) 是一种慢性的精神和行为障碍, 以强迫思维和强迫行为为主要表现。强迫症患者的共情和情绪调节能力缺陷可能与其临床症状有关, 本研究拟探索患者共情能力、情绪调节能力、临床症状三者的关系, 分析情绪调节和共情能力对临床症状的影响机制。

方法 研究共纳入 90 名强迫症患者及 40 名健康被试, 使用自编信息调查表、耶鲁-布朗强迫量表 (Y-BOCS)、强迫症状分类量表修订版 (OCI-R)、贝克抑郁量表 (BDI)、贝克焦虑量表 (BAI)、席汉残疾量表 (SDS)、国际神经精神科简式访谈问卷 (M.I.N.I.) 搜集被试的基本信息、临床症状表现及共病情况, 使用公认真认知成套测验 (MCCB) 测量被试的神经认知功能水平, 使用中文版人际反应指数 (IRI-C) 及简版情绪调节困难量表 (DERS-16) 测

量被试的共情能力及情绪调节能力, 对测量结果进行差异检验及相关分析, 明确强迫症患者的共情与情绪调节能力特点, 探究其与神经认知功能症状、强迫症状、情绪症状等临床症状变量的关系, 再以情绪调节困难为自变量、共情能力为中介变量、临床症状为因变量进行中介效应检验, 以了解共情及情绪调节能力对临床症状的作用机制。

结果 (1) 强迫症患者认知共情得分显著低于健康对照, 情感共情得分与健康对照无显著差异, 情绪调节困难各维度得分及总分均显著高于健康对照, DERS 总分与 IRI-个人痛苦得分显著正相关, 共病抑郁或焦虑障碍的患者 IRI-个人痛苦得分更高;

(2) IRI-换位思考得分与 MCCB 注意-警觉得分显著负相关, IRI-共情关注得分与 MCCB 信息处理速度得分显著正相关, 情绪调节困难量表总分正向预测 OCI-R 得分, 无共病的强迫症患者的认知共情得分负向预测 Y-BOCS 得分, 强迫症患者 IRI-个人痛苦在情绪调节困难与抑郁之间存在中介作用。

结论 (1) 强迫症患者认知共情水平低, 情绪调节困难程度高, 共病情绪障碍的患者情感共情体验更强, 共情能力与情绪调节能力有关; (2) 强迫症患者认知功能症状与共情有关, 情绪调节困难可直接或通过共情间接影响情绪症状, 强迫症状严重程度主要受认知共情影响, 强迫症状维度主要与情绪调节困难有关。

关键词: 强迫症; 共情; 情绪调节

伴强迫型人格障碍的强迫症患者临床特征和影响因素

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目的 本研究旨在探究伴强迫型人格障碍的强迫症患者的临床特征差异及影响因素, 为进一步临床诊疗提供理论支持。

方法 2022 年 7 月至 2023 年 12 月在南京医科大学附属脑科医院强迫症专病门诊治疗的强迫症患者 (n=195) 及同时期招募的健康志愿者 (n=53)。将 YBOCS 得分大于等于 16 分的受试者作为强迫症患者组, 并对其进行分组, 强迫型人格障碍筛查分

量表得分 ≤ 5 分为不伴有强迫型人格障碍的强迫症组 ($n=137$), >5 分为伴有强迫型人格障碍的强迫症组 ($n=58$)。采用描述统计、单因素方差分析、独立样本 t 检验比较患者组与健康对照组间人口学资料及临床症状的差异。使用双变量皮尔逊相关计算和多元线性回归分析影响强迫型人格障碍分量表得分的因素。

结果 本研究共纳入了 195 名强迫症患者和 53 名健康被试, 总计 248 例受试者, 年龄范围 18-59 岁。男性占 51.20%, 女性占 48.80%。在 195 名强迫症患者中, 有 41 例受试者报告有精神疾病家族史, 占 21.03%。未治疗时间范围为 0-23 年, 总体平均值为 2.77 年。在本次就诊前, 有 130 例患者 (66.67%) 未接受过任何治疗。伴或不伴强迫型人格障碍的强迫症患者在年龄、未治疗时间、精神疾病家族史、强迫症症状筛查量表、排序维度、囤积维度、贝克抑郁量表得分方面存在统计学意义的差异 ($F/t=3.175$ 、 2.668 、 2.637 、 68.570 、 21.693 、 4.749 、 44.438 , $p<0.05$)。未治疗时间、囤积维度、排序维度和贝克抑郁量表得分被发现是 PDQ 得分的相关影响因素 ($r=0.141$ 、 0.153 、 0.365 、 0.492 、 0.414 , $p<0.05$)。囤积维度和排序维度对 PDQ 得分的预测效果比其他因素更为显著 ($B=0.231$ 、 0.274)。

结论 相比于单纯强迫症患者, 囤积行为、排序行为和更严重的抑郁情绪可能是伴有强迫型人格障碍的强迫症患者的重要症状特征。

关键词: 强迫型人格障碍, 强迫, 未治疗时间, 症状维度

远程精神心理服务使用现状调查: 以从业者的视角

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目的 由于传统心理服务资源分布不均、可覆盖人群有限, 远程精神心理服务 (telemental health) 凭时空便利性、间接成本低在国内普及, 但其也存在隐私安全保障差等伦理问题。本研究目的是调查目前远程精神心理服务的实践模式和伦理情况, 探究影响从业者使用远程服务的因素, 以及如何促进

从业者更伦理地进行远程服务, 有利于推动我国精神卫生服务的均质化与可及性。

方法 本研究采用全国性横断面线上设计问卷调查, 招募国内执业的精神心理服务从业者填写。问卷中包括 1) 基本信息及远程服务模式调查; 2) 态度认知调查, 含态度、主观规范、感知行为控制、感知有用性、感知易用性和行为意图六个因子; 3) 伦理情况调查。

结果 共回收 972 份有效问卷, 含精神科医生 431 名, 心理师 541 名。其中 690 名从业者报告使用远程服务, 多数从业者使用视频提供服务 (65.9%), 在办公区域等公共空间进行服务的从业者 (78.84%) 与在家等私人空间进行服务的从业者 (67.25%) 数量相当; 多数从业者表示远程服务价格低于传统心理服务 (37.7%) 或与其相当 (58.1%); 44.5% 的公立机构从业者表示机构要求记录服务全程, 在私立机构中机构要求 (29.2%) 和自行记录 (33.9%) 比例相当。职业 ($\beta=1.130$, $p<0.001$) 和工作地点 ($\beta=-1.508$, $p<0.001$) 对从业者是否使用远程服务的影响显著, 心理师使用的可能性比精神科医生高 3.097 倍, 公立机构使用可能性仅为私立机构的 0.221 倍, 从业者的态度 ($\beta=0.081$, $p=0.039$) 也有显著影响。在使用远程服务的群体中, 行为意图 ($\beta=1.314$, $p<0.001$) 提高促使他们使用时间上升。关于伦理问题, 缺乏专门规章制度 (58.55%)、培训不足 (30.58%)、无法处理紧急情况 (71.88%) 普遍存在, 行为意图过高 ($\beta=-0.408$, $p<0.001$)、主观规范低 ($\beta=0.395$, $p=0.006$)、感知行为控制低 ($\beta=0.357$, $p=0.006$) 成为危险因素。

结论 精神科医生和公立机构从业者受限于潜在服务对象和客观条件制约, 进行远程服务的比例低于心理师和私立机构从业者。从业者对远程精神心理服务的态度和意图能够正向预测使用, 提高主观规范和感知行为控制也有利于促使服务更为伦理。但从业者应据实选择适合方式, 过于想要使用远程服务可能会造成伦理问题。

关键词: 远程精神心理服务, 从业者, 行为模式, 伦理规范

一位痛并快乐着的男生——经典精神分析视角下的俄狄浦斯冲突

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目的 阐述俄狄浦斯冲突的象征性隐喻,借助三角关系中的象征内容来探讨个人内心复杂的情感体验。

方法 本文首先介绍了一个惊恐障碍的心理治疗案例,从经典精神分析的视角探讨患者与父母亲的三角关系以及与女性的关系,从而揭示出其潜意识的俄狄浦斯冲突。然后通过阐述希腊神话俄狄浦斯王弑父娶母事件背后的隐喻,引入俄狄浦斯情结的概念。以男孩为例,介绍俄狄浦斯冲突的成因,从象征层面探讨儿童对异性父母的乱伦冲动、与同性父母的竞争、同胞竞争、阉割性焦虑、内疚、超我发展、心理性别身份认同等情感体验,强调父亲在三元关系中的作用。解决了俄狄浦斯冲突,儿童就能获得“成熟的三元之爱”。最后描述俄狄浦斯冲突在成年人的人际交往以及国家之间相互竞争中随处可见。

结果 俄狄浦斯冲突在很多精神症状的深层潜藏着,是心理发展水平进入神经症阶段之后的核心冲突。

结论 俄狄浦斯冲突在日常生活中无处不在,在人际交往、国家之间相互竞争中经常能看到它的影子。出现俄狄浦斯冲突,标志着人的心理发展阶段从二元关系进入三角关系,这是心理走向成熟的必经之路。走出俄狄浦斯冲突,人的性别身份认同逐渐形成,更有可能建立好的人际关系。每个人的一生都在演绎三角关系。

关键词: 经典精神分析,俄狄浦斯,阉割性焦虑,性别认同

短程动力性人际治疗对于改善抑郁症患者解释偏差的疗效研究

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目的 解释偏差是指个体对模糊情境做出正性或负性解释的倾向,是影响个体人际体验和互动的重要因素。抑郁症患者被认为会对人际情境做出消极解释偏差,并基于此采取敌对或回避等消极行为,

进而负性影响其人际关系,成为抑郁症维持的重要因素之一。短程动力性人际治疗(Dynamic Interpersonal Therapy, DIT)是16次手册化的短程心理动力性治疗方法,目前国内已有随机对照研究证明了其对抑郁症患者症状的改善作用,然而其对解释偏差特征是否起作用尚待深入研究。因此,本研究旨在探究DIT对抑郁症患者解释偏差的影响。

方法 本研究采用随机平行对照设计,根据美国精神疾病诊断与统计手册第五版(DSM-5)标准,纳入重症抑郁障碍患者共102例。其中对照组40例,接受常规抗抑郁药物治疗。DIT组62例,接受常规抗抑郁药物治疗和DIT治疗。词句联想范式(Word Sentence Association Paradigm, WSAP)分别在治疗前和治疗后(16周)测量患者的解释偏差特征。此外汉密尔顿抑郁量表(HAMD-17)和9项患者健康抑郁量表(PHQ-9)评估患者的抑郁症状。

结果 (1) 抑郁疗效指标显示: HAMD-17 ($F=15.65, p<0.001$) 和 PHQ-9 ($F=4.91, p=0.03$) 的时间 \times 组别交互作用均显著,且 DIT 组症状下降更快,在治疗后 HAMD-17 ($F=9.79, p=0.002$) 分数显著低于对照组。(2) 疗效指标与解释偏差指标变化的相关分析显示: DIT 组 ($r=0.307, p=0.02$) 和对照组 ($r=0.338, p=0.03$) 的 HAMD-17 得分变化均与积极词认可率变化显著负相关。(3) 患者积极解释偏差的三个指标均表现出显著的时间主效应,具体体现于,两个组别在治疗前后的积极词认可率显著提升 ($F=85.89, p<0.001$), 认可积极词的速度显著加快 ($F=19.98, p<0.001$), 拒绝积极词的速度显著变慢 ($F=17.96, p<0.001$), 组别主效应和交互效应未达到统计学显著水平; DIT 组患者拒绝消极词的速度加快,与对照组的差异具有统计学意义 ($F=4.03, p=0.47$)。

结论 DIT 和纯药物治疗均能有效提升抑郁症患者的积极解释偏差,且 DIT 治疗在减少患者消极解释偏差方面效果优于纯药物治疗。

关键词: 短程动力性人际治疗,解释偏差特征,抑郁症

The Role of Social Support and Perceived Stress in Quality of Life in Patients with Major Depressive Disorder

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Objective Major depressive disorder (MDD) is a prevalent and debilitating mental illness that significantly impacts patients' health and quality of life. This study aims to investigate the mediating effect of social support and perceived stress in the relationship between the severity of depressive symptoms and quality of life in patients with MDD

Methods A total of 146 drug-naïve patients with MDD according to Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) completed the Hamilton Depression Rating Scale-17 (HAMD-17), Quality Of Life Scale-6 item (QOL-6), Social Support Rate Scale (SSRS), and Perceived Stress Scale-10 item (PSS-10)

Results The results revealed significant associations among severity of depressive symptoms, social support, perceived stress, and quality of life. The HAMD-17 was negatively correlated with QOL-6 ($p < 0.001$) and SSRS ($p = 0.04$), whereas positively correlated with PSS-10 ($p < 0.001$). SSRS and PSS-10 also played a mediating role in the chain prediction model linking HAMD-17 to QOL-6 ($\beta = -0.1467$, $p < 0.001$)

Conclusion Engaging in social interactions provides both some level of stress as well as substantial social support for individuals with depressive disorder. This finding suggests that such engagement may mitigate the negative impact of depression on their quality of life

关键词: Depression, Quality of Life, Social Support, Perceived Stress.

强迫症患者不恰如其分体验的临床特征研究

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目的 不恰如其分体验 (Not just right experience, NJRE) 是强迫症 (Obsessive-compulsive disorder,

OCD) 患者常见的特殊主观体验, 影响了患者的症状表现、治疗疗效以及疾病预后。因此本研究旨在探索伴 NJRE 的 OCD 患者临床症状特征及神经认知特点, 增强我们对 OCD 患者 NJRE 相关症状的理解, 为未来的临床干预提供新的思路。

方法 本研究从南京脑科医院强迫症专病门诊及住院病区招募强迫症患者。通过网络广告和社区海报招募健康对照人群。对所有被试进行一般人口学资料采集及临床量表评估, 对其中部分被试进行神经认知功能测验。采用卡方检验、独立样本 t 检验、单因素方差分析对被试一般临床信息包括性别、年龄、受教育年限等人口学特征、强迫症患者组的强迫症状严重程度、病程、OCI-R 得分、MCCB 测验得分进行比较。在认知成套测验结果部分使用单因素方差分析进行组间比较, 并将性别、年龄、受教育年限作为协变量, 事后分析时使用 Bonferroni 法进行多重比较校正。

结果 (1) 共招募评估 377 名 OCD 患者。结果发现其中有 184 名 OCD 患者当前存在 NJRE, 193 名 OCD 患者当前不存在 NJRE。伴 NJRE 的 OCD 患者起病年龄更小, 强迫思维、强迫行为严重程度及 YBOCS 总分均显著高于不伴 NJRE 的 OCD 患者。除强迫思维维度得分, 伴 NJRE 的 OCD 患者 OCI-R 各症状维度得分均显著高于不伴 NJRE 的 OCD 患者。此外伴 NJRE 的 OCD 患者 BAI、BDI 量表得分显著高于不伴 NJRE 的 OCD 患者。(2) 伴 NJRE 的 OCD 患者组 (OCD+NJRE 患者组) 强迫症症状分类量表 (OCI-R) 清洗维度、囤积维度、排序维度、检查维度、精神中和维度得分显著高于不伴 NJRE 的 OCD 患者组 (OCD-NJRE 患者组)。三组在连线测验 (TMT)、符号编码测验 (BACS)、迷宫 (NAB) 和 范畴流畅测试 (Fluency) 上的得分存在显著差异 ($P < 0.05$)。事后比较显示, 健康对照组 (HC 组) TMT、NAB、Fluency 测验得分均显著高于 OCD-NJRE 组, 而 OCD+NJRE 组与 HC 组之间的差异不显著; 但 OCD+NJRE 组在 BACS 测验得分低于 HC 组, 而 OCD-NJRE 组与 HC 组之间的差异不显著。

结论 伴 NJRE 的 OCD 患者在对称、清洗、检查、精神中和等症状维度更严重; 在大部分神经认知功能测验中的表现优于不伴 NJRE 的 OCD 患者, 但在符号编码测验中的表现相对较差, 这提示 NJRE 的 OCD 患者注意维持及转移能力受损较明显。

关键词: 强迫症, 不恰如其分体验, 临床特征, 神经认知功能

雌激素在精神病学中的研究进展

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近年来,精神分裂症的患病率逐年上升,提高治疗应答率的问题日趋突出,而且在治疗上已不仅仅满足于症状的缓解。它涉及到了多种领域的功能缺损,同时在性别、年龄等多个方面均存在着一定的性别差异。根据流行病学调查显示,精神分裂症患者中男性的比例高于女性,同时女性精神障碍的2个高峰,青春期前后及绝经期前后,在雌激素水平突然下降的情况下易诱发精神障碍包括精神分裂症、心境障碍,由此提出了精神分裂症的“雌激素假说”。理论上雌激素可以改善精神分裂症患者的预后,但目前应用雌激素作为辅助治疗的情况并不常见,且我国相关临床研究相对较少,多停留在理论及动物实验层面。为避免雌激素带来的癌变不良风险,临床研究多应用选择性雌激素受体调节剂(SERMs)作为雌激素辅助治疗的代表,包括了1代SERMs的他莫昔芬以及2代SERMs的雷洛昔芬。此种假说向临床提供了一个新的思路,即应对特殊人群如绝经期的女性分裂症患者、难治性精神分裂症等可能会有意外收获,在抗精神病药物难以改善的精神症状、弥补抗精神病药物内分泌紊乱副作用、分裂症后的心境障碍及物质滥用、提高生活质量及社会功能上可能会存在意想不到的效果。由此可见,为进一步改善精神分裂症患者的预后,提高生活质量,了解雌激素在精神分裂症疾病发展过程中的作用至关重要。

关键词: 雌激素,精神分裂症,性功能障碍

NOS1AP 基因多态性与中国汉族健康人群人格特质的相关性研究

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目的 目前,关于人格的分子遗传学的研究受

到越来越多的重视。已经报道的与人格相关的候选基因大部分都是多巴胺(DA)、5-羟色胺(5-HT)、去甲肾上腺素(NE)、谷氨酸(Glu)、 γ -氨基丁酸(GABA)等神经递质相关的基因。除此之外,另有研究表明人格的发展与神经发育、以及参与认知功能的基因和蛋白也具有明显相关性。NOS1AP 作为神经型一氧化氮合酶(nNOS)的接头蛋白,影响一氧化氮(NO)的产生,调节多巴胺、谷氨酸和乙酰胆碱等神经递质的释放,参与脑内多种神经信号的传导过程。NOS1AP 通过其羧基末端磷酸酪氨酸结构域(PTB)与突触蛋白结合,影响突触的发生及可塑。另外,NOS1AP 的 PTB 结构域还可与 Dexas1 结合,参与神经元内信号转导以及与 NMDA 受体介导的神经元毒性有关。综上,我们猜测 NOS1AP 可能通过影响脑内多种信号转导系统及神经元的发育等方面而与人格特质之间存在潜在的相关性。目前,国内外尚无这方面的报道。因此,本研究采用 PCR-RFLP 方法,探讨 NOS1AP 基因多态性与中国汉族健康人人格特质是否具有相关性。

方法 本实验选取 522 名中国汉族健康志愿者为研究对象。采用 Cloninger 编制的三维人格问卷(TPQ)的中文版对所有入组的被试者进行人格的评定,留取受试者外周静脉血 2ml,碘化钾法提取基因组 DNA,采用 PCR-RFLP 法测定其基因型,应用 SPSS17.0 统计软件,检验 NOS1AP 基因四个位点各基因型间人格维度的差异, $p < 0.05$ 被认为有显著统计学意义。

结果 (1) rs1858232 的各基因型与 NS3($x^2=7.497$, $p=0.024$)及 HA4($x^2=6.437$, $p=0.040$)有显著性差异;(2) rs4531275 的各基因型与 RD2($x^2=11.484$, $p=0.003$)有显著性差异;(3) rs4657178 的各基因型与 NS($x^2=5.223$, $p=0.073$), HA($x^2=3.660$, $p=0.165$)及 RD ($x^2=0.061$, $p=0.970$)总分及其分量表均无显著性差异;(4) rs6704393 的各基因型与 HA1($x^2=7.216$, $p=0.027$)有显著性差异。

结论 研究结果表明 NOS1AP 基因多态性与中国汉族健康人人格特质有关, NOS1AP 基因可能是影响人格的候选基因之一。

关键词: NOS1AP;基因多态性;人格特质;中国健康人群;

不同类型抑郁障碍患者肠道菌群的差异性研

究

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目的 了解不同类型抑郁障碍患者与健康人群的肠道菌群的差别,探讨不同类型抑郁障碍与肠道微生物失衡相关性,为进一步抑郁障碍的精确诊治提供科学依据。

方法 选取2022年1月至2023年11月就诊于大连市第七医院的首发抑郁障碍患者67例(抑郁障碍组),完成一般情况调查问卷、汉密尔顿抑郁量表(HAMD),杨德森等编制的48条目生活事件量表(LES)、赵幸福等引进的儿童期虐待问卷(CTQ-SF),抑郁障碍分为遗传性起源型、应激性起源型和其他起源型。同时选取与患者组同期来自同一地区的健康志愿者20人(对照组)。收集粪便后使用琼脂糖凝胶电泳提取DNA,使用聚合酶链式反应(PCR)扩增细菌或古菌16SrDNA基因和其他功能基因的不同区域,于Illumina测序平台进行上机测序,通过生物信息学分析获得肠道菌群中细菌或古菌物种组成、物种丰度、系统进化、群落比较等信息,探讨不同种类抑郁障碍与肠道菌群的相关性。用SPSS进行统计学计算;采用生物学信息的方法来分析肠道菌群群落各个水平丰度和多样性的变化,采用QIIME2方法分析组间各分类水平菌群显著性差异,采用Kruskal-Wallis法和Wilcoxon Test来分析各组间肠道菌群的 α 和 β 多样性,使用LEfSe方法检验生物标志物,LDA值与物种进化树。以 $P<0.05$ 表示差异具有统计学意义。

结果 1.不同类型抑郁障碍组与对照组在肠道菌群多样性方面无明显差异。

2.门水平上,肠道菌群丰度较高的种类主要是四个门,厚壁菌门、变形菌门、放线菌门和拟杆菌门,占最多的是厚壁细菌门。在属水平上,肠道菌群丰度较高的种类主要是一些属如埃希氏菌属,普拉梭菌属,Phocaeicola A,拟杆菌属,和戴阿利斯特杆菌属。

3.遗传性起源型、应激性起源型和其他起源型的肠道菌群的标志物差异,具有统计学意义($P<0.05$)。应激性起源型中肠道定植产气肠杆菌属(Enterocloster)、丁酸盐产生菌属(Anaerostipes)、Faecalimonas水平高于其余三组;遗传性起源型中梭菌属(Clostridium)、Phocaea水平高于其余三组;对

照组中放线菌科(Actinomycetaceae)、保罗詹森菌属(Pauljensenia)、内脏臭杆菌(Odoribacter)水平高于其余三组。

结论 1.不同类型抑郁障碍患者与普通健康人群在肠道菌群多样性方面无明显差异。

2.不同类型抑郁障碍患者之间的肠道菌群可能存在差异性标志物,肠道菌群在未来可能作为抑郁障碍分类新的生物标志物,推动抑郁障碍的个体化精准治疗。

关键词: 抑郁障碍 肠道菌群 相关性分析 分布情况 高通量测序

重度抑郁障碍患者的快感缺失与炎性细胞因子及补体因子H的研究进展

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目的 重度抑郁障碍作为一种常见的慢性疾病,具有多种多样的症状。其病程、症状和治疗反应的异质性很大,导致治疗和机制研究的困难。为了提高治疗的准确性和临床结果,需要对抑郁症的各种特征的神经生物学基础有更深入的了解。快感缺失,即体验快乐的能力下降,是抑郁症的典型特征之一,同时也是精神分裂症、其他情感障碍和物质滥用的典型特征。根据DSM-5,快感缺失作为重度抑郁症发作的核心特征,也被认为是最有前途的内表型之一。在抑郁症患者中,快感缺失不仅是一种症状,而且与不良预后和自杀行为有更强的相关性。此外,许多心理、药理学甚至一些物理疗法对抑郁症患者的影响差异很大,主要是由于享乐障碍。因此,虽然有大量证据表明异常的奖赏环路会导致抑郁症的快感缺失症状,但迫切需要更多的生物学测定提出GDNF可以作重度抑郁障碍的快感缺失的生物标志物,为诊断和治疗提供了一种新的方向。

方法 本文通过对近十余年来抑郁障碍的快感缺失、炎性细胞因子及补体因子H的相关的研究进行总结分析,探究重度抑郁障碍患者的快感缺失与炎性细胞因子及补体因子H的相关性。

结果 重度抑郁障碍的快感缺失和炎性细胞因子及补体因子H之间可能存在的关联。

结论 重度抑郁障碍的快感缺失和炎性细胞因

子及补体因子 H 之间可能存在的关联,可以作重度抑郁障碍的快感缺失的生物标志物,为诊断和治疗提供了一种新的方向。

关键词: 重度抑郁障碍 炎症细胞因子 补体因子 H

童年创伤与成年应激对于强迫症状的影响: 炎症及丘脑功能连接所发挥的作用

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目的 强迫症是一种与 CSTC 环路异常相关的神经精神疾病。既往研究表明,童年创伤和应激事件可能通过影响大脑功能连接而增加 OCD 风险。本文研究探讨了强迫症(OCD)患者中儿童创伤经历、应激、神经炎症与大脑功能连接之间的关系。研究基于皮层-纹状体-丘脑-皮层(CSTC)环路的神经病理模型,分析了童年创伤、应激事件对强迫症症状的影响,并考察了炎症因子在其中扮演的角色。

方法 本研究纳入 105 名受试者,包括 50 名 OCD 患者和 55 名健康对照组(HC)。采用耶鲁-布朗强迫量表(Y-BOCS)、应激感受量表(PSS)和童年期创伤量表(CTQ)进行临床评估。通过 ELISA 法测定血浆炎症因子水平,并利用 3.0 T MRI 系统进行神经影像学数据采集。使用 SPSS 和 Process 宏程序进行回归和中介分析。

结果 OCD 患者组在 Y-BOCS、CTQ、PSS 得分上显著高于 HC 组,且炎症因子水平也显著升高。进一步的中介分析显示,炎症因子水平能够介导应激感受与 OCD 症状严重程度之间的关系。同时神经影像学分析发现, OCD 患者的炎症因子水平与丘脑亚区-背外侧前额叶皮层(dIPFC)、丘脑亚区-顶上回的功能连接强度负相关,并且功能连接强度同时强迫症状严重程度及童年创伤严重程度负相关。

结论 本研究结果支持创伤-应激-炎症-强迫症状模型,提示应激感受可能通过促进神经炎症来加剧 OCD 症状。此外,与炎症相关的丘脑亚区的功能连接改变可能与 OCD 症状的严重程度及童年创伤经历有关。这些发现为理解 OCD 的发病机制提供了

新的视角,并可能有助于开发新的治疗策略。

关键词: 强迫症,儿童创伤,应激,神经炎症,功能连接,丘脑

代谢综合征与双相障碍躁狂发作患者认知功能的相关性研究

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目的 近年来,双相障碍的发病率正在逐年增长,成为全球人类疾病负担之一。越来越多研究报告,认知损害导致双相障碍患者生活质量减退,生活满意度下降。导致双相障碍患者认知损害的原因多方多面,代谢综合征则是当前研究较多的领域之一。国内外研究发现肥胖、血压、血脂异常及胰岛素抵抗对认知域影响存在差异性,认知域受损亦存在不均衡性。现有的认知评估工具多种多样,繁琐费时。中国简版神经认知成套测验(C-BCT)作为新兴的认知测评工具,被广泛应用到精神分裂症患者认知功能评级中,具有耗时短、操作方便等优点,在双相障碍疾病中使用较少。因此,本研究目的为探索代谢综合征对双相障碍躁狂发作患者认知功能的影响,代谢综合征各组分与认知功能是否存在相关性,为临床医生提供新的理论依据。

方法 本研究收集 2022 年 10 月至 2023 年 12 月于大连市第七人民医院门诊就诊或住院的双相障碍躁狂发作患者,依据患者是否存在代谢综合征,将患者分为研究组(伴代谢综合征)和对照组(不伴代谢综合征),每组各 30 例,基线期对两组患者分别使用中国简版神经认知成套测验(C-BCT)进行认知功能评估,采用 SPSS 26.0 上进行统计学分析,组间比较采用独立样本 t 检验,将代谢综合征各组分与认知功能分数进行相关性分析及回归分析, $P < 0.05$ 具有统计学意义。

结果 1.基线期组间比较符号编码分数有统计学差异(研究组 38.37 ± 8.74 , 对照组 $43.20 \pm 8.34, p = 0.032$);基线期组间比较连线测试、持续操作、数字广度测试分数无统计学差异($p > 0.05$)。

2.基线期患者连线测试分数与体重指数呈负相关($r = -0.258, p = 0.047$);患者符号编码分数与体重指数、舒张压呈负相关($r = -0.292, p = 0.023$; $r = -$

0.281, $p=0.030$); 患者持续操作分数与体重指数呈负相关 ($r=-0.333, p=0.009$); 患者数字广度与代谢综合征各组别则无相关性。回归分析显示随着体重指数的升高, 患者连线测试分数降低 ($B=-0.409, t=-2.030, p=0.047$); 随着体重指数的升高, 患者符号编码分数降低 ($B=-0.693, t=-2.030, p=0.047$); 随着体重指数的升高, 患者持续操作分数降低 ($B=-0.783, t=-2.690, p=0.009$)。

结论 1. 共病代谢综合征的双相障碍躁狂发作患者具有更差的认知表现。

2. 双相障碍躁狂发作患者认知功能下降可能与肥胖相关。

关键词: 双相障碍, 躁狂发作, 认知功能, 代谢综合征

Incorporating Culture Consideration In Practice Of Interpersonal Psychotherapy In China: A Comparison Of Two Cases And The Role Of Chinese Funeral Ritual

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Objective For Interpersonal psychotherapy (IPT) to be more effective in its worldwide dissemination, cultural factors should be taken into account and adaptations should be made. This article assessed two cases contrasting the influence of attending or missing Chinese keening rituals on later depression among bereaved young adults. It also examined IPT's effectiveness in treating bereavement-related depression

Methods Two cases were compared in this article, with two bereaved individuals, one diagnosed with depression two years after missing mother's keening ritual, and her sister, who participated in the keening ritual and displayed no depressive symptoms. The former sought and received IPT. Cases were presented in details, IPT treatment was presented, and assessments evaluating depression symptoms (Hamilton Depression Scale-17)

were conducted for both individuals at baseline and before every session

Results Scores of the health individual indicated no significant depressive symptoms throughout the process. Scores showed decrease in depressive symptoms for the depressive individual. Her scores decreased drastically at the third measurement and remained relatively low throughout the treatment. IPT alleviated depression by addressing emotional difficulties in interpersonal contexts and resolving past and current relationship problems related to depressive symptoms

Conclusion The two cases suggest the protective role of keening in Chinese funeral ceremonies for decreasing the risk of subsequent depression among young adults following the death of a family member. IPT effectively treated depression for bereaved population. We call on future studies to investigate other culture-specific rituals with potential psychological significance to better understand how to incorporate culture consideration in practice of IPT in China

关键词: interpersonal psychotherapy; bereavement; depression; funeral rituals; keening; case comparison; cultural adaptation

老年痴呆症的现状及分析

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目的 目前众多的慢性疾病中, 老年痴呆病人所带来的家庭负担是最大的。那么, 如何有效的降低这些负担已经成为一项重要的工作。本文主要为了探讨老年痴呆病的发病特征及社区管理模式。

方法 一是社区医疗机构对老年痴呆症患者的健康管理, 1、照顾人的客观压力。2、主观照顾负担, 通过分析主观照顾负担影响因素, BPSD 属于最为严重的影响因素, 越高的病人 BPSD 严重程度, 从而就会加剧照顾者所感知到的主观负担。二是健康管理的内容, (一) 照护的管理要点,

①日常生活的照护 ②居住环境和安全的照护 ③沟通障碍的照护 ④失语的照护 ⑤行为异常的照护

⑥心理照护老年痴呆是一种不可逆的病症，发病机理与环境及社会文化、心理因素密切相关。⑦饮食护理⑧皮肤护理⑨服药的照护（二）认知训练管理，（三）对家属的健康管理，（四）健康饮食管理，（五）环境管理，（六）运动管理，（七）医疗管理，（八）健康体检，（九）早期症状。

老年痴呆症的早期发现及筛查评估，系统规范治疗指导。以及对病人人家属的心理健康状况以及对其实施教育后对病人生活质量的影响。

结果 指导家属调节自己的心态，减轻了心理负担，不断完好护理的方法，正确对待患病者，改善护理质量，提高患者的生活质量。

结论 提高家属的护理质量，提高患者的生活质量。

关键词：痴呆，社区管理

碳酸锂联合用药治疗双相情感障碍的研究进展

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双相情感障碍是一种以心境高涨与心境低落交替作为主要特点的心境障碍，存在多种发作形式，随着发作次数的增加，其病情往往逐渐复杂化，治疗难度亦逐渐升高。双相情感障碍患者在发病时自知力受损，容易造成自己及他人的人身伤害及财产损失，因而需要迅速有效的控制病情，并预防复发。碳酸锂是一种常用的心境稳定剂，其通过提升血锂浓度而稳定情绪，被广泛应用于在双相情感障碍的急性期治疗及巩固期维持疗效上，具体作用机制尚未完全阐明。碳酸锂可以单独使用或联合其他药物及非药物治疗使用。我国双相障碍诊疗指南将碳酸锂作为双相情感障碍急性期治疗的一线药物。在临床应用时，由于血锂浓度提升较慢，为了更快控制病情，减少疾病对患者身体及其他方面造成的损伤，提升预后，对于精神病性症状较重、以及躁狂或抑郁症状较重的患者，往往会联合其他抗精神病药物、心境稳定剂或抗抑郁药物进行治疗。然而在何时选择何种药物使用何种剂量进行联合治疗往往需要根据临床医生自己的临床经验进行探索，本文对国内外近年来使用对双相情感障碍患者使用碳酸锂进行

单药或与其他药物进行联合用药的文献进行总结，以期为碳酸锂治疗双相情感障碍时进行治疗方案选择提供更多依据，并为碳酸锂的进一步研究提供思路。

关键词：碳酸锂，双相情感障碍，联合用药

Association between Alexithymia and Neurocognition in Chinese Han First-episode, Drug-naïve Major Depressive Disorder

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Objective Alexithymia is defined as a difficulty in identifying and describing one's own emotions. It represents a risk factor for cognitive deficits and is frequently observed in individuals with depressive disorders. However, the relationship between alexithymia and neurocognitive function in major depressive disorder (MDD) is still unknown. This study aimed to explore the association between alexithymia and neurocognition in patients with MDD

Methods A total of 134 Chinese Han first-episode drug-naïve MDD patients were recruited. The 20-item Toronto Alexithymia scale (TAS-20), the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS), the 9-item Patient Health Questionnaire (PHQ-9) and the Generalized Anxiety Disorder-7 items (GAD-7) was used to assess alexithymia, neurocognitive functioning, and emotion. Multivariable linear regression models were used to estimate the association between alexithymia and neurocognition. Interaction and stratified analyses were conducted according to age, gender, marital and education status

Results Among the 134 MDD patients, 55 participants (41%) had alexithymia. In the fully adjusted model, TAS total score (TAS-T) and difficulty identifying feelings (DIF) were statistically significantly associated with immediate memory. The interaction analysis showed no interactive role in the association between alexithymia and immediate memory

Conclusion Alexithymia is negatively associated with immediate memory in MDD patients, highlighting that more attention should be paid to the alteration of cognitive functioning in MDD patients with alexithymia

关键词: Alexithymia, Immediate memory, Multi-variable liner regression, Stratified analysis, Interaction analysis, Major depressive disorder

令人“困”“获”的心理咨詢 ——浅谈精神分析之移情与反移情

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目的 精神分析治疗中的移情与反移情

方法 案例报告

结果 心理咨询过程中, 及时处理移情与反移情, 迅速解除来访者心理问题

结论 1、男 35 岁 未婚, 和父母不亲近, 不愿回家 10 年。大学毕业后曾有过短暂工作, 和男性领导关系不好而辞职, 开始在外旅居生活, 喜欢找年长男性陪同自己。即使给父母打电话要钱也不喊爸爸妈妈, 总感觉和父母亲近不起来, 在家很不舒服。父母已经年迈, 也不愿回家照顾父母。爸爸是船员。由父母陪陪同咨询。

来访者存在轻度的焦虑和抑郁情绪, 感觉在外旅游时心情能好一些, 自己也希望回家照顾父母, 但又觉得在家不舒服, 因此无法长时间在家生活。无情感高涨和乱花钱等表现。

咨询过程: 通过首次访谈后, 来访者愿意接受心理咨询, 并约定每周一早上 8 点开始咨询, 每次咨询 40 分钟。咨询时来访者语速慢, 语速低, 多喜欢低头, 少有目光接触。每次咨询过程中咨询师感到非常困倦, 感觉几乎睁不开眼睛, 即使喝浓茶或者咖啡也非常困倦, 咨询结束, 咨询师立刻清醒。咨询师觉察后和来访者讨论, 来访者表示真的睡着了也没事的, 只是想找个人说说话, 这时来访者突然明白到就像爸爸远远的在海上飘荡一样。于是来访者开始愿意和父母交流了, 在家也感觉舒服多了, 通过评估之后结束咨询。

2.移情与反移情

在精神分析的理论框架中, 移情与反移情是构成心理咨询关系动态性的核心要素。

2.1 移情: 来访者将过去对重要他人的情感、态度或期望投射到咨询师身上的过程。它为来访者提供了一个安全的环境, 使其能够重新体验并处理过去未解决的情感冲突。通过识别与评估来访者的移情, 咨询师能够更准确地把握来访者的心理需求, 从而制定更为个性化的咨询方案。同时, 移情也是咨询师与来访者建立信任与亲近感的关键环节, 促进咨询过程的顺利进行。

2.2 反移情, 是咨询师在回应来访者移情时产生的情感反应, 它反映了咨询师对来访者情感的共鸣与理解。

反移情在咨询实践中同样具有不可忽视的重要性。咨询师在应对来访者移情时产生的情感反应, 不仅是对来访者情感的共鸣与理解, 也是咨询师自我认知的反映。通过反移情, 咨询师能够更深入地了解自己的价值观、信念和偏见, 从而避免在咨询过程中受到个人情感的影响。此外, 反移情还能帮助咨询师识别潜在的风险与陷阱, 确保咨询过程的安全与有效。

3、案例分析: 本案例中来访者因爸爸常年在外工作, 因而长期在外寻找年长男性(象爸爸一样)陪伴自己。心理咨询也愿意寻找男性咨询师, 咨询师只是远远的存在这是来访者的移情。即使是周一的早上咨询师也非常困倦, 且咨询师只对该来访者困倦(反移情), 也是来访者的投射性认同, 通过分析, 来访者意识到自己的潜意识, 心理困惑立即烟消云散, 回归正常生活。

关键词: 精神分析, 移情, 反移情

强迫症患者的情绪调节困难与临床特征的相关研究

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目的 对伴有情绪调节困难的强迫症患者进行相关评估, 收集基本人口学资料、临床特征、心理学因素及社会功能信息并进行相关性研究。

方法 纳入强迫症患者 85 人, 健康对照 44 人, 使用简式情绪调节困难量表(Difficulties in Emotion

Regulation Scale-16, DERS-16) 进行访谈, 明确患者是否存在情绪调节困难以及存在的维度。对基本人口学资料、临床特征、心理学因素及社会功能信息和量表得分进行分组比较, 采用斯皮尔曼相关分析探索患者情绪调节困难与人口学及临床特征的相关性。

结果 在对强迫症患者与健康对照组进行比较的研究中, 年龄因素在两组间未显示出统计学上的显著差异 (独立 t 检验, $P > 0.05$)。然而, 在性别、受教育年限以及耶鲁-布朗强迫量表 (Yale-Brown Obsessive Compulsive Scale, Y-BOCS)、强迫量表修订版 (Obsessive Compulsive Inventory-Revised, OCI-R)、贝克抑郁量表第二版 (Beck Depression Inventory, BDI-II)、贝克焦虑量表 (Beck Anxiety Inventory, BAI)、席汉残疾量表 (Sheehan Disability Scale, SDS)、应激感受量表 (10-item Perceived Stress Scale, PSS-10) 的总分和分量表分方面, 两组之间存在显著的统计差异 ($P < 0.05$)。此外, DERS-16 量表在总分、清晰性缺失、目标定向行为投入困难、控制冲动行为困难、有效情绪调节策略获取有限、不接受情绪反应等分量表分上显示出显著的组间差异。进一步的相关分析揭示, DERS-16 量表中清晰性缺失、目标定向行为投入困难、控制冲动行为困难、不接受情绪反应等分量表分与年龄呈现显著的负相关。DERS-16 总分与 OCI-R 总分及其各个分量表分、BDI-II、BAI、SDS 量表分之间存在显著的正相关。特别地, DERS-16 的清晰性缺失与 Y-BOCS 总分、Y-BOCS-思维分量表、OCI-R 总分及其分量表分、BDI-II、BAI 量表分之间显示出显著的正相关。DERS-16 的目标定向行为投入困难、控制冲动行为困难分量表分、有效情绪调节策略获取有限、不接受情绪反应分量表分与 OCI-R 总分、OCI-R 的各个分量表分、BDI-II、BAI、SDS 量表分也均显示显著的正相关。

结论 强迫症患者普遍存在情绪调节困难, 且情绪调节困难各维度与临床特征及心理、社会功能存在一定的联系。对情绪调节的识别评估有助于进一步认识强迫的异质性。

关键词: 强迫症, 情绪调节困难

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目的 对伴有情绪调节困难的强迫症患者进行情绪调节相关评估和基本人口学资料、病史及临床特征、心理学相关因素及社会功能信息收集, 通过核磁共振技术进行功能神经环路的脑影像研究。

方法 基于强迫症患者与健康对照组的静息态功能脑影像数据进行比较, 纳入强迫症患者 49 人, 健康对照 40 人。以双侧尾端额中回、双侧外眶额、双侧内眶额、双侧额下回岛盖区、双侧额下回眶区、双侧额下回三角区、双侧嘴端额中回、双侧额上回、双侧伏隔核、双侧杏仁核、双侧尾状核、双侧苍白球、双侧核壳、双侧丘脑 28 个脑区为感兴趣区 (Region Of Interest, ROI) 进行基于种子点的功能连接 (Seed-Based Functional Connectivity) 分析, 进行不同脑区间的功能连接强度 (Functional Connectivity Strength, FCS) 比较。采用偏相关分析探索差异脑区特征值与患者情绪调节困难的相关性。

结果 与健康对照组相比, 强迫症患者在 ROI 左侧苍白球-左侧外眶额、左侧内眶额-左侧外眶额、左侧额上回-左侧外眶额、右侧额上回-左侧外眶额、右侧尾状核-左侧外眶额、右侧核壳-左侧外眶额、右侧额上回-右侧嘴端额中回之间的功能连接强度明显降低。其中右侧苍白球-左侧外眶额间的功能连接强度与 Y-BOCS 总分及强迫观念分量表得分呈显著正相关。右侧尾状核-左侧外眶额与 OCI-R 检查分量表得分呈显著负相关。左侧额上回-左侧外眶额间的功能连接强度与 PSS-10 量表得分呈显著正相关 ($P < 0.05$)。

结论 本研究指出, 与健康对照相比, 强迫症患者在多个脑区间的功能连接强度存在差异。这些发现揭示了强迫症患者脑区功能连接强度的特定缺陷。进一步的相关性分析表明, 这些功能连接强度的降低与强迫症的症状严重程度及心理应激因素密切相关。这为理解强迫症的神经生物学基础提供了重要线索, 并可能为未来的治疗策略开发提供理论依据。

关键词: 强迫症, 情绪调节困难, 静息态功能磁共振

强迫症患者情绪调节困难与功能神经环路的关联研究

氧化应激和炎症反应在青少年抑郁症中的作用

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目的 近年来, 青少年抑郁症患病率急剧上升, 其确切的发病机制尚不完全清楚。许多研究指出了可能的生物学和心理社会因素, 其中氧化应激和炎症反应被认为是抑郁症的发病机制之一。本综述着重探讨氧化应激和炎症反应在青少年抑郁症患者中的作用以及可能的治疗方向。

方法 通过中国知网、万方数据、维普数据库、中国生物医学文献数据库、PubMed、PsycINFO、Web of Science 等学术数据库, 检索关于青少年抑郁症、氧化应激和炎症反应之间关系的研究文献。关键词包括但不限于青少年抑郁症 (Adolescent depression)、氧化应激 (Oxidative stress)、炎症反应 (Inflammatory response)、炎症因子 (inflammatory factor)。根据题目和摘要的相关性, 筛选出与研究主题相关的文献。包括原始研究、综述文章和 Meta 分析。综合分析提取的数据, 探讨青少年抑郁症、氧化应激和炎症反应之间的关联。

结果 多项研究表明, 青少年抑郁症患者与氧化应激水平增加和炎症反应的增强相关, 如氧化应激标志物 (一氧化氮、8-hydroxy-20 脱氧鸟苷、谷胱甘肽过氧化物酶和丙二醛等) 和炎症因子 (肿瘤坏死因子 α 、干扰素 γ 和 IL-6 等) 均显示出不同程度的异常; 活性氧的增加和促炎信号通路的激活加剧炎症过程, 进而加剧抑郁症症状, 如自伤行为; 同时发现超重或肥胖与抑郁症的共存会加剧炎症反应, 导致青少年抑郁症患者自伤风险增加; 目前发现抗氧化剂和长链多不饱和脂肪酸能改善青少年抑郁患者的临床症状, 显示出潜在的治疗作用。此外, 一些实验研究表明, 氧化应激和炎症反应可能通过影响神经递质的释放、损害神经元和影响神经递质相关途径等途径共同参与了青少年抑郁症的发病机制。

结论 氧化应激和炎症反应在青少年抑郁症的发病机制中扮演重要角色。青少年抑郁症患者体内存在氧化应激和炎症反应, 两者相互作用共同加剧了青少年抑郁患者健康问题的进展。因此对抗高水平氧化应激和炎症反应的有害影响是治疗青少年抑郁症的一种前景广阔的策略。而抗氧化剂 N-乙酰半

胱氨酸和 ω -3 脂肪酸可以改善青少年抑郁症患者相关症状, 提示这些机制在治疗中具有潜力。但需进一步研究确认氧化应激和炎症反应与青少年抑郁症的确切关系, 并开发有效的个性化干预和治疗方向。

关键词: 氧化应激; 炎症反应; 青少年抑郁症; 自伤行为; 肥胖;

The Associations between Duration of Untreated Psychosis, Growth Factors, and Neurocognition in Drug-Naïve Schizophrenic Patients

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Objective Cognitive impairment is a core feature of schizophrenia with unclear mechanisms, particularly neurocognition. The objective of this study was to investigate the association between duration of untreated psychosis (DUP) and cognitive function, as well as potential biological mechanisms

Methods A total of 219 drug-naïve schizophrenic patients were recruited in this study. DUP was measured in years, reflecting the untreated period observed in this population. Cognitive function was assessed by the MATRICS Consensus Cognitive Battery (MCCB). The plasma concentrations of three growth factors, VEGF, BDNF, and EGF were detected by enzyme-linked immunosorbent assay (ELISA) in 128 patients. Multiple linear regression analysis was used to analyze the association between DUP, growth factors, and cognitive function

Results Our findings showed that DUP was significantly negatively correlated with speed of processing and reasoning and problem-solving in all patients ($N=219$, $P < 0.05$). Five years was defined cut-off point for long and short DUP group in the present study. Only in the short DUP patients, DUP was strongly associated with visual learning and neurocognition ($P < 0.05$). In patients with growth factor ($N=128$), DUP was independently associated with speed of processing, verbal learning, and neurocognitive ($P < 0.05$). Further,

plasma concentrations of VEGF, BDNF, and EGF were all significantly correlated with cognitive function ($P < 0.05$). Additionally, we found a potential trend of correlation between DUP and BDNF ($P = 0.061$)

Conclusion Our study provides insights into a negative correlation between DUP and cognitive function, and BDNF may serve as a potential biological mechanism

关键词: Schizophrenia, Drug naïve, DUP, BDNF, Cognition function

Prevalence and Characteristics of Cognitive Impairment in OCD Patients with Or without OCPD

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Objective Cognitive dysfunction is one of the characteristics of patients with OCD combined with obsessive-compulsive personality disorder(OCPD).This study explored the characteristics and prevalence of cognitive impairment in patients with OCD combined with OCPD based on the use of the Measurement and Treatment of Cognition to Improve Cognition in Schizophrenia Consensus Cognitive Battery (MCCB)

Methods We assessed cognitive functioning using the MCCB in 60 patients with OCD combined with OCPD(OCPD group),50 with OCD without OCPD(OCD group) and 50 healthy controls,and performed correlation analyses to explore the relationship between cognitive dysfunction and clinical characteristics

Results Patients in the OCPD group performed significantly worse in all cognitive domains of the MCCB except social cognition compared to the HC group.OCPD group also showed significant variability in a number of cognitive domains when compared to the OCD group.Patients in the OCPD group had significantly more clinical impairment in the cognitive domain of MCCB than those in the OCD group

Conclusion Cognitive impairment was more

common in OCD patients with OCPD. The degree of cognitive impairment can be used as a clinical difference between OCD patients and OCPD patients. And it can remind clinicians to consider the impact of cognitive impairment in treatment planning for OCD patients with OCPD

关键词: Obsessive-Compulsive Personality Disorder;Obsessive-Compulsive Disorder;cognitive impairment;Measurement and Treatment of Cognition to Improve Cognition in Schizophrenia Consensus Cognitive Battery

情绪对阈下抑郁个体情绪性信息工作记忆加工的影响及其神经机制

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目的 阈下抑郁个体是指具有部分抑郁症状但未达到临床抑郁障碍诊断标准的个体,其对情绪性信息的记忆偏向在抑郁的发生与发展中起到重要的作用。然而,情绪对阈下抑郁个体情绪性信息工作记忆加工产生怎样的影响仍不明确。本研究采用行为实验和事件相关电位(event-related potential, ERP)技术,以中性、正性和负性情绪面孔为工作记忆材料,以面孔以外的正性、负性与中性图片为诱发情绪的材料,采用变化觉察任务范式,探讨情绪对阈下抑郁个体情绪性信息工作记忆加工的影响及其神经机制。

方法 实验1共纳入30名阈下抑郁个体和30名健康对照者,通过图片诱发被试不同情绪后,整体呈现记忆项目(中性+负性面孔、中性+正性面孔),并进行检测,探讨情绪对阈下抑郁个体情绪性信息工作记忆加工的影响。实验2采用ERP技术探讨情绪影响阈下抑郁个体情绪性信息工作记忆加工的神经机制。

结果 行为实验结果表明,在诱发被试中性和负性情绪条件下,编码阶段呈现负性情绪信息和中性信息,提取阶段检测负性情绪信息时,阈下抑郁个体正确率高于正常人;而在诱发被试正性情绪条

件下,两者的正确率无差异。ERP 结果显示,在编码阶段,在诱发个体负性和中性情绪条件下,阈下抑郁个体加工负性情绪信息诱发的 P1 高于正常人;而在诱发个体正性情绪条件下,两者加工三类情绪性信息诱发的 P1 无差异。说明阈下抑郁个体偏向于加工与当前情绪状态一致的负性情绪信息。在提取阶段,在诱发个体中性和负性情绪条件下,阈下抑郁个体加工负性情绪信息诱发的晚期正成分(LPC)高于正常被试;而在诱发个体正性情绪条件下,两者加工三类情绪性信息诱发的 LPC 无差异。

结论 本研究结果表明,诱发负性情绪后阈下抑郁个体在提取负性情绪信息时消耗更多的认知资源,而诱发正性情绪可改变阈下抑郁个体对负性情绪信息工作记忆加工的偏向,其潜在机制是,诱发正性情绪减少阈下抑郁个体对负性情绪信息编码和提取阶段的资源投入。

关键词: 阈下抑郁,情绪性工作记忆,情绪诱发,认知偏向,事件相关电位,ERP

非自杀性自伤与边缘型人格障碍、创伤后应激障碍的关联性研究进展

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目的 非自杀性自伤(NSSI)是指故意造成自己身体受伤,预期仅导致轻微身体伤害的行为。近年来在我国青少年群体中的检出率呈逐年上升趋势,已成为亟待解决的公共卫生问题。童年期创伤是指个体在 18 岁以前所经历的各种负性生活事件,被认为是 NSSI 的重要危险因素,而其又与一系列成人期精神障碍的发生显著相关,这些精神障碍亦被证实是 NSSI 的危险因素。因此有研究者推测,与童年期创伤相关的精神障碍及其症状可能在童年期创伤和 NSSI 间起中介作用。故本文就与童年期创伤高度相关的三种精神障碍——边缘型人格障碍(BPD)、创伤后应激障碍(PTSD)和复杂性创伤后应激障碍

(CPTSD)与 NSSI 的关联性进行阐述。

方法 以“非自杀性自伤”、“边缘型人格障碍”、“NSSI”、“BPD”、“PTSD”等为关键词,检索知网、PubMed、Web of Science 等数据库,收集发表的相关研究文献,并进行整理综述。

结果 NSSI 和三种精神障碍的关系:目前多数学者倾向于认为 NSSI 是一个独立的诊断实体,但和 BPD 显著相关。NSSI 也与 PTSD 相关,因 PTSD 症候群(即唤醒症状、再体验/侵入性记忆和回避)会导致情绪失调,故其是 NSSI 的危险因素。PTSD 可导致自伤,而边缘型人格倾向会提高其自伤的严重程度。以往关于 NSSI 和 CPTSD 关系的研究较少,可能是由于 CPTSD 是新兴的主题,早期研究中对 CPTSD 和 PTSD 并未做出区分。但研究发现童年期创伤和 CPTSD 的解离症状可以预测成年后的自伤行为,CPTSD 患者自伤的概率和频率均高于 PTSD 患者,这种差异可通过自我组织障碍症状(DSO)进行解释。

三种精神障碍间的关系:有研究认为 CPTSD 和 BPD 存在重叠,BPD 合并 PTSD 的患者易被误诊为 CPTSD。随研究推进发现 BPD、PTSD 和 CPTSD 虽均存在额顶叶-边缘回路的异常,但存在差异性,支持了三者相互独立且存在一定关联的观点,但目前对如何关联尚未达成一致。有研究发现从临床症状、生物学机制和创伤发生时间与严重程度进行分析,推论这三种疾病可能是一个从 PTSD 到 CPTSD 再到 BPD 的连续体,但目前尚无实证研究证明。三者间可能只是存在共同病因而非连续体关系,抑或是由于与创伤无关的其它危险因素所致的连锁效应而出现同时或相继共患。因此除创伤外的其它潜在病因也应纳入评估。

结论 BPD、PTSD 和 CPTSD 作为 NSSI 的危险因素,童年期创伤又与其高度相关,它们可能在童年期创伤和 NSSI 之间起不同的中介作用,以创伤相关精神障碍诊断作为 NSSI 的分类依据也许可行,可为进一步探索非自杀性自伤的分类、预防和干预机制提供参考依据。

关键词: 非自杀性自伤,童年期创伤,边缘型人格障碍,创伤后应激障碍,复杂性创伤后应激障碍

一例难治性强迫症 DBS 治疗 2 年随访

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一般资料：患者，男，29岁，未婚。

病情概要：因“反复想事、担心、反复洗手20年，加重伴心情不好8年”多次在多家医院就诊，因为症状复杂多变，有四次自杀经历（3次过量口服“对乙酰氨基酚”、1次“大量饮酒”），曾先后诊断为“抑郁症”、“强迫症”，“精神分裂症”，几乎用遍所有抗抑郁剂及抗精神病药（“舍曲林、阿立哌唑、利培酮、氯氮平、氨磺必利、艾司西酞普兰等），每种药物足量使用均大于3个月，CBT12余次，效果均不好，药物不良反应大，患者剧烈头痛，不能正常生活，无法社交，伴有短期被跟踪感，觉得父母要害自己，2021年10月再次因病情加重，上厕所要反复检查几个小时，再次来我院，经由详细评估病情，YBOCS评分35分，确诊为“强迫性障碍”，并且符合难治性强迫症的诊断标准，第三次收住院，给予“氟伏沙明最高300mg/日，加用氯米帕明100mg/日，增效剂哌罗匹隆24mg/日，坦度螺酮30mg/日”，CBT8次，住院两周症状明显好转出院。

DBS治疗：2022年1月（出院后3月），患者病情无故加重，强迫症状几乎占满患者的所有时间，再次住院，对其病情进行详细评估，考虑进行脑深部电刺激术（DBS），与患者和家属进行知情同意，和神经外科、磁共振室联袂在脑影像立体定向引导下进行了脑深部电刺激术，于内囊前肢和伏隔核植入双靶点电极，术后3周开机，患者抑郁焦虑情绪瞬间改善，根据患者个体反应调控电刺激量，术后半年强迫症状逐渐缓解，术后一年强迫症状几乎完全消失，至今随访2年，病情稳定，无不良反应，YBOCS评分5分，患者恢复正常工作生活，已经在恋爱中。

讨论：强迫症（OCD）是一种常见的慢性精神障碍，WHO将其列为十大致残性疾病之一，其年患病率在中国为1.63%。经过规范的药物和心理全程治疗，40-60%的患者症状得到改善，但仍有约20-30%的患者疗效差，成为难治性强迫症（ROCD）。脑深部刺激术（DBS）又称脑起搏器治疗，采用立体定向技术，在微创手术下将微电极植入到脑内的相关核团靶点处，并通过导线连接植入锁骨下皮下的脉冲发生器。通过微电极发放弱电脉冲，抑制颅内异常的脑电信号，改善症状，长期刺激可重塑颅内的神经网络和神经递质，重建神经功能。皮质-纹状

体-丘脑-皮质（CSTC）环路在强迫症的神经生物学发病机制中日益受到重视，内囊前肢、伏隔核等多个结构位点进行综合的神经调控可能是DBS治疗难治性强迫症的新思路。2016年，《中国强迫症防治指南》明确提出DBS可作为经过精神科医生通过符合防治指南的系统药物和心理治疗仍无效的难治性强迫症的临床治疗。

关键词：难治性强迫症，DBS，随访

基于心智化的精神动力学治疗在青少年情绪障碍中的应用

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目的 青少年情绪障碍是一组以焦虑、抑郁、恐惧等症状为主要表现的心理疾病，其患病率呈逐年增高的趋势，对于儿童青少年的身心人格的健康发展产生重要的影响。这个阶段的年轻人需要巩固独立的身份认同，情绪障碍可以被认为是一种发展的危机，青春期心智化阶段的特点让一些具有潜在脆弱性的青少年发展面临更大的困难。在中国仅有约6.4%的儿童青少年的情绪障碍寻求心理健康专家的帮助。

方法 心智化是个体推测自己和他人心理状态的能力（知识、信念、需要、意图等），包括认知心智化和情感心智化（使用认知理解说话的意思，推测他人的情感）。具有强大心智能力的人，通常在面对压力环境时表现出复原力。他们可以从压力性事件中迅速恢复，表现出良好的、有效协同调节能力和面对不幸的人际调节能力。缺乏思考精神状态的能力可能会迫使个人在物质领域管理思想、信仰和欲望，主要表现在控制身体状态和行为过程。心智化的失败引起对身体的暴力性攻击，这种暴力产生对自己和他人的物化，导致自我的分裂，一部分是施虐者，另一部分是受害者。通过对患者和治疗师心智状态的好奇，得以在治疗过程中使心智化“在线”，让情绪、感受得以被觉察和尊重，让引起情绪困扰的扳机事件有反思的可能。在治疗的过程中，治疗师对来访者的情绪体验进行标记和回应，打断来访者原始的内在运作模式，需要治疗师对来访者

的想法更加透明和开放,治疗师把自己的心智借给来访,考虑与病人相关的自己的心理状态,为患者提供一个可供考虑的替代视角,帮助来访思考自己的心智,帮助其恢复对心智化能力的信心,同时回复对未来的合理希望。

结果 儿童青少年的心智化功能得到整合和发展

结论 文章基于心智化角度探索精神动力学治疗在青少年情绪障碍中的应用,为青少年情绪障碍心理治疗提供循证参考。

关键词: 心智化 青少年情绪障碍

取得了卓越的成就,但是国人内心深处的创伤一直被“向上”、“进取”的理念压抑住了,近几年这些“防御”方式渐渐无法掩盖内心的不安,“内卷”成立对抗焦虑的方式,尤其疫情后生存的焦虑再度被唤醒,心理问题越来越多了,系统里最薄弱的环节——“儿童青少年”尤其受影响较大,“学霸综合征”屡见不鲜,“生病”的现象层出不穷,其实背后都是时代之殇!我们从未真正修复近代史的心理创伤!没有真正的哀悼和恢复!解决儿童青少年的心理问题,需要将教育回归“育人”的本质,需要正视创伤后的生存焦虑和哀伤!

关键词: 儿童青少年 心理健康 创伤 防御方式

创伤视角下探索儿童青少年心理问题影响因素

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《中国儿童健康成长白皮书(2022)》指出:心理健康问题,已经成为目前我国儿童健康成长的3个最大阻碍之一。处于12-18岁的中学阶段的儿童出现情绪不稳定、自闭/抑郁倾向等心理问题的比例也是最高的,达到17.3%。《2022年青少年心理健康状况调查报告(蓝皮书)》指出:家庭因素、手机依赖是影响青少年心理健康重要因素。《中国儿童健康成长白皮书(2022)》指出学业压力、家长的焦虑是影响儿童心理健康重要因素。从两份报告中我们可以看出无论是家庭教育还是学校教育,都出现了一定问题。教育应该是教书、育人,但是目前无论从家庭教育和学校教育,只看重了“教书”的功能,就是过分注重成绩。育人的功能没有了,对孩子的品质教育、生命教育都严重缺失,导致很多孩子要通过“疾病化”的方式进入到医疗的系统里面,通过心理咨询与治疗获得“育人”的途径,补足人格和生命教育,可以说我们现在心理咨询的行业承担了教育系统和家庭系统缺失的“育人”功能!为何我们的教育系统会顾此失彼了?教育的内卷有时代和社会的因素,这些因素的背后与近现代中国屈辱历史背景下所致的创伤有关,近代中国一直在“落后就要挨打”这样的创伤后应激障碍状态里面,战争的创伤和复杂的国际环境导致的生存焦虑、恐惧不安升华,化成了高度的发展动力,我们从衰落到复苏到繁荣,这些年

短程注意缺陷多动障碍家长培训的干预效果及其影响因素

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目的 探究短程注意缺陷多动障碍家长培训的干预效果,并探索该培训方案可能的起效影响因素。

方法 于2022年10月—2023年12月,连续纳入107名参加为期5小时的“短程ADHD家长培训”的ADHD儿童青少年的家长。采用自编问卷、养育心理灵活性问卷(PPFQ)、简式养育倦怠问卷(S-PBA)和Conners父母用症状问卷(PSQ)进行前后测。采用配对样本t检验、Pearson相关分析、多元线性回归进行统计学分析。

结果 干预后ADHD儿童青少年家长的疾病了解程度显著提高($t=-9.62, P 0.01$)、家长评定的儿童多动指数显著降低($t=2.04, P 0.05$)。ADHD儿童青少年家长的疾病了解程度变化、养育心理灵活性变化及养育倦怠变化($r=0.195、0.206、0.208, P$ 均 0.05)均与家长评定儿童的多动指数变化呈正相关。疾病了解程度的变化、养育心理灵活性的变化、养育倦怠的变化($\beta=0.205、0.190、0.206, P$ 均 0.05)均是ADHD儿童青少年家长评定的多动指数变化的影响因素。

结论 短程ADHD家长培训能提高家长对ADHD的了解程度,可能改善儿童青少年多动症状。

此外,疾病了解程度、养育心理灵活性、养育倦怠可能是干预发挥作用的重要影响因素。

关键词:注意缺陷多动障碍;养育心理灵活性;养育倦怠;家长培训

精神障碍与艺术创作关系的定性研究

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目的 探讨精神障碍与创作之间相互影响的一般规律。

方法 招募涵盖不同艺术门类的有精神障碍诊断的艺术创作者。以半结构化的访谈提纲,通过电话和视频结合部分文字回复进行访谈。采用扎根理论的方法,从原始资料出发,自下而上进行分析。

结果 28位艺术家被纳入深度访谈。艺术家从事最多的艺术门类是绘画和诗歌,所诊断最多的是双相障碍和抑郁障碍。

经过分析形成一级编码 28 个,二级编码 17 个;三级 6 个。三级编码包括“精神障碍对艺术创作的有益影响、有害影响”、“艺术创作对精神健康的有益作用、有害作用”、“精神障碍与艺术创作的共因”、“精神障碍与艺术创作之间的中介因素”。

其中,“精神障碍对艺术创作的有益影响”包括:高度投入的创作状态和丰沛的创作动力、带来灵感和素材、提高创作素养、特别的审美和表达、推动人去思考人生意义和精神探索、因为疗愈作用而促进创作、带来某种现实中好处。而“艺术创作对精神健康的有害作用”包括:创作过度投入、推崇独特价值、为促进创作而加重自己病情、创作中的某种痴迷状态损害了现实生活的功能、带来现实中的困难。“精神障碍与创作之间的共因”包括:遭遇创伤和荒谬、独特的敏感的个性、精神追求。“精神障碍与创作之间的中介因素”包括:社会认可、文艺志向、病情严重程度、治疗后康复程度。

结论 现实中患有精神障碍的创作者,相比于历史上的名人,能够为二者之间联系提供更细致和更直接的例证,能够对来自历史名人的研究结论形成交叉论证。

双相障碍患者在受访者中占多数,为二者相互影响提供了许多例子,尤其是在“精神障碍直接促进

创作”的 5 个影响中提供了许多见解。

“为促进创作而加重自己病情”,是令人难以理解的影响,但在本研究中得到了受访者的例子的明确支持。

受访者在频繁提到精神障碍对创作的有益作用时,也会提到随着病情好转、药物影响或经过治疗康复后,出现灵感减少、创作激情降低、麻木不仁等情况。例证了“倒 U 型理论”。

精神障碍和艺术创作都是难以把握的现象、存在明显个体差异性、并共同构成一个长时间跨度下的复杂系统,难以用量性方法来研究。本研究通过质性研究方法总结出二者之间的具体影响,能够为进一步研究提供基础。

关键词:精神障碍;艺术创作;相互关系;扎根理论

清洗类住院强迫症患者临床特征及其影响因素

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目的 探讨清洗类强迫症患者临床特征及影响强迫症症状特征的因素,为清洗类强迫症患者的筛查及早期干预提供参考。

方法 收集 2012 年 3 月-2023 年 3 月在南京医科大学附属脑科医院住院治疗 539 例强迫症患者的病历资料。从症状表现维度将患者分为清洗类(n=237)和非清洗类(n=302),比较两组患者人口学资料及临床症状的差异。使用二元 Logistic 回归分析影响清洗类住院强迫症患者症状特征的因素。

结果 人口学及临床资料方面,清洗类强迫症患者与非清洗类强迫症患者性别、强迫症症状种类数、精神类疾病家族史、共病其他精神类疾病差异均具有统计学意义($\chi^2 = 10.293、32.732、4.656、6.004, P$ 均小于 0.05 或 0.01)。两组起病年龄差异具有统计学意义($Z = -2.456, P < 0.05$)。清洗类症状与患者性别、起病年龄呈正相关,与精神类疾病家族史、共病其他精神疾病呈负相关(P 均小于 0.05 或 0.01)。危险因素方面,女性、阳性精神疾病家族史是清洗类住院强迫症患者的独立风险因素($OR = 1.801、1.574, P$ 均小于 0.05 或 0.01)。

结论 清洗类和非清洗类强迫症住院患者在人口学资料及临床症状上存在差异,清洗类症状与女性、起病年龄呈正相关。女性、阳性精神疾病家族史是清洗类住院强迫症患者的独立风险因素。

关键词: 清洗类强迫症;住院强迫症患者;回顾性分析

云南边境地区某市世居少数民族严重精神障碍患者发病情况调查分析

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目的 调查分析云南边境地区某市世居少数民族严重精神障碍患者的情况,为有效救治、关怀边境少数民族地区严重精神障碍患者和制定针对性防治措施提供依据。

方法 采用实地调查分析方法,对边境少数民族地区某市世居在册少数民族严重精神障碍患者数据资料进行调查分析。

结果 五种世居少数民族严重精神障碍患病率为4.24% (803/18.92),同地区患病率为4.68% (2160/46.19),差异无统计学意义, $P>0.05$;精神分裂症占比最高 58.90% (473/803)、其次为精神发育迟滞伴精神障碍占 29.51% (273/803)和癫痫所致精神障碍占 7.97% (64/803),明显高于其他严重精神障碍疾病类型, $P<0.05$ 。男性患者 474 例(59.03%)、女性 329 例(40.97%),男女性别比为 1.44: 1,男女总患病率在统计学上有差异($P<0.05$); 18~45 岁患者 382 例,占 47.57% (382/803),明显高于其它年龄段患者, $P<0.05$;初中以下文化患者占 86.30% (693/803),占比最高;未婚 49.07%(394/803)、离异和丧偶患者 15.82%(127/80),明显高于普通人群。

结论 世居少数民族中男性、18~45 岁、初中以下文化是严重精神障碍患者主要人群。精神分裂症、精神发育迟滞伴精神障碍、癫痫所致精神障碍发病明显高于其他严重精神障碍疾病类型。癫痫病及其所致的精神障碍的防治应引起高度重视。政府实施严重精神障碍管理治疗工作规范在早期筛查和发现患者方面成效显著。

关键词: 严重精神障碍;少数民族;调查分析

神经语言学视角下近红外脑功能成像的中日言语流畅任务范式对比研究

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目的 中日两国精神科领域都使用言语流畅任务,作为近红外脑功能成像的主要认知任务,但两范式临床使用中存在差异。言语流畅任务设计的变化可能会对诊断带来挑战,保证结果可重复性和有效性所需的统一范式、协议和分析方法刻不容缓。本研究旨在检查VFT模式在中国和日本的临床环境中用于精神病学诊断的不同实施方式。这项比较研究将有助于理解语言处理中的神经激活作用,并为fNIRS在精神病学诊断和管理中的未来发展和应用提供思路。

方法 通过综述中日相关文献,总结两国在临床应用及VFT的差异。本综述的设计遵循了乔安娜·布里格斯研究所(Joanna Briggs Institute)发布的最新范围综述指南(Peters等,2020)。为确保标准化和透明的报告过程,我们采用了Tricco等人在2018年提出的系统综述和荟萃分析扩展范围综述(PRISMA-ScR)指南。这种方法保证了对现有文献的严谨和全面探索,遵循了系统综述方法学的标准。

结果 我们总结了“近红外-言语流畅任务”应用的研究文章的言语流畅任务任务范式及其分析方法学上的差异,并进一步从神经语言学角度分析言语流畅任务设计(语音对比语义)、刺激方式(听觉对比视觉)以及语言类型学的影响。

结论 专注于中国和日本是至关重要的,因为它提供了言语流畅任务在不同语言环境中的激活差异。通过探讨这些特定研究,我们的综述强调了根据语言和文化背景定制言语流畅性的重要性,从而增强了言语流畅性任务在跨文化精神病学评估中的有效性和实用性。

关键词: 近红外脑功能成像、言语流畅任务、前额功能、精神障碍、语言与大脑

社会精神医学学组

绵阳市城乡居民心理健康素养现状调查

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目的 了解绵阳市城乡居民心理健康素养现状及影响因素，为提升居民心理健康水平提供理论依据。

方法 于 2021 年 8—10 月采取分层多阶段抽样的方法，随机抽取绵阳市常住成年居民 28 264 人为研究对象。采用一般资料调查表调查一般情况，使用国民心理健康素养问卷进行心理健康素养调查。采用 SPSS 26.0 进行 χ^2 检验和多因素 logistic 回归分析。

结果 绵阳市城乡居民心理健康素养达标率为 19.0%（5 383/28 264）。多因素 logistic 回归分析结果显示，女性（OR=0.910）、农村居民（OR=0.903）、老年人（与 18~29 岁组相比，60~69 岁 OR=0.843，70~79 岁 OR=0.745、 ≥ 80 岁 OR=0.635）、婚姻状况为离婚或丧偶（OR=0.809）、离退休人员（与工人或农民相比 OR=0.277）、其他类型工作（OR=0.620）、患 1 种（OR=0.611）及 2 种及以上慢性病（OR=0.469）的居民心理健康素养水平更低；高学历人群（与不识字相比，高中或职高或中专 OR=1.344，大专 OR=1.430，本科及以上 OR=1.430）、家庭月收入高（与 0~2 999 元相比，3 000~5 999 元 OR=1.866、6 000~9 999 元 OR=2.363、10 000~19 999 元 OR=1.87）、 $\geq 20 000$ 元 OR=1.671）、职业为公职或技术人员或军人（与工人或农民相比 OR=1.241）的居民心理健康素养水平更高，均有统计学意义（ $P < 0.05$ ， $P < 0.01$ ）。

结论 绵阳市城乡居民心理健康素养水平较低，应重点关注女性、农村、老年、低学历、低收入、患慢性病种类多、离婚或丧偶以及离退休人员的心理健康素养水平。

关键词：心理健康素养；现状调查；影响因素

耗散结构理论在精神康复治疗中的一些思考

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目的 耗散结构理论概括为一个远离平衡态的开放系统，通过不断地与外界交换物质和能量，在系统内部某个参量的变化达到一定的阈值时，通过涨落，系统可能发生突变，由原来的无序状态转变为一种有序状态。分析精神分裂症的康复过程与耗散结构的形成过程找出共同点，寻找严重精神障碍康复的至关重要的因素。

方法 比较精神发病和康复过程与耗散结构形成过程。

结果 精神分裂症的病前性格以及疾病表现首先破坏了机体作为耗散结构的开放系统，使机体成为了亚孤岛系统，从而使患者渐渐熵增到无序状态。精神康复就是从一种精神无序状态向有序状态的转化过程，耗散结构理论认为，“开放”是所有系统向有序发展的必要条件，在临床工作中发现在所有促进精神分裂症康复的举措中，“开放”氛围的营造、病人能够与外界进行能量信息的交换是促进病人走向康复的必要的条件，耗散结构的形成过程对精神康复学具有指导意义。

结论 在精神分裂症的康复工作中，社区康复效果总体好于院内康复，院内康复举措中开放的环境的构建是精神病患者康复的重要前置条件，然而基层严重精神疾病患者仍住与传统的、毫无生气的、全封闭的病区环境中，病人与社会存在不同程度的隔离，不利于患者的精神康复；而近来社会办医的民营精神卫生机构正在迅速扩张，使得更多的重性精神障碍被关于病房内，严重精神障碍的回归社会之路变得曲折与漫长。

关键词：耗散结构， 开放系统， 精神障碍院内、社区康复

方法 病例介绍：患者女，63岁，离异，无放射物、毒物接触史，无毒品接触史，查体：可引出幻触、幻视，近2年感到周围有虫钻进全身皮肤，从头到脚无处不在，虫子有20多种，钻入时有痛感或虫爬感，在皮肤下吸血，有的虫子在皮肤下产卵，在房间里能看到虫子飞来飞去，指着物品上的霉点说是黑色虫子，且虫子会进入皮肤沿着血管逐渐长进身体，非常担心害怕，外出购物时带厚厚的手套，担心手上的虫子跑到别人的东西上面。为了杀掉体内的虫子，患者常用洗衣粉和84消毒液泡澡、抓烂皮肤后用酒精兑浓盐水涂擦、或用电蚊拍靠近或挨到皮肤，皮肤烫出水泡。颅脑MRI+DWI+MRA检查示两侧脑室旁及额顶叶皮质下多发性缺血性脑白质病变，皮肤检查未见虫卵及活虫。

综合性护理措施：1.心理护理：建立良好信任的护患关系，从言语上不否认患者所描述的虫子，表示认同获得信任。2.采用心理暗示护理，告诉病人这种虫子不厉害很容易治疗，应用“特效杀虫药”可治愈，举例说明曾治愈好转病例给予治愈信心，心理暗示可每日执行，3.给予抗精神病治疗控制精神症状。4.皮肤护理：患者因抓伤、烫伤及自己“杀虫”的灼伤皮肤，做好消毒和药膏涂擦，并告知患者为“专业杀虫药”。5.放松疗法和工娱治疗：放松及转移注意力。

结果 皮肤问题完全修复，虫爬感、担心虫子问题明显改善，未因“虫子”再住院。

结论 目前报道的寄生虫病妄想多存在明显的社会心理因素，本病例也为老年离异女性，笔者认为在抗精神病药物治疗的同时辅以综合护理非常有必要，认真听取患者主诉，建立良好信任的护患关系，采取暗示、疏导、转移注意力及减轻皮肤不适感等综合护理对改善症状是有益的。

关键词：寄生虫 妄想 综合护理

1 例寄生虫妄想综合护理

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目的 寄生虫病妄想 1946年由Wilson等报道并予以命名，是一种较罕见的精神心理疾患，报道1例于我科住院治疗的寄生虫妄想病历，探讨寄生虫妄想的有效护理。

A Study of The Effects of Physical Activity on Depression Anxiety and School Attendance Based on Adolescents' Self-Reports

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Objective School study is crucial to students' knowledge accumulation and ability cultivation, and a necessary part of personal growth and entry into society; this paper explores the correlation between physical activity and adolescent depression, anxiety, and School Attendance Problems

Methods Self-reported information including regular physical activity, school attendance problems, and demographics were collected from 392 adolescents attending an outpatient clinic. The PHQ-9 and GAD-7 were applied to assess the severity of depression and anxiety symptoms. Data processing was performed by SPSS25 to analyze the effects of physical activity on depression and anxiety as well as school attendance in adolescents

Results Grouped by whether or not regular physical activity was practiced, the differences between the two groups were highly statistically significant in terms of whether or not there was a school attendance problem, PHQ-9 scores, GAD-7 scores, depression severity, and anxiety severity. Grouped by the presence of school attendance problems, the difference between the two groups was highly statistically significant in terms of whether they exercised regularly, PHQ-9 scores, GAD-7 scores, depression severity, and anxiety severity

Conclusion Daily physical activity has a significant impact on adolescents' depression and anxiety and school attendance problems. Daily physical activity has a positive impact on adolescents' depression and anxiety symptoms. Depression and anxiety may lead to adolescents' loss of interest in school, and their attention, memory, which affects their ability to memorize and process information, as well as their lack of self-confidence. Depression and anxiety may lead to a decrease in adolescents' social interaction skills, which can lead to feeling disconnected from their peers and affect their sense of inclusion in school, and dropping out of school may become a way for adolescents to escape from these symptoms if they are not properly supported and treated

关键词: Adolescents, Depression, Anxiety, Physical Activity, School Attendance Problems

抑郁对自杀自伤行为的影响——焦虑的部分中介作用

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目的 焦虑、抑郁及自杀自伤行为是心理健康领域中的重要问题,而了解它们之间的关系对于预防和干预自伤自杀行为具有重要的意义。

方法 本研究采用横断面调查的方法,在广东省4家精神专科医院的精神疾病门诊/病房连续招募13~25岁的抑郁发作的青少年,并依据国际疾病与相关健康问题统计分类第十版(The International Statistical Classification of Diseases and Related Health Problems 10th Revision, ICD-10)临床诊断为单相/双相抑郁发作,采用汉密尔顿焦虑量表(HAMA)、汉密尔顿抑郁量表(HAMD)、哥伦比亚-自杀严重程度评定量表等量表来评估受试者焦虑和抑郁与自杀自伤行为之间的关联,并检验焦虑在抑郁与非自杀性自伤(non-suicidal self-injury, NSSI)之间的中介作用。

结果 焦虑和抑郁与自杀自伤行为呈负相关。具体来说,焦虑症状的加重与自杀意念($r = -0.311$),自杀尝试($r = -0.265$)及NSSI($r = -0.206$)相关;抑郁症状的加重也与自杀意念($r = -0.355$),自杀尝试($r = -0.307$)及NSSI($r = -0.208$)相关。进一步的中介效应分析发现,焦虑在抑郁与NSSI之间起到部分中介作用。

结论 本研究结果支持了焦虑、抑郁与自杀自伤行为之间的负相关性,这提示了焦虑和抑郁在自杀自伤行为中的促进作用。此外,焦虑在抑郁与NSSI之间的中介作用也值得关注。因此,针对焦虑和抑郁的干预可能有助于降低自杀自伤行为的风险。

关键词: 焦虑、自杀、相关性、中介效应

青少年心理健康问题污名化现状分析

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目的 分析了解青少年心理健康问题污名化的现状,明确青少年心理健康污名化的主要原因,探索污名化对青少年的影响,引起人们对于青少年心理健康污名化问题的关注并提出可行的建议,希望能够有效改善青少年的心理健康状况。

方法 采用整群抽样法,于2024年4月选取东营市6730名初中生作为研究对象,进行一般社会资料问卷、心理健康污名化问卷等问卷调查,为期2周,对结果进行分析。

结果 (1) 纳入有效问卷5437份,其中被调查学生总体平均年龄 12.93 ± 0.95 岁,男生约占学生总体的一半。(2) 公众污名化得分为 22.83 ± 7.47 分(总分=45分),自我污名化得分为 25.95 ± 5.91 分(总分=50分),分值越高,心理健康问题污名化程度越高。根据每个维度的污名化得分范围将其分别划分为很低、较低、较高、很高四段,其中约18%的学生公众污名化程度较高或很高,约14%的学生自我污名化程度较高或很高。

结论 目前青少年心理健康问题出现了较强的污名化现象,使得许多青少年在面临心理健康问题时选择隐瞒、回避,不愿意主动寻求专业帮助,甚至进一步加剧了心理健康问题的恶化,对患者的社会功能产生严重的负面影响。全社会应真正重视青少年的心理健康问题,建立更完善的心理健康监测体系,加强家庭、学校、医院、社会各界的合作,建立有效联动机制,采取积极的干预措施来积极调整青少年对污名化的错误认知,改善其应对污名化的方式,促进其心理健康,有效提升青少年的心理健康状况。

关键词: 青少年,心理健康,污名化,干预措施

联合VR认知训练改善青少年抑郁症认知症状的临床探究

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目的 本研究旨在探讨虚拟现实(VR)认知训练对改善青少年抑郁症患者认知症状的效果。

方法 本研究纳入了60名确诊为抑郁症的青少年患者(年龄12-18岁),他们被随机分配到实验组和对照组。实验组接受为期12周的VR认知训练,每周5次,每次30分钟;对照组则进行等时长的传统计算机认知训练。使用蒙特利尔认知评估量表(MoCA)、贝克抑郁量表(BDI)和认知功能缺陷自评问卷(PDQ-D)等标准化心理测评量表评估患者的认知功能和抑郁症状。

结果 干预前,3组认知功能分数差异无统计学意义(均 $P>0.05$)。通过12周的训练,结果显示,从训练前的基线到训练后的评分,VR认知训练组的蒙特利尔认知评估量表(MoCA)和认知功能缺陷自评问卷(PDQ-D)的结果显著优于对照组($p<0.05$)。VR认知训练组在记忆力、注意力、反应速度、执行功能和总体认知干预前后比较差异有统计学意义($p<0.01$),而传统计算机训练组的改进幅度较小。此外,与基线相比,VR训练组的BDI得分显著下降,提示其抑郁症状有所缓解。

结论 本研究证实了VR认知训练通过高度仿真的环境和互动性的任务,有效提升了青少年抑郁症患者的认知功能。相比传统训练,VR技术提供了更多的感官刺激和更高的参与度,这可能是其效果更佳的原因之一。本研究结果为VR技术在抑郁症综合治疗中的应用提供了坚实依据。作为一种新兴的治疗工具,VR技术有望成为抑郁症综合治疗方案中的重要一环,提供患者全新的康复路径。

关键词: 虚拟技术,青少年抑郁症,认知症状

低频重复经颅磁刺激联合盐酸舍曲林治疗老年抑郁症的疗效

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目的 研究低频重复经颅磁刺激联合盐酸舍曲林治疗老年抑郁症的临床疗效。

方法 本研究选取临沂市精神卫生中心2023年3月-2024年3月住院的76例年龄 ≥ 60 岁的老年患者作为研究对象,所有患者均符合ICD-10诊断标准中抑郁症的诊断,按照随机化数字表法将其分为

对照组 (N=38, 给予患者盐酸舍曲林口服治疗, 两周内缓慢加量至 150mg/日) 和治疗组 (N=38, 给予盐酸舍曲林联合刺激频率为 1Hz 的重复经颅磁刺激, 每日一次, 每周五次), 对比两组治疗效果。利用汉密尔顿抑郁量表 17 项版 (HAMD-17) 和抑郁自评量表 (SDS) 评定抑郁症的严重程度, 汉密尔顿焦虑量表 (HAMA) 评定焦虑症状的严重程度。以 HAMD、SDS、HAMA 的减分情况来评定其治疗效果, 分别在治疗的第 0、1、2、3、4 周末将两组的量表评分作为对比来评估其临床疗效。

结果 治疗前 HAMD、SDS、HAMA 评分在对照组和治疗组中无显著性差异 ($P>0.05$); 治疗后两组的量表评分分数均较前下降, 但治疗组优于对照组 ($P<0.05$); 对照组和治疗组其 HAMD、SDS、HAMA 评分差异具有统计学意义 ($P<0.05$)。

结论 盐酸舍曲林联合低频重复经颅磁刺激和盐酸舍曲林均能在老年期抑郁症的治疗中发挥良好的作用, 但在盐酸舍曲林治疗的基础上加上低频重复经颅磁刺激对治疗老年抑郁症会取得更好的疗效。

关键词: 重复经颅磁刺激, 盐酸舍曲林, 老年抑郁症

沙盘治疗在青少年抑郁中的应用及治疗效果研究

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目的 本研究旨在深入研究沙盘治疗在青少年抑郁干预中的具体应用及其治疗效果。

方法 研究共选取了 88 例青少年抑郁情绪患者, 年龄在 14-18 岁, 随机分为对照组 (n=44) 和试验组 (n=44)。对照组: 接受常规的心理咨询和药物治疗。试验组: 在对照组的基础上, 增加团体沙盘游戏治疗。沙盘游戏治疗由经验丰富的心理治疗师引导, 每周进行 2 次, 每次持续 1 小时, 连续进行 8 周。分别在在治疗开始前和治疗 4 周后、治疗结束后, 对所有患者进行 SDS (抑郁自评量表)、HAMD (汉密尔顿抑郁量表)、BDI (贝克抑郁量表) 的基线评估, 同时结合患者的自我报告、观察记录以及治疗师的反馈进行质性分析。

结果 试验组治疗后 SDS 量表平均分在第 8 周末较治疗前显著降低 ($P<0.01$), 对照组 SDS 平均分变化前后无明显差异。试验组在 HAMD 和 BDI 量表上的得分均较治疗前明显下降 ($P<0.01$), 对照组在治疗前后量表上的得分前后无明显差异。质性分析显示, 大部分试验组患者表示沙盘游戏为他们提供了一个表达情感、分享困扰和寻找解决方案的平台, 有效减轻了抑郁症状。

结论 本研究证实了沙盘治疗在青少年抑郁干预中的显著治疗效果。这种非言语性心理治疗方法不仅能够有效缓解青少年的抑郁症状, 还能够提高他们的自我认知能力和促进情感表达。

关键词: 沙盘治疗; 青少年; 抑郁。

线上失眠认知行为治疗与面对面失眠行为治疗对抑郁障碍患者睡眠质量的影响研究

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目的 在一项随机对照实验中, 我们比较了使用线上失眠认知行为治疗与面对面进行失眠认知行为治疗的抑郁障碍患者的睡眠质量在治疗前、治疗后和治疗结束 3 个月的效果对比。

方法 选择我院睡眠医学科门诊就诊病人和住院病人在 2022 年 1 月-2023 年 1 月期间收治治疗的 60 例符合 ICD-10 抑郁障碍的诊断标准并伴有失眠的患者。按照随机数字表法分组治疗, 对照组 30 例患者行面对面的失眠认知行为治疗, 观察组 30 例患者使用线上失眠认知行为治疗。两组分别进行了 6 次失眠认知行为治疗。两组患者在治疗前、治疗后及治疗结束后 3 个月进行了失眠严重程度指数 (ISI)、汉密尔顿抑郁量表 24 项 (HAMD)、汉密尔顿焦虑量表 (HAMA) 的评估。应用 SPSS 软件包进行统计学处理并分析。

结果 治疗前, 两组患者各项量表评分无显著差异。治疗后以及治疗结束 3 个月后两组参与者的失眠严重程度指数 (ISI)、汉密尔顿抑郁量表 24 项 (HAMD)、汉密尔顿焦虑量表 (HAMA) 较治疗前均有显著下降, $P<0.05$, 且两组之间没有显著差异

($P>0.05$)

结论 线上失眠认知行为治疗与面对面失眠行为治疗均对抑郁障碍患者睡眠质量有明显改善, 对患者的抑郁情绪及焦虑情绪也有一定的缓解, 两者疗效相当。

关键词: 线上失眠认知行为治疗 ; 抑郁障碍 ; 睡眠质量

精神障碍患者疾病进展恐惧量表的编制及信效度检验

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目的 编制精神障碍患者疾病进展恐惧量表, 并进行信效度检验。

方法 通过文献回顾、质性访谈、德尔菲专家函询法形成量表初稿。于 2024 年 3 月-2024 年 6 月采用便利抽样法选取北京、哈尔滨和厦门 3 所三甲精神专科医院收治的 235 例精神障碍患者进行正式调查, 检验量表信效度。

结果 量表最终包含 17 个条目, 探索性因子分析提取出 3 个公因子, 累计方差贡献率为 77.29%; 验证性因子分析显示, X^2/df 为 2.314, $TLI=0.94$ 、 $IFI=0.95$ 、 $CFI=0.95$ 、 $RMSEA=0.07$, 量表结构模型拟合良好; 条目水平的内容效度指数为 0.80~1.00, 量表水平的平均内容效度指数为 0.94; 总量表的 Cronbach's α 系数为 0.95, 各维度的 Cronbach's α 系数分别为 0.945、0.920 和 0.942; 重测信度为 0.888, 各维度的重测信度分别为 0.825、0.775 和 0.943(均 $P<0.001$), 表明量表的稳定性好; 校标关联度分析显示, 量表得分与健康焦虑量表得分具有相关性(均 $P<0.05$), 且相关系数均 >0.4 , 表明校标关联效度理想。

结论 编制的精神障碍患者疾病进展恐惧量表具有较好的信效度, 可用于精神障碍患者疾病进展恐惧现状的评估。

关键词: 精神障碍; 疾病进展恐惧; 量表; 信度; 效度

The Influence of Family Function on Mobile Phone Addiction in College Students: The Parallel Mediating Role of Self-control and Interaction -emotion Regulation

Zijian Zhang*

The influence of family function on mobile phone addiction in college students: the parallel mediating role of self-control and interaction -emotion regulation

Objective to investigate whether self-control and interpersonal emotion regulation can act as parallel mediators between family function and mobile phone addiction

Methods Family function could negatively predict the level of mobile phone addiction ($r = 0.43$, $p<0.01$). Family function could positively predict self-control level ($r = -0.22$, $p<0.01$). Family function could positively predict the level of interpersonal emotion regulation ($r = -0.36$, $p<0.01$). There was no significant correlation between interpersonal emotional regulation and mobile phone addiction ($r = 0.086$, $p>0.01$). Self-control could negatively predict the level of mobile phone addiction ($r = -0.17$, $p<0.01$). Furthermore, the relationship between the scores of the four sub-dimensions of interpersonal emotional regulation (negative emotional tendency, negative emotional efficacy, positive emotional tendency, positive emotional efficacy) and other variables was investigated. The results showed that, except for the negative emotional tendency, which could negatively predict mobile phone addiction ($r = -0.64$, $p<0.01$), the other dimensions were not significantly correlated with mobile phone addiction. Family function positively predicted interpersonal emotional regulation ($r = -0.46$, $p<0.01$). The direct effect of family function on mobile phone addiction was significant: Bootstrap 95% confidence interval was [0.062, 0.207], excluding 0; The mediating effect of negative emotional tendency and self-control is also significant: The 95% confidence intervals of Bootstrap were [-0.049, -0.004] and [0.095, 0.199] respectively, excluding 0, indicating that family function could not only directly predict the level of mobile phone addiction, but also could predict

the level of mobile phone addiction through the mediating effect of negative emotional tendency and self-control, which belonged to a partial mediating effect

Results Function, mobile phone addiction, self-control and interpersonal emotion regulation were correlated in pairs. The direct effect of family function on mobile phone addiction is significant; The parallel mediating effect of variable of self-control and variable of interpersonal emotional regulation between variable of family function and variable of mobile phone addiction is significant

Conclusion Family function can directly affect mobile phone addiction; It can also be influenced by the parallel mediating effect of self-control and interpersonal emotion regulation

关键词: Family function; Mobile phone addiction; interpersonal emotion regulation; self-control

精神病医院医务人员线上开展精神障碍患者居家感控对医院感控管理的价值分析

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目的 实施创新赋能管理, 探讨精神病医院医务人员线上开展精神障碍患者居家(院外)感染智慧防控管理, 即“互联网+”模式(微信、微信群、公众号、视频号等), 远程指导科普居家防控细菌病毒感染、提高抵御感染、安全合理用药的健康知识、基本卫生操作技能、身体自我免疫素质后, 对患者降低携带病毒细菌等感染源进入医院、及在门诊和住院治疗期间发生院内感染几率、对院感管理影响的实践价值和效果分析。

方法 随机选取门诊治疗、居家服药的精神病患者共有 300 例, 在 2020 年 4 月~2024 年 5 月期间, 对其中的 150 例患者为对照组, 进行门诊窗口常规感染防控处置不良反应等指导, 另外的 150 例患者为观察组, 在门诊窗口常规指导外, 再借助微信(群)公众号朋友圈视频号等给予强化居家防控细菌病毒等院外抗感染和处置不良反应等远程指导、智慧防控管理。对比两组中部分患者因精神病发作住院期间发生院内感染情况。

结果 观察组患者在线上获得医务人员的居家(院外)防控感染强化指导干预后, 感控知识提升、病情发作住院期间发生院内季节性病毒性感冒、细菌性感染比例、感染后病程等都明显降低, 相比于对照组, 具有明显的优势, $P < 0.05$ 。

结论 医务人员开展智慧防控管理, 院外感控宣传、线上强化防控感染指导, 能够大大降低患者发生院内感染的风险几率! 院外感染智慧防控管理, 能够有效降低医院感控管理压力, 具有创新性、实用性, 值得借鉴推广、持续开展。

关键词: 院外感控, 居家智慧防控, 院感管理, 精神病居家患者

社会支持在内蒙古在职干部积极应对方式与抑郁间的中介作用

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目的 在职干部作为特殊群体, 掌握着公共利益, 对社会管理和社会服务负有特殊责任, 他们的心理健康状况与政府执政能力建设和社会稳定发展密切相关, 与人民群众利益息息相关。因此调查内蒙古自治区在职干部的心理健康状况, 并探讨社会支持和应对方式对内蒙古自治区在职干部抑郁情绪的影响。

方法 采用自编量表、症状自评量表(SCL-90)、社会支持评定量表(SSRS)和简易应付方式问卷(SCSQ), 以分层按比例分配、简单随机抽样和按规模大小成比例抽样的方法选取内蒙古自治区 12 个盟市 2000 名在职干部进行问卷调查, 最终回收有效样本 1996 例。

结果 社会支持与在职干部抑郁因子分呈显著负相关($P < 0.01$), 表明社会支持越好, 抑郁程度越低, 感受到的抑郁情绪越少; 应对方式的积极维度分与在职干部抑郁因子分呈显著负相关($P < 0.01$), 表明应对方式越积极, 心理健康水平越高, 抑郁程度越轻; 积极应对方式对内蒙古自治区在职干部抑郁的直接效应显著($P < 0.05$), 积极应对方式通过社会支持对内蒙古自治区在职干部抑郁的间接效应显著($P < 0.01$)。

结论 社会支持在内蒙古自治区在职干部积极

应对方式与抑郁间发挥部分中介作用, 在职干部的心理健康受应对方式和社会支持的影响, 通过对心理健康影响因素和作用机制的探讨, 为内蒙古在职干部心理健康工作提供借鉴。

关键词: 在职干部 社会支持 应对方式 抑郁

青少年首发精神分裂症代谢异常、炎性因子与认知功能相关性研究

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目的 本研究为在青少年首发精神分裂症治疗前进行代谢指标、炎性因子检测, 进一步探讨代谢异常、炎性因子对青少年首发精神分裂症的认知功能的影响

方法 选择 2022 年 9 月至 2023 年 12 月来我院就诊的符合《ICD-10 精神与行为障碍分类》精神分裂症诊断标准的首发青少年患者(包括门诊患者、住院患者)(≤ 18 岁) 100 例。分别在治疗前进行血生化、血常规、C-反应蛋白和甲状腺功能八项测定。据检查结果进行分组其中伴发代谢综合征(MS)的患者 57 例(MS 组), 不伴发代谢综合征患者 43 例(非 MS 组), 炎性因子升高的患者有 39 例, 炎性因子正常的有 61 例。同时伴有代谢综合征和炎性因子升高的患者有 27 例, 其余 73 例。分别对入组患者使用韦氏记忆量表、韦氏智力量表评定认知功能。应用 SPSS 软件包进行统计学处理并分析。

结果 伴发代谢综合征组的患者的记忆和韦氏智力水平低于不伴发代谢综合征组, 差异有统计学意义($P < 0.05$)。炎性因子升高组患者的记忆和韦氏智力水平低于炎性因子正常组, 差异有统计学意义($P < 0.05$)。同时伴有代谢综合征和炎性因子升高组患者的记忆和韦氏智力水平较单独伴发代谢综合征患者或者炎性因子升高患者的指标更低, 差异有统计学意义($P < 0.05$)。

结论 伴有代谢综合征或炎性因子升高的青少年首发精神分裂症患者的认知功能的损害和生活能力下降比较明显, 同时伴有代谢综合征和炎性因子升高的青少年首发精神分裂症患者的认知功能的损害和生活能力下降会更加明显。

关键词: 青少年 ; 首发精神分裂症 ; 代谢异常 ; 炎性因子; 认知功能

非自杀性自伤青少年家庭抗逆力现状及其影响因素

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目的 本次研究调查非自杀性自伤青少年家庭抗逆力现状, 并分析其影响因素。

方法 选择 2023 年 3 月-2024 年 1 月在广州某三甲医院精神科收治的 268 例非自杀性自伤青少年的父母作为研究对象, 采用患者及其父母的一般资料调查表、家庭坚韧性量表、反刍思维量表、述情障碍量表、广泛性焦虑量表、抑郁症筛查量表进行横断面调查。观察并分析这一群体家庭抗逆力现状, 分析其影响因素。

结果 家庭抗逆力总分 58.21 ± 6.03 分, 责任维度 27.40 ± 3.29 分, 控制维度 16.62 ± 2.60 分, 挑战维度 14.19 ± 1.88 分。女性家庭抗逆力得分显著低于男性, 父母离异或其他不稳定的婚姻状况的青少年家庭抗逆力得分显著低于父母稳定的青少年, 不同家庭平均月收入 and 抑郁程度者家庭抗逆力得分存在差异, 差异有统计学意义($P < 0.05$)。家庭坚韧性总分与反刍总分($r = -0.285$)、述情障碍得分($r = -0.572$)、GAD-7 总分($r = -0.433$)、PHQ9 总分($r = -0.398$)均呈负相关, 家庭抗逆力各维度与量表得分相关性分析, 除责任维度与反刍总分无统计学意义外, 其他指标均呈负相关($P < 0.05$)。多元线性回归分析结果显示: 青少年 NSSI 的家庭抗逆力影响因素有抑郁程度($t = -5.662$)、家庭月收入($t = 2.975$)、述情障碍得分($t = -8.442$)、GAD-7 得分($t = -4.023$), 差异均有统计学意义($P < 0.05$)。

结论 家庭抗逆力得分与个体消极思维、述情障碍、焦虑程度、抑郁程度呈负相关, 家庭平均月收入、抑郁程度、焦虑程度、述情障碍是青少年 NSSI 家庭抗逆力的重要独立危险因素, 青少年 NSSI 家庭抗逆力处于中等水平, 提高家庭成员的自我调节能力、减轻疾病家庭负担、调动社会支持系统, 可以提高其家庭抗逆力。积极关注学生的 NSSI 情况, 针对

性开展干预措施, 从而取得良好效果。

关键词: 非自杀性自伤; 青少年; 家庭坚韧性; 影响因素; 多元线性回归分析

TREM2 Regulates BV2 Microglia Activation and Influences Corticosterone-induced Neuroinflammation in Depressive Disorders

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Objective Depressive disorders is a serious mental illness, and its underlying pathological mechanisms remain unclear. The overactivation of microglia and neuroinflammation are thought to play an essential role in the occurrence and development of depressive disorders. TREM2, an immune protein mainly expressed in microglia, is an important part of nerve cells involved in inflammatory response. Corticosterone (CORT) is often referred to as a stress hormone and plays a role in the immune system and stress response. Therefore, this study investigated the role of TREM2 in CORT-induced BV2 cell damage and preliminarily analyzed the effects of TREM2 on JAK2/STAT3 signaling pathway and microglia polarization

Methods The cell model of CORT-induced depression in vitro was established, and the effect of CORT on the activity of BV2 microglia was detected by CCK8. Plasmid transfection was used to overexpress and interfere with TREM2 in BV2 cells cultured by CORT. Western blotting, PCR, and ELISA analyzed the expression of related proteins and inflammatory factors

Results The results showed that CORT could affect BV2 cell proliferation and TREM2 levels. In the presence of CORT, overexpression of TREM2 decreased the levels of TNF- α , IL-1 β , and IL-6 and increased the levels of IL-10. Interference with TREM2 increased the levels of TNF- α , IL-1 β , and IL-6 and decreased the levels of IL-10

Conclusion TREM2 can affect the release of inflammatory factors through the JAK2/STAT3 signaling pathway and regulate the M1/M2 phenotypic transformation of microglia. TREM2 plays a role in regulating CORT-induced inflammatory responses, revealing the influence of TREM2 on the neuroinflammatory pathogenesis of depressive disorders and suggesting that TREM2 may be a new target for the prevention and treatment of depressive disorders

关键词: TREM2; Corticosterone; Microglia polarization; Neuroinflammation; Depressive disorders

某精神专科医院 1045 例医疗不良事件的回顾性分析及对策研究

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目的 分析精神专科医院医疗不良事件发生情况及变化趋势, 剖析医疗不良事件发生原因, 以期探索可靠便捷的医疗不良事件预警机制及防范措施, 为降低不良事件发生率, 保障医疗安全, 提高医疗质量, 提供参考依据。

方法 应对赣州市某三级甲等精神专科医院 2021 年-2023 年上报的 1045 例医疗不良事件数据进行回顾性分析, 双人将数据录入 Excel, 用频数与构成比进行描述性统计, 回顾梳理不良事件报告例数、类别分布、事件分级及各科室分布情况。

结果 ①2021 年-2023 年, 其中 2023 年上报的不良事件例数呈显著上升趋势, 为 455 例, 占比 43.35%。2021 年及 2022 年不良事件上报例数相对持平。可能与疫情期间病源单一且收治病患数较少, 而 2023 年疫情高峰期结束后, 全国心理、睡眠病人就诊人数呈井喷式发展有关。

②医疗不良事件类别共 18 种, 以药物不良反应事件为主, 占比 40.57%, 与精神心理类药物的药理毒性与疾病的诊治方式有关; 其次是自杀自伤事件 (14.35%) 和伤人事件 (14.07%), 与收治病种有关。

③医疗不良事件分级情况: 其中 III 级 (非后果事件) 最多, 为 893 例, 占比 85.45%。

④医疗不良事件各科室分布情况: 精神科上报

例数最多, 占比 61.63%, 其次是心理睡眠科(22.58%)和老年医学科(6.32%), 与精神心理疾病的病情特点与诊疗环境有关。

结论 精神专科医院收治患者的复杂性及封闭的工作环境, 相较于综合性或其他专科医院具有更高医疗不良事件发生率, 如何保障医疗质量, 提高医患满意度, 完善医疗安全管理是精神专科医院改革发展之中亟需解决的关键问题。健全医疗不良事件管理模式, 提高研判医疗风险意识, 构建医疗安全文化等措施可以有效防范不良事件发生的。

关键词: 精神专科医院; 医疗不良事件; 医疗质量; 对策

The Association of Sun Sensitivity, Sun Protective Behaviors and Depression in Both Genders

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Objective The aim of this study was to comprehensively analyze the association between sun sensitivity, common sun protective behaviors (such as staying in shade, wearing long sleeves, and using sunscreen), and depression in both genders. By adjusting for each other as potential confounders, we sought to disentangle the independent effects of these factors on depression

Methods Data from the National Health and Nutrition Examination Survey (NHANES) 2017-2018 cycle were utilized in this study. Participants' sun sensitivity and sun protective behaviors were assessed through the dermatology questionnaire, while depression was measured using the 9-item Patient Health Questionnaire, with a score greater than 4 indicating depression. Gender-specific logistic regression analyses were performed to examine the relationships between sun sensitivity, sun protective behaviors, and depression

Results A total of 2606 participants, with a mean age of 39.99 ± 1.57 years, were included in the analysis. Among them, 1227 (47.1%) were males, and 1378 (52.9%) were females. Our findings revealed no significant association between sun sensitivity and depression.

However, staying in shade was positively associated with depression (OR=1.27, 95% CI: 1.03-1.57). In contrast, using sunscreen was negatively associated with depression (OR=0.69, 95% CI: 0.53-0.90). Gender-specific analyses showed that in males, there were no associations between sun protective behaviors and depression. However, in females, both wearing long sleeves (OR=0.65, 95% CI: 0.42-0.99) and using sunscreen (OR=0.71, 95% CI: 0.52-0.97) were negatively associated with depression

Conclusions Our study found no significant association between sun sensitivity and depression. However, staying in shade appears to be a potential risk factor for depression, while using sunscreen may serve as a protective factor. Interestingly, we observed gender differences in the relationships between sun protective behaviors and depression. In males, there were no associations between these behaviors and depression, whereas in females, wearing long sleeves and using sunscreen were negatively associated with depression, suggesting they may be protective factors against depression in this group. These findings underscore the importance of understanding and promoting sun protection strategies, while considering potential gender differences in their psychological implications.

关键词: Sun Sensitivity, Sun Protective Behaviors, Depression, Gender Differences, NHANES

山东省基层精防人员工作满意度分析

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目的 了解山东省基层精防人员的配置基本情况与工作满意度及影响因素, 为相关部门制定政策、合理配置资源提供参考。

方法 本研究为横断面调查, 采用自编的人口学特征问卷与明尼苏达满意度量表, 在全省 16 市所有开展严重精神障碍管理治疗项目的基层医疗卫生机构进行调查。一般人口学资料包括性别、年龄、婚姻状况、受教育程度、是否正式员工、年资、每日工作时间、每周工作天数、月收入、收入满意度等。

工作满意度采用明尼苏达满意度量表, 测量工作者的内在满意度、外在满意度及一般满意度。

结果 1.全省共有 2685 家基层医疗卫生机构开展严重精神障碍管理治疗项目, 共有 6491 名基层精防人员, 每 10 万人中有 6.39 名基层精防人员。平均每名精防人员随访管理 81 名患者, 最高的市平均为 326 人, 工作负荷较大。基层精防人员近 45%没有编制, 75%为初级职称, 收入水平不高。除了干本职工作以外, 90%的精防人员仍需要承担基本公共卫生服务的其他工作, 每周工作时间在 6 天以上。

2.基层精防人员总体满意度为(2.60±0.91)分, 整体处于满意和基本满意的状态。其中内部满意度得(2.52±0.91)分, 外部得分为(2.72±0.98)分。内部满意度好于外部满意度。基层精防人员最不满意的条目为“我的收入与我的工作量”, 最满意的条目为“能够为其他人做些事情的机会”。不同婚姻状况、年龄段、每年参加的培训的次数和管理患者人数这几个维度方面, 各组精防人员工作满意度得分不同, 并且差异具有统计学意义($P<0.05$)。

3.分别以工作总体满意度得分作为因变量, 将所有维度作为自变量, 进行多重线性回归分析。结果显示, 管理患者人数($t=2.094$, $P<0.05$)、是否兼职负责其他工作($t=-3.527$, $P<0.05$)、月收入($t=-5.135$, $P<0.05$)与基层精防人员工作总体满意度存在统计学关联。管理患者人数较多、兼职负责其他工作是工作总体满意度的负面因素, 而月收入高和参加县级以上培训是基层精防人员工作总体满意度的积极因素。

结论 山东省基层精防人员对工作总体满意度评价得分低于 3 分, 属于“满意和基本满意”的水平。管理患者人数数量、是否兼职负责其他工作、收入和每年参加县级以上培训的次数是基层精防人员工作总体满意度的影响因素。

关键词: 基层精防人员、满意度

The Family Doctor in Patients with Mental Illness The Role of Community Management and The Practice

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Abstract: With the continuous development of community mental health services, family doctors, as an important part of the medical service system, play an increasingly important role in the management and care of patients with mental disorders. This article summarizes the development history, service model and characteristics of family doctors, analyzes the current status and challenges of community management of patients with mental disorders, and focuses on the multiple roles played by family doctors in community management of patients with mental disorders, including as the first contact and continuous care provider, and the key role in patient education and psychological support. At the same time, this article also discusses how family physicians can effectively collaborate with multidisciplinary teams to improve the overall effectiveness of patient management. Family doctors play an indispensable role in community management of patients with mental disorders. By continuously optimizing the family doctor system, strengthening professional training and incentive mechanism, the effectiveness of family doctors in mental illness management can be further improved, so as to better meet the medical needs of patients and promote the comprehensive development of community mental health services. This paper not only provides a new perspective and ideas for community management of patients with mental disorders, but also provides a useful reference for relevant policy making and practice.

Key words: family doctor; People with mental illness; Community Management

关键词: Key words: family doctor; People with mental illness; Community Management

空气颗粒物大小对孤独症谱系障碍儿童发病风险的研究进展

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孤独症谱系障碍 (autism spectrum disorder, ASD) 是一种复杂的大脑神经发育障碍, 其病因受到遗传和环境因素的共同作用。我国约有 300 万儿童受此疾病影响, 给社会和家庭带来沉重负担。研究表明, 空气颗粒物 (particulate matter, PM) 可能通过干扰神经发育和大脑功能, 增加 ASD 的发病风险。研究发现, 不同大小的颗粒物通过多种途径和机制影响神经系统健康。PM₁₀ 和 PM_c 主要在呼吸道上部引发局部炎症, 释放炎性介质, 通过血液循环对大脑造成影响。较小的颗粒物如 PM_{2.5} 和 PM₁ 能够深入呼吸道并穿透肺泡进入血液, 直接影响中枢神经系统, 破坏血脑屏障, 引起神经炎症和细胞凋亡。DPM 含有大量有毒化学成分 (如多环芳烃、重金属等), 通过多种机制损害神经系统, 增加 ASD 风险。此外, 空气颗粒物对神经发育的影响存在敏感窗口期。孕期特别是妊娠早期及儿童早期是大脑发育的关键阶段, 此时暴露于高浓度空气颗粒物, 可能导致大脑结构和功能的异常发育, 增加 ASD 的发病风险。基于此, 本系统评价综述了不同粒径的空气颗粒物 (包括 PM₁₀、PM_c (PM_{2.5-10})、PM_{2.5}、PM₁ 及尾气颗粒物 [diesel particulate matter, DPM]) 与 ASD 之间的关联, 并比较了不同粒径颗粒物的效应差异。

关键词: 孤独症谱系障碍; 空气颗粒物; 敏感窗口期; 发病机制

我国社区心理健康服务体系建设的现状

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目的 探讨当前我国社区心理健康服务体系建设的现状, 并提出相关建议。

方法 目前, 我国正在积极推进社区心理健康服务体系建设。由于起步较晚和发展不均衡等原因, 该体系仍存在诸多不足。本文通过对国内外相关文献的研究及对国内现状的调查, 以及对国内几个典型城市的案例分析, 展示我国社区心理健康服务体系建设的进展与挑战, 并就如何完善这一系统提供参考意见。

结果 截至 2020 年底, 在全国范围内已建立了超过 4 万个心理咨询室或心理服务中心, 并有近 5

万名专业人员提供了相应服务。在政府政策的支持下, 目前我国已初步建立了心理健康服务体系, 但仍存在诸多不足之处, 整体来看: 首先, 资源仍然相对稀缺且分布不平衡是一个显著问题; 其次, 公众对心理健康的重要性认识不足也是阻碍体系发展的因素之一。业内专家普遍认为需要从以下几个方面入手进行改善: 加大政策支持, 提升服务能力, 强化公众意识, 完善信息平台。

结论 虽然中国在心理健康服务体系建设方面已经取得了一定的成绩, 从中央到地方各级政府部门都在逐步加大对社区心理健康服务业的扶持力度, 这预示着未来行业的良好发展态势, 但我们还有很长的路要走, 要实现全面而高效的心理健康服务体系还需各方面的共同努力。我们应该继续优化资源配置, 促进公平性和可及性的提升; 同时也要加强对公民心理健康的宣传教育, 普及科学知识, 消除偏见和歧视, 形成关注心理健康、重视社区服务的良好氛围。我们期待看到一个更加成熟和完善的服务网络在未来形成。

关键词: 社区服务, 心理健康, 体系建设

The Relationship Between Career Adaptability, Decent Work, Job Satisfaction and Burnout Among Psychiatrists: A Cross-Sectional Study

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Background The COVID-19 pandemic has increased the demand for mental health services globally, exacerbating the shortage of psychiatrists. This has led to decreased job satisfaction and perceived decency of work, along with increased burnout among them. Understanding the career adaptability of psychiatrists is crucial for addressing these issues

Methods The study used a cross-sectional research design and convenience sampling in February 2024. The 516 psychiatrists working in public hospitals located in Zhejiang Province and the Xinjiang Uygur Autonomous Region were assessed using demographic characteristics, the Career Adapt-Abilities Scale

(CAAS), the Decent Work Perceptions Scale (DWPS), the Minnesota Satisfaction Questionnaire (MSQ), and the Maslach Burnout Inventory-General Survey (MBI-GS)

Results The study found that career adaptability significantly influences burnout, job satisfaction, and decent work. Job satisfaction and decent work have negative effects on burnout, while decent work positively affects job satisfaction. Furthermore, mediation analysis highlights the role of decent work in mediating the relationship between career adaptability and burnout, explaining 50.74% of the total effect

Conclusion This study underscores the importance of career adaptability among psychiatrists, highlighting the mediating role of decent work and job satisfaction. Thus, management in psychiatric hospitals should take measures to enhance physicians' personal career adaptability, uphold the concept of decent work, improve job satisfaction, alleviate burnout, and safeguard physicians' professional well-being.

关键词: Career Adaptability; Decent Work; Job Satisfaction; Burnout; Psychiatrists; Mediation analysis.

医护人员对非自杀性自伤患者管理体验质性研究的 Meta 整合

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目的 整合医护人员对非自杀性自伤 (non-suicidal self injury, NSSI) 患者的态度及照护体验的质性研究, 为探索非自杀性自伤管理方案并制订干预策略提供参考。

方法 计算机检索 PubMed、Embase、Web of Science、Cochrane Library、EBSCO、CINAHL、中国知网、万方数据库、维普数据库、中国生物医学文献数据库中关于医护人员对管理 NSSI 患者的体验的质性研究, 检索时限为建库至 2023 年 7 月。使用澳大利亚乔安娜布里格斯研究所循证卫生保健中心质性研究质量评价标准 (2016) 评价文献质量, 采用

Meta 整合方法对结果进行整合。

结果 共纳入 11 篇文献, 提炼出 35 个研究结果, 归纳出 15 个类别, 最终综合为 4 个整合结果
1. 医护人员负性情感反应突出, 包括 (1) 面对伤情的恐惧感以及担忧潜在的风险; (2) 束手无策导致的沮丧和挫败感; (3) 同情心降低及对患者进行标签化。
2. 医护人员对 NSSI 管理的多元应对, 包括 (1) 建立良好的治疗关系; (2) 应用多种自伤替代疗法; (3) 加强风险评估及安全管理; (4) 采取个体化的护理; (5) 回避性照顾。
3. 医护人员在 NSSI 管理实践中的困境, 包括 (1) 限制性干预时机的分歧; (2) 自我效能低下; (3) 治疗关系的破坏; (4) 工作环境对高质量护理的限制。
4. 医护人员对 NSSI 管理的期待: (1) 加强相关知识培训; (2) 完善心理健康服务体系; (3) 提高社会公众整体认知。

结论 医护人员在照护 NSSI 患者时存在情绪压力和心理负担, 因此建议对照护 NSSI 的医护人员提供心理支持和情感关怀。医护人员的专业技能和知识决定了对患者的准确评估和有效干预的能力, 持续的专业培训和知识更新对提高照护质量至关重要。此外, 呼吁完善心理健康服务体系, 以便更好地满足患者的心理健康需求。

关键词: 医护人员; 非自杀性自伤; 管理; 质性研究; Meta 整合

The Mediating Role of Depression in The Relationship between Anxiety and Psychosomatic Symptoms in Nursing Internship Students after COVID-19 Policy Lifted in China: A Cross-sectional Study

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Objective The medical system has gradually resumed in China since early 2023. However, the existing pandemic threats and potential healthcare burden still stress out the medical personnel in major cities. Notably, nursing students are a vulnerable and highly stressed group, which can significantly impact their health and careers. Clinical internship is an important phase for

nursing students that helps them develop nursing abilities as they apply theory to practice and transition from the role of a student to that of a professional nurse. However, to reduce the proportion of infected persons during the pandemic, the clinical internship for nursing students was instead of online courses. Since December 5, 2022, the COVID-19 policy (a preventive policy that uses rigorous quarantine regulations and extensive testing to control any outbreak before it spreads) in China was lifted, and the clinical internship resumed in-person learning. A surge in COVID-19 incidence and hospitalizations poses psychosomatic challenges to nursing internship students. The term "psychosomatic" refers to the interaction in which psychological and biological variables are connected to health and illness, and the factors affecting people's psychosomatic health including age, gender, education, occupation etc. Most nursing students were concerned with higher infection risks, late graduation, the long-term impact on their future careers, and other stressors after the COVID-19 pandemic, which may result in severe psychosomatic problems. Previous studies showed that nursing internship students experienced considerable psychosomatic problems after the COVID-19 pandemic. Psychosomatic symptoms, alongside various forms of negative emotions such as anxiety and depression, may impact the health of healthcare workers and the daily care of patients, leading to unfavorable health outcomes for patients. For nursing students in internship, it may even shake their belief in pursuing a nursing career. While numerous studies have highlighted the presence of psychosomatic problems among nursing internship students in the early stages of the pandemic between 2020 and 2022, the psychosomatic health of nursing internship students after COVID-19 policy lifted are mainly unknown. Anxiety, depression and stress are the most common psychosomatic problems among nursing students. However, the underlying mechanisms and correlations between psychosomatic symptoms and negative emotions among nursing internship students are scarcely studied. Thus, we aim to investigate the prevalence of psychosomatic symptoms, anxiety, depression and perceived stress in nursing internship students after COVID-19 policy lifted, and explore the the underlying

mechanisms and correlations between them, which may serve as vital evidence to guide nursing internship students in promoting psychosomatic health

Methods A cross-sectional study with convenience sampling was conducted among nursing internship students at a grade-A tertiary hospital in Nanjing in early 2023. The inclusion criteria for this study were: (a) nursing students in internship; (b) those voluntarily participating in this research. The exclusion criteria were: (a) nursing interns on sick leave during investigation; (b) those who are unable to complete the questionnaire for personal reasons or other circumstances; (c) diagnosed with depression or other mental illnesses. All invitees completed the questionnaire online via the platform Questionnaire Star (<https://www.wjx.cn>) for questionnaire design and data gathering. The questionnaire included a demographic questionnaire, psychosomatic symptom scale (PSSS), generalized anxiety disorder 7-item (GAD-7), and patient health questionnaire-9 (PHQ-9), chinese perceived stress scales (CPSS). In this study, IBM SPSS 26.0 software was used to analyze the data. Descriptive statistics are the first step in analysis, the continuous variables that met the normal distribution were described as mean and standard deviation, whereas for the non-normal distribution, they were expressed as median and quartile. The categorical variables were described by the number and percentage. The chi-square tests were used to test the differences in categorical variables for the psychosomatic symptoms of nursing internship students, the Kruskal-Wallis H rank-sum test and Mann-Whitney U-test were used to compare the differences in total scores and psychosomatic symptoms for anxiety, depression, and stress. Multiple linear regression analysis was used to explore the influencing factors of psychosomatic symptoms among nursing internship students during the post-pandemic era. Finally, PROCESS 3.3 was utilized to analyze the mediating effect of influencing factors with psychosomatic symptoms in nursing interns. The P-value less than 0.05 (2-tailed) was considered statistically significant.

Results The prevalence of psychosomatic symptoms, anxiety, depression, and stress were 53.3%, 17.3%, 35.5%, and 66.5% respectively. Multiple linear regression analysis revealed that anxiety and depressive

symptoms were significant predictors of psychosomatic symptoms, which could explain 61.4% of the total variance of psychosomatic symptoms ($P < 0.05$). Further correlation analysis showed that psychosomatic symptoms was positively correlated with anxiety, depression ($P < 0.01$). The mediation model confirmed a significant association between anxiety and psychosomatic symptoms (total effect $c = 2.044$, Standard Error = 0.144, total effect share = 72%). We observed a significant mediating effect of depression on the association between anxiety and psychosomatic symptoms (effect value = 1.471, Standard Error = 0.298, Bootstraps 95% CI = 0.896 to 2.062).

Conclusion After the Chinese COVID-19 policy lifted, this is the first study that investigates the psychosomatic symptoms and associated factors of nursing internship students. We found that the prevalence of psychosomatic symptoms, anxiety, depression, and stress among nursing internship students were 53.3%, 17.3%, 35.5%, and 66.5% respectively. Furthermore, we found depression played a mediating role between anxiety and psychosomatic symptoms, which play an important role in making strategies to predict and intervene in the psychosomatic symptoms of nursing internship students. Clinical internship is a challenging and stressful experience for nursing internship students, even under normal circumstances. Notably, compared to the investigations in the early pandemic period, our study shows that nursing internship students have a lower incidence of negative emotions after the COVID-19 policy lifted. This may indicate that anxiety and depression among nursing students have been alleviated compared to the pandemic lockdown period. Sufficient understanding of the coronavirus infection, long-term adjustment to the pandemic and regulations related quarantine may be important for this reasons. However, the results of our survey and previous studies suggest that after the policy of COVID-19 lifted, nursing internship students nearing graduation may still experience this anxiety and depression due to the pressures of entrance examinations, employment, and nursing licensure exams. Therefore, the psychosomatic health of nursing internship students after COVID-19 policy lifted deserves attention. Possible interventions should target the monitoring and timely

treatment of anxiety and depression in nursing interns, as these symptoms are closely related to psychosomatic symptoms.

关键词: post-pandemic era; nursing student; internship; psychosomatic symptoms; anxiety; depression

情绪及自尊、亲子关系、负性生活事件对青少年抑郁障碍患者非自杀性自伤行为的影响

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目的 调查青少年抑郁障碍患者非自杀性自伤(NSSI)行为的情况,分析相关影响因素,为NSSI的防治提供理论基础及参考。

方法 选取 95 例青少年抑郁障碍患者,根据 DSM-5 关于 NSSI 的诊断标准,将患者分为伴有 NSSI 行为组(NSSI 组)和不伴有 NSSI 行为组(nNSSI 组)。采用青少年非自杀性自伤行为问卷(ANSAQ)、抑郁自评量表(SDS)、焦虑自评量表(SAS)、罗森伯格自尊量表(RSES)、亲密关系体验-关系结构量表(ECR-RS)、青少年生活事件量表(ASLEC)对患者进行评估,比较 NSSI 组与 nNSSI 组两组的组间差异,并使用二元 Logistic 回归分析探究 NSSI 行为的影响因素。

结果 95 例青少年抑郁障碍患者中有 59 例存在 NSSI,检出率为 62.11%。NSSI 组在抑郁自评量表、焦虑自评量表、对父亲的依恋焦虑、对母亲的依恋焦虑及依恋回避、ASLEC 总分、受惩罚、人际压力、学习压力、适应方面的评分均高于 nNSSI 组,而在罗森伯格自尊量表的评分较 nNSSI 组低 ($P < 0.05$)。二元 Logistic 回归分析提示,高焦虑水平、对母亲的依恋回避、受惩罚是青少年抑郁障碍患者 NSSI 行为发生的危险因素 ($P < 0.05$)。高自尊是青少年抑郁障碍患者发生 NSSI 行为的保护因素 ($P < 0.05$)。

结论 本研究提示青少年抑郁障碍患者 NSSI 发生率较高,高焦虑水平、对母亲的依恋回避、受惩罚是青少年抑郁障碍患者发生 NSSI 行为的危险因素,而高自尊是保护因素。临床中除了改善患者的抑郁、焦虑情绪外,还需注意关注患者的自尊水平、亲子关系及负性生活事件,以减少 NSSI 行为的发

生。

关键词：青少年,抑郁障碍,非自杀性自伤,影响因素

An Investigation on Mental Health Literacy in A Prefecture-Level City of China

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Background Mental Health Literacy (MHL) is a prerequisite for early identification and prevention for mental problems. China listed MHL as a national health policy indicator to achieve the goal of "Healthy China". But estimates of MHL from coordinated general population surveys were not published. This survey was set up in 2023 to investigate the Level of MHL (MHLL), analyse their social and psychological risk factors in a prefecture-level city of China.

Methods Multi-stage random sampling and Kish selection table were applied to get the sample who responded through a face-to-face-administered questionnaire through a community-based cross-sectional survey. National MHL Questionnaire (NMHLQ) was applied to conduct the survey. Analyses included descriptive statistics, Chi-square test and logistic regression were used

Results A total of 6970 people participated (effective rate: 98.8%), of whom a 51.4% were girls. The respondent aged from 15 to 80 years (52.9±12.6). Results showed that only 23.5% (n=1638) of respondents reached the qualified MHLL in total. High MHLL were observed among high years of education (OR=2.087, 95% CI:0.984-0.996, P<0.001), and good self-rated health

(OR=0.990, 95% CI:0.984-0.996, P=0.002), while increasing age was a risk factor for MHLL (OR=4.014, 95%CI:1.589-10.140, P=0.003)。

Conclusion Residents' MHLL is 23.5% (95% CI:22.6%-24.4%), which meets the relevant requirements of the Healthy China Action (2019-2030) and Municipal Health Commission. Corresponding countermeasures should be given to vulnerable people with high stigma

关键词：Residents; Mental health literacy level; Influencing factors; Stigma; Health promotion

精神疾病患者出院后死亡原因调查

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目的 为了解精神疾病患者出院后的死亡原因,做到及早预防,以减少或避免死亡的发生。

方法 采用通过电话回访的方式,向2020年5月至2024年5月经临汾锦冉心理康复医院治疗出院的精神疾病患者直系亲属进行调查,分别对患者性别、年龄、病程、出院诊断、合并躯体疾病、院外服药情况、家庭支持、死亡原因进行分析。

结果 自2020年5月到2024年5月出院后死亡的14例患者中,均未定期复查,未按时服药,其中男性13例,女性1例,年龄25-82岁,病程2年—20年,出院诊断:精神分裂症6人,脑器质性精神障碍4人,双相情感障碍3人,伴有精神症状的重度抑郁1人。其中:自杀6人(服药4人,服农药2人),阿尔茨海默症死亡4人,外走溺水1人,车祸1人,猝死1人。

结论 精神疾病患者康复出院后男性死亡率明显高于女性占93%,其中自杀占最大比例43%,其次是脑器质性精神障碍占29%,外走溺水7%,车祸7%,肺癌7%,猝死7%。

精神疾病患者康复出院,回归家庭,回归社会后,家庭护理非常重要。需要医院、家庭、社会三方共同努力,构建完善的精神疾病康复体系,提高他们的社会适应能力,同时让他们能够认识到自己的价值,增强生活的信心,从而减少因为自卑、悲观而自杀的发生。

同时也有相当一部分老年精神疾病患者为脑器质性病变引起,因此要加强对老年患者的原发性疾病的及早治疗,通常原发性疾病治疗好后,伴随的相关精神障碍会减轻或消失。

关键词:精神疾病,出院,死亡原因

孤独症谱系障碍学龄前儿童血浆内源性大麻素含量降低

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目的 内源性大麻素系统是一个与突触可塑性和神经调节相关的细胞信号系统,其起作用的分子为内源性大麻素(endocannabinoid, eCB)。eCB的失调可能与孤独症谱系障碍(autism spectrum disorder, ASD)相关。越来越多临床研究逐渐关注到ASD儿童eCB的失调,以及eCB水平与ASD症状的相关性。然而目前证据较少,尤其是学龄前儿童相关证据,并且缺乏一致性。本研究旨在测试学龄前ASD儿童与同龄正常神经发育儿童血浆当中eCB含量变化,探究ASD儿童血浆eCB水平变化及其与症状严重程度度的关联。

方法 使用LC-MS/MS法对71例学龄前ASD患儿(年龄=3.79±1.09岁;82%男童)和75例神经正常发育儿童(年龄=4.25±2.50岁;100%男童)血浆中主要eCB进行了测定,包括2-花生四烯酰基甘油(2-arachidonoylglycerol, 2-AG), N-花生四烯酰乙醇胺(N-arachidonylethanolamine, AEA), N-棕榈酰乙醇胺(N-palmitoylethanolamine, PEA)和N-油酰乙醇胺(N-oleoylethanolamine, OEA)和。将测试结果与性别、年龄、体重指数和ASD患者症状严重程度度相关联,症状严重程度使用的是儿童孤独症评定量表(The Childhood Autism Rating Scale, CARS)进行测评。

结果 相比正常对照,ASD儿童具有更低水平的AEA(0.06±0.035 vs 0.11±0.04, P<0.01), PEA(1.23±0.88 vs 2.26±1.29, P<0.01), OEA(1.42±0.53 vs 2.01±0.66, P<0.01)和2-AG(0.90±0.90 vs 1.88±1.26, P<0.01)。ASD儿童血浆中2-AG水平与症状严重程度呈显著负相关(r=-0.252, P=0.034)。血浆AEA、OEA、PEA和2-AG水平与ASD儿童的年龄、性别、BMI、无显著相关。

结论 我们发现相比健康儿童,ASD儿童的血浆AEA、2-AG、PEA和OEA水平较低。较低水平的2-AG与更高的ASD症状严重程度度相关。但ASD作为一种神经发育障碍疾病,未来需要进一步的研究来确定外周与中枢的关联性以及中枢中eCB的变化,同时探究外周eCB变化对症状产生影响的机制,找到可能有效的干预靶点。

关键词:孤独症,内源性大麻素系统

成人注意缺陷多动障碍(ADHD)诊断现状和挑战

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目的 了解中国成人ADHD人群分布特点和诊断的挑战。

方法 收集首次就诊于浙江大学医学院附属邵逸夫医院成人注意缺陷多动障碍专病门诊患者的临床资料(性别、年龄、教育水平、合并症和ASRS评分)进行回顾性分析。诊断采用DSM-5成人ADHD诊断标准。统计采用方差分析方法和卡方检验。

结果 收集了从2022年3月至2024年3月因怀疑自己是ADHD而首次就诊的患者共301例,最小年龄为17周岁,最大年龄为47岁,其中男性100名,占33.2%,女性为201名,占66.8%。27名(8.97%)患者无法联系到12岁之前的照料者,导致儿童时期的病史缺失。剩下的274名患者中,符合ADHD诊断标准的有99人,不符合的为175人。99例被确诊的患者中,男性38人(38.4%),女性61人(61.6%),平均年龄为25.88±6.19岁,教育年限为15.19±2.13,成人ADHD自评量表评分为34.62±7.29,共病焦虑症13例、抑郁症9例、双相障碍6例、睡眠障碍6例、抽动障碍4例、创伤后应激障碍1例。ADHD和不符合ADHD两组人群在年龄、性别和教育年限方面均无统计学差异。

结论 成人ADHD诊断最大挑战来自于12岁之前的病史的获取困难,减少回忆偏倚及客观的病史是诊断的前提;其次是共病其他精神疾病容易遗漏或误诊。

关键词:成人注意缺陷多动障碍,诊断,现状分析

Neurobiological Differences in Early-Onset Obsessive-Compulsive Disorder: A Study of The Glutamatergic System Based on Functional Magnetic Resonance Spectroscopy

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Objective In this study, we aimed to investigate the dissimilarities and associations between the anterior cingulate cortex (ACC) neurometabolites and inhibitory functions in three groups: early-onset OCD (EO-OCD) with onset in adolescence (age of onset ≤ 14 years), non-early-onset OCD (age of onset > 14 years), and a healthy population. We used functional magnetic resonance imaging combined with cognitive tasks and conducted subgroup analyses on early-onset OCD (EO) and non-early-onset OCD (non-EO). Our focus was on examining the influence of the glutamatergic system on the different OCD subtypes

Methods 66 OCD and 29 healthy controls (HCs) underwent clinical evaluation and were further divided into subgroups with EO (n=22) or non-EO (n=41). The research included collecting both resting state (rMRS) and functional state magnetic resonance spectroscopy (fMRS) data. The focus was on the ACC as the region of interest. Reaction times and response error rates during the Go-Nogo task were recorded during scanning. Quantitative analysis of the MRS data yielded absolute neurometabolic concentrations in the ACC, which were then subjected to statistical examination. The results were adjusted for the impact of the disease course using multiple linear regression analysis

Results The EO group demonstrated significantly lower functional GSH than the non-EO group. There is a correlation between Glx levels and cognitive function in OCD patients. A unique correlation between

GSH levels and Y-BOCS scores was found in the EO group. Opposite correlations were found between the EO and non-EO group in terms of Go task reaction time and functional state Glx levels

Conclusion The concentration of Glx in the ACC may serve as a biomarker for OCD. There is neurobiological heterogeneity in OCD, and early-onset OCD should be viewed as a subtype. This is evidenced by the differences in changes in ACC concentrations of Glx and GSH between early-onset and non-early-onset OCD patients. Moreover, Early-onset OCD exhibits a unique and distinct correlation between glutamate metabolites and inhibitory function

关键词: Obsessive-compulsive disorder, Early-onset, Magnetic Resonance Spectroscopic, Anterior cingulate cortex, Glutamate, Glutathione.

Using Network Analysis To Identify Central Symptoms of Depression and Anxiety in Different Profiles of Infertility Patients

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Objective The enormous pressure substantially affects the psychological well-being of infertility patients, resulting in prevalent depression and anxiety. The current study endeavors to define distinct depression and anxiety profiles of infertility patients and identify central symptoms within different subgroups to facilitate targeted interventions.

Methods The research employed K-means Clustering to delineate the depression and anxiety profiles, followed by a repetition of the analysis using Latent Class Analysis (LCA). Furthermore, network analysis was utilized to identify central symptoms within the various subgroups

Results K-means Clustering identified Cluster 1 (16.15%), Cluster 2 (37.08%) and Cluster 3 (46.77%),

while LCA yielded the low-risk group (47.23%), the mild-risk group (34.46%) and the high-risk group (18.31%). A majority of patients in the three clusters were predominantly in a single LCA-derived patient class (88.38–100%). Network analysis revealed that connections within each symptom in PHQ-9 and GAD-7 were stronger than those between symptoms. Furthermore, PHQ 2 (“sad mood”), GAD 1 (“nervousness”) and GAD 2 (“uncontrollable worry”) were identified as the central symptoms in Cluster 1. GAD 3 (“excessive worry”), GAD 2 (“uncontrollable worry”) and GAD 5 (“restlessness”) emerged as the central symptoms in Cluster 2. Additionally, PHQ 4 (“fatigue”), GAD 6 (“irritability”) and GAD 3 (“excessive worry”) were identified as the central symptoms in Cluster 3

Conclusion We defined three distinct depression and anxiety profiles among infertility patients and pinpointed central symptoms within each subgroup. These findings underscore the importance of directing research towards those central symptoms within each subgroup in order to develop targeted intervention strategies

关键词: Infertility, Depression, Anxiety, K-means Clustering, Latent Class Analysis, Network analysis

2021年宁夏严重精神障碍患者管理治疗现状分析

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目的 分析 2021 年宁夏严重精神障碍患者管理治疗情况, 为有关部门制定下一步精神卫生政策提供决策依据。

方法 采用描述性分析方法, 对 2005 年宁夏实施严重精神障碍管理治疗项目以来的患者登记、管理、治疗等情况进行分析。

结果 截至 2021 年底, 宁夏登记在册严重精神障碍患者 29787 例, 报告患病率 0.43% (29787/6946540); 在管患者 28195 例, 管理率 94.66% (28195/29787), 规范管理患者 26924 例, 规范管理率 90.39% (26924/29787); 服药患者 24283 例, 服

药率 81.52% (24283/29787), 规律服药患者 19761 例, 规律服药率 66.34% (19761/29787); 病情稳定患者 25663 例, 病情稳定率 97.05% (25663/26444)。与 2020 年相比, 在册患者增加 901 例, 规范管理率、规律服药率、精神分裂症患者服药率、病情稳定率分别增加 3%、8.36%、1.14%、1.19%。山区县在册患者规律服药率显著低于市辖区和川区县 ($F=3.672$, $P=0.045$)。

结论 近年来登记在全民健康保障系统-精神卫生子系统的患者人数持续增长, 患者管理和治疗水平有所提高。山区县应针对当地精神卫生服务的薄弱环节制定救助救治政策, 以提高患者的治疗率。

关键词: 公共精神卫生; 严重精神障碍; 基本公共卫生服务; 社区管理

重复经颅磁刺激治疗儿童抽动障碍

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目的 重复经颅磁刺激 (rTMS) 是在经颅磁刺激的基础上发展起来的新的神经电生理技术, 已应用于多种神经精神疾病治疗, 并取得一定疗效。本研究旨在深入探讨 rTMS 在治疗儿童抽动障碍中的应用效果及其安全性。

方法 研究选取了 30 名确诊为抽动障碍的儿童作为研究对象。这些孩子被随机分为两组, 其中一组仅接受常规药物治疗, 而另一组则在常规药物治疗的基础上增加了重复经颅磁刺激治疗。rTMS 作用于辅助运动区 (SMA), 给予低频治疗, 共 1000-1200 次脉冲, 一次性连续刺激, 5 次/周, 整个疗程持续了 4 周, 共治疗 20 次。每次治疗时间为 20 分钟。为了评估治疗效果, 研究使用了耶鲁综合抽动严重度量表 (YGTSS)。

结果 经过 4 周的治疗, 接受 rTMS 治疗的患儿在耶鲁综合抽动严重度量表 (YGTSS) 评分上比仅接受药物治疗的儿童有了显著的降低, 这一差异具有统计学意义 ($P<0.05$)。此外, rTMS 治疗组中并未观察到明显的不良反应。

结论 药物联合重复经颅磁刺激治疗儿童抽动障碍较单一药物治疗疗效更佳, 联合治疗对儿童抽动障碍症状改善效果更好, 且能明显提升患儿自我

意识及生活质量,治疗时的不良反应风险更低。重复经颅磁刺激技术在治疗儿童抽动障碍方面是安全的、无痛的、有效的,更容易被抽动障碍的患儿及家属接受。

关键词: 经颅磁,儿童,抽动障碍

精神科不配合静脉采血患者的护理体会

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目的 总结交流精神科患者静脉采血的护理特点及经验体会,来者可鉴。

方法 通过问题访谈形式就不配合采血患者表现形式、处理措施及临床经验教训等问题对某三甲精神专科医院门诊 27 人、住院病房 70 名工作人员(涉及各层级人员)进行访问,总结归纳结果。

结果 精神科患者常见不配合采血情形及处理归纳如下

1.已表现出冲动、伤人、毁物、自伤行为的患者:采血前患者已有严重的以上行为,工作人员、家属均无法与其进行沟通,取得配合,为保障众人安全,与家属沟通,请主诊医生开具约束性保护,在急诊留观病房安全采血。家属也可提前寻求 110、120 等社会支持。医院开通绿色通道,缩短等候时间,保证及时治疗。

2.出于紧张、恐惧、顾虑、排斥心理的患者:存在恐惧、害怕疼痛心理的患者,多见于儿童、青少年及女性患者,给予鼓励性支持性心理护理,讲解检查意义,用榜样法、奖励法、转移注意力等方法,尽可能由高技术人员操作。对检查有顾虑、排斥者,如质疑检查的必要性,排斥抽血,对抽血存在错误认知。运用专业知识排忧,增加信任、安全感。

3.对于情感淡漠、老年痴呆症重度阶段、木僵状态、精神发育迟滞、缄默不语等问而不答,问而错答,认知障碍的无法配合,与家属、工作人员做好核对沟通,共同协助患者在合适体位下安全采血,避免意外及错误发生。

4.对违拗、易激惹、兴奋、冲动、被动接触、敌对、理性活动少、有意识拒绝检查等受疾病影响,间歇性不配合但能沟通诱导的患者,耐心沟通中了解患者状态,不与患者争论,不生硬拒绝患者无理要

求,避免激惹,安抚诱哄,转移注意力,与亲属、医生、保卫科等其他工作人员做好配合,协力完成采血。

5.采血过程中突发拔针抢针、攻击毁物、自伤等情形,立即终止采血,收起危险物品如利器、易扔砸物品,保障自身安全前提下安全安抚控制住患者,寻求家属帮助,必要时通知保卫科协助,保障周围人群安全。精神障碍患者做出各种突发危险行为并不少见,工作人员在采血中要与家属的沟通,根据患者言行表情,高度警觉、洞察预判可能的突发状况,做好应急与防范。对此,精神科采血窗口设计并投入使用针对患者不配合状态下的有保护性能的采血操作台、操作床、椅等非常有必要。门诊与病房都应在采血前后核对采血对象及用物。

结论 精神科采血工作的顺利开展不仅需要专业的知识、技能,沟通技巧,心理护理,还需要敏锐的洞察预判,应急处理能力,在保障全员安全的前提下保质保量完成采血工作。

关键词: 精神科,静脉采血,不配合患者,护理体会

Exploration on Facial Action Unit Features in Depressive Episodes Recognition Based on Multiple Contexts

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Objective This study explored the facial action unit (AU) features of patients with depressive episodes across three different contexts: naturalistic, resting, and task-based. It compared the recognition models based on AU features of depressive episodes in each context, aiming to provide insights for the clinical assisted identification and intervention research of depressive episodes based on artificial intelligence (AI)

Methods A total of 65 inpatients with depressive episodes were enrolled as the case group and matched with 65 healthy controls. The self-rating depression scale (SDS) and Hamilton depression scale (HAMD) were administrated and frontal videos were recorded by

two groups during naturalistic, resting and task context, respectively. Support Vector Machine (SVM) classifier was used to construct recognition models for depressive episodes and the performance of different models was compared

Results The model constructed based on effective AU features in the naturalistic context performed the best, with an accuracy of 80.0%, F1=0.810, AUC=0.880. In contrast, the model constructed in the task context was with an accuracy of 72.5%, F1=0.732, AUC=0.782

Conclusion This study suggests that the communication situation based on doctor-patient face-to-face interaction remains the predominant approach for early identifying and intervening in patients experiencing depressive episodes

关键词: depressive episode; facial action unit; recognition model; support vector machine

呼和浩特市社区精神分裂症患者服药依从性调查及原因分析

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目的 调查呼和浩特市社区精神分裂症患者近1个月的服药依从性状况,从社会人口学资料、疾病治疗情况、患者对服药的主观态度及家属态度等方面探究影响服药依从性的因素,为提高呼和浩特市社区精神分裂症患者的服药依从性、减少疾病的复发、改善患者的预后提供依据。

方法 本研究采用单纯随机抽样方法,从内蒙古自治区严重精神障碍信息管理系统中抽取512名呼和浩特市社区精神分裂症患者作为研究对象,调查工具参考北京大学研究的“精神分裂症患者服药依从性及家属态度”调查问卷后自行设计,于2023年7月至2023年11月对门诊及社区患者进行面对面调查。

结果 512名被调查者中,遵医嘱服药394人(77.0%),低量服药105人(20.5%),超量服药13人(2.5%)。患者所服药物中,第一代抗精神病药使用率为15.7%,第二代抗精神病药使用率为84.3%,

服用第二代抗精神病药的患者中,使用率居前3位的药物为氯氮平(33.7%)、利培酮(26.1%)及奥氮平(11.2%)。影响服药依从性的单因素分析中,婚姻状况($\chi^2=19.457$, $P=0.001$)、患者有无停药($\chi^2=117.852$, $P<0.001$)、谁决定停药($\chi^2=10.056$, $P=0.039$)、首次发病与首次系统药物治疗年龄差值($F=4.441$, $P=0.012$)、服药方式($\chi^2=124.965$, $P<0.001$)差异均具有统计学意义。在患者对服药的主观态度方面,遵医嘱服药组中,97.7%的患者认为精神疾病需要服药并长期维持治疗,92.6%的患者按照医生的建议坚持服药;低量服药组中,60.0%的患者认为病情稳定便可减药停药,56.2%的患者因为有时无意忘记导致无法按时服药;超量服药组中,100.0%的患者认为症状加重,自行调药即可,15.4%的患者以为多吃药会更快痊愈。家属对患者的态度中,85.4%的家属认为应该听从医生的治疗建议,32.8%的家属将精神病人视为负担。影响服药依从性的多因素分析中,患者有无停药($\beta=-2.240$, $P<0.001$)、服药方式($\beta=-0.903$, $P<0.001$)是服药依从性的独立危险因素。

结论 (1)呼和浩特市社区精神分裂症患者服药依从率为77.0%,高于2016年全国服药依从性调查结果(70.4%)。(2)婚姻状况、患者及家属对疾病和治疗的认知、患者对医生的信任、家属管理及经济支持是服药依从性的影响因素,其中,患者及家属对疾病和治疗的认知、患者对医生的信任、家属管理及经济支持能够提高患者服药依从性。患者不愿主动服药、有过停药行为是影响服药依从性的独立危险因素。

关键词:精神分裂症,服药依从性,社区,影响因素

童年创伤对大学生抑郁症状的影响:压力知觉和焦虑症状的中介作用以及情绪调节策略的调节作用

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目的 探讨童年创伤对大学生抑郁症状的影响以及压力知觉和焦虑症状的中介作用和情绪调节策

略的调节作用。

方法 于2023年12月-2024年2月,采用童年创伤问卷、抑郁自评量表、压力知觉量表、焦虑自评量表和情绪调节策略问卷对1320名大学生进行调查。

结果 (1)童年创伤与大学生抑郁症状呈显著正相关($r=0.527, p<0.001$)。(2)童年创伤显著正向预测压力知觉($\beta=0.319, SE=0.027, t=11.816, p<0.001$)、焦虑症状($\beta=0.408, SE=0.023, t=17.621, p<0.001$)和抑郁症状($\beta=0.143, SE=0.020, t=7.162, p<0.001$);压力知觉显著正向焦虑症状($\beta=0.359, SE=0.026, t=15.972, p<0.001$)和抑郁症状($\beta=0.143, SE=0.020, t=7.162, p<0.001$);焦虑症状显著正向预测抑郁症状($\beta=0.514, SE=0.022, t=23.935, p<0.001$)。(3)在童年创伤→压力知觉→焦虑症状→抑郁症状的中介模型中:①压力知觉在童年创伤和抑郁症状之间起部分中介作用,间接效应值为0.095(95%CI:0.077~0.115),效应占比为18.74%;②焦虑症状在童年创伤与抑郁症状之间起部分中介作用,间接效应值为0.210(95%CI:0.178~0.243),效应占比为41.42%;③压力知觉和焦虑症状在童年创伤与抑郁症状之间起链式中介,间接效应值为0.059(95%CI:0.048~0.071),效应占比为11.64%。(4)认知重评策略调节了压力知觉与抑郁症状之间的关系。具体而言,大学生的认知重评策略水平越高,压力知觉对抑郁症状的预测作用越低($\beta=-0.038, SE=0.016, t=-2.384, p<0.05$)。

结论 童年创伤与抑郁症状之间存在有调节的中介效应,压力知觉和焦虑症状是二者关系的中介变量,并且认知重评策略能弱化压力知觉对抑郁症状的影响。

关键词:童年创伤;压力知觉;焦虑症状;情绪调节策略;抑郁症状;大学生

重症精神疾病患者未成年子女的支持需求和行为情绪问题

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目的 了解重症精神疾病患者子女的支持需求、行为和情绪问题并探究其影响因素,为学校、社会

对重症精神疾病患者子女的心理支持与干预提供参考。

方法 对四川省精神卫生中心登记在册并长期管理的重症精神疾病患者及其子女采用《支持需求问卷》和《长处与困难问卷》进行线下问卷调查。

结果 共有63名未成年子女、60名父亲、54名母亲参与本次调查。其中23名父亲、43名母亲为四川省精神卫生中心登记在册并长期管理的重症精神疾病患者。参与调查的父母中服药者53人、精神残疾者52人、精神疾病呈痊愈或病情轻度者47人、自杀未遂者9人。63名未成年子女平均年龄为12.94岁,男性26名、女性37名,平均上学年限为6.7年。未成年子女对父母发病时有效的帮助途径、经济资助、社会支持、学习或升学辅导有较高的支持需求;未成年子女整体情绪行为处于异常水平,其中情绪症状和亲社会行为处于异常水平,品行问题处于边缘水平。子女的情绪行为问题与父亲的文化程度、精神疾病、相处情况,父母的主动沟通情况呈相关关系;情绪症状与父亲的文化程度、对父母精神疾病的担心相关;品行问题与父亲的文化程度,父母的精神疾病、相处情况有关。

结论 社会、院校、社区应需更加重视父亲为重症精神疾病患者、父母需长期服药、家庭支持较少需照顾父母的未成年子女,对其提供相应的帮助支持,同时重视其心理健康问题。

关键词:重症精神疾病;未成年子女;支持需求;人际交往;现状调查

机器学习与深度学习方法在应激识别中的应用:基于心率变异性的研究

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目的 应激与多种精神疾病(如焦虑、抑郁等)的发生密切相关,且严重影响患者的日常功能,准确、非侵入地评估和识别应激对于精神疾病的早期预防、诊断和治疗具有重要意义,因此开发精确有效的应激评估工具至关重要。心率变异性(Heart

Rate Variability, HRV) 是一个常用、易获取的指标,但其特征数量繁多。现有结合机器学习 (Machine Learning, ML) 的研究大多仅使用单一或数量有限的 HRV 特征和少数传统 ML 模型,导致最佳 HRV 特征组合和模型的选择尚不明确一致。此外,在众多 HRV 特征中,极低频 (Very Low Frequency, VLF) 特征的生理意义及其与应激的关系仍不完全清楚,可能由于传统特征提取方法过于粗糙,简单线性计算会丢失数据的时变和非线性信息。

方法 研究一采用特里尔社会应激任务诱发应激,纳入 41 名被试,测量应激任务下的心电图、正负性情绪和唾液皮质醇水平,并以正负性情绪和皮质醇反应作为应激的客观指标。从心电图记录中提取 27 项 HRV 特征,初步测试 23 个传统 ML 模型,再从中筛选 5 个性能最优的 ML 模型进行参数调优。随后通过 500 次 4 折交叉验证和参数调优提升结果稳健性,减少随机性影响。研究二基于研究一纳入 38 名被试,测量应激任务下的心率和状态焦虑水平。采用连续小波变换技术对 VLF 成分进行时频图提取,并输入卷积神经网络模型 (Convolutional Neural Network, CNN) 进行应激识别。

结果 结果表明,特里尔社会应激任务有效诱发被试的应激反应 (所有 $p=0.001$)。包含平均 RR 间期、心率标准差、最大心率、分形维度、样本熵、极低频和低频的 7 个 HRV 特征组合是应激识别的最优特征集。在所有 ML 模型中,随机森林模型性能表现最佳,平均准确率、灵敏度、特异度和 AUC 分别为 98.27%、99.30%、97.13% 和 0.999。此外,VLF 是识别应激的一个有效特征,基于 VLF 时频图构建的 CNN 模型在应激分类任务中达到 95% 的优秀性能。

结论 机器学习和深度学习方法,尤其是基于图像的 CNN 模型,是开发应激识别系统的有效方法。此外,采用随机森林算法对心电信号进行学习,能够更有效识别和诊断应激。使用更全面的特征集构建的模型,其性能优于仅使用单一或少量特征构建的模型。特别地,VLF 成分是一个与应激密切相关的 HRV 特征,具有重要的生理和心理意义。

关键词: 应激识别, HRV, VLF, 时频分析, 机器学习, 卷积神经网络

联: 躯体化症状的中介效应和情绪调节困难的调节效应

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目的 非自杀性自伤 (Non-Suicidal Self-Injury, NSSI) 已发展为严重的公共卫生问题,与未来自杀风险密切相关。研究发现睡眠质量差会增加 NSSI 患者自伤的风险,且 NSSI 患者存在躯体化症状,合并躯体化问题的 NSSI 患者表现出更严重的情绪调节缺陷,同时睡眠质量差也会对躯体化症状带来负性影响。目前尚缺乏研究在同一 NSSI 样本中探讨睡眠质量、躯体化症状、情绪调节困难及 NSSI 间的相互作用关系。本研究尝试构建中介模型和调节模型,探讨躯体化症状在睡眠质量和 NSSI 间的中介作用及情绪调节困难在其中的调节作用。

方法 筛选符合精神障碍诊断与统计手册第五版 (DSM-5) 中 NSSI 诊断标准的大学生为研究对象,采用匹兹堡睡眠质量指数、患者健康问卷躯体症状群量表、情绪调节困难量表和青少年非自杀性自伤行为功能评估量表对睡眠质量、躯体化症状、情绪调节困难及 NSSI 行为进行调查。采用 Pearson 相关分析各量表得分之间相关性;采用 Hayes 编制的 PROCESS 程序进行中介效应和调节效应检验,并进行简单斜率分析。

结果 研究纳入 165 例 NSSI 大学生,平均年龄 20.84 ± 1.46 ,其中男性 102 例 (61.8%)。NSSI 严重程度得分 31.23 ± 1.61 ,睡眠质量得分 8.81 ± 0.24 ,躯体化症状得分 13.25 ± 0.44 ,情绪调节困难程度得分 111.41 ± 1.59 。睡眠质量差、躯体化症状、情绪调节困难和 NSSI 严重程度之间呈现两两显著正相关 (相关系数 r 范围 0.30~0.58)。中介效应检验结果显示,睡眠质量越差, NSSI 个体的躯体化症状越严重 ($\beta=0.54, P<0.001$);躯体化症状越严重,个体在过去一年内的 NSSI 严重程度越高 ($\beta=0.41, P<0.001$),躯体化症状完全中介了睡眠质量差对 NSSI 严重程度的影响 (中介效应 0.22,解释了 64.7% 的方差)。调节效应检验结果显示,躯体化症状和情绪调节困难的交互项与 NSSI 严重程度显著关联 ($\beta=0.15, P=0.02$)。简单斜率分析显示情绪调节困难高的个体躯体化症状对 NSSI 严重程度的关联显著 ($\beta=0.44, P<0.001$),但情绪调节困难低的个体躯体化症状与 NSSI 严重程度的关联不显著;控制焦虑抑

非自杀性自伤个体睡眠质量和自伤行为的关

郁水平后,结果保持稳健。

结论 NSSI 个体中睡眠质量差和 NSSI 严重程度间的关联与躯体化症状有关。情绪调节困难程度调节了躯体化症状与 NSSI 严重程度之间的关联,在情绪调节困难高的个体中,躯体化症状与 NSSI 严重程度显著关联,但在情绪调节困难低的个体中关联不显著。

关键词: 非自杀性自伤;躯体化症状;睡眠质量;情绪调节

精神科一线医护人员基于可穿戴设备的压力状况研究

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目的 本研究通过可穿戴设备收集精神科一线医护人员压力相关生理指标和知觉压力量表资料,在一般人口学资料的基础上,对比医护两个群体在压力水平是否存在差异,并探索压力相关生理指标与知觉压力量表结果是否具有关联性,为精神科医护人员减少压力提供依据。

方法 收集精神科一线医护人员的一般人口学资料、中文版知觉压力量表(Chinese Perceived Stress Scale, CPSS),采集工作现场时点压力相关生理指标,包括:血压、心率和压力值,采用 t 检验和 χ^2 检验对各变量进行医护组间差异性统计分析;采用 Pearson 相关分析对变量间进行相关性分析

结果 共纳入 172 人,医生和护士两组间性别、学历、职称、班次、平均月收入 and 人事关系的构成比均存在统计学差异 ($\chi^2=4.293, P=0.038$; $\chi^2=67.691, P=0.000$; $\chi^2=17.042, P=0.001$; $\chi^2=99.413, P=0.000$; $\chi^2=40.495, P=0.000$; $\chi^2=6.271, P=0.012$), 两组间年龄、舒张压、失控感、知觉压力总分的差异均具有统计学意义 ($t=2.857, P=0.005$; $t=2.009, P=0.046$; $t=-3.701, P=0.000$; $t=-3.057, P=0.003$)。剔除高血压、冠心病病史后,167 人进入最后的分析,其知觉压力量表总分 19.69 ± 7.01 ,其中大于临界值(25 分)共 32 人,占比 19.16%。相关性分析未发现压力相关生理指标与知觉压力总

分存在相关关系。提示精神科一线护理人员的压力水平高于医生,本研究中未发现压力相关的生理指标与知觉压力量表之间存在相关性。

结论 精神科一线医护人员压力状况不容乐观,护理人员更为严重。单一时点获得的压力相关生理指标尚无法体现精神科一线医护人员压力水平,其与心理评估结果关联性需进一步验证。

关键词: 精神科;医护人员;生理指标;知觉压力;心率变异性;压力值

精神压力和慢性肾脏疾病发病的关联

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目的 精神压力被认为是心血管代谢疾病的一个重要风险因素。然而,精神压力与慢性肾脏病(CKD)是否存在关联仍不清楚,本研究旨在阐明精神压力和 CKD 发病的关联,从而通过加强关注人群社会精神降低 CKD 发病率。

方法 研究对象包括英国生物库中的 462,699 名参与者。精神压力的定义通过社交隔离程度来决定,后者通过自我报告问卷进行测量。CKD 病例通过医院或死亡记录确定。我们采用多变量 Cox 比例危险模型来评估社会隔离与突发 CKD 之间的独立关联。此外,我们还使用了倾向得分匹配(PSM)分析来排除混杂因素的干扰,加强结果可信度。

结果 中位随访期为 12.6 年,共记录了 25,486 例慢性肾功能衰竭病例。与社会隔离程度最低的参与者相比,社会隔离程度最高的参与者罹患慢性肾功能衰竭的风险更高(模型 1, HR, 1.33; 95% CI, 1.28-1.38),在考虑了孤独感和遗传风险等混杂因素后,这种关联有所减弱。而在使用 PSM 的回归模型中,这种关联仍然是稳健的。

结论 精神压力与 CKD 风险的增加有关联,尤其是独居和更少的成人教育。这些发现强调了加强关注人群精神压力可能有助于维护肾脏健康。

关键词: 精神压力,社交隔离,CKD,英国生物样本数据库

新冠疫情期间医护人员孤独感流行率的 meta 分析

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目的 分析医护人员在新冠疫情期间孤独感流行率及相关影响因素, 为未来类似公共卫生事件发生时提供相应的理论依据。

方法 检索时间从2020年1月至2024年4月, 计算机检索 PubMed、Embase、Scopus、APA/PsycInfo、Proquest、中国知网、维普数据库、万方数据库等有关新冠疫情期间医护人员孤独感流行率的相关文献, 文献的筛选、数据提取以及质量评价由2位评审员独立完成, 然后双方相互查验。若有分歧, 由第3位评审者评定。对文献去重后阅读题目及摘要进行初筛, 对照纳入标准和排除标准阅读全文, 最终决定文献是否纳入。对纳入文献进行偏倚风险评价, 横断面研究采用美国卫生保健质量和研究机构 (Agency for Healthcare Research and Quality, AHRQ) 质量评价表, 而队列研究采用纽卡斯尔-渥太华量表 (Newcastle-Ottawa Scale, NOS) 评价。使用 Begg's 检验及 Egger's 检验方法评价本研究的发表偏倚。通过逐一剔除单个研究的方法进行敏感性分析。

结果 通过检索各数据库, 共获得文献 1019 篇。经层层筛选, 最终纳入 11 篇文献, 包括英文 10 篇, 中文 1 篇, 总样本量 8472 例, 共计 3019 例医护人员在疫情期间发生孤独感。纳入文献质量评价结果均为中、高质量文献, Begg's 检验结果 $Z=0.93$ 、 $P=0.350$, Egger's 检验结果 $t=1.31$ 、 $P=0.223$, 提示无明显发表偏倚。敏感性分析得出的点估计值均在总效应量的 95%CI 以内, 提示本研究的 Meta 分析结果具有较好稳定性。Meta 分析结果显示, 新冠疫情期间医护人员的孤独感流行率为 42.5% [95%CI (29.2%, 55.8%), $P<0.001$], 亚组分析结果显示, 发达国家和发展中国家的医护人员孤独感流行率分别为 47.2% 和 39.0%; 医师和护士的孤独感流行率分别为 44.8% 和 53.1%; 2020 年和 2021-2022 年的医护人员孤独感流行率分别为 47.3% 和 30.1%。

结论 在新冠肺炎疫情期间医护人员的孤独感流行率较高, 且随着时间发展呈现出动态变化趋势,

且在不同区域及不同岗位之间存在明显差异。因此建议从本次疫情中汲取经验与教训, 重视医护人员的孤独感等心理问题并制定相应的干预策略。

关键词: 医护人员; 新冠疫情; 孤独感; 流行率; meta 分析

童年创伤直接或由家庭相关因素和性格介导间接影响抑郁症的快感缺失

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目的 快感缺乏是抑郁症的核心症状之一, 是难治性抑郁症和抑郁症残余症状的紧迫问题。快感缺乏对抑郁症患者的生活质量有严重影响。然而, 家庭相关因素和人格特质在影响快感缺失方面的相互作用没有得到很好的描述。基于这些发现, 我们认为儿童虐待、养育方式、家庭功能和人格特质共同作用, 导致抑郁症的快感缺乏症状。我们的研究目的是探索低快感缺乏和高快感缺乏组的儿童虐待、养育方式、家庭功能和人格特质是否不同; 进一步探讨某些人格特质是否可能是快感缺乏严重程度的独立危险因素; 童年虐待是否直接或通过家庭相关因素和人格中介影响快感缺乏。

方法 武汉大学人民医院共招募了 373 例抑郁症患者。我们通过使用自制的一般信息问卷、儿童创伤问卷、父母养育方式量表、家庭评估设备、艾森克人格问卷和快乐体验量表来评估患者的一般状况、家庭相关因素、人格特质和快感缺乏症状。采用 Logistic 回归和结构方程模型探究快感缺乏的影响因素及其中介关系。

结果 高快感缺乏和低快感缺乏组之间的特定人格特质、童年虐待、养育方式和家庭功能存在显著差异。其中, 精神病、外向性以及母亲的排斥和否认甚至可能是快感缺乏严重程度的独立危险因素。SEM 表明, 童年时期的情绪忽视可能直接或间接地影响快感缺乏, 通过精神病、外向性、家庭功能以及母亲的排斥和否认的中介。

结论 童年创伤可以通过养育方式、家庭功能和人格特征直接或间接影响抑郁症患者的快感缺乏症状。

关键词: 抑郁症; 快感缺失; 儿童期虐待; 人格;

家庭功能

Development and External Validation of A Suicidal Ideation Prediction Model for HIV-negative/unknown Men Who Have Sex with Men in China

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Objective Due to the high HIV infection rate and social-cultural factors such as stigmatization towards sexual minorities, lack of social acceptance towards men who have sex with men (MSM) is widespread, which could result in mental disorders such as suicidal ideation (SI) in this population. However, few studies focused on the influencing factors of SI among HIV-negative/unknown MSM. This study aims to develop and validate an SI prediction model in HIV-negative/unknown MSM

Methods Participants in this two-wave cross-sectional study were recruited from a gay social networking app in China. Data were collected on demographics, SI, depressive symptoms, and perceived social support by relative scales. The 1st wave data was divided into train and internal validation sets, and the 2nd wave data was used as an external validation set. Random forest and logistic regression models were used to determine the predictors. An optimal model was selected by comparing the values of area under the receiver operating characteristic curve. Receiver operating characteristic curve analysis, Hosmer and Lemeshow goodness of fit test and calibration curve, and decision curve analysis were used to evaluate the selected

prediction model and perform internal-external validation

Results Respectively 1394 and 620 HIV-negative/unknown MSM were enrolled in the 1st wave and 2nd wave of the study. Respectively 25.68% and 18.71% had SI in the two waves of the survey. Age, education level, HIV test, perceived social support, and depressive symptoms were predictors of SI. A nomogram and an online program were developed to visualize the prediction model. The model showed good discrimination, calibration, practical utility, internal validity, and temporal external generalizability

Conclusion This study developed an SI prediction model to predict the suicidal risk among HIV-negative/unknown MSM. The model could be employed in practice to screen and prevent the occurrence of SI among HIV-negative/unknown MSM. Tailored intervention on alleviating depressive symptoms, improving perceived social support, and enhancing HIV testing should be considered to reduce SI among HIV-negative/unknown MSM in China

关键词: Men Who Have Sex with Men, Suicidal Ideation, Prediction model, External validation

社区居民住房特征与抑郁症之间的关联：NHANES 的实证研究

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目的 抑郁情绪,是一种普遍的心理行为问题,其发生率正逐年攀升,我国被诊断为抑郁症的人数约为9500万,对社会和家庭构成了重大负担。由于住房用地紧张、资源稀缺,导致居民住房压力增加,同时也加剧了居民生存压力,这可能是导致抑郁情绪发生风险增加的重要原因之一。本研究旨在利用美国国家营养与健康调查(NHANES)数据库,探索住房特征与抑郁情绪之间的关系,为抑郁情绪的发生机制研究提供科学依据。

方法 本研究选取了NHANES 2017-2018年的

人口学资料(包括年龄、性别、种族、婚姻状况等)、住房特征和抑郁状况数据,采用9项患者健康问卷抑郁量表(Patient health questionnaire, PHQ-9)评估受试者的抑郁状况;根据NHANES家庭等级访谈评估住房情况,划分为拥有、租赁和其他三类。数据分析采用SPSS 28.0统计软件,用卡方检验比较各组之间的差异;使用多因素Logistic回归分析居民住房特征与抑郁情绪的关系。

结果 1)本研究共纳入受试者5143人(男2489、女2654,平均年龄 51.00 ± 17.49 岁)。根据PHQ-9将受试者分为抑郁组($n=1317$)和非抑郁组($n=3826$),有抑郁情绪者占25.6%;2)在人口统计学特征中,不同性别、种族、婚姻状况、BMI的参与者抑郁情绪检出率差异均有统计学意义($\chi^2=37.959, P<0.001$; $\chi^2=24.075, P<0.001$; $\chi^2=70.435, P<0.001$; $\chi^2=17.192, P<0.001$),不同年龄参与者抑郁情绪检出率差异没有统计学意义($\chi^2=1.918, P=0.383$)。3)住房特征与抑郁情绪存在关联($OR=1.230, 95\%CI: 1.122\sim 1.347, P<0.001$)。

结论 美国成人住房特征的不同可能会影响抑郁情绪发生的风险,拥有个人房产者较租赁及其他安排者的抑郁情绪发生风险低,以此为研究抑郁情绪的发生机制提供新思路。

关键词:住房特征;抑郁;NHANES

探究大学生体质健康信念与锻炼拖延的关系:基于潜在剖面分析

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目的 随着大众对体育锻炼益处的认知增强,锻炼拖延成为改善身体健康的阻碍之一,在大学生群体中,锻炼拖延在一定程度上同样影响大学生运动积极性与良好习惯的养成。体质健康信念是个体对自身体质健康状况的一种心理感知,个人对自身健康状况的错误认知可能会导致其对锻炼行为的拖沓,从而造成身体素质不断下降。本研究旨在通过潜在剖面分析探索大学生锻炼拖延程度的潜在类别,以及与体质健康信念之间的关系,为提高大学生体育健康意识和增强体质健康提供依据。

方法 本研究通过随机抽样选取河南某高校的

大学生。调查工具:(1)自编一般状况调查问卷:包括性别、年龄、民族、身高、体重、是否独生子女、家庭收入情况以及父母锻炼习惯等内容;(2)体质健康信念基于大学生体质健康信念量表评估测量;

(3)通过大学生锻炼拖延量表评估大学生锻炼拖延的程度。使用Mplus 8.3软件对锻炼拖延程度进行潜在剖面分析(Latent Profile Analysis, LPA);使用SPSS21.0软件采用Spearman秩相关分析探究大学生锻炼拖延与健康体质信念的关系,采用单因素方差分析和卡方检验探究不同锻炼拖延组别大学生的人口学特征差异以及体质健康信念差异,其中检验水准 α 取0.05。

结果 (1)本研究共发放问卷1546份,回收率99.74%,有效率99.48%,最终纳入自然科学和人文社科专业的大学生共1538人(男744,女794;自然科学1011,人文社科527);(2)通过潜在剖面分析得出BIC值在第4次分类时虽仍在减小,但Entropy值处于最高(Entropy=0.884)将大学生锻炼拖延分为低锻炼拖延行为组(13.1%)、中锻炼拖延行为组(20.2%)、中高锻炼拖延行为组(20.8%)及高锻炼拖延行为组(45.9%)4个潜在类别,其中高锻炼拖延人群占比最大;(3)通过卡方检验分析得出,大学生锻炼拖延行为在性别、专业类别、独生子女、健康状况及父母锻炼习惯等方面的差异具有统计学意义(P 值均 <0.001);(4)大学生体质健康信念与锻炼拖延存在正相关($r=0.384, P<0.001$);(5)不同锻炼拖延程度的大学生体质健康信念评分差异具有统计学意义($F=66.423, P<0.001$),锻炼拖延行为更严重的人群,其体质健康信念评分越高。

结论 本研究大学生中女性、自然科学专业、非独生子女、自觉身体健康以及父母很少锻炼的人群其锻炼拖延行为更严重;体质健康信念与锻炼拖延有关,同时可针对性的对锻炼拖延严重人群采取宣教,在其体质健康信念坚定的基础上,加强大学生对于锻炼的价值认同,激发锻炼意愿和行为。

关键词:锻炼拖延;体质健康信念;潜在剖面分析;大学生

有氧运动干预对错失焦虑大学生睡眠拖延行为的影响研究

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目的 本研究通过流行病学调查及干预研究, 了解大学生睡眠拖延行为和错失焦虑的分布特征, 分析大学生睡眠拖延行为与错失焦虑之间的关系, 并进一步探讨有氧运动对大学生睡眠拖延行为和错失焦虑的干预效果。

方法 选取来自河南省某高校的 1030 名在校大学生进行横断面调查, 采用自编一般状况调查问卷、睡眠拖延行为量表、错失焦虑量表进行测评; 依据睡眠拖延行为量表与错失焦虑量表的筛查结果, 在被试自愿的基础上, 选取具有睡眠拖延行为问题的大学生作为运动干预的对象, 进行为期 12 周的有氧运动干预, 并在干预后进行心理评估。使用 Epidata3.1 录入数据, SPSS21.0 进行数据分析, 包括描述性统计、独立样本 T 检验、方差分析、Pearson 相关分析、二元 Logistic 回归分析大学生睡眠拖延行为和错失焦虑的分布特征、影响因素、探究大学生睡眠拖延行为与错失焦虑的关联, 检验水准 $\alpha=0.05$ 。

结果 问卷共发放 1116 份, 回收率 100%, 有效率 92.29%。最终共纳入样本 1030 人 (男生 510 人、女生 520 人), 平均年龄 21.250 ± 2.592 岁。干预样本共纳入 22 人。(1) 大学生睡眠拖延行为评分为 2.887 ± 0.468 , 睡眠拖延检出人数 517 人, 检出率 50.194%; 错失焦虑评分为 20.780 ± 6.370 , 错失焦虑检出 540 人, 检出率 52.427%; (2) 采用独立样本 T 检验, 结果表明, 大学生错失焦虑在性别 ($P=0.022$)、年级 ($P=0.001$) 上存在差异, 且具有统计学意义; (3) 采用单因素方差分析法, 结果表明, 大学生睡眠拖延行为在专业 ($P=0.039$)、健康状况 ($P=0.000$) 和父母关系 ($P=0.011$) 上存在差异, 错失焦虑在年龄 ($P=0.042$)、健康状况 ($P=0.001$) 上存在差异, 且具有统计学意义 (4) 根据相关分析结果显示, 大学生睡眠拖延行为及错失焦虑之间呈正相关 ($r=0.220, P=0.000$); 回归显示, 错失焦虑正向预测睡眠拖延行为 ($\beta=0.016, P=0.000$), 且具有统计学意义; (5) 采用配对样本 T 检验, 结果表明, 大学生干预后睡眠拖延行为 ($t=2.277, P=0.036$)、错失焦虑 ($t=2.748, P=0.014$) 评分降低, 且差异性具有统计学意义。

结论 (1) 大学生群体中存在睡眠拖延行为, 其错失焦虑整体处于偏高水平; (2) 错失焦虑正向

预测睡眠拖延行为, 大学生错失焦虑程度越高, 其睡眠拖延行为越严重; (3) 12 周有氧运动有利于改善大学生睡眠拖延行为, 也可缓解错失焦虑, 有利于促进个体身心健康的发展。

关键词: 有氧运动; 睡眠拖延行为; 错失焦虑; 大学生

大学生锻炼拖延行为与广泛性焦虑的关系分析

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目的 本研究通过流行病学调查, 了解大学生锻炼拖延的分布特征, 同时探讨广泛性焦虑与大学生锻炼拖延的相互关系。

方法 通过随机抽样选取河南省某高校在校大学生进行现况调查。调查工具: (1) 自编一般状况调查问卷: 包括性别、年龄、民族、身高、体重、是否独生子女、家庭收入情况以及父母锻炼习惯等内容; (2) 采用大学生锻炼拖延量表评估大学生锻炼拖延的程度; (3) 通过广泛性焦虑量表评估大学生焦虑状况。使用 SPSS 21.0 进行数据分析, 包含单因素分析、Pearson 相关分析、二元 Logistic 回归分析和 R 语言绘制限制性立方条样 (Restricted Cubic Spline, RCS) 曲线四个部分, 分析锻炼拖延的分布特征、影响因素、探究广泛性焦虑与锻炼拖延的关联, 观察预测广泛性焦虑与大学生锻炼拖延的非线性关系, 进一步判断潜在危险因素与保护因素, 检验水准 α 取 0.05。

结果 (1) 共发放问卷 1546 份, 回收率 99.74%, 有效率 99.48%。最终共纳入样本 1538 人 (男生 744 人、女生 794 人), 平均年龄 20.67 ± 2.74 岁, 其中, 无焦虑者 829 人 (53.90%), 轻度焦虑 576 人 (37.45%)、中度焦虑 90 人 (5.85%)、重度焦虑 43 人 (2.80%); (2) 将大学生锻炼拖延分为两组, 其中, 低拖延行为组 781 人 (50.78%) 和高拖延行为组 757 人 (49.22%); (3) 单因素方差分析结果表明, 不同焦虑程度大学生的锻炼拖延存在统计学差异 ($F=11.385, P=0.01$); (4) Pearson 相关分析结果显示, 广泛性焦虑与锻炼拖延没有相关关系 ($r=0.010$,

$P=0.694$); (5) 二元 Logistic 回归分析结果显示, 广泛性焦虑是锻炼拖延的潜在危险因素, 具有焦虑情绪者出现高拖延行为的风险相对于无焦虑情绪者高 ($OR=1.202$, $95\%CI:1.044-1.384$, $P=0.019$); (4) 限制性立方条样结果显示, 广泛性焦虑评分与锻炼拖延呈倒 U 型非线性关系, 总体 $OR>1$, 表明广泛性焦虑与高锻炼拖延相关联, 是锻炼拖延的潜在危险因素。

结论 在大学生群体中存在锻炼拖延行为, 不同焦虑程度影响大学生的锻炼拖延行为, 广泛性焦虑是大学生锻炼拖延行为的潜在危险因素。通过采取有效措施缓解广泛性焦虑情绪, 从而减少大学生的锻炼拖延行为。

关键词: 锻炼拖延行为; 广泛性焦虑; 大学生

精神科医护人员心理资本在职业认同与知觉压力之间的中介作用研究

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目的 精神疾病患者的表现复杂多样, 患者可能随时出现冲动伤人或自伤等行为, 医护人员需时刻处在紧张防备的状态, 增加其压力水平。本研究从积极心理学与积极组织行为学出发, 探讨精神科医护人员职业认同、心理资本及知觉压力三者之间的关系, 为降低其压力水平提供重要科学依据。

方法 采取方便抽样方法, 于 2024 年 1-4 月抽取沈阳市精神卫生中心 615 名医护人员进行问卷调查, 包括知觉压力量表 (PSS-10)、心理资本问卷 (PCQ) 和职业认同量表进行调查, 有效问卷 543 份 (88.29%)。应用分层多元回归分析探讨精神科医护人员职业认同和心理资本对知觉压力的影响, 渐进再抽样策略检验心理资本在职业认同与知觉压力关系的中介作用。

结果 职业认同感 ($\beta=-0.423$, $P<0.01$) 和心理资本 ($\beta=-0.350$, $P<0.01$) 是知觉压力的重要影响因素, 分别解释了知觉压力变异量的 17.1% 和 6.6%。心理资本在职业认同与知觉压力之间的中介效应显著 ($95\%CI [-0.315, -0.159]$)。

结论 精神科医护人员的职业认同和心理资本与知觉压力密切相关, 心理资本在职业认同与知觉

压力之间起到不完全的中介作用, 提示医院管理者应重视精神科医护人员心理资本建设, 降低其知觉压力水平, 进一步提高医疗工作效率及质量。

关键词: 精神科医护人员, 职业认同, 心理资本, 知觉压力, 中介效应

荆州市小学学生非自杀性自伤行为的相关因素分析

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目的 本研究旨在探讨荆州市小学学生中的非自杀性自伤 (NSSI) 分布情况, 并分析与之相关的行为特征。

方法 2023 年 9 月-2023 年 11 月, 采用自行整编《“阳光少年”调查问卷》调查工具, 内容包括一般人口学资料问卷及一些标准化问卷, 采用方便整群抽样在线上用问卷星对荆州市内 31 所小学的 5-6 年级学生进行调查, 以 6 个月内是否存在 NSSI 为标准。本研究共收集 8016 份问卷, 筛选出有效数据 6953 份, 样本有效率 86.74%。

结果 本次调查小学学生的平均年龄 11.1 ± 0.7 岁, 其中男生 3655 人、女生 3298 人, 5 年级 3261 人、6 年级 3692 人。共检出六个月内存在自伤行为人群共 276 人, 检出率为 3.97%, 其中男生 136 人 (3.72%), 女生 140 人 (4.24%)。单因素分析显示, NSSI 检出率高与以下单因素存在统计学显著意义 ($P<0.05$), 在业余时间较少参加集体活动、近 1 个月饮食习惯与以前相比有改变、近 1 个月日常饮食追求吃饱而已、近 1 个月较多宵夜、每天业余上网总时长大于 4 小时、存在网瘾、存在失眠、无午休习惯、一般晚上 10 点后入睡、积极看待自己的生命、心理压力高、新冠疫情流行后对现在身心健康有影响、新冠疫情流行后对现在同伴关系有影响、新冠疫情流行后对学习有影响、家庭为单亲、重组、留守家庭及其他、父母的婚姻状况为非已婚。多因素分析结果显示, 在小学阶段, 消极看待自己生命 ($OR=9.58$)、有失眠 ($OR=2.77$)、心理压力高 (OR

=2.70)、近1个月饮食习惯与以前相比有改变(OR=2.11)、新冠疫情流行后对现在同伴关系影响较多(OR=2.59)及较少(OR=1.47)、新冠疫情流行后对学习有较多影响(OR=2.19)及较少影响(OR=1.44)、家庭组成为其他(未与父母共同生活、非单亲、重组、留守家庭)(OR=1.73)的小学生的NSSI发生风险显著增加。

结论 单因素分析和多因素 Logistic 回归模型的结果揭示了多个与 NSSI 行为显著相关的因素,特别值得注意的是,消极看待自己生命的学生 NSSI 发生的风险是最高的,这强调了心理健康干预的重要性。此外,新冠疫情对学生心理和社交关系的负面影响也与 NSSI 行为有显著关联,提示我们在疫情后期仍要特别关注学生的心理健康。未来的工作应该集中在开发针对性的预防策略和干预措施,特别是针对那些处于高风险群体的学生。

关键词:非自杀性自伤;小学学生;多因素回归

高中生学习压力与网络成瘾的关系:抑郁情绪的中介作用

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目的 探讨高中生学习压力、抑郁情绪和网络成瘾的关系。

方法 采用整群取样,以湖北省荆州市 4568 名高中生为研究对象。采用自编“阳光少年”中学生心理健康调查问卷,包含陈树林、郑全全编制的中学生应激源调查问卷中的学习压力分问卷(Cronbach's $\alpha=0.88$), Kurt Kroenke 等人编制的 9 项抑郁自评量表(Cronbach's $\alpha=0.92$)和 Young 等人编制的网络成瘾量表(Cronbach's $\alpha=0.92$)进行测试,使用 SPSS22.0 软件和 SPSS process 插件进行统计分析。

结果 本研究结果表明:(1)4568 名高中生中,男生 2295 人(50.2%),女生 2273 人(49.8%),年龄 16.09 ± 0.87 岁,高一 1329 人(29.1%),高二 1824 人(39.9%),高三 1415 人(31.0%);(2)女高中生的学习压力分数和抑郁情绪分数显著高于男高中生(均 $P<0.01$),高三学生学习压力分数和抑郁情绪分数显著

高于高二和高一学生(均 $P<0.01$),高三学生网络成瘾分数显著高于高二学生($P<0.05$);(3)高中生学习压力(5.55 ± 4.05)、抑郁情绪(5.02 ± 5.45)和网络成瘾(38.42 ± 13.37)均呈显著正相关关系($r=0.38\sim 0.55$,均 $P<0.01$);(4)中介作用分析结果显示,抑郁情绪在高中生学习压力与网络成瘾间起中介作用,中介效应占总效应的比例为 61.42%。

结论 本研究发现:(1)与男高中生相比,女高中生的学习压力情况和抑郁情绪情况更加糟糕;(2)高中生学习压力和抑郁情绪随年级上升而逐渐严重,在高三阶段达到最高峰;(3)高中生网络成瘾趋势呈“√”字型,即高一至高二略有下降,而高二至高三出现大幅上升;(4)高中生的抑郁情绪会随着学习压力的提升而增强,且网络成瘾会随着学习压力和抑郁情绪的提升而增强;(5)本研究使用中介作用分析进一步发现,高中生的学习压力会通过抑郁情绪的中介作用对网络成瘾产生影响,即当高中生在学习过程中感知到学习压力时,受学习压力影响较大的抑郁情绪是使其出现网络成瘾的重要原因。

综上所述,学校、教育部门与医疗机构有必要对高中生的网络成瘾问题加以关注,尤其要重点关注其学习压力情况与抑郁情绪情况,以预防网络成瘾问题在高中生群体发生。在针对有网络成瘾问题的高中生进行心理干预时,学校教师和心理工作者可以从性别和年级角度出发,有针对性地降低不同性别和年级高中生的学习压力与抑郁情绪,以避免网络成瘾问题的出现。

关键词:高中生;学习压力;抑郁情绪;网络成瘾

沈阳市社区老年人经济地位轨迹与心理健康相关性研究

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目的 经济地位与心理健康之间存在密切联系,经济地位的下降会增加老年人心理健康问题的风险。了解不同轨迹对心理健康的影响至关重要。本研究探讨沈阳市社区老年人的社会经济地位轨迹及其与心理健康状态之间的关系,旨在为制定老年人心理健康干预措施和社会经济支持政策提供依据,在制

定老年人支持政策时以实现更加精准和有效的干预。

方法 本研究采用随机抽样方法,于2023年12月-2024年4月对沈阳市13区县市的常驻60岁以上老年人进行问卷调查,共收到14914份问卷,其中有效问卷14414份(96.65%)。调查内容包括个人基本情况、生活质量评价、心理健康状态(抑郁症状、焦虑症状、睡眠状况、认知功能)、自评社会经济地位(SES)、未来担忧、应对方式和退休适应。使用项目反应理论(IRT)构建社会经济地位潜变量评分,并运用组轨迹模型(GBTM)分析不同社会经济地位轨迹。

结果 研究发现沈阳市老年人社会经济地位轨迹可分为8种类型,包括较高稳定型、轻微下降型、明显下降型、明显上升型、极高稳定型、轻微上升型、较低稳定型和极低稳定型。不同轨迹组的构成比例存在显著差异。心理健康状态与社会经济地位轨迹类型相关,较低社会经济地位轨迹的老年人存在更高的心理健康风险。

结论 沈阳市社区老年人的社会经济地位轨迹与其心理健康状态密切相关,处于较低或下降型经济地位轨迹的老年人更易受到抑郁、焦虑等心理问题的困扰。

关键词:老年人,社会经济地位轨迹,心理健康

心理弹性在公交驾驶员压力知觉与工作投入间的中介作用

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目的 探究心理弹性在公交驾驶员压力知觉和工作投入间的中介作用。

方法 方法 在2023年6月,使用方便抽样方法在安徽省某公交公司抽取628名驾驶员,进行心理弹性、压力知觉和工作投入量表问卷测试;对数据采用SPSS 25.0进行描述性统计、Pearson相关分析,使用Amos 24.0构建结构方程模型,采用Bootstrap法检验中介作用。

结果 心理弹性、工作投入和压力知觉量表的总分分别为(30.63±5.22)、(83.07±10.67)和(41.86±9.55)分。Pearson相关分析表明,工作投入

与心理弹性呈正相关($r=0.35, P<0.01$),与压力知觉呈负相关($r=-0.31, P<0.01$)。中介效应检验表明,压力知觉对工作投入的直接预测作用显著($\beta=-0.15, P<0.01$);心理弹性在压力知觉和工作投入的关系中起部分中介作用(效应值=-0.325, 95%CI: -0.398~-0.258),中介效应占总效应的53.85%。

结论 压力知觉不仅可以直接影响公交驾驶员工作投入,也可以通过心理弹性的中介作用间接影响工作投入。公交公司应注重提高驾驶员的心理弹性水平,从而压力知觉对驾驶员工作投入带来的消极影响

关键词:压力知觉;心理弹性;工作投入;中介作用

建设精神专科联合应急处置机制的研究

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目的 构建高效、响应快速的区域性精神卫生应急协同处置体系,提升在应对突发精神卫生事件时的干预能力和服务质量。

方法 收集宜昌市120指挥中心2023年派诊给宜昌市优抚医院“120”急救中心院前急救患者的资料进行回顾性分析。统计分析“120”急救中心院前急救相关疾病种类的构成及其发展趋势。

结果 2023年院前急救649例患者实施应急处置,有危险行为452例,占处置人数的69.66%,药物不良反应78例,占处置人数的12.12%。伴有其他疾病的需救治的52例,占处置人数的8.01%。严重精神障碍患者出现危险行为时,由及时联系社区、公安、医院联合应急医疗处置干预,对维护社会安全非常必要。

结论 配备不同专业的医务人员进行联合诊治已成为当下医院发展的趋势。加强对院前急救人员的培训,如常规心电图机,除颤仪、呼吸机的使用,同时加强心理疏导技巧的培训,以便医护人员能够快速并准确地应对突发情况。与综合医院建立协同机制,合作转诊关系,为救治患者提供更多更快捷的渠道,更大程度地确保医务人员的安全与患者的心理健康。为社区、医院解决难题。

关键词:精神专科;院前急救;协同机制

心理健康素养水平影响因素分析

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目的 了解群体的心理健康状况, 识别潜在问题, 分析影响心理健康素养水平的因素, 以便为制定有效的心理健康教育和干预措施提供依据, 从而针对性的采取有效措施降低其负面影响。这有助于提升个体和群体的心理健康水平, 这不仅对个人的心理健康有着深远的影响, 也对整个社会的和谐稳定与发展具有积极作用。

方法 心理健康素养是一个跨学科领域, 涉及心理学、社会学、医学、教育学等多个学科。通过查找相关文献和研究报告、政策文件、调查资料等, 综合分析不同年龄、性别、职业和文化背景的人群多维度的影响因素, 包括个体、家庭、社会、环境、政策和制度等多个层面。

结果 心理健康素养水平受到多种因素的影响, 包括遗传与自然因素、社会与经济环境、个体因素、生活习惯与行为、教育与培训、心理健康服务以及心理创伤等。这些因素相互作用, 共同影响个体的心理健康素养水平。

结论 心理健康素养水平的影响因素可以归纳为多个方面, 这些因素共同作用于个体的心理健康素养, 影响其心理健康水平。提高心理健康素养需要综合考虑这些因素, 需要从多个层面入手, 采取综合性的干预措施, 针对不同群体运用多样化、个性化措施来降低负面影响。从而提高人群整体心理健康素养水平, 为个体和社会的健康发展提供有力保障。

关键词: 心理健康素养; 综合因素; 有效措施

The Prevalence and Risk Factors for Suicide Attempts in Youth Depressive Inpatients Within Month After Discharge in China

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Objective Suicide prevention has become increasingly important, especially for those with depression. Global depression cases have risen sharply, leading to a high number of suicides, particularly affecting youth aged 15-29. Most suicide attempters have mental disorders, with depression being the highest risk. Hospitalized depressed youth have a surprisingly high suicide attempt rate of 53.8%, emphasizing the urgent need for targeted interventions

Suicide risk monitoring and research among post-discharge depressed youth in China, especially during the first month, remains limited. This gap hinders suicide prevention efforts. Our study in southern China aims to fill this void, assessing suicide risks and identifying effective interventions for this critical period.

Methods A cohort study was performed in Guangdong Province, China, from July 2022 to July 2023, involving depressed inpatients from five hospitals. Comprehensive assessments were done at admission and discharge, with a follow-up after one month to track post-discharge suicide attempts. 250 young depressed inpatients aged 13-25 were included based on specific criteria. Demographics, clinical traits, and psychosocial features were evaluated using standard scales. Statistical tests, including Mann-Whitney U, covariance analysis, and logistic regression, were used to pinpoint risk factors for post-discharge suicide attempts, utilizing SPSS 22.0

Results Logistic regression analysis identified several risk factors for suicide attempts after discharge, including “Actual suicide attempts on admission(OR=3.227; 95% CI=1.035–10.062; p=0.043)”, “Actual suicide attempts at discharge” (OR=2.835; 95% CI=1.242–6.473; p=0.013), total Toronto Alexithymia Scale scores(OR=1.054; 95% CI=1.054–1.095; p=0.007), and a lower reduction in “Sleep disorders”

factor scores during hospitalization(OR=0.792; 95% CI=0.656–0.957; p=0.016)

Conclusion Our study identified a high prevalence (22.4%) of suicide attempts in young depressed inpatients 1 month after discharge. Post-discharge suicide attempts are associated with various social, psychological, and clinical factors, most importantly “Suicide attempts” before and during hospitalization since they are easily identified by clinicians as well as, sleep disorders, which may be treatable, and alexithymia

关键词: Youth depression; Inpatients; Post-discharge suicide; Risk factors

加强精神专科医院信访投诉管理 着力构建和谐医患关系

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目的 本文将对精神专科医院信访投诉管理的重要性和现状进行分析,并探讨如何加强管理,促进医患关系的和谐发展。

方法 (一)健全投诉渠道,医院可以设置专门的投诉受理部门或者投诉热线,为患者和家属提供便捷的投诉途径。同时,还可以通过互联网平台、邮件等多种形式设立投诉通道,让患者能够方便地进行投诉和意见反馈;(二)加强沟通与解释,在医院信访投诉管理中,加强沟通与解释是至关重要的一环。要改善公众对精神障碍患者和医生、医院的认知,突出公益性,下沉社区,促进人群心理健康,提高精神卫生社会声量,提升社会影响力;(三)建立投诉处理机制,医院可以设立专门的投诉处理部门或者委员会,负责接收、调查和处理患者的投诉。同时,应建立快速响应的投诉处理流程,确保投诉能够得到及时、公正、有效地处理,并及时回应患者的诉求,增强患者对医院的信任感。(四)强化医疗质量管理。医院还可以引入第三方评估机构对医疗质量进行评估,借鉴国际先进的医疗管理经验,不断提升医院的整体医疗质量水平,减少医疗事故和纠纷的发生,从根本上改善医患关系。

结果 综上所述,在医患关系日益凸显的当下,加强精神专科医院信访投诉管理,构建和谐医患关

系已成为当务之急。通过建立健全的信访投诉管理机制,增进医患沟通与理解,提高医疗服务质量和医疗安全水平,我们可以期待医患双方能够更加理性、平等地协商解决问题,共同促进医患关系的良性发展。

结论 未来医院信访投诉管理工作能够更加完善,医患之间能够建立起更加和谐、稳定的关系,为社会各界提供更加优质的医疗服务,造福人民群众。

关键词: 精神专科医院管理; 信访投诉; 医患关系

虚拟标准化病人有效性评估研究进展

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目的 虚拟标准化病人是特定类型的计算机程序,能够精确地模拟真实的临床场景,已成为重要的教学工具。本文旨在综述虚拟标准化病人(virtual standard patient, VSP)的评估方法,探讨现有研究中用于VSP评估的工具和方法,以及这些方法在提高VSP评估效果方面的潜力。

方法 以“virtual patient”、“virtual standard patient”、“virtual simulation”以及“standard patient”为关键词,检索了中国知网、万方、维普、生物医学文献、PubMed、EMBASE和Scopus等数据库从建库至2024年3月1日发表的关于虚拟标准化病人的文献,按照纳入、排除标准严格筛选后对文献进行综述。

结果 虚拟标准化病人有效性评估主要包括学习效果评估和系统评估。学习效果评估中的效标评估能提供一致的评估标准,增强了结果的可比性,使研究结果更具可靠性,并减少了主观偏见,研究者能更准确的评估所要研究的特定方面,但难以捕捉互动细节;专家评估能提供专业的反馈,但存在主观偏差;以及基于凯恩框架(Kane's framework)的新手—专家比较评估模式和引入了生理学数据的其它评估方法。此外,分别介绍了系统评估的主要维度,包括技术设计、模拟现实性和学习实用性,并归纳了相应的评估工具,包括使用卡片分类法(card sorting)评估技术设计的易用性;《马斯特里赫特标准化病人评定工具》(The Maastricht Assessment of a

Simulated Patient, MaSP)可以用来评估 VSP 的技术设计的满意度、模拟现实性的真实性和学习实用性;模拟现实性能够通过《威特默存在感量表》(Witmer's-Presence-Questionnaire, PQ)测量;以及作用于学习实用性的 Kirkpatrick 四级评估模型。

结论 本文为理解和改进 VSP 的评估方式提供了一定的参考。然而,任何评估方法都有其局限性,因此在选择评估方法时,需要根据具体的研究目的和场景进行综合考虑。同时,期待未来有更多的研究能够开发出新的评估工具和方法,以进一步提高 VSP 评估的效果。

关键词:虚拟标准化病人;有效性;评估;综述

某市中高考考生考前心理状况及健康宣教服务需求调查分析

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目的 调查分析西南地区某市中、高考考生考前心理健康状况及心理健康宣教服务需求。了解考生对不同健康宣教服务形式以及内容的接受程度,为中高考考生健康干预提供依据。

方法 本研究采用整群随机抽样法。通过西南地区某市的教育局,在中高考考前向当地的学校的中高考考生发布了电子问卷。问卷通过“问卷星”平台进行分发,中高考生在充分知情同意的前提下自愿填写问卷。通过凯斯勒心理疾患量表6项版本(The Kessler Psychological Distress Scale,K6)量表(中文版)评估考生考前情绪问题,自编问卷评价考生睡眠状况、心理健康服务需求及其对不同健康宣教服务形式、内容的接受程度。

结果 在接受调查的10641名中高考生中,K6阳性率8.99%;54.61%的考生睡眠时长出现了变化;53.74%考生认为自己有健康宣教服务的需求。健康宣教服务形式接受程度从高到低分别是:视频动画、科普文章、心理健康知识讲座、现场心理咨询、心理热线或线上咨询服务。健康宣教服务内容的接受程度从高到低是:如何应对考试压力、考前睡眠保健知识、饮食营养、用眼卫生。

结论 西南地区某市中高考生情绪问题阳性率

高于普通青少年人群,中高考生中睡眠问题发生率较高。中高考生对健康宣教服务的需求较大,最为接受的宣教方式为视频动画,最受欢迎的内容为如何应对考试压力。

关键词:考生;情绪问题;睡眠;心理服务

中国人群习惯性午睡与健康结局的关联性分析

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目的 随着社会的发展,人们的工作及学习压力也随之增加,午睡成为了大多数人缓解疲劳的一种习惯。在中国,午睡通常被认为是一种健康的生活习惯,但长时间的午睡、不良睡姿等也可能对健康造成负面影响。习惯性午睡对身心健康的影响尚存在争议。本研究旨在探索中国人群中习惯性午睡与健康结局之间的关联性,为进一步指导午睡人群改善身心健康提供现实依据。

方法 采用横断面研究的方法,通过线上问卷收集京东注册用户的午睡健康等信息。探索中国人群习惯性午睡与健康结局的关系,同时根据夜间睡眠分组,分析午睡与夜间睡眠时长、夜间睡眠质量共同对健康结局的影响。

结果 本研究纳入41,061名参与者,分析发现:1)在中国人群中,午睡与躯体疾病(OR=0.90,95%CI=0.85-0.96)和精神障碍(OR=0.81,95%CI=0.70-0.94)的低风险相关。2)对于夜间睡眠较短的人群,午睡会降低躯体疾病的风险(OR=0.83,95%CI=0.75-0.91),对于夜间睡眠较长的人群,午睡则会增加躯体疾病的风险(OR=1.48,95%CI=1.05-2.08)。3)在睡眠质量较差(PSQI \geq 7)的人群中,午睡与慢性躯体疾病(OR=0.88,95%CI=0.82-0.96)和精神障碍(OR=0.79,95%CI=0.67-0.93)低风险显著相关,而在睡眠质量较好的人群中未见午睡对健康结局有明显影响。

结论 本研究提示习惯性午睡可能是一些慢性躯体疾病和精神障碍的风险因素,但同时也可以减少夜间睡眠不足、夜间睡眠质量较差带来的负面影响,为有午睡习惯的人群作息安排和疾病预防提供

了一些启发。

关键词：午睡习惯，健康结局，躯体疾病，精神障碍，横断面研究

Gender Difference in Clinical Features of Youth with Major Depressive Disorder

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Objective The prevalence of depressive disorders in youth is on the rise and has become a serious public health issue. Previous research has shown that there are gender differences in the prevalence, clinical symptoms, and response to antidepressant treatment of youth depression. These findings may help in the individualization of treatment for patients. To evaluate gender differences in the clinical characteristics of youth depression from multiple perspectives, this study included sociodemographic data as well as assessments of clinical symptoms, sleep characteristics, suicide risk, and family functioning

Methods This cross-sectional study included 461 youths (13–25 years old) with major depressive disorder recruited from January 2022 to May 2023, including 333 females and 128 males. The Hamilton Anxiety Scale and the Hamilton Depression Scale were used to assess the anxiety and depression symptoms; the Columbia-Suicide Severity Rating Scale was used to assess the patients' suicidal ideation, suicide attempts and non-suicidal self-injury behaviors; the Epworth Sleepiness Scale and the Athens Insomnia Scale were used to assess the sleep characteristics of the patients; and the Interpersonal Communication Ability Scale and the Family Adaptability and Cohesion Evaluation Scales were used to assess the interpersonal competence and family functioning. The patients' interpersonal skills and family functioning were evaluated using the Interpersonal Skills Scale and the Family Intimacy and Adaptability Scale. The data were statistically analyzed

by gender

Results Female patients had a younger age of onset than male patients ($P < 0.05$), and male patients smoked more ($P < 0.05$). There was no statistically significant difference between the two patient groups in terms of education level, BMI, employment status, marital status, family history, and alcohol drinking history ($P > 0.05$). Female patients had more depressive symptoms than male patients ($P < 0.05$), especially anxiety/somatization symptoms ($P < 0.05$), a higher severity of suicidal ideation ($P < 0.05$), and a higher proportion of patients who had suicide attempts ($P < 0.05$) and non-suicidal self-injury behaviors ($P < 0.05$). There was no significant difference in the total Hamilton Anxiety Scale score between the two groups of patients. However, women had a significantly higher somatic anxiety factor score than men ($P < 0.05$). There were no statistically significant differences between the two groups of patients in the four characteristics of the Epworth Sleepiness Scale total score, Athens Insomnia Scale total score, Interpersonal Communication Ability Scale total score, and Family Adaptability and Cohesion Evaluation Scales total score ($P > 0.05$). Female patients had significantly more severe sleepiness symptoms while reading ($P < 0.05$) and watching TV ($P < 0.05$) compared to male patients. Females had more severe interpersonal skills symptoms than males, including difficulty asking for help ($P < 0.05$), nervousness when speaking in front of leaders and teachers ($P < 0.05$), and fear of embarrassment when socializing ($P < 0.05$)

Conclusion Female youth with depressive disorders have a younger age and more severe depressive and somatic anxiety symptoms than male patients. Female youth patients have more severe suicidal ideation, non-suicidal self-injury behaviors, and suicide attempts than males. These findings imply that gender differences should be considered in the treatment of youth depression to offer patients individualized treatment

关键词：Gender Difference, Clinical Features, Youth Depression

心理援助热线专业人员胜任力评价指标体系

的构建

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目的 构建心理援助热线咨询员的专业胜任力评价指标体系,为培训与考核提供科学参考,提高心理热线的服务规范和服务质量。

方法 通过文献综述初步拟定心理援助热线专业人员胜任力评价指标体系,选取全国不同地区的16名专家使用德尔菲法进行专家咨询,整理和筛选指标,通过层次分析法确定各级指标的权重,得出较科学的心理援助热线专业人员胜任力评价指标体系。

结果 专家咨询法所选专家来自全国东、中、西部地区,专家咨询问卷回收率100%,两轮咨询专家权威系数分别为0.92和0.90。经过两轮专家咨询构建了包括4项一级指标、9项二级指标、34项三级指标在内的心理援助热线专业人员胜任力评价指标体系,一级指标包括理论知识、专业技能、职业态度和个人特质。采用层次分析法确定了各指标的权重,两轮专家咨询中各级指标的肯德尔和谐系数分别为0.159~0.179和0.165~0.250。

结论 本研究构建的心理援助热线专业人员胜任力评价指标体系不仅关注理论知识、专业技能等外在表现,同时也注重职业态度和个人特质等内在特征,较全面地描述了心理热线专业人员的胜任力特征。构建的心理援助热线专业人员胜任力评价指标体系科学、系统,可以为心理热线咨询员专业能力的优化提供参考。

关键词: 心理热线;胜任力;德尔菲法;层次分析法;评价指标体系

生活方式对非自杀性自伤行为影响研究进展

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目的 本综述旨在探讨不同的生活方式对NSSI行为发生的影响及其潜在的心理社会机制,总结非自杀性自伤研究的当前状态、趋势和问题。

方法 本文基于PubMed数据库,对近五年内相关的英文文献进行了系统检索和分析。使用以下主题词“Healthy Lifestyles”、“Eating Behaviors”、“Exercises”、“Internet Addiction”、“Sleeping Habits”、“Pet”与“Non-suicidal self-injury”组合检索相关文献。

结果 (1) 饮食方面:不健康的饮食习惯,如高糖、高盐、高脂肪食物的过度摄入以及营养物质的缺乏,可能与心理健康问题如抑郁、焦虑等有所关联,并可能间接增加发生NSSI行为的风险。

(2) 运动方面:中等强度运动如快走、慢跑、游泳等,每次运动时间在30-60分钟能更好的预防NSSI行为。

(3) 网络依赖行为方面:网络依赖可能增加NSSI的风险,而NSSI行为也可能进一步加剧网络依赖。研究数据显示,每天使用手机长达3小时的人群心理问题的风险增加,而超过6小时的使用者患抑郁症等心理问题的风险则显著上升78%。

(4) 饲养宠物方面:童年时期与高度依恋的宠物狗或猫的累积接触与青少年心理健康障碍的风险降低有关。与宠物建立亲密关系的人可能拥有更强的社会支持和更健康的社交关系,这进一步降低了NSSI的风险。与宠物相关的压力或冲突等可能成为触发NSSI的应激事件。

(5) 睡眠方面:睡眠中断、睡眠质量差、频繁的噩梦的人群发生NSSI的风险更高。睡眠不规律与NSSI病史以及NSSI冲动的严重性有关。具体表现在10天内睡眠不规律程度越高,则每日NSSI冲动的严重程度越高。周末睡眠时间少于7小时的个体,其NSSI行为的发生风险增加,而工作日睡眠时间达到或超过9小时的个体,发生NSSI行为风险降低。

结论 饮食失调、缺乏体育锻炼、严重的网络依赖行为、睡眠质量差以及睡眠时间不足等均可能增加青少年发生非自杀性自伤行为的风险。因此,

维持健康的生活习惯,包括均衡饮食、适度运动、合理使用网络、与宠物建立亲密关系以及保持良好的睡眠质量,对于促进心理健康和预防 NSSI 行为具有重要意义。

关键词:青少年;生活方式;心理健康;非自杀性自伤

荆州市高三年级学生校园欺凌行为的相关因素分析

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目的 本研究旨在探讨荆州市高三年级学生在校园欺凌行为中扮演不同角色的分布情况,并分析与之相关的行为特征。

方法 2023年9月-2023年11月,采用自行整编《“阳光少年”调查问卷》调查工具,内容包括一般人口学资料、心理认知、家庭生活、校园欺凌等方面。采用 SPSS 22.0 软件对所得数据进行统计分析,使用 X² 检验与多元 logistic 回归分析影响学生是否涉入校园欺凌事件、在其中处于何种角色的因素。以 $P < 0.05$ 作为差异有统计学意义的界值。

结果 (1)高三年级同学共收集 1415 份调查问卷,收集有效问卷 1235 份,有效率 87.28%。其中男生 589 人,平均年龄 17.01 ± 0.52 岁;女生 646 人,平均年龄 16.95 ± 0.50 岁。(2)通过问卷中第 51 题:“我曾经欺负过其他同学(例如:给其他同学起绰号、嘲笑、孤立、殴打、离间同学等)”与 52 题:“我曾经被其他同学欺负(例如:被其他同学起绰号、嘲笑、孤立、殴打、离间同学等)”的作答情况,把这部分学生在校园欺凌中扮演的角色分为:欺凌者、受害者、欺凌-受害者、不涉入欺凌事件中四类。分类后发现在这个样本中:欺凌者有 34 人,占 2.7% (男生 26 人,占 4.4%;女生 8 人,占 1.2%);受害者有 138 人,占 11.2% (男生 59 人,占 10.0%;女生 79 人,占 12.2%);欺凌-受害者有 96 人,占 7.8% (男生 63 人,占 10.7%;女生 33 人,占 5.1%);不涉入欺凌事件者有 967 人,占 78.3% (男生 441 人,占 74.9%;女生 526 人,占 81.4%)。(3)多元 logistic

分析,结果显示:1.男性 ($OR=3.99$)、经常或每天吃宵夜 ($OR=2.78$) 的荆州市高三年级学生成为欺凌者的风险显著增加;2.过去半年内发生过自伤行为 ($OR=2.40$)、焦虑 ($OR=2.20$)、失眠 ($OR=2.00$)、经常或每天吃宵夜 ($OR=1.69$) 的荆州市高三年级学生成为受害者的风险显著增加;3.网瘾 ($OR=4.24$)、过去半年内发生过自伤行为 ($OR=2.84$)、男性 ($OR=2.59$)、焦虑 ($OR=1.91$) 的荆州市高三年级学生成为欺凌-受害者的风险显著增加。

结论 在荆州市高三年级学生中,经常吃宵夜的学生,更容易涉及到校园欺凌事件中;而男性更容易成为欺凌者;女性、网瘾、半年内发生过自伤行为的学生,更容易成为受害者,往往伴有焦虑、失眠的特点出现。应重点关注常吃宵夜、半年内曾发生过自伤行为,患有网瘾、焦虑、失眠等特点人群,普及健康的人际交往模式理念,并为弱势群体制定、完善保护措施。

关键词:荆州市;高中三年级;校园欺凌;相关分析

荆州区初中生网络成瘾影响因素调查研究

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目的 调查荆州区初中生网络成瘾现状及分析其相关影响因素,为正确引导初中学生合理利用网络资源及开展心理健康服务提供参考依据。

方法 于 2023 年 9 月 18 日至 11 月 8 日采用整群抽样的方法,选取荆州区十所中学的初中生作为研究对象,采用问卷星线上调查的方式,内容包括一般人口学资料、家庭生活情况、网络成瘾量表(IAT)等问卷进行相关心理健康状况和网络成瘾情况调查。采用 SPSS 27.0 统计软件对收集的数据进行分析,分类变量之间的差异采用 X² 检验,采用二元 logistic 回归分析有无影响网络成瘾的因素。以 $P < 0.05$ 作为差异有统计学意义的界限值。

结果 共收集 12343 份问卷,有效问卷 10938 例,有效率 88.6%。初中生网络成瘾量表(IAT)(总分 ≥ 50 分)阳性率为 11.1%;分类变量的单因素方差

分析中,影响因素为年级、父母婚姻状况、兄弟姐妹情况、参加集体活动情况、平均每天业余时间上网时长、睡眠情况在初中生网络成瘾情况有统计学差异($P<0.05$),性别情况在网络成瘾情况中没有统计学差异。二元 logistic 回归分析:以初中生是否发生网络成瘾分别作为因变量,将单因素分析中有统计学意义的因素作为自变量,进行多因素 Logistic 回归分析,结果显示,霍斯默-莱梅肖检验显著性 0.180,大于 0.05,表明本次数据二元 logistic 回归模型拟合度良好。在所有初中生中:初二学生 $OR=1.662(1.409-1.960),P<0.001$;初三学生 $OR=1.648(1.397-1.945),P<0.001$;平均每天业余时间上网总时长 1-2 小时 $OR=1.775(1.505-2.095),P<0.001$;2-4 小时 $OR=2.875(2.392-3.456),P<0.001$;4-6 小时 $OR=6.075(4.472-7.782),P<0.001$;大于 6 小时 $OR=11.716(8.960-15.320),P<0.001$;主动或被动参加集体活动 $OR=1.436(1.246-1.655),P<0.001$;睡眠情况为失眠 $OR=3.890(3.400-4.451),P<0.001$;父母婚姻状况为非已婚状态 $OR=1.362(1.163-1.595),P<0.001$ 。

结论 荆州区初中生网络成瘾问题应引起家长、学校和政府相关部门的重视,重点关注高年级、父母为非已婚家庭、很少或几乎不参加集体活动、长期失眠、每天花费较多业余时间上网的初中学生的心理健康状况和网络使用问题,引导他们合理正确利用网络资源,助力学习与身心健康发展。

关键词:初中生;网络成瘾;心理健康状况

Job Burnout and Mental Health Outcomes Among Primary Mental Health Service Medical Professionals: A Cross-sectional Study in Shanghai, China

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Objective Studies have reported high prevalence

of mental health outcomes, such as high levels of anxiety and depression, in relation to job burnout among health care providers, including primary care general practitioners. Since a group of primary health care medical professionals are working specifically with the routine care towards patients with severe mental illness in China, little has been known on the level of job burnout, and its association with mental health outcomes for this group. Therefore, this study aims to explore prevalence of job burnout among this special group of medical professionals in primary care setting working with severe mental illness (PMP-MH), and its relationship with mental health outcomes of these professionals, i.e., anxiety and depressive symptoms

Methods This is a cross-sectional study with self-report data collected electronically between February 14, 2023 to August 31, 2023 from medical professionals as PMP-MH in Shanghai, China ($N=402$). Levels of job burnout was evaluated by using the Chinese version of the Maslach Burnout Inventory General Survey (MBI-GS), which consists of three dimensions: emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (PA). The cutoff score of burnout was 1.49 according to the criterion of the weighted average score suggested by previous studies. Severity of anxiety and depressive symptoms were measured by the General Anxiety Disorder 7-items (GAD-7) and the Patient Health Questionnaire 9-items (PHQ-9) scales, respectively. We contrasted prevalence of anxiety and depressive symptoms (categorized variables) among medical professionals as PMP-MH with a high level of job burnout to those with a low level, by applying robust (modified) Poisson regression model. Subgroup analyses were performed to explore the modification effect from demographic and occupational factors on this relationships

Results A total of 371 medical professionals were included in the analysis, with 306 (82.5%) reported having a high level of job burnout. Compared with workers having a low level of job burnout, those with a high level of job burnout exhibited a higher prevalence of anxiety symptoms (prevalence ratio [PR] 6.90 [95% CI 3.21-14.87]) and depressive symptoms (3.53 [95% CI 2.04-6.12]). When further classifying high

level of burnout into moderate-high and severe-high level of burnout, we found workers with severe-high level of job burnout showed the highest prevalence of anxiety symptoms (9.25 [4.30-19.92]) and depressive symptoms (5.16 [2.97-8.98]). Burned-out individuals with a high level of EE, DP and a low level of PA were at higher risks of anxiety and depressive symptoms compared with those without burnout. Subgroup analyses showed that those who were male, in younger age group, doctors, perceive their workload as heavy, satisfied with their job, having a higher education level, having a permanent employment contract and poorly cooperated with the community mental health service team were more likely to suffer from excessive anxiety and depressive symptoms

Conclusion Medical professionals working with patients with severe mental illness in primary care setting entails an extremely high level of job burnout. High level of job burnout is associated with a higher prevalence of mental health outcomes, especially for anxiety symptoms. The positive relationship between job burnout and mental health outcomes were moderated by demographic and occupational factors. The findings highlight the need for heightened awareness regarding mental health outcomes among burned-out medical professionals working in the primary care, particularly those working routinely with severe mental health patients

关键词: burnout, anxiety symptoms, depressive symptoms, relationship, primary mental health service medical professionals

大学生领悟社会支持、生命意义感与感戴关系及其团体心理干预研究

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目的 本次研究主要为了解当代大学生领悟社会支持、生命意义感与感戴关系实际情况,并探究心理干预的应用价值,为提高大学生的心理健康水平提供科学依据。

方法 在中国某大学内部采用随机数表法选择有 300 名大学生,并对所有大学生发放有领悟社会支持问卷、生命目的量表以及大学生感戴量表问卷,在收集全部问卷后进行有效性筛选并进行匹配,并从中筛选出 100 例得分较为相近的大学生,并按照随机数表法结合大学生的自身志愿分为两组。其中一组为实验组,实施团队心理干预基础上进行有社会意义和生命目的的感受;一组为对照组,进行分组后自行接受社会意义和生命目的的感受。在实验组接受 8 次团体心理干预后对两组患者再次进行问卷调查,并对比两组大学生的相关评分。

结果 两组大学生在进行意义感受后领悟社会支持问卷、生命目的量表、心理弹性问卷评分均出现显著改善,组内结果对比具有统计学意义 ($p < 0.05$);不过在治疗后的评分结果中,实验组的评分要显著优于对照组,组间结果对比具有统计学意义 ($p < 0.05$)。

结论 在领悟社会支持、生命意义感与感戴关系较差感受的大学生中辅助采用团体心理干预,有利于大学生的正确价值观的树立,值得应用与推广。

关键词: 大学生,领悟社会支持,生命意义感,感戴关系,团体心理干预

Barriers and Facilitators To Help-seeking Behavior Among Young Adults at High Risk for Depression and Anxiety: A Qualitative Study

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Objective Despite the availability of effective treatments, most people suffering from psychological distress choose not to seek professional help. This study aimed to explore the barriers and facilitators to help-seeking among young adults at high risk for depression and anxiety

Methods College students who experienced depression and anxiety symptoms but did not meet a diagnosis of depression or anxiety were recruited between Oct 2022 and Dec 2022. Semi-structured interviews were conducted in a medical university. Thematic analyses were used to identify key themes that influenced participants' barriers and facilitators related to seeking help for their psychological distress

Results A total of 24 participants with an average age of 19 were included. Many young adults preferred to deal with psychological distress on their own rather than seeking help from people they trusted. They would only seek professional help when symptoms were obvious or had dysfunction. Nine themes were identified concerning barriers to help-seeking: (a) poor experiences with help-seeking, (b) fear of burdening others, (c) lack of trusting and committed relationship, (d) negative attitudes and beliefs related to seeking help, (e) lack of emotional competence, (f) lack of accessibility, (g) stigma, (h) lack of confidentiality and trust, (i) unaffordability. Four themes were identified about facilitators for help-seeking: (a) perceived severity, (b) trust and having a committed relationship, (c) past-positive experiences, and (d) perceived helpfulness

Conclusion Strategies for improving help-seeking by young adults at high-risk for depression and anxiety should focus on improving emotional competence, increasing mental health literacy and social support, reducing stigma, and improving accessibility of mental health resources in educational and supportive systems

关键词: Barriers, Facilitators, Psychological distress, Help-seeking, Young adults, High-risk

重大公共卫生事件与感染者心境障碍、情绪调节能力之间的关联：一项大规模前瞻性队列研究

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目的 在现代社会中，心境障碍的发病率逐年升高，对患者的心理与生理健康都造成了严重负担。各种重大公共卫生事件（public health emergencies, PHE）的突发对于个体心理健康可能产生不同程度的影响。本研究旨在全面性阐述公共卫生事件与心境障碍发生的可能因果关系，并探索其所致的核心心理症状以及调节因素。

方法 本研究的大样本前瞻性队列共纳入 1442 名来自全国各地的参与者，这些参与者在过去 3 个月内均感染了 SARS 冠状病毒 2 型(SARS-CoV-2)。我们通过在在线问卷收集了参与者的社会人口学特征、PHE 期间心理生理状态（包括自我报告的感染严重程度、对再感染的恐惧等）。此外，我们还使用心理量表评估了参与者的各类心理健康以及情绪调节能力（包括表达抑制与认知重评）。采用 Mann-Whitney U 检验比较参与者 PHE 发生前后的心理健康状况，以及多变量 logistic 回归探讨 PHE 期间心理生理状态与各类心境障碍之间的关系。此外，还应用调节效应模型来检验情绪调节在上述因果关系中的潜在调节作用。

结果 相对于基线水平，在突发 PHE 期间更多参与者表现出明显的焦虑（35.4% Vs 29.6%, $P < 0.001$ ）、抑郁（49.1% Vs 37.5%, $P < 0.001$ ）、失眠（26.7% Vs 17.0%, $P < 0.001$ ）和躯体障碍（49.1% Vs 31.8%, $P < 0.001$ ）。多变量 logistic 回归结果表明，参与者自我报告的严重感染（OR=1.973, $P = 0.002$ 及 OR=1.895, $P = 0.004$ ），对再感染的恐惧（OR=3.170 及 OR=2.248, P 均 < 0.001 ），对收入影响（OR=1.935, $P = 0.005$ 及 OR=1.657, $P = 0.009$ ），对疫情未来趋势的消极态度（OR=7.339 及 OR=2.019, P 均 < 0.001 ）等，都是焦虑障碍和抑郁障碍的显著且独立的危险因素。此外，PHE 期间具有负向心理生理状态的参与者最容易产生“紧张感”、“兴趣缺失”、“睡眠问题”和“自我否定”等具体心理症状。调节效应分析发现表达抑制正向调节了 PHE 期间负向心理生理状态与焦虑障碍之间的因果关联（ $\beta = 0.041$, $P < 0.01$ ）。

结论 本研究表明，SARS-CoV-2 相关的公共卫

生事件显著加剧了感染者的焦虑、抑郁、睡眠以及躯体障碍等心境障碍的发生。在 PHE 期间, 早期且准确地识别感染者, 尤其是那些表达抑制程度高的个体的负向心理症状, 对于心境障碍疾病的预防与治疗至关重要。

关键词: 公共卫生事件, 心境障碍, 表达抑制, 前瞻性队列研究

Depressive Symptoms Among Teochew People in Teoswa Region of Guangdong Province, China: Prevalence and Associated Factors

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Objective Depression is a mental disorder with an increasingly high incidence and heavy burden. However, no study has explored the prevalence and associated factors of depressive symptoms in Teochew people. This study aims to analyze the prevalence of depressive symptoms in Teochew people and explore the relationships between depressive symptoms and demographic characteristics, lifestyle, and chronic diseases

Methods This cross-sectional survey was conducted between September and December 2022, using a multistage stratified equal volume random sampling method. The Patient Health Questionnaire-9(PHQ-9) was used to detect depressive symptoms. Based on Guangdong Province's population data obtained from the Seventh National Population Census in 2020, the data was weighted by sex, region, age and city to improve the representativeness of the study sample. Univariate and multivariate logistic regression of the complex sampling method were used for statistical analysis

Results A total of 8256 Teochew participants were included in this study, with the response rate of 83.00%. The prevalence rate of depressive symptoms in Teoswa region was 4.5% [95%confidence interval(95%CI): 3.9%-5.1%]. The highest prevalence rate of depressive symptoms in Shantou city was 6.1%

(95%CI:5.1%-7.3%), followed by Jieyang city at 4.4% (95%CI:3.4%-5.6%), Chaozhou city at 4.1% (95%CI:3.2%-5.2%), and Shanwei city at 3.0% (95%CI:2.3%-3.9%). Teochew people who were women, unmarried, overweight or obese, and had less frequent physical exercise, were more likely to experience depressive symptoms (all $P<0.05$). Teochew people who maintained regular three meals a day and had lower education level, were less likely to experience depressive symptoms (all $P<0.05$). Compared with Teochew people without chronic diseases, Teochew people with multimorbidity were more susceptible to depressive symptoms [Odds ratio (OR):6.528, 95%CI:3.885,10.970; $P<0.05$]

Conclusion The prevalence rate of depressive symptoms in Teoswa region was relatively high but lower than figures in Guangdong province. Health professionals should pay more attention to depressive symptoms of high-risk group

关键词: Teoswa region, depressive symptoms, prevalence, lifestyle, chronic diseases.

宁夏三市妊娠期妇女抑郁症状现状与影响因素分析

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目的 了解宁夏三市妊娠期妇女抑郁症状的发生情况, 并对其危险因素进行分析。

方法 采用随机抽样方法, 随机抽取于 2023 年 1 月—2023 年 12 月在宁夏区银川市、石嘴山市、固原市参与孕产期抑郁症筛查防治项目的 487 例妊娠期妇女为调查对象, 运用自行设计的一般资料调查表、抑郁症自我评估量表 (PHQ-9) 进行调查, PHQ-9 量表 0—4 分为正常组 (399 人)、5—9 分为轻度抑郁症状组 (60 人)、10—14 分为中度抑郁症状组 (22 人)、 ≥ 15 分为重度抑郁症状组 (6 人), 其中轻度抑郁症状组、中度抑郁症状组、重度抑郁症状组合为抑郁症状检出组, 对调查数据进行统计分析, 了解妊娠期妇女抑郁症状现状及其影响因素。

结果 抽样调查的 487 例妊娠期妇女中有 88 人

存在抑郁症状, 检出率为 18.07%, 经过追踪调查, 确诊抑郁症 7 人, 确诊率为 1.44%。Logistic 回归分析显示, 妊娠期年龄、妊娠阶段、妊娠期合并症、孕产次、不良孕产史等因素与妊娠期抑郁症状的发生有关, 差异具有统计学意义($P < 0.05$)。

结论 宁夏三市妊娠期妇女抑郁症状的检出率较高, 受多种因素影响。建议将妊娠期抑郁症状筛查纳入常规产检中, 早筛查、早干预可以降低产后抑郁的发生, 关注高危人群, 开展针对性的心理健康保健服务。

关键词: 妊娠期; 孕妇; 抑郁症状; 现状; 影响因素

医疗美容门诊咨询者的焦虑症状和人格障碍

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目的 描述医疗美容门诊咨询者焦虑症状和人格障碍阳性率, 探讨医疗美容咨询者焦虑症状的相关因素。

方法 选取 2021 年 11 月-2023 年 7 月期间在北京某三甲医院成形外科针对各部位进行医疗美容手术咨询的 788 名来访者, 采用人格诊断问卷第 4 版 (PDQ-4) 和焦虑自评量表 (SAS) 作为调查工具, 分别以 42 分和 50 分为阳性界值筛查其是否存在人格障碍和焦虑症状。采用方差分析、 χ^2 检验、多重线性回归和 logistic 回归的方法进行统计分析。

结果 本研究中医疗美容门诊咨询者焦虑症状阳性率为 15.23% (120/788), 人格障碍阳性率为 3.50% (28/788)。年龄与 SAS 量表得分负关联 ($\beta = -0.82, P = 0.009$), PDQ-4 量表得分与 SAS 量表得分正关联 ($\beta = 0.15, P < 0.001$), 眼整形、面部轮廓整形、微创整形与 SAS 量表得分正关联 ($\beta = 2.00 \sim 3.64, P < 0.05$)。

结论 医疗美容门诊咨询者年龄越小和人格偏离越突出, 焦虑症状越严重。眼整形、面部轮廓整形、微创整形的咨询者焦虑症状更严重。

关键词: 医疗美容, 焦虑症状, 人格障碍

双相障碍患者照料者的静息-活动模式改变: 一项家系研究

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目的 精神障碍患者的照料者承受沉重的精神负担, 前人研究报告了双相障碍患者照料者的精神症状和睡眠症状。然而, 主观报告或存在回顾性偏倚, 双相障碍患者照料者的静息-活动模式尚未经过系统性客观测量。本研究旨在探索双相障碍患者照料者的客观睡眠、活动和昼夜节律改变。

方法 本研究收集了先证者和配偶的资料, 先证者接受基于 DSM-IV 的神经精神病学临床访谈, 结合临床访谈和医疗记录, 应用最佳估计策略获取临床数据。终身罹患双相障碍的先证者的配偶被定义为照料者; 终身未患有双相障碍的先证者的配偶被纳入对照组。照料者和对照被试在非利手佩戴 1 周连续监测的体动记录仪进行静息-活动模式测量。采用 t 检验和协方差分析对数据进行统计。

结果 本研究纳入被试 87 名, 年龄均值为 43.72 岁, 75.86% 为女性, 其中照料者 42 名, 对照被试 45 名。校正年龄性别等人口学变量后, 与对照被试相比, 照料者休息时间 (7.28 ± 1.54 vs. 7.33 ± 1.29 , hours, adjusted $p = .004$) 和睡眠时间 (6.03 ± 1.45 vs. 6.22 ± 1.16 , hours, adjusted $p = .01$) 较短, 夜间轻度 (5.37 ± 3.42 vs. 4.05 ± 2.62 , min, adjusted $p = .04$) 和剧烈 (0.04 ± 0.10 vs. 0.01 ± 0.03 , min, adjusted $p = .01$) 的运动持续时间较长, 日间活动水平较高 (41.00 ± 15.65 vs. 36.58 ± 9.92 , millis-g, adjusted $p = .01$)。

结论 双相障碍患者照料者表现出静息-活动模式改变。本研究增进了对双相情感障碍照料者影响的理解, 突出了静息-活动模式管理在双相障碍家庭中的重要性。

关键词: 双相障碍, 照料者, 家系研究, 静息-活动模式

女大学生外貌负面评价恐惧、限制性饮食与进食障碍倾向的关系及干预研究

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进食障碍 (Eating Disorder) 是以进食行为异常为显著特征的一组综合征, 近年来, 随着网络社交媒体的不断发展和受社会文化的影响, 女大学生进食障碍的现象不断增多。而网络社交媒体中“容貌焦虑”“白幼瘦审美”盛行加剧了女性对自己外貌的严苛控制, 困扰女性身心健康。其中的原因之一就是女性的外貌负面评价恐惧。外貌负面评价恐惧(fear of negative appearance evaluation)指个体担心会出现负面的关于外貌的人际评价, 从而刻意回避可能会被评价的行为。外貌负面评价恐惧会加剧女大学生对自己外貌控制的行为, 为了跟到“以瘦为美”的社会潮流从而做出限制饮食的行为, 增加进食障碍倾向的风险。进食障碍是具有高死亡风险的心理疾病, 因此探讨女大学生外貌负面评价恐惧和进食障碍倾向的关系, 为临床干预、治疗及进一步研究提供依据。本研究通过使用外貌负面评价恐惧量表、限制性饮食量表、进食障碍量表等量表与问卷对女大学生被试进行实测, 了解当前该群体在负面评价恐惧与限制性饮食的现状; 通过实证研究分析女大学生外貌负面评价恐惧、限制性饮食与进食障碍倾向三者之间的关系及其在人口学变量上的关联; 并且为研究二中对女大学生开展团体心理辅导干预提供基础。

关键词: 外貌负面评价恐惧; 进食障碍; 限制性饮食

通辽市社区居民老年期痴呆流行病学调查的设计和实施

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目的 描述通辽市社区居民老年期痴呆流行病学调查的抽样设计、权重计算、调查工具、现场执行及质量控制方案。

方法 采用三阶段不等概率抽样设计在内蒙古自治区通辽市调查 65 岁及以上的常住居民, 采用 10/66 老年期痴呆系列研究(10/66 Dementia Research Group, 10/66 DRG) 评估工具获得老年期痴呆的疾病诊断, 以计算机辅助个人访谈模式开展调查, 并实施调查全程及时质量控制措施。

结果 在通辽市 9 个旗/县/市/区的 166 个嘎查/村/居中共调查老人 4 345 人, 应答率为 96.2%。计算抽样设计权数、无应答调整权数和事后分层调整权数后, 将上述权数相乘并进行极值调整和标化调整, 从而获得最终权数。10/66 DRG 评估工具是通过社区痴呆筛查表 (Community Screening Interview for Dementia, CSI-D) 和老年精神状况检查 (Geriatric Mental State Examination, GMS) 收集相关信息, 结合社会人口学和危险因素问卷、躯体和神经系统检查、知情人访谈问卷, 分别以 10/66 DRG 老年期痴呆诊断标准和美国精神医学学会精神障碍诊断与统计手册第 4 版 (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, DSM-IV) 为诊断标准, 利用计算机诊断程序获得老年期痴呆的诊断结果。171 名访员接受培训, 考核合格后开展入户调查, 并采用计算机数据核查、录音核查和电话核查等质量控制措施, 保证调查的真实性。

结论 本调查采用严格的抽样设计和质量控制措施实施调查, 并采用国际效度和信度满意的 10/66 DRG 评估工具作为调查工具, 具有国际跨文化可比性, 可以为国内其他地区开展老年期痴呆流行病学调查提供方法学参考。

关键词: 老年期痴呆, 描述性流行病学, 10/66 老年期痴呆系列研究, 抽样, 权重

Treatment Received and Related Factors Among Chinese Adults with Mood and Anxiety Disorders

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Objective To provide the latest nationally representative data on service utilization and the factors related to mood and anxiety in China

Methods Data are from the China Mental Health Survey. This cross-sectional epidemiological survey was conducted across China using a consistent research protocol and assessment instrument between 2013 and 2015. As representative household samples, 32,552 participants aged 18 or above were interviewed face-to-face in the community. The diagnosis of mood and anxiety disorders, treatment received in the past year, and associated sociodemographic/clinical factors were assessed by the Chinese version of the Composite International Diagnostic Interview (CIDI) 3.0. Standard errors of prevalence estimates were calculated using the Taylor series linearization method, which accounted for sampling weights and sample clustering. Additionally, two-stage sampling weights were used to adjust for different selection probabilities. Poststratification weights were based on age, gender, and residence distribution data from the 2010 China census population survey. Multivariable logistic regression analysis was performed to examine the associations between diverse sociodemographic and clinical factors and health services utilization across different sectors. All statistical analyses were conducted using SAS version 9.4

Results Among the individuals with mood or anxiety disorders in this study, 10.9% (95% CI, 8.77-12.99) received treatment from the healthcare sector in the past year. Only 1.10% (95% CI, 0.45-1.75) received minimally adequate treatment. Significant factors associated with treatment receipt included location, with rural (Odds ratio, 0.54; 95% CI, 0.37-0.80) and central region residents (OR, 0.57; 95% CI, 0.36-0.88) showing lower odds, and sleep disturbances (OR, 3.46; 95% CI, 1.67-7.10) and comorbid mood and anxiety disorders (OR, 2.52; 95% CI, 1.37-4.62) showing higher odds. Male patients (OR, 0.35; 95% CI, 0.17-0.73) and those with minimal education (OR, 0.45; 95% CI, 0.21-0.96) had lower odds of seeking help from mental health specialists, while chronic pain patients (OR, 6.78; 95% CI, 2.68-17.14) had higher odds

Conclusion The finding reveals a potentially significant, underestimated disease burden in China. The results highlight the need for targeted strategies to improve equitable service access, promote evidence-based treatments, and address underserved populations

关键词: Service Utilization, Mood Disorders, Anxiety Disorders, Treatment Adequacy, Comorbidity

基于 logistic 回归和决策树模型对青少年抑郁障碍患者非自杀性自伤行为危险的分析

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目的 对青少年抑郁障碍患者非自杀性自伤 (non-suicidal self-injury, NSSI) 行为的影响因素进行分析, 并构建 logistic 回归模型和决策树风险模型。

方法 回顾性选取 2022 年 7 月至 2023 年 6 月广州某三甲精神专科医院收治的 156 例青少年抑郁障碍患者作为研究对象, 根据是否发生 NSSI, 将其分为 NSSI 组和非 NSSI 组, 收集 2 组临床相关资料, 采用单因素及多因素 logistic 回归分析青少年抑郁障碍患者 NSSI 的危险因素, 并采用决策树法与 Logistic 回归算法构建其风险预测模型, 并比较两种模型对 NSSI 的预测价值。

结果 156 例青少年抑郁障碍患者中有 34 例发生 NSSI, 其发生率为 21.79%; 多因素 logistic 回归分析结果显示, 网络成瘾、在校受欺凌、自杀意念、自杀未遂史、抑郁情况以及自我接纳能力为青少年抑郁障碍患者 NSSI 的危险因素 ($P < 0.05$); 根据危险因素构建决策树模型, 模型选择了网络成瘾、在校受欺凌、自杀意念、自杀未遂史、抑郁情况以及自我接纳能力等 6 个解释变量, 合计 5 层, 共 15 个节点, 其中网络成瘾为青少年抑郁障碍患者 NSSI 最为重要的影响因素; 决策树模型预测青少年抑郁障碍患者 NSSI 的 AUC 为 0.867 (95% CI: 0.804~0.916), Logistic 回归模型预测青少年抑郁障碍患者 NSSI 的 AUC 为 0.847 (95% CI: 0.781~0.900), 两种模型的 DeLong 检验结果为 $Z=1.007$, $P=0.3138$, 决策树模型的预测效能虽高于 Logistic 回归模型, 但两者比较无差异 ($P > 0.05$)。

结论 网络成瘾、在校受欺凌、自杀意念、自杀

未遂史、抑郁情况以及自我接纳能力是青少年抑郁障碍患者 NSSI 的危险因素,决策树风险预测模型的预测效能虽高于 Logistic 回归模型,但 2 组比较无差异。因此在实际应用中,需要综合考虑多种因素,如数据的可用性、模型的复杂性、预测结果的解释性等选择合适的模型。

关键词: logistic 回归模型, 决策树模型, 青少年抑郁障碍, 非自杀性自伤行为, 影响因素

动物辅助治疗对中国青少年的焦虑情绪和体像状态的积极影响——一项前-后对照干预型研究的小样本预实验

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目的 动物辅助治疗 (Animal-Assisted Therapy, AAT) 是一种将某些符合特殊条件的动物纳入治疗的整个过程中,通过人与动物的直接和有目的的互动,来舒缓人的压力、改善情绪与身体机能、提高社交能力、促进社会化的干预手段。青少年在学业考试和人际关系挑战的双重压力下,常常出现焦虑情绪、体像困扰等心理问题。本研究旨在探究 AAT 对我国青少年的焦虑情绪和体像状态的影响,为促进我国青少年心理健康和社会化提供客观、可靠的实证依据。

方法 本研究为前-后对照的干预型研究的前期预实验。研究对象:上海某实验高中的 AAT 学生社团的 11 名高中生。研究地点:上海闵行实验高中的一楼活动室。研究时间:2024 年 6 月 1 日上午 10:00。干预方法 在活动室内,由研究者组织学生入场围成弧形就坐,由动辅师牵引治疗犬入场,在动辅师引导下,研究对象依次记住治疗犬的名字、年龄、性别及性格特征。将研究对象平分为两组,每组与治疗犬和动辅师互动 30 分钟,互动内容包括在动辅师的引导下抱或抚摸治疗犬,与其对话,与其合影和听动辅师讲述治疗犬的生平故事。整个干预过程持续 60 分钟。评估项目和工具:时点焦虑情绪:采用情景特质焦虑量表-情景焦虑部分 (STAI-S) 测量;时点体像状态:采用体像状态量表 (BISS) 测量;过程体验:采用“数字评分表” (NRS) 的方式评

估轻松感。评估过程: AAT 干预开始前,每个研究对象独立完成“干预前问卷”。AAT 干预后,研究对象再次完成“干预后问卷”。统计方法 所有定量数据采用 SPSS 进行录入和分析,采用配对样本 t 检验的方式比较干预前后的测量变量。所有统计检验均采用双侧检验,以 $P < 0.05$ 代表差异有统计学意义。

结果 本预实验共纳入 11 名研究对象,收集到 11 份有效数据。包括 5 名男生,6 名女生。年龄分布于 15-17 岁之间,平均年龄为 16 ± 0.45 岁,干预前的平均焦虑水平为 32.36 ± 8.86 分,干预后的平均焦虑水平为 25.73 ± 5.83 分,配对样本 t 检验显示 $t = 2.53$ ($P = 0.03$),提示 AAT 对青少年的时点焦虑情绪有显著的有统计学意义的缓解作用。干预前研究对象的平均体像满意度为 28.55 ± 11.49 分,干预后的平均体像满意度水平为 31.09 ± 12.00 分,配对样本 t 检验显示 $t = -3.37$ ($P = 0.007$),提示 AAT 对青少年的时点体像满意度有显著的有统计学意义的提高作用。干预后的放松感评分为 9.4 ± 1.075 分,提示 AAT 给研究对象带来了很高的放松体验。

结论 本研究发现,一次 60 分钟的 AAT 干预可有效降低青少年的时点焦虑情绪、提高体像满意度,并为其提供了极高的放松体验。

关键词: 动物辅助疗法, 青少年, 焦虑情绪, 体像状态, 前后对照干预型研究, 预实验

无抽搐电休克治疗患者首次治疗与术后发热的相关性分析

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目的 探究无抽搐电休克治疗患者首次治疗对术后发热的影响。

方法 采用回顾性横断面分析的方法,利用病历系统采集 256 例住院行无抽搐电休克治疗患者的基本资料与临床资料,包括年龄、性别等基本资料,病程、疾病类型、发热时间、发热程度、是否首次治疗、治疗次数、第几次治疗后出现发热等临床资料。其中,发热的判断标准采用临床工作中的标准,以腋温测量结果为准,体温在 $37.5^{\circ}\text{C} \sim 37.9^{\circ}\text{C}$ 为低热,体温在 $38^{\circ}\text{C} \sim 38.9^{\circ}\text{C}$ 为中度发热,体温在 $39^{\circ}\text{C} \sim$

39.9°C时为高热,40°C以上为极高热;依据体温是否在37.5°C以上分为发热组和无发热组,分析首次治疗与术后发热的相关性。

结果 45例(17.6%)在治疗后出现了发热现象,发热程度以低热和中度发热为主,低热占68.8%,中度发热占20.0%,高热占11.1%。第一次治疗后出现发热20例,占比44.4%。发热组和无发热组在年龄($t=0.566$, $P=0.005$)、病程($\chi^2=1.162$, $P=0.006$)、是否首次MECT治疗($\chi^2=9.932$, $P=0.002$)有统计学差异。logistic回归提示无抽搐电休克治疗患者首次治疗与术后发热相关($OR=3.214$, $P=0.002$)。

结论 首次治疗是无抽搐电休克治疗患者术后发热的相关影响因素,针对此类患者,需要个体化地进行发热的预防和治疗,以提高治疗的安全性和有效性。

关键词:无抽搐电休克治疗,发热,首次治疗

A comparison of psychological resilience, self-esteem, and related factors in Chinese Firstborn and Second-born children

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Objective This is a study of comparing psychological resilience, self-esteem, and related factors between the firstborn children and the second-born children in China

Methods The methods used include the Chinese Adolescent Resilience Scale, the Chinese Self-Esteem Scale, the perceived parental rearing patterns scale Chinese version, and the Chinese screen questionnaire of child abuse

Results The results showed that there were no significant differences in the total psychological resilience, the self-esteem score, perceived parenting styles, and the prevalence of child abuse between the firstborn

and second-born children ($P>0.05$). The severe punishment, excessive interference, and overprotection of the father and the over interference and over protection of the mother of males were significantly higher compared to females (all $P_s<0.05$). In the firstborn children, the emotion control of females was significantly lower, and interpersonal assistance was significantly higher compared to those of males ($P_s<0.05$). In the second-born children, the self-esteem score and the emotion control of females were significantly lower compared to those of males ($P_s<0.01$). In the females, the severe punishment and excessive interference of the father of the firstborn children were significantly higher compared to the second-born children (all $P_s<0.05$). There were no significant differences between the firstborn and second-born children

Conclusion Equal attention and care may be a more suitable way of rearing. But there were some differences in gender. Gender prejudice still exists and it's recommended to give males and females the same way of upbringing

关键词: firstborn,second-born,resilience,self-esteem,parenting style,child abuse

棕榈酸帕利哌酮长效针剂和奥氮平治疗社区精神分裂症患者疗效比较

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目的 比较和探讨棕榈酸帕利哌酮长效针剂和奥氮平对社区精神分裂症患者的临床效果、社会功能及不良反应。

方法 选取2021年3月到2022年3月本院门诊符合精神与行为障碍分类第10版(ICD-10)精神分裂症诊断标准的患者83例进行分组,分为观察组(42例)与对照组(41例),治疗组应用棕榈酸帕利哌酮长效针剂药物治疗,对照组则单用奥氮平药物治疗,进行为期1年的治疗观察,于治疗前,治疗3月,治疗6月及治疗12月末统计分析两组患者阳性与阴性症状量表(PANSS)、个人和社会功能量表(PSP)、自知力与治疗态度问卷(ITAQ)及不良

反应发生率, 评定患者的精神症状、社会功能、不良反应发生率及对药物的可接受度。

结果 1、与治疗前比较, 研究组和对照组治疗前后 PANSS 及各因子分均低于治疗前, PSP、ITAQ 总分评分两组均有改善, 但研究组和对照组治疗后评分对比差异有统计学意义 ($P<0.05$)。2、与对照组比较, 研究组治疗前后 PANSS、PSP、ITAQ 总分及各因子分对比差异均有统计学意义 ($P<0.05$); 研究组不良反应发生率较对照组低 ($P<0.05$)。3、两组药物不良反应发生率比较: 两组治疗观察期间均统计了两组药物不良反应的发生例数, 研究组与对照组比较, 其中低血压、嗜睡、肝功能异常、体重增加不良反应的发生例数对照组多于研究组; 研究组药物不良反应发生率较对照组低, 两组对比差异有统计学意义 ($P<0.05$)。

结论 本研究比较棕榈酸帕利哌酮长效针剂和奥氮平药物治疗社区慢性精神分裂症患者, 结果表明, 棕榈酸帕利哌酮长效针剂和奥氮平均可改善精神分裂症患者的精神症状, 但棕榈酸帕利哌酮长效针剂组在社会功能改善及自知力和治疗态度方面优于奥氮平组, 取得满意的疗效, 本研究结果与文献基本一致。帕利哌酮长效针剂改善精神症状, 提高治疗疗效, 且能提高患者自知力水平和监护人管控能力, 也降低带给患者家属的心理压力, 故药物治疗接受度高, 药物依从性好。

关键词: 棕榈酸帕利哌酮针剂; 奥氮平; 精神分裂症; 疗效和不良反应; 社会功能; 治疗态度;

青少年抑郁症患者营养状况的影响因素

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目的 探讨青少年抑郁症患者营养状况的影响因素。

方法 选取 2023 年 9 月-2024 年 3 月在广州医科大学附属脑科医院门诊就诊的 142 例青少年抑郁症患者作为研究对象, 采用身体成分评估患者的营养状况, 收集数据包括基本资料、精神症状情况等。对不同人口学资料 and 不同严重程度的青少年抑郁症患者身体成分指标进行比较分析, 并采用多元线性

回归的方式分析青少年抑郁症患者营养状况的影响因素。

结果 纳入的 142 名患者, 单因素结果分析显示, 饮酒情况、吸烟情况、病程持续时间、运动次数均会影响患者营养状况变化。其中病程 ≤ 6 个月、无吸烟饮酒史、运动次数集中在 4-6 次的青少年抑郁症患者身体成分评分更高, 差异具有统计学意义 ($P<0.05$)。依据 PHQ-9 量表得分, 按照抑郁程度进行分组, 共计分成四组。将不同严重程度抑郁症患者身体成分指标进行比较, 其中肌肉量、蛋白质、骨骼肌、细胞内水分比较后差异具有统计学意义 ($P<0.05$)。组间比较结果显示轻度抑郁组肌肉量、骨骼肌含量、细胞内水分、身体细胞量比较均高于中度抑郁组、中重度抑郁组和重度抑郁组。重度抑郁组蛋白质含量低于其他三组, 差异具有统计学意义 ($P<0.05$)。多元线性回归结果显示, 青少年抑郁症患者营养状况的影响因素包括饮酒情况 ($\beta=0.159$, 95% CI 0.563~5.597, $P=0.017$)、病程时间 ($\beta=-1.90$, 95% CI -2.389~-0.257, $P=0.015$)、每周运动次数 ($\beta=0.214$, 95% CI 0.397~2.928, $P=0.01$)、社会性人格焦虑量表 (SPAS) 的体格自我表现不合适维度 ($\beta=-.209$, 95% CI -.772~-0.0710, $P=0.019$)、中文版荷兰进食行为问卷 (DEBQ) 外因性饮食维度 ($\beta=-0.207$, 95% CI 0.253~-0.030, $P=0.014$)。

结论 青少年抑郁症患者的营养情况受饮酒情况、病程时间、每周锻炼次数、体格不满、外因性饮食的重视度的影响。饮酒情况影响患者的营养状况, 饮酒情况越严重, 患者营养功能越差。青少年抑郁症患者的对自身体格不满程度越高且对外因性饮食重视度越高, 身体成分得分越低, 营养情况越差; 然而, 每周锻炼次数越多, 身体成分得分越高。病程持续时间长, 患者的营养状况越差。同时随着抑郁水平的升高也会导致青少年抑郁症患者蛋白质等相关营养指标含量下降, 导致青少年抑郁症患者易疲劳、抵抗力低下、记忆力减退影响其学习与生活, 加重患者的心理负担产生抑郁焦虑等负面情绪。因此应正确引导青少年接纳自身身体的变化, 采取真正有效的减压方式帮助青少年形成健康心理。

关键词: 青少年, 抑郁症, 身体成分, 营养状况

临床护士职场暴力应激与情感性精神障碍风险

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目的 医疗暴力问题显著影响和制约着我国医疗卫生事业的可持续发展；本研究调查床护士工作场所暴力应激现状，探索临床护士职场暴力应激与情感性精神障碍风险的危险因素和保护因素。通过多角度梳理人类暴力行为发生机制，为未来构建有效的医疗暴力预防和治理策略提供理论与实践思考。

方法 于2023年1月30号—3月15号在海南省二级三级医院进行横断面现状调查。采用医务人员职业应激量表（Medical staff occupational stress scale,MSOSS）之职场暴力应激子量表、神经质人格量表(CBF-PI-B-N)、病人健康问卷（Patient health queatinal-9, PHQ-9）、广泛性焦虑量表（Generalized Anxiety Disorder 7-item scale, GAD-7）、社会支持量表（Social support rating scale, SSRS），应对方式评估对临床护士进行调查。采用 SPSS27.0 软件进行统计分析。

结果 本次调研的临床护士来自二级医院 1638 名，来自三级医院 1350 名。20-29 岁的临床护士 1373 名；30-39 岁的年龄段护士 1159 名；大于等于 50 岁的临床护士 456 名。专科学历 1656 名占调研人数的一半以上，其次是本科及以上学历 1332 名。三级医院临床护士遭受语言形式暴力发生率最高，其次是患者恶意传播病毒。二级医院临床护士遭受患者恶意传播病毒发生率最高，其次是语言形式暴力。职场暴力应激（OR=1.028; 95%CI: 1.022-1.033）神经质人格（OR=1.075;95%CI: 1.063-1.086）是临床护士焦虑症风险的危险因素；社会支持（OR=0.939;95%CI: 0.929-0.949）是焦虑症风险的保护因素。职场暴力应激（OR=1.023; 95%CI: 1.018-1.029）与神经质人格（OR=1.066; 95%CI: 1.055-1.077）是临床护士抑郁症风险的危险因素；社会支持（OR=0.938; 95%CI: 0.928-0.948）是抑郁症风险的保护因素。

结论 各个等级医院临床护士遭遇工作场所暴力情况不容忽视；有效预警和防治职场暴力可以降低临床护士情感性精神障碍的风险。有效管理医疗场所中患者及其家属对临床护士实施暴力行为需要综合运用社会学和心理学理论以及医工联合的技术建立起全面且有效的预警策略。

关键词： 临床护士,职场暴力,情感性精神障碍,抑郁症,焦虑症

国内重复经颅磁刺激联合胆碱酯酶抑制剂对阿尔茨海默病认知功能影响的 Meta 分析

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目的 通过 Meta 分析方法，系统评价国内重复经颅磁刺激联合胆碱酯酶抑制剂对阿尔茨海默病认知功能的影响。

方法 通过文献检索中国知网、中国万方医学、中国生物医学文献数据库等中文数据库，检索时间均为 2008 年 1 月至 2024 年 6 月，使用“经颅磁刺激”、“重复经颅磁刺激”、“rTMS”“胆碱酯酶抑制剂”、“多奈哌齐”、“卡巴拉汀”、“加兰他敏”、“认知功能”作为检索词并同时结合自由词和各数据库的主题词进行检索，再通过手工方式筛查纳入文献的参考文献，最后纳入随机对照试验，提取有关资料。采用在 Cochrane 系统评价中质量评价标准 Jadad 量表，对所纳入的随机对照试验进行质量评价。采用 Cochrane 协作网提供 RevMan 5.3 软件及 Stata15.0 软件进行统计分析。

结果 最终纳入 14 个研究，共 1068 例患者。重复经颅磁刺激联合胆碱酯酶抑制剂治疗阿尔茨海默病的总有效率比较[OR=2.88, 95%CI(1.70, 4.90), Z=3.91, P<0.0001]，有统计学意义；重复经颅磁刺激联合胆碱酯酶抑制剂治疗阿尔茨海默病结束时 ADAS-cog 评分比较[MD=-5.25, 95%CI (-7.25, -3.24), Z=5.13, P<0.00001]，有统计学意义；重复经颅磁刺激联合胆碱酯酶抑制剂治疗阿尔茨海默病结束时 MMSE 评分比较 [MD=3.56, 95%CI (2.74, 4.38), Z=8.49, P<0.00001]，有统计学意义；重复经颅磁刺激联合胆碱酯酶抑制剂治疗阿尔茨海默病结束时 MoCA 评分比较[MD=3.58, 95%CI (2.47, 4.69), Z=6.32, P<0.00001]，有统计学意义；重复经颅磁刺激联合胆碱酯酶抑制剂治疗阿尔茨海默病结束时 P300 潜伏期比较[MD=-45.41, 95%CI (-87.64, -3.19), Z=2.11, P=0.04]，有统计学意义；重复经颅磁刺激联合胆碱酯酶抑制剂治疗阿尔茨海默病结束时 P300 波幅比较[MD=2.65, 95%CI (2.19, 3.11), Z=11.33, P<0.00001]，有统计学意义；重复经颅磁刺激联合胆碱酯酶抑制剂治疗阿尔茨海默病的不良

事件发生率比较[OR=1.08, 95%CI (0.63, 1.87), Z=0.78, P=0.78], 无统计学意义。

结论 重复经颅磁刺激联合胆碱酯酶抑制剂治疗阿尔茨海默病的可有效改善临床症状, 同时还能改善认知功能, 治疗过程中的不良事件发生较少, 治疗安全性较高。

关键词: 重复经颅磁刺激; 阿尔茨海默病; 胆碱酯酶抑制剂; 认知功能; Meta 分析

976 例首次就诊的儿童青少年抑郁发作的临床特征分析

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目的 探讨首次就诊的儿童青少年抑郁发作的临床特征。

方法 本研究对 2020 年 1 月至 2023 年 12 月首次至南京医科大学附属脑科医院就诊的抑郁发作儿童的临床资料进行分析, 了解儿童青少年首发抑郁发作的临床特点及可能的心理社会因素。

结果 共纳入分析首次就诊的抑郁发作儿童青少年 976 例(13.2±1.4 岁), 其中男性 219 例(13.3±1.6 岁), 女性 757 例(13.3±1.4 岁)。就诊儿童中当下就读年级初二的有 287 例(29.4%); 初一的有 237 例(24.3%); 初三的有 210 例(21.5%); 高一的有 83 例(8.5%); 六年级的有 77 例(7.9%)。情绪低落开始出现的年龄为(12.2±1.6 岁), 其中男性(12.2±1.7 岁), 女性(12.2±1.6 岁)。

867 例(88.8%) 患儿病程中存在消极观念, 669 例(68.5%) 患儿当下仍存在消极观念。649 例(66.5%) 患儿有自伤行为。401 例(41.1%) 患儿查体皮肤存在疤痕等。405 例(41.5%) 存在食欲不佳, 80 例(8.2%) 患儿存在其他饮食问题。在睡眠问题中, 574 例(59.0%) 患有一种睡眠问题, 123 例(13.0%) 患儿有两种睡眠问题, 7 例(0.7%) 患儿患有 3 种睡眠问题; 在所有患儿中, 有 515 例(53.0%) 的患儿存在入睡困难, 143 例(15.0%) 患儿存在睡眠浅的问题, 182 例(19.0%) 患儿则存在其他睡眠问题。

起病前存在心理社会因素者为 823 例(84.6%), 其中, 657 例(67.3%) 的患儿起病前有一种生活事件; 229 例(23.4%) 患儿有两种生活事件, 29 例(3%)

患儿有三种生活事件。505 例(52.0%) 的患儿起病前感受到学业压力大, 334 例(34.2%) 患儿同伴关系受挫, 203 例(21.0%) 患儿存在亲子关系不佳, 48 例(5.0%) 则存在师生关系的困扰。

结论 首次我院门诊就诊的儿童青少年抑郁发作的女性多于男性, 以初中学生占比更多, 初次就诊年龄为 13.2±1.4 岁。开始出现情绪低落的年龄为 12.2±1.6 岁。首次就诊的抑郁发作的儿童青少年人群中消极观念、自伤行为、进食问题较常见, 且起病前有更多的学业压力、同伴关系、亲子关系和师生关系的困扰。

关键词: 儿童, 青少年, 抑郁发作, 临床特征

大学生偶像参照效应实证研究

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目的 为探究大学生是否存在偶像参照效应, 即大学生的自我概念中是否存在偶像, 从而为将来在临床对存在偶像崇拜的个体进行干预提供实证支持。

方法 以 106 名吉林省大学生为被试, 通过实验法, 以 3 (参照对象) × 2 (词性) 双因素被试内实验设计选用记忆的 R/K 范式进行实验。参照对象指被试在 R/K 任务中所参照的对象, 即“请判断下方呈现词汇是否符合用于形容你自己/你的偶像/鲁迅先生”, 分为自我、偶像、他人(鲁迅)三个水平; 词性指 R/K 任务中, 判断阶段中需要判断的词汇的性质, 分为正性和负性两个水平。以自编的 150 个特质词作为实验用词, 实验过程分为学习阶段(记忆阶段)以及测验阶段。学习阶段要求被试判断呈现出来的词汇是否用于形容某一参照对象, 测验阶段则要求被试判断呈现出来的词汇是否在学习阶段出现过。如若被试判断某一词汇出现, 则要求被试在此基础上继续判断是“清晰记得(R)”还是“模糊知道(K)”。其中的“R”指的就是“remember”, 意味着明确记得出现过该词汇, 并且对于该词汇出现的情景有着相关的记忆; 而“K”指的则是“know”, 意味着知道出现过该词汇, 但是对此该词汇出现时候的情景没有什么印象, 更多反映地是对词汇的一种熟悉感, 知道感。该范式基于自我记忆参照指出, 个体对

于符合自我概念的词汇的记忆正确率更高、判断反应时更短。因此,因变量为 R/K 任务的正确率以及反应时,用于判断自我概念中是否存在偶像。

结果 (1) 参照对象主效应显著,自我参照组 R 判断任务的正确率和反应时与偶像参照组 R 判断任务的正确率和反应时之间没有显著差异;(2) 自我参照组 R 判断任务的正确率和反应时显著优于他人组 R 判断任务的正确率和反应时;(3) 词性的主效应显著,正性词汇 R 判断任务的正确率显著高于负性词汇 R 判断任务的正确率,而在 R 判断任务的反应时上二者没有差异。

结论 (1) 大学生存在自我参照效应,同时大学生存在积极自我偏好;(2) 大学生存在偶像参照效应;(3) 偶像进入大学生的自我概念中。

关键词: 自我参照效应 偶像参照效应 R/K 范式

孕妇职业特点与孕期心理问题关系的研究

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目的 本研究旨在探讨孕妇职业特点与孕期心理问题之间的关系,以便为孕妇提供精准心理支持。

方法 本研究采用问卷调查法,选取了 3216 名孕妇作为研究对象。问卷内容包括孕妇的基本信息(如年龄、学历、职业等)、孕期基本情况(如孕周、是否有并发症等),以及孕期心理状况评估。心理评估采用国际通用的孕期心理评估量表,包括焦虑自评量表(SAS)、抑郁自评量表(SDS)等。数据收集后,使用 SPSS 统计软件进行描述性统计、方差分析、相关分析和回归分析等。

结果 1.职业类型与心理问题:医护人员(512 名):SAS 平均分为 56.3,SDS 平均分为 53.1,中度以上抑郁焦虑为 29%。教育工作者(783 名):SAS 平均分为 52.2,SDS 平均分为 49.5,中度以上焦虑抑郁比例为 25%。金融从业者(435 名):SAS 平均分为 54.8,SDS 平均分为 50.9,28%的孕妇有中度及以上焦虑抑郁比例。IT 从业者(326 名):SAS 平均分为 53.5,SDS 平均分为 48.7,中度及以上焦虑抑郁比例为 24%。其他职业(如销售人员、服务业

等,共 1160 名):SAS 和 SDS 平均值分别为 49.3 和 45.8,中度及以上心理问题的比例平均为 21%。2.工作压力与心理问题:高工作压力职业(包括医护人员、金融从业者):SAS 和 SDS 的平均分普遍较高;低工作压力职业(如部分服务业职业):SAS 和 SDS 的平均分相对较低。3.工作稳定性与心理问题:稳定职业(如教育工作者、公务员等):SAS 和 SDS 平均分相对较低,表明工作稳定性可能对孕妇心理健康有积极影响。不稳定职业(如临时工作、自由职业者等):SAS 和 SDS 平均分普遍偏高。4.收入水平与心理问题:中高收入职业(如金融从业者、高级管理职位等):SAS 和 SDS 平均分也相对较高。中低收入职业:SAS 和 SDS 平均分普遍较低。

结论 本研究发现,孕妇的职业特点与其孕期心理问题之间存在密切关系。医护人员、公务员、金融 IT 从业等职业孕妇更容易出现孕期焦虑和抑郁等心理问题。因此,为了维护孕妇的心理健康,家庭、社会和单位应共同努力,为孕妇提供更为宽松的工作环境、合理的工作时间以及必要的心理支持和帮助。同时,孕妇自身也应学会调节情绪,保持积极乐观的心态,合理安排工作和生活。

关键词: 孕妇,职业,孕期心理问题

青少年抑郁症患者中自伤行为与睡眠特点分析

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目的 调查分析伴自杀行为青少年抑郁症睡眠障碍的特点,探讨伴自杀行为的青少年抑郁症患者的睡眠障碍特点。

方法 选取 2022 年 1 月至 2023 年 12 月在北京回龙观医院某病区住院的符合《国际疾病分类精神与行为障碍分类(第 10 版)》(ICD-10)诊断标准的青少年抑郁症患者(年龄 12-18 岁)122 例为研究对象。根据患者近 1 年是否伴有自伤行为分为两组,即伴有自伤行为组与不伴有自伤行为组。其中伴有自伤行为组共 90 例、不伴有自伤行为组 32 例。采用汉密尔顿抑郁量表调查青少年抑郁情况以及抑郁严重程度,同时用匹兹堡睡眠质量指数量表(Pittsburgh Sleep Quality Index, PSQI)评估青少年

抑郁症患者的睡眠情况，并进行统计分析。

结果 青少年抑郁患者中伴有自伤行为组的PSQI总分明显高于不伴有自伤行为组。两组比较，差异有统计学意义 ($P < 0.05$)；青少年抑郁症患者的睡眠问题与自伤行为呈正相关，青少年抑郁症患者的睡眠问题以睡眠节律紊乱最突出。

结论 青少年抑郁症患者存在睡眠障碍，伴有自伤行为的青少年抑郁症患者睡眠问题较为严重，其中以失眠、睡眠节律紊乱、问题最为突出，日间功能障碍更明显。伴有自伤行为的青少年抑郁症患者睡眠问题需要更多关注。

关键词：青少年；抑郁症；睡眠障碍

河北省成年居民中重度失眠现状调查

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目的 调查河北省成年居民中重度失眠的现状，并剖析其影响因素。

方法 调查对象为河北省 18 岁及以上常住居民，抽样方法为多阶段分层随机法，共抽取了 9959 人。采用失眠严重程度量表 (ISI) 进行失眠情况调查，根据量表得分，分为无失眠组、轻度失眠组及中重度失眠组。采用 χ^2 检验进行差异性分析，影响失眠因素采用无序多分类 Logistic 回归分析。

结果 154 份问卷不完整剔除，回收问卷 9805 份。被调查的 9805 名居民中，中重度失眠者 410 名 (4.2%)，轻度失眠者 1279 名 (13.0%)，无失眠者 8116 名 (82.8%)。比较三组一般资料，结果显示两组患者在性别、婚姻状况、职业、学历、个人月收入、家庭月收入、饮酒、锻炼时间、锻炼强度、慢性病、年龄等方面存在差异，均有统计学意义 ($P < 0.05$)，回归分析结果显示，性别、婚姻、职业、饮酒、锻炼时间、是否患慢性病是轻度失眠及中重度失眠的影响因素，中重度失眠的影响因素还有学历、家庭月收入、锻炼强度、年龄 ($P < 0.05 \sim P < 0.01$)。

结论 河北省成年居民存在失眠症状人群偏高，女性、非婚状态、非农民、饮酒、长时间锻炼、患有慢性病均是居民患轻度及中重度失眠的危险因素；年龄小、中等学历、中等家庭月收入、适当锻炼强度

是居民中重度失眠的保护性因素。

关键词：中重度失眠；现状调查；河北省；成年居民

无性恋案例报告及分析

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目的 无性恋是指一个人对他人几乎没有或根本没有性感的状态，它涉及到个人情感体验、人际关系和自我认知的许多方面，通过 3 例无性恋案例报告，分析其心理特征，为无性恋提供健康心理建议。

方法 病例报告 3 例，病例 1：一名 30 岁男性，从小对性不感兴趣，从未对任何人产生过性吸引。他不知道自己是无性恋，交友甚多，与家人关系密切。曾经谈恋爱，却发现自己对性毫无兴趣，这导致了缺乏亲密感，就医过程中认识类似情况者获得归属感。案例 2：一名 25 岁女性，对性关系漠不关心，从未主动追求过性伴侣。她很清楚自己是无性恋。与家人和亲密的朋友保持良好的关系。在一段短暂的关系中，她的性欲很低，最终她选择了分手。她的家人对她的选择表示困惑，并敦促她尽快找到一个伴侣。她找到一些无性恋朋友分享彼此的生活经历和感受。案例 3：一名 45 岁的男性，他在中年时意识到自己对性的需求极低。因对性毫无兴趣而离异。离婚后与女性朋友无性同居。他以自己的方式关心和支持孩子的发展，并与孩子保持良好的关系。离婚后开始重视无性恋群体的活动和信息，形成了一个新的社交圈。

结果 无性恋者在某些方面与其他群体存在显著差异。在情感体验上，无性恋者往往对浪漫爱情的需求较低，更注重友情和亲情。在人际关系上，他们更倾向于与同样是无性恋者的人建立深层次的关系，而对于性取向不同的个体则可能感到难以理解和接受。

结论 针对无性恋者的心理特点和需求，提出以下健康建议：社会应加强对无性恋者的认识和了解，消除对他们的误解和偏见。通过性教育帮助青少年正确认识并接纳不同性倾向。为无性恋者提供专业的心理支持和咨询服务，帮助他们建立健康的自我认知和情感关系。

关键词：无性恋；临床心理学；案例分析；性倾向

高中生网络游戏障碍的异质性表现类型及其与儿童期不良经历的关系

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目的 以网络游戏障碍（Internet Gaming Disorder, IGD）的9项症状标准为特征，在高中生群体中识别IGD的异质性表现类型，并探究其与儿童期不良经历的关联。

方法 2024年2月于杭州市某中学招募1746名15至20岁的高中生（平均年龄为 16.97 ± 0.95 岁，女生占比55.6%）参与研究，分别使用自编一般资料问卷、儿童期不良经历问卷修订版（Revised Adverse Childhood Experience Questionnaire, ACEQ-R）、网络游戏障碍简短版本量表（Internet Gaming Disorder 9 items Short Form, IGDS-SF9）收集高中生的社会人口学资料、儿童期不良经历暴露情况及IGD相关症状严重程度。使用潜在剖面分析识别高中生IGD的异质性表现类型，并使用多分类Logistic回归分析探讨儿童期不良经历与高中生IGD表现类型的关系。

结果 高中生中识别出3种异质性的IGD表现类型，分别是：“规范/健康游戏者”（1066人，占61.1%，该类别在9项IGD标准上的得分均最低）、“中度IGD风险者”（549人，占31.4%，该类别在9项IGD标准上的得分均高于平均值，但小于平均值+1个标准差）及“高IGD风险者”（131人，占7.5%，该类别在9项IGD标准上的得分均最高，高于平均值+1个标准差）。多分类logistic回归分析结果显示：即使在控制社会人口学资料后，ACEQ-R得分与高中生被归类于“中度IGD风险者”或“高IGD风险者”而非“规范/健康游戏者”的可能性、及高中生被归类于“高IGD风险者”而非“中度IGD风险者”的可能性呈显著正相关，且与未曾暴露于儿童期不良经历的高中生相比，暴露于1种、2种、3种及以上儿童期不良经历的高中生被归类为“中度IGD风险者”或“高IGD风险者”而非“规范/健康游戏者”的可能性显著

增加（趋势性检验 $P < 0.001$ ）。但在控制社会人口学资料后，仅暴露于3种及以上儿童期不良经历的高中生（相比于未曾暴露于儿童期不良经历）被归类于“高IGD风险者”而非“中度IGD风险者”的可能性显著增加。

结论 高中生中异质性的IGD表现类型与儿童期不良经历暴露情况显著相关，提示IGD的早期预防和干预工作应重点针对有儿童期不良经历暴露的个体，并考虑其IGD表现类型。

关键词：网络游戏障碍，游戏成瘾，儿童期不良经历，高中生，潜在剖面分析

网络精神病学组

中药复方联合网络认知行为治疗在恶劣心境患者中的应用效果

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目的 探讨中药复方联合网络认知行为治疗 (ICBT) 在恶劣心境患者中的应用效果。

方法 选取 2018 年 1 月至 2023 年 12 月就诊于沈阳市精神卫生中心的 120 例恶劣心境患者作为研究对象, 采用随机数字表法将其分为中药组、对照组和联合治疗组各 40 例。中药组采用中药复方口服治疗、对照组采用 ICBT 治疗、联合治疗组同时采用中药复方和 ICBT 治疗, 治疗 8 周。比较三组治疗后汉密尔顿抑郁量表(HAMD)、抑郁自评量表(SDS)评分变化。

结果 三组患者治疗后的量表评分低于治疗前, 差异有统计学意义 ($P < 0.05$)。多组间有效率的比较经 Bonferroni 校正, 治疗后, 联合治疗组有效率高于中药组, 差异有统计学意义 (均 $P < 0.0167$); 治疗后, 联合治疗组有效率高于对照组, 差异有统计学意义 (均 $P < 0.0167$); 治疗后, 中药组和对照组有效率比较, 差异无统计学意义 (均 $P > 0.0167$); 治疗后, 联合治疗组 HAMD、SDS 量表评分低于中药组, 差异有统计学意义 ($P < 0.05$); 治疗后, 联合治疗组 HAMD、SDS 量表评分低于对照组, 差异有统计学意义 ($P < 0.05$); 中药组和对照组治疗后 HAMD、SDS 量表评分比较, 差异无统计学意义 ($P > 0.05$)。

结论 中药复方联合 ICBT 治疗对恶劣心境患者的抑郁情绪有明显的改善作用, 优于单一治疗, 且副作用小, 易于患者接受, 值得临床推广。

关键词: 恶劣心境; 网络化认知行为治疗; 中药复方; 汉密尔顿抑郁量表

医务人员开展远程 MTM 服务 对重性精神病居家患者的实践价值

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目的 进行创新赋能、培育新时代“智慧精防”医疗服务领域“新质生产力”的探索。探讨医务人员借助“互联网+重性精神病居家患者”模式 (微信或微信群、公众号、视频号等), 远程科普, 线上开展药物治疗管理 (MTM) 的实践价值。

方法 医务人员选取 116 例长期居家服药的重性精神病门诊患者为研究对象, 在 2023 年 1 月至 2024 年 5 月间, 依据指导方式不同分为对照组和观察组, 各 58 例。对照组采取常规用药指导, 观察组采取常规用药指导后, 再开展远程药物治疗管理 (MTM) 药学服务, 比较两组效果。

结果 观察组患者通过医务人员远程药物治疗管理 (MTM), 不良反应发生后的总处置率、对医嘱药物治疗方案知晓率、对药学服务满意度均明显高于对照组, 组间比较, 差异均具有统计学意义 ($P < 0.05$); 观察组患者用药不合理发生率、病情加重重复发生率均明显低于对照组, 组间比较, 差异具有统计学意义 ($P < 0.05$)。

结论 医务人员借助“互联网+”模式开展远程药物治疗管理 (MTM) 服务, 具有实践价值, 可减少患者不合理用药现象、提高不良反应处置率、提升患者满意度、提升患者用药依从性、降低病情加重重复发生率等, 值得所有医务人员借鉴、推广应用。

关键词: (药物治疗管理) MTM 服务, 互联网+ 重性精神病, 精准服务, 居家服药

Association between IGF-1 Levels and MDD: A Case-control and Meta-analysis

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Objective Insulin-like growth factor-1 (IGF-1) has a variety of neurotrophic effects, including neurogenesis, remyelination and synaptogenesis, and is an effective regulator of neuronal plasticity. Although multiple studies have investigated IGF-1 in depression-related disorders, few studies have focused on patients with a first episode of clearly diagnosed depression who had never used antidepressants before. Therefore, this

study investigated first-episode and drug-naïve patients with depression to supplement the current evidence around IGF-1 levels in depressive disorders

Methods This study consisted of two parts. In the first part, 60 patients with first-episode and drug-naïve depression and 60 controls matched for age, sex, and BMI were recruited from the outpatient department of the Fourth Hospital of Wuhu City, and the community. The case-control method was used to compare differences in serum IGF-1 levels between the two groups. In the second part, 13 case-control studies were screened through the database for meta-analysis to verify the reliability of the results

Results Results of the case-control study demonstrated that serum IGF-1 levels are significantly higher in patients with first-episode and drug-naïve depression compared to healthy controls ($p < 0.05$), although there was no significant difference between men and women with diagnosed MDD, there was no significant correlation between serum IGF-1 level and age in patients with depression and no significant correlation between IGF-1 level and the severity of depression. The meta-analysis corroborates these findings and demonstrated that IGF-1 levels are significantly higher in MDD patients than in healthy controls

Conclusion Patients with first-episode and drug-naïve depression have higher IGF-1 levels, but the exclusion of confounding factors in studies of IGF-1 as it relates to depressive disorders must be taken into consideration strictly, and additional research is needed to fully understand the critical role of IGF-1 in depression

关键词: IGF-1, depressive disorder, first-episode and drug-naïve, case-control, meta-analysis

比较电休克与磁休克治疗对精神分裂症患者杏仁核体积的影响

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目的 确定在没有电休克副作用的情况下进行与电休克治疗(ECT)临床疗效相匹配的脑刺激的方

法是精神病学的一个重要目标。磁性癫痫治疗(MST)是一种潜在的替代疗法,已显示出相当大的疗效,但有轻微的认知障碍。

方法 NCT 编号: NCT02746965; 注册日期: 2017 年 3 月 1 日; 研究 URL: <https://clinicaltrials.gov/study/NCT02746965>. 本研究比较了 ECT 和 MST 的临床疗效和认知副作用。此外,我们还研究了皮质厚度变化对治疗反应的可能贡献。34 名确诊的精神分裂症患者随机接受 ECT ($n=16$) 或 MST ($n=18$) 治疗,为期 4 周。通过 PANSS 测量精神症状,通过神经心理状态评估可重复电池组(RBANS)测量认知,并使用 FreeSurfer 比较治疗前后皮质厚度的变化。

结果 两种治疗均能降低 PANSS 评分,疗效相当,而 MST 在保留 RBANS 语言评分方面更为优越。在这项研究中, MST 组和 ECT 组在治疗后杏仁核体积均未出现显著变化。本研究检查了 ECT 或 MST 治疗后精神分裂症患者的 MRI、临床改善和认知量表数据集。采用了 FreeSurfer 图像分析工具。在治疗前后,测定左侧和右侧杏仁核的体积。我们打算研究认知改善、治疗效果和杏仁核体积变化之间的联系。提取每个受试者的杏仁核体积数据。为了确定治疗前后杏仁核体积是否发生了变化,我们进行了重复测量方差分析(RT-ANOVA)。两组的杏仁核体积都没有明显变化。因此,我们搁置了该计划的相关分析。

结论 MST 与 ECT 一样,能有效缓解精神分裂症症状,但认知功能保持得稍好。

关键词: 杏仁核体积; 神经心理评估; 电休克治疗; 磁性癫痫治疗; 精神分裂症

通过电子问卷冬季奥运会崇礼赛区中的医疗团队职业倦怠评价

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目的 本文介绍了通过手机电子问卷形式对 2022 年 1 月至 4 月在张家口市崇礼地区举行的冬季奥运会期间的医疗保障团队的职业倦怠的评估,旨在讨论使用手机问卷在未来的大型公共活动时更好

的监测工作人员的职业状态。

方法 通过手机问卷星的形式建立职业倦怠电子问卷,在2022年01月至2022年04月第24届冬季奥运会期间对崇礼赛区医疗保障团队成员的职业倦怠评估6次,其中包括医疗服务团队人员146名(63男,83女)。使用混合效应模型对引起职业倦怠的因素进行分析,采用SPSS Version 20.0统计软件进行分析,以 $P \leq 0.05$ 为差异具有统计学意义。

结果 共完成问卷职业倦怠问卷645份,全部使用手机问卷星完成,平均每份完成时间141.3秒。职业倦怠问卷的五个维度中,困倦疲劳(系数1.14, $P=0.01$)、情绪不安(系数1.42, $P<0.01$)、躯体疼痛或钝痛感(系数1.16, $P<0.01$)均在第8周时显著的高于基线水平,并均在医疗保障结束后的第12周时,恢复至与基线无显著差异。不快感、视觉疲劳情况在保障期间的12周中与基线水平的变化无统计学差异。在医疗、医技、工勤、行政的不同类型岗位间,仅有情绪不安呈现出岗位间差异,在行政岗位的工作人员情绪不安的情况更为明显(系数1.21, $P=0.05$)。五个维度中仅有困倦疲劳呈现隔离区闭环内外的差异,在闭环外的工作人员,困倦疲劳情况较轻(系数-0.79, $P=0.03$)。

结论 通过对第24届冬季奥运会崇礼赛区医疗保障团队成员的职业倦怠评估,显示在重大群体活动下的医疗保障团队承受着职业倦怠的挑战。疲劳、情绪问题、躯体不适的情况通常在第8周开始明显恶化。通过在手机终端进行问卷式健康情况监测可以高效的将工作人员健康状态进行汇总。同时在此类保障活动中设置不同的工作团队轮替工作或许是保持医疗保障团队整体状态的有效方法。

关键词:手机问卷;职业倦怠;大型公共活动;医疗保障;精神健康

阿立哌唑与二甲双胍治疗抗精神病药引起的高泌乳素血症的真实世界研究

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目的 抗精神病药物治疗引起的高泌乳素血症对女性患者影响很大,可导致月经不调、月经缺乏、溢乳、性功能障碍、骨密度降低和乳腺癌症,从而影

响女性患者的生存质量,甚至寿命。还导致服药依从性差。因此监测泌乳素和治疗高泌乳素血症对于精神分裂症女性患者至关重要。本研究比较了阿立哌唑与二甲双胍在女性精神分裂症患者中治疗抗精神病药物诱导的高泌乳素血症的疗效。

方法 本研究从在北京安定医院住院记录数据库中筛选了2010年至2020年住院的女性精神分裂症患者。所有患者均因抗精神病药物治疗而出现高泌乳素血症,并记录了血清泌乳素水平。我们使用了医疗记录中的数据,包括抗精神病药物的类型、高泌乳素血症的治疗用药,基线和干预后多次的泌乳素检查结果。采用Cox回归和工具变量用于确定第30、60和180天缓解率的风险比。

结果 最终纳入了652名服用抗精神病药物出现高泌乳素血症的女性患者,366人(56.1%)接受阿立哌唑治疗,286人(45.9%)接受二甲双胍治疗。第30天,阿立哌唑组泌乳素水平显著下降,缓解率为73.6%,二甲双胍组的缓解率为15.0%。在180天的随访期内,阿立哌唑组的最终缓解率显著高于二甲双胍组,分别是77.6%和23.1%。低剂量组(阿立哌唑 ≤ 5 mg)的效果明显更明显,治疗30天缓解率达到80%。

结论 相比二甲双胍,阿立哌唑治疗高泌乳素血症的效果更优,起效更快、缓解率更高。相较10mg及以上剂量组,5mg剂量组可以获得更高疗效。

关键词:精神分裂症;女性;高泌乳素血症;阿立哌唑;二甲双胍

中医药服务与技术 in 康复科的应用现状与管理对策

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目的 探讨中医药服务与技术 in 康复科的应用现状与管理对策。

方法 分别选择在2年的时间里在医院康复科连续工作的护理人员18人以及随机抽取在2年的时间里在康复科住院治疗的250例患者的数据资料回顾性分析。依据是否实施中医药特色护理干预技术分组,以2018年1月~12月的患者数据作为对照组,以2019年1月~12月的患者数据为观察组。对

比干预前、后的患者的焦虑以及抑郁程度[焦虑自评量表(SAS)、抑郁自评量表(SDS)]。对比2组患者对于科室中医护理技术的满意程度。对比干预前、后护理人员自身的满意度情况。

结果 在干预之后,2组患者的SDS以及SAS的评分均降低,但观察组患者的评分均低于对照组患者($P<0.05$)。干预后,观察组患者对于科室中医护理技术的满意程度评分在各个维度均高于对照组的患者($P<0.05$)。干预后,科室内护理人员对于自身的满意度评分在各个维度均明显增高($P<0.05$)。

结论 患者个体在疾病的治疗过程中能够通过疾病的变化和身体感受到中医药各种措施所带来的好处,而护理人员也可以在中医药策略的实施过程中达成自我水平的改善和提升,并且也提供给了护理人员一个更好的展示自我的平台,为工作人员提供了一个今后发展的方向,这对于保证以及提升工作积极性具有重要的意义。将中医特有的护理技术应用到医院康复科就诊病人的护理工作中,可以帮助提高病人满意度和护士本身的满意度,同时也可以改善就诊患者的负性情绪状况。

关键词:中医药;技术;康复科;艾灸;负性情绪

1 例脑积水术后分流管堵塞引发精神障碍病案报道

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目的 目前精神科医师对脑器质性病变的鉴别诊断存在不足,为增加临床医师对脑器质性病变精神症状的认识,拓宽精神科医师对器质性病变的鉴别,提高诊断精准性。

方法 本文通过报道1例脑积水行脑室-腹腔分流术后因引流不畅引发精神障碍,以情绪低落、兴趣下降、认知障碍为起始症状,就诊精神科且经抗抑郁药治疗无效的患者,分析其误诊原因,加强临床医生对此类容易误诊误治的脑器质性病变的认识,提高鉴别诊断能力。

结果 脑室-腹腔分流术是目前治疗脑积水的常用手术方式,但其术后并发症发生率24%~52%。

分流失败是最常见的术后并发症之一,术后10年发生率在60%以上,分流管堵塞最为常见,导致脑积水症状复发,部分患者再次出现头痛、眩晕、步态不稳、意识障碍等症状。正常压力脑积水患者的临床症状主要以步态障碍、认知功能障碍和排尿功能障碍较多。精神症状表现不一,变化也大,临床并无特异性,但多数是以淡漠、焦虑和抑郁症状等精神症状为首发或主要症状,故临床容易与精神分裂症、抑郁障碍混淆。

结论 神经精神症状是近年来脑器质性病变临床特征研究的一个热点,可能更早于影像学检查病变之前。淡漠、焦虑和抑郁症状是正常压力脑积水患者中较为常见的精神症状,精神科医师在临床接诊时,应注意鉴别,避免混淆诊断,耽误病情或错误用药,加重病情。

关键词:脑积水;精神障碍;脑器质性病变;奥氮平

精神科常用中成药说明书中问题分析与管理建议

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目的 本研究旨在对精神科常用中成药的说明书进行系统的调查与统计,深入分析其中存在的问题,并提出相应的改良和管理建议,以期提高中成药使用的安全性和规范性,保障患者的用药安全。

方法 本研究收集了我院精神科在2023年1月至6月期间使用的114种常用中成药的说明书,并对这些说明书进行了详细的整理和分析。具体统计项目包括规格、功能主治、用法用量、用药禁忌、药物不良反应、注意事项、特殊人群、警示语、证据分级等方面的内容。同时,研究还对说明书的语言表述进行评估,重点关注表述的准确性和一致性,分析说明书中存在的问题,并探讨这些问题的成因,最后提出针对性的解决策略。

结果 通过对114种精神科常用中成药说明书的调查统计,我们发现所有说明书在规格、功能主治及用法用量方面的内容都较为完善,涵盖率达到100%。然而,在涉及药物安全信息的项目上,具体

情况有所不同: 药物不良反应、注意事项、特殊人群、贮藏等内容的注明比例均超过 50%, 但仍存在改进空间。其中, 证据分级的注明比例最低, 仅为 27.19%, 并且有 42.11% 的中成药说明书缺少这项内容。在语言表述方面, 说明书中存在的一些问题尤为突出。最主要的问题是中西医表述混用, 这一问题在说明书中占比高达 56.14%。其次, 表述不清晰的问题也较为严重, 占比为 39.47%。这些问题的存在不仅影响了说明书的可读性和准确性, 也可能对临床医生和患者的理解造成困扰, 从而影响用药效果和安全性。

结论 研究表明, 尽管精神科常用中成药说明书在规格、功能主治及用法用量等方面内容较为完善, 在语言表述方面, 应尽量减少中西医表述混用的情况, 保持说明书语言的统一和规范, 确保用语的精确度和准确度。为此, 建议加强中成药说明书的编写标准和指南的制定, 并对相关人员进行系统培训, 提升他们的编写能力和水平。

关键词: 精神科, 中成药, 说明书, 问题分析, 管理

The Resting EEG Power Spectrum and Correlated Cognitive Impairments in First-episode and Drug-naïve Patients with Major Depressive Disorder with Or without Suicide Ideation

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Objective Accumulating evidence indicates that resting-state brain oscillations are altered in patients with major depressive disorder (MDD). However, the neurophysiology and neuropathology of patients with MDD with or without suicidal ideation (SI) are poorly understood. The purpose of this cross-sectional study was to determine whether altered resting-state oscillations are associated with cognitive impairment (CI) in patients with MDD with or without SI

Methods Ninety first-episode and drug-naïve

patients with MDD patients were recruited for this study. The Beck Scale for Suicide Ideation (BSSI) was used to assess suicidal ideation. The MATRICS Consensus Cognitive Battery (MCCB) was used to assess neurocognitive function. Resting-state electroencephalography (EEG) was performed for 10 minutes with the eyes closed

Results A decrease in the relative alpha band in the occipital region was observed in patients with MDD with or without SI compared to healthy controls. An increased FAA was observed in patients with MDD with SI and healthy controls. Furthermore, a partial correlation revealed negative correlations between the relative alpha power of each ROI and attention (LF-alpha: $r=-0.535$, $FDRp=0.01$; RF-alpha: $r=-0.494$, $FDRp=0.01$; LP-alpha: $r=-0.6$, $FDRp<0.001$; RP-alpha: $r=-0.566$, $FDRp=0.01$; LT-alpha: $r=-0.554$, $FDRp=0.01$; RT-alpha: $r=-0.602$, $FDRp<0.001$; LO-alpha: $r=-0.665$, $FDRp<0.001$; RO-alpha: $r=-.676$, $FDRp<0.001$) in patients with MDD without SI. There were no correlations between EEG features and CI in patients with MDD with SI or healthy controls

Conclusion Our findings indicate that brain oscillations were altered regardless of suicidal ideation in patients with first-episode and drug-naïve MDD. Compared to those with SI, MDD without SI is characterized by a distinct pattern in FAA. Moreover, CI and the related relative alpha power band alterations may be state-like markers of MDD without SI

关键词: electroencephalography, major depressive disorder, suicide ideation, EEG power spectrum, cognitive impairment

神经炎症在精神分裂症发病机制中的研究进展

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目的 精神分裂症是一种病因复杂的重性精神疾病, 其高发病率和致残率给社会带来了沉重的负担。近年来, 越来越多的研究揭示了神经炎症在精

精神分裂症的病理生理中扮演的关键角色。本文综合来自遗传学、动物模型和临床研究等方面的证据,旨在阐释神经炎症与精神分裂症之间的联系。

方法 以“精神分裂症”和“神经炎症”为关键词,进行文献搜索。

结果 神经炎症可通过 Toll 样受体 (TLR) 和氧化应激参与到精神分裂症的发病过程中。

TLR 参与神经炎症,且与精神分裂症的发病相关,特别是在认知功能的损害方面。孕期或童年期的应激性事件诱发 CNS 的氧化应激,使得神经细胞受损并释放内源性的损伤相关分子模式,后者与小胶质细胞上的 TLR 结合后,使小胶质细胞激活并释放细胞因子,抑制神经元的轴突和树突的发育,以及造成突触可塑性的下降。

氧化应激和神经炎症是一组相互影响、相互促进的关系,氧化应激可介导神经炎症的发生,反之亦然。氧化应激引起的组织损伤,可能直接导致免疫应答和神经炎症。过量的 ROS 会损伤细胞膜上的磷脂和单胺类神经递质的膜受体,导致单胺类神经递质的功能紊乱。核因子 κ B (NF- κ B) 是一个转录因子家族,调控着大量参与炎症反应的基因。氧化应激可通过 NF- κ B 诱导神经炎症的发生,同时也可以通过其产生更多的自由基。另一方面,免疫系统是氧化应激的来源之一。如活化的小胶质细胞可通过 NADPH 氧化酶产生超氧化物,以起到免疫作用,但这同样可能损伤自身的神经元。

结论 神经炎症在精神分裂症发病机制中的重要作用,早期应激性事件通过小胶质细胞的 TLR 影响到神经元的发育;神经炎症和氧化应激的相互作用造成的恶性循环,同样会促成神经元的损伤。深入研究神经炎症与精神分裂症的关系,有助于理解这一复杂疾病的发病机制,并为临床的诊断和干预提供理论基础。

关键词:精神分裂症,神经炎症,免疫

国外关于数字倦怠的研究进展

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目的 随着信息和通信技术的发展,日常生活中各种形式和功能的数字设备得到广泛使用。特别

是,COVID-19 大流行加速了日常生活数字化转型,通过应用数字技术将传统的面对面互动转变为非面对面方式,例如远程办公,远程教学,远程医疗等。但是,数字设备的密集使用也威胁着数字用户的心理健康,加剧了数字用户的压力,焦虑和数字倦怠的状态。本文对国外关于数字倦怠研究进行综述,为下步开展数字倦怠相关临床工作和科研工作提供理论借鉴。

方法 以“digital burnout”、“digital fatigue”、“digital exhaustion”等为关键词在 Pubmed、Web of Science、ScienceDirect、Google scholar 等数据库检索总结最近 5 年国外关于数字倦怠方面的英文研究。

结果 数字倦怠是指通过数字技术不断连接工作、生活和学习而造成数字用户身心疲惫,从而对数字用户的心理健康产生重大影响,导致个体满意度、效率和整体幸福感下降。通过回顾国外关于数字倦怠的最近 5 年的英文文献,综述发现:目前有关数字倦怠群体的研究主要集中在医护群体、教师和学生群体。已有研究发现医护人员的数字倦怠水平高于平均水平,这受到每天平均上网时间、压力水平、身心健康和经济状况的影响。在线教学中,教师的自我效能感、网络教学能力、情绪调节等因素对数字倦怠有重要影响。在线学习中,学生的电子设备使用时长、电子设备类型、性别和学习领域等因素影响学生的数字倦怠程度。此外,数字倦怠还与知觉压力水平、情绪劳动、额外的行政职责等方面相关。

结论 当前关于数字倦怠的研究虽然较少,但是也取得一定的进展,特别是在概念界定、影响因素分析方面。然而,该领域仍存在一些挑战,如缺乏跨文化比较研究、跨群体比较研究、有效的干预措施、统一的评估标准和长期跟踪研究等。未来的研究需要进一步探索数字倦怠的机制,开发有效的预防和干预措施,并考虑不同文化背景下的适应性策略,以应对数字化时代下的心理健康挑战。

关键词:数字倦怠,数字疲劳,数字耗竭,心理健康,影响因素

Altered Mitochondrial Lymphocyte in Overweight Schizophrenia Patients Treated with Atypical Antipsychotics and Its Association with Cognitive Function

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Objective Increasing evidence indicated that schizophrenia and obesity are associated with altered mitochondrial and immune function. In this study, we investigated the levels of CRP (C-reactive protein) and mitochondrial lymphocyte in chronically treated schizophrenia patients with atypical antipsychotic medications, and further explored the relationship between mitochondrial lymphocyte count and weight gain as well as cognitive function in these patients

Methods We evaluated the mitochondrial lymphocyte count of 97 patients (53 overweight, 44 non-overweight) and 100 healthy controls using mitochondrial fluorescence staining and flow cytometry (Novo-Cyte, Agilent Technologies, US). The serum CRP was measured by high-sensitivity enzyme-linked immunosorbent assay (ELISA). Clinical symptoms and cognitive function of the patients were assessed using the Positive and Negative Syndrome Scale (PANSS) and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)

Results The results showed that mitochondrial lymphocyte counts of CD3+ T, CD3+CD4+ T, and CD3+CD8+ T cells in schizophrenia patients were higher than in the control group ($p < 0.05$). Additionally, overweight patients had significantly higher mitochondrial lymphocyte counts of CD3+ T and CD3+CD4+ T cells compared to schizophrenia patients with normal weight. Stratified analysis by gender revealed that there was a statistically significant difference ($p = 0.014$) in CD3+CD4+ mitochondrial lymphocyte count in male patients, and a marginal trend toward significance ($p = 0.058$). Furthermore, the mitochondrial lymphocyte counts of CD3+ T and CD3+CD4+ T cells, as well as CRP levels, were positively correlated with BMI in schizophrenia patients, but the mitochondrial lymphocyte counts of CD3+CD4+ T cells were negatively correlated with the language scale in the RBANS

Conclusion Our study results provide evidence for the association between altered mitochondrial T

lymphocyte and weight gain as well as cognitive impairment in schizophrenia patients treated with atypical antipsychotic medications

关键词: schizophrenia, atypical antipsychotic medications, mitochondrial lymphocyte count, overweight, cognition

The Relationship between Attention and Suicidal Ideation Among Patients with Adult-onset Chronic Schizophrenia

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Objective Patients with chronic schizophrenia have a high risk of suicide, and their cognition function is impaired. We aimed to explore the relationship between attention and suicidal ideation among patients with adult-onset chronic schizophrenia

Methods A total of 416 patients with adult-onset chronic schizophrenia were enrolled in this study. We divided patients into suicidal ideation group and non-suicidal ideation group according to the evaluation results of the Beck Scale for Suicide Ideation. Psychotic symptoms were measured by the PANSS, and cognitive function was measured by the RBANS. Insomnia symptoms were measured by the ISI

Results Age was significantly different (44.28 ± 10.58 vs. 48.46 ± 12.23 , $t = 10.64$, $P = 0.001$) between the two groups, and the patients with suicidal ideation were younger than patients without suicidal ideation. The positive symptom scores of the PANSS, the scores of ISI and attention scores of RBANS were higher in patients with suicidal ideation than patients without suicidal ideation (17.30 ± 5.67 vs. 15.58 ± 4.90 , $t = 9.633$, $P = 0.002$; $3.00(1.00-6.00)$ vs. $2.00(1.00-3.50)$, $Z = -2.048$, $P = 0.041$; 81.80 ± 14.99 vs. 76.91 ± 13.88 , $t = 10.101$, $P = 0.002$). In the logistic regression analysis, age (OR, 0.973; 95%CI, [0.955-0.992]; $P = 0.005$), positive symptom scores of PANSS (OR, 1.063; 95%CI, [1.019-1.109]; $P = 0.005$), ISI scores (OR, 1.098; 95%CI,

[1.037-1.163]; $P = 0.001$) and attention scores of RBANS (OR, 1.029; 95%CI, [1.013-1.047]; $P = 0.001$) were independently associated with the occurrence of suicidal ideation among patients with adult-onset chronic schizophrenia

Conclusion High attention scores of RBANS was a risk factor for suicidal ideation among patients with adult-onset chronic schizophrenia

关键词: Adult-onset, Cognitive impairment, Positive symptoms, Schizophrenia, Suicidal ideation

经颅直流电刺激对青少年网络成瘾疗效及认知功能影响研究

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目的 网络成瘾是一种个体过度使用网络而导致的精神行为障碍, 具体表现为对网络依赖度高, 减少网络使用时会出现戒断反应, 严重者会伴有精神症状。以往研究表明网络成瘾不仅与抑郁、强迫、人际关系敏感、焦虑、敌意、偏执观念等多种精神症状之间存在显著相关性, 还会影响正常的社会交际活动能力。经颅直流电刺激(transcranial direct current stimulation, tDCS)作为一种无创脑刺激的治疗方式, 近几年被证实对成瘾行为和物质成瘾有较好的疗效。本研究拟探究网络成瘾个体认知情绪调节策略特点, 并探索 tDCS 治疗是否对网络成瘾个体成瘾程度及其伴发的抑郁、焦虑、社交障碍等情绪问题是否有改善作用以及其对患者睡眠状况的影响。

方法 本研究共招募青少年网络成瘾个体 60 名, 所有参与者随机分配到治疗组 ($n = 30$) 以及伪刺激组 ($n = 30$), 研究一采用问卷调查方式在青少年群体中进行测试, 探究认知情绪调节策略的不同维度与网络成瘾的相关性。研究二采用 tDCS 刺激的治疗方法, 使治疗组接受 tDCS 干预 (2 mA, 20min, 连续 14 天, 每天 1 次)、并在第一天刺激前和最后一天刺激后收集各项量表, 分别评定患者的成瘾程度、抑郁、焦虑及社交困难程度和睡眠状况。通过比较刺激前后的量表得分来评估 tDCS 治疗的作用。

结果 研究一结果显示: 网络成瘾与消极认知情绪调节呈显著正相关, 随着网络成瘾评分的增加,

个体认知情绪调节策略中接受、关注计划、视角转换评分不断降低, 责备他人评分不断升高。研究二结果显示: 治疗组患者在接受 tDCS 干预后上网时间及上网次数比伪刺激组显著降低, 其焦虑、抑郁、社交回避及睡眠评分显著降低, 四项评分皆低于伪刺激组。

结论 认知情绪调节策略与网络成瘾密切相关, 积极的认知情绪调节方式可通过缓冲生活事件的不良影响在一定程度上防止青少年网络成瘾。tDCS 治疗可有效减少患者上网时间及上网次数, 减轻患者网络成瘾程度及伴发的抑郁、焦虑以及社交回避和苦恼程度, 改善伴发睡眠困难的患者的睡眠质量。

关键词: 经颅直流电刺激, 网络成瘾, 认知情绪调节, 社交回避, 焦虑障碍, 抑郁障碍

门诊 2012-2023 年拒绝上学青少年心理病理症状发展情况分析: 一项回顾性研究

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目的 了解门诊“拒绝上学”青少年的主诉、社会心理功能水平、接受治疗变化, 且探讨青少年在就诊期间病程发展过程、影响因素等来理解和预测青少年的康复和转归。

方法 在上海某区专科医院门诊系统里检索 1967 名儿童青少年门诊信息, 进行一项回顾性研究。整理门诊就诊数据信息表, 检阅门诊 2012-2023 年门诊病历, 筛选出主诉出勤困难、不想/拒绝上学青少年, 描述其心理病理特征、个人功能及相关环境和家庭生活因素, 独立双人提取关键信息, 第三方审核。对家长进行半结构式电话随访, 内容包括: 门诊药物治疗、心理治疗、转学/复学/就业等, 及门诊后学校出勤情况、就诊和学校之间的困难和建议、

目前存在的问题。

结果 1. 人口学资料: 最终有 271 名拒绝上学青少年患者 (平均年龄 14.76, $SD=2.323$), 占比 15.85%, 其中 61% 拒绝上学; 通过病例回顾, 青少年的应激事件占比最大的是学业受挫 (25.83%)、人际关系冲突/同辈压力欺负 (19.19%)、家庭氛围差 (15.18%); 诊断为情绪和心境障碍是最多的 (占 87.8%), 就诊时病程时长平均 12.16 月, 儿童青少年用药率高, 占比 69%, 复诊期间稳定服药占比 40.2%; 接受过门诊心理咨询的占比 58.67%, 复诊次数平均 7 次, 复诊频率 1 月/次。2. 采用单因素对比分析, 显示性别在拒绝上学程度上差异有统计学意义 (卡方=7.580, $p=0.023$), 女性 60%; 自伤/自杀念头在拒学程度上差异有统计学意义 (卡方=10.709, $p=0.098$); 3. Logistic 回归分析等多因素统计分析寻找门诊青少年拒绝上学程度及是否复学危险因素, 探索建立 logistic 回归模型, 通过向 148 位家长的电话随访, 复学成功率低 35.79%, 拒学程度与复学是否成功没有显著性, 接受心理咨询和无自伤/自杀念头是复学的保护性因素。

结论 门诊儿童青少年拒绝上学情况愈加严重, 提示拒绝上学儿童青少年的心理病理症状更加复杂, 强调重视外化症状与家庭养育、社会环境压力有紧密的负面影响。今后进一步开展前瞻性跟踪/纵向研究的必要性和意义, 加强医院、学校、社会的“三位一体”协作机制。

关键词: 拒绝上学; 厌学; 青少年; 门诊; 跟踪研究; 回顾性分析

基于大数据分析的抑郁症蛋白组学研究

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背景 抑郁症的诊断缺乏客观标志物, 单一的生物标志物不太可能改善抑郁症的临床诊断。一种可行的替代方法是开发生物标志物组合, 有可能将灵敏度和特异性提高到诊断所需的水平。

方法 这项研究在英国生物银行 (UK Biobank) 中构建了两个蛋白质组学数据集: Cox 数据集 ($N=42,712$) 和诊断数据集 ($N=37,038$)。首先, 使用

Cox 比例风险回归模型在 Cox 数据集中筛选出抑郁症潜在的生物标志物。随后, 在诊断数据集中验证了这些潜在生物标志物的诊断准确性。采用五种不同的机器学习算法来识别最优的抑郁症生物标志物组合, 通过五倍交叉验证和受试者工作特征曲线下面积 (AUC) 评估模型的性能。

结果 在平均 14 年的随访中, 调整混杂因素后, 筛选出 144 种血浆蛋白与抑郁症发病风险显著相关。这些抑郁症相关蛋白参与细胞因子受体相互作用和 MAPK/PI3K-Akt 信号传导等途径。当与传统的风险因素相结合时, 本研究中确定的 9 种血浆蛋白生物标志物对抑郁症的诊断准确率达到 75.8%, 与使用 144 种 (AUC 最高 76.5%) 和 2923 种 (AUC 最高 75.9%) 蛋白的诊断准确率相似。

结论 研究结果表明, 蛋白组学生物标志物可以作为基于人群的抑郁症筛查的补充信息, 具有潜在的临床应用价值。通过机器学习算法筛选的 9 种抑郁症相关蛋白可以替代蛋白质组学, 作为抑郁症的生物标志物组合。未来还需要进一步研究这些蛋白在抑郁症的病理机制中的作用。

关键词: 抑郁症; 蛋白质组学; 生物标志物; 机器学习

Resting-state EEG As A Potential Indicator To Predict Sleep Quality in Depressive Patients

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Objective Impaired sleep, observed in many depressive patients, is often the chief complaint of depression and is also a risk factor for the development of depression. Previous researches have reported their bidirectional relationship. For instance, depressive patients with sleep disturbance are more prone to show severe symptoms and have difficulties in treatment. Furthermore, persistent insomnia is thought to be a vital predictor of depression relapse and may contribute to unpleasant clinical outcomes. In addition, insufficient sleep may activate the sympathetic nervous system, leading to

an increase in inflammatory markers which are involved in the pathophysiology of depression. However, currently, we still lack convenient and quick tools to assess sleep quality for MDD patients in clinical work

Electroencephalogram (EEG) is an approach used in psychiatric research, which focuses on analyzing broad frequency bands in the EEG power spectrum termed delta, theta, alpha, beta and gamma. When it comes to sleep monitoring, sleep EEG, also called polysomnography (PSG) can accurately reflect every stage during sleep. Typical sleep-EEG changes in MDD patients include impaired sleep continuity (prolonged sleep latency, early morning awakenings), disinhibition of REM sleep (shortened REM latency or sleep onset REM periods) and changes of NREM sleep (decrease of slow wave sleep, slow wave activity and sleep stage two). Although PSG has been considered as the “gold standard” for the objective assessment of sleep disorder, there are still several limitations, including excessively long examination duration and relatively low efficiency.

Most of the previous studies only discussed band power changes of resting-state EEG (rsEEG) in MDD patients, few of them have focused on its potential application in sleep quality assessment. Considering quantitative EEG measures exhibit higher stability than traditional PSG parameters, we chose to analyze quantitative EEG measures of MDD patients during wakefulness, intending to find a more accessible and time-saving tool to assess their sleep quality. To this end, we first measured HRV and rsEEG in both MDD patients and healthy controls during wake and compared their differences. We further investigated the correlations between subjective measures of sleep quality and HRV. Finally, we examined whether absolute power of rsEEG predicted sleep quality in depressive patients.

Methods Fifty patients diagnosed with major depressive disorder were recruited from the clinic and inpatient unit, as well as an equal number of healthy control subjects from the college or community. The exclusion criteria for the MDD group were the comorbidity of any other psychiatric disorder or cardiovascular disease; the history of central nervous system disease, head injury, alcohol or drug abuse or electroconvulsive therapy; or current pregnancy and breastfeeding. All patients

were drug-naïve or did not take medication regularly for more than two weeks. And the inclusion criteria of healthy controls were as follows: neither had a history of mood disorder nor currently meet criteria for any psychiatric disorder; the history of central nervous system disease, head injury, alcohol or drug abuse or electroconvulsive therapy; or current pregnancy and breastfeeding. Our study finally included a total of 91 subjects (46 healthy controls and 45 MDD patients)

Hamilton Rating Scale for Depression (HAM-D-24) and Pittsburgh Sleep Quality Index (PSQI) were used to assess the severity of depressive symptoms and their sleep quality. EEG data were collected with an active EEG-system with 64 scalp electrodes positioned in accordance with the 10–20 system. EEG data were analyzed offline in MATLAB. In power spectra analysis, four frequency bands were studied: delta (from 1 to 4 Hz), theta (from 4 to 7 Hz), alpha (from 8 to 13 Hz), and beta (from 13 to 30 Hz).

Multi-factor analysis of variance (MANOVA) was conducted for different frequency bands with group (HC and MDD) as the independent variable and channel as dependent variable. All channels were chosen from each brain region including frontal (F3, F4, Fz, FC3, FC4, FCz), central (C3, Cz, C4, CP3, CPz, CP4), parietal (P3, Pz, P4, PO3, PO4, POz), and occipital (O1, O2, Oz). Significant interactions were followed up by simple effect analyses to compare the power of each electrode, in which *p*-values were corrected with FDR. Finally, we established regression models to examine whether spectral power could predict the sleep quality in MDD patients.

Results The HAM-D-24 score of MDD group was significantly higher than healthy controls ($t = 18.89$, $p < 0.001$). With regard to the PSQI score, the depressive patients had a higher level of the average total score (5.35 ± 2.57 vs. 11.84 ± 2.15 , $t = 13.09$, $p < 0.001$), indicating more serious sleep issues in depressed patients. Moreover, MDD patients showed a worse all-around sleep quality in the seven aspects of PSQI

MANOVA revealed significant main effects of group in delta, theta and alpha band. All the three band power were stronger in MDD patients than the HC group [$F_{\text{delta}}(1,89) = 21.99$, $p < 0.001$, $\eta^2_p = 0.20$;

$F_{\theta}(1,89) = 8.635, p = 0.004, \eta^2p = 0.09$; $F_{\alpha}(1,89) = 4.502, p = 0.037, \eta^2p = 0.05$]. But no significant main effect of group was found in beta band [$F_{\beta}(1,89) = 1.753, p = 0.189, \eta^2p = 0.02$]. MANOVA further revealed a significant group \times channel interaction in theta and beta band [$F_{\theta}(20,1780) = 2.429, p = 0.013, \eta^2p = 0.03$; $F_{\beta}(20,1780) = 3.305, p = 0.001, \eta^2p = 0.04$]. Simple effect analyses showed significantly stronger theta band (F3, F4, Fz, FC3, FC4, FCz, C3, C4, CP3, CPz, P3, Pz, POz, PO4, P4) and beta band (FC3, Fz, C3, Pz, P4) power in the MDD group.

The stepwise regression model showed TP8 delta power contributed unique variance to the model, and a positive association existed between PSQI score and TP8 delta power ($\beta = 0.39, p = 0.009$). This model accounted for 13% of the variance in PSQI score [Adj R² = 0.13, $F(1,43) = 7.49, p = 0.009$]. The regression model of theta and alpha band respectively accounted for 17% [Adj R² = 0.17, $F(1,43) = 10.16, p = 0.003$] and 20% [Adj R² = 0.20, $F(1,43) = 12.30, p = 0.001$] of the variance, with the absolute power of AF3 ($\beta_{\theta} = 0.44, p = 0.003, \beta_{\alpha} = 0.47, p = 0.001$) emerging as the significant predictor. For beta band, the model accounted for only 11% [Adj R² = 0.11, $F(1,43) = 6.18, p = 0.017$] of the variance, with absolute power of AF3 as a significant predictor ($\beta = 0.35, p = 0.017$).

Conclusion Our results found an increase in the absolute power in delta, theta, and alpha bands. Despite no significant main effect of group in beta band, subsequent simple effect analyses also showed significantly stronger beta band power (FC3, Fz, C3, Pz, P4) in MDD group. Multiple linear regression showed that theta, alpha and beta band power of frontal electrode (AF4) as well as delta band power of temporal electrode (TP8) were potential predictors of MDD patients' sleep quality. Increased theta power during wakefulness is associated with sleepiness and decreased cognitive performance, which may mark sleepiness and fatigue and reflect worse sleep quality in MDD patients. With regard to elevated alpha and beta band power, they are considered as indicators of cortical hyperarousal. In the current study, we find a positive correlation between alpha, beta and PSQI total score, which supports that the higher level of hyperarousal during wakefulness reflects more

severe sleep issues in depressed patients. Our findings replicate increased absolute delta, theta, alpha band power in MDD individuals, indicating the co-existence of sleepiness and hyperarousal during the resting state is also associated with worse sleep quality. Compared with the time-consuming process of PSG, our results support that with just several minutes of waking EEG recording, we can preliminarily evaluate sleep quality in MDD patients

关键词: Depression, Electroencephalogram, Sleep quality

述情障碍在大学生抖音使用强度与社交退缩间的中介作用

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目的 探究述情障碍在大学生抖音使用强度和社交退缩间的中介作用。

方法 在2023年10—12月,使用方便抽样方法在安徽省芜湖市2所高校抽取935例大学生,进行多伦多述情障碍量表(the twenty-item Toronto alexitimia scale,TAS-20)、抖音使用强度量表和社交退缩量表问卷测试;对数据采用SPSS 25.0进行描述性统计、Pearson相关分析,使用Amos24.0构建结构方程模型,采用Bootstrap法检验中介作用。

结果 述情障碍、社交退缩和抖音使用强度量表的总分分别为(56.36±8.11)、(49.71±10.86)和(17.89±5.79)分。Pearson相关分析表明,抖音使用强度与社交退缩呈正相关($r=0.18, P<0.01$),与述情障碍呈正相关($r=0.23, P<0.01$)。中介效应检验表明,抖音使用强度对社交退缩的直接预测作用显著($\beta=0.19, P<0.01$);述情障碍在抖音使用强度和社交退缩的关系中起部分中介作用(效应值=0.114, 95%CI:0.032~0.094),中介效应占总效应的57.58%。

结论 音使用强度不仅可以直接影响社交退缩,也可以通过述情障碍的中介作用间接影响社交退缩。学校应注重降低大学生的述情障碍水平,从而缓解抖音使用强度对大学生社交退缩带来的消极影响

关键词: 抖音使用强度; 社交退缩; 抒情障碍;

中介作用

TRPV1受体在中枢神经系统中的双重作用及其与精神分裂症相关研究

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目的 精神分裂症是一组以阳性症状、阴性症状、精神运动性障碍及现实检验能力严重受损为特征表现的精神障碍，其发病机制尚未完全阐明。最近的研究表明，瞬时感受器电位香草酸受体 1(transient receptor potential vanilloid 1, TRPV1)，对精神分裂症有促进和抑制作用，并在精神分裂症的发生发展过程中发挥重要作用。因此，本文综述了 TRPV1 在中枢神经系统中的双重作用，以及 TRPV1 和精神分裂症相关研究，为后续研究提供理论基础。

方法 使用生物医学文献数据库 Pubmed 输入以下关键词"TRPV1"或"schizophrenia"; "TRPV1"和"central nervous system"，进行检索。

结果 TRPV1 与精神分裂症的发生发展关系密切。近年来对 TRPV1 在中枢神经系统中的功能研究的文献有很多，本综述从氧化应激、神经炎症、神经凋亡、突触可塑性方面进行了归纳总结，以期能更好地解释 TRPV1 与精神分裂症之间的关系。TRPV1 在中枢神经系统中的功能复杂且具有双重性，但至今未有成熟理论解释其如何调控这种双重效应。既有研究说明使用辣椒素、大麻二酚等 TRPV1 激动剂可以改善精神分裂症动物模型的症状，也有研究说明 TRPV1 通道打开造成了钙超载导致线粒体损伤、ROS 积累、神经凋亡这一对中枢神经系统有害的连续生物学过程。此外，精神分裂症发生还可能与 TRPV1 介导的神经发育相关。TRPV1 在中枢神经系统中所起的效应可能和其所处的环境和细胞因子相关。TRPV1 的激动所带来的更大的益处有可能是由于持续的激动导致的受体脱敏随后下调。不同类型和不同剂量的 TRPV1 激动剂所产生的效应有所不同，其中可能涉及 TRPV1 的不同亚型。

结论 目前 TRPV1 和精神分裂症之间直接的相关研究较少，并且都集中在动物研究中。对于 TRPV1 在精神分裂症中所起的保护和损伤机制，以及如何调控这一双重效应都尚未完全阐明。未来需

要更多的临床研究相关证据来证明 TRPV1 和精神分裂症之间的关系。

关键词：精神分裂症; TRPV1

虚拟标准化病人在精神医学教学中的应用

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目的 随着社会的日益发展，精神健康问题越来越被广泛关注。面对日益严重的精神障碍形势，我国精神卫生专业人才的需求与供给之间存在较大缺口，而虚拟标准化病人(Virtual Standardized Patient, VSP)有望成为精神医学教学的一种有效途径。因此，本文旨在综述虚拟标准化病人在精神医学教学中的研究情况，探讨其应用现状，并指出未来研究思路与方向，为培养精神卫生专业人才提供新的视角和解决方案。

方法 以“virtual patient”、“virtual standard patient”、“virtual simulation”、“psychiatry virtual patients”以及“standard patient”为关键词，检索了中国知网、万方、维普、生物医学文献、PubMed、EMBASE 和 Scopus 等数据库从建库至 2024 年 3 月 1 日发表的关于虚拟标准化病人的文献，按照纳入、排除标准严格筛选后对文献进行综述。

结果 VSP 在精神医学教学领域取得了显著效果。在病史采集和诊断教学方面，VSP 能提高医学生的诊断技能和自信心；在共情能力培养方面，VSP 通过提供即时反馈，有效提升医学生的共情沟通能力；在药理学教学方面，VSP 为精神科住院医师提供了真实、互动的药理学知识培训平台；在动机性访谈技能培训方面，VSP 促进了动机性访谈技能的传播。然而，现有 VSP 在语言和情感表达方面存在限制，交互性有待提高，且种类有限。

结论 精神卫生领域的 VSP 应用已经取得了显著的进展。众多研究表明，VSP 在提高医护人员的精神疾病诊断技能、药理学知识和共情能力方面具有明显效果。然而，现有 VSP 在情感表达方面和评

估体系等方面也存在一些局限性。未来研究应关注跨学科合作,增加交互性和沉浸感。同时,应开发个性化的学习内容,以更好地满足不同学生的需求。总的来说,随着虚拟现实和人工智能技术的发展,VSP系统有望实现更真实、更智能的交互,为精神医学领域提供更高效、个性化的培训平台。

关键词:虚拟标准化病人,精神医学教学,精神障碍,临床技能

新时代精神卫生领域的新质生产力发展路径研究

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目的 本研究旨在探索新时代背景下精神卫生领域的新质生产力发展路径,基于习近平总书记在《发展新质生产力是推动高质量发展的内在要求和重要着力点》一文中提出的高质量发展理念,提出了科技创新、产业创新、绿色发展、体制机制创新和人才机制创新等五个方面的具体发展路径,旨在提升精神卫生服务的质量与效率,推动行业整体升级。

方法 本文通过文献综述和案例分析的方法,综合国内外相关研究成果和实践经验,系统探讨了科技创新(包括人工智能、虚拟现实技术、大数据与云计算)、产业创新(如远程医疗技术和服务体系现代化)、绿色发展(包括在线心理咨询服务、绿色医院建设和生态疗法)、体制机制创新(医保政策改革和“互联网+精神卫生”服务模式)和人才机制创新(联合培养机制和高层次专业技术人才队伍建设)等方面的具体应用与前景。

结果 研究表明:科技创新在提升精神卫生服务质量和效率方面具有显著优势,特别是人工智能和虚拟现实技术的应用;产业创新通过远程医疗技术和现代化服务体系的推动,显著扩大了服务覆盖范围和便捷性;绿色发展通过在线心理咨询和绿色医院建设,实现了环保目标 and 高质量服务的双重目标;体制机制创新通过医保政策改革和“互联网+精神卫生”服务模式,提高了服务的普及性和效率;人才机制创新通过联合培养机制和高层次专业技术人才队伍建设,显著提升了专业人才的培养质量和队伍素质。

结论 本文提出的五大方面的发展路径,不仅显著提升了精神卫生服务的质量与效率,推动了行业整体升级,也为新时代精神卫生领域的发展提供了全面指导。通过科技创新、产业转型、绿色发展、体制机制改革和人才培养的协同推进,我们有望实现精神卫生服务的精准化、个性化和智能化,全面提升精神卫生服务的高质量发展,为建设健康中国作出更大贡献。

关键词:精神卫生;科技创新;产业转型;绿色发展;体制机制创新;人才培养

炎症因子在抑郁症自伤与自杀行为中的研究现状

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目的 自伤与自杀行为是抑郁症(Major Depressive Disorder, MDD)常见且严重的并发性行为,已成为全球性的公共卫生问题。MDD与自伤自杀行为强相关,自伤和自杀行为有交互作用,且炎症因子很可能参与了这一过程,并表现出不同的炎症种类水平表达升高。为了深入理解MDD患者自伤和自杀行为的机制,本文主要从炎症因子及其是如何通过影响犬尿氨酸通路和下丘脑-肾上腺-皮质醇(HPA)轴参与自伤和自杀行为进行探究。这为MDD患者的自伤和自杀风险提供早期识别和干预的新视角,以期临床实践提供有价值的参考。

方法 本文使用中国知网(CNKI)、PubMed、Web of Science数据库,对相关文献进行检索并综合分析,收集并整理了炎症因子在具有自伤和自杀行为的MDD中的研究。综述了近年来四种常见的炎症因子(IL-6、IL-1 β 、CRP和TNF- α)在MDD患者自伤和自杀行为关系的研究结果,并讨论了炎症因子通过犬尿氨酸通路和HPA轴影响自伤和自杀行为的机制。

结果 一、四种炎症因子在MDD自杀与自伤行为中的变化

IL-6 是证据最多的炎症因子,与自杀意念、自杀未遂和自杀死亡都有关联,较多的证据表明 IL-6 水平的升高与自伤行为和自杀意念有关。基线水平的 IL-1 β 在具有自伤自杀行为的 MDD 患者中显著升高,而其降低可能提示自伤自杀行为近期的发生。CRP 水平的升高可能提示抑郁症状加重和自伤行为频率的增加,进而发展为更严重的自杀行为。TNF- α 失调可能提示了患者的冲动性特质和认知功能损害,并于 MDD 患者自伤自杀行为密切相关。

二、炎症因子在 MDD 自伤与自杀行为中的机制

炎症因子通过影响血清素和犬尿氨酸代谢通路,导致血清素水平下降和犬尿氨酸水平上升,从而影响 MDD 和自杀行为的发展。慢性化的炎症状态可能使 HPA 轴反应钝化,减弱对自伤冲动的抑制;而短期的炎症水平升高则可能激活 HPA 轴,增加皮质醇的反应,引发短暂的自杀意念。此外,睡眠障碍引起的炎症因子水平升高还可能通过降低血清素代谢物水平,促使自伤行为向自杀行为转变。

结论 MDD 患者自伤和自杀行为与炎症因子(IL-6、IL-1 β 、CRP 和 TNF- α)水平密切相关。炎症因子不仅是自伤自杀行为的关联因素,还可能作为预测未来自杀行为的生物标志物。对于降低 MDD 患者的自伤和自杀风险具有重要意义。

关键词: 抑郁症,自伤行为,自杀行为,炎症因子,犬尿氨酸通路,下丘脑-垂体-肾上腺轴

脑电技术在抑郁症非自杀性自伤行为和自杀意念中的研究进展

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目的 非自杀性自伤行为和自杀意念是抑郁症患者自杀的重要危险因素,目前多采用临床问诊或量表评估的方式,带有一定的主观性,缺乏客观检测方法或神经生物学标志物。脑电作为非侵入式的神经电生理检查手段,在抑郁症脑功能研究和临床中被广泛应用。本综述将概述抑郁症患者非自杀性自伤行为和自杀意念相关的脑电研究进展,旨在为

脑电技术在抑郁症自杀的早期预测提供参考。

方法 本文通过中国知网(CNKI)和 PubMed 外文数据库,对相关文献进行检索并综合分析,收集并整理了抑郁症患者非自杀性自伤行为和自杀意念相关的脑电技术研究。

结果 伴非自杀性自伤行为或自杀意念的抑郁症患者在静息态分析和任务态分析均存在有意义的结果。一、脑电功率谱分析:伴非自杀性自伤行为或伴自杀意念的抑郁症患者静息状态下的脑电功率谱,在 Alpha、Beta、Gamma、Theta 节律表现出与抑郁症患者的特征差异性。二、脑电微状态:部分微状态的贡献率、发生率、覆盖率以及微状态之间的转换率可作为自杀意念的一种潜在的神经生理标志物。三、脑电功能连接分析:脑电相干性指标可能是抑郁症自伤自杀行为的特异性表现,甚至是提示自伤发展至自杀行为的脑电特征。四、任务态分析:伴非自杀性自伤行为或伴自杀意念的抑郁症患者在目标刺激下的事件相关电位特征,可为抑郁症患者产生自伤自杀行为的发展机制研究提供可靠的神经电生理活动依据。

结论 以上研究表明脑电技术可作为早期预测抑郁症自杀的有意义的生物标志物,但非自杀性自伤行为和自杀意念作为自杀行为的重要危险因素也存在差异,能否探索出非自杀性自伤行为发展至自杀意念的脑电特征趋势,防止病情发展至自杀行为,具有重要的临床意义。本综述主要归纳了传统且单一的脑电成分研究,对于综合性实验、脑电与磁共振等技术联合运用的研究总结欠缺,期待未来能结合脑电节律、事件相关电位、脑网络及其他技术等进行分析。

关键词: 抑郁症,非自杀性自伤行为,自杀意念,脑电

睡眠质量对医学生自杀风险的影响:抑郁的中介作用和学业压力的调节作用

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目的 本研究主要试图构建一个有调节的中介模型,以探讨睡眠质量对医学生自杀风险的影响,

以及抑郁和学业压力在二者关系之间的作用,为医学生这一特殊群体自杀行为的早期预防提供理论依据。

方法 采用整群抽样法,结合一般人口学调查表、匹兹堡睡眠质量表(PSQI)、病人健康问卷抑郁量表(PHQ-9)、贝克自杀意念量表(BSI)以及学业压力评分对昆明医科大学第一临床医学院 3579 名在校生进行问卷调查。采用 SPSS.26.0 软件对数据进行统计分析,使用 PROCESS 宏程序进行有调节的中介效应分析。

结果 (1)睡眠质量、抑郁、自杀风险及学业压力均两两显著相关;(2)睡眠质量指数正向预测自杀风险($\beta=0.12, P=0.005$);(3)抑郁在睡眠质量与自杀风险之间起部分中介作用($\beta=0.35, P<0.001, 95CI%$ 为 $[0.29, 0.42]$),中介效应占总效应的 72.92%;(4)学业压力调节了中介模型的前半路径,即调节了睡眠质量对抑郁的影响($\beta=0.21, t=9.85, P<0.001$)。

结论 本研究发现睡眠质量通过影响抑郁从而增加医学生的自杀风险;降低学业压力可以降低睡眠质量对医学生抑郁情绪的影响。因此,医学院校的心理健康教育可以重点集中于帮助医学生更好地处理学业压力。同时要注重筛查和识别有睡眠问题和抑郁情绪的学生,这可能是降低医学生自杀风险,预防自杀行为的有效途径。

关键词: 睡眠质量, 学业压力, 抑郁, 自杀风险, 医学生

舍曲林药物浓度与剂量校正浓度的影响因素分析

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目的 舍曲林作为临床上最常用的抗抑郁药物之一,其不同患者群体中的剂量和血药浓度存在显著差异,并受到多种因素的影响。本研究旨在探索影响舍曲林血药浓度及其剂量校正浓度的相关因素,以期为舍曲林的个体化用药方案制定提供参考。

方法 回顾性收集舍曲林治疗药物监测数据,以及用药剂量、年龄、性别、合并疾病、合用药物、肝肾功能等信息,采用单因素和多因素广义线性回归分析的方法,探索舍曲林血药浓度及剂量校正浓

度(C/D)的影响因素。

结果 研究共纳入 1080 例患者的数据资料,其中男性 369 例(34.2%),儿童青少年(6-17 岁)患者 478 例(44.3%),主要诊断为抑郁障碍的患者 588 例(54.4%)。舍曲林的日剂量、血药浓度和 C/D 比值的中位数(第 25 百分位数,第 75 百分位数)分别为 100.0(100.0, 150.0) mg/d, 53.15(31.18, 87.65) ng/mL, 0.4715(0.3175, 0.7080) ng/mL/mg/d。在 1080 例患者中,有 50 例(4.6%)患者舍曲林血药浓度偏低,75 例(6.9%)患者血药浓度偏高。对于舍曲林血药浓度,经单因素广义线性回归分析,将舍曲林日剂量、性别、年龄、民族、合并肾脏疾病、丙氨酸氨基转移酶(ALT)水平、天冬氨酸氨基转移酶(AST)水平、 γ -谷氨酰转肽酶(GGT)水平、中性粒细胞计数、淋巴细胞计数纳入多因素回归,结果显示舍曲林药物浓度受舍曲林日剂量($P<2e-16$)、性别($P=2.63e-05$)、年龄($P=0.000636$)、AST 水平($P=0.001358$)的显著影响。对于 C/D,经单因素广义线性回归分析,将性别、年龄、合并肾脏疾病、AST 水平、淋巴细胞计数及合用 CYP 酶(CYP2B6、CYP2D6、CYP2C19)抑制剂纳入多因素回归,结果显示 C/D 受性别($P=6.19e-05$)、年龄($P=0.04689$)、AST 水平($P=0.00028$)的显著影响。

结论 研究探索了舍曲林药物浓度与剂量校正浓度的影响因素,以期为舍曲林的合理使用和制定个性化给药方案提供参考。

关键词: 舍曲林; 治疗药物监测; 剂量校正浓度; 个体化用药

Associations of Pro-inflammatory Factors and IL-10 Levels with Degree of Suicide Risk in Adolescents with Depression

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Objective Depression and suicidal behavior are

associated with pro-inflammatory status in adults. However, differences in inflammatory levels among adolescents with depression at different suicide risk levels are unclear, and the connection between anti-inflammatory factors, which play an important role in the immune system, and suicide needs to be explored

Methods This study recruited 111 adolescent patients with depression aged 13-18 and 23 healthy controls. Patients were divided into three subgroups: (1) High suicide risk (n = 45): suicidal ideation within the past week and history of suicide attempts; (2) Medium suicide risk (n = 44): suicidal ideation within the past week but no history of suicide attempts; (3) Low suicide risk (n = 22): no suicidal ideation and no history of suicide attempts. Severity of depression, suicidal ideation, and suicide risk were assessed using the Hamilton Depression Scale-17 (HAMD-17) and the Chinese version of the Beck Suicide Ideation Scale (BSI-CV). Plasma levels of IL-6, TNF α , IFN γ , IL-1 β , and IL-10 in all participants were measured

Results Plasma levels of IL-6, TNF- α , IFN- γ , and IL-10 differed between the suicide risk subgroups, and the differences remained significant after controlling for severity of depressive symptoms using covariance analysis. Pairwise comparison indicated that plasma levels of these four cytokines in the high suicide risk group were higher than those in the low suicide risk group (all $p < 0.05$), among which the level of IL-10 was significantly higher than that in the medium ($p = 0.028$) and low risk groups ($p = 0.001$). IL-10 was positively correlated with the total score of the HAMD-17 ($r = 0.210$, $p = 0.027$), BSI-CV ($r = 0.241$, $p = 0.011$), and suicidal ideation ($r = 0.301$, $p = 0.001$); the other four cytokines were also somewhat correlated with suicidal ideation (all $p < 0.05$), but not significantly correlated with depressive symptoms (all $p > 0.05$). IL-10 correlated positively with these four pro-inflammatory factors. Multiple linear regression analysis showed that Ln IL-10 levels significantly affected BSI-CV ($\beta = 0.270$, $t = 2.897$, $p = 0.005$) and HAMA-17 ($\beta = 0.285$, $t = 3.041$, $p = 0.003$) total scores. In binary logistic regression, after controlling for depressive symptoms, gender, age, BMI, and duration of illness: Ln IL-10 level remained a risk factor for suicidal behavior (OR = 3.224, 95% CI

1.571-6.619 $p = 0.001$)

Conclusion Adolescents with different suicide risk levels differed in plasma levels of pro-inflammatory factors and the anti-inflammatory factor IL-10. These differences were independent of depressive symptoms; high IL-10 levels may be a risk factor for suicidal behavior in depressed patients. Further research is needed to explore the relationship between anti-inflammatory factors and suicide

关键词: suicide risk, depression, adolescence, pro-inflammatory state, anti-inflammatory factors, IL-10

静息态功能磁共振网络连接在抑郁症认知损害中的研究进展

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目的 抑郁症(Major Depressive Disorder, MDD)是一种高患病率、高复发率的精神疾病, 认知损害(cognitive impairment, CI)作为其核心症状之一, 严重影响患者的生活质量和社会功能, 以及增加MDD患者的复发风险。抑郁症认知损害的评估多基于临床问诊或量表测评, 缺乏客观、精准的评估手段。基于静息态功能磁共振(resting-state functional magnetic resonance imaging, rs-fMRI)的研究发现MDD患者认知损害与脑功能网络连接异常密切相关。因此, 本文主要围绕rs-fMRI的脑网络功能连接(functional connectivity, FC)及拓扑属性对伴有CI的MDD的相关研究展开综述, 为伴有CI的MDD发病机制提供客观的影像学依据。

方法 本文通过PubMed及Web of Science等数据库, 对相关文献进行检索, 整理并综合分析有关脑网络分析在抑郁症认知损害中的研究。

结果 对于伴有CI的MDD患者, 其默认模式网络(default mode network, DMN)、中央执行网络(central executive network, CEN)、突显网络(salience

network, SN)等脑网络存在 FC 及拓扑属性异常, 且与患者的神经认知表现有一定的相关性。而 MDD 患者的认知功能, 需要多个参与认知行为的脑区及脑网络相互协调。以 DMN、CEN、SN 三个核心认知网络构建的三重网络模型, 三者之间的 FC 异常, 可能会导致 MDD 和 CI 的发生, 以及与 CI 的持续不缓解有关。其中, SN 在三重网络模型中起着至关重要的作用, SN 的功能活动异常, 可能会导致 DMN 和 CEN 之间的动态转化失衡, 从而引起 MDD 及 CI 的发生。

结论 基于 rs-fMRI 的脑网络分析, 抑郁症认知损害存在脑网络内部及脑网络之间的功能连接及拓扑属性异常。然而, 目前对于抑郁症认知损害的网络连接研究结论并不一致, 因此建立样本数量大的数据库, 将有助于减少样本量不同带来的误差, 使得研究结果更趋于准确, 对于了解抑郁症认知损害的发病机制, 精准定位致病位点, 具有重要意义。

关键词: 抑郁症, 认知损害, 静息态功能磁共振, 脑网络

应用“甲状腺稳态结构参数”评价精神障碍患者甲状腺稳态的范围综述

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目的 范围综述--应用“甲状腺稳态结构参数”评价精神障碍患者甲状腺稳态。

方法 本研究根据范围综述方法标准 (PRISMA-ScR) 进行。通过检索 Medline, Web of Science 和 PsycInfo 数据库, 筛选并确定应用“甲状腺稳态结构参数”评价精神障碍患者甲状腺稳态的研究文献。“甲状腺稳态结构参数”包括甲状腺分泌能力 (SPINA-GT)、外周活化性脱碘酶的总活性 (SPINA-GD) 和评估甲状腺垂体功能和甲状腺稳态中枢设定点参数: 促甲状腺激素指数 (TSHI) 和基于分位数甲状腺反馈指数 (TFQI)。文献包括“甲状腺稳态结构参数”的纵向测量, 或包括相关的比较组: 精神疾病患者与对照组、不同的精神病、疾病不同状态 (首次发作与复发与缓解、抑郁发作与躁狂发

作) 的比较, 和精神药物是否暴露 (vs. drug-naive 或 drug-free)、以及不同的精神药物之间的比较。

结果 本范围综述最终共纳入 5 项研究进行综合分析。根据文献公布的信息类型对文献分为两类: 1. 与精神疾病 (精神分裂症、抑郁症或双相情感障碍) 相关的甲状腺异常研究; 2. 精神药物对“甲状腺稳态结构参数”的影响。综合分析确定了与精神疾病 (精神分裂症、抑郁症或双相情感障碍) 相关的甲状腺异常的特征, 和精神药物对甲状腺稳态的影响。在急性发作的 drug-free 或 drug-naive 的精神分裂症患者中, 甲状腺异常反应主要归因于较高的甲状腺稳态中心设定点 (TSH 指数和 TFQI 指数)。与健康对照组相比, drug-free 的抑郁症和双相情感障碍的患者具有共同的甲状腺异常特征: 活化性脱碘酶活性 (SPINA-GD) 受损和甲状腺激素的血清蛋白结合 (T4/游离 T4 和 T3/游离 T3) 降低, 但甲状腺稳态中心设定点 (TSH 指数和 TFQI 指数) 没有显著变化。此外, 躁狂发作患者的甲状腺分泌能力 (SPINA-GT) 升高。药物对“甲状腺稳态结构参数”的影响研究显示: 喹硫平、米氮平和奥卡西平暴露降低甲状腺稳态中心设定点。

结论 “甲状腺稳态结构参数”作为基于系统的评价参数, 从甲状腺稳态中枢设定、外周甲状腺分泌功能和代谢三个层面, 为精神疾病患者的甲状腺稳态评估提供了新的维度, 特别是提供了促甲状腺激素 (TSH) 水平正常的下丘脑-垂体-甲状腺功能紊乱患者的识别方法。“甲状腺稳态结构参数”在精神疾病领域的应用仍处于初始阶段, 开展相关研究应充分考虑影响下丘脑-垂体-甲状腺轴稳态的因素。需要进一步研究来探讨甲状腺异常的动态变化及其临床相关性, 特别是对患者的长期影响, 以明确“甲状腺稳态结构参数”评价精神障碍患者甲状腺稳态在临床决策中的实用性。

关键词: 精神障碍, 下丘脑-垂体-甲状腺, 甲状腺稳态结构参数, 范围综述

复发性抑郁障碍患者自杀行为的危险因素以及与认知功能的关系

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目的 探讨抑郁症患者自杀行为的发生率、自杀行为的危险因素以及自杀行为与认知功能的关系。

方法 采用横断面调查方法, 纳入符合 ICD-10 符合复发性抑郁障碍的患者 250 例。采用面对面访谈的方式确定复发性抑郁障碍患者的自伤行为。采用自杀意念自评量表 (SIOSS) 评估自杀意念, 采用成套神经心理状态评估工具 (RBANS) 评估认知功能, 采用卡方检验比较两组的人口学及临床资料的差异, 采用独立样本 t 检验比较 SIOSS、RBANS 在伴不伴自杀行为组得分的差异, Logistic 回归分析复发性抑郁障碍患者自杀行为的危险因素。

结果 复发性抑郁障碍患者自杀行为的发生率为 41.2%。伴有自杀行为的复发性抑郁障碍患者中伴精神症状的比例高于不伴有自伤行为组 (40.8% vs 19.0%)、女性比例高于不伴有自杀行为组 (73.8% vs 53.5%)。伴有自杀行为的复发性抑郁障碍患者的受教育年限高于不伴有自杀行为组, 总病程短于不伴有自杀行为组。伴有自杀行为的复发性抑郁障碍患者的 SIOSS 总分、绝望因子、乐观因子、掩饰因子得分高于不伴有自杀行为组。在认知功能方面, 伴有自杀行为的复发性抑郁障碍患者的 RBANS 言语功能得分低于不伴自杀行为组。Logistic 回归分析显示, 起病年龄小是复发性抑郁障碍患者自杀行为的危险因素, 首次住院年龄小、即刻记忆、言语功能是复发性抑郁障碍患者自杀行为的保护因素。

结论 复发性抑郁障碍患者自杀行为的发生率较高, 认知功能, 尤其是即刻记忆、言语功能是自杀行为的保护因素, 可能减少自杀行为的发生。

关键词: 复发性抑郁障碍, 自杀行为, 认知功能

可穿戴技术在抑郁症领域的应用现状

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人工智能驱动的可穿戴技术正逐渐形成为抑郁症等精神疾病识别监测的新工具, 可穿戴设备提供了一种非侵入式、连续且客观的数据收集方式, 通过监测和分析用户的生理信号、行为模式以及环境数据等, 能够用于识别抑郁症患者的情绪状态和行为活动。可穿戴设备的显著优势包括: (1) 持续监测: 与传统的自我报告或间歇性的临床评估相比,

可穿戴设备能够提供连续性的生理参数和行为模式数据, 这对于理解患者的日常活动具有重要价值, 持续的数据监测对于抑郁症患者疾病管理、减少复发复燃尤为重要。例如, 通过连续监测心率和睡眠模式的变化, 可以帮助识别抑郁症状变化的早期迹象, 从而实现风险预警。(2) 客观数据支持: 基于可穿戴设备收集的数据具有较高的客观性, 例如对睡眠模式、心率变异性以及活动量等数据的客观记录分析, 能够为医生提供了更加详细和精确的数据支持。这种客观数据的获取有助于医生更准确地理解和评估患者的状况, 进而有助于评估疗效、制定和及时调整个性化治疗方案。(3) 促进患者参与: 一些研究表明, 将可穿戴设备的数据展示给患者本人, 可以提高他们对自身状况的理解, 并可能激励患者共同参与疾病治疗与管理。

然而, 尽管可穿戴技术存在诸多潜在优势, 但在临床实践中实现广泛应用仍面临一些挑战。首先, 目前大多数研究较少结合其他维度数据进行综合分析, 限制了可穿戴设备数据用于抑郁症评估的全面性和准确性。其次, 目前研究间存在较高异质性, 不同的可穿戴设备、机器学习算法都影响了研究结果, 因此开发普适性强且结论稳定的工具体系是需要解决的技术困难。再次, 虽然可穿戴设备提供了方便且连续的监测手段, 但过度依赖这些设备可能会忽视专业人员的临床判断, 抑郁症的评估治疗不仅需要关注生理、行为指标的变化, 还需要综合考虑患者的心理和社会因素。最后, 虽然人工智能技术提供了个性化反馈和干预的可能性, 但如何将这些技术与临床专业知识有效结合, 以改善患者的治疗效果, 仍然是一个重要的问题。

综上所述, 人工智能驱动的可穿戴技术在抑郁症领域展现了巨大的潜力, 但在技术与临床深度应用方面仍然有需要攻克的难题。通过不断完善技术并结合临床专业知识, 我们有理由相信人工智能驱动的可穿戴技术将在抑郁症等精神疾病领域扮演越来越重要的角色。

关键词: 抑郁症, 可穿戴技术

肠道谷氨酸代谢在抑郁症中的研究进展

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目的 抑郁症是一种常见且危害极大的精神疾病,其患病率逐年上升、复发率高以及疾病负担重已成为全球的关注热点。目前一线抗抑郁药物主要有起效慢、疗效有限且副作用大等不足,增加了抑郁症的治疗难度。研究表明肠道菌群失调与抑郁症密切相关,尤其谷氨酸代谢发挥了重要作用,已成为研究抑郁症病理生理机制的重要代谢通路之一。因此,本文将对肠道菌群以及谷氨酸代谢参与抑郁症的作用机制进行综述。

方法 本文通过 PubMed 及中国知网 (CNKI) 数据库,对相关文献进行检索并分析,对关于肠道谷氨酸代谢在抑郁症中的相关研究性文章进行系统综述,在多种假说基础上探讨肠道谷氨酸代谢参与抑郁症的可能机制,包括肠道菌群改变对谷氨酸稳态、转运和代谢的可能的作用机制进行综述。

结果 抑郁症的谷氨酸代谢假说认为中枢神经系统谷氨酸能信息传递障碍,发病机制主要是通过提高中枢和外周谷氨酸浓度水平以及下调 N-甲基-D-天冬氨酸受体和谷氨酸转运蛋白等方式起作用,同时以肠道谷氨酸为中心的谷氨酰胺-谷氨酸- γ -氨基丁酸-中枢的代谢通路障碍与抑郁症也有一定的联系。但目前关于肠道谷氨酸代谢对抑郁症确切的调控机制的动物和人体试验研究较少,在肠道菌群和谷氨酸代谢的相关性研究中,很多问题仍然没有得到很好的阐明。

结论 谷氨酸作为中枢神经系统的兴奋性神经递质以及肠道的重要代谢物,与其相关的 N-甲基-D-天冬氨酸受体、谷氨酸转运蛋白及谷氨酰胺和 γ -氨基丁酸等代谢产物异常均会可能引起中枢神经系统谷氨酸信息传递及代谢发生障碍,这可能是谷氨酸参与抑郁症发病的重要关键点。

关键词: 抑郁症;肠道菌群;谷氨酸代谢

脑源性神经营养因子相关信号通路在抑郁障碍共病代谢综合征中的研究进展

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目的 抑郁障碍与代谢综合征共病不仅显著提高患者的死亡风险和自杀倾向,还导致巨大的经济负担和生活质量的显著下降。本文旨在探讨脑源性神经营养因子 (BDNF) 及其相关信号通路在抑郁障碍与代谢综合征共病中的作用机制,并分析其作为生物标志物和治疗靶点的潜在可能性。

方法 通过综述近年来关于 BDNF 及其相关信号通路在抑郁障碍和代谢综合征共病中的研究进展,分析其在神经生长、分化、存活和突触可塑性中的作用,特别关注 BDNF-TrkB 和 BDNF-p75NTR 信号通路在这两种疾病共病中的双向作用,结合流行病学研究和实验数据,对 BDNF 的作用机制进行了系统分析。

结果 研究表明,BDNF 水平在抑郁障碍和代谢综合征患者中显著降低。BDNF 与高亲和力受体 TrkB 结合后,激活 PI3K/Akt/mTOR、MAPK 和 PLC γ /IP3/CaMKII 等信号通路,促进神经元生长、存活和突触可塑性。而与低亲和力受体 p75NTR 结合的 proBDNF 则通过激活 JNK、NF- κ B 等通路,诱导神经元凋亡和炎症反应。此外,BDNF 及其下游信号途径的激活状态还可调节糖皮质激素受体 (GR) 的多个磷酸化位点,通过其受体 TrkB 激活的信号通路,包括 PI3K/Akt、PLC γ 和 ERK/MAPK 通路,能够影响 GR 的磷酸化状态,这不仅影响神经元的生存和突触可塑性,而且参与调控炎症反应和氧化应激,在抑郁障碍与代谢综合征的共病性中起着关键的桥梁作用。

结论 BDNF 可通过调节包括 PI3K/Akt/mTOR 在内的多个信号通路,在抑郁障碍和代谢综合征的共病发展中起到关键作用。此外,BDNF 信号通路在调节糖皮质激素受体磷酸化过程中的作用,为理解抑郁障碍与代谢综合征共病中的应激反应和炎症机制提供了新的视角。未来的研究应着眼于探索 BDNF 信号通路在不同生理和病理状态下的具体机制,并开发出针对这一信号通路的精准干预措施。

关键词: 脑源性神经营养因子, 抑郁障碍, 代谢综合征, 信号通路, 生物标志物

Effect of Non-Enzymatic Antioxidants on Cognitive Function in First-episode Drug-naïve Patients with Major Depressive Disorder

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Objective Cognitive dysfunction is a symptom that persistent and difficult to treat in major depressive disorder (MDD), receiving increasing attention. A balanced state of oxidative stress is essential for the normal function of brain including learning capacity, emotional regulation and cognitive function. The correlation between cognition and oxidative stress might change in patients with mental diseases. Thus, this study aims to explore the relation between serum antioxidants and cognition of MDD patients

Methods Collecting and matching cognitive performance with MATRICS Consensus Cognitive Battery (MCCB), serum antioxidants, demographic and clinical characteristic of 105 first-episode drug-naïve MDD patients and 53 healthy controls (HC) before we analyzed the differences between the two groups. Serum non-enzymatic antioxidants, including albumin (ALB), uric acid (UA), superoxide dismutase (SOD) and C-reactive protein (CRP), were measured to detect the level of oxidative stress of participants and its correlation with cognitive function. Then we used the 1.5 standard deviations below the mean of the standard score as the threshold for cognitive impairment to divided MDD participants into two groups to detect the relevant elements of five different domains of cognitive dysfunction in MDD

Results ALB was significantly lower in MDD group ($p=0.001$), while CRP were higher than HC ($p=0.017$), after adjusting for education years. All five dimensions of cognitive function were significantly

lower in the MDD group than HC ($p<0.001$). Speed of processing (SOP) in MDD group correlated with ALB ($r=0.281$, $p=0.004$) and UA($r=0.325$, $p=0.001$) excluding the effect of years of education between the two groups. We also explore the significant correlation between attention/vigilance (AV) domain and UA ($r=0.272$, $p=0.005$). The regression effect model for levels of UA and ALB associated with the SOP domain was significant ($F=7.322$, $p=0.001$) and this model was able to explain 12.6% of the variance in the SOP results. A regression effect model for UA in relation to the AV dimension was also present ($F=6.941$, $p=0.01$). In MDD group, ALB($r=0.257$, $p=0.008$) and UA($r=0.298$, $p=0.003$) were correlated with SOP scores. UA was a protective factor against impairment of the SOP, with a 0.006-fold reduction in the risk of SOP impairment for each 1-unit increase of UA

Conclusion As non-enzymatic serum antioxidants, ALB and UA may be prospective biomarkers of cognitive function in patients with MDD. Our findings contribute to understanding the ability of serum antioxidants to predict cognitive decline in individuals and provide new targets for treatment of cognitive impairment of MDD patients

关键词: major depression disorder, cognitive function, albumin, uric acid

精神卫生法在司法鉴定中的实施现状综述

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目的 《精神卫生法》自修订以来,促进了司法鉴定的法律依从与可信用度,使得鉴定有法可依、有据可循。但在实施过程中,仍存在鉴定程序的不规范、鉴定机构的不规范导致“被精神病”等问题。精神司法鉴定应承担起保障刑事诉讼公平、正义的责任,在施行中遵循程序正义,在鉴定中谨遵鉴定准则,鉴定人员应竭尽所能去查证,令有罪者伏法,无辜者免受伤害。

方法 21世纪以来,人口数量逐步增长,现代人的生存压力随之剧增,精神相关疾病的发病率逐

渐增高。如何依法进行精神疾病鉴定，如何保障精神患者的相关权益，仍是值得深思和探究的问题。本文从《精神卫生法》立法的目的、内容与现行实施案例入手，考虑《精神卫生法》的内容与意义，并与美国精神卫生制度的并行比较；同时简要评述我国精神卫生法在实施中给予鉴定的参考意义，包括涉刑精神病强制医疗与非刑精神病强制医疗。结合校园犯罪与精神疾病的关系，浅析精神卫生法。

结果 我国第一部精神相关法律是《中华人民共和国精神卫生法》，于2012年确立，2013年实施，2018年重新修订并施行。这一版本完善了前一版本的不足，但在保障精神疾病患者权利方面仍有一定缺陷。但不可否认的是，它对于推动我国精神卫生事业的健康发展，保障精神患者的合法权益，促进司法精神鉴定的合理规范化有着重大影响。被精神病现象的产生，其实根本原因在社会与道德问题期待于法律来解决是不可行的。《精神卫生法》在如何具体明确强制医疗的人员方面仍存在漏洞，应与国情适应、与国际接轨，从而更好地保障人权等一系列问题。而对于校园犯罪，应加强高校危机干预，将精神疾病从小处预防，减少校园犯罪的发生率。

结论 在国家层面，立法者应更注重严重精神疾病患者得不到强制医疗的现象，行政部门应努力解决财政投入短缺、资金不够、人员不足等一系列问题，加强违法犯罪人员的精神鉴定。同时，应进一步修缮以“高校—心理咨询机构—班级—寝室”为核心的四级心理危机干预制度。而当学生处于高危状况时，学校应及时将学生送往医院进行抢救与治疗，并同时通知其家长，先保证学生的生命安全，再寻求学生的心理修复，从而减少精神疾病的发生，降低校园犯罪率。

关键词：司法精神鉴定 精神卫生法 非刑强制医疗

Video Gaming During Coronavirus Pandemic in Adolescents: Disorder Or Self-medication?

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Objective The purpose of this article is to ex-

plore the interaction between video games and adolescents during the pandemic

Methods Retrieve relevant studies on Internet-and-Mobile-Based Interventions (IMIs) from databases such as Pubmed and Cochrane Library, including reviews, systematic reviews, meta-analyses, and various current studies and prospective studies

Results The results indicate a significant increase in gaming among adolescents during the pandemic, associated with both positive outcomes (e.g., enhanced well-being and social connections) and negative consequences (e.g., addiction, social dysfunction, and exacerbation of psychiatric disorders)

Conclusion In concluding this review, we explore the nuanced interplay between video games and adolescents in the context of the COVID-19 pandemic, highlighting the potential of video games to serve both as beneficial tools and sources of risk. The pandemic has undeniably increased gaming among adolescents, which has been linked to positive outcomes such as improved well-being and social connections, as well as negative consequences like addiction, social dysfunction, and the aggravation of psychiatric disorders. We argue for the importance of recognizing video games' dual nature and the necessity of fostering balanced gaming practices. It is imperative to raise awareness among adolescents, their families, and educators about the risks of excessive gaming, while also acknowledging and leveraging the positive aspects of gaming. By promoting healthy gaming habits, we can help ensure that video games serve as a force for good in the lives of adolescents, particularly in challenging times like these

关键词：coronavirus disease 2019 pandemic, mental health, internet gaming disorder, video games, addiction, adolescents

发病年龄对女性抑郁症患者大脑功能连接的影响

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目的 抑郁症是一种病因复杂的、造成极大疾病负担的精神疾病，其患者的性别差异十分显著。青春期起病和成人起病的抑郁症具有不同的临床特点，因此有研究认为是不同的抑郁症亚型。本研究将的主要目的是探索早发女性抑郁症和晚发女性抑郁症在大脑功能连接上的差异。

方法 研究对象为2019年4月至2022年10月就诊于武汉大学人民医院精神卫生中心门诊的抑郁症患者，所有的参与者由两名有经验的精神科医生根据DSM-5诊断为抑郁症。使用自制一般信息调查问卷收集患者年龄、性别、受教育程度、童年是否与父母分离等一般人口学信息及起病年龄、病程、复发次数、门诊次数、病程中是否有自伤行为及消极想法等临床信息。汉密尔顿抑郁量表(HAMD-17)、9项患者健康问卷(PHQ-9)、汉密尔顿焦虑量表(HAMA)、广泛性焦虑量表(GAD-7)用于评估患者的抑郁及焦虑严重程度。斯奈斯-汉密尔顿快感量表(SHAPS)评估患者快感缺失严重程度。童年创伤问卷(CTQ)评估患者16岁前发生的创伤事件。参与者在完成量表1周内进行核磁共振扫描。根据首次发病年龄将起病年龄 ≤ 19 岁分为早发组(85人)，将起病年龄 > 19 岁分为晚发组(人)。基于matlab2013b，在网际FC计算之前，对所选RSN的时间过程执行了以下额外的后处理步骤：(a) 去趋势线性、二次和三次趋势；(b) 对检测到的异常值进行尖峰化处理；(d) 截止频率为0.15 Hz的低通滤波。然后提取每个受试者每个IC的平均时间过程。网际FC估计为每个受试者所有IC对的平均时间过程之间的Pearson相关系数，为每个参与者生成 $C \times C$ 相关矩阵。随后，使用Fisher的r-to-z变换将r值转换为z值，以提高正态性。

结果 在多个RSN中，两组受试者的FC存在显著差异(体素阈值为 $p < 0.001$ ，GRF校正阈值为 $p < 0.05$ ，图3)。与AOS组相比，EOS组受试者在AN左舌回、DAN右舌回、RFPN右颞上回(Temporal_Sup_R)、SN左中央后回、VN右舌回(Frontal_Inf_Tri)FC升高，VN左额下回FC降低。

结论 童年期情感虐待与抑郁症的早发存在相关，早发的抑郁症可能影响大脑功能连接效率。

关键词：抑郁症；发病年龄；神经影像；功能连接

HIV 阳性男男性行为者睡眠障碍及影响因素

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目的 本研究调查福建省厦门地区HIV阳性男男性行为者(MSM)群体的睡眠障碍发生率，并探讨其影响因素。并为降低睡眠障碍的发生率，提出建设性建议。

方法 运用“问卷星”平台对就诊于厦门大学附属第一医院感染科接受治疗的HIV感染者进行横断面研究，对500例HIV感染者的社会人口统计学变量进行收集，其中包括年龄、月收入、住房条件、吸烟和饮酒等基本信息，采用匹兹堡睡眠质量指数(PSQI)问卷、广泛性焦虑量表(GAD-7)和患者健康问卷-9(PHQ-9)等自评工具，评估其睡眠质量以及焦虑和抑郁等心理健康状况。

结果 本研究调查HIV阳性男男性行为者共280例，福建省厦门地区HIV阳性男男性行为者睡眠障碍的检出率为43.9%，要显著高于一般人群19.6%，logistics回归分析显示，其中的风险因素包括：饮酒量超过3瓶啤酒(330ml)且每周饮酒超过5天(OR=3.076; 95%CI: 1.165~8.121, $p=0.023$)；存在焦虑症状(OR=2.946, 95%CI: 1.067~8.138, $p=0.037$)；存在抑郁症状(OR=4.966, 95%CI: 2.610~9.448, $p=0.001$)。

结论 HIV阳性男性同性恋者群体中，睡眠障碍的患病率较高，其主要影响因素包括高酒精摄入量以及显著的焦虑和抑郁症状。饮酒量大的感染者睡眠质量较差，焦虑和抑郁症状严重的感染者睡眠质量也较差。因此，应更加关注HIV阳性男性同性恋者群体的睡眠与情绪问题，制定更具针对性的心理和生理干预措施，营造更包容的环境，以全面提升其生活质量。

关键词：HIV、男男性行为、睡眠障碍、焦虑状态、抑郁状态

Network Analysis of Insomnia and Cognitive Performance Among Medical Staff

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Objective This study aimed to elucidate the network structure of the co-morbidity between cognitive deficits and insomnia symptoms within hospital medical staff

Methods The investigation spanned from September 13 to 19, 2022, across Jining and Qingdao regions, recruiting 657 medical staff participants. The study employed the Perceived Deficits Questionnaire for Depression (PDQ-D) and the Athens Insomnia Scale (AIS) to assess cognitive function and insomnia symptoms, respectively. A regularized partial correlation network analysis scrutinized the symptomatology, emphasizing the centrality and predictability of the items. Statistical analysis and network visualization were conducted using R software

Results The network analysis identified PDQ items 13 ("absent-mindedness") and 17 ("difficulty remembering numbers shortly after viewing them") as central within the Cognitive Functioning-Insomnia network. Additionally, AIS items 6 ("daytime emotional disturbances") and 8 ("daytime sleepiness"), along with PDQ item 13, emerged as pivotal bridging symptoms linking cognitive deficits to insomnia. Gender did not significantly influence network global strength, edge weight distribution, or individual edge weights

Conclusion The findings indicate that "absent-mindedness" and "difficulty remembering numbers shortly after viewing them" represent the principal symptoms of concurrent cognitive impairment and insomnia among hospital medical staff. Interventions focusing on these symptoms could potentially ameliorate the co-morbidity of cognitive dysfunction and insomnia in this population

关键词: insomnia, Cognitive, impairment, Network analysis, Healthcare

Bipolar Disorder with Borderline Personality

Disorder Comorbidity: Insights Into Cognitive and Personality Impairments

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Objective Despite the recognized prevalence of cognitive and personality impairments in bipolar disorder (BD), the specific impact of comorbid borderline personality disorder (BPD) on these domains remains insufficiently understood. The purpose of this study is to investigate the impact of comorbid BPD on cognitive and personality impairments in patients with BD and to identify independent risk factors for this comorbidity

Methods We assessed 38 unmedicated with BD-II and BPD comorbid, 47 with BD-II patients, and 30 healthy controls using the Chinese version of the MATRICS Consensus Cognitive Battery (MCCB), and the Minnesota Multiphasic Personality Inventory (MMPI). Statistical comparisons across groups were made using one-way ANOVA or Kruskal-Wallis tests, correlation analyses were performed with Pearson or Spearman methods, and binary logistic regression identified independent risk factors

Results Comorbid patients showed significant cognitive deficits in attention/vigilance, verbal learning, and social cognition, and composite scores, with elevated MMPI scores in hypochondriasis, depression, psychasthenia, paranoia, and schizophrenia scales. Independent risk factors identified in BD patients for BPD comorbidity include non-suicidal self-injury, MCCB composite scores, hypochondriasis, and masculinity-femininity

Conclusion The study emphasizes the importance of early detection and tailored interventions for BD patients with BPD comorbidity. Addressing cognitive and personality impairments is crucial for improving treatment outcomes

关键词: Bipolar Disorder, Borderline Personality Disorder, Cognitive Impairment, Personality Traits, MATRICS Consensus Cognitive Battery, Minnesota Multiphasic Personality Inventory

关键词：抑郁症,缺氧诱导因子-1,神经可塑性

缺氧诱导因子-1 调节抑郁症的机制研究进展

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目的 总结探讨缺氧诱导因子-1 调节抑郁症的机制研究进展

方法 第一作者在 2024 年 3 月至 2024 年 6 月于中国知网学术期刊数据库、万方学术期刊数据库、PubMed 及 Web of Science 检索国内外文献；其中检索项为：主题词+关键词；中文检索式为“抑郁症”and“缺氧诱导因子”；英文检索式为#1：“depressive disorder” OR “depression” OR “MDD”；#2：“hypoxia inducible factor 1” OR “HIF-1”；#3：“vascular endothelial growth factor” OR “VEGF”；#4：“erythropoietin” OR “EPO”；#5：“energy metabolism”；#6：“neuroinflammation”；#7：“oxidative stress”；#8：“#3 OR #4 OR #5 OR #6 OR #7”；#9：“#1 AND #2”；#10：“#1 AND #7”；#11：“#2 AND #7”。检索文献时间限制为 2013 年至 2024 年，共检索出 348 篇相关文献。纳入标准：研究主题为 HIF-1 与抑郁症的文献；研究对象为啮齿类动物或人类的文献；近 10 年公开发表的中文或英文文献。排除标准：案例报道、会议论文、专家论述等文体；重复文献；无法获取全文的文献。根据文献纳入排除标准，最终筛选并引用文献 46 篇。

结果 抑郁症是以持续而显著的心境低落为主要特征的一类精神障碍，病因复杂且复发率高，现阶段仍需要更加精准有效的诊疗方式。越来越多的研究表明，缺氧诱导因子-1 (hypoxia inducible factor 1, HIF-1) 及相关通路参与调节抑郁症的发展与恢复。HIF-1 表达的增加可以激活下游众多靶基因，如血管内皮生长因子、促红细胞生成素、脑源性神经营养因子、葡萄糖转运蛋白等，促进神经发生，提高突触可塑性，调节神经炎症反应，改善大脑能量代谢，减轻氧化应激。此外，间歇低氧训练和促进 HIF-1 表达的相关药物在临床前研究中已证明其抗抑郁效果。

结论 本文将国内外相关研究进展总结归纳，从神经可塑性、神经炎症、能量代谢、氧化应激等方面论述 HIF-1 对抑郁症的调节作用及可能机制，并探讨针对 HIF-1 水平调节的抗抑郁治疗前景，或可为抑郁症发病机制及治疗研究点亮新思路。

新型冠状病毒疫情密接人员心理状态的分析

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目的 了解疫情对于民众的心理健康状况及其影响因素，在为针对民众的健康教育和心理支持提供参考和依据。

方法 选取在 2021 年 9 月 11 日~2021 年 10 月 7 日厦门市同安区新型冠状病毒爆发期间，民众面对突然发生的重大公共卫生事件的心理应激状况，我们利用问卷星软件，要求密接人员进行在线问卷填写。经筛查分析获取有效问卷 1025 份，有效问卷占比为 81.3%，使用 ISI 失眠严重程度指数量表、PHQ-9 抑郁症筛查量表、GAD-7 焦虑症筛查量表，比较密接人群包括居住酒店、年龄、性别、学历、婚姻情况。运用二元 logistic 回归分析；以 $P < 0.05$ 为差异有统计学意义。

结果 年龄是独立与焦虑症高风险相关的因素 $P < 0.001$ ，与总体心理问题风险增加独立相关 $P = 0.026 < 0.05$ 。

结论 其中年龄是焦虑、整体心理问题的独立危险因素。这提示我们年龄增高会导致更严重的焦虑和总体心理问题，这一现象可能与中老年人群在日常生活中拥有较多空闲时间可以关注疫情变化和进展，加上媒体的渲染，以及面对周围街坊邻里相继被感染的对于病情的恐惧会加重激反应。这些种种原因可能会加重这类人群的焦虑和总体心理问题，因此关注年龄较大人群的心理健康问题，提高他们面对这类突发事件的应急处理能力，缓解他们的心理压力，帮助梳理疫情期间面临的心理问题，提供必要的心理指导治疗，及时发现并给予干预处理。

关键词：新冠肺炎疫情；心理状态；年龄；焦虑；应对方式

大学生学业倦怠结构及其与抑郁症状关系的网络分析

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目的 本研究旨在验证倦怠的维度结构,以及倦怠与抑郁症状是否存在概念重叠。通过网络分析的建模,为解决理论问题提供网络视角的证据。

方法 我们使用马斯拉赫职业倦怠量表(学生调查)和病人健康问卷抑郁量表(PHQ-9)分别评估了1096名大学生学业倦怠和抑郁症状的严重程度。我们采用网络分析的方法,通过R软件构建倦怠症状网络、抑郁症状网络和倦怠-抑郁共现网络,并计算网络中节点的预期影响(expected influence, EI)和桥预期影响(bridge expected influence, BEI)。

结果 去个性化症状“对学习越来越不感兴趣”具有最高的预期影响(EI=1.255),是学业倦怠网络中最为核心的症状。在共现网络中,抑郁症状“快感缺失”(BEI=0.161)、“疲劳”(BEI=0.109)和倦怠症状“怀疑学习的意义”(BEI=0.107)具有最高的桥预期影响,是导致倦怠-抑郁共现的最重要症状。社团检测结果表明,倦怠症状网络中有三个社团,分别符合其因子分析确定的三个维度。此外,倦怠和抑郁社团之间没有症状的重叠。

结论 当前研究结果支持倦怠的多维度理论,并为倦怠作为一个独立于抑郁障碍的构念提供了网络视角的证据。同时,去个性化症状而不是情绪耗竭,在倦怠以及倦怠与抑郁症状的共病中起最重要的作用。

关键词:倦怠;抑郁;网络分析;共病

精神分裂症和重性抑郁障碍患者感觉门控P50抑制缺陷与认知功能损害的特征分析

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目的 本文旨在分析首发精神分裂症(SZ)患者与首发重性抑郁障碍(MDD)患者感觉门控P50抑制缺陷程度与其认知功能损害程度之间的差异和交互关系,验证是否感觉门控P50比值越大则其认知功能损害程度越严重,并建立诊断预测模型。

方法 收集符合DSM-5诊断标准和排除标准的102例首发SZ患者和83例首发MDD患者作为受试对象。收集其一般人口学资料,检测其P50成分,并采用重复性成套神经心理状态测验量表(RBANS)评估其认知功能。采用R 4.3.0对数据进行统计学分析。

结果 (1)首发SZ患者的S1潜伏期小于首发MDD患者($P<0.05$),而S2波幅和P50比值均大于首发MDD患者($P<0.05$)。(2)首发SZ患者认知功能的即刻记忆、视觉广度、言语功能、注意力和延时记忆等5个维度分值和认知功能总分值均低于首发MDD患者($P<0.05$)。(3)首发SZ患者的S2波幅与其即刻记忆、延时记忆、视觉广度和认知功能总分值均呈显著负相关(均 $P<0.01$),P50比值与其4个维度(除言语功能外)和认知功能总分值均呈负相关($P<0.05$),经FDR校正后,上述负相关关系依然存在($P<0.05$);而首发MDD患者的S2波幅、P50比值与其认知功能各维度分值以及认知功能总分值之间均不存在相关性($P>0.05$)。(4)以受试者的S2波幅、P50比值、认知功能的即刻记忆和言语功能维度分值和认知功能总分值分别作为预测因素构建诊断预测模型,曲线下面积(Area Under Curve, AUC)值分别为0.654、0.653、0.851和0.803。本研究还同时以P50比值与即刻记忆和言语功能维度分值、以P50比值和认知功能总分、以S2波幅和认知功能总分、以S2波幅和认知功能的即刻记忆和言语功能维度分值分别作为预测因素构建了4个综合诊断预测模型,AUC值分别为0.849、0.798、0.789和0.846。在上述8个诊断预测模型中,以认知功能的即刻记忆和言语功能维度分值为预测因素构建的模型AUC值最大,为0.851,其预测效果最好,可作为SZ和MDD患者诊断的预测因素,其校准曲线和临床决策曲线表明该模型具有很好的校准度和临床决策效用。

结论 首发SZ患者感觉门控P50抑制缺陷程度和认知功能损害程度均较首发MDD患者更加严重。此外,首发SZ患者感觉门控P50抑制缺陷越严重,其认知功能损害程度也越严重。基于感觉门控P50成分、P50比值和认知功能评分构建的诊断预测模型可作为首发SZ患者和首发MDD患者诊断和鉴别的生物学标志物,具有较高的临床应用价值,值得被推广。

关键词:精神分裂症,重性抑郁障碍,感觉门控P50,认知功能

A Network Analysis Study of Anxiety and Depression Among College Students Before and After The COVID-19 Pandemic Lockdown Lift: A Focus on The Transition Period

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Objective With the development of the COVID-19 pandemic, symptoms of depression and anxiety have increasingly manifested themselves in Chinese college students. Most existing studies are cross-sectional, and the longitudinal study of anxiety and depression symptoms at the symptom level are rarely described. The purpose of this study is to clarify the changes and interrelationships of anxiety and depression symptoms in Chinese college students before and after the lifting of the COVID-19 pandemic lockdown by network analysis

Methods The symptoms of the same population during the lockdown and unlockdown period were taken as nodes, the partial correlation coefficient between the two nodes was taken as the edge, and the connection between depression and anxiety symptoms was taken as a bridge, so that the relationship between symptoms was mapped as a visual graph. To explore the relationship and change characteristics of anxiety and depression symptoms in college students during lockdown period and after lockdown

Results the strongest positive edge was between “STAI3: I am tense” and “STAI4: I feel strained”, with the correlations of 0.38. followed by between “STAI15: I am relaxed” and “STAI16: I feel content”, with the correlations of 0.34; and between “BDI5: Guilty feelings” and “BDI6: Punishment feelings”, with the correlations of 0.32. only one connections were negative. the strongest edge was between “STAI10: I feel comfortable” and “STAI14: I feel indecisive”, with the correlations of -0.004; The positively correlated edges at T2 are the same as T1. The same edge between “STAI3: I am tense” and “STAI4: I feel strained” with the correlations

of 0.41, between “STAI15: I am relaxed” and “STAI16: I feel content”, with the correlations of 0.38 and between “BDI5: Guilty feelings” and “BDI6: Punishment feelings” with the correlations of 0.33. Compared with the positive correlations, only one connections were negative, but the negative correlation edge was different. The different edge in the T2 network were between “STAI17: I am worried” and “BDI19: lost much weight”, with the correlations of -0.017

In the top 10 % of bridge symptoms Nodes were “BDI1: Sadness”, “STAI17: I am worried”, “STAI11: I feel self-confident”, “BDI2: Pessimism” at T1(0.15, 0.09, 0.06, 0.06). In the top 10 % of bridge symptoms Nodes at T2 are differences. The bridges were “STAI14: I feel indecisive”, “STAI9: I feel frightened”, “BDI13: Indecisiveness” and “BDI6: Punishment feelings” (0.16, 0.15, 0.09 0.08). In the top 10 % of expected influence symptoms during the T1 period, the node of “STAI16: I feel content” was strongest, followed by “STAI18: I feel confused”, “STAI4: I feel strained”, “STAI20: I feel pleasant”. (1.00, 0.99, 0.93, 0.91). In the top 10 % of expected influence symptoms during the T2 period, the node of “STAI15: I am relaxed” was strongest, followed by “STAI10: I feel comfortable”, “BDI20: Agitation or worried about my physical problems”, “STAI9: I feel frightened” (1.07, 0.93, 0.91, 0.90). The strongest positive predictions in the CLPN were from “STAI13: I am jittery” to “STAI7: I am presently worrying over possible misfortunes”; from “STAI13: I am jittery” to “STAI18: I feel confused”; and from “BDI6: Punishment feelings” to “STAI9: I feel frightened” (0.18, 0.18, 0.13). While the edges from “BDI18: Changes in appetite” to “BDI8: Self-criticalness”; from “STAI11: I feel self-confident.” to “BDI16: Changes in sleeping pattern” and from “STAI11: I feel self-confident” to “BDI21: Loss of interest in sex” showed the stronger negative predictions (-0.11, -0.10, -0.07).

Conclusion This study is the first to use network analysis and cross-lag analysis to investigate the relationship between anxiety and depression symptoms from the horizontal and longitudinal perspectives of the COVID-19 outbreak and lockdown period and the COVID-19 lockdown period, and explore the core

symptoms, the changes of symptom nodes, and the interaction between different symptoms in the anxiety and depression symptom network of college students, suggesting the possible causal relationship between symptoms, and the important bridge symptoms in the network. We found that anxiety and depression during the lockdown period were significantly higher than those unlockdown period

关键词: College students; Depression; Anxiety; Comorbidity; Network analysis; Cross-lagged panel network analysis

精神分裂症和重性抑郁障碍患者 fNIRS 脑血流动力学改变与其认知功能损害的特征研究

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目的 本文旨在探讨精神分裂症 (Schizophrenia, SZ) 和重性抑郁障碍 (Major Depressive Disorder, MDD) 患者的功能性近红外光谱成像技术 (Functional Near-Infrared Spectroscopy, fNIRS) 脑血流动力学改变和其认知功能损害之间的交互关系, 并构建诊断预测模型。

方法 收集符合 DSM-5 诊断标准和排除标准的 62 例 SZ 患者与 43 例 MDD 患者作为受试对象。收集其一般人口学资料, 检测其脑血流动力学改变数据, 采用 RBANS 评估其认知功能。采用 SPSS 26.0 软件对数据进行统计学分析。

结果 (1) SZ 患者的即刻记忆、延时记忆、视觉广度、言语功能和注意力等 5 个认知维度的分值均低于 MDD 患者 ($p < 0.05$)。 (2) SZ 患者额叶任务态重心值 (CV)、双侧颞叶任务态 CV 均高于 MDD 患者 ($p < 0.05$)。 (3) SZ 患者的言语功能维度分值与额叶静息态积分值 (IV) 和双侧颞叶静息态 IV 均呈正相关 ($p < 0.05$)； (4) MDD 患者其即刻记忆维度分值与其前额叶静息态 CV 呈正相关 ($p < 0.05$)、与其双侧颞叶静息态斜率值呈负相关 ($p < 0.05$)、与其双侧颞叶任务态 CV 呈显著负相关 ($p < 0.01$)； MDD 患者的延时记忆维度分值、认知总分值均与其双侧颞叶任务态 CV 呈显著正相关 (均 $p < 0.01$)。

(5) Logistic 回归分析结果表明能够区分 SZ 和

MDD 的主要参数包括即刻记忆、言语功能以及额叶任务态 CV。以即刻记忆、言语功能、额叶任务态 CV 分别作为预测因素构建 SZ 和 MDD 诊断预测模型, 曲线下面积 (AUC) 分别为 0.778、0.741 和 0.687。说明预测模型对于 SZ 和 MDD 的诊断和鉴别诊断价值较大: 即随着即刻记忆、言语功能得分增加, 患者被诊断 SZ 的风险减小, 被诊断 MDD 的风险增大, 随着额叶任务态 CV 的增加, 诊断 SZ 的风险增大, 诊断 MDD 的风险减小。

结论 (1) 与 MDD 患者相比, SZ 患者更易表现出额叶和双侧颞叶任务态重心值增高和更差的认知功能。(2) 受试者额颞叶脑血流动力学减慢可能影响其认知功能。(3) 即刻记忆、言语功能以及额叶任务态 CV 有望成为预测 SZ 和 MDD 患者的生物学诊断参数。

关键词: 精神分裂症、重性抑郁障碍、脑血流动力学、认知功能

社会心理服务研究协作组

Psycho-Social Factors Associated with Recent Suicide Attempts Among 12–25-Year-Old High-Suicide-Risk Callers To A Suicide Prevention Hotline in China

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Objective This study explores the differences in demographic and psychosocial characteristics between high-suicide-risk AYA callers with serious suicide plans and recent suicide attempts, investigating potential factors related to recent suicide attempts in this specific population. These findings are expected to facilitate the development of more indicated suicide prevention measures for high-suicide-risk AYA callers.

Methods This study was conducted at the Beijing Psychological Support Hotline. All AYA callers assessed as having a high-suicide risk (defined as intending to carry out suicidal acts within 72h or reporting suicide attempts occurring within the last two weeks or ongoing), were recruited from January 2017 to December 2018. They were categorized into two groups: a suicide plan group (with serious suicide plans to be carried out within 72h) and a suicide attempt group (with recent suicide attempts, ongoing, or within the last 2 weeks). Psychosocial characteristics such as the severity of depression, alcohol or substance misuse, suicide attempt history, and acute and chronic life events were assessed using a structured interview during the calls. Chi-square tests and logistic regression analysis were employed to explore the differences between the two groups and associated psychosocial factors with recent suicide attempts.

Results From January 1, 2017, to December 31, 2018, 2,345 high-suicide risk calls from AYAs were identified. Among these, 345 calls were duplicates, resulting in 2,000 individual high-suicide risk AYA sampled for this study. There were 1,130 (56.5%) individual AYA callers in the suicide attempt group and 870 (43.5%) individual AYA callers in the suicide plan group.

Among all the recruited participants, there were 1,210 females (60.5%) and 790 males (39.5%). The average age was (19.5±3.4), with 655 adolescents (12–17 years old) and 1,345 young adults (18–25 years old). In terms of educational level, 2.5% were in elementary school or below, 23.1% in middle school, 35.5% in high school, and 37.2% were at university or above. Regarding marital status, 96.4% were unmarried and 3.4% were married or cohabiting.

In terms of psychosocial characteristics, 728 individuals (36.4%) experienced severe depression in the last two weeks, 226 individuals (11.3%) experienced alcohol or substance abuse, 1,007 individuals (50.4%) had chronic life events, 927 individuals (46.4%) experienced acute life events, 184 individuals (9.2%) had severe physical illnesses, 355 individuals (17.8%) had a history of being abused, 421 individuals (21.1%) feared of being attacked, 781 individuals (39.1%) had a history of suicide among relatives or acquaintances, and 1,055 individuals (52.8%) had a history of suicide attempts.

Compared with the suicide plan group, the callers in the suicide attempt group were more likely females (69.6% v 48.7%, $\chi^2 = 88.9$, $P < 0.001$) and were less likely young adults (61.2% v 75.1%, $\chi^2 = 42.6$, $P < 0.001$). There was a statistically significant difference in the educational level of callers between the two groups (elementary school and below 2.83% v 2.07%, middle school 26.2% v 19.0%, high school 35.3% v 35.7%, and university and above, 34.2% v 41.0%; $\chi^2 = 18.4$, $P < 0.001$). The proportion of callers with a suicide attempt history was higher in the suicide attempt group than in the suicide plan group (59.7% v 43.7%, $\chi^2 = 32.8$, $P < 0.001$), while other variables showed no statistically significant difference between the two groups.

After adjusting for sex and age, a history of prior suicide attempts (OR = 1.53) and alcohol or substance abuse (OR = 1.37) were associated with recent suicide attempts.

Conclusions Consistent with previous research on general callers, our findings showed that a history of prior suicide attempts is the main correlate of recent suicide attempts among high-suicide risk AYA callers. Callers with a history of suicide attempts may exhibit certain cognitive biases, such as dichotomous thinking

or irrational beliefs that impede rational self-guidance, potentially leading them to cope with stressful life events using hazards or other extreme measures. Moreover, they may have acquired a maladaptive problem-solving approach, that is, addressing adverse conditions through suicide attempts. Therefore, it may be crucial to emphasize the improvement in coping skills of high-suicide-risk AYA callers, especially those reporting prior suicide attempts.

Our findings indicated that alcohol or substance misuse was also associated with recent suicide attempts among high-suicide risk AYA callers, consistent with previous research findings. Previous studies have indicated that for individuals with impulsive and risk-taking traits, chronic alcohol abuse could exacerbate maladaptive coping behaviors, impair self-regulation, and consequently elevate the risk of suicide. Moreover, prolonged use of opioid drugs may lead to neurobiological changes that contribute to the elevation of negative emotions, which confers suicide risk to individuals with alcohol misuse. Therefore, it is imperative to pay attention to callers with alcohol or substance misuse, educate them on the detrimental effects of alcohol or substance misuse, and refer them to professional facilities.

Previous studies have indicated that depression was a key risk factor for suicide attempts; however, our findings indicated that for high-suicide risk AYA callers, a higher level of depression did not necessarily lead them from having serious suicidal plans to actually making suicide attempts. A potential explanation is that among AYA callers with high suicide risk, depression is no longer sensitive enough to differentiate those with recent suicide attempts from those with serious suicide plans only. Undoubtedly, depression is a key risk factor for suicidal behavior; however, it might not be an essential pathway from ideation to planning to implement such behaviors.

These results indicated that among AYA callers at high suicide risk, relatively older callers were less likely to report recent suicide attempts ($OR = 0.53$) and female callers were more likely to report recent suicide attempts ($OR = 1.96$), similar to previous studies. Compared with adolescents, young adults may have an increased ability to alleviate negative emotions and solve

practical problems owing to their higher levels of education and increased social experiences. Additionally, previous reports have suggested that females are more likely to attempt suicide than males, especially with impulsive or low intent in the general population and youth.

While receiving calls from high-suicide risk AYA callers, hotline counselors should focus more on callers with previous suicide attempts and alcohol or substance misuse, and implement indicated suicide prevention measures via hotline.

关键词: suicide risk, adolescent and young adult, hotline, suicide attempt, China

腹侧被盖区多巴胺能神经元参与调控焦虑样行为研究进展

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目的 为深入探讨关于腹侧被盖区 (ventral tegmental area, VTA) 多巴胺能神经元参与调控焦虑样行为的研究进展, 本文分别综述生理及病理状态下, VTA 多巴胺能神经元参与的神经环路对焦虑样行为的调控作用、VTA 神经递质与焦虑样行为的关系以及相关影像学研究进展, 从而为未来的治疗发展提供路线图。

方法 本文通过查阅大量相关文献, 对 VTA 多巴胺能神经元参与调控焦虑样行为进行综合分析和归纳, 全面了解 VTA 多巴胺能神经元参与调控焦虑样行为的研究动态和进展。

结果 动物研究结果表明 VTA 多巴胺能神经元参与侧隔、伏隔核、脚间核、中央杏仁核等多条神经投射环路, 这些环路可分别对生理或病理状态下的焦虑样行为起调控作用; 多巴胺是 VTA 主要神经递质, 可通过多巴胺 D1 和 D2 受体调控焦虑; 此外, VTA 中的谷氨酸、 γ -氨基丁酸、乙酰胆碱在调控焦虑中也起到直接或间接作用。临床影像学研究发现焦虑障碍组多巴胺能 VTA 结构完整性低于健康对照组。

结论 本文对生理及病理状态下 VTA 参与调节焦虑样行为的神经环路及相关神经递质进行总结, 这为明确焦虑障碍的发病机制提供了路线图。新兴的影像研究使得 VTA 定向分析可视化成为可能, 为焦虑障碍的诊断提供了新的辅助标准。

关键词: 焦虑, 腹侧被盖区, 多巴胺, 神经环路, 神经递质

Associations of Social Isolation and Loneliness with Incident Cardiovascular Disease Among Individuals with Severe Mental Illness

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Objective The present study aimed to investigate the associations of social isolation and loneliness with CVD among individuals with SMI and assess the extent to which intermediate risk factors explained the associations

Methods A total of 69,813 participants with SMI (32.1% male; mean age=55.0 years) were included from the UK Biobank. Social isolation and loneliness were assessed using self-reported questionnaires. Cardiovascular diseases were identified by linking hospital records and death registries

Results In the multivariate-adjusted model, loneliness was associated with an increased risk for incident of CVD (yes vs. no: HR: 1.05; 95% CI: 1.01-1.10). No significant associations were observed for social isolation (most vs. least: HR: 0.97; 95% CI: 0.93-1.00). Loneliness ranked higher in relative strength for predicting CVD as other traditional lifestyle risk factors, such as poor diet and physical inactivity. The association between loneliness and CVD was mainly attributed to psychological factors and health behaviors

Conclusion Among individuals with SMI, loneliness, but not social isolation, was independently associated with a higher risk for incident CVD, which was

largely explained by psychological stress and subsequent unhealthy lifestyles. These findings highlight loneliness as novel modifiable risk factor for predicting CVD

关键词: Severe mental illness; social isolation; loneliness; cardiovascular disease.

Causal Association between Gut Microbiota and Self-harm in Past Year: A Two-sample Mendelian Randomization Study

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Objective Several recent observational studies have reported that gut microbiota composition is associated with self-harm. However, the causal effect of gut microbiota on self-harm is unknown

Methods A two-sample Mendelian randomization analysis was conducted utilizing summary statistics of gut microbiota-derived from the largest extant genome-wide association study meta-analysis, encompassing 18,340 participants, facilitated by the MiBioGen consortium. Summary statistics pertaining to incidences of self-harm over the previous year were procured from the UK Biobank, involving 591 cases and 6,243 controls. To explore the putative causal link between gut microbiota composition and self-harm occurrences, several analytical methods were employed, including inverse variance weighting, MR-Egger, weighted median, weighted mode, and simple mode. Additionally, reverse Mendelian randomization was applied to those bacterial taxa previously identified as causally related to self-harm in the forward analyses. Cochran's Q statistics were utilized to assess the heterogeneity among the instrumental variables

Results Inverse variance weighted estimates indicated a protective association of Methanobacteria (odds ratio = 0.965, 95% confidence interval: 0.936-0.995, P=0.024) and Ruminococcaceae (UCG014 group,

OR=0.938, 95% CI 0.887-0.992, P=0.025) against self-harm. Conversely, Mollicutes (RF9 group, OR=1.054, 95% CI 1.004-1.107, P=0.034) and Rikenellaceae (RC9 group, OR=1.038, 95% CI 1.009-1.069, P=0.011) demonstrated suggestive associations with increased risk of self-harm. Results from reverse Mendelian randomization analysis revealed no significant causal impact of self-harm on the composition of gut microbiota. Additionally, analyses did not detect significant heterogeneity among the instrumental variables, nor evidence of horizontal pleiotropy

Conclusion This two-sample Mendelian randomization study identified a causal association between Methanobacteria, Ruminococcaceae UCG014, Rikenellaceae RC9, and instances of self-harm in the preceding year. To elucidate the protective effects of probiotics against self-harm and to delineate their specific mechanisms of action, further randomized controlled trials are imperative

关键词: Self-harm; Gut microbiota; Mendelian randomization; Causal inference

中小学生学习心理健康自评及影响因素分析

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目的 了解杭州市中小学生学习心理健康自评情况及相关影响因素及心理需求。

方法 采用随机分层整群抽样的方式,依据小学、初中、高中三个层次,抽取杭州市30所学校,其中小学5-6年级、初中三个年级、高中三个年级的各一个班的在读学生作为调查对象,共调查学生3460名,了解他们对自身心理健康状况的自评情况,分析相关影响因素,同时调查学生对家长及老师的期待。

结果 3460名学生中,小学5-6年级773人,初中1583人,高中1104人,平均年龄 14.3 ± 2.1 岁。69.5%的学生自评心理健康状况好,一般的占23.3%,不好的占7.3%;不同学段学生心理自评有统计学差异(卡方值=46.69, $p < 0.05$),随着学段的增加,学

生自评心理健康状况下降,年龄段与心理健康自评相关;学生心理健康自评与家庭关系、父母交流频率、成绩满意度均成正相关;与父母或与父母(外)祖父母共同居住的学生心理状况自评好于其他居住形式(卡方值=25.53, $p < 0.05$)。遇到困惑倾向向母亲和同学倾诉(36.7%和32.1%),向老师倾诉的最少,只有0.6%,其次为心理医生,只有1.0%。在心理需求方面,对家长期待排在前三位的是理解信任,包容支持,关系和睦,对老师的期待排在前三位的是:理解信任,减少作业,平等对待。

结论 需要关注中小学生的心理状况,关注家庭的影响,营造和谐家庭氛围,鼓励寻求专业的心理支持。学生对家长和老师,理解信任的心理需求均排在第一位,需要家长和教师关注。

关键词: 心理健康, 中小学生学习, 心理需求

磷脂酰丝氨酸介导的小胶质细胞修剪突触参与小鼠抑郁样行为发生的机制研究

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目的 阐明磷脂酰丝氨酸(PS)作为“吃我”信号,介导小胶质细胞修剪突触,参与小鼠的抑郁样行为发生。

方法 首先研究PS参与慢性社交挫败应激所致抑郁样行为发生。具体包括:(1)采用慢性社交挫败应激(Chronic social defeat stress, CSDS)构建小鼠抑郁模型,10天应激结束后依次进行小鼠焦虑、抑郁样行为学检测;(2)使用免疫印迹检测应激组 and 对照组小鼠内侧前额叶皮层(medial prefrontal cortex, mPFC)TLRs表达及炎症因子IL-10, IL-1 β , IL-6, TNF- α 表达水平;(3)采用免疫荧光染色检测mPFC脑区小胶质细胞激活水平以及ATP11C、CDC50A的表达, pSIVA-IANBD染色检测PS暴露水平;(4)采用高尔基染色检测神经元树突棘形态和数量变化;(5)采用激光共聚焦断层扫描以及三维立体重建检测小胶质细胞对神经元突触吞噬情况。其次,干预PS在神经元表面的暴露,研究其对抑郁样行为的影响。具体包括:(1)使用药理学方法阻断内质网钙离子通道以及PKC α 通路,阻断ATP11C

从胞膜向胞内转移,观察 PS 暴露水平、翻转酶表达、突触修剪情况及小鼠抑郁样行为;(2)采用小鼠脑立体定位微注射敲低 mPFC 脑区 Atp11c 基因,观察小鼠抑郁样行为变化。

结果 CSDS 导致小鼠发生显著的焦虑样和抑郁样行为及 mPFC 脑区小胶质细胞高水平激活的炎症反应;CSDS 导致 mPFC 脑区神经元上 ATP11C 表达以及 CDC50A 表达显著降低,神经元上 PS 外翻水平显著增加;CSDS 导致 mPFC 脑区神经元树突成熟型棘突数量显著降低,被修剪的树突棘数量显著增加,以及小胶质细胞对突触的吞噬显著增加;小鼠腹腔注射内质网钙离子通道阻断剂 R-卡维地洛和选择性 PKC α 通路抑制剂 Go6976 可以显著逆转上述表型,挽救 PS 暴露及小鼠抑郁样行为;mPFC 脑区 Atp11c 基因表达的敲低导致小鼠显著的抑郁样行为。

结论 本研究首次证实了 PS 作为小胶质细胞吞噬突触的“吃我”信号分子参与小鼠抑郁样行为发生的神经机制。其中,翻转酶 ATP11C 在调节 PS 暴露中发挥重要作用。该研究为 PS 介导的小胶质细胞突触修剪参与抑郁发病提供了科学证据,为研发新型快速抗抑郁药物提供了科学依据。

关键词: 抑郁症,小胶质细胞,突触修剪,磷脂酰丝氨酸,“吃我”信号

Liraglutide-associated Depression in A Patient with Type 2 Diabetes A Case Report and Discussion

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Objective To investigate the potential association between liraglutide, a glucagon-like peptide-1 receptor agonist (GLP-1RA), and the development of depressive symptoms in patients with type 2 diabetes

Methods A case study of a 39-year-old male with type 2 diabetes who presented with depressive symptoms shortly after initiating liraglutide therapy for

glycemic control and weight reduction. Clinical assessments, including mood evaluations and diagnostic criteria for depression, were employed to track symptom progression and treatment outcomes

Results Following the initiation of liraglutide, the patient experienced a range of depressive symptoms, including poor mood, irritability, decreased interest and energy, progressing to sadness, low self-esteem, and physical discomfort. A clinical diagnosis of a depressive episode was made concurrently with the introduction of liraglutide. Upon discontinuation of liraglutide and initiation of antidepressant therapy, there was a rapid improvement in depressive symptoms within a week, suggesting a potential link between liraglutide use and the onset of depression

Conclusion This case study underscores the importance of recognizing potential psychiatric side effects, particularly depression, associated with GLP-1RAs like liraglutide. Mechanisms such as GLP-1RA effects on glucose fluctuations, dopamine modulation, and influence on the brain reward system are discussed as potential contributors to mood disturbances. Further research is essential to elucidate the underlying mechanisms and clarify the clinical implications of GLP-1RA therapy on mental health outcomes

关键词: depression1 ,liraglutide2, GLP-1 receptor agonists (GLP-1RA)3 , case report4

父母教养方式与注意缺陷多动障碍儿童异常行为的相关性研究

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目的 比较注意缺陷多动障碍(Attention Deficit Hyperactive Disorder, ADHD)儿童与正常发育儿童在父母教养方式方面的差异,以及这些差异如何与儿童的行为问题相关联。

方法 回顾性收集 209 例 ADHD 儿童青少年的父母教养方式量表(Egna Minnen Beträffande Uppfostran, EMBU)和 Conners 儿童行为量表数据,

比较 ADHD 儿童在 EMBU 各因子得分与常模的差异, 并分析父母教养方式与 Conners 行为量表各维度得分之间的相关性。

结果 在 ADHD 儿童中, 父亲的情感温暖理解 ($t=-8.710$, $PFDR<0.001$) 得分和母亲的情感温暖理解 ($t=-6.159$, $PFDR<0.001$) 得分显著低于常模水平。ADHD 儿童父亲的惩罚严厉 ($t=8.658$, $PFDR<0.001$) 得分和拒绝否认 ($t=6.849$, $PFDR<0.001$) 得分, 母亲的惩罚严厉 ($t=7.336$, $PFDR<0.001$) 得分和拒绝否认 ($t=4.256$, $PFDR<0.001$) 得分均显著高于常模水平。与常模相比, ADHD 儿童的父母在过分干涉和过度保护方面的得分显著降低 (父亲过分干涉: $t=-2.170$, $PFDR=0.031$; 父亲过度保护: $t=-6.888$, $PFDR<0.001$; 母亲过分干涉: $t=-5.567$, $PFDR<0.001$)。父亲的特定教养方式与 ADHD 儿童行为问题之间存在显著的正相关关系。具体而言, 父亲的惩罚严厉、过分干涉和过度保护与儿童的多动指数得分呈正相关 (惩罚严厉: $r=0.216$, $PFDR<0.05$; 过分干涉: $r=0.198$, $PFDR<0.05$; 过度保护: $r=0.236$, $PFDR<0.05$)。ADHD 儿童的品行问题得分与父亲的惩罚严厉 ($r=0.278$, $PFDR<0.001$)、过分干涉 ($r=0.215$, $PFDR<0.05$)、拒绝否认 ($r=0.189$, $PFDR<0.05$) 和过度保护 ($r=0.229$, $PFDR<0.05$) 得分呈正相关。ADHD 儿童的冲动/多动得分与父亲的惩罚严厉 ($r=0.222$, $PFDR<0.05$)、拒绝否认 ($r=0.187$, $PFDR<0.05$) 和过度保护 ($r=0.244$, $PFDR<0.001$) 得分呈正相关。

结论 ADHD 儿童在家庭环境中经历较少的情感支持和较多的惩罚性教养方式。相比于母亲, 父亲的特定教养方式 (惩罚严厉、过分干涉、拒绝否认和过度保护) 更倾向于导致 ADHD 儿童的行为问题 (多动指数、品行问题和冲动/多动)。

关键词: 注意缺陷多动障碍; 父母教养方式; 行为问题; 父母教养方式评价量表; Conners 儿童行为量表

父母教养方式影响儿童注意缺陷多动障碍的神经电生理机制研究

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目的 通过比较注意缺陷多动障碍 (Attention Deficit Hyperactive Disorder, ADHD) 儿童与正常发育儿童在父母教养方式和静息态脑电特征的差异, 以及差异与儿童行为问题的相关性来探讨父母教养方式影响 ADHD 儿童行为相关问题的神经电生理机制。

方法 纳入 2023 年 7 月至 12 月于杭州市第七人民医院儿童心理科门诊就诊的 ADHD 患儿 46 例 (ADHD 组) 以及与之年龄和性别相匹配的 25 例健康对照 (Healthy Controls, HC) 儿童 (HC 组)。比较 ADHD 组在父母教养方式量表 (Egna Minnen Beträffande Uppfostran, EMBU) 得分和 Conners 儿童行为量表得分与 HC 组的差异。采集两组儿童静息闭眼状态下 5~10 分钟脑电图。采用倾向性得分方法控制分组不平衡因素, 采用协方差分析对两组的脑电功率谱密度 (Power Spectral Density, PSD) 和相位锁定指数 (Phase Locking Index, PLI) 进行比较。采用偏相关分析两组差异具有统计学意义的脑电信号特征与 EMBU 得分、Conners 儿童行为量表得分的相关性。

结果 ADHD 组的父母在情感温暖理解方面的得分显著低于 HC 组 (父亲: $t=5.793$, $PFDR<0.001$; 母亲: $t=4.154$, $PFDR<0.001$), 在惩罚严厉方面的得分显著高于 HC 组 (父亲: $t=-4.236$, $PFDR<0.001$; 母亲: $t=-2.996$, $PFDR<0.01$)。ADHD 组的品行问题 ($Z=-5.680$, $PFDR<0.001$)、学习问题 ($Z=-6.599$, $PFDR<0.001$)、心身障碍 ($Z=-3.033$, $PFDR<0.01$)、冲动/多动 ($Z=-6.135$, $PFDR<0.001$)、焦虑 ($Z=-3.330$, $PFDR<0.01$) 和多动指数 ($Z=-6.278$, $PFDR<0.001$) 得分显著高于 HC 组。ADHD 儿童顶区的 β 功率值显著低于 HC ($PFDR<0.05$); PLI 这一功能连接指标显示 ADHD 儿童在大脑额-顶区之间 δ 频段的交互性较 HC 显著减弱 ($PFDR<0.05$)。相关性结果显示, ADHD 儿童顶区的 β 功率、额区-顶区的 δ 频段 PLI 与父母教养方式、行为问题得分之间均未发现具有统计学意义的相关性 (P 均 >0.05)。

结论 神经电生理结果提示脑区功能激活和网络连接受到影响可能是 ADHD 的潜在发病机制之一。

关键词: 注意缺陷多动障碍; 父母教养方式; 功率谱密度; 功能连接

抑郁和焦虑症状在青年群体失眠症状与自伤行为之间的中介作用

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目的 越来越多的研究证据提示失眠症状与自伤行为密切相关。然而,有关失眠症状与自伤行为之间潜在机制尚不明确。本研究旨在探索青年群体失眠症状与自伤行为之间的潜在心理学机制。

方法 2022年12月至2023年5月期间,邀请厦门地区12-25岁青年群体参与本次线上调查。应用青少年健康相关危险行为问卷中2个相关条目对自伤行为进行评估。失眠、抑郁和焦虑症状的评估分别通过失眠严重程度指数量表(ISI)、患者健康问卷-9(PHQ-9)和广泛性焦虑量表(GAD-7)。应用结构方程模型探索抑郁和焦虑症状在失眠症状和自伤行为之间的中介作用。

结果 最终有3436名青年(平均年龄:18.12[2.26]岁,女性2006名)完成本调查并纳入分析,其中707名研究对象(20.6%)自我报告过去一年内有过自伤行为。与无自杀行为相比,有自伤行为的青年失眠、抑郁和焦虑症状的严重程度评分更高。相关分析显示失眠症状与自杀行为显著相关($\beta = 0.343, p < 0.001$)。此外,抑郁($\beta = 0.096, p < 0.001$)和焦虑($\beta = 0.026, p = 0.001$)症状在失眠症状和自伤行为之间起到中介作用。抑郁和焦虑两者总的间接效应占失眠症状与自伤行为之间总效应中79.33%。敏感性分析将PHQ-9中睡眠和自杀自伤相关的条目移除,得到相似的研究结果。

结论 本研究发现抑郁和焦虑症状在失眠症状与自伤行为之间起到了中介作用,这一研究结果提示治疗失眠、抑郁和焦虑症状将有利于促进自伤行为的有效干预。

关键词:失眠;自伤行为;抑郁;焦虑;青年

新冠疫情期间大学生 NSSI、失眠、PTSD 症

状及性别差异的网络分析

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目的 了解新冠疫情期间荆州市学生的非自杀性自伤行为(Non-Suicidal Self-Injury, NSSI)、失眠、创伤后应激障碍(Post-Traumatic Stress Disorder, PTSD)症状及关联性,并探索其网络特征中的性别差异。

方法 本研究在2021年6月至2022年1月期间,采用《青少年学生心理健康状况调查问卷》作为调查工具,包括一般人口学资料以及标准化量表(青少年自我伤害行为问卷、ISI、PCL-5等),通过方便整群抽样的方式,使用问卷星平台对大学生进行调查。共回收8672份问卷,有效问卷7247份(有效率83.57%)。研究使用R软件包中的bootnet、qgraph和networktools,应用IsingFit方法构建了NSSI、失眠和PTSD症状的混合图模型,对模型中的边缘权重和症状的中心性指数进行了稳健性和显著性分析。使用NetworkComparisonTest对不同性别的网络模型进行了差异性检验。

结果 参与本研究者中,男生2970人、女生4277人,平均年龄 20.25 ± 1.21 岁。NSSI检出率15.84%(1148/7247),失眠检出率28.41%(2059/7247),PTSD检出率5.00%(362/7247)。在NSSI、失眠和PTSD症状网络中,最主要的症状是“PTSD-避免想起或谈论过去的那段压力性事件经历,或避免产生与之相关的感觉”和“PTSD-注意力很难集中”,而“PTSD-入睡困难或易醒”、“ISI-入睡困难”是桥接强度最强的症状。NSSI桥接强度最强的症状是“PTSD-感觉和其他人疏远或脱离”和“PTSD-有冒险行为或者做一些可能伤害自己的事情”。男性和女性网络模型存在差异,男性的主要症状是“PTSD-避免想起或谈论过去的那段压力性事件经历,或避免产生与之相关的感觉”“PTSD-记不起压力性事件经历的重要内容”,女性的主要症状是“PTSD-避免想起或谈论过去的那段压力性事件经历,或避免产生与之相关的感觉”“PTSD-注意力很难集中”。网络的中心强度和桥接强度稳定性良好。

结论 本研究揭示了荆州市大学生在COVID-19疫情期间,NSSI、失眠和PTSD症状之间的复杂

关联,主要表现为回避和记忆相关症状、注意力和认知相关症状,以及睡眠相关症状。社会及学校应加强学生心理健康教育,注意防范学生的自伤行为,开展睡眠管理课程和活动,改善睡眠质量,根据学生性别差异,制定不同的干预服务策略。

关键词:网络分析; COVID-19; 学生; NSSI; ISI; PTSD

估。

关键词:信效度,手机应用程序,数字化

高校大学生人格特征与心理健康的地域性别相关性分析:上海新疆跨文化视角

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数字化认知测验的开发与信效度验证

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背景与目的 在第十四届全国人大常委会第七次会议上,《国务院关于精神卫生工作情况的报告》中提出要“深入开展科学研究,开发本土化测评工具”。目前强有力的证据表明,精神疾病发生率在增长,老龄化趋势也进一步突显,随之产生的认知功能障碍发生率也在增长,因此开发认知功能的本土化测评工具是必要的。而目前的认知测评工具多是纸笔测验或基于电脑、平板运行,并且需要专业人员辅助评估。支持自评的、基于智能手机的数字化认知测验尚未得到开发与验证。

本研究旨在开发一种基于移动手机的、支持多人同时进行的自评认知测验,并通过探索其因子结构、内部一致性信度、重测信度、效标效度、天花板效应和地板效应来检验其质量。

方法 160名被试现场或远程完成数字化认知测验。86名被试完成了中文版神经心理状态评定量表(RBANS)以验证效标效度。54名被试参与了两次认知测验。使用项目分析、探索性因子分析、信效度分析方法检验认知测验的可靠性与稳定性。

结果 数字化认知测验 e-Cog 共有 9 个任务,分为 4 个因子:逻辑记忆、工作记忆、言语记忆和视空间记忆,共解释了 71.949%的变异。间隔三周的重测信度为 0.777,内部一致性信度为 0.670,效标效度为 0.806,无天花板效应、地板效应。

结论 这项研究表明,认知测验 e-Cog 是一种科学、有效并且可靠的工具,能够客观、远程地在手机的 Android 和 iOS 操作系统上进行认知功能的评

目的 本研究以新疆与上海两所高校的大学生群体为样本,严谨地运用了艾克森人格问卷简式量表中国版进行了一项大规模的调查。该调查旨在深入探究上海与新疆两地高校青少年的人格特质与心理状态,揭示地域文化、性别差异对大学生人格特征与心理健康之间的潜在联系,旨在为高等教育心理辅导提供科学、实证的支撑依据。

方法 本研究随机抽取了新疆与上海两所高校的大学生为样本,分别收集了 594 名学生的数据。数据收集基于艾克森人格问卷简式量表中国版指导,通过问卷星平台进行在线问卷调查,保证数据质量和成本效益。问卷发放前,研究团队进行了严格审阅和测试,确保内容清晰准确、符合伦理。使用 SPSS26.0 软件进行数据清洗和标准化,剔除无效问卷,确保数据完整可靠。首先进行描述性统计分析,了解样本特征。随后,探究人格维度间的相关性及地域文化、性别等影响。回归分析采用多种模型确保结果稳健可靠。同时,检查共同方法偏差,确保结果精确。

结果 根据统计分析,上海与新疆地区的大学生在人格特质上呈现出显著的差异,这一差异在一定程度上反映了地域文化的影响。在开放性特质方面,上海学生得分较高,这可能与上海作为国际化大都市的开放氛围密切相关,使得他们更易于接受新观念。相较之下,新疆学生在宜人性特质上得分较高,表现出温暖友善的性格特点。在尽责性特质上,上海学生普遍得分较高,这可能与上海高竞争的社会环境有关,使得他们更加注重责任感和使命感。而新疆学生虽然得分稍低。在外倾性特质上,两地学生的得分相近,但上海学生的外倾性特质相对更高,这可能与上海快节奏的生活方式有关;而新疆学生可能更倾向于内省和自我反思。在神经质特质上,上海学生的得分略高,这可能与上海高压

力的生活环境相关。此外,性别因素也在一定程度上影响了学生的人格特质。在上海地区,女性学生可能展现出更强的外向性特质,这可能与上海社会期望和女性角色定位有关。

结论 通过对研究结果的深入讨论,我们揭示了地域文化及性别差异对大学生人格特质的影响,这些发现对于优化教育资源配置、提升教育质量和区域平衡发展具有实际指导意义。同时,我们的研究结果为进一步探究地域文化对个体心理发展的影响提供了实证基础,对于深化人格心理学在跨文化背景下的应用研究具有深远影响。未来的研究可以进一步探索其他地域、文化背景下的大学生人格特质,以构建更全面的跨文化心理学理论框架。

关键词:大学生;人格特质;新疆;上海;性别

音乐疗法联合药物治疗抑郁症睡眠质量的初步分析

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目的 探讨音乐疗法联合药物对抑郁症患者睡眠质量的作用。

方法 选取2018年9月至2019年9月在河北医科大学第一医院精神卫生中心住院的102例抑郁症患者作为研究对象,采用随机数字表法分为对照组和研究组,每组各51例。研究组采用音乐疗法联合SSRIs药物治疗,对照组单独SSRIs药物治疗,音乐治疗仪采用脑波体感放松治疗仪,采用团体治疗的形式,每日上午7:00-7:30治疗,每次治疗30分钟,连续治疗28天(4周)。采用PSQI量表对患者睡眠问题进行评估,采用HAMD量表对患者抑郁情绪进行评估。采集患者的人口学资料:年龄、性别、职业、文化程度、婚姻状况、家庭经济状况等。在治疗前、治疗第一周、第二周、第四周分别评估患者的睡眠状况及抑郁情绪。

结果 (1)在第一周和第二周PSQI减分差异有统计学意义,组别与时间点间无交互作用。不同时间点HAMD差异有统计学意义($F_{时间}=1033.961$, $P_{时间}<0.001$),组别与时间点间存在交互作用($F=4.405$, $P=0.014$)。进一步分析单独的效应,第三和第四时间点研究组的HAMD的减分率均高于

对照组($P<0.05$) (2)不同特征患者PSQI评分比较,男性PSQI得分高于女性($t=2.248$, $P=0.027$ 。

(3)治疗前PSQI高分($t=2.018$, $P=0.047$)为失眠的独立风险因素。

结论 音乐疗法联合SSRIs治疗抑郁症的失眠优于SSRIs单药治疗,睡眠质量在初期治疗得到明显改善。

关键词:音乐疗法;抑郁症;睡眠质量;随机对照实验

手机依赖与人际信任关系的研究

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目的 了解北联大本科生手机依赖的基本特点与人际信任关系的关系。

方法 采用随机抽样的方法,在河北联合大学大一~大四总共300名被试,获得有效问卷284份,其中男生71人,女生213人;城市107人,农村177人;独生子女89人,非独生子女195人。用大学生手机依赖指数量表和人际信任量表(Interpersonal Trust Scale IT)进行测查。采用SPSS13.0对实测数据进行描述统计、相关分析

结果 应用spss系统对284人的大学生手机依赖量表的总分进行探索性分析,其中偏度系数 >0 ,峰度系数 <0 ,数据呈正偏态分布,曲线比较平坦。最高分为115分,最低分为27分,平均分为62.76分。以均值为界,有141人(占49.6%)有手机依赖倾向。应用spss系统对284名大学生的人际信任量表总分进行探索性分析,其中偏度系数和峰度系数均大于0,说明数据呈正偏态分布,曲线比较陡峭。最高分为125,最低分为65,平均分为85.47分。量表得分越高,人际信任度越高。应用spss对大学生手机依赖量表总分与大学生人际信任量表总分进行非参数检验,结果显示两者之间无显著相关。

结论 本调查结果显示,在河北联合大学接受调查的学生中,所有人都拥有手机,其中89.1%的大学生经常随身携带手机,45.7%的大学生晚上睡觉也要开着手机,23.6%的大学生会害怕手机自动关机。本次研究的数据显示在大学生中对手机的依赖倾向比较普遍,这与国内相关研究的结果基本一

致。手机对于大学生已成为一项不可或缺的必需品。但是手机依赖对大学生的身心健康有着不可忽略的危险性。有 24.3% 的大学生更喜欢与人手机交流而不是面对面，26.8% 的大学生当自己没有手机时与别人交流有困难，这显示如果不解决手机依赖问题，长此以往会对大学生的交往能力会产生负面的影响。

大学生这一年龄阶段正处在自我统一性确立的时期，其内心充满成长过程中的冲突与不安，尤其当发现自我设计的理想人生与现实难以达成一致时，痛苦和迷茫使他们需要释放精神压力，需要情绪迁移。如果情感宣泄的途径受到阻碍时，极可能将这些负面情绪发泄在手机上，用手机寻求解脱、排遣郁闷。本次研究显示大学生手机依赖倾向与大学生人际信任情况无显著相关，对于大学生手机依赖的研究可以考虑其他因素进行研究，如孤独感、家庭关系等。

关键词：手机依赖；人际信任度；大学生

间歇性 θ 爆发刺激的机制研究进展

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目的 间歇性 θ 爆发刺激(Intermittent Theta Burst Stimulation, iTBS)是高频经颅重复磁刺激(High-frequency Repetitive Transcranial Magnetic Stimulation, HF-rTMS)治疗模式的一种，可有效改善抑郁症相关症状，其具有高效，低成本特点，较为适合在社区环境进行推广。本研究旨在阐述关于 iTBS 机制的最新研究进展，以及这些进展在临床工作中可能的最新应用方向以及利用这些新发现改善现有治疗的可能方案。当前 DD 复发较高，特别是单一药物治疗复发率较高。故将物理治疗引入 DD 患者日常是迫在眉睫的。iTBS 因其相对低成本与高效率特点，是最有希望的物理治疗之一，故针对其机制的研究与应用，有利于建立低成本且高效的抑郁症社区治疗机制。

方法 检索中国知网、万方数据库、维普数据库、pubmed 和 google scholar，收集国内外关于 iTBS 治疗抑郁症机制相关文献及 iTBS 对于脑源性神经营养因子(Brain Derived Neurotrophic Factor, BDNF)机制相关文献，最终纳入 49 篇文献，并对其进行治

疗评价，因文献质量较好，同质性较差故进行定性分析。

结果 结果显示 BDNF 系统在 iTBS 的抗抑郁作用中具有关键作用，BDNF 系统会对 iTBS 的疗效以及相关联合治疗方案产生一定程度影响。

结论 间歇性 θ 爆发刺激对 BDNF 系统影响可能是抑郁症相关症状改善的原因之一，且其影响 iTBS 的机制可通过多种方式完善 iTBS 治疗，如增效剂应用，rTMS 多模式联合应用，iTBS 的个体化治疗等方向。

关键词：抑郁症；间歇性 θ 爆发刺激；脑源性神经营养因子；高频经颅重复磁刺激；认知功能

青幼期食蟹猴抑郁模型伏隔核单细胞转录组学研究

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目的 儿童青少年抑郁症是造成该年龄段疾病负担的主要原因，与成年抑郁不同具有独特的临床特点和发病机制。近年来有大量研究证实神经元-神经胶质细胞的相互作用参与了抑郁症的发病机制，因此在神经细胞水平研究儿童青少年抑郁症的特异性改变可能为该人群的有效诊断和治疗提供新的线索。

方法 青幼期 CUMS 组食蟹猴表现出典型的抑郁样行为，即蜷缩样行为显著增加、笼内移动移动显著减少、苹果渴求行为显著减少、人类入侵者测试中的焦虑样行为显著增加。根据既往文献报道的经典的 marker 基因，我们将伏隔核的细胞粗分为 5 类(神经元、小胶质细胞、星形胶质细胞、少突胶质细胞、少突胶质细胞前体细胞)。我们发现 CUMS 组伏隔核的细胞特异性转录水平改变，其中星形胶质细胞改变最为明显。激活的 GABA 能突触和抑制的 D-谷氨酰胺和 D-谷氨酸代谢基因组也被发现与表达 D1 和 D2 中棘神经元以及星形胶质细胞亚型的抑郁样行为有关。星形胶质细胞与 D1 和 D2 中棘神经元(如 BMP6 和 ERBB4)在抑制状态下的细胞间通讯也出现异常。此外，我们发现 FKBP5 在抑郁食蟹猴的四种神经胶质细胞中显著升高，而在神经元中没有改变。基于整块组织样本的转录组测序和蛋白

组测序也发现了与单细胞转录组一致点的结果。

结论 上述结果揭示了儿童青少年抑郁伏隔核的细胞类型特异性改变,并可能为这一特殊患者人群揭示新的潜在抗抑郁药物靶点。

关键词: 儿童青少年抑郁症, 青幼期食蟹猴抑郁模型, 伏隔核, 单细胞转录组

基于多重信息筛选的人格种子词典构建

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目的 人格是心理健康的重要影响因素,使用便捷方式快速了解人格可方便我们促进大众心理健康。丰富的人类语言信息(包括词汇、语法等)与人格之间存在很强的关联性且获取便捷,由此利用语言信息构建人格预测模型是人格研究的热点问题。但是,人格标注十分困难,有必要建立一个时兴的、有效的且通用的人格种子词典作为语言信息的基础人格标签或人格先验信息,为语言预测人格的模型构建或大语言模型调优打下基础。

方法 本研究的人格种子词来源于三个方面:人格测评工具、情感词典或词库以及人格与语言的相关研究。对于人格测评工具,如大五人格量表(NEO系列),迈尔斯-布里格斯类型指标(Myers-Briggs Type Indicator, MBTI)等,研究邀请专业心理人员提取量表中的种子词,即量表题目中描述人格的词汇。对于与人格相关的情感词库或词典,通过查阅相关文献,研究采纳了Linguistic Inquiry and Word Count(LIWC)词典中的词汇。对于人格与语言相关的研究,通过文献筛查,研究提取了相关文献中明确了人格维度的词汇。将以上方法收集到的词汇汇总,得到人格种子词及其维度和侧面。然后,以专家投票的形式对初始词汇进行修正,形成初版人格种子词典。最后,对初版的人格词汇库在18-50岁的健康人群中进行检验(共200人),采用问卷调查的方式,同时测评标准大五人格量表以及人格种子词典中词汇的使用偏好调查问卷,统计标准人格维度和侧面与词典中词汇的维度和侧面的匹配度,仅筛选出标准人格与种子词使用偏好匹配度大于80%的词汇,形成终版的人格词汇库。

结果 通过以上步骤构建了5个维度的人格种

子词典,包括外倾性:1277个词汇,严谨性:1109个词汇,开放性:1038个词汇,宜人性:1456个词汇,神经质:984个词汇,其中每个维度均有6个侧面

结论 本研究构建了一个较为丰富的人格种子词典,可适用于一般正常人群,可以作为各类采用语言信息探索人格的模型/大模型提供基础人格标注和先验信息,为方便快捷了解大众人格打下基础。

关键词: 人格, 种子词典, 语言, 标注

COVID-19 感染对中国儿童青少年心理健康的长期影响

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目的 COVID-19感染对儿童和青少年的长期心理健康影响尚不明确。本研究调查了中国取消动态清零政策后,COVID-19感染对儿童和青少年心理健康的影响,重点关注了症状特异性和社会家庭风险因素对心理健康问题的影响。

方法 本研究为期6个月,从2022年9-10月(T1)到2023年4-5月(T2)。研究对象为8348名年龄在10至18岁的青少年,进行了两次评估。我们比较了COVID-19感染组(COVID+, n=4108)和未感染组(COVID-, n=4240)之间的心理健康变化($\Delta=T1-T2$)。在使用逆概率加权平衡T1时的社会家庭混杂因素后,采用多元logistic回归评估COVID-19感染与心理健康症状发生/恶化之间的关联。我们还进行了多元logistic回归分析,探讨COVID+组中与心理健康症状发生/恶化相关的特定急性COVID-19症状和社会家庭风险因素。

结果 与COVID-组相比,COVID+组的整体心理健康改善(Δ)较低。COVID+组与抑郁恶化(OR 1.20, 95% CI 1.04-1.39)、焦虑恶化(OR 1.30, 95% CI 1.15-1.47)、压力恶化(OR 1.23, 95% CI 1.03-1.46)、失眠恶化(OR 1.21, 95% CI 1.05-1.39)以及情绪症状恶化(OR 1.72, 95% CI 1.27-2.33)的风险增加相关。中度到重度思维困难、气短和胃肠症状是与各种心理健康结果恶化相关的特定COVID-19症状。此外,学业困难、家庭经济困难、家庭矛盾、食物成

瘾和饮酒被确定为感染 COVID 青少年心理健康症状恶化的社会家庭风险因素。

结论 COVID-19 感染对青少年的心理健康留下了长期影响,甚至超越了急性感染期带来的影响。认知功能障碍和呼吸/胃肠不适等特定的新冠急性期症状对后期心理健康问题的发生和恶化起着重要作用。与此同时,社会家庭因素进一步调节了这些影响,强调了需要综合干预,同时解决生物学和心理社会方面的问题。

关键词: 心理健康;COVID-19 感染;急性症状;儿童和青少年

(OR [95% CI] 1.83 [1.05–3.21])。中度至重度急性 COVID-19 症状,包括睡眠障碍(2.20 [1.17–4.14]),注意力/记忆力下降(2.47 [1.02–6.00]),胸闷(2.05 [1.08–3.85])和对病毒的恐惧(2.23 [1.11–4.48])是 COVID-19 感染后长期失眠的危险因素。保持规律的运动(0.54 [0.33–0.88])被发现是预防失眠的保护因素。

结论 COVID-19 感染与医学生心理健康状况变差有关,增加了医学生失眠的风险,促进规律运动是预防和治疗长期 COVID-19 感染后失眠的有效措施。

关键词: COVID-19, 医学生, 失眠

新冠急性期症状对医学生长期失眠影响研究

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目的 在新冠肺炎疫情期间,情绪与失眠症状显著增加,而新冠感染急性症状和生活及行为方式对医学生的长期心理健康的影响尚未明确。本研究旨在确定 COVID-19 感染是否是医学生抑郁、焦虑和失眠的风险因素,并探讨与 COVID-19 急性症状和生活及行为方式相关的风险因素。

方法 本研究在 2020 年 3 月至 2022 年 3 月 (T1) 和 2023 年 8 月 (T2) 进行了两次心理健康评估。其中 T1 时期被试均无 COVID-19 感染,在 T2 时期调查 COVID-19 感染情况。比较了两次调查之间感染和未感染 COVID-19 学生抑郁、焦虑和失眠症状的变化差异。使用倾向得分加权法控制人口统计和生活方式等混杂因素,构建逻辑回归模型评估 COVID-19 感染对医学生抑郁、焦虑和失眠症状的发生风险。以 COVID-19 急性期症状和日常生活方式为独立变量,使用逻辑回归寻找 COVID-19 感染后出现心理健康症状的风险因素。

结果 本研究纳入了 2359 名参加过两次调查的医学生,他们的平均年龄为 22.23 岁 (标准差 2.49 岁),1485 (62.95%) 为女性,根据 T2 时期 COVID-19 调查结果分为 COVID-19 阳性组 (n=2021) 和 COVID-19 阴性组 (n=338)。COVID-19 阳性组的抑郁和失眠症状显著高于 COVID-19 阴性组,并且 COVID-19 阳性组与感染后失眠的发生呈正相关性

关于强迫症患者全脑静息态功能磁共振改变的荟萃分析

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目的 强迫症患者某些大脑区域的活动和功能存在异常,静息态功能核磁揭示了这种复杂的差异。然而,既往研究是孤立的,且结果存在异质性。本文通过荟萃分析,探讨静息态下强迫症患者全脑的功能磁共振(包括局部功能一致性,Reho; 低频振幅,ALFF; 低频振幅分数, fALFF; 功能连接, FC) 的一致性特点。

方法 本综述的方法已在 PROSPERO (CRD42024524648) 中注册。自 2024 年 1 月 3 日起,对英文数据库(PubMed、Web of Science、Embase)和中文数据库(中国知网、万方)进行了系统的文献检索,检索策略如下:(强迫症)和((磁共振成像)或(MRI))。提取一般信息包括第一作者、研究出版日期、样本量、性别分布、平均年龄、教育水平、平均患病时间、耶鲁-布朗强迫症量表 (Y-BOCS) 平均总分、药物治疗状态及扫描仪场强。提取了强迫症患者相对于健康对照者的异常峰值坐标及其效应大小,并采用激活似然估计 (ALE) 算法进行基于坐标的荟萃分析,以确定强迫症患者在静息状态下大脑活动的异常区域。使用 GingerALE (v2.3.5) 计算大脑坐标以生成激活概率图。

结果 (1) 共 8037 条记录导入文献管理器,后经对标题、摘要初筛及后续阅读全文复筛,最终

纳入文献 101 篇, 其中 ReHo 共 17 篇, ALFF 共 23 篇, fALFF 共 13 篇, FC 共 55 篇。(2) 与健康对照相比, 强迫症患者未发现一致性的 ReHo 差异; 患者左额中回、左额下回和右顶下小叶的 ALFF 值增加, 右腹侧核和双侧内侧额回中表现出 ALFF 值降低; 患者左小脑后叶 fALFF 值增加。(3) 对进行 FC 描述性统计时未发现较为一致的种子点, 但按其解剖结构进行汇总发现存在较为一致性的异常。

结论 强迫症患者存在一致性的脑区活动异常, 这些异常揭示了强迫症患者存在执行功能异常、意志行为缺陷且无法打破强迫行为(或强迫思维)与焦虑情绪之间的恶性循环的可能原因。

关键词: 强迫症; 静息态; 功能磁共振成像; 荟萃分析

失眠对生活满意度的影响: 一个有调节的中介模型

谢璐欣 李月 喻佳龙 王姝懿 洪家龙 刘莎*
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目的 考察 COVID-19 感染实施“乙类乙管”近 1 年后, COVID-19 感染者失眠、认知、生活满意度的水平, 探讨失眠与生活满意度的关系, 以及认知失败、神经质在其中的作用。

方法 2023 年 12 月采用方便抽样的方法有效回收 956 份问卷。采用认知失败问卷、失眠严重指数量表、生活满意度量表、大五人格简式量表对个体进行评估。采用独立样本 t 检验和方差分析进行不同人口学特征量表得分的差异性检验; 采用回归分析研究变量之间的关系; 通过 Bootstrap 法进行中介效应检验, 采用简单斜率法分析失眠与神经质的交互效应。

结果 1) COVID-19 感染实施“乙类乙管”近 1 年后, COVID-19 感染者中 8.3% 的被试表现出中等及以上程度的失眠; 23.4% 的被试表现出经常及以上频率的认知失败; 52.6% 的被试对自己的生活达到基本满意及以上的程度, 26~50 岁比 50 岁以上的被试表现出更高层次的认知失败; 2) 在控制人口学变量后, 失眠显著负向预测生活满意度 ($\beta = -0.302, p < 0.001$); 失眠显著正向预测认知失败 ($\beta = 0.357, p < 0.001$), 且失眠和神经质交互项显著负向预测认

知失败 ($\beta = -0.087, p < 0.01$); 认知失败显著负向预测生活满意度 ($\beta = -0.236, p < 0.001$)。简单斜率分析的结果表明相比高神经质个体 ($\beta = 3.659, p < 0.001$), 失眠对认知失败的预测作用在低神经质个体中更大 ($\beta = 5.380, p < 0.001$)。

结论 失眠不仅对生活满意度有直接预测作用, 同时还通过认知失败的中介作用预测生活满意度, 且该中介作用的前半段受到神经质水平的调节。

关键词: 失眠; 认知失败; 神经质; 生活满意度; COVID-19

The Association Between Exercise and Transversal Skill Level of Medical Students: The Mediating Role of Personality Traits

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Objective This study aimed to explore the impact of physical exercise on the transversal skill level of medical students and to analyze the mediating role of personality traits in this process

Methods Using an online questionnaire, the study assessed 509 medical students' basic information, exercise intensity, professional identity, social and emotional competence, creativity, and personality traits. The tools used included the Physical Activity Rating Scale-3 (PARS-3), the Medical Students' Professional Identity Scale (MSPI-S), the Social and Emotional Competence Questionnaire (SEC-Q), the Williams Creativity Aptitude Test (WCAT), and the Big Five Inventory-2 (BFI-2). Independent samples t-tests were employed to delineate differences in transversal skill levels among medical students with varying exercise volumes. Pearson

correlation analysis was utilized to clarify the relationship between exercise and the transversal skill levels of medical students. The PROCESS macro developed by Hayes was applied to test the mediating and moderating roles of personality traits between exercise and transversal skill levels

Results The results indicated that medical students with moderate and high volumes of exercise scored significantly higher on professional identity, social awareness and prosocial behaviour, social and emotional competence, creativity, and openness than those with low exercise volumes ($p < 0.05$). Additionally, openness fully mediated the effects of PARS-3 on MSPI-S ($a*b$: Bootstrap SE=0.014, 95%CI=0.009-0.062), SEC-Q ($a*b$: Bootstrap SE=0.019, 95%CI=0.137-0.149), and WCAT ($a*b$: Bootstrap SE=0.022, 95%CI=0.080-0.170). Concurrently, neuroticism partially mediated the effects of PARS-3 on SEC-Q ($a*b$: Bootstrap SE=0.014, 95%CI=0.006-0.062, Effect ratio=25.97%) and WCAT ($a*b$: Bootstrap SE=0.012, 95%CI=0.004-0.052, Effect ratio=13.33%)

Conclusion Moderate physical exercise positively influences the transversal skill levels of medical students. It positively impacts their transversal skills by enhancing openness and reducing neuroticism, thereby strengthening social and emotional competence and creativity. These findings provide empirical evidence for the beneficial role of exercise in medical education, underscoring the significance of integrating physical activity into medical student training to support the holistic development of advanced medical professionals

关键词: Physical exercise, Medical students, Transversal skills, Personality traits, Higher education

后疫情时代大众神经质人格特质对生活满意度的影响: 基于焦虑与抑郁的链式中介作用

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目的 后疫情时代的到来引发了社会、心理健康和生活方式等多方面的深刻变革, 探讨后疫情时代大众人格特质、生活满意度与焦虑、抑郁之间的关系, 为提升大众心理健康提供有价值的参考。

方法 采用问卷调查法进行数据收集, 使用中国大五人格问卷(CBF—PI)、病人健康问卷(PHQ-9)、广泛性焦虑量表(GAD-7)、生活满意度量表(SWLS)作为测量工具, 使用 Pearson 相关分析探讨各量表评分之间的相关关系。采用 Process 进行中介效应检验, 分析焦虑和抑郁在神经质与生活满意度之间的中介作用。

结果 共收回有效问卷 1010 份, 其中男性占比 33.9%, 平均年龄为 33.04 岁 ($SD=11.736$), 城镇占比 65.4%。神经质与焦虑 ($r=0.608$, $p < 0.01$)、抑郁 ($r=0.579$, $p < 0.01$) 呈显著正相关, 与生活满意度 ($r=-0.278$, $p < 0.01$) 呈显著负相关。神经质可显著负向预测生活满意度 ($\beta=-0.083$, $P < 0.05$), 正向预测焦虑 ($\beta=0.434$, $P < 0.001$) 与抑郁 ($\beta=0.122$, $P < 0.001$); 抑郁可显著负向预测生活满意度 ($\beta=-0.398$, $P < 0.001$)。神经质对生活满意度的直接效应为 -0.083 , $P < 0.001$, 占总效应的 32.81%, 抑郁在神经质与生活满意度之间起部分中介作用, 效应值为 -0.048 , 95% CI: $[-0.077, -0.024]$, 占总效应的 18.97%; 神经质通过焦虑和抑郁对生活满意度存在间接效应, 效应值为 -0.132 , 95% CI: $[-0.176, -0.092]$, 占总效应的 52.17%。

结论 后疫情时代大众的焦虑与抑郁在神经质人格与生活满意度之间存在链式中介作用, 神经质人格可以直接影响生活满意度, 也可以通过焦虑和抑郁的链式中介作用间接影响生活满意度。

关键词: 神经质、生活满意度、焦虑、抑郁、心理健康

团体正念认知疗法对抑郁症患者的认知功能的研究

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目的 分析团体正念认知疗法(MBCT)对抑郁

症患者认知功能的影响。

方法 选取在本院心理科诊治的 200 例抑郁症患者为研究对象,选取年限为 2020 年至 2021 年。采用随机数表法将 200 例抑郁症患者分为对照组(100 例)和观察组(100 例),其中对照组患者实施常规心理治疗方案联合药物进行治疗,观察组患者实施团体正念认知疗法联合药物进行治疗。观察并比较两组患者的自主神经认知功能。

结果 与治疗前比较,两组患者治疗后的神经功能均有所改善($P<0.05$);与对照组比较,观察组患者的自主神经功能评分明显更优($P<0.05$)。

结论 团体正念认知疗法在抑郁症患者中的临床效果明显,能有效改善患者的自主神经认知功能,值得推广。

关键词:团体正念认知疗法;抑郁症;认知功能

团体正念认知疗法对焦虑型抑郁症患者的临床应用

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目的 探讨团体正念认知疗法(MBCT)在焦虑型抑郁症患者中的临床应用效果。

方法 选取 2018 年至 2020 年在本院心理科住院的 200 例焦虑型抑郁症患者为研究对象,采用简单化随机表法将 200 例患者分为对照组和干预组,每组各 100 例。其中对照组每周进行 2 次模拟心理治疗(安静的坐在同样的治疗室差不多时间,但中间不给予任何治疗)联合药物治疗,干预组患者每周进行 2 次团体正念训练联合药物治疗。观察并比较两组患者的汉密尔顿焦虑抑郁(HAMD-17)量表和 PHQ-15 量表评估患者的焦虑和抑郁程度。

结果 与对照组比较,干预组患者的 HAMD-17 评分和 PHQ-15 评分均明显更好($P<0.05$)。

结论 团体正念认知疗法在焦虑型抑郁症患者中的应用效果显著,能有效改善焦虑型抑郁症患者的临床症状,值得临床推广应用。

关键词:团体正念认知疗法;焦虑型抑郁症;临床应用

医学专科学校学生马克思主义信仰对心理因素影响的网络分析

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目的 利用心理网络分析医学专科学校学生心理状况,以及马克思主义信仰对学生心理健康的作用影响。为学校进行马克思主义教育、培养学生正确观念、引导学生思想认知的同时注重学生的心理健康状况提供理论指导。

方法 对云南省 706 名医学高等专科学校学生进行问卷调查,问卷内容包含马克思主义信仰水平量表、心理弹性量表、大学生积极幻想问卷、同伴欺凌问卷、网络欺凌问卷、青少年非自杀性自伤行为评定问卷、抑郁症筛查量表和焦虑自评量表等。研究采用 R 语言对数据进行统计分析、网络模型构建和结果可视化。

结果 网络期望值和突现强度为 0.75,具有讨论的意义。马克思主义信仰水平通过对中国特色社会主义道路确信、理论确信、制度确信等三个维度的程度进行评估。发现在医学高等专科学校学生中,制度确信与理论确信与心理弹性正相关,与积极幻想的控制感正相关。道路确信与制度确信与网络欺凌的攻击行为存在潜在的负向相关关系。制度确信、理论确信与非自伤性自伤存在潜在负性相关关系。道路确信、制度确信与抑郁情况存在潜在的负性相关关系。

结论 医学高等专科学校学生的马克思主义信仰水平与其当前不同心理因素密切相关,这种信仰对学生的心理健康产生了积极的影响。学校应该进一步加强对学生的马克思主义教育,帮助学生提高心理素质。

关键词:心理网络分析,医学专科学校学生,马克思主义信仰

Global, Regional and National Mental, Neurological and Substance Use Disorders Among

Young People Aged 10-24 Years: Findings for The Global Burden of Disease Study 2021

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Objective Mental, neurological, and substance use (MNS) disorders stand as the foremost contributors to disease burden among young people globally

Methods Data were obtained from the 2021 Global Burden of Disease study. Prevalence, disability adjusted life years (DALYs), years lived with disability (YLDs), and years of life lost (YLLs) with 95% uncertainty intervals (UIs) were reported. The data was further stratified by age, sex and region

Results A total of 279.0 million, 750.9 million and 29.7 million prevalent cases of mental, neurological and substance use disorders was identified in people aged 10-24. Among MNS disorders, NDs exhibited the highest prevalence, MDs caused the most disabling cases, and SUDs contributed most to mortality in the 10-24 age group. The study also revealed sex-based disparities in mental and neurological disorders across age groups, with higher prevalence of internalizing disorders

such as anxiety and depression in females, and externalizing disorders like conduct disorder, substance use disorders and ADHD in males. Depressive and eating disorders exhibited a notable increase from ages 10-14 to 15-19, whereas schizophrenia, multiple sclerosis, drug use disorders and alcohol use disorders showed further increases from ages 15-19 to 20-24

Conclusion Generally, high-income countries according to the World Bank exhibited the highest prevalence and DALYs rates for MNS disorders. Specifically, Australia and New Zealand had the highest prevalence rates for MDs, Norway and Italy for NDs, and the United States and Canada for SUDs

关键词: Mental disorders, Substance use disorders, Neurological disorders, depression, anxiety

精神病专科医院前急救护理人员工作压力分析及对策

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目的 分析精神病专科医院院前急救工作者心理压力的根因分析、及对应急处置工作和救助患者、家属的影响,探讨院前急救护理人员工作压力和相应对策。

方法 通过对 65 名院前急救工作人员的心理问卷调查、心理访谈和对应急处置中严重事件压力的因果关系进行调查。分析院前急救护理人员存在的工作压力。

结果 院前急救人员 90%的压力来自于自身不良心理因素。78%的压力来自现场急救隐患、转运途中安全隐患。35%压力来自急救护理技术和设备问题。还有患者不配合,家属情绪影响,人际关系等。

结论 精神专科医院救治患者的特殊性,院前急救人员的工作具有高度的复杂性和挑战性,不仅要应对患者的精神症状,还要处理突发的紧急情况,在双重压力下给院前急救人员带来较大的心理压力。另外,精神科护理人员普遍缺乏系统的急救相关专业培训,综合急救素质偏低;导致在院前应急处置中存在一些困难和问题,充分了解院前急救护理人员的工作压力源,有助于帮助他们缓解不良心理

压力。提出对策及时有效地控制急救医护人员心理压力,能提高急救医护人员的专业技术和风险评估能力,促进护理人员的身心健康和积极工作态度,这对于提高护理质量,保障患者权益具有重要的意义。

关键词:院前急救;护士心理压力;安全隐患事件压力

蛋白质 O-GlcNAc 糖基化参与青春期小鼠抑郁共病肥胖的机制研究

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目的 青少年抑郁症的发病率显著上升,给家庭和社会带来了沉重的负担。开展青少年抑郁症的发病机制和治疗方法研究具有重要的社会意义和经济价值。青春期肥胖与抑郁症之间具有密切联系,二者可能互为因果关系。本研究旨在探讨蛋白质 O-GlcNAc 糖基化修饰在应激诱发的青春期小鼠抑郁样行为与肥胖共病中的作用,为青少年抑郁症与肥胖共病的治疗提供新的策略。

方法 研究采用 4 周龄的青春期雄性小鼠,通过给予高脂饮食的肥胖模型与长期束缚应激模型模拟抑郁与肥胖的共病状态。根据行为学指标、体重和血糖观察高脂饮食喂养的青春期小鼠是否出现加重或缓解的抑郁样症状,利用免疫荧光技术关注在抑郁与肥胖共病小鼠中 O-GlcNAc 糖基化富集程度和神经元活性出现显著差异的脑区,并分析两者之间的相关性。

结果 行为学检测结果显示,在高脂饮食和束缚应激模拟青春期抑郁与肥胖共病的小鼠模型中,相对于高脂饮食喂养并经历应激的小鼠,正常饮食喂养的小鼠受到长期应激后出现了显著的体重下降和抑郁样行为,此表征预示着在青春期阶段,高脂饮食有可能缓解应激造成的抑郁样行为。此外,通过观察以夜食综合征为代表的小鼠饮食失调模型中,经历社交挫败应激后的小鼠更容易发生进食量增加、

体重增长以及抑郁和焦虑样行为。进一步通过免疫荧光染色技术,我们发现在小鼠的内侧前额叶皮层、杏仁核等脑区糖基化 O-GlcNAcylation 和 c-fos 水平显著增加,提示其在抑郁和肥胖共病的发生中可能发挥调节作用。

结论 青春期小鼠给予高脂饮食可能缓解长期应激导致的抑郁样行为,蛋白质 O-GlcNAc 糖基化可能参与了应激诱导的抑郁样行为和肥胖共病机制。

关键词: O-GlcNAc 糖基化, 应激, 抑郁症, 肥胖, 青春期, 小鼠

神经质人格特质的功能连接梯度研究及其与认知功能和转录组学的关系

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目的 神经质这一人格特质被认为是精神病理学中的一个重要风险因素,可以预测如重度抑郁症、广泛焦虑症和精神分裂症等一系列疾病。然而,神经质的神经生理机制尚不清楚,目前还未有研究探究不同神经质水平人群的功能连接梯度差异,及其与认知功能和转录组学的关系。

方法 本研究收集了 319 名受试者的艾森克人格问卷(109 名低神经质、210 名中高神经质)和静息态功能磁共振数据,并计算了所有受试者基于体素的功能连接梯度。然后,分析了低神经质组和中高神经质组的主梯度模式差异及其与元分析认知术语、神经递质的关联,并采用偏最小二乘回归(partial least squares regression, PLS)算法基于艾伦人类脑图谱探究差异 Z 图与精神疾病的相似性、功能富集、神经细胞、皮质层和发育富集的关系。

结果 研究发现,与低神经质组相比,中高神经质组在视觉网络(Cohen's $d=-0.574$, $P<0.001$)、边缘网络(Cohen's $d=0.363$, $P=0.006$)和默认网络(Cohen's $d=0.646$, $P<0.001$)的主功能梯度模式存在差异,并且这种差异与多种高阶认知功能(社会认知、决策制定、情感等)和神经递质(五羟色胺、多巴胺等)有关。另外,差异 Z 图与基于基因表达图谱的 PLS1 分数显著正相关。与功能梯度差异相关的 PLS1 基因与孤独症、精神分裂症的失调基因显著相关,与星形胶质细胞的失调基因显著重叠,

主要富集在神经发育、突出信号传导以及免疫系统反应等生物学通路，并且上调基因主要富集在 L1、L2 和 L5 皮质层，以及婴幼儿期至儿童期的丘脑和杏仁核区域，而下调基因主要富集在 L3 和 L4 层，以及幼年期至青少年期的小脑区域。

结论 这些结果为阐明不同神经质人格特质的功能连接梯度改变及其与认知功能、神经递质和微观转录组学的复杂相互作用提供了重要的理论基础。

关键词：神经质，功能连接梯度，认知功能，神经递质，艾伦人类脑图谱

MindUp 正念课程的本土化实施与对青少年总体幸福感提升及焦虑、抑郁情绪改善的研究

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2003 年公益组织霍恩基金会 (The Hawn Foundation) 联合神经科学家、教育家和心理学家共同创立研发 MindUP (心升) 课程。MindUP 课程已在五大洲四十八个国家推广实施。迄今为止，世界各地已有超二十万名教师参与 MindUP 课程培训，帮助了 1000 多万儿童青少年。

MindUP 正念团体课程是一个循证课程，以认知神经科学、正念、积极心理学和社会情感学习四大领域为核心支柱，促进儿童和青少年形成积极的情绪认知、情绪情感、意志品质、行为反应，提升其亲社会性、幸福感、心理抗压力和社会情感能力。MindUP 课程有着扎实的理论基础，以认知神经科学、正念、积极心理学及社会情感学习为四大支柱，分别对应课程的 4 个单元，即“集中注意力”、“强化感知力”、“态度决定一切”、“正念地采取行动”。在课程目标的设计上，整体上立足于认知、情感、意志、行为四个方面帮助学生提升亲社会性、幸福感及社会情感能力。这与我国德育课程设计知情意行合一的思想颇为相似，这为 MindUP 课程在我国的本土化实践提供了天然土壤。

自 2022 年以来，我国引进了 Mindup 团体课程的师资培训，开始了本土化的教学实践，但目前没有研究者对本土化教学实践进行实证研究。

目的 旨在首先通过访谈、专家论证的方法，对 Mindup 课程进行本土化的设计与实施。其次，采用实证研究的方法，验证 Mindup 课程对青少年总体幸福感的提升，及焦虑、抑郁情绪的改善有显著的效果。

方法 访谈法，量化研究，标准化心理评估，问卷调查法，随访研究。在门诊就诊的 12-18 岁、诊断为焦虑或抑郁的青少年患者 (且处于康复期) 中，选取实验组 40 人，实施 Mindup 团体课程，选取 40 人为对照组，不实施 Mindup 团体课程。在团体课程前、课程实施四周后、课程结束后、课程实施 3 个月后、课程实施 6 个月后、课程实施 12 个月后进行问卷调查。调查工具：总体幸福感量表 (GWB)、焦虑自评量表 (SAS)、抑郁自评量表 (SDS)。

结果 实验组的总体幸福感数值显著高于对照组，实验组的焦虑自评量表数值显著低于对照组，实验组的抑郁自评量表的数值显著低于对照组。

结论 Mindup 团体课程适于本土化实施，并且实证研究表明，此团体课程可以提升青少年的总体幸福感，对焦虑、抑郁的情绪改善有显著效果。形成适用于我国本土化的 Mindup 团体课程。

关键词：Mindup 正念团体课程，标准化心理评估，问卷调查法，总体幸福感，焦虑，抑郁

德性践行对生活满意度的影响：责任心和抑郁的链式中介作用

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目的 德性践行 (Moral Practice) 是指以善为本，通过善行善念面对生活，通过感恩施舍奉献自己，以获得道德觉悟包括以善为本和感恩利他。德性践行是灵性应对 (Spiritual Coping) 的核心维度之一。研究表明，灵性应对与个体的人格特质和生活满意度之间存在一定关联。本研究旨在进一步细化灵性应对中的四个维度，研究作为灵性应对核心维度之一的德性践行与责任心、抑郁和生活满意度之间的关系，并研究其与生活满意度之间的关系。

方法 采用网络发放问卷的方式进行数据收集，问卷由五部分组成，包括基本人口学信息、大五人格简式量表 (Chinese Big Five Personality Inventory

Brief Version, CBF-PI-B)、病人健康问卷 (PHQ-9)、灵性应对量表 (Chines Spiritual Coping Scale, CSCS)、生活满意度问卷 (Satisfaction With Life Scale, SWLS)。采用 SPSS 26.0 对数据进行统计学分析, 使用 Harman 单因素共同方法偏差检验; 对各变量进行描述性统计和相关分析; 运用 PROCESS 4.2Model6 和 Bootstrap 法进行链式中介路劲分析和检验, 以 $P < 0.05$ 为差异有统计学意义。

结果 德性践行显著正向预测生活满意度和责任心, 责任心和抑郁在德性践行和生活满意度间发挥链式中介作用。

结论 本研究通过中介效应检验, 探究了灵性应对、大五人格特质、抑郁与生活满意度的关系。发现灵性应对中的德性践行维度与生活满意度之间存在显著的正向预测关系, 为理解灵性应对这一包含一点宗教与哲学意味的概念以及运用灵性应对提高人们生活满意度的实践提供了一定的理论支撑。

关键词: 灵性应对; 德性践行; 大五人格特质; 责任心、抑郁; 生活满意度

基于多模态语音特征的内化外化多分类模型研究

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目的 本研究旨在通过比较不同机器学习模型和语音特征维度组合在分类内化、外化及其共病中的性能, 确定最有效的语音特征维度组合和最佳分类模型。

方法 采用了三种机器学习模型: 随机森林 (RF)、支持向量机 (SVM) 和逻辑回归 (LR)。语音特征分为韵律特征 (Prosodic Features)、声源特征 (Source Features)、谱特征 (Spectral Features) 和时域特征 (Temporal Features) 四个基准维度, 并生成这些基准维度的所有可能组合。使用方差阈值法和相关性分析进行特征选择。应用 SMOTE 技术处理数据不平衡问题。通过随机搜索进行超参数调优, 以加权 F1 分数为主要评估指标。通过 10 倍交叉验证和显著性测试比较不同特征维度组合和模型的性能。分别对男性和女性数据集进行了实验。

结果 通过 15 种不同的特征维度组合进行实

验。对于男性声音, SVM 模型在使用谱和时域特征维度组合时取得最高的加权 F1 分数, 为 0.7007; RF 模型在使用谱特征维度时取得次高的加权 F1 分数, 为 0.6983。对于女性声音, RF 模型在使用谱特征维度时取得最高的加权 F1 分数, 为 0.6817; 其次是 SVM 模型, 加权 F1 分数为 0.6771。LR 模型在两个数据集上的表现均较差, 加权 F1 分数分别为 0.4099 (男性) 和 0.4337 (女性)。在内化、外化及其共病分类任务中, 谱特征维度表现出最强的预测能力。对于男性声音, 结合谱和时域特征维度组合显著提高了 SVM 模型的性能。对于女性声音, 使用谱特征维度即可达到最佳性能。声源特征和韵律特征的贡献相对较小。显著性测试结果表明, 不同特征维度组合间的模型性能存在显著差异 ($p < 0.0001$), 每种特征维度组合的三种模型间的性能也存在显著差异 ($p < 0.0001$)。

结论 优先使用谱特征维度组合, 并采用支持向量机和随机森林模型, 可以显著提高内化、外化及其共病分类的准确性和可靠性。未来研究应继续改进数据平衡技术和优化谱特征维度的提取和处理, 以进一步提升分类性能。

关键词: 语音特征分类, 内化, 外化, 共病, 机器学习

高中生领悟社会支持、应对方式对焦虑、抑郁的影响

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目的 探究领悟社会支持对高中生焦虑、抑郁症状的影响以及应对方式在其中的作用机制。

方法 2023 年 3 月-4 月采用一般资料调查问卷表、广泛性焦虑量表 (GAD-7)、抑郁症筛查量表 (PHQ-9)、领悟社会支持量表 (PSSS) 和简易应对方式量表 (SCSQ), 对来自陕西省某高中的 1473 名高中生进行调查, 通过偏差矫正的 Bootstrap 法进行中介效应检验。

结果 高中生 GAD-7 平均得分为 (5.02±3.88) 分, 检出焦虑症状者 709 人 (48.13%), PHQ-9 得分为 (5.95±4.70) 分, 检出抑郁症状者 776 人 (52.68%);

性别、年级、是否为班干部、应对方式在高中生 GAD-7 得分差异均有统计学意义 ($P < 0.05$)；性别、年级、是否为班干部、父母是否离异、应对方式在高中生 PHQ-9 得分差异均有统计学意义 ($P < 0.05$)；高中生的 GAD-7 得分与 PHQ-9、SCSQ 消极维度得分呈显著正相关 ($r = 0.749, 0.302$, 均 $P < 0.01$)，与 PSSS 得分、SCSQ 积极维度得分呈显著负相关 ($r = -0.350, -0.248$, 均 $P < 0.01$)；高中生的 PHQ-9 得分与 PSSS、SCSQ 积极极维度、SCSQ 消极维度得分呈显著负相关 ($r = -0.452, -0.304$, 均 $P < 0.01$)，与 SCSQ 消极维度得分呈显著正相关 ($r = 0.330$, $P < 0.01$)；积极应对方式和消极应对方式在领悟社会支持对焦虑、抑郁影响中的平行中介效应有统计学意义，中介效应占比分别为 31.97% 和 26.19%。

结论 高中生中焦虑和抑郁症状的检出率较高，提高高中生对社会支持的认知和理解，积极鼓励他们采取积极的应对方式，减少消极应对方式的使用，可以有效降低他们的焦虑和抑郁水平。

关键词：焦虑；抑郁；高中生；领悟社会支持；应对方式

Effects of Transcranial Direct Current Stimulation on Response Inhibition: A Meta-analysis of Stop Signal Task Performance

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Objective Response inhibition is a hallmark of executive control. Response inhibition dysfunction has been identified as the main maintenance mechanism of a series of mental disorders, such as attention-deficit-hyperactivity-disorder, binge eating disorder and addiction. In recent years, many studies have reported the effect of transcranial direct current stimulation (tDCS) on response inhibition. Given the different large parameter spaces in the study design, tDCS types, and task procedures, it is essential to make a quantitative analysis of the existing literature in this field. So, the main purpose of this meta-analysis was to explore whether tDCS

could improve the response inhibition function. In addition, several moderator variables were investigated

Methods We performed a comprehensive literature search for studies published from data inception to June 2024 including the PubMed/MEDLINE database, Web of Science, PsychInfo and Embase. In order to focus on the ability to interrupt an already initiated reaction, only studies that assessed response inhibition in the stop-signal task (SST) were included. Hedges 'g' was used to quantify the effect size of stop-signal reaction time (SSRT) changes before and after tDCS intervention. Due to the difference in mechanism, the influence of tDCS polarity was first investigated, and then other moderator variables were analyzed respectively

Results A total of 68 effect sizes involving 1939 participants were extracted from the 34 included studies, with 50 effect sizes for anodal tDCS stimulation and 18 for cathodal tDCS stimulation. The results of meta-analysis showed that anodal tDCS had a modest to moderate and significant overall effect on response inhibition ($g = 0.39$, $CI [95\%] = 0.27 \sim 0.50$, $P < 0.0001$), while cathodal tDCS had a weak and insignificant effect ($g = 0.07$, $P = 0.32$). Further moderator and subgroup analysis on the study of anodal tDCS indicated that target electrode placement performed as a significant moderator

Conclusion Based on the studies included, our results revealed that anodal tDCS elicit a modest to moderate effect on improving the response inhibition. And we further substantiated previously observed differences between brain regions, i.e., involvement of the right inferior frontal gyrus (rIFG), the right dorsolateral prefrontal cortex (rDLPFC) and the motor-related cortex (M1 and pre-SMA) in inhibitory control. Overall, our findings quantitatively demonstrate the potential of anodal tDCS to improve response inhibition function and provide quantitative evidence for the application of anodal tDCS in precise treatment of diseases characterized by response inhibition dysfunction

关键词：Stop-signal task, Response inhibition, Meta-analysis, Inhibitory control, Transcranial direct current stimulation, tDCS

中国大学生对跨性别者的态度调查

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目的 了解大学生对跨性别者的态度及影响因素。

方法 于2024年3月—4月,在线招募全国大学生3115名,通过网络平台发放《跨性别态度与信念量表》对大学生进行问卷调查,该量表包括人际关系舒适性(IC)、性别信念(SGB)和人类价值(HV)3个维度,总分在26—182之间,得分越高,表示对跨性别者的态度越包容。

结果 (1)中国大学生在跨性别者信念与量表上的得分为 128.73 ± 31.93 ; (2)相比于男生,女大学生在跨性别者态度与信念量表上的得分更高($t=-3.892, p<0.001$); (3)相比于家庭居住地为农村的学生,家庭居住地为城市的大学生性别信念(SGB)与人类价值(HV)维度的得分更高($t=-2.328, p<0.05$; $t=2.423, p<0.05$); (4)相比于生活中无跨性别者朋友的大学生,生活中有跨性别者朋友的大学生量表得分更高($t=-2.685, p<0.01$); (5)相比于其他学历学生,本科生量表得分更高($F=5.302, p<0.01$); (6)相比于其他专业,法学、文学和教育学专业的大学生性别信念(SGB)与人际关系舒适性(IC)维度的得分更高,医学生人类价值(HV)维度得分更高($F=1.881, p<0.05$; $F=2.163, p<0.05$; $F=5.476, p<0.001$); (7)父母亲文化程度为硕士及以上的大学生在跨性别者态度与信念量表上的得分更高($F=9.889, p<0.001$; $F=6.870, p<0.001$)。

结论 (1)中国大学生对跨性别者持包容态度; (2)女大学生、家庭居住地为城市、生活中有跨性别者朋友、本科生、父母亲文化程度高的大学生对跨性别者的态度更包容。

关键词: 大学生,跨性别者,态度

四川省青少年及青年学生的体育锻炼与心理健康

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目的 体育锻炼对心理健康有积极的影响作用,这种影响因锻炼类型、频率、持续时间而不同。本研究旨在探索青少年及青年学生群体的体育锻炼状况和心理健康问题之间的关系,为学生心理健康的预防干预提供工作。

方法 采用方便抽样,发放线上问卷。受访者为四川省的初、高中和大学生。内容包括:基本信息,体育锻炼信息(是否锻炼,单次锻炼时长,锻炼频率,锻炼方式),以及精神健康问题量表(PHQ-9、GAD-7)。采用卡方检验比较不同体育锻炼状态下学生的心理健康问题。采用逻辑回归探索不同运动方式、时长、频率对有体育锻炼的学生心理健康问题的影响。

结果 共55773名学生参与。近一年有体育锻炼习惯的学生有34272名(61.4%),有体育锻炼的学生出现抑郁(31%)和焦虑(26.9%)的率显著低于无体育锻炼的学生(46.8%, 39.8%, $P<0.001$)。从时长来看,单次运动时间为 ≤ 30 分钟,30-60分钟,60-90分钟, ≥ 90 分钟的学生发生抑郁(31.6%, 29.9%, 32.6%, 32.2%)和焦虑(26.8%, 26.2%, 28.2%, 28.3%)的率显著低于无体育锻炼的学生(46.8%, 39.8%, $P<0.001$)。从频率来看,每周运动 ≤ 1 次,2次,3次,4次, ≥ 5 次的学生发生抑郁(31.4%, 31.0%, 30.4%, 31.7%, 31.2%)和焦虑(27.3%, 26.6%, 26.7%, 27.1%, 27.3%)的率显著低于无体育锻炼的学生(46.8%, 39.8%, $P<0.001$)。从锻炼方式来看,从事任何形式(散步、有氧、健身房运动、骑行、挥拍类、其他球类、水上运动、家务劳动、活动、慢跑,其他)的体育锻炼,学生的抑郁和焦虑的率都更低($P<0.001$)。与单次运动时间 ≥ 90 分钟相比,30分钟及以下,30-60分钟的学生出现抑郁($OR=0.908, 0.863, P<0.05$)和焦虑($OR=0.851, 0.851, P<0.001$)的风险更低。与“其他类型”的运动相比,散步、骑行、挥拍类运动的学生出现抑郁($OR=0.596, 0.602, 0.621, P<0.001$)和焦虑($OR=0.608, 0.639, 0.643, P<0.001$)的风险更低。

结论 青少年及青年学生的心理健康问题与其体育锻炼显著负相关,任何时长、频率、类型的体育锻炼对学生心理健康都有积极意义,但适度的运动时长、适宜的运动方式效果更佳。

关键词: 青少年学生,青年学生,体育锻炼,心理健康

童年创伤对青少年学校适应的影响：边缘人格特征与社会支持的中介作用

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目的 探讨童年创伤对青少年学校适应的影响,以及边缘人格特征和社会支持在二者之间的作用机制。

方法 采用童年创伤问卷(CTQ-SF)、学校适应量表(SAS)、边缘人格特征量表(BPF5-C)以及社会支持量表(SSS),对2616名青少年学生进行问卷调查,使用SPSS进行相关分析,PROCESS进行链式模型分析。

结果 (1)相关分析表明,童年创伤与社会支持和学校适应显著负相关($r = -0.37, -0.41, P < 0.01$),与边缘人格特征呈显著正相关($r = 0.37, P < 0.01$)。边缘人格特征与社会支持、学校适应呈显著负相关($r = -0.40, -0.55, P < 0.01$)。社会支持与学校适应显著正相关($r = 0.53, P < 0.01$)。(2)边缘人格特征在童年创伤与学校适应之间起部分中介作用,效应量为33.33%;社会支持在二者之间中介效应量为20.51%;边缘人格特征与社会支持的链式中介效应量为7.70%,三条路径中介效应占总效应的61.54%。

结论 童年创伤既能直接负向影响青少年学校适应,也可以通过三条路径间接影响学校适应:一是边缘人格特征的单独中介作用,二是社会支持的单独中介作用,三是边缘人格特征与社会支持的链式中介作用。

关键词: 童年创伤; 学校适应; 边缘人格特征; 社会支持

音乐会的不同形式对有音乐训练者与无音乐训练者情绪反应差异研究

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目的 听音乐可激发人类情绪体验,音乐会作

为一种常见的音乐表演形式常见于人类的日常生活中。然而,有无音乐训练的不同人群对现场音乐会实时的情绪体验研究较少。本研究基于智能手机生态瞬时评估(ecological momentary assessment, EMA)探讨不同音乐训练背景人群对音乐会不同形式下情绪体验的差异性。

方法 音乐会形式包含沉浸式音乐聆听(上半场)与互动式音乐体验(下半场)两个环节,每个环节各60分钟。共招募97名成年在校大学生,其中有音乐训练者(Music Trainer [MT组], $n=46$)和无音乐训练者(Non-Music Trainer [NMT组], $n=51$)。每名被试均在音乐会开始前,上半场结束后,和下半场结束后分别进行3次EMA评估,评估内容为对当下情绪的愉悦度、精力状态和紧张度。

结果 MT组与NMT组在沉浸式音乐聆听与互动式音乐体验下情绪愉悦度与精力状态存在差异。MT组愉悦度和精力状态在沉浸式音乐聆听后有显著性提升,而NMT组愉悦度和精力状态在互动式音乐体验后有显著性提升,紧张度则在两组间无差异无显著差异。

结论 音乐训练造成的音乐感知差异提升了对聆听音乐的情绪体验,但无音乐训练者也可通过互动式音乐体验改善情绪。本研究也进一步提示,音乐治疗作为干预手段是应考虑来访者音乐训练背景,提供合适的治疗方案尤为重要。

关键词: 现场音乐会, 音乐训练, 生态瞬时评估, 情绪反应

适应不良完美主义对青少年情绪和行为问题的影响：基于个体中心的潜在剖面分析

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目的 负性完美主义水平高者易出现情绪障碍和行为问题。本研究以个体为中心的视角,通过调查青少年情绪和行为问题的亚群体及剖面特征,探讨适应不良完美主义对青少年情绪和行为问题的影响。

方法 采用长处和困难问卷(Strengths and Difficulties Questionnaire, SDQ)、中文版Frost多维完美

主义量表 (Chinese Frost Multidimensional Perfectionism Scale, CFMPS), 在线收集 12-18 岁在校生成数据, 有效问卷 1115 例, 男: 女=1.33, 平均年龄 14.97 ± 1.50 岁。采用潜在剖面分析 (LPA) 和 Logistics 回归等方法进行数据分析。

结果 (1) Pearson 相关: SDQ 总分、困难总分及 SDQ 除亲社会行为的维度都与适应不良完美主义及所含维度呈显著正相关 ($p < 0.05$), 而 SDQ 中亲社会行为与适应不良完美主义总分、父母期望、个人标准、行动的疑虑三个维度显著负相关 ($r = -0.10, p < 0.001$; $r = -0.15, p < 0.001$; $r = -0.17, p < 0.001$; $r = -0.12, p < 0.001$)。 (2) 情绪和行为问题存在三类最佳剖面: C1 无风险 (5.83%)、C2 轻度风险 (69.42%) 和 C3 中高度风险组 (24.75%) (AIC=22221.23, BIC=22331.59, aBIC=22261.71, Entropy=0.88, LMR ($p < 0.01$), BLRT ($p < 0.001$))。 (3) 单因素方差分析: 三组成员在适应不良完美主义及各维度上均差异显著 ($p < 0.001$), 事后检验发现 SDQ 的 3 种剖面在适应不良完美主义中 (除担心错误维度): $C3 > C2 > C1$, 担心错误维度: $C3 > C2, C3 > C1$ 。 (4) 多项式 logistics 回归: 适应不良完美主义中, 担心错误 (CM)、父母期望 (PE)、个人标准 (PS)、行动的疑虑 (DA) 维度都对 C2 组有显著预测作用, 以 C1 组为参照, PE、PS、DA 因子得分高者更易进入 C2 组 ($OR = 1.13, p < 0.05$; $OR = 1.26, p < 0.01$; $OR = 1.27, p < 0.01$), CM 维度每升高一单位, 其属于 C1 组的发生比降低 27% ($OR = 0.73, p < 0.001$); C3 组中 PS、DA 维度得分高者比例更高 ($OR = 1.21, p < 0.05$; $OR = 1.49, p < 0.001$)。

结论 青少年情绪和行为问题存在群体异质性, 轻度风险占比最高, 且各剖面在适应不良完美主义上存在组间差异。适应不良完美主义的个人标准、行动的疑虑维度可能是预测青少年情绪和行为问题风险上升的潜在指标。

关键词: 青少年, 情绪和行为问题, 适应不良完美主义, 潜在剖面分析, 个人中心分析

医学生自杀自伤行为风险预测模型的构建与评估

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目的 探究医学生自杀自伤行为的特征和影响因素, 构建 Logistic 回归风险预测模型。

方法 2022 年 3 月至 2024 年 4 月, 经过知情同意后, 使用电子版人口学信息调查表、患者健康问卷 (Patient Health Questionnaire, PHQ-9)、广泛性焦虑量表 (Generalized Anxiety Disorder, GAD-7)、社会支持评定量表 (Social Support Rating Scale, SSRS) 和压力感受量表 (Perceived Stress scale, PSS-10) 对某高校的 4406 名医学生进行网络调查, 并使用由简明国际神经精神访谈 (Mini-International Neuropsychiatric Interview, MINI) 改编的自评量表评估医学生的自杀自伤行为。根据问卷收集时间, 将 2022 年 3 月至 2023 年 12 月采集的数据作为训练集 ($n = 2626$), 将 2024 年采集的数据作为测试集 ($n = 1780$)。使用卡方检验和 t 检验和进行单因素分析。基于单因素分析结果筛选变量, 对训练集数据使用多元 Logistic 回归分析构建医学生自杀自伤风险模型。使用 ROC 曲线下面积、特异度、灵敏度和约登指数对模型效果进行评价。

结果 调查期间, 医学生自杀自伤行为自我报告检出率为 3.3%。单因素分析显示, 自杀自伤行为报告者的抑郁症状评分、焦虑症状评分、压力感知评分显著高于未报告自杀自伤者, 社会支持水平显著低于为报告自杀自伤者 (t 值为 -15.322、-13.440、-13.265 和 7.814, P 值均 < 0.001)。女性、有心理疾病史、家庭经济情况自评为差或较差的医学生, 自杀自伤行为自我报告率更高 (χ^2 值为 10.743、37.585 和 8.287, P 值均 < 0.05)。多元 Logistic 回归分析显示, 抑郁情绪 ($OR = 1.33$)、使用烟酒 ($OR = 3.18$)、心理疾病史 ($OR = 5.17$) 和家庭经济情况差 ($OR = 3.71$) 是医学生自杀自伤的主要危险因素 ($P < 0.05$)。在验证集中使用风险评分模型, ROC 曲线下面积为 0.870 (95% 置信区间为 0.833~0.908, $P < 0.001$)。取最佳截断值时, 灵敏度 83.7%, 特异度 87.6%, 约登指数 71.3%。

结论 医学生自杀自伤行为的影响因素较多。基于 Logistic 回归的风险评估模型对医学生自杀自伤行为具有一定的预测价值。高校应关注自杀自伤行为的预测因素, 及时对高风险个体开展心理干预措施。

关键词: 大学生, 医学生, 自杀自伤, 预测模型, 影

响因素

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苯二氮卓类药物的滥用、误用和依赖的患病率及危险因素：一项 Meta 分析和系统评价

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目的 本研究旨在系统评估苯二氮卓类药物的滥用率，并探讨其主要危险因素，为公共卫生政策的制定和临床干预措施提供科学依据。

方法 我们检索了截止到 2024 年 5 月 8 号的 PubMed、Embase、Cochrane、PsycInfo、web of science 五个数据库，从中筛选出关于苯二氮卓类药物滥用的研究。纳入标准包括：报告苯二氮卓类药物滥用率的原始研究，并包含至少一个潜在危险因素的数据。使用随机效应模型对滥用率进行 Meta 分析，并通过亚组分析探讨危险因素的影响。

结果 目前暂纳入 6 项研究，涉及样本总数为 1383212 人。综合分析显示：在一般人群中，苯二氮卓类药物的总体滥用率为 1.92% (95% CI: 1.84%-2%)。亚组分析发现，女性 (OR=1.68, 95% CI: 1.58-1.79)、未婚 (OR=1.28, 95% CI: 1-1.62)、独居 (OR=1.42, 95% CI: 1.23-1.64)、低收入 (OR=1.21, 95% CI: 1.12-1.3)、重度抑郁 (OR=4.19, 95% CI: 3.88-4.52)、有自杀意念 (OR=3.41, 95% CI: 3.12-3.72) 等是主要危险因素。

结论 苯二氮卓类药物的滥用在不同人群中差异显著，女性、未婚、独居、低收入、重度抑郁症及存在自杀意念的个体是主要的高危人群。针对这些高危人群的干预措施应加强，以降低苯二氮卓类药物的滥用风险。本研究存在局限性，比如目前纳入研究暂时较少；研究人群为一般人群，可能无法代表特定高危人群等，未来的研究应重点关注精神疾病人群，并进一步探讨其他潜在的危险因素。

关键词：苯二氮卓;滥用;依赖;患病率;危险因素

目的 抑郁症是影响儿童青少年的第二大精神障碍，但是目前其药物治疗效果差，根本原因在于其发病机制不清，而目前的抗抑郁药物主要针对成人抑郁症发病机制。亟需探究儿童青少年抑郁症的发病机制，优化其治疗。在目前抑郁症发病机制中，炎症假说和细胞因子假说中，活性氧 (ROS) 在其中发挥重要作用，升高可能导致抑郁症。而铁死亡是 ROS 在亚铁离子催化下氧化脂膜上的多不饱和脂肪酸，导致脂质过氧化物堆积，最终导致细胞死亡。进来研究表明铁死亡在抑郁症中也发挥重要作用，但是其具体作用和机制还未阐明，尤其在儿童青少年中未有研究。因此本研究的目的是探究铁死亡在儿童青少年抑郁症患者中的表达情况与其作用，为儿童青少年抑郁症的治疗提供新的见解

方法 收集儿童青少年抑郁症患者与健康对照组受试者全血，以分离血清；采用 Elisa 与生化检测试剂盒验证铁死亡通路——谷胱甘肽 (GSH)、谷胱甘肽过氧化物酶 4 (GPX4)、铁蛋白 (Ferritin)、丙二醛 (MDA)、转铁蛋白受体 1 (TFR1)、亚铁离子 (Fe²⁺) 在血清中的表达情况。

结果 Elisa 结果显示，与健康对照组受试者相比：Ferritin 与 TFR1 在儿童青少年抑郁症患者中表达明显升高，GPX4 在儿童青少年抑郁症患者中表达明显降低。生化检测结果显示，与健康对照组受试者比较：GSH 在儿童青少年抑郁症患者中表达明显降低，MDA 在儿童青少年抑郁症患者中表达明显升高，亚铁离子在二者中的表达无差异。

结论 Elisa 结果与生化检测结果显示，儿童青少年抑郁症患者血清中还原性物质明显降低，而其铁死亡产物 MDA、铁代谢途径 Ferritin 与 TFR1 的表达明显升高，血清检测结果提示在儿童青少年抑郁症患者确实发生了铁死亡。但是具体机制还需要进一步探究

关键词：儿童青少年；抑郁症；铁死亡

铁死亡在儿童青少年抑郁症中的作用与机制研究

大学生心理健康与人格结构的关系及其中介因素

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目的 D型人格作为一种人格特质倾向对大学生心理健康有着重要影响,大学生在学业过程中会面临诸多挑战,有D型人格特质的学生易体验到消极情绪,并长期处于这种情绪中。本文旨在探讨大一新生D型人格特质与快感缺失的关系,分析应对方式和心理韧性在其间的中介作用。

方法 2021年9月,采用便利抽样法选择无锡某高校的864名大一新生为研究对象,采用一般人口学问卷、中文版时间体验愉悦量表(Temporal Experience of Pleasure Scale, TEPS)、D型人格量表(DS-14)中文版、简易应对方式问卷及心理韧性量表(CD-RISC)中文版对其进行调查。

结果 大一新生D型人格特质检出率为42.8%,快感缺失得分为(86.57±13.46)分。大一新生D型人格与快感缺失呈负相关($r=-0.161$, $p<0.01$),心理韧性和积极应对方式在D型人格与快感缺失间起完全中介作用。

结论 D型人格特质对大学生的心理健康状态具有一定预测作用,具有D型人格特质的大学生倾向于通过积极应对方式和心理韧性调节其快感缺失,学校需重点关注大一新生的D型人格特质,充分利用应对方式和心理韧性的可干预性,缓解其快感缺失。

关键词: 大学生; D型人格; 快感缺失; 心理韧性

Effectiveness of Plant-based Biophilic Interventions on Depressive Symptoms Among People with Mental Disorders: Protocol for A Systematic Review and Meta-analysis of Randomized Controlled Trials

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Objective Biophilic interventions, stemming from the concept of biophilia, which hypothesizes human have innate connection with nature, has become a new approach to incorporate the positive experiences of

nature into the design of the environment. Biophilic interventions include natural sounds, aromatherapy, green plants, views of nature and so on. Biophilic interventions can be organized into three categories (i.e., nature in the space, natural analogues, and nature of the space), and plants are often the momentous elements. Plant-Based biophilic interventions (PBIs) have been utilized to reduce stress, improve cognitive function and creativity, improve psychological conditions and expedite healing, which is essential for providing people opportunities to live and work in healthy places and spaces with less stress and greater overall health and well-being. Previous studies have reported their effectiveness on depression symptoms in heterogeneous groups of mental disorders. Despite growing interest, there is no comprehensive and systematic synthesis of the evidence on the characteristics and effectiveness of various PBIs in the literature. To address the aforementioned knowledge gaps, this systematic review and meta-analysis aims to examine the empirical evidence concerning the effectiveness of PBIs in mitigating depressive symptoms across diverse mental disorders

Methods The conduct and reporting of the review will follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. We have registered our systematic review and meta-analysis with PROSPERO. We will conduct a comprehensive search for randomized controlled trials studies of interventions published from database inception until Jun 16, 2024 in MEDLINE, Embase, Cochrane Central Register of Controlled Trials (CENTRAL), PsycINFO, CINAHL, Scopus and Google Scholar (first 200 records). In addition, we will manually search the first 200 records on Google Scholar and browse the reference lists of included studies and relevant reviews. Only English-language articles were included. The quality of RCTs was assessed using the version 2 of the Cochrane tool for assessing risk of bias in randomized trials (RoB 2). We will provide a narrative overview of the findings from eligible studies. With sufficient data, a meta-analysis will be conducted

Results We anticipate that participants receiving PBIs will exhibit a significant reduction in depressive symptoms in between-group comparisons. And effect

sizes will be significantly associated with the length of intervention sessions

Conclusion To our best knowledge, this systematic review is the first to provide an overview of PBIs, including intervention characteristics and their effects on related mental health outcomes. If successful, this study will provide critical evidence that the PBIs are efficacious for alleviating depressive symptoms in individuals with mental disorders, potentially leading to the adoption of PBIs as a novel and effective intervention approach in conjunction with other treatments in clinical settings

关键词: Depression, mental disorders, plant, intervention, meta-analysis

The Impact of COVID-19 Related Trauma Memory on Long-term Mental Symptoms

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Objective Coronavirus disease 2019 (COVID-19) can be traumatic in terms of the threatened personal safety and intrusive experience of guilt, which may lead to mental health problems and undermine mental well-being. This study aims to investigate the association between COVID-19 related trauma memory and long-term mental symptoms

Methods This study recruited community populations who had normal or corrected-to-normal vision and aged 15 years or older. We collected the demographic characteristics, including age, gender, education, marital status, occupation, monthly family income,

COVID-19 vaccination status and time, history of physical diseases, history of mental disorders and family history of mental disorders. The acute and chronic physical symptoms among participants with COVID-19 were assessed by the symptom questionnaire. Chronic mental health included depression, anxiety, insomnia, acute stress, and PTSD symptoms. The participants were instructed to focus on neutral and trauma-related pictures, and to provide fear, valence and arousal ratings of each picture. The mean fear scores ≥ 6 were defined as fear of trauma cues. Relationships were examined between mental symptom scores and picture ratings

Results A total of 641 volunteers were included in this study, with 212 feeling fear of trauma cues (Fear group) and 429 participants feeling no fear of trauma cues (No-fear group). No difference in the history of physical diseases, history of mental disorders, and family history of mental disorders was found between Fear group and No-fear group. However, the prevalence of any of mental symptoms was higher in Fear group than No-fear group (67.5% vs 49.9%; $P < 0.001$). Compared with No-fear group, Fear group had higher prevalence rates of anxiety (28.7% vs 43.4%; $P = 0.002$), depression (41.0% vs 52.4%; $P = 0.038$), insomnia (30.3% vs 48.6%; $P < 0.001$), and acute stress/PTSD symptoms (5.8% vs 14.2%; $P < 0.001$). The result of partial correlation analysis showed that the fear of trauma cues was significantly correlated with increased prevalence of anxiety, depression, insomnia and acute/PTSD symptoms after adjusting for potential confounders

Conclusion The fear of trauma cues was associated with risk of any of mental symptoms and specific mental symptoms, including anxiety, depression, insomnia and acute/PTSD symptoms. These findings demonstrate the significance of comprehensive evaluation and management of trauma memory during the pandemic

关键词: Trauma memory, mental symptoms, correlation

短期焦点解决治疗在城市留守儿童认知偏向干预中的应用研究

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目的 随着我国城镇化进程的加速,大量农村劳动力涌入城市,导致城市中留守儿童数量日益增多。这些儿童由于缺乏父母直接的关爱和教育,容易产生一系列心理问题,其中认知偏向尤为突出,表现为对自我价值的低估、对未来期望的消极以及对社会关系的过度敏感等。本文旨在探讨短期焦点解决策略在干预城市留守儿童认知偏向方面的有效性。

方法 研究采用准实验设计,将64名城市留守儿童随机分为实验组和对照组,每组32人。实验组接受为期四周的短期焦点解决干预,内容包括自我效能感提升、积极情绪培养等;对照组则维持常规学校教育。干预前后,通过标准化的心理测量工具评估两组儿童的认知偏向水平,包括自我概念、感知社会支持和社会适应能力等方面。

结果 经过短期焦点解决干预后,实验组儿童的认知偏向有显著改善,具体表现在自我评价更加积极、对未来持乐观态度以及社会交往能力增强。与对照组相比,实验组在上述各项指标上均有明显提升,且差异具有统计学意义。

结论 短期焦点解决策略能够有效纠正城市留守儿童的认知偏向,促进其心理健康和全面发展。

本研究为城市留守儿童的心理干预提供了新的视角和方法,强调了短期、集中、目标导向的干预模式在解决这一群体特定心理问题上的潜力。未来研究可进一步探索该策略在不同年龄、性别及文化背景下的适用性和效果,以期为更多城市留守儿童提供有效的心理支持。

关键词: 短期焦点解决治疗,城市留守儿童,认知偏向

新型神经营养因子 MANF 通过内质网应激 PERK/ATF4 通路调控神经元铁死亡在抑郁症中的机制研究

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目的 抑郁症是医学研究领域的难点,对其机制的研究需要寻找新的突破点,神经元铁死亡在抑郁症中发挥重要作用。新型神经营养因子 MANF 是抑郁症中调控神经元铁死亡的关键分子,本研究拟研究 MANF 在抑郁症中的作用及其下游调控机制。

方法 建立小鼠 CSDS 抑郁模型,采用社会交互、糖水偏好、旷场、悬尾和强迫游泳等实验评估小鼠抑郁样行为学表现;使用 Western Blot 和 RT-PCR 技术,比较 CSDS 抑郁敏感组和对照组小鼠抑郁相关脑区(mPFC 和海马)MANF 的表达,筛选 MANF 调控抑郁的脑区;采用免疫荧光技术,观察 MANF 与神经元(NeuN)、小胶质细胞(Iba-1)、星形胶质细胞(GFAP)和少突胶质细胞(Olig2)的共定位情况;采用 CSDS 抑郁模型,向小鼠双侧海马注射 MANF 过表达病毒,阐明小鼠海马上调 MANF 对抑郁样行为的影响;借助 MANF 敲减病毒,向小鼠双侧海马注射 MANF 敲减病毒,探明敲减海马 MANF 对小鼠应激敏感性的影响;采用高尔基染色技术,观察过表达或敲减小鼠海马 MANF 蛋白对神经元形态的影响,并借助脑片膜片钳技术,探究 MANF 对海马神经元兴奋性的影响;采用免疫共沉淀技术,观察 MANF 和 PERK 的交互作用。

结果 1.CSDS 抑郁敏感小鼠海马脑区 MANF 表达上调;2.小鼠海马脑区特异性敲减 MANF 增加对应激的敏感性;3.小鼠海马脑区敲减 MANF 导致神经元铁死亡和树突棘形态改变;4.小鼠海马脑区过表达 MANF 改善抑郁样行为;5.PERK-ATF4 通路可能是抑郁症中 MANF 调控神经元铁死亡的下游通路。

结论 在 CSDS 抑郁模型中,小鼠海马 MANF 的表达上调,激活 PERK/ATF4 内质网应激通路,促进神经元铁死亡,最终导致抑郁症的发生。

关键词: 抑郁症;MANF;铁死亡;内质网应激

内蒙古赤峰地区高中生睡眠问题现状调查

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目的 为调查高中生的睡眠情况,探究失眠与

情绪状态间的相关性,本研究在内蒙古赤峰地区高中生中进行睡眠情况调查,针对不同性别及年级学生睡眠情况进行了统计。采用焦虑自评量表对学生的心理状态进行评估,并通过心理复原力量表对学生的心理弹性进行衡量,对导致睡眠问题的心理因素进行探索,为探寻改善学生的睡眠状况和提高学生心理健康水平的干预措施提供参考。

方法 采用失眠严重程度指数量表、Epworth嗜睡量表、焦虑自评量表、心理复原力量表以及睡眠呼吸暂停初筛量表对2021年4月~5月内内蒙古赤峰地区3所中学1770名高中生进行睡眠、情绪及心理弹性进行调查分析,并运用Logistic回归以及分层回归等分析睡眠问题的影响因素。

结果 在接受睡眠情况调查的1770名高中生中,既往存在失眠情况的有565人(31.9%)。针对焦虑等心理状态的分析发现,失眠组的焦虑程度显著高于无失眠组($P < 0.001$),而心理复原力得分显著低于无失眠组($P < 0.001$)。平均睡眠时间在高二组最短,但是报告失眠的严重程度在高一组最高。Logistic回归分析发现焦虑水平($OR = 1.074, P < 0.001$)和心理复原力水平($OR = -0.971, P < 0.001$)与失眠情况显著相关。通过该两种量表评分可以对受试者是否出现失眠进行预测($AUC = 0.724, P < 0.001$)。

结论 焦虑以及心理复原力程度都与睡眠情况显著相关,随着焦虑情绪增加,睡眠质量明显下降,而较好的心理复原力则是失眠的保护因素。

关键词: 高中生; 睡眠; 焦虑; 心理复原力; 现状调查

客观睡眠参数与非痴呆人群脑内 β -淀粉样蛋白负荷之间的关系:一项荟萃分析

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目的 淀粉样蛋白级联假说认为, β -淀粉样蛋白($\text{amyloid-}\beta, A\beta$)沉积会导致tau蛋白过度磷酸化并聚集成神经纤维缠结,引起炎症反应、突触功能障碍、神经元凋亡,导致认知功能下降和行为紊乱,与包括阿尔兹海默病、帕金森病等的神经退行性疾病相关。因此,挖掘与 $A\beta$ 负荷有关的相关因素(尤

其是可变因素)非常重要。大脑淀粉样蛋白积累与睡眠紊乱之间的相互影响,我们设计一项荟萃分析来探索其中的关联,以求有助于神经退行性疾病的早期识别和管理。

方法 该研究方案可在PROSPERO平台通过注册号CRD42023387435查阅。我们在三个数据库(PubMed、Embase、PsycINFO)分别进行了全面的检索,检索策略的设计基于关键词"Amyloid And ((Sleep*) OR (Insomnia*))",分析了脑内 $A\beta$ (基于CFS或PET报告)与一般睡眠参数以及睡眠分期(基于多导睡眠监测或体动记录仪)之间的关系。数据的荟萃分析使用随机效应模型,合并效应量以及95%置信区间以皮尔逊相关系数的形式报告,同时进行了敏感性分析和回归分析探索结论的稳健性。

结果 共22篇文章被纳入荟萃分析。在一般睡眠参数中,睡眠效率与 $A\beta$ 负荷呈负相关($r = -0.104, 95\% CI(-0.168, -0.040)$),而入睡后觉醒时间($r = 0.0095, 95\% CI(0.030, 0.161)$)、入睡后觉醒次数($r = 0.0135, 95\% CI(0.083, 0.186)$)、呼吸暂停低通气指数($r = 0.280, 95\% CI(0.073, 0.464)$)、氧减指数($r = 0.567, 95\% CI(0.053, 0.844)$)与 $A\beta$ 负荷呈正相关。未发现总睡眠时间、睡眠潜伏期、非快眼动1,2,3期睡眠和快眼动气睡眠与脑内 $A\beta$ 负荷存在显著关联。敏感性分析表明,脑内 $A\beta$ 负荷与睡眠效率、入睡后觉醒时间、觉醒次数、呼吸暂停低通气指数的显著相关具有稳健性。单因素荟萃回归分析显示,调整呼吸暂停低通气指数不影响睡眠效率、入睡后觉醒时间和次数与 $A\beta$ 负荷之间的关,睡眠碎片化和夜间缺氧与脑 $A\beta$ 负荷的关系也不受年龄、性别因素影响。

结论 夜间睡眠碎片化和缺氧可能是脑内淀粉样物质沉积的预警信号。客观睡眠监测或有助于与 $A\beta$ 沉积相关神经退行性疾病的早期识别和管理。

关键词: β -淀粉样蛋白负荷,睡眠,神经退行性疾病,睡眠障碍,客观睡眠参数

经颅交流电刺激治疗抑郁的疗效及机制探索:一项前瞻性随机对照研究

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目的 抑郁障碍是当前全球疾病负担的第二大原因,然而,5%~55%患者对抗抑郁药物反应不佳或难以耐受,药物难治性抑郁患者生活质量严重降低,自杀风险极高,亟需新的治疗方法以作为新的治疗选择。脑刺激技术(电休克、经颅磁刺激)可以改善抑郁情绪,对于部分难治性抑郁患者也有疗效,经颅交流电刺激是一种新型的低强度非侵入性脑刺激,通过影响神经细胞的同步化和去同步化来调节皮质兴奋性和自发脑电活动,被证明可以改善抑郁情绪。我们设计了一项随机对照研究,探索经颅交流电刺激改善抑郁患者情绪的疗效及其潜在机制。

方法 该研究方案通过北京大学第六医院伦理委员会审核。根据既往研究计算样本量,纳入48名符合DSM-5诊断标准而未接受过其他脑刺激治疗重性抑郁障碍患者,治疗期间保持患者的精神科药物不变。分别随机给予连续5天、每天2次、每次40分钟的6Hz,2mA的真/伪经颅交流电刺激,刺激位点为双侧背外侧前额叶。治疗前后分别评估患者的抑郁情绪、焦虑情绪,采集静息态脑电图。使用MatLAB软件及eeglab插件进行脑电图数据预处理,借助Cartool工具包对治疗前后的脑电图进行微状态分析。通过一般线性模型重复方差测量比较真、伪刺激组治疗前后的差异。

结果 根据随机对照研究方案,重性抑郁障碍患者各有24名分入真/伪刺激组,1名伪刺激组受试者首次治疗感头晕退出。两组的基线人口学和抑郁症状信息无显著差异。真刺激组治疗后汉密尔顿-24抑郁量表评分平均降低-12.33分,显著优于伪刺激组-6.52分($F=9.791, P=0.003$),真刺激组治疗后汉密尔顿-14焦虑量表评分平均降低-10.04分,显著优于伪刺激组-4.04分($F=12.859, P=0.001$)。以经典的4种微状态比较真伪刺激两组受试者治疗前后的脑微状态特征,真刺激组患者治疗后微状态A的平均持续时间($F=6.988, P=0.013$)、覆盖率($F=7.728, P=0.009$)和频率($F=5.283, P=0.028$)均与伪刺激组有显著差异。斯皮尔曼相关性分析显示,微状态A覆盖率($R_s=0.382, P=0.026$)和频率($R_s=0.399, P=0.019$)与汉密尔顿-24抑郁评分变化相一致。

结论 经颅交流电刺激结合药物治疗对抑郁患者的疗效显著优于伪刺激与药物联合方案,抑郁症状的额外改善可能与对大规模脑网络的神经调控有关。

关键词: 经颅交流电刺激,抑郁障碍,脑电微状态,前额叶

高中生同伴欺凌与师生关系、非自杀性自伤行为:交叉滞后分析

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目的 同伴欺凌是高中生中普遍存在的现象。本研究旨在调查影响这一人群中同伴欺凌的因素,以及它们与师生关系和NSSI的关系。此外,本研究旨在提出有效的预防措施,以缓解这些问题。

方法 采用青少年同伴欺凌量表、师生关系量表、非自杀性自伤量表,对云南省1329名高中生(男生521人,女生808人)进行为期1年、两阶段(T1、T2)的追踪问卷调查。使用Amos构建结构方程模型进行交叉滞后分析,采用Bootstrap方法对中介效应进行检验。

结果 两阶段的同伴欺凌、非自杀性自伤性别差异皆显著,男生得分高于女生。T2时间点上师生关系性别差异显著,男生得分低于女生(均 $P<0.05$)。高中生同伴欺凌与师生关系具有跨时间稳定负相关($r=-0.257\sim-0.171$,均 $P<0.01$)。交叉滞后分析显示,非自杀性自伤T1对师生关系T2具有显著负向预测作用($\beta=-0.076, P<0.05$),师生关系T1对同伴欺凌T2具有显著负向预测作用($\beta=-0.129, P<0.001$),同伴欺凌T1对师生关系T2同样具有负向预测作用($\beta=-0.068, P<0.05$)。Bootstrap检验显示,非自杀性自伤行为会通过师生关系的完全中介作用而间接影响高中生同伴欺凌的发生,且无性别差异。

结论 高中生同伴欺凌、师生关系和非自杀性自伤存在性别差异。同伴欺凌、师生关系和非自杀性自伤存在因果关系,高中生非自杀性自伤行为的增多会增加同伴欺凌的发生,良好的师生关系可以降低这一情况。师生关系在高中生非自杀性自伤与同伴欺凌的影响机制中起完全中介作用。

关键词: 高中生;同伴欺凌;师生关系;非自杀性自伤;交叉滞后分析

Prevalence and Risk Factors of Fatigue after SARS-CoV-2 Infection in Children and Adolescents: A Systematic Review and Meta-analysis

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Introduction There has been a gradual rise in the prevalence of long coronavirus disease (COVID) symptoms among youngsters, especially fatigue. In this study, we performed a meta-analysis to estimate the prevalence of fatigue among children and adolescents following COVID-19 infection, and also to identify the associated risk factors.

Methods The present study conducted a systematic search in PubMed, Embase, Web of Science, Cochrane, MedRxiv, and BioRxiv databases to identify relevant studies published from inception to April 11, 2023. The pooled prevalence of fatigue was estimated using a random effects model. Subgroup analyses and meta-regression were conducted to assess the estimated prevalence of fatigue during the whole clinical progression, especially during long COVID.

Results A total of 39 articles were included in the study. The prevalence of persistent fatigue was 11.0% (95% CI: 8.1-14.8%) from the onset of first symptom of

COVID-19. At 6 months post-recovery from COVID-19, the prevalence decreased to 8.5% (95% CI:0.04-17.2%), and further declined to 2.7% (95% CI:0.01-13.0%) after a period of 12 months. Subgroup analyses and meta-regression showed that the prevalence of fatigue or persistent fatigue was higher in patients with moderate to severe COVID-19 and older age.

Conclusion The present study systematically evaluates and discusses the prevalence of fatigue in children and adolescents after SARS-CoV-2 infection. It is recommended that long-term surveillance and early intervention strategies should be implemented to improve the mental well-being of children and adolescents after infection and facilitate their long-term recovery.

关键词: children; adolescents; COVID-19; fatigue; persistent fatigue

中国一般人群中睡眠卫生与慢性疾病的相关性分析

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目的 了解中国一般人群睡眠卫生现况, 探究睡眠卫生与慢性疾病间的关系

方法 采用横断面研究的方法, 使用网络调查平台, 对中国 34 个省级行政区的 41061 名居民进行了问卷调查, 调查内容包括一般人口学信息、睡眠卫生情况 (SHI), 主观睡眠质量 (PSQI)、既往疾病史等信息。根据睡眠卫生指数的四分卫间距将人群划分为睡眠卫生较差、一般和良好。使用描述性统计对调查对象一般情况及睡眠卫生情况进行差异性分析。满足正态分布的连续变量采用均值±标准差进行描述, 不满足正态分布的连续变量则采用中位数和四分位数进行描述。使用 Logistic 回归探究睡眠卫生指数与慢性疾病的关系以及主观睡眠质量和睡眠卫生的交互作用。

结果 在本研究中, 共有 8872 (21.6%) 人睡眠卫生习惯较差, 睡眠卫生差是心血管疾病、呼吸系统疾病、内分泌疾病、神经系统疾病和精神疾病的

危险因素 (均 $P < 0.001$)。此外, 交互作用分析等结果显示, 在相同的主观睡眠质量人群中, 睡眠卫生较差的人群发生各类慢性疾病的风险明显增加, 表明睡眠卫生差是独立的危险因素。

结论 研究表明, 睡眠卫生与多种慢性疾病的有关, 重视并提高睡眠卫生可能减少慢性疾病的发生。

关键词: 睡眠卫生; 慢性疾病; 主观睡眠质量

Glymphatic System Dysfunction and Sleep Deprivation May Contribute To The Pathogenesis and Progression of Cognitive Impairment

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The glymphatic system functions most optimally to remove extracellular brain solutes during sleep; therefore, sleep deprivation may be a crucial progression factor and a risk factor. This study aimed to look at how the glymphatic system functions in relation to sleep deprivation-induced cognitive impairment. In this investigation, we first employed electroencephalography (EEG) to confirm that sleep deprivation had been successfully established. Then, by identifying aquaporin-4 (AQP4), a crucial component of glymphatic system activity, we confirmed the functional relevance of the glymphatic system in cognitive impairment brought on by sleep deprivation. Finally, we altered the AQP4 to see if the sleep-deprived mouse's cognitive function had changed. The modulation of AQP4 may play a role in the loss of cognitive performance that sleep deprivation causes. In light of this, we hypothesize that sleep deprivation impairs the glymphatic system by lowering AQP4, which has an impact on cognitive behavior, particularly learning and memory. we conclude that the glymphatic system plays a very important functional role in cognitive impairment caused by sleep deprivation. To determine whether AQP4 might be regarded as a risk factor for cognitive impairment and to understand the regulatory mechanisms of this protein better, more

research is nevertheless required.

关键词: Glymphatic system, Meningeal lymphatic vessels, sleep deprivation, AQP4

Reconstruction of Visual Information From Cortical Activity: A Systemical Review

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Objective The brain is the most complex and mysterious organ in the human body, and researchers have been diligently working to unravel the secrets of this fascinating realm. As part of the field known as "brain decoding" or "brain-computer interface" (BCI), decoding visual activity from brain signals involves utilizing neuroimaging techniques to interpret the patterns of neural activity associated with visual perception.

Methods and Results In 2012, T. Horikawa et al. conducted a study in which subjects were asked to sleep during an MRI scan. These individuals were periodically awakened, approximately every 6 minutes, and asked to report their visual experiences prior to awakening. The researchers performed over 200 repeated experiments on each volunteer and created a database based on the objects described in their dreams, which were then meticulously categorized. By examining the patterns of brain activity during dreaming and comparing them to responses to visual stimuli during wakefulness, the researchers successfully predicted the visual experiences during dreams using machine-learning models. However, a complete interpretation of one's dreams still remains a distant goal, as does the ability to interpret the dreams of multiple individuals with a single machine. More recently, a method called "CEBRA" has gained attention. Scientists recorded multicellular electrophysiological data from the hippocampus area using intracranial electrodes and discovered that CEBRA could capture complex kinematic features, providing highly accurate visual decoding of videos directly from the brain. However, it is important to note

that both of the aforementioned studies are considered "matching" rather than "pixel-level reconstruction." This means that the models rely on contrastive learning to find the best match rather than generating the images themselves.

Conclusion In conclusion, significant attention has been directed towards decoding visual activity from brain signals, and previous achievements have highlighted a promising future. Our next goal is to employ multiple imaging methods, such as magnetoencephalography (MEG), to obtain more accurate results

关键词: Reconstruction; Visual; Brain-computer interface; Decoding

Sex Differences in Acute and Chronic Symptoms During Omicron Wave in China: A National Online Survey

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Objective Sex differences is known as a crucial factor to impact the health outcomes of SARS-CoV-2 infection. Following a strategic shift in late 2022, there was a sharp increase in COVID-19 cases in China. However, there remains a dearth of knowledge regarding the sex differences of acute and chronic symptoms during this surge.

Methods and Results We found that females (82.0%) reported higher the prevalence of symptomatic infection than males (71.6%, $P < 0.001$). The proportion of severe outcomes and abnormal CT of the chest was higher in females than males. Similarly, females reported higher prevalence of any chronic physical (48.7% vs 32.6%; $P < 0.001$) and mental (45.3% vs 33.4%; $P < 0.001$) symptoms than males. Multivariable logistic regression analyses showed that females were associated

with 42% increased risk of any acute symptoms (adjusted OR = 1.42, 95% CI = 1.33-1.53, $p < 0.001$), 63% higher risk of any chronic physical symptoms (adjusted OR = 1.63, 95% CI = 1.52-1.74, $p < 0.001$), and 50% increased risk of any chronic mental symptoms (adjusted OR = 1.50, 95% CI = 1.40-1.61, $p < 0.001$) compared with males after adjusting for potential confounders. This nationwide cross-sectional study, enrolling a total of 33,050 participants from 32 provinces in China, was conducted through an online survey from January 15 to February 9, 2023 to examine the acute and chronic physical and mental symptoms in male and female patients with omicron infection.

Conclusion Our findings reveal that females constitute a notable risk factor for both acute and chronic manifestations after omicron infection, including physical and mental symptoms. Future studies that link data on epidemiology, clinical presentation, pathophysiology, and management of omicron infection between males and females are encouraged to product comprehensive evidence for providing sex-specific pharmaceutical and nonpharmaceutical interventions

关键词: omicron, sex difference, acute symptoms, chronic symptoms, prevalence, risk

物质依赖医学学组

高频重复经颅磁刺激对酒依赖患者情绪及认知功能的影响分析

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目的 探究高频重复经颅磁刺激对酒依赖患者情绪及认知功能的影响。

方法 选取我院 2022-2023 年间收治的酒依赖患者作为研究对象, 接受常规戒酒治疗的患者纳入对照组 (N=36), 常规治疗基础上接受高频重复经颅磁刺激治疗的患者纳入到观察组 (N=36), 比较两分组的蒙特利尔认知评估量表 (MoCA) 评分。

结果 在治疗前, 两分组的 MoCA 评分不存在显著差异, 治疗后, 观察组的整体情况好于对照组 ($P<0.05$), 体现如下: 观察组的地点定向 (4.74 ± 0.45) 和时间定向评分 (4.68 ± 0.46 分) 高于对照组 (4.53 ± 0.42 分)、(4.47 ± 0.43 分), 差异显著 ($P<0.05$); 另外, 注意计算 (4.25 ± 0.46 分) 和总分 (27.26 ± 1.63 分) 也均高于对照组 (4.01 ± 0.40 分)、(26.34 ± 1.45 分), 差异显著 ($P<0.05$)。治疗一段时间后, 观察组的情绪状况也较对照组改善显著 ($P<0.05$), 主要表现为, 观察组患者抑郁、焦虑各 1 例, 占比分别为 2.78%, 躁郁症和精神问题分别为 2 例、1 例, 占比分别为 5.56%、2.78%; 而对照组抑郁、焦虑、躁郁症和精神问题共 15 例, 占比共计 41.76%。两分组差异显著 ($P<0.05$)。

结论 对酒依赖患者采取高频重复经颅磁刺激可以较好的改善患者的情绪和认知功能, 值得临床推广。

关键词: 高频重复经颅磁刺激, 酒依赖, 认知功能, 影响

Consumption Habits, Emotions, and Personality Traits of Bubble Tea Addicts: A Cross-sectional Study

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Objective In recent years, bubble tea has gained popularity worldwide, especially among youths. The primary objective of this study was to explore the potential relationship between bubble tea addiction and consumption habits, emotions, and personality traits in China

Methods We send the questionnaire and collected data through the online survey tool Questionnaire Star. The questionnaire included demographic data, bubble tea consumption habits survey, General Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-9 (PHQ-9) and Eysenck Personality Questionnaire-Revised, Short Scale for Chinese (EPQ-RSC). According to Bubble Tea Addiction Questionnaire score, participants were divided into addiction group and non-addiction group

Results A total of 511 participants completed the online survey, 45(8.81%) were in the addiction group and 466 (91.19%) were in the non-addiction group. The frequency and expenditure of drinking bubble tea were higher in the addiction group. It is noteworthy to observe that the addiction group with higher proportion of drinking bubble tea as a means of socializing. The anxiety and depression levels of the addiction group were significantly higher than the non-addiction group. The results showed that neuroticism and psychoticism scores of the addiction group were significantly higher than non-addiction group. There was no statistical difference in the score of extroversion and lie

Conclusion Our study found that a high proportion of young people were addicted to bubble tea. Bubble tea addiction was related to high consumption and negative emotions. Psychotic and neurotic personality traits were associated with bubble tea addiction. Bubble tea is tasty but should be consumed in moderation

关键词: Addiction; Bubble tea; Consumption; Emotion

酒精使用障碍治疗药物的研究进展

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目的 系统地梳理对酒精使用障碍 (alcohol use disorder, AUD) 具有治疗作用的药物, 尤其重点关注有可能将 AUD 治疗作为新适应症的“老药”的最新研究进展, 为临床医生全面认识具有 AUD 治疗作用的药物提供借鉴, 以便更有效地选择治疗方案。

方法 我们检索了 PubMed 数据库中 2019 至今发表的与 AUD 药物治疗有关的文献, 主要从药理机制、治疗作用、研究进展等几个方面探讨了纳曲酮、双硫仑、纳美芬、托吡酯、巴氯芬、加巴喷丁、普瑞巴林、昂丹司琼、异丁司特、N-乙酰半胱氨酸、哌唑嗪、螺内酯、司美格鲁肽以及马钱子碱氮氧化物等在 AUD 治疗中的作用。

结果 目前我国暂无批准专门用于 AUD 治疗的药物, 国际上批准用于临床的 AUD 药物也寥寥无几。其中, 纳曲酮可降低酒依赖患者的酒精消耗并改变酒精主观体验, 减少复饮的风险; 纳美芬对在预后因素方面表现良好的患者更有效; 双硫仑与氯氮平联合有增效作用。然而, 这些药物均未得到充分利用, 这可能提示 AUD 患者存在不同的临床亚型。处于临床前和临床试验阶段的具有 AUD 治疗潜力的“老药”多达 9 种以上。如高剂量托吡酯可降低饮酒水平, 巴氯芬可对酗酒者的奖赏系统脱敏, 加巴喷丁可降低饮酒天数, 普瑞巴林安全性高。异丁司特、哌唑嗪、螺内酯、司美格鲁肽和马钱子碱氮氧化物等也在治疗 AUD 中表现出潜力。但这些药物的临床治疗效果尚需进一步的临床研究进行确认, 他们的作用机制和安全性也同样需要进一步研究。

结论 目前用于治疗 AUD 的药物主要聚焦于缓解戒断症状, 对于更好地降低对酒精的渴求尚无更多研究证据。未来应该对有 AUD 治疗潜力的“老药”开展更大规模的临床研究以进一步验证其安全性和有效性, 同时对其机制进行深入研究, 以促进 AUD 更加规范有效地治疗。

关键词: 酒精使用障碍, 药物治疗, 复饮, 渴求

High-intensity Transcranial Alternating Current Stimulation Reduced The Inter-brain Synchronization in The Ventrolateral Prefrontal Cortex and Temporoparietal Junction

in Gaming Disorder

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Objective Disrupted interpersonal interaction is a significant feature of gaming disorder. This study aims to develop a targeted intervention to modulate disrupted inter-brain synchronization and verify its effectiveness

Methods Sixty male individuals with gaming disorder were recruited from a university in Hunan Province. Participants in pairs underwent functional near-infrared hyperscanning, randomly assigned to the intervention group (n=30) and the control group (n=30). Both groups received high-intensity transcranial alternating current stimulation intervention. During the intervention, participants in both groups simultaneously completed cognitive training tasks such as puzzle-solving. The primary outcome measures were scores on the Gaming Disorder Screening Scale and inter-brain synchronization

Results There was a significant time-by-group interaction difference for gaming craving ($F = 5.72, p = 0.021$): the control group showed increased gaming craving after the intervention ($t = -2.02, p = 0.049$) compared with the intervention group. After the intervention, there were significant time-by-group interaction differences for inter-brain synchrony in LVL PFC ($F = 11.86, p = 0.028$) and RTPJ ($F = 10.56, p = 0.021$) in the competitive task (Hbo): the intervention group showed decreased IBS in LVL PFC after the intervention ($t = 4.54, p = 0.001$) compared with the control group did not ($t = -1.77, p = 0.111$); the intervention group showed decreased IBS in RTPJ after the intervention ($t = 2.13, p = 0.043$) compared with the control group ($t = -2.40, p = 0.024$). In the competitive task (Hbr), there was a significant time-by-group interaction for IBS in LVL PFC ($F = 12.18, p = 0.016$): the control group showed increased IBS after the intervention ($t = -2.45, p = 0.029$) compared with the intervention group ($t = 1.76, p = 0.102$). There was also a significant time-by-group interaction for average IBS in the LVL PFC region ($F = 11.40, p = 0.040$): the control group showed increased LVL PFC IBS after the intervention ($t = -2.57, p = 0.040$), while

the intervention group showed decreased LVL PFC IBS ($t = 2.71, p = 0.027$)

Conclusion High-intensity electrical stimulation of the whole brain can to some extent reduce gaming craving in individuals with gaming disorder and decrease the inter-brain synchronization of the LVL PFC and RTPJ during a competitive task, thus reducing the competitiveness of the participants

关键词: hyperscanning, high-intensity tACS, clinical trial, TPJ, gaming disorder

大学生心理控制源与职业决策自我效能感的相关研究

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目的 探究大学生心理控制源与职业决策自我效能感之间的关系。

方法 采用龙燕梅修订的《大学生择业效能感量表》(Career Choice Self-efficacy Scale of College Students)和Levenson编制的“内控性、有势力的他人及机遇量表”(IPC量表)。通过问卷星施测,一共回收问卷332份。使用spss21.0分析软件对其结果进行了数据分析与综合处理,描述统计用于整体描述数据分布概况,独立样本t检验用于检验两组变量之间是否存在差异性,单因素方差分析用于检验多组变量之间是否存在差异性,之后对两两变量进行相关分析的处理。

结果 大学生心理控制源与职业决策自我效能感之间存在显著性相关。

结论 大学生职业决策自我效能感总体处于中等以上水平;大学生心理控制源的内源性水平高于外在性水平(有势力的他人、机遇)。以大学生职业决策自我效能感为因变量,心理控制源的内外源为预测变量来进行回归分析,其中,内控性(Internality)可以正向预测职业决策自我效能感,而有势力的他人(Someone else with power)与机遇(Locus of control)的预测作用并不显著。

关键词: 大学生,心理控制源,职业决策自我效能感

A Latent Class Analysis of Internalized Stigma Among The Methamphetamine Users in China

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Objective Internalized stigma is a process that individuals see themselves negatively, feeling isolated by others, which is prevalent among patients with mental illnesses, such as schizophrenia and depression, linking with poor psychological outcomes, symptoms, and social functions. To the best of our knowledge, there are few studies investigating the internalized stigma in Chinese Methamphetamine(MA)users. Given the high MA prevalence in China over the past two decades and the lack of research on investing in internalized stigma, it is necessary to explore internalized stigma among Chinese MA users. Additionally, in order to divide the sample into different groups of internalized stigma, the present study used Latent class analysis (LCA) to categorize potential latent classes among MA Users on internalized stigma. Unlike traditional variable-centered statistic methods, LCA is a typical person-centered approach to model population heterogeneity and identify distinct subpopulations a priori unknown. The assessment of typologies in internalized stigma can help us better understand the different classes of internalized stigma among Chinese MA users as a valuable reference for future studies

Methods Seven hundred and thirty-one MA users were recruited and completed a series of self-report questionnaires including their demographics, the Substance Use Stigma Mechanisms Scale (SU-SMS), the Multidimensional Scale of Perceived Social Support (MSPSS), the Centre for Epidemiologic Studies Depression Scale (CES-D), the General Self Efficacy Scale (GSES), and Rosenberg's Self-Esteem Scale (SES). R software was used to organize and clean up data sets, and a latent class analysis was analyzed

Results The results showed three classes of in-

ternalized stigma (severe, moderate, and mild), suggesting that MA users are a heterogeneous population on this matter. The percentage of severe internalized stigma and moderate accounted for 21%(n=155) and 39% (n=291) respectively among the Chinese MA users. One-way ANOVA analyses showed that there were significant differences in the three classes on age, education level, the composition ratio of gender, income, self-efficacy, depressive symptoms, and self-esteem. In addition, multinomial regression analysis showed that depressive symptoms depression symptoms (OR= 1.07, 95% CI 1.04~1.10), self-esteem (OR= 1.35, 95% CI 1.25~1.47), age (OR= 1.04, 95% CI 1.01~1.07), education (OR= 1.40, 95% CI 1.21~1.62) were risk factors for severe internalized stigma

Conclusion Substance Use Disorder (SUD) is a special health issue in China, considering as both a mental disorder and an ethical problem, which has caused SUD patients to experience severe internalized stigma comparing with other mental illnesses. To the best of our knowledge, this was the first study in China to categorized MA users into three varying classes of internalized stigma groups with LCA and compared the three classes to further explore the different characteristics of participants with different internalized stigma classes. We found that 21% of MA users have sever internalized and 31% experienced moderate internalized stigma, which means that internalized stigma prevents among MA users in China. Furthermore, results of this study supported those of previous research that depressive symptom is a risk factor for internalized stigma. At the same time, one unanticipated result was that self-esteem was a risk rather than a protective factor for severe internalized stigma

关键词: Methamphetamine users, Internalized stigma, Latent class analysis.

美沙酮维持治疗患者 N/OFQ-NOP 通路基因多态性与其焦虑状态的相关关系

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目的 本研究通过对美沙酮维持治疗 (MMT) 患者孤啡肽-孤啡肽受体通路 (N/OFQ-NOP 通路) 基因多态性进行检测, 探究 MMT 患者 N/OFQ-NOP 通路基因多态性与其焦虑状态的相关性。

方法 在广州医科大学附属脑科医院美沙酮治疗点进行 MMT 受试者的招募工作。共有 197 名 MMT 患者符合入组标准, 并被纳入到本研究中。以面对面访谈的形式对所有受试者进行资料收集, 内容包括: 一般个人信息及美沙酮维持治疗情况。运用《贝克焦虑自评量表 (BAI)》对受试者进行焦虑状态评估。对所有的受试者进行血液样本采集, 并运用血液基因组 DNA 提取试剂盒对所采集到的血液样本进行全血 DNA 提取, 随后运用 Sequenom MassARRAY®SNP 检测方法进行基因多态性的检测。

结果 (1) 197 名 MMT 受试者均为汉族人。

(2) 本研究共检测了 6 个与 N/OFQ-NOP 通路相关的 SNP 位点, 分别为: rs13931、rs76786693、rs189594057、rs145840163、rs34874539 和 rs61742883。

(3) 本研究检测的 6 个 SNP 位点中, MMT 受试者仅 rs13931 和 rs76786693 存在基因多态性, 且两个位点符合哈迪-温伯格平衡 ($p_{H-W} > 0.05$)。 (4) 在 rs13931 位点基因型分布频率方面, 有焦虑 MMT 受试者与无焦虑 MMT 受试者之间存在显著差异 ($p=0.001$)。而在 rs13931 位点等位基因分布频率方面, 有焦虑 MMT 受试者 rs13931-C 等位基因的分布频率显著高于无焦虑 MMT 受试者的 ($p < 0.001$)。

(5) 而 rs76786693 位点, 无论是在基因型分布频率方面还是等位基因分布频率方面有焦虑 MMT 受试者与无焦虑 MMT 受试者之间均不存在统计学差异 ($p > 0.05$)。 (6) 与 rs13931 CC 基因型的受试者相比, rs13931 AC 基因型 (OR=0.407, $p=0.006$) 和 rs13931 AA 基因型 (OR=0.140, $p=0.011$) 的受试者出现焦虑的风险更低。 (7) 携带 rs13931-C 等位基因与 MMT 受试者焦虑发生风险的增加相关 (OR=5.425, $p=0.024$), 而携带 rs13931-A 等位基因与 MMT 受试者焦虑发生风险的降低相关 (OR=0.347, $p < 0.001$)。

结论 N/OFQ-NOP 通路 rs13931 位点基因多态性与 MMT 受试者焦虑状态相关。携带 rs13931-C 等位基因的 MMT 受试者出现焦虑的风险更高, 而携带 rs13931-A 等位基因的 MMT 受试者出现焦虑的风险更低。

关键词: 美沙酮维持治疗, 孤啡肽-孤啡肽受体通路, 基因多态性, 焦虑

Analysis of The Use of Second-class Psychotropic Drugs in Outpatient Clinics of A Tertiary Psychiatric Hospital

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Objective To understand the application of Class II psychotropic drugs in outpatient clinics of a tertiary psychiatric hospital from 2020 to 2022, and to provide reference basis for scientific management and standardization of the rational use of Class II psychotropic drugs

Methods The PASS software was used to extract the drug names, specifications, units, consumption, sales amounts, etc. of the second class psychotropic drugs in the outpatient department of Hefei Fourth People's Hospital from 2022 to 2022. The defined daily dose system (DDD) and average daily cost (DDC) were statistically analyzed

Results The sales volume and DDDs of the second type of psychotropic drugs have been increasing year by year, with the highest and fastest growing sales volume of oxalazepam and the highest dosage of clonazepam (0.5mg). The top three drugs in DDDs are dexzopiclone, estazolam, and alprazolam. Oxazepam and zaleplon have higher DDC values in all second class psychotropic drug varieties. Clonazepam (2mg) has a sequence number ratio of 1 and good synchronization

Conclusion The second type of psychotropic drugs in our hospital are mainly benzodiazepines, and their structure is not reasonable. Psychiatrists and pharmacists need to pay attention to the rational and standardized use of benzodiazepines to reduce drug dependence and abuse

关键词: Class II psychotropic drugs; sales volume; Defined daily dose system; Average daily cost

The Association of Serum Levels of S100B and BDNF and Cognitive Function in Alcohol Dependence Patients

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Objective To explore the relationship between cognitive impairment and S100B, BDNF levels in patients with alcohol dependence

Methods Serum calcium binding protein (S100B) and brain-derived neurotrophic factor (BDNF) were detected by enzyme-linked immunosorbent assay in 35 patients with cognitive impairment and alcohol dependence (cognitive impairment group), 33 patients without cognitive impairment and alcohol dependence (non cognitive impairment group) and 32 healthy controls. The cognitive function was evaluated by repetitive neuropsychological state test (RBANS)

Results (1) The concentration of S100B in cognitive impairment group and non cognitive impairment group was higher than that in healthy control group [$(5.46 \pm 0.05) \pm 0.92$] ng/mL, (4.04 ± 0.85) ng/mL, (2.05 ± 1.09) ng/mL,] ($P < 0.05$); The concentration of BDNF in cognitive impairment group and non cognitive impairment group was lower than that in the control group [(62.10 ± 8.28) ng/mL, (63.83 ± 9.10) ng/mL, (69.76 ± 16.61) ng/mL] ($P < 0.05$); (2) The concentration of S100B in cognitive impairment group was higher than that in non cognitive impairment group [(5.46 ± 0.92) ng/mL, (4.04 ± 0.85) ng/mL] ($P < 0.05$). The scores of immediate memory, attention and delayed memory in cognitive impairment group and non cognitive impairment group were lower than those in healthy control group ($P < 0.01$). Immediate memory, attention and delayed memory in cognitive impairment group were higher than those in non cognitive impairment group ($P < 0.01$). The speech function in the cognitive impairment group was higher than that in the healthy control group ($P < 0.01$), and there was no significant difference in speech function between the cognitive impairment group and the non cognitive impairment group ($P > 0.05$). S100B concentration in cognitive impairment group was negatively correlated with attention and

delayed memory in RBANS ($r = -0.459$, $r = -0.458$, $P < 0.05$); BDNF concentration was positively correlated with immediate memory, attention and delayed memory in RBANS ($r = 0.368$, $r = 0.375$, $r = 0.379$, $P < 0.05$), but not in the group without cognitive impairment

Conclusion Serum S100B and BDNF levels are related to some cognitive impairment in alcohol dependent patients, and there is a relationship between the imbalance of nerve injury and neuroimmune abnormalities

关键词: alcohol dependence; cognitive impairment; S100B; BDNF

大学生不同负性情绪对道德判断能力的影响

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目的 了解大学生在不同的负性情绪下的道德判断能力水平, 探讨大学生不同负性情绪(包括厌恶、愤怒和悲伤)对道德判断能力的影响差异, 以及探究三种负性情绪中哪一种对道德判断能力的影响最为显著, 即在何种负性情绪占主导时道德判断水平最低。

方法 加入不同的视频材料诱导相应情绪, 采用道德判断测验量表(Moral Judgment Test, MJT)中文版和正性负性情绪量表(The Positive and Negative Affect scale, PANAS)改编版进行测量评定。本实验将 104 名大学生分为四组, 其中三组观看相应情绪诱导材料——视频后进行道德情境判断, 剩下一组作为对照组——不诱导情绪直接进行道德情境判断, 以上四组均在道德情境判断前使用正性负性情绪量表改编版测量情绪。运用 SPSS23.0 软件对所得数据进行处理分析。

结果 四组的情绪得分具有显著差异, 在厌恶、愤怒和悲伤的不同负性情绪下, 大学生的道德判断水平没有显著差异; 与对照组(没有进行情绪诱导)($M=13.34$, $SD=7.767$)相比, 愤怒情绪($M=14.61$, $SD=8.389$)、悲伤情绪($M=14.62$, $SD=10.215$)和厌恶情绪($M=17.49$, $SD=10.261$)的道德判断水平的差异不显著。

结论 (1) 大学生在不同负性情绪下的道德判

断能力没有显著差异; (2) 与没有诱导负性情绪产生的情况相比, 大学生产生不同负性情绪时的道德判断能力的差异也不明显。

关键词: 大学生; 负性情绪; 道德判断能力

边缘人格特质与双相障碍自杀风险及生存质量的关联研究

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目的 了解双相障碍(bipolar disorder)患者中边缘型人格特质(borderline personality traits, BPT)的发生率, 探索 BPT 的严重程度与双相障碍临床变量的相关性以及每种 BPT 对双相障碍患者自杀未遂史及生存质量(quality of life, QOL)的影响。

方法 本研究基于 DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, DSM-5) 诊断工具, 通过方便抽样的方法从湘雅二医院精神科病房招募符合双相障碍诊断标准的住院患者, 并以调查问卷的形式对其进行调查研究。调查的内容包括一般人口学资料, BPT, 抑郁、焦虑、躁狂、精神病性症状, 童年创伤经历, QOL 及自杀风险, 并在 3 个月后对 QOL 进行复测。采用独立样本 T 检验、Wilcoxon 非参数检验、卡方检验、偏相关分析、logistic 回归分析、多重线性回归分析对数据进行统计分析。

结果 基线时共纳入 346 份有效调查问卷, 成功随访到 252 人, 随访率为 72.83%。①97.98% 的双相障碍患者至少存在 1 种 BPT, 77.5% 的患者存在 5 种及以上 BPT; ②BPT 的严重程度与双相障碍患者的抑郁、焦虑、躁狂、精神病性症状及自杀风险呈显著正相关($r=0.178-0.482$, $P < 0.05$), 与基线时和三个月后患者的 QOL 呈显著负相关($|r|=0.445-0.468$, $P < 0.001$); ③BPT 中害怕被遗弃($OR=2.201$, $95\%CI=1.292-3.750$, $P=0.004$) 和情感不稳定($OR=3.110$, $95\%CI=1.100-8.789$, $P=0.032$) 对既往自杀未遂史的影响有统计学意义, 慢性的空虚感($B=-5.974$, $\beta=-0.176$, $95\%CI=-9.214 \sim -2.735$, $P < 0.001$) 对 QOL 的影响有统计学意义。

结论 1. 双相障碍患者中 BPT 的发生率高, 且

BPT 越严重, 则双相障碍患者的临床症状越严重、自杀风险越高和 QOL 越差; 2. BPT 中害怕被遗弃和情感不稳定是既往自杀未遂增加的危险因素, 而慢性的空虚感是 QOL 低的危险因素。

关键词: 双相障碍; 边缘人格特质; 自杀风险; 生存质量

基于接纳承诺疗法对网络游戏成瘾者执行功能的干预效果研究

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目的 本研究基于接纳承诺疗法核心理念, 针对网络游戏成瘾的大学生群体, 设计并实施了基于接纳承诺疗法心理自助课程干预并探讨了这一干预方案在改善网络游戏成瘾者执行功能方面的应用效果, 旨在为相关研究和临床实践提供有益的参考。

方法 1. 干预方案的构建: 在前期查阅文献结合前期调查结果分析的基础上, 通过专家会议法, 最终形成基于接纳承诺疗法心理自助课程。

2. 干预实施阶段: 根据样本量计算最终确定 58 名研究对象, 其中干预组 30 人, 对照组 28 人。对照组给予常规护理, 干预组进行基于接纳承诺疗法心理自助课程干预。两组受试者予以心理学评估 (包括 IGD-20、PHQ-9、心理灵活性以及执行功能等) 和任务态脑电评估 (任务态脑电选择 Go/Nogo 任务), 按照要求完成所有干预后再次进行前述的评估项目。心理学评估中按评分在 SPSS 25.0 软件进行处理; 脑电数据在 MatLab 软件中进行处理。

结果 对照组和干预组的各项基线指标无统计学差异 ($p>0.05$)。(1) 量表结果 干预前, 干预组 IGD-20 得分明显较高, 干预后, IGD-20、PHQ-9、心理灵活性以及执行功能量表得分明显改善下降 ($p<0.05$)。(2) 行为学结果 干预前, Go/Nogo 范式, 干预组和对照组对中性背景和游戏背景 Go 反应时和 Nogo 正确率进行自身配对检验, 均无统计学差异 ($p>0.05$); 干预后, Go/Nogo 任务中 Go 任务反应时间缩短, Nogo 任务正确率提高, 具有统计学意义 ($p<0.05$); (3) 任务态脑电: 干预前, 干预组和对照组的 N200、P300 波幅之间没有统计学差异

($p>0.05$)。干预后, 干预组的 N200、P300 波幅较干预前的 N200、P300 波幅增大, 差异具有统计学意义 ($p<0.05$)。

结论 在阅读文献及前期调查结果的基础上, 通过专家会议法形成基于接纳承诺疗法心理自助课程。通过对网络游戏成瘾大学生进行干预, 提高了大学生的执行功能和心理灵活性, 增强心理适应能力。但本研究的研究对象只针对于在校大学生, 是否同样适用于其他群体, 结果还有待验证。在数据收集方面, 本研究结合大学生的自我评价与客观的行为学测量指标, 确保数据更为全面、客观, 旨在为提升网络游戏成瘾大学生的执行功能提供更为坚实和有价值的依据。

关键词: 网络游戏成瘾, 执行功能, 接纳承诺疗法, 事件相关电位

物质成瘾的脑功能磁共振影像网络拓扑特征与功能连接的改变

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目的 功能磁共振成像是成瘾医学研究的有力工具, 本研究期望通过全脑尺度的功能网络分析探究物质成瘾的神经影像机制, 并为成瘾疾病的临床治疗探索新的有效的治疗靶点。

方法 本研究纳入 21 名酒精成瘾受试者及同期招募的 21 名健康对照受试者; 纳入 23 名甲基苯丙胺成瘾受试者及同期招募的 23 名健康对照受试者。研究采集受试者静息态功能磁共振成像数据, 利用图论和功能连接法分析酒精和甲基苯丙胺成瘾患者脑功能磁共振影像的网络拓扑特征和功能连接的变化。

结果 第一、图论分析发现, 两种物质成瘾患者的脑网络发生了功能重组, 节点之间的信息传输能力受损。其中, 酒精成瘾者受损最显著的脑区是双侧脑岛, 其节点局部效率、节点效率、度中心性显著降低; 与之不同, 甲基苯丙胺成瘾者受损伤最显著的脑区是左侧上顶回, 其节点效率、度中心性、介数中心性相对于健康对照显著降低。第二、网络水平的功能连接分析发现, 酒精成瘾者突显网络内部连接减弱, 而甲基苯丙胺成瘾者默认模式网络内部

连接增强。第三、全脑体素功能连接分析发现,两种物质成瘾者的扣带回和小叶皮层与脑岛/左侧上顶回的连接均显著减弱,但它们的全脑功能连接模式不同。

结论 研究表明,不同成瘾物质对大脑的影响模式存在差异,突显网络和感觉运动网络分别在酒精、甲基苯丙胺成瘾的脑影像机制中扮演重要角色,脑岛和左侧上顶回是受损伤最显著的脑区。本研究的结果可能为未来成瘾患者精准的脑刺激治疗提供了一定的依据,并未不同物质成瘾者的个性化治疗提供了初步参考。

关键词: 成瘾,酒精,甲基苯丙胺,静息态功能磁共振,图论,功能连接

酒精使用障碍背景下的失眠治疗进展

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目的 失眠和酒精使用障碍息息相关,失眠不仅是酒精戒断的常见症状,其持续存在也会导致复饮等问题出现。在酒精使用障碍患者需要注重失眠的治疗,本文根据近年来国内外相关文献,简述酒精使用障碍背景下失眠的药物治疗和心理治疗,了解酒精使用障碍背景下的失眠治疗研究进展,以期临床干预提供参考。

方法 通过查阅并总结相关文献,对近年来国内外针对酒精使用障碍患者进行失眠治疗的研究进展进行综述,在此基础上探讨了酒精使用障碍与失眠的双向关系,以及药物对酒精使用障碍与失眠产生不同影响的情况,讨论针对酒精使用障碍患者失眠的治疗方法。

结果 酒精使用与失眠之间存在双向关系,酒精使用可能直接导致失眠等睡眠问题,而失眠可能是酒精使用障碍复发的危险因素。双硫仑、阿坎酸、纳曲酮和纳美芬被美国食品药品监督管理局批准用于治疗酒精使用障碍,其中双硫仑会导致REM睡眠的减少,阿坎酸会改变酒精使用障碍患者的睡眠结构及连续性,而纳曲酮和纳美芬会对睡眠产生不良影响。镇静催眠类药物已被广泛用于治疗睡眠问题以及急性酒精戒断,但由于具有诱导依赖的潜力可能不适合酒精使用障碍患者。褪黑素受体激动剂阿

戈美拉汀和雷美替胺以及食欲素受体拮抗剂能够改善酒精使用障碍患者的失眠症状。失眠的认知行为治疗 CBT-I 是联合失眠和 AUD 的推荐一线治疗(高水平证据)。第三,如果反应不足或 CBT-I 不可用,可以增加药物治疗。

结论 对酒精使用障碍合并失眠的患者而言,失眠的认知行为治疗应被视为一线治疗,可有效减轻失眠症状,而且失眠的改善可能对酒精相关问题产生下游影响,可以将失眠的改善作为酒精使用结果改善的预测指标。

关键词: 酒精使用障碍;失眠;双向关系

Priority To Substances in Drug Users: The Essential Role of Non-Human Primates in Modeling Drug-Choice Behavior

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Objective Substance Use Disorders (SUDs) present a long-standing global public health issue, significantly impacting individuals and society. One of the core symptoms of SUDs, as identified in the International Classification of Diseases (ICD-11), is the increasing prioritization of drug use over other aspects of life, despite negative consequences. This review aims to investigate why drugs become such a dominant priority in individuals with SUDs and to explore the neural mechanisms underlying this preference. By examining animal models, particularly non-human primates (NHPs), the review seeks to bridge the gap between pre-clinical findings and clinical applications, providing insights into the decision-making processes in addiction.

Methods The methodology involves a comprehensive search of peer-reviewed articles, books, and conference papers using databases such as PubMed and Google Scholar, with keywords including "priority of drug use," "drug choice behavior," "neural mechanisms," "addiction models," "rodent models," "non-hu-

man primate models," and "decision-making in addiction."

Results Human studies using paradigms such as drug-money choice have shown that drug-dependent individuals frequently choose drugs over substantial monetary rewards. Several theories have been proposed to explain this drug preference, including habit theory, cognitive impairment theory, neurobiological theory and so on. Further specific underlying mechanisms still require animal research. Early studies with rodents revealed important insights but showed limitations, as rodents often prioritize non-drug rewards over drugs, suggesting they might not fully capture the human condition of drug preference. In contrast, non-human primates (NHPs) like rhesus monkeys and baboons exhibit decision-making behaviors more similar to humans. Studies using the discrete choice procedure in NHPs demonstrated a significant preference for drugs over food, particularly under conditions of drug withdrawal. The differences between rats and NHPs can be explained by drug reward delay hypothesis. The studies of choice models in rats reveals that orbitofrontal cortex (OFC) is involved in assigning economic value to rewards. The central amygdala (CeA) and infralimbic cortex (IL) to nucleus accumbens shell (NAshell) pathways also play critical roles. Lower GABA levels in the CeA are associated with alcohol preference, and alterations in the IL-NAshell circuit affect heroin preference

Conclusion In this review, we propose that the study of the drug-specific mechanisms underlying drug choice may provide new therapeutic directions for addiction. The preclinical drug choice model, which is gradually receiving attention in recent years because it better reflects the complex decision-making processes involved in real-world drug use and is able to capture the competition between drug-seeking and other rewarding behaviors, provide this opportunity. Given the conflicting behaviors observed in rodents compared to human drug users and the involvement of more complex cognitive processes, non-human primates are an important model to complement rodent studies

关键词: Choice behavior, Priority of drug use, Substance use disorder, Non-human primate, Drug choice models, Decision-making

基于授权理论下知信行健康教育对男性酒精依赖患者的应用研究

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目的 探讨基于授权理论下知信行健康教育对男性酒精依赖患者康复的应用效果。

方法 招募 2021 年 1 月~2023 年 6 月于我院住院治疗的 70 例男性酒精依赖患者为研究对象,随机分为对照组和实验组,每组 35 人。两组患者在年龄、文化程度、饮酒量上无明显差异,对照组执行常规护理干预。包括严密观察病情,进行精神科风险评估、执行医嘱治疗及护理,落实日常生活卫生护理,常规健康宣教,一般心理护理等。实验组在常规护理的基础上实施基于授权理论下知信行健康教育。干预过程主要包括:明确问题、表达感情、制订目标、制订计划、效果评估。干预前、干预 3 周末、6 周末时,分别使用一般自我效能感量表(GSES)及住院精神病人社会功能评定量表(SSPI)评估两组患者一般自我效能感和社会功能指标,采用重复方差分析检测两组指标在干预前、干预 3 周末、干预 6 周末的变化,并进行比较。

结果 随着干预时间的延长,两组患者自我效能存在显著的时间、分组及交互效应($P<0.05$)。通过对同一时间点两组自我效能进行 t 检验,发现干预 6 周末时,实验组自我效能评分要明显高于对照组。差异有统计学意义($P<0.05$)。日常生活能力、活动与交往情况、社会性活动技能和总分均存在显著的时间效应($P<0.05$),活动与交往情况、社会性活动技能和总分存在显著的分组效应和交互效应($P<0.05$)。通过对同一时间点两组总分进行 t 检验,发现干预 3 周、6 周末时,实验组社会功能总得分要明显高于对照组,差异有统计学意义($P<0.05$)。

结论 给予基于授权理论下知信行健康教育能提高男性酒精依赖患者的自我效能,有效改善其社会功能。

关键词: 授权理论; 知信行教育; 酒精依赖

大麻二酚抑制大脑皮层发育的作用机制研究

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目的 目前全球范围内大麻的使用率在不断增加,部分国家正在将其移除管控名单。已有研究表明,孕期使用大麻会影响子代的发育以及认知功能等,这主要是由于大麻中的精神活性成分四氢大麻酚导致的,但是大麻中的另一种非精神活性成分大麻二酚(Cannabidiol, CBD)对胎儿的影响目前并不十分清楚。临床研究表明, CBD 可缓解孕妇的呕吐焦虑等症状,其在孕妇中的使用率呈升高趋势。动物实验表明, CBD 具有亲脂性,其可以通过胎盘进入胎儿体内蓄积;孕期 CBD 摄入会影响子代体重,在不同物种中会产生不同的影响,这些证据都对孕期使用 CBD 的安全性提出质疑。因此本研拟通过体外培养人大脑皮层类器官,模拟胎儿大脑发育的过程,探索孕期 CBD 暴露对胎儿大脑发育的影响。

方法 本研究主要通过免疫荧光实验、Western-Blot 实验、实时荧光定量 PCR 实验以及单细胞测序等实验,深入研究 CBD 对皮层类器官发育的影响。

结果 初步研究结果表明,孕期 CBD 暴露会抑制皮层类器官生长。孕期 CBD 暴露改变了皮层类器官放射状胶质细胞的增殖分化过程,对中间祖细胞以及神经元的数目、比例构成产生影响,最终使神经元成熟后结构与功能发生异常改变。

结论 本研究发现 CBD 抑制大脑皮层发育,孕期不应摄入 CBD。

关键词: 大麻二酚, 类器官, 发育

The Relationship between Sleep Profiles and Anxiety and Depression in Addicted Patients: A Latent Profile Analysis

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Objective Researchers are increasingly focusing on the differences in sleep patterns, but there is little research on the specific characteristics of sleep in addicted

population. Moreover, limited studies investigated the link between sleep patterns and anxiety and depression among addiction patients. The objective of this study is to analyze sleep patterns in Chinese individuals with addiction in order to potentially inform clinical interventions aimed at improving the mental health outcomes of this population

Methods A total of 438 addicted patients from a Mental Hospital of Shanghai China were recruited. Latent profile analysis and logistic regression were used to explore the relationship between these patterns and anxiety and depression symptoms

Results Four profiles were identified among addicted population: Healthy sleepers (HS; 42.92%), Medicated Maladaptive Sleepers (MMS; 12.56%), Efficient but dysfunctional sleepers (EBDS; 26.71%), and Inefficient and dysfunctional sleepers (IADS; 17.80%). Then, patients with substance addiction are more likely to be the MMS, and patients with behavioral addiction are more likely to be the EBDS and IADS. Finally, the IADS reported the highest levels of anxiety and depression, had significant differences with the HS and MMS, but not the EBDS

Conclusion Clinicians and other workers should prioritize the assessment of the unique sleep patterns of addicted patients and tailor treatment plans accordingly. Caution should be exercised when prescribing sleep medications to patients with substance addiction. For individuals with addiction who exhibit specific sleep patterns, it may be necessary to further assess and address their symptoms of anxiety and depression

关键词: sleep profiles, depression, anxiety, latent profile analysis, addicted patients

Impact of Sexual Debut Age on Marijuana Consumption in U.S. Residents

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Objective The present investigation aims to rigorously explore the intricate relationship between the

age of sexual debut and the subsequent experimentation with, as well as the regular use of, marijuana. By analyzing the data, we seek to identify potential associations that may exist between these variables

Methods The study employed data from the National Health and Nutrition Examination Survey (NHANES) conducted between 2015 and 2016. The cohort comprised 3,414 participants, including 48.39% males and 51.61% females, with a mean age of 37.81 ± 12.25 years. The age of sexual debut was ascertained through the Mobile Examination Center (MEC) Interview, which is a standardized questionnaire designed to gather information on various lifestyle factors. Marijuana experimentation and regular use were evaluated using the Drug Use Questionnaire, a validated tool for assessing substance use patterns. Logistic regression analysis was performed to assess the strength and direction of the associations, while restricted cubic spline (RCS) curves were utilized to visually represent the relationships

Results Among the participants who reported experimentation with marijuana, a notable proportion of 50.76% transitioned to regular users, with an average onset age of 18.01 ± 5.13 years. Following the adjustment for potential confounding factors, positive associations were discerned between sexual debut and both marijuana experimentation (OR=11.911, 95% CI: 6.604-21.744) and regular use (OR=10.012, 95% CI: 4.335-23.124). Conversely, a negative association was observed between the age of sexual debut and both marijuana experimentation (OR=0.770, 95% CI: 0.748-0.793) and regular use (OR=0.734, 95% CI: 0.706-0.763) after accounting for covariates. The RCS curves further corroborated these findings, revealing an inverse proportional relationship between the age of sexual debut and the likelihood of marijuana experimentation and regular use

Conclusion This study underscores the early age at which individuals commence regular marijuana use and highlights the potential correlation between sexual behaviors and marijuana consumption. Specifically, our findings indicate that a delayed age of sexual debut is associated with lower rates of marijuana experimen-

tion and regular use. These results provide valuable insights into the complex interplay between sexual development and substance use patterns, which may have significant implications for prevention strategies and intervention programs aimed at reducing the risks associated with early marijuana use

关键词: Marijuana, Sexual Debut Age, Experimentation, Regular Use

Gantenerumab 治疗阿尔兹海默症有效性及安全性: 一项 meta 分析

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目的 运用 meta 分析研究 Gantenerumab 治疗阿尔兹海默症的有效性及其安全性。

方法 计算机检索 Pubmed、Embase 及 Cochrane 数据库有关 Gantenerumab 治疗阿尔兹海默症的研究。

结果 纳入 4 个研究, 总病例数 2848 例, Gantenerumab 较安慰剂可降低 ADAS-Cog13 评分 (MD -0.99, 95% CI: -1.68 到 -0.29, $p=0.005$); Gantenerumab 组较安慰剂组 CDR-SB 评分改变无差异 (MD -0.08, 95% CI: -0.26 到 0.11, $p=0.40$); FAQ 评分无明显影响 (MD -0.36, 95% CI: -1.12 到 0.41, $p=0.36$); MMSE 评分无明显影响 (MD 0.11, 95% CI: -0.32 到 0.54, $p=0.61$); Gantenerumab 较安慰剂可明显降低淀粉样蛋白水平 (SMD -10.22, 95% CI: -11.70 到 -8.75, $p<0.00001$); Gantenerumab 较安慰剂发生所有不良事件无明显差异 (OR 1.07, 95% CI: 0.70 到 1.65, $p=0.74$); Gantenerumab 较安慰剂发生严重不良事件降低 19% (OR 0.81, 95% CI: 0.66 到 0.99, $p=0.04$)。

结论 Gantenerumab 较安慰剂可降低 ADAS-Cog13 评分, 淀粉样蛋白水平以及严重不良事件; 但 CDR-SB 评分/FAQ 评分/MMSE 评分以及所有不良事件无明显差异。

关键词: Gantenerumab; 阿尔兹海默症; meta 分析;

催产素对甲基苯丙胺致小鼠认知障碍的作用

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目的 探究催产素对甲基苯丙胺致小鼠空间记忆和工作记忆障碍的作用及作用机制。

方法 1.借助 Y 迷宫自发交替实验和新物体识别测试实验,构建 METH 致认知障碍的小鼠模型。

2.利用经鼻给药方式,探讨外源性 OXT 施用对 METH 致小鼠认知障碍的作用。

3.采用化学遗传激活方式,探讨内源性 OXT 系统激活对 METH 致小鼠认知障碍的作用。

结果 1.连续 7 天 10 mg/kg 的 METH 持续暴露引起小鼠显著的工作记忆和认知记忆损害,表现为 Y 迷宫自发交替实验中正确交替的比例和次数减少,返回相同臂的错误率上升,以及在新物体识别测试实验中对新物体的偏好和对新旧物体的区分下降。

2.在认知记忆测试前 30 min 给予小鼠 2.5 $\mu\text{g}/\mu\text{l}$ 的 OXT 滴鼻可显著改善 METH 引起的小鼠认知功能损害。

3.在测试前通过腹腔注射 CNO (3 mg/kg) 激活 METH 小鼠 PVN 中的 OXT 神经元可有效阻断 METH 引起的认知功能减退。

结论 1.长期 METH 暴露可严重损害小鼠的空间记忆和工作记忆。

鼻滴 OXT 或化学遗传激活 PVNOXT 神经元均可改善 METH 所致小鼠认知记忆损害。

关键词: 甲基苯丙胺;催产素;认知记忆;下丘脑室旁核;

自我控制在酒依赖患者自我效能感中的中介效应及注意偏向的眼动研究

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目的 研究探讨了自我控制在自我效能感预测酒精成瘾的中介作用,同时通过成瘾的行为学范式

结合眼动监测技术,探究酒精依赖患者对酒精相关线索注意偏向的眼动特征,并分析眼动指标和自我效能感间的相关性。

方法 采用一般自我效能感量表 (General Self-Efficacy Scale; GSES)、自我控制量表 (Self-Control Scal; SCS) 和密西根酒精依赖调查量表 (Michigan Alcoholism Screening Test; MAST) 对 48 名酒依赖患者和 52 名健康人群进行调查,对自我控制在自我效能感与酒依赖的关系中的中介效应进行检验。同时采用 2 (线索类型:酒精图片、情绪图片) \times 2 (探测点和线索相对位置:同侧、异侧) \times 2 (组别:酒依赖组、健康对照组) 三因素混合设计。通过使用经典点探测范式和眼动技术监测被试对酒精线索注意偏向的特征。通过使用成瘾的点探测范式和 EyeLink Portable Duo 便携式眼动监测探究被试线索注意偏向特征 (行为学指标:点探测任务的正确率和反应时;眼动指标:注视点位移,瞳孔大小以及注视时间)。

结果 研究发现,酒依赖患者对酒精图片的注视点位移 ($p < 0.05$)、对酒精和情绪图片的瞳孔大小 ($p < 0.01$) 均显著大于健康对照组。酒依赖的自我效能感与酒精成瘾呈负相关 ($\beta = -0.173, p < 0.01$),酒精成瘾和自我控制呈负相关 ($\beta = 0.148, p < 0.01$),自我效能感与自我控制呈正相关。中介效应检验显示自我控制在自我效能感与酒依赖之间起完全中介作用,中介效应值 = -0.095, 95% 置信区间为 [-0.175, -0.017]。与此同时,酒依赖患者的对酒精和情绪图片的瞳孔大小和自我效能感呈负相关 ($p < 0.05$)。

结论 结果表明,酒依赖表现对酒精相关线索存在注意偏向;酒依赖的自我效能感能够负向预测酒程度;自我效能感通过提高自我控制水平进而降低酒依赖患者的成瘾程度;研究还提示了基于眼动的注意偏向矫治训练对降低酒依赖患者的成瘾程度及复饮风险的有效性可能来自于提高了自我效能感。

关键词: 酒依赖,注意偏向,自我效能感,自我控制

Smartphone Video Games Effectively Improve Cognitive Function in Middle-aged and Elderly Patients with Chronic Schizophrenia: A Randomized Controlled Trial

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Objective This study explores whether free video games can improve the cognitive function of middle-aged and elderly patients with chronic schizophrenia, and the effect of video games on blood factors in middle-aged and elderly patients with chronic schizophrenia

Methods We used a randomized controlled trial method to randomly divide the participants into two groups (control group and game group). The control group watched TV for 1 hour a day, five days a week for six weeks, and the game group played video games for 1 hour a day, five days a week for six weeks. The whole project lasted for 12 weeks, and the patients were measured and peripheral blood was collected at baseline, 3 weeks, 6 weeks, 9 weeks and 12 weeks. We used Repeatable Battery for the Assessment of Neuropsychological Status (RBANS), Stroop Color and Word Test (SCWT), Positive and Negative Syndrome Scale (PANSS), General Functional Assessment Scale (GAF), General Self-Efficacy Scale (GSE), Problematic Mobile Game Questionnaire (PMGQ) and Patient Health Questionnaire-9 (PHQ-9) to evaluate the cognitive function, psychiatric symptoms and mobile phone addiction of participants. blood factors GDNF, Tau, MIP-1 and MIP-4 were quantitatively detected

Results The total score of RBANS and the score of RBANS delayed memory in the game group were significantly increased. The negative symptoms were significantly improved in the game group. The PMGQ scores of the two groups were lower than the critical value at each time point. There was no significant difference in PHQ-9, GAF and GSE scores between groups. The level of GDNF in the game group was significantly increased, and the levels of Tau, MIP-1 and MIP-4 were decreased. GDNF level was positively correlated with RBANS total score and RBANS delayed memory score. MIP-1 level was negatively correlated with RBANS total score and RBANS delayed memory score

Conclusion This study demonstrates that free video games can improve the cognitive function of mid-

dle-aged and elderly patients with chronic schizophrenia. GDNF, TauMIP-1 and MIP-4 have the potential to become serum markers for predicting cognitive function

关键词: Schizophrenia, Cognitive function, Smartphone video games, GDNF, MIP-1, Tau

Chinese South Oaks Gambling Screen(C-SOGS): A Reliability and Validity Study

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Objective This study aims to translate the South Oaks Gambling Screen(SOGS) into Chinese and to verify the reliability and validity of the scale in the mainland Chinese population

Methods Based on the Brislin translation model, the South Oaks Gambling Screen was adapted to Chinese. This study collected 283 cases from October 2023 to May 2024, divided into a general population sample (N = 159) recruited from the community and a gambling treatment sample (N = 124) recruited from a gambling cessation center in Shanghai. SPSS 20.0 was used for data analysis. Item analysis, internal consistency, split-half reliability, test-retest reliability, factor analysis, content validity, structural validity, and convergent validity were used to test the reliability and validity of C-SOGS

Results The scale demonstrated high internal consistency ($\alpha = 0.97$), test-retest reliability (0.80), and split-half reliability (0.98). Factor analysis resulted in a two-dimensional solution accounting for 70.98% of the total variance: a first factor composed mainly by questions related to the problems and consequences caused by gambling, a second factor encompassing questions related to the sources of gambling funds. Its content validity was over 0.80 and 0.90 in I-CVI and S-CVI respectively. The scale had a hit rate of 0.95, sensitivity of

1.00, a specificity of 0.91, a false-positive rate of 0.10, and a false-negative rate of 0.00 when screening the gambling population

Conclusion The C-SOGS exhibits strong reliability and validity in identifying individuals with gambling disorders, making it a valuable clinical tool for the effective screening of such patients

关键词: South Oaks Gambling Screen (SOGS), Localization, Reliability, Validity

物质依赖病房不良事件上报的综合性评估与对策研究

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目的 运用综合性评估方法对某三甲专科医院物质依赖病房上报 15 例不良事件进行深入分析,制订相关护理对策,促进病房管理,以保证患者安全。

方法 回顾性分析物质依赖病房 2021 年 1 月至 2023 年 12 月不良事件上报共 15 例住院患者的临床资料,针对不良事件的分级、事件种类、入院后发生事件时天数、发生地点、发生原因、时间特点、损伤结果、发现人、发现人工作年限、事件发生前护理风险评估等级等进行分析。

结果 (1)发生的不良事件分级主要为Ⅲ级不良事件共 9 例;Ⅳ级不良事件共 5 例;Ⅱ级事件共 1 例。(2)主要发生原因为专科疾病患者存在的风险综合性评估不足。(3)事件发生时间段以白天班时间为主:白天班 10 例、小夜班 3 例、大夜班 2 例。(4)发生入院后 7 天内的不良事件共 6 例,占比 40% (其中 1 例出现缝针,伤害性最大)。

结论 为减少物质依赖住院患者不良事件发生,保障医疗护理质量安全,不仅要优化科室人力资源配置,特别在白天班工作繁忙时期,加强巡视并与患者沟通,提高风险评估能力和不良事件处置能力;加强对护理人员的专科疾病观察与评估的培训,尽早识别戒断症状,及时处理;还要加强有效的医护患沟通,尽快详细获取患者的准确病史;医生、护士、心理治疗师、护工及家属等进行综合性评估,动态观察患者病情变化,及时进行心理疏导,给予关注,提供患者有希望解决的方案,满足其合理需求,

保障患者安全,减少意外事件的发生。

关键词: 物质依赖,护理不良事件,综合性评估

酒精依赖伴抑郁患者脑结构和静息态脑功能特征研究

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目的 酒精依赖与抑郁障碍共病的神经机制尚未明确。本研究基于磁共振成像技术研究酒精依赖伴抑郁患者脑结构和静息态脑功能特征,为探索两种疾病的共病机制提供一定依据和参考。

方法 本研究纳入了酒精依赖伴抑郁组 24 例,酒精依赖不伴抑郁组 24 例和健康对照组 31 例。采集三组研究对象磁共振数据。基于 SPM12、CAT12、DPABI、DPARSF 5.3 及 xjView 等工具包对磁共振数据进行预处理和脑灰质体积(GMV)、低频振幅(ALFF)、局部一致性(ReHo)等指标的计算及统计分析。研究差异显著脑区 GMV、ALFF 及 ReHo 值与酒精依赖量表(ADS)、9 项患者健康问卷(PHQ-9)得分的相关性。

结果 与健康对照组相比,酒精依赖伴抑郁组在右颞下回、左小脑 8 区、左颞中回、左楔前叶、左/右顶下缘角回、右背外侧额上回、左/右额中回的 GMV 值减少。与酒精依赖不伴抑郁组相比,酒精依赖伴抑郁组 GMV 值无显著差异。与健康对照组相比,酒精依赖不伴抑郁组在左/右舌回、右梭状回、左辅助运动区的 GMV 值减少。与健康对照组相比,酒精依赖伴抑郁组在左距状裂周围皮层、左中央后回、右颞极:颞上回、左补充运动区的 ALFF 值降低;左豆状苍白球、右小脑 9 区、右颞上回、左颞极:颞中回的 ALFF 值升高。与酒精依赖不伴抑郁组相比,酒精依赖伴抑郁组右小脑 8 区的 ALFF 值升高。与健康对照组相比,酒精依赖不伴抑郁组在左楔叶、右中央后回、左后扣带回、左缘上回、左角回、左枕中回的 ALFF 值降低;右小脑 7b 区、右尾状核、Vermis_7 区的 ALFF 值升高。与健康对照组相比,酒精依赖伴抑郁组在左/右中央后回、左距状裂周围皮层、右颞中回、右脑岛、左小脑 4_5 区的 ReHo 值降低,左丘脑的 ReHo 值升高。与酒精依赖不伴抑郁组相比,酒精依赖伴抑郁组的 ReHo 值无

显著差异。与健康对照组相比,酒精依赖不伴抑郁组在左/右中央后回、右颞横回、左内侧和旁扣带回的 ReHo 值降低;右丘脑、右小脑 8 区的 ReHo 值升高。酒精依赖伴抑郁组的右颞上回 ALFF 值与 PHQ-9 得分呈正相关,右颞中回 ReHo 值与 PHQ-9 得分呈负相关。酒精依赖不伴抑郁组的右丘脑 ReHo 值与 ADS 得分呈负相关。

结论 酒精依赖伴抑郁患者额叶、顶叶、颞叶、小脑多脑区的灰质体积减少,表明上述脑区可能参与酒精依赖伴抑郁患者的发生发展。酒精依赖患者静息状态下存在右侧小脑功能活动的增强和中央后回功能活动的减弱,而酒精依赖伴抑郁患者右小脑 8 区的 ALFF 值较酒精依赖不伴抑郁患者增高更加显著,这表明酒精依赖伴抑郁患者静息状态下右侧小脑自发神经活动的异常增高可能是酒精依赖共病抑郁障碍的重要神经机制。

关键词: 酒精依赖;抑郁;灰质体积;低频振幅;局部一致性。

Differential Expression Profiling of tRNA-Derived Small RNAs and Their Potential Roles in Methamphetamine Self-administered Rats

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Objective The objective of this study was to elucidate the roles of transfer RNA-derived small RNAs (tsRNAs), including tRNA-derived fragments (tRFs) and tRNA halves (tiRNAs), in the pathophysiological processes induced by methamphetamine. Given their established roles in gene expression regulation, protein translation, cellular activity, immune responses, and stress reactions, we aimed to uncover how these tsRNAs contribute to methamphetamine-related pathogenesis

Methods We employed small RNA sequencing, quantitative reverse transcription-polymerase chain reaction (qRT-PCR), bioinformatics analysis, and luciferase reporter assays to profile and functionally characterize tRFs and tiRNAs in the nucleus accumbens (NAc) of methamphetamine self-administering rat models. Our

approach included the identification and differential expression analysis of tsRNAs following 14 days of methamphetamine exposure. We validated changes in specific tsRNAs using qRT-PCR and conducted bioinformatic analysis to predict their biological functions in methamphetamine-induced pathogenesis. The luciferase reporter assay was utilized to confirm the targeting relationship between selected tsRNAs and brain-derived neurotrophic factor (BDNF)

Results Our analysis identified a total of 461 tRFs and tiRNAs in the NAc post-methamphetamine administration, with 132 showing significant differential expression—59 upregulated and 73 downregulated. Notably, the expression levels of tiRNA-1-34-Lys-CTT-1 and tRF-1-32-Gly-GCC-2-M2 decreased, while tRF-1-16-Ala-TGC-4 increased in the methamphetamine group compared to controls. Bioinformatics analysis suggested potential roles for these tsRNAs in methamphetamine's pathogenic mechanisms. Specifically, tRF-1-32-Gly-GCC-2-M2 was found to target BDNF, implicating it in the pathophysiological changes induced by methamphetamine.

Conclusion The study revealed a significant alteration in tsRNA expression patterns in response to methamphetamine, with specific tsRNAs like tRF-1-32-Gly-GCC-2-M2 playing a role in the drug's pathophysiological effects through targeting BDNF. These findings offer novel insights and pave the way for future research into the mechanisms and potential therapeutic targets for methamphetamine addiction.

关键词: transfer RNA-derived small RNAs, methamphetamine, addiction, tRF-1-32-Gly-GCC-2-M2, BDNF

早期酒精依赖停药后再入院风险相关因素

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目的 探究早期酒精依赖患者停药后再入院风险的相关因素。

方法 选取 2020 年 5 月到 2021 年 5 月在金华市

第二医院诊断及治疗的早期酒精依赖患者 134 例,根据随访期(12 个月)内是否因酒精依赖再次入院将患者分为再入院组及对照组,比较两组一般资料,并在患者出院时使用强制性饮酒问卷(obsessive compulsive drinking scale, OCDS),认知功能成套测验及社会支持量表(social support rating scale, SSRS),应用 Logistic 回归分析再入院发生的独立危险因素,应用受试者工作曲线(receiver operating characteristic curve, ROC)评估不同指标对再入院的预测效能。

结果 本研究再入院患者 47 (43.12%) 例,再入院组男性比例、身体质量指数(Body Mass Index, BMI)、日均饮酒量、吸烟比例、接受教育时间显著高于对照组($P < 0.05$),再入院组 OCDS 得分显著高于对照组($t=16.984, P=0.000$),再入院组认知功能中空间广度(space span, SS)、低水平语言记忆(hopkins verbal learning test, HVLT)及 SSRS 中主观支持得分显著小于对照组($t=4.295, 4.673, 8.250; P=0.000, 0.000, 0.000$),高水平 BMI (OR=2.046, $P=0.038$)及 HVLT (OR=0.065, $P=0.033$)是再入院发生的独立危险因素, BMI、HVLT 预测再入院发生的 AUC 分别为 0.824 及 0.848,两者联合预测的 AUC 为 0.942,显著优于单独诊断($Z=3.848, 3.064; P=0.000, 0.002$),且联合诊断可有效提高诊断准确率、特异性及阳性预测值($P < 0.05$)。

结论 高水平 BMI 及低水平 HVLT 是再入院发生的独立危险因素,并对患者再入院情况具有较好预测作用。

关键词: 酒精依赖;再入院;危险因素;认知障碍

甲基苯丙胺使用障碍者短期戒断后睡眠质量分析

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目的 探讨甲基苯丙胺使用障碍者短期戒断后的睡眠质量。

方法 本研究共有 552 名戒断一个月的甲基苯

丙胺使用障碍者参与,采用匹兹堡睡眠指数(PSQI)调查参与者的主观睡眠状况;随机抽取 220 名参与者使用心肺耦合睡眠监测仪(CPC)对睡眠进行数据监测,并进行睡眠日记评估。

结果 PSQI 的结果显示,54.2%的参与者存在较差的主观睡眠质量($PSQI > 5$),33.3%的参与者存在较为严重的主观睡眠质量问题($PSQI > 8$)。存在较为严重的主观睡眠质量问题的个体更可能为女性、更大的年龄、更长的毒品使用时间和对 MA 更高的渴求。CPC 睡眠结构分析显示,存在较为严重的主观睡眠质量问题($PSQI > 8$)的个体可能存在更短的睡眠总时间($p < 0.001$)、熟睡时间($p < 0.001$)和更好的睡眠效率($p < 0.001$)。以及更长的浅睡时间($p < 0.001$)、快速眼动睡眠时间($p < 0.001$)和睡眠潜伏期($p < 0.001$)。渴求($p < 0.012$)和吸烟频率($p < 0.028$)可以预测甲基苯丙胺使用障碍者的客观睡眠时间。

结论 甲基苯丙胺使用障碍者在戒断一个月后存在主观睡眠质量问题的比例仍较高,并且这种异常的主观睡眠体验与客观睡眠指标的异常相关。

关键词: 甲基苯丙胺,戒断,匹兹堡睡眠指数,心肺耦合睡眠监测

男性酒依赖患者复饮行为的相关影响因素分析

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目的 分析男性酒依赖(alcohol dependence, AD)患者戒断后复饮行为的相关影响因素。

方法 选取 2018 年 1 月至 2023 年 9 月在北京回龙观医院就诊的男性酒依赖患者为研究对象。所有患者均给予常规急性脱瘾治疗,并在治疗后的 6 个月随访患者的复饮情况。根据患者是否复饮分为复饮组 56 例(63.64%)和未复饮组 32 例(36.36%),比较两组的人口学和临床特征,并使用有序二分类 Logistic 回归探讨男性酒依赖患者复饮的相关影响因素。

结果 单因素分析结果显示,复饮组与未复饮

组在癫痫发作史, 日均饮酒量, GGT, DSQ-1, DSQ-2, MAST-4 方面的差异具有统计学意义 ($P < 0.05$)。进一步二分类 Logistic 回归分析显示, 日均饮酒量 ($OR = 1.36$, $95\%CI: 1.09-1.70$), DSQ-1 不成熟的防御机制 ($OR = 2.51$, $95\%CI: 1.34-4.70$) 是男性酒依赖患者的危险因素; DSQ-2 成熟的防御机制 ($OR = 0.42$, $95\%CI: 0.22-0.78$) 是男性酒依赖患者复饮的保护因素。

结论 日均饮酒量、不成熟的防御机制可能增加男性酒依赖患者复饮的风险; 成熟的防御机制可能减少男性酒依赖患者复饮的风险。

关键词: 酒精依赖; 复发; 危险因素; 保护性因素

Circulating Plasma and Exosome Levels of The MiR-320 Family As A Non-invasive Biomarker for Methamphetamine Use Disorder

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Objective The neurobiological mechanism of methamphetamine(MA) use disorder was still unclear, and no specific biomarkers exist for clinical diagnosis and treatment. Recent studies have demonstrated that microRNAs (miRNAs) are involved in the pathological process of MA addiction. The purpose of this study was to identify novel miRNAs as biomarkers for the diagnosis of MA user disorder

Methods First, members of the miR-320 family, including miR-320a-3p, miR-320b, and miR-320c, were selected and analyzed in the circulating plasma and exosome by microarray and sequencing. Secondly, miR-320 in plasma was quantified by real-time quanti-

tative reverse transcription polymerase chain reaction(RT-qPCR) in eighty-two patients exhibiting MA use disorder and fifty age-gender-matched healthy controls. We also analyzed miR-320 expression in the exosome of thirty-nine patients exhibiting MA use disorder and twenty-one age-matched controls. Subsequently, diagnostic power was evaluated using the area under the curve (AUC) of the receiver operating characteristic (ROC) curve

Results The results showed that miR-320 was significantly increased in MA use disorder plasma and exosome compared with controls. The AUC of the ROC curves of miR-320 in MA use disorder plasma and exosome were 0.751 and 0.962, respectively. The sensitivities of miR-320 in MA use disorder plasma and exosome were 0.900 and 0.846, respectively, whereas the specificities of miR-320 were 0.537 and 0.952, respectively. Among the increases in miR-320 in MA use disorders patients, the increase in miR-320 in the plasma was positively correlated with smoking, age of onset, and daily use. Target prediction with miR-320 identified pathways implicated in MA addiction, including cardiovascular disease, synaptic plasticity, and neuroinflammation

Conclusion Our findings indicated that plasma and exosome associated miR-320 might be used as a potential blood-based biomarker for diagnosing MA use disorder

关键词: exosome; plasma; methamphetamine; microRNAs; diagnosis; biomarker

VR 线索暴露治疗酒精使用障碍的疗效研究

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目的 本研究旨在探索 VR 线索暴露疗法对降低酒精使用障碍患者渴求、防止复饮的治疗效果。

方法 96 例符合 DSM-5 中重度酒精使用障碍诊断的住院患者被随机分配到 VR-CET 组(N=47)和对照组(N=49)。对照组仅接受常规临床治疗和 VR 场景放松治疗, VR-CET 组接受常规临床治疗以及 VR

线索暴露治疗,包括饮酒情境的暴露,观看厌恶视频进行渴求的反调节治疗,最后进行场景放松。在两周内均完成5次治疗。治疗前后均使用OCDS、AUQ和酒精图片诱发下的VAS评估主观渴求。AUD出院后使用时间线回访法(Timeline Follow back, TLFB)对患者进行4周一次的电话随访,共随访24周,记录出院后复饮的情况。首要结果指标为随访期重复入院率、8周内的完全戒酒率、总酒精消费量。次要结局指标为渴求改善情况,首次饮酒时间、重度饮酒天数。所有结局指标采用意向性分析的方式,使用协方差统计分析VR-CET组与对照组治疗前后渴求改善情况。随访期结局指标使用Logistics回归分析和广义估计方程进行分析。

结果 本研究探讨了VR线索暴露治疗酒精使用障碍的临床疗效。在首要结局指标中,VR-CET组在随访期内的重复入院率较低($P=0.030$, $OR=0.25$, $95\% CI 0.07-0.88$)。出院后8周内的完全戒酒率较高($P=0.022$, $OR=2.91$, $95\% CI 1.16-7.26$)。在酒精消费中,两组间差异接近显著(Wald卡方值=3.33, $P=0.068$, $Cohen's d=0.38$),且分组与时间的交互效应差异显著(Wald卡方值=12.53, $P=0.028$),多重比较发现在随访第8周(Wald卡方值=4.54, $P=0.033$, $Cohen's d=0.45$)、第12周(Wald卡方值=6.68, $P=0.01$, $Cohen's d=0.54$)和第16周(Wald卡方值=3.85, $P=0.05$, $Cohen's d=0.40$)两组差异显著。在次要结局指标上,渴求改善方面,VR-CET组与对照组的VAS诱发、OCDS、AUQ评分治疗前后差值上,差异未显示出统计学意义($p>0.05$),重度饮酒天数和首次复饮时间VR治疗组与对照组没有显著统计学差异($p>0.05$)。

结论 VR线索暴露治疗对AUD出院后饮酒结局具有改善作用,可以提升AUD出院后早期的完全戒酒率,减少再住院风险,并且减少出院后的酒精消费。

关键词: 线索暴露疗法,虚拟现实,酒精使用障碍,渴求,复饮

苯二氮草类镇静催眠药超说明书用药的现况调查

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目的 当前临床指南普遍建议苯二氮草类药物(BZDs)应“短期、小剂量”使用,以降低潜在的依赖和副作用风险。然而,实际临床应用中“长期、大剂量”使用BZDs的情况较为普遍,这与推荐指南存在显著差异。为了解BZDs在实际临床中的使用情况及其背后的影响因素。本研究于一家大型三甲精神专科医院门诊进行了一项详细的处方用药调查。

方法 通过收集2022年7月1日至7日一周时间内门诊的BZDs处方数据,全面分析了BZDs的使用模式,包括用药频率、剂量、以及与特定诊断相关的用药情况。

结果 本研究共纳入2812名患者的BZDs用药信息,其中女性占比60.2%,男性占39.8%。平均年龄为45.91岁。男性患者的BZDs日均使用剂量显著高于女性患者。而且随着年龄的增加,苯二氮草类镇静催眠药日均使用剂量也逐渐增加,且不同年龄段之间BZDs的日均使用剂量存在显著性差异。睡眠障碍患者的BZDs日均使用剂量中位数最高,其次为精神分裂症、双相情感障碍、抑郁症、焦虑症、心境[情感]障碍,且不同疾病诊断之间BZDs的日均使用剂量也存在显著性差异。BZDs的超适应症用药现象普遍,77%的患者存在超说明书用药,主要以超适应症为主,同时超剂量的情况也较为常见。精神分裂症的患者超说明书用药发生率最高,其次为双相情感障碍、心境[情感]障碍、抑郁症、焦虑症、睡眠障碍。我们还发现阿普唑仑、劳拉西泮和奥沙西泮是使用频率最高的三种BZDs。发生超说明书用药最常见于咪达唑仑,其次为氯硝西泮、劳拉西泮、奥沙西泮、阿普唑仑、艾司唑仑、硝西泮。年龄小、使用多种BZDs、联合使用多种精神科药物是发生超说明书用药的危险因素。

结论 BZDs的使用普遍而超说明书用药现象显著,这提示临床医生在使用BZDs时需更加注意药物的适应症与剂量控制。合理的超说明书用药在一定程度上可能填补了现有药品说明书与临床实践之间的差距,但对于显著的超大剂量用药情况,需要行政部门、医疗机构和临床医生共同努力,以完善管理措施,保证用药的安全性和合理性。

关键词: 苯二氮草类镇静催眠药、超说明书用药、处方分析、现况调查

A Study on Cognitive Function Impairment in Chronic Ketamine Users

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Objective Over the past two decades, ketamine has emerged as a major substance of abuse in many regions worldwide. Neuroimaging studies have revealed significant brain atrophy in chronic ketamine users, particularly in areas associated with cognitive functions. This study aims to investigate the extent of cognitive impairment in chronic ketamine users and its relationship with patterns of ketamine use

Methods The study included 28 chronic ketamine users and 30 healthy controls. Cognitive function was evaluated using the MATRICS Consensus Cognitive Battery (MCCB), which assesses seven cognitive domains: working memory, visual learning, verbal learning, speed of processing, reasoning and problem-solving, attention/vigilance, and social cognition. Correlation analyses were performed to examine the relationship between cognitive performance and characteristics of ketamine use

Results Chronic ketamine users demonstrated significantly lower performance in speed of processing, visual learning, working memory, and overall MCCB scores compared to healthy controls. Significant negative correlations were observed between estimated total ketamine consumption and cognitive performance in speed of processing and overall cognitive function

Conclusion Chronic ketamine users exhibit impairments in working memory, visual learning, and speed of processing. Chronic ketamine use may lead to reduced information processing speed and overall cognitive function. These cognitive impairments may be indicative of structural and functional damage in multiple brain regions

关键词: Ketamine, Chronic Ketamine Use, Cognitive Impairment, Speed of Processing

针对酒精使用障碍的虚拟成瘾康复治疗师的开发与有效性验证

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目的 酒精是滥用最为严重的精神活性物质之一,既往研究提示心理治疗干预有效,然而心理服务资源严重不足导致许多患者未能接受相应干预。为了应对该现实困境,本研究对已有虚拟成瘾康复治疗师系统针对酒精使用障碍进行优化开发,并验证虚拟成瘾康复治疗师对酒精使用障碍患者的疗效。

方法 虚拟成瘾康复治疗师系统是一个由临床医生、心理治疗师和计算机专家组成的团队针对酒精使用障碍开发的评估和康复程序,具有电脑移动端及网页移动端两种入口模式。评估方面主要针对成瘾的核心特征,如情绪、冲动性、治疗动机和渴求程度。在治疗方面系统提供了 10 个治疗单元,包括动机增强、情绪调节、冥想等。

开发完成后,共有 93 名酒精使用障碍患者随机接受基于虚拟成瘾康复治疗师系统的康复心理治疗联合常规治疗或单纯常规治疗。在基线期、干预后使用量表收集患者的临床结局指标,包括渴求和睡眠情绪状态等。干预一月后简单随访患者的复饮、情绪和睡眠情况。研究采用重复测量方差分析和独立样本 t 检验对两组受试者在接受治疗前后的疗效指标进行比较。运用卡方检验比较两组患者在治疗后一个月的随访结局。为了进一步确定对干预疗效可能存在影响的受试者临床特征,我们使用探索性亚组分析和线性回归来探究人口学因素和临床特征对于酒精渴求变化的影响。使用 logistic 回归探究认知和情绪因素对两组受试者临床结局的影响。

结果 在前期开发基础上,本研究针对酒精使用障碍患者,系统进一步丰富了数字人的形象和治疗内容。在认知评估模块搭载上,针对成瘾患者核心认知损害特点——主要表现在注意、记忆、抑制控制、执行功能等多个认知维度的功能障碍,以及对物质相关线索刺激的认知偏向——包括注意偏向、趋向偏向以及药物相关记忆偏向,本研究亦构建了脑电、肌电等客观生理指标同步采集下的认知评估方案。

干预后一个月随访结果表明,在 93 名受试者中,有 13 名受试者失访,43 名受试者复发,37 名受试者未复饮。卡方分析比较两组患者的复饮结局结果

表明, 两组患者的干预后一个月随访的结果有显著差异。独立样本 *t* 检验的结果表明两组受试者对于酒精渴求的前后测差值有显著差异, 两组受试者在 PHQ-9 抑郁量表得分的后测有显著差异, 两组受试者在 PSQI 睡眠质量指数的后测差值有显著差异。

结论 本研究开发了一套基于心理治疗师虚拟形象治疗酒精使用障碍的系统, 该系统结合了认知行为治疗工具, 预防复发的正念音频指导和酒精使用障碍相关知识。对照试验提示基于心理治疗师虚拟形象开发系统对酒精使用障碍治疗具有优于常规成瘾治疗方案的临床疗效, 并有潜力能降低受试者酒精使用障碍的复发率, 结合其具有扩大应用的一定价值, 值得向各级医疗机构推广干预。

关键词: 酒精使用障碍, 虚拟成瘾康复治疗师, 临床对照研究

The Severity of Gambling in Clinical Samples of Gamblers: Profiles and Prediction of The Impulsivity and Emotions

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Objective Impulsivity and emotion impairments have been noted in individuals with gambling disorder (GD). However, little research has investigated the influence of impulsivity and emotions on the severity of gambling in clinical populations. This study aimed to examine: (i) differences in emotions and impulsivity traits according to the severity of gambling in individuals with GD, (ii) the mediating effects of emotion in the relationship between impulsivity traits and gambling severity, and (iii) the predictive effects of emotion and impulsivity traits on GD severity

Methods The study included 214 participants seeking treatment for GD who completed assessments for emotions (Patient Health Questionnaire-9 [PHQ-9], 7-item Generalized Anxiety [GAD-7]), impulsivity traits (Barratt Impulsiveness Scale [BIS], Self-control Scale [SCS]), and GD severity (DSM-5)

Results Participants were categorized into mild ($n = 78$), moderate ($n = 63$), and severe ($n = 73$) gambling severity groups. Significant differences in emotions and impulsivity traits were observed across these groups. The severe GD group exhibited higher levels of depression, anxiety, and impulsivity traits, along with lower self-control, compared to the moderate and mild groups. Mediation analyses demonstrated that negative emotions mediated the association between impulsivity traits and the severity of gambling. More specifically, the indirect effects of impulsivity traits through PHQ-9 and GAD-7 were found to be significant, indicating a mediating role of emotions. Moreover, a predictive model incorporating emotion and impulsivity traits showed moderate accuracy in predicting the severity of gambling, with an area under the receiver operating characteristic curve of 0.714

Conclusion This study highlights the distinct pathways through which impulsivity traits operate and emphasizes the need for prevention and treatment strategies that consider impulsivity traits and emotions for different levels of gambling severity

关键词: gambling disorder, emotion, impulsivity, gambling severity

Public Stigma Towards People with Alcohol Use Disorders in China

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Objective Research from Western societies indicates pervasive public stigma against people with alcohol use disorders (AUDs). However, there is a lack of knowledge about the interactions between different components of stigma and their contribution to discriminatory behaviour towards individuals with AUDs within the Chinese cultural context. The aim of the present study was therefore to investigate the relationships of (mis-)conceptions, stereotypes, emotional reactions, perceived public stigma and their contribution to the desire for social distance among the Chinese adults

Methods (Mis-)conceptions, stereotypes, emotional responses, willingness to help and avoid, perceived stigma, and the desire for social distance from individuals with AUDs were assessed via a cross-sectional online survey with a sample of 1,100 adults from the Chinese population

Results Three-fourth of the participants recognised AUDs as mental illnesses, though 70% of the sample did not support health insurance coverage for the treatment of AUDs. A stronger desire for social distance was associated with increased perceived public stigma, greater recognition of alcohol use disorders as mental illnesses, heightened perceptions of personal responsibility, increased fear, and more willingness to avoid and withhold help, controlling for age, gender, education, employment, and alcohol consumption

Conclusion Culturally tailored anti-stigma programmes are needed to address stigma associated with mental illnesses in general, highlight the multifaceted cause models of alcohol use disorders, reduce perceptions of personal responsibility, and involve people with lived experience of alcohol use disorders

关键词: alcohol use disorders, public stigma, stereotype, discrimination, China, stigma change

The Impact of Childhood Misbehavior on Drinking Behavior Among Non-medical College Students in Beijing: The Mediating Effect of Positive Alcohol Expectations

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Objective This study preliminarily explores the mediating effect of positive alcohol expectations in the process by which childhood misbehavior before the age of 12 affects drinking behavior among non-medical college students in Beijing

Methods Using convenience sampling, 214 non-medical college students were recruited from two universities in Beijing between January 2014 and December 2015. The Ethanol Dependence Syndrome Scale (EDSS) was employed to assess the severity of the participants' drinking behavior. Information on general demographics, drinking expectations, and behaviors before the age of 12 was collected. Correlation analysis, multiple regression analysis, and Bootstrap tests were utilized to analyze survey results

Results Significant positive correlations were found among drinking behavior, childhood misbehavior before the age of 12, and positive alcohol expectations. Multiple regression analysis showed that childhood misbehavior before the age of 12 significantly positively predicted positive alcohol expectations ($\beta=1.269$, $P<0.01$) and the severity of drinking behavior ($\beta=0.091$, $P<0.01$). Positive alcohol expectations also significantly predicted the severity of drinking behavior ($\beta=0.02$, $P<0.01$), while negative alcohol expectations did not show the significant predictive effect ($\beta=-0.082$, $P=0.1$). Both direct and mediating effect from childhood misbehavior before the age of 12 to the severity of drinking behavior were significant, with their 95% confidence intervals not including "0". The direct effect of childhood misbehavior before the age of 12 on drinking behavior was 0.091, with a 95% CI of (0.009-0.167), accounting for 79.77% of the total effect. The total indirect effect was 0.023, with a 95% CI of (0.008-0.046), accounting for 20.23% of the total effect. Drinking expectations significantly mediated the impact of childhood behavior on the severity of drinking behavior

Conclusion The childhood misbehavior before the age of 12 of college students can indirectly influence

their drinking behavior through individual drinking expectations. It is suggested that more attention should be paid to college students with childhood misbehavior before the age of 12, and intervention strategies could be developed to reduce positive alcohol expectations and the occurrence of drinking behavior

关键词: Childhood Misbehavior; Positive Alcohol Expectations; Drinking Behavior; Mediating Effect

The Changes of Substance Use Patterns and Its Association with Health Risk Behaviors Among Adolescents: Trends Analysis From 2007 To 2019

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Objective Understanding the evolving characteristics and profiles of adolescent substance use is essential for designing effective interventions, and continuous monitoring of trends is vital for public health initiatives. The aim of this study was to determine the polysubstance use patterns among the adolescents and to explore the dynamic association between substance use and health risk behaviors during the long-term period (i.e., 2007 to 2019)

Methods The current study used biennial data from the US nationally representative Youth Risk Behavior Survey(YRBS) from 2007 to 2019. Crude prevalence rates were calculated for self-reported lifetime use of 11 substances, including cigarettes, alcohol, marijuana, cocaine, glue, heroin, methamphetamine, ecstasy, steroids, hallucinogenic drugs, and injected illegal drugs. Prevalence rates were determined for six theoretical domains, including sexual risk behaviors, suicide-related behaviors, physical and mental health safety, electronic use, safety, and violence-related behaviors, for the overall sample. Joinpoint regression models

were used to estimate biennial percent changes (BPCs) and average BPC (ABPC) of substance use and health risk behaviors from 2007 to 2019. Latent category analysis was used to identify substance use patterns, and logistic regression analysis with year-by-group interactions assessed dynamics and disparities from 2007 to 2019

Results Three stable substance use patterns—Low (the group with low probabilities of using cigarettes, alcohol, and marijuana, and almost no use of illegal substances), Moderate (the group with moderate probabilities of using cigarettes, alcohol, and marijuana, and low probabilities of using illegal substances), and High Polysubstance Groups (the group with moderate to high probabilities of using cigarettes, alcohol, marijuana and illegal substances)—were identified from 2007 to 2019. There was an increasing trend in the Low Polysubstance Group(BPC=1.60% [95%CI:0.35%, 2.87%]), a decreasing trend in the Moderate Polysubstance Group(BPC=-3.21% [95%CI:-5.85%, -0.51%]) and a steady trend in the High Polysubstance Group from 2007 to 2019. Compared to Low Polysubstance Group, the High Polysubstance Group presented higher risk in most health-risk behaviors. The changes in the risk of most health risk behaviors of three substance use subgroups-based disparities were not significant, or narrowed from 2007 to 2019. Sexual risk behaviors and violence-related behaviors are more sensitive to the trend changes in polysubstance use. It was found that the disparity in the risk of these two kinds of behaviors increased over time in the Moderate Polysubstance use group. Although health-risk behavior disparities between legal substance users and non-users were smaller or unchanged, the prevalence of marijuana was still high, with an increasing risk disparities in engaging in sexual risk and violence-related behaviors associated with it from 2007 to 2019. Meanwhile, disparities in nearly all health risk behaviors between illegal substances users and non-users widened, with sexual risk behavior and violence-related behaviors showing the most pronounced differences

Conclusion From 2007 to 2019, the proportion of the High Polysubstance Group remained unchanged, with consistently high levels of health risk behaviors.

The trends in risk of engaging in health risk behaviors differed between legal and illegal substances. These findings underscore the need for multifaceted and adaptable strategies to address adolescent substance use and related behaviors

关键词: Substance use, Health-related behaviors, Adolescents, Disparities, Trends

Exploration of The Therapeutic Effects and Impact on Neuroplasticity of Sequential Bilateral Transcranial Magnetic Stimulation (TMS) Treatment for First-Episode Depression Patients

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Objective 1. To investigate the efficacy of bilateral sequential treatment with left intermittent theta burst stimulation (ITBS) combined with right low-frequency repetitive transcranial magnetic stimulation (rTMS) in improving sleep and mood in patients with first-episode depression. 2. To explore the impact of this treatment modality on brain neuroplasticity in patients with first-episode depression through event-related potentials

Methods A total of 42 patients who met the diagnostic criteria for depression in the International Classification of Diseases, 10th Edition (ICD-10) for mental and behavioral disorders were studied. They were divided into a first-episode group of 21 patients and a non-first-episode group of 21 patients. Both groups received antidepressant treatment with escitalopram oxalate alone, supplemented with ITBS on the left dorsolateral prefrontal cortex (L-DLPFC) combined with low-frequency rTMS (LF-rTMS) on the right dorsolateral prefrontal cortex (R-DLPFC). Both groups completed 10 treatment sessions (5 days/week). Additionally, PSQI

was used to assess sleep quality, and HAMD-17, SAS, and SDS were used to assess mood improvement before and after treatment. The Japanese MEB-23120 electromyography/evoked potential instrument was used to measure MMN latency, P300 latency, and amplitude

Results After the sequential treatment with left DLPFC ITBS combined with right DLPFC LF-rTMS, both first-episode and non-first-episode depression patients showed a decrease in HAMD-17, SDS, and PSQI scores compared to before treatment (all $P < 0.05$). The MMN latency and P300 latency were shortened in both groups after treatment (all $P < 0.05$). Among them, the decline in HAMD-17, SDS, and PSQI scores was more significant in first-episode depression patients compared to non-first-episode depression patients. In the first-episode depression population, there was a positive correlation between changes in PSQI and HAMD after TMS treatment. The results suggest that earlier TMS intervention leads to better therapeutic effects when depression occurs. At the same time, this study provides evidence that the combined treatment of iTBS and LF-rTMS can improve brain neurophysiological indicators

Conclusion This rTMS stimulation protocol can effectively improve sleep and depression status in individuals with depressive disorders. The improvement trend is more significant in individuals with first-episode depression, and there is a correlation between the degree of sleep improvement and the degree of depression improvement. rTMS can significantly improve advanced brain function electrophysiological indicators related to automatic processing and active control processing, suggesting that rTMS may have a plastic effect on the brain, maintaining dynamic stability and balance of brain function

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关键词: Transcranial Magnetic Stimulation, First-Episode Depression, Event-Related Potentials.

Therapeutic Effect of Escitalopram Oxalate on Functional Gastrointestinal Disease in The Elderly

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Objective Functional Gastrointestinal Disorder is a kind of functional disease which can not be explained by organic disease. There are more and more evidence suggests that the disorders of gut-brain axis are related to it, and the variety and abundance of intestinal microbes are also closely related to it. Previous studies have shown that psychiatric drugs may be effective in the treatment of this disorder. In view of this, a randomized, single-blind, controlled study was conducted to investigate the effect of escitalopram oxalate on the improvement of clinical symptoms in elderly patients with functional gastrointestinal disorder. At the same time, the intestinal microbes were analyzed to explore whether the changes of variety and abundance of microbes are consistent with the changes of clinical symptoms

Methods A total of 83 subjects were recruited. General demographic data, anxiety and depression scales scores, and gastrointestinal symptom scales scores of the subjects were collected during enrollment, and stool samples were obtained. All patients were treated with routine drugs of gastroenterology, while the patients in the experimental group were also treated with escitalopram oxalate 10 mg/d for 12 weeks. At the end of Week 12, anxiety and depression scales and gastrointestinal symptom scales were re-evaluation. At the end of 12 weeks, stool samples were obtained again. Two stool specimens were analyzed by 16S Amplicon Sequencing

Results There was no statistically significant difference in the general demographic data and symptom scale scores of the subjects. After 12 weeks of treatment, both the experimental group and the control group showed significant improvement, and the improvement in the experimental group was more significant than that in the control group, with a statistically significant difference

The results of 16S Amplicon Sequencing analysis showed that the variety and abundance of intestinal microbes increased both in the experimental group and the

control group after the treatment. The results were statistically different ($p < 0.05$). Significant changes were observed in four genera and two species in the experimental group. Among them, the abundance of *Blutia*, *Eubacterium-hallii*-group, *Prevotellaceae-UCG-003*, *Streptococcus-salivarius* and *Parabacteroides-merdae* decreased and the abundance of *Butyricoccus* increased.

The correlation analysis showed that the abundance of *Butyricoccus* was negatively correlated with the scores of 3 scales. The abundance of the other 4 kinds of microbes was positively correlated with the scores of 3 scales. The results of bivariate logistic regression analysis showed that the abundance of *Butyricoccus* had regression relationship with the scores of Gastrointestinal Symptom Rating Scale and Zung Self-Rating Depression Scale. The P values were 0.006 and 0.026 respectively.

Conclusion In this study, a randomized controlled intervention trial showed that adding escitalopram oxalate tablets on the basis of symptomatic treatment had a more significant clinical effect on the treatment of functional gastrointestinal disorder in the elderly than symptomatic treatment alone. After 12 weeks of treatment, the variety and abundance of the intestinal microbes changed significantly, and the increased abundance of *Butyricoccus* was closely related to the improvement of clinical symptoms

关键词: Functional Gastrointestinal Disorder; Escitalopram Oxalate; Clinical Symptoms; 16S Amplicon Sequencing

非自杀性自伤群体生理疼痛和社会疼痛研究进展

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目的 非自杀性自伤(Non-Suicidal Self-Injury, NSSI)是指个体在没有自杀意图的情况下,故意对身体组织进行破坏的行为(Nock, 2010),其主要目的是通过疼痛或流血来缓解情绪上的痛苦或压力(Liu et

al., 2022)。尽管已有诸多研究关注 NSSI 发生机制、影响因素和干预措施(Qu et al., 2023), 但从生理和社会疼痛加工异常的角度关注 NSSI 群体仍有不足, 因此本综述拟回顾当前 NSSI 群体生理和社会疼痛的研究进展, 以期制定科学的预防和治疗策略提供依据(Kao et al., 2024)。

方法 本综述采用文献分析法, 回顾了关注 NSSI 生理疼痛和社会疼痛的实证研究, 总结出 NSSI 群体在这两方面的研究进展。

结果 NSSI 群体在生理上的疼痛敏感性更低(Lalouni et al., 2022)。来自行为学的证据表明, NSSI 组在热痛刺激和压力痛刺激下都表现出更高的疼痛阈值和疼痛耐受。来自神经机制的证据表明, NSSI 组在热痛刺激下, 相比 HC 在初级感觉皮层(S1)和次级感觉皮层(S2)表现出更高程度的激活。来自纵向数据的证据表明, 在 1 年的时间里, 疼痛阈值的降低与 NSSI 的减少有关(Kao et al., 2024)。

NSSI 群体可能经历更多的社会排斥, 同时也对社会疼痛更加敏感(Cheek et al., 2020)。来自日记法的研究表明, NSSI 组相对对照组, 在经历社交压力源后报告了更强烈的痛苦体验(Haliczer & Dixon-Gordon, 2023)。来自神经机制的证据表明, NSSI 群体在考察社会疼痛的经典范式赛博传球任务中(Cyberball), NSSI 青少年比对照组表现出更高的腹侧前扣带回(vACC)激活, 这提示了 NSSI 青少年对社会排斥的反应更高(Brown et al., 2017)。

有研究者认为, 两类疼痛在敏感性上存在相耦合的模式, 即对生理疼痛更敏感的个体在社会排斥中也报告更多的社会疼痛(Eisenberger et al., 2006)。但是基于健康群体得到的两类疼痛的关系, 不一定适用于 NSSI 群体。在 NSSI 群体中梳理和探索两类疼痛的加工机制尤为重要。

结论 相比健康群体, NSSI 群体的生理疼痛敏感性更低, 社会疼痛敏感性更高。在健康群体中, 两类疼痛敏感性存在耦合关系, 但 NSSI 群体存在潜在的失耦合模式, 这种异常模式可能是与症状相关的特异性表现。未来研究应同时纳入生理疼痛和社会疼痛范式, 揭示 NSSI 群体在两类疼痛加工过程中的神经基础, 最终为心理和物理干预的有效性提供支持。

关键词: 非自杀性自伤 生理疼痛 社会疼痛 神经机制

基于单细胞核 RNA 测序解析海洛因成瘾大鼠边缘下皮层转录变化

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目的 海洛因是一种强效的合成阿片类药物, 会作用于呼吸中枢神经元上的 μ 阿片受体引起呼吸抑制。近二十年来, 美国因吸食海洛因致死的人数超 47 万。根据《2023 年中国毒情形势报告》, 滥用海洛因人数高达 30.5 万名, 是我国滥用率最高的阿片类毒品。然而, 由于海洛因成瘾分子机制复杂以及脑区网络多样, 因此对海洛因成瘾关键靶点基因的全基因组关联研究仍有待完善。本实验通过建立海洛因自身给药成瘾大鼠模型, 将成瘾大鼠与空白组大鼠边缘下前额叶皮层(infralimbic cortex, IL)的转录组进行对比, 揭示海洛因成瘾行为的分子机制, 为药物成瘾的靶点研究提供理论基础。

方法

1)、海洛因自身给药模型的建立

成年雄性 SD 大鼠(280g-320g)进行海洛因自身给药训练 14 天后, 形成稳定的强迫性觅药行为后, 同时使用生理盐水训练另一批大鼠作为对照。

2)、单细胞核 RNA 测序(snRNA-seq)实验

将海洛因自身给药大鼠与盐水训练大鼠最后一次训练结束后取 IL 近行基于 10×Genomics 平台的 snRNA-seq, 使用 fastp、UMI-tools 进行数据质控和建库。

3)、数据分析

Seurat 进行数据矩阵的筛选和 UMAP 非线性降维聚类; 通过人工注释根据已知标记基因鉴定细胞类型。对海洛因自身给药和盐水进行差异基因分析以揭示模型转录特征。GO、KEGG 富集分析评价行为学差异涉及的特定功能改变。差异表达基因的蛋白质-蛋白质相互作用网络(PPI)构建发现关键基因网络。

结果

海洛因自身给药大鼠 IL 出现细胞类型特异性转录变化。其改变主要集中于兴奋性神经元(Excitatory)中。Excitatory 特异性 DEGs 功能富集结果显示海洛因自身给药诱导中枢神经系统突触的损伤以及神经元自噬。对神经元细胞转录反应进一步研究神经元细胞中下调的 DEGs 包括即早表达基

因 (IEGs), 如 Fos 和 Arc。PPI 构建发现 Excitatory 中关键基因为 Ptk2b, Dusp1 和 Dusp6。

结论 本研究发现海洛因自身给药主要通过介导神经突触可塑性改变进行强迫性觅药行为。随后找寻出关键基因, 为药物成瘾提供新靶点。

关键词: 关键词: 海洛因自身给药; 单细胞核 RNA 测序; 边缘下皮层; 兴奋性神经元

注意力缺陷/多动障碍的不同治疗模式: 一项随机对照试验的 Meta 分析

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目的 注意缺陷多动障碍 (ADHD) 是一种常见的神经发育障碍以多动/冲动的症状为特征, 注意力不集中, 或两者兼而有之。近年来, 基于大脑可塑性的特点, 国内外学者日益关注重视药物联合执行功能康复对 ADHD 儿童进行培训, 以实现有针对性的干预神经缺陷。ADHD 可以通过药物和非药物治疗方法来缓解症状和功能损害。兴奋剂和非兴奋剂药物治疗可以迅速改善 ADHD 症状, 但即便是长期使用药物, 社会功能和学习能力也不会显著提高。因此, ADHD 的非药物治疗, 包括物理治疗、行为干预、社交技能培训, 以及认知行为疗法等, 已经引起了相当大的关注。目前, 国内外仍有许多关于多动症治疗方法的争论。本研究旨在通过对近年的相关研究进行系统回顾, 以探讨目前最有效的治疗 ADHD 的方法。

方法 对于 2010 年 1 月 1 日至 2021 年 1 月, 发表在 PUBMED、EMBASE、WOS, 和 Cochrane 图书馆数据库中, 针对多动症的药物与非药物治疗研究进行系统综述。

结果 在 ADHD 的分析中共纳入 12 项研究。药物治疗与安慰剂的联合疗效比较为 $SMD=-6.84, 95\%CI (-10.48, -3.21)$ 。根据哌甲酯与哌甲酯联合其他疗法治疗多动症的亚组分析, 发现在多动/冲动亚型中, 哌甲酯联合其他疗法治疗多动症优于单独用药 ($SMD=-2.02, 95\%CI, -3.61-0.43; I^2=37\%$)。它揭示了药物治疗和物理治疗两组之间没有显著差异 ($SMD=-7.41, 95\%CI, -16.31-1.48; I^2=95\%$)。

结论 多动症儿童需要多模式治疗, 在药物治

疗的同时, 应提供心理健康教育, 并根据特定功能和行为的治疗目标, 结合采取非药物干预措施, 以促进儿童社会功能的全面恢复。

关键词: 多动症; 药物治疗; 非药物治疗

赌博障碍患者冲动特征与赌博严重程度相关性探索 ——基于 SST 的一项研究

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目的 赌博障碍是指个体由于环境和遗传因素导致反复和持续性的赌博模式。随着互联网的发展, 线上赌博日益严重, DSM-5 也首次将赌博障碍归为成瘾性疾病。作为一种成瘾行为, 冲动特质是导致患者赌博行为发生、发展、以及影响预后的关键行为。既往研究发现赌博障碍与高冲动特质相关, 但是冲动特质及状态, 以及冲动的不同维度与赌博障碍之间的关系尚缺乏深入探讨, 本研究针对上述问题开展进一步研究, 以期验证冲动性的两个方面(冲动特质和冲动运动反应)是否可以共同预测 GD 组的赌博严重程度。

方法 本研究从某自愿戒赌中心纳入 77 名寻求治疗的 GD 患者和社会招募 32 名健康对照, 参与者完成了赌博严重程度的评估: 中国版赌博筛查表 (SOGS)、赌博症状评估量表 (G-SAS)、耶鲁布朗强迫症量表 (PG-YBOCS-C); 冲动特质: 巴瑞特冲动性人格问卷第 11 版 (BIS-11); 冲动运动反应采用停止信号反应任务 (SST) 进行评估。

结果 根据 DSM-5 诊断条目把 GD 组 (a) 分为轻中度组 (满足 4-7 条) 和重度组 (满足 8-9 条) 与健康对照组 (HC) 组比较。结果显示, 在冲动特质方面, 轻中度组和重度组比 HC 组表现的更强, 强弱顺序为: 重度组 (①) > 轻中度组 (②) > 对照组 (b), 且差异有统计学意义 ($P_{ab} < 0.001, P_{①②} = 0.005, P_{①②b} < 0.001$); 在冲动运动反应方面, GD 组的 go 试次和 target 试次反应时比 HC 组短的多, 冲动运动反应更强, 抑制能力更弱 ($P = 0.015$,

$P=0.015$), 但是 GD 组的两个分组并未发现此种结果($P=0.205$)。在 GD 组中发现了不同冲动性之间的关联, 冲动特质与冲动运动反应成显著负相关($P<0.01$), 其中冲动特质(非计划冲动)对赌博严重程度(G-SAS; PG-YBOCS-C)有预测作用($P=0.016$, $P=0.006$)。

结论 研究证实了冲动性的不同纬度与赌博严重程度有关, 并且在临床样本中, 冲动特质可以预测赌博严重程度。未来的研究可以通过针对冲动性的某方面治疗改善赌博症状的有效性进而证明冲动性对赌博严重冲动的影

关键词: 赌博严重程度, 冲动性, 停止信号任务

精神科 1 例马德龙病病例报告并文献回顾

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目的 介绍马德龙病的诊疗

方法 结合我院收治的一例病例, 及国内外各项数据研究, 详细描述马德龙病的临床症状、诊断和治疗过程。

结果 马德龙病在中年男性中普遍存在; 其中绝大多数均有长期酗酒史, 典型的临床表现以及 CT、MRI 等辅助检查较易诊断此病; 手术治疗效果理想

结论 全面了解马德龙病的发病机制和临床管理。

内容:

马德龙病是一种罕见的脂肪代谢障碍性疾病, 其特征是面部和颈部、躯干和上肢皮下脂肪组织弥漫性、对称性沉积; 特征表现: 颈部外观类似 "马颈圈"; 患者常因颈部、躯干畸形影响美观来就诊, 病情持续进展可导致活动受限、压迫气道以致呼吸困难, 甚至窒息。中年男性更容易患上这种疾病, 大多数患者都有酗酒史。

患者, 男, 55 岁, 身高 175cm, 体重 75kg; 因 "长期饮酒后出现乱语、行为异常、情绪不稳 10 年余" 入院; 患者饮酒史二十余年, 患者发现上肢、躯干、颈部出现肿物一年, 因尚未影响个人生活, 无痛, 便未行特殊处理。院外表现饮酒后明显乱语, 行为冲动、怪异, 眠差, 拿刀恐吓家人, 不能自控饮

酒, 入院查体: 患者双上肢上臂内侧、腹部、耳后、颈前可见对称性肿物, 质软有弹性, 边界尚清, 无明显压痛, 皮肤表面无异常分泌物。患者双上肢 MRI 可见: 双上肢弥漫性脂肪堆积, 结合患者酗酒病史及查体情况, 住院诊断: 1. 酒精所致的精神和行为障碍 2. 酒精依赖综合征 3. 马德龙病; 患者多部位组织肿物因患者未感不适, 暂不影响个人生活, 对于马德龙病未予特殊处理, 住院期间予以戒酒, 并使用奥氮平抗精神病药物治疗并联合心理治疗及物理治疗。

马德龙病目前发病原因仍不明确, 几乎所有的患者都存在长期的酗酒史。本例患者曾长期过度饮酒, 已经有二十多年的酗酒史。

目前马德龙病的诊断和治疗的意见基本一致, 这种疾病通常很容易诊断, 除特殊的症状和体征之外, 病史、B 超、CT 和针吸细胞学的检测也可以帮助进一步确诊。

由于马德龙病的恶变率低、复发率高, 而且多发性对称性脂肪瘤缺乏完整的包膜, 经常沿着周围组织结构的间隙生长, 因此要完全切除相当困难。因此, 手术切除并不需要全部切除, 主要目的是改善外观。

综上, 马德龙病虽然在生活当中比较罕见, 发病机制不明确, 常因颈部及躯干的外形改变或影响个人生活就诊。临床医生通过了解病史、进行体格检查和辅助检查不难诊断此病。该病容易并发其他躯体疾病, 极少发生恶变, 无明显症状或不影响个人生活可暂不予以特殊处理, 常见治疗手段为手术治疗; 结果往往与手术的精确度和酒精摄入量直接相关。减肥和控制饮食很少会产生大的影响。戒酒有助于延缓病程, 降低复发几率。

关键词: 马德龙病 多发性对称性脂肪瘤病 酒精依赖

Two-hour Nicotine Withdrawal Improves Inhibitory Control Dysfunction in Male Smokers: Evidence From A Smoking-cued Go/No-go Task ERP Study

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Purpose Nicotine withdrawal is a multifaceted physiological and psychological process that can induce a spectrum of mood disturbances. Gaining a more nuanced understanding of how pure nicotine withdrawal influences cognitive control functions may provide valuable insights for the enhancement of smoking cessation programs. This study investigated changes in inhibitory control function in smokers after 2-hour nicotine withdrawal using the event-related potential (ERP) technique

Methods 28 nicotine dependence (ND) patients and 28 health controls (HCs) completed a smoking-cued Go/No-go task containing two different types of picture stimuli, smoking-cued and neutral picture stimuli. We analyzed the behavioral and ERP data using a mixed model Repeated Measure Analysis of Variance (ANOVA)

Results No-go trials accuracy rate (ACC) at baseline (time 1) was lower in the ND group compared to HCs with smoking-cued stimuli, and No-go trials ACC after 2-hour nicotine withdrawal (time 2) was not lower in the ND group compared to HCs. When confronted with smoking-cued stimuli, the No-go trials ACC was higher in time 2 than in time 1 in the ND group. For the ERP component, the No-go N2 amplitudes in the ND group with smoking-cued stimuli were lower than that of HCs, whereas after 2-hour nicotine withdrawal, the ND group's No-go N2 amplitudes higher than that at time 1, and did not differ from that of HCs. No-go P3 amplitudes were not significantly different between the two groups

Conclusion Evidenced from ERP data, ND patients have an inhibitory control dysfunction in the face of smoking cues, which is mainly manifested in the early stage of response inhibition rather than in the late stage. Two-hour nicotine withdrawal improves inhibitory control dysfunction in ND patients. The No-go N2 component is an important and sensitive neuroelectrophysiological indicator of inhibitory control function in ND patients

关键词: nicotine dependence; inhibitory control; 2-hour nicotine withdrawal; event-related potentials;

Go/No-go task

Cognitive Impairment and Association with Hypertension in Male Patients with Alcohol Dependence: A Cross-sectional Study

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Objective To explore the differences in Complete Blood Count (CBC) and Comprehensive Metabolic Panel (CMP) indexes between alcohol-dependent (AD) patients and AD patients with hypertension, as well as the correlation between each index and cognitive function, and to find the risk factors leading to hypertension in AD patients

Methods The participants were hospitalized in the Department of Alcohol Dependence, Shandong Daizhuang hospital, China, from January 2024 to June 2024, including 124 AD patients(control group) and 106 AD patients with hypertension (study group). Homocysteine (Hcy), D-dimer(D-D), Folate acid, Cholesterol, hemoglobin (Hb), and Mean Corpuscular Volume (MCV) were measured, all participants were assessed with Montreal Cognitive Assessment (MoCA), and were measured with the Event-related Potential (ERP) evoked by the two-stimulus auditory Oddball paradigm

Results The study group was older than the control group (44.02 ± 10.24 vs. 47.36 ± 8.95 , $p < 0.05$); The drinking duration of the study group was higher than that of the control group [12.5 (8.25, 20) vs. 17 (9.5, 24.25), $p < 0.05$]; The auditory P3b amplitude(P3b-amp) of the study group was lower than that of the control group [$7.32 \pm 4.99 \mu V$ vs. $5.89 \pm 4.21 \mu V$, $p < 0.05$]; The MoCA score of the study group was lower than that of the control group [21 (20, 24) vs. 19.5 (17, 22), $P < 0.01$]; The MCV of the study group was higher than that of the control group ($96.80 \pm 6.95 \text{fl}$ vs. $100.20 \pm 7.48 \text{fl}$, $P < 0.01$). The MoCA score of AD patients was negatively correlated with age, years of drinking, daily smoking amounts and MCV ($P < 0.01$), and positively correlated with education and P3b-amp ($P <$

0.05; $P < 0.01$). P3b-amp was negatively correlated with age and years of drinking ($P < 0.01$; $P < 0.05$); Folate was negatively correlated with Hcy ($P < 0.01$). MCV and MoCA scores were risk factors for hypertension in alcohol dependent patients after adjusting for confounding factors (OR=1.05, $P=0.01$; OR=0.86, $P < 0.01$)

Conclusion AD patients with hypertension have lower MoCA score, P3b-amp, and higher MCV. MCV and MoCA scores are risk factors for hypertension in patients with AD, which can be used as effective clinical indicators for early monitoring

关键词: Alcohol dependence, Hypertension, Cross-sectional study, Montreal Cognitive Assessment, Event-related Potential

上海市闵行区中小学生学习网络成瘾现状调查分析

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目的 调查上海市闵行区青少年网络成瘾现状, 并分析各学段及不同性别青少年的网络成瘾现状。

方法 选取 2023 年 4 月至 5 月上海市闵行区 3 所小学三年级和(或)四年级、1 所初中二年级、1 所高中一年级的学生为研究对象。收集青少年一般资料, 采用中文网络成瘾量表修订版(CIAS-R)比较不同学段、不同性别青少年网络成瘾情况的差异。采用单因素及多因素 Logistic 回归分析青少年网络成瘾的影响因素。

结果 本研究线下共发放问卷 1 284 份, 回收有效问卷 1 044 份, 问卷有效回收率为 81.3%。青少年群体中, 网络依赖总检出率为 5.9% (62/1 044), 网络成瘾总检出率为 2.9% (30/1 044)。其中中小学生的网络依赖检出率为 4.0% (27/672), 网络成瘾检出率为 1.6% (11/672); 中学生的网络依赖检出率为 9.4% (35/372), 网络成瘾检出率为 5.1% (19/372), 小学生网络成瘾程度比较, 差异有统计学意义 ($\chi^2=23.816$, $P < 0.001$); 不同性别青少年网络成瘾程度比较, 差异无统计学意义 ($P > 0.05$)。不同学段及不同性别青少年各自 CIAS-R 总分、“网络成瘾核心症状”分量表得分、“网络成瘾相关问题”分量表得

分及 4 个因子得分比较, 差异均有统计学意义 (均 $P < 0.05$)。小学生群体中, 不同性别青少年网络成瘾程度、CIAS-R 总分、两分量表得分及 4 个因子得分比较, 差异均有统计学意义 (均 $P < 0.05$); 男生群体中, 不同学段青少年 CIAS-R 总分、两分量表得分及 4 个因子得分比较, 差异均有统计学意义 (均 $P < 0.05$); 女生群体中, 不同学段青少年网络成瘾程度、CIAS-R 总分、两分量表得分及 4 个因子得分比较, 差异均有统计学意义 (均 $P < 0.05$)。单因素及多因素 Logistic 回归分析显示, 学段为中学是青少年网络成瘾的危险因素 (OR=2.852, 95%CI=1.842~4.410, $P < 0.001$); 在小学生群体中, 性别为男性是网络成瘾的危险因素 (OR=3.593, 95%CI=1.622~7.956, $P=0.002$); 在女生群体中, 学段为中学是网络成瘾的危险因素 (OR=7.106, 95%CI=3.152~16.023, $P < 0.001$)。

结论 上海市闵行区中小学生学习网络成瘾程度在中学男、女生中水平最高, 其次是小学男生, 小学女生网络成瘾程度水平最低。

关键词: 青少年; 学生; 网络成瘾; CIAS-R; 性别

Genome Variation in Alcohol Use Disorder by Whole-exome Sequencing

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Objective Alcohol use disorder is closely related to genetic and environmental factors. However, the contribution of coding variation to alcohol use disorder susceptibility remains poorly understood. We aimed to identify genetic mutations in alcohol use disorder by whole exon sequencing

Methods

We performed whole exome sequencing in 83 patients with alcohol use disorder and compared it with exome sequences of healthy controls were collected from the 1000 Genomes Project; At the same time, alcohol use disorder patients were grouped and tested in the smoking group versus the non-smoking group; the

relapse group versus the non-relapse group; and the group with brain damage versus the group without brain damage, We also compared whole-exome sequencing data for alcohol use disorder with morphine dependence. GO and KEGG enrichment analysis and protein interaction analysis were performed for the mutated genes in each group. Three online protein function prediction sites were used to predict whether SNPs/InDels cause protein coding changes. Further, we conducted a rare variant exploration.

Results We identified 106,525SNV and 19,826 Indel gene mutations in alcohol use disorder. In the healthy and alcohol use disorder groups, mutations in CNTNAP3, ZNF683, ALDPH2, CCHCR1, ZNF45, and ESRRA loci were found to be deleterious mutations in all three sites; OR4C11 was found to be a potentially deleterious mutation in the relapse and non-relapse groups

Conclusion CNTNAP3, ZNF683, ALDPH2, CCHCR1, ZNF45, ESRRA, OR4C11 may be potential targets for future precision treatment of alcohol use disorders, and further provide new ideas for drug development

关键词: Alcohol use disorder, whole-exome sequencing; variants; rare variants; protein function prediction

神经元 TLR4 激活调节甲基苯丙胺的奖赏与复吸

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目的 探讨神经元 TLR4 激活在甲基苯丙胺 (Methamphetamine, METH) 奖赏和复吸中的调控作用。

方法 建立雄性成年大鼠甲基苯丙胺自身给药的成瘾模型, 将训练成功的 24 只成瘾大鼠随机分为 METH 组、静脉注射 3mg/kgTLR4 抑制剂 TAK242 组、Vehicle 组、内侧前额叶皮层注射 1ug/0.5ul/sideTLR4 抑制剂 TAK242 组。甲基苯丙胺

奖赏效应的测试程序采用 FR1, 训练时长 4 小时。奖赏动机的测试程序采用累进比率 (Progressive ratio, PR), 其通过提高大鼠获得药物的难度来观察奖赏动机和渴求, 即大鼠需要付出呈指数式上升的有效触碰次数才能获得 1 针甲基苯丙胺注射。12 只大鼠在建立稳定的甲基苯丙胺自身给药模型后, 停止训练, 放回饲养笼戒断 14 天, 继而进行消退训练, 消退结束后进行甲基苯丙胺复吸测试。免疫荧光法检测大鼠内侧前额叶皮层 TLR4 的定位及表达量的变化、细胞凋亡、小胶质细胞的激活情况。Western blot 检测内侧前额叶皮层 TLR4 - MyD88 - NFκB 信号通路蛋白分子水平的变化。ELISA 检测血清白细胞介素 (IL) -1β、IL-6、肿瘤坏死因子 α (TNF-α) 的变化。

结果 静脉注射 3mg/kgTLR4 抑制剂 TAK242 显著限制甲基苯丙胺成瘾大鼠的奖赏行为, 但不影响奖赏动机。于内侧前额叶皮层注射 1ug/0.5ul/sideTLR4 抑制剂 TAK242 显著限制甲基苯丙胺成瘾大鼠的奖赏行为。静脉注射 3mg/kgTLR4 抑制剂 TAK242 显著限制甲基苯丙胺成瘾大鼠的复吸行为。甲基苯丙胺成瘾大鼠的内侧前额叶皮层小胶质细胞激活、神经元和小胶质细胞上 TLR4 过表达, 且 TAK242 处理可逆转上述结果。甲基苯丙胺成瘾大鼠的内侧前额叶皮层中 TLR4、MyD88、HMGB1 蛋白表达水平增高, 且 TAK242 处理可逆转上述结果。

结论 甲基苯丙胺成瘾大鼠的内侧前额叶皮层发生神经炎症, 可能由 TLR4-MyD88-NFκB 信号通路调控, 使用 TLR4 抑制剂 TAK242 可限制甲基苯丙胺成瘾大鼠的奖赏和复吸行为、减轻甲基苯丙胺诱导的神经炎症。

关键词: 甲基苯丙胺、TLR4、神经炎症

Exploration of The Role of ELANE in Alcohol Use Disorder

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Objective Alcohol use disorder is a serious public health problem; however, the specific mechanisms

remain unclear. Our previous studies have identified "ELANE" as the Hurb gene in alcohol use disorder. However, its role in the clinical practice of alcohol use disorders has not been confirmed

Methods Ninety patients with alcohol use disorder and 53 healthy controls were recruited. Clinical variables were collected and follow-up was conducted for 12 months for relapse. ELANE protein expression was studied by immunohistochemistry

Results ELANE concentrations were significantly elevated in the alcohol use disorder group than in healthy controls ($P < 0.001$). According to the median value of ELANE expression level in alcohol use disorder group, patients were divided into high ELANE (≥ 2.7651 pg/mL, $n = 46$) and low ELANE groups (< 2.7651 pg/mL, $n = 44$). Binary logistic analysis indicated that SERPINA3 was statistically significant ($P = 0.007$) Kaplan-Meier survival analysis did not indicate any difference in event-free survival between patients with low and high ELANE levels ($P = 0.568$) after 12 months of follow-up. Receiver characteristic curve analysis revealed that ELANE had an area under the curve of 0.8683 ($P < 0.0001$), with a sensitivity and specificity of 65.6% and 92.5%, respectively. Cox regression analysis revealed that Marital status was a negative predictor of relapse ($\beta = -0.661$; hazard ratio = 0.516; $P = 0.038$)

Conclusion ELANE level was remarkably elevated in patients with alcohol use disorder than healthy controls, indicating a potential role of ELANE in the pathogenesis of alcohol use disorder. However, ELANE may not be a potential predictive marker of relapse with patients in alcohol use disorder

关键词: alcohol use disorder, ELANE, relapse biomarkers

The Relationship between Binge Drinking and Incidence of Intentional Injury Events-A Study Based on The Data of Emergency Room

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Objective Investigate the relationship between binge drinking and incidence of intentional injury events

Methods This project is a survey performed per 10 years which sponsored by the National Institute of Alcohol Abuse and Alcoholism (NIAAA) commissioned by the International Health Organization (WHO). Tianjin was selected as the site which to conduct the survey by NIAAA in China. According to the requirements of NIAAA, 521 injured patients in the emergency room was enrolled in the study. WHO handbook for collaborative research on alcohol and injury was adopted to assess subjects' drinking patterns. Logistic regression analysis was used to estimate the association between drinking patterns and the incidence of intentional injury

Results Within 6 hours before injury, the incidence of intentional injury events among 12+ standard drinks each time was 7.61 folds (OR=7.61, CI=3.90-11.86) for induce the intentional injury events, the incidence among the 5-11 standard cup drinks was 3.56 folds (OR=3.56, CI=1.08-6.08). Within the past 12 months, the incidence of intentional injury events among 12+ standard drinks each time was 3.46 folds (OR = 3.46, CI = 2.07-5.78) for induce the intentional injury events, the incidence among the 5-11 standard cup drinks was 2.86 folds (OR= 2.86, CI = 1.68-4.87)

Conclusion The drinking pattern of binge drinking can increase the risk of the incidence of intentional injury

关键词: Paroxysmal binge drinking, drinks, intentional injury, risk factors

Internet Gaming Disorder and Suicidal Behaviors Mediated by Sleep Disturbance: A Large-scale School-based Study in 135,174 Chinese Middle School Students

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Objective Emerging research suggests a positive association between Internet Gaming Disorder (IGD) and suicidal behaviors. However, existing studies predominantly focus on suicidal ideation rather than suicide attempts and often do not adequately control for potential psychological confounders. The mechanism linking IGD to suicidality remains unclear. This study aims to assess the independent association between IGD and suicidal behaviors and to examine the mediating role of sleep disturbances among Chinese adolescents.

Methods We recruited 135,147 middle school students from Zigong city using cluster sampling. Data on demographics, suicidal ideation, and suicide attempts were collected. IGD was assessed using the Internet Gaming Disorder Scale-Short Form. Mental distress, including depression, anxiety, hyperactivity, conduct problems, sleep problems, and psychotic experiences, was evaluated using standardized questionnaires. Multiple logistic regression models and mediation analysis were conducted.

Results The prevalence rates of IGD, suicidal behaviors, suicidal ideation, and suicide attempts were 1.6%, 16.7%, 11.9%, and 9.8%, respectively. Adolescents with IGD showed a significantly higher risk for suicidality: nearly 60% reported suicidal behaviors, 50% reported suicidal ideation, and 40% reported suicide attempts. Both IGD and gaming usage were independently linked to suicidal behaviors. Sleep disturbances partially mediated the relationship between IGD and suicidal behaviors, accounting for 47.0% of the total effect

Conclusion IGD is closely associated with suicidal behaviors, with sleep disturbances mediating this relationship. Timely and regular assessments for suicidality and sleep disturbances are vital in IGD cases. Targeted interventions addressing sleep disturbances might reduce suicidal risk among adolescents with IGD

关键词: Internet gaming disorder, suicidal behavior, sleep disturbance, adolescents

男性冲动特质与心理渴求的相关关系及对酒依赖复发的预测作用

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目的 探索酒依赖患者的冲动特质和心理渴求相关关系及对复发的预测作用。

方法 2017年8月至2018年2月收集符合DSM-IV酒精依赖诊断标准的男性患者109例。在完成急性戒断期后进行基线测查,包括一般资料、焦虑自评量表(SAS)、抑郁自评量表(SDS)、密歇根酒依赖筛查量表(MAST)、Barratt冲动量表(第十一版)(BIS-11)和饮酒迫切性量表(AUQ)。在基线测查后第三个月进行电话随访。

结果 ①复发率与预测因素:三个月内复发率为65.14%;年龄、教育年限、婚姻状况、MAST、SAS、SDS、BIS-11在复发组和未复发组间差异均无统计学意义($P>0.05$);而AUQ评分对三个月内复发有预测作用($OR=1.05, P=0.047$);②冲动与心理渴求的关系:AUQ评分与BIS-11总分($r=0.30, P<0.01$)、注意冲动评分($r=0.25, P<0.01$)、运动冲动评分($r=0.21, P<0.01$)、无计划冲动评分($r=0.19, P<0.05$)均成正相关关系。

结论 AUQ评分可以作为三个月内复发的预测因素,而冲动特质对复发没有预测作用;酒依赖患者冲动特质(BIS-11评分)与其心理渴求(AUQ评分)成正相关关系。

关键词:酒依赖,复发,心理渴求,冲动特质

A Network Analysis of The Structural and Individual Patterns of Anxiety in Pediatric Patients with NSSI

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Objective Non-suicidal self-injury (NSSI) behavior is correlated with anxiety, which influences and exacerbates self-injurious behaviors in children with NSSI, thereby constituting a significant risk factor for

recurrent episodes. However, the patterns of individual heterogeneity in NSSI within the context of precision medicine remain inadequately understood. The primary objective of this study is to examine the core characteristics of anxiety and the explicit manifestations of anxiety in diverse NSSI patients

Methods We gathered scale results from a sample of 10,781 primary and secondary school students in Chengdu and Karamay, with 10,501 students completing the survey. Participants were categorized into three groups—NSSI (Non-Suicidal Self-Injury), subthreshold NSSI (sNSSI), and healthy—based on the frequency of self-injurious behaviors reported in the past year. Subsequently, a network analysis was performed on the explicit anxiety data of participants exhibiting NSSI and sNSSI symptoms. Based on the measurement results obtained from the Revised Children's Manifest Anxiety Scale (RCMAS), explicit anxiety networks and individual differential anxiety networks were constructed for each group. The findings indicate that the two types of non-suicidal self-injury (NSSI) are associated with distinct core impulsivity traits

Results The overall network strength in patients with Non-Suicidal Self-Injury (NSSI) is significantly higher compared to other groups. Additionally, physiological anxiety, worry or hypersensitivity, and social-related connections exhibit distinct differences from those observed in other cohorts. Based on the impulse network of individual differences, subjects were categorized into three distinct types, each demonstrating deviations from the control group. These three deviation patterns are associated with the type of NSSI, age, education level, and the duration of self-injurious behavior

Conclusion The research findings suggest that individuals exhibiting various types of non-suicidal self-injury (NSSI) demonstrate distinct core anxiety traits. Furthermore, the explicit anxiety patterns of these individuals exhibit specificity. These insights support the potential for improved anxiety management through personalized pharmacological interventions in clinical practice

关键词: NSSI, anxiety, network analysis, clustering.

缅北移交涉诈吸毒人员成瘾及心理特征

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目的 近年来, 缅甸北部地区的电信诈骗活动和毒品问题日益严重, 毒品流通加快, 且可获得性显著增加, 导致许多从事电信诈骗的人员可能接触毒品。随着中国加大对电信诈骗的打击力度, 越来越多的缅北涉诈人员被移交回国, 了解这些人员的毒品成瘾严重程度及其精神心理状态变得尤为重要, 这不仅有助于评估毒品对他们的影响, 还能为制定更有效的政策和预防措施提供坚实依据。

方法 本研究共包括缅北移交涉诈人员 246 人, 其中包括整群抽样的中部某省会城市所有毛发检测呈阳性的涉诈人员 166 人和随机抽样的毛发检测呈阴性的涉诈人员 80 人。所有人员均通过访谈及填写量表的方式完成一般资料采集和心理评估, 采用《精神障碍诊断与统计手册》第五版 (DSM-5) 评估受试人员是否达到“物质使用障碍”和“反社会型人格障碍”的诊断标准; 采用患者健康问卷-9 (PHQ-9) 对抑郁情绪进行评估; 采用广泛性焦虑量表 (GAD-7) 对焦虑情绪进行评估; 采用匹兹堡睡眠质量指数量表 (PSQI) 评估睡眠质量; 采用社会支持问卷 (SSRS) 评估社会支持水平; 采用冲动量表 (BIS-11) 测量冲动特质; 最后使用创伤后应激障碍筛查量表 (PCL-5) 来对涉诈人员进行创伤后应激障碍的筛查。

结果 涉诈吸毒人员以文化程度较低的年轻男性为主, 与入缅前不同, 该群人员在国内吸食最多的毒品类型是冰毒麻古, 在缅期间则是氯胺酮的比例最大, 其中约 50% 在缅期间规律吸毒, 40% 达到了物质使用障碍的疾病诊断标准, 且吸毒涉诈人员的反社会型人格障碍占比显著高于非吸毒涉诈人员 ($p < 0.01$)。与非吸毒涉诈人员相比, 吸毒涉诈人员在缅时间更长、在缅收入更高, 且留守和服刑经历更多。在情绪、睡眠等心理状态上, 吸毒涉诈人员在缅期间的抑郁量表 (PHQ-9) 和焦虑量表 (GAD-7) 的得分均显著低于非吸毒人员的得分 ($p < 0.001$)。在缅期间, 吸毒涉诈人员在睡眠质量指数量表 (PSQI) 的得分显著低于非吸毒组 ($p < 0.001$)。吸毒涉诈人员的社会支持问卷 (SSRS) 总分明显高于非吸毒组, 尤其是在客观支持上 ($p < 0.001$)。在创伤后应激障碍症状上, 非吸毒组的 PCL-5 总分显著高于吸毒组

($p < 0.01$)。

结论 在缅时间长、留守经历及既往有过违法犯罪经历是导致涉诈人员吸毒行为发生的高危因素。涉诈人员均面临着较多的精神心理问题，如焦虑、抑郁、创伤后应激障碍和反社会人格障碍等，尤其需要关注非吸毒涉诈人群的抑郁、焦虑、创伤后应激障碍、睡眠障碍和社会支持；注意对吸毒涉诈人群反社会人格障碍及毒品成瘾的筛查与诊治。

关键词： 缅北移交涉诈人员；吸毒行为；心理特征；

Efficacy and Safety of Prophylactic Use of Benzhexol after Risperidone Treatment in MK-801-induced Model Mice

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Objective The purpose of this experiment is to explore efficacy and safety of prophylactic use of benzhexol after risperidone treatment and the mechanism in the process

Methods C57/BL mice were randomly divided into 4 groups ($n=8$): control group MK-801 group, MK-801+ Ris group, MK-801+ Ris + Ben group. Three groups of mice with schizophrenia model were intraperitoneally administered 0.5mg/kg dose of MK-801 once a day for two weeks. Open field test (OFT) and new object recognition test (NORT) were carried out after injection. The two groups of mice were treated with risperidone (3mg/kg) and risperidone (3mg/kg) + benzhexol (10mg/kg) once a day for four weeks. After the treatment, the inclined screen test (IST), rotarod test (RT), open field test (OFT), new object recognition test (NORT) and morris water maze test (MWM) were conducted successively. The expression of BDNF, p-Tau and Tau in hippocampus was detected by Western blot assay

Results Benzhexol could significantly attenuated risperidone-induced motor coordination impairments. Benzhexol increased the time in bars of risperi-

done-treated MK-801 mice in the Rotarod test. Benzhexol significantly shorten the latency time of Ris+Ben group in the inclined screen test. Prophylactic use of benzhexol did not affect the total distance of the risperidone threated mice in the open field test. In the Morris water maze test and the novel object recognition test, the prophylactic use of benzhexol reduced the spatial learning memory and discrimination ratio of novel objects in MK-801-induced model mice after risperidone. Benzhexol impairs cognitive function in risperidone threated MK-801-induced model mice by increasing the ratio of p-Tau/Tau and decreasing BDNF expression levels in the hippocampus

Conclusion In this study, we found that prophylactic use of benzhexol can reduce the occurrence of EPS and does not affect the efficacy of risperidone in the treatment of positive symptoms. Benzhexol may impaired cognitive function by increasing the ratio of p-Tau/Tau and decreasing the expression of BDNF in hippocampus, but the use of benzhexol and risperidone did not cause further deterioration of cognitive function in MK-801 mice

In conclusion, This study suggests that prophylactic use of benzhexol is beneficial to patients. In order to prevent the deterioration of the patient's cognitive function, it is necessary to monitor the patient's cognitive function during the use of benzhexol.

关键词： Benzhexol; Risperidone, Schizophrenia, Extrapyramidal symptom; MK-801, Brain-derived neurotrophic factor, Prophylactic use

青少年非自杀性自伤成瘾的心理机制：焦虑-动机网络分析

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目的 近年来，非自杀性自伤 (non-suicidal self-injury, NSSI) 行为在青少年中大量涌现，已成为严重的公共精神卫生问题。习惯性、重复性的自伤行为被认为具有成瘾特征；然而，并非所有重复自伤

的患者都展现出成瘾倾向。另一方面,焦虑症状在NSSI青少年中广泛存在,是驱动自伤的主要诱因之一。本研究旨在探讨成瘾性与非成瘾性NSSI青少年之间,焦虑症状与自伤功能构成的焦虑-动机网络是否存在差异,以揭示自伤成瘾的潜在心理机制。

方法 本研究采用横断面设计,在成都和克拉玛依的10-18岁青少年中展开问卷调查。使用蓄意自我伤害清单、渥太华自伤量表和儿童焦虑表现量表分别评估青少年的自伤情况、成瘾特征及焦虑水平。数据分析采用偏相关网络分析和网络间比较。

结果 共10,479人完成调查,其中22.8% (n=2,393)报告过去一年中至少发生过一次NSSI,2.5% (n=261)报告具有成瘾特征的NSSI行为。与非成瘾组相比,成瘾组表现出更高的焦虑水平和自伤动机。在NSSI成瘾组青少年的焦虑-动机网络中,寻求快感和社交相关顾虑起到重要的桥梁及中介作用,网络的平均可预测性为0.55;而在非成瘾组中,内/外部情绪调节动机与过度敏感起到桥梁作用,网络的平均可预测性为0.63。对两组网络的节点中心性进行比较,非成瘾组的各症状节点强度均低于成瘾组。

结论 本研究首次揭示了成瘾性和非成瘾性NSSI青少年中焦虑-动机网络的差异,为理解自伤成瘾的潜在心理机制提供了新的视角,并为临床干预提供了实证依据。研究结果显示,成瘾性NSSI青少年更倾向于通过自伤寻求快感和应对社交相关压力,而非成瘾性NSSI青少年主要通过自伤来调节情绪。这一发现提示,临床干预策略应针对不同类型的NSSI青少年制定个性化方案。

关键词: 非自杀性自伤,成瘾行为,焦虑,网络分析

精神疾病的脑电标记及精准电刺激干预研究进展

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目前对于精神疾病的诊疗评估多依靠临床医师的主观判断,为寻求更敏感稳健的手段,近年对于脑电这一生物标记的研究逐步深入,发现其在诊断、疾病分型、干预等方面的重要潜力。另一方面,经颅

电刺激等神经调控技术基于脑电标记形成的个体化精准调控方案也开辟了新的治疗方向。为此,本综述拟回顾近十年来各种精神心理疾病的脑电生物标记主要进展,并分析相应的优化电刺激调控策略。脑电通常指神经元在一定条件下的周期、节律性放电经由头皮表面记录到的神经振荡信号,通过分析可以进一步了解大脑内部神经生理活动。已有研究发现脑电生物特征能表征基本大脑功能、精神疾病易感性及其严重程度等临床特征。如频谱特征 γ 振荡被认为与专注和记忆等高级大脑功能有关,许多研究认为其反映兴奋性谷氨酸能神经元和抑制性 γ -氨基丁酸能中间神经元的相互作用,基于此的研究发现 γ 振荡具有区分抑郁症患者与正常人的潜能。而基于相干性和锁相值(PLV)进行的相位同步性分析是反映脑功能连接常用的方法,其利用不同脑区的脑电信号在特定频段相位差的一致性来衡量脑区同步性。各种精神疾病中均发现不同类型功能连接异常,尤其对于精神分裂症患者的诊断、分型等的研究展现出巨大的临床价值。

脑部电刺激包括经颅直流电刺激(tDCS)和经颅交流电刺激(tACS),通过在头皮上放置电极施加直流或正弦交流电影响神经细胞的活动,能够产生改善局部脑血流、诱导突触可塑性改变和调节神经递质等延迟效应;而tACS还可能通过神经夹带作用调节内源性神经振荡进而影响大脑功能状态。电刺激疗效可以被脑电生物指标敏感捕捉,如失匹配负波(MMN)为精神分裂症的推定生物标志物之一,在一项随机对照临床实验中发现阳极额叶tDCS提高的认知任务表现与MMN振幅的提高存在显著相关。与传统刺激模式不同,近年来基于患者脑电生理活动进一步开发精准调控方案展现了更强的治疗潜力。如基于阿尔兹海默病患者异常 γ 振荡的楔前叶tACS家庭治疗策略已被证实可改善认知能力、提高伽马振荡并增强功能连接性。

然而,脑电作为精神疾病生物标记的可靠性和稳健性仍有待完善,经颅电刺激的原理机制也尚未完全明了,尽管存在许多研究得出了乐观的结果,但也有一些不同结果。其原因可能有很多,如:不同疾病涉及相同的电生理活动过程、同一疾病涉及多种电生理过程杂糅、疾病的EEG特征改变无法通过现有的技术手段进行完整细分等。因此脑电及电刺激技术想要走上临床正式应用还需进行大量研究探索进行验证。

关键词: 脑电图,神经振荡,精准电刺激,个体化

治疗

酒精戒断综合征新技术应用及多层次治疗

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目的 酒精戒断综合征是酒精依赖患者突然停药或减量后出现的一系列神经、精神症状，严重者（如酒精戒断性癫痫，震颤谵妄）可能危及生命。本文旨在探索酒精戒断综合征新技术应用及不同严重程度酒精戒断综合征治疗方法。

方法 通过检索国内医学期刊数据库“万方、中国知网”，国外医学期刊数据库“Pubmed、Web of Science、Science Direct”，对酒精戒断综合征治疗进行文献复习。在临床实践中逐步形成输液泵控制下地西洋静脉点滴给药、右美托咪定静脉泵入两大治疗新技术。通过对年龄、饮酒史、躯体状况、既往酒精戒断表现、当前酒精戒断症状 5 个方面，对酒精戒断综合征患者进行风险及严重程度评估，采用不同治疗方式治疗酒精戒断综合征。

结果 对于单纯性酒精戒断反应，宜采用口服地西洋或奥沙西洋替代治疗。对于既往曾发生过酒精戒断性癫痫或震颤谵妄的患者，可考虑采用输液泵控制下地西洋静脉点滴给药预防严重酒精戒断综合征。对于已经出现震颤谵妄的患者，宜采用输液泵控制下地西洋静脉点滴给药控制震颤谵妄，严重者可合并采用右美托咪定静脉泵入辅助镇静，改善震颤谵妄；同时可联合使用氟哌啶醇注射液改善激越状态及精神病性症状。静脉给药（地西洋、右美托咪定）时需进行心电监测及血氧饱和度监测，特别关注患者呼吸、血压、血氧饱和度变化情况。

结论 根据酒精戒断综合征不同症状表现及风险及严重程度评估结果，对酒精戒断综合征患者应采用不同治疗方案尽快控制症状，预防震颤谵妄的发生，或尽早改善震颤谵妄症状。

关键词：酒精戒断综合征；替代治疗；地西洋；震颤谵妄；右美托咪定

Characteristics and Influencing Factors of

Non-suicidal Self-injury (NSSI) Behaviors in Adolescents

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Objective To identify the characteristics and influencing factors of non-suicidal self-injury (NSSI) behaviors in adolescents

Background Non-suicidal self-injury (NSSI) is garnering increasing attention due to its high prevalence and strong association with suicide. A comprehensive understanding of the individual and household characteristics related to NSSI is essential for effective prevention and intervention strategies.

Methods Forty adolescents with NSSI and their parents were recruited by convenience sampling from outpatients of Shanghai Hongkou Mental Health Center. NSSI behaviors of the adolescents, anxiety symptoms and depressive symptoms of both the adolescents and parents as well as family functions were evaluated

Results The peak onset of first NSSI centered at age of 13 (24%) and 16 (20%), corresponding to the first and last year of secondary school. Majority of the adolescents with NSSI were female (92%), and attended key secondary school (72%). Approximately 60% of them ranked in the upper 50% at school examinations, with 28% in the upper 25%. Privately performed NSSI was reported by 88% of adolescent, with punching objects (76%) and self-cutting with a knife (68%) being the most common methods. The primary reasons for NSSI were “because it feels good” (88%) and “to relief stress” (76%). All adolescents with NSSI experienced depression and anxiety, with 50% exhibiting severe depression and 55% experiencing severe anxiety. The frequency of NSSI in the last month was significantly associated with depression severity. Additionally, both adolescent depression and anxiety correlated with overall family functioning and specific subscales related to family roles. Adolescent depression was also linked to family problem-solving abilities

Conclusion Our study revealed a critical role of

family function and affective mental health in the involvement of NSSI. Additionally, academic pressure emerges as a potential risk factor for NSSI. Therefore, effective strategies to manage stress and negative emotions, coupled with a supportive family environment might be essential to preventing and mitigating NSSI

关键词: Characteristics, NSSI, Adolescent, Family, Depression, Anxiety

酒精相关认知障碍诊疗进展

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目的 酒精相关认知障碍在酒依赖患者中极为常见, 尽管它会给治疗效果带来负面影响, 但在临床中常未能得到充分诊疗。本文旨在调查关于酒精相关认知障碍的最新理论模型、测评工具和干预方法。

方法 对国内外近十年发表的酒精相关认知障碍领域的文献进行复习。

结果 在过去 10 年中成瘾的双重过程理论模型逐步完善, 关注冲动系统和控制系统之间的相互作用, 神经生物学理论也开始强调前额叶皮质区在觅药行为中的作用及与中脑系统间的相互作用。研究较多的认知领域包括注意偏向、执行功能和工作记忆。除常规的自我报告问卷、神经心理功能评估量表外, 脑电图、磁共振功能成像、眼动追踪技术也被用于相关研究。相关的认知训练可分为认知偏差修正和抑制控制训练、工作记忆干预两大类。基于虚拟现实技术的严肃游戏比传统的计算机认知训练更有助于训练效果的远转移。在药物干预方面, 维生素 B1、哌甲酯、美金刚产生了统计学上显著的认知改善。但维生素 B1 治疗剂量和持续时间的数据仍然不足, 也缺少对哌甲酯、美金刚治疗效果的复制。经颅直流电刺激与认知训练的联合使用是有效的, 但效果的持续时间仍需做进一步研究。当前关于酒精相关认知障碍的研究多存在异质性强、样本量少、干预特异性低的局限。

结论 目前已有初步的研究证明酒精相关认知障碍可以通过相应干预得到改善, 进而延长禁欲时间或减少饮酒量, 但该领域研究尚不充分, 需要基

于有前景的策略(如数字干预、维生素 B1)做进一步探索。

关键词: 酒精相关认知障碍, 认知干预, 认知康复, 药物治疗, 经颅直流电刺激

Sociodemographic and Environmental Correlates of Climate Change Anxiety in Shanghai

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Objective Climate change anxiety (CCA) is a global concern, extensively studied in Western countries. Yet, there remains a lack of research on how social and environmental factors influence CCA, particularly in large cities from non-Western countries like China. This study aims to investigate the CCA level among general population in Shanghai and its Sociodemographic and environmental correlates

Methods We conducted an anonymous online survey with 1817 adults in Shanghai, using the climate change anxiety scale (CCAS) to measure CCA. In addition, we assessed their sociodemographic characteristics and acquired air quality data on particulate matter (PM_{2.5}) from the Shanghai Municipal Bureau of Ecology and Environment. We analyzed the distribution of CCAS and PM_{2.5} across Shanghai's 16 districts and constructed multivariate multiple linear model to examine the effect of PM_{2.5} on CCAS

Results We found that 16.6% of participants reported experiencing CCA more often than “sometimes”, with 18.1% and 18.6% reporting cognitive-emotional impairment and functional impairment, respectively, at a frequency higher than “sometimes”. The multivariate multiple linear model revealed that increased PM_{2.5} levels was associated with heightened cognitive emotional impairment ($b = 0.0078$, 95% CI: 0.001, 0.01) and functional impairment ($b = 0.01$, 95% CI: 0.003, 0.017).

Moreover, being male, having fewer years of education, low income, and residing in an urban area were associated with an increase in both cognitive-emotional and functional impairments

Conclusion A significant proportion of participants in Shanghai reported frequent CCA. Elevated PM2.5 concentration and sociodemographic factors were correlated with an increase CCA. Therefore, efforts to address CCA should consider social and environmental factors

关键词: Cognitive-emotional impairment, Functional impairment, Eco-anxiety, Social and environmental factors, Air quality

青少年网络和现实社会联结对网络使用问题与焦虑的影响：一项横断面研究

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目的 本研究旨在探索中国青少年中现实社会联结和网络社交联结在问题性网络使用(problematic internet use, PIU)与焦虑之间的作用。我们假设现实社会联结对于减轻PIU青少年的焦虑具有更大影响,相比于网络社会联结。

方法 本横断面研究从2022年9月至2023年3月,在中国福建、江苏、四川和新疆的四个省份进行。采用Young网络成瘾量表(IAT-20)、修订版社交联系量表(SCS-R)、DSM-5-TR Level-2焦虑量表进行测量。数据分析采用SPSS 26.0进行基本特征描述、回归和相关分析,使用Mplus 8.0进行结构方程模型(SEM)分析。

结果 在调查中,共有9,407名中国青少年参与,平均年龄为14.90岁,其中21.8%存在PIU,25.0%表现出临床显著焦虑。多变量逻辑回归分析显示性别、居住地、父母教育水平、网络社会联结和现实社会联结与焦虑显著相关。斯皮尔曼相关分析显示网络使用问题与焦虑呈正相关,现实社会联结和网络社会联结分别与网络使用问题和焦虑呈负相关。SEM显示现实社会联结和网络社会联结在PIU与焦虑之间的显著中介作用,其中现实社会联结占总效

应的29.1%,网络社会联结占1.8%。

结论 PIU严重程度正向预测青少年的焦虑症状,而增加的社交亲密性对PIU青少年起到保护作用。进一步的,网络虚拟世界的社会联结尽管也带来了保护作用,但现实社交联结的中介效应占比更大。本研究强调了增强现实社交联结,即现实社会的社交亲密性,对于在互联网时代避免青少年过度网络使用导致病理性焦虑表现的重要意义。

关键词: 青少年, 问题性网络使用, 社会联结, 焦虑

Plasma Exosomes in Methamphetamine Addicts During Acute Withdrawal Induce Anxiety and Depression-like Symptoms in Mice

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Objective Methamphetamine (MA) addiction is a complex brain disease with a high relapse rate due to the underlying mechanism remains largely elusive. Recently, exosomes are involved in the pathophysiology of neuropsychiatric diseases, but the role of exosomes in MA is unclear. The aim of this study was to investigate the pathomechanism of MA addiction and withdrawal through plasma-derived exosomes

Methods A combination of approaches was employed. Animal behavior assays, neuron and glial cell co-culture systems, and immunofluorescence staining were utilized

Results The transplantation of plasma exosomes in MA addicts during acute withdrawal induced anxiety and depression-like behavior in mice. In addition, in vitro experiments validate exosome treatment changed neuronal morphology with dendrite branch number and length were reduced and induced astrogliosis and an A1-like reactive astrocyte phenotype. The following proteomic analysis in MA addicts undergoing withdrawal, revealed differential expressed proteins involved in immunity and inflammation. Of these, amyloid A-1 (SAA1) and amyloid A-2 (SAA2) were upregulated in

acute withdrawal (AW) stage but rapidly declined in protracted withdrawal (PW) stage, compared to healthy controls (HCs). Further experiments verified the key role of SAA1 and SAA2 in inducing anxiety and depression-like behavior, astrogliosis and neurotoxic

Conclusion This study may provide a potential animal model and further understanding of the pathogenic mechanisms of withdrawal symptoms for MA

关键词: Methamphetamine, Withdrawal; Exosomes, SAA1

耶鲁-布朗赌博强迫量表的汉化及信效度检验

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目的 关注赌博行为的强迫特征及准确评估赌博障碍的严重程度对赌博障碍群体的早期干预尤为重要,但目前仍缺乏切合于中国大陆的中文版耶鲁-布朗赌博强迫量表。本研究旨在对这一他评工具进行汉化修订并检验其在中国赌博障碍患者中的信度和效度。

方法 本研究对耶鲁-布朗赌博强迫量表进行标准化的翻译和文化适应,包括翻译、回译、专家评审及预试验,形成中文版耶鲁-布朗赌博强迫量表(PG-YBOCS-C)。研究选取符合 DSM-5 赌博障碍诊断标准的 116 名上海市精神卫生中心及某戒赌中心的赌博障碍患者作为研究对象,以 Barratt 冲动性人格量表(BIS-11)、中文版自我控制量表(SCS)及赌博渴求程度量表(VAS)作为效标工具,并进行探索性因子分析及信度分析。2 周后,共有 55 位患者完成了量表重测。

结果 修订后的 PG-YBOCS-C 共有 10 个条目,项目分析结果显示 PG-YBOCS-C 的区分度良好,能够有效地区分患者的症状严重程度。Kaiser-Meyer-Olkin (KMO) 与 Bartlett 球形检验结果显示 KMO=0.93, Bartlett 球形检验统计值 $X^2=1123.86$, $P=0.000<0.01$,说明 PG-YBOCS-C 适合进行因子分析。探索性因子分析得出一个主成分因子,可解释总方差的 72.8%,表明 PG-YBOCS-C 具有稳定的单

因子结构。同时效标效度结果表明 PG-YBOCS-C 总分与冲动水平($r=0.31$, $p<0.001$)和赌博渴求程度($r=0.38$, $p<0.001$)均呈显著正相关,与自我控制能力($r=-0.32$, $p<0.001$)呈显著负相关。信度分析结果显示 PG-YBOCS-C 的 Cronbach's α 系数是 0.965,量表具有极高的内部一致性;重测信度为 0.722,量表在跨时间维度上稳定性高。

结论 本研究结果表明 PG-YBOCS-C 具有良好的信效度,可作为评估中国赌博障碍患者症状严重程度的可靠他评工具。

关键词: 耶鲁-布朗赌博强迫量表, 赌博障碍, 效度, 信度, 病理性赌博

虚拟现实结合眼动追踪及动作捕捉技术在酒精使用障碍的应用研究

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目的 本研究将虚拟现实(virtual reality,VR)技术与眼动追踪测量和动作捕捉记录结合,在进行 VR 暴露疗法的过程中,实时评估酒精使用障碍(alcohol use disorder,AUD)患者酒精相关的注意偏差及渴求严重程度,探究该技术能否便捷准确地反映 AUD 患者的心理状态,构建治疗与评估一体化的综合应用体系。

方法 选取新乡医学院第二附属医院精神五科住院治疗的 AUD 患者 49 例,采用随机数字表法将其分为患者治疗组 27 例和患者对照组 22 例,并招募本院或附近工厂的健康男性职工 30 名为健康对照组。试验借助 HTC VIVE Focus3 头戴式 VR 设备(内置眼动追踪程序)及 Noitom Hi5 动作捕捉手套进行,所有受试者均进行基线检测,采集在酒精线索相关 VR 环境下的眼动追踪数据(主要包括关注酒精线索及非酒精线索的总用时及总次数)和动作捕捉记录(酒精线索物品和非酒精线索物品拾取的总时长及总次数)。患者对照组仅接受常规临床治疗,治疗组在常规临床治疗基础上另加 8 次基于 VR 的线索暴露治疗,每次 10 分钟,每周 2 次(间隔 2 日),为期 4 周,患者组完成所有治疗后再接受同前述基线一致的检测。

结果 3组间差异使用方差分析比较眼动/动作捕捉数据和VAS、PACS评分,结果显示患者对照组($P<0.05$)和患者治疗组($P<0.05$)的初次酒精线索关注时间、次数比率均显著大于健康对照组,说明在酒精线索相关VR环境下,患者组呈现出更明显的关于酒精线索的注意偏向和饮酒渴求;患者对照组与治疗组的各项数据均无显著差异($P>0.05$)。使用配对样本T检验比较两患者组治疗前后各项数据差异,结果显示患者治疗组治疗前后PACS评分($P<0.05$)、VAS评分($P<0.05$)均降低,患者对照组所有数据前后两次评估均无差异($P>0.05$);使用独立样本T检验比较治疗前后各项数据差值,结果显示患者治疗组的PACS评分差值差值($P<0.05$)、VAS评分差值($P<0.05$)、酒精线索关注时间比率差值($P<0.05$)(初次-末次)均显著大于对照组,说明VR暴露治疗能有效降低患者的主观渴求感,同时也能降低其对酒精线索注意偏向的程度。

结论 虚拟现实结合眼动追踪及动作捕捉技术有助于高效便捷地反映AUD患者的渴求相关临床特征,有潜力构建实用性强、易于推广的治疗评综体系。

关键词:酒精使用障碍;虚拟现实;眼动追踪;动作捕捉

重复经颅磁刺激的精准干预:突触可塑性效应、双靶点及闭环调控

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目的 重复经颅磁刺激(rTMS)作为突触可塑性效应的非侵入性调节手段,其在认知和神经精神疾病治疗中的潜力受到广泛关注。本综述重点探讨了rTMS诱导长时程增强(LTP)和长时程抑制(LTD)效应的影响因素,以及双靶点rTMS和闭环神经调控的干预效果。

方法 LTP和LTD作为神经突触连接强度变化的生物学基础,对学习和记忆的重要性。传统上,低频rTMS用于诱导LTD样效应,而高频rTMS用于诱导LTP样效应。然而,实际研究显示这一效应可能受到刺激频率、强度、时间间隔、刺激部位、持续时间、个体差异、状态依赖性和闭环干预等多种因

素的影响。

结果 NMDA受体和mGlu5受体在LTP和LTD的诱导中发挥关键作用,而CaMKII激活则在LTP和LTD诱导中具有双重功能,既可以增强也可以减弱突触连接。精确控制rTMS参数,包括频率、强度、时间间隔、刺激部位和持续时间,对于优化LTP和LTD样效应的产生至关重要。

在双靶点rTMS的刺激条件下,我们讨论了刺激时序、协同性以及神经解剖连接对LTP和LTD效应的影响。双靶点rTMS通过同时或顺序刺激大脑两个不同区域,可能影响皮层间的相互作用和网络连接性。适当的时序和协同性对于增强rTMS效果至关重要,而个体差异和大脑网络特性在个性化治疗方案中起着核心作用。

此外,我们强调了闭环干预方案的重要性,这是一种根据实时大脑活动或行为反馈调整刺激参数的策略,以提高治疗效果和减少副作用。闭环干预通过个性化和精确性、提高效率、增强治疗效果、适应性和灵活性,以及减少刺激治疗次数和副作用,提供了一种新的治疗模式。

结论 我们强调,通过精确控制rTMS参数,特别是双靶点rTMS的时序和协同性;而个性化和闭环干预则依赖于敏感和特异性的生物标志物。未来的研究需要进一步探索双靶点rTMS的刺激脑区以及最佳干预方案,以及如何结合多模态的生物标志物实现个体化、精准的闭环神经调控。

关键词:长时程增强;长时程抑制;重复经颅磁刺激;双靶点刺激;突触可塑性;闭环干预

伴或不伴烟草依赖的酒精使用障碍患者急性戒断期特征

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目的 部分酒精使用障碍患者同时合并烟草依赖。本研究旨在探讨伴或不伴烟草依赖的酒精使用障碍患者急性戒断期临床特征。

方法 本研究纳入符合DSM-5中酒精使用障碍诊断标准的住院患者。收集患者性别、年龄、受教

育年限、近 1 个月饮酒量、戒酒次数等一般资料。在酒精戒断急性期使用宾夕法尼亚酒精渴求量表 (PACS)、尼古丁依赖检验量表 (FTND)、贝克抑郁问卷 (BDI-21)、贝克焦虑问卷 (BAI)、匹兹堡睡眠质量指数 (PSQI) 评估工具评估酒精使用障碍患者的饮酒心理渴求、抑郁情绪、焦虑情绪、睡眠质量。根据 FTND 值分为伴烟草依赖组 (FTND \geq 4) 及不伴烟草依赖组 (FTND $<$ 4)。运用 SPSS (27.0.1) 软件进行统计学分析,探讨两组患者急性戒断期临床特征差异。

结果 40 例患者中, 18 例 (45%) 伴烟草依赖。所有患者均为男性。伴烟草依赖组平均年龄 40.72 ± 8.74 岁, 不伴烟草依赖组平均年龄 44.09 ± 10.0 岁, 无显著性差异 ($p > 0.05$)。两组患者受教育年限相仿 (12.72 ± 4.50 年 VS 12.09 ± 3.89 年, $p > 0.05$)。伴烟草依赖组近一个月饮酒量较不伴烟草依赖组更大 (5679.17 ± 3505.86 g VS 3720.45 ± 2276.73 g, $p = 0.04$)。伴烟草依赖组与不伴有烟草依赖组患者在戒酒次数 (2.67 ± 1.78 次 VS 1.95 ± 0.899 次)、饮酒渴求 (11.00 ± 5.03 分 VS 10.45 ± 6.32 分)、抑郁情绪 (9.72 ± 6.76 分 VS 8.91 ± 6.47 分)、焦虑情绪 (30.56 ± 3.96 分 VS 28.95 ± 3.46 分)、睡眠质量 (9.33 ± 2.79 分 VS 9.50 ± 2.57 分) 方面无显著性差异 (p 均 > 0.05)。

结论 伴有烟草依赖的酒精使用障碍患者饮酒量可能更高。尽管伴烟草依赖的酒精使用障碍患者戒酒次数、饮酒渴求、抑郁、焦虑等评分高于不伴烟草依赖者, 但本研究未见显著性差异。

关键词: 酒精使用障碍, 烟草依赖, 渴求, 临床特征

双相障碍患者中分离症状的发生率及相关因素

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目的 越来越多的研究发现分离症状 (Dissociation symptom, DS) 在双相障碍 (Bipolar disorder, BD) 患者中非常常见。然而, 对于我国 BD 患者中 DS 的发生率和临床相关性仍知之甚少。本

研究旨在初步探索 BD 患者中 DS 的发生率及相关因素。

方法 通过方便抽样的方法从湘雅二医院精神科门诊及病房招募符合《美国精神障碍诊断和统计手册 (第五版)》BD 诊断标准的患者, 以线上问卷调查及线下访谈的方式进行研究。我们调查了患者的 DS、抑郁症状、焦虑症状、躁狂发作次数及严重程度、精神病性症状、童年创伤经历、边缘型人格特质、自杀风险、生活质量和人口学等特征。采用独立样本 T 检验、曼-惠特尼秩和检验、卡方检验、斯皮尔曼相关性分析、单因素回归分析、多重线性回归分析对数据进行统计分析。

结果 本研究共招募 BD 患者 517 人, 有效率 85.30%, 发现: ① BD 患者中 DS 的发生率为 53.50% (236/441), 伴 DS 的患者多见于女性、学生、未婚、住院患者, 具有更严重的临床症状 (抑郁症状、躁狂症状、焦虑症状、精神病性症状), 更高的自杀风险, 更可能具有童年创伤经历、边缘型人格特质和更差的生活质量等特征; ② 相关分析显示, DS 与抑郁症状、焦虑症状、躁狂症状、精神病性症状、边缘型人格特质、自杀风险、童年创伤经历均呈正相关 (P 均 < 0.001); 与生活质量呈负相关 (P 均 < 0.001); ③ 回归分析发现, 抑郁症状 ($\beta = 0.173$, 95% CI = 0.069-0.277, $P = 0.002$)、躁狂症状 ($\beta = 0.117$, 95% CI = 0.021-0.213, $P = 0.013$)、精神病性症状 ($\beta = 0.131$, 95% CI = 0.029-0.233, $P = 0.003$)、童年创伤经历 ($\beta = 0.114$, 95% CI = 0.075-0.153, $P = 0.01$) 和边缘型人格特质 ($\beta = 0.198$, 95% CI = -0.102-0.498, $P < 0.001$) 对 DS 的影响具有统计学意义。

结论 本研究作为第一个在国内 BD 群体中探索 DS 发生率及相关因素的研究, 得出以下结论 1. BD 患者中 DS 的发生率高; 2. BD 患者 DS 的程度越严重, 临床表现的抑郁症状、焦虑症状、躁狂症状及精神病性症状更严重、有更高的自杀风险、更多的童年创伤经历、更强的边缘型人格特质和更差的生活质量; 3. 抑郁症状、躁狂症状、精神病性症状、童年创伤经历和边缘型人格特质是 BD 患者中 DS 的独立危险因素。

关键词: 双相障碍, 分离症状, 童年创伤经历, 边缘型人格特质, 生活质量

预防酒精成瘾复发的药物治疗研究进展

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酒精成瘾问题日益突出, 不仅严重损害了人们的身体健康, 还破坏了家庭的和谐以及社会的安宁。预防复发是酒精成瘾治疗的重点与难点, 治疗措施主要包括心理社会干预和药物治疗。本文主要基于药理作用、临床循证、药物副反应、适应人群等方面系统阐述酒精成瘾预防复发的药物治疗策略。讨论的药物包括现代医学中适应症用药的双硫仑、纳曲酮(口服和缓释注射制剂)和阿坎酸, 超说明书范围用药的托吡酯、纳美芬、加巴喷丁和哌唑嗪, 传统医学中的单药葛根、贯叶连翘、常山和马钱子以及方剂黄连温胆汤和安神方。总结了两种药物的联合疗法和心理治疗与药物治疗的联合疗法, 此外本文还提供最新的临床指南作为指导, 说明在哪些情况下使用哪种药物。总结: 本文回顾的数据支持使用纳曲酮来降低酗酒的风险和减少大量饮酒, 使用阿坎酸来维持戒酒, 而双硫仑适用于有戒酒动机的患者, 不是那些以减少酒精摄入为目标的患者。对于超说明书使用的药物而言, 在治疗酒精成瘾方面有一定的效果, 但是因其副作用或其疗效一般的原因, 并不推荐它们作为酒精成瘾患者的一线用药。目前具有戒酒功效的单味中药的戒酒疗效也并不明确, 中药复方仍然是现今运用于酒精成瘾研究的重点。总体而言, 本综述中讨论的药物显示了临床有效性和对未来酒精成瘾治疗的希望。重要的是, 这些药物也为异质性的酒瘾人群提供了个性化的治疗方案。

关键词: 复发, 酒精成瘾, 药物治疗

决策风格在青少年抑郁、焦虑情绪对笑气成瘾影响中的中介效应分析

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目的 “笑气”学名一氧化二氮(Nitrous Oxide)。近些年来, “笑气”等替代毒品物质滥用现象逐渐引起我国社会关注。吸食“笑气”损害个体的神经系统, 甚至还会引发个体的精神症状, 对身心健康危害极

大。“笑气”虽在禁毒实践层面列为毒品, 但因其价低、易得和难以检测的特征在青少年中流行率较高。本研究想要探索青少年抑郁、焦虑情绪对笑气成瘾的影响并检验决策风格在其中的中介作用。

方法 本研究采用随机抽样的方法在线上发放问卷, 回收有效问卷 979 份。采用一般情况问卷、一般决策风格量表(GDMS)、广泛焦虑障碍量表(GAD-7)和抑郁自评量表(PHQ-9)进行调查, 使用 SPSS 26.0 进行统计描述、单因素 χ^2 检验、二元 Logistic 回归分析和中介效应分析。

结果 979 名青少年网友中, 吸食笑气占 5.72%, 知晓笑气的为 67.52%。二元 logistics 回归分析可知, 学历、恋爱经历、吸烟情况以及出入酒店和 KTV 的频率是吸食笑气的影响因素。其中小学学历 OR 值 7.681, 恋爱对象有过社会人士 OR 值 4.689, 吸烟 OR 值 3.941; 焦虑水平和决策风格总分和五种风格类型(理智型、逃避型、依赖型、冲动型和直觉型)都呈现显著正相关(P 值均 <0.05), 抑郁水平和决策风格总分以及五种风格类型都呈现显著负相关(P 值均 <0.05)。中介分析显示, 逃避型(效应值=0.043, 95%CL:0.021~0.068)、依赖型(效应值=0.048, 95%CL:0.027~0.076)、冲动型(效应值=0.035, 95%CL:0.018~0.058)和直觉型(效应值=0.051, 95%CL:0.025~0.085)决策风格在抑郁情绪对笑气成瘾影响中起部分中介作用。理智型(效应值=-0.044, 95%CL:-0.071~-0.022)决策风格在焦虑情绪对笑气成瘾影响中起部分中介作用。

结论 抑郁、焦虑情绪对笑气成瘾有负面影响, 且这种影响一部分会通过影响决策风格进而影响笑气成瘾。

关键词: 笑气成瘾, 决策风格, 抑郁, 焦虑, 青少年

Cortical Activation and Functional Connectivity During The Verbal Fluency Tasks in Individuals with Methamphetamine Use Disorder in Withdrawal: A Multichannel Near-Infrared Spectroscopy Study

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Objective The globally abused illicit drug Methamphetamine (MA) causes significant physical and psychological harm to its users and places a substantial burden on healthcare systems. Research indicates that individuals with Methamphetamine Use Disorder (MUD) exhibit impaired executive functions, which are often associated with poor treatment outcomes. Poor executive function performance is related to damage or dysfunction in the frontal cortex. This study aims to investigate the impairment of executive functions and the associated cortical hemodynamic changes in individuals with MUD through the combination of verbal fluency tasks and functional near-infrared spectroscopy (fNIRS) technology, providing a basis for the diagnosis and treatment of MUD patients.

Methods This study recruited MUD patients and demographically matched healthy controls (HCs) from Chengdu Compulsory Drug Rehabilitation Center, the Mental Health Center of West China Hospital of Sichuan University, and the community. Based on inclusion and exclusion criteria and data quality control, 111 MUD patients and 51 healthy controls were included. Clinical characteristics were assessed using the Visual Analog Scale for craving (VASc). Other clinical self-report scales included the Alcohol Use Disorders Identification Test (AUDIT), the Fagerstrom Test for Nicotine Dependence (FTND), the Beck Depression Inventory (BDI), the Beck Anxiety Inventory (BAI), the Social Support Rating Scale (SSRS), the Chinese Perceived Stress Scale (CPSS), and the Pittsburgh Sleep Quality Index (PSQI). After completing the clinical characteristic assessments, all participants underwent behavioral data recording and functional near-infrared brain imaging data collection during the Verbal Fluency Task (VFT). The collected data were then processed and statistically analyzed to explore the differences in oxyhemoglobin (HbO) concentration changes and functional connectivity matrices in the frontal and temporal cortices during the VFT between groups, as well as their relationships with clinical characteristics and task-related behavioral performance.

Results 1. Analysis of Differences in Demographic and Clinical Data Between Groups: Compared

to HCs, MUD patients had significantly fewer years of education, a higher proportion of smokers, and greater perceived stress.

2. Analysis of Differences in VFT Performance and Related fNIRS Data Between Groups: Compared to HCs, MUD patients generated significantly fewer words during the VFT. In channels (CH) involving the frontal pole of the prefrontal cortex (CH6, CH7, CH8, CH10, CH11), the triangular part of the inferior frontal gyrus (CH22), the pre-motor cortex and supplementary motor cortex (CH38), the dorsolateral prefrontal cortex (CH23, CH24, CH26, CH27, CH30, CH40), and the frontal eye field (CH41), MUD patients showed significantly lower changes in oxyhemoglobin (HbO) concentration, indicating decreased activation. The functional connectivity matrix revealed that MUD patients had significantly higher connectivity strength between CH5-CH20 (triangular part of the inferior frontal gyrus - primary motor cortex). All these results were statistically significant after FDR correction.

3. Correlation Analysis Between VFT Performance and Differential Brain Regions: After controlling for smoking status, years of education, and CPSS scores, partial correlation and stepwise regression analyses of the changes in HbO concentration in the 14 differential channels with word generation during VFT revealed that greater changes in HbO concentration in CH38 were significantly associated with higher word generation.

Conclusion 1. MUD patients began using MA at an earlier age, reflecting a trend of younger initiation in the MA-using population, which warrants attention.

2. MUD patients exhibited poorer behavioral performance on the Verbal Fluency Task (VFT), along with reduced activation in brain regions such as the dorsolateral prefrontal cortex and abnormal functional connectivity between the triangular part of the inferior frontal gyrus and the primary motor cortex. These findings suggest impairments in verbal processing functions.

3. Additionally, this study found that activation in channels primarily located in the pre-motor cortex and supplementary motor cortex was correlated with behavioral performance, providing evidence for the use of fNIRS technology as a more sensitive method to detect

executive function impairments.

关键词: Methamphetamine Use Disorder, Functional Near-Infrared Spectroscopy (fNIRS), Hemodynamics, Executive Function, Verbal Fluency Task

The Associations between Social Support, Depressive Symptoms, and New Psychoactive Substance Use Among Men Who Have Sex with Men: A Cross-sectional Mediation Study

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Objective The use of new psychoactive substances (NPS) is very common among men who have sex with men (MSM) and represents a maladaptive coping strategy for dealing with stress and integrating into their community. This study aims to explore the prevalence and determinants of NPS use among MSM in China and to investigate the potential mediating effects of mental health between perceived social support and NPS use. It provides data support for the development of targeted intervention measures to reduce NPS use among MSM in China

Methods This study recruited MSM and sent an online questionnaire via the Blued App from March 17 to May 28, 2023. The questionnaire includes the social demographic characteristics, psychoactive substance use characteristics, the Center for Epidemiologic Studies Depression Scale (CES-D), and the perceived Social Support Scale (PSSS). Univariable and multivariable logistic regression were conducted to explore the influencing factors of NPS use. Mediation analysis was performed to assess the potential mechanisms between social support and NPS use

Results A total of 686 MSM were included in this study, with 28.9% of participants reporting the use of NPS. The most frequently used NPS was Rush Popper, followed by Capsules Zero, sedatives, hypnotics, and anxiolytics, amphetamine synthesis substances, and hallucinogens. The study identified several factors associated with NPS use among MSM, including student status, high income, depressive symptoms, HIV positivity, multiple sexual partners, and history of PrEP use. Mediation analysis showed that depressive symptoms fully mediated the relationship between social support and NPS use

Conclusion NPS use is prevalent among MSM in China, underscoring the necessity for improved awareness of the health risks associated with NPS use, particularly regarding mental health impacts and its increased risks on HIV infection. Targeted educational and publicity strategies should be adopted among those MSM NPS users. Furthermore, it is crucial for policymakers and community organizations to actively engage in creating a more supportive social environment to bolster their social networks and improve their mental health well-being. This comprehensive strategy will be promising to reduce NPS use, promote safer sexual behaviors, and decrease the risk of HIV infection among MSM

关键词: New psychoactive substances, men who have sex with men, social support, depressive symptoms

White Matter Neural Substrates in Alcoholism with Genic Risk and Their Role in Pathological Reward Process

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Objective Significant evidence of brain white matter (WM) microstructural and network connectome abnormalities have been revealed in alcohol dependence (AD). We aim to explore the neuroimaging characteristics of AD with high genic risk and the role of these

changes in pathological craving

Methods The study recruited 51 patients for AD, 21 patients with family history positive (FHP), 30 patients with family history negative (FHN), and 25 healthy controls (HC). We compared fractional anisotropy (FA) and mean diffusivity (MD) of striatal circuits and topological properties of reward system between the three groups. Then covariates of alcohol use characteristics were controlled between FHP and FHN. In addition, whether genic load neural organization abnormalities were associated with self-reported craving were explored in AD

Results We found abnormal WM microstructural of striatal circuits and topological properties of hippocampus in AD with FHP compared to HC. After controlling covariates of alcohol use characteristics, there was still disruptions of topology organization in FHP compared to FHN, such as lower nodal betweenness, nodal degree and higher shortest path of right hippocampus. The nodal topological properties of right hippocampus were significantly correlated with self-reported craving in AD

Conclusion We provide robust evidence for WM neural abnormalities in AD with high genic risk. We also found the disrupted topological properties of the right hippocampus associated with craving level

关键词: Alcohol dependence; Reward system; Genic risk; white matter microstructure; Topological organization

Intervention and Mechanism of Anhedonia in Depression Based on Intermittent Theta Burst Transcranial Magnetic Stimulation

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Objective Major depressive disorder (MDD) is a prevalent psychiatric disorder with core symptoms including low mood, anhedonia, and cognitive slowing. Anhedonia has been identified as a key endophenotypes of depression, linked to dysfunction within reward-related neural circuits. Intermittent Theta Burst Stimulation (iTBS) has the advantages of shortening the duration of treatment and improving the utilization of clinical instruments. Therefore, this study aims to investigate the effect of iTBS on patients with depression and anhedonia

Methods Twenty-five patients diagnosed with depression and anhedonia, according to the International Classification of Diseases (ICD-10) criteria for mental and behavioral disorders, were recruited for a study. All patients were treated with Escitalopram oxalate alone in addition to iTBS in the left dorsolateral prefrontal (L-DLPFC) (treatment regimen: 100% resting motor threshold, stimulation target on the L-DLPFC, and single stimulation number of 1800). Patients were treated twice daily (The interval between two treatments was set at 54 minutes.) and completed a total of 10 sessions (5 days/week). In addition, clinical symptoms, behavioral and electroencephalogram (EEG) assessments were performed on the baseline, fifth and tenth day of treatment. The clinical assessments included the Snaith-Hamilton Pleasure Scale (SHAPS), Hamilton Anxiety Rating Scale (HAMA-14), Hamilton Depression Rating Scale (HAMD-17), Self-rating Depression Scale (SDS) and Self-rating Anxiety Scale (SAS). Additionally, behavioral and EEG data were collected using the Money Delay Incentive (MID) paradigm

Results In terms of clinical symptom intervention, the scores of HAMD-17, HAMA-14, SDS, SAS and SHAPS were significantly decreased after treatment compared with baseline ($P < 0.05$). Regarding the behavioral experiment, with the increase of regulation days, the response time of patients under different rewards continuously decreased, and the accuracy rate continuously increased. In MID task EEG, a negative correlation was observed between the average amplitude difference of CNV component before and after regulation and Δ HAMD-17, which was significant in both no reward and big reward conditions ($P < 0.05$). Furthermore,

the average amplitude difference of Cue-P3 component before and after regulation positively correlated with Δ SHAPS, and this correlation was significant in conditions with small reward

Conclusion The findings indicate that the proposed iTBS treatment protocol effectively mitigates the clinical symptoms of depression and anhedonia among patients. This provides valuable insight into the potential mechanism underlying the response to iTBS in patients with depression and anhedonia

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关键词: major depressive disorder, anhedonia, electroencephalogram, intermittent theta burst stimulation.

Cortical Activation and Functional Connectivity During The Stroop Color Word Task in Individuals with Methamphetamine Use Disorder in Withdrawal: A Multichannel Near-Infrared Spectroscopy Study

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Objective Methamphetamine (MA), widely abused globally, is one of the most prevalent and harmful illicit drugs in China, causing significant physical and psychological damage. Research indicates that individuals with Methamphetamine Use Disorder (MUD) experience impaired inhibitory control. Studies have linked the addiction of MA to weakened inhibitory control functions, highlighting the critical role of inhibitory control in treatment outcomes and preventing relapse. This study aims to investigate the impairment of inhibitory control functions in MUD patients and the associated cortical hemodynamic changes using a combination of the Stroop Color Word Task and functional near-infrared spectroscopy (fNIRS) technology, providing a basis for the diagnosis and treatment of MUD patients.

Methods This study recruited MUD patients and demographically matched healthy controls (HCs) from Chengdu Compulsory Drug Rehabilitation Center, the Mental Health Center of West China Hospital of Sichuan University, and the community. Based on inclusion and exclusion criteria and data quality control, 111 MUD patients and 51 healthy controls were included. Clinical characteristics were assessed using the Visual Analog Scale for craving (VASc). Other clinical self-report scales included the Alcohol Use Disorders Identification Test (AUDIT), the Fagerstrom Test for Nicotine Dependence (FTND), the Beck Depression Inventory (BDI), the Beck Anxiety Inventory (BAI), the Social Support Rating Scale (SSRS), the Chinese Perceived Stress Scale (CPSS), and the Pittsburgh Sleep Quality Index (PSQI). After completing the clinical characteristic assessments, all participants underwent behavioral data recording and functional near-infrared brain imaging data collection during the Stroop Color Word Task (STROOP). The collected data were then processed and statistically analyzed to explore the differences in oxyhemoglobin (HbO) concentration changes and functional connectivity matrices in the frontal and temporal cortices during the STROOP between groups, as well as their relationships with clinical characteristics and task-related behavioral performance.

Results 1. Analysis of Differences in Demographic and Clinical Data Between Groups: Compared to HCs, MUD patients showed statistically significant differences with lower levels of education, a higher proportion of smokers, and greater perceived stress.

2. Analysis of Differences in STROOP Performance and Related fNIRS Data Between Groups: Compared to HCs, there was no statistically significant difference in behavioral performance related to the STROOP task among MUD patients. However, MUD patients exhibited smaller changes in oxyhemoglobin (HbO) concentration in 17 channels (CH) primarily located in the frontal pole of the prefrontal cortex (CH6), middle temporal gyrus (CH13, CH15), superior temporal gyrus (CH16), triangular part of the inferior frontal gyrus (CH12, CH22, CH29, CH31), dorsolateral prefrontal cortex (CH23, CH26, CH27, CH28, CH30,

CH32, CH40, CH43), and frontal eye field (CH44). Additionally, weaker functional connectivity was observed between CH2-CH29 (superior temporal gyrus - triangular part of the inferior frontal gyrus), CH4-CH8 (dorsolateral prefrontal cortex - frontal pole of the prefrontal cortex), and CH4-CH29 (dorsolateral prefrontal cortex - triangular part of the inferior frontal gyrus), which are primarily located in the dorsolateral prefrontal cortex and triangular part of the inferior frontal gyrus. All these results were statistically significant after false discovery rate (FDR) correction.

Conclusion In the Stroop Color Word Task, no significant differences were found in behavioral performance among MUD patients, possibly indicating partial recovery of inhibitory control abilities in patients who have been abstinent for a longer period. However, during withdrawal, MUD patients still exhibit impaired activation primarily in the dorsolateral prefrontal cortex and weakened functional connectivity in this region.

关键词: Methamphetamine Use Disorder, Functional Near-Infrared Spectroscopy (fNIRS), Hemodynamics, Executive Function, Stroop Color-Word Task

赌博症状评估量表的汉化及信效度检验

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目的 本研究旨在对赌博症状评估量表 (Gambling Symptom Assessment Scale, G-SAS) 进行汉化, 并验证其中文版在我国赌博障碍患者中的信效度。

方法 根据使用 Brislin 翻译模型对量表进行翻译与回译, 经过跨文化调试、预调查后最终形成中文版 G-SAS。2023 年 9 月至 2024 年 3 月, 采取便利抽样法从上海市精神卫生中心和上海某戒赌中心选取了 121 名符合 DSM-5 赌博障碍诊断标准的赌博障碍患者作为研究对象, 采用一般资料表、G-SAS 中文版、耶鲁-布朗赌博强迫量表(Pathological Gam-

bling Adaptation of the Yale-Brown Obsessive Compulsive Scale, PG-YBOCS)、南橡树赌博筛查量表(South Oaks Gambling Screen, SOGS)等进行资料收集。通过 Cronbach's α 系数进行内部一致性检验, 2 周后复测进行重测信度检验, 采用专家咨询法评价量表的内容效度, 采用探索性因子分析进行结构效度检验, 以 PG-YBOCS 和 SOGS 为校标工具进行校标关联效度检验。

结果 中文版 G-SAS 共 12 个条目, 各条目的 CR 值范围为 4.36~10.73; 量表的 Cronbach's α 系数为 0.926, 重测信度系数为 0.896; 内容效度指数 S-CVI 为 0.960。KMO 值为 0.821, Bartlett 球形检验 $p < 0.01$, 探索性因子分析共提取 2 个因子, 分别为赌博冲动与思想控制和赌博相关的情感体验, 累计方差贡献率为 71.71%。中文版 G-SAS 的得分与 PG-YBOCS 得分呈正相关 ($r = 0.661, p < 0.01$), 与 SOGS 得分的相关性无统计学意义($r = 0.070, p > 0.05$)。

结论 中文版 G-SAS 具有良好的信效度, 可以作为评估我国赌博障碍患者的赌博症状严重程度的有效测量工具。

关键词: 赌博障碍; 行为成瘾; 赌博症状评估量表; 信度; 效度

Prevalence and Risk Factors of Substance Use Behavior Among College Students: A Cross-sectional Survey

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Objective In recent years, there are some report of substances use such as nitrous oxide, "smart drug",

and synthetic drug vapes among adolescents and young adults. College students are generally characterized by a lack of personal precautionary awareness and tend to ignore the knowledge of potential health harms of these substances due to curiosity or social needs. This study was conducted to investigate the awareness, usage, and risk factors of substance use among college students.

Methods From 19 June 2023 to 26 November 2023, an online cross-sectional survey was conducted in 10 colleges in Wuhan City, Hubei Province. All participants were investigated to collect the demographic characteristics, substance use and related risk factors of the college students. Logistic regression was used to explore the risk factors for substance use behaviors.

Results A total of 10,952 participants completed the questionnaires. The average age of the participants was 18.92 years old, of which 49.81% were male, 6.25% are ethnic minorities, and the percentage of medical students was 0.37%. The awareness of various substances was as follows: nitrous oxide (63.83%), cough syrup (36.76%), "smart drug" (37.56%), synthetic drug vapes (2.78%), synthetic cannabinoids (32.72%), and etomidate (11.81%). Regarding substance usage, 3.10% of the participants (n=385) reported the use of any substance. The usage of specific substances was distributed as follows: nitrous oxide (0.68%, n=74), non-medical use of cough syrup (1.72%, n=188), "smart drug" (0.47%, n=52), synthetic drug vapes (0.77%, n=84), synthetic cannabinoids (0.51%, n=56), and etomidate (0.24%, n=26). Additionally, 1.46% of the participants (n=160) reported the use of other substances. Of those who reported substance use, the mean age was 19.31 years, 67.27% (259) were male, 18.18% (10.71% of those without substance use) had average monthly expenditures of more than 2,000, and 30.88% (24.07% of those without substance use) had monthly household incomes of more than 10,000. Logistic regression analyses showed an increase in age (OR=1.086, 95%CI: 1.019-1.158), males (OR=1.397, 95%CI: 1.104-1.766), drinking (OR=1.919, 95%CI: 1.483-2.484), smoking (OR=2.726, 95%CI: 2.081-3.572), anxiety (mild, OR=1.473, 95%CI: 1.124-1.931; moderate and severe, OR=2.135, 95%CI: 1.575-2.895) and internet addiction (problematic internet use, OR=1.783, 95%CI: 1.382-

2.299; internet addiction, OR=3.503, 95%CI: 2.350-5.220) were associated with substance use.

Conclusion There is a risk of various substance use in the college students. Except for nitrous oxide, less than 40% of participants have heard of other substances, among which the percentage who have heard of synthetic drug vapes is only 2.78%. We should enhance the training and education on substance identification skills and harm prevention abilities among college students. Substance use college students have better economic conditions, which is an objective condition to support their use of substances. On the other hand, college students face problems such as anxiety and Internet addiction. It is necessary for families and schools to pay attention to the stress and mental health problems and substance use behaviors in order to improve the physical and mental health wellbeing of college students

关键词: College students; Substance use; Risk factors; Investigation

数字疗法(移动医疗应用程序)在酒精使用障碍早期干预中的研究进展

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背景 酒精使用障碍是全球性公共卫生问题, 过量饮酒是导致死亡率上升、健康恶化和社会问题加剧的重要危险因素之一。目前, 针对酒精使用障碍的新型数字疗法(移动医疗应用程序)正在变得越来越受欢迎。它所具有的广泛覆盖性、便利性和低成本等特点能够克服许多传统医疗手段的不足。

目的 本研究系统综述了国内外利用数字疗法干预酒精使用障碍的理论基础和有效证据, 对相关软件的开发、优化具有一定的借鉴意义, 也为软件市场的规范化提供了参考。

方法 检索了截至 2024 年 6 月的 PubMed、Science Direct、中国知网 CNKI、万方数据、维普资讯和中华医学期刊全文数据库内相关的国内外文献。纳入了样本量大于 50, 并报告了饮酒量结局的移动应用程序临床研究, 并对其干预过量饮酒的神经心理学机制、相关随机对照试验(RCTs)结果进行归

纳和总结。

结论 研究显示,与没有干预的受试者相比,接受移动医疗应用程序早期干预的高危饮酒人群饮酒量更少。这表明,数字疗法可有效干预酒精使用问题,其潜在应用前景广阔。遗憾的是,这些文章并未详细讨论具体是哪个模块在干预过程中起到了关键性作用。此外,这些数字疗法干预酒精使用问题的潜在副作用和伦理风险的研究仍需进一步研究。同时需要特别指出的是,现有的这些数字疗法在治疗已明确诊断酒精使用障碍的患者时影响很小或没有影响。针对这些患者,面对面且持续的心理治疗、药物支持仍是最主要治疗手段。对于这类人群而言,探索数字疗法与药物治疗、心理治疗等治疗方法的联合方案或许是更好的选择。

关键词: 关键词: 数字疗法, 移动应用, 酒精, 酒精使用障碍, 早期干预

网络成瘾的流行病学综述

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目的 了解网络依赖的流行病学特点。

方法 以“Internet Addiction, Game Disorder, Internet dependence、Epidemic, Prevalence”等在为关键词在 PubMed 上检索英文文献,以“网络依赖、网络成瘾、游戏障碍、流行病、患病率”等为关键词在中国知网、万方数据库和维普数据库上分别检索中文文献,阅读摘要后筛选符合目的文献,继续阅读全文。

结果 网络依赖的患病率在大学生、中学生甚至小学生中均发现逐年升高趋势。男生网络成瘾检出率高于女生。在不同国家和地区的报告的未经分类的网络依赖的患病率差异较大,在 1.6%-38.9%之间,但总体随着时间变化呈上升趋势。总体来说东亚文化报告的网络成瘾患病率高于西方文化。这一差异性在广泛性网络成瘾中更加突出。游戏障碍的患病率在不同文献中报告的差异不大,且随着时间变化的差异性相对较小。

结论 网络依赖的问题日益严峻,患病率在上升,需要重视。同时网络依赖的异质性比较突出,不同类型的网络依赖表现出差异较大的流行病学特点,

提示基于网络依赖的不同类型去看待和研究这个疾病的可能更有意义。提示我们以后对网络依赖的研究需要重视疾病分类。

关键词: 网络依赖, 游戏障碍, 流行病学、患病率

酒精使用障碍患者血清氨基酸代谢组学与心理渴求关系的研究

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目的 酒精使用障碍(alcohol use disorder, AUD)是一种慢性复发性疾病,其发病机制仍不明确,缺乏具有敏感性和特异性的生物标志物。既往研究表明, AUD 患者存在氨基酸代谢异常,且与心理渴求水平有关。本研究对 AUD 患者血清进行靶向代谢组学检测,筛选可能的生物标志物,并分析了氨基酸代谢物与酒精使用情况和心理渴求的相关性。

方法 本研究纳入男性 AUD 患者 38 名,健康男性 30 名,采集一般资料和饮酒情况。使用宾夕法尼亚酒精渴求量表(Penn Alcohol Craving Scale, PACS)和视觉模拟评分量表(Visual Analogue Scale, VAS)评估入组者对酒精的心理渴求水平。采集入组者的血清,进行氨基酸靶向代谢组学分析。采用 T 检验法($P < 0.05$)和倍数变化法($\text{Fold Change} \geq 1.2$ 或 ≤ 0.83)筛选差异代谢物。

结果 与健康对照组相比, AUD 患者血清 D,L- β -氨基异丁酸、L-谷氨酸、 γ -氨基丁酸浓度显著升高, β -丙氨酸、L-精氨酸、谷氨酰胺浓度显著降低。AUD 患者血清谷氨酸水平与每周饮酒量呈正相关($r=0.328, P=0.045$),血清谷氨酰胺与心理渴求评分呈负相关(PACS: $r=-0.484, P=0.002$; VAS: $r=-0.333, P=0.041$)。

结论 持续饮酒可导致外周氨基酸代谢异常,可能与 AUD 患者酒精使用情况和心理渴求有关。谷氨酸相关代谢物改变可能是 AUD 发展的辅助因素,或可成为早期干预的潜在靶点。

关键词: 酒精使用障碍,靶向代谢组学,谷氨酸代谢,心理渴求

酒精使用障碍的动态脑功能连接改变

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目的 基于静息态 EEG 信号的功率谱和动态脑功能连接分析方法,结合临床特征探究酒精使用障碍特征性的脑功能连接改变。

方法 收集并分析了 25 例酒精使用障碍患者组和 26 例健康对照组 64 导静息态脑电生理信号,酒精使用障碍患者评估了酒精使用障碍筛查量表(AUDIT)、强迫性饮酒量表(OCDS)、简易饮酒期望问卷(AEQ)和饮酒动机问卷(DMQ-R)。结合滑动窗口分析技术与加权相位延迟指数(wPLI)分析大脑功能连接,并应用 k-means 聚类方法分析个体水平脑功能的时空动态变化,探索酒精使用障碍患者脑功能特征性改变及其与疾病临床特征的相关性。

结果 功率谱分析发现,在睁眼静息态 EEG 数据 low-beta (13-20Hz) 频段中, F1、FCz、FC1 (三个电极都位于内侧额叶)和 C3 (左侧中央回)的功率升高。使用 DynamicBC 工具箱,对各通道对之间功能连接随时间的变化进行聚类,得到的 S1、S2 和 S3 三个大脑状态。酒精使用障碍患者组与健康对照组相比:(1) S1 状态出现频率降低, S2 状态出现频率升高;(2) 状态转移次数升高;(3) S1 状态到 S1 状态的转移概率降低, S1 状态到 S2 状态都转移概率升高。并且,在酒精使用障碍患者中,动态脑功能指标差异与临床特征存在相关性:积极饮酒期望与 S1 状态的出现频率成负相关、与 S2 状态的出现成正相关;状态转换次数与 AUDIT 总分、OCDS 总分及强迫性饮酒想法成正相关; S1 状态到 S1 状态的转移概率与 AUDIT 总分、OCDS 总分及强迫性饮酒想法成负相关,而 S1 状态到 S2 状态的转移概率与积极饮酒期望、社交性饮酒动机成正相关。

结论 酒精使用障碍患者内侧额叶、左侧中央回在静息状态下大脑活动增强,不同脑区之间的动态功能连接存在特征性改变。而且,这些改变与酒精使用程度、强迫性饮酒、饮酒期望修改。这些结果提示, low-beta 频段下频谱功率和动态功能连接特征性改变可能反映了酒精使用障碍潜在的病理基础,有望作为疾病诊断及评估的生物标记,为早期诊断

和评估提供新思路。

关键词:酒精使用障碍,动态脑功能连接,静息态脑电图,强迫性饮酒,饮酒期望,饮酒动机

15 MA 高强度经颅交流电刺激治疗赌博障碍的探索性研究

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目的 经颅交流电刺激(transcranial alternating current stimulation, tACS)技术通过对受试者头皮施加 1-2 mA 的交流电刺激,被证明能够调节赌博障碍者的病理性大脑神经活动及赌博行为。然而,人类颅骨对 tACS 刺激电流的巨大衰减作用,导致进入颅骨内的刺激电流往往只能调节赌博障碍者的大脑局部皮层,难以有效调节病理性神经网络,使得临床治疗效果有限。最近一种采用 15 mA 刺激电流幅值的高强度 tACS (high-intensity tACS, Hi-tACS) 被证明是干预大脑神经网络的有效技术,且被证明是治疗抑郁症、焦虑症等精神障碍的有效策略,有望干预赌博障碍的病理性神经网络并改善赌博症状。

方法 在这项开放标签试验中,17 名(男性)被《精神障碍诊断与统计手册》第五版(DSM-5)诊断为赌博障碍的受试者接受了 Hi-tACS 的临床治疗。没有对照组。在连续的 10 天内,受试者每天接受 2 次 Hi-tACS 治疗,每次治疗持续 40 分钟,总共完成 20 次治疗。刺激电流强度为 15 mA,刺激频率为 77.5 Hz。主要结局指标是治疗前后评估的临床总体印象-严重性量表(Clinical Global Impressions-Severity scale, CGI-S)评分变化。次要结局指标是通过问卷量表评估的赌博严重程度、心理渴求、赌博症状、情绪状态及赌博行为的改变。

结果 Hi-tACS 治疗能够显著降低赌博障碍者的临床严重程度,且未观察到明显副作用。赌博严重程度、心理渴求、赌博症状、情绪状态及赌博行为在治疗后显著改善,虽然治疗后三个月内的随访评估结果显示略有增加,但三个月随访结果仍显著低于治疗前基线水平。

结论 Hi-tACS 在减少赌博障碍患者的临床严重程度、赌博严重程度、心理渴求、赌博症状、情

绪状态和赌博行为方面是有效的,且改善在治疗后三个月内持续存在,提示了 Hi-tACS 治疗赌博障碍的可行性、耐受性、安全性和有效性。

关键词: 赌博障碍, 赌博症状, 赌博行为, 风险决策, tACS

Transdiagnostic Neuromodulation of Impulsivity: Current Status and Future Trajectories

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Impulsivity, increasingly perceived as a transdiagnostic characteristic, significantly influences diverse psychiatric conditions and emanates beyond the boundaries defined by traditional classification systems. Transdiagnostic research has shed light on the complex clinical manifestations of impulsivity, and the underpinning neural circuitry. The pressing challenge now is to translate this enhanced understanding into precise and potent interventions tailored to these different aspects of impulsivity. Recent advancements in neuromodulation, specifically targeting brain circuits, have provided encouraging evidence for improvements in clinical symptoms, and neural circuitry across various psychiatric conditions, signposting a transformative phase in crafting interventions that tackle impulsivity from a transdiagnostic perspective. However, the field continues to ascertain a universally embraced framework that effectively amalgamates these discoveries into a unified clinical methodology. The Research Domain Criteria (RDoC) delivers a neuroscientifically informed framework that aims to reconcile the neurobiological underpinnings with clinical symptoms, thereby facilitating targeted neuromodulation strategies. In this context, we have traversed the landscape from the rudimentary conceptualisation of impulsivity to the sophisticated techniques being developed to modulate its underpinnings. The journey has uncovered the intricate web of neural

circuitry associated with impulsivity and highlighted the pivotal role that neuromodulation techniques could play in future interventions. The heterogeneity of impulsivity poses significant challenges, which we have addressed by considering advancements in neuromodulation technologies and the unification of research efforts facilitated through the RDoC framework. By moving towards a model that regards impulsivity as a transdiagnostic trait, we can begin to tailor interventions that are as complex and nuanced as the disorders they aim to ameliorate. As research paradigms evolve and new technologies emerge, we are moving toward an age where interventions for impulsivity will be far more dynamic and precisely aimed at modulating the brain's complex circuitry. The hope is that this progress will catalyze more profound insights and effective interventions, markedly enhancing the quality of life for those affected by impulsivity and related psychopathologies.

关键词: impulsivity, transdiagnostic, neural circuits, neuromodulation, RDoC

依托咪酯的成瘾潜力及戒断前后外周血皮质醇、ACTH 改变情况

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目的 依托咪酯是一种短效静脉全身麻醉药物,作为新型毒品,目前尚未有研究对依托咪酯吸食后的主观效应及滥用潜力进行定量评估。本研究以依托咪酯滥用患者为研究对象,通过对其吸食后的精神活性效应、渴求程度、戒断效应进行量表评估以描绘依托咪酯使用的成瘾潜力。

方法 患者在自愿戒毒机构内进行为期 4 周的药物戒断,在刚入院 24 小时内使用成瘾研究中心量表 (ARCI)、阿片戒断症状评价量表 (OWS)、以及视觉模拟量表 (VAS) 分别评估依托咪酯使用的成瘾潜力、戒断反应及渴求程度,并对戒断前后依托咪酯滥用患者的成瘾 ARCI、VAS 评分及血 ACTH 及皮质醇含量进行样本 T 检验分析。

结果 本研究共纳入依托咪酯滥用患者 67 例,本研究纳入的依托咪酯滥用患者以男性 (82.1%)、

未婚(58.2%)、初中学历(43.3%)为主,平均年龄(27.75±7.28)岁,97%的患者伴有烟、酒及其他成瘾物质的使用;在23个产生强烈渴求的患者中,使用依托咪酯至产生强烈渴求次数的中位数为4次;使用总次数的中位数为6次,其中有20.9%的患者使用依托咪酯超过30次。OWS总评分5.86±8.31,其中戒断症状主要包括疲惫(40.9%)、烦躁不安(34.8%)、口干(33.3%)、全身软弱无力(31.8%)、无食欲(25.8%)、哈欠(25.8%)、昏睡(25.8%)、失眠(22.7%)、手颤抖(19.1%)、抑郁(19.1%);戒断前后VAS结果表明渴求度显著降低($p<0.05$);戒断前后ARCI量表得分分别为20.63±7.44(MBG:3.48±3.31、PCAG:9.69±3.29、LSD:7.48±2.43)vs15.77±3.94(MBG:10.00±4.17、PCAG:2.80±1.77、LSD:2.98±1.49), $p<0.0001$;血皮质醇前后水平391.12±178.32 vs 433.50±130.13(皮质醇正常值:85.3-618.0nmol/L, $p<0.05$);ACTH前后水平102.85±110.62 vs 42.99±20.88(ACTH正常值:0.0-46.0ng/L), $p<0.001$ 。

结论 量表结果初步提示依托咪酯吸食具有一定的成瘾潜力(欣快、镇静、拟精神效应),符合精神活性物质的使用特征,经过戒断后,患者的ARCI评分显著性降低。此外,依托咪酯戒断反应与阿片戒断症状具有一定程度相似性(疲惫、烦躁不安、口干、全身软弱无力等)。患者戒断前后皮质醇及ACTH的对比结果提示,依托咪酯使用能够轻度降低血皮质醇水平、升高ACTH水平,且在四周的戒断后足以恢复。

关键词:物质滥用,依托咪酯,成瘾潜力,皮质醇、ACTH

男性酒精依赖患者血浆氧化应激标志物水平与认知功能的相关性研究

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目的 研究男性酒精依赖患者体内氧化应激标志物水平与认知功能之间的关系,探讨氧化应激反应在认知功能损害中的作用。

方法 随机选取2024年1月~2024年4月于

山东省戴庄医院酒精依赖科住院的206例酒精依赖患者,运用蒙特利尔认知功能量表(MoCA)将患者分为认知功能正常组(30例)和认知功能障碍组(176例)。测定并比较两组酒精依赖患者血浆氧化应激标志物总胆红素(TBIL)、直接胆红素(DBIL)、间接胆红素(I-BIL)、白蛋白(ALB)、尿酸(UA)、甘油三酯(TG)、总胆固醇(TC)、同型半胱氨酸(Hcy)、超氧化物歧化酶(SOD)水平。分析血浆氧化应激标志物水平与临床认知功能评分的相关性。

结果 入院的酒精依赖患者认知障碍的发生率为85.44%。酒精依赖患者的认知功能与受试者年龄及受教育年限、嗜酒年限显著相关(均 $P<0.05$)。与认知功能正常组相比较,认知功能障碍组血浆TG、TC和Hcy平显著升高、SOD水平显著降低(均 $P<0.05$)。认知功能障碍组血浆TG水平与MoCA总分、视空间与执行功能、语言、抽象思维和延迟记忆呈负相关($P<0.05$);血浆TC水平与MoCA总分、语言、延迟记忆呈负相关($P<0.05$);血浆Hcy平与MoCA总分、视空间与执行呈负相关($P<0.05$);血浆SOD水平与血MoCA总分呈正相关($P<0.05$)。甘油三酯预测认知功能障碍的AUC值为0.656。

结论 男性酒精依赖患者普遍存在认知功能损害。酒精依赖患者的血浆氧化应激标志物在认知功能正常组和认知功能障碍组存在差异性表达,血浆甘油三酯、总胆固醇、同型半胱氨酸水平升高提示可能存在认知功能损害,血浆超氧化物歧化酶水平较高提示认知功能可能较好。其中血浆甘油三酯水平可作为评估酒精依赖患者是否发生认知功能障碍的潜在预测指标。

关键词:男性;酒精依赖;化应激;认知功能

纳曲酮治疗病理性赌博1例

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目的 了解病理性赌博的诊断、临床表现及治疗方法。

方法 回顾性分析1例28岁男性患者病理性赌博患者的临床资料,并结合文献复习予以讨论。

结果 患者病理性赌博6年,临床上表现为赌博依赖,并情绪低落,失眠等精神症状。既往门诊予

心理治疗合并氟西汀等药物治疗,但疗效欠佳,因加重来院住院治疗,入院时以难以控制的赌博行为为主要表现,伴有抑郁及焦虑情绪,入院视觉类量表评定为8分。入院后开始给予氟西汀、阿普唑仑等治疗,后逐渐停用,换为纳曲酮治疗,同时合并认知行为的心理治疗及足够的重复经颅磁刺激治疗,患者症状逐渐好转,出院时精神症状基本消失,赌博依赖明显减轻。出院后一直予纳曲酮维持治疗,同时合并家庭治疗,出院后随访半年,患者无复赌行为。

结论 病理性赌博为慢性复发性脑病,目前机理原因不清楚,其中中脑边缘系统研究较多,而关于阿片类受体拮抗剂治疗病理性赌博的研究较多,结合本病例,在一些对于系统心理治疗合并药物治疗效果欠佳的病例,治疗上,可选择住院治疗,早期给予规范的心理治疗,药物治疗,重复经颅磁刺激等综合治疗方法,药物治疗可选择纳曲酮,后期予纳曲酮合并家庭维持治疗,疗效较好,无再发生赌博行为,同时精神症状控制较平稳。

关键词: 纳曲酮; 病理性赌博

BZRAs Use Status in China-Perspectives From Psychiatrists: A Cross-sectional Study

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Objective Benzodiazepine receptor agonists (BZRAs), which include benzodiazepines and Z-drugs, are the most commonly prescribed psychotropic drugs worldwide, and their inappropriate use places a significant burden on public health. Given the widespread use of BZRAs in psychiatric settings, we conducted a cross-sectional survey study to understand the status of Benzodiazepine Receptor Agonists (BZRAs) use status in China, and thus lay down the foundation for further improvement in rational use of BZRAs

Methods To understand the current state of sedative-hypnotic drug use and its influencing factors, we conducted a nationwide questionnaire survey across various regions of China, including the eastern, central, and western areas. Participants were administered a

self-devised 47-item questionnaire on the cognition of BZRAs prescription behavior, a 14-item questionnaire on attitudes towards sedative-hypnotic drugs, and an 8-item questionnaire on adverse reactions to BZRAs to explore the current state and influencing factors of BZRAs. The collected questionnaires were analyzed using SPSS version 24.0

Results A total of 190 questionnaires were collected, including 156 from tertiary hospitals and 164 from psychiatric specialty hospitals. The three most commonly prescribed BZRAs are alprazolam, lorazepam, and zopiclone; the three most commonly diagnosed disorders are anxiety disorders, insomnia, and addictive diseases. The three most common adverse reactions are drowsiness, dizziness, and fatigue. In prescription practices, the behavior of prescribing based on the previous prescription or at the request of the patient exceeds the prescription behavior for therapeutic purposes. In actual use, more than 60% of respondents believe they have deficiencies in relation to guidelines, laws and regulations, and the use of BZRAs in special populations. Approximately 60% to 90% of the respondents believe that the most common situations of exceeding the treatment course and dosage occur in the aforementioned three types of disorders. 56% of the respondents consider the standard for exceeding the treatment course to be consistent with the guidelines, and 84% would allow the use of BZRAs for more than one month in clinical practice. 84% of the respondents believe that the use of BZRAs beyond the recommended course or dosage is common, and 92% consider it harmful to patients. 81% of the respondents believe they have the ability to identify addiction to BZRAs, but 48% believe they lack the skills to manage such addictions. 62% of the respondents believe that psychiatrists have incomplete knowledge of the use of BZRAs, and 87% of the respondents believe it is necessary to receive training related to the use of BZRAs

Conclusion This survey objectively reflects the current state of BZRAs from the perspective of psychiatrists in China. The majority of physicians believe that the current usage is not rational enough, and there is a significant need to improve the situation of over-dosing

and over-treatment duration. It is imperative for psychiatrists to receive training related to rational drug use

关键词: BZRAs, survey, inappropriate use

PAI-1 水平增高与酒精使用障碍患者高凝状态的相关性研究

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目的 临床中发现酒精使用障碍患者更容易出现血栓相关性事件, 从而导致酒精使用障碍患者缺血性中风的发病率增加。纤溶酶原激活物抑制剂-1 (PAI-1) 水平升高可导致纤溶活性降低, 从而增加血栓的形成, 是血栓性疾病的独立危险因素。分析 D-二聚体 (检测凝血和纤溶系统激活的标志物) 的水平, 以评估酒精使用障碍患者是否有高凝状态的证据。为了确定 PAI-1 与 D-二聚体是否具有相关性, 以发现酒精使用障碍患者多发血栓事件的证据, 对以上指标进行评估。

方法 选取 2021 年 6 月-2023 年 6 月住院的 15 例酒精使用障碍患者, 20 例不饮酒的健康对照组, 用 ELISA 检测血浆 PAI-1 及 D-二聚体的表达量水平。

结果 ①与对照组对比, 酒精使用障碍组 PAI-1、D-二聚体含量显著高于正常对照, P 值均小于 0.05。②对两组 PAI-1 与 D-二聚体水平进行相关性分析, 显著性水平 P 值小于 0.05, 显示两者具有显著相关性。

结论 1.酒精可能与 PAI-1、D-二聚体显著升高有关, 酒精使用障碍患者多发血栓相关性时间可能与长期大量饮酒相关。2.PAI-1 水平与 D-二聚体水平之间存在显著的正相关关系, 这表明两者在生理和病理过程中可能具有相似的变化趋势。3.这种相关性可能揭示了 PAI-1 和 D-二聚体在凝血和纤溶系统中的作用是相互关联的, 共同参与了血栓形成和溶解的过程。

关键词: 酒精使用障碍; 纤溶酶原激活物抑制剂-1; D-二聚体

Characteristics of Online Mental Health Care Services From Haoxingqing Platform: Cross-sectional Survey Study

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Objective This study aims to describe the demographic characteristics of registered-professionals and medical service data on the Haoxingqing platform, and explore the impact of registered-professionals on the medical service data

Methods We analyzed the 11333 professionals in Haoxingqing platform over the past 5 years

Results Our statistical results focus on the relationship between the volume of patients/volume of prescriptions/total volume of patient consultations/consultation volume of three different consultation methods and the gender/professional titles of registered professionals, and the results showed that gender and title had significance differences on the above results; meanwhile, the gender of the registered professional also affects the consultation method ($P=0.025; P<0.012; P<0.015$), the professional titles also had a significant impact on the above four factors ($p<0.01$)

Conclusion This study aims to infer the distribution and preference of patients through the correlation analysis of online professional-side data, so as to provide a basis for balanced medical resources

关键词: eHealth; internet hospital; China; online mental health care services; digital health; app; online consultation

团体心理治疗对酒依赖患者复饮率及生活质量的影响分析

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目的 评价团体心理治疗对酒依赖患者复饮率

及生活质量的影响

方法 研究设定起止时间为2021年10月~2023年2月,从我院收治的酒精依赖患者中抽选出72例以随机双盲法分组,对照组常规药物治疗,观察组接受团体心理治疗,每组36例,比较各组患者的复饮率、生活质量、心理状态以及自我效能

结果 相较于对照组,观察组患者治疗后的复饮率显著偏低,其各方面生活质量评分显著升高,差异有统计意义($P<0.05$);治疗前两组心态和自我效能感评分差异无意义,治疗后观察组患者的焦虑和抑郁评分显著低于对照组,其自我效能评分显著高于对照组,组间差异有意义($P<0.05$)

结论 采取团体心理治疗能从患者心理上改变对饮酒的看法并保持乐观、积极的态度面对,深刻让患者意识到酒瘾的危害,帮助患者分析酒瘾原因,提供有效的戒酒方法,促使患者解除心理依赖,循序渐进的减轻戒酒症状,促使其从内心克服戒酒痛苦,逐渐恢复正常生活,走出酒瘾心理障碍,本研究显示,观察组患者的复饮率和不良情绪评分比对照组低,其生活质量和自我效能评分均高于对照组,差异证实了团体心理治疗对成功戒酒和改善患者生活水平的重要性。团体心理治疗既能够帮助酒依赖患者成功戒酒,还能引导其乐观、积极生活,值得临床借鉴。

关键词: 团体心理治疗;酒依赖;复饮率;生活质量

线索暴露疗法联合重复经颅磁刺激治疗对酒精依赖患者心理状态及复饮率的影响

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目的 探讨线索暴露疗法联合重复经颅磁刺激治疗对酒精依赖患者心理状态及复饮率的影响

方法 80例酒精依赖患者随机分组各40例,对照组用线索暴露疗法,观察组用线索暴露联合重复经颅磁刺激疗法,比较施治前后HAMD评分、施治前后MAST评分、施治后复饮率。对照组行线索暴露疗法:收集患者与酒精相关的线索信息,例如,什么情境、什么感受、什么想法会诱发患者想要饮酒,通过深入了解这些线索,患者能够更好地了解

与其酒精依赖有关的心理和情绪因素。进入线索暴露阶段,引导患者逐渐面对与酒精相关的线索,在治疗师的监督 and 指导下,练习不去饮酒并应对触发的欲望和情绪。在逐渐增加线索的复杂度和难度后,患者能够建立更好的应对机制和控制能力,从而减少饮酒的冲动。

结果 未施治阶段各项评分没有差异,施治后2、4、6、8周观察组HAMD、MAST评分都更低($P<0.05$),同时施治后4、12、24周复饮率,观察组更低($P<0.05$)。

结论 线索暴露法是一种常用于治疗酒精依赖的认知行为疗法方法,通过线索暴露法的实践,患者可以逐渐减少对饮酒相关线索的情绪和生理反应,提高自我控制能力,以更好地抵制饮酒的诱惑和维持戒酒状态。同时,线索暴露法也促进了对饮酒观念和行为的认知重建,帮助患者建立更健康的生活方式和思维模式,重复经颅磁刺激(rTMS)疗法可以通过调节和改变大脑神经回路、增强前额叶皮层活动、调整脑化学物质水平等多种机制来治疗酒精依赖,两者联合应用可协同提高患者的自控能力,对降低其酒精依赖度有积极意义。

关键词: 线索暴露联合重复经颅磁刺激疗法;酒精依赖;心理状态;复饮率

时间洞察力对问题性游戏使用的预测作用：一项长期追踪随访研究

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目的 过度游戏行为会对心理健康、身体和社会功能造成负面影响。时间洞察力的不同维度(过去积极、过去负性、现在命运、现在享乐和未来)在游戏成瘾行为的出现、维持和康复方面发挥着重要作用。但目前研究多以横断面为主,难以推论因果关系,无法明确时间洞察力对发展成为游戏障碍的预测作用。同时,不同类型结构的时间洞察力人群出现出现游戏障碍的风险可能存在差异,是否也存在特异性的干预方式,但目前尚没有研究对此进行探讨。如果知道时间洞察力的不同维度是如何与游戏症状、游戏障碍的其他风险因素相互作用,我们就能够设计出更好的针对性的干预策略,进而期待

有更好的结果。

方法 纳入了 4356 名大一学生, 完成津巴多时间洞察力问卷(ZTPI)、抑郁量表 (PHQ-9)、焦虑量表 (GAD-7)、自尊量表 (RSES) 和网络游戏障碍筛查量表 (GDSS), 并在半年后进行随访, 再次填写相应量表, 共 3159 名被试完成随访。针对有随访数据的被试, 使用 ZTPI 的 5 个分量表 (过去积极、过去消极、现在冲动、现在命运和未来) 得分为聚类指标, 进行聚类分组, 并将聚类组别进行临床资料的对比分析和网络模型对比分析, 并追踪其半年后的问题性游戏行为的转归情况。

结果 经过聚类分析, 发现了时间洞察力三种类型, 未来取向人群 (n=1189)、负性取向人群 (n=1601) 和退缩取向人群 (n=355)。半年后随访, 以 GDSS 的得分前 20% 为界, 划分为问题性游戏使用和非问题性游戏使用, 发现三个类别中, 负性取向和退缩取向人群出现问题性游戏使用的比例显著高于未来取向人群, 两组人群的相对风险比率值是未来取向人群的 1.99 倍和 2.36 倍。在干预策略上, 负向取向人群和退缩取向的干预侧重点也存在差异。

结论 我们的结果表明不同的时间洞察力的类型发展出问题性游戏的风险不同, 负性取向和退缩取向类型更加不具有适应性, 在资源有限的情况下, 可以此两类型人群优先干预。

关键词: 时间洞察力 游戏成瘾 聚类分析 网络分析 长期追踪

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Correlation of Perceived Stress with Clinical Features in Individuals with First-episode Schizophrenia

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Objective Schizophrenia is a debilitating disorder and is among the top ten global causes of disability. Most patients experience recurrent or persistent symptoms in a chronic course of the disease, placing a substantial burden on the patients, families, and society. Early and effective treatment in first-episode schizophrenia (FES) is important for better outcomes. Accumulating evidence suggests that stress is associated with the pathophysiological mechanisms of schizophrenia. Stress functions as a catalyst that sets in motion a systemic change to cope with or avoid future stress. Retrospective studies supported that life events may sometimes "trigger" episodes of schizophrenia, the sensitivity to stress or perceived stress may be more predictive of symptom severity and treatment outcomes than self-reported exposure to life events in patients with schizophrenia. Our study aimed to explore the features of perceived stress in people with FES and to compare its differences in FES and healthy controls, and to explore the relationships between perceived stress and clinical features in FES, which may contribute to further longitudinal studies focus on stress interventions and specific clinical outcomes in schizophrenia patients with early onset

Methods Ninety patients with FES (mean age: 28.26 years old, female: 49%) and 111 healthy controls (mean age: 28.88 years old, female: 51%) were included in the study. Patients were enrolled during their first hospitalization at Beijing HuiLongGuan Hospital. Schizophrenia diagnosis was established by two independent and experienced psychiatrists using the International Classification of Diseases-10 (ICD-10) criteria or the Structured Clinical Interview for DSM-IV-TR Axis-I Disorders (SCID). Healthy controls were recruited

through advertisements. Perceived Stress Scale-14 (PSS-14) was used to assess the subjective perceived stress in FES group and healthy controls. In individuals with FES, the Positive and Negative Syndrome Scale (PANSS) was administered to assess psychopathological symptoms, and the severity of depressive symptoms was assessed by the Calgary Depression Scale for Schizophrenia (CDSS). We used Student *t* or χ^2 tests for group comparison of continuous and categorical variables, respectively. Stress-related findings are often sex-specific, thus we compared sex-specific differences in PSS score in individuals with FES and healthy controls. Pearson's or Spearman's correlation analysis was used to explore the correlation between demographic information and PSS in each group. Partial correlation analysis was used to explore relationships between PSS and clinical characteristics by adjusting for age, sex, and education years. All tests were two-tailed, with significance set at $p < 0.050$

Results Individuals with FES and healthy controls were age- and sex-matched ($p = 0.477$ and $p = 0.728$, respectively), while patients had fewer years of education than controls (13.52 ± 3.34 vs. 14.39 ± 2.61 , $t = -2.01$, $p = 0.046$). The PSS score was higher in the FES group than in controls (26.79 ± 8.81 vs. 19.42 ± 7.14 , $t = 6.34$, $p < 0.001$). There was no sex difference in PSS scores in either the patient ($t = 0.46$, $p = 0.645$) or the control group ($t = -0.53$, $p = 0.599$). The PSS score was negatively associated with age in healthy controls ($r = -0.22$, $p = 0.023$), while the relationship was not significant in the FES group ($r = -0.08$, $p = 0.464$). The PSS score was not related to years of education in either the FES or control group ($r = -0.12$, $p = 0.281$; $r = -0.06$, $p = 0.520$, respectively). In the FES group, the PSS score was negatively associated with the chlorpromazine equivalent dose ($r = -0.25$, $p = 0.018$) but not with the age at onset ($r = -0.05$, $p = 0.620$) or duration of illness ($r = -0.09$, $p = 0.431$). In individuals with FES, the PSS score was positively correlated with the general psychopathology scale score of PANSS ($r = 0.22$, $p = 0.043$). As most items of the general psychopathology scale are components of the depressive domain defined by the five-factor model of the PANSS, we explored the relationship between stress and depressive symptoms,

which were assessed using the CDSS. Partial correlation analysis with age, sex, and education as covariates indicated that the CDSS score was positively correlated with the PSS score ($r = 0.28$, $p = 0.012$), suggesting that perceived stress is accompanied by more severe depressive symptoms in patients with FES

Conclusion Individuals with FES may have elevated perceived stress than that in healthy controls. Reports of sex differences in stress sensitivity among those with psychiatric disorders or in the general population have been inconsistent, the current study showed that perceived stress was comparable between males and females in both FES and healthy control groups at a mean age of 28 years. In the general population, aging may be associated with a better capacity to cope with psychological stress and lower perceived stress, while this age-related effect may not hold in patients with schizophrenia. Perceived stress is a feeling of unpredictability, uncontrollability, and being overwhelmed by one's life, which may be related to direct emotional experiences. The present research suggest perceived stress may be more related to the severity of depressive symptoms in the FES group. Longitudinal studies are needed to explore the relationships between interventions for stress and clinical outcomes, which may contribute to the development of new treatment strategies to improve the prognosis of FES

关键词: First-episode schizophrenia, perceived stress, depressive symptoms

2 型糖尿病共病抑郁障碍认知功能损害与 MS4A4A、STREM2 和 P-tau181 的相关研究

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目的 研究 2 型糖尿病共病抑郁障碍患者的临床特征及认知功能与 MS4A4A、sTREM2 和 P-tau181 的相关关系, 探索 2 型糖尿病共病抑郁障碍认知功能的相关病理机制

方法 MDD 组 37 例, T2DM 组 37 例, 2 型糖

尿病共病抑郁障碍组(TD)36例, 招募健康对照组(HC)37例。采用RBANS评估认知功能, 采用HAMD-17和HAMA评估抑郁和焦虑情绪, 采用ELISA法检测外周血MS4A4A、sTREM2和P-tau181水平, RT-qPCR检测PBMC中MS4A4A mRNA水平。

结果 TD组空腹血糖、糖化血红蛋白、果糖胺显著高于MDD组和HC组, T2DM组空腹血糖、糖化血红蛋白显著高于MDD组和HC组, 胰岛素抵抗指数显著高于HC组和MDD组。TD组RBANS总转换、即刻转换低于HC组, 注意力转换、视空间转换低于T2DM和HC组, MDD组注意力转换低于T2DM。TD组MS4A4A mRNA表达高于HC组和T2DM组, sTREM2、P-tau181表达高于HC组和MDD组。TD组RBANS总转化与空腹C肽、糖化血红蛋白呈负相关。延迟转化与空腹C肽、糖化血红蛋白呈负相关。注意力转化与年龄、空腹C肽、MS4A4A呈负相关, 与HAMA评分呈正相关。语言转化与腰臀比、P-tau181呈负相关, 与MS4A4A、MS4A4A mRNA呈正相关。视空间转化与腰臀比、空腹血糖、空腹胰岛素、糖化血红蛋白与呈正相关, 与HAMA、MS4A4A呈负相关。

结论 2型糖尿病共病抑郁患者空腹血糖、糖化血红蛋白水平升高, 胰岛素抵抗指数升高和胰岛β细胞分泌指数降低。2型糖尿病共病抑郁障碍患者的RBANS总转化水平下降, RBANS总转化水平与焦虑程度呈负相关。2型糖尿病共病抑郁障碍患者血清MS4A4A mRNA、sTREM2、P-tau181水平升高, MS4A4A mRNA、sTREM2、P-tau181的水平升高与认知功能的下降有正相关关系。

关键词: 2型糖尿病共病抑郁障碍; 认知功能损害; MS4A4A; MS4A4A mRNA; sTREM2; P-tau181

Study on The Relationship between Vascular Growth Factor Expression and Cognitive Impairment in Comorbid Major Depressive Disorder of Type 2 Diabetes

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Objective To study the relationship between the

serum levels VEGF, bFGF, ANG1 and ANG2 and cognitive function impairment in patients of comorbid MDD of T2DM

Methods A total of 169 participants were included 32 patients in the healthy control (HC) group, 46 patients in the MDD group, 49 patients in the T2DM group, and 42 patients in comorbid major depressive disorder of type 2 diabetes (TD) group

HAMD-17, HAMA, and RBANS were to assess anxiety, depression and cognitive function. Serum expression levels of VEGF, bFGF, ANG1 and ANG2 were measured by ELISA.

Results The total RBANS scores, delayed memory scores, attention scores, language scores and the immediate memory scores were extremely lower in TD group than in HC and T2DM groups, serum VEGF levels were higher in TD group than in HC group

Serum bFGF, ANG1, ANG2 levels in TD group were higher than those in HC group and MDD group. AUC of serum VEGF for the diagnosis of TD was 0.66, with cut-off point of 159.74 pg/ml. The AUC of serum bFGF for the diagnosis of TD was 0.718, with cut-off point of 209.23 pg/ml. The AUC of serum ANG1 for the diagnosis of TD was 0.793, with cut-off point of 303.43 pg/ml.

Conclusion the serum levels bFGF, ANG1 and ANG2 are higher in patients of comorbid MDD of T2DM. There is relationship between VEGF, bFGF, ANG1 and ANG2 and cognitive function impairment in patients of comorbid MDD of T2DM

关键词: VEGF, bFGF, ANG1, ANG2, T2DM, MDD

早发型双相障碍认知功能损害的研究进展

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目的 早发型双相障碍发作频繁、情绪不稳定、对药物反应差, 常伴有精神病性症状或/和混合特征等, 具有较频繁的自杀企图和自杀行为, 相较于成年发病的双相障碍具有更多的快速循环倾向和认知损害。儿童和青少年双相障碍的诊断误诊率高, 具

有较大的挑战性,如治疗延误或治疗效果不佳,导致疾病反复波动及预后不良。本文就早发型双相障碍患者认知功能改变及其相关影响因素的研究进展做一综述。

方法 通过查阅和筛选国内外文献,综述早发型双相障碍患者认知功能改变及其相关影响因素。

结果 早发型双相障碍起病于儿童和青春期,这一时期是大脑发育的关键时期,也是个人学习和成长的关键期,大脑结构和功能的变化贯穿整个阶段,尤其涉及认知功能的相关区域,因而认知功能损害是早发型双相障碍患者常见的临床表现。患者病程越长、住院次数越多,与之相对应的工作记忆、注意转移能力和执行能力更差。早发型患者认知功能的影响因素涉及临床(疾病本身、药物使用)和生物学(神经影像、遗传学、神经生化、炎症反应)多方面。

结论 针对早发型双相障碍高危人群早期识别与诊断是目前难点,早期评估双相障碍认知功能、给予恰当的干预措施,可早期防止该疾病的进展、提高患者生活质量、恢复社会功能。

关键词: 早发型双相障碍 认知功能损害 研究进展

Association between The Systemic Immune-inflammatory Index and Female Sexual Dysfunction As Measured by Low Sexual Frequency in Depressive Patients: Results From NHANES 2005-2016

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Objective Sexual dysfunction, particularly in females, is a complex issue influenced by various factors, including depression and inflammation. The Systemic immune-inflammation index (SII), an inflammatory biomarker, has shown associations with different health conditions but its relationship with female sexual dys-

function (FSD) remains unclear. This study aimed to investigate the association between SII and FSD in the context of depression, utilizing low sexual frequency as an assessment indicator

Methods Data from NHANES 2005-2016, involving 1,042 depressed female participants, were analyzed. FSD, indicated by low sexual frequency, and SII, derived from complete blood count results, were assessed. Logistic regression and subgroup analyses were conducted, considering demographic and health-related factors

Results A total of 1,042 individuals were included in our analysis; 11.51% of participants were categorized as having FSD and decreased with the higher SII tertiles (tertile 1, 13.83%; tertile 2, 13.54%; tertile 3, 7.18%; p for trend <0.0001). A multivariate linear regression analysis showed a significant negative association between SII and FSD [0.9993 (0.9987, 0.9999)]. This negative association in a subgroup analysis is distinctly and significantly present in the Mexican-American subgroup [0.9959 (0.9923, 0.9996)], while it does not reach statistical significance in other racial categories. Furthermore, the association between SII and FSD was nonlinear; using a two-segment linear regression model, we found a U-shaped relationship between SII and FSD with an inflection point of 2100 (1,000 cells/ μ L)

Conclusion In summary, in depressed individuals, higher SII is independently associated with a decreased likelihood of FSD, emphasizing the potential role of inflammation in female sexual health

关键词: Female sexual dysfunction, Sexual frequency, Sexual health, Systemic immune-inflammatory index.

重性精神疾病妊娠期及哺乳期用药与管理

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目的 精神分裂症、双相障碍等是临床常见的重性精神障碍,这些疾病大多需要长期治疗。女性

患者妊娠期和哺乳期治疗一直面临重要抉择, 用药与否关联胎儿、婴儿和孕产妇近期与远期身心健康。该时期治疗涉及伦理和安全问题, 相关研究匮乏且多为小样本或个案报道。本文就近年来妊娠期与哺乳期治疗相关报道进行综述, 以期安全管理重性精神患者的妊娠期与哺乳期。

方法 通过查阅和筛选国内外文献, 综述近年重性精神疾病在妊娠期及哺乳期用药相关的研究、临床试验、指南和专家意见, 分析和综合了关于各种药物的安全性和有效性, 以及对母亲和发育中的胎儿或婴儿潜在风险和益处的相关数据。

结果 遵循妊娠原则和治疗安全性原则至关重要。孕早期, 胎儿发育的关键时期, 应尽量避免药物治疗。孕中期, 如果病情需要, 可以在征得患者和家属同意情况下, 根据循证医学报道谨慎使用药物。孕晚期, 需要考虑新生儿撤药反应, 根据孕妇病情酌情减少药物剂量。此外, 整个孕期尽可能使血药浓度维持在相对稳定的水平, 避免较大血药浓度波动对胎儿生长发育的影响。需要特别注意的是妊娠期药物治疗中, 某些药物相对不安全, 例如抗精神病药物中氯氮平可能导致婴儿软弱症, 抗抑郁药物中帕罗西汀和氟西汀风险性较大, 可能导致胎儿心脏中膈缺陷, 应慎用。此外, 心境稳定剂中丙戊酸钠和卡马西平使用需慎重, 因为可能导致神经发育异常。苯二氮卓类药物最好在整個孕期都避免使用。对于长效抗精神病药物注射液, 尽管在临床使用中尚未有较大危害报告, 仍需更多临床实践以确认其安全性。在确定最适合的治疗方案时, 应考虑母亲疾病的严重程度、未治疗精神疾病的潜在风险以及个体患者特征等因素。

结论 基于当前证据, 需要仔细权衡重性精神疾病在妊娠期及哺乳期用药的潜在风险和益处。应与患者共同制定个性化的治疗计划, 考虑到每种情况的特定需求和情况。还需要进一步的研究来更好地了解在妊娠期和哺乳期使用药物对母婴结果的长期影响。

关键词: 重性精神疾病; 妊娠期; 哺乳期; 精神药物

青少年中学生昼夜节律改变与心理健康水平的关系及其影响因素

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目的 探讨青少年中学生昼夜节律紊乱与焦虑抑郁情绪的关系, 并了解青少年中学生昼夜节律紊乱的危险因素。

方法 采用整群抽样法, 选取某中学初中及高中部 10 个班进行调查, 共获得有效样本 381 名。分别采用清晨型与夜晚型问卷 (Morning and Evening Questionnaire 5, MEQ-5)、汉密顿抑郁量表 (Hamilton Depression Rating-Scale-24-item version, HAMD)、汉密顿焦虑量表 (Hamilton Anxiety Scale, HAMA)、社会功能缺陷筛选量表 (Social Disability Screening Schedule, SDSS)、国际体育活动问卷简版 (Te International Physical Activity Questionnaire Short Version, IPAQ-SF) 及匹兹堡睡眠质量指数 (Pittsburgh Sleep Quality Index, PSQI) 进行心理健康评估; 利用 MEQ-5 问卷将中学生分为晚间型 (≤ 11 分, $n=140$)、中间型 (12-17 分, $n=166$) 及晨间型 (≥ 18 分, $n=75$)。本研究采用 SPSS 25.0 软件进行数据分析, 方法包括 χ^2 检验、Kruskal-Wallis 检验、Spearman 秩相关分析及多元 logistic 逐步回归分析。

结果 (1) 昼夜节律类型分布情况: 中学生晚间型节律占 36.7%, 中间型节律占 43.6%, 晨间型节律占 19.7%。(2) 三组心理健康水平比较: 三组比较发现晚间型在抑郁情绪的比率 (32.1%) 较高 ($\chi^2=13.35$, $P=0.001$); 晚间型的焦虑情绪比率 (38.6%) 高于其他两型 ($\chi^2=11.70$, $P=0.003$); 晚间型睡眠质量差的比率 (61.4%) 高于其他两型 ($\chi^2=21.36$, $P<0.001$); 社会功能缺陷的比率 (57.9%) 较高 ($\chi^2=10.69$, $P=0.005$); 晚间型呈现出较低的运动水平比率 (44.3%) ($\chi^2=19.73$, $P=0.001$)。(3) 晚间型影响因素相关性分析: Spearman 秩相关分析发现晚间型 MEQ-5 总分与 PSQI 总分呈负相关 ($r=-0.19$, $P=0.027$)。(4) 多元 logistic 回归分析发现, 母亲性格、个性特征及运动水平是晚间型昼夜节律的相关因素。

结论 晚间型昼夜节律类型可能与中学生的焦虑抑郁情绪及睡眠质量降低有关, 并可导致其学习、社交等社会功能受损, 另外, 运动水平低可能是晚间型发生的危险因素。

投稿任务

关键词: 昼夜节律类型; 焦虑; 抑郁; 睡眠质量; 运动; 青少年

精神专科医院个性化手卫生设施改造对患者手卫生依从性及医院感染的影响的对照研究

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目的 通过设计并增设个性化手卫生设施, 增加精神专科医院手卫生设施可及性, 提高精神科患者手卫生依从性, 降低医院感染发生风险。

方法 选取北京市某三级甲等精神专科医院 12 个病区, 设计个性化手卫生设备并按照可及性原则增设于病区相应位点。采用手卫生依从性直接观察法, 以手卫生设施安装日 (2024 年 2 月 1 日) 为节点, 分别对设备增设前 (2023.10-2024.01) 及设备增设后 (2024.02-2024.05) 期间住院患者手卫生依从性及医院感染情况进行调查, 评价增设手卫生设施前后患者手卫生依从性及医院感染情况。

结果 手卫生设备增设前共调查患者手卫生时机 3383 次, 手卫生依从率为 51.85%, 正确率为 34.49%; 设备增设后共调查患者手卫生时机 3392 次, 手卫生依从率为 59.96%, 正确率为 46.26%; 设备增设后患者手卫生依从率和正确率高于设备增设前 ($P < 0.05$)。手卫生设备增设前各病区患者手卫生依从率在 15.09%-84.77% 之间, 正确率在 2.42%-57.66% 之间, 设备增设后各病区患者手卫生依从率在 42.41%-91.50% 之间, 正确率在 18.10%-59.02% 之间; 不同病区患者手卫生依从率和正确率存在统计学差异 ($P < 0.05$); 手卫生设备增设前各时机患者手卫生依从率在 38.06%-94.20% 之间, 正确率在 25.00%-43.75% 之间, 设备增设后各时机患者手卫生依从率在 32.43%-89.67% 之间, 正确率在 33.33%-52.29% 之间; 设备增设后进食前后、大小便前、离开病房前后、接触公共用品前后、接触其他患者或物品前后患者手卫生依从率均较增设前高 ($P < 0.05$); 不同性别患者手卫生依从率存在统计学差异 ($P < 0.05$), 女性患者依从率高于男性, 设备增设后男女患者手卫生依从率和正确率均高于设备增设前 ($P < 0.05$)。设备增设前共出院患者 3737 例次, 医院感染率 4.09%; 设备增设后共出院患者 4559 例次, 医院感染率 2.46%, 设备增设后住院患者医院感染率低于设备增设前 ($P < 0.05$); 其中下呼吸道感染设备增设后医院

感染率低于设备增设前 ($P < 0.05$)。

结论 精神专科医院手卫生设施可及性低, 患者手卫生依从率和正确率差。通过增设个性化手卫生设施, 可提高患者手卫生依从率和正确率, 有效降低患者医院感染风险。

关键词: 精神专科医院; 手卫生依从性; 手卫生设施; 医院感染

精神专科医院手卫生设施及患者手卫生依从性现状分析

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目的 落实国家手卫生规范及 WHO 手卫生设施可及性要求, 了解精神专科医院病区手卫生设施可及性及患者手卫生依从性现状, 为推进精神科医院落实手卫生措施提供依据, 保证患者医疗安全, 促进医疗质量提升。

方法 通过问卷调查和现场查看相结合的方式, 对某三级甲等精神专科医院 12 个病区手卫生设施配置及完善情况进行调查; 运用手卫生依从性直接观察法, 通过自行设计患者手卫生依从性观察表, 设立、培训手卫生观察员, 对 2023 年 9 月-2024 年 1 月期间住院患者手卫生依从性进行调查, 评价患者手卫生依从性现状。

结果 共调查住院病区内病室、治疗室、护士站、医生办公室、餐厅等诊疗区域 201 个, 洗手池的总设置率为 36.82%; 其中治疗室、护士站、医生办公室的洗手设施配置完备率为 91.35%, 速干手消毒剂的配置率 100%; 病室相关洗手池欠完备, 未设置洗手液和干手设施; 病室内和病区走廊未配置速干手消毒剂; 75.00% 的病区工作人员认为病区手卫生设施配置不充足, 认为精神科患者利用手卫生设施进行自伤等安全隐患是影响手卫生设备配置的主要原因。共调查患者手卫生时机 3383 个, 总体依从率为 51.85%, 正确率为 34.04%; 不同性别患者手卫生依从性及正确性无统计学差异 ($P > 0.05$), 其中男性患者依从率为 46.83%, 正确率为 30.82%, 女性患者依从率为 50.54%, 正确率为 31.79%; 不同时机手卫生依从性不同 ($P < 0.05$), 排名前三位分别为进食前 (94.20%)、大小便后 (74.35%)、接触伤口、管

路后(57.14%);后三位分别为接触其他患者或他人物品前(16.08%)、接触公共用品前(15.42%)、接触其他患者或他人物品后(15.09%);导致手卫生不正确性的原因主要为揉搓步骤不完整(65.27%),其次为揉搓时间不够(58.75%)。

结论 精神专科医院病区手卫生设施配置率及完备率较低,可及性不足,精神科患者手卫生依从性和正确性较低,仅在医务人员要求和指导下执行。现有手卫生设施对精神科患者造成的自伤、自杀等安全隐患是影响手卫生设备配置的主要原因,亟需配置适用于精神专科患者的手卫生设施,加强患者手卫生知识宣教,促进手卫生工作落实,降低医院感染风险。

关键词:精神专科医院;医院感染管理;手卫生依从性;手卫生设施

产后抑郁症患者血清神经递质和甲状腺激素水平与抑郁状况的相关性分析

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目的 分析产后抑郁症患者血清神经递质、甲状腺激素水平与抑郁状况的相关性。

方法 选取2021年2月—2022年3月丽水市第二人民医院收治的产后抑郁症患者75例为研究组,另选取同期55例健康产妇作为对照组。采用爱丁堡产后抑郁量表(EPDS)、汉密顿抑郁量表(HAMD)评价产妇抑郁状况,检测两组产妇神经递质[5-羟色胺(5-HT)、多巴胺(DA)、去甲肾上腺素(NE)、孤啡肽(OFQ)]水平,甲状腺激素[三碘甲状腺原氨酸(T3)、甲状腺素(T4)、促甲状腺激素(TSH)]水平。采用Pearson相关性分析法分析产后抑郁症患者血清神经递质、甲状腺激素水平与抑郁状况的相关性,采用多因素logistic回归分析模型分析产后抑郁症患者的危险因素。

结果 研究组5-HT、DA、NE、T3、T4、TSH水平分别(0.99±0.22) μmol/L、(2.17±0.43) μmol/L、(28.49±5.14) ng/ml、(2.15±0.32) nmol/L、(124.67±11.03) nmol/L、(1.49±0.24) nmol/L,显著低于对照组的(2.48±0.53)

μmol/L、(3.54±0.87) μmol/L、(44.86±10.59) ng/ml、(2.77±0.41) nmol/L、(133.54±12.87) nmol/L、(2.26±0.39) nmol/L,差异均有统计学意义(均P<0.05)。研究组OFQ水平为(25.16±5.34) ng/L,明显高于对照组的(10.86±2.79) ng/L,差异有统计学意义(P<0.05)。

结论 产后抑郁症患者的血清神经递质、甲状腺激素水平与其抑郁状况密切相关,孕期合并症、母乳喂养不顺利、家庭不和睦、5-HT水平是产后抑郁症的独立危险因素,临床应加强产妇的早期神经递质、甲状腺激素水平检测,加强母乳喂养、孕期并发症等相关临床干预,以降低产后抑郁症发生。

关键词:甲状腺激素;产后抑郁症;

大脑白质网络异常在精神分裂症患者及其未发病的遗传高危亲属中的比较研究

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目的 精神分裂症是一种会造成沉重疾病负担的重性精神疾病。研究显示脑白质网络异常可能是其一项重要生物学基础,并具有遗传倾向。对患者及未发病直系亲属的白质网络属性比较有助于我们了解其发病机制。本研究比较精神分裂症患者、未发病的遗传高危人群及健康对照组间的白质网络局部效率均值差异。

方法 对三组被试对被试行T1加权扫描和DTI扫描,用PANDA软件和图论分析法计算Eloc,比较三组被试间的异同,应用PANDA软件构建白质网络,并测量他们的简明精神症状量表得分,用GRETNA软件计算局部效率均值,用SPSS分析三组被试间的差异、局部效率均值异常与精神病性症状的关系。

结果 (1)三组被试间的网络局部效率均值存在显著差异(p=0.006),事后比较表明患者显著低于健康对照和遗传高危人群;(2)网络局部效率与简明精神症状量表总分呈负相关(r=-0.39, p=0.014, FDR校正后),与缺乏活力因子分(r=-0.49, p=0.002, FDR校正后)、敌意因子分(r=-

0.33, $p=0.041$, FDR 校正后)、思维障碍因子分 ($r=-0.32$, $p=0.038$, FDR 校正后) 呈负相关。

结论 白质网络局部效率均值下降可能是精神分裂症的一项神经生理学异常, 与精神症状总体严重程度及缺乏活力、敌意、思维障碍等多个症状有关。

关键词: 精神分裂症; 遗传高危患者亲属; 白质网络

心因性非痫性发作患者人格特质与临床特征的分析

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目的 研究心因性非痫发作患者的人格特点及临床特征

方法 本前瞻性研究纳入 2021 年 1 月-2023 年 12 月就诊中国北京宣武医院神经内科年龄 14-34 周岁的 PNES 患者 41 例。收集患者人口学信息, 临床病例记录, 使用明尼苏达多项人格测验 (MMPI) 评估患者人格特点。研究 PNES 患者的人口学资料, 临床特征及人格特点。

结果 本研究 PNES 组 MMPI 中的 Hs 疑病 [(66.35±1.82) 分比 (61.18±1.78) 分]、Hy 癔病 [(65.62±1.36) 分比 (50.79±1.49) 分]、N 神经质 [(69.15±1.70) 分比 (61.00±1.75) 分] 分数高于癫痫患者 ($t=2.040$ 、 3.371 、 3.348 ; $P<0.05$)。人口学信息 PNES 患者女性占 58.5%, 男性 41.5%, 多子女家庭占 61%, 独生子女家庭占 39%, 居住在农村占 51.2%, 居住在城市占 48.8%。PNES 症状影响学习、工作者占 63.4%, 能坚持学习、工作者占 36.6%。PNES 发作频率以重度每天发作为主, 发病时间为几分钟到几小时差异较大。共病癫痫 9 例, 共病焦虑 8 例, 共病失眠 7 例, 共病抑郁 6 例, 其中接受抗癫痫药物及其它治疗 30 例。将所有 PNES 发作症状分为 5 类, 包括运动症状 41.3%, 感觉症状 21.7%, 无反应 17.4%, 异常行为 10.9%, 内脏症状 8.7%。将发作因素分为易感因素 9 件, 其中疾病遗传素质 6 件, 诱发因素 40 件, 其中学习及工作困境 22 件, 维持因素各种慢性压力 12 件。

结论 我们的研究表明 PNES 具有特殊的人口

学特征, 人格具有高疑病、癔病、神经质的特点。运动性 PNES 是最常见的发作类型, 症状持续时间和频率差异较大。癫痫被认为是 PNES 最常见的共病, 患者接受药物治疗比例较高。

关键词: 心因性非痫性发作; 人格特征; 神经质

从高唤醒角度探索失眠简明行为治疗对失眠患者的疗效

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目的 与正常人相比, 失眠患者会表现出一系列的高唤醒特征。失眠简明行为疗法 (BBTI) 关注行为要素, 干预时间较短, 对失眠患者的疗效可靠。然而, 目前没有从高唤醒的角度探索 BBTI 对失眠的疗效研究。本研究目的是比较失眠患者与健康对照组在日间静息状态下的心理生理唤醒水平。并探讨失眠患者在 BBTI 治疗前后的心理生理唤醒水平的变化。

方法 通过标准化的入组访谈纳入失眠患者 (Insomnia Disorder 组, ID 组), 匹兹堡睡眠质量指数量表 (PSQI) 得分 ≤ 5 和失眠严重程度指数量表 (ISI) 得分 ≤ 7 招募为健康对照组 (Health Control 组, HC 组)。两组被试均需完成 PSQI、ISI、Epworth 嗜睡量表 (ESS)、睡眠信念与态度量表 (DBAS-16)、焦虑自评量表 (SAS)、抑郁自评量表 (SDS)、高唤醒量表 (HAS), 并记录日间静息态生理指标。生理唤醒水平包括皮肤电导水平 (SCL)、心率 (HR)、心率变异性 (HRV)。ID 组在记录基线睡眠日记后, 接受为期四周的 BBTI。在治疗结束时和治疗结束后两个月时, ID 组完成睡眠日记的记录和相关量表的填写。睡眠日记中获得的主要参数包括入睡潜伏期 (SOL)、夜间觉醒次数 (NOA)、夜间觉醒时长 (WASO)、总睡眠时长 (TST)、卧床时间 (TIB)、睡眠效率 (SE)。在治疗后两个月, ID 组需要再次记录日间静息态生理指标。

结果 1. 将 ID 组和 HC 组的数据进行比较发现 ID 组在 HAS 得分上高于 HC 组。ID 组在 HR、SCL 上显著高于 HC 组; 而在 HRV 频域指标 LFlog、HFlog=显著低于 HC 组。

2. 对 ID 组在 BBTI 治疗前、治疗后、治疗后两

个月的数据进行分析,在 ISI、PSQI 上变化显著;在 TST、SOL、SE 等睡眠日记临床指标上均有改善。BBTI 对 HAS 得分有显著影响;ID 组在生理唤醒水平后测上 HRV 时域指标 SDNN 治疗后显著上升;频域指标 HFlog 治疗后显著上升;SCL 显著下降,其他指标与前测差异不显著。

3.将 BBTI 前后临床指标动态变化和基线高唤醒水平进行相关分析,ΔSOL 和 HR、HRV 时域指标 RMSSD、频域指标 LF (n.u.)、HF (n.u.)、LF/HF ratio 显著相关。ΔPSQI、ΔSE 和 HAS 的反应得分显著相关。其他相关关系不显著。

结论 1.失眠患者与健康受试者相比存在异常的高唤醒特征。

2.BBTI 可以改善失眠患者的主观失眠严重程度和睡眠质量,并且可以减少睡眠潜伏期,提高睡眠效率。

3.BBTI 治疗后的失眠患者高唤醒水平降低,并且发现干预效果与其高唤醒水平相关。

关键词: 失眠,失眠简明行为治疗,高唤醒,心率变异性,皮肤电导水平

杏仁核牛磺酸水平与女性广泛性焦虑障碍之间的关联:7T 的质子磁共振波谱研究

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目的 通过质子磁共振波谱在 7T 处测量患者脑内牛磺酸 (MRS) 浓度,探索人脑中的牛磺酸浓度与广泛性焦虑障碍的发展之间存在关联。广泛性焦虑障碍 (GAD) 的特征是过度担心或非理性的恐惧或躯体不适感。一般来说,女性患焦虑症的可能性是男性的两倍或更多。牛磺酸 (MRS) 是一种氨基酸,在神经元生成、分化、树突化和突触连接形成中起着关键作用。有动物实验证明,牛磺酸对小鼠具有抗焦虑作用。然而,目前尚没有体内证据表明。

方法 招募患有 GAD 的未服药女性(18-40 岁) 60 名和健康对照参与者 60 名。参与者由有执照的临床心理学家通过 DSM-5 的结构化临床访谈进行评估和诊断。使用广泛性量表 (GAD-7) 测量焦虑水平。使用质子磁共振波谱在 7T 处测量 GAD 组和健康对照组 (HC 组) 的杏仁核、海马体、蓝斑和前额

叶皮层中的牛磺酸浓度。

结果 预期 GAD 组杏仁核、海马体、蓝斑和前额叶皮层中的海马牛磺酸浓度低于健康对照组。观察不同脑区内牛磺酸是否存在差异。GAD 组的广泛性焦虑量表评分显著高于 HC 组。GAD 组与健康对照组参与者的年龄或体重指数没有统计学上的显著差异。

结论 广泛性焦虑的女性患者的人脑牛磺酸浓度可能较低,且人脑中较低水平的牛磺酸浓度可能提供了 GAD 的新特征。

关键词: 7T MRI,杏仁核,磁共振波谱 (MRS),广泛性焦虑障碍 (GAD),牛磺酸

失眠简明行为疗法干预新冠后失眠的疗效研究

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目的 新型冠状病毒感染后失眠是新冠后症状中最常见的精神健康问题之一,严重影响了患者的健康状况和生活质量,加重社会经济负担。本研究针对此类人群,探索失眠简明行为疗法 (BBTI) 对新冠后失眠的疗效,验证其对失眠严重程度、睡眠质量、日间功能、焦虑抑郁情绪、疲劳程度等的改善效果及镇静催眠药物减量情况,为此类患者的治疗提供实施参考依据,并探究新冠病毒影响程度与失眠严重程度的关系。

方法 纳入 43 名新冠后失眠持续至少 3 个月的患者,随机分为 BBTI 组(22 例),睡眠卫生教育 (SHE)组(21 例)。BBTI 组接受 4 周失眠简明行为治疗,SHE 组接受 4 周睡眠卫生教育。所有患者在基线、四周干预后、三个月随访时均需完成一周睡眠日记的记录(SOL、NOA、WASO、TST、TIB、SE 及目前正在服用镇静催眠药物的种类和剂量。)及相关量表的评估(ISI、PSQI、ESS、SAS、SDS、FS-14、CIS)。将患者镇静催眠药物的使用剂量换算成口服近似等效地西洋的剂量,以统计药物使用剂量的变化。使用 SPSS 26.0 进行数据分析。

结果 1. 四周干预后:重复测量方差分析显示,两组在 TIB、SOL、WASO、SE、ISI、PSQI、药物使用剂量上均存在显著的时间×组别的交互效应。

post hoc 分析表明,与 SHE 组相比,BBTI 组 TIB、SOL 显著缩短,SE 显著升高,ISI 量表得分显著降低。此外,BBTI 组用药剂量显著小于基线水平,两组用药剂量组间差异不显著。

2. 三个月随访:重复测量方差分析显示,两组在 TIB、WASO、SE、ISI、PSQI 上均存在显著的时间×组别的交互效应。post hoc 分析表明,与 SHE 组相比,BBTI 组 TIB 显著缩短,SE 显著升高。此外,两组在药物使用剂量上存在显著的时间主效应。

3. 将新冠指标和基线量表得分、BBTI 组新冠指标和量表得分变化分别进行 Spearman 相关性分析。结果发现,年龄与 PSQI 呈显著正相关、与 ESS 呈显著负相关。新冠后失眠病程与 ESS、FS-14 总分呈显著正相关。新冠前睡眠情况与新冠急性期症状、PSQI、SDS 呈显著正相关。CIS 与 ISI、ISI 四周变化呈显著正相关。文化程度与 ISI 三个月变化呈显著负相关。

结论 1. 与 SHE 相比,BBTI 能够明显缩短新冠后失眠患者的无效躺床时间、入睡潜伏期,提高睡眠效率,降低失眠严重程度。三个月随访时,其缩短无效躺床时间、提高睡眠效率的优势仍然持续。

2. BBTI 能够减少新冠后失眠患者镇静催眠药物的使用,且长期疗效仍然保持。

3. 受新冠影响越大,患者感染后失眠越严重,BBTI 改善失眠的效果越显著。

关键词: 新冠后失眠,失眠简明行为疗法,慢性失眠,新冠后症状

草酸艾司西酞普兰治疗产后抑郁的效果研究进展

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目的 产后抑郁是女性围产期常见的精神障碍性疾病,不利于产妇身心健康,也直接影响了全家的生活质量。其典型症状主要表现为:易激惹,愤怒,焦虑,沮丧、哭泣及困倦,通常丧失看护婴儿的能力。产后抑郁作为围产期自杀的首要病因,及早识别和治疗会降低围产期抑郁女性自杀率。目前认为产后抑郁症的发生与患者的心理、性激素变化等具有相关性。5-羟色胺再摄取抑制剂(SSRI)

是近年临床上广泛应用的抗抑郁药,而草酸艾司西酞普兰是现代药物中选择性最强的 SSRI 类药物,其不良反应明显小于其它 SSRI 类药物,而且起效快,副作用小。而产妇涉及哺乳问题,药物基本的治疗原则是其疗效与安全性,所以,探讨艾司西酞普兰对产后抑郁的诊疗效果是很有必要的。

方法 采用检索中国知网和 PubMed 数据库 2018 年至 2024 年相关文献,检索词为“产后抑郁;焦虑;艾司西酞普兰;影响”和“Postpartum Depression; Anxiety; Escitalopram; The effect”。排除旧的、重复的观念,对检索的文献整理归纳,总共纳入 30 篇文献进行分析讨论。

结果 艾司西酞普兰通常与其他药物或疗法联合使用治疗产后抑郁,如与米氮平联合治疗,可有效改善患者睡眠质量和心理状态,促使患者泌乳量增加,确保产妇和婴儿健康。与中药制剂如乌灵胶囊联合治疗产后抑郁可有效提高患者的神经递质水平,降低雌激素水平,缓解临床症状。

结论 目前针对症状、程度不同的 PPD 患者,虽有不同治疗措施可供选择,但无论是药物、物理、心理治疗,还是中医药治疗,均缺少足够 RCT 证据。由于 PPD 病理机制复杂,寻找针对 PPD 潜在病理生理学新疗法,以加强现有疗效,提高患者生活质量十分必要。此外,中西医在治疗 PPD 方面各有特点,值得进一步研究。物理治疗、心理治疗单独或与其他措施联合治疗 PPD 是同样值得探索的方向。总之,针对不同的 PPD 患者,需要根据生物、社会、家庭和心理等因素综合考虑,以提供个体化的最佳治疗方案。

关键词: 产后抑郁;焦虑;艾司西酞普兰;影响

非限制性的 5:2 轻断食联合代餐干预对重性精神障碍合并超重或肥胖患者肠道菌群影响的研究

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目的 通过前瞻性、开放、非随机对照的临床干预试验,观察非限制性 5:2 轻断食联合代餐干预及未进行轻断食干预的合并超重或肥胖的重性精神障碍患者的体重、BMI、腰围、臀围、代谢指标、肠

道菌群及功能的变化。

方法 本研究依据纳排标准最终确定 63 名重性精神障碍合并超重或肥胖患者,根据患者意愿(是否接受非限制的 5:2 轻断食联合代餐的方式控制体重)非随机分为试验组及对照组,试验组患者进行为期 3 个月(12 周)的非限制性 5:2 轻断食联合代餐干预(在 12 周内的每周需按照 5 个正常饮食日+2 个连续或不连续的轻断食日进行轻断食),对照组不进行任何干预。收集受试者的一般人口学信息及临床病理资料,采集受试者干预前后粪便样本进行肠道菌群宏基因组测序,采集患者干预前后的血液样本进行代谢指标检测。采用多种统计学方法及生物信息学分析方法对受试者粪便肠道菌群数据进行分析,比较两组患者干预前后组内及组间的肠道菌群特征、并探索其与体重、腰围、臀围、BMI、代谢指标等的关联。

结果 1、试验组终点的体重、BMI、腰围、臀围较基线相比显著降低($p<0.05$);对照组终点的 CHOL、LDL-C 水平与基线时对比有显著升高($p<0.05$);试验组与对照组相比,体重、腰围、臀围有明显降低。

2、试验组与对照组在基线时的肠道菌群对比,在属水平,存在 2 个差异菌属,终点时两组组间存在 7 个差异菌属;在种水平,基线时两组比较,存在 3 个差异菌种,终点两组间存在 9 个差异菌种。

3、试验组与对照组肠道菌群差异基因所对应的功能的基线、终点两两相比,试验组肠道菌群的编码限制修饰系统功能增强,对照组编码嘌呤核苷酸生物合成、水解糖苷化合物功能增强。

4、干预后的差异菌群,在属水平, *Bacteroidetes* *Phascolarctobacterium* 丰度与腰围($p=-0.008$)、CHOL ($p=-0.002$)、TG($p=-0.036$)、LDL-C($p=-0.039$)呈负相关,与 BMI 呈正相关($p=0.002$);在种水平, *Parabacteroides distasonis* 丰度与 TG 变化呈正相关,与 CHOL 变化呈负相关。

结论 1、12 周的非限制性 5:2 轻断食联合代餐干预可降低合并超重或肥胖的重性精神障碍患者的体重、BMI、腰围、臀围,并可能具有优化其血脂代谢的作用;上述变化可能与部分肠道菌群的丰度变化有关

2、12 周的非限制性 5:2 轻断食联合代餐干预可能影响合并超重或肥胖的重性精神障碍患者部分菌群的丰度;肠道菌群差异基因所对应的功能变化可能与人体的免疫功能、尿酸代谢水平、脂肪分解

相关。

关键词: 重性精神障碍,肠道菌群,超重或肥胖,5:2 轻断食

卧床不起半年分离性运动障碍病例治疗分析

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目的 通过分离转换障碍病例分析,个性化理解、掌握当代此种疾病的有效临床诊治方法。

方法 对分离性运动障碍病例的诊疗经过进行分析、归纳,总结当代分离转换障碍病例的个性化有效临床诊治方法。病例是 1 女性患者,21 岁,大专毕业生,学习成绩一般,性格开朗,随和,胆小。身体状况好,无烟酒等不良嗜好。母亲为当地医院医生,父亲为当地学校老师。患者的外祖母有抑郁病史。2023 年 7 月初患者因数次考试结果不理想(专接本考试未通过、护士资格考试未通过、事业编考试未通过),家人觉其没精神,走路时显得疲累,与家人交流少,情绪一般。同年 8 月中旬患者表妹考入“北师大”办升学宴,邀请患者参加。患者自觉跟妹妹差距很大,丢面子,强烈拒绝参加宴会。同年 8 月 25 日父母让其报名专升本的培训班,患者强烈拒绝,后出现头痛、心烦。同年 8 月 27 日早晨患者称自己不能动了,不能起床,但是具体哪里不舒服患者说不上来。同年 8 月 30 日患者自称脑袋里出了很多血,自己的瞳孔都变大了,要求家人拨打 120 电话。此后患者一直卧床至入院时,吃饭需家人喂食,在床上自主排便,很少与家人交流,日常躺在床上看手机视频,困了就睡觉。同年 10 月份,患者自称“脑子里有棵大树,有很多树枝和树叶,压得她不能起床”。2024 年 2 月份患者母亲找过算命先生,患者异常表现无改善,遂入院求治。神经系统检查等查体未见异常。头颅、颈部 CT 及腰椎 CT、胸部 DR 及血常规、生化、肝肾功能、甲功五项等未见异常。精神检查:意识清,定向力可,接触欠合作,平卧于床,眼神灵活,头颈部活动受限,简单交流可,不愿与医生深入交谈,表现的有些害羞、紧张。称就想父母陪着她,不想再与医生交谈,患者不认为目前的状态为异常。诊断分离性运动障碍。给予 MECT 治疗 6 次,阿立哌唑片(日高量 10mg)联合文拉法辛

缓释胶囊（日高量 225mg）治疗。经支持性、解释性、暗示性心理治疗，森田疗法治疗，住院环境行为治疗。

结果 患者病情明显改善，疗效较好。

结论 分离性运动障碍是一种不符合中枢或外周神经系统的解剖学或生理学的躯体功能紊乱，常发生在应激之后，可表现为肢体瘫痪、不随意运动、异常运动、共济失调、失用症、运动不能症、构音困难、抽搐等。治疗多以心理治疗为主、药物治疗为辅。心理治疗包括：暗示疗法、催眠疗法、行为疗法等。药物治疗多在抗精神病药物基础上联合使用心境稳定剂或抗抑郁剂、抗焦虑剂等。

关键词：青年女性，分离性运动障碍

孤独谱系障碍患儿适应能力与母亲养育压力的中介模型研究

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目的 分析孤独谱系障碍（ASD）患儿适应性能力与养育压力的关系，尝试建立母亲养育压力、焦虑情绪和家庭功能的中介模型，以期探究 ASD 患儿适应性能力对母亲和家庭的影响方式，为改善孤独谱系障碍患儿母亲心理健康和家庭功能提供科学依据。

方法 ①收集 ASD 患儿和其母亲的一般情况信息、儿童适应性行为评定量表第二版（ABAS-II）及母亲焦虑自评量表（SAS）、抑郁自评量表（SDS）、养育压力指数量表简版（PSI-SF）、家庭功能评定量表（FAD），使用 Excel 软件建立数据库。②使用 IBM SPSS 26.0 软件对一般情况进行描述统计，各量表得分进行夏皮洛-威尔克（S-W）正态性检验，各量表得分间进行皮尔逊（Pearson）双尾相关性检验和线性回归分析，使用 Process 插件中的模型 4 建立中介模型。

结果 ①截至目前招募 20 例 ASD 患儿和母亲；儿童平均年龄 13.69±2.85 岁，男女性别比为 2.33:1，儿童 ABAS-II 一般适应综合平均值为 82.95±14.84、母亲 SAS 标准分平均值为 41.10±9.39、SDS 标准分

平均值为 43.05±10.71、PSI-SF 总分平均值为 99.70±23.53、FAD 总的功能得分平均值为 2.18±0.47。

②患儿 ABAS-II 一般适应综合和母亲 PSI-SF 总分（ $p=0.015$ ）及 FAD 总的功能得分（ $p=0.024$ ）的相关性有统计学意义，母亲的 SAS 标准分与 SDS 标准分、母亲 PSI-SF 总分及 FAD 总的功能得分的相关性有统计学意义（ $P<0.001$ ）。③检验家庭功能（FAD 总的功能得分）在母亲养育压力（PSI-SF 总分）与母亲焦虑情绪（SAS 标准分）间的中介效应，母亲养育压力对母亲焦虑情绪的直接效应为 0.2724，家庭功能的中介效应为 0.0619，直接效应和中介效应分别占总效应的 81.51%、18.49%。④以患儿适应能力（ABAS-II 一般适应综合得分）为自变量，母亲养育压力（PSI-SF 总分）为因变量进行二元一次线性回归分析，标准化系数为 -0.45（ $t=-2.14$ ， $P<0.05$ ）。

结论 ①患儿适应能力与母亲养育压力负相关，与家庭功能正相关；母亲焦虑水平与抑郁水平正相关，与母亲养育压力负相关，与家庭功能正相关。②家庭功能在母亲养育压力与母亲焦虑情绪间的中介效应显著，为部分中介效应。③患儿适应能力可以预测母亲的养育压力，患儿适应能力越强，母亲养育压力越小。

关键词：孤独谱系障碍；儿童；适应能力；母亲；养育压力；中介模型

基于网络分析探讨孕妇抑郁的核心症状

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目的 孕期对于女性的心理健康影响非常明显，其中抑郁症状是孕妇常见的心理问题之一。本研究将深入探究孕妇抑郁症状的网络特征，识别其核心症状，从而为临床更精准有效的干预提供潜在靶点。

方法 本研究选取了 760 名孕妇作为研究对象，以健康问卷抑郁症状群量表评估其抑郁症状。使用软件 R qgraph 包进行网络分析，核心症状使用中心性指标（中介性（betweenness）、接近性（closeness）和强度（strength）进行衡量，中心性指标越高，表明症状越核心。选取中心性整体排名前 4 位的症状作为核心症状。网络的准确性和稳定性评估由 R 包

bootnet 实现。

结果 研究结果显示,疲倦(Bet=3, Clo=0.01477, Str=1.01735),心境抑郁(Bet=6, Clo=0.016659, Str=0.964862),内疚/无价值感(Bet=9, Clo=0.016812, Str=0.950173),烦躁不安(Bet=6, Clo=0.01572, Str=0.906003)是孕妇抑郁症状网络中的核心症状。症状网络节点强度、接近性、中介性的相关稳定性系数分别为 0.595、0.439、0.128,表明其具有较高的稳定性。

结论 本研究首次运用网络分析法研究了孕妇抑郁症状的网络特征,结果表明“疲倦”、“心境抑郁”、“内疚/无价值感”、“烦躁不安”是抑郁网络的核心症状,在网络中具有较高的地位和影响,表明它们对整体抑郁症状网络的严重程度起着关键作用。临床医师可以考虑以这些关键症状为主要干预靶点,可能会最大程度地降低整个抑郁症状网络的严重程度,从而更有效地改善孕妇的抑郁程度。

关键词: 孕妇 抑郁 网络分析 中心性指标

负性情绪图片处理中的显著性别效应: 基于抑郁症及 fNIRS 的研究

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目的 本研究作为寻找抑郁症客观生物标志物研究的一部分,旨在探究不同性别的抑郁症患者和健康对照组在不同情绪图片被动注视任务中前额叶皮质(prefrontal cortex, PFC)激活情况,为女性和男性之间不同精神病理过程提供线索。

方法 2023年4月-11月招募到抑郁症患者20例,健康受试者20例,其中女性25例,男性15例。使用22通道日立ETG-4100功能近红外光谱(functional near-infrared spectroscopy, fNIRS)成像仪采集被试被动观看正性、中性、负性情绪图片时的fNIRS数据。采用MATLAB2013及NIRS_SPM处理fNIRS数据,使用SPSS25进行两因素方差分析, $P < 0.05$ 被视为有统计学显著性。

结果 对于负性图片,抑郁症和健康对照组激活强度所有通道均无统计学差异($P > 0.05$),但一半通道(通道1、4、5、6、11、15、16、17、19、20、21)显示出显著的性别主效应($P < 0.05$),且女性激

活强度均值大于男性。对于正性图片,两组激活强度在通道10有统计学差异($P < 0.05$);对于中性图片,两组激活强度在通道9、18有统计学差异($P < 0.05$),对于这两种情绪图片未显示出性别上的激活差异($P > 0.05$)。

结论 男性和女性对于负性情绪图片处理存在fNIRS可检测到的激活差异,且在前额叶皮层女性对于负性情绪图片的反应强度大于男性;在正性和中性图片中未见这种性别上的差异,但对于这两种图片抑郁患者及健康对照部分通道存在激活强度差异。

关键词: 性别差异,抑郁症,负性图片,情绪反应,功能性近红外光谱

围产期妇女失眠障碍及生活质量现况调查

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目的 鉴于失眠对围产期妇女的健康状况和生活质量的负面影响,本文旨在探究中国围产期妇女失眠障碍的患病率、影响因素及与生活质量的关系。

方法 采用线上问卷调查法,选择2020年6月-2020年9月期间我国围产期妇女作为研究对象,使用基于DSM-IV精神疾病诊断手册的三个标准化失眠诊断条目来评估被试的失眠症状,并使用世界卫生组织生活质量问卷(WHOQOL-BREF)来评估其生活质量。采用单因素分析、多因素逻辑回归方法进行数据分析。

结果 共有1,226名围产期妇女参与研究,最终有1,060名(86.46%)完成了全部心理量表评估。研究发现,共有116名女性(10.94%, 95%CI=9.06%-12.83%)报告过去一个月内存在失眠症状。其中,69人(6.51%, 95%CI=5.02%-8.01%)报告了入睡困难,53人(5.00%, 95%CI=3.69%-6.31%)报告睡眠维持困难,48人(4.53%, 95%CI=3.27%-5.78%)报告了早醒症状。逻辑回归分析发现,具有较高教育背景(大学或以上, OR=0.587, 95%CI=0.379-0.907, $P=0.016$)的女性报告失眠症状的可能性较小,而报告躯体共病(OR=2.250, 95%CI=1.386-3.651, $P=0.001$)的女性则更容易报告失眠症状。此外,失

眠与健康相关的生活质量受损显著相关 ($F=14.332$, $P<0.001$)。

结论 本研究发现, 约十分之一的围产期妇女在近一个月内报告了失眠症状。鉴于失眠对健康和生活质量的负面影响, 医护人员应定期对该人群进行失眠筛查。对于怀孕期间和怀孕后失眠的女性, 应提供适当的干预措施, 如睡眠卫生教育、放松技巧和失眠的认知行为治疗等干预手段改善其失眠状况。有针对性的失眠治疗将有利于提高患者的睡眠质量和生活质量。

关键词: 围产期; 失眠; 生活质量; 现况;

The Gut Microbiota As A Potential Biomarker in Methamphetamine Use Disorder: Evidence From Two Independent Datasets.

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Objective Methamphetamine use disorder (MUD) poses a considerable public health threat, and its identification remains challenging due to the subjective nature of the current diagnostic system that relies on self-reported symptoms. Recent studies have suggested that MUD patients may have gut dysbiosis, and gut microbes may be involved in the pathological process of MUD. We aimed to examine gut dysbiosis among MUD patients and generate a machine-learning model utilizing gut microbiota features to facilitate the identification of MUD patients

Methods Fecal samples from 78 MUD patients and 50 sex- and age-matched healthy controls were analyzed by 16S rDNA sequencing to identify gut microbial characteristics that could help differentiate MUD patients from healthy controls. Based on these microbial features, we developed a machine learning model to help identify MUD patients. Besides, we used public data to verify the model, which were downloaded from a published study conducted in Wuhan, China (with 16 MUD patients and 14 HCs). Furthermore, we explored the gut microbial features of MUD patients within the first three months of withdrawal, and try to identify the

withdrawal period of MUD patients by microbial features

Results The results revealed that MUD patients exhibited significant gut dysbiosis, including decreased richness and evenness and changes in the abundance of certain microbes, such as Proteobacteria and Firmicutes. Based on the gut microbiota features of MUD patients, we developed a machine learning model that demonstrated exceptional performance with an AUROC of 0.906 in identifying MUD patients. Additionally, when tested using an external and cross-regional dataset, the model achieved an AUROC of 0.830. Moreover, MUD patients within the first three months of withdrawal exhibit specific gut microbiota features, such as Actinobacteria significantly enrichment. The machine learning model had an AUROC of 0.930 in identifying the withdrawal period of MUD patients

Conclusion In conclusion, the gut microbiota is a promising biomarker for identifying MUD. Our study presents a potential approach to improving the identification of MUD patients. Future longitudinal studies are needed to validate these findings

关键词: methamphetamine use disorder, gut microbes, machine learning, microbiota-gut-brain axis, addiction.

基于概率学习的空间注意偏向任务探讨抑郁症注意抑制功能及 iTBS 模式的调控作用

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目的 注意力功能损伤是抑郁症发作期及缓解期的主要症状之一, 然而具体机制并不清楚。本研究旨在通过神经认知心理学范式联合神经电生理分析系统地研究抑郁症患者的空间注意抑制功能, 并探讨 iTBS 刺激模式对抑郁症患者注意认知功能的潜在调控作用及相关电生理机制, 为未来的抑郁靶症状调控研究提供依据。

方法 本研究共纳入 16 名符合 DSM-5 重性抑郁障碍诊断标准的疾病被试和 16 名健康被试。采用

基于概率学习的空间注意抑制任务评估两组被试干预前后的反应时间,同步采集64导联脑电信号并分析偏侧化事件相关脑电成分(N1pc、N2pc、Pd)。干预时采用Brainsight神经导航系统对两组被试的左侧背外侧前额叶皮层(dLPFC)进行定位并予以单日2次iTBS模式调控,比较两组被试经过单日精准调控后的行为学表现及神经电生理指标的差异。

结果 基线水平下,行为学指标显示患者组完成空间注意偏向任务的反应时间比健康组更长($t=2.49, p<0.05$)。基线水平下,神经电生理指标显示,健康组在高概率学习位置所诱发的注意抑制Pd成分潜伏期早于低概率学习位置($t=3.56, p<0.05$),提示健康组存在概率学习相关的干扰物抑制效应;然而,患者组并不存在这样的学习效应,表现为患者组在高低概率两个学习位置诱发的Pd成分无差异($t=1.54, p=0.15$),并且,患者组在各条件下均诱发出N1pc成分,提示任何特征突出的物体均能捕获抑郁症患者的注意力。单日调控后,两组被试在低概率位置上反应时间均较基线水平显著减少($t_s>2.10, p_s<0.05$),且抑郁组在低概率位置上诱发出更大振幅的N2pc($t=3.03, p<0.05$),经过调控后的抑郁组出现延迟Pd成分,且在低概率条件下诱发出的Pd成分早于高概率学习位置($t=2.82, p<0.05$),提示iTBS可能对低概率位置有调控作用,且可能改善抑郁患者的空间概率学习抗干扰能力。

结论 抑郁症患者可能存在基于概率学习的空间注意抑制功能损伤,iTBS经颅磁刺激可能有助于改善抑郁症患者对于干扰物体的抑制能力,并通过对低概率位置的调控作用从而整体上改善了患者的注意认知功能。

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关键词:抑郁症,精准调控,经颅磁刺激,注意抑制功能

老年抑郁症的中医体质研究进展

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目的 老年抑郁症是老年人群最常见的精神疾

病之一,通常指的是60岁及以上首次发作的原发性抑郁。随着社会人口快速老龄化,老年抑郁症的患病率将不断增长,给老年人群身心健康带来巨大危害。老年抑郁症的发生是生物、社会心理等多种因素所致,因此其病因病机也错综复杂。基于“辨病-辨证-辨体”三位一体的中医诊疗思维,从老年抑郁症的中医体质出发,把老年抑郁症的诊疗和中医体质结合起来进行研究,通过探讨老年抑郁症患者的中医体质特征,加深对老年抑郁症患者中医体质的认识,为进一步深入研究老年性抑郁症病因病机及临床辨证论治提供思路,以期对老年性抑郁症的预防及治疗提供新的参考依据。

方法 通过文献检索的方法,查阅近年来关于老年抑郁症中医体质的相关文献,总结近年来老年抑郁症患者从中医体质方向出发研究的成果。

结果 多数研究显示老年性抑郁症患者体质以偏颇体质为主,其中气郁质、气虚质、阳虚质、阴虚质多见,尤其以气虚质、气郁质最为突出。

结论 老年抑郁症与患者体质密切相关,气郁质、气虚质、阳虚质、阴虚质是老年抑郁症患者的重要致病特质,临床对老年抑郁症防治的辨体调护应重视这一点,辨证用药方面在梳理气机的同时,要重视扶助正气、顾护阳气及滋阴润燥的补益方法。中医治疗老年抑郁症,在治疗疾病的同时,从不同维度改善体质,体现中医标本兼治的核心理念及治疗优势。

关键词:老年抑郁症;中医体质;特征;辨证论治。

Comparative Safety of Antipsychotic Medications During Pregnancy: A Systematic Review and Network Meta-Analysis

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Background A network meta-analysis were performed to evaluate the risk of congenital malformations and other prenatal outcomes in fetuses after exposure to antipsychotics during pregnancy

Methods We searched the PubMed, EMBASE,

and Cochrane CENTRAL databases up to December 15, 2023, to identify observational studies comparing anti-psychotic treatment with control treatment (no exposure). The data were extracted and assessed for risk of bias. We used R and Stata software to conduct analysis using Bayesian network meta-analysis methods

Results The literature search identified 28,434 potentially relevant records; ultimately, 32 studies covering 3,042,997 pregnant women were included. Compared to that in the unexposed group, the risk of congenital malformations was significantly greater in the aripiprazole, olanzapine, risperidone and lithium groups. Network meta-analysis revealed that lurasidone was the safest medication among the included drugs, followed by ziprasidone and quetiapine, while carbamazepine posed a greater risk. However, the results should be interpreted with caution, and further studies are needed to provide more evidence

Conclusion The evidence from this analysis suggests that lurasidone, ziprasidone, and quetiapine are less teratogenic and safer for use by pregnant women. However, it is important to use lurasidone and ziprasidone with caution, and additional clinical studies are necessary.

关键词: Adverse effect, Congenital malformations, Antipsychotics, Fetus, Network meta-analysis

Risk Factors for Cognitive Function in Elderly Residents of Rural Northeast China: A Real-World Study

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Background Cognitive impairment and dementia are major challenges faced by the elderly population during aging. However, the cognitive status of the elderly in rural Northeast China remains to be investigated. Therefore, we utilize cross-sectional data and Mendelian randomization (MR) analysis of the elderly population in rural Northeast China to reveal the risk

factors affecting their cognitive function

Objective This study first utilizes data on the epidemiological characteristics of cognitive function and related risk factors collected in Beizhen City, Liaoning Province, in 2023 to explore the influencing factors of cognitive function in the rural elderly population through Lasso regression and multiple linear regression

Results After Lasso regression and multiple stepwise regression analysis, the results showed that educational level, body fat percentage, social support, albumin, systolic blood pressure, snoring, age, depression level, reading, household income, and waist-to-hip ratio are the main influencing factors of cognitive function

Conclusions This study provides updated data on the prevalence of cognitive impairment among the elderly population in rural northeastern China and offers new insights into the underlying mechanisms. To prevent cognitive decline in the elderly, efforts should focus on improving education, enhancing social support, managing chronic health conditions, and improving sleep quality, thereby enhancing the quality of life and well-being of the elderly

关键词: Cognitive Impairment , Rural Elderly , Risk Factors , Lasso Regression

Association between Acne Vulgaris and Premenstrual Disorders: A Cross-sectional Analysis of College Students in China

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Objective Premenstrual disorders (PMDs) are prevalent among women of reproductive age and have negative impacts on their physical and mental well-being. Previous studies have demonstrated a close association between acne and psychological issues. However, the relationship between acne and PMDs remains inconclusive. Hence, we conducted this cross-sectional study to explore the potential association between acne and PMDs

Methods This cross-sectional study involved young female adults recruited from the Care of Premenstrual Emotion (COPE) prospective cohort study in China. PMDs were assessed using the Calendar of Premenstrual Experiences, and the acne status was evaluated using a standard questionnaire, which contains four levels: 1. No obvious acne, 2. Mild acne, 3. Moderate acne, 4. Severe acne. Participants are divided into two groups based on the severity of acne: group I.no/ mild; group II.moderate/ severe.Multivariate regressions, adjusted for potential confounders, were conducted to investigate the associations between PMDs and acne status. Furthermore, the associations of acne status with PMD subtypes of different onset time and severity were explored

Results The study included 1507 participants (mean age= 20.0 [standard deviation 2.00]), of whom 366 (24.3%) reported having PMDs. 616 (40.88 %) and 424 (28.24 %) students reported have mild acne and moderate/ severe acne, respectively. The mild acne and moderate/ severe acne status showed an association with a increased incidence of PMDs (OR=1.30[95% Confidence interval 0.95–1.79] and 1.51(1.08-2.13), respectively; P for trend=0.017). No significant differences were observed in the associations between the acne status and different PMD subtypes

Conclusion Acne status is significantly associated with an increased risk of PMDs, though the causal relationship between acne and PMDs need to be explored

关键词: Premenstrual disorders, Acne status, association, college students

微生物-肠-脑轴在双相障碍治疗中的研究进展

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目的 双相障碍 (Bipolar disorders, BD) 具有疗效差、复发率高等特点, 其病理生理学机制仍不清楚, 肠粘膜和大脑之间的双向沟通系统, 即肠脑轴, 在维持身体和大脑功能之间的稳态方面发挥着重要作用, 几项研究表明, 肠道微生物群改变肠脑轴活动, 这一概念现在被广泛接受为微生物-肠-脑 (Microbiota-Gut-Brain, MGB) 轴。MGB 轴影响机体的基因调控与表达、氧化应激、全身慢性炎症与神经炎症、神经递质调控等诸多方面。本文将从 MGB 轴的角度分析双相障碍的病理生理学机制及其治疗干预效果, 以期对双相障碍的诊治提供新思路。

方法 作者于 2024 年 5 月在中国知网、万方数据知识服务平台、PubMed, 使用检索词“双相情感障碍/bipolar affective disorder”或“双相障碍/bipolar disorder”、“脑肠轴/brain-gut axis”、“微生物群-脑-肠轴/microbiota-gut-brain axis”、“双相障碍/bipolar disorder (BD)”AND“肠道微生物/gut microbiota”、“益生菌/probiotics”AND“双相障碍/bipolar disorder (BD)”进行文献检索, 纳入国内外数据库建库至 2024 年发表的相关研究文献。纳入标准: 文献中患者的诊断符合双相障碍的标准; 与微生物群-肠-脑轴或双相障碍治疗或治疗机制相关的中文或英文文献。排除标准: 文献语言为非中英文文献; 重复文献; 研究设计不合理或期刊质量较低的文献; 文章评述, 会议论文等。通过文献纳入及排除标准对文献进行全面的审阅, 最后纳入参考的文献共 47 篇。

结果 人体的肠道是一个复杂的微生态系统, 其中生存着大量的微生物, 目前的研究主要集中在肠道菌群上, 除此之外还有病毒、真菌及古生菌等。这些肠道微生物相互作用, 共同影响 BD 的病理生理学机制。其中肠道微生物血清代谢物是值得注意的, 多项研究都发现了短链脂肪酸的抗炎作用及情绪稳定作用, 它还参与肠道屏障的维持。常用的 MGB 轴干预包括口服益生菌干预、菌群移植干预、饮食干预、迷走神经刺激治疗, 均展现出了积极的治疗效果。

结论 肠道微生物群及其代谢物和肠道通透性可能在 BD 的发生发展中起到重要的作用, 但各种假说并不能完全解释目前的发现。MGB 轴干预在 BD 的治疗上具有相当的潜力, 但对于肠道生态的干预大多停留在菌群上。其中口服益生菌或益生元是一种不错的选择, 然而在这些研究中, 其疗效并不确切, 因此, 进一步研究可以针对菌株及给药方式

的选择,以更好的改善肠道微生态,这或许还需要其他学科共同参与。

关键词:双相障碍;微生物-肠-脑轴;肠道微生物;肠道通透性;菌群移植

Family Cohesion and Adaptability in Teachers with Depression in Liaoning, China

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Objective We aimed to research how depression affects family cohesion, family adaptability, and family function among teachers

Methods We surveyed teachers in Liaoning Province, China ($n = 2944$) through questionnaires using Family Adaptability and Cohesion Evaluation Scale (FACES II-CV) and Patient Health Questionnaire-9 (PHQ-9). We compared family function between teachers with and without depression

Results We detected that 21.5% of teachers suffered from depression. The mean cohesion score of teachers with depression was higher than teachers without depression (65.06 ± 5.54 vs. 63.35 ± 4.86), whereas the mean adaptability score of teachers with depression was lower (44.13 ± 7.11 vs. 46.94 ± 6.03). When we adjusted the possible confounders, including sex, age, the current work situation, grade, and previous insomnia or emotional disorders in the logistic regression analysis, the odds ratio (OR) for balanced family function decreased significantly compared with the midrange family function when we compared teachers with and without depression (OR: 0.563; 95% CI: 0.461 to 0.688), whereas the OR for extreme family function did not increase significantly (OR: 1.116; 95% CI: 0.733 to 1.699)

Conclusion Significant differences existed in family cohesion, adaptability between Chinese teachers with and without depression and conducting appropriate family interventions is crucial

关键词: Depression, Teacher, Family cohesion and adaptability,

FK506 结合蛋白 5 基因在心境障碍治疗中的应用进展

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目的 下丘脑-垂体-肾上腺轴 (HPA) 的功能失调与心境障碍的发生相关, FK506 结合蛋白 5 (FKBP5) 是一种糖皮质激素受体 (GRs) 伴侣蛋白, 通过调节 GR 敏感性进而调节 HPA 功能。将 FKBP5 基因及其在心境障碍药物治疗、电休克治疗、FKBP5 拮抗剂中的应用进行综述并展望, 总结 FKBP5 基因在心境障碍治疗中的进展。

方法 以 FKBP5 基因、心境障碍作为检索词, 检索中国知网、Pub Med 数据库, 检索时限为 2018 年至 2023 年中涉及 FKBP5 基因与心境障碍的药物治疗、电休克治疗及 FKBP5 拮抗剂的相关文献及其中涉及参考文献并进行总结分析。

结果 其中共选入 40 篇相关研究, 其中涉及 FKBP5 机制文献共 18 篇, 抗抑郁药物文献 6 篇, 情绪稳定剂文献 4 篇, 电休克治疗文献 6 篇, FKBP5 拮抗剂文献 4 篇, 其中抗抑郁治疗对 FKBP5 基因表达影响结果不一致, FKBP5 基因多态性有望成为预测锂盐治疗反应的生物标记物, 而电休克治疗能够改变情感障碍患者的 FKBP5 基因表达水平, 且 FKBP5 基因有望成为抗抑郁治疗的新靶点。

结论 FKBP5 基因与情感障碍疾病的疗效具有一定的相关性。目前, 尽管相关研究证明了 FKBP5 基因与情感障碍疾病治疗之间的关系, 但研究结果并不相同, 仍然存在矛盾。因此, 在临床实践及研究中应注重于 FKBP5 基因与治疗疗效的关系。另外, FKBP5 基因的相关检测在不同的生物样本中的结果不同, 建议在进一步的研究中选择合适的生物学样本。未来的研究应侧重于 FKBP5 基因与临床常用治疗方案的疗效及预后的相关性。

关键词: FK506 结合蛋白 5; 抑郁障碍; 双相情感障碍; 治疗; 综述

童年创伤对女性双相情感障碍患者认知功能、焦虑症状、社会功能的影响及相关性分析

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目的 童年创伤与女性双相情感障碍患者之间的关系一直备受关注,过去的研究表明,女性更容易经历童年创伤。然而,目前对于童年创伤对女性双相情感障碍患者认知功能、社会功能和焦虑水平影响的研究还相对较少。因此本研究深入探讨童年创伤对双相情感障碍女性患者的认知功能、焦虑症状及社会功能的影响及相关性。

方法 入组 2024 年 3 月至 2024 年 6 月于沈阳市精神卫生中心住院的稳定期双相情感障碍女性患者 53 名,采用童年期创伤问卷(CTQ-SF),将患者分为 2 组,伴童年创伤组(n=28),不伴童年创伤组(n=25)。采用蒙特利尔认知评估量表(MoCA)评估患者的认知功能;采用汉密尔顿焦虑量表(HAMA)评估患者焦虑症状;采用社会功能缺陷筛选量表(SDSS)评估患者社会功能。两组间比较采用独立样本 T 检验,相关性分析采用 spearman 相关分析。统计软件采用 SPSS23.0。

结果 1.两组患者年龄,文化程度无显著差异; 2.伴童年创伤组比不伴童年创伤组蒙特利尔认知评估量表得分显著降低($t=-3.211, P<0.05$);汉密尔顿焦虑量表评分显著增高($t=2.688, P<0.05$);社会功能缺陷筛选量表评分显著增高($t=2.955, P<0.05$); 3.伴童年创伤组童年期创伤问卷得分与认知功能呈负相关($r=-0.530, p<0.05$);躯体忽视与抽象能力呈负相关($r=-0.451, p<0.05$);情感虐待、情感忽视与定向力呈负相关($r=-0.405, r=-0.415, p$ 均 <0.05);性虐待与焦虑症状呈正相关($r=0.683, p<0.05$)。

结论 童年创伤可能是女性双相情感障碍患者认知水平、焦虑症状、社会功能的影响因素,童年创伤与女性双相情感障碍患者的认知功能和焦虑症状有相关性,其中躯体忽视与抽象能力呈负相关;情感虐待、情感忽视与定向力呈负相关;性虐待与焦虑症状呈正相关。因此,探究童年创伤对女性双相情感障碍患者的心理影响,可能为双相情感障碍女性患者个体化治疗及早期干预提供理论支持。

关键词:童年创伤 双相情感障碍 女性 认知功能 焦虑症状 社会功能

The Benefits and Therapeutic Effects of Handcrafting on Women's Mental Health

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Objective This study aims to explore the positive and therapeutic effects of handcrafting activities, such as knitting, crocheting, quilting, and paper quilling, on women's mental health. The research seeks to understand the underlying mechanisms that make these activities appealing to women despite their busy schedules, and to investigate why they are willing to sacrifice valuable time to engage in handcrafting. This study aims to fill the gap in current mental health research by providing empirical evidence on the mental health benefits of handcrafting, which is underrepresented in the academic literature.

Methods This study employs a mixed-method approach, combining quantitative surveys, qualitative interviews, and neuroimaging techniques. A sample of 200 women aged 25-50 years who regularly participate in handcrafting activities will be recruited from community groups and online forums.

Quantitative data will be collected using standardized questionnaires measuring levels of stress (Perceived Stress Scale), anxiety (Generalized Anxiety Disorder 7-item scale), depression (Patient Health Questionnaire-9), and overall well-being (WHO-5 Well-being Index) at baseline and after a six-month period of regular handcrafting.

Qualitative data will be obtained through semi-structured interviews with a subset of participants, exploring their experiences, motivations, and perceived benefits of handcrafting. The interviews will be audio-recorded and transcribed verbatim for thematic analysis.

Neuroimaging data will be collected using functional magnetic resonance imaging (fMRI) and other brain imaging techniques. Neuroimaging assessments

will be conducted before the participants begin their handcrafting activities, during the activities, and after completing a session. These assessments will measure changes in brain activity and connectivity associated with stress, relaxation, and emotional processing.

Results Preliminary findings suggest that repetitive handcrafting activities induce a state of mindfulness, similar to meditation, which significantly reduces stress and promotes relaxation. Neuroimaging data is expected to show increased activation in brain regions associated with relaxation and decreased activation in regions associated with stress. Additionally, social interactions during group crafting sessions provide emotional support, reduce feelings of isolation, and foster a sense of community. The creative process and the sense of accomplishment from completing projects enhance self-esteem and contribute to overall mental well-being. Engagement with colors and patterns during crafting activities also stimulates positive emotional responses and enhances aesthetic appreciation

Conclusion Handcrafting has significant therapeutic potential for enhancing women's mental health by providing stress relief, promoting social support, facilitating creative expression, and enhancing mindfulness. This study contributes empirical evidence, including neuroimaging data, to support the incorporation of handcrafting activities into holistic mental health strategies for women. By filling the gap in the current literature, this research underscores the importance of integrating handcrafting into mental health interventions, promoting a multifaceted approach to improving women's mental well-being

关键词: Handcrafting Women's Mental Health Therapeutic Effects Stress Relief Creative Expression Mindfulness, Social Support, Neuroimaging, fMRI

女性强制戒毒人员精神病态与毒品渴求关系: 抑郁症状中介作用

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目的 探究女性强制戒毒人员精神病态、抑郁症状和毒品渴求间的关系。

方法 采用整群抽样的方法, 将天津市女子强制戒毒所 309 名女性强制戒毒人员作为研究对象。纳入标准: ①完成生理脱毒期且无戒断反应; ②认知功能正常; ③在知情同意的基础上自愿参加本次调查; ④无严重躯体或精神疾病。研究者将她们分为 6 组, 每组 50 人左右, 以团体无记名的形式分段施测。现场发放问卷, 现场收回。本次共发放问卷 309 份, 剔除无效问卷(漏答, 人口学信息不完整) 获得有效问卷 305 份, 回收有效率为 98.71%。采用莱文森精神病态自评量表(LSRP)、流调中心抑郁量表(CES-D)、毒品渴求视觉模拟标尺(VAS)对天津市 305 名女性强制戒毒人员进行调查, 用 SPSS 25.0 进行数据分析。

结果 (1) 初级精神病态与毒品渴求存在显著正相关, 次级精神病态、抑郁症状与毒品渴求之间存在显著正相关。(2) 结果显示, 次级精神病态影响毒品渴求的总效应为 0.23 (SE=0.06, 95%CI=[0.12,0.34]), 抑郁症状在次级精神病态与毒品渴求关系间的间接效应为 0.10 (SE=0.03, 95%CI=[0.04,0.16]), 占总效应的比例为 43.48%。采用偏差校正的百分位 Bootstrap 法对抑郁症状在次级精神病态与毒品渴求关系间的中介作用进行检验, 以上 Bootstrap 95% 置信区间均不包含 0, 表明抑郁症状在次级精神病态与毒品渴求关系间的中介效应显著。

结论 本研究结果发现抑郁症状在天津市女性强制戒毒人员精神病态和毒品渴求之间起部分中介作用, 次级精神病态可以正向预测毒品渴求, 也可以通过抑郁症状间接预测毒品渴求。

关键词: 女性, 强制戒毒人员, 精神病态, 毒品渴求, 抑郁症状

55~79 岁人群下肢皮下脂肪率与认知功能的关系

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目的 了解 55~79 岁人群下肢皮下脂肪率与

认知功能及不同维度的关系相关性,从而提高人们的身材管控意识,降低成年人出现认知障碍风险以及为更精细化的干预和治疗认知障碍提供理论依据。

方法 采用多中心横断面调查方法纳入 2023 年 7 月~8 月在北镇市各乡镇招募 55~79 岁人群 762 人。采用多频生物电阻抗测定法(BIA)得到下肢皮下脂肪率。根据简易精神状态评估(MMSE)评定认知功能。MMSE 主要评估定向力、记忆力、注意力和计算力、回忆能力和语言能力五个维度。使用 SPSS 26.0 进行多重线性回归分析, R4.3.3 进行桥接网络分析。

结果 多重线性回归分析显示,在控制了年龄、性别、受教育程度、吸烟、喝酒、抑郁情况、血糖、血脂和血压等协变量后,下肢皮下脂肪率与整体认知功能和语言能力呈正相关($P<0.05$),下肢皮下脂肪率与定向力、记忆力、注意力和计算力、回忆能力之间没有显著性。在下肢皮下脂肪率与认知的桥接网络模型中,回忆、语言和下肢皮下脂肪率是最核心的领域。

结论 在这项研究中,下肢皮下脂肪率是认知功能的保护因素,特别是与语言能力有关的认知功能,因此,我们可以通过控制下肢皮下脂肪率来提升以语言能力为主的认知功能。

关键词: 认知功能,下肢皮下脂肪率,桥接网络

Correlation Between Life Satisfaction and Symptoms of ADHD in Dental Students: The Mediation of Resilience

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Objective Given the increasing socioeconomic burden of ADHD, existing studies on ADHD symptoms are significantly underrepresented among dental students. We conducted this research to (1) analyze the morbidity of ADHD symptoms in dental students in China, (2) explore the relationship between life satisfaction and two ADHD symptoms among dental students, and (3) explore the mediation between life satisfaction and ADHD symptoms

Methods The research was a cross-sectional investigation. It was carried out in May 2023 at a medical university in China. "Wenjuanxing," a well-known professional online survey platform, was used to conduct questionnaire surveys and collect data. Authors can access information that identifies individual participants during or after data capture. A stratified cluster sampling method was used to recruit participants based on academic years. Initially, 75 students were recruited from each academic year. The inclusion criteria were as follows: major in stomatology, full-time undergraduate, and a negative screening on the Self-Rating Depression Scale (SDS) and Self-Rating Anxiety Scale (SAS). The exclusion criteria were as follows: non-stomatology major, part-time undergraduate, master, PhD, MD, and a positive screening on the SDS and SAS. All students participated voluntarily and were informed of the study's purpose before answering the questionnaire. At the beginning of the questionnaire, we included a link for informed consent. The participants who answered the questionnaire were considered to have signed a written informed consent agreement before answering the questionnaire. The Medical Ethics Committee of China Medical University authorized the study. We surveyed 297 dental students. A total of 291 completed a self-report scale consisting of the Adult ADHD Self-Report Scale, Wender Utah Rating Scale (WURS), Life Satisfaction Scale, and Conner-Davidson Resilience Scale. The study used hierarchical linear regression analysis, resampling, and asymptotic strategies for data processing

Results A total of 297 questionnaires were distributed, of which 291 were valid (effective rate 98.0%). Four of the six invalid questionnaires required less than 1 second per question, on average, and the remaining two could not be answered in full. A total of 120 male and 171 female participants provided valid responses

On the WURS, 91 students scored 46 or more. They were evaluated using the ASRS scale. Participants were assigned to the ADHD symptom positive screening group if the scores of questions 1 to 3 in Part A (the first six) were greater than or equal to three, the scores of questions 4 and 5 were at least four, and more than four of the six questions met the above standards. A total

of 20 people matched the above conditions. In the positive and negative screening groups. The positive rate among women was lower than that reported by men ($p = .025$). The three groups differed significantly in paternal educational level ($p = .046$). Significant differences were not detected between the two groups in age ($p = .794$), race ($p = .216$), place of residence ($p = .830$), academic year ($p = .652$), only child status ($p = .865$), and maternal education level ($p = .520$). The asymptomatic group had significantly higher ranks of life satisfaction ($p < .05$) and resilience ($p < .05$) than the symptomatic group.

Both hyperactivity and inattention were negatively associated with life satisfaction (hyperactivity: $r = -.190$, $p < .05$; inattention: $r = -.121$, $p < .05$) and resilience (hyperactivity: $r = -.258$, $p < .05$; inattention: $r = -.177$, $p < .05$). Life satisfaction was significantly positively correlated with resilience ($r = .752$, $p < .05$).

Hyperactivity and inattention explained 4% of the differences in life satisfaction. A significant negative correlation was detected between hyperactivity and life satisfaction after controlling age and gender ($\beta = -.26$, $p < .05$). Resilience strongly and positively affected life satisfaction. ($\beta = .75$, $p < .05$). It explains 53% of the variable of life satisfaction.

Resilience has a significant mediating effect between student life satisfaction and inattention. ($a \times b = -0.199$, $p < .05$). Resilience significantly moderates the correlation between life satisfaction and hyperactivity ($a \times b = -0.159$, $p < .05$).

Conclusion This study's results show that the positive screening rate for ADHD symptoms in general adult populations is lower than that among Chinese dental students. Paternal education level is related to the positive screening rate for ADHD symptoms. Of the two ADHD symptoms, only hyperactivity was significantly associated with life satisfaction. Distinct mediation of resilience was found between life satisfaction and ADHD symptoms. The findings of the study can ensure the early detection of ADHD symptoms in dental students to enhance the mental health level of future dentists to a certain extent. Resilience intervention programs can improve dental students' life satisfaction, especially for students with ADHD symptoms

关键词: dental students, resilience, life satisfaction, ADHD symptoms

合并自杀行为的重性抑郁障碍患者的静息态脑影像学研究

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目的 探讨有无自杀行为史的重性抑郁障碍患者静息态大脑活动的异同,寻找合并自杀行为的重性抑郁障碍患者脑区的特异性改变。

方法 本研究共纳入合并自杀行为的重性抑郁障碍患者 76 名,不合并自杀行为的重性抑郁障碍患者 100 名以及健康志愿者 100 名。所有被试均排除核磁共振禁忌症,头部外伤史。所有被试均完成临床和人口学信息访谈、使用 DSM-5 障碍定式临床检查 (Structured Clinical Interview for DSM-5 Disorders, SCID-5), 24 项汉密尔顿抑郁量表 (Hamilton ratingscale for depression, HAMD-24), 汉密尔顿焦虑量表 (Hamilton ratingscale for anxiety, HAMA), beck 自杀意念量表 (BSI), 简明精神病量表 (Brief Psychiatric Rating Scale, BPRS), 杨氏躁狂量表 (Young Mania Rating Scale, YMRS) 进行症状的评估。使用 GE Signa HDX 3.0T scanner with an 8-channel headline circle 完成静息态头部核磁共振影像数据的采集,使用 dpabi 软件对采集的影像数据进行预处理和统计分析。使用分数 ALFF (fALFF) 来比较各组之间脑区的差异。fALFF 是对原始 ALFF 方法的改进,它检查低频范围内每个频率的功率与整个频率范围的功率之间的比率。

结果 经过 GRF 校正后,合并自杀行为的重性抑郁障碍患者与无自杀行为的重性抑郁障碍患者相比,在左脑额中回 (Frontal_Mid_L) 的活动增强,左脑背外侧额上回 (Frontal_Sup_L), 右脑梭状回 (Fusiform_R) 活动降低。合并自杀行为的重性抑郁障碍患者与健康对照者相比,右侧丘脑内侧背核 (THAL_MDm_R) 活动升高,左脑内侧额上回 (Frontal_Sup_Medial_L) 活动降低。而无自杀行为的抑郁症患者与健康人相比,右脑颞中回 (Temporal_Mid_R)、左脑梭状回 (Fusiform_L) 活动增强;左脑中央后回 (Postcentral_L) 的活动降低。

结论 合并自杀行为的重性抑郁障碍患者与无自杀行为的重性抑郁障碍患者相比,其在静息态的左脑额中回活动增强,这可能与自杀行为的增加有关。

关键词: 重性抑郁障碍,自杀行为,脑功能静息态,左脑额中回,右脑梭状回

青少年抑郁障碍伴复杂性应激障碍患者下丘脑体素相关性研究现状

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目的 本综述旨在探讨青少年复杂性应激障碍(C-PTSD)伴抑郁障碍患者地下丘脑体素的MRI变化,评估其在病理机制中的作用,并分析现有研究的局限性和未来研究的方向。

方法 本文通过系统检索相关文献,选取近年来在青少年C-PTSD和抑郁障碍患者中应用MRI技术研究地下丘脑体素变化的研究。重点关注研究设计、样本特征、MRI技术参数、地下丘脑体素变化的测量方法及其与临床症状的相关性分析。

结果 1. 下丘脑体积变化:多项研究表明,C-PTSD和抑郁障碍患者的下丘脑体积显著减小。研究结果显示,体积减少与患者的应激水平、病程长短和症状严重程度密切相关。例如,某项研究对比了40名C-PTSD伴抑郁障碍青少年患者与40名健康对照组,结果显示患者组的下丘脑体积显著小于对照组。

2. 灰质密度变化:下丘脑的灰质密度变化也是研究的热点。部分研究指出,C-PTSD和抑郁障碍患者的下丘脑灰质密度显著降低,这可能与神经元丢失或突触密度减少有关。例如,使用高分辨率3T MRI对50名患者进行研究,发现患者下丘脑灰质密度显著低于健康对照组。

3. 功能连接性变化:fMRI研究还发现,C-PTSD和抑郁障碍患者下丘脑与其他大脑区域(如杏仁核、前额叶皮层)的功能连接性发生改变,这可能解释了情绪调节和应激反应的异常。例如,研究表明,C-PTSD伴抑郁障碍患者下丘脑与杏仁核的功能连接性增强,而与前额叶皮层的连接性减弱。

结论 下丘脑在青少年复杂性应激障碍伴抑郁

障碍中的作用越来越受到关注。通过MRI技术研究下丘脑体素的变化,为理解C-PTSD和抑郁障碍的神经生物学机制提供了重要线索。具体结论如下

1. 下丘脑体积减小:C-PTSD和抑郁障碍患者的下丘脑体积显著减小,提示下丘脑结构受损可能是疾病的关键病理特征之一。

2. 灰质密度降低:下丘脑灰质密度的降低可能反映了神经元丢失或突触密度减少,与情绪调节功能受损有关。

3. 功能连接性改变:下丘脑与其他脑区的功能连接性变化,特别是与情绪调节相关区域的连接性异常,可能解释了患者的情绪和行为症状。

关键词: 1. Complex Post-Traumatic Stress Disorder (C-PTSD), Depression, Adolescents, Hypothalamus, Voxel-based MRI, Neuroimaging, Brain volume

认知功能对农村老年女性抑郁症状的影响——家庭经济收入的调节效应分析

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目的 随着人口老龄化的持续加剧,老年抑郁症成为全球范围内的重要公共卫生问题。抑郁症在老年人中的发病率较高,给患者及其家庭带来了巨大的心理、社会和经济负担,而农村老年女性是其中容易被忽视的群体。多项研究表明农村老年女性抑郁与认知功能之间存在密切关系,认知功能障碍在老年女性中不仅预示着潜在的神经退行性疾病,同时也与抑郁症状的发生和发展有着密切联系。认知受损的老年个体在执行功能、记忆、注意力等方面的问题可能导致日常活动受限,从而增加抑郁发生的可能性。在全球老龄化进程加快的社会背景下,家庭经济收入成为影响老年人身心健康的重要社会经济指标之一。研究发现,家庭经济收入与老年人抑郁症状的发生和发展密切相关,低收入往往与更严重的抑郁症状呈现正相关。本文主要通过统计模型评估农村老年女性认知功能、抑郁与家庭经济收入的关系,并分析与验证家庭经济收入对农村老年女性认知功能与抑郁症状关系产生的调节作用,从而进一步了解这三个变量之间的关系。

方法 以农村老年女性抑郁症状、认知功能以及家庭经济年收入之间的关系作为研究对象,采用心理测量法并使用老年抑郁量表 GDS-15 和简易精神状态检查(MMSE)两个量表对抑郁症状情况以及认知功能情况进行研究。本文所使用的研究数据来自于 2023 年 7-8 月在辽宁省北镇市农村地区开展的抑郁症队列研究项目所收集的年龄在 55 岁以上农村老年女性的基线数据。描述其基本人口学特征,探究认知功能、家庭经济年收入和抑郁症状间的相关关系,采用 SPSS26 的 PROCESS 插件的模型 1 分析验证家庭经济年收入的调节作用。

结果 本研究共纳入 652 名农村老年女性,平均年龄为 64.37 ± 6.02 岁,认知正常的有 532 人(81.6%),认知功能下降的有 120 人(18.4%)。不考虑抑郁的 548 人(84.0%),提示抑郁倾向的 92 人(14.1%),提示抑郁症的 12 人(1.9%)。农村老年女性抑郁症状与认知功能情况呈显著负相关($r = -0.177, p < 0.01$),与家庭年收入呈显著负相关($r = -0.160, p < 0.01$)。家庭年收入在农村老年女性认知功能与抑郁症状的关系中存在调节作用($\text{coeff} = 0.111, 95\% \text{CI}: 0.013 \sim 0.210$)。

结论 农村老年女性认知功能情况与家庭经济年收入对老年人抑郁症状产生了非常显著的负向预测作用。家庭经济年收入削弱了认知功能情况对抑郁症状的负向影响关系。本研究的结果可能有助于提供一个新的框架来理解生理和社会等因素与农村老年女性心理健康之间的关系,从而为制定针对抑郁症状的个性化预防与干预策略提供新的视角和理论依据,促进该群体的心理健康与生活质量。

关键词: 认知功能,抑郁,经济收入,调节效应

Objective Bipolar disorder (BD) has been associated with an increase in suicidal behavior. Neural features of suicidal behavior, including suicide attempts (SAs) and suicidal ideation (SI), in mood disorders may help prevent suicidal behavior

Methods We enrolled 23 BD patients with a history of SAs, 18 BD patients with a history of SI, 34 BD patients without suicidal behavior, and 60 healthy controls (HCs). All participants underwent structural magnetic resonance imaging. The brain activity was assessed using the dynamic amplitude of low-frequency fluctuations (ALFFs)

Results Significant differences were found in dynamic ALFFs in the caudate region among the four groups. The post-hoc analysis showed that BD patients with SAs had significantly increased dynamic ALFFs in the caudate region compared to the others. BD patients with SI or without suicidal behavior had significantly increased dynamic ALFFs in the caudate region compared to HCs. However, there were no significant differences in dynamic ALFFs in the caudate region between BD patients with SI and BD controls

Conclusion Abnormal dynamic ALFFs in the caudate region may be associated with SAs in BD. Further investigations are warranted to determine whether dynamic ALFFs in BD patients with SI are different from those in BD patients with SAs

关键词: Bipolar disorder; Suicide attempts; Suicidal ideation; Dynamic amplitude of low-frequency fluctuations

Dynamics Amplitude of Low-frequency Fluctuations Associated with Suicidal Ideation and Suicide Attempts in Bipolar Disorder

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雌激素与抑郁症研究概况

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目的 本文对雌激素水平在抑郁症发病机制及治疗等方面的研究进展进行综述,探讨女性生理周期中的雌激素波动引起抑郁症发病率出现性别差异化的原因,为抑郁症的研究和治疗提供依据和参考。

方法 检索知网、万方、维普、中国生物医学文献数据库、Pubmed、Embass 等数据库查阅文献,对

过往雌激素治疗抑郁症的基础实验和相关临床研究进行梳理和总结,分析目前雌激素治疗抑郁症的相关机制、临床疗效和具体进展,进一步对该方向进行归纳总结。

结果 雌激素在女性不同年龄段的波动规律以及雌激素作用于雌激素受体、HPA轴,以及通过调控神经炎症、神经细胞表观遗传学、神经发生和能量代谢参与抑郁症发生。激素替代疗法(Hormone replacement treatment, HRT)可用于抑郁症治疗, HRT在对围绝经期和绝经后妇女情绪的不同研究中呈现出不同的影响结果。

结论 动物实验和临床研究表明雌激素在抑郁症发生过程中发挥重要作用。临床研究还需进一步深入和细化研究,在开展卵巢激素对围绝经期抑郁症的影响及潜在机制的研究时,应重点关注激素水平的变化,并增加雌激素浓度的测量频次。同时,外源性植物雌激素补充以及药物载体雌激素对抑郁症患者进行有效防治也将成为未来的研究重点。

关键词: 抑郁症,雌激素水平,发病机制,抑郁症治疗

重性精神疾病患者暴力攻击行为相关因素的研究进展

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目的 为预防及干预重性精神疾病患者暴力攻击行为的发生提供理论依据和支撑;对未来相关的研究方向做一探讨。

方法 对国内外有关重性精神疾病暴力攻击行为的文献做一综述。

结果 重性精神疾病患者发病期间发生暴力攻击的行为较为常见,行为具有突发性、无目的性等特点,预防有困难,严重的后果给家属和社会带来沉重负担,危害到公共安全。重性精神疾病患者发生暴力攻击行为有明显的人口学特征;大脑结构和功能的变化能预测暴力攻击行为的发生,杏仁核与暴力攻击行为关系密切,精神分裂症患者攻击行为可能与其动态脑功能连接异常有关,双相情感障碍患者攻击行为与DRD4 exonIII48 bp VNTR之间可能存在关联;重性精神疾病患者有情绪不稳定,易激

惹等特点,或在幻觉、妄想的影响下导致暴力攻击行为的发生率增加;重性精神疾病患者的暴力攻击行为与精神病性症状有紧密的联系,阳性症状突出,认知水平下降以及患者童年的创伤均是精神疾病共病后发生暴力攻击的危险因素。

结论 重性精神疾病患者暴力攻击行为是一项公共卫生问题,需要全社会的努力和协调;重性精神疾病患者暴力攻击行为的发生与很多因素相关,是社会、心理及生物等因素共同作用的结果。以后我们可以把研究放在‘如何综合评估这些患者的暴力攻击行为并加以预防’及‘探讨这些患者发生暴力攻击行为的保护因素’两个方面。

关键词: 重性精神疾病,暴力攻击行为

中国传统产后实践与产后抑郁的关系

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目的 本研究通过探索中国传统产后实践与产后抑郁的关系,旨在为中国传统产后实践观念和行为的改变提供依据。

方法 本研究共纳入240名产后妇女。采用自编一般情况调查问卷收集产妇人口学资料,采用中文版爱丁堡产后抑郁量表(EPDS)、社会支持评定量表(SSRS)、躯体症状群量表(PHQ-15)、“坐月子”一般依从性问卷(ADP)、“坐月子”行为认可度调查问卷分别评定产后抑郁症状、社会支持程度、躯体症状的严重程度、产妇对坐月子行为的依从性及认可度,并分析其关系。

结果 EPDS与ADP总分、ADP-社交限制、ADP-饮食禁忌、ADP-避免劳动、ADP-卫生维度呈负相关($r=-0.228$ 、 $r=-0.146$ 、 $r=-0.184$ 、 $r=-0.275$ 、 $r=-0.168$, $P<0.05$ 或 0.01),与A值(ADP与其认可度的差值)呈正相关($r=0.161$, $P<0.05$)。EPDS评分阈值为9/10时,二元Logistic回归分析显示:ADP-避免劳动维度是产后抑郁的保护因素($OR=0.930$, $P<0.01$);EPDS评分阈值为12/13时,二元Logistic回归分析显示:产妇A值是产后抑郁的危险因素($OR=2.233$, $P<0.01$)。

结论 产妇对中国传统实践的践行及认可度可能影响产后抑郁的发生。

关键词：中国传统产后实践；坐月子；产后抑郁

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脑瘫患儿照料者的心理状况调查

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目的 脑瘫患儿的照料者负担过重, 可能会影响其心理健康。本研究旨在探究脑瘫患儿照料者的心理健康状况, 并提高医疗保健提供者的认识。

方法 入组 2022 年 7 月至 2024 年 5 月就诊于上海禾滨康复医院的确诊为脑瘫儿童的照料者 60 名, 使用患者健康问卷-9 (Patient Health Questionnaire-9, PHQ-9), 广泛性焦虑障碍量表 (Generalized Anxiety Disorder-7, GAD-7)、心理压力感知度量表 (Perceived stress scale, PSS) 以及匹兹堡睡眠质量指数量表 (Pittsburgh Sleep Quality Index, PSQI) 来评估照料者的情绪、压力及睡眠。

结果 研究样本包括 60 名照顾者, 其中 70% 是母亲。根据量表评分, 13% 的照顾者具有中度抑郁评分, 12% 显示极度重度抑郁, 11% 显示中度焦虑。此外, 分别有 13.5%、15.9% 和 8.7% 的照顾者被评定为中度、重度和极重度压力水平。照料者的抑郁、焦虑和压力、睡眠质量评分与受脑瘫患儿的智力影响、躯体残疾程度和频繁住院显著相关 ($p \leq 0.05$)。

结论 目前, 中国脑瘫患儿照顾者的压力和焦虑抑郁程度及其与儿童依赖程度的关系没有得到很全面的研究。脑瘫儿童的照顾者报告称, 他们面临着与儿童所需的长期治疗与照顾相关的心理健康挑战。医护人员应该采用以家庭为中心的方法, 为脑瘫儿童及其家庭提供早期和积极的医疗帮助和社会支持。

关键词：脑瘫；照料者；抑郁；焦虑；压力；睡眠

目的 探讨职业高校学生的心理健康现状, 并从人口学特征探究其影响因素, 为促进职业技术学院学生心理健康制定科学干预措施提供理论依据。

方法 采用方便抽样的方法于 2022 年通过自媒体平台在线发放心理健康自评工具, 包含患者健康问卷抑郁症状群量表 (Patient Health Questionnaire, PHQ-9)、广泛性焦虑量表 (Generalized Anxiety Disorder Scale, GAD-7), 对江西赣州三所职业高校 9140 名学生进行心理健康状况调查和评估, 以阳性检出率作为结局指标, 采用 logistic 回归分析探究影响因素。

结果 在线共回收有效问卷 9140 份。三所职高学生 PHQ-9 阳性检出率为 57.4% (5246/9140), 其中轻度 34.6%, 中度 14.7%, 中重度 5.9%, 重度 2.2%; GAD-7 阳性检出率为 39.6% (3616/9140), 其中轻度 28.1%, 中度 8.6%, 重度焦虑 2.9%。Logistic 回归分析显示, 女性、城镇地区、父母一方长期在外及单亲家庭为职业高校学生抑郁、焦虑情绪出现的危险因素。

结论 职业高校部分学生存在不同程度的抑郁或焦虑情绪, 且与多项因素如性别、居住地区、养育方式密切相关。学校、家庭和社会应共同采取针对性的措施进行预防和干预, 促进身心健康。

关键词：职业高校；抑郁；焦虑；心理健康

产后抑郁症的心理指导

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目的 对于妇女产后抑郁的心理指导

方法 1.心理治疗

(1) 支持性心理治疗 支持性心理疗法又称支持疗法。是指在执行医护过程中, 医护人员对患者的心理状态合理地采用劝导、鼓励、同情、安慰、支持以及理解和保证等方法, 可有效消除患者的不良

职业高校学生心理健康现状及其相关因素分析

情绪,使其处于接受治疗的最佳心理状态,从而保证治疗的顺利进行,使疾病早日康复。

(2) 人际心理治疗 这项抑郁症心理治疗方法主要用于治疗成人抑郁症急性期发病,旨在缓解抑郁症状,改善抑郁患者的一些社交问题。抑郁症患者常见的人际问题包括四方面:不正常的悲伤反应、人际冲突、角色转变困难和人际交往缺乏等。

- (3) 音乐疗法。
- (4) 焦点转移。
- (5) 行为调整法。
- (6) 倾诉宣泄法。
- (7) 角色交替法。
- (8) 自我鼓励法。
- (9) 自我实现法。

2. 药物治疗

- (1) 抗抑郁药物。
- (2) 激素。

3. 物理治疗

- (1) 颅微电流刺激疗法。
- (2) 电休克治疗。
- (3) 其他 研究显示中医穴位按摩可改善产后抑郁患者的心理状态和生活质量。

结果 1. 加强围生期保健

利用孕妇学校等多种渠道普及有关妊娠、分娩常识,减轻孕妇对妊娠、分娩的紧张、恐惧心情,完善自我保健。

2. 密切观察

对有精神疾患家族史的孕妇,应定期密切观察,避免一切不良刺激,给予更多的关爱、指导。

3. 充分关注

分娩过程和疼痛对产后抑郁有较大影响,尤其对产程长、精神压力大的产妇,更应给予充分关注。

4. 心理疏导

对于有不良分娩史、死胎、畸形胎儿、孕期情绪异常等高危因素的产妇,应给予她们更多的关心,及早进行心理疏导。

结论 加强孕期的保健,对产妇进行健康教育、指导产妇相关的保健知识及母婴的心身变化;讲解相关正确的母乳喂养技巧;关心爱护孕妇消除产妇紧张不安焦虑以及低落的情绪,关心产妇的家庭与个人之见的联系。让产妇更为了解产后抑郁症的概念并更好地改善情绪。

关键词: 产后抑郁; 心理指导; 关心爱护

抑郁症主客观睡眠障碍对疗效影响的对照研究

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目的 研究抑郁症主客观睡眠障碍特征和对疗效的影响的分析。

方法 1. 一般资料

选取 2022 年 2 月-2023 年 2 月我院就诊的 50 例抑郁症患者作为研究对象,采用匹兹堡睡眠质量问卷的测量,汉密尔顿抑郁量表评估,以及多导睡眠图的检查,将匹兹堡睡眠治疗问卷中第 6 项选项 AB 设置为主观睡好组(26 例),将选项 CD 设置为主观睡眠差组(24 例)。主观睡眠好组中,男 12 例,女 14 例,年龄 18~55 岁,平均年龄(36.5±18.5)岁。主观睡眠差组中,男 11 例,女 13 例,年龄 18~56 岁,平均年龄(37.0±19.0)岁;两组基线资料对比结果 $P>0.05$,具有可比性。

2. 方法

所有的研究对象均进行匹兹堡睡眠质量问卷的测量,汉密尔顿抑郁量表评估,以及多导睡眠图的检查。

2.1 匹兹堡睡眠质量问卷测量

研究对象入组时采用匹兹堡睡眠质量问卷表对其近 1 个月睡眠质量进行评定。共 7 个因子,19 项自评条目,每个 0~3 分,总分 0~21 分,得分越高睡眠质量越差。

2.2 汉密尔顿抑郁量表评估

由经过专业训练的评定员(两名)对所有研究对象进行汉密尔顿抑郁量表评估,通过观察、交谈的方式进行检查,检查完毕后两名评定员独立完成对研究对象的评分。采用 5 级评分法,0~4 分,得分越高抑郁越严重。

2.3 多导睡眠图检查

安排研究对象在睡眠实验室睡两晚,第一个夜晚主要让其适应环境,第二个夜晚开始对其整夜进行多导睡眠图检查,对研究对象睡眠进程、睡眠结构、睡眠指标等进行分析。

2.4 治疗方法

睡前 20min 开始进行肢体放松疗法,右下至上,轻声引导研究对象放松脚趾、小腿、大腿肌肉,深呼

吸、缓慢吐气，再次引导其放松臀、腹胸、背部肌肉，深呼吸、缓慢吐气，放松肩、颈、头部肌肉，放松面部肌肉保持微笑，手指放松、手臂放松、大脑放松，一次将全身、心放松。

3.疗效评价与观察指标

分析两组研究对象治疗 4 周后客观睡眠效率、睡眠进程（睡眠总时间、觉醒次数等）、睡眠结构（REM 睡眠时间、觉睡比等）、REM 睡眠指标以及抑郁情况。

4.统计学方法

将本研究两组数据纳入 SPSS21.0 分析，使用 ($\bar{x} \pm s$) 表示、t 对比检验，当 $P < 0.05$ 时表示差异有统计学意义。

结果 两组研究对象客观睡眠效率、睡眠进程、睡眠结构以及 REM 睡眠指标均无明显差异 ($P > 0.05$)；主观睡眠好组汉密尔顿抑郁量表减分率高于主观睡眠差组，结果，差异有统计学意义， $P < 0.05$ 。

结论 抑郁症患者的主观睡眠质量差于客观睡眠质量，患者在治疗的过程中往往高估了自己的睡眠障碍，因此对治疗产生了一定的抑制作用。

关键词：抑郁症,主客观睡眠障碍,特征

经颅直流电刺激联合文拉法辛治疗抑郁症的临床效果分析

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目的 分析抑郁症患者采用经颅直流电刺激进行治疗的临床可行性。

方法 以本院 60 例抑郁症患者为研究对象，对照组($n=30$)单纯施予文拉法辛治疗，研究组($n=30$)施予文拉法辛+tDCS 治疗。

对照组患者给予文拉法辛(怡诺思, 惠氏制药有限公司, 批准文号: 国药准字 J20120039, 药品规格: 150mg x 7sx2 板)进行治疗: 以 75mg/d 的初始给药剂量按照 3 次/d 的用量服用, 观察患者的病情转变, 并在 <7d 内将剂量调整至 150mg/d 进行治疗。

研究组在对照组患者治疗的基础上给予 tDCS 治疗, 以患者左侧前额叶皮层背外侧为主要刺激部位, 经颅直流电刺激仪(IS200 型, 北京飞宇星电子

科技有限公司生产)的阳极和阴极分别放置在患者的头部和对侧肩部, 形成 5cm x 7cm 的刺激电极面积, 确保皮肤与电极接触充分。设置经颅直流电刺激仪的强度为 1.4mA, 并将刺激剂量控制在 <0.057ma/cm² 范围内, 电极以弹力绷带进行固定, 刺激时间控制在 20~30min/次, 按照 1 次/d 的频次连续治疗 5d。

研究组患者的治疗总有效率 93.3%显著高于对照组 73.3%, 差异显著($P < 0.05$);研究组患者的并发症发生率 20.0%显著低于对照组 46.7%, 差异显著 ($P < 0.05$);且治疗后研究组患者的 HAMA、HAMD 评分均优于对照组, 差异显著($P < 0.05$)。

结论 在抗抑郁药物基础上联合经颅直流电刺激治疗抑郁症患者, 可显著提高临床疗效, 缓解患者的症状并减少不良反应。

关键词：抑郁症、经颅直流电刺激、临床治疗、可行性

抚慰孩子的心灵

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目的 来提高心理健康意识, 用科学的方法缓解压力, 预防心理问题。

中国科学院心理研究所曾经发布的调研显示, 约 14.8%的青少年存在不同程度的抑郁风险, 其中 4.0%的青少年属于重度抑郁风险群体。其实相比成人, 情感发育尚未成熟的青少年更容易出现情绪问题乃至抑郁障碍。这是因为, 大脑中负责感知情感的杏仁核在 15 岁时就发育成熟, 而负责控制情感的前额皮质要到 25 岁左右才会成熟, 成熟状态不一致的生理结构, 使发育中的青少年可以像成人一样感知情绪, 却无法控制情绪和行为, 而青春期受激素影响, 更增加了青少年抑郁障碍的风险。

方法 第一, 多关注孩子的情绪, 倾听他们行为背后的动机、情绪。

第二, 适当与孩子沟通交流, 通过谦虚真诚的心态, 站在孩子的角度理解、倾听他们的感受。

第三, 要更加关注青少年睡眠、运动与心理健康之间的相互影响, 更充足的睡眠和运动有助于降低青少年的抑郁、孤独和手机成瘾。

结果 愿我们以奋发有为的态度,唤起社会各界的高度重视和合力担当,为全国青少年心理健康保驾护航,让更多青少年向阳而生、健康成长。

结论 而作为医疗机构的工作人员,如何针对青少年群体的心理健康状况更好服务,我有以下四点建议:一是建立医校共联体,进一步完善青少年心理健康筛查和检测机制;二是加强宣讲活动,着力青少年的心理健康工作;三是倡导青少年健康使用手机,减少手机成瘾风险;四是加强对高风险群体心理健康的精准预防和干预工作。

关键词:青少年,抑郁症,空椅技术,手机成瘾

浅谈青少年自残

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目的 旨在通过分析其背后的心理、家庭和社会因素,提出有效的应对措施和忠告,以减少自残行为,促进青少年的健康成长

方法 研究中,首先本文详细描述了青少年自残的具体表现和潜在危害,强调了这一问题的严重性和紧迫性。随后,本文从心理层面剖析了青少年自残的心理动机,包括挫败感、无助感、自我认同问题等;从家庭层面探讨了家庭环境不稳定、亲子关系紧张等因素对青少年自残行为的影响;从社会层面分析了学校压力、网络暴力等社会因素对青少年心理健康的负面作用。在应对措施方面,本文提出了包括心理疏导、家庭支持、社会关注在内的多维度策略。首先,强调了对青少年进行心理疏导的重要性,通过专业的心理咨询和教育,帮助他们建立健康的心理防御机制,提高应对挫折的能力。其次,家庭作为青少年成长的重要场所,其支持作用不可忽视,建议家长加强与孩子的沟通,关注他们的情绪变化,提供必要的支持和帮助。最后,社会应加强对青少年自残问题的关注,通过制定相关政策、加强宣传教育、完善心理健康服务体系等方式,为青少年创造一个更加健康、积极的社会环境。除了应对措施外,本文还给出了对青少年的忠告:鼓励青少年珍惜生命,以积极的心态面对生活中的挑战和困难;同时,倡导他们建立良好的人际关系,通过与他人交流、分享,减轻心理压力,提高自我认同感和

归属感。这些忠告有助于青少年树立正确的价值观和人生观,提高心理素质,从而更好地应对自残等心理健康问题。

结果 为了预防和减少自残行为,需要家长、学校、社区和政府等多方面的共同努力。通过加强心理疏导、提供家庭支持、关注社会环境和制定相关政策措施等多维度策略的实施,可以为青少年创造一个更加健康、积极的成长环境,促进他们的全面发展。同时,呼吁全社会加强对青少年心理健康问题的关注和支持,共同为青少年的健康成长贡献力量。

结论 青少年自残是一个需要引起全社会关注的问题

关键词:青少年自残;心理疏导;家庭支持;社会关注;生命教育;心理健康

Inflammatory Factors Can Serve As Good Biological Markers for The Diagnosis of Depression in Adolescents

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Objective In recent years, an increasing number of studies have found that inflammation is associated with major depressive disorder (MDD). To explore the relationship between inflammation and MDD, we proposed the hypothesis that inflammatory factors may be biomarkers of MDD

Methods 210 participants were recruited in this study, including healthy controls (n=88) and first-episode adolescents with MDD (n=132). Plasma samples were analysed using the Luminex Magpix-based assay system (Luminex Corporation) to assess the expression levels of inflammatory factors. Potential biomarkers were screened by covariance and ROC analyse.

Results In using roc analysis to differentiate between adolescent depressed and healthy subjects, the AUC was observed for TNF- α (AUC=0.729), IL-4 (AUC=0.724), IFN- γ (AUC=0.714) and the joint diagnosis (AUC=0.772) of these three inflammatory factors.

In the male group, the highest AUC was observed for TNF- α (AUC=0.811) but for IFN- γ in the female group (AUC=0.764)

Conclusion TNF- α , IFN- γ , and IL-4 effectively identified adolescents with depression. TNF- α and C-4 accurately differentiated male patients from healthy subjects, while IFN- γ distinguished female patients. The combined diagnostic approach significantly enhanced identification of depressive disorders in adolescents. This suggests promising avenues for developing targeted diagnostic and therapeutic strategies for adolescent depression

关键词: Major depressive disorder, TNF- α , IFN- γ , IL-4

基于深度学习的精神分裂症及其高危人群局部脑年龄预测

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目的 探索精神分裂症患者及其高危人群在结构 MRI 的高分辨率下的脑年龄差异

方法 本研究共招募被试 280 例, 其中精神分裂症 (schizophrenia, SZ) 患者 80 例、SZ 患者的一级亲属即 SZ 遗传高危人群 (Genetic High Risk, GHR) 被试 78 例以及年龄性别匹配的健康 (Healthy Control, HC) 被试 122 例, 年龄范围为 18-55 岁。344 名被试均使用同一台磁共振扫描仪完成扫描, 并获得结构相磁共振成像数据。利用深度学习 Unet 模型, 对预处理产生的灰质和白质作为输入特征, 获得每个被试的体素水平的神经影像预测年龄 (脑龄) 和实际年龄之间差异的信息, 计算每个被试的 ROI 水平的脑龄差, 最后通过方差分析以及事后检验进行组间的比较。

结果 对三组的所有 ROI 脑龄差进行方差分析, FDR 校正后仍存在差异的脑龄差进行 HSD 检验。结果显示, 与 HC 相比, SZ 与 GHR 均主要在颞叶存在显著差异 (颞横回、颞上回、左侧颞下回, 左侧颞中回, 校正后均 $p < 0.001$, Cohens'd 均 > 0.8 ; 海马旁回, 校正后 $p < 0.05$, Cohens'd 均 > 0.8 ; 梭状回, 校正后 $p < 0.05$, Cohens'd 均 > 0.4)。SZ 与 HC 相比, 在右

侧杏仁核、丘脑侧后核、距状裂、黑质致密部与网状部, 左侧中央沟盖、海马、尾状核、缘上回、丘脑腹侧外核、丘脑垂体核外侧核、红核存在差异 (校正后 $p < 0.05$, Cohens'd 均 > 0.3)。而 SZ 与 GHR 相比均无显著差异。

结论 1. 利用深度学习 Unet 模型, 发现 SZ、GHR 与 HC 在脑龄差中均有显著差异。

2. SZ 与 GHR 主要在颞横回、颞上回、左侧颞下回, 左侧颞中回存在脑龄差的显著差异。

关键词: 脑龄; 深度学习; 精神分裂症; 遗传高危人群

认知衰老的前因与保护机制的范围综述

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目的 随着老年人在世界人口占比的趋势逐年上升, 认知老化对老年人生活、心理健康方面的负向影响也被越来越多的研究者广泛关注。本文结合前人研究, 探究认知衰老的前因变量并阐明其因果机制, 为认知衰老的保护提供可行性建议。

方法 以 JBI 小组发布的 PRISMA 指南为指导, 在 Google Scholar 进行文献检索, 以 cognitive aging, latent growth model, psychology, longitudinal 为关键词对文献进行检索, 并将时间设定为 2010-2013 年发布。本综述采用范围综述的方式 (scoping review) 解决研究结果可视化的问题, 并全部纳入纵向研究且以潜变量增长模型 (latent variable growth curve modeling, LGM) 为统计方法的文章, 以支撑变量之间的因果关系, 除此之外对文章的来源、样本、研究方法和研究结果进行分析, 将检索到的文章进行审核。

结果 最终纳入 8 篇文献, 发布时间均在 2010 年之后, 研究方法均采用以潜变量增长模型 (LGM) 的纵向研究。认知衰老从 50-55 岁以后发生, 孤独、社会隔离、与配偶或子女同居、经验的开放性、社会参与、生活方式、受教育程度、休闲活动和中年时期的体重指数对认知的截距具有预测作用。而社会隔离、与配偶或子女同居、减少抑郁情绪、提升社会参与、丰富生活方式、较长的教育年限, 较高

收入水平、控制休闲活动和中年期的体重指数可能对认知衰老的下降有保护作用。

结论 本研究罗列了有关认知衰老的可能的保护因素,且这些因素已经在实证研究中被证实,这可以为日后对于认知衰老的干预和防护提供视角。这是一篇基于潜变量增长曲线模型的综述,即是一篇对于纵向研究的综述,相比于横断研究,这保证了因果关系的真实性。且取样的研究来源于不同的国家,这使得研究结果具有跨文化比较的意义。综上,对于老年认知的保护,在结果的讨论部分,我们将保护措施分为三个部分,认知训练、社会参与、收入与健康,事实上,三者并非只独立发挥作用,除了直接对认知衰老产生影响外,自身也存在着紧密联系,认知训练与社会参与亦可能促进收入与健康的发展,早年认知训练的参与也可能调节社会参与的类型,因此我们应当从系统的观点理解老年认知保护的作用。

关键词: 认知衰老, 认知训练, 潜变量增长模型, 心理学

炎症因子影响青少年非自杀性自伤的研究进展

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目的 非自杀性自伤(nonsuicidal self-injury, NSSI)是指个体在没有自杀意念的情况下,故意、反复、直接地损伤自身组织,造成轻度或中度损伤的行为。青少年是NSSI的高危人群。炎症因子的中细胞因子(如白细胞介素、肿瘤坏死因子)和趋化因子在炎症反应和免疫调节中发挥关键作用,可能与NSSI密切相关。本文从炎症因子的角度探讨青少年非自杀性自伤的发病机制,并研究其预防和干预措施,为青少年非自杀性自伤的早期识别和干预提供科学依据。

方法 本文围绕“炎症”“细胞因子”“青少年”“非自杀性自伤”“NSSI”在中国知网、万方数据知识服务平台、PubMed、Web Of Science等中英文数据库中检索,筛选出有关炎症因子与青少年非自杀性自伤的研究,综述当前的研究进展并为之后的治疗

和干预指明方向

结果 (1)青少年NSSI患者在炎症因子水平上显示显著的异常表达。具体而言,青少年NSSI患者在血液或唾液中的炎症因子如IL-1 β 、IL-2、IL-6、IL-10、IL-15、TNF- α 和CCL2等表达水平显著增高,而IL-4和IL-13的表达水平则显著降低。(2)炎症因子的异常释放通过降低多巴胺和5-羟色胺水平,影响神经递质系统,增加青少年抑郁和焦虑的风险,进而引发自伤行为,同时还可能干扰神经发育和突触形成,影响情绪调节和行为控制,并导致神经元损伤和凋亡,进一步加剧青少年的自伤倾向。(3)早期预防策略包括心理教育、建立支持性社会环境和心理健康促进计划。治疗手段包括认知行为疗法(CBT)、心理支持治疗、家庭治疗、药物治疗及支持性环境和康复计划。

结论 综合研究显示,青少年NSSI与炎症因子如IL-1 β 、IL-2、IL-6、IL-10、IL-15、TNF- α 、CCL2、IL-4和IL-13的异常表达密切相关。这些炎症因子可能通过影响神经递质系统和神经发育,加剧抑郁情绪和自伤行为。早期预防和多种治疗策略如CBT和家庭治疗,有望有效降低炎症因子水平,减少NSSI行为的发生与严重程度。

关键词: 非自杀性自伤,细胞因子,炎症,青少年,NSSI

高龄产妇心理健康影响因素分析

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目的 随着社会经济的高速发展,女性生育年龄明显推迟,高龄产妇比例上升。相应的身体机能下降,妊娠并发症风险增加,高龄孕产妇面临更大的精神心理压力。为全面了解高龄产妇的心理健康状况及相关心理社会诱发因素。分析围生期孕产妇家庭功能与焦虑症状之间关系,探讨变化趋势及影响因素。

方法 依汉密尔顿焦虑量表、汉密尔顿抑郁量表、阿森斯失眠自评量表和家庭功能评定量表,于2023年6月至2023年12月对武汉市某三甲医院妇产科门诊125例初产妇,分四个时间点进行随访调查(孕8月产检、孕9月产检、分娩当天、产后42

天), 测量其家庭功能、睡眠状况及产后焦虑症状, 基于潜变量增长混合模型, 描绘发展轨迹并识别其潜在亚组, 构建广义相加模型及进行中介效应分析变量关系, 绘制工作特征曲线以预测效能。

结果 本研究收集 125 例初产妇 (57 例适龄初产妇, 68 例高龄初产妇), 高龄产妇焦虑的检出率 23.7%, 远高于适龄孕产妇, 其压力主要来自对母婴健康的担心, 对家庭支持不足的担心, 对分娩疼痛的担心等。家庭功能是影响孕产妇焦虑症状的重要因素之一。高龄产妇的家庭功能存在异质性, 同时家庭的结构、子系统、角色和沟通等多方面也会受到焦虑症状的影响。

结论 加强个性化的随访管理和心理保健服务, 提高高龄产妇家庭功能, 可以减轻焦虑和失眠, 进而寻求改善孕产妇心理健康的有效方法。

关键词: 高龄产妇, 心理健康, 家庭功能, 支持

性别烦躁者的心理健康

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目的 性别烦躁正在上升。许多性别烦躁者生活在社会的边缘, 面临耻辱、歧视、排斥、暴力和健康状况不佳。尽管对性别恐惧症(GD)人群的社会接受度有所提高, 但这些人仍然承受着高度的情绪压力, 这凸显了了解他们精神疾病诊断的重要性。

方法 采用 MEDLINE/PubMed、SciELO、Cochrane、EMBASE、PsychINFO 数据库和手动检索系统评价该人群终生 Axis I 精神障碍的发生率, 对 1980 年以后发表的文章进行检查。搜索使用关键词: ('transgender' OR 'gender identity disorder' OR 'gender dysphoria' OR 'transsexualism' OR 'gender dysphoric patients' OR 'gender incongruence') AND ('mental disorder' OR 'axis I' OR 'psychiatric disorders') AND ('comorbidity' OR 'comorbid' OR 'prevalence')。 (“跨性别者”或“性别认同障碍”或“性别障碍”或“跨性别主义者”或“性别障碍患者”或“性别不一致”)和 (“精神障碍”或“I 轴”或“精神障碍”)和 (“合并症”或“合并症”或“患病率”。

结果 性别烦躁正在上升, 人口调查显示成年

人的患病率在 0.2-0.6% 之间, 日本一项评估性别烦躁 (gender dysphoria GD) 患病率的横断面研究结果 GD 的患病率高于先前估计的, 在出生时被归类为男性或女性的受试者中, 有 0.87% (95%CI 0.69-1.1) 和 1.1% (95%CI 0.86-1.3) 报告了广泛的性别烦躁。与顺性别者相比, 跨性别者的精神疾病诊断率更高。与同龄人相比, 性别相关青少年 (Gender-referred adolescents GR) 表现出相当大的精神症状。但在 GR 青少年中, 40.9% 在青春期没有接受任何精神病学诊断。受性别影响的儿童谈论自杀的可能性比未受影响的儿童高出 5.1 倍, 自残/企图自杀的可能性也高出 8.6 倍。跨性别者中非自杀性自残 (NSSI) 的发生率以及过去一年 NSSI 的相关性调查研究。53.3% 的参与者报告一生中曾有过自伤。22.3% 的样本报告了过去一年的 NSSI。研究发现, 青春期阻滞剂并不能缓解性别恐惧症儿童的负面想法。性对于大多数顺性别者和跨性别者都很重要, 并且是生活质量的一个重要方面。

结论 识别并为诊断为 GD 的人群制定心理健康公共政策十分迫切。

关键词: 性别烦躁, 性别认同障碍, 易性症, 心理健康

White Matter Abnormalities and Cognitive Impairment in Bipolar I Disorder: A Multi-State Investigation

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Objective Bipolar I disorder (BD-I) presents a formidable challenge to modern psychiatry, characterized by recurrent manic episodes and depressive states, often accompanied by cognitive dysfunction. Despite its clinical significance, the mechanistic underpinnings of cognitive impairment in BD-I remain obscure. Structural brain changes have been implicated as potential contributors to this cognitive burden. In this study, we examined the relationship between cognitive impairment and white matter abnormalities in distinct states of BD-I, shedding light on the neurobiological basis of cognitive deficits in this population

Methods Our investigation involved 119 participants aged 18 to 45, comprising 66 healthy controls (HC) and 53 BD-I patients: 28 remission (r-BD), 10 manic (m-BD), and 15 depressive (d-BD). Comprehensive assessments were conducted, encompassing clinical evaluations, cognitive testing utilizing the MATRICS Consensus Cognitive Battery (MCCB), and diffusion tensor imaging (DTI). Subsequently, we performed intergroup comparisons, statistical analyses, and correlation studies to unravel the complex relationships within this paradigm

Results Our findings revealed compared to HC, r-BD individuals exhibited significant disparities in attention, processing speed, working memory, and executive function. Similarly, m-BD patients displayed cognitive deficits in processing speed, visuospatial memory, and executive function, and d-BD individuals in emotional intelligence. Notably, our DTI analyses demonstrated a shared neuropathological feature across all BD-I states, revealing a common decrease in fractional anisotropy (FA) within the corpus callosum trunk (CCT). Moreover, our analyses identified distinct correlations between cognitive performance and the FA values of the CCT in specific BD-I states. In r-BD, the CCT FA values correlated with various cognitive functions, such as Trail Making Test A ($r=-0.586$, $p=0.001$), Symbol Coding ($r=0.434$, $p=0.021$) and Maze Test ($r=0.426$, $p=0.024$). In d-BD, the CCT FA values were negatively associated with Mayer-Salovey-Caruso Emotional Intelligence Test ($r=-0.672$, $p=0.006$). In contrast, no such correlations were observed in m-BD. When all BD-I patients were considered together, emotional intelligence was inversely correlated with CCT FA values ($r=-0.396$, $p=0.00$)

Conclusion In conclusion, this study highlights the nuanced nature of cognitive impairment in BD-I across different states, with the most severe deficits observed during remission. Notably, white matter abnormalities within the corpus callosum trunk appear to be a consistent feature of BD-I, possibly contributing to the cognitive challenges faced by these individuals. Our findings offer valuable insights into the neural substrates of cognitive dysfunction in BD-I, with potential implications for targeted interventions to ameliorate

cognitive deficits in this population

关键词: Bipolar disorder type I, White matter integrity, MATRICS Consensus Cognitive Battery.

基于 Q 方法追踪团体关系会议中参会成员学习体验的演变

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目的 团体关系会议 (GRC) 是一项体验式学习活动, 参与成员能够在其构建的团体环境中研究自身行为和感受团体动力。然而国内未有研究就 GRC 中参会成员学习体验的发展性进行分析。因此, 本研究旨在采用 Q 方法, 通过追踪研究, 探索 GRC 后一年内参会成员学习体验的演变过程。

方法 GRC 前基于目的性抽样方式来选取被试, 招募 21 名被试进行预访谈 (2 名) 和正式半结构化访谈 (19 名), 每次约 30-45 分钟。通过提取访谈中描述学习体验的语句作为 Q 陈述来构建 Q 样本, 以是否有新的编码或主题出现为判断依据来进行资料饱和检验。研究招募 27 名 2022 CATWGRC 的国内参会成员组成 P 样本, 被试在会后 (T1)、3 个月 (T2)、6 个月 (T3)、9 个月 (T4) 和 12 个月 (T5) 后分别进行了 5 次 11 级迫选 Q 排序和排序后访谈 (10-20 分钟)。通过 KADE 软件, 采用主成分分析法进行 Q 因子分析。在因子解释阶段, 根据每个因子的典型排布和区别陈述进行因子命名, 并结合排序后访谈资料对不同时间点的 Q 因子进行进一步定性分析。同时, 通过分析被试的极端 Q 陈述随时间的变化来确定学习体验不断发展的轨迹。

结果 通过访谈构建了由 52 条 Q 陈述构成的 Q 样本, 内容包含会议体验、会议评价和会议影响三个方面。在 GRC 会后每个时间点均发现了 4 个 Q 因子, 每个时间点中 Q 因子累计变异解释率分别为 51%、47%、48%、46%、46%, 均 >40%。根据各因子典型排布与区别陈述进行命名: T1: 迷茫观察者、主动体验者、寻求保护者、自我反思者; T2: 边界维护者、消极体验者、能力提升者、认知提升者; T3: 积极实践者、边界束缚者、寻求指导者、反对权威者; T4: 会议肯定者、团体观察者、关注差异

者、体验转化者；T5：表达困难者、积极探索者、勇于表达者、行动受限者。结合排序后访谈资料对每个因子进行进一步的定性解释，最终得到 GRC 参会成员学习体验随时间的变化过程为：对会议的评价和感受（T1）→关注自身学习和改变（T2）→将会议学习体验与现实团体实践相联系（T3）→关注个体学习向关注团体学习的转变（T4）→学习体验的持续发展（T5）。

结论 GRC 中参会成员的学习体验包括会议体验、会议评价和会议影响三个方面，并受到个人特征（性别、职业、参会次数）和文化教育背景因素的影响。GRC 后 1 年内，参会成员学习体验的演变趋势包括以下三个方面：①从对会议的评价和体验到对现实团体的实践和感悟，②从个人层面的学习到团体层面的学习，③从主观感受到付诸行动。

关键词：团体关系会议，体验式学习，Q 方法，学习体验，追踪研究

突触囊泡蛋白 2A 在认知障碍发病机制中的研究进展

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目的 目前的证据表明，阿尔茨海默病患者在出现首发症状前几十年就开始出现病理变化和脑损伤。因此，AD 的早期干预是延缓疾病进展的重要策略。突触缺失被认为是 AD 的早期病理表现，与 AD 的病理性认知能力下降密切相关，突触囊泡蛋白 2A (SV2A) 位于突触前末端的突触囊泡中，被认为是突触密度的第一个体内标志物。研究 SV2A 功能障碍与 AD 的关系有助于为 AD 的早期识别及靶向治疗提供新思路。

方法 以“Synaptic vesicle glycoprotein 2 A”“SV2A”“synaptic density”“synaptopathy”“cognitive impairment”“Alzheimer’s disease”“AD”等为关键词，查阅近 5 年文献，了解 SV2A 与认知障碍的关系及其具体机制。

结果 在最新的研究中，SV2A 被证明与既往的 AD 生物标志物(如 A β 42/A β 40、p-tau、NfL 和 GFAP)相比，在 AD 早期诊断中具有更高的灵敏度。血清 SV2A 在 AD 早期筛查中的高效性，加上血液检测

的易用性和非侵入性，使血清 SV2A 成为健康人群筛查的优秀生物标志物。目前有研究表明，SV2A 的缺乏与 A β 和 Tau 过度磷酸化有关，SV2A 的过表达与 APP 裂解酶和载脂蛋白 E 基因的下调有关。并且 SV2A 对 AD 发生和发展的调节可能由磷脂酰肌醇 3-激酶 (PI3K) 信号通路介导，SV2A 的过表达抑制 PI3K 信号通路。此外，有研究表明，小胶质细胞可能在突触丢失中发挥积极作用。

结论 SV2A 与认知障碍有关，未来需要更深入的研究来阐明 SV2A 导致 AD 发病的具体机制。这有利于通过靶向 SV2A，为 AD 的早期诊断和治疗提供一种新的策略。

关键词：突触囊泡蛋白 2A,阿尔兹海默症,认知障碍,突触密度

运用 Q 方法探究精神科医生产生高职业倦怠感的原因

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目的 职业倦怠是一种由“未成功管理的工作场所压力”引起的综合征，影响着各种从业者的身心健康，尤其在医生这种群体当中。精神科医护人员中产生倦怠感的比例越来越高，但是目前的研究整体集中在精神科医生职业倦怠感的现状、职业倦怠感带来的危害等，对于精神科医生产生倦怠感的原因尚不明确。本研究使用 Q 方法探讨来源不同的精神科医生产生倦怠感的原因，从精神科医生角度出发，来了解其主观想法。了解来自专科医院与综合性医院的医生倦怠原因的不同，来帮助精神科医生本人更好地认识倦怠感、提前预防，或者为管理者制定减少倦怠感的发生发展的措施提供一定的参考。

方法 本研究选取了来自沈阳、抚顺、长春、哈尔滨的 5 家医院的精神科医生，运用马斯勒职业倦怠感量表-服务版初步筛选出高倦怠水平（情绪衰竭 ≥ 27 分、人格解体 ≥ 10 分、降低的个人成就感 ≤ 33 分）的研究对象。然后使用 Q 方法来寻找产生职业倦怠感的原因。先通过查阅文献、对 20 名被试者针对职业倦怠感的原因进行半结构化访谈（寻找不同背景资料的，遵循样本量饱和性的原则，经过饱和

性检验直至在访谈中不出现新的观点后确定的被试者的数量)等,得到了65条描述职业倦怠感原因的语句的Q母体,再经过消除重复的、简化整合及专家审阅修改后,形成了一个由35条倦怠感原因描述语句构成的Q样本。再次招募来自专科医院15名、综合医院14名总计29名被试者作为P样本,运用35条Q样本制作成的Q-sort表格排序工具,让来源不同的P样本做9级排序,并就排序结果进行访谈。运用Q方法统计软件进行分别数据分析,经过主成分分析、因子旋转等步骤,得到不同职业倦怠原因的因子分类,最后对因子解释并命名。

结果 在分发150份有效问卷中,62份问卷达到了高水平倦怠,本研究的精神科医生整体倦怠水平为41.3%。职业倦怠感的因子:专科医院,医生产生倦怠感的因子可分为4种:工作量的繁多和工作回报的不平衡;工作性质的特殊和医患关系的摩擦;个人特质的差异和职业规划的冲突;社会环境的影响和预期期望的矛盾。综合医院,医生产生倦怠感的因子可分为3种:医院制度不合理和工作任务的繁多;人际关系的不良和职业价值的未果;个人要求过高和医疗环境的分配不均。

结论 本研究将来自专科医院的精神科医生职业倦怠感的产生原因分为四类,来自综合医院的分为三类;原因有相似之处,比如医院制度和分配资源、医患关系等;有不同之处,比如工作量、工作任务、职业期望、个人特征等;通过研究我们也可以了解到Q方法是一种独特的研究主观性的方法,在职业倦怠感的研究上体现了其独到的优势。

关键词:倦怠,职业倦怠感,精神科医生,原因

围绝经期抑郁障碍卵巢功能变化与神经类固醇激素和下丘脑-垂体-肾上腺轴失调

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目的 本文主要围绕围绝经期抑郁障碍发病机制中神经内分泌机制理论假说,围绝经期女性卵巢功能失调、雌激素水平下降,激活体内应激反应变化,引起皮质醇、促肾上腺皮质激素等神经类固醇激素变化,导致下丘脑-垂体-肾上腺(LPA)轴紊乱,产生抑郁症状。

方法 本文回顾了围绝经期抑郁障碍的相关文献,包括流行病学研究、预测因素研究、相关性分析和雌激素治疗研究等方面。结合动物模型、临床研究的数据和结论,综合论述了围绝经期抑郁障碍发病的神经内分泌假说和机制。

结果 围绝经期是女性必经的过渡期,期间抑郁症状的发生率或抑郁障碍的患病率增加2-3倍。虽然雌激素水平影响情绪的机制尚不清楚,但越来越多的基础和临床研究证据表明,女性卵巢激素及其衍生的神经类固醇激素的波动导致下丘脑-垂体-肾上腺(HPA)轴的GABA能神经调节改变。对于一部分女性来说,面对神经类固醇激素水平的变化,GABA-A受体无法调节GABA能神经活性,可能会导致HPA轴功能障碍,从而增加对压力的敏感性,导致抑郁障碍的发生。

结论 神经内分泌机制假说为女性围绝经期激素水平变化与更年期社会心理环境因素相互作用,从而导致围绝经期抑郁障碍发生的风险机制提供了重要的理论依据。此外,为将来围绝经期抑郁障碍的治疗和干预方法、新药开发等提供必要的理论基础。

关键词:围绝经期抑郁障碍,雌激素,下丘脑-垂体-肾上腺轴,应激反应

基于扎根理论探究影响“慢性化”精神分裂症患者预后的社会心理因素

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目的 本文通过扎根理论探索精神分裂症患者“慢性化”的社会心理因素,可以深入地了解到患者等人的内心的真实想法,使我们在临床治疗、家庭支持及社会支持方面可以精准切入问题的关键点。可以帮助我们更好地理解其“慢性化”过程中所面对的困境,为临床治疗和家庭照护提供指引。

方法 本文运用扎根理论研究方法。经入组及排除筛选,访谈了15名精神分裂症患者和7名精神科医生。对访谈所得的原始数据进行深入编码与分析,提取并形成子类属,对子类属进行了进一步的编码分析,按照一定的逻辑顺序对它们进行归类和

整合,最终提炼出核心类属。核心类属与理论基础进行对比,提炼出精神分裂症患者“慢性化”的社会心理因素作用模型。最后运用解释结构模型,对核心类属进行编号,根据各因素之间的相关关系列出邻接矩阵,将数据录入 SPSSPRO 进行数据分析,得到可达矩阵。将社会心理因素划分为不同的层级,构建出层级结构模型,解析各影响因素的作用路径。

结果 以原始数据资料的语句编码,提炼出原始语句的初始概念,形成 50 个子类属。之后对初始编码得到的 50 个子类属进一步归纳和整合,得到 13 个核心类属,分别是自我领域功能低下、低自尊、病耻感、基因文化性别、家属的态度和行为、家属的经济和照顾负担、较少的情感支持、社会政策的改善、增订和落实、社会认同和群体压力、社会偏见、媒体影响、医生的态度和行为及精神卫生服务的易得性。对核心范畴进行进一步的精练,提取出 4 个轴心类属,分别是个人支持、家庭支持、社会支持和医疗卫生支持。最后建立层级结构模型,将精神分裂症“慢性化”社会心理因子体系分为七个等级递阶结构。媒体影响力与基因文化性别在层级结构中是最基本、最深层次的。最深层有许多因素影响或通过作用于其他层次因素来传递其影响效应,对其他层次的各种因素及预防精神分裂症“慢性化”有深远的影响,需要长期的研究与突破。低的自我领域功能、病耻感、家庭成员的态度与行为,家庭经济照料负担与家庭成员的情感支持,改善、更新与实施社会认同与群体压力,社会偏见,社会情绪支持,医生的态度与行为,在精神分裂症患者中扮演“承上启下”的角色,通过直接作用于第一层因素,间接影响精神分裂症患者的“慢性化”,并将深层因素的影响传递到“慢性化”。

结论 个体支持是影响精神障碍患者“慢性化”的内在因素。精神分裂症“慢性化”社会心理因子体系可分为七个等级递阶结构,媒体影响力与基因文化性别是最基本、最深层次的因素;其他因素扮演“承上启下”的角色,间接影响精神分裂症患者的“慢性化”并传递深层因素的影响。

关键词: 精神分裂症,慢性化,社会心理因素,扎根理论,解释结构模型

基于 Q 方法探索东北某专科医院精神科医生的职业认同

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目的 职业认同可以反映从业者对职业的看法、态度、满意度以及认识程度。积极的职业认同有助于稳定人才队伍,缓解职业倦怠,降低离职倾向。本研究旨在应用 Q 方法探究东北某专科医院精神科医生的职业认同,从精神科医生的角度出发,运用主客观相结合的方法更好的展现其内心真实的想法。深入的、有目的性的了解到专科医院精神医生对职业认同的不同看法,可以对未来专科医院人才的管理培养和发展提供一定的参考。

方法 本研究采用 Q 方法探究精神科医生不同的职业认同,具体的操作步骤如下: 1. 构建 Q 样本: 采用半结构式访谈法,最终访谈了 8 名精神科医生,系统性地提炼出 32 条反映精神科医生职业认同各层面的陈述语句,形成研究的 Q 样本。2. 选择 P 样本: 设计一套调查参与者背景信息的调查问卷,采用非随机、有目标的选择方式,挑选具有不同背景特征的 18 位精神科医生作为参与排序的 P 样本。3. Q 排序: 为受试者提供 9 等级的正态分布表格,受试者在专业人员的指导下完成由“最同意”、“模糊不确定”、“最不同意”的顺序进行强迫排序。4. 数据分析: 本研究应用 KEN-Q 软件进行处理分析 Q 排序结果,对收集到的 Q 排序数据进行深入处理与分析,其中包括主成分分析法以提取关键因子,并采用因子旋转技术(如 Varimax 旋转)来优化因子结构,提高解释力。

结果 在本项研究中,我们成功地识别出了四个关键因子,并对其特征值和所解释的变异量进行了如下统计: 第一个因子的特征值为 6.4619,它能够解释总体变异量的 36%; 第二个因子的特征值为 2.0159,其对变异量的解释贡献率为 11%; 第三个因子的特征值是 1.5299,其所解释的变异量占比为 8%; 而第四个因子的特征值为 1.3634,同样也解释了 8%的变异量。四个因子的特征值均大于 1,累积解释变异量为 63%。专科医院精神科医生的职业认同分为四个类型,具体命名为“期望提高福利待遇的精神科医生”;“重视职业幸福感的科医生”;“期望精神卫生发展稳健前行的科医生”;“青睐管理岗位的精神科医生”。

结论 本研究中专科医院的精神科医生职业认

同感主要分为以下 4 个类型：“期望提高福利待遇的精神科医生”；“重视职业幸福感的精神科医生”；“期望精神卫生发展稳健前行的精神科医生”；“青睐管理岗位的精神科医生”。

关键词：精神科医生，职业认同，精神卫生，Q 方法

抑郁症患者就医延迟的影响因素：一项质性研究

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目的 抑郁症不仅会导致个体功能受损和生活质量下降，还会带来巨大的经济损失和沉重的社会负担。尽管目前已有有效的治疗方法，但抑郁症患者寻求专业治疗的情况并不理想，绝大多数患者往往经过长时间拖延才前往医院就诊，为了进一步理解导致患者就医延迟的因素，探索患者的观点至关重要。本研究旨在通过质性研究方法深入探讨抑郁症患者就医延迟的影响因素，以便提供合理化建议促进患者及时就医，提高精神卫生服务的有效利用率。

方法 采用目的抽样法，以研究者本人为研究工具，对 16 名符合纳入和排除标准的抑郁症患者进行一对一结构化访谈，在访谈结束后 48 小时内及时将录音转换为文字稿并进行校对，共获得了大约 5 万字的有效文字稿，并以此作为第一手的研究资料。将整理的有效文字稿导入 Nvivo12 软件，运用质性研究中的程序化扎根理论方法对访谈资料进行规范化的处理与编码分析，提取抑郁症患者就医延迟的影响因素，在此基础上利用解释结构模型方法，解析各影响因素间的层次关系，进而构建抑郁症患者就医延迟影响因素的多级递阶结构模型。

结果 从访谈资料提取出导致抑郁症患者就医延迟四个因素：个人因素(认知水平、疾病发展、个人感知、信息素养、求助偏好、个人态度)、人际网络因素(亲朋支持、工作关系)、医疗资源因素(实际成本、专业水平)、社会环境因素(传统观念、网络媒体)，这些因素通过解释结构模型方法可进一步分为四个层级，归纳为表层、中层和深层三个层次。

结论 抑郁症患者就医延迟行为受个人因素(认知水平、疾病发展、个人感知、信息素养、求助偏好、个人态度)、人际网络因素(亲朋支持、工作关系)、医疗资源因素(实际成本、专业水平)和社会环境因素(传统观念、网络媒体)的影响。影响抑郁症患者就医延迟的 12 因素通过解释结构模型可划分为四个层级，并归纳为表层、中层和深层三个层次。第一层因素包括个人感知、求助偏好与个人态度，也是影响抑郁症患者就医延迟的表层因素；第二、三层因素包括认知水平、实际成本、信息素养、亲朋支持、工作关系与专业水平，属于中层因素。第四层因素包括疾病发展、传统观念与网络媒体，是影响抑郁症患者就医延迟的深层因素。表层因素对就医延迟的行为产生直接影响，中层因素既受到深层因素的影响，又对表层因素产生直接影响，深层因素是影响抑郁症患者就医延迟的根本因素，对其他因素的影响面较广，可直接或间接影响表层和中层因素，并且深层因素中的传统观念和网络媒体之间也有影响作用。

关键词：抑郁症，就医延迟，影响因素，质性研究，扎根理论，解释结构模型

高原躯体症状障碍患者的躯体症状与负面情绪的关系

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目的 躯体症状障碍的特点为存在一种或多种躯体症状以及过度的感受、想法和行为，在一般人群中的发病率较高，对社会造成了较大的医疗负担。临床上发现躯体症状障碍在高原地区的发病率较高，且很多伴随着各种形式的负面情绪，如焦虑、抑郁、压力及述情障碍。但这些负面情绪在高原患者中的关系尚不明确。

方法 本研究纳入 85 例高原躯体症状障碍患者以及 90 例性别、年龄相匹配的高原地区的健康被试，所有被试均接受了自评量表的评估。在躯体症状障碍方面使用了 SSD-12(躯体症状量表 12 条目)、PHQ-15(健康问卷躯体症状群量表 15)评估躯体症状的严重程度，在负面情绪方面使用了 PHQ-9(患者健康状况问卷-9)评估抑郁、GAD-7(患者健康状

况问卷-7)评估焦虑、TAS-26(多伦多述情障碍量表-26)评估述情障碍、CPSS(压力知觉量表)评估压力程度。

结果 本研究发现,高原地区躯体症状障碍患者的两项躯体症状量表评分以及焦虑、抑郁、压力水平显著高于健康对照。在患者组中,躯体症状的严重程度与多种负面情绪(焦虑、抑郁、压力)呈正相关。

结论 高原地区躯体症状障碍患者除了呈现出躯体症状相关的症状外,还常伴随着多种负面情绪,如焦虑、抑郁、压力等。在临床上针对躯体症状进行治疗的同时,也应当针对其负面情绪采取一定的治疗措施,如抗抑郁药,以期从多方面缓解患者的多种症状。

关键词: 躯体症状障碍,高原人群,负性情绪

儿童青少年边缘特质量表中文简化版的修订及信效度检验

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目的 本研究引进儿童青少年边缘特征量表(BPFSC-11)中文简化版,旨在为我国儿童青少年边缘人格特质的探索、评估及治疗提供依据。

方法 通过翻译、回译、文化调试、预实验后形成了 BPFSC-11 中文版,采取随机整群抽样法,于 2023 年 7 月选取西安市、朔州市、廊坊市三个地区的 3 所中学的在校中学生进行线上问卷调查。研究工具包括一般情况调查问卷、BPFSC-11 中文版、情绪调节困难量表(DERS)、故意自残量表简版(DSHI-9)、加州大学洛杉矶分校的孤独量表(UCLA)、90 项症状清单(SCL-90)中的偏执和人际关系敏感分量表。最终回收问卷 1126 份,三周后,随机抽取 100 人接受重测。使用 SPSS27.0 软件进行项目分析、探索性因子分析、信度检验、构想效度检验及一般人口学差异分析,使用 AMOS28.0 软件进行验证性因子分析。

结果 中文版 BPFSC-11 的项目分析符合心理测量学要求($P < 0.001$),探索性因子分析和验证性因子分析结果显示中文版 BPFSC-11 为一维结构,单因子的模型拟合度良好, $\chi^2 / df = 2.433$;

RMSEA=0.051 ; GFI=0.973 ; AGFI=0.950 ; RMR=0.032; NFI=0.974; IFI=0.984; TLI=0.976; CFI=0.984。中文版 BPFSC-11 的内部一致性信度 Cronbach's α 系数为 0.908,重测信度为 0.807。中文版 BPFSC-11 得分与 DERS ($r=0.645$)、DSHI-9 ($r=0.288$)、UCLA ($r=0.632$)、SCL-90 偏执及人际关系敏感分量表 ($r=0.599$, $r=0.625$) 等得分均存在正相关 ($P < 0.01$)。中文版 BPFSC-11 得分在男生 (23.28 ± 9.42) 与女生 (24.43 ± 10.45) 之间无显著差异;有年龄中存在显著差异,其中 16 岁及 17 岁得分最高,且两个年龄得分差异不显著;非独生子女得分显著高于独生子女;农村样本得分显著高于城市样本;高中组得分显著高于初中组;父母婚姻不稳定的青少年得分显著高于父母婚姻稳定的青少年 (均 $P < 0.01$)。

结论 本研究完成了 BPFSC-11 在中国文化背景中的修订及信效度研究,表明中文版 BPFSC-11 具有良好的信度和效度,是一种可靠有效、简洁方便的边缘人格特质测量工具,可用于中国儿童青少年边缘人格特质的评估。

关键词: 边缘人格特质,青少年,儿童,信效度,量表

孕妇孕次与孕期心理问题关系的研究

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目的 本研究旨在探讨孕妇的孕次(怀孕次数)与孕期抑郁之间的关系,为其预防和干预提供策略。

方法 本研究为横断面研究,共纳入了 3626 名在某三甲医院产科接受产前检查的孕妇,采用标准化的问卷调查法收集数据。问卷内容包括孕妇的基本信息(如年龄、职业、婚姻状况、文化程度及家庭收入等)、孕次信息,以及孕期抑郁的评估量表。孕期抑郁的评估采用抑郁自评量表(SDS)。数据分析采用 SPSS25.0 统计软件,通过描述性统计、卡方检验和逻辑回归分析等方法,对孕次与孕期抑郁之间的关系进行了详细分析。

结果 1. 孕次:在参与研究的 3626 名孕妇中,孕次范围为 1-5 次,平均孕次为 1.7 次。其中,初孕

妇(孕次为1)共有1486名,占比41%;经孕妇(孕次大于1)共有2140名,占比59%。

2. 孕期抑郁发生率:根据SDS量表评分,本研究发现孕期抑郁的总发生率为21%,即共有765名孕妇在孕期表现出抑郁症状。

3. 孕次与孕期抑郁的关系:随着孕次的增加,孕期抑郁的发生率逐渐升高。在初孕妇中,抑郁症状的发生率为5.4%(80/1486);孕次为2的孕妇中抑郁的发生率为7.2%(86/1195),孕次为3的孕妇中抑郁的发生率为7.7%(62/808),而孕次大于或等于4的孕妇中抑郁的发生率最高,达到了12.1%(53/437)。卡方检验显示,不同孕次组间的抑郁发生率存在显著差异($\chi^2=27.1$, $df=3$, $p<0.001$)。

4. 逻辑回归分析:为了进一步探究孕次与孕期抑郁之间的关系,本研究进行了逻辑回归分析。结果显示,孕次是孕期抑郁的独立危险因素。随着孕次的增加,孕妇出现抑郁的风险逐渐增加($\beta=0.12$, $p<0.001$)。这一结果意味着,相比于初孕妇,经孕妇更容易在孕期出现抑郁症状。

结论 本研究发现,孕妇的孕次与孕期抑郁之间存在显著的正相关关系,即孕次越多,孕期抑郁的危险越高。这一结果提示我们,对于孕次较多的孕妇,应给予更多的心理健康关注和支持。通过加强健康教育、减少无效妊娠以及建立社会支持网络等措施,可以帮助预防和减少孕期抑郁的发生。

关键词:孕妇;孕次;孕期抑郁;逻辑回归分析

基于Q方法探究专科医院精神分裂症和双相情感障碍患者服药不依从的自陈原因

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目的 多数严重精神障碍属于慢性疾病范畴,药物治疗是治疗的关键,而在临床工作中发现几乎一半的精神疾病患者不能坚持服药。服药不依从性会导致精神症状加重,增加疾病复发率、再住院率以及经济负担。本研究应用Q方法探究精神疾病患者服药不依从的自陈原因,并提出相应的干预措施,为解决精神疾病患者服药不依从问题提供一定的参考。

方法 本研究采用Q方法探究专科医院精神分裂症和双相情感障碍患者服药不依从的自陈原因。首先,对研究对象进行面对面半结构式访谈,收集Q语句,当没有新的语句出现时,资料达到饱和,停止访谈。然后对收集到的Q语句进行审核、修正,形成最终的Q陈述语句;其次,挑选P样本,应选择背景不同,对研究主题可能有不同建设性意见的受访者进行Q排序,P样本的数量小于Q样本中陈述的数量;最后运用PQ method软件对相关数据进行主成分分析、因子旋转等运算步骤,其中因子提取时要求因子特征值 >1 ,并且必须有两个以上Q排列映射到该因子才能予以保留。因子旋转时应保留因子载荷量的绝对值大于 $2.58 \times (1/\sqrt{Q})$ (样本数量) ($P < 0.01$),且不存在跨因子情况的Q排列,各因子累计可解释变异量需 $>40\%$ 。

结果 本研究选取了8名符合纳入及排除标准的精神疾病患者进行面对面半结构式访谈,结合文献进行整理,形成56条Q陈述集合,最后经过审核、修正形成35条Q陈述语句。邀请了21名精神疾病患者参与Q排序过程,依据服药不依从自陈原因,将其分为5种类型:“家庭和社会支持不足”、“对治疗信息了解不足”、“自我感知药物疗效不明显”、“病耻感”、“无法耐受副作用”。因子1的特征值为4.1983,因子2的特征值为2.4456,因子3的特征值为1.9577,因子4的特征值为1.8557,因子5的特征值为1.5995,累积解释率为57%。

结论 本研究从患者的角度进行分析将专科医院精神分裂症和双相情感障碍患者服药不依从的自陈原因归为5类,为专科医院精神分裂症和双相情感障碍患者服药不依从行为的干预与治疗提供新思路,有助于提高服药依从性。

关键词:Q方法,服药依从性,自陈原因,精神分裂症,双相情感障碍

正念认知疗法对围产期抑郁症患者的疗效

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目的 由于药物治疗对围产期抑郁症患者及胎儿可能得不良影响,心理治疗成为围产期抑郁患者的一线选择。本研究探索正念认知治疗

(Mindfulness based cognitive therapy, MBCT) 对围产期抑郁症患者的疗效。

方法 本研究为纵向研究,患者来自于2023年2月至2024年2月在复旦大学附属华山医院精神医学科就诊的42位门诊患者。采用随机数字法,将患者随机分配进入MBCT及心理健康教育组(Psychoeducation, PED),共进行八周治疗。在治疗前、治疗4周及治疗8周采用患者健康问卷-9(Patient Health Questionnaire-9, PHQ-9)和17项汉密尔顿抑郁量表(17-Hamilton Depression Scale, HAMD)评估患者基线及治疗4周及8周时抑郁症状的程度。

结果 进行全分析集分析(Full-analysis-set, FAS), MBCT组及PED组均为21人。与基线相比,治疗4周及8周后, MBCT组及PED组患者的自评及他评抑郁量表评分均较基线降低(均 $P<0.001$),但MBCT组抑郁量表的减分率在治疗4周及8周时,均明显高于PED组,差异具有统计学意义($p<0.05$)。

结论 MBCT对围产期抑郁具有良好的疗效,由于无药物不良反应,结构化,短程,患者接受度更高。

关键词: 基于正念的认知治疗(MBCT); 心理教育; 围产期抑郁;

(SDS)分别评估患者的抑郁程度、焦虑程度、快感缺失程度、睡眠质量、社会功能。所有入组的患者均完成外周血IL-6及CRP的检测。通过多元线性回归模型分析了快感缺失症状与IL-6和CRP等炎症因子,以及匹兹堡睡眠质量指数(PSQI)、席汉残疾评定量表(SDS)之间的关系。

结果 本研究中70%的抑郁症患者存在快感缺失症状,快感缺失量表与IL-6及CRP等炎症因子具有相关性,IL-6和CRP数值越高,快感缺失症状越严重;快感缺失越严重,睡眠越差,社会功能越差,差异具有统计学意义($P<0.05$)。

结论 快感缺失是抑郁症患者的核心症状之一,严重影响患者的睡眠及社会功能,白介素-6和C反应蛋白等炎症因子可能参与了对快感缺失症状的介导。

关键词: 抑郁症; 快感缺失; 白介素-6; C-反应蛋白

抑郁症患者快感缺失症状与白介素-6和C反应蛋白的相关性

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目的 快感缺失是抑郁症患者的核心症状之一,严重影响患者的症状恢复及社会功能,本研究旨在探讨抑郁症患者快感缺失症状与睡眠、社会功能以及炎症因子白介素-6(IL-6)和C反应蛋白(CRP)之间的关系。

方法 本研究为横断面研究,患者来自于2023年5月至2024年3月在复旦大学附属华山医院精神医学科就诊的126位门诊患者,符合《精神障碍诊断与统计手册》第5版成人抑郁症的诊断标准。采用汉密尔顿抑郁量表(HAMD)、汉密尔顿焦虑量表(HAMA)、斯奈思-汉密尔顿快感量表(SHARPS)、匹兹堡睡眠质量指数(PSQI)、席汉残疾评定量表

司法精神病学组

100 例法医精神病司法鉴定重新鉴定案例调查分析与对策

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目的 探讨有争议的法医精神病司法鉴定中重新鉴定案例,分析其在初次鉴定中存在的问题,提出解决问题方法。

方法 收集 2013 年——2023 年在法医精神病司法鉴定重新鉴定案例 100 例进行调查,自制调查表,将数据进行统计学分析。

结果 初次鉴定案项目与重新鉴定结论间均无相关性 ($P>0.01$)但初次鉴定与重新鉴定组法律关系一致性比较有显著差异,有统计学意义 ($X^2=8.819$, $P<0.05$)

结论 初次鉴定鉴组司法鉴定程度受理、资料、精神检查、讨论分析环节存在问题导致司法鉴定意见中法律关系前后不一致,应该从规范执业行为,提高司法鉴定人专业技能,完善鉴定标准等问题亟待规范和解决。

法医精神病司法鉴定涉及医学和法学的许多方面,其结论常常引起的争议,随着我国社会主义法制的日趋完善和《精神卫生法》完整,以及精神卫生知识的逐渐普及,有关对精神病人的行为与法律的关系也日益重视,要求重新鉴定的案例也日益增多[1]。本文对 100 例 2013 年至 2023 年法医精神病司法鉴定重新鉴定案例进行调查分析,采用自行设计调查表进行逐个登记,分为初鉴组和复鉴组,从初鉴组鉴定程度、鉴定过程、鉴定意见书等方面存在问题与重新鉴定意见的一致性行分析,与复鉴组鉴定意见、法律关系进行对比。采用 SPSS10.0 统计软件进行统计分析,采用 t 检验和 X^2 检验。有利于提高法医精神病司法鉴定质量,并对在法医精神病司法鉴定中存在问题,提出法医精神病司法鉴定程序规范的具体措施及对策。

关键词: 法医精神病 司法鉴定 重新鉴定 调查分析

司法精神病重新鉴定 1 例报告

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目的 关于司法鉴定一些法律规定的出台使司法鉴定工作增加了风险,尤其是司法精神病鉴定,目前尚缺乏客观的生物学指标,大多还只能依据调查所得及鉴定经验去得出结论,因此在司法鉴定实践活动中,重复鉴定的案例会经常出现,同样一名被鉴定对象,两个鉴定单位可得出截然相反的鉴定结论,某些案件当事人被追究的责任也不同,这些问题却是值得我们思考的,现将一例重复鉴定案件报告如下

方法 被鉴定人杨××,男,64岁,汉族,为退休干部×年×月×日涉嫌猥亵幼女被×公安局羁押×年×月×日曾在××司法鉴定所进行法医精神病司法鉴定,结论为酒精所致的精神障碍(缓解期);有刑事责任能力,同年×月×日被逮捕,因故亲属不服要求重新鉴定,××年×月×日委托我所对其进行重新鉴定,经对案件情况全部审讯记录对有关人员的调查记录、关押期间的表现调查以及被鉴定人住院病历、辅助医学检查、精神状态检查后发现被鉴定人

结果 从此例司法鉴定重新鉴定案件中,我们可以看出引起这样结果的原因虽有一定的客观原因,但大多数还是我们鉴定中的问题,包括有认识上的问题,很重要的还有司法鉴定的基本技巧问题,对此案本人谈些看法,以作共勉

1.精神病司法鉴定有很大不同,调查材料的收集会影响鉴定结论的客观性,资料必须公正、可靠、全面。

2.精神病司法鉴定时有的被鉴定人精神症状变化快,要调查过去的事,这样有助于全面了解被鉴定人精神症状。

3.精神病司法鉴定要求司法鉴定人要有严谨的科学作风,公平公正,对法律负责,加强风险意识,充分认识到“错误”鉴定后果不仅涉及鉴定人的安全,使当事人权益受到损害,更严重的在刑事案件中“错鉴”造成“错判”会导致无法挽回的不良后果。

4.每做完一份鉴定书,就要想到由此可能产生的后果,要认真斟酌再三。还要把握分寸,包括充分调查,全面检查及掌握诊断标准等。

因此,司法精神病鉴定工作是一项时间长、任务重、要求高的特殊工作,我们作为司法鉴定人必

须要有扎实的精神病学功底，高度认真态度以及一些不苟的严谨作风，才能更好地服务于司法鉴定。

结论 综上：被鉴定人长期饮酒，酒依赖，酒后出现精神病性症状，××年颅脑外伤后出现明显的额叶内侧面综合症作案动机为满足性的快乐，对自己的危害行为认识“是一种犯罪行为”，故而在脑器质性人格改变，自我克制能力受损的基础上为满足性快感而实施的危害行为，应评定为混合动机，鉴定意见为 1.脑器质性精神障碍；酒精所致的迟发性精神障碍；酒依赖；2.××年 4 月 5 日猥亵幼女是由于脑器质性精神障碍，辨认能力，控制能力削弱下实施的，责任能力评定；限制刑事责任能力，后法院采信我所鉴定意见，对被鉴定人从轻处罚，判被鉴定人有期徒刑六个月。

关键词：司法精神病 重新鉴定 1 例报告

涉案抑郁症定量脑电图生理机制研究

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山东省精神卫生中心

目的 为了明确涉案抑郁症脑电活动特征，为应用脑电图客观评价涉案抑郁症严重程度提供依据。

方法 首先，符合 CCMD-3 抑郁症诊断标准，并且 Beck 抑郁自评量表 (BDI) >15 分的涉案抑郁症 30 例，选择 30 例健康者作为对照组。然后，对入组样本进行定量脑电图检测 (δ 、 θ 、 α 、 β) 功率值。采集记录两组被试静息态 (清醒、睁眼、安静、坐位) 脑电各 9 分钟，运用 Matlab 软件对脑电数据进行离线处理，以短时傅里叶变换 (STFT) 的方法，选取额区 (F3、FZ、F4)、中央区 (C3、CZ、C4)、顶区 (P3、PZ、P4) 以及枕区 (O1、OZ、O2) 的电极，分别计算各个频段 δ (1-3.5Hz)、 θ (4-7Hz)、 α (8-13 Hz)、 β (13-30 Hz) 的能量信息，并绘制出平均脑地形图；另外选取额区 FP1、FP2、F7、F8 作为计算额区脑电 α 波不对称性 (Frontal alpha asymmetry, FAA) 的特征电极。

结果 1. 静息态脑电 β 波功率组间差异显著 ($t=3.726, p<0.05$)，表现为涉案抑郁症组脑电 β 波功率显著高于健康对照组。

2. 静息态脑电 δ 波功率组间差异显著 ($t=2.25826, p<0.05$)，表现为涉案抑郁症组脑电 δ 波功

率显著低于健康对照组。

2. 涉案抑郁症组脑电 α 波功率均显著低于静息状态 ($t=2.0536, p<0.05$)。

3. 两组间静息态 FAA 值无显著差异，无其他主效应或交互相应。

4. 涉案抑郁症组被试四个波段功率值、FAA 值与其 BDI 评分均无显著相关。

结论 本研究结果表明涉案抑郁症组脑电活动四个波段存在差异，可以作为评定抑郁的指标，FAA 值组间无显著差异。

关键词：抑郁症 定量脑电图 额区脑电 α 波不对称性

精神分裂症患者刑事责任能力评定相关因素分析

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目的 探讨精神分裂症患者刑事责任能力评定相关因素

方法 资料与方法

1.1 一般资料

选择宁夏精神疾病鉴定所 2020~2023 年鉴定的 50 例具有凶杀行为的精神分裂症患者 (观察组) 与 50 例具有凶杀行为的无精神障碍嫌疑人 (对照组) 作为研究对象，观察组均符合《中国精神障碍分类与诊断标准第三版 (精神障碍分类)》中关于精神分裂症的诊断标准，对照组均无精神障碍，每个案例均由至少 3 名精神科主治医师以上职称且具有司法鉴定资格的鉴定人进行鉴定。

1.2 方法

回顾性分析和对比两组研究对象的一般人口学资料、犯罪特征，统计精神分裂症患者的刑事责任能力评定结果。一般人口学资料包括年龄 (≥ 40 岁、 < 40 岁)、性别 (男、女)、文化程度 (文盲、小学、初中、高中及以上)、婚姻状态 (未婚、已婚、离异或丧偶) 等指标，犯罪特征包括案发前思维障碍 (有、无)、情绪状态 (稳定、不稳定)、社会功能 (正常、受损)、攻击行为史 (有、无)、作案先兆 (有、无)、诱因 (有、无)、预谋 (有、无)、作案动机 (现实动机/混合动机、病理动机)、作案对象 (陌生人、亲友)、

环境辨认(好、差)、自我保护(有、无)。

根据刑事责任能力评定结果将 50 例精神分裂症患者分为有刑事责任能力组与无刑事责任能力组,采用多因素 Logistics 回归分析法对具有凶杀行为的精神分裂症患者刑事责任能力评定结果的影响因素进行分析。

结果 精神分裂症患者的作案与案发前思维障碍、情绪状态、社会功能、攻击行为史、作案先兆、诱因、预谋、作案动机、作案对象、环境辨认、自我保护等方面有比较均有显著差异($P<0.05$),而在年龄、性别、文化程度、婚姻状态方面比较均无显著差异($P>0.05$)。

结论 具有凶杀行为的精神分裂症患者在接受刑事责任能力评定时需谨慎,应综合考虑其精神障碍因素、作案特征对其评定结果的影响,以提高刑事责任能力评定的准确性。

关键词:精神分裂症,动机,作案特征,相关因素

甲基苯丙胺成瘾者初吸年龄和吸毒时间对心理健康影响状况的研究

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目的 研究甲基苯丙胺成瘾所导致的心理健康状况,并分析影响甲基苯丙胺患者心理健康状况的相关因素。

方法 选取蚌埠强制隔离戒毒所 106 名男性甲基苯丙胺成瘾者作为观察组,当地社区 76 名健康男性作为对照组。采用一般情况问卷收集成瘾者一般人口学资料和相关吸毒情况,采用 SCL-90 量表评估受试者心理健康状况。并采用 Pearson 相关性分析和多元逐步回归方法分析心理健康状况的影响因素。

结果 两组一般人口学资料无显著差异($P>0.05$);心理健康状况分析结果显示,除敌对因子外,甲基苯丙胺组 SCL-90 各因子得分及总分均显著高于对照组($P<0.01$);相关分析显示,初吸年龄与躯体因子($r=-0.275$)、抑郁因子($r=-0.182$)、焦虑因子($r=-0.228$)、恐怖因子($r=-0.207$)、偏执因子($r=-0.170$)、精神病性因子($r=-0.178$)和 SCL-90 总分($r=-0.182$)呈负相关;累计吸毒时间与焦虑因子

($r=0.179$)、恐怖因子($r=0.215$)和 SCL-90 总分($r=0.192$)呈正相关;逐步回归分析显示躯体因子、抑郁因子、偏执因子、精神病性因子的主要影响因素是初吸年龄,焦虑因子、恐怖因子和 SCL-90 总分的主要影响因素是初吸年龄和累计吸毒时间。

结论 甲基苯丙胺使用导致成瘾者出现较严重的心理健康障碍,这种心理健康障碍的发生与较早的吸毒年龄和累计吸毒时间呈正相关,本研究为戒毒工作者更好的了解戒毒人员的心理健康状况,对不同状况吸毒人员提供有针对性的干预方案提供参考。

关键词:甲基苯丙胺成瘾;心理健康状况,影响因素

宁夏地区涉酒法医精神病鉴定案例资料分析

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目的 探讨宁夏地区 2022-2023 年涉及饮酒而行法医精神病鉴定的案例特征。

方法 对 200 年-2023 年在宁夏精神疾病鉴定所委托鉴定的 483 例鉴定的案例进行整理,将其中涉及到饮酒的 83 例鉴定资料采用自制调查表收集诊断、病程、年龄文化程度、涉酒原因、酒精类型、饮酒量等相关资料,进行回顾性分析,并与 2020-2021 年因涉酒鉴定进行对比。

结果 83 例涉酒法医精神病鉴定中,精神分裂症最多(21/83,25.34%),酒精所致精神障碍次之(17/83,20.48%),未发现精神病性障碍为三(11/83,13.25%);危险驾驶最多(46/83,55.42%),伤害案次之(6/83,7.2%);完全刑事责任能力最多(34/83,40.96%),限定刑事责任能力次之(31/83,37.35%),无刑事责任能力最少(18/83,21.68%)

结论 近 2 来,因涉酒委托法医精神鉴定量较 2020-2021 年的 21 例明显增加(增长率 66.26%),鉴定仍以精神分裂症为主体,以危险驾驶为案由居多,以完全刑事责任能力居上;也有未见精神病性障碍的对象提请委托。要加强对精神病患者的管理,特别是“病驾”和“酒驾”。

关键词:涉酒;精神病患者;司法鉴定

Workplace Violence Impact Correctional Officers' Mental Health Via Overwork

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Objective China's correctional officers face widespread workplace violence and the resulting overwork that can profoundly damage their physical and mental health. This study aims to investigate the mediating role of overwork in the relationship between workplace violence and the manifestation of physical and mental health issues among correctional officers

Methods This study enlisted 472 eligible participants. Cross-sectional data were obtained using the Chinese version of the Workplace Violence Scale (WVS), while the physical and mental health of correctional officers was evaluated through relevant scales. Analysis involved descriptive statistics, correlation analyses, and tests for mediation models

Results Workplace violence and overwork significantly affected the physical and mental health of correctional officers ($p < 0.001$). Mediation analyses indicated that workplace violence indirectly influences the physical and mental health of correctional officers through overwork ($p < 0.05$), establishing overwork as a mediating factor in the health challenges faced by correctional officers due to workplace violence

Conclusion Workplace violence and overwork significantly contribute to the physical and mental health challenges faced by correctional officers. Overwork acts as a mediator in the relationship between workplace violence and these health issues. The study suggests addressing workplace violence and mental health issues among correctional officers by increasing their numbers, improving the work environment, and implementing enhanced welfare policies

关键词: Correctional officers, Workplace violence, Overwork, physical and mental health

Disrupted Brain Functional Asymmetry at Rest in Patients with Major Depressive Disorder Associated with Sleep Disturbances

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Objective Sleep disturbances (SD) are common in major depressive disorder (MDD) patients. Brain functional asymmetry is crucial for understanding MDD pathophysiology. Previous studies using the parameter of asymmetry (PAS) approach have found brain functional asymmetry disruption in MDD. However, this has not been explored in MDD patients with SD

Methods This study examined 26 MDD patients with SD, 34 MDD patients without SD, and 34 healthy controls using resting-state functional magnetic resonance imaging scans. SD symptoms were quantified using the 17-item Hamilton Rating Scale for Depression. PAS approach was used to evaluate functional asymmetry

Results MDD patients with SD displayed increased PAS in the left middle frontal gyrus (MFG)/inferior frontal gyrus (IFG) and decreased PAS in the left parahippocampal gyrus (PHG) compared to MDD patients without SD. Increased PAS in the left MFG/IFG was positively correlated with SD severity, and a negative correlation was found between decreased PAS in the left PHG and SD scores in all MDD patients. Receiver operating characteristic analysis indicated that increased PAS in the left MFG/IFG and decreased PAS in the left PHG may serve as potential neuroimaging markers to differentiate MDD patients with SD from those without SD with Area Under Curve values of 0.8157 and 0.8068, respectively

Conclusion These results highlighted that increased PAS in the left MFG/IFG and decreased PAS in the left PHG may be considered a prominent feature associated with SD symptoms of MDD patients, potentially serving as imaging markers to discriminate between MDD patients with and without SD

关键词: Major depressive disorder·Sleep disturbances·Parameter of asymmetry·Functional asymmetry

Research Protocol for Systematic Review of Forensic Psychiatric Assessment in Adolescents Aged 12 To 14 Years

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In 2021, the minimum age of criminal responsibility in China has been edged down to 12 years old according to Amendment XI to the Criminal Law. Adolescents between the ages of 12 and 14 who commit eight types of serious crimes, including intentional homicide, intentional injury causing serious injury or death, rape, robbery, drug trafficking, arson, and explosion or releasing dangerous substances, and are prosecuted with the approval of the Supreme People's Procuratorate, shall bear criminal responsibility. In China, there is a lack of child psychiatrists, and forensic psychiatry research pertaining to children and adolescents is uncommon. Additionally, the majority of forensic psychiatrists do not possess a profound understanding of child psychiatry. The lowering of the minimum age of criminal responsibility will increase the challenge in forensic psychiatric assessment. Crimes committed by children aged 12 to 14 years old have been reported since the implementation of Amendment XI to the Criminal Law, each of them sparking extensive societal debate and discussion. The significance of conducting a precise and unbiased forensic psychiatric evaluation is paramount in the administration of justice within legal organizations. This research aims to conduct a systematic review of existing literature related to the criminal responsibility of adolescents aged 12 to 14 years old and suffering from mental disorders.

This protocol adheres to the guidelines of the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA). Two investigators will conduct a thorough and independent search of major inter-

national databases using relevant terms of “criminal responsibility” and “adolescents”. The inclusion criteria will follow the PICOS acronym: Participants (adolescents aged between 12 and 16 years old), Intervention (not applicable), Control (not applicable), Outcomes (criminal responsibility), and Study design (case reports, comments, cross-sectional studies). Two investigators will independently select eligible studies, extract data, as well as assess study quality. The extracted data will include study and participants' characteristics, primary and secondary outcomes, and expert consensus and viewpoints. The study quality will be assessed using the CASP Appraisal Checklists.

The objectives of this systematic review are to address the following inquiries in adolescents aged 12 to 14 years: (1) Explore the differences in crime characteristics between targeted population and adolescents aged 14 to 16 years. (2) Analyze the distribution of mental disorders among adolescents committing crimes. (3) Analyze the influence of diverse mental disorders on criminal behaviors. (4) Identify the primary risk factors that contribute to criminal behaviors in adolescents with mental disorders. (5) Explore the variations in crime types among adolescents with different types of mental disorders. (6) Discuss the criminal responsibility of adolescents with conduct disorders. (7) Investigate the role of culture and religion in shaping judgments of criminal responsibility for adolescents with mental disorders.

关键词: systematic review, minimum age of criminal responsibility, adolescents, forensic psychiatric assessment

108 例受处罚能力鉴定案例分析

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目的 探讨上海地区受处罚能力评定案件的特点及一般规律,为精神障碍患者的防控工作及预防违法行为提供一些参考数据。

方法 对2023年1月~2023年12月在上海市精神卫生中心司法鉴定所实施受处罚能力评定的案

件 108 例进行资料收集。

结果 108 例案件中, 男性占 70.4%, 平均年龄 (38.08±12.19) 岁, 高中及以上文化占 61.1%, 未婚及离异者占 63.9%, 无业者占 42.6%。作案类型中, 殴打或故意伤害他人身体的行为占比最高, 为 32 起 (29.6%), 其次为扰乱公共秩序的行为 27 起 (25.0%), 猥亵他人和在公共场所裸露身体 16 起 (14.8%), 盗窃、诈骗、哄抢、抢夺、敲诈勒索、损毁公私财物行为 12 起 (11.1%), 寻衅滋事 9 起 (8.3%)。鉴定诊断前 5 位依次是精神分裂症、分裂型障碍和妄想性障碍 (F20-F29) 44 例 (40.7%), 心境障碍 (F30-F39) 21 例 (19.4%), 成人人格与行为障碍 (F60-F69) 10 例 (9.3%), 器质性精神障碍 (F00-F09) 8 例 (7.4%), 使用精神活性物质所致的精神和行为障碍 (F10-F19) 7 例 (6.5%)。鉴定意见为无受处罚能力 47 例 (43.5%), 限定受处罚能力 21 例 (19.4%), 完全受处罚能力 40 例 (37.0%)。

结论 上海市精神卫生中心司法鉴定所 2023 年受处罚能力评定的案件中, 以青壮年、高中及以上文化、未婚的无业人员为主。鉴定诊断前 5 位的是精神分裂症、分裂型障碍和妄想性障碍, 心境障碍, 成人人格与行为障碍, 器质性精神障碍, 使用精神活性物质所致的精神和行为障碍。

关键词: 司法精神病鉴定, 行政案件, 受处罚能力

涉案抑郁症认知功能与事件相关电位的相关研究

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目的 为了明确涉案抑郁症神经心理认知功能特征 (事件相关电位 P300、N400、MMN 特征), 为应用事件相关客观评价涉案抑郁症的认知功能提供依据。

方法 首先, 符合 CCMD-3 抑郁症诊断标准, 并且 Beck 抑郁自评量表 (BDI) >15 分的涉案抑郁症 30 例, 选择 30 例健康者作为对照组。然后, 对入组样本进行事件相关电位检测, 分析指标为 P300、N400、MMN 峰潜伏期及波幅, 电极位点 Pz、Cz、fz。

结果 涉案抑郁症基线水平 P300 (电极位点 Pz、

Cz、fz) 潜伏期明显长于对照组 (Pz:t=8.267, P<0.001; Cz:t=10.620, P<0.001; fz:t=7.745, P<0.001), 波幅明显低于对照组 (Pz:t=7.208, P<0.001; Cz:t=7.064, P<0.001; fz:t=8.466, P<0.001)。涉案抑郁症基线水平 N400 (电极位点 Pz、Cz、fz) 潜伏期明显长于对照组 (Pz:t=10.659, P<0.001; Cz:t=7.569, P<0.001; fz:t=8.180, P<0.001), 波幅明显低于对照组 (Pz:t=8.562, P<0.001; Cz:t=9.869, P<0.001; fz:t=7.583, P<0.001)。涉案抑郁症基线水平 MMN 潜伏期及波幅在频率偏离无统计学差异 (潜伏期: t=0.644, p>0.05; 波幅: t=1.887, p>0.05), 时间偏离无统计学差异 (潜伏期: t=0.644, p>0.05; 波幅: t=1.413, p>0.05)。

结论 本研究结果表明者存在神经心理认知功能障碍, 主要表现在识别、比较、判断、记忆、决断、期待、语言认知加工、无意识注意状态等心理活动异常, 具体表现在事件相关电位 P300、N400、MMN 出现异常。

关键词: 抑郁症; 神经心理认知; 事件相关电位

71 例恶性案件司法精神疾病鉴定进行相关分析

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目的 对 71 例恶性案件司法精神疾病鉴定进行相关分析。一是对 69 例被鉴定人在案发时的精神状态及责任能力评定进行分析, 2 例被鉴定人目前是否有精神疾病鉴定做一简述; 二是按照五部 (检) 联合制定颁布的《关于办理死刑案件审查判断证据若干问题的规定》对因故意杀人、抢劫致人死亡等恶性案件的犯罪嫌疑人可能处以死刑, 按照“规定”对此类案件的犯罪嫌疑人刑事责任能力进行司法精神疾病鉴定, 对于此类 44 例被鉴定人在“案发时无精神病具有完全刑事责任能力”通过采用艾森克人格测试 (简称 EPQ) 对其人格特质进行分析。

方法 依据《中国精神障碍分类与诊断标准 (第三版) CCMD-3》或《ICD-10 精神与行为障碍分类》、《司法鉴定技术规范-精神障碍者刑事责任能力评定指南 SF/Z JD0104002-2011》或重新修订的《SF/Z JD0104002-2016》以确定案发时段的精神状

态及刑事责任能力。同时对犯罪心理形成的因素,包括内在、外在因素进行剖析,采用艾森克人格测试(简称EPQ)对被鉴定人的人格特质进行分析。

结果 可发现能明确诊断为具有精神疾病的被鉴定人(不涉及刑事责任能力),在此71例“恶性案件”中仅占38%;如果加入限定和无刑事责任能力者不足17%。2例中1例为东北亚某国人员在华期间因浏览“黄色网站”被发现,恐其回国受到严惩而杀害其国同事(囿于我们对其国的“意识形态”的认知);另1例为我国公民在东盟某国枪杀同胞疑似与“毒品”有关(案发后逃逸,未能及时做“血、尿毒品检测”;后经做“毛发毒品检测”证实),仅做“目前精神状态”的评定,此2例目前均无“精神病”。对有现实动机44例“无精神病”的被鉴定人的“人格特质”分析可见,在此类“恶性案件”中抑郁质倾向者占63.6%。

结论 通过上述分析,精神病人在此类“恶性案件”中,其占比并不比常人高,其原因与国家“重症精神病人”的严格监管有关,也可能与精神病人的社会退缩行为或在被害妄想下的个体防御而不是攻击行为等有一定关联。这与高北陵论著^①中的阐释基本一致。对有现实动机44例“无精神病”的被鉴定人的“人格特质”分析可见,在此类“恶性案件”中抑郁质倾向者占63.6%,这与陈和华论著^②认为“多为胆汁质的人”的观点相左。其现实动机为久拖未决的土地房屋纠纷、离异后交友的情感“积怨”、多次讨要欠款未果、罹患严重的躯体疾病后砍杀仇家、被人反复敲诈等因素。从这些案例可以看出,社会的各种冲突、职业和婚姻稳定性、低文化程度、物质和精神层面诱惑及毒品滥用等外部环境因素,与被鉴定人的内在的人格特质共同触发了犯罪行为的发生。

关键词:精神病人,刑事责任能力,人格特质

论司法鉴定的规范性

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目的 探讨如何通过规避风险,确保司法鉴定的规范性

方法 从主体资格、鉴定程序、认证认可等方面规避风险,确保司法鉴定的规范性

结果 鉴定主体必须合法,严守法定程序鉴定,

通过机构认可或资质认证等手段多措并举,确保司法鉴定规范化

结论 一、鉴定主体必须合法

1、鉴定机构:出具鉴定结论的鉴定机构必须具有法定资格。

2、鉴定人员:必须具备法定的鉴定资格,符合一定的任职标准,如具有精神病学相关专业的中级职称,通过精神病司法鉴定人资格考试,取得司法鉴定人资格证书,并有一定实践经验的人员方能从事鉴定工作。

二、严守法定程序鉴定

1、鉴定人应根据有关回避制度予以回避:依据《北京市精神病司法鉴定管理办法》予以回避。针对重新鉴定,《检察院诉讼程序规则》及《公安机关办理刑事案件程序规定》规定了特别回避制度,即应当另行指派或者聘请鉴定人。

2、鉴定人员应达到法定鉴定人数:《司法鉴定程序通则》第十九条规定:司法鉴定机构对同一鉴定事项,应当指定或者选择二名司法鉴定人共同进行鉴定;对疑难、复杂或者特殊的鉴定事项,可以指定或者选择多名司法鉴定人进行鉴定。目的防止鉴定过程中出现弊端,既起到相互监督制约的作用,又可以弥补一个人知识能力、经验的不足,相互补充。

3、鉴定文书格式规范、内容全面:符合司法部于2007年12月1日起施行的《司法鉴定文书规范》的要求,内容上做到依据充分、重点突出、逻辑严密、简洁流畅。

4、鉴定材料必须真实全面:包括通过直接或间接手段调查的被鉴定人的案情经过(重点是案前、案中、案后的精神状况材料)、审讯材料、羁押期间的表现、病史情况等,调查材料要具体、详细、真实、客观,应注明调查对象及来源,并有调查对象签字。其中调查资料必须通过合法程序提取收集,而且调查资料的内容不得与判决所依据的主要证据的内容相矛盾。

三、通过机构认可或资质认证

开展检查机构质量管理体系的运作是提高司法鉴定人员整体素质的重要途径,一是强化规范运作的理念,鉴定人员必须按照规范文件开展鉴定工作,人员的整体素质和鉴定规范水平会逐步提高;二是质量管理有统一的模式、规范的技术标准、完备的记录档案,能够做到每一步操作都有据可查,结果可以重现,可以通过实验室间比对、方法确认等措

施来促进技术发展；三是通过建立一套全面系统规范的管理体系文件使机构管理水平达到国际通用标准（ISO），可以获得相关国际实验室的认同，有利于国际间交流；四是机构管理体系文件规定了鉴定工作质量有一个监督、审查、纠错、预防的运作机制，促使鉴定机构不断自查自纠，可以保证质量管理处于一个高水平。目前司法精神病鉴定机构认可及资质认证工作尚未广泛开展，任重道远，需要不懈努力。

关键词：规避风险，司法鉴定，规范性

再犯罪风险评估工具研究现状

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再犯罪，特别是暴力再犯罪问题，不仅是社会关注的焦点，更是影响公众安全的重要议题。再犯罪率在高收入国家中持续处于较高水平，英格兰和威尔士被释放不到12个月的成年人再犯率为56.1%，美国两年内再监禁率为29%，澳大利亚为39%。我国再犯率多年来一直保持在6%至8%的水平，但这仍是一个值得警惕的数字。

自20世纪90年代起，风险评估工具的开发与应用便成为了国际刑事司法研究的热点。这些工具已在全球范围内得到广泛应用，成为司法实践中的关键要素。在欧美国家的司法体系中，风险评估贯穿了量刑、假释、缓刑、释放时机、释放条件以及释放后的监管治疗等多个环节，为司法决策提供了有力的量化依据。我国《刑法》在缓刑和假释的条件中均提到“没有再犯罪的危险”，但如何评价再犯罪风险则过于笼统，缺少可操作性。故而有必要研发预测准确率高的再犯罪风险评估工具，进而有效识别高风险人群，并及时干预和管控，这将对公众健康和安全做出重要贡献。

在使用精算评估工具前，法官等决策者做出缓刑、假释等决定常依赖于自己的经验判断或咨询精神病学专家，这种传统评估方法容易因个体主观判断造成偏差。随着精算评估方法的出现，其在再犯罪风险评估领域展现出显著的优势，这种方法基于统计模型和数据分析，通过计算得出个体的再犯罪风险等级。然而近年来精算评估方法也遭受诟病，

如工具泛滥，准确度不高，评分者一致性低，研发、验证过程透明度不足，评估工具昂贵，需培训，评估时间长，缺少外部验证，预测指标单一等。

我国自主研发的工具还比较少，在这方面的研究和实践相对比较落后，仍处于初级阶段，且研究设计及统计方法也存在大量问题。刘崇亮研发了中国罪犯风险等级评估量表，但该研究缺乏外部验证，无法得知该工具的预测准确性，组间比较的实验设计方法也不合理。邬庆祥编制了《刑释人员个人人身危险性测评量表》，并进行了外部验证，但该研究预测指标算法不合理，未报道区分度和校准度，也未纳入人格障碍、是否患有精神疾病这类与再犯罪密切相关的因子。

以上研究存在着普遍的问题，即研究设计不合理、缺乏外部验证、有效预测因子缺失、涉及了过多的主观和含糊的预测因子、未报道评估者内部一致性、样本量不合理、统计分析过于简单等，这些必定会导致算法缺乏科学性，进而影响评估结果的准确性。故而，有必要以科学严谨的方法研发和验证一套适合我国国情的再犯罪风险评估工具。

关键词：再犯罪风险评估工具

反馈相关隐藏信息测试在时间延迟情景下的测谎及脑网络研究

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目的 基于脑电信号（EEG）探索时间延迟情景下反馈相关隐藏信息测试（fCIT）中有罪者、无辜知情者、无辜者的脑功能连接（BFC）。

方法 招募被试57名，将所有被试随机分为有罪延迟组（20名）、无辜知情延迟组（22名）、无辜组（15名）。有罪延迟组模拟盗窃，无辜知情延迟组观看案件新闻，无辜组对案件一无所知，7-10天后进行测谎。测谎实验中，被试需辨认是否见过六种刺激物。有罪组需隐瞒见过探测刺激，无辜知情组和无辜组均如实回答。每一次辨别后，被试将收到电脑的反馈（“+4”诚实和“-2”撒谎）。脑电数据预处理后，计算三组被试脑电信号各电极对间的相锁值

(PLV), 构建各组被试在刺激呈现阶段及反馈阶段的脑功能连接, 并对有罪延迟组-无辜知情延迟组、有罪延迟组-无辜组的 PLV 进行 t 检验, 得出差异电极对的头皮分布位置。

结果 刺激呈现阶段, 有罪延迟组与无辜知情延迟组在 P3-Fz、P3-F3、Oz-P3 等 12 个电极对的 PLV 差异具有统计学意义 ($P < 0.05$), 差异电极对主要分布在左顶叶、中央区。有罪延迟组与无辜组在 Pz-Fz、P3-F3、P3-F7 等 31 个电极对的 PLV 差异具有统计学意义 ($P < 0.05$), 差异电极对主要分布在左前额叶、左顶叶、中央区、枕叶。反馈阶段, 有罪延迟组与无辜知情延迟组在 Pz-Fz、Oz-Fz、Cz-O1、F8-O1 这 4 个电极对的 PLV 差异具有统计学意义 ($P < 0.05$), 差异电极对主要分布在中央区、左枕叶。有罪延迟组与无辜组在 Pz-FP1、Pz-Fz、Pz-F3 等 11 个电极对的 PLV 差异具有统计学意义 ($P < 0.05$), 差异电极对主要分布在左前额叶、左顶叶、中央区、左枕叶。

结论 在时间延迟情景下, fCIT 中有罪者、无辜知情者、无辜者脑电信号的脑功能连接存在差异, 脑功能连接具有测谎潜力。

关键词: 测谎, 隐藏, 反馈, 延迟, 脑功能连接

当前性自卫能力评定的困惑与应对

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目的 以当前性自卫能力鉴定案例为线索, 引出鉴定人在当前性自卫能力的司法鉴定的困惑, 并针对这些困惑简要阐述应对方法与伦理思想, 以供同道参考。

方法 通过当前 3 例在案件的复杂性、女性在案件中所处的地位、司法机关对鉴定意见的依赖性、鉴定风险等方面, 均不同于过去鉴定案件的性自卫能力鉴定案件, 探讨鉴定人在这类案件的司法鉴定中沿用过去的鉴定模式的困惑, 找出应对办法。

结果 在这些案例的鉴定过程中, 存在以下困惑: 女性有精神障碍 (含智力障碍, 以下统称“精神障碍”), 同时也表达出性本能的需求, 然而, 本学科通常将“主动参与”作为精神障碍者缺乏性自我保护

的评定依据之一; 女性有精神障碍的同时, 也具有一定的性知识及对性行为的辨认能力; 女性的性观念转变与当前我国对女性的性权益保护的现状形成反差, 也导致这类女性“对自身性不可侵犯权利的认识能力”的概念产生了与专业的偏差; 女性有精神障碍的同时, 其自身也存在某些品行问题, 本学科通常将“未索取、也未得到好处”作为缺乏性自我保护的判断主要依据之一。

结论 鉴定人应改变过去僵化固定的思维模式, 全面了解并澄清与被鉴定人的性自卫能力相关的情况和嫌疑人的涉案特征, 即在考察辨认能力受损程度时, 需要结合案件的具体特征进行综合判断。

关键词: 法医精神病; 性自卫能力; 困惑与应对

愤怒面孔下暴力精神分裂症反应抑制的事件相关电位研究

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目的 发现暴力精神分裂症 (SCZ) 反应抑制的神经电生理特征, 探究愤怒面孔对暴力精神分裂症反应抑制功能的影响。

方法 按照纳入、排除标准筛选被试, 最后纳入 90 名被试, 其中暴力 SCZ 组、非暴力 SCZ 组与健康对照组各 30 名。采用事件相关电位技术对所有被试进行情绪双选择 Oddball 任务实验, 并同时收集反应抑制行为学数据和脑电数据。使用 BIS 冲动性量表第 11 版 (BIS-11)、Buss-Perry 攻击性量表-中文版 (BPAQ)、一生攻击史量表 (LHA) 评估被试的冲动性、攻击性及暴力行为。使用阳性及阴性症状量表 (PANSS) 评估 SCZ 精神症状。

结果 与健康对照组相比, 暴力 SCZ 组及非暴力 SCZ 组在进行双选择 Oddball 任务时反应时更长, 额-中央区偏差刺激的 P3 潜伏期更长; 时频分析结果显示, 暴力 SCZ 组和非暴力 SCZ 组额区/额-中央区/中央区的 θ 频段 N2d 功率及 δ 频段 P3d 功率要显著低于健康对照组 ($P < 0.05$)。暴力 SCZ 组监测到更大的冲突, 其额区/额-中央区/中央区/中央-顶区的 N2d 波幅显著高于非暴力 SCZ 组及健康对照组 ($P < 0.05$)。所有被试额区/额-中央区/中央区/中央-顶区愤怒面孔的 N2d 波幅显著大于中性面孔的 N2d

波幅 ($P < 0.05$)。健康对照组顶区的愤怒面孔偏差刺激的 P3d 波幅显著大于中性面孔偏差刺激的 P3d 波幅 ($P < 0.05$)，暴力与非暴力 SCZ 组的 P3d 波幅差异无统计学意义 ($P > 0.05$)。SCZ 阳性症状与愤怒面孔准确率代价存在显著正相关 ($r = 0.270, P < 0.05$)。

结论 精神分裂症患者存在反应抑制缺陷，暴力精神分裂症患者的反应抑制缺陷主要表现为冲突觉察增强。愤怒情绪面孔使反应抑制认知过程的冲突觉察增强。

关键词：精神分裂症,暴力,反应抑制,愤怒,事件相关电位

构建性自我防卫能力评定“技法衔接”机制初探

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摘要 作为法医精神鉴定中重要的内容之一，对受到性侵犯的精神障碍者进行性自我防卫能力评定是保障其性不可侵犯权利的重要手段，为保障精神障碍者的合法权利提供重要的法律依据。然而，在我国现行法律法规中，对精神障碍者性自我防卫能力的司法认定与评定的技术方法存在不契合情形，具体表现为性自我防卫能力评定等级划分方法不一致、性自我防卫能力削弱司法鉴定意见在证据采信过程中缺乏法律依据等，导致在法医精神病鉴定过程中及司法实务中出现诸多问题，给办案人员带来困扰，严重影响司法实践。案件处置的混乱，不仅是鉴定意见无法被科学、依法运用的结果，更是对案件当事人权利保障的缺失。随着我国以审判为中心的诉讼制度改革不断推进，如何保障司法鉴定的科学性、客观性、公正性，保障司法鉴定的意见的合法性、证据性及适用性已成为一项重要研究课题。因此，本文将从法学研究、法律实践、司法鉴定等多角度进行分析讨论，以我国立法精神、立法原则、立法规范为前提，综合立法要求、法律修订、诉讼制度、法律公共信息平台建设等内容，吸收国外法律内容，借鉴我国以往经验，探究构建性自我防卫能力评定“技法衔接”机制，促进技术方法与法律法规的契合，推进专业技术标准与司法鉴定的发展。

关键词：性自我防卫能力评定 技术标准 法律

法规 契合 机制

The Effects of Subjective Family Status and Subjective School Status on Depression and Suicidal Ideation Among Adolescents: The Role of Anxiety and Psychological Resilience

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Purpose This cross-sectional study aimed to examine the impact of subjective family status and subjective school status on depression and suicidal ideation among adolescents through a moderated mediation model and to explore the mediating and moderating effects of anxiety and psychological resilience on family status, school status, depression, and suicidal ideation

Methods 1,190 secondary school students aged 13 to 17 years (mean age: 13.57 ± 2.02 years) were evaluated depression, anxiety, and suicidal ideation using the PHQ-8 and GAD-7 questionnaires. Subjective family and school status were also assessed. Data analysis was conducted using Mplus, SPSS's Process, and the RSA 3.0 plugin

Results Subjective family/school status, anxiety, psychological resilience, depression, and suicidal ideation were significantly correlated. Anxiety played a partial mediating role in the influence of subjective family status and subjective school on depression and suicidal ideation, and psychological resilience moderated the impact of anxiety on adolescent depression and suicidal ideation ($\beta_{\text{depression}} = -0.05, p < 0.01$; $\beta_{\text{suicidal ideation}} = -0.06, p < 0.05$)

Conclusion Subjective family status and school status played important roles in depression and suicidal ideation in adolescents, and anxiety and psychological resilience played mediating and moderating roles.

关键词：Depression, Anxiety, Suicidal ideation, Subjective family status, Subjective school status

评估 ICD-11 人格障碍维度模型: SASPD 和 PiCD 中文版在中国社区和临床样本中的表现

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目的 司法精神案件中人格障碍的身影屡见不鲜。ICD-11 人格障碍诊断从分类模型转变为维度模型,但中国目前还缺乏相关评估工具。标准化人格障碍严重程度评估量表(Standardised Assessment of Severity of Personality Disorder, SASPD)和 ICD-11 人格测验(The Personality Inventory for ICD-11, PiCD)分别评估了人格障碍的整体严重程度和特质风格,并在多地区样本中表现出良好的信效度。本研究对 SASPD 和 PiCD 进行了中文版修订并检验其在中国普通人群和临床患者中的信效度,考察 ICD-11 新维度模型跨文化的适用性,为中国 ICD-11 新维度系统诊断提供实践工具。

方法 644 名社区被试和 150 名临床患者完成了中文版 SASPD 和 PiCD、人格功能量表简版(LPFS-BF2.0)、人格障碍严重程度量表(PDS-ICD-11)、DSM-5 人格量表简要版(PID-5-BF)、人格障碍诊断问卷(PDQ-4)及大五人格量表(BFI-2)。随机抽 40 名社区被试在两周后完成了重测。采用相关和回归检验 SASPD 和 PiCD 的内部一致性、重测信度、校标效度,通过探索性因子分析和验证性因子分析确定了最适合中国地区的因子模型。

结果 社区和临床样本中两个量表均表现出良好的信度, SASPD 的 Cronbach's α 分别为 0.80 和 0.73,重测信度为 0.82。PiCD 五个维度的平均 Cronbach's α 为 0.84 和 0.8,平均重测信度为 0.90。探索性因子分析显示, SASPD 呈现出一个包含自我和人际两个维度的两因子结构,而 PiCD 则支持理论对应的五因子结构。 SASPD 与 LPFS、PDS-ICD-11 及 PiCD 存在显著意义上的相关, PiCD 的各维度与 PID-5-BF 和 BFI-2 的相应维度均呈现出预期的相关模式,支持其良好校标和构念效度。具体表现为 PiCD 的负性情感、脱抑制、去依恋、去社会和强迫分别和 PID-5-BF 中的负性情感、脱抑制、分离、对抗敌意和脱抑制,以及 BFI-2 中的神经质、尽责性、

外向性、宜人性和尽责性密切相关。

结论 SASPD 和 PiCD 在中国展现出良好的信效度,能够可靠地评估中国人群的人格障碍严重程度和特质领域,为 ICD-11 维度模型提供了支持证据。

关键词: ICD-11; 人格障碍; 跨文化适应性; 严重程度; 特质领域

精神损伤类法医精神病鉴定中伤病关系评定路径分析

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2020 年 5 月 14 日,司法部印发《法医类司法鉴定执业分类规定》(司规[2020]3 号),对法医类司法鉴定执业范围进一步规范管理。该规定第四章对法医精神病鉴定进行规范,将法医精神病鉴定项目分为九个大项目,其中第二十九条界定了精神损伤类鉴定,“对因伤或因病致劳动能力丧失及其丧失程度,对各类致伤因素所致人体损害后果的等级划分,及损伤伤情的严重程度进行鉴定。包括劳动能力,伤害事件与精神障碍间因果关系,精神损伤程度,伤残程度,休息期(误工期)、营养期、护理期及护理依赖程度等鉴定。”该类鉴定中,蕴含了大量的伤病评定内容,不仅有直接列明的伤害事件与精神障碍之间的因果关系评定,而且在精神损伤程度、伤残程度、休息期(误工期)、营养期、护理期及护理依赖程度等的评定中,也内含了伤病关系评定的要求,伤病关系评定成为该部分鉴定重点,甚至成为疑难问题;但该类鉴定中的伤病关系评定仅有框架式的原则性规定,缺乏进一步的可操作性强的实施细则,容易导致不同鉴定人思路不一致,出现鉴定意见不一致的情形,引发对法医精神病鉴定的质疑。本文以思维导图形式,清晰界定精神损伤类法医精神病鉴定各项目之间的内在联系,重点勾勒其中蕴含的伤病关系评定路径,结合现行有效地司法鉴定相关规定,以精神伤残程度评定为重点,辅以法医精神病伤残程度能力验证中的伤病关系考核点分析,旨在厘清精神损伤类法医精神病鉴定中伤病关系评定思路,有助法医精神病鉴定人统一认识,提高鉴定意见的一致性,切实增强法医精神病鉴定的公信力。

关键词：法医精神病学，精神伤残，伤病关系，作用力

深圳市无刑事责任能力精神障碍者强制医疗解除因素的回顾性研究

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目的 无刑事责任能力精神障碍者的强制医疗是指为保障个体权益及公众安全而对经鉴定依法不负刑事责任的精神障碍者实施强制隔离和医学治疗的措施。目前司法机构对强制医疗的判决、执行等程序已趋于规范，但对强制医疗的解除流程及相关评估标准仍存在不足。本文通过对深圳市 2019 年以来已解除强制医疗的无刑事责任能力精神障碍者相关临床资料进行整理和回顾性分析，为强制医疗精神病人的解除强制医疗评估标准提供了部分依据，同时深入探讨影响无刑事责任能力精神障碍者强制医疗解除的相关评估因素及流程不足。

方法 采用自制调查表对 2019 年 1 月至 2024 年 6 月已由人民法院批准解除强制医疗的 33 例无刑事责任能力精神障碍者进行调查及临床资料统计，对强制医疗时间、首次犯罪、物质滥用、人格障碍、精神症状、自知力、病情稳定情况、强制医疗期间表现、社会支持等因素进行比较。

结果 解除强制医疗的精神障碍者在解除时精神症状疗效均为好转或显效，病情稳定不小于 6 个月，强制医疗期间无危险性行为，拥有部分或完整的危险性认知及良好的社会支持（监护条件），同时暴力危险性评估表低或部分中风险亦为解除强制医疗的充分条件，而年龄、强制医疗时长和案发前精神病史之间并没有明显的相关性。

结论 强制医疗精神障碍者的精神科病情改善程度、社会支持系统的完善程度以及相关法律法规的规定仍是影响其强制医疗解除的重要参考指标。其中，病情改善程度是决定是否解除强制医疗的最直接和核心的因素，而精神科医生的专业评估则为其提供了科学依据。同时，社会支持评估亦是核心参考因素之一，家属或监护人的意见也反映了患者家庭环境和社会支持的实际情况，对于判断患者出院后是否能够得到有效照护具有重要意义。

关键词：精神障碍，强制医疗，解除强制医疗

孤独症谱系障碍影响性自我防卫能力分析思路

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目的 结合相关案例，探讨如何依据孤独症谱系障碍临床特征，提炼其影响性自我防卫能力的分析要点，促进对此类被鉴定对象的准确评估。

方法 女，29 岁，中专肄业。2 年前两次被公公性侵，提请性自我防卫能力鉴定。10 年前被其母前男友性侵，当地曾鉴定为边缘智力，有完全性自我防卫能力。本次审查中，被鉴定人称自己平时脑子记不得事情，公公侵害自己当时有反抗，事后没告诉任何人，只是躲着公公。1 年前因三胎事与公婆矛盾回娘家，觉憋屈，遂将被公公侵害事告诉母亲并报警。母亲为教师，反映女儿只是说话口齿不清，易健忘。自幼不合群，易遭同学霸凌。小学考 60-70 分，初中更差。15 岁上幼师学校，无法学会弹钢琴。17 岁转学护理，实习时无法独立完成操作而退学，至此母亲才考虑女儿可能有智力问题，之前只认为其较同龄人幼稚。鉴定精神检查无明显智能障碍，未查及精神病性症状。脑电图正常，韦氏智商 91。

结果 本次鉴定初期，鉴定人分析思路仍沿用智能发育维度，诊断边缘智力。并依据其被公公强奸时知道不应该，有明显反抗，具有辨别是非能力，依据指南评定为完全性自我防卫能力。

该案疑点在于，身为教师的母亲，本应对精神发育迟滞较一般百姓更为敏感，为何直至女儿护校实习不顺才意识到其“智力低下”？鉴定人对于发育障碍的理解，是否过于局限在智能维度？邀请儿童精神科专家会诊，进一步追溯发育史，其自幼语言发育较同龄儿童慢，不合群。之后表现社交互动和社交交流能力欠缺，对社交互动不能做出恰当回应，对各种社交情境适应欠缺，情感表达幼稚；对环境和常规改变适应性欠佳，对噪音敏感。孤独症诊断观察量表及孤独症诊断访谈量表均提示明显异常。根据病史及临床检查和评估，诊断广泛性发育障碍（CCMD-3）。

被鉴定人患广泛性发育障碍，其社交互动和社

沟通交流能力欠缺,对环境和常规的改变适应性欠佳,情感表达幼稚,受其所患精神疾病影响,其对自身性不可侵犯权利的认识与维护能力明显削弱,依据指南评定为性自我防卫能力削弱。

结论 广泛性发育障碍(DSM-5 孤独症谱系障碍)是一组存在不同程度典型孤独症功能缺损“三联症”(社会交流、语言交流、重复刻板)的发育障碍性疾病。目前法医精神病学教材对其缺乏介绍,鉴定人对此类障碍的诊断识别及其如何影响法律能力的分析经验不足,易漏诊误判。

关键词: 性自我防卫能力,孤独症谱系障碍,广泛发育障碍,精神发育迟滞

Neurolaw in Forensic Psychiatry

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Neurolaw, as an interdisciplinary field linking the brain and law, provides a way to better understand human behavior by combining the research results of neuroscience. Since 1990's, this emerging field provided a more precise interpretation of human behavior in modifying legal rules and decisions through the study of the human nervous system as a new dimension of legal phenomena. This paper seeks to provide a in-depth elaboration of the application of neuroscience evidence in the forensic psychiatry practice, as the following aspects:

1) The type of technology is accepted or excluded as legal evidence, such as (e.g., psychological testing, functional neuroimaging)

2) As neuroscience technologies develop, the questions arose regarding their use and societal impact.

3) Discusses ethical issues related to forensic psychiatrists' claimed expertise in neuroscience, formulate medical opinions based on neuroscience, and consider its relevance to criminal responsibility.

4) What should be aware of when forensic psychiatrists use the neuroscientific evidence rendering diagnoses and explaining behavior.

Neuroscientific technology is an auxiliary tool in

forensic identification. Neurolaw aims to understand and promote the integration of neuroscience in civil, criminal, correctional, and other areas of law. We strive to find the objective basis of mental injury, understand the structural and functional neuroimaging and its use and limitations in the legal system; Evaluate empirical evidence that purportedly links neurobiology and criminology. that can provide more basic-data and research direction for forensic psychiatric identification.

关键词: Neurolaw, Forensic Psychiatry, psychological testing, functional neuroimaging

A Meta-analysis of The Relationship between Voyeurism and Affective Disorders

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Objective This study conducted a meta-analysis of the literature on the relationship between voyeurism and mood disorders from 1954 to 2022. By searching multiple databases, we synthesized and analyzed data from relevant studies during this period, aiming to gain a deeper understanding of the association between voyeurism and affective disorders

Methods In this study, PubMed, Embase and CNKI were used to search 46 articles published between 1954 and 2022 with the keywords of“Voyeurism” and“Affective disorder”. After rigorous literature screening and evaluation, 12 eligible studies were finally included. The data were extracted and analyzed by SPSS software, including descriptive statistics, correlation analysis and regression analysis

Results The results of meta-analysis showed that patients with voyeurism had common symptoms of affective disorder. Among them, about 75.7% of patients with voyeurism accompanied by anxiety symptoms, 61.9% of patients with depressive symptoms. Correlation analysis showed that there was a significant positive correlation between voyeurism and affective disorder ($R = 0.63, P < 0.01$). Regression analysis further

confirmed this relationship, indicating that affective disorder is an important predictor of the initiation of voyeuristic behavior in voyeurism

Conclusion In this study, a meta-analysis found a close relationship between voyeurism and mood disorders. It is suggested that the emotional state of the patients should be taken into full consideration and comprehensive treatment measures should be taken. At the same time, it also suggests that we should strengthen mental health education and emotional disorders screening to reduce the occurrence and harm of voyeurism

关键词: Voyeurism; affective disorder; meta-analysis; sexual psychological disorder; clinical treatment

交通肇事案件法医精神病鉴定

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目的 交通肇事案件发生在顷刻之间, 案件发生存在多种可能, 此类案件法医精神病鉴定难度较大, 本文通过鉴定实践经验总结, 试图为该类药物鉴定提供一种实用有效的解决方案。

方法 可将此类案件分成在意识清晰状态下作案或在意识障碍状态下作案两类, 对不同类型采取不同的责任能力评定分析方法。

结果 1、如果车祸发生时处于意识清晰状态, 涉嫌故意犯罪的, 按一般案件鉴定原则鉴定, 鉴定分析不应局限于案件发生顷刻间精神状态及辩控能力, 而应分析整个驾驶过程及心理活动过程, 结合其既往病史、案发前后精神状态以及与作案行为关系等因素, 综合分析是正常作案还是精神病理症状导致。2、如果车祸发生时处于意识障碍状态, 如果车祸系癫痫发作导致意识障碍所致, 因其患癫痫驾驶与之后危害结果发生之间存在明显相关性, 故不能因癫痫发作致行为辩控能力丧失即评无刑事责任能力。而应分析其是否能预见患癫痫开车存在社会危害可能性, 若对该危险驾驶行为具有辨认和控制能力, 应评有刑事责任能力; 如属于不能预见的突发疾病, 可评无刑事责任能力。3、鉴定需注意驾驶失控存在多种可能, 如: 疲劳驾驶、注意力不集中、过度紧张、错踩油门或因疾病发作导致意识障碍等,

当事人大多表示“脑子一片空白”, 对事发经过不能回忆, 而正常人在极度紧张状态下也可“脑子一片空白”。4、通过驾驶特征分析, 如有无主动制动或变向避让等避险驾驶动作, 可以分析其当时是否存在意识障碍, 但要肯定或否定车祸系癫痫发作所致大多缺乏充分依据。该情形鉴定意见宜作客观描述, 如: “案件发生存在多种可能”, “不能排除癫痫发作导致可能”, 而不宜作出肯定性意见, 如有确凿证据证明, 则另当别论。

结论 该类案件鉴定需要谨慎, 论证要恰如其分, 鉴定意见要留有余地。

关键词: 法医精神病鉴定; 交通肇事案件; 刑事责任能力评定

强制医疗患者住院期间心理体验的质性研究

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目的 由于强制医疗患者通常面临法律、伦理和医疗三者交织的复杂情形, 其心理状态与自愿就医患者存在显著差异, 本研究旨在深入探讨强制医疗患者在住院期间的心理感受, 以便为改善其心理健康、推动解除强制医疗提供参考。

方法 2024年4-6月期间, 以目的抽样法对重庆市某医院的15名强制医疗患者进行半结构式访谈, 对他们在住院期间的个人感受、思想变化、人际互动及对治疗体验等方面进行了全面的数据收集。借助Nvivo软件编码整理, 并采用Colaizzi七步法对资料进行系统分析。

结果 共提炼四个核心主题。①环境适应, 涵盖了患者对强制医疗环境的初步反应及适应过程, 包括对限制性环境的压力和随之而来的适应策略; ②情感波动, 患者情感起伏较大, 常见由初期的否认、愤怒到后期的妥协或接受; ③社会支持需求, 强调了来自家庭、朋友以及医护人员的社会支持对患者心理健康的重要性; ④自我认知变化, 部分患者在经历了一系列心理斗争后, 对自我、疾病及生活有了新的认识和反思。

结论 强制医疗患者在住院期间经历复杂的心理变化, 其中环境适应、情感波动、社会支持需求和自我认知变化是影响他们心理感受的主要因素。医

疗团队需加强对这类患者心理状况的关注,通过提供心理咨询服务、加强社会支持网络、优化治疗环境等措施,帮助患者更好地应对住院期间可能遇到的心理挑战。此外,研究建议开展进一步的定量研究以验证这些质性研究结果的普遍性,并在临床实践中探索具体的心理干预方案,以促进患者的整体福祉和治疗合作。

关键词: 强制医疗,非自愿住院,心理体验,质性研究

2023年宁夏地区精神、智力残疾状况分析

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目的 分析宁夏回族自治区2023年精神和智力残疾的现状,包括患病率、影响因素、现有服务体系及未来发展趋势。通过对宁夏地区残疾人登记数据的统计分析,结合实地调研和专家访谈,揭示精神、智力残疾人群的基本特征及其面临的挑战。提出针对性的改进措施和政策建议,以期为宁夏地区精神、智力残疾人群提供更好的支持和服务。

方法 随着社会经济的发展和人民生活水平的提高,精神、智力残疾问题逐渐受到重视。宁夏回族自治区作为中国西北地区的重要省份,其精神、智力残疾状况对于当地社会稳定和经济发展具有重要意义。首先,通过文献综述了解国内外精神、智力残疾的研究现状和发展趋势。其次,对宁夏地区残疾人登记数据进行统计分析,并收集于2023年1月至2023年12月期间于宁夏回族自治区宁安医院完成精神、智力残疾鉴定患者1192例,这些患者不同程度的存在情感、认知和行为障碍,病程时间超过一年,精神障碍不同程度的影响了日常生活和社会活动。采用《世界卫生组织残疾量表I》(WHO-DASII)、《社会功能缺陷筛选量表》(SDSS)进行评分及残疾等级评定,对精神疾病诊断、残疾鉴定等级、患者年龄等相关因素进行统计分析。以揭示精神、智力残疾的分布情况和影响因素。最后,通过定性研究,包括实地调研和专家访谈,收集第一手资料,深入了解精神、智力残疾人群的实际需求和面临的困境。

结果 1. 患病率分析: 与全国平均水平相比,

宁夏地区精神、智力残疾的患病率略高,可能与当地经济发展水平和文化背景有关。2. 影响因素分析: 遗传因素: 研究发现,精神、智力残疾在一定程度上受遗传因素影响,家族中有类似病史的患者患病风险较高。环境因素: 不良的生活习惯、长期暴露于有毒物质、营养不良等环境因素也可能导致精神、智力残疾。社会因素: 社会压力、家庭矛盾、教育水平低等社会因素也可能增加精神、智力残疾的风险。3. 服务体系评估: 医疗资源: 宁夏地区精神、智力残疾的医疗资源相对不足,专业医师数量有限,且分布不均。康复服务: 康复机构较少,康复设施不完善,康复服务覆盖面有限,无法满足所有患者的需求。社会支持: 社会对精神、智力残疾的认知度不高,存在一定程度的歧视和偏见,患者及其家属在社会融入和心理支持方面面临较大困难。

结论 宁夏地区精神、智力残疾的患病率较高,且存在明显的影响因素。现有服务体系无法满足患者的需求,需要进一步加强和完善。

关键词: 宁夏地区 精神残疾 智力残疾

睡眠障碍研究协作组

社区环境下失眠障碍中西医结合不同治疗路径的比较研究

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目的 观察中医外治法联合失眠的简化行为疗法(BBT-I)对失眠障碍的疗效和依从性。

方法 2021年3月至2022年12月选取盐城市多家社区卫生服务中心门诊就诊的98例失眠障碍患者为研究对象。将受试者随机分为实验组(49例)和对照组(49例)。实验组给予中医五禽戏练功、中药浴足等个性化融入BBT-I治疗,对照组给予BBT-I联合盐酸曲唑酮片(25-150mg/日)治疗4周,之后进行三个月的随访。以失眠症严重程度指数作为治疗比较的主要终点,并观察不同联合方案对行为治疗依从性的影响。

结果 将失访患者按无效纳入统计,治疗4周后实验组有效率26.53%,缓解率53.06%,对照组22.45%,缓解率24.49%,差异有统计学意义($p<0.05$);随访3个月后实验组有效率4.08%,缓解率53.06%,对照组有效率8.18%,缓解率30.61%,差异无统计学意义($p>0.05$);对睡眠限制治疗依从性问卷调查中,实验组高依从的比率98.23%,对照组67.79%, $P<0.05$,差异有统计学意义,其他各行为治疗的依从性组间比较未见统计学差异, $P>0.05$ 。

结论 中医外治法联合失眠的简化行为治疗模式作为失眠的社区首诊治疗方案是有效的,中药浴足可显著提高睡眠限制的依从性,与联合盐酸曲唑酮比,依从性更高、疗效更好。

关键词: 失眠障碍; 中西医结合; 行为治疗; 依从性

高校生睡眠和精神心理健康状况及影响因素

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目的 从多维度了解我国高校生睡眠和精神心

理健康状况,并探讨生活质量的影响因素。

方法 本研究采用方便取样法,通过网络平台招募全国高校生(大学生和研究生)。分别使用失眠严重程度指数(ISI)、患者健康问卷(PHQ-9)、广泛性焦虑量表(GAD-7)、压力知觉量表(PSS-10)、情绪调节困难量表(DERS-16)和生活质量问卷(SF-12)等自评问卷评估其抑郁、焦虑、失眠、压力、情绪调节能力和生活质量水平。

结果 共纳入高校生1423人,平均年龄 22.86 ± 4.74 岁;其中男性462人(32.5%),女性961人(67.5%);大学生805人(56.6%),研究生618人(43.4%)。根据自评量表,该样本中高校生失眠症状的检出率为50.6%,中重度失眠为14.4%;存在中重度抑郁(PHQ-9 ≥ 10 分)的比例为46.4%,中重度焦虑(GAD-7 ≥ 10 分)的比例为36.5%,精神生活质量受损(SF-12中MCS < 50 分)比例达81.7%。良好的家庭经济水平是精神生活质量的独立保护因素($P=0.015$),压力、抑郁、情绪调节困难和焦虑是精神生活质量的显著独立危险因素(均 $P<0.001$)。

结论 失眠、抑郁和焦虑等精神心理症状在高校生非常常见,针对压力、抑郁焦虑水平和情绪调节能力的干预可能有利于改善高校生精神生活质量。

关键词: 失眠; 高校生; 精神心理健康; 生活质量

伴失眠症状的双相障碍维持治疗期患者睡眠模式与生物节律的体动记录研究

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目的 探讨双相障碍维持治疗期患者的睡眠模式与生物节律特征研究。

方法 采取病例对照的研究方式,对45例双相障碍维持治疗期患者和50例健康志愿者进行对照研究,比较两组间匹兹堡睡眠质量指数量表(PSQI)、中文版神经精神科生物节律评估访谈(BRIAN-C)、体动记录仪监测的差异。

结果 双相障碍维持治疗期患者和健康对照组在家族史、服用情感稳定剂,服用非典型抗精神病药、PHQ-9总分、MDQ总分差异均有显著统计学意义($P<0.01$);两组间服用镇静催眠药差异有统计学

意义($P<0.05$); 两组间比较, PSQI 总分、睡眠质量、入睡时间、睡眠效率、睡眠障碍、催眠药物、日间功能障碍差异均有显著统计学意义($P<0.01$); BRIAN-C 总分、睡眠、活动、饮食习惯差异均有显著统计学意义($P<0.01$); 社交($t=2.482, P=0.015$) 差异有统计学意义($P<0.05$)。体动记录仪的起床时间、卧床时间、睡眠总时间差异均有显著统计学意义($P<0.01$); 上床时间, 差异有统计学意义($P<0.05$)。

结论 双相障碍维持治疗期患者与健康人群比较有明显的睡眠紊乱和生物节律异常, 具有不同程度的生物节律紊乱。

关键词: 双相障碍; 失眠; 睡眠模式; 生物节律; 体动记录仪

抑郁患者述情障碍在手机成瘾和睡眠障碍的中介作用

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目的 探讨重度抑郁患者述情障碍和抑郁程度在智能手机成瘾和睡眠质量间的中介作用。

方法 采用匹兹堡睡眠质量量表、手机成瘾指数量表、抑郁自评量表和述情障碍量表对 114 名符合国际疾病分类(International Classification of Diseases, ICD)-10 标准的重度抑郁发作患者进行问卷调查。所有数据采用 SPSS22.0 统计软件进行分析。

结果 在 114 名重度抑郁发作患者中, 本研究中年龄分布显示 58.77% 的抑郁症患者年龄在 20-39 岁; 在性别方面, 70.17% 的人是女性, 29.82% 是男性。性格上, 41.22% 为中间性格, 38.59% 为内向。同时, 73.68% 的人是独生子女。在家庭类型方面, 39.47% 为核心型家庭; 家庭月收入主要集中在 5 千-1 万元区间; 有子女的比例为 55.26%; 婚姻状况显示 53.5% 为未婚, 37.71% 已婚。职业分布中, 33.33% 是学生, 工人和农民的比例分别为 10.52% 和 14.91%。手机成瘾检出率为 72.7%, 睡眠障碍的检出率为 72.2%。睡眠障碍与述情障碍、手机成瘾、抑郁程度呈正相关, 均满足。中介效应分析结果显示, 生理性症状和认识和区分情感与躯体感受的能力在手机成瘾和睡眠质量之间的中介作用显著, 总间接效应为 0.0459, 占总效应的 57.45%。

结论 抑郁程度和述情障碍在重度抑郁发作患者的手机成瘾和睡眠质量之间存在中介效应。

关键词: 重度抑郁发作; 手机成瘾; 睡眠障碍; 述情障碍

穴位贴敷治疗抑郁伴失眠的临床对照研究

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目的 本研究旨在评估穴位贴敷疗法在治疗抑郁伴失眠患者中的临床疗效和安全性, 并与常规药物治疗进行比较。

方法 本研究纳入了 100 例符合入组标准的抑郁伴失眠患者, 随机分为两组, 每组 50 例。实验组接受穴位贴敷治疗, 对照组接受常规抗抑郁药物治疗。穴位贴敷选择百会、神门、内关等主要穴位, 贴敷频率为每周三次, 每次贴敷时间为 2 小时。对照组患者每日口服常规抗抑郁药物。治疗周期为 8 周。在治疗的第 0、4、8 周, 通过汉密尔顿抑郁量表 (HAMD) 和匹兹堡睡眠质量指数 (PSQI) 对患者的抑郁症状和睡眠质量进行评估。

结果 经过 8 周的治疗, 两组患者的抑郁症状均有明显改善, 但实验组的 HAMD 评分下降幅度显著高于对照组 ($P<0.05$), 表明穴位贴敷在缓解抑郁症状方面具有更优的效果。实验组的 PSQI 评分也显著低于对照组 ($P<0.05$), 显示穴位贴敷能够有效改善患者的睡眠质量。此外, 实验组患者未出现明显不良反应, 而对照组有 15% 的患者报告了不同程度的药物副作用, 如头晕、恶心等。

结论 穴位贴敷治疗对抑郁伴失眠患者具有显著的临床疗效, 不仅能够有效改善抑郁症状, 还能显著提高睡眠质量。同时, 该治疗方法安全性较高, 不良反应少, 具有良好的患者依从性。因此, 穴位贴敷作为一种替代或辅助治疗手段, 值得在临床上进一步推广应用和深入研究。

关键词: 穴位贴敷, 抑郁, 失眠, 临床对照研究

我国青少年精神障碍患者家庭亲密度与适应性的调查

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目的 全球青少年精神障碍患病率逐年增长,本研究探讨我国青少年精神障碍患者的家庭亲密度与适应性状况,为青少年精神障碍患者的治疗提供理论依据。

方法 于2023年6月至11月在全国8个省进行整群分层抽样,根据诊断标准对诊断为抑郁症、焦虑症、精神分裂症及睡眠障碍的10-19岁患者,使用一般资料调查表和家庭亲密度与适应性量表分别进行调查,有效调查者2026人,对数据进行单因素分析与多因素分析。

结果 本次调查人群平均年龄 15.38 ± 2.04 岁,14岁发病率最高(16.8%),女性占比70.7%,男女比例约1:2.4;病情复发率高(65.6%);疾病诊断中占比最高为抑郁症合并其他精神疾病(31.8%),其次是抑郁障碍(26.7%);青少年精神障碍患者现实家庭亲密度与适应性得分分别为 56.49 ± 13.20 和 37.36 ± 12.48 ,远低于理想相应得分($66.34\pm 13.79, 49.37\pm 13.87$);主要照顾者平均年龄 45.43 ± 0.97 岁,文化程度初中最多(31.4%),家庭经济情况一般最多(68.2%),家庭结构以核心家庭为主(54.8%);单因素与多因素分析结果均显示不同性别、第一照顾者文化程度、家庭经济状况、家庭结构在家庭亲密度与适应性得分上差异显著($P < 0.05$)。

结论 (1)我国青少年精神障碍患者女性比男性多;疾病复发率高,抑郁情绪障碍与抑郁症合并其他精神疾病是常见的精神障碍;青少年精神障碍患者现实家庭亲密度和家庭适应远低于理想家庭亲密度和适应性;(2)家庭经济状况越好、第一照顾者文化程度越高、照顾者为女性和三代同堂的家庭类型的患者,家庭亲密度和适应性更好。

关键词: 我国青少年;精神障碍;家庭亲密度与适应性

同伴支持服务模式在失眠障碍患者中的应用

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目的 探讨同伴支持服务模式在改善失眠障碍患者睡眠质量与睡眠障碍的认知和态度,缓解焦虑、抑郁情绪方面的效果,为建立科学、有效的护理干预方法提供基础依据。

方法 选取2023年11月1日~2024年5月30日在重庆市某三级精神卫生中心收治的34例失眠障碍患者为研究对象作为试验组,采用前后对照研究,通过成立同伴支持研究小组、培训同伴支持者、实施同伴支持服务模式,最终比较试验组睡眠质量状况、睡眠障碍的认知和态度、焦虑状况、抑郁状况的变化。

结果 实验过程中,脱落2例,最终试验组纳入32例。干预后匹兹堡睡眠质量指数(PSQI)评分低于干预前,差异有统计学意义($P < 0.05$)、睡眠障碍信念和态度量表(DBAS)评分高于干预前,差异有统计学意义($P < 0.05$)、焦虑自评量表(SAS)评分低于干预前,差异有统计学意义($P < 0.05$)、抑郁自评量表(SDS)评分低于干预前,差异有统计学意义($P < 0.05$)。

结论 将广泛应用于慢性疾病患者的同伴支持服务模式推广应用于失眠障碍患者群体中,有助于改善患者睡眠质量,提高睡眠障碍的认知和态度,缓解焦虑、抑郁情绪,可作为失眠障碍患者护理管理的新模式加以推广应用。

关键词: 失眠障碍;睡眠障碍;同伴支持

孔圣枕中丹改善失眠伴发认知障碍的疗效和机制探索

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目的 建立强迫失眠的小鼠模型,并探究中医传统古方孔圣枕中丹对失眠小鼠模型的认知能力的影响及作用机制。

方法 将24只小鼠随机分为正常组、模型组、孔圣枕中丹组和阳性对照(地西洋)组。用改良的多平台水环境睡眠剥夺箱对模型组、孔圣枕中丹组和

地西洋组进行连续睡眠剥夺。建模后,分别给正常组和模型组灌胃生理盐水,孔圣枕中丹组灌胃孔圣枕中丹,阳性对照组灌胃地西洋,1次/天。实验期间观察并记录各组小鼠一般状态、体重及行为学实验指标,包括旷场实验中小鼠水平运动总格数、直立次数, Morris 水迷宫定位航行实验中小鼠逃避潜伏期时间、轨迹路线和空间探索实验中小鼠第一次抵达平台时间、在目标平台区域总时间、穿越平台次数,悬尾实验中小鼠不动时长。ELISA 测定小鼠血清 γ -氨基丁酸 (γ -aminobutyric acid, GABA) 含量。

结果 建模结束后,模型组小鼠毛色变暗、行动迟缓、睡眠时间减少、精神萎靡、体重减轻,成功构建了强迫失眠小鼠模型。在旷场实验中,与空白组相比,模型组水平运动格数和直立次数减少;与模型组相比,孔圣枕中丹组水平运动格数和直立次数显著增加 ($P<0.05$)。与空白组相比,模型组小鼠在 Morris 水迷宫实验中逃避潜伏期极显著增加 ($P<0.01$),第一次抵达平台区域时间极显著增加 ($P<0.01$),在目标平台区域总时间、穿越平台次数有减少的趋势;与模型组相比,孔圣枕中丹组逃避潜伏期极显著减少 ($P<0.01$),孔圣枕中丹组和地西洋组第一次抵达平台区域时间均极显著减少 ($P<0.01$),孔圣枕中丹组和地西洋组在目标平台区域总时间极显著增加 ($P<0.01$),孔圣枕中丹组穿越平台次数显著增加 ($P<0.05$)。在悬尾实验中,与空白组相比,模型组不动时长显著增加 ($P<0.05$);与模型组相比,孔圣枕中丹组和地西洋组不动时长极显著减少 ($P<0.01$)。与空白组相比,模型组小鼠血清 GABA 浓度略微升高,孔圣枕中丹组与模型组相比 GABA 浓度极显著降低 ($P<0.01$)。

结论 孔圣枕中丹可以改善失眠模型小鼠的认知能力,作用机制可能与减少失眠小鼠血清内 GABA 含量有关。

关键词:孔圣枕中丹,失眠,认知障碍,GABA

重力毯对抑郁伴失眠的干预效果研究

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目的 本研究旨在评估自制重力毯对抑郁障碍

合并失眠患者的疗效,特别是其对失眠症状、日间嗜睡、疲劳感及抑郁症状的改善效果。

方法 2019年9月至2020年9月,在某三级甲等医院精神卫生科选取了69例中度和重度抑郁障碍并伴有失眠的患者。患者随机分配至干预组(使用自制重力毯)和对照组(使用1Kg空毯),每晚进行9小时的干预,连续7天。研究采用多种量表和睡眠日记来评估患者的失眠严重程度、日间嗜睡、疲劳程度、抑郁症状及睡眠质量。

结果 最终有64名患者完成了研究。结果显示,干预组在使用自制重力毯后,其失眠严重程度指数(ISI)、日间嗜睡时间量表(ToDSS)、疲劳严重度量表(FSS)和抑郁自评量表(SDS)的评分均显著下降,表明睡眠质量和日间功能得到了改善。特别是,干预组的睡眠潜伏期缩短、夜间觉醒时间减少、睡眠效率提高,这些改善在统计上均优于对照组。此外,干预组的抑郁症状也得到了显著缓解。

结论 自制重力毯作为一种安全有效的非药物干预手段,对改善抑郁障碍合并失眠患者的睡眠质量、减少日间嗜睡和疲劳、以及缓解抑郁症状具有积极作用。研究结果为临床提供了新的治疗选择,但同时也指出了研究的局限性,包括依赖患者自评量表、样本量较小、干预时间较短等,建议未来的研究在这些方面进行改进,并探索重力毯在其他疾病中的应用及其作用机制。

关键词:自制重力毯,抑郁障碍,失眠,日间嗜睡,日间疲劳,睡眠效率

在 OSA 中,高觉醒阈值与代谢综合征相关

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目的 阻塞性睡眠呼吸暂停(OSA)患者由于夜间反复间歇性低氧及睡眠片段化,导致代谢综合征高发。觉醒阈值作为 OSA 病理过程中的非解剖因素之一,对于 OSA 的临床治疗具有重要的指导意义。低觉醒阈值患者频繁出现觉醒,导致睡眠片段化,而高觉醒阈值患者夜间存在较长的阻塞时间以及较严重的阻塞事件,这可能是代谢综合征高发的原因。我们的目的是探讨在 OSA 患者中,高觉醒阈值与代

谢综合征的关系。

方法 我们对汕头大学精神卫生中心睡眠门诊的 112 例 OSA 患者(平均年龄 43.50 ± 11.64 岁, 89.29%为男性)进行了横断面研究。觉醒阈值是根据多导睡眠图参数来预测, 高唤醒阈值占以下情况 ≤ 1 个: 睡眠呼吸暂停低通气指数 < 30 次/小时, 最低血氧饱和度 $> 82.5\%$ 和低通气事件占总呼吸事件的比例 $> 58.3\%$ 。代谢综合征的诊断根据国际糖尿病联盟的新定义。逻辑回归用来探索高觉醒阈值与代谢综合征之间的关系。

结果 112 例患者中, 有 51 例 (45.54%) 有代谢综合征, 68 例 (60.71%) 有高觉醒阈值。逻辑回归结果显示, 在控制混杂因素后, 有高觉醒阈值的患者, 出现代谢综合征 (OR = 4.31, 95% 置信区间 = 1.63-11.42, $p = 0.003$), 中心性肥胖 (OR = 5.78, 95% 置信区间 = 1.95-17.16, $p = 0.002$), 高甘油三酯血症 (OR = 2.84, 95% 置信区间 = 1.11-7.28, $p = 0.030$) 的风险高于低觉醒阈值的患者。此外, 较高的觉醒阈值水平与较高的腰围 (p -for-trend < 0.001)、甘油三酯 (p -for-trend = 0.042) 和收缩压 (p -for-trend = 0.037) 相关。高唤醒阈值组有更多的阻塞性事件、更高的睡眠呼吸暂停低通气指数、更高的氧减指数和更低的氧饱和度。

结论 在 OSA 中, 与低觉醒阈值相比, 高觉醒阈值与代谢综合征患病率增加有关。高觉醒阈值是 OSA 患者心脏代谢合并症严重程度的标志。

关键词: 阻塞性睡眠呼吸暂停; 觉醒阈值; 代谢综合征

Effects of Reducing South and Supplementing North on Sleep Structure and Inflammatory Factors in Patients with Insomnia after COVID-19

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Objective To observe the clinical effect of re-

ducing south and supplementing north on insomnia patients after COVID-19, and explore its possible mechanism from the aspects of sleep structure and inflammatory factors

Methods A total of 104 patients with insomnia after COVID-19 were randomly divided into treatment group and control group, with 52 cases in each group. The treatment group took the decoction of reducing south and supplementing north (Liuwei Dihuang Pill combined with Jiaotai Pill), 1 dose per day; The control group was given oral lorazepam tablets, 1mg each time, once a night. Both groups were treated for 4 weeks. Insomnia Severity Index (ISI), Fatigue Assessment Scale (FAS), General Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-9 items (PHQ-9), and TCM symptom score were evaluated before treatment and 4 weeks after treatment to evaluate clinical efficacy. The sleep structure related indexes [non-rapid eye movement stage 1 (N1), non-rapid eye movement stage 2 (N2), non-rapid eye movement stage 3 (N3), rapid eye movement stage (REM), sleep latency (SL), wake time after sleep (WASO), total sleep time (TST) and sleep efficiency (SE)] and inflammatory factors related indexes [Interleukin-2 (IL-2), interferon- γ (IFN- γ), interleukin-4 (IL-4), interleukin-10 (IL-10) levels and Th1/Th2 (IFN- γ /IL-4) ratio] were recorded; Treatment Emergent Symptom Scale (TESS) assessed and recorded the occurrence of adverse events

Results Finally, 101 cases were completed, including 51 cases in the treatment group and 50 cases in the control group. The total effective rate of treatment group (90.20%) was higher than that of control group (74.00%), and the difference was statistically significant ($P < 0.05$). Before treatment, there were no significant differences in scale assessment, sleep structure and inflammatory factors between the two groups ($P > 0.05$). After 4 weeks of treatment, ISI, FAS, GAD-7, PHQ-9, symptom score in the treatment group and the control group ($P < 0.01$) were significantly lower than before treatment; ISI, FAS, GAD-7, PHQ-9 and symptom scores in the treatment group were significantly lower than those in the control group ($P < 0.01$ or $P < 0.05$). In the treatment group, N1, N2, SL and WASO were de-

creased ($P < 0.01$), while N3, REM, TST and SE were increased ($P < 0.01$). In control group, N1, SL and WASO decreased ($P < 0.01$), while REM, TST and SE increased ($P < 0.01$ or $P < 0.05$). Compared with control group, N1, N2 and WASO in treatment group were decreased ($P < 0.01$), while N3 and REM were increased ($P < 0.01$). In the treatment group, IL-2, IFN- γ and IFN- γ /IL-4 were decreased ($P < 0.01$), while IL-4 and IL-10 were increased ($P < 0.01$). In control group, IL-2, IFN- γ and IFN- γ /IL-4 were decreased ($P < 0.01$), while IL-4 and IL-10 were increased ($P < 0.01$). IL-2, IFN- γ and IFN- γ /IL-4 in the treatment group were lower than those in the control group ($P < 0.01$), while IL-4 and IL-10 were higher than those in the control group ($P < 0.01$)

Conclusion Reducing south and supplementing north may improve the clinical efficacy of patients with insomnia after COVID-19 by regulating sleep structure and the balance of inflammatory factors

关键词: reducing south and supplementing north, COVID-19, insomnia disorder, sleep structure, inflammatory factor

八段锦和健步走对改善伴有睡眠问题的女大学生的睡眠质量、心肺功能及疲劳感的研究

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目的 探讨八段锦和健步走对睡眠障碍女大学生睡眠质量、心肺功能和躯体疲劳的疗效, 为改善女大学生睡眠质量提供新的视角和干预措施。

方法 于 2023 年 9 月至 2024 年 1 月在湖南大学进行招募, 通过问卷筛查的形式选出 90 名睡眠障碍女大学生为研究对象, 按照随机数字表法分为对照组、健步走组和八段锦组, 每组各 30 名。八段锦组和健步走组进行每周 5 次、每次 45min, 持续 10 周的运动干预, 对照组不施加干预手段, 依习惯自行锻炼; 三组在相同时间内保持原有的学习生活习惯, 不额外增加体力活动。采用匹兹堡睡眠质量量表 (PSQI)、心肺功能指标、疲劳量表 (FS-14) 对

三组受试者的睡眠质量各项指标、心肺功能指标以及躯体疲劳状况进行效果评定。

结果 八段锦组在干预后 PSQI 得分、心肺功能指标和疲劳量表得分方面较基线得分改善, 且差异具有统计学意义 (P 均 < 0.05)。健步走组在干预后入睡时间得分、心肺功能指标较基线水平改善且差异具有统计学意义 (P 均 < 0.05)。在干预 10 周后, 八段锦组在 PSQI 总分、入睡时间、睡眠时间得分方面均优于健步走组和对照组且差异具有统计学意义 (P 均 < 0.05); 八段锦组和健步走组在心肺功能指标方面均优于对照组, 差异具有统计学意义 (P 均 < 0.05); 八段锦组在心肺功能指标、躯体疲劳度和疲劳总分优于健步走组, 差异具有统计学意义 (P 均 < 0.05); 此外, 八段锦组在日间功能障碍得分和疲劳量表得分方面优于对照组, 差异具有统计学意义 (P 均 < 0.05); 健步走组的躯体疲劳度和疲劳总分较对照组明显改善, 差异具有统计学意义 (P 均 < 0.05)。

结论 八段锦能显著提高睡眠障碍女大学生睡眠质量、心肺功能以及降低疲劳程度。健步走可在一定程度上提高睡眠障碍女大学生的心肺功能和缓解疲劳程度。

关键词: 睡眠障碍, 睡眠质量, 疲劳, 女大学生, 心肺功能

Effects of Noninvasive Brain Stimulation (NIBS) on Excessive Daytime Sleepiness: A Brief Review

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Objective Excessive daytime sleepiness (EDS) is a major public health concern worldwide, leading to poor performance in family and professional roles, as well as an increased risk of motor vehicle accidents and fatalities. Noninvasive brain stimulation (NIBS) techniques, which can increase or decrease cortical excitability, have garnered renewed interest in recent years as a potential treatment for EDS. However, there is currently no systematic review available on the potential

use of NIBS as a treatment for EDS

Methods A comprehensive literature search was conducted using PubMed and Web of Science, covering publications prior to 1 September 2023, to gather information on noninvasive brain stimulation in the treatment of excessive daytime sleepiness, as discussed in this paper

Results To date, only a few studies have been conducted on the subject, and sample sizes are consistently small. The available literature shows that anodal transcranial direct current stimulation (tDCS) (FP1/FP2/F3/F4, 1-2mA) or high-frequency transcranial alternating current stimulation (tACS) has been found to reduce sleepiness and increase vigilance in cases of EDS caused by a variety of disorders. Additionally, anodal tDCS has been shown to decrease total sleep time in healthy individuals. High-frequency repetitive transcranial magnetic stimulation (rTMS) (10HZ) over the left DLPFC or low-frequency rTMS (1HZ) targeting the right posterior parietal cortex has demonstrated significant positive effects in the treatment of daytime sleepiness. Furthermore, low-frequency (1HZ) rTMS over the right DLPFC might be effective in improving EDS in patients with Parkinson's disease. Moreover, NIBS has been found to provoke a net gain of cortical arousal, which is linked to the modulation of cortical activity by reducing slow-frequency (δ and θ) activity while enhancing faster frequencies (β_1 and β_2)

Conclusion In summary, the use of various neuromodulation techniques through NIBS in the treatment of EDS shows promise. Despite the small number of studies, the mechanism underlying the efficacy of NIBS in modulating sleepiness is likely related to its ability to act on neural networks that regulate arousal and sleep through a top-down (cortico-thalamic) pathway. However, further research and additional data are needed to fully investigate the potential of NIBS as a treatment for EDS. This includes the use of larger sample sizes, testing different protocols, and setting appropriate parameters for stimulation

关键词: Excessive daytime sleepiness (EDS), Noninvasive brain stimulation (NIBS), Transcranial direct current stimulation (tDCS), Transcranial alternating current stimulation (tACS), Repetitive transcranial

magnetic stimulation (rTMS), Top-down (cortico-thalamic) pathway

Associations between Insomnia and Cardiovascular Diseases: A Meta-review and Meta-analysis of Observational and Mendelian Randomization Studies

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Objective Observational studies suggest associations between insomnia and cardiovascular diseases (CVDs), but the causality remains unclear. We aimed to investigate the potential causal associations between insomnia and several CVDs by a combination of systematic meta-review and meta-analysis of the observational and Mendelian randomization (MR) studies

Methods We searched PubMed, Web of Science, and Embase for English-published articles from inception to July 11, 2023. Two reviewers independently screened the articles to minimize the potential bias. We summarize the current evidences for the associations between insomnia and the risks of coronary artery disease (CAD), atrial fibrillation (AF), heart failure (HF), myocardial infarction (MI), hypertension (HTN), and stroke by combining the meta-analyses of observational studies and MR studies

Results A total of 4 meta-analyses of observational studies and 9 MR studies were included in the final data analysis. Systematic meta-review of observational studies provides strong evidence supported that insomnia is an independent risk factor for many CVDs, including AF, MI, and HTN. Meta-analysis of MR studies showed that insomnia may have a potentially causally relationship with CAD (odd ratio (OR) = 1.14, 95% confidence interval (CI) = 1.10-1.19, I² = 97%), AF (OR = 1.02, 95% CI = 1.01-1.04, I² = 94%), HF (OR = 1.04, 95% CI = 1.03-1.06, I² = 97%), HTN (OR = 1.16, 95% CI = 1.13-1.18, I² = 28%), large artery stroke (OR = 1.14, 95% CI = 1.05-1.24, I² = 0%), any ischemic

stroke (OR = 1.09, 95% CI = 1.03-1.14, I² = 60%), primary intracranial hemorrhage (OR = 1.16, 95% CI = 1.05-1.27, I² = 0%). No evidence suggested that insomnia is causally associated with cardioembolic and small vessel stroke

Conclusion Our results provide strong evidence supported a possible causal association between insomnia and CVDs risk. Strategies to reduce insomnia may be one of the promising targets in the prevention of CVDs

关键词: Insomnia, Mendelian randomization, Observational study, Meta-review, Cardiovascular

Polysomnographic Characteristics of Patients with Heart Failure Combined with Sleep Apnea: A Systematic Review and Meta-analysis

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Objective Patients with heart failure (HF) often report sleep disordered breathing (SDB), which seriously affect the prognosis of HF patients. However, most previous studies assessed sleep quality based on subjective reports, which may not accurately reflect actual sleep structure and could potentially lead to misinterpretation of the relationship between sleep parameters and HF progression. The purpose of this meta-analysis was to evaluate polysomnographic characteristics in HF with SDB and after different treatments. We also explored the potential mechanism that SDB aggravate HF, so as to provide for sleep management and treatment of clinical HF patients

Methods We searched PubMed, Embase, and Web of Science databases from July 21, 2022, to July 23, 2023. Observational studies and experimental treatment studies (controlled or uncontrolled) were included. The experimental interventions included automatic servo ventilation (ASV), continuous positive airway pressure (CPAP), and other therapies. The main subjects were HF combined with SDB and healthy. The primary

outcome was objective sleep parameters from standard polysomnography. Secondary outcomes self-reported sleep quality through valid instruments

Results 40 eligible articles were included in the meta-analysis, with effect sizes calculated as mean differences, and pooled using a random effects meta-analysis model. Compared with healthy people, wake time after sleep onset (WASO) of HF patients increased by 23.54min, sleep efficiency (SE) decreased by 7.45%, and the percentage of slow wave sleep (SWS) decreased by 3.16%, suggesting poor sleep quality. HF patients combined with SDB, the percentage of N1 sleep increased by 6.64%, the percentage of SWS decreased by 3.3%, and the percentage of REM sleep decreased by 3.71% suggesting that the sleep structure was disorganized after the combination of SDB

Conclusion Our findings suggest that HF patients showed decreased SE, reduced SWS, and increased WASO, indicating impaired sleep continuity. HF with SDB leads to a further decline in sleep quality, and HF with CSA has a more severe disturbance in nighttime sleep than HF with OSA. The results of our meta-analysis showed that CPAP improves SWS, suggesting that it may improve the prognosis of HF patients, but large-sample RCTs are still needed to determine its long-term effects on cardiovascular function

关键词: heart failure, polysomnography, sleep structure, slow wave sleep, mortality

加味酸枣仁汤与艾司唑仑治疗慢性失眠障碍的认知功能及临床疗效

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目的 本研究旨在探索加味酸枣仁汤与艾司唑仑治疗慢性失眠障碍患者(chronic insomnia disorder, CID)的认知功能及临床疗效

方法 共纳入 80 例符合诊断标准的 CID 患者,

受试者根据随机数字表法分为两治疗组, 分别给予加味酸枣仁汤及艾司唑仑治疗(4周), 采用匹兹堡睡眠质量指数(Pittsburgh sleep quality index, PSQI)、失眠严重程度指数量表(Insomnia severity index, ISI)、汉密尔顿焦虑量表(Hamilton anxiety scale, HAMA)、汉密尔顿抑郁量表(Hamilton depression scale, HAMD)、多导睡眠监测(Polysomnography, PSG)、重复性成套神经心理状态测验(Repeatable battery for the assessment of neuropsychological status, RBANS)观察主客观睡眠、情绪及认知功能的变化。对两组治疗前量表评分、PSG采用独立样本t检验, 各自前后采用配对样本t检验, 对两组间治疗前后疗效比较采用混合线性效应模型进行分析。

结果 (1) 加味酸枣仁汤与艾司唑仑治疗后的PSQI ($Z=-6.16, P<0.001$; $Z=-4.56, P<0.001$)、HAMD ($Z=-5.96, P<0.001$; $Z=-4.23, P<0.001$)、HAMA ($Z=-5.97, P<0.001$; $Z=-4.40, P<0.001$) 分数分别与治疗前比较, 差异有统计学意义, 且加味酸枣仁汤组治疗后PSQI总分显著低于西药组 ($Z=-2.78, P=0.006$); (2) 两组总有效率比较差异无统计学意义 ($\chi^2=0.37, P=0.543$); (3) 两组CID患者治疗后RBANS总分 ($Z=-4.87, P<0.001$; $Z=-3.21, P=0.001$)、即刻记忆方面 ($Z=-4.90, P<0.001$; $Z=-2.62, P=0.009$)、延时记忆方面 ($Z=-4.27, P<0.001$; $Z=-3.19, P=0.001$) 均得到明显的改善。(4) 两组间治疗前后PSG相关指标均无明显统计学差异, 但酸枣仁汤组治疗后患者REM期持续时间 ($Z=-2.39, P=0.017$)及N3期持续时间 ($Z=-2.32, P=0.020$) 较治疗前增加, 差异有统计学意义。

结论 加味酸枣仁汤与艾司唑仑治疗CID患者的临床疗效相当, 对CID患者临床症状、情绪、认知功能(尤其即刻记忆、延时记忆)方面均有改善, 但与艾司唑仑治疗相比, 酸枣仁汤治疗在改善主观睡眠质量方面效果更好。

关键词: 加味酸枣仁汤, 艾司唑仑, 临床疗效, 认知功能

南通市青少年睡眠质量及影响因素水平分析

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目的 了解南通市青少年睡眠质量状况及其影响因素, 对改善儿童青少年心理健康有重要意义, 同时为南通市青少年维持睡眠质量提供理论依据,

方法 选取南通市中学生进行匹兹堡睡眠质量指数量表(PSQI)和患者健康问卷抑郁量表(PHQ-9)问卷调查, 采用描述性统计对中学生睡眠质量进行现况分析, 多因素 Logistic 回归分析中学生睡眠障碍的影响因素。

结果 南通市中学生PSQI平均得分(4.43 ± 2.70), 睡眠障碍人数为398人(12.25%), 中重度抑郁的学生睡眠障碍检出率为50.53%。南通中学生轻微抑郁的人数为610人, 中重度抑郁的人为180人, 与无抑郁的人相比, 轻度抑郁的人发现睡眠障碍是无抑郁的人的3.68倍, 中重度抑郁的人发现睡眠障碍是无抑郁的人的13.61倍。不同性别、年龄段、家庭情况、运动时间以及抑郁状态的学生之间的PSQI平均得分差异有统计学意义($P<0.05$)。不同运动时间和抑郁状态的睡眠障碍率之间存在差异($P<0.05$), 运动时间在2-3小时之间的PSQI平均得分(3.71 ± 2.59)和睡眠障碍率(7.46%)最低。多因素 Logistic 回归分析显示, 不同运动时间、抑郁状态对中学生的睡眠水平会产生影响($P<0.05$), 轻度抑郁(OR:3.68, 95%CI: 2.87~4.71), 中重度抑郁(OR: 13.61, 95%CI: 9.83~18.85)是睡眠质量的危险因素, 运动时间1小时~2小时(OR:0.513, 95%CI: 0.41~0.64), 2小时~3小时(OR:0.41, 95%CI:0.25~0.69)是保护因素

结论 南通市中学生的睡眠障碍检出率较低, 学生的抑郁状态以及运动时间可能是其睡眠质量的影响因素。

关键词: 青少年; 睡眠质量; PSQI; PHQ-9

Lemborexant for The Treatment of Insomnia in Chinese Patients: Four Cases

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Objective Lemborexant is a competitive antagonist of dual orexin receptors indicated for the treatment of adult patients with insomnia characterized by difficulties with sleep onset and/or sleep maintenance. There

has been no published study of its efficacy and safety in treating Chinese patients with insomnia. In this case report, we present 4 Chinese patients with insomnia who were treated with lemborexant

Methods All of the 4 patients were outpatients in department of Mental Health, Guangzhou United Family Hospital. Patient-reported (subjective) outcomes were recorded at baseline and each followed-up visit. The primary outcomes were sleep quality evaluated by Insomnia Severity Index (ISI) after 4 weeks of treatment. Depression and anxiety were also evaluated by Patient Health Questionnaire-9 (PHQ-9) and General Anxiety Disorder-7 (GAD-7), respectively

Results Case 1 was a patient with insomnia for 4 months who direct transited from zolpidem to lemborexant. Case 2 was a patient with insomnia for 3 years who had taken 2 sedatives with unsatisfactory treatment with lorazepam. Case 3 was a patient with insomnia for 12 years accompanied by depression and anxiety at a time and who had taken 3 different drugs. Case 4 was a patient with recurrence of depression accompanied with insomnia for a month. After 4-week treatment, all of the 4 patients' sleep quality was improved by add-on Lemborexant or switching from benzodiazepines or Z-drugs to Lemborexant while their ISI scores were all decreased. Most of the patients' PHQ-9 and GAD-7 scores were improved. None of the 4 patients experienced any discomforts related to lemborexant use

Conclusion This is the first report of using lemborexant to treat Chinese patients with insomnia. Lemborexant treatment was effective and safe in treating 4 Chinese patients with insomnia. This could provide basis for future studies on this topic

关键词: orexin receptor antagonist, lemborexant, insomnia, clinical practice

目的 探讨基于互联网数字技术的失眠认知行为治疗对广泛性焦虑障碍患者焦虑、睡眠质量的影响。

方法 选取 2023 年 4 月-2023 年 10 月在湖州市某三级甲等精神专科医院确诊为广泛性焦虑障碍的 82 例患者为研究对象, 随机分为干预组 41 例和对照组 41 例。在干预组中, 患者接受了药物治疗和数字失眠认知行为治疗, 而在对照组中, 患者则接受了药物治疗和睡眠护理门诊的线下失眠认知行为治疗, 共干预 6 周。分别于干预前、干预 6 周后测评汉密尔顿焦虑量表 (HAMA)、匹兹堡睡眠质量指数 (PSQI)、睡眠个人信念与态度简化量表 (DBAS-16)。在进行干预前和干预后, 都需要记录睡眠日记, 日记主要涵盖了入睡潜伏期 (SOL)、夜间觉醒次数 (NOA)、入睡后觉醒时间 (WASO)、总睡眠时间 (TST) 以及睡眠效率 (SE) 等方面的内容。

结果 与基线相比, 干预组治疗六周后, HAMA、PSQI、DBAS-16 均有显著改善 ($P < 0.05$)。经过治疗后, 干预组的焦虑水平明显低于治疗前, 其社会功能也得到了提升, 差异具有统计学意义 ($P < 0.05$)。与对照组相比, 干预组在睡眠质量以及个人对睡眠的信念和态度上的改进更为明显, 差异具有统计学意义 ($P < 0.05$)。干预后, 两组患者在 HAMA、PSQI、DBAS-16 评分干预前后差异都具有显著的统计学意义 ($P < 0.05$)。患者睡眠日记结果显示, 两组患者入睡潜伏期、入睡后觉醒时间、睡眠总时间、睡眠效率均有改善, 干预组改善更显著, 但两组患者夜间觉醒次数均改善不明显 ($P > 0.05$), 与广泛性焦虑障碍患者高度觉醒特质有关。

结论 数字失眠认知行为治疗能有效缓解广泛性焦虑障碍患者的焦虑情绪, 改善失眠症状, 提升患者主观睡眠体验感, 提高睡眠质量, 缩短入睡时间, 增加睡眠总时长。

关键词: 数字失眠认知行为治疗; 广泛性焦虑障碍; 焦虑; 睡眠质量

数字失眠认知行为治疗在广泛性焦虑障碍患者中的应用研究

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失眠障碍与焦虑抑郁共病失眠障碍患者的临床特征研究

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目的 比较原发性失眠患者、焦虑障碍共病失眠患者、抑郁障碍共病失眠患者的睡眠特征，以期为临床诊疗提供参考依据。

方法 2022年8月至2023年10月期间，以方便采样的方式，在武汉市精神卫生中心睡眠障碍病区招募新收治入院的慢性失眠患者共99例。根据DSM-5诊断标准，将受试者分为失眠障碍组（简称失眠组， $n=24$ ），焦虑障碍共病失眠组（简称焦虑组， $n=33$ ），抑郁障碍共病失眠组（简称抑郁组， $n=42$ ）。利用福特应激失眠反应测试量表（FIRST）、简式睡眠功能失调信念与态度量表（DBAS-16）、睡眠卫生习惯量表（SHPS）、睡前觉醒状态量表（PSAS）评估患者的睡眠认知、睡前觉醒和睡眠习惯，利用广泛性焦虑障碍量表（GAD-7）、9项患者健康问卷（PHQ-9）评估患者的焦虑、抑郁情绪，利用多导睡眠监测（PSG）评估患者的客观睡眠结构及质量，并比较三组各参数的差异。

结果 量表：焦虑组DBAS-16评分低于失眠组（ $P=0.016$ ），PSAS评分高于失眠组（ $P=0.035$ ）。失眠组GAD-7评分低于焦虑组（ $P=0.032$ ）及抑郁组（ $P=0.014$ ）。失眠组PHQ-9评分低于焦虑组（ $P=0.002$ ）及抑郁组（ $P<0.001$ ）。抑郁组GAD-7评分低于焦虑组（ $P=0.026$ ）。PSG：焦虑组的觉醒总时间、入睡后清醒时间、觉醒次数、主客观入睡潜伏期差值低于失眠组（ P 值依次为0.041、0.012、0.029、0.040）；焦虑组的睡眠效率、主客观总睡眠时间差值、主客观睡眠效率差值高于失眠组（ P 值依次为0.044、0.044、0.028）；抑郁组的入睡潜伏期高于焦虑组（ $P=0.012$ ）。抑郁组入睡后清醒时间低于失眠组（ $P=0.007$ ）；抑郁组入睡潜伏期、REM潜伏期高于失眠组（ $P=0.029$ 、0.021）。

结论 1.焦虑共病失眠患者存在更多错误睡眠认知、更高的睡前觉醒。2.焦虑共病失眠患者存在更多的主观性失眠。3.抑郁共病失眠患者存在特殊睡眠结构紊乱。本研究提示早期识别、正确区分患者的失眠障碍类型与情绪问题具有重要的临床意义。

关键词：失眠障碍；抑郁障碍；焦虑障碍；共病；多导睡眠监测

失眠伴阻塞性睡眠呼吸暂停患者睡眠监测指标和脑电功率频谱与认知功能损害的相关性

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目的 探讨失眠伴阻塞性睡眠呼吸暂停（OSA）患者睡眠监测指标和脑电功率频谱与认知功能损害的相关性。

方法 收集失眠患者74例，根据是否合并OSA将患者分为失眠组和失眠伴OSA组。采用多导睡眠监测仪测两组睡眠指标，使用脑电功率频谱分析软件分析睡眠脑电功率频谱；采用蒙特利尔认知评估量表（MoCA）、记忆与执行筛查量表（MES）评估认知功能；采用Pearson相关法分析失眠伴OSA患者睡眠指标、脑电功率频谱与认知功能的相关性。

结果 REM期睡眠与MoCA中延迟回忆评分呈正相关（ $r=0.331$ ， $P<0.05$ ），NREM2期睡眠与MES总分呈正相关（ $r=0.352$ ， $P<0.01$ ），AHI与MES总分呈负相关（ $r=-0.335$ ， $P<0.05$ ），入睡后觉醒时间与MoCA中命名、定向评分呈正相关（ $r=0.445$ ， $P<0.05$ ； $r=0.452$ ， $P<0.05$ ），入睡潜伏期和AHI与MoCA中命名评分呈负相关（ $r=-0.415$ ， $P<0.05$ ； $r=-0.360$ ， $P<0.05$ ）。NREM2期theta脑电功率频谱与MES总分呈正相关（ $r=0.334$ ， $P<0.05$ ），NREM1期alpha脑电功率频谱与MoCA中注意评分呈负相关（ $r=-0.679$ ， $P<0.05$ ），NREM1期beta脑电功率频谱与MoCA中抽象评分呈负相关（ $r=-0.585$ ， $P<0.05$ ）。

结论 失眠伴OSA患者的睡眠监测指标和脑电功率频谱表现为NREM2期睡眠减少，睡眠中与缺氧相关的指标增加，NREM2期theta脑电功率频谱减少，NREM1期theta、alpha脑电功率频谱减少，并且睡眠的改变与认知功能具有相关性。

关键词：失眠；阻塞性睡眠呼吸暂停；多导睡眠监测；脑电频谱分析；认知损害

睡眠质量对女性精神分裂症患者认知功能影响分析

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目的 精神分裂症是一种以意志行为障碍及精神活动不协调为主要症状的重性精神障碍性疾病，

患者普遍存在广泛的认知功能损害和睡眠障碍,我国是精神分裂症高发国家,调查数据显示,我国的精神分裂症发病率约为 6.55%,尤其近年来随着生活压力的不断增加,精神分裂症的发病率也随之升高,对我国社会经济发展造成了严重的经济损害。及早发现并干预以延缓疾病进展、改善预后是临床诊疗精神分裂症的业内共识。而既往研究显示,睡眠参与记忆巩固过程,睡眠障碍可能影响记忆功能,最终导致认知功能受损。此外,大量前瞻性队列研究也发现睡眠质量下降是老年人认知障碍的危险因素。认知功能损害是精神障碍的核心症状,关系到患者的治疗、预后和社会功能的康复。基于此,本研究以我院就诊的 95 例精神分裂症患者为研究对象,分析睡眠质量对精神分裂症患者认知功能影响。

方法 采用匹兹堡睡眠指数问卷(PSQI)评估其主观睡眠质量,根据 PSQI 得分将患者分为高睡眠质量组(n=41)、低睡眠质量组(n=54),根据睡眠时间分为睡眠时间<7h 组、睡眠时间≥7h~<9h 组、睡眠时间≥9h 组。采用重复性成套心理状态测验(RBANS)评估患者的认知功能,Pearson 相关性分析睡眠质量对精神分裂症患者认知功能影响。

结果 高睡眠质量组精神分裂症患者的即刻记忆、注意力、视觉广度、认知总分均高于低睡眠质量组($P<0.05$),睡眠时间≥7h~<9h 和睡眠时间≥9h 精神分裂症患者的即刻记忆、注意力、视觉广度、认知总分均高于睡眠时间<7h($P<0.05$)。精神分裂症患者 PSQI 评分与 RBANS 评分的相关性呈显著负相关性($r=-0.526$, $P<0.05$)。

结论 精神分裂症患者的睡眠质量和认知功能呈负相关性,低睡眠质量可能加重精神分裂症患者认知损害。

关键词:睡眠质量;精神分裂症;认知功能

社会时差对老年睡眠障碍患者糖脂代谢相关性研究进展

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目的 国家统计局第七次人口普查数据显示,我国人口老龄化趋势正在日益加深,60 岁及以上人口超过 2.6 亿人。随着年龄的增长,老年人睡眠习

惯和睡眠结构将发生变化,睡眠问题愈发普遍,研究显示,中国老年人睡眠障碍总患病率为 35.9%,而睡眠障碍与糖脂代谢紊乱、糖尿病等多种代谢性疾病的发生发展有关。近年来,昼夜节律紊乱与糖脂代谢的关系备受关注。研究发现,昼夜节律紊乱会导致血液中葡糖及甘油三酯水平升高。社会时差(Social Jetlag, SJL)是现代生活方式影响下反应慢性昼夜节律紊乱的新兴指标,是由昼夜节律钟决定的生物节律与工作安排和社交活动强加的睡眠和起床时间之间的不一致导致。一些证据指出, SJL 对老年睡眠障碍患者的糖脂代谢有显著影响,但仍存在争议,且内在机制尚未阐明。因此,本文将对社会时差与老年睡眠障碍患者糖脂代谢的关系及内在机制进行综述,以期推动社会时差与糖脂代谢的基础和临床研究,为改善睡眠障碍提供指导。

方法 通过计算机分别检索发表于 CNKI、万方、PubMed 等数据库中关于该主题的研究,共检索到 113 篇,剔除无关文献 86 篇,选取相关度最高 27 篇文献进行分析和总结。

结果 现有研究中关于老年睡眠障碍患者 SJL 与糖脂代谢的关系尚存在争议,多数研究认为其与 HbA1c 水平升高、肥胖、血脂异常相关,少数研究尚未发现其关联性。此外, SJL 与糖脂代谢的相关性可能受到年龄、职业、生活习惯和环境因素的影响。关于 SJL 影响糖脂代谢的可能机制,主要概括为以下几点:1.体内激素分泌异常: SJL 作为一种慢性昼夜节律紊乱,与人体激素的分泌失调密切相关。昼夜节律系统的核心,即下丘脑视交叉上核(SCN),对多种激素的分泌起着精细调节作用,包括褪黑素、皮质醇、瘦素和胃泌素等,这些激素在葡萄糖和脂质代谢中发挥着关键作用。2.生物钟基因的时序调控异常: SJL 的出现通常会改变个体的作息时间,从而影响生物钟系统。3.光周期的改变:随着 SJL 的增加,人们更多地暴露于夜间人工光源下,光周期随之延长。光周期过长已被证实会干扰昼夜节律。4.体力活动水平降低:多项研究发现 SJL 可能会降低体力活动水平,从而影响代谢。5.进食时间和饮食模式的改变:多项研究证实, SJL 越大的人对健康饮食模式的依从性越低。

结论 老年睡眠障碍患者 SJL 与糖脂代谢的关系尚存在争议,内在机制尚未阐明。且针对该主题的研究较少、层次较浅,样本量较少,混杂因素矫正不足,大部分研究都是横断面研究,使得因果关系证据不足。因此,未来应开展更大规模的前瞻性研

究, 以更深入地探索这一主题。

关键词: 社会时差; 老年人; 睡眠障碍; 代谢; 综述

COVID-9 疫情期间青少年抑郁症患者睡眠障碍及相关影响因素

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目的 疫情对青少年睡眠质量影响显著, 且与学习任务显著相关。本研究了解 COVID-9 疫情期间青少年抑郁症患者的睡眠状况、学习情况以及与抑郁焦虑情绪、学习倦怠的关联, 旨在探索青少年抑郁症患者睡眠障碍的影响因素。

方法 本研究针对 142 名青少年抑郁症患者, 363 名青少年健康对照, 完成一般资料情况以及网络学习情况调查, 使用阿森斯失眠量表 (Athens Insomnia Scale, AIS) 评估睡眠情况, 使用青少年学习倦怠量表 (Adolescent Student Burnout Inventory, ASBI) 和情绪自评量表 (DASS-21) 评估学习倦怠及抑郁焦虑和压力等症状。

结果 1) 患者组 AIS 得分显著高于健康对照组 ($F=20.66, p<0.001$); 在学习和使用网络时长方面, 对照组每日学习时长 ($>6h$) ($X^2=61.87, p<0.001$) 比例高于患者组; 患者组学习效率 ($X^2=86.22, p<0.001$) 和网络学习的满意度更差 ($X^2=54.87, p<0.001$); 2) 以 AIS >7 分为临界, 抑郁症患者分为伴有和不伴有睡眠障碍两组。不伴睡眠障碍的患者组每日使用网络学习的时长 ($>6h$) 的比例 (54.7%) 高于伴有睡眠障碍的患者组 (41.6%) ($X^2=7.84, p=0.020$); 3) 在学业倦怠各因子中, 伴有睡眠障碍的患者身心损耗 ($F=2.81, p=0.028$) 和低成就感 ($F=2.58, p=0.040$) 的评分显著高于不伴有睡眠障碍的患者; 4) 伴有睡眠障碍的患者焦虑症状的评分显著高于不伴有睡眠障碍的患者 ($F=3.82, p=0.006$); 5) ASI 总分与 DASS-D ($r=0.29, p=0.001$)、DASS-A ($r=0.32, p<0.001$) 和 DASS-S ($r=0.26, p=0.002$) 均成正相关, 而 ASI 总分与 ASBI 各因子未发现显著统计学差异; 6) logistic 回归分析结果显示: 居住在农村的抑郁症患者睡眠障碍发生的可能性是居住当地在城市的 7.580 倍 ($OR=7.580, 95\%CI 1.800-$

31.912), 已休学患者睡眠障碍发生的可能性更高 ($OR=0.342, 95\%CI 0.142-0.825$), 焦虑症状越重的患者发生睡眠障碍的概率越大 ($OR=1.241, 95\%CI 1.052-1.463$)。

结论 疫情期间, 青少年抑郁症患者更容易出现睡眠障碍和学习效率的下降, 居住在农村、已休学及共病焦虑是青少年抑郁症患者睡眠障碍的危险因素。

关键词: 青少年抑郁症, COVID-19, 睡眠障碍, 学习倦怠

综述: 大鼠睡眠剥夺模型的应用

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目的 由于睡眠机制及其影响因素 (性别, 年龄, 遗传, 生活方式等) 较多, 具有较多的混杂因素, 且研究多涉及中枢神经系统调节, 对于研究取样具有一定的限制。啮齿类动物虽然属于低等哺乳动物, 但其睡眠稳态模式及其相对应的神经生化调节机制相似, 因此, 大鼠睡眠剥夺模型作为一种重复性较好 (可通过选择相同品种、品系、性别、年龄、体重、活动性、健康状态等方面严加控制的各种等级的标准实验动物), 操作性高, 成本较为低廉, 研究方式可控, 成为研究睡眠剥夺相关机制的重要研究模型。例如, 大鼠睡眠剥夺模型可用于研究个体应对失眠不足的能力差异及其内在机制, 以及睡眠不足导致的神经调节变化等。目前, 在不同研究中, 研究者根据自己的研究要求, 大鼠睡眠剥夺模型的具体参数也有着很大的差异。研究模型的设计差异一方面为了我们揭示了不同睡眠剥夺模型可能产生的神经或机体的影响; 另一方面, 由于缺乏统一的标准, 也导致了不同研究结果差异大, 甚至是相互矛盾, 缺乏一致性的缺点。因此, 本文回顾了关于大鼠睡眠剥夺模型在调节睡眠免疫相互调节的文献, 进行总结思考, 提出目前研究中取得的成绩, 存在的局限性, 并提出未来研究的问题。

方法 以“睡眠剥夺, 物理造模法, 化学造模法, 光遗传学造模法”等为关键词组合查询 2009-2024 年 2 月在中国知网, 万方数据库、pubmed、ovid、embase、MD Consul、Medline 等数据库中的相关文

献,大鼠睡眠剥夺模型的在失眠导致免疫调控异常的应用进行综述。

结果 睡眠剥夺大鼠模型分类,根据睡眠剥夺暴露总时间,可将睡眠剥夺分为急性睡眠剥夺(<4 天)和慢性睡眠剥夺(≥ 4 天)[14]。根据睡眠剥夺程度的不同,可将睡眠剥夺分为完全睡眠剥夺(连续24小时无法获得睡眠);部分睡眠剥夺,选择性单一睡眠阶段剥夺。根据造模方式不同可分为化学造模法,物理造模法(水平台造模法,轻柔刺激法,强迫运动法),光遗传学造模法,每种方法各有优缺点,可根据实验要求进行选择。

结论 目前,睡眠剥夺模型已日渐完善,且在科研工作者的不断努力之下,逐渐减少睡眠剥夺造模过程中产生的压力、强迫运动、居住环境等对实验动物造成的影响,减少了混杂因素的发生。同时睡眠遥测脑电记录技术的发展,也逐渐增加了对睡眠剥夺模型成功与否的评估,增加了实验可靠性。

关键词: 睡眠剥夺,物理造模法,化学造模法,光遗传学造模法

伽玛感觉闪烁治疗失眠的研究

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目的 失眠障碍发病率高,严重影响人类生活质量。研究表明,使用40 Hz的光刺激会引起最大的广泛夹带。伽玛波感觉闪烁刺激是治疗多种疾病的,在小型临床试验中,伽玛感觉闪烁治疗刺激的治疗没有显著的安全性或依从性问题。磁共振成像和脑脊液蛋白质组学显示了闪烁影响神经系统中神经网络和免疫因子的初步证据。值得注意的是,一些研究表明,40 Hz的光闪烁可能会改善阿尔兹海默症(Alzheimer's disease, AD)相关的昼夜节律紊乱。最近已经证明,伽玛感觉刺激疗法可以改善AD患者的睡眠质量。伽玛(Gamma)振荡因其在大脑皮层信息传递、代谢调节的积极作用而成为非药物治疗精神疾病的热点。本文拟通过对伽玛波感觉闪烁治疗失眠障碍的依从性,治疗效果及不良反应等方面进行研究,对伽玛感觉闪烁刺激治疗慢性失眠提供一定的参考。

方法 这项前瞻性观察性研究招募了37名慢

性失眠患者。在为期8周的时间里,参与者每天通过伽玛感觉闪烁进行一小时的治疗。治疗前后给与睡眠日记记录睡眠情况。

结果 在研究的主要阶段,依从率平均为92.21%。只有三名参与者的依从率低于85%。因此,患者的依从性总体良好。此外,闪烁治疗未报告严重不良事件。对睡眠日记的分析表明,40 Hz的闪烁可以通过减少睡眠开始延迟和增加总睡眠时间来提高睡眠质量。参与者未经历任何与闪烁相关的严重不良事件。最常见的不良事件是头晕和头痛,分别发生在6名参与者身上。闪烁治疗可能会出现轻度不良事件,包括头晕、耳鸣、头痛、心悸、眼部不适和月经不调。根据睡眠日记现实,第一周的平均睡眠时间($H=4.59$, $SD=1.20$)低于第八周的睡眠时间($E=5.03$, $SD=1.29$),这一差异具有统计学意义($p=0.009$)。治疗第一周($H=57.86$)的睡眠潜伏期比治疗第八周($H=44.29$)长,这一差异具有统计学意义($p=0.016$)。这表明40 Hz的闪烁可以改善睡眠质量。

结论 在为期八周的研究中,每天连续1小时40 Hz的声音和光刺激增加了失眠障碍患者的总睡眠时间,减少了睡眠开始的潜伏期。因此,伽玛感觉闪烁能够改善慢性失眠障碍患者的睡眠质量。

关键词: 感觉闪烁;伽玛振荡;失眠障碍;睡眠效率;睡眠日记

重复经颅磁刺激治疗孤独症谱系障碍患者失眠障碍的随机对照双盲研究

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目的 探究重复经颅磁刺激(rTMS)治疗孤独症谱系障碍(ASD)患者失眠障碍的疗效

方法 对共病失眠障碍并愿意参加本研究的ASD儿童,利用计算机生成的随机数表,以1:1的比例分配到真刺激(rTMS)组和假刺激(sham)组,由rTMS治疗师采用低频rTMS刺激受试者大脑右侧背外侧前额叶皮质区,治疗参数如下:1 Hz, 50%的运动静息电位,每次30个脉冲,50次,每次间隔3s。ASD儿童将在4周内进行20次治疗,Sham组的操作流程与rTMS治疗组一样,采用假

刺激线圈产生与真刺激相同的声音和感觉,但没有磁场穿过颅骨。在基线期、4周治疗结束后及8周后的随访期使用PSG(每次连续两晚,共六次)对受试者进行睡眠质量评估。将测量时间作为重复测量,将组别(sham组和rTMS组)作为组间因素,利用重复测量方差分析及广义估计方程等方法分析治疗前后睡眠参数及临床症状变化情况。

结果 30名共病失眠障碍的ASD儿童被纳入随机、对照、双盲干预,男女比例为5:1,年龄范围为 6.6 ± 2.6 岁。rTMS组(N=15)与Sham组(N=15)在基线期一般人口学数据、睡眠参数以及临床症状量表总分差异均无统计学意义($P>0.05$);在4周治疗结束后,发现rTMS组PSG参数(总睡眠时间和快速眼球运动期睡眠占总睡眠时间比值)显著高于sham组($P<0.05$);且仅rTMS组总睡眠时间显著高于基线期($P<0.05$)。比较两组在基线期与4周治疗结束后总睡眠时间和快速眼球运动期睡眠占总睡眠时间比值均数变化,发现rTMS组分别平均增加68.5分钟和1.9%,而sham组分别平均降低25.9分钟和0.9%。

结论 低频rTMS(1Hz)治疗可以显著增加共病失眠障碍的ASD儿童总睡眠时间和快速眼球运动期睡眠占总睡眠时间比值,改善ASD儿童的睡眠质量。

关键词: 孤独症谱系障碍、失眠障碍、重复经颅磁刺激、多导睡眠监测

标准化认知行为治疗方案对慢性失眠障碍患者的疗效

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目的 以慢性失眠障碍患者为研究对象,使用失眠认知行为治疗系统(CBT-I)对其进行6个阶段的标准化治疗,探索其对慢性失眠障碍患者睡眠质量、认知功能影响,为慢性失眠障碍患者提供更有有效的治疗,使患者早日重新回归正常生活。

方法 招募60例符合条件的慢性失眠障碍(CID)患者(依据ICSD-3),被随机分配到认知行为治疗(CBT-I)组和药物治疗(DT)组。CBT-I包括6个阶段,分别为:了解失眠与治疗方法、认知

识别与放松训练、睡眠卫生与限制疗法、情景体验与专家解析、矛盾意向疗法与刺激控制疗法、预防复发6个阶段,此标准化方案通过新乡医学院第二附属医院睡眠医学科的计算机(失眠认知行为治疗系统CBT-I)提供。慢性失眠障碍患者通过简单的随机化方法随机分到两个治疗组,确保患者随机分配到两组的机会为50/50。CBT-I组提供药物治疗与认知行为治疗,DT组只提供与认知行为治疗组同样的药物治疗。所有患者均在治疗前收集人口学信息,并进行多导睡眠监测,排除其他睡眠障碍(比如睡眠呼吸暂停),并评估失眠严重程度指数(ISI)、匹茨堡睡眠质量指数量表(PSQI)、睡眠个人信念和态度量表(DBAS)、汉密尔顿焦虑量表(HAMA)、汉密尔顿抑郁量表(HAMD)。

结果 两组患者在基线人口学特征及临床特征均无统计学差异,并且在为期6周的治疗后,所有临床特征均有改善。治疗6周时,与DT组相比,CBT-I组在PSQI、ISI、DBAS和HAMD评分改善更明显,HAMA评分改善无统计学差异。

结论 目前的研究结果表明,与单用药物治疗相比,联合认知行为治疗治疗可以更加有效改善慢性失眠障碍患者的睡眠质量、改变不合理的信念与态度、改善抑郁情绪。

关键词: 慢性失眠障碍,认知行为治疗,标准化方案

慢性失眠症患者静息态大脑功能连接变化研究

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目的 探讨慢性失眠症(CID)患者治疗前静息态全脑功能连接(FC)改变模式和治疗后FC的变化,为阐明CID的发病机制及治疗提供影像学依据。

方法 纳入符合标准的31例CID患者(CID组)和35名健康对照者(对照组)。两组均进行静息态全脑功能磁共振成像扫描。CID组在药物治疗4周后再次进行静息态全脑功能磁共振成像扫描。以海马、杏仁核、丘脑、前扣带回为种子点,分别比较治疗前两组间这些种子点区域与全脑FC的变化,以及CID组治疗前后上述种子点区域与全脑FC的

变化。另外,根据 CID 患者治疗后失眠严重程度指数 (ISI) 评分将其分为反应缓解组和反应未缓解组,比较两组治疗前后上述种子点区域与全脑 FC 的变化。

结果 CID 组较对照组左侧海马与右侧辅助运动区、左侧顶上回、左侧中央前回和右侧中央后回之间 FC 减弱;右侧海马与左侧中央前回之间 FC 减弱;左侧杏仁核与左侧中央前回和左侧额下回三角部之间 FC 减弱;右侧杏仁核与左侧中央后回和左侧辅助运动区之间 FC 减弱 (均 $P < 0.05$, GRF 校正)。与治疗前相比, CID 组治疗后左侧海马与右侧梭状回之间 FC 增强,右侧海马与右侧颞下回之间 FC 增强,左侧杏仁核与右侧梭状回之间 FC 增强,右侧丘脑与左侧后扣带回和左侧楔前叶之间 FC 增强,双侧前扣带回与左侧楔叶之间 FC 增强 (均 $P < 0.05$, GRF 校正)。反应缓解组治疗后较治疗前左侧海马与左侧角回、双侧颞中回之间 FC 增强,右侧海马与右侧颞上回之间 FC 增强左侧前扣带回与右侧枕中回、左侧楔叶之间 FC 增强 (均 $P < 0.05$, GRF 校正)。

结论 CID 组较对照组海马、杏仁核与多个脑区之间 FC 发生改变; CID 组治疗前后海马、杏仁核、丘脑和前扣带回与多个脑区之间 FC 发生改变;反应缓解组治疗后较治疗前左侧海马与左侧角回、双侧颞中回之间 FC 增强,右侧海马与右侧颞上回之间 FC 增强,左侧前扣带回与右侧枕中回、左侧楔叶之间 FC 增强,这些脑区之间 FC 增强可能与疗效有关。这些发现为阐明 CID 的发病机制及治疗提供了影像学依据。

关键词:慢性失眠症,功能磁共振成像,功能连接

慢性失眠患者相关基因的 DNA 甲基化分析

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目的 采用目的区域甲基化水平测序 (MethylTarget) 分析失眠相关基因 BDNF、PAX8、LHX6 基因在慢性失眠患者与健康对照中的 DNA 甲基化水平差异,探讨慢性失眠患者与健康人群相关基因的甲基化变化,从而寻找与慢性失眠相关的 DNA 甲基化分子标志物。

方法 1.根据严格纳入和排除标准,招募在新乡医学院第二附属医院住院的慢性失眠患者及同期的健康志愿者。对慢性失眠患者采用多导睡眠监测 (Polysomnography, PSG) 分析失眠患者客观睡眠情况,监测指标包括:睡眠总时间、睡眠潜伏期、快速动眼 (REM) 期睡眠时间 & 睡眠效率。收集所有样本的一般相关信息,并以匹兹堡睡眠质量指数 (Pittsburgh sleep quality index, PSQI) 量表和失眠严重程度指数 (Insomnia Severity Index, ISI) 量表评估睡眠质量和失眠严重程度,汉密顿抑郁量表 (Hamilton Rating scale for Depression, HAMD) 和汉密顿焦虑量表 (Hamilton Anxiety Scale, HAMA) 评估抑郁和焦虑症状。

2.对 30 例慢性失眠患者和 30 例健康对照进行 MethylTarget, 分析失眠相关基因 BDNF、PAX8、LHX6 基因启动子的甲基化水平在慢性失眠患者与健康对照中的差异。

3.统计分析采用统计学软件 SPSS 22.0 进行, $P < 0.05$ 时认为差异具有统计学意义。

结果 采用 MethylTarget 分析 BDNF、PAX8、LHX6 基因启动子区域甲基化水平,三者慢性失眠组和健康对照组的甲基化水平差异均无明显统计学意义 ($P > 0.05$)。

结论 慢性失眠患者中 BDNF、PAX8、LHX6 基因启动子区域甲基化水平未发生显著变化。

关键词:慢性失眠; DNA 甲基化; 基因; 表观遗传

以精神病性症状为主的癫痫个案报告

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目的 报道一例以幻觉和情绪不稳为主要临床表现,最终诊断为癫痫的病例。

方法 回顾一例 40 岁男性汉族患者,详细采集患者的现病史、既往史、个人史、家族史,进行详细的体格检查和精神检查,记录患者的入院前后的辅助检查及相关检验结果、诊疗经过及患者的病情变化。

结果 本文报道一例 40 岁男性汉族患者,以间断反复发作的幻觉、情绪不稳 5 年余,反复就诊精

神病专科医院,先后诊断为“抑郁障碍、双相情感障碍、精神分裂症”,期间给予“碳酸锂、舍曲林、奥氮平”抗精神科药物治疗后,症状波动,控制不稳定,仍反复发作。入院后经完善脑电图检查可见持续的慢波、棘波;头颅MRI提示:左侧额叶及额叶皮层下异常信号,最终拟诊断为癫痫。经给予抗癫痫药治疗3天后症状即明显改善。出院后随访4个月精神及情绪症状控制稳定,未再复发。以此更加支持癫痫的诊断。

结论 临床中以幻觉、情绪不稳为主要临床表现的癫痫较为少见,容易误诊为精神分裂症、双相情感障碍等精神疾病。临床工作中,应通过详细询问病史,对患者的症状特点以及既往诊疗过程进行回顾总结,提出鉴别诊断,并及时完善脑电图、脑影像等相关辅助检查确定正确诊断,才能制定正确有效的治疗方案。从该案例中可学习到怎样识别癫痫相关的精神障碍,避免临床误诊误治。

关键词: 精神病性症状,癫痫,睡眠障碍

内侧前额叶部位经颅磁刺激治疗失眠的疗效观察:一项随机、双盲、伪刺激对照的临床试验

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目的 失眠是最常见的睡眠障碍。重复经颅磁刺激(rTMS)治疗失眠症(ID)安全有效。越来越多的证据表明,内侧前额叶皮层(mPFC)可能在皮质水平上参与睡眠和觉醒的调节,并可能作为 rTMS 治疗 ID 的潜在靶点。本研究的目的是观察 mPFC-rTMS 治疗 ID 的疗效和安全性。

方法 对62名ID患者进行了一项试点、双盲、随机、伪刺激对照试验。进行10次mPFC部位低频rTMS治疗或伪刺激治疗。主要结局指标是治疗4周的反应率,次要指标是治疗4周后匹兹堡睡眠质量指数(PSQI)总分及各因子分变化、缓解率和不良反应。所有的统计分析基于随机分配患者的意向治疗原则。对于真伪刺激组间疗效差异比较采用广义估计方程,独立固定变量为时间(T0、T1和T2)、刺激组(真刺激和伪刺激)和相互作用项。当相互作用

显著时,采用Bonferroni校正对多重比较进行事后比较。

结果 53名患者完成了试验(真刺激组T1脱落2例,伪刺激组T1脱落7例),保留率为85.5%(53/62)。治疗4周后,真刺激组反应率为51.7%(15/29),伪刺激组反应率为20.8%(5/24)(RR=2.48,95%置信区间[1.05,5.84];P=0.037)。治疗4周后,真刺激组缓解率为44.8%(13/29),假手术组缓解率为16.7%(4/24)(RR=2.69,95%可信区间[1.01,7.17];P=0.048)。广义估计方程结果显示,PSQI评分及PSQI2、PSQI5、PSQI7分量表时间和组别存在显著的交互作用,PSQI1、PSQI3、PSQI4、PSQI6分量表在不同治疗时间的主效应显著。事后分析结果显示,在治疗4周后,除了PSQI3和PSQI4外,真刺激组PSQI、PSQI1、PSQI2、PSQI5、PSQI6、PSQI7评分低于伪刺激组,差异有统计学意义。2组不良反应发生率无统计学差异。

结论 mPFC部位rTMS在治疗4周后,患者失眠严重程度改善,睡眠潜伏期缩短,白天功能障碍和睡眠障碍改善,催眠药物使用频率降低。

关键词: 内侧前额叶 重复经颅磁刺激 失眠

Cerebral Activation and Network Connectivity in Chronic Insomnia Patients During A Verbal Fluency Task: Insights From Multi-Channel Near-Infrared Spectroscopy

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Objective Patients with chronic insomnia exhibit varying degrees of cognitive dysfunction. Dynamic functional connectivity helps us understand potential cognitive processes in the cerebral cortex. However, this has not yet been studied in patients with chronic insomnia. This study aimed to elucidate the differences between brain activity patterns in patients with chronic insomnia and healthy controls (HCs) using a verbal fluency task (VFT)

Methods We recruited 84 patients with chronic

insomnia and 81 HCs. Oxy-haemoglobin (Oxy-Hb) concentrations in the brains of the participants were monitored using functional near-infrared spectroscopy (fNIRS) while performing the VFT

Results During the task period, no significant difference was observed between the VFT results of the two groups; patients with chronic insomnia showed significantly less cortical activation in haemodynamic responses of oxy-Hb at channels and brain regions mainly located in the prefrontal cortex compared to HCs (false discovery rate-corrected $p < 0.05$). Moreover, the average channel-to-channel connectivity strength of patients in the chronic insomnia group was lower than that of those in the HC group ($t = -6.717, p < 0.001$)

Conclusion Our study provides neurological evidence for the dynamic detection of executive function in patients with chronic insomnia. Compared to HCs, patients with chronic insomnia exhibit weaker levels of brain activity and reduced task-related functional connectivity

关键词: Chronic insomnia; Verbal fluency task; Cognitive dysfunction; Oxy-haemoglobin; Functional near-infrared spectroscopy

间歇性禁食通过调节肠道菌群及代谢物抑制 OSAS 诱导认知功能障碍小鼠的炎症反应

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目的 间歇性禁食(Intermittent Fasting, IF)是一种在特定时间段内控制饮食的方法,以达到控制体重、提高健康状况和延缓衰老的目的,可以预防神经退行性疾病。然而,IF对睡眠呼吸暂停引起的认知功能障碍的影响及其机制尚不清楚。

方法 使用间歇性缺氧(CIH)培养箱干预小鼠,模拟OSA病理。给与间歇性禁食干预。评估认知功能功能和海马神经元。大脑、血浆和结肠组织的炎症也被测量。粪便样本通过16S rDNA基因测序和非靶向代谢组学进行评估。

结果 使用间歇性缺氧(CIH)培养箱干预小鼠,模拟OSA病理。给与间歇性禁食干预。评估认知功能功能和海马神经元。大脑、血浆和结肠组织的炎症也被测量。粪便样本通过16S rDNA基因测序和非靶向代谢组学进行评估。我们发现IF对CIH小鼠OSA模型的认知功能障碍、神经元丢失和炎症有保护作用。16S rDNA测序显示,CIH显著增加了Citrobacter, Desulfovibrio和Ruminococcus,并减少了Dubosiella,而IF治疗逆转了生态失调。同时,IF调节CIH诱导的组胺、n-乙酰腐胺、d-天冬氨酸等代谢产物。使用抗生素预处理的CIH小鼠粪便进行粪便微生物群移植可减轻认知功能损伤和神经元丢失。

结论 IF可能是通过微生物-肠道-大脑轴介导的抗炎机制对CIH诱导的认知功能障碍小鼠发挥保护作用。IF可能是预防CIH认知障碍发病并减缓认知障碍进展过程的潜在治疗方式。

关键词: 间歇性禁食,阻塞性睡眠呼吸暂停,慢性间歇性缺氧,肠道菌群,代谢组

慢性失眠障碍对精神警觉性、风险决策以及反应抑制功能的影响:基于长时程睡眠特征分析

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目的 本研究旨在对慢性失眠障碍患者的精神警觉性、风险决策和反应抑制能力三个认知功能进行客观检测,以揭示慢性失眠障碍对认知功能影响的作用机制以及通过长时程密集的睡眠监测,探求慢性失眠障碍患者睡眠结构的变异性,挖掘慢性失眠障碍与个体认知功能之间的潜在机制。

方法 本研究是一项多中心实验研究,通过结

构化临床会晤,收入样本共计 60 名,样本包含健康对照组 30 名以及通过简单随机取样方法在失眠研究队列中纳入符合标准的 30 名慢性失眠障碍患者。两组被试在基线期间收集社会人口统计学资料、自评问卷、数字化认知测试(精神运动警觉性任务、气球模拟风险决策任务和 Go/No-Go 任务)以及进行额贴式睡眠记录仪(UMindSleep)的使用教学,所有被试将连续 7 天佩戴额贴式睡眠记录仪,以此评估参与者连续 7 天的各项睡眠指标。

结果 研究发现慢性失眠障碍组的失眠严重程度指数量表(Insomnia Severity Index, ISI)、爱泼沃斯嗜睡量表(The Epworth sleep scale, ESS)、病人健康问卷抑郁量表 (Patient Health Questionnaire-9, PHQ-9) 及广泛性焦虑量表(Generalized Anxiety Disorder-7, GAD-7)分值均高于健康对照组;慢性失眠障碍组在精神运动警觉性任务上的主要评估指标与健康对照组无显著差异;在气球模拟风险决策任务中,慢性失眠障碍组被试在爆炸气球个数和 BART(Balloon Analogue Risk Task, BART) 值上与健康对照组有显著差异;在 Go/No-Go 任务中,慢性失眠障碍组患者在犯错误率、遗漏率均与健康对照组显示明显差异,而在 Go 目标平均反应时及错误率上与健康对照组没有显著差异;比较两组睡眠参数发现,慢性失眠障碍组患者睡眠效率和睡眠维持率下降,睡眠结构紊乱,主要表现平均清醒时长(分钟)延长、平均清醒占睡眠百分比增加、平均深睡占睡眠百分比下降;在睡眠特征与部分认知功能之间关系方面,首先,睡眠效率越差,精神运动警觉性功能越差。其次,个体风险决策偏好水平与各项睡眠参数没有显著影响关系。最后,睡眠效率下降及睡眠结构紊乱,都可能造成了个体执行功能和反应抑制能力的缺陷。

结论 本研究通过长时程密集睡眠监测发现,慢性失眠障碍患者主要表现出睡眠结构紊乱和睡眠效率下降,同时在认知功能上也存在风险寻求和反应抑制能力受损情况,但精神警觉性功能未见异常。此外,本研究发现个体的风险决策偏好水平可能与各项睡眠参数无关,而睡眠结构紊乱可能会造成个体反应抑制能力和精神运动警觉性功能的缺陷。

关键词:慢性失眠障碍,睡眠监测,认知功能

不同失眠严重程度患者脑功能差异的多通道近红外光谱研究

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目的 失眠障碍严重影响患者的生活质量和心理健康。虽然已有研究表明失眠患者与健康对照组的大脑功能活动存在显著差异,但不同失眠严重程度患者的脑功能差异研究相对较少。本研究旨在探讨不同失眠严重程度患者组间的大脑功能差异及其与心理社会因素的相关性。

方法 本研究共纳入 154 例失眠障碍患者,按照失眠严重程度、病程和用药情况进行分组,采用近红外脑功能成像(functional near-infrared spectroscopy, fNIRS)设备测量言语流畅性任务期间氧合血红蛋白(oxy-Hb)浓度的相对变化。使用 PSQI、HAMD-17 和 HAMA 评估睡眠质量和情绪状态,使用 RRS、PSS 和 FIRST 评估心理社会因素。数据分析采用 Homer2 软件包和 SPSS 26.0,进行单因素方差分析、t 检验和 Pearson 相关分析。

结果 失眠障碍患者右侧额下回 oxy-Hb 浓度在不同失眠严重程度组间存在显著差异($F=3.21, P<0.05$)。右侧额叶 oxy-Hb 浓度与反刍思维量表($r=0.233, P<0.05$)及压力知觉量表($r=0.225, P<0.05$)呈显著正相关,右侧额叶功能活动与失眠压力反应量表($r=-0.253, P<0.05$)呈显著负相关。

结论 失眠障碍患者的大脑功能活动与其心理状态和压力感知存在密切关联。右侧额下回、额叶和额叶的功能活动与失眠相关心理特征显著相关,这提示在治疗失眠时需综合考虑这些因素,以期实现更为有效的干预和治疗。

关键词:失眠障碍;近红外;失眠严重程度;右侧额下回

失眠障碍执行功能受损研究现状

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目的 近年来,我国失眠障碍患病率呈显著上升趋势,普通人群失眠患病率为 29.2%,其中 18~60 岁人群的患病率为 15.11%。《睡眠障碍国际分类》第

三版将失眠障碍定义为尽管有充足的睡眠机会和环境,仍然存在入睡困难、睡眠维持困难或早醒,通常伴有较为明显的日间功能紊乱。失眠障碍患者常主诉记忆力下降、注意力难以集中、执行功能受损等,表现为认知功能受损,严重影响患者的日常生活。特别是执行功能受损,严重影响患者工作学习效率。执行功能是指个体对思想和行为进行有意识控制的心理过程,包括反应抑制、工作记忆和认知灵活性三个成分,是高级认知功能的重要组成部分。因此,本综述旨在对近十年失眠障碍执行功能相关的研究进行系统综述,系统论述失眠障碍患者执行功能受损的研究现状。

方法 本综述在中国知网和 Pubmed 数据库检索近十年研究失眠障碍执行功能的文献。

结果 对以往研究进行归纳发现:(1)失眠患者进行停止信号任务时,发现患者反应时更长,抑制控制能力较差,但是在准确性方面未发现差异;另有研究发现,伴客观短睡的失眠患者反应抑制功能受损更明显。失眠患者难以控制夜间侵入性认知,入睡困难,可能与失眠患者的反应抑制能力受损有关。(2)失眠患者在工作记忆任务中表现较差,主要表现为正确率下降。(3)一项失眠患者认知灵活性的研究发现,患者认知灵活性未受影响。但在另一项研究中发现,失眠患者认知灵活性下降,主要表现为反应时延长。

结论 失眠患者执行功能受损,主要表现在反应抑制、工作记忆和认知灵活性方面。目前对失眠患者在反应抑制、工作记忆受损的研究结果较为一致,但是对认知灵活性的研究结果尚未得出一致的结论。因此,未来可以进一步研究失眠患者反应抑制受损的机制,探讨失眠发生发展的深层机制,进一步关注失眠患者认知灵活性变化。

关键词: 失眠障碍, 反应抑制, 工作记忆, 认知灵活性

Comparative Analysis of EEG Power Changes in Non-Organic Insomnia Patients Before and After Treatment with Healthy Controls

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Objective Insomnia is a common sleep disorder that significantly impairs the quality of life of patients. This study aims to analyze the EEG power in different frequency bands at various electrode sites before and after treatment in first-time visiting patients with non-organic insomnia. Comparisons will also be made with a healthy control group. Through this study, we aim to explore the neuroelectrophysiological changes associated with insomnia treatment, providing a scientific basis for EEG evaluation of insomnia

Methods The study involved 33 patients with non-organic insomnia and 17 healthy controls. Resting-state EEG signals were collected for 5 minutes from 16 electrode sites (Fp1, Fp2, F3, F4, C3, C4, P3, P4, O1, O2, F7, F8, T3, T4, T5, T6) before and after treatment. EEG signals were preprocessed and analyzed using Matlab R2023a and EEGLAB v2023.1. Power spectral analysis was performed to extract absolute and relative power values across five frequency bands (δ , θ , α , β , γ). Independent sample t-tests and paired sample t-tests were used to compare EEG power changes before and after treatment and with the healthy control group

Results Comparison within insomnia patients: No significant differences were observed in the absolute or relative power values across the five frequency bands at any of the 16 electrode sites before and after treatment

Pre-treatment: Compared to the healthy controls, insomnia patients showed significantly increased absolute power in the θ band across most electrodes (except O2 and T3). In the α band, relative power was significantly reduced in several electrodes (except C3, C4, P3, P4, O2, F7, T3, T4, T5, and T6). For the γ band, some electrodes exhibited significantly reduced relative power (except Fp1, Fp2, F4, O1, O2, F7, F8, and T4). There were generally no significant differences in the absolute or relative power values for the other bands.

Post-treatment: In the δ band, most electrodes showed a significant increase in absolute power post-treatment (except F4, C3, O1, F7, and T5). In the β band, some electrodes showed increased absolute power (except Fp1, F3, P3, P4, O1, O2, F7, T3, T4, and T5). No

significant differences were found in most other bands' absolute or relative power values.

Conclusion The study suggests that treatment has a regulatory effect on EEG activity, positively influencing brain function. This provides further evidence from an EEG perspective for understanding the neurobiological mechanisms of insomnia. Additionally, the study indicates that different brain regions corresponding to different electrode sites show varied EEG responses after insomnia improvement. This suggests that modulating the EEG power in specific brain regions could potentially enhance the quality of sleep in patients

关键词: Non-Organic Insomnia, EEG Power, Before and After Treatment, Healthy Controls

大学生失眠与抑郁症状的关系：情绪调控的中介作用

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目的 本研究旨在探讨情绪调控在失眠与大学生抑郁水平之间的中介作用。

方法 采用自行整编《“长江大学大学新生心理普查”调查问卷》调查工具，内容包括一般人口学资料问卷及失眠严重程度指数表(ISI)、病人健康问卷(PHQ-9)、广泛性焦虑障碍量表(GAD-7)及青少年上网成瘾自评量表(IAT)，情绪调控使用《大学生心理健康量表》的情感调控维度，采用方便整群抽样在线上进行调查。本研究共收集 8498 份问卷，筛选出有效数据 7353 份，样本有效率 86.53%。研究中所有的数据分析均使用 SPSS 21 处理，采用 PROCESS 插件分析中介效应。

结果 (1) 本次调查大学新生的平均年龄 19.3 ± 3.0 岁，其中男生 3788 人、女生 3565 人。共检出存在抑郁症状人群共 2836 人，检出率为 38.57%，其中男生 1438 (19.56%) 人，女生 1398 (19.01%) 人。(2) 失眠得分与抑郁症状得分呈正相关($r=0.631$, $P<0.01$)、情绪调控得分与抑郁症状得分呈负相关($r=-0.514$, $P<0.01$)。(3) 失眠症状对抑郁症状的直接

作用显著，并通过情绪调控的中介产生间接效应，中介作用效应值为 0.119，占总效应的 19%。

结论 大学生失眠可以直接影响抑郁症状，也可以通过负向影响情绪调控能力影响抑郁症状，提示可以通过增强失眠大学生情绪调节能力以预防和缓解抑郁症状。

关键词: 抑郁症状; 大学新生; 情绪调节; 中介效应

发作性睡病患者的心理状况分析及其干预策略

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目的 研究发作性睡病患者心理状况分析及其干预策略。**方法** 研究选取时间为 2022 年 1 月~2023 年 12 月，诊断为发作性睡病的患者 50 名作为研究对象，评估患者的焦虑、抑郁情绪、嗜睡程度、生活质量，通过 logistic 回归分析法评估发作性睡病患者焦虑抑郁情绪的影响因素，通过 Spearman 相关性分析法评估患者贝壳焦虑抑郁量表与嗜睡程度及生活质量的相关性。

方法 研究选取时间为 2022 年 1 月~2023 年 12 月，诊断为发作性睡病的患者 50 名作为研究对象，评估患者的焦虑、抑郁情绪、嗜睡程度、生活质量，通过 logistic 回归分析法评估发作性睡病患者焦虑抑郁情绪的影响因素，通过 Spearman 相关性分析法评估患者贝壳焦虑抑郁量表与嗜睡程度及生活质量的相关性。

结果 50 名发作性睡病的患者贝壳焦虑评分为 (48 ± 4.532) 分，贝壳抑郁评分为 (14 ± 2.342) 分。单因素分析结果显示，日间嗜睡程度、社会支持、病程均于发作性睡病患者焦虑和抑郁情绪有关，(P 均 <0.05)。多因素 Logistic 分析结果显示，日间嗜睡程度 >12 分，病程 >1 年，家庭/学校不理解支持是发作性睡病患者焦虑抑郁的影响因素(P 均 <0.05)。Spearman 相关性分析结果显示，发作性睡病患者患者的嗜睡量表总分与贝壳焦虑评分呈正相关 ($r = 5.152$, $P = 0.008$)，与贝壳抑郁评分呈正相关 ($r = 4.116$, $P = 0.007$)，嗜睡量表总分与生活质量总分呈负相关 ($r = -5.345$, $P = 0.007$)，生活质量总分与

贝壳焦虑评分呈负相关($r = -5.433, P = 0.005$), 与贝壳抑郁评分呈负相关($r = -5.520, P = 0.006$)。

结论 日间嗜睡程度、社会支持、病程均是发作性睡病患者焦虑和抑郁情绪影响因素, 焦虑抑郁情绪与患者的日间嗜睡程度正相关和生活质量负相关, 日间嗜睡和生活质量负相关。临床应从改善发作性睡病的日间嗜睡程度和生活质量出发予以对应策略, 从而改善患者的焦虑抑郁情绪。

关键词: 发作性睡病, 日间嗜睡, 生活质量, 焦虑抑郁

青少年抑郁障碍患者抑郁症状和认知缺陷的关系: 焦虑和睡眠障碍的链式中介作用

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目的 探讨青少年抑郁障碍患者抑郁症状与认知缺陷之间的关系, 分析焦虑和睡眠障碍的链式中介作用。

方法 纳入 141 名青少年抑郁障碍患者为研究对象。通过儿童版简明国际神经精神访谈(MINI-KID), 采用病人健康问卷(PHQ-9)、认知缺陷问卷-抑郁(PDQ-D)、广泛性焦虑量表(GAD-7)、匹兹堡睡眠质量指数(PSQI)评估患者的抑郁焦虑、睡眠和认知情况。采用 χ^2 检验、独立样本t检验、单因素ANOVA检验、Mann-Whitney U检验、Kruskal-Wallis H检验比较不同特征青少年抑郁、认知情况。采用Spearman相关分析青少年抑郁障碍患者抑郁症状、认知缺陷、焦虑情绪及睡眠障碍的相关性。采用SPSS PROCESS宏程序偏差校正的非参数百分位Bootstrap法进行中介效应检验。

结果 认知缺陷与抑郁症状、焦虑、睡眠障碍两两之间呈正相关($r=0.525\sim 0.625$, 均 $P<0.001$)。焦虑和睡眠障碍在抑郁症状与认知缺陷之间存在链式中介作用, 中介效应值为0.136, 效果量为13.68%。

结论 青少年抑郁障碍患者抑郁症状可以直接导致认知缺陷, 也可以通过焦虑和睡眠障碍的链式中介作用间接影响认知缺陷。

关键词: 青少年, 抑郁症状, 认知缺陷, 焦虑, 睡眠障碍, 链式中介效应

正念减压结合针灸对慢性失眠患者焦虑情绪和睡眠质量的改善作用

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目的 探索正念减压(MBSR)音频练习结合针灸治疗慢性失眠的疗效。

方法 选取我院 2021 年 1 月-2022 年 1 月门诊就诊患者 44 名, 采用随机数字表法分为 2 组, 观察组应用 MBSR 音频同时结合针灸的疗法治疗, 对照组仅应用右佐匹克隆治疗, 治疗前后进行汉密尔顿焦虑量表(Hamilton Anxiety Scale, HAMA)、匹兹堡睡眠质量指数量表(Pittsburgh Sleep Quality Index, PSQI)评估, 并用 spss22.0 进行统计分析。

结果 治疗后观察组临床疗效高于对照组, 观察组精神焦虑, 睡眠质量及日间功能改善显著优于对照组($P<0.05$), 不良反应方面观察组低于对照组。

结论 正念减压音频练习结合针灸改善慢性失眠患者焦虑情绪和睡眠质量疗效显著。

关键词: 慢性失眠; 正念减压音频; 针灸; 右佐匹克隆

青少年磨牙症与睡眠质量、焦虑抑郁情绪的关系

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目的 探讨青少年磨牙症的发生率, 磨牙症与睡眠质量、焦虑抑郁情绪之间的关系。

方法 采用横断面抽样调查, 共纳入 6780 名 12-18 岁的青少年。采用改编的磨牙症量表评估磨牙症。采用失眠严重指数(ISI)评估青少年的失眠症状, 采用青少年日间嗜睡量表(CADSS)评估日间嗜睡程度, 采用噩梦烦恼问卷-中文版(NDQ)评估睡

眠中的噩梦情况,采用广泛性焦虑障碍量表-2(GAD-2)和2条目患者健康问卷(PHQ-2)评估患者的焦虑抑郁情绪。采用卡方检验比较两组的人口学及临床资料的差异,采用独立样本t检验比较青少年有无磨牙症组的ISI、CADSS、NDQ、GAD-2、PHQ-2得分的差异,Logistic回归分析青少年磨牙症的危险因素。

结果 青少年磨牙症的发生率为22.8%。在一般资料方面,高中生磨牙症发生率高于初中生,男生、女生之间没有差异。有磨牙症的青少年在失眠症状、日间嗜睡症状、噩梦痛苦总分、噩梦一般痛苦、噩梦现实感知、焦虑症状、抑郁症状方面的得分显著高于无磨牙症组。Logistic回归分析显示,日间嗜睡症状、噩梦痛苦总分、噩梦一般痛苦是青少年磨牙症的危险因素。

结论 青少年磨牙症的发生率较高,有磨牙症的青少年的睡眠质量较差,有着更严重的焦虑抑郁情绪,日间嗜睡症状、频繁噩梦是其发生的危险因素,我们要重视对青少年磨牙症的评估及相关危险因素的干预。

关键词:青少年,磨牙症,睡眠质量,焦虑抑郁

噩梦频率、噩梦困扰与中学生非自杀性自伤的关系

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目的 本研究对中学生非自杀性自伤、噩梦频率和噩梦困扰的关系进行研究,有助于了解中学生非自杀性自伤、噩梦的流行特征及性别差异、分析中学生非自杀性自伤与噩梦频率和噩梦困扰的关联和分噩梦困扰在噩梦频率与中学生非自杀性自伤间的中介作用。

方法 于2022年5月采用患者健康问卷(Patient Health Questionnaire-4, PHQ-4)、青少年非自杀性自伤行为评定问卷(Adolescent Non-suicidal Self-injury Assessment Questionnaire, ANSAQ)、噩梦困扰问卷-中文版(Chinese Version of Nightmare Distress Questionnaire, NDQ-CV)、中国青少年日间嗜睡量表(Chinese Adolescent Daytime Sleepiness

Scale, CADSS)、失眠严重程度指数(Insomnia Severity Index, ISI)等对山东省日照市五所高中和五所初中的学生进行问卷调查。用SPSSAU 21.0在线统计软件进行数据分析。

结果 有效问卷总计6773份,问卷有效回收率为99.9%。研究对象年龄中位数为16(15, 17)岁,女性占总样本的53.37%。中学生过去一年非自杀性自伤(Non-suicidal Self-injury, NSSI)的发生率为38.62%,女性高于男性(40.17% vs 36.86%)但NSSI发生率的性别差异仅在初一和初二年级的中学生中有统计学意义。女性ANSAQ行为问卷得分显著高于男性。45.12%的中学生近一个月有过至少1次噩梦,近一个月内频繁噩梦(噩梦频率≥每周1次)的发生率为13.29%。女性的噩梦困扰高于男性,存在频繁噩梦的个体中女性的占比高于男性(63.67% vs 36.33%),且频繁噩梦的性别差异在除高一之外的各个年级的样本中均存在。过去一年有NSSI的中学生有噩梦困扰和频繁噩梦的比例更高。不论是在总体样本还是在分性别样本中,噩梦困扰在噩梦频率与非自杀性自伤间的中介效应都是显著的,且中介效应百分比在女性样本中高于男性样本(35.78% vs 27.10%)

结论 频繁噩梦、噩梦困扰和NSSI在中学生群体中比较常见,且发生率在不同性别之间存在差异。中学生的噩梦频率和噩梦困扰均与NSSI相关。噩梦频率不仅直接预测了NSSI,还可以通过噩梦困扰的中介作用间接预测NSSI;这种中介效应在分性别样本中依旧存在。

关键词:中学生,噩梦频率,噩梦困扰,中介作用,非自杀性自伤

快动眼睡眠行为障碍合并创伤后应激障碍:一例病例报告

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目的 快速眼动睡眠行为障碍(REM sleep behavior disorder, RBD)是在快速眼动睡眠期患者出现异常行为,且通常伴随梦境出现的一种快速眼动睡眠障碍。创伤后应激障碍(Post-Traumatic Stress

Disorder, PTSD)是一种由强烈的精神应激引起的应激障碍,患者可能会做跟创伤事件相关的噩梦,是一种创伤的入侵性体验。拟探讨快速眼动睡眠行为障碍及创伤后应激障碍的合并诊断和治疗方案。

方法 2022年一男性患者因反复噩梦伴梦中异常行为三年而入院,该患者自诉自2019年下半年无原因逐渐开始出现反复噩梦,噩梦栩栩如生,且在梦中伴随较多异常行为,心情差时更容易出现噩梦和梦中异常行为。入院初,患者的多导睡眠监测的检查结果提示患者夜间睡眠期间存在肌张力迟缓。结合患者的临床特点,诊断为RBD。但在详细了解患者的创伤经历后,结合明尼苏达多项人格测试、SCL-90、创伤后应激障碍问卷等检查结果,进行病案讨论后,最终诊断修订为:1.RBD; 2.PTSD。患者的药物治疗单用氯硝西泮 1mg,因考虑到患者的创伤性经历,提供针对创伤的行为认知治疗。

结果 住院 20 余天患者临床痊愈出院。

结论 睡眠问题可能是患者外在的一个症状,患者的诊断可能并不只局限在睡眠障碍疾病上。

关键词: 快速眼动睡眠行为障碍 创伤后应激障碍 心理治疗 以创伤为中心的认知行为治疗

The Efficacy of Microelectrical Pulser in Primary Insomnia: A Randomized Controlled Clinical Trial

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Objective Exploring the effectiveness and safety of microelectrical pulser in the treatment of primary insomnia

Methods 40 primary insomnia patients were randomly divided into a control group and a treatment group, with 20 patients in each group. The treatment group was treated with the micro-pulse stimulator, and the control group was treated with the pseudo-stimulation of the micro-pulse stimulator. The Pittsburgh Sleep Quality Index Scale (PQIS) was used to assess the subjective insomnia symptoms before treatment, after 2

weeks of treatment and after 4 weeks of treatment respectively, and the smart bracelet was used to assess the daily sleep of the patients

Results (1) PQSI scores decreased in both groups after 4 weeks of treatment compared with baseline scores, and the daytime dysfunction score was lower in the treatment group (0.11 ± 0.32) than in the control group (0.25 ± 0.55), with a statistically significant difference ($P < 0.05$). (2) In the treatment group, after 4 weeks of treatment, the average daily sleep time (7.03 ± 1.08) was prolonged compared with the baseline (6.58 ± 0.86) in terms of objective sleep time, and the difference was statistically significant ($P < 0.05$)

Conclusion Microelectrical pulser is safe and effective in the treatment of primary insomnia

关键词: Microelectrical pulser; primary insomnia; Pittsburgh Sleep Quality Index scale

夜间低睡眠质量和日间嗜睡对精神分裂症患者自杀行为进展的影响

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目的 精神分裂症患者的自杀意念常见,部分会转化为自杀未遂行为。控制这种进展是自杀预防的关键环节之一。睡眠紊乱是精神分裂症自杀的重要风险因素,然而其对自杀不同阶段的影响并不明确。本研究旨在探究睡眠紊乱症状在精神分裂症自杀进展的作用。

方法 本研究从中国四省(直辖市)的9家医院招募精神分裂症住院患者。使用简明国际神经精神访谈自杀模块评估患者是否有近1月自杀意念和自杀未遂。睡眠紊乱症状包括夜间低睡眠质量和日间嗜睡,分别采用匹兹堡睡眠质量指数和Epworth嗜睡量表进行评估。采用多因素 Logistic 回归模型明确睡眠紊乱症状对于自杀意念的影响程度,及其在自杀意念者发生自杀未遂中的作用。回归模型均纳入一般人口学信息、病史信息和精神症状(患

者健康问卷评估的抑郁症状、广泛性焦虑障碍量表评估的焦虑症状、简明精神病量表中的缺乏活力、思维障碍、敌对猜疑和激活性因子)因素进行协变量调整。

结果 本研究共纳入 672 例精神分裂症住院患者,近 1 月自杀意念率为 10.9% (95%CI: 8.7%~13.4%),自杀未遂率为 3.3% (95%CI: 2.2%~4.9%)。自杀未遂者均有自杀意念,自杀意念者存在自杀未遂行为的比例为 30.1% (95%CI: 20.8%~41.4%)。在整体样本中,夜间低睡眠质量(OR: 3.56, 95%CI: 1.79~7.06, $p < 0.001$)是自杀意念的独立相关因素,日间嗜睡未表现出显著相关。在自杀意念进展为自杀未遂行为的相关因素中,日间嗜睡(OR: 4.15, 95%CI: 1.13~15.24, $p = 0.032$)是关键的睡眠紊乱症状,夜间低睡眠质量未表现出显著相关。

结论 精神分裂症患者自杀行为不同阶段的影响因素存在差异。夜间低睡眠质量是自杀意念形成的关键睡眠紊乱症状,日间嗜睡则对自杀意念进展为自杀未遂具有重要作用。存在日间功能损害的睡眠紊乱对于自杀的影响是更深入的,会加重自杀进展,需要进行重点评估和关注,将有助于自杀风险的分级预防。

关键词: 精神分裂症,睡眠紊乱,自杀意念,自杀未遂

Spindle-related Brain Activation in N2 and Sleep Duration: A Negative Correlation

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Objective To explore the underlying neural mechanism of functional difference between non-rapid eye movement sleep stage 2 (N2) and N3

Methods We tested discrepancy in spindle-related brain activation between N2 and N3 within healthy, non-sleep-deprived college students (dataset 1: $n = 27$, 59% females, median age 23 years), using simultaneous electroencephalography-functional magnetic resonance imaging (EEG-fMRI). To assess the replicability of the finding, we repeated the analysis among healthy, non-sleep-deprived adults (independent dataset 2: $n = 30$, 50% females, median age 32 years). Furthermore, correlation analysis was performed to explore the association between spindle-related brain activation of which with significant inter-stage difference and total sleep time (TST) during EEG-fMRI. We conducted the correlation analysis in N2 and N3, respectively

Results The finding from dataset 1 indicated significantly increased blood-oxygen level-dependent signal in the right middle temporal gyrus during N2 compared with N3, which was well replicated in dataset 2. Negative association between spindle-related brain activation in the right middle temporal gyrus and TST were only observed in N2

Conclusion Our findings emphasize the unique role of N2 spindle in human information processing during sleep at the expense of shortening TST

关键词: Sleep spindles; NREM; Brain activation; EEG-fMRI

Investigating Alterations in Gut Microbiota Associated with Insomnia Disorder: A Focus on Arousal-promoting Neurotransmitters

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Objective The present study aimed to investigate the alterations of gut microbiota in patients with insomnia disorder and to identify objective diagnostic biomarkers for insomnia disorder. Additionally, we explored the relationship between arousal-promoting neurotransmitters and the abundance of species in the gut microbiota

Methods A total of 40 patients with insomnia disorder and 38 healthy controls were included in this study. Metagenomic sequencing was used to detect changes in gut microbiota, while enzyme-linked immunosorbent assay (ELISA) was used to measure the serum levels of arousal neurotransmitters (histamine and orexin-A). Moreover, we used Spearman's correlation analysis to explore the correlation between the abundance of species and arousal-promoting neurotransmitters

Results Our findings showed significant increases in peripheral serum levels of arousal neurotransmitters (histamine and orexin-A) in the patients with insomnia disorder ($P<0.001$). Significant differences in beta diversity at the genus and species levels were noted between the two groups ($P<0.001$), while there was no significant difference in alpha diversity ($P>0.05$). MetagenomeSeq analysis identified 33 differentially abundant microbial species; LEfSe analysis identified four potential biomarkers for insomnia disorder, including increased expression of Bacteroidaceae, Phocaeicola, Phocaeicola gatus, and decreased expression of Prevotella copri. Additionally, a positive correlation was found between Bacteroides thetaiotaomicron and histamine ($r=0.606$, $P=0.010$), and between Bacteroides sp. HMSC067B03 and orexin A ($r=0.641$, $P=0.006$)

Conclusion Patients with insomnia disorder exhibited elevated levels of serum histamine and orexin-A. The gut microbiota, predominantly represented by Bacteroidaceae, served as a biomarker for distinguishing insomnia disorder. Changes in the microbiota-gut-brain axis may play a crucial role in the onset and development of insomnia disorder, suggesting that targeting the arousal-promoting neurotransmitters within the microbiota-gut-brain axis could be a potential therapeutic approach for insomnia disorder

关键词: Insomnia disorder; Gut microbiota; Neurotransmitters; Histamine; Orexin-A.

青少年抑郁障碍患者自我同情和非自杀性自伤: 元认知的中介作用

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目的 探讨青少年抑郁障碍自我同情对非自杀性自伤行为的影响, 以及元认知的中介作用, 为青少年抑郁障碍患者的非自伤性自伤行为的干预提供依据。

方法 本研究于2023年5月至2024年1月期间, 采用方便取样于北京市某精神专科医院应用自我同情量表12项简版(SCS-SF)、渥太华非自杀性自伤量表中文修订版(OSI)、元认知问卷(MCQ-30)对103名12-18岁的青少年抑郁障碍患者进行问卷评估。采用SPSS 26.0进行差异检验及Spearman相关分析; 采用PROCESS v4.1宏程序偏差校正的非参数百分位数Bootstrap方法进行中介效应显著性检验。

结果 (1) 青少年抑郁障碍患者自我同情、元认知及非自杀性自伤在性别、年级及家庭居住环境中均存在显著差异($P<0.05$); (2) 相关分析结果显示, 青少年抑郁障碍患者自我同情与NSSI原因($r=-0.424$, $P<0.01$)、NSSI实际情况($r=-0.413$, $P<0.01$)元认知($r=-0.402$, $P<0.01$)呈负相关, 元认知与NSSI原因($r=-0.380$, $P<0.01$)、NSSI实际情况($r=-0.409$, $P<0.01$)呈正相关; (3) 中介效应分析显示, 青少年抑郁障碍患者中自我同情可负向预测NSSI($\beta=0.324$,

$P < 0.01$), 直接效应占总效应的 76.60%; 元认知的中介效应显著($\beta = 0.101, P < 0.01$), 占总效应的 23.71%。

结论 青少年抑郁障碍患者的自我同情可负向预测到青少年非自伤性自伤行为, 同时青少年自我同情可减弱青少年元认知对非自杀性自伤行为的正向预测作用。

关键词: 青少年 抑郁障碍 自我同情 非自杀性自杀 元认知

中国普通人群睡眠卫生、健康结局和性别差异之间的关系:一项横断面研究

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目的 中国普通人群睡眠卫生、健康结局和性别差异之间的关系:一项横断面研究。

方法 采用横断面研究的方法, 对中国 34 个省级行政区的 41061 名居民进行了网络问卷调查, 调查内容包括一般人口学信息、睡眠卫生情况(sleep hygiene index, SHI), 主观睡眠质量(PSQI)、既往疾病史等信息。根据睡眠卫生指数的四分卫间距将人群划分为睡眠卫生较差、一般和良好。使用描述性统计对调查对象一般情况及睡眠卫生情况进行差异性分析。二元 logistic 用于检验睡眠卫生在慢性健康结局中性别差异, 使用 R 语言 mediation 包检验睡眠卫生对性别和健康结局的中介效应。

结果 在睡眠卫生情况方面, 男性在睡前相关行为维度的睡眠卫生习惯相对较差, 女性在上床后进行更多与睡眠无关的活动。在 15 岁以上的人群中, 3456 名男性(20.55%)和 3,658 名女性(15.09%)自我报告至少患有一种慢性疾病。二元 logistic 回归发现, 睡眠卫生情况较差的男性患病神经系统疾病的几率更高: 男性(OR: 4.058, 95% CI: 3.066-5.366), 女性(OR: 2.611, 95% CI: 2.143-3.182)。中介效应显示, SHI 和患病率之间的关系存在性别差异, 男性的患病率高于女性 (p for interaction < 0.001)。

结论 本研究表明, 睡眠卫生可能是加剧或延续慢性疾病的重要因素, 睡眠卫生和健康结果之间的性别特异性关联, 在进行认知行为治疗(CBT)时, 应根据疾病种类和目标人群进行个体化评估和治疗。

关键词: 慢性疾病; 睡眠; 睡眠卫生; 性别差异;

中国青少年睡眠质量相关影响因素的研究进展

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目的 睡眠质量的好坏与青少年心理健康关系密切。然而, 在当今社会, 青少年的睡眠问题日益严重, 成为一个迫切需要解决的公共卫生问题。因此, 本综述基于家庭、学校、行为习惯和心理健康四个角度, 通过系统回顾影响中国青少年睡眠的因素, 以期改善青少年的睡眠质量提供科学参考。

方法 通过检索中文数据库(知网和万方), 从家庭因素、学校因素、行为习惯因素和心理健康因素四个维度, 检索与睡眠相关的影响因素, 并进行概括。

结果 (1) 家庭因素: 家庭环境对青少年的睡眠有重要影响, 家庭因素主要包括留守儿童、父母不稳定的婚姻状况、家庭经济状况差、父亲和/或母亲打鼾、家庭氛围紧张、亲子关系差、家庭作息不规律等因素会导致青少年睡眠问题。

(2) 学校因素: 学习压力较大、教师粗暴行为、同伴侵害等因素都可能降低睡眠质量。

(3) 行为习惯因素: 手机成瘾、问题性网络使用、睡前使用电子产品、缺少体力活动、烟草和电子烟的使用、短视频使用等不良的生活习惯都会对青少年的睡眠质量产生不良影响。

(4) 心理健康因素: 青少年低心理韧性、较高的生活事件、抑郁情绪、焦虑情绪、认知功能下降等心理因素对青少年的睡眠产生不良影响。

结论 青少年睡眠问题是一个复杂而严峻的问题, 对于青少年的睡眠问题的干预需要从家庭因素、学校因素、行为习惯因素和青少年心理健康四个维度考虑和分析, 并制定合理的方案来改善青少年的睡眠问题。

关键词: 青少年; 睡眠质量; 影响因素; 研究进展。

认知行为疗法治疗失眠障碍的神经影像学研究

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目的 随着社会经济快速发展,社会竞争压力也不断加大,失眠障碍的发生率日益增加。失眠障碍不仅影响患者的生活质量,更是罹患其他精神障碍的危险因素。认知行为疗法(Cognitive Behavioral Therapy for Insomnia, CBT-I)作为失眠障碍的有效治疗办法,本研究探究 CBT-I 治疗失眠障碍可能的神经机制,为临床医生针对失眠障碍选择治疗方案时提供参考。

方法 纳入 40 例符合《精神障碍诊断与统计手册(第五版)》(Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, DSM-5)诊断标准失眠障碍患者,患者接受为期 6 周的 CBT-I 治疗,失眠障碍患者在经 CBT-I 治疗前后行静息态功能磁共振扫描,此外纳入 40 例与之匹配的健康对照者,进行 1 次静息态功能磁共振扫描。应用 DPARSF5.3 和 spm12,以脑岛、扣带回为感兴趣区,进行全脑的功能连接分析,比较对照组与患者组脑区功能连接差异,以及患者经 CBT-I 治疗前后脑区功能连接强度的变化。将功能连接强度变化与临床疗效相关性分析。

结果 失眠障碍患者经 CBT-I 治疗后匹兹堡睡眠质量指数量表、失眠严重程度量表、汉密尔顿抑郁量表、汉密尔顿焦虑量表评分等均低于治疗前,睡眠监测显示入睡后清醒时间低于治疗前、睡眠效率均高于治疗前($P<0.05$)。失眠障碍患者与健康对照者相比,右侧脑岛与右侧距状裂周围皮层功能连接升高,左侧内侧和旁扣带回与右侧豆状苍白球、右侧前和扣带旁回、左侧楔叶功能连接升高,右侧内侧和旁扣带回与右侧额中回功能连接降低。患者经 CBT-I 治疗后与治疗前相比,左侧脑岛与左侧额中回、右侧内侧和旁扣带回与左侧顶上回功能连接降低;后扣带回与右侧脑岛、前扣带回与右侧额中回及右侧内侧和旁扣带回功能连接升高(均采用 GRF 校正,voxel $P<0.01$, cluster $P<0.05$)。相关性分析结果 匹兹堡睡眠质量指数量表减分率与左侧脑岛与左侧额中回功能连接降低($P<0.05$, 相关系数 $=-0.39$)、前扣带回与右侧内侧和旁扣带回功能连接升高($P<0.05$, 相关系数 $=-0.37$)呈负相关。

结论 失眠的认知行为疗法治疗失眠障碍疗效明确,与脑岛、扣带回相关的功能连接可能是 CBT-I 治疗起效的潜在机制。

关键词: 失眠障碍,认知行为疗法,磁共振,功能连接

抑郁症患者的童年创伤和认知情绪调节策略与抑郁症状的关系

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目的 探究抑郁症患者的童年创伤和认知情绪调节策略与抑郁严重程度之间的关系,并考察其性别差异。

方法 选取 2021–2024 年西南医科大学附属医院心身医学科的抑郁症患者 238 名进行问卷调查。采用汉密尔顿抑郁量表(HAMD)评估患者抑郁严重程度,采用儿童创伤问卷(CTQ)和认知情绪调节量表(CERQ)了解患者的童年创伤类型和认知情绪调节策略。采用 Spearman 相关分析考查不同性别条件下 HAMD 得分与各量表得分之间的相关性。同时,构建逐步线性回归模型,预测抑郁症发病的危险因素。

结果 所有患者的抑郁程度与情感虐待、自责、反刍和灾难化呈正相关。此外,女性患者的抑郁严重程度还与身体虐待、理性分析呈正相关,而与情感忽视、积极重新关注和积极重评呈负相关。线性回归分析表明,灾难化可正向预测男性组的 HAMD 评分,而自责、理性分析可正向预测女性组的 HAMD 评分,情感忽视和积极重评则可负向预测女性组的 HAMD 评分。

结论 所有患者的抑郁程度与情感虐待、自责、反刍和灾难化呈正相关。此外,女性患者的抑郁严重程度还与身体虐待、理性分析呈正相关,而与情感忽视、积极重新关注和积极重评呈负相关。线性回归分析表明,灾难化可正向预测男性组的 HAMD 评分,而自责、理性分析可正向预测女性组的 HAMD 评分,情感忽视和积极重评则可负向预测女性组的 HAMD 评分。

关键词: 抑郁症;童年创伤;认知情绪调节

A Holistic Model of Music Therapy for Sleep Disorders in Adolescents: Theoretical Foundations and Clinical Applications

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Objective Sleep disorders are common among adolescents and significantly impact their quality of life, academic performance, and overall well-being. While pharmacological treatments can be effective, they often come with side effects and the risk of dependency, which is particularly concerning in younger populations. Music therapy, as a non-pharmacological intervention, has gained increasing attention due to its safety and lack of side effects. By clarifying the distinctions between “music therapy,” “music medicine,” and “music healing,” this study aims to develop a holistic model of music therapy for sleep disorders in adolescents, providing a theoretical foundation and practical guidance for clinical application

Methods This study employs a comprehensive review of literature, examining various research studies, clinical reports, and expert opinions to identify the definitions and applications of “music therapy,” “music medicine,” and “music healing” in clinical settings with different populations. Music Therapy, as a clinical and evidence-based practice, involves a certified music therapist using music interventions, such as music-assisted progressive muscle relaxation, to accomplish individualized goals within a therapeutic relationship. Music Medicine refers to the use of pre-recorded music by healthcare professionals to improve patient outcomes and enhance the medical environment, while Music Healing is typically practiced in non-clinical settings by individuals without any type of formal training. Within this population, a qualified music therapist assesses adolescents’ needs from physical, emotional, cognitive, behavioral, and social perspectives, focusing on achieving specific therapeutic outcomes, such as facilitating relaxation, reducing anxiety, and enhancing coping strategies. Various benefits have been observed through

live music delivered by a professional music therapist, including the regulation of the autonomic nervous system, hormone levels, brain wave activity, sleep routines, sleep patterns, and sleep habits

Results Through reviewing of the literature, a holistic model of music therapy for sleep disorders in adolescents is recommended. The model includes psychological interventions where music therapy functions as a safe container to alleviate anxiety and stress, thereby improving emotional stability and sleep quality. Physiologically, music therapy affects the autonomic nervous system by reducing sympathetic nervous activity and increasing parasympathetic activity, promoting physical relaxation. Additionally, music therapy can modulate hormone levels by lowering cortisol levels and increasing melatonin secretion, facilitating the onset of sleep. Behaviorally, when music therapy is combined with behavioral therapies such as sleep hygiene education, establishing bedtime routines, and reducing screen time before bed, it helps young patients develop healthy sleep habits, reduce nighttime awakenings, and decrease difficulties in falling asleep

Conclusion Music therapy, as a non-pharmacological intervention, demonstrates significant potential for improving sleep disorders in adolescents. The development of a holistic model of music therapy for this population highlights the importance of professional music therapy interventions across psychological, physiological, and behavioral domains to achieve optimal therapeutic outcomes. Specifically, music therapy can enhance sleep quality by alleviating psychological stress, regulating physiological functions, and improving behavioral habits. This model provides new insights and methods for clinical practice and holds great potential for widespread application in the treatment of sleep disorders in adolescents. Future research should further validate the effectiveness of this model and explore personalized music therapy protocols to meet the diverse needs of young patients

关键词: Music Therapy; Sleep Disorders; Adolescents; Music Medicine

脑活素在治疗阿尔茨海默症诱发的睡眠紊乱中的作用

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目的 阿尔茨海默症是一种常见的神经退行性疾病，其诱发的睡眠异常严重影响患者的生活质量。脑活素是一种 GABA 受体激动剂，并用于临床治疗阿尔茨海默症，但其是否能改善阿尔茨海默症诱发的睡眠异常尚不明确。因此，本研究旨在探究阿尔茨海默症小鼠中睡眠异常的发生发展过程，并进一步明确脑活素在治疗阿尔茨海默症诱发的睡眠异常中的作用，以期为临床改善阿尔茨海默症患者的睡眠异常提供有效的治疗手段。

方法 (1) 建立阿尔茨海默症小鼠模型；(2) 采用睡眠脑电记录监测并比较野生型小鼠和阿尔茨海默症小鼠的睡眠结构；(3) 探究慢性腹腔注射脑活素对阿尔茨海默症小鼠睡眠结构的影响。

结果 (1) 3xTg 小鼠病理结果显示 A β 沉积和 tau 蛋白异常磷酸化，符合阿尔茨海默症诊断标准(2) 与野生型小鼠相比，3xTg 小鼠在疾病早期 REM 睡眠减少、觉醒增加，疾病晚期 NREM 睡眠与 REM 睡眠均显著减少、觉醒增加；(3) 脑活素注射可以显著增加 3xTg 小鼠的 NREM 与 REM 睡眠，减少觉醒。

结论 本研究发现 3xTg 阿尔茨海默症小鼠在疾病早期 REM 睡眠减少、觉醒增加，晚期出现 NREM 睡眠减少，而脑活素可以显著改善 3xTg 阿尔茨海默症小鼠的睡眠异常，为临床治疗阿尔茨海默病患者的睡眠异常提供了新的理论依据。

关键词：阿尔茨海默病，睡眠，脑电

精神创伤研究协作组

Major Depressive Disorder and Perceived Social Support: Moderated Mediation Model of Security and Brain Dysfunction

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Objective Low social support increases the risk of Major depressive disorder (MDD), yet its effects on brain function are unclear.

Methods We recruited 32 MDD patients with low social support, 52 with high social support, and 54 healthy controls. Using degree centrality (DC), regional homogeneity, amplitude of low-frequency fluctuations, and fractional amplitude of low-frequency fluctuations measures, we examined regional brain activity in MDD patients with low social support. Abnormal regions identified in these analyses were selected as regions of interest for functional connectivity (FC) analysis. We then explored relationships among social support, brain dysfunction, MDD severity, and insecurity using partial correlation and moderated mediation models.

Results Our findings reveal that MDD patients with low social support show decreased DC in the right superior temporal pole and right medial geniculate nucleus, coupled with increased FC between the right superior temporal pole and right inferior temporal gyrus, and the right supramarginal gyrus compared to those with high social support. Furthermore, the DC of the right medial geniculate nucleus positively correlates with social support, while the FC between the right superior temporal pole and right supramarginal gyrus negatively correlates with both social support and subjective support. Additionally, a moderated mediation model demonstrates that the FC between the right superior temporal pole and right supramarginal gyrus mediates the relationship between social support and depression severity, with security moderating this mediation.

Conclusion These findings underscore the impact of low social support on brain function and depression severity in MDD patients

关键词: Major depressive disorder; Social support; Security; Degree centrality; Functional connectivity

Regional Brain Activity and Connectivity Disruptions in Major Depressive Disorder: The Role of Low Social Support

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Objective Low social support increases the risk of Major Depressive Disorder (MDD), but its impact on brain function is unclear

Methods We recruited 32 MDD patients with low social support, 52 MDD patients with high social support, and 54 healthy controls. Regional brain activity was assessed using amplitude of low-frequency fluctuation (ALFF), fractional ALFF (fALFF), degree centrality, and regional homogeneity. Abnormal regions identified were used for functional connectivity (FC) analysis. Partial correlation and moderated mediation models explored relationships between social support, brain dysfunction, MDD severity, and childhood maltreatment

Results Compared to high social support patients, low social support MDD patients showed decreased fALFF in the right superior temporal pole and increased fALFF in the left postcentral gyrus, with reduced FC between the right superior temporal pole and the right middle occipital gyrus. fALFF of the left postcentral gyrus correlated positively with physical abuse and negatively with social support. FC between the right superior temporal pole and right middle occipital gyrus was positively with social support. Furthermore, the moderated mediation model revealed that FC between the right superior temporal pole and the right middle oc-

cipital gyrus mediated the relationship between subjective support and depression severity, with physical abuse moderating this mediation effect

Conclusion These findings underscore the impact of low social support on brain function and depression severity in MDD patients

关键词: Major depressive disorder; Low Social support; Childhood maltreatment; fractional amplitude of low-frequency fluctuation; Functional connectivity

Genetic Causal Effects of Multi-site Chronic Pain on Post-traumatic Stress Disorder: Evidence From A Two-sample, Two-step Mendelian Randomisation Study

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Objective To determine if the correlation between multi-site chronic pain and post-traumatic stress disorder (PTSD) is causal and to identify the direction of causation

Methods We applied a two-sample Mendelian randomisation (MR) analysis using data from genome-wide association studies of European ancestry populations. The inverse variance weighted (IVW) method was used for MR analyses, accompanied by various sensitivity and validation analyses. Additionally, multivariable and mediation MR analyses were conducted to assess the mediating effects of 13 lifestyle factors or diseases on the causal relationship between multi-site chronic pain and PTSD

Results The MR analysis revealed that multi-site chronic pain significantly increases the risk of developing PTSD (ORIVW = 2.39, 95% CI = 1.72-3.31, $p = 2.10 \times 10^{-7}$). Conversely, the absence of pain significantly reduces the risk of developing PTSD (ORIVW = 0.12, 95% CI = 0.05-0.30, $p = 3.14 \times 10^{-6}$). Multivariable MR analysis indicated that 13 potential confounding

factors do not influence the causal effect of multi-site chronic pain on PTSD. Mediation analysis showed that body mass index (BMI) (6.98%), educational attainment (8.79%), major depressive disorder (MDD) (36.98%), and insomnia (27.25%) mediate the causal connection between multi-site chronic pain and PTSD

Conclusion Individuals with multi-site chronic pain are at a higher risk of developing PTSD, and this risk is partially mediated by pathways involving BMI, educational attainment, MDD, and insomnia. These findings underscore the need for effective preventive and therapeutic strategies for PTSD in patients suffering from multi-site chronic pain

关键词: Multi-site chronic pain, Post-traumatic stress, Mendelian randomisation, Mediation analysis, Genetics

24 小时活动行为特征与自杀倾向的关联研究

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目的 本研究旨在分析全年龄段人群 24 小时活动行为特征与自杀倾向的关联。

方法 本研究通过横断面流行病学调查, 采用多级分层抽样法, 设置样本权重, 以调查美国全年龄段人群 24 小时活动行为特征和自杀倾向。研究共纳入样本 3941 人, 其中男性 1919 (48.69%) 人, 女性 2022 (51.31%) 人, 平均年龄 51.23 ± 17.51 岁。24 小时活动行为特征包括中高强度体力活动 (MVPA)、不同类型体力活动 (工作体力活动 WPA、通勤体力活动 TPA、娱乐体力活动 RPA)、久坐 (SB) 和睡眠障碍 (SD)。MVPA、不同类型体力活动和 SB 通过全球体力活动量表 (GPAQ) 评估, 睡眠障碍通过慕尼黑时型问卷 (MCTQ) 评估。自杀倾向通过病人健康问卷 (PHQ-9) 第 9 个条目评估。协变量包括性别、年龄、种族、调查季节、兵役、学历、婚姻状况、贫困、家庭人数、BMI、健康状况。统计分析采用 SPSS26.0 进行描述性统计、组间差异检验、Logistic 回归分析, 检验水准 $\alpha=0.05$ 。

结果 样本中有 143 (3.63%) 具有自杀倾向。

将样本分为“自杀倾向组”(n=143)和“无自杀倾向组”(n=3798), 检验自变量和协变量在两组间的差异, 发现自变量和种族、学历、婚姻、贫困、健康状况在两组间差异具有统计学意义。建立两级 Logistic 回归模型, 排除协变量干扰, 加权后发现: MVPA (OR=0.990, 95%CI: 0.988-0.992)、TPA (OR=0.940, 95%CI: 0.938-0.942) 和 RPA (OR=0.682, 95%CI: 0.681-0.683) 与自杀倾向负向关联; WPA (OR=1.180, 95%CI: 1.178-1.182)、SB (OR=1.007, 95%CI: 1.006-1.008) 和 SD (OR=2.201, 95%CI: 2.197-2.205) 与自杀倾向正向关联。

结论 在 24 小时活动行为中, 中高强度体力活动、通勤体力活动和娱乐体力活动是自杀倾向的潜在保护因素, 其中娱乐体力活动保护性较强; 工作体力活动、久坐和睡眠障碍是自杀倾向的潜在危险因素, 其中工作体力活动危险性较强、睡眠障碍危险性高。

关键词: 24 小时活动行为, 自杀倾向, 体力活动, 久坐, 睡眠障碍

创伤与解离 —— 被低估的临床症状

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目的 创伤性事件对个体心理健康的影响已被广泛研究, 但解离作为创伤后的重要症状, 常常被低估和忽视。本文旨在探讨创伤与解离之间的关系, 强调解离症状在临床上的重要性, 并评估其对诊断和治疗的影响。

方法 本研究通过文献综述的方法, 系统回顾了心理学和精神病学领域中关于创伤与解离的主要研究。重点关注解离性身份障碍(DID)、解离性失忆、解离性恍惚状态等各种形式的解离症状。文献检索范围涵盖了 PubMed、心理学数据库(PsycINFO)、Cochrane Library 等数据库。检索关键词包括“创伤”、“解离”、“解离性障碍”、“解离症状”等。此外, 通过案例分析的方法, 对若干临床病例进行详细探讨, 包括症状表现、诊断过程和治疗效果。

结果 文献综述结果显示, 创伤与解离症状之间存在高度相关性。大量研究表明, 经历重度创伤事件 (如性暴力、自然灾害、战争等) 的人群中, 解

离症状的发生率显著增加。例如,有研究发现,约30%至50%的创伤幸存者在某个时期会经历不同程度的解离症状,如记忆缺失、身份混乱和情感的脱离。此外,临床案例分析表明,解离症状不仅影响患者的日常生活和社会功能,还可能导致误诊和治疗延误。解离症状的隐蔽性和复杂性,使得很多临床医生未能及时识别,并错将其归因于其它精神疾病,如抑郁症、焦虑症或精神分裂症。

结论 解离作为创伤后的常见而复杂的心理现象,在临床上应受到更多的重视和研究。本文呼吁临床医生在面对创伤患者时,系统评估和识别解离症状,基于精准的诊断,制定个性化的治疗方案。未来研究应进一步探索解离机制及其与创伤的相互影响,开发有效的干预措施,以提高患者的生活质量和康复效果。

关键词: 创伤, 解离, 解离性障碍, 解离症状, 临床诊断, 心理治疗。

自杀危机干预: 氯胺酮的应用及作用机制-综述

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自杀行为是世界范围内的一个重大公共卫生问题,每年约发生1600万起自杀未遂事件和80万起自杀死亡事件。关于抗抑郁药、锂盐、抗精神病药和抗焦虑药(苯二氮卓类药物)对自杀意念与自杀行为影响的研究较多,但结果并不一致。

1 普通药物干预的短板

尽管抗抑郁药、锂盐、抗精神病药和抗焦虑药被广泛用于治疗自杀危机相关疾病,但它们主要针对致自杀疾病,不能快速起效缓解自杀意念,显然不是自杀危机的最佳干预药物。

2 氯胺酮的优势

氯胺酮能快速改善重度抑郁症患者的快感缺乏,并能迅速缓解自杀意念,与目前临床常用的抗抑郁药物的延迟效应形成鲜明对比,这一点在自杀危机干预中尤为重要。氯胺酮不但能快速缓解患者抑郁症状,消除自杀意念或行为,而且效果可持续数周,为进一步心理危机干预提供了足够“窗口期”。对突发自杀意念有益 氯胺酮不仅可减少重度抑郁症和

双相情感障碍患者自杀意念,对于突发自杀意念或行为等紧急情况也有重要的临床价值。

3 氯胺酮的局限性

鼻用艾司氯胺酮与静脉给药的氯胺酮有相似的不良反应,包括拟精神、拟交感神经、前庭症状和成瘾性。禁忌症包括动脉瘤性血管疾病或动静脉畸形、脑出血以及对艾司氯胺酮、氯胺酮或其任何剂型过敏。除上述情况限制了氯胺酮临床使用外,还有一种情况也需引起重视,即应用氯胺酮后自杀念头的迅速消退并不等同于自杀行为风险的完全消失,尤其是氯胺酮有效时间窗消失后,自杀意念可能会转土重来,甚至更为猛烈并付诸行动。

4 氯胺酮的作用机制

氯胺酮的作用机制的假说较多,但并不是相互排斥的,在发挥药物的抗抑郁作用方面可能是互补的,因为所有的假设都提出突触可塑性的急性变化,导致兴奋性突触的持续加强,这是改善抑郁症状、缓解心里痛苦所必需。事实上,所有这些过程的最终结果是皮质-中脑边缘脑回路中参与维持情绪和应激反应的兴奋性突触的持续增强,从而快速缓解抑郁症状与自杀意念。另外,氯胺酮对单胺能系统的影响及抗炎作用也可起到抗抑郁作用。

关键词: 自杀危机干预; 氯胺酮; 临床应用; 作用机制

Prevalence and Influencing Factors of Sleep Disorders in Medical Students after The COVID-19 Pandemic

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Objective The prevalence of sleep disorders among medical students was high during the COVID-19 pandemic. However, there have been fewer studies on sleep disorders among medical students after the COVID-19 pandemic. The objectives of the current research include: 1) To investigate the prevalence of sleep disorders among medical students two months after the

COVID-19 outbreak. And 2) to explore the factors influencing sleep disorders in medical students after the COVID-19 pandemic

Methods 1,194 medical students were recruited from all over China. The Self-administered scale was used to collect the demographic characteristics. The Self-rating Depression Scale (SDS), the Self-rating Anxiety Scale (SAS), and the Pittsburgh Sleep Quality Index (PSQI) were used to assess subjects' depression, anxiety, and sleep disorders, respectively. The chi-square test and binary logistic regression were used to identify factors influencing sleep disorders. The receiver operating characteristic (ROC) curve was used to assess the predictive value of relevant variables for sleep disorders

Results We found the % prevalence of sleep disorders among medical students after COVID-19 was 82.3%. According to logistic regression results, medical students with depression were 1.151 times more likely to have sleep disorders than those without depression (OR=1.151, 95% CI 1.114 to 1.188). Doctoral students were 1.908 times more likely to have sleep disorders than graduate and undergraduate students (OR=1.908, 95% CI 1.264 to 2.880). In addition, the area under the ROC curve for depression is 0.689

Conclusion The prevalence of sleep disorders among medical students is high after COVID-19. In addition, high academic levels and depression are risk factors for sleep disorders. Therefore, medical colleges and administrators should pay more attention to sleep disorders in medical students after the COVID-19 pandemic. Regular assessment of sleep disorders and depression is essential

关键词: Sleep Disorders, Medical students, COVID-19, Depression, Anxiety

COVID-19 大流行期间和之后护士严重抑郁症的患病率和影响因素: 一项大规模多中心研究

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目的 在 COVID-19 流行期间,护士面临着巨大的心理压力。然而,目前对 COVID-19 流行之后护士严重抑郁及其相关因素的研究较缺乏。本研究的主要目标是 1. 比较 COVID-19 大流行期间和流行结束之后中国护士严重抑郁症的患病率; 2. 探讨影响护士严重抑郁的因素。

方法 本研究在疫情期间和疫情结束后在中国共招募了 1522 名一线护士。本研究分别采用抑郁自评量表、焦虑自评量表和匹兹堡睡眠质量指数来评估受试者的抑郁、焦虑和睡眠障碍。并采用了卡方检验、t 检验和二元逻辑回归来确定影响严重抑郁症的因素。用 ROC 曲线来评估影响严重抑郁的相关变量的预测价值。

结果 研究发现,疫情过后护士的重度抑郁症发病率(4.9%)明显高于疫情期间的发病率(1.7%)。并且,在 COVID-19 流行结束后,我们发现学历、健康状况、每周运动频率、焦虑和睡眠障碍也与护士的严重抑郁有关。此外,ROC 曲线分析表明,在 COVID-19 流行结束后,SAS 评分和 PSQI 评分对护士的严重抑郁均具有良好的预测价值。

结论 在 COVID-19 流行结束之后,护士严重抑郁的发生率要比流行期间更高。而且,尽管 COVID-19 流行已经结束,但护士仍面临着严重的心理压力。因此,在 COVID-19 流行结束后,要及时为护士提供相应的心理支持,并要完善相应的心理健康支持系统来保护护士的健康。

关键词: 严重抑郁, 护士, COVID-19, 焦虑, 睡眠障碍

PTSD 小鼠模型炎症小体的表达与髓鞘变化的研究

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目的 探究创伤后应激障碍(PTSD)小鼠模型海马组织和前额叶皮质 NLRP3 炎症小体的表达以及髓鞘的变化。

方法 将雄性 C57BL/6J 小鼠随机分为 4 组:对

照组、PTSD-3 d 组、PTSD-7 d 组和 PTSD-14 d 组,造模组采用改良性单一连续应激 (SPS&S) 来制备 PTSD 动物模型。通过旷场实验和高架十字迷宫试验来检测小鼠模型焦虑和抑郁反应。通过避暗实验系统建立记忆和记忆能力测试。通过苏木精-伊红染色法 (HE) 染色、髓鞘染色、免疫组织化学染色和免疫荧光染色来观察模型海马组织和前额叶皮质的形态学变化、髓鞘变化以及 NLRP3 炎症小体的表达。通过 Western Blot 检测 NLRP3 炎症小体的蛋白表达。

结果 与对照组相比,造模组的体质量下降,出现焦虑和抑郁样行为,学习记忆能力下降。HE 染色和髓鞘染色显示,与对照组相比,造模组海马 CA1 区和前额叶皮质的神经元细胞发生一定程度的损伤,出现脱髓鞘现象。Western Blot、免疫组织化学染色和免疫荧光染色结果显示,与对照组相比,PTSD-3 d 组海马组织和前额叶皮质的 NLRP3 炎症小体被激活,且差异具有统计学意义 ($P<0.05$)。

结论 SPS&S 诱导的 PTSD 小鼠模型海马组织和前额叶皮质 NLRP3 炎症小体激活,产生脱髓鞘现象。

关键词: 创伤后应激障碍; NLRP3; 髓鞘; 认知障碍; 小鼠

情绪及应对方式、亲子关系、童年创伤对青少年抑郁障碍患者非自杀性自伤行为的影响

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目的 调查青少年抑郁障碍患者非自杀性自伤 (NSSI) 行为的情况,分析相关影响因素,为 NSSI 的防治提供理论基础及参考。

方法 选取 95 例青少年抑郁障碍患者,根据 DSM-5 关于 NSSI 的诊断标准,将患者分为伴有 NSSI 行为组 (NSSI 组) 和不伴有 NSSI 行为组 (nNSSI 组)。采用青少年非自杀性自伤行为问卷 (ANSAQ)、抑郁自评量表 (SDS)、焦虑自评量表 (SAS)、简易应对方式问卷 (SCSQ)、亲密关系体验-关系结构量表 (ECR-RS)、儿童期创伤问卷简表 (CTQ-SF) 对患者进行评估,比较 NSSI 组与 nNSSI 组两组的组间差异,并使用二元 Logistic 回归分析探究 NSSI 行为的影响因素。

结果 95 例青少年抑郁障碍患者中有 59 例存在 NSSI, 检出率为 62.11%。NSSI 组在抑郁自评量表、焦虑自评量表、SCSQ 消极应对、对父亲的依恋焦虑、对母亲的依恋焦虑及依恋回避、CTQ-SF 总分、情感忽视、躯体忽视、情感虐待、性虐待方面的评分均高于 nNSSI 组 ($P<0.05$)。二元 Logistic 回归分析提示,焦虑、消极应对、对母亲的依恋回避、情感虐待是青少年抑郁障碍患者 NSSI 行为发生的危险因素 ($P<0.05$)。

结论 本研究提示青少年抑郁障碍患者 NSSI 发生率较高,焦虑、消极应对、对母亲的依恋回避、情感虐待是青少年抑郁障碍患者发生 NSSI 行为的危险因素。临床中除了改善患者的抑郁、焦虑情绪外,还需注意关注患者的应对方式、亲子关系及童年创伤经历,以减少 NSSI 行为的发生。

关键词: 青少年,抑郁障碍,非自杀性自伤,影响因素

The Impact of Positive and Traumatic Experiences on Symptoms of PTSD, Depression and GAD in Early Adolescents: Mediating Roles of Negative Appraisals and Dissociation

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Objective Positive experiences has been suggested to be associated with decreased risks of post-trauma psychopathology. However, psychological mechanisms underlying the protective effects are unknown. This study aimed to examine the mediating roles of negative appraisals and dissociation in paths from positive and traumatic experiences to symptoms of emotional disorders

Methods A total of 956 trauma-exposed adolescents (mean age 12.79 years, SD = 0.68, range from 11.00 to 16.00; 54% male) were surveyed two times (T1 and T2) interval one year. Positive and traumatic experiences, negative appraisals, dissociation, and symp-

toms of posttraumatic stress disorder (PTSD), depression, and generalized anxiety disorder (GAD) were measured by self-administered structured questionnaires. Path analysis was used to examine hypothesized associations for PTSD, depression, and GAD, independently

Results Positive experiences at T1 had persistent protective effects on T2 PTSD symptoms and depression, even after controlling for T1 symptom levels, negative appraisals, and dissociation. The effects of T1 traumatic experiences on emotional symptoms at T2 were totally mediated by T1 clinical symptoms, negative appraisals and dissociation. Negative appraisals and clinical symptoms at T1 also played mediating roles between positive experiences and all three kinds of emotional problems at T2. Interestingly, dissociation at T1 mediated development of T2 PTSD, but not depression and GAD, from both positive and traumatic experiences

Conclusion Positive experiences has an important role in youth's adjustment to Abstract trauma. It contributes to the development of cognitive appraisals, dissociation and subsequent emotional disorders. Cognitive models of posttrauma psychopathology apply to the protective factor

关键词: positive experiences, appraisal, dissociation, PTSD, psychopathology, adolescence

中职生童年创伤与非自杀性自伤的关系: 思维反刍与情绪调节困难的链式中介效应

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目的 探索童年创伤对中职生非自杀性自伤的影响, 及思维反刍和情绪调节困难是否在童年创伤与非自杀性自伤间存在链式中介效应。

方法 采用童年创伤量表 (Childhood Trauma Questionnaire, CTQ)、青少年非自杀性自伤行为问卷、思维反刍量表-10 简表 (Ruminative Responses Scale, RRS-10)、情绪调节困难量表 (Difficulties in Emotion

Regulation Scale, DERS) 对赣州市某中职学校学生进行心理调查。使用 SPSS 23.0 和 SPSS PROCESS V4.0 插件进行统计分析, 应用 Mann-Whitney U 检验、独立样本 t 检验、Spearman 相关分析、双变量 Logistic 回归分析, 及 SPSS PROCESS 中介效应模型检验对数据进行分析。

结果 (1) 中职生非自杀性自伤行为检出率为 22.98%; (2) 伴非自杀性自伤青少年童年创伤 [39(34, 44) 分 vs. 45(39, 53) 分, $z = -20.68$]、思维反刍 [16(13, 20) 分 vs. 20(17, 25) 分, $z = -23.07$] 与情绪调节困难 [85(75, 93) 分 vs. 97(87, 111) 分, $z = -24.03$] 量表总分均显著高于无非自杀性自伤中职生 (均 $p < 0.01$);

(3) 童年创伤 ($r = 0.363$)、思维反刍 ($r = 0.413$)、情绪调节困难 ($r = 0.431$) 与非自杀性自伤总分两两均呈显著正相关 (均 $p < 0.01$); (4) 中介效应模型检验显示, 童年创伤既可直接影响非自杀性自伤 ($\beta = 0.514$, 95% CI: 0.460 - 0.569), 又能通过思维反刍 ($\beta = 0.155$, 95% CI: 0.130 - 0.183) 和情绪调节困难 ($\beta = 0.039$, 95% CI: 0.116 - 0.164) 的单独中介与链式中介 ($\beta = 0.071$, 95% CI: 0.058 - 0.085) 作用影响非自杀性自伤, 总间接效应占总效应的 41.6%。

结论 中职生非自杀性自伤行为发生率高, 思维反刍与情绪调节困难是童年创伤影响个体非自杀性自伤的重要因素。社会应广泛提升对童年期创伤经历的重视, 尤其使家庭正确关注儿童青少年教育与心理健康状态。在临床中可应对思维反刍、情绪调节困难进行有效干预, 缓解童年不良经历对青少年非自杀性自伤的影响。

关键词: 童年创伤, 非自杀性自伤, 思维反刍, 情绪调节困难, 中职生

优质护理在精神科病区的应用

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目的 精神病患者由于疾病的原因可能出现各种各样的精神症状, 给社会和家庭带来不同程度的危害, 多数自知力不完整, 对住院反感, 住院期间增加了护理的难度, 开展优质护理服务, 可展示人性化的关爱, 为病人创造良好的治疗环境, 既保证护理安全、促进护患关系和谐, 又减少了护患纠纷,

提高护理服务满意度。

方法 1、转变护理观念、强化护理技能，从以往的被动护理转为主动护理。组织护士进行有关“优质护理服务示范工程”知识的学习及培训，领会优质护理精神，通过模拟演练等方式明确护理工作内容。从患者角度来评价自身的工作行为，分析患者需求，学会换位思考。

2、创建病区文化、美化病区环境。采取每季度评选一次优秀护士，将优秀护士的名字、行为公示，树立明星效应。营造温馨的病区环境，病区设有软面镜子、爱心座位、读书角、图画展示栏、心愿墙等，充分利用墙面对常见疾病的相关知识进行宣传。病区环境设置充分体现人文关怀，使患者感受到爱心和温暖。

3、转变工作模式。对科室进行护理工作模式的调整，实行责任制整体护理，责护在岗期间负责患者的全面护理，其他时间由值班护士负责在岗包干，实现人人管床、互为辅助的效果，为患者提供无隙的护理服务。一对一的形式加深了护患沟通，促进了护患关系的和谐。

4、每月组织护患座谈会，旨在收集患者住院期间的感受，畅所欲言，提供更多、更好的建议。对患者提出的建设性意见虚心采纳，从而有效地提升护理服务质量，营造健康、和谐的护患关系。

5、丰富宣教方式及工娱活动，改变传统口头宣教模式，转为多模式宣教，根据护理工作情况制定健康教育手册，采用类似护理路径的方式按照时间排序，认真执行宣教内容。科室制定每日工娱课程表，定期组织各类比赛，成立各类康复小组以及手指操、八段锦、绘画等活动，让患者在住院生活中感受到生活的乐趣，从而更好的恢复社会功能。

结果 通过在精神科病房开展优质护理服务后精神科患者及家属的护理满意度可达到百分之 98% 以上，基础护理、专科护理、健康宣教等护理质量均显著提升。充分调动了护理人员的积极性，提高了护理人员自身素质，有效地保证了护理安全。建立了和谐的护患关系，减少了护患纠纷，提高了患者服药的依从性，增强了战胜疾病的信心。

结论 更新护理理念是提高护理服务质量的前提，传统的护理服务是以疾病治疗为中心，而优质护理服务则要求护士以患者需求为中心。优质护理的开展必须先完成护士工作理念的转变，要求护士学会换位思考，能够在工作中发现、理解患者的心理需求，从而有针对性的实施护理措施，提高护理

服务质量，有效提高患者的护理满意度及患者的生活质量，全面推进了护理事业高质量发展，

关键词：优质护理服务 患者生活质量

难治性精神分裂症合并创伤后吉兰-巴雷综合征 1 例合并文献复习

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目的 探讨难治性精神分裂症合并创伤后吉兰-巴雷综合征（Guillain-Barres syndrome, GBS）的临床表现、辅助检查结果、治疗及短期预后等临床特征，为临床诊治提供参考。

方法 回顾性分析 1 例难治性精神分裂症合并创伤后 GBS 患者的临床特点及诊治经过，并结合文献复习和探讨其相关特点及精神疾病出现创伤后与神经免疫疾病之间的关系，提高临床医生对该疾病的认识。

结果 患者因“四肢无力 3 周，加重伴言语含糊 5 天”入院。既往患有精神分裂症，抗精神病药物治疗效果差，故多次行电休克治疗，3 周前患者行休克治疗后发生摔倒，当时感觉四肢乏力，并出现活动减少，4 天后出现行走不能，伴发热，近 5 天来患者四肢无力加重，出现四肢运动不能，伴有言语含糊，吸肌麻痹、吞咽困难及进食后有恶心、呕吐，二便难解，并且精神分裂症的症状逐渐加重。检查肌电图提示：四肢多发性对称性感觉运动型周围神经病，以轴索病变为主；头颅 MRI 未见明显异常，脑脊液呈蛋白-细胞分离现象及寡克隆 IgG 区带阳性，行多学科联合会诊，最终结合其病史和检查结果，诊断为精神分裂症伴发创伤后 GBS，遂予抗精神药物、丙种球蛋白、呼吸机支持及针灸康复等多学科综合性治疗后，患者精神状态及四肢无力等症状明显改善。

结论 难治性精神分裂症患者若存在手术或外伤等诱发因素，出现运动功能障碍、肌肉萎缩、显著的颅神经症状，并发生呼吸衰竭，四肢无力程度严重等临床表现，脑脊液蛋白-细胞分离现象，神经电生理提示周围神经损害，则应考虑难治性精神分裂症合并创伤后 GBS。研究显示，创伤后患者发生 GBS

的相对发病风险明显增高,早期予以免疫干预可显著改善患者预后,提高患者生活质量。本例患者予免疫球蛋白、无创呼吸机、抗精神药物、针灸康复等综合性治疗后症状缓解。目前难治性精神分裂症与创伤后 GBS 共病的报道不多,也没有资料表明电休克治疗和创伤后 GBS 存在一定的因果关系,但是临床我们需要提高对精神分裂症患者的神经功能障碍的认识,及时诊断和积极治疗是关键。

关键词:难治性精神分裂症;电休克;吉兰-巴雷综合征;创伤

青少年家庭关系与网络游戏障碍:非适应性认知和脑自发活动的中介作用

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目的 研究表明青少年家庭关系与网络游戏障碍(internet gaming disorder, IGD)密切相关,同时非适应性认知在家庭关系对 IGD 的影响路径中发挥着关键作用,以及家庭关系与 IGD 之间的脑自发活动存在着相关神经机制,因此本研究探究非适应性认知和脑自发活动在青少年家庭关系与 IGD 之间的作用。

方法 本研究根据入组标准和排除标准筛选后共招募 IGD 组 52 例及 HC 组 51 例,采用 Young 网络成瘾量表(Young Internet Addiction scale, YIAS)评估青少年的网络成瘾严重程度,采用中文版家庭环境量表(the Chinese version of Family Environment Scale, FES-CV)和非适应性认知量表(the Chinese Adolescents' Maladaptive Cognitions Scale, CAMCS)分别评估家庭关系和非适应性认知水平,采用静息态功能磁共振评估脑自发活动,即 mALFF 和 FC,分析各量表之间以及量表与脑自发活动的相关性,并进一步分析非适应性认知和脑自发活动在青少年家庭关系与 IGD 之间的作用。

结果 IGD 组大脑的右侧顶上回、右侧顶下缘角回、右侧中央前回、右侧缘上回、右侧中央后回、右侧背外侧额上回、右侧补充运动区及右侧额中回(middle frontal gyrus, MFG)区域的 mALFF 值显著高于 HC 组,左侧小脑上脚、双侧回直肌、左侧梭状回、左侧颞极、左侧海马旁回、左侧眶部额上回及

左侧眶内额上回区域的 mALFF 值显著低于 HC 组。2 家庭关系中的矛盾性与 IGD 呈正相关,非适应性认知在家庭关系(矛盾性)与 IGD 之间具有中介作用;家庭关系中的亲密度与 IGD 呈负相关,脑自发活动(MFG)在家庭关系(亲密度)与 IGD 之间具有中介作用。

结论 本研究结果表明青少年家庭关系与 IGD 有关,非适应性认知与脑自发活动(MFG)在家庭关系与 IGD 之间具有中介作用,表明非适应性认知与脑自发活动可能是家庭关系与 IGD 之间联系的相关因素,同时 IGD 组 MFG 到右侧脑岛的 FC 值与家庭关系中的矛盾性呈正相关,表明 MFG 可能是青少年家庭关系与 IGD 之间联系的神经生物学标志物。

关键词:青少年;家庭关系;网络游戏障碍;非适应性认知;脑自发活动;额中回

重性抑郁障碍患者海马表面形状的改变

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目的 海马体在情绪处理过程中起着重要作用,主要涉及情绪产生、情绪调节、情感记忆等。重性抑郁障碍(MDD)患者海马结构及功能的异常是神经影像学中较为常见的发现。相比于海马整体体积的测量,本研究测量海马表面形状更有益于发现 MDD 患者海马的局部的、早期的改变。

方法 本研究招募了 61 名重性抑郁障碍患者(MDD)和 65 名年龄和性别匹配的健康对照(HC)。使用 FSL 6.0.7 中的 FIRST 模块对海马进行自动化分割、配准。使用 FSL 顶点分析脚本(first_utils)计算形状指数,该脚本可计算基于 MNI 空间中每一个参与者海马形状偏离所有被试海马的平均形状与表面网格的垂直距离,正指数表示海马表面结构向外变形膨胀,负指数表示海马表面结构向内萎缩。并运行单变量逐顶点分析方法评估海马形状的组间差异,所有结果使用无阈值聚类增强(TFCE)以及错误发现率(FEW)校正, $p < 0.05$ 。

结果 MDD 组和 HC 组在右前海马体形状上存在显著差异。相对于 HC 组, MDD 患者右前海马体局部出现明显的向外变形 ($p < 0.05$, FWE-&TFCE 校正)。MDD 组和 HC 组在左侧海马体未发现表

面形状的差异。

结论 海马局部区域表面形状的改变,可能发生在重性抑郁障碍病理进展的早期。

关键词:重性抑郁障碍 海马体 海马表面形状

伴应激事件抑郁障碍患者肠道菌群特征及相关性研究

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目的 重性抑郁障碍(Major Depressive Disorder, MDD)严重危害人类身心健康,部分MDD患者在发病前曾经历应激性生活事件,但生活事件导致MDD的可能机制目前尚不清楚。既往研究提示应激事件会引起肠道菌群改变,肠道菌群与抑郁症状密切相关。本研究以肠道菌群为切入点,探究经历应激性生活事件的MDD患者肠道菌群特征,以及生活事件、肠道菌群与抑郁症状之间的相关性。

方法 招募符合纳入及排除标准的MDD患者和健康受试者(Healthy Control, HC),使用汉密尔顿抑郁量表24项(Hamilton Depression Scale-24, HAMD-24)评估抑郁症状的严重程度,生活事件量表(Life Event Scale, LES)评估是否受生活事件影响及影响程度,并根据LES量表总分是否超过32分,将MDD患者分为未经历生活事件的MDD患者(LES-0)组和经历生活事件的MDD患者(LES-1)组,最后通过使用16S rRNA基因测序技术对上述三组受试者的粪便样本肠道菌群进行检测。

结果 三组受试者在性别、年龄、受教育年限、BMI四个方面差异无统计学意义; α 多样性分析发现,HC组的Simpson和Pielou's evenness指数显著高于MDD组,LES-0组的Chao 1、Faith's PD和Observed species指数显著高于LES-1组; β 多样性分析发现,LES-1组和LES-0组存在显著差异。通过线性判别分析在不同分类水平上鉴定出33种细菌,在属水平上,HC组中粪杆菌属、罗斯氏菌属、拟杆菌属、巨单胞菌属、小杆菌属、萨特氏菌属相对丰度较高,LES-0组中嗜血杆菌属、颗粒链菌属、

Pseudoramibacter Eubacterium、毛梭菌属、鞘鞍醇单胞菌属相对丰度较高,LES-1组中布洛特菌属、粪球菌属、SMB53、多尔氏菌属、乳杆菌属相对丰度较高。相关性分析提示,LES总分与HAMD-24总分呈显著正相关,布洛特氏菌属、粪球菌属、链球菌属与HAMD-24及LES总分呈显著正相关,而拟杆菌属、粪杆菌属、罗斯氏菌属与HAMD-24及LES总分呈显著负相关。

结论 经历生活事件的MDD患者具有特殊的肠道菌群,这些菌群不同于健康人及未经历生活事件的MDD患者,生活事件、肠道菌群、抑郁障碍之间存在相关性。

关键词:重性抑郁障碍,生活事件,肠道菌群

阿司匹林通过花生四烯酸代谢-神经炎症轴改善青春期肥胖诱发抑郁样行为的机制研究

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目的 西方化饮食引起青春期肥胖的儿童青少年是抑郁症的高发人群,但青春期肥胖诱发抑郁症的具体机制尚不清楚。近几年,能量代谢和免疫炎症在抑郁症病理机制中的作用引起了学界的关注。因此,本研究拟以动物行为学为基础探索阿司匹林通过影响花生四烯酸代谢-神经炎症轴来改善青春期肥胖诱发抑郁样行为的机制,为青春期肥胖相关抑郁症的治疗提供了新的理论和实验依据。

方法 本研究通过给予3w雄性C57BL/6J小鼠喂食高脂饮食模拟青春期肥胖,评估体重和脂肪含量以及葡萄糖和总胆固醇水平,并结合口服葡萄糖耐量实验和腹腔注射胰岛素耐量实验综合评估肥胖模型。SPT、FST、SIT、TCT、OFT和EPM评估小鼠的抑郁样行为。对高脂饮食引起肥胖诱发抑郁样行为的小鼠进行阿司匹林干预,观察小鼠的行为改变,并通过氧化脂质靶向代谢组和免疫荧光染色分析阿司匹林干预后血浆代谢谱和神经炎症的变化。此外,通过花生四烯酸和阿司匹林与BV2小胶质细胞共培养24h,采用qRT-PCR和ELISA检测IL-6、TNF- α 和MCP-1的表达水平。

结果 (1)高脂饮食小鼠的体重、脂肪含量、血浆葡萄糖和总胆固醇水平显著增加,并出现葡萄

糖耐量减退和胰岛素抵抗。青春期肥胖诱发了小鼠抑郁样行为和社交认知功能障碍。(2) 血浆代谢组学分析提示抑郁样小鼠的亚油酸代谢和花生四烯酸代谢通路出现明显改变, 且花生四烯酸代谢中促炎性代谢介质显著升高, 而抗炎性的代谢介质显著下降, 这些代谢介质与高脂饮食引起肥胖诱发的抑郁样行为和社交认知功能密切相关。此外, 高脂饮食引起肥胖诱发抑郁样小鼠大脑炎症因子(如 IL-6、TNF- α 和 MCP-1) 表达显著升高, 小胶质细胞呈现明显的激活状态。(3) 阿司匹林可以显著改善青春期肥胖诱发的小鼠抑郁样行为及社交认知功能损伤, 并降低血浆花生四烯酸代谢谱中促炎性介质的水平和小胶质细胞的活性。细胞实验进一步证实, 花生四烯酸引起 BV2 小胶质细胞 TNF- α 和 MCP-1 的表达显著升高, 而阿司匹林可以显著降低这些炎症因子的水平。

结论 高脂饮食引起青春期肥胖小鼠血浆中花生四烯酸代谢紊乱以及神经免疫激活导致抑郁样行为和社交认知障碍, 阿司匹林通过降低花生四烯酸代谢产生的促炎性代谢介质和神经炎症, 从而改善青春期肥胖诱发的抑郁样行为和社交认知功能障碍。

关键词: 抑郁症, 肥胖, 花生四烯酸代谢, 神经炎症, 阿司匹林

分裂型人格特质、亚临床抑郁与对照个体的特质和状态心智游移的比较

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目的 心智游移是思维偏离当前任务的情况, 是日常生活中常见的现象。心智游移可以用问卷调查或者思维抽样任务实验进行测量, 一般认为, 通过问卷测量反映了心智游移特质水平, 而实验室心智游移反映了状态水平。前人研究表明心智游移在不同亚临床人群中的表现和认知相关性仍不清楚。本研究在具有分裂型人格特征的个体和具有抑郁症状的个体(即精神分裂症和抑郁症患者的亚临床人群)中开展相关探索。

方法 在完成分裂型人格问卷(Schizotypal Personality Questionnaire, SPQ) 和贝克抑郁量表

(Beck Depression Inventory, BDI) 的样本中, 招募了 42 名具有分裂型人格特征的个体(SPQ 得分 ≥ 41 且 BDI 得分 ≤ 6)、42 名亚临床抑郁症患者(BDI 得分 ≥ 14 且 SPQ 得分 < 41) 和 42 名对照者(SPQ 得分 ≤ 26 且 BDI 得分 ≤ 6), 完成心智游移思维采样任务(状态水平)和心智游移问卷(特质水平), 参与者还完成了反刍思维和认知功能(注意力、抑制和工作记忆)的测量。

结果 两个亚临床组都比对照组表现出更多的状态和特质心智游移。结果显示具有分裂型人格特征的个体比亚临床抑郁症患者表现出更多的特质心智游移。反刍思维、持续注意力和工作记忆与心智游移有关。此外, 亚临床抑郁症患者的心智游移可以用反刍思维或注意力来解释, 而高分裂型人格特质患者的心智游移则不能用反刍思维、注意力或工作记忆来解释。

结论 分裂型人格特质和亚临床抑郁症患者在日常生活和实验室情境中表现出更多的心智游移行为, 分裂型人格特质患者在日常生活中心智游移行为比亚临床抑郁症患者更明显。亚临床抑郁症患者的心智游移行为可用反刍思维或注意力来解释, 而分裂型人格特质患者的心智游移行为不能仅用反刍思维、注意力或工作记忆来解释。这些发现表明, 分裂型人和亚临床抑郁症患者的心智游移行为模式不同, 潜在机制也不同, 需要进一步研究如何增加这些患者的适应性心智游移行为, 并减少适应不良的心智游移行为。

关键词: 分裂型人格特质, 抑郁, 心智游移

Tryptophan-kynurenine Metabolites Involved in Cognitive Impairment in Bipolar Disorder

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Objective Tryptophan affects neuroendocrine, immune, and inflammatory processes through its downstream metabolic pathways. It also contributes to signal transduction within the brain. In this study, we exam-

ined changes in serum tryptophan and its associated metabolites in patients with bipolar disorder (BD) and analyzed their effects on cognitive functions and mood symptoms

Methods We used liquid chromatography-tandem mass spectrometry to measure tryptophan metabolite levels in 74 patients with BD and 61 healthy volunteers. The correlations between diagnosis, sex, age, body mass index, and various inflammatory factors with tryptophan metabolites were assessed using the Mantel test. Pearson's correlation analysis determined the relationship between tryptophan metabolite levels and cognitive function

Results Compared to the healthy control (HC) group, individuals with BD generally exhibited lower serum TRP levels and reduced levels of its downstream metabolic pathways, including kynuridine (NFK, KYN, KYNA, and XA), indole (ILA, MeOAA, IGA, and ICAId), and 5-HT metabolites. Notably, the level of the 5-HT secondary metabolite 5-HIAA was significantly increased. Notably, diagnosis is the primary factor influencing changes in the tryptophan spectrum, followed by immunoinflammatory status. Metabolites of the tryptophan-kynurenine/indole pathway were significantly associated with cognitive functions, although their associations with depressive symptoms were comparatively weaker. However, metabolites related to the 5-HT pathway exhibit a significant association with the emotional symptoms of BD

Conclusion Deficiency in tryptophan-kynurenine/indole metabolite may contribute to cognitive dysfunction in patients with BD, with its decrease potentially linked to reduced tryptophan levels. Therefore, targeted tryptophan supplementation or consumption of tryptophan-rich foods may improve patients' cognitive functions

关键词: Tryptophan metabolism, cognitive function, bipolar disorder

唾液链球菌损伤肠道干细胞致小鼠认知障碍症的肠-脑轴的机制研究

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目的 精神分裂症 (Schizophrenia, SCZ) 是一种慢性且高度致残性的重型精神障碍, 影响了全球近 1% 的人口。流行病学调查和遗传学分析表明, SCZ 患者发生炎症性肠病 (IBD) 的风险增加, 且患 IBD 疾病风险随着精神分裂症控制不充分而增加。在我们前期分析人群肠道宏基因组研究中发现, 唾液链球菌在精神分裂症患者体内显著增加。因此我们进一步开展小鼠的单菌移植实验, 揭示肠道微生物在精神分裂症中的作用机制。

方法 本研究采用 6 周龄的雄性 C57BL/6J 小鼠, 连续给与抗生素 10 天, 随后实验组灌胃临床分离的精神分裂症相关唾液链球菌 (*Streptococcus salivarius*, 108 cfu / 200ul), 对照组给与 BHI200 ul。连续灌胃 14 天后, 观察小鼠行为学 (旷场、高架十字迷宫、三箱社交、条件恐惧和前脉冲抑制实验), 收集小鼠结肠样本, 进行免疫染色, 判断肠道损伤; 采用体外类器官培养方法, 确定类器官分化增殖的能力; 对脑组织进行切片染色, 确定参与细菌调节的脑区。

结果 行为学结果显示唾液链球菌 (SS) 定植小鼠出现精神运动兴奋性增加和社交能力下降等精神分裂样行为, 并伴有肠道炎症。小鼠肠道类器官培养发现, SS 菌定植导致类器官出芽率降低, 细胞干性受损。脑部染色观察发现, 小鼠 SS 菌定植导致海马和眶额叶 c-fos 表达升高。

结论 精神分裂症相关细菌---唾液链球菌可能影响肠道干细胞发育, 导致肠道受损, 诱发肠道炎症, 最终导致相关脑区活动性的变化, 影响了小鼠的认知功能。

关键词: 唾液链球菌, 肠道干细胞, 认知障碍, 肠脑轴

Identification of Critical Signature in Post-traumatic Stress Disorder Using Bioinformatics Analysis and in Vitro Analyses

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Objective Post-traumatic stress disorder (PTSD) is a complicated psychiatric disorder after experiencing trauma that affects people's natural lives. As such, the objective of the study was mining related pathways and key genes of PTSD validated through *in vitro* experiments

Methods Retrieving RNA sequencing (RNA-seq) datasets from the Gene Expression Omnibus (GEO) database. The differentially expressed genes (DEGs) were screened using GEO2R. Weighted gene co-expression network analysis (WGCNA) was used to describe patterns of correlation between genes. Gene ontology (GO) was used for gene function annotations, and KEGG pathway assessment was carried out for enrichment analysis. The plugin MCODE from Cytoscape software was utilized to analyze the protein-protein interaction (PPI) network. Assessment of anxiety and depression in a mice model of stress was carried out by the open-field test (OFT) and elevated plus maze test (EPMT). Subsequently, Real-Time quantitative PCR (qRT-PCR) was used to verify these key genes in stress-exposed models

Results A total of 157 common upregulated DEGs and 53 common downregulated DEGs were identified between the amygdala (AMY) and the hippocampus (HIP). Notably enriched pathways (Neuroactive ligand-receptor interaction, mTOR signaling pathway, Nicotine addiction and dopaminergic synapse, etc.) were screened by Gene functional annotations and enrichment analysis. The PPI network identified the 4 hub genes, finding that the closely related pathways were Nicotine addiction and dopaminergic synapse. qRT-PCR was used to confirm these four genes and the expressing trends were consistent with the microarray analysis. The results of the OFT and the EMPT were remarkable changes

Conclusion Using bioinformatic analysis and *in vitro* experiments, we explored a variety of genes and pathways that may represent key mechanisms in the development of PTSD

关键词: PTSD, Microarrays, Bioinformatics, DEGs, Function enrichment

团体认知行为治疗对强迫症认知灵活性的临床干预研究

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目的 通过采用量表联合神经心理测验评估,探究团体认知行为治疗(Group cognitive behavioral therapy, GCBT)对 OCD 患者认知灵活性改变的干预效果,以及 GCBT 的疗效,从而为临床实践提供治疗指导。

方法 采用随机对照试验,将 66 例符合 DSM-5 诊断标准的 OCD 患者,随机分为研究组 31 例与对照组 35 例,同时招募 33 例健康人群作为健康对照组(Healthy Control, HC)。研究组接受 8 周的 GCBT 联合 SSRI 类药物治疗;对照组接受 SSRI 类药物治疗,观察 8 周。在治疗前,对三组均进行量表和神经心理测验测评,采用 Y-BOCS、强迫信念问卷(Obsessive Belief Questionnaire, OBQ-44)测量强迫症状严重程度及强迫信念;使用认知灵活性量表(Cognitive Flexibility Inventory, CFI)、Stroop 色词测验(Stroop Color and Word Test, SCWT)、连线测验(Trail Marking Test, TMT)、威斯康辛卡片分类测验(Wisconsin Card Sorting Test, WCST)评估主客观认知灵活性功能表现;治疗后研究组与对照组再次进行量表及神经心理测验。干预前后采用重复测量方差分析方法分析组别和时点的交互作用;最后比较两组疗效。

结果 (1) 干预前,研究组、对照组和 HC 在性别、年龄、教育程度上均无统计学差异(均 $p > 0.05$);而健康组与研究组、对照组在 Y-BOCS、OBQ-44、主客观认知灵活性上差异具有统计学意义($p < 0.05$);(2) 干预后,研究组与对照组进行重复测量方差分析结果显示:研究组强迫信念分维度 RT 平均得分上显著低于对照组,在组别与时点交互作用具有显著统计学意义($p = 0.015$);在强迫症状严重程度, Y-BOCS 及分维度强迫思维、强迫行为平均得分上显著低于对照组,在组别与时点上的交互作用具有统计学意义(均 $p < 0.05$)。(3) 在认知灵活性方面,干预后结果显示,CFI 分维度可控性在组别与时点的交互作用具有显著统计学意义($p = 0.001$)。(4) 在疗效方面,研究组总体疗效优于对照组($p < 0.01$)。

结论 (1)GCBT 能有效改善 OCD 患者的认知灵活性并且能够改善其强迫症状及强迫信念, 建议临床上可联合 GCBT 法对 OCD 患者的认知灵活性进行心理干预, 改善其总体强迫症状。(2) GCBT 联合药物治疗的总体有效率优于单纯药物治疗。

关键词: 强迫症, 认知灵活性, 团体认知行为疗法, 药物治疗, 随机对照试验

The Sexually Divergent CFos Activation Map of Fear Extinction

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Objective Post-traumatic stress disorder (PTSD) is a neuropsychiatric disorder that can develop after experiencing or witnessing a traumatic event. Exposure therapy is a common treatment for PTSD, but it has varying levels of efficacy depending on sex. In this study, we aimed to compare the sexual dimorphism in brain activation during the extinction of fear conditioning in male and female rats by detecting the c-fos levels in the whole brain

Methods Total thirty-two rats (sixteen males) were randomly separated into the extinction group as well as the non-extinction group, and then underwent fear conditioning as well as extinction. Subsequently, brain sections from the sacrificed animal were performed immunofluorescence and the collected data were analyzed by repeated two-way ANOVAs as well as Pearson Correlation Coefficient

Results Our findings showed that most brain areas activated during extinction were similar in both male and female rats, except for the reunions thalamic nucleus and ventral hippocampi. Furthermore, we found differences in the correlation between c-fos activation levels and freezing behavior during extinction between male and female rats. Specifically, in male rats, c-fos activation in the anterior cingulate cortex was negatively correlated with the freezing level, while c-fos activation in the retrosplenial granular cortex was positively correlated with the freezing level; but in female

rats did not exhibit any correlation between c-fos activation and freezing level. Finally, the functional connectivity analysis revealed differences in the neural networks involved in extinction learning between male and female rats. In male rats, the infralimbic cortex and insular cortex, anterior cingulate cortex and retrosplenial granular cortex, and dorsal dentate gyrus and dCA3 were strongly correlated after extinction. In female rats, prelimbic cortex and basolateral amygdala, insular cortex and dCA3, and anterior cingulate cortex and dCA1 were significantly correlated

Conclusion These results suggest divergent neural networks involved in extinction learning in male and female rats and provide a clue for improving the clinical treatment of exposure therapy based on the sexual difference

关键词: Auditory fear conditioning, Extinction, Sexual dimorphism, c-fos mapping

磷酸二酯酶 5 抑制剂作用靶点与抑郁症风险的孟德尔随机化研究

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目的 既往观察研究发现磷酸二酯酶 5 (phosphodiesterase 5, PDE5) 抑制剂可能具有预防抑郁症 (MDD) 的作用, 但 PDE5 靶点与抑郁症风险之间的因果关系并未充分证实, 故本研究拟采用孟德尔随机化方法分析 PDE5 靶点与抑郁症风险之间的因果关系。

方法 遗传代理以舒张压为替代生物标志物, PDE5 相关数据来自英国生物样本库 (UK BioBank, UKBB) 的全基因组关联分析 (GWAS), 舒张压数据来自国际血压联盟和 UKBB 荟萃分析, 抑郁症数据来自 iPSYCH。选择 5 个单核苷酸多态性 (SNPs): rs10050092, rs12646525, rs17355550, rs66887589, rs80223330 作为 PDE5 抑制的工具变量 (IV), 主要结果采用反向方差加权方法 (IVW) 分析, 同时采用 MR-Egger 法、加权中值法和 MR-PRESSO 方法检验结果的异质性、敏感性和多效性。统计分析使用 R 软件进行。数据收集时间为 2024 年 6 月。

结果 本研究数据来自 77 个队列,纳入 757601 名欧洲男女被试。F 统计值平均值 >10 。遗传代理的 PDE5 抑制与抑郁症风险无显著关联: $OR=0.32$, $95\%CI: (-8.62-6.35)$, $P=0.76$ 。异质性检验: $P=0.30$; 水平多效性检验: $P=0.52$; MR-PRESSO: $P=0.36$ 。

结论 PDE5 靶点与抑郁症风险之间可能不存在因果关系, PDE5 抑制剂预防抑郁的效果及其机制需要更为严格的研究进行验证。

关键词: 孟德尔随机化, 抑郁症, 磷酸二酯酶 5 抑制剂, 药物靶点

青少年抑郁症患者冲动性人格与自杀风险的关系研究—反刍性思维和安全感的链接中介作用

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目的 探讨冲动性人格对青少年抑郁症患者自杀风险的影响, 以及反刍性思维 and 安全感在冲动性人格与自杀风险的中介效应。

方法 采用反刍思维量表 (RRS)、安全感量表 (SQ)、Barratt 冲动性量表 (BIS-II) 和中文版 Beck 自杀意念量表 (BSI-CV) 对 211 例青少年抑郁症患者进行测评。采用 Pearson 分析反刍性思维、安全感、冲动性人格与自杀风险之间的相关关系, 采用 Amos 软件构建结构方程模型 (SEM) 并进行中介效应检验。

结果 211 例青少年抑郁症患者自杀风险评分为 (24.65 ± 3.27) 分, 冲动性人格评分为 (107.65 ± 14.16) 分, 反刍性思维评分为 (57.28 ± 7.14) 分, 安全感评分为 (40.26 ± 6.22) 分。青少年抑郁症患者自杀风险与冲动性人格、反刍性思维之间呈正相关性, 与安全感之间呈负相关性 (均 $P<0.05$); 冲动性人格与反刍性思维、安全感之间呈负相关性 (均 $P<0.05$)。反刍性思维与安全感之间呈负相关性 ($P<0.05$)。反刍性思维和安全感在冲动性人格与自杀风险之间的总间接效应为 49.28%, 其中反刍性思维的中介作用占 23.25%, 安全感的中介效应占 18.04%, 反刍性思维-安全感的链式中介效应占 7.99%。

结论 反刍性思维和安全感在冲动性人格与自杀风险之间的链式中介效应成立, 证实冲动性人格

可以通过调节反刍性思维 and 安全感, 间接影响青少年抑郁症患者自杀风险。

关键词: 青少年抑郁症, 自杀风险, 冲动性人格, 反刍性思维, 安全感, 中介效应

精细化护理措施在精神分裂症与躁狂症伴糖尿病患者中的应用效果探究

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目的 探讨并分析精细化护理措施在精神分裂症与躁狂症伴糖尿病患者中的应用效果。

方法 选择 2022 年在我院被确诊为精神分裂症与躁狂症并伴有糖尿病的患者 40 名为研究对象, 观察其精细化护理前后的各项指标变化。这些指标包括生理机能、血糖指标、综合能力、情绪状态、ESCA 评分及生活质量等。研究组在患者空腹及餐后血糖、糖化血红蛋白、饮食控制、服药行为、生活依从以及理解能力等方面增加护理力度。

结果 经精细化护理后, 患者的空腹血糖、餐后 2h 血糖以及糖化血红蛋白均显著降低 ($P<0.001$), 患者的饮食控制、服药行为、生活依从和理解能力也有显著提高 ($P<0.001$)。患者的焦虑情绪和抑郁情绪均得到缓解 ($P<0.001$), 同时综合护理各阶段 ESCA 评分均有显著提高。生活质量在生理机能、生理职能、躯体疼痛、健康状况、精力状态、社会功能、情感职能和精神健康等方面均得到显著改善 ($P<0.001$)。

结论 精细化护理措施在处理患者情感困扰及社会功能障碍方面具有优势, 并在患者健康状况及生理功能恢复方面也发挥了积极的作用。对精神分裂症与躁狂症伴糖尿病患者进行精细化护理措施, 可以有效改善患者的血糖控制、综合能力、情绪状态和生活质量, 提高患者的精神健康及生理状态, 表明其在临床护理中具有高度的应用价值。

关键词: 精细化护理, 精神分裂症, 躁狂症, 糖尿病, 生活质量

Hydrogen Relieves Depression-like Mood in

PTSD Rats by Ameliorating Neuroinflammation

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Objective This study aims to investigate whether hydrogen can relieve depression-like mood in PTSD model rats by ameliorating neuroinflammation

Methods Post-traumatic stress disorder (PTSD) model was established through the Single prolonged stress and electric foot shock (SPS & S) procedure. Then, magnesium silicide nanosheets (MSNs) were fed for seven days. Behaviors related to depressive mood were assessed by Open-field test (OFT) and Elevated plus maze test(EMPT). The level of neuroinflammation was assessed by western blot and by real-time quantitative reverse transcription polymerase chain reaction (qRT-PCR)

Results Rats exposed to SPS&S showed decreased open arm entries in the elevated plus maze test and reduced distance traveled in the center zone in the open field test, significantly different from the control group. Treatment with hydrogen reversed these changes. Furthermore, SPS&S triggered exacerbated neuroinflammation in the prefrontal cortex. Post-SPS&S administration of hydrogen therapy increased the time spent in the center zone of the OFT and the distance traveled in the open arms of the EMPT. Additionally, hydrogen therapy was observed to lower levels of neuroinflammation

Conclusion Hydrogen can correct depressive-like behaviors and neuroinflammation induced by SPS&S in rats. These findings collectively suggest that hydrogen is a promising therapeutic agent for alleviating depressive symptoms in post-traumatic stress disorder, with its potential mechanisms possibly related to improving neuroinflammation

关键词: PTSD,depressed mood,Hydrogen,neuroinflammation

The Effect of Professional Psychological Help-seeking Self-stigma on Post-traumatic Stress Symptoms: The Mediating Role of Psychological Resilience

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Objective This study aims to investigate the influence of professional psychological help-seeking self-stigma on post-traumatic stress symptoms (PTSS) among students with potential psychological problems, examining the mediating role of psychological resilience

Methods Students initially screened for potential psychological issues at a comprehensive university mental health center in Beijing were randomly given questionnaires. Screening tools included the Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), Suicide Behavior Questionnaire-Revised (SBQ-R), and Mood Disorder Questionnaire-13 (MDQ-13). We assessed professional psychological help-seeking self-stigma, PTSS, and psychological resilience using the Self-Stigma of Seeking Help Scale (SSOSH), PTSD Checklist-Civilian Version (PCL), and Connor-Davidson Resilience Scale (CD-RISC), respectively. Structural equation modeling (SEM) was employed to explore the mediating effects of psychological resilience

Results Data from 287 students (mean age: 22.28 ± 3.17 ; female: 36.93%) were available for subsequent analyses. The results showed that there was no serious common method bias problem in this study. The scores of SSOSH, CD-RISC and PCL were skewed distribution, so the correlation test using Spearman rank correlation analysis, it showed that professional psychological helpThe mediation model demonstrated a good fit ($\chi^2/df = 30.87$, SRMR = 0.028, CFI = 0.982, TLI =

0.966). Bootstrap tests (5000 samples) showed that the indirect effect of self-stigma on PTSS through resilience was -0.274 ($p < 0.005$), and the direct effect was 1.036 ($p < 0.005$), indicating a partial mediating effect of resilience

Conclusion This study elucidates how professional psychological help-seeking self-stigma influences PTSS, directly and indirectly through psychological resilience, with a stronger direct effect. These findings underscore the importance of addressing stigma to enhance the utilization of professional mental health services and alleviate PTSS

关键词: Professional Psychological Help Self-stigma, Post-traumatic Stress Symptoms, Psychological Resilience, Mediation Model, Structural Equation Model

恐惧消退 cFos 激活地图的性别差异

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目的 创伤后应激障碍 (PTSD) 常见于患者在经受或目击极度危险甚至毁灭性事件之后, 患者饱受事件相关恐惧记忆 (fear memory) 折磨是这一疾病的典型特征。其发病率和病程的转归及预后均存在明显的性别差异。恐惧条件反射 (Fear Conditioning) 作为恐惧记忆及恐惧相关疾病研究的经典范式已经得到广泛的探索, 其优点是可以模拟 PTSD 恐惧记忆 (fear memory) 形成以及暴露疗法 (exposure therapy) 治疗恐惧相关疾病时恐惧记忆消退 (extinction) 过程。但是以往的研究大多数都局限于啮齿类动物, 关于 PTSD 和暴露疗法 (exposure therapy) 两性差异的研究较少。本研究旨在填补这一空白, 利用分子手段探究条件恐惧消退 (extinction) 过程中的两性差异。

方法 选取 8~10 周龄的雄雌大鼠各 16 只, 随机分为消退与未消退共 4 组。按照分组对所有动物进行行为学训练后取脑并 c-fos 免疫荧光染色, 随后比较 15 个热门脑区的 c-fos 表达情况及行为及脑区间皮尔逊相关性分析 (Pearson Correlation Coefficient)。

结果 消退后, 雄鼠和雌鼠的僵直度水平 (freezing level) 均降低到 40% 以下, 且分子实验发现消退过程中激活的脑区大部分相同, 仅 Re 和腹侧海马 (ventral hippocampus) 存在差异。随后的相关性分析实验发现, 雄鼠的 IL 与僵直度水平 (freezing level) 呈显著正相关, BLA 和 dDG 与僵直度水平 (freezing level) 呈显著负相关, 而雌鼠仅 vDG 与僵直度水平 (freezing level) 呈强正相关性。最后, 脑区间相关性分析表明消退后雄鼠的 PrL、RSC 和 dDG 间具有较强的相关性, IC 与 vCA1 呈强正相关性而与 Re 呈强负相关性, CeA 与 ACC 间存在强正相关性而 BLA 则与 dDG 间存在强正相关性。雌鼠则是 CeA、RSC、En 间存在强相关性, PrL 与 BLA 间具有较高相关性, 此外, 雌性大鼠的海马 (hippocampus) 与 Re 和 ACC 间也表现出较高的相关性。

结论 本研究评估了大鼠在消退学习中的两性差异, 结论如下: (1) 雌雄大鼠在恐惧消退习得过程中差异不大; (2) 但脑区的激活方式可能存在两性差异。

关键词: 恐惧记忆, 消退, 性别差异, c-fos

A Review of Propranolol Blocking Memory Reconsolidation To Treat Post-traumatic Stress Disorder

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Posttraumatic stress disorder (PTSD) is regarded as a debilitating and complex psychiatric disorder, which develops after exposure severe trauma. The symptoms of PTSD cause great distress to patients, but also bring great challenges to their interpersonal relationships and professional work. Due to the increasing prevalence and severity of symptoms, treatment for PTSD is critical. Recent studies have demonstrated that reconsolidation—a time of re-stability—occurs after consolidated memories are reactivated, returning them to a reliable state. Memories are prone to change in this unstable state. Consequently, medications that influence

memory reconsolidation might represent a novel therapeutic approach.

Propranolol has been found to hinder memory reconsolidation as well as memory development and memory dissociation during emotional reactions. By selectively suppressing protein synthesis, propranolol prevents the reconsolidation of fear memories while having no negative effects on declarative memories.

When given after a brief period of memory reactivation, propranolol effectively prevented reconsolidation in rodents. Furthermore, this outcome is repeatable, offering more proof that propranolol, when given following short-term memory reactivation, can lessen fear. What's more, propranolol has been shown through numerous clinical studies to be effective in the treatment of PTSD by preventing memory reconsolidation.

Propranolol seems to be an effective treatment for PTSD. Propranolol exhibits a distinct advantage by preventing memory reconsolidation. In addition, for kids with PTSD, propranolol medication looks to be a potentially secure and efficient therapeutic choice. The advantage of using propranolol to treat PTSD in children is its safety, and different studies in child populations have shown that propranolol has no significant side effects and is safe to use.

关键词：PTSD; Propranolol; Reconsolidation; Fear

高中生童年期创伤与非自杀性自伤的关系：以冲动系统为中介

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目的 高中生正处于成长和转变的年龄阶段，但恰好也是非自杀性自伤行为的高发群体之一。而童年期创伤被认为是影响非自杀性自伤的重要因素。冲动系统作为自我控制的一个维度，被认为在个体应对压力事件时发挥重要作用。本研究旨在探讨冲动系统在童年期创伤和非自杀性自伤之间的跨时间

中介作用，以揭示三者间的动态心理机制。

方法 通过为期一年、两个阶段的问卷调查，对云南省两所中学的 1309 名高中生进行横向和纵向研究，重点分析童年期创伤对非自杀性自伤的影响路径及冲动系统在其中的中介作用。

结果 童年期创伤、冲动系统与非自杀性自伤存在两两相关关系。在即时模型和延时模型中，童年期创伤可以通过冲动系统的中介作用对非自杀性自伤产生影响，冲动系统的中介作用机制具有跨时间的稳定性。童年期创伤通过影响个体的情绪调节和自我控制能力，从而增加非自杀性自伤的发生率。冲动系统作为自我控制能力的一部分，能够在童年期创伤和非自杀性自伤之间起到重要的中介作用。提高高中生的自我控制能力，特别是冲动控制能力，可以作为减少非自杀性自伤行为的干预策略。

结论 本研究通过横向和纵向研究，验证了童年期创伤对非自杀性自伤的显著影响及其通过冲动系统的中介作用，强调了提高青少年自我控制能力在心理干预中的重要性。

关键词：童年期创伤,冲动系统,非自杀性自伤,中介效应

表达性艺术治疗对创伤后应激障碍(PTSD)患者干预效果的初步研究

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目的 研究表达性艺术治疗对创伤后应激障碍(PTSD)患者减轻症状、缓解情绪、恢复功能的干预作用。进一步探讨表达性艺术治疗对创伤后应激障碍(PTSD)中创伤再体验症状、警觉性增高症状以及回避或麻木症状的干预效果是否有差异性。

方法 创伤后应激障碍(PTSD)是一种由非同寻常的威胁或灾难性事件所引发的强烈的恐惧感、无助或厌恶等严重的心理反应,创伤后应激障碍(PTSD)可引起明显的职业、心理和社会功能丧失,对个体的社会功能、家庭生活和身心健康造成长期的破坏性影响。表达性艺术治疗是一种以非言语为主的心理治疗技术,其特点在于通过非言语的形式

来传达治疗信息、舒缓情绪、促进交往,尤其适用于那些难以用言语表达情感或经历的患者。研究调查50例诊断或合并诊断创伤后应激障碍(PTSD)的住院或门诊患者,有针对性的实施表达性艺术心理干预。在心理治疗干预前后分别采用 PTSD 症状筛查量表,社会功能量表,生活质量评定量表评估,统计分析症状缓解,社会功能恢复情况。

结果 通过有效的表达性心理治疗干预,患者在治疗后再体验症状、警觉性增高症状以及回避或麻木症状有统计学差异,症状不同程度减轻,社会功能有一定程度的恢复。

结论 表达性艺术治疗可有效缓解创伤后应激障碍患者的临床症状,在恢复社会功能中有重要作用。

关键词: 表达性艺术治疗;创伤后应激障碍;心理特征;心理干预

心理援助热线自杀者亲友自杀意念的危险因素

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目的 探索心理援助热线因亲友自杀问题来电者自杀意念的危险因素。

方法 将2009-2023年北京市心理援助热线中因亲友自杀问题的来电者纳入本研究,通过询问自杀者亲友两周内是否有自杀想法来评估当下是否有自杀意念。收集自杀者亲友的一般人口学资料,评估自杀者亲友的痛苦感、希望感、抑郁程度以及自杀危险因素。采用多元 logistic 回归分析,探索自杀者亲友自杀意念的危险因素。

结果 本研究总共纳入360例因亲友自杀问题的来电者。50.3%(181例)来电者报告该次来电前2周内自杀意念。受教育年限10-16年(OR=0.38, 95%CI: 0.19~0.75)、受教育年限>16年(OR=0.16, 95%CI: 0.05~0.51)、高希望感(OR=0.18, 95%CI: 0.11~0.31)是来电者自杀意念的保护因素;而既往自杀未遂史(OR=2.10, 95%CI: 1.25~3.53)、高痛苦

感(OR=2.46, 95%CI: 1.50~4.05)、高抑郁程度(OR=1.73, 95%CI: 1.05~2.85)是来电者自杀意念的独立危险因素。

结论 自杀者亲友的既往自杀未遂史、高痛苦感、高抑郁程度是自杀意念的危险因素。

关键词: 心理援助热线;自杀;亲友;自杀意念;危险因素

A Systematic Review of Clinical Applicability of ICD-11 CPTSD Assessment in Multiple Populations

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Objective In 2018, the World Health Organization introduced the distinction between post-traumatic stress disorder (PTSD) and complex post-traumatic stress disorder (CPTSD) in the main diagnostic system for the first time. ICD-11 clearly positioned CPTSD as an independent diagnosis of PTSD. The International Trauma Questionnaire (ITQ) was designed for self-report of CPTSD. Considering the upcoming implementation of ICD-11 in clinical practice, this study aimed to examine whether the ITQ has cross-cultural clinical application value for different populations

Methods A systematic literature search was performed in PubMed, EMBASE, Cochrane Library Databases, and Web of Science databases using the keywords "CPTSD," "ITQ," "assessment," "clinical utility," and "cross-cultural" for all published studies in English, French and Spanish from January 2010 to May 30, 2024. The performance of the ITQ on different clinical samples was retrospectively analyzed

Results In both children and adults, the ITQ has been studied to prove its validity. A large number of questionnaires have been studied in Western countries, focusing on groups such as refugees, foster children, and veterans. Evidence suggests that in clinical practice, CPTSD can be effectively distinguished from similar diagnoses such as bipolar disorder and borderline personality disorder (BPD). Although ITQ has been translated

into multiple languages, such as French, Spanish, and Chinese, the scale currently lacks strong cross-cultural evidence to support it. In addition, there is almost no research on the factor validity, internal consistency, and convergent validity of ITQ in Chinese samples

Conclusion First, more ITQ results from different types of samples are needed to verify the validity of CPTSD assessment. Second, although the ITQ has been used in different countries, the factor validity, internal consistency, and convergent validity of the translated ITQ have not yet been determined, and therefore the ITQ is not widely used clinically in these countries. Especially in my country, ITQ is rarely used in clinical practice to identify or diagnose CPTSD, as currently this area can only rely on clinical wisdom

关键词: complex PTSD, The International Trauma Questionnaire, ICD-11 trauma, clinical applicability

高频重复经颅磁刺激联合帕罗西汀治疗创伤后应激障碍的疗效

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目的 探讨高频重复经颅磁刺激(rTMS)联合帕罗西汀治疗创伤后应激障碍(PTSD)患者的疗效及对认知功能的改善。

方法 将符合 DSM-5 诊断标准的 PTSD 患者随机分为两组, 联合组给予帕罗西汀联合右侧前额叶背外侧部 rTMS 治疗, 对照组给予帕罗西汀联合假 rTMS 治疗, 每组 25 例, 治疗 4 周共 20 次。在治疗前后评定创伤后应激障碍检查表(PCL)、威斯康星卡片分类测验(WCST)和不良反应量表, 并进行血常规、生化功能、心电图、脑电图、头颅 CT 等检查。

结果 与对照组相比, 联合组在治疗后 PCL 评分显著下降, WCST 评分显著上升, 不良反应发生率无显著差异。两组间血常规、生化功能、心电图、脑电图、头颅 CT 等指标无明显异常变化。

结论 rTMS 联合帕罗西汀治疗 PTSD 患者具有较好的疗效和安全性, 能够有效改善患者的 PTSD 症状和认知功能。

关键词: 创伤后应激障碍; 重复经颅磁刺激; 帕

罗西汀; 认知功能

心理韧性与社会支持在灾后救援人员中对缓解创伤事件后精神症状的作用差异: 症状网络分析

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目的 经历创伤事件的个体后续患上精神症状的风险显著增加, 主要包括创伤后应激障碍(PTSD)、焦虑和抑郁, 这些精神症状会显著影响其整体生活质量。因此, 探索可能对心理健康具有保护作用的因素至关重要。先前的研究已经确定了两大类保护因素: 分别是“主观”因素(如心理韧性)和“客观”因素(如社会支持)。尽管心理韧性和社会支持被广泛认为可以有效缓解创伤事件后患者的精神症状, 但目前缺乏对它们在不同创伤后精神疾病症状中干预效果的比较分析。此外, 先前的研究大多未能控制不同创伤事件可能引起的潜在混杂效应。

方法 本研究采用新的网络分析方法, 旨在探讨心理韧性和社会支持对创伤后精神症状的不同调节作用, 并有效控制不同创伤事件的混杂效应。因此, 本研究招募了 264 名经历同一创伤事件的一线救援人员。采用量化边缘权重和桥梁预期影响(BEI)方法, 比较了心理韧性和社会支持的缓解效果。

结果 研究发现, 在一线救援人员中, 社会支持与心理症状的负相关性显著, 尤其在抑郁网络中的疲劳和 PTSD 网络中的睡眠障碍表现出更为显著的影响, 而心理韧性的相关性较弱。BEI 的定量分析显示, 心理韧性更有效地抑制抑郁和焦虑症状网络, 而社会支持则更显著地减轻 PTSD 症状网络的激活。

结论 本研究首次在真实世界的灾后救援人员中探索了心理韧性和社会支持对创伤后结果的不同影响, 并有效控制了不同创伤事件可能引起的混杂效应。我们的研究结果为未来精准有效的创伤后心理干预提供了理论参考。

关键词: 心理弹性, 社会支持, 网络分析, 横断面研究, 创伤后应激障碍

心理咨询师心理弹性、情绪调节和共情能力对替代性创伤的影响：有调节的中介模型

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目的 替代性创伤是指心理治疗师在与精神疾病患者的长期接触中，在咨访关系的双向相互作用而不由自主地受到影响的現象，其往往出现在残酷和破坏性的灾害面前，其损害程度超过心理和情感承受能力，并间接导致各种心理异常。心理咨询师的替代性创伤发生率开始增高，心理咨询师因所接触到的创伤或高风险的个案日渐增多，对其负面影响的可能性也增高。本研究通过对 790 名心理咨询师替代性创伤、心理弹性、情绪调节和共情能力的研究，明确心理咨询师的替代性创伤情况及影响因素。

方法 采用网络问卷调查法，选取安徽省合肥市、安庆市、六安市、蚌埠市共 790 名心理咨询师进行问卷调查。采用治疗者信念量表、心理弹性量表、情绪调节方式问卷和中文版人际反应指针量表进行测评；采用独立样本 t 检验和 χ^2 检验进行 2 组间差异性检验；采用 Pearson 相关分析进行各量表得分之间的相关分析；采用 Hayes 编制的 PROCESS 宏程序进行中介模型分析。

结果 1.790 名心理咨询师中，43.2% (341/790) 存在替代性创伤。

2.有无替代性创伤的心理咨询师在共情能力各因子分和总分、情绪调节方式总分和各因子得分、心理弹性总分和各因子得分上差异有统计学意义。

3.中介分析显示：共情能力显著正向预测情绪调节 ($\beta=0.56, P<0.001$)；情绪调节显著正向预测替代性创伤 ($\beta=0.59, P<0.001$)；情绪调节和心理弹性的交互项对自杀意念的预测作用显著 ($\beta=-0.05, P<0.001$)。

结论 情绪调节在共情能力对替代性创伤的影响中起部分中介作用，心理弹性在共情能力对替代性创伤的影响中起调节作用。

关键词：替代性创伤；心理弹性；情绪调节；共情能力；心理咨询师

Acceptance Commitment Therapy for Post-traumatic Stress Disorder: A Systematic Review and Meta-Analysis

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Objective To systematically evaluate the intervention effect of Acceptance Commitment Therapy (ACT) on post-traumatic stress disorder (PTSD)

Methods We searched the following electronic databases: Medline, PubMed, Scopus, Embase, ScienceDirect, CNKI, WANGFANG and Technology Journal Database. The final search was conducted on January 31st, 2024. When searching the English electronic database, the search themes we used include (PTSD OR Post-Traumatic Stress Disorder OR posttraumatic OR post-traumatic OR posttraumatic stress disorder,) AND (ACT OR Acceptance and Commitment Therapy). In searching the Chinese electronic databases, we used the “Chuangshanghouyingjizhangai OR chuangshanghouyingji” AND “jienachengnuoliaofa OR jienayuchengnuoliaofa” search strategy

Results Through systematic search and quality assessment, nine articles of randomized controlled trials (RCTs) involving ACT interventions for PTSD were ultimately obtained and used as a systematic review and meta data sources for the analysis. The nine randomized controlled studies included 729 study participants, 374 in the experimental group and 355 in the control group. Meta-analysis results showed that compared with conventional interventions, ACT had a significant improvement effect on PTSD symptoms, and the combined Hedges' g -value was 1.765, (95% CI: 0.886-2.664, $Z=3.935, P < 0.001$), and subgroup analyses showed that in the veteran population, there was no significant difference in PTSD symptoms between ACT and conventional interventions (3 studies, $N=196$, combined Hedges' g -value was 1.042, (95% CI: -0.083 to 2.166, $Z=1.816, P=0.069$), and in the other populations, ACT compared to conventional interventions improved PTSD symptoms more (6 studies, $N=533$, combined

Hedges' s g-value of 2.191, (95% CI:0.933 to 3.450, Z=3.412, P=0.001). Meanwhile, individuals still maintained a stable effect of ACT over conventional interventions at 3months post-intervention, and the combined Hedges' s g-value was 1.186, (95% CI:0.314 to 2.058, Z=2.665, P=0.008)

Conclusion Acceptance commitment therapy is effective in improving PTSD symptoms and the intervention is relatively stable

关键词: Acceptance commitment therapy, PTSD, meta-analysis, systematic review

睡眠过程中声音闭环刺激可促进恐惧记忆消退

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目的 本研究旨在探索声音闭环刺激技术在睡眠期间对恐惧情绪记忆消退的影响及其作用机制,为创伤后应激障碍(Post-Traumatic Stress Disorder, PTSD)患者提供一种新型的干预方法。恐惧记忆的形成和维持是 PTSD 等焦虑障碍的核心问题,而睡眠期间的慢振荡波(Slow oscillation, SO)活动与记忆巩固密切相关。本研究采用靶向记忆激活结合听觉恐惧条件反射范式,以期揭示声音闭环刺激在睡眠中对恐惧记忆消退的促进作用。

方法 研究对象为 30 名健康大学生,所有受试者在实验前签署知情同意书,并通过问卷量表评分排除可能影响睡眠及情绪的生理、心理及身体因素。实验采用 NeuroScan64 导脑电系统和 MP150 多通道生理记录仪同步采集受试者的脑电及皮肤电导反应(Skin Conductance Response, SCR)指标。实验分为三个阶段:恐惧记忆学习、声音闭环刺激干预(90 分钟的小睡)以及恐惧记忆表达测试。在小睡期间,当受试者处于慢波活动上升期时,进行声音线索暴露,并随机呈现空白对照刺激。

结果 行为学结果显示,睡眠过程中的声音闭环刺激显著降低了恐惧记忆的表达。电生理学结果进一步揭示,在声音线索暴露后的 800ms 时间窗内,诱发了明显的负向波活动,且脑电地形图分析显示,

这些诱发的脑电活动主要集中在额叶区域。此外,相关分析发现声音线索诱发的 Delta 波活动与恐惧记忆的消退存在显著的正相关。

结论 综上所述,本研究证实了睡眠期间声音闭环刺激可以有效降低恐惧记忆的表达,并且这种降低与声音线索暴露诱发的 Delta 波活动密切相关。这一发现不仅为理解睡眠中记忆处理的神经机制提供了新的视角,而且为开发针对 PTSD 等恐惧相关疾病的新型干预策略提供了科学依据。

关键词:睡眠;声音闭环刺激;恐惧记忆;记忆消退;PTSD;干预策略

童年创伤影响人格特质的皮层下神经机制

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目的 童年创伤和人格特征是影响精神疾病的重要社会心理因素。童年创伤会影响人格特质的发展,而皮层下脑结构的改变可能是潜在的神经基础。然而,目前尚不清楚三种因素之间的确切联系。本研究旨在探讨儿童创伤、人格特质和皮质下结构之间的关系。

方法 研究纳入 171 名健康受试者,所有受试者均完成童年创伤问卷(CTQ)和五因素人格问卷(NEO-FFI),并接受了 T1 加权 MRI 扫描。使用 FreeSurfer6.0 软件计算皮层下脑结构的灰质体积(GMV)。利用线性回归分析探究童年创伤、大五人格特质与皮层下 GMV 两两之间的关系,并利用 SPSS 插件 PROCESS 进行中介分析探究三者之间的潜在联系。

结果 多元线性回归分析显示不同类型童年创伤与五大人格特质之间存在复杂关系。总体而言,不同形式的虐待或忽视与神经质正相关,与外向性、开放性、宜人性和尽责性负相关。对于皮层下 GMV 与人格特质之间的关系,我们发现右侧海马 GMV 与神经质之间呈负相关。此外,宜人性与双侧丘脑、左侧苍白球和右侧壳核 GMV 呈正相关。对于童年创伤与皮层下 GMV 之间的关联,结果显示不同类型童年创伤与皮层下 GMV 间呈负相关。根据上述多元线性回归分析结果,我们纳入 4 个潜在模型进行进一步的中介分析。中介分析结果显示,右侧海马

GMV 部分介导了童年创伤（情感虐待、躯体忽视和 CTQ 总分）对神经质的影响。

结论 童年创伤会影响五大人格特质的发展，而皮层下结构的改变可能与这一过程密切相关。右侧海马 GMV 的改变可能是童年创伤导致神经质水平升高的关键神经机制。

关键词：童年创伤,海马,人格,神经质,皮层下结构,MRI

PTSD 小鼠模型海马组织和前额叶皮质铁死亡相关分子表达的探究

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目的 探究创伤后应激障碍（PTSD）小鼠模型海马组织和前额叶皮质铁死亡相关分子的表达以及神经细胞凋亡的表达。

方法 将雄性 C57BL/6J 小鼠随机分为 4 组：对照组、PTSD-3 d 组、PTSD-7 d 组和 PTSD-14 d 组，造模组采用条件性足部电击（CF）和单次-持续应激（SPS）来制备 PTSD 动物模型。通过旷场实验和高架十字迷宫试验来检测小鼠模型焦虑和抑郁反应。通过尼氏染色和普鲁士蓝染色来观察模型海马组织和前额叶皮质的神经元受损情况与铁离子含量情况。通过蛋白质免疫印迹（Western Blot）和免疫组织化学染色检测模型海马组织和前额叶皮质的谷胱甘肽过氧化酶 4(GPX4)与铁蛋白轻链(FTL)的蛋白表达。通过 TUNEL 染色检测海马组织和前额叶皮质神经细胞凋亡的情况。

结果 与对照组相比，造模组出现焦虑和抑郁样行为。尼氏染色提示造模组神经元受损。普鲁士蓝染色显示，与对照组相比，造模组海马 CA1 区和前额叶皮质的铁离子含量增多。Western Blot 和免疫组织化学染色结果显示，与对照组相比，PTSD-3 d 组海马组织和前额叶皮质的 GPX4 蛋白表达增多，且差异具有统计学意义（ $P<0.05$ ）；与对照组相比，PTSD-3 d 组海马组织和前额叶皮质的 FTL 蛋白表达减少，且差异具有统计学意义（ $P<0.05$ ）。TUNEL 染色结果显示造模组海马组织和前额叶皮质的神经细胞存在凋亡现象。

结论 PTSD 小鼠模型海马组织和前额叶皮质出现铁死亡现象，并且神经细胞发生凋亡。

关键词：创伤后应激障碍；铁死亡；细胞凋亡；小鼠

Gender Differences in Cognitive Deficits in Drug-na?ve Schizophrenia Patients with Hyperprolactinemia: A Retrospective Study

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Objective Cognitive deficits in schizophrenia have been extensively studied. However, there are few studies on schizophrenia with hyperprolactinemia. This study investigated gender differences in cognition in schizophrenia with and without hyperprolactinemia.

Methods A total of 93 schizophrenia patients and 69 healthy controls were enrolled. The Positive and Negative Syndrome Scale (PANSS) was used to assess clinical symptoms. The MATRICS Consensus Cognitive Battery (MCCB) was used for cognitive assessment. Demographic characteristics were collected, and serum prolactin levels were measured.

Results 71% ($n=66$) of drug-na?ve schizophrenia (DNS) patients met the diagnostic criteria for hyperprolactinemia. DNS patients had significantly worse cognitive functions in all domains than healthy controls (all $P<0.001$). In DNS patients with hyperprolactinemia (DNSH), male patients had an earlier age of onset, lower rates of marriage, and higher rates of smoking and drinking than females (all $P<0.05$), while female patients scored significantly higher than males in verbal learning and social cognition (all $P<0.05$). In addition, prolactin levels were positively correlated with TMT scores in males DNSH ($r=0.593$, $P=0.006$). Multiple regression analysis found the following variables independently associated with MCCB total score: gender ($\beta=0.223$, $t=2.260$, $P<0.05$), age ($\beta=-0.307$, $t=-3.044$, $P<0.01$), education ($\beta=0.290$, $t=3.080$, $P<0.01$), and negative symptom subscale ($\beta=-0.279$, $t=-3.008$, $P<0.01$). Together, these factors predicted 57.3% of the

variance in MCCB total score.

Conclusion DNS manifests cognitive deficits in all aspects. In DNSH, males have worse cognitive functions than females in verbal learning and social cognition

关键词: Gender differences, cognitive deficits, schizophrenia, hyperprolactinemia

Prevalence and Correlates of Burnout Among Frontline Nurses in China During and after The COVID-19 Epidemic: A Multicenter Survey

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Objective This multicenter survey aimed to investigate the prevalence and correlates of burnout among frontline nurses in China during and after the COVID-19 epidemic.

Methods The study recruited frontline nurses from 27 provinces of China in November-December 2022 and April-July 2023. Assessment measures included demographic questionnaire, PSQI for sleep quality, SAS for anxiety, SDS for depression, and MBI-HSS for burnout. Statistical analysis involved chi-square tests, t-tests, logistic regression, and ROC analysis.

Results Among 775 nurses during the pandemic and 693 post-pandemic, burnout prevalence was significantly higher during the pandemic (94.7% vs. 71.3%, $P < 0.001$). Emotional exhaustion prevalence did not differ significantly (33.8% vs. 33.3%, $P = 0.848$), while depersonalization and reduced personal achievement were higher during the pandemic ($P < 0.001$). Scores for SAS, SDS, PSQI, emotional exhaustion, and depersonalization were significantly lower post-pandemic ($P < 0.001$), while reduced personal achievement scores were higher ($P < 0.01$). Logistic regression revealed high financial stress as a protective factor during the pandemic (OR = 0.443, 95% CI 0.222-0.883), while post-pandemic, frequent exercise (OR = 0.506, 95% CI 0.290-0.880), SDS scores (OR = 1.031, 95% CI 1.002-1.061), and PSQI

scores (OR = 1.058, 95% CI 1.034-1.083) were associated with burnout. ROC analysis showed good predictive value for SDS and PSQI scores.

Conclusion Burnout prevalence among frontline nurses was significantly higher during the COVID-19 pandemic. High financial stress was protective during the pandemic, while frequent exercise post-pandemic was protective against burnout. Assessment and management of psychological stressors are crucial for nurse well-being, particularly during and after public health crises like COVID-19

关键词: burnout, nurse, COVID-19, China

Nuclear Magnetic Resonance Analysis Implicates Sex-specific Dysregulation of The Blood Lipids in Alzheimer's Disease: A Retrospective Health-controlled Study

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Objective This retrospective health-controlled study explores the sex-specific dysregulation of blood lipids in AD, employing nuclear magnetic resonance (NMR) spectroscopy, a novel approach in AD research.

Methods Enrolling 35 AD patients and 35 healthy controls, this investigation scrutinizes lipid metabolism levels in plasma samples. Notably, we assess distinct sex-associated differences in plasma lipid metabolism levels, focusing on high-density lipoprotein (HDL) and low-density lipoprotein (LDL) subfractions.

Results Our findings reveal significant sex-specific alterations in plasma lipid metabolism levels, particularly in HDL and LDL subfractions. Disease-specific sex disparities underscore the complexity of lipoprotein metabolism in AD. ROC curve analysis demonstrates promising diagnostic values for lipid metabolites, especially when combined with other lipid markers.

Conclusion This study enhances our understanding of the intricate interplay between sex, lipid metabolism, and AD pathogenesis

关键词: Alzheimer's disease, Nuclear magnetic

resonance, sex-specific dysregulation