



江苏省医学会

第二十六次心身与行为医学学术会议

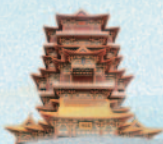
数字赋能 智慧心身

论文汇编

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协办单位：徐州市医学会 徐州市东方人民医院

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Rethinking functional connectivity: neural circuits in major depressive disorder revealed by a novel gray–white–gray communication framework

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Aims: Traditional studies on brain functional connectivity (FC) in major depressive disorder (MDD) predominantly focused on gray matter (GM), often overlooking the critical role of white matter (WM). Conventional FC models treat GM–GM connectivity as a set of intangible edges reflecting synchronized neuronal activity, leaving the medium underlying these edges and the traffic hubs embedded in the communication process unresolved. Since WM has long been recognized as the key conduit for information transfer in the brain, its intrinsic functional signals are posited to serve as a bridge that influences GM–GM connectivity. The integrative gray–white–gray (G–W–G) communication connectivity framework highlighted WM as a key bridge influencing whole–brain communication.

Through a triple–path connectivity analysis, this framework regards GM regions as nodes and G–W–G connections as edges, thereby capturing a more holistic representation of brain communication pathways. By applying this approach to MDD patients, our study aims to illuminate whether G–W–G connectivity can help explain specific depressive symptomatology and, furthermore, whether it holds potential for predicting treatment efficacy.

Methods: G–W–G communication framework were constructed using signals of GM and WM from resting–state functional magnetic resonance imaging data of 325 MDD patients and 177 healthy controls. Specifically, 20 GM regions of interest were defined as nodes, forming 190 unique GM pairs. Each GM pair communicated via 48 functional routes corresponding to distinct WM bundles, yielding 48 2D matrices that together formed a 3D connectivity map. In each 2D matrix, an edge represented signal transmission through a specific WM pathway for all GM pairs. Synchronization among GM – WM – GM triplets was quantified by first computing a covariance matrix from their functional time series and then performing principal component analysis to derive eigenvalues. A linear index (LI) was calculated as the difference between the two largest eigenvalues divided by the sum of all three eigenvalues. LI values ranged from 0 to 1, with higher values indicating stronger synchronization among triplets. To minimize common patterns and local signal contributions, the 2D matrices were normalized. A normalized 20 × 20 connectivity matrix—representing 190 G – W – G connectivity values across 48 WM bundles—was then analyzed

using analysis of covariance (ANCOVA) with age, sex, and education as covariates (site effects were removed after preprocessing). False discovery rate (FDR) correction was applied to control for multiple comparisons. Pearson correlation analyses assessed the relationships between 114 significantly altered G - W - G connectivity values and both the HAMD-24 total scores and individual factor scores, with FDR correction ensuring robustness. Additionally, a predictive model for treatment efficacy was established based on G - W - G connectivity.

Results: The results revealed G-W-G connections altered in MDD, primarily mediated by functional disruptions in WM, including the anterior limb of the internal capsule, sagittal stratum, cingulum, splenium of the corpus callosum, fornix, and superior longitudinal fasciculus. Notably, dorsolateral prefrontal cortex-anterior limb of internal capsule-dorsal anterior cingulate cortex communication connectivity is positively correlated with suicide behavior, indicating that the left anterior limb of the internal capsule as a potential neural bridge linking disrupted connectivity to suicidal symptoms ($r = 0.251$, $P_{fdr} = 0.038$; $r = 0.282$, $P_{fdr} = 0.006$). In addition, several G-W-G connections showed potential for distinguishing treatment responders from non-responders. 18 variables with non-zero coefficients were identified, including 3 general demographic features (sex, age, and education level) and 15 G-W-G communication connectivity metrics. For each individual G-W-G communication connectivity metric, ROC analysis was performed, and the AUC values were approximately 0.5, indicating low diagnostic validity. When the 15 communication connectivity metrics were combined for ROC analysis, predictive accuracy improved but remained low (AUC [95% CI] = 0.683 [0.618 - 0.748], sensitivity = 0.598, specificity = 0.696). Combining all 18 variables for ROC analysis resulted in a model with moderate predictive accuracy (AUC [95% CI] = 0.756 [0.697 - 0.815], sensitivity = 0.783, specificity = 0.618).

Discussions: This study systematically investigated the altered G-W-G communication connectivity in MDD patients, providing a tangible pathway framework for understanding the classic GM-GM FC abnormalities observed in previous MDD research. These alterations were primarily associated with specific WM bundles. Importantly, the G-W-G framework identifies the left anterior limb of internal capsule as a potential neural bridge linking disrupted connectivity to the manifestation of suicidal symptoms, shedding light on the intricate interaction of the whole brain in suicide pathophysiology. Several G-W-G connections were also found to significantly predict short-term antidepressant treatment response, underscoring their potential utility as biomarkers for distinguishing responders from non-responders. These findings highlight the integrative role of WM pathways in facilitating GM-GM communication, offering a novel and comprehensive perspective on the neural mechanisms underlying MDD. By advancing the G-W-G framework, this study establishes a robust foundation for future research aimed at refining neurobiological models of MDD and developing more precise, individualized, and effective treatment strategies.

Key Words major depressive disorder, functional connectivity, rs-fMRI, white matter, suicide, treatment response

光照疗法对抑郁症的生物节律调节作用的临床实践

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目的: 评估光照疗法作为辅助治疗在抑郁症患者中的效果。通过对比光照治疗组和对照组的抑郁、焦虑、心身症状和睡眠质量的改善, 探讨光照疗法的短期疗效, 并分析其可能的机制。

方法：纳入确诊为抑郁症的患者93例，随机分为光照治疗组（47人）与对照组（46人）。两组均给与常规治疗，如抗抑郁药物治疗和一般心理护理。光照治疗组在常规治疗的基础上，每日早晨接受20分钟的全光谱白光治疗，即波长：480nm，强度：10000LUX，持续2周。对照组再常规治疗的基础上接受相同时间段的安慰剂光照治疗，即20分钟的LED光照治疗，波长：400nm，强度：538LUX，在基线期、治疗1周后、2周后采用抑郁症筛查量表（PHQ-9）、广泛性焦虑量表（GAD-7）、心身症状量表（PSSS）和匹兹堡睡眠量表（PSQI）评估患者的焦虑、抑郁症状和睡眠质量等。

结果：干预1周后，两组患者的PHQ-9和GAD-7评分减分率比较发现，光照治疗组较对照组有显著降低（ $p<0.01$ ），但在干预2周后，两组减分率无显著差异（ $P>0.05$ ）。具体而言，PHQ-9量表中的条目1（兴趣）、条目5（食欲）和条目7（注意力）在干预1周后显示出显著差异（ $p<0.05$ ）。对于PSSS评分的减分率比较，干预1周后，光照治疗组的PSSS总分和心理因子分数显著低于对照组（ $p<0.05$ ）。干预2周后，光照治疗组在PSSS总分、心理因子分和躯体因子分上均显著低于对照组（ $p<0.05$ ）。在PSQI评分的减分率比较中，干预1周后，两组在总分及睡眠时间、睡眠障碍、催眠药物使用和日间功能障碍四个维度上存在显著差异（ $p<0.05$ ）。然而，在干预2周后，这些差异不再显著（ $P>0.05$ ）。

结论：本研究结果表明，在常规治疗基础上，光照疗法对抑郁症患者的症状改善有显著的辅助作用。光照疗法在1周后显著改善了患者的心理健康和心身症状。然而，在干预2周后，光照疗法组与对照组在抑郁和焦虑症状方面的差异不再显著，表明光照疗法的短期效果较为明显，但其长期效益可能需要进一步研究。尽管如此，光照疗法在改善患者睡眠质量和日间功能方面显示出短期显著优势，特别是在睡眠时间、睡眠障碍和日间功能障碍等维度上。综合来看，光照疗法可以作为抑郁症患者的有效辅助治疗手段，特别适用于需要迅速缓解抑郁和焦虑症状的患者。未来的研究应进一步探索光照疗法的长期疗效及其在不同患者群体中的应用，以提供更加全面的治疗指导。

关键词 光照疗法，抑郁障碍，情绪，睡眠质量

肺癌患者复发恐惧的家庭照顾者照护体验的质性研究

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目的：描述肺癌患者复发恐惧家庭照顾者的照护体验，旨在改善肺癌患者复发恐惧家庭照顾者的照护质量，为构建照顾者支持系统提供依据。

方法：采用描述性质性研究，按照目的抽样法，于2024年02月-07月选取在盐城市某三级甲等医院的呼吸与危重症医学科住院治疗的15例肺癌患者复发恐惧的家庭照顾者进行半结构化深入访谈，访谈过程中采用录音设备进行录音，同时做现场笔记，记录受访者面部表情、肢体动作等非语言资料。每位家庭照顾者访谈1次，每次访谈30min。研究者在访谈过程中使用开放式提问，访谈过程中可使用反问、重复等访谈技术深入发掘家庭照顾者的真实体验和感受。收集关于肺癌复发恐惧的家庭照顾者照护体验的资料，并结合访谈笔记、反思日志等辅助材料以丰富信息，访谈结束后利用讯飞语记工具，将访谈录音内容逐字逐句转录为word文档，并结合访谈笔记进行补充和完善，在此基础上，研究者深入阅读访谈资料，进行编码、归类并提炼主题，逐步形成核心主题和亚主题。

结果：将肺癌患者复发恐惧的家庭照顾者照护体验提炼为4个主题：照护的动机（爱的传承、无奈的选择、患者的意愿、现实的考虑）；照顾者的体验与感受（正性：心理弹性增强、健康意识增强、享受照顾过程、转变生死观念；负性：担心疾病复发、照顾者身心俱疲、疾病恶化过程中的无力感、疾病

告知过程中的矛盾感、疾病治疗过程中家庭成员的分歧)；照护者的需求(渴望专业的多学科团队指导、同伴亲友的认同及支持、精神信仰支持)；照护的意义(情感反馈及家庭责任的体现、减轻患者躯体痛苦、实现照护者自身价值)。

结论：肺癌患者复发恐惧的家庭照顾者负性体验与感受较多，渴望得到全方位有温度的专业照护指导及精神支持。医护人员需关注FCR照顾者的照护动机，帮助适应照护角色，增强照护信心；重视FCR照顾者的负性体验，减轻照护负担，改善照护质量；满足FCR照顾者的照护需求，强化社会支持，提升照护技能；引导FCR照顾者健康赋能，构建照护意义，实现自我价值。

关键词 肺癌；复发恐惧；家庭照顾者；照护体验

Clinical Subtypes of Premenstrual Dysphoric Disorder (PMDD) Among Chinese College Students: A Latent Class Analysis

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Objective: Premenstrual dysphoric disorder (PMDD), affecting 2.0% - 5.0% of reproductive-aged women globally, presents diagnostic complexities due to heterogeneous symptom profiles. This study investigates symptom heterogeneity in Chinese female college students to establish clinically meaningful PMDD subtypes.

Methods: A total of 669 Chinese female college students were assessed using a series of questionnaires including the Chinese version of CTDP-DSM-5 (CTDP-C), the Patient Health Questionnaire-9 (PHQ-9), the General Anxiety Disorder-7 (GAD-7) and Premenstrual Symptoms Screening Tool (PSST). Using the Chinese version of CTDP-DSM-5, 218 people were positive for PMDD. We employed latent class analysis (LCA) on the CTDP-C scores to evaluate the validity of empirical definitions concerning PMDD subtypes.

Results: LCA delineated two PMDD subtypes with distinct phenotypic profiles. Class 1 (severe subtype: mean scores 8.78) demonstrated co-occurring psychological symptoms (emotional lability, irritability, anxiety) and physical manifestations (fatigue, bloating, pain). Class 2 (mild subtype: mean CTDP-C score 1.52) exhibited attenuated, atypical symptomatology. Significant interclass differences were observed across 90% of CTDP-C items ($P < 0.001$). Physical disease, particularly dysmenorrhea ($P < 0.001$), emerged as critical severity amplifiers, suggesting shared pathophysiology.

Discussion: Two distinct subtypes of PMDD have been identified: one characterized by severe symptoms and the other by milder symptoms. Further evaluation of the heterogeneity within PMDD to delineate more precise phenotypes will be essential for advancing future biological and genetic research.

Key Words Key words: premenstrual dysphoric disorder; psychological symptom; physical symptom; subtype

雌激素可预测女性抑郁症发展

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背景: 主要抑郁障碍 (MDD) 是一种复杂的疾病, 具有多种临床亚型, 这也导致其发病机制十分复杂。性激素在MDD各亚型中发挥着重要作用, 并在一生中呈现出特定的变化模式。然而, 目前对MDD各亚型中性激素特征的研究仍不充分。因此, 本研究旨在探讨生命周期内性激素变化对抑郁症状的影响。

方法: 本研究使用了2013至2016年国家健康与营养调查 (NHANES) 的数据。研究样本包括4204名男性和4217名女性, 均为18岁及以上。数据集涵盖了生殖状态、患者健康问卷-9 (PHQ-9) 评分、雌二醇和睾酮水平等变量。

结果: 与无MDD者相比, 年龄在28至57岁的男性和女性均表现出异常的激素波动。值得注意的是, 在女性中, 雌二醇水平在28至37岁期间开始异常升高, 并预示着MDD组中38至57岁女性抑郁症状更为严重。在PHQ各项分析中, MDD女性在疲劳 (第4项) 得分显著高于男性, 而在失眠 (第3项) 得分则显著低于男性 ($P < 0.05$)。在无MDD组中, 除精神运动性激越 (第8项) 和自伤或自杀意念 (第9项) 外, 男性在所有抑郁症状的得分均显著低于女性 (所有 $P < 0.05$)。

结论: 与年龄相关的性激素波动与男女抑郁症状呈现相关性, 其中女性早期的雌激素变化可预测围绝经期抑郁的严重程度。男女不同年龄段的抑郁症状亦存在差异。这些发现突显了根据性别和特定年龄段的激素波动来识别抑郁症亚型的重要性。

关键词 抑郁障碍; 性激素; 临床亚型; 性激素; 年龄; 性别

A healthy lifestyle is necessary for alleviating Premenstrual Dysphoric Disorder (PMDD) in nurses

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Objective: Premenstrual Dysphoric Disorder (PMDD) frequently affects women of reproductive age, significantly disrupting their daily lives. Female nurses, facing high job stress, are particularly susceptible to PMDD, which impacts both their well-being and the quality of patient care. This study explores the risk factors of PMDD among Chinese nurses, highlighting the importance of a healthy lifestyle in alleviating symptoms.

Methods: A cross-sectional study was conducted to measure 1031 Chinese clinical nurses using the Chinese version of CTD-P-DSM-5 (CTDP-C), Patient Health Questionnaires-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), Pittsburgh Sleep Quality Index (PSQI), and the Medical Staff Stressor Scale (MSSS). Statistical analysis was performed from June 2024 to December 2024.

Results: The results revealed several key factors associated with an increased risk of PMDD among nurses. Specifically, nurses with a Body Mass Index (BMI) of 24-28 kg/m² ($p = 0.011$), engaging in less than 30 minutes

of exercise per week ($p = 0.014$), drinking ($p = 0.049$) and working more than two night shifts per week ($p < 0.001$) were all at a significantly higher risk of developing PMDD. Correlation analysis demonstrated significant positive associations between CTDP-C scores and the following scales: PHQ-9 ($r = 0.702$, $p < 0.01$), GAD-7 ($r = 0.680$, $p < 0.01$), PSQI ($r = 0.493$, $p < 0.01$), and MSSS ($r = 0.500$, $p < 0.01$). The multivariable regression model identified BMI, weekly exercise duration, drinking, weekly night shifts, Irritable Bowel Syndrome, Chronic Gastritis, Asthma, irregular menses, depression, sleep disorders, and neurasthenia as predictors of PMDD among the nursing population.

Conclusions: PMDD is prevalent among Chinese nurses, It is related to their life style, working environment and emotional fluctuations, severely affecting their quality of life at work. Maintaining a healthy lifestyle is crucial for alleviating premenstrual anxiety. Healthcare managers should establish and implement targeted management measures for female nurses suffering from PMDD to enhance their work-related quality of life.

Key Words Keywords: premenstrual dysphoric disorder; scale tool; Chinese nurses; healthy lifestyle

音乐疗法治疗身心疾病的应用现状

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目的：本文旨在综述音乐疗法在治疗身心疾病中的应用现状，探讨其治疗机制、临床研究进展、实际效果以及面临的挑战，并展望未来的发展方向。

方法：通过文献综述的方法，收集和分析近年来关于音乐疗法在焦虑、抑郁、失眠、疼痛管理以及神经康复等身心疾病中的应用研究。重点探讨音乐疗法在情绪调节、神经生理调节和认知功能改善等方面的作用机制。

结果：音乐疗法通过音律、旋律、节奏等音乐元素的调节作用，能够显著影响个体的情绪、神经生理反应、认知能力以及生理健康。临床研究表明，音乐疗法在焦虑症、抑郁症、失眠症、慢性疼痛以及神经康复等身心疾病的治疗中具有积极作用。讨论：尽管音乐疗法在身心疾病的治疗中取得了显著进展，但仍面临一些挑战和不足。首先，音乐疗法的效果受多种因素影响，如音乐的类型、节奏、频率等，未来需要更多的研究来确定标准化的治疗方案，同时结合个体差异，制定个性化治疗策略。其次，音乐疗法的具体生理机制尚不完全明确，尤其是其在神经生理和心理调节中的作用机制，需要通过更多的实验和临床研究进行验证。最后，未来音乐疗法的应用需结合神经科学、心理学、医学等多个学科的研究成果，进一步优化治疗方案，提高其治疗效果。

结论：音乐疗法作为一种安全、有效的非药物治疗手段，在身心疾病的治疗中展现出广阔的应用前景。通过情绪调节、神经生理调节和认知功能改善等机制，音乐疗法能够有效缓解焦虑、抑郁、失眠、疼痛等症状，改善患者的整体健康状态。随着研究的不断深入，音乐疗法在身心疾病治疗中的作用和机制将得到进一步明确，其在临床中的应用前景将更加广泛。

关键词 音乐疗法；身心疾病；临床应用；情绪调节；神经康复

“音穴协同”律动推拿法调理医护人员身心状态经验介绍

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目的：本文旨在介绍“音穴协同”律动推拿法在调理医护人员身心状态中的应用经验，为高危高压状态下出现的失眠、焦虑、抑郁、疲劳、免疫力及效能下降等一系列亚健康问题提供一种简便、有效的中医与心理融合性干预思路与理疗方法，以维系医护人员身心健康，便于更好地完成疫情期间各类繁杂医务工作。

方法：通过观察分析医护人员在高危高压工作状态下的身心问题，采用以捶击拍打为主的中医传统推拿手法对经穴进行刺激，并结合现代心理干预中的音乐疗法，形成“音穴协同”律动推拿法。通过疲劳量表（FS-14）、匹兹堡睡眠质量指数量表（PSQI）、焦虑自评量表（SAS）、抑郁自评量表（SDS）进行疗效评价，并结合医护人员的反馈意见，不断优化调理方法。

结果：经过调理后，医护人员的疲劳量表、睡眠质量指数、焦虑自评量表和抑郁自评量表评分均有所下降，与调理前相比具有显著性（ $P < 0.05$ ）。医护人员主观感受也较为一致，认为“音穴协同”律动推拿法在改善睡眠质量、焦虑、抑郁情绪、增强身体免疫力、缓解疲劳、恢复精力状态等方面效果明显。经过近两年的探索与实践，该方法已成为我科调理医护人员身心状态的一项简、便、效、廉的中医与心理融合性干预方法。

结论：“音穴协同”律动推拿法通过振阳开郁、疏通气血津液，结合音乐疗法的身心共治作用，有效改善了医护人员的身心状态。该方法简便易行，效果显著，值得进一步推广应用，以帮助医护人员在高危高压工作环境中保持身心健康，更好地完成医疗工作任务。

关键词 音穴协同；律动推拿；身心状态

草酸艾司西酞普兰联合重复经颅磁刺激 对青少年强迫症患者的影响

霍冯达

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目的：对青少年强迫症患者使用草酸艾司西酞普兰联合重复经颅磁刺激治疗的临床效果展开分析。

方法：选入青少年强迫症患者80例为研究对象，时间为2020.6到2021.8，按随机抽签分为对照组40例（单一草酸艾司西酞普兰治疗）、观察组40例（草酸艾司西酞普兰联合重复经颅磁刺激治疗），对比疗效。

结果：观察组治疗4周后、治疗10周后的焦虑症状评分、强迫症状评分统计结果均低于对照组， t 值=5.871、10.286、3.314、4.891， $P < 0.05$ ；观察组临床总疗效95.00%高于对照组77.50%， χ^2 值=5.164， $P < 0.05$ ；观察组和对照组不良反应发生率对照无统计学差异， χ^2 值=0.392， $P > 0.05$ 。

结论：使用草酸艾司西酞普兰治疗青少年强迫症患者的同时，配合采取重复经颅磁刺激治疗手段更加有助于改善其临床症状，增强治疗效果，且不良反应不会显著增加，安全性良好，适合推广。

关键词【关键词】青少年；强迫症；重复经颅磁刺激；草酸艾司西酞普兰；临床疗效；不良反应

富马酸喹硫平治疗老年期痴呆患者 精神行为症状的临床疗效观察

王旺

泗阳脑科医院

目的：探讨富马酸喹硫平治疗老年期痴呆患者精神行为症状的疗效和安全性。

方法：1、选择2023年1月至2023年8月在本院门诊治疗年龄在60岁以上的老年期痴呆患者；2、符合ICD-10精神分裂症诊断标准；3、简明精神病评定量表评分总分大于35分，痴呆病理行为量表评分不低于8分；4、伴有幻觉、妄想、行为异常、情感障碍等精神障碍性的患者；5、排除有其他躯体疾病者、既往有精神病史者，患者及家属对本次研究内容了解并自愿签署知情同意书，男女比率1:1，符合人员共76例。6、分组：将76例随机平均分为研究组及对照组，研究组使用富马酸喹硫平治疗、对照组使用利培酮治疗；7、治疗疗程均为8周8、评定方式：以简明精神病评定量表、痴呆病理行为量表及锥体外系反应量表评定疗效及不良反应。

结果：研究组（富马酸喹硫平）总有效率显著性高于对照组（利培酮）总有效率10%以上，不良反应病例数基本相等，无明显差异。

结论：根据相关文献资料，对比相关数据，对老年期痴呆患者精神行为症状的患者实施治疗时，富马酸喹硫平在痴呆症状的改善程度上较高，控制精神行为症状的疗效较好，而且不良反应较少，临床上是一种有效的治疗药物，临床上值得推广。

关键词 富马酸喹硫平 老年痴呆 精神症状

生物反馈治疗结合药物与单纯药物治疗 对伴有非自杀性自伤抑郁症患者临床疗效分析

唐颖

泗阳脑科医院

目的：探讨生物反馈治疗结合药物与单纯药物治疗伴有非自杀性自伤抑郁症患者的临床效果。

方法：选取2024年1月至2025年1月期间门诊及住院部收治的，诊断符合ICD-10抑郁症诊断标准，诊断为抑郁症，并伴有非自杀性自伤的患者为研究对象。其中需排除其他器质性疾病，患者及家属对本次研究内容了解并自愿签署知情同意书，男女比率1:1，符合人员共100例。随机分为对照组（50例）和研究组（50例）。对照组给予单纯的药物治疗。研究组在对照组的基础上增加生物反馈治疗。治疗疗程均为8周。两组分别于治疗前及治疗第1、2、4、6、8周末采用，症状自评量表（SCL-90）、汉密尔顿抑郁

量表 (HAMD)、汉密尔顿焦虑量表 (HAMA)、焦虑自评量表 (SAS)、抑郁自评量表 (SDS)、渥太华 (OSI) 自伤量表、Beck 自杀意念量表评定临床疗效。

结果: 治疗前两组患者的焦虑、抑郁、自杀、自伤等评分比较无显著区别。治疗后, 研究组患者的焦虑、抑郁、自杀、自伤评分显著降低, 与对照组分数比较有统计学意义 ($P < 0.05$)。研究组抑郁症患者的自杀、自伤态度评分明显低于对照组数据, 对比有统计学意义 ($P < 0.05$)。

结论: 生物反馈治疗结合药物治疗可调节伴有非自杀性自伤抑郁症患者的心理状态, 缓解其负性情绪, 其临床疗效优于单纯药物治疗, 建议广泛使用。

关键词 非自杀性自伤 抑郁症 生物反馈治疗

基于虚拟组织学探索伴忧郁特征抑郁症社会奖赏钝化的潜在分子遗传学机制

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目的: 抑郁症 (major depressive disorder, MDD) 是一种高度异质性的精神疾病, 伴忧郁特征亚型 (MDD with melancholic features, MDD-MF) 具有其独特的临床表现和神经生物学机制。前期已发现MDD-MF亚型存在社会奖赏反馈的钝化, 本研究则旨在探索MDD-MF亚型在社会奖赏反馈阶段的皮层激活改变及其潜在分子遗传机制。

方法: 招募MDD-MF亚型40例, 不伴忧郁特征亚型 (MDD without melancholic features, MDD-nMF) 40例, 健康对照50例。采用简明国际神经精神障碍访谈检查 (Mini-international neuropsychiatric interview, M.I.N.I) 忧郁特征模块对是否伴有忧郁特征进行诊断区分。所有被试在脑电图记录下完成社会激励延迟任务, 并利用标准化低分辨率脑电磁断层扫描方法 (standardized low-resolution brain electromagnetic tomography, sLORETA) 对社会奖赏反馈阶段200-300 ms时间窗的皮层激活进行了溯源定位。随后利用艾伦人脑图谱 (AHBA), 通过偏最小二乘回归 (PLS) 分析全脑基因表达与亚组间皮层激活差异的空间相关性。采用置换检验验证结果的统计学显著性, 并利用Metascape平台对关联性基因进行生物功能富集。

结果: 溯源分析结果显示, 相对于MDD-nMF亚型, MDD-MF亚型右侧眶额回、右侧梭状回激活下降 ($P < 0.05$)。PLS分析揭示了全脑基因表达与皮层激活差异存在空间关联 ($r = 0.464$, $P = 0.005$), PLS成分1 (PLS1) 解释了皮层激活差异方差的27.5%。研究发现了52个正加权基因 (PLS1+) 和40个负加权基因 (PLS1-) 分别与皮层激活增加和减少显著相关。正相关性最高的基因是炎症相关的核苷酸结合寡聚化结构域样受体蛋白3基因 (NLRP3; $r = 0.487$, $P = 0.004$)。此外, PLS1基因集主要富集在神经元连接、神经发生、突触传递和膜内定位等生物学过程。

讨论: MDD-MF亚型患者对社会奖赏反馈表现出钝化的神经反应, 可能与奖赏皮层、视觉相关皮层的激活减弱有关。此外, 本研究发现NLRP3等基因与其皮质激活异常显著关联, 且基因富集分析确定的生物学过程主要包括神经元投射发育、神经发生负调控和突触信号传导等。这些发现表明炎症易感性导致的神经元和突触功能受损可能是 MDD-MF亚型社会奖赏钝化的病理机制。

关键词 抑郁症、社会奖赏、脑电图、转录-神经影像关联

杏仁核亚区体积减少在童年创伤与抑郁症抑郁严重程度间的中介作用

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目的：探索童年创伤（childhood trauma, CT）与抑郁症（major depressive disorder, MDD）对杏仁核亚区体积的独立与交互影响，并检验这些亚区的体积变化在童年创伤与抑郁严重程度间的中介作用。

方法：纳入2022年10月至2024年11月在南京脑科医院符合抑郁症诊断标准的患者129例及127名性别、年龄与之相匹配的健康对照者；所有受试者接受3D-T1加权MRI扫描，采用FreeSurfer 7.2FreeSurfer软件（版本7.4.0）分割杏仁核亚区体积；使用17项汉密尔顿抑郁量表（17-item Hamilton Depression Scale, HAMD17）、汉密尔顿焦虑量表（Hamilton Anxiety Scale, HAMA）及童年期创伤问卷（Childhood Trauma Questionnaire, CTQ）分别评估抑郁、焦虑严重程度及16岁前的创伤经历。采用广义线性模型分析抑郁症诊断（抑郁/健康）与童年创伤（伴/不伴）的主效应及交互效应，并控制年龄、估计颅内总容积体积、性别、用药史及受教育年限等因素的影响。通过偏相关分析和中介效应模型探索抑郁症患者杏仁核亚区体积与临床指标的关系。

结果：抑郁症诊断与右侧中央核（Wald $\chi^2=9.09$, $P=0.026$ ）和内侧核体积增大独立相关（Wald $\chi^2=10.08$, $P=0.026$ ）；童年创伤与右侧中央核（Wald $\chi^2=7.99$, $P=0.047$ ）和内侧核体积减小独立相关（Wald $\chi^2=9.20$, $P=0.047$ ）。抑郁症与童年创伤在所有杏仁核亚区中均无交互作用。中介分析显示，右侧内侧核体积减少在童年创伤与抑郁严重程度之间具有部分中介作用（中介效应占比26.69%，95%CI=0.002~0.060），在情感忽视维度与抑郁严重程度间也具有部分中介作用（中介效应占比26.75%，95%CI=0.006~0.150），而右侧中央核体积未呈现中介效应。

结论：抑郁症与童年创伤对杏仁核亚区的影响呈现不同的模式，童年创伤与杏仁核亚区体积减少相关，而抑郁症与杏仁核亚区体积增大相关。右侧内侧核体积减少在童年创伤与抑郁严重程度中具有中介作用。

关键词 抑郁症；杏仁核；童年创伤；皮质下亚区分割

首发精神障碍阴性症状的发生率、评估及早期治疗的意义

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目的：探讨青少年“精神分裂症、抑郁症、双相情感障碍”首次发作时阴性症状的发生率是否存在差异，对首发精神障碍的阴性症状进行评估，以及在早期有效治疗阴性症状对于预后的意义。

方法：从2016年1月至2024年12月我院住院、门诊的部分青少年首发精神障碍患者中选取75例精神障碍患者：39例精神分裂症、22例抑郁症、14例双相障碍患者作为精神障碍组，以及62例受试者（12-

18岁，无精神病史及服药史）作为普通人群对照组进行评估。1、精神障碍组：阴性症状量表(SANS)、汉密尔顿抑郁量表（HAMD-17）及精神病前驱问卷（PQ16）、治疗时出现的症状量表；2、对照组：抑郁自评量表、躁狂症状问卷及情绪障碍问卷。

结果：1、精神分裂症、抑郁症及双相障碍组的阴性症状发生率分别为81.5%、72.4%、79.3%；对照组VS精神障碍组的阴性症状发生率：普通人群阴性症状发生率31.3%，青少年首发精神分裂症阴性症状发生率78.2%（以 $>4/8$ 为临界值，确定发生率）；2、在总体人群中，用SNS评分测量的阴性症状与精神障碍显著相关，而抑郁症状和精神病史则不与精神障碍相关，与非阴性症状青少年相比，阴性症状有较高的发生率，青少年首次精神障碍发作时对于阴性症状自我评估、诊断和预后的相关性尚不清楚，但首发精神障碍阴性症状的发生率与普通人群对照组相比，是存在差异的；3、首发精神障碍常见的阴性症状是情绪退缩41.6%，与非阴性症状相比，前者表现出较高的“反应不足和不良反应”轨迹发生率，及较低的依从性相关轨迹发生率；4、首次就诊时非阴性症状患者治疗有效率明显增高，而阴性症状与多重治疗失败风险增加有关。讨论：1、阴性症状包括情感迟钝、情绪退缩、快感缺乏、意志力减退和社交障碍等，常见于精神分裂症，但其他精神障碍也存在，在疾病早期，识别和治疗或许可以降低阴性症状的发生率；2、青少年首发精神障碍通常表现出明显的阳性、阴性症状以及紊乱行为，相对于成人，通过评估，前者可能具有未经治疗的精神病持续时间更长、病态前适应能力更差和共病(如神经发育和物质滥用障碍)数量更多的特点；3、纵向影像学研究表明，阴性症状可能是一种明显异常的神经发育轨迹的标志，可能更难用常规抗精神病药物治疗，导致更严重的病程损害，阴性症状可能有助于识别对抗精神病药物反应不佳，因此在精神障碍早期有效治疗阴性症状，对于预后意义重大。

关键词 关键词: 阴性 症状 评估 治疗

精神科护士心理健康状况分析

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目的：了解精神科护士心理健康状况。

方法：采用问卷调查和焦虑自评量表（SAS）对100名精神科护士进行调查。

结果：有效问卷中男性25人（25%），女性75人（75%）；年龄20-55岁，平均 35.23 ± 13.13 岁；副高及以上职称6人（6%），中级职称20人（20%），初级职称64人（64%）；研究生及以上学历7人（7%），本科学历8人（8%），大专学历85人（85%）；已婚38人（38%），未婚62人（62%）。学历高、职称高的精神科护士心理健康状况优于学历低者；婚姻状况对精神科护士的心理状态有影响；年龄高的护士心理健康状况优于年龄低者。精神科护士抑郁得分情况：100名护士中SAS得分 >50 分有7名，抑郁检出率为7%，抑郁平均得分为 47.12 ± 10.23 分，与国内抑郁平均得分 45.12 ± 9.42 分比较，差异有显著性（ $P < 0.01$ ）；

结论：精神科护士的心理健康状况受到不同程度的影响，应加强对这些人群的心理社会支持，提高精神科护士的心理健康水平。

关键词 精神科护士 心理健康 分析

老年肺部感染患者谵妄发生现状及其影响因素分析

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目的：探讨谵妄在老年肺部感染患者中的发生率及其影响因素。

方法：选取2023年01月至2024年03月江苏省荣军医院老年医学病区住院治疗的老年肺部感染患者95例。收集患者一般资料。采用谵妄评定方法(CAM)评估患者是否发生谵妄，以22分作为谵妄诊断用分界值，将95例老年肺部感染患者分成谵妄组(n=46)和非谵妄组(n=49)。采用SPSS(22.0版)软件进行统计分析。采用二元logistic回归分析谵妄的影响因素，并构建ROC曲线，进一步评价对谵妄有预测价值的影响因素。

结果：95例老年肺部感染患者中谵妄发生率高达48.42%。与非谵妄组相比，谵妄组患者超敏C反应蛋白(CRP)>10mg/L比例偏高、血钙值降低比例偏高、血糖值偏高、SOD值偏低、使用喹诺酮类药物比例偏高、采用俯卧位通气比例偏低(P均<0.05)。二元logistic回归分析显示：喹诺酮类药物、血钙值降低、血糖值增高是谵妄的独立危险因素，而俯卧位通气是预防谵妄的独立保护因素(P均<0.05)。根据二元Logistic回归分析获得的独立影响因素，构建受试者工作特征曲线(ROC)，结果显示：使用喹诺酮类药物、血钙值降低、血糖值增高对谵妄具有中度预测价值，俯卧位通气对谵妄具有中度预防价值，ROC下的面积(AUC)均在0.7-0.9之间。

结论：老年肺部感染患者谵妄发生率较高，喹诺酮类药物、血钙值降低、血糖值增高是谵妄发生的独立危险因素，而俯卧位通气是谵妄发生的独立保护因素。

关键词 老年；肺部感染；谵妄；影响因素

Alterations of structural–functional coupling in bipolar disorder patients with and without suicidal ideation: A multi–modal MRI study

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Aims: Bipolar disorder (BD) is associated with a high risk of suicidality. Suicidal ideation (SI) correlates with chronotype disruptions, yet their joint neuroimaging signatures remain unclear. Traditional unimodal MRI analyses lack sensitivity to detect coupled structural–functional brain abnormalities. We hypothesize that BD–SI patients will show altered structural–functional coupling compared with BD–nSI patients and healthy controls (HC), which may

be moderated by chronotype.

Methods:A total of 138 BD-SI patients, 46 BD-nSI patients and 280 HC were recruited. Resting-state functional MRI (rs-fMRI) and diffusion tensor imaging (DTI) data were acquired, and chronotype was assessed by Morningness-Eveningness Questionnaire (MEQ). We investigated structural and resting-state fMRI connectivity, as well as their coupling among 3 groups. Partial correlation analyses were conducted to examine the associations between suicidal ideation, chronotype characteristics and altered structural connectivity-functional connectivity (SC-FC) coupling in BD-SI group, while controlling for education duration.

Results:We found an altered structural connectome network differences of fractional anisotropy (FA) between BD-SI, BD-nSI and HC groups, in which the most involved nodes were in the left middle temporal gyrus, bilateral Fusiform gyrus, left amygdala and left cuneus. We also found an altered functional connectome network differences of functional connectivity (FC) between 3 groups, in which the most involved nodes were in the bilateral caudate nucleus, bilateral putamen, left supplementary motor area, left postcentral gyrus, bilateral inferior temporal gyrus and bilateral fusiform gyrus. BD-SI patients showed decreased SC-FC coupling in the left angular gyrus, right paracentral lobule and right caudate nucleus compared with HC, and in the left precentral gyrus, right parahippocampal gyrus and left angular gyrus compared with BD-nSI group. However, the BD-SI group showed increased SC-FC coupling in the right middle frontal gyrus when compared with BD-nSI group. In BD-SI patients, pairwise partial correlations revealed significant interrelationships among chronotype features, local SC-FC coupling indices and suicidal ideation severity scores.

Conclusion:BD-SI patients demonstrate distinct SC-FC coupling alterations, including prefrontal hypercoupling and limbic-sensory decoupling. These multi-network imbalances correlate with suicidal ideation severity, suggesting a neurobiological substrate for emotion-cognition dysregulation in suicidality. The convergence of structural and functional connectivity markers underscores SC-FC as a sensitive multimodal biomarker. Future studies should clarify circadian influences on these dynamic coupling patterns.

Key Words Bipolar disorder; SC-FC coupling; Functional connectivity; Fractional anisotropy; Chronotype

抑郁症稳定期合并功能性胃肠病患者胃肠认知行为评估 与干预研究

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目的:完成对抑郁症稳定期合并功能性胃肠病患者的胃肠特异性认知与行为的评估并探讨基于评估结果制定的心身整体胃肠病学模式干预策略的有效性。

方法:选取2023年1月至2024年12月至苏州大学附属第三医院心身胃肠病学科由精神科医师评估为抑郁症稳定期并符合罗马IV功能性胃肠病诊断标准的住院患者80例完成胃肠特异性认知与行为评估,评估工具为胃肠认知与行为指数(Gastrointestinal Cognition Behavior Index, GCBI),并同时施测广泛性焦虑量表(Generalized Anxiety Disorder 7,GAD-7)、患者健康问卷躯体症状群量表(Patient Health Questionnaire-15,PHQ-15)和胃肠道生活质量指数(gastrointestinal quality of life index, GIQLI)评估患者焦虑、躯体化状态以及胃肠道相关生活质量,基于评估结果制定以心身整体胃肠病学模式中症状导向二步

重归因为核心的心身整体干预策略，干预4周后患者复诊，医师对患者进行复评并提供后续医疗建议。

结果：研究对象中女性53例（66.3%），男性27例（33.8%）；年龄范围为18–70岁，平均年龄为 43.89 ± 12.33 岁；病程中位数为30(12–63)个月。干预4周后，抑郁症稳定期合并功能性胃肠病患者GCBF评分、GAD-7、PHQ-15均显著低于干预前（ $P < 0.05$ ），GIQLI评分显著高于干预前（ $P < 0.05$ ）。

讨论：抑郁症稳定期功能性胃肠病患者存在不同程度的胃肠特异性认知行为异常，由于对症状的认知偏差，对疾病病因、诊断产生错误的思维逻辑和不良暗示出现相关的临床表现，比如对食物性状、温度、特定种类食物及进食频率等的非理性的无科学依据的严格限制或回避，盲目或过度限制饮食导致营养摄入不足，出现体质偏低以及更严重的胃肠道症状，严重影响了生活质量。因此，传统医学模式治疗疗效欠佳。本研究显示融合了生物心理社会因素的心身整体胃肠病学模式诊治抑郁症稳定期合并功能性胃肠病患者有效，有助于纠正胃肠相关特异性认知与行为、缓解焦虑、躯体化、提升胃肠相关生活质量，在较短的时间内产生了较大的益处。因此，消化内科专科医生应突破传统生物医学模式的局限，通过短期规范的心身整体模式培训学习掌握一些与功能性胃肠病相关的精神心理知识和技能，成为同时具备心理学和胃肠病学背景的专业人员，减轻自身的职业倦怠，也更好地帮助患者减轻病痛之苦。功能性胃肠道症状可能是抑郁症残余症状，以功能性躯体症状为表现的残余症状常常容易被忽视，最终影响患者整体临床结局。

关键词 抑郁症稳定期，功能性胃肠病，胃肠特异性认知与行为，心身整体胃肠病学模式

Insights into causal associations between type 2 diabetes and common human diseases: a phenotype-wide bi-directional Mendelian randomization analysis.

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Background: There is substantial evidence showing the significant comorbidity between Type 2 Diabetes (T2D) and various diseases. However, there is still a need to develop a detailed understanding of the pairwise causal associations within the comorbidity networks of T2D.

Methods: The phenome-wide Mendelian randomization (MR) analyses were conducted to investigate the bidirectional causal relationship between type 2 diabetes (T2D, with 180,834 cases) and 892 common diseases in the FinnGen datasets (with 377,277 cases). Inverse variance weighting was the primary method used, supplemented by weighted median and MR-Egger approaches for sensitivity analyses. Results: In the MR analysis, a total of 41 diseases were causally associated with T2D risk (average b: 0.124). This included 9 neurological diseases (average b: 0.178), 8 psychiatric and behavioral diseases (average b: 0.003), 7 circulatory diseases (average b: 0.120), and 5 digestive system diseases (average b: -0.002). Our reverse MR analysis showed that T2D was causally linked to the risk of 120 disease phenotypes (average b: 0.103). This included 35 circulatory diseases (average b: 0.118), 24 genitourinary system diseases (average b: 0.132), 15 skin, muscle, bone, and connective tissue diseases (average b: 0.067), 11 endocrine system diseases (average b: 0.114), 10 digestive system diseases (average b: 0.109), among others. Bidirectional causality was observed between T2D and 16 diseases. Most MR analyses showed little evidence

of heterogeneity and pleiotropy.

Conclusions: Our findings highlight the broad yet limited causal effect that T2D exerts on other human diseases. Conversely, analyses investigating the impact of other diseases on T2D show a more confined scope but a greater magnitude of effect.

Key Words Background: There is substantial evidence showing the significant comorbidity between Type 2 Diabetes (T2D) and various diseases. However, there is still a need to develop a detailed understanding of the pairwise causal associations within the comorbidity

Novel insights into genetic associations and drug targets of mitochondria-associated proteins with major depressive disorder

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Background: A growing number of observational studies have found that mitochondrial pathomechanisms are associated with major depressive disorder (MDD), but little is known about the causal direction of this association. This study aimed to explore the potential causal relationship between mitochondria-associated proteins and the risk of MDD.

Methods: We used summary data from a genome-wide association study (GWAS) of 66 mitochondria-associated proteins in 3,301 individuals of European descent, as well as a large GWAS on MDD, which involved 294,322 cases and 741,438 controls. We performed a two-sample bidirectional Mendelian randomization (MR) analysis using inverse variance weighting (IVW) as the primary method, supplemented by two additional approaches (MR-Egger and weighted median methods) as sensitivity analyses to detect and adjust for pleiotropy. Moreover, to identify and evaluate potential drug targets, we conducted searches in both the GWAS catalog and the Drug-Gene Interaction Database (DGIdb).

Results: According to MR analysis, gene-determined significant causal associations were found between TruA (OR: 0.98), HINT2 (OR: 0.98), MUL1 (OR: 0.98), C1QBP (OR: 1.02), and MDD. The reverse MR analysis indicated causal associations between MDD and RNMT (OR: 0.79), C1QBP (OR: 0.75), and ATP β (OR: 0.77). Thus, we observed a clear bidirectional causal relationship between C1QBP and MDD. Following gene-drug analysis, CHF, BCHE, and KNG1 emerged as potential therapeutic targets.

Conclusions: Our findings revealed a causal link between mitochondria-associated proteins and MDD, offering significantly new insights to augment the understanding of MDD pathomechanisms to identify potential therapeutic targets for drug development.

Key Words Major depressive disorder; Mitochondria-associated proteins; GWAS; Bi-directional; Mendelian randomization; Gene-Drug analysis

Exploring genetic associations and drug targets for mitochondrial proteins and schizophrenia risk.

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Background: Numerous observational studies have highlighted associations between mitochondrial dysfunction and schizophrenia (SCZ), yet the causal relationship remains elusive. This study aims to elucidate the causal link between mitochondria-associated proteins and SCZ.

Methods: We used summary data from a genome-wide association study (GWAS) of 66 mitochondria-associated proteins in 3,301 individuals from Europe, as well as a GWAS on the large, multi-ethnic ancestry of SCZ, involving 76,755 cases and 243,649 controls. We conducted bidirectional two-sample Mendelian randomization (MR) analyses, with inverse variance weighting (IVW) as the primary method. To account for multi-directionality and ensure robustness, we included MR-Egger, weighted median (WM), weighted mode, and simple mode methods as supplementary sensitivity analyses. Moreover, we explored the GWAS catalog and the Drug-Gene Interaction Database (DGIdb) to identify and evaluate potential therapeutic targets.

Results: MR analysis revealed significant genetically determined causal associations between ETHE1 (OR: 1.06), SOD (OR: 0.97), CALU3 (OR: 1.03), and C1QBP (OR: 1.05) and SCZ. According to the reverse MR analysis, a causal relationship was shown between SCZ and CA5A (OR: 1.09), DLD (OR: 1.08), AIF1 (OR: 0.93), SerRS (OR: 0.93) and MULA of NFKB1 (OR: 0.77). After conducting the gene-drug analysis, HRG, F12, GPLD1, C1R, BCHE, CFH, PON1, and CA5A were identified as promising therapeutic targets.

Conclusions: This present study reveals a significant causal relationship between mitochondria-associated proteins and SCZ, offering valuable insights into the disease's pathogenicity and identifying potential therapeutic targets for drug development.

Key Words Schizophrenia; Mitochondria-associated proteins; GWAS; Bi-directional; Mendelian randomization; Gene-Drug analysis

Prediction of depressive episodes based on clinical features, cognitive characteristics, inflammation-related proteins, and EEG data.

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Background: The absence of clinically validated biomarkers and objective diagnostic protocols hinders the accurate and effective diagnosis of depression. Although machine learning has been increasingly explored in psychiatric diagnosis, there remains a pressing need to develop a reliable tool that integrates multimodal data—such as clinical features, cognitive functions, electroencephalographic microstates, and inflammation-associated proteins—to improve diagnostic accuracy and objectivity.

Methods: One hundred and fifteen patients with depression and 66 healthy controls were included in this study, and data on their clinical characteristics, cognitive function, electroencephalographic microstates, and serum inflammation-related proteins were collected. The baseline depression group was followed up after 4 weeks of clinical treatment, with 56 participants completing the follow-up survey, which mirrored the baseline survey. The depression baseline and healthy control groups were designated as the training set, while the follow-up and healthy control groups served as the validation set. Six classical machine learning algorithms—Decision Tree, Random Forest, XGBoost, LightGBM, k-Nearest Neighbor, and Support Vector Machine—were employed to train the diagnostic prediction model using the training set. The model was then validated with the validation set to identify the optimal depression diagnostic prediction model.

Results: The results of the study showed significant differences in clinical characteristics, cognitive function, EEG microstates, and serum levels of inflammation-related proteins in patients with major depressive disorder compared with healthy controls. In the model evaluation, the k-nearest neighbor model performed the best, with an accuracy of 95.08% for multimodal diagnosis, an F1 score of 0.9545, and an AUC value of 0.9969. In order of feature importance were IL-18, IL-8, ISI, MMP-8, CD40, CASP-8, visuospatial/constructional, and mean duration of EEG microstate D.

Conclusion: The multimodal, multi-indicator-based model showed superior accuracy in differentiating depressed patients from healthy individuals compared to the unidimensional multi-indicator approach. This diagnostic model provides a strong foundation for achieving a more accurate and objective clinical diagnosis of depression.

Key Words major depressive disorder, cognitive function, EEG microstate, inflammatory proteins, machine learning

心身整合照护：一例吞咽困难患者的护理体会

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目的：患者为一名80岁老年男性，因“进食呛咳1周。”入院，诊断为：吞咽障碍、糖尿病、高血压、脑梗死个人史。患者因反复吸入性肺炎置入鼻肠管，依赖肠内营养，并因呛咳恐惧出现抗拒进食行为。本文结合该吞咽障碍患者的护理案例，探讨如何在心身医学视角下应用整合照护模式对吞咽困难患者进行有效干预。

方法：从发病机制分析，该患者的生理因素与社会心理状态互相影响，形成“呛咳-焦虑-吞咽困难”的恶性循环。一方面，反复呛咳、误吸导致吸入性肺炎，较重的疾病负担引发患者对进食的恐惧和回避行为，产生焦虑抑郁情绪，且长期依赖鼻饲管降低患者自主性，诱发无助感，患者的社会功能严重受损。另一方面，焦虑状态可增强喉部肌肉张力，干扰吞咽协调性，进一步加重吞咽困难。

心身整合护理（Psychosomatic Integrated Care）是基于心身医学的整合护理模式，诊疗护理过程中全面考虑患者的生物、心理和社会因素，并将心理疗法及认知行为疗法等纳入疾病治疗及康复，有助于减少患者焦虑抑郁及躯体化症状。首先运用倾听与共情的技术以面对面沟通的形式进行心身访谈，建立护患信任，完成对患者的心身整体评估，包括生理评估：协助医师完成改良洼田饮水试验；心理社会评估：案例中采用GAD-7、PHQ-9、胃肠认知与行为指数（Gastrointestinal Cognition Behavior Index, GCBI）评估患者精神心理状态与胃肠相关特异性认知与行为。基于心身评估结果制定心身整合干预策略：认知重构，纠正“进食必然呛咳”的错误信念，案例中通过成功案例分享重建信心；正向激励，肯定患者依从性，鼓励参与治疗决策；饮食训练，即逐步暴露于经口进食（从3-4ml/口增至10ml），使用增稠剂改良食物性状；脑电音乐治疗，通过 α 波音乐缓解焦虑，改善睡眠；放松训练，指导深呼吸降低进食前紧张状态；社会支持与环境调整，鼓励家庭参与，减少孤独感；多学科协作联合制定个性化饮食方案。

结果：2月后患者实现完全经口进食，血糖控制稳定，洼田饮水试验由II级提升至I级，焦虑抑郁、胃肠认知与行为评分降低，睡眠质量提升，心理社会状态明显改善。

讨论：结合心身整合照护模式，通过多学科协作、心理干预及个性化康复训练，显著改善了该患者的临床结局。本案例为老年吞咽障碍患者的综合护理提供了实践参考，未来可推广至各专科更广泛人群。

关键词 吞咽障碍，心身整合照护，焦虑，抑郁，胃肠认知与行为

Correlation Between Inflammatory Cytokines and Anxiety/Somatization Symptoms in Patients with Major Depressive Disorder

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Background and Objective Major depressive disorder (MDD) is a typical psychosomatic illness, often accompanied by significant anxiety and somatic symptoms. Recent evidence suggests that systemic inflammation may play a role in the pathogenesis of depression, but its relationship with specific behavioral dimensions remains unclear. This study aims to investigate the correlation between serum inflammatory markers (CRP, IL-6, TNF- α) and anxiety/somatization symptoms in MDD patients, to provide clinical evidence for mind-body interaction mechanisms. **Methods** A total of 60 first-episode MDD patients were recruited, all meeting ICD-10 diagnostic criteria for depressive episodes. Patients with major physical illnesses or recent immunosuppressant use were excluded. Fasting blood samples were collected and analyzed using ELISA to detect CRP, IL-6, and TNF- α levels. Psychiatric symptoms were assessed using the 17-item Hamilton Depression Rating Scale (HAMD-17), Hamilton Anxiety Scale (HAMA), and the Patient Health Questionnaire-15 (PHQ-15) for somatization. Pearson or Spearman correlation analyses were conducted to explore associations between inflammatory markers and clinical scale scores. **Results** Preliminary analysis showed a positive correlation between CRP and HAMA scores ($r=0.38$, $p=0.004$), and between TNF- α levels and PHQ-15 scores ($r=0.41$, $p=0.002$). IL-6 levels had a weaker but near-significant correlation with HAMD scores ($r=0.25$, $p=0.06$). These findings suggest that increased inflammation may be linked to greater anxiety and somatic symptom severity. **Conclusion** Inflammatory status in MDD patients is closely associated with their anxiety and somatization symptoms, supporting the hypothesis of shared mind-body biological pathways. Inflammatory cytokines may serve as potential biomarkers for behavioral symptom subtyping and personalized interventions, offering new insights for psychosomatic medicine strategies.

Key Words Major depressive disorder (MDD), Inflammatory Cytokines

心身研究诊断标准在广泛性焦虑症稳定期患者的临床应用

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目的: 利用心身研究诊断评估广泛性焦虑症稳定期患者的心理和躯体症状, 探索心身研究诊断标准在筛查广泛性焦虑症稳定期患者疾病进展的适用性。

方法: 研究纳入2023年7月至2024年7月就诊于苏州大学附属第三医院的符合纳排标准的广泛性焦虑症稳定期的患者, 进行基线评估和6个月随访, 每次评估间隔时间为1个月。经过培训的精神科医师使用

心身研究诊断半结构式问诊修订版(Diagnostic Criteria for Psychosomatic Research-Revised Semi-Structured Interview, DCPR-R-SSI)评估12种DCPR综合征,符合至少1种DCPR心身综合征诊断标准的患者定义为DCPR阳性患者,反之为DCPR阴性患者。同时使用广泛性焦虑量表(Generalized Anxiety Disorder-7, GAD-7)对患者的焦虑症状进行评估,使用简明健康状况调查表(36-Item Short Form Survey ,SF36)评估患者的生活质量。

结果:本研究共纳入99例患者,其中女性53例(66.3%),男性27例(33.8%),平均年龄为 46.42 ± 8.90 岁(24-66岁),中位病程为20个月(6-36个月)。焦虑症稳定状态患者中DCPR综合征患病率76.77%(76/99),DCPR综合征中居于前三的分别为继发于精神障碍的躯体症状55.56%(55/99)、健康焦虑42.42%(42/99)、A型行为30.30%(30/99)。DCPR阳性患者GAD-7评分(4.20 ± 1.81 vs 3.92 ± 1.60)和病程(25.11 ± 5.02 vs 19.82 ± 4.60)显著高于DCPR阴性患者($P < 0.05$);同时,DCPR阳性患者SF36总分高于DCPR阴性患者(70.20 ± 10.40 vs 75.30 ± 8.70),差异无统计学意义。

结论:1. 广泛性焦虑症稳定期患者中DCPR综合征患病率高,DCPR可以应用于广泛性焦虑症稳定期患者的临床实践,早期识别和区分患者的共病症状。

2. DCPR阳性患者较DCPR阴性患者的焦虑症状更严重、生活质量更差,利用DCPR有助于为广泛性焦虑症稳定期患者心理和躯体状况变化的早期识别提供工具支持。

关键词 心身研究诊断标准; DCPR; 广泛性焦虑症稳定期

急性期脑卒中患者感知压力对睡眠质量的影响: 社会支持和心理弹性的链式中介作用

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目的:探讨急性期脑卒中患者社会支持和心理弹性在感知压力与睡眠质量间的链式中介作用。

方法:采用横断面研究设计,于2023年8月至2025年1月对常州市第二人民医院527例急性期脑卒中患者进行问卷调查。使用人口学特征调查问卷、10项感知压力问卷、社会支持量表、心理弹性量表和匹兹堡睡眠质量指数量表进行评估,采用Pearson相关分析和SPSS-PROCESS宏插件进行链式中介效应分析。

结果:患者感知压力(18.86 ± 6.32 分)与社会支持(36.22 ± 7.62 分)、心理弹性(57.92 ± 14.46 分)均呈负相关($r = -0.272$, $r = -0.296$, $P < 0.001$),与睡眠质量(7.19 ± 3.27 分)呈正相关($r = 0.372$, $P < 0.001$)。社会支持与心理弹性正相关($r = 0.508$, $P < 0.001$),与睡眠质量负相关($r = -0.293$, $P < 0.001$)。心理弹性与睡眠质量负相关($r = -0.337$, $P < 0.001$)。中介分析显示:感知压力正向预测睡眠质量($\beta = 0.25$, $P < 0.001$);社会支持($\beta = -0.10$, $P < 0.001$)和心理弹性($\beta = -0.19$, $P < 0.001$)负向预测睡眠质量,并起到部分中介作用,中介效应分别为8.24%和9.41%;感知压力对睡眠质量的直接效应为0.130,占总效应的76.47%;感知压力通过社会支持、心理弹性对睡眠质量有链式中介效应,占总效应的7.06%。

结论:急性期脑卒中患者睡眠质量受感知压力直接影响,并通过社会支持和心理弹性的中介路径间接影响。临床应重视心理社会干预,通过增强社会支持网络和培养心理弹性改善患者睡眠质量和整体预后。

关键词 急性期; 脑卒中; 睡眠质量; 感知压力; 社会支持; 心理弹性

偏头痛共病抑郁焦虑失眠

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目的：偏头痛是一种原发性头痛，常表现为双或单侧的发作性中重度搏动样头痛。许多慢性疼痛疾病的预后受到焦虑或抑郁等心理因素的影响。慢性失眠患者可同时存在抑郁、焦虑和头痛。本研究通过问卷量表对偏头痛患者合并失眠、焦虑、抑郁及相关危险因素进行评估。

方法：连续入组 2024 年12月至 2025 年 4 月苏州工业园区金鸡湖社区卫生服务中心、苏州市相城区第三人民医院、漕湖人民医院及苏州市立医院门诊就诊 144 例原发性头痛患者为研究对象。所有入组患者均行问卷调查：采用基于患者-计算机交互的头痛临床决策支持系统（clinical decision support system for the diagnosis of headache disorders based on patient - computer interactions, CDSS2.0）（包括原发性头痛诊断问卷、PHQ-9、GAD-7、PSQI），该系统能够实现通过人机对话问卷直接向患者获取头痛特征相关信息，对原发性头痛诊断灵敏度可达 80%以上，特异度高达95%以上。

结果：（1）入组144例原发性头痛患者：其中男性4例，年龄（19-53）岁；女性140例，年龄（21-71）岁。无先兆偏头痛64例，有先兆偏头痛20例，慢性偏头痛16例，新发每日持续性头痛 8例，频发性紧张型头痛16例，慢性紧张型头痛20例。头痛以单侧为主36例，以双侧或多部位疼痛108例。头痛时间（3m—40y），VAS（3-10）分。

（2）144例原发性头痛患者中；合并焦虑116例（80.6%），无焦虑28例（19.4%），轻度焦虑56例（38.9%），重度焦虑24例（16.7%）。合并抑郁104例（72.2%），无抑郁40例（27.8%），轻度抑郁40例（27.8%），中度抑郁52例（36.1%），重度抑郁12例（8.3%）。原发性头痛合并抑郁焦虑88例（61.1%）。

（3）原发性头痛患者合并失眠84例（58.3%），失眠患者主要表现为慢性失眠，其中以偏头痛和紧张性头痛合并失眠为主。失眠合并抑郁76例（90.5%）和焦虑80例（95.2%），失眠合并抑郁焦虑72例（85.7%）。头痛共病抑郁焦虑、失眠72例（50%）。

讨论：失眠、抑郁焦虑及头痛在门诊患者比例非常高，共病常见，但确诊很困难。一方面是头痛诊断体系复杂；其次基层医师缺乏相应的专科疾病知识；第三神经科医师由于门诊量大，诊疗时间仓促导致漏诊。因此我们采用更新版的CDSS 2.0，该系统通过在门诊环境下使用个人移动设备进行人机对话来获取临床信息。

本研究中人口统计学变量的水平与偏头痛和头痛的发病率较高相对应。30-59岁年龄段的偏头痛发病率较高，40-49岁年龄段的头痛发病率较高。女性偏头痛或头痛的发病率较高与激素水平变化有关，这与女性头痛发作更频繁、持续时间更长相符。

偏头痛或头痛的发病率与睡眠障碍明显相关，失眠更有可能是头痛尤其是偏头痛的前兆和结果。本研究表明，失眠患者的偏头痛和头痛发病率较高，而偏头痛的发病率更高，二者共病比例达58.3%。中枢神经系统中的间脑与脑干区域与偏头痛的发病机制和睡眠-觉醒周期调节紧密相关。偏头痛共病焦虑高于抑郁，三者共病达61.1%。偏头痛与睡眠障碍和抑郁焦虑之间的关联复杂且相互影响，共病率可以达50%。偏头痛伴抑郁焦虑失眠，是偏头痛反复发作的危险因素。研究结果提示不管在专科门诊还是基层医院门诊，应对偏头痛病人的情绪及睡眠进行评估，同时运用相关量表指导临床诊疗。

关键词 偏头痛、抑郁、焦虑、失眠

Effects of neuroregulatory techniques on weight in patients with mental disorders: A Meta-analysis of Randomised Controlled Trials

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Background: In recent years, mental disorders have increasingly contributed to the global burden of disease. As one of the primary treatments for individuals with mental disorders, neuroregulatory techniques have demonstrated efficacy in managing overall mental symptoms; however, their impact on weight control remains inconsistent. This study performed a preliminary meta-analysis aimed at objectively evaluating the role of neuroregulatory techniques in weight regulation and providing guidance for future research and clinical practice.

Methods: Six English databases (PubMed, PsycINFO, MEDLINE, EMBASE, Web of Science, Cochrane Library) and four Chinese databases (CNKI, Wanfang Database, VIP Database, SinoMed Database) were systematically searched by two independent reviewers on December 20, 2024. The search included randomized controlled trials (RCTs) that utilized neuroregulatory techniques as interventions and were published between 1985 and 2024. The study population comprised individuals aged 18 years or older who were diagnosed with a psychiatric disorder according to ICD-11, DSM-5, or any earlier version of these diagnostic manuals. Primary outcome measures focused on body weight and body mass index (BMI), while supplementary data encompassed demographic characteristics, disease background, and details of the neuroregulatory techniques employed. Data extraction adhered to the PRISMA guidelines, and quality assessment was conducted in accordance with the Cochrane Handbook. A random-effects model was applied to synthesize the data. This study is registered with PROSPERO (registration number: CRD42023479168).

Results: We included 10 eligible RCTs involving a total of 528 participants (279 in the intervention group and 249 in the control group). The types of mental disorders encompassed eating disorders, schizophrenia, depression, and others. Interventions include repetitive transcranial magnetic stimulation (rTMS), transcranial direct current stimulation (tDCS), continuous theta-burst stimulation (cTBS), vagus nerve stimulation (VNS), and real-time neurofeedback techniques. Meta-analysis results indicated that the effect of neuroregulatory techniques on BMI control in patients with mental disorders was not statistically significant (Hedges' $g = -0.44$; 95% CI [-1.00, 0.12]; $P = 0.127$). Similarly, the impact of neuroregulatory techniques on weight control in this patient population was also not statistically significant (Hedges' $g = -0.36$; 95% CI [-0.85, 0.13]; $P = 0.153$). Egger's test indicated the absence of significant publication bias in studies using BMI ($P = 0.687$) or weight ($P = 0.932$) as outcome measures.

Conclusions: Our findings indicate that neuroregulatory techniques do not exhibit a statistically significant impact on altering BMI or body weight. Researchers should exercise caution when endorsing the efficacy of neuroregulatory techniques for weight control. Future studies should prioritize implementing standardized RCTs featuring larger sample sizes, extended follow-up durations, and more stringent methodologies to comprehensively assess the effects of neuroregulatory interventions on weight management in patients with mental disorders.

Key Words Neuroregulatory techniques, schizophrenia, depression, RCT, BMI, weight.

The Relationship between Non-Suicidal Self-Injury (NSSI) and Suicidal Behaviors among Depressed Adolescents: The Moderating Role of Anxiety and Depression – A Multi-center Study in China

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Objective: Non-suicidal self-injury (NSSI) and suicidal behaviors are increasingly prevalent among adolescents with depression, accompanied by a growing prominence of emotional problems. This study aims to investigate the association between NSSI and suicidal behaviors in Chinese adolescents diagnosed with depression, while further examining the moderating roles of anxiety and depression severity in this relationship.

Methods: This study surveyed both outpatients and inpatients at 16 mental hospitals across China between January and December 2021. The participants were adolescents aged 12 to 18 who had been diagnosed with depression. Participants completed psychological assessments, including the Structured General Condition Scale, the Self-Assessment of Mutant Functioning (FASM), the 7-item Generalized Anxiety Disorder scale (GAD-7), and the Patient Health Questionnaire-9 (PHQ-9). Univariate and multivariate analyses were performed to examine factors influencing suicidal behaviors. Subsequently, interaction terms for anxiety, depression, and regression results were incorporated into the model to analyze the moderating effects of anxiety and depression on suicidal behaviors.

Results: Among the 2,343 adolescents aged 12 to 18 years who participated in the assessment, a total of 1,958 reported engaging in NSSI behaviors, and 994 exhibited suicidal behaviors. Regression analysis revealed a significant association between NSSI and suicidal behaviors in adolescents. The factors influencing suicidal behaviors among adolescents with depressive NSSI included delayed wound healing, compulsive skin rubbing, excessive drug use, comorbid mental disorders, and the diversity of NSSI behaviors. Adolescents with delayed wound healing and compulsive skin rubbing, coupled with low anxiety and high depression, were more likely to exhibit suicidal behaviors. Additionally, adolescents who did not use excessive drugs but experienced low anxiety and high depression also demonstrated an increased likelihood of suicidal behaviors. Low anxiety was associated with a heightened risk of suicidal behavior among adolescents without mental disorders, whereas high depression was linked to an elevated risk of suicidal behavior regardless of the presence of comorbid mental disorders. In addition, adolescents exhibiting a greater variety of NSSI behaviors, experiencing lower levels of anxiety, and presenting higher levels of depression were at an increased risk of engaging in suicidal behaviors.

Conclusion: Our study revealed that NSSI and suicidal behavior are closely interconnected among adolescents. Specifically, adolescents who engaged in behaviors such as delaying wound healing intentionally, rubbing the skin aggressively, not relying heavily on medication, being diagnosed with mental illnesses, and exhibiting multiple NSSI behaviors were more likely to exhibit suicidal tendencies. Furthermore, adolescents with low levels of anxiety but high levels of depression were found to be at a higher risk of suicidal behavior.

Key Words Adolescent, NSSI, suicidal behavior, GAD-7, PHQ-9.

中医心理调护用于预防心身疾病反复发作的效果研究

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目的：探讨中医心理调护在预防心身疾病反复发作中的临床效果，分析其对患者情志状态、躯体症状及生活质量的干预作用，为心身疾病的复发防控提供中医特色方案。心身疾病易受情志波动、心理应激等因素影响而反复发作，中医心理调护以“形神共调”为核心，旨在通过情志干预阻断心理-生理病理链条，降低复发风险。选取符合心身疾病诊断标准（如高血压、肠易激综合征、焦虑性失眠等）且近1年内有复发史的患者200例，随机分为中医心理干预组（100例）与常规护理组（100例）；常规护理组给予基础疾病管理及西医健康教育；干预组在此基础上联合中医心理调护，干预周期3-6个月；干预

方法：干预组采用中医心理调护方案，包括：情志相胜法：根据五行相克理论，以“怒胜思”“喜胜悲”等原则调节异常情志；移情易性法：通过音乐疗法、书法绘画、导引术（如八段锦）转移患者对疾病的过度关注；语言开导法：结合中医“七情致病”理论，针对患者认知偏差进行辨证疏导；药食调神法：配伍合欢皮、远志等解郁安神中药，辅以百合莲子粥等食疗方；疗效评价：比较两组患者干预前后的复发率、汉密尔顿焦虑量表（HAMA）、抑郁量表（HAMD）评分，及躯体症状积分、生活质量量表（SF-36）得分。

结果：研究显示，中医心理调护可显著提升心身疾病防复发效果：复发率：干预组复发率较对照组降低28.5%-41.2%（ $P<0.05$ ），尤其在伴有明显焦虑、抑郁倾向的患者中效果更显著；情志状态：干预组HAMA、HAMD评分较对照组显著下降（ $P<0.01$ ），患者情绪稳定性、心理应激耐受力明显改善；躯体症状与生活质量：干预组躯体症状积分降低35.7%-52.3%，SF-36生理功能、情感职能等维度得分提升20.1%-31.8%，均优于对照组；作用机制：中医心理调护可能通过调节下丘脑-垂体-肾上腺轴（HPA轴）功能、改善自主神经紊乱，降低心理应激对免疫系统的抑制作用。

结论：中医心理调护在心身疾病防复发领域具有独特优势，其通过辨证施护的情志干预体系，既能纠正患者异常心理状态，又能通过“调神”改善脏腑气血功能，形成“心理-生理”双向调节机制。该方法可作为心身疾病缓解期的辅助干预手段，有效降低复发率，提升患者生存质量。未来需进一步扩大样本量，结合神经内分泌指标深化机制研究，并探索中医心理调护与现代认知行为疗法（CBT）的整合路径，推动心身疾病防复发干预的标准化与精准化。

关键词 中医心理调护；心身疾病；反复发作；效果研究

论中医“治未病”思想在心身疾病预防实践中的应用

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目的：探讨中医“治未病”思想在心身疾病预防中的应用价值，通过梳理其理论内涵与实践路径，为心身疾病的早期干预提供中医视角的解决方案。心身疾病作为心理社会因素主导的躯体疾病，其发生

发展与情志失调、脏腑功能失衡密切相关，而“治未病”强调未病先防、既病防变，与心身疾病的预防需求高度契合。

方法：采用文献研究与理论分析相结合的方式：系统梳理《黄帝内经》等中医经典中“治未病”的核心理论，提炼“调神摄生”“顺应四时”“辨证施防”等预防原则；结合现代心身医学理论，分析心身疾病（如高血压、消化性溃疡等）的中医病因病机，重点探讨情志因素对脏腑气血的影响；归纳“治未病”实践方法，包括情志调摄（如移情易性、冥想放松）、饮食起居干预（如食疗药膳、作息调节）、经络干预（如针灸、推拿）及中医心理疗法（如语言开导、音乐疗法），并结合临床案例与现代研究证据，论证其作用机制。

结果：研究表明，“治未病”思想在心身疾病预防中具有多维度优势：理论层面：其“形神合一”“天人相应”的整体观，为心身疾病的全周期预防提供了系统框架，弥补了现代医学“生物-心理-社会”模式在个体化干预中的不足；实践层面：情志调摄可通过调节自主神经功能、改善内分泌紊乱，降低心身疾病发病风险；饮食起居干预能从脾胃运化、气血生成等环节阻断情志致病的病理链条；经络干预可通过调节脏腑气血，缓解心理压力所致的躯体症状；现代研究佐证：部分临床研究显示，中医“治未病”干预可降低心身疾病高危人群的发病率，改善焦虑、抑郁等情志障碍，提升心理应激适应能力。

结论：中医“治未病”思想在心身疾病预防中具有独特的理论价值与实践意义。其通过“调神”“护形”“顺时”的综合干预策略，既能针对心身疾病的心理社会诱因进行源头调控，又能通过脏腑功能的整体调节增强机体抗病能力，为心身疾病的早期预防提供了个体化、多层次的干预方案。未来可进一步结合循证医学方法，深化“治未病”技术的标准化研究，推动中医预防思想与现代心身医学的融合，提升心身疾病的防控效能。

关键词 治未病；心身疾病；预防实践；应用价值

双相情感障碍血清尿酸水平研究

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目的：探讨双相情感障碍不同临床相（躁狂与抑郁发作）患者UA水平差异，并与精神分裂症患者和正常对照进行比较，为嘌呤代谢紊乱可能参与双相情感障碍发病机制提供进一步理论依据。

方法：选取北京回龙观医院2013年1月至2014年12月住院的双相情感障碍患者，采用随机数字表法将其分为双相情感障碍组、精神分裂症组与对照组。各组患者均抽血查UA水平。比较几组患者的UA水平，进行比较。

结果：双相情感障碍组、精神分裂症组与对照组UA水平三组间年龄（ $F=1.31$, $P=0.27$ ）、性别（ $\chi^2=0.04$, $P=0.98$ ）差异均无统计学意义。三组间UA水平存在统计学差异（ $F=18.32$, $P<0.01$ ），两两比较，各组间UA水平差异均有统计学意义（ $P<0.05$ ）。双相情感障碍躁狂发作组、抑郁发作组与对照组UA水平三组间年龄（ $F=0.05$, $P=0.95$ ）、性别（ $\chi^2=2.47$, $P=0.29$ ）差异无统计学意义。躁狂发作组与抑郁发作组在发作总病程、本次病程、既往住院次数方面无统计学差异（ $P>0.05$ ）。三组UA水平存在组间差异（ $F=21.69$, $P<0.01$ ），两两比较，躁狂发作组UA水平高于抑郁发作组（ $P<0.01$ ），且二者均高于对照组（ $P<0.01$ ）。

结论：UA水平升高可能是双相情感障碍的素质性标记物，而非状态标记物。

关键词 双相情感障碍，血清尿酸水平，

基于磁共振DTI构建脑结构网络 对脑小血管病伴认知障碍患者的研究

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目的：脑小血管病（cerebral small vessel disease, CSVD）的脑网络改变已成为研究热点，但其介导认知障碍的神经病理与生理学机制目前尚未完全阐明。本研究旨在探讨基于弥散张量成像（Diffusion tensor imaging, DTI）构建的脑结构网络在CSVD伴认知障碍患者中的脑网络拓扑属性及Rich-club特征的改变。

方法：本研究纳入了伴认知功能障碍的脑小血管病患者与健康人群各27例作为研究对象。采集所有被试的磁共振DTI序列，利用MRtrix、FSL工具包对DTI图像进行预处理后构建结构脑网络，采用图论方法分析脑结构网络的整体拓扑特征及节点属性并进行比较。基于Rich-club分析方法，计算脑网络中Rich-club连接、Feeder连接及Local连接的总连接值，并进一步探讨CSVD伴认知功能障碍患者Rich-club网络参数与认知功能水平之间的关联性。

结果：（1）健康对照组与脑小血管病伴认知功能障碍组均呈现出小世界特性。与正常对照组相比，患者组的聚类系数、全局效率和局部效率均呈下降趋势，且其最短路径长度略有增加，但两组间在全局属性指标中均无统计学差异（ $P>0.05$ ）。（2）与正常对照组相比，CSVD伴认知障碍组右侧眶部额上回、右侧三角部额下回、左侧舌回、右小脑第2叶、右小脑第4/5叶和右小脑第7b叶度中心度降低，左回直肌、右豆状苍白球、双侧前扣带回和旁扣带脑回度中心度增加（ $P<0.05$, FDR校正）。左回直肌、右豆状苍白球、右前扣带回和旁扣带脑回节点最短路径长度减少，右侧三角部额下回、左侧舌回、右小脑第2叶和右小脑第7b叶节点最短路径长度增加（ $P<0.05$, FDR校正）。右侧三角部额下回、左侧舌回、右小脑第2叶、右小脑第4/5叶和右小脑第7b叶节点效率下降，左回直肌、右豆状苍白球、右侧前扣带回和旁扣带脑回节点效率增加（ $P<0.05$, FDR校正）。但两组在介数中心度和节点聚类系数的比较中，均不具有显著统计学意义（ $P>0.05$, FDR校正）。（3）基于Rich-club分析发现，CSVD伴认知功能障碍组患者的Feeder连接总连接值较健康对照组明显下降。（4）伴认知功能障碍的CSVD患者组Rich-club连接的总连接值与MMSE量表评分（ $r=0.48$, $p=0.011$ ）呈显著相关，Feeder连接的总连接值与MMSE量表评分（ $r=0.61$, $p<0.001$ ）和MoCA量表评分（ $r=0.42$, $p=0.028$ ）均存在显著的统计学相关性。

讨论：（1）CSVD合并认知损害患者的结构脑网络呈现出破坏趋势，但其局部功能分化和全局信息整合之间保持着相对稳定的动态平衡。（2）在CSVD伴认知障碍患者脑网络中，多个脑区的节点属性呈现显著异常，这些异常节点涉及的脑区与高级认知功能密切相关，包括语言功能、记忆加工、注意力调控以及执行功能等。（3）CSVD合并认知损害患者脑网络中核心节点与外围节点之间的信息传递效率显著下降，且与认知水平降低存在密切联系。本研究从脑网络拓扑特性的角度为伴认知障碍的CSVD的潜在神经机制提供新的见解。

关键词 脑小血管病;认知障碍;图论;脑结构网络;Rich-club

Gender-Specific Relationship between Remnant Cholesterol Levels and Suicide Attempts in Untreated First-Episode Major Depressive Disorder

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Objective: This study sought to determine whether there were gender-specific differences in the association between remnant cholesterol (RC) levels and suicide attempts (SA) in untreated first-episode (UFE) major depressive disorder (MDD) patients.

Methods: 1,718 UFE MDD patients were enrolled in this investigation. Data on clinical features, blood lipid levels, and demographics were gathered. Depressive, anxiety, and psychotic symptoms were assessed by HAMD-17, HAMA-14, and PANSS-P, respectively. Multivariable binary logistic regression examined associations between RC and SA. Two-piecewise linear regression identified threshold effects in non-linear relationships.

Results: RC and SA were positively correlated in both sexes, according to univariate logistic regression analysis (all $p < 0.05$). Nevertheless, after controlling for confounding variables, this association was no longer statistically significant (all $p > 0.05$). Further examination of nonlinear relationships identified an inverse L-shaped correlation between RC and SA exclusively in males. When RC concentrations were below 1.99 mmol/L, a significant positive association with SA was observed (OR=1.93, 95% CI: 1.23-3.02, $P=0.004$), whereas no significant correlation existed at higher RC levels (OR=0.56, 95% CI: 0.28-1.11, $P=0.096$). Female subjects demonstrated no evidence of nonlinear associations between RC and SA.

Conclusion: Our study on patients with UFE MDD demonstrated that gender-specific variations exist in the connection between RC and SA. Only male patients showed a non-linear connection between RC and SA. Notably, low RC levels were identified as a potential biomarker for elevated suicide risk in males with UFE MDD.

Key Words non-linear relationship, gender difference, suicide attempts, untreated first-episode, remnant cholesterol

The prevalence and clinical correlates of severe anxiety symptoms in first-episode drug-naïve schizophrenia: a Chinese population study

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Objective: Although anxiety symptoms frequently co-occur with schizophrenia and may substantially influence

disease progression and treatment outcomes, systematic investigations of this comorbidity remain limited. This study aimed to investigate the prevalence and clinical correlations of severe anxiety symptoms among Chinese patients with first-episode drug-naïve (FEDN) schizophrenia.

Methods: This cross-sectional study enrolled 255 FEDN schizophrenia patients. Comprehensive clinical and demographic data were collected from all participants. Psychiatric symptoms were assessed using PANSS, while anxiety and depression symptoms were evaluated using the HAMA-14 and the HAMD-24, respectively. Multiple logistic regression analysis was used to estimate risk factors for severe anxiety symptoms in FEDN schizophrenia patients.

Results: The prevalence of severe anxiety symptoms among patients with FEDN schizophrenia was 51.8% (132/255). Multivariable logistic regression analysis revealed that both elevated HAMD-24 scores (OR = 1.17, 95% CI: 1.11-1.22, $p < 0.001$) and higher HDL-c levels (OR = 4.70, 95% CI: 1.53-14.4, $p = 0.007$) were independently associated with increased risk of severe anxiety symptoms. The area under the curve (AUC) of HAMD-24, HDL-c, and the combination of these two variables for severe anxiety symptoms was 0.592, 0.868, and 0.872, respectively.

Conclusion: The findings highlight the substantial prevalence of severe anxiety symptoms in patients with FEDN schizophrenia. HAMD-24 scores and HDL-c levels were identified as independent factors and potential risk markers for severe anxiety symptoms. Our findings contribute to the understanding of potential pathological mechanisms underlying comorbid severe anxiety in first-episode drug-naïve schizophrenia patients.

Key Words schizophrenia, first-episode, severe anxiety symptoms, comorbid, prevalence

Epidemiological Characteristics and Risk Factors of Overweight and Obesity in First-Episode Drug-Naïve Patients with Schizophrenia: A Cross-Sectional Study from China

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Objective: Overweight and obesity are prevalent among patients with schizophrenia, yet systematic research on these comorbidities in first-episode drug-naïve patients remains insufficient. This study aimed to investigate the epidemiological characteristics and risk factors of overweight and obesity in first-episode drug-naïve (FEDN) schizophrenia patients in China, to provide scientific evidence for early intervention and comprehensive treatment strategies.

Methods: This cross-sectional study included 255 FEDN patients with schizophrenia. Comprehensive clinical and demographic data were collected from all participants. The Positive and Negative Syndrome Scale (PANSS) was used to assess the severity of psychiatric symptoms, while the Hamilton Anxiety Scale (HAMA-14) and Hamilton Depression Scale (HAMD-24) were employed to evaluate anxiety and depressive symptoms. Multivariate logistic regression analysis was conducted to systematically assess potential risk factors for overweight and obesity in FEDN schizophrenia patients.

Results: The overall prevalence of overweight and obesity among FEDN schizophrenia patients was 49.8% (127/255). After adjusting for potential confounding factors, multivariate logistic regression analysis revealed that

overweight and obesity were significantly positively associated with serum uric acid levels (OR=1.00, 95%CI: 1.00–1.01, P=0.029), systolic blood pressure (OR=1.06, 95%CI: 1.02–1.10, P<0.005), and PANSS total score (OR=1.02, 95%CI: 1.00–1.04, P=0.004). To validate the accuracy and predictive capability of the regression model, receiver operating characteristic (ROC) curve analysis was performed, showing that the areas under the curve (AUC) for uric acid, systolic blood pressure, PANSS total score, and the combined predictive model were 0.66, 0.74, 0.59, and 0.79, respectively, with the combined model demonstrating superior predictive value.

Conclusion: The prevalence of overweight or obesity among Chinese FEDN schizophrenia patients was as high as 49.8%. Serum uric acid levels, systolic blood pressure, and severity of psychiatric symptoms were identified as independent risk factors for overweight and obesity.

Key Words Schizophrenia, First-episode drug-naive, Overweight, Obesity, Epidemiology

Atherogenic index of plasma and psychotic symptoms in Untreated First-Episode Major Depressive Disorder

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Objective: It is generally established that depression and cardiovascular disease are related.

AIP, or the atherogenic index of plasma, is now a valid indicator of cardiovascular risk. However, the link between AIP and psychotic symptoms (PS) in major depressive disorder (MDD) remains largely unexplored. The link between AIP and PS in Chinese patients with untreated first-episode MDD (UFE MDD) was investigated in the present research.

Methods: We gathered demographic and anthropometric information from 1718 individuals with UFE MDD in this cross-sectional investigation. PANSS-P was used to measure PS. The HAMD-17 and HAMA-14 were used to assess depressive and anxiety symptoms, respectively. To examine the correlation between AIP and PS, a multiple binary logistic regression model was employed. Potential nonlinear relationships were examined using smooth curve fitting, and two-piecewise logistic regression was applied to examine threshold effects.

Results: 10.0% of UFE MDD patients had psychotic symptoms (171/1718). Univariate analysis revealed a significant positive correlation between PS and AIP (OR = 5.51, 95% CI: 2.83 to 10.76, P < 0.001); however, this association became nonsignificant after controlling for confounding variables (OR = 1.97, 95% CI: 0.70 to 5.50, P = 0.197). When AIP was categorized into quartiles, the fully adjusted model showed significantly increased risk of psychotic symptoms in the third quartile compared with the first quartile (OR=2.73, 95% CI: 1.27 to 5.86, P=0.010). Smooth curve fitting revealed a nonlinear relationship with an inflection point at AIP = 0.99. Below this threshold, AIP showed a strong association with PS (OR = 21.70, 95% CI: 2.41 to 195.28, P = 0.006), while no discernible correlation was found above it (OR = 0.26, 95% CI: 0.04 to 1.63, P = 0.150).

Conclusions: This study revealed a nonlinear relationship between AIP and PS in untreated first-episode MDD patients (threshold at 0.99), suggesting that AIP may be used as a marker to monitor psychotic symptoms in UFE MDD.

Key Words atherogenic index of plasma, untreated, psychotic symptoms, major depressive disorder, association

电休克治疗对精神分裂症的免疫调节机制新进展

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目的：精神分裂症是一种病因复杂、致残率高的严重精神障碍。电休克治疗（ECT）作为其重要治疗手段，可能通过免疫调节机制发挥疗效。本文旨在综述 ECT 对精神分裂症患者免疫炎症标志物、细胞因子网络及犬尿氨酸代谢途径的调节作用，探讨其潜在机制及临床意义。

方法：通过系统检索国内外数据库，筛选近五年内与 ECT 治疗精神分裂症免疫调节相关的临床研究、动物实验及综述文献。结合观察性研究、系统综述、荟萃分析和实验性研究数据，分析 ECT 对促炎/抗炎细胞因子、免疫炎症标志物（如 BDNF、VEGF、白细胞亚群）及犬尿氨酸代谢途径的影响，并总结其机制与临床疗效的关联。

结果：研究显示，ECT 可降低精神分裂症患者促炎因子（如 TNF- α 、IL-18）的表达，同时调节抗炎因子（如 IL-10）水平，改善 Th1/Th2/Th17/Treg 平衡。动物实验表明，ECT 通过抑制 IL-17、NF- κ B 及 TNF 信号通路减轻神经炎症。ECT 治疗后，患者血浆脑源性神经营养因子（BDNF）水平显著升高，且与症状改善相关；中性粒细胞与单核细胞比值（NLR、MLR）降低，淋巴细胞基线水平可预测阳性症状改善。ECT 通过调节犬尿氨酸（KYN）与色氨酸（TRP）的代谢平衡，降低 KYNA/TRP 比值，减少神经毒性代谢产物喹啉酸（QA）的积累，从而改善神经炎症和认知功能。低炎症患者经 ECT 后代代谢指标改善更显著。ECT 还通过调控下丘脑-垂体-肾上腺轴（HPA 轴）、抑制小胶质细胞活化及氧化应激反应，整合神经与免疫系统的相互作用，最终缓解精神病理症状。

讨论：现有研究揭示了 ECT 通过多途径调节免疫炎症的潜在机制，但其临床应用仍面临挑战。多数研究样本量较小，且集中于抑郁症患者，需更多针对精神分裂症的大规模临床验证。细胞因子网络复杂，现有研究多聚焦单一因子，需系统性分析动态变化。犬尿氨酸代谢与炎症的交互作用机制尚未完全阐明，需结合代谢组学与基因组学深入探索。未来研究可借助人工智能和系统生物学技术，建立精准治疗模型，优化 ECT 在精神分裂症中的应用。

总结：总之，ECT 通过调节免疫炎症标志物、细胞因子平衡及犬尿氨酸代谢途径，在精神分裂症治疗中发挥重要作用。尽管机制研究取得进展，仍需多学科合作推动基础研究与临床转化的深度融合，为患者提供更高效、个性化的治疗方案。

关键词 精神分裂症；电休克治疗；细胞因子；免疫炎症；犬尿氨酸途径

Altered serum glutathione disulfide levels in acute relapsed schizophrenia are associated with clinical symptoms and response to electroconvulsive therapy

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Background: The pathophysiological mechanisms of schizophrenia are complex and not fully elucidated. This study aimed to investigate changes to total glutathione (T-GSH), glutathione disulfide (GSSG), reduced glutathione (GSH), and the GSH/GSSG ratio before and after electroconvulsive therapy (ECT) for patients with acute relapse of schizophrenia and associations with clinical symptoms.

Methods: The study cohort included 110 patients with acute relapse of schizophrenia and 55 healthy controls. All patients received 8 - 10 sessions of ECT. Clinical symptoms were assessed using the Positive and Negative Syndrome Scale (PANSS).

Results: As compared to the healthy controls, schizophrenia patients had decreased baseline GSSG levels ($t = -2.115$, $p = 0.036$) and elevated GSH/GSSG ratios ($t = 2.141$, $p = 0.034$). Baseline GSSG levels were negatively correlated with both PANSS total scores ($\beta = -0.369$, $t = -4.108$, $p < 0.001$) and positive symptom scores ($\beta = -0.332$, $t = -3.730$, $p < 0.001$), while changes to GSSG levels were positively correlated with improvements in PANSS total scores ($r = 0.392$, $p < 0.001$) and positive symptom scores ($r = 0.293$, $p = 0.005$) after ECT treatment. In treatment responders, GSSG levels were significantly increased ($t = -2.817$, $p = 0.006$) and GSH/GSSG ratios were decreased ($t = 4.474$, $p < 0.001$), as compared to before ECT, with baseline T-GSH ($B=0.734$, $OR=2.083$, $95\%CI:1.287-3.372$, $p=0.003$), GSSG ($B=-2.720$, $OR=0.066$, $95\%CI:0.011-0.390$, $p=0.003$), and GSH/GSSG ratio ($B=-1.013$, $OR=0.363$, $95\%CI:0.142-0.930$, $p=0.035$) predictive of clinical improvement.

Conclusion: Patients with schizophrenia exhibit significant redox imbalance, and GSSG levels may serve as a potential biomarker to evaluate and predict ECT outcomes.

Key Words schizophrenia, electroconvulsive therapy, glutathione disulfide, redox state, oxidative stress

帕利哌酮和阿立哌唑治疗早期精神分裂症患者的效果比较

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背景：精神分裂症的早期干预对预后具有重要影响，但不同抗精神病药物的疗效差异尚需进一步研究。本研究旨在探讨帕利哌酮与阿立哌唑对早期精神分裂症患者的治疗效果及其对神经调节蛋白1（NRG1）的影响。

方法：采用前瞻性随机对照研究方法，纳入2022年01月至2024年12月在连云港市第四人民医院就诊的早期精神分裂症患者80例。通过随机数字表法将患者分配至帕利哌酮治疗组（n=40）和阿立哌唑治疗组（n=40）。治疗周期为2个月，评估指标包括阳性与阴性症状量表（PANSS）评分、临床疗效以及血清NRG1水平变化。

结果：两组在PANSS评分的组间比较、时间点比较及其交互作用方面均显示显著差异（ $P < 0.05$ ）。治疗前，帕利哌酮组和阿立哌唑组的PANSS总分分别为（ 89.62 ± 8.45 ）分和（ 88.95 ± 8.31 ）分，差异无统计学意义（ $P > 0.05$ ）。治疗1个月后，帕利哌酮组PANSS评分降至（ 65.34 ± 6.92 ）分，显著低于阿立哌唑组的（ 72.46 ± 7.15 ）分（ $P < 0.05$ ）；治疗2个月后，帕利哌酮组进一步降至（ 48.23 ± 5.87 ）分，继续优于阿立哌唑组的（ 58.75 ± 6.24 ）分（ $P < 0.05$ ）。临床疗效评估显示，帕利哌酮组总有效率为92.5%（37/40），显著高于阿立哌唑组的77.5%（31/40）（ $P < 0.05$ ）。治疗前两组血清NRG1水平分别为（ 3.26 ± 0.45 ）ng/mL和（ 3.28 ± 0.43 ）ng/mL，治疗2个月后分别升至（ 5.87 ± 0.62 ）ng/mL和（ 4.92 ± 0.58 ）ng/mL，帕利哌酮组的提升更为显著（ $P < 0.05$ ）。不良反应方面，帕利哌酮组和阿立哌唑组的不良反应发生率分别为22.5%（9/40）和25.0%（10/40），差异无统计学意义（ $P > 0.05$ ），主要表现为嗜睡、锥体外系反应和头晕等。

结论：研究表明，帕利哌酮在改善早期精神分裂症症状、提升血清NRG1水平方面较阿立哌唑具有显著优势，同时保持了良好的安全性。这一发现为早期精神分裂症的药物选择提供了重要的临床参考。

关键词 帕利哌酮；阿立哌唑；早期精神分裂症；神经调节蛋白1；疗效

Life satisfaction, depressive symptoms, and blood pressure in older Chinese adults

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Objective: Both life satisfaction and depressive symptoms have been proven to be related to blood pressure (BP) separately. This longitudinal study aimed to examine whether these two distinct but related psychological constructs are independent predictors of BP in older Chinese adults.

Methods: This study used two waves of data from the China Health and Retirement Longitudinal Study (CHARLS) and the analysis were restricted to those respondents aged 60 and older at baseline (n = 2,428, mean

age = 66.8 years; male, 53.7%). Multiple linear regression models were used to evaluate the associations between baseline life satisfaction, depressive symptoms measured by the 10-item Center for Epidemiologic Studies Depression Scale (CESD-10), and systolic (SBP) and diastolic blood pressure (DBP) at 4-year follow-up.

Results: Life satisfaction was positively associated with both SBP ($\beta = 0.06$, $p < .001$) and DBP ($\beta = 0.06$, $p < .001$) at follow-up when examined independently. Depressive symptoms were negatively associated with both SBP ($\beta = -0.06$, $p < .001$) and DBP ($\beta = -0.04$, $p < .05$) at follow-up. When both psychological variables were entered simultaneously into the fully adjusted model, life satisfaction remained significantly associated with both SBP ($\beta = 0.05$, $p < .05$) and DBP ($\beta = 0.06$, $p < .01$), while the association between depressive symptoms and SBP was maintained ($\beta = -0.05$, $p < .05$) but the association with DBP became non-significant.

Conclusion: The results suggest that both life satisfaction and depressive symptoms independently predict BP changes in the older Chinese population after four years, with life satisfaction showing consistent positive associations and depressive symptoms showing negative associations with blood pressure. These findings expand our knowledge about the distinct association patterns of life satisfaction and depressive symptoms with BP in older adults.

Key Words Life satisfaction; Depressive symptoms; Blood pressure; Older adults; Longitudinal study

Association of depressive and anxiety symptoms with blood pressure in first-episode, treatment-naïve patients with depression: A cross-sectional study

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Objective: Depressive and anxiety symptoms are common comorbidities in patients with depression, but their associations with blood pressure (BP) have not been well characterized in treatment-naïve patients. This cross-sectional study aimed to examine the associations between depressive symptoms (HAMD), anxiety symptoms (HAMA), and blood pressure in first-episode, treatment-naïve patients with depression.

Methods: A total of 1,718 first-episode, treatment-naïve patients with depression were included in this cross-sectional study. Depressive symptoms were assessed using the Hamilton Depression Rating Scale (HAMD), and anxiety symptoms were evaluated using the Hamilton Anxiety Rating Scale (HAMA). Systolic blood pressure (SBP) and diastolic blood pressure (DBP) were measured as outcome variables. Multiple linear regression models were used to evaluate the associations between HAMD, HAMA, and blood pressure, adjusting for demographic characteristics and clinical variables.

Results: The mean age of participants was 34.87 ± 12.43 years, with 65.77% being female. Mean HAMD and HAMA scores were 30.30 ± 2.94 and 20.80 ± 3.47 , respectively. Mean SBP and DBP were 119.48 ± 10.91 mmHg and 75.95 ± 6.74 mmHg, respectively. In the fully adjusted model including both variables simultaneously, HAMD remained significantly associated with both SBP ($\beta = 0.80$, 95% CI: 0.63, 0.98, $p < 0.001$) and DBP ($\beta = 0.36$, 95% CI: 0.24, 0.49, $p < 0.001$). HAMA showed no significant association with SBP ($\beta = 0.13$, 95% CI: -0.02, 0.28, $p = 0.079$) but remained significantly associated with DBP ($\beta = 0.15$, 95% CI: 0.04, 0.26, $p = 0.006$).

Conclusion: In first-episode, treatment-naïve patients with depression, depressive symptoms were independently associated with both systolic and diastolic blood pressure, while anxiety symptoms showed a significant association only with diastolic blood pressure. These findings suggest that depressive and anxiety symptoms may have distinct associations with cardiovascular parameters in patients with depression.

Key Words Depression; Anxiety; Blood pressure; HAMD; HAMA; First-episode

封闭病房精神分裂症患者攻击行为护理 预防干预方案构建及初步应用

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目的：基于德尔菲法构建封闭病区住院精神分裂症患者攻击行为护理预防干预方案，探究护理预防措施在降低患者攻击行为中的有效性。

方法：在文献分析、半结构式访谈的基础上拟定封闭病区住院精神分裂症患者攻击行为护理预防干预方案，采用德尔菲法对来自精神科护理管理、护理教育、临床护理、心理学的16名专家进行2轮专家函询，根据专家意见修改并确定最终培训方案。选取我院2023年10—2024年03月急性精神科封闭病区收治的102例精神分裂症患者为对照组，2024年04—2024年09月同类型急性精神科封闭病区收治的101例精神分裂症患者为实验组。对照组患者给予常规护理，试验组患者给予构建方案的干预，比较两组患者干预后患者攻击行为发生率、保护性约束使用率、保护性约束平均时长、阳性与阴性症状量表（positive and negative syndrome scale, PANSS）的得分变化。

结果：2轮专家函询的积极系数分别为100%和100%，专家权威数分别为0.912和0.898，肯德尔和谐系数分别为0.496及0.552。2轮专家函询后，各指标的重要性评分为4.74~5.00分，变异系数为0~0.17。最终形成的培训方案包括4项一级指标、11项二级指标和30项三级指标。患者攻击行为发生率、保护性约束使用率、保护性约束平均时长明显降低（ $P<0.001$ ），患者阴性症状得分降低（ $P<0.001$ ）。

结论：基于德尔菲法构建的封闭病区精神分裂症患者攻击行为的护理预防干预方案，可降低患者攻击行为和保护性约束的发生，缩短约束时长，缓解阴性症状，保障临床护理安全。

关键词 封闭病区；精神分裂症；德尔菲专家函询法；攻击行为；保护性约束

Hormones and bone mineral density correlate with psychopathology in female patients with chronic schizophrenia: implications for osteoporosis risk

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Purpose: Postmenopausal women with chronic schizophrenia face an increased risk of osteoporosis, yet the relationships among bone mineral density (BMD), hormones, and psychiatric symptoms remain unclear.

Methods: This cross-sectional study included 165 postmenopausal women with chronic schizophrenia and 166 matched healthy controls. BMD was measured by dual-energy X-ray absorptiometry, with assessment of sex hormones, thyroid function, and Positive and Negative Syndrome Scale (PANSS) scores.

Results: The patient group showed significantly lower unilateral total hip BMD ($t = -2.248$, $P = 0.025$), correlating with PANSS general psychopathology scores ($\beta = 0.217$, $P = 0.025$). Lumbar spine, femoral neck, and total hip BMD negatively correlated with FSH (all $P < 0.05$). T3 negatively correlated with PANSS negative symptom scores ($\beta = -0.179$, $P = 0.025$). Estradiol levels were significantly lower in the osteopenia and osteoporosis groups than in the normal BMD group ($P < 0.05$). TSH (RR = 1.116, $P = 0.026$) and age (RR = 1.038, $P = 0.024$) were identified as risk factors for osteoporosis, while T4 (RR = 0.984, $P = 0.023$) appeared protective. Attributable risk calculations revealed that 10.4% of osteoporosis cases were attributable to elevated TSH, 3.66% to increasing age, while elevated T4 reduced risk by 1.63%.

Conclusion: This study reveals complex associations among BMD, hormones, and psychiatric symptoms in postmenopausal women with schizophrenia, highlighting the need for comprehensive bone health monitoring.

Key Words Bone mineral density; Hormones; Osteoporosis; Psychopathology; Schizophrenia

Prevalence and attributable risk of depression and anxiety among secondary school students: the role of maternal mental health and other risk factors

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Background: Depression and anxiety among secondary school students have become significant public health concerns, yet comprehensive studies examining their prevalence and associated factors, particularly the influence of maternal mental health, are limited.

Methods: A cross-sectional study was conducted among 7850 secondary school students. The Patient Health Questionnaire-9, Generalized Anxiety Disorder-7, and Perceived Social Support Scale were used to assess depressive symptoms, anxiety symptoms, and social support, respectively.

Results: The self-reported prevalence of depressive and anxiety symptoms was 11.6% and 18.1% among secondary school students, respectively. Multivariable analysis identified significant risk factors including female, suburban region, maternal depressive and anxiety symptoms (all $P < 0.001$), along with parental discord, academic stress, insufficient physical activity, excessive screen time, and moderate household income (all $P < 0.05$). Population attributable risk (PAR) analysis revealed academic pressure accounted for the highest contribution to both depressive (PAR%=40.3%) and anxiety symptoms (PAR%=53.5%). For depression, physical inactivity (25.6%), excessive screen time (24.9%), and suburban region (23.3%) were substantial contributors. Additionally, maternal anxiety symptoms explained 5.2% of depression and 7.8% of anxiety, while maternal depressive symptoms contributed 3.1% to student depression. Social support demonstrated a protective effect against both conditions ($P < 0.05$).

Conclusion: The findings highlighted the considerable prevalence of depression and anxiety among secondary school students and underscored the significant role of maternal mental health and other modifiable risk factors.

Key Words adolescent mental health; depression; anxiety; maternal mental health; risk factors; social support

幻听访谈指引单联合应对卡 在精神分裂症伴幻听症状患者中的应用

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目的：观察幻听访谈指引单联合应对卡在精神分裂症伴幻听症状患者中的应用效果。

方法：采用连续收集样本方法，选取江苏省某三级甲等精神专科医院精神科2023年10月-2024年10月诊断为精神分裂症且伴有幻听症状的94例患者作为研究对象，按照入院时间顺序分为对照组和观察组，其中2023年10月-2024年3月的46例患者为对照组，2024年4月-2024年10月的48例患者为观察组，对照组给予入院后的常规护理，观察组在常规护理的基础上采用幻听访谈指引单联合应对卡进行护理干预，观察两组患者住院期间因幻听导致的保护性约束发生率、患者对护理满意度以及幻听风险得分。

结果：观察组患者住院期间因幻听导致的保护性约束发生率为18.75%（9/48），低于对照组的36.96%（17/46），两组比较，差异有统计学意义（ $p < 0.001$ ）；观察组9名约束的患者约束平均时长为（ 9.8 ± 3.9 ）h，明显低于对照组的（ 19.6 ± 4.2 ）h，且差异有统计学意义（ $p < 0.001$ ）；观察组患者对护理人员专业知识能力和健康宣教能力满意度均高于对照组（ $p < 0.001$ ）；观察组患者出院时幻听风险得分为（ 16.13 ± 3.14 ），明显低于对照组的（ 18.26 ± 3.26 ），差异明显（ $p < 0.001$ ）。

结论：幻听访谈指引单联合应对卡应用于精神分裂症伴幻听症状患者中，可提高患者的护理满意度，降低保护性约束发生率和幻听风险，同时缩短约束时长，值得推广和借鉴。

关键词 精神分裂症；幻听症状；幻听访谈指引单；应对卡；约束率；幻听应对；满意度；前-后对照研究

Prevalence and risk factors of depressive and anxiety symptoms and functional constipation among university students in eastern China

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BACKGROUND: Depression and anxiety are prevalent among university students worldwide, often coexisting with functional constipation (FC). Family relationships have been identified as crucial factors affecting mental health, yet the gender-specific associations between these conditions remain underexplored.

AIM: To assess prevalence of depressive symptoms, anxiety symptoms, and FC among Chinese university

students and explore their associations.

METHODS: Using a cross-sectional survey design, data were collected from 12,721 students at two universities in Jiangsu and Shandong provinces. Depressive symptoms were assessed using the Patient Health Questionnaire-9, anxiety symptoms using the Generalized Anxiety Disorder -7 scale, and FC using the ROME IV. Gender-stratified analyses and population attributable risk proportions were calculated to evaluate risk factor patterns and population impact.

RESULTS: The prevalence of self-reported depressive, anxiety, and comorbid depressive and anxiety symptoms was 16.3%, 24.9%, and 13.3%, respectively, whereas that of FC was 22%. Students with depressive symptoms were 1.811 times more likely to have FC than those without. Female gender, parental relationships, and lower household income were significant risk factors for both mental health conditions. For depressive symptoms, females experienced stronger effects from both parental conflict (OR = 8.006 vs 7.661 in males) and FC (OR = 1.954 vs 1.628 in males). For anxiety symptoms, conflicted parental relationships had stronger effects in males (OR = 5.946) than females (OR = 4.262). Overall, poor parental relationships contributed to 38.6% of depressive and 33.5% of anxiety symptoms.

CONCLUSION: Family relationships significantly impact student mental health, with gender-specific patterns. Targeted interventions addressing family dynamics could reduce mental health burden in university settings.

Key Words University students; depression; anxiety; functional constipation; Patient Health Questionnaire-9; Generalized Anxiety Disorder-7.

Prevalence, severity, and risk factors for depression and anxiety symptoms among adolescents: a cross-sectional study

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Purpose: The aim of the current study was to examine the prevalence and severity of self-reported depression and anxiety symptoms among adolescents in China and to identify important risk factors.

Method: We conducted a cross-sectional survey of 22,925 adolescents using the Patient Health Questionnaire-9 and Generalized Anxiety Disorder-7 for depressive and anxiety symptoms, respectively. Functional constipation (FC) was evaluated using the ROME IV criteria, and social support using the Perceived Social Support Scale.

Results: Depressive symptoms were reported by 16.0%, anxiety symptoms by 24.1%, and FC by 7.8% of participants. Among the total group, 27.5% reported mild, 10.0% moderate, 4.0% moderately severe, and 2.0% severe depressive symptoms, while 23.0% reported mild, 7.2% moderate, and 3.8% severe anxiety symptoms. Female sex, smoking, FC, parental conflict, lower household income, lower levels of physical activity, and longer weekly electronic device use time were identified as significant risk factors for depressive and anxiety symptoms, while age and body mass index were identified as additional significant risk factors for anxiety symptoms. In contrast, received support was identified as a significant protective factor against depression and anxiety symptoms.

Conclusion: Interventions targeting modifiable risk factors such as physical activity, smoking, and excessive electronic device use as well as improved access to support are priorities for addressing the high prevalence of depressive and anxiety symptoms among adolescents.

Key Words adolescent, depression, anxiety, risk factors, functional constipation, PHQ-9, GAD-7.

Decreased serum VEGF, NRG1, and Neuropilin-1 levels in male patients with treatment-resistant schizophrenia: implications for VEGF as a protective factor

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Background: Vascular endothelial growth factor (VEGF), Neuregulin-1 (NRG1), and Neuropilin-1 are important neurotrophic factors involved in neurodevelopment, synaptic plasticity, and neuroprotection processes implicated in schizophrenia pathophysiology. This study aimed to investigate the expression patterns of these markers and their clinical implications in male patients with treatment-resistant schizophrenia (TRS) and chronically medicated schizophrenia (CMS).

Methods: In this cross-sectional study, serum levels of VEGF, NRG1 β 1, neuropilin-1, S100B, and S100A8 were measured using the Luminex liquid suspension chip technology in 31 TRS patients, 47 CMS patients, and 47 healthy controls. Psychiatric symptoms and cognitive function were assessed using the Positive and Negative Syndrome Scale (PANSS) and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS).

Results: VEGF levels were significantly lower in TRS versus controls ($P < 0.001$), with no significant difference between TRS-CMS ($P = 0.053$) or CMS-controls ($P = 0.051$). NRG1 β 1 was significantly reduced in both TRS ($P = 0.003$) and CMS ($P < 0.001$) groups compared to controls. Neuropilin-1 decreased significantly only in the TRS group versus controls ($P = 0.029$). No significant difference was observed in S100B and S100A8 levels across all groups (all $P > 0.05$). Correlation analysis revealed a negative association between NRG1 β 1 levels and positive scores ($r = -0.355$, $P = 0.014$), and a significant positive correlation between VEGF levels and language function ($r = 0.313$, $P = 0.032$) in CMS patients. Additionally, VEGF demonstrated potential protective properties in TRS patients ($B = -1.098$, $RR = 0.333$, $95\%CI: 0.131 - 0.849$, $P = 0.021$).

Conclusion: VEGF may serve as a protective factor against TRS, with its reduction possibly contributing to treatment resistance. The positive correlation between VEGF and language function suggests its role in cognitive processes, highlighting its potential as a biomarker in schizophrenia treatment.

Key Words Treatment-resistant schizophrenia, Vascular endothelial growth factor (VEGF), Neuregulin-1 (NRG1), Neuropilin-1, Biomarkers

Altered fibroblast growth factor-2, epidermal growth factor, and transforming growth factor- α serum concentrations in male patients with chronic schizophrenia: Implications for cognitive function and disease risk

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Background: Growth factors (GFs) are essential regulators of neurodevelopment and neuroplasticity, and GF dysregulation is strongly implicated in the pathophysiology of schizophrenia. This study investigated if serum concentrations of epidermal growth factor (EGF), fibroblast growth factor-2 (FGF-2), and transforming growth factor- α (TGF- α) are altered in male patients with chronic schizophrenia and associated with cognitive dysfunction.

Methods: Serum GF levels were measured in serum samples from 75 male patients with chronic schizophrenia and 73 age- and education-matched healthy controls (HCs) using Luminex technology. Clinical symptoms were assessed in the patient group using the Positive and Negative Syndrome Scale (PANSS), while cognitive functions were examined in all subjects using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS).

Results: Patient serum contained significantly lower concentrations of EGF ($t = -3.522$, $p = 0.001$) and FGF-2 ($t = -4.606$, $p < 0.001$), but a higher concentration of TGF- α ($t = 4.268$, $p < 0.001$). There was a weak positive correlation between serum EGF and TGF- α concentrations in the patient group ($r = 0.273$, $p = 0.018$). Patients also demonstrated significant correlations between serum EGF and both RBANS language subscore ($r = 0.267$, $p = 0.021$) and RBANS total score ($r = 0.346$, $p = 0.002$), between serum FGF-2 and language subscore ($r = 0.388$, $p = 0.001$), and between serum TGF- α and visuospatial/constructional subscore ($r = -0.330$, $p = 0.004$). Low FGF-2 was independently associated with schizophrenia risk (RR = 0.844, 95% CI: 0.719 - 0.990, $P = 0.037$).

Conclusions: The serum concentrations of EGF, FGF-2, and TGF- α are altered in chronic schizophrenia and associated with cognitive impairments. Serum FGF-2 may serve as a biomarker for disease risk.

Key Words Schizophrenia; Epidermal growth factor; Fibroblast growth factor-2; Transforming growth factor- α ; Disease risk; Cognitive function.

Decreased levels of platelet-derived growth factor subtypes and superoxide dismutase isoenzymes in early-onset schizophrenia

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Background: Early-onset schizophrenia (EOS) patients are at greater risk of poor long-term outcomes compared to later-onset patients, so it is essential to identify unique pathomechanisms and prognostic biomarkers for this EOS patient group. Deficits in neurotrophic and oxidative stress resistance are implicated in EOS, so this study investigated associations of EOS risk with peripheral blood platelet-derived growth factor (PDGF) subtype concentrations and superoxide dismutase (SOD) isoenzyme activities.

Methods: Serum PDGF subtype concentrations and plasma SOD isoenzyme activities were measured in 99 first-episode drug-naïve EOS patients (ages 12 - 18 years) and 40 matched healthy controls (HCs). Disease severity was assessed using the five-factor model of the Positive and Negative Syndrome Scale (positive, negative, cognitive, excitement/hostility, and anxiety/depression).

Results: Serum PDGF-AB and PDGF-BB concentrations as well as plasma total (T)-SOD and Mn-SOD activities were significantly lower in EOS patients than HCs (all, $P < 0.001$ except for T-SOD, where $P = 0.003$). Serum PDGF-AB concentration was positively correlated with plasma Mn-SOD activity ($r = 0.267$, $P = 0.007$), while serum PDGF-BB concentration was negatively correlated with cognitive symptom severity ($r = -0.406$, $P < 0.001$) and T-SOD activity was negatively correlated with excitement/hostility symptom severity ($r = -0.354$, $P < 0.001$). Multivariate analysis with dichotomized factors identified low PDGF-AB (RR=1.788, 95% CI: 1.226 - 2.608, $P = 0.003$), low PDGF-BB (RR=1.758, 95% CI: 1.208 - 2.558, $P = 0.003$), and a significant PDGF-AB \times Mn-SOD interaction (RR=1.460, 95% CI: 1.044 - 2.042, $P = 0.027$) as independent EOS risk factors, with 44.1%, 43.1%, and 31.5% attributable risk, respectively, and population attributable risk fractions of 34.5%, 33.7%, and 23.6%, respectively.

Conclusion: Reduced PDGF and SOD activity may contribute to earlier onset of schizophrenia symptoms and exacerbate symptom severity. Peripheral blood PDGF concentrations and SOD activities may thus be valuable biomarkers for EOS detection.

Key Words Early-onset schizophrenia; platelet-derived growth factor; superoxide dismutase; oxidative stress; biomarkers; attributable fraction.

Serum Interleukin-8 and Interleukin-23 levels in early-onset schizophrenia: association with clinical characteristics

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Objective: To investigate the serum levels of interleukin (IL)-8 and IL-23 in patients with early-onset schizophrenia (EOS), explore their relationships with clinical symptoms, and evaluate their potential value as biomarkers for EOS.

Methods: Ninety-two drug-naïve EOS patients and 40 age, sex, education and body mass index matched healthy controls were enrolled. Serum IL-8 and IL-23 levels were measured using Luminex liquid suspension chip technology, and clinical symptoms were assessed using the Positive and Negative Syndrome Scale (PANSS).

Results: Serum levels of IL-8 ($Z=-2.377$, $P=0.017$) and IL-23 ($Z=-2.798$, $P=0.005$) were significantly higher in EOS patients compared to healthy controls. After controlling for confounding factors, IL-23 was significantly positively correlated with PANSS anxiety/depression factor score ($P=0.041$) and total score ($P=0.009$). Modified Poisson regression analysis showed that IL-8 (RR=1.021, 95%CI: 1.016-1.026, $P<0.001$) and IL-23 (RR=1.007, 95%CI: 1.000-1.014, $P=0.039$) were risk factors for EOS, with attributable fractions of 2.1% and 0.7%, and population attributable fractions of 0.7% and 0.2%, respectively.

Conclusion: Serum levels of IL-8 and IL-23 were significantly elevated in EOS patients, and IL-23 levels correlated with the severity of clinical symptoms, suggesting that inflammatory responses play an important role in the pathogenesis of EOS. IL-8 and IL-23 may serve as potential biomarkers for EOS.

Key Words Early-onset schizophrenia; Interleukin-8; Interleukin-23; Inflammatory cytokines; Biomarkers

Changes in Serum IL-18 Levels in Early-Onset Schizophrenia Patients and Their Correlation with Clinical Symptoms

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Objective: To investigate the characteristics of serum IL-18 level changes in early-onset schizophrenia (EOS) patients and their correlation with clinical symptoms.

Methods: 99 EOS patients and 40 healthy controls were enrolled. Serum IL-18 concentrations were measured, and clinical symptoms were assessed using the Positive and Negative Syndrome Scale (PANSS). The relationships between IL-18 levels and symptom severity and disease duration were analyzed.

Results: Serum IL-18 levels in EOS patients were significantly lower than in the control group ($F=12.952$, $P<0.001$, Cohen's $d=0.63$), negatively correlated with PANSS cognitive symptom factor scores ($r=-0.357$, $P<0.001$), and positively correlated with disease duration ($r=0.235$, $P=0.019$). Patients with disease duration less than 2 years had significantly lower IL-18 levels than the control group ($P<0.001$). Low IL-18 expression may be a risk factor for EOS (RR=0.989, 95%CI: 0.986-0.991, $P<0.001$).

Conclusion: The decreased serum IL-18 levels in adolescent EOS patients may reflect an immune compensatory mechanism in the early stage of the disease. The association with cognitive symptoms suggests that IL-18 may be involved in cognitive alterations in EOS.

Key Words Early-onset schizophrenia; Interleukin-18; Cognitive symptoms; Immune mechanism; Case-control study

经颅磁刺激治疗青少年抑郁症的临床效果研究： 一项随机对照试验

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目的：青少年抑郁症发病率逐年攀升，但传统药物与心理治疗存在应答率低、副作用明显等问题。本研究旨在探讨重复经颅磁刺激（rTMS）对青少年抑郁症的安全性及有效性，分析不同刺激参数对临床症状改善的影响，为优化非药物治疗方案提供依据。

方法：本研究采用随机双盲对照设计，纳入72例13-18岁符合DSM-5抑郁发作诊断标准的患者（HAMD-17评分 ≥ 18 ），随机分为高频组（10Hz左侧背外侧前额叶， $n=24$ ）、低频组（1Hz右侧背外侧前额叶， $n=24$ ）及伪刺激组（ $n=24$ ）。所有受试者在维持原抗抑郁药基础上接受每日1次、每周5天、持续4周的干预。主要疗效指标为HAMD-17评分变化，次要指标包括儿童抑郁量表（CDI）评分、临床总体印象量表（CGI）及不良事件记录。采用重复测量方差分析比较组间差异，统计显著性设定为 $p<0.05$ 。

结果：1. 疗效分析：高频组治疗后HAMD-17评分较基线下降52.3%（ $18.6 \pm 2.1 \rightarrow 8.9 \pm 3.4$ ），显著优于低频组（34.7%）及伪刺激组（12.1%）（ $F=9.82$, $p<0.001$ ）。临床应答率（HAMD减分 $\geq 50\%$ ）高频组达70.8%，显著高于低频组41.7%（ $\chi^2=4.62$, $p=0.032$ ）及伪刺激组16.7%（ $\chi^2=18.34$, $p<0.001$ ）。2. 安全性：共报告5例轻微头痛（高频组3例，低频组2例），均通过调整刺激强度缓解，未发生癫痫等严重不良事件。3. 功能改善：高频组CDI评分下降幅度（47.5%）显著高于对照组（ $p=0.007$ ），且CGI改善指数显示76%患者达到“明显进步”。讨论 本研究首次系统验证rTMS在青少年抑郁群体中的临床应用价值。高频左侧刺激展现出显著优于传统低频模式的疗效，可能与青少年前额叶神经可塑性增强有关。这一发现支持将rTMS作为药物难治性青少年抑郁的二线治疗方案。但需注意以下局限性：①样本量较小且随访期仅8周，需扩大样本验证长期效果；②未分层分析不同病因亚组的响应差异；③缺乏脑影像学指标佐证神经机制。未来研究应结合功能磁共振探索生物标志物，并建立基于年龄的个性化刺激参数体系。

结论：10Hz左侧背外侧前额叶rTMS可安全有效地改善青少年抑郁症状，其疗效优势提示靶向调控前额叶-边缘系统功能连接的重要性。本研究为青少年非药物治疗提供了高质量循证依据，具有重要临

床转化价值。

关键词 经颅磁, 青少年, 抑郁症

Correlations of Oxidative Stress Markers with Niacin Sensitivity in Male Patients with Chronic Schizophrenia

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Background: Schizophrenia is a debilitating mental disorder linked to oxidative stress (OS) and inflammatory dysregulation. Emerging evidence suggests impaired niacin sensitivity in schizophrenia patients, potentially reflecting OS and inflammation. This study investigated correlations between OS markers and niacin sensitivity in male chronic schizophrenia patients to elucidate pathophysiological mechanisms and identify biomarkers.

Methods: The cohort of this cross-sectional study included 80 male chronic schizophrenia patients and 40 matched healthy controls. Blood samples were collected for analysis of nitric oxide (NO), total nitric oxide synthase (TNOS), inducible nitric oxide synthase (iNOS), constitutive nitric oxide synthase (cNOS), total antioxidant capacity (TAC), and vitamin E (VE). Skin niacin sensitivity was assessed via the erythema response to topical niacin. Clinical symptoms were evaluated using the Positive and Negative Syndrome Scale (PANSS). Statistical analyses (t-tests, analysis of variance, and logistic regression) were conducted to identify associations.

Results: TNOS, iNOS, cNOS, TAC, and VE levels were significantly lower in the patient group than in the healthy control group ($p < 0.001$). Reduced skin erythema response in patients ($p < 0.001$) was correlated with lower TAC activity. Plasma NO levels were positively correlated with PANSS positive symptom scores ($r = 0.370$, $p = 0.004$). TAC was a significant predictor of an impaired niacin response ($OR = 1.009$, $p = 0.022$).

Conclusion: Chronic schizophrenia is characterized by disrupted redox balance and diminished niacin sensitivity, implicating oxidative-inflammatory crosstalk in disease pathology. A weakened niacin response, associated with antioxidant deficits, may serve as a biomarker of the severity of OS. These findings underscore the potential of antioxidant therapies to modulate clinical outcomes. Further longitudinal studies are needed to validate causal relationships and therapeutic implications.

Key Words schizophrenia; oxidative stress; niacin sensitivity; nitric oxide; total antioxidant capacity.;

Gender differences and risk prediction of Depression patients with Non-suicidal Self-injury (NSSI) among Chinese adolescents

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Objective: Adolescence is a critical period for physical and mental development, but it is also a time for mental health issues, especially when depression is prevalent. Non-suicidal self-harm (NSSI) behavior is becoming increasingly common among adolescents with depression, and understanding the underlying mechanisms and gender differences is crucial for developing effective intervention measures. This study aimed to investigate gender differences in depression patients with NSSI among adolescents and provide a feasible direction for predicting NSSI.

Methods: A total of 1627 adolescent depression patients (1240 with NSSI) were recruited from 16 hospitals between 2020 and 2021. We collected demographic information, depressive symptoms (using Patient Health Questionnaire-9, PHQ-9), emotion facial recognition (seven emotions, with seven images selected for each emotion), and emotion regulation ability (using the Emotion Regulation Questionnaire for Children and Adolescents, ERQ-CA-C). Use binary logistic regression and Area Under Curve (ROC) analysis were used to identify factors associated with NSSI.

Results: The results showed that the prevalence of NSSI was similar in male (75.57%) and female (76.39%) patients. Significant gender differences were observed in age (15.40 ± 1.53 vs. 14.73 ± 1.62 , $t=6.015$, $p<0.001$), educational years (9.55 ± 1.69 years vs. 8.94 ± 1.71 for males, $t=5.166$, $p<0.001$) and racial distribution (96.2% males were Han Chinese, 88.9% females were Han Chinese, $\chi^2=13.034$, $p=0.001$). No significant gender differences were found in emotional facial recognition. The most common method of NSSI was to cut or scratch the skin. The age distribution of NSSI behavior reached its peak at different ages for males and females (males at 17 years old, accounting for 31.8%, and females at 12 years old, accounting for 91.7%). Binary logistic regression analysis showed that regardless of gender, a history of mental illness, lower cognitive reappraisal scores, and higher PHQ-9 scores were significantly correlated with NSSI. In addition, lower scores on the surprise subscale for emotion recognition were associated with NSSI in females. ROC curve analysis showed that the combination of these factors had better diagnostic accuracy in predicting NSSI than using PHQ-9 alone.

Conclusion: In conclusion, this study highlighted the importance of considering gender differences and emotional regulation strategies in the assessment and treatment of NSSI among adolescent depression patients. The findings provided a more precise theoretical foundation and practical guidance for mental health interventions, emphasizing the need for tailored approaches to address this complex issue.

Key Words depression, NSSI, adolescents, emotional face recognition, gender differences

人格和焦虑抑郁症状在大学生儿童期虐待与自杀意念间的链式中介作用

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目的：验证人格和焦虑抑郁症状在大学生儿童期虐待与自杀意念的关系中发挥链式中介作用的理论假设。

方法：抽取江苏省3所高校2374名大学生，实施人口社会经济学资料调查问卷、儿童期虐待史自评量表（PRCA）、简式大五人格问卷（NEO-FFI-R）、贝克抑郁自评问卷（BDI）、焦虑自评量表（SAS）、自杀意念量表（SIS）等量表测试。

结果：（1）采用Harman单因素检验进行共同方法偏差的检验，结果发现， $KMO=0.905$ ，Bartlett's球形检验 $\chi^2=47084.023$ ， $P<0.001$ ，因子分析显示特征根大于1的因子有33个，最大因子方差解释率为12.730%，表明研究数据不存在共同方法偏差问题。（2）相关分析发现，大学生的儿童期虐待与神经质、焦虑症状、抑郁症状和自杀意念呈正相关（ $P<0.01$ ），与外向性、友善性、谨慎性呈负相关（ $P<0.01$ ）。神经质与焦虑症状、抑郁症状和自杀意念呈正相关（ $P<0.01$ ），外向性、开放性、友善性和谨慎性分别与抑郁症状、焦虑症状、自杀意念呈负相关（ $P<0.01$ ）。自杀意念与焦虑症状、抑郁症状呈正相关（ $P<0.01$ ）。（3）构建中介作用结构方程模型，进行拟合检验，结果显示，模型的适配度指数 $df=4.515<5.000$ ， $CN=391>200$ ， $PGFI=0.663>0.50$ ， $PNFI=0.748>0.50$ ， $PCFI=0.757>0.50$ ，饱和模型 $>AIC<$ 独立模型，模型与样本数据契合良好； $RMSEA=0.050\leq 0.050$ 、 $GFI=0.967$ 、 $AGFI=0.951$ ， $NFI=0.945$ 、 $RFI=0.931$ 、 $IFI=0.957$ 、 $TLI=0.945$ 、 $CFI=0.957$ ，模型适配良好。儿童期虐待既可直接影响大学生的自杀意念（ $S\beta=0.096$ ， $P<0.01$ ），又通过人格（ $S\beta=0.393$ ， $P<0.01$ ； $S\beta=-0.260$ ， $P<0.01$ ）、焦虑抑郁症状（ $S\beta=0.103$ ， $P<0.01$ ； $S\beta=0.928$ ， $P<0.01$ ）间接影响其自杀意念；人格即直接影响大学生的自杀意念（ $S\beta=-0.260$ ， $P<0.01$ ），又通过焦虑抑郁症状（ $S\beta=0.826$ ， $P<0.01$ ； $S\beta=0.928$ ， $P<0.01$ ）间接影响其自杀意念。

结论：人格和焦虑抑郁症状在大学生儿童期虐待与自杀意念的关系中发挥链式中介作用，其中神经质有正向作用，外向性、开放性、友善性和谨慎性有负向作用。

关键词 儿童期虐待；自杀意念；人格；焦虑；抑郁；大学生

长期住院男性精神分裂症患者皮肤烟酸敏感度与基质金属蛋白酶指标相关性分析

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目的：探讨长期住院男性精神分裂症患者的皮肤烟酸敏感度与血清MMP-9、MMP-2水平的相关性。

方法：纳入90例符合DSM-5诊断的男性长期住院患者（病程 ≥ 5 年），和40例年龄、性别、受教育程度、体质量指数、吸烟情况相匹配的健康人群(对照组)，使用浓度分别为0.0001、0.001、0.01、0.1mol/L的烟酸进行皮肤敏感度测试，ELISA法检测血清MMP-9、MMP-2浓度。以Spearman相关分析及多元回归模型检验变量关联，控制吸烟、年龄、病程、BMI、文化程度及RBANS等混杂因素。

结果：烟酸浓度为0.0001、0.001、0.01、0.1mol/L，在5 min、10 min、15 min、20 min时，患者组烟酸皮肤反应分数低于对照组($P < 0.01$)。患者组烟酸反应总分明显低于对照组($t = -6.793, P < 0.01$)。患者组RBANS各项评分均低于对照组($P < 0.01$)。烟酸低反应组和烟酸高反应组PANSS总分及各分量表评分之间差异无统计学意义($P > 0.05$)。烟酸低反应组在即刻记忆、言语功能、延时记忆、RBANS总分方面低于烟酸高反应组($P < 0.05$ 或 $P < 0.01$)。患者组MMP-9、MMP-2浓度显著升高，($P < 0.05$)。皮肤烟酸敏感度与血清MMP-9、MMP-2水平呈负相关。

结论：长期住院男性患者的烟酸敏感度降低与血清MMP-9、MMP-2升高显著相关，提示神经炎症可能通过血脑屏障损伤加剧烟酸反应缺陷。本研究支持MMP-9、MMP-2作为潜在生物标志物，需扩大样本验证其机制。

关键词 基质金属蛋白酶 烟酸皮肤反应 精神分裂症

烟酸皮肤潮红试验反应 与中国青少年睡眠障碍症状的贝叶斯网络分析

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目的：烟酸皮肤潮红试验（NSFT）反应异常可能反映磷脂代谢障碍，而后者与精神分裂症及睡眠障碍（SD）均存在潜在关联。然而，NSFT与SD症状间的相互作用机制尚未明确。本研究旨在利用贝叶斯网络分析探索中国青少年NSFT反应与SD症状的关联模式，并识别核心症状及性别差异，为睡眠障碍的早期干预提供理论依据。

方法：采用横断面研究设计，于2022年9月至2023年6月纳入江苏省镇江市及浙江省衢州市15-24岁青少年5,593名。使用匹兹堡睡眠质量指数（PSQI）评估SD症状（含7个子维度：主观睡眠质量、入睡时间、睡眠时长、睡眠效率、睡眠紊乱、催眠药物使用、日间功能障碍），并通过标准NSFT量化皮肤潮红反应。采用贝叶斯网络模型构建症状关联网络，计算期望影响（expected influence）和桥接强度（bridge strength）确定核心及桥接症状，并通过Bootstrap法（10,000次抽样）检验网络稳定性。

结果：网络模型显示，NSFT反应减弱与PSQI总分升高显著关联。核心症状中，睡眠质量和日间功能障碍具有最高中心性，而催眠药物使用是连接NSFT与SD的最强桥接症状。性别分层分析发现，女性群体中催眠药物的桥接作用更强，且其与睡眠紊乱的关联强度显著高于男性。

讨论：本研究首次揭示NSFT反应与SD症状的网络化关联模式，支持磷脂代谢异常可能通过影响前列腺素通路参与睡眠调控的假说。核心症状（如睡眠质量）的识别提示临床需关注青少年主观睡眠体验，而催眠药物在女性中的突出作用可能与性激素调节磷脂酶A2活性有关。研究局限性包括横断面设计无法推断因果关系，未来需结合纵向追踪与代谢组学验证机制。建议将NSFT作为睡眠障碍高风险青少年的简易筛查工具，并对女性群体开展针对性药物使用监测。

关键词 烟酸皮肤潮红试验；睡眠障碍；贝叶斯网络分析；青少年；性别差异

多基因风险评分在抑郁症风险评估中的应用： 基于东亚人群的表型分析

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研究背景：抑郁症（Major Depressive Disorder, MDD）是一种受多基因影响的复杂精神疾病，对全球公共健康构成重大挑战。多基因风险评分（Polygenic Risk Score, PRS）作为一种新兴的遗传学工具，已被广泛用于评估个体的疾病风险及比较不同个体之间的风险差异。本研究旨在通过PRS方法探讨其对抑郁症的风险预测能力。

研究方法：本研究初始纳入1000名符合DSM-IV抑郁症诊断标准的抑郁症患者和2000名健康对照者。以PGC（Psychiatric Genomics Consortium）东亚人群研究中MDD及精神分裂症（Schizophrenia, SCZ）表型的汇总统计数据，以及BBJ（Biobank Japan）研究中失眠（insomnia）及身体质量指数（BMI）表型的汇总统计数据作为base数据集，利用PLINK v1.90软件对数据进行严格的质量控制，并采用PRSice 2.3.5软件为通过质量控制的949名患者和1283名健康对照生成4种表型的最佳PRS。此外，通过PRSet功能计算基于基因本体（Gene Ontology, GO）基因集的通路PRS，以评估不同通路PRS与MDD的关联。在验证数据的正态性和方差齐性后，使用R 4.3.0软件进行独立样本t检验，比较MDD患者与健康对照者之间不同表型PRS的差异。随后，以性别为协变量，对各表型及通路PRS进行Logistic回归分析，以评估PRS对表型变异的解释能力。

研究结果：结果显示，MDD-PRS和insomnia-PRS在MDD患者与健康对照者之间存在显著差异，且MDD患者的PRS整体趋势高于健康对照者。SCZ-PRS在两组之间同样存在差异，但健康对照者的PRS整体趋势高于MDD患者。而BMI-PRS在两组之间未表现出显著差异。同表型特征预测分析表明，在最佳p值阈值（ $P_T=0.00240005$ ）下，MDD-PRS预测MDD患病状态模型的伪 R^2 值为0.131094。跨表型特征PRS预测分析显示，基于SCZ、insomnia和BMI表型的PRS构建的预测模型均未达到统计学显著性水平（SCZ-PRS Empirical- $P=0.207079$ ；insomnia-PRS Empirical- $P=0.0209979$ ；BMI-PRS Empirical- $P=0.733027$ ）。此外，通路PRS的模型解释效力高于单表型特征预测模型。其中，生物过程（Biological Process, BP）发现43个基因集、细胞组分（Cellular Component, CC）发现26个基因集、分子功能（Molecular Function, MF）发现16个基因集与MDD表型存在显著关联。

研究结论：本研究证实，MDD-PRS对MDD疾病状态具有预测价值。进一步的通路PRS分析显著提升了模型的解释效力，不仅增强了疾病预测的准确性，还为深入理解抑郁症的病理生理机制提供了新的研究方向。未来研究可进一步探索PRS在抑郁症精准医学中的应用潜力。

关键词 抑郁症；多基因风险评分；通路多基因风险评分

结合遗传标记利用机器学习构建抑郁症的发生风险预测模型

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目的：抑郁症是一种常见的心理疾病，据WHO预计，到2030年抑郁症将成为中国疾病负担的第二大疾病，在全球疾病负担中升至第一名。抑郁症的诊断主要依赖于临床医生的经验判断、患者的自述症状以及标准化的评估工具，这一过程耗时且可能受到主观因素的影响。抑郁症的发生受到多种因素影响，其中包括遗传因素。因此，开发一种基于遗传信息的、客观且高效的抑郁症预测模型，对于提高诊断的准确性和效率具有重要意义。机器学习算法能够帮助分析与抑郁症相关的基因变异，并进一步理解这些变异如何影响个体的患病风险。本研究旨在利用机器学习技术，结合个体的遗传信息，构建并优化一个能够有效预测抑郁症发生风险的模型。

方法：本研究共招募了929名抑郁症患者和489名健康人。所有受试者均采集一般人口学资料，采集外周血液样本。研究基于KEGG通路数据库，围绕MDD病因假说和发病机制以及抗抑郁作用相关通路共筛选1309个候选基因，通过Illumina MiSeq平台完成测序，使用PLINK软件筛选高质量SNP，剔除缺失率大于20%、最小基因频率低于5%的SNP标记。将数据集按7:3拆分为训练集和测试集，采用二分类logistic回归方法评估特征变量对结局二分类变量（抑郁症/健康对照）的影响。在模型评估方面，首先利用ROC曲线分析模型的诊断性能，计算AUC值来评估模型的区分能力。为了进一步优化和可视化预测结果，采用列线图展示各特征的贡献，并通过校准曲线评估模型的拟合优度。最终，我们通过以上可视化手段，深入分析模型的预测准确性与稳定性。

结果：最终数据集共纳入913名抑郁症患者和489名健康对照，共有22个特征变量被纳入，分别为2个人口统计学特征（性别、年龄）、20个SNPs（rs10937954、rs77472678、rs56039629、rs1049524、rs2229850、SNV21814、rs539785、rs3780519、rs2236380、rs58982257、SNV69068、rs12301635、SNV89829、rs12437474、rs2587763、rs138501838、rs1051319、rs5844366、rs5997703、rs5749135）。ROC曲线分析显示，模型在训练集中的AUC值为0.83（95% CI: 0.80–0.86），表明该模型具有较好的区分能力。测试集中的AUC值为0.73（95% CI: 0.68–0.78），模型在测试集上也表现出良好的稳定性和有效性。

结论：本研究针对抑郁症诊断，结合遗传因素，利用机器学习技术构建并优化了预测模型。通过深入的数据挖掘和模型验证，我们成功筛选了与抑郁症发病风险显著相关的基因标记，并构建了基于这些标记的预测模型，为抑郁症诊断及风险预测提供了新的视角和方法。未来我们将通过进一步的研究和探索，不断优化和完善模型，为抑郁症诊断和风险预测提供更加精准和有效的支持。

关键词 抑郁症；单核苷酸多态性；机器学习；遗传；风险预测

长期用药的慢性精神分裂症患者心脏血管受损的影响因素分析

姚亦涵、蒋焱、陈羽、郭洋、张志璐、徐治
东南大学附属中大医院

目的：精神分裂症是一种严重的精神疾病，发生心血管死亡和心源性猝死（SCD）的风险高出一般人群5倍。数据显示相较于健康人群，精神分裂症患者的心血管疾病发生率增加了近一倍。精神分裂症患者代谢综合征患病率为一般人群的2-3倍，且缺血性心脏病与代谢综合征密切相关，加之精神分裂症患者行冠状动脉造影术的实施难度大。因此，本文旨在通过对慢性精神分裂症患者有无代谢综合征来评价患者心脏的代谢和血管情况，从而帮助临床上的早期识别和干预，最终实现改善精神分裂症患者的心脏疾病方面的预后。

方法：本研究共招募233名慢性精神分裂症患者。收集资料包括人口学资料、临床特征、血液及代谢指标、心血管指标。研究数据按有无代谢综合征分为两组，代谢综合征诊断标准参考国际糖尿病联合会的定义，并录入SPSS 27.0软件进行统一计算。采用t检验、卡方检验进行差异性分析；不满足正态性时，采用秩和检验。对其中存在统计学差异的变量进一步作斯皮尔曼相关；再将其中具有显著相关性的变量纳入二元logistic回归分析，并采用ROC曲线分析某因素和代谢综合征的相关程度。

结果：以有无代谢综合征为分组条件，将入组精神分裂症患者分为无代谢综合征组（156人）和有代谢综合征组（77人）。最终我们发现两组在身高（ $p=0.046$ ），体重、BMI、腹围、上臂围、收缩压、丙氨酸氨基转移酶、甘油三酯、高密度脂蛋白胆固醇、载脂蛋白A1/载脂蛋白B（ $p=0.000$ ），舒张压、高血压病史、天冬氨酸氨基转移酶/丙氨酸氨基转移酶、 γ -谷氨酰转氨酶、尿酸（ $p=0.001$ ），糖尿病病史（ $p=0.022$ ），阳性（ $p=0.018$ ）、阴性（ $p=0.016$ ）症状评分，血小板计数（ $p=0.017$ ），淋巴细胞计数（ $p=0.025$ ），总蛋白（ $p=0.027$ ），白蛋白（ $p=0.046$ ），前白蛋白（ $p=0.027$ ），总胆红素（ $p=0.011$ ），直接胆红素（ $p=0.012$ ），低密度脂蛋白胆固醇（ $p=0.030$ ），载脂蛋白A1（ $p=0.008$ ），载脂蛋白B（ $p=0.002$ ），动脉粥样硬化指数（ $p=0.032$ ），血尿素氮（ $p=0.023$ ），电解质磷（ $p=0.018$ ），心脏药物数量（ $p=0.007$ ），代谢药物数量（ $p=0.044$ ），右肱踝脉搏波传导速度（ $p=0.048$ ），左肱踝脉搏波传导速度（ $p=0.033$ ）上有统计学差异。排除代谢综合征诊断标准涉及的因素后，进一步分析相关性，除阳性症状评分外，均显著相关。将相关的变量纳入回归方程，得到关于代谢综合征的回归方程，其中前白蛋白（ $p=0.024$ ），总胆红素（ $p=0.040$ ），丙氨酸氨基转移酶（ $p=0.032$ ）具有显著性，其曲线下面积分别为0.612、0.611、0.683。

结论：精神分裂症患者的前白蛋白、总胆红素越低，丙氨酸氨基转移酶越高，其患代谢综合征的可能性越大，心脏代谢及血管情况越差，说明精神分裂症患者的心脏血管问题可能受到蛋白、胆红素及转氨酶的异常代谢改变的影响。

关键词 精神分裂症；心血管疾病；代谢综合征

长期用药的慢性精神分裂症患者 心脏传导功能受损的影响因素分析

姚亦涵、蒋焱、陈羽、郭洋、张志璐、徐治
东南大学附属中大医院

目的：精神分裂症是一种严重的精神疾病，其患者发生心血管死亡和心源性猝死的风险高出一般人群5倍。数据显示相较于健康人群，精神分裂症患者的心血管疾病发生率增加了近一倍。已有研究发现精神分裂症患者存在心脏传导功能异常，且心电图对严重精神病患者的心脏风险评估作用也已被证实。因此，本文旨在通过对慢性精神分裂症患者的心电图异常的影响因素进行全面分析，从而对临床早期的识别和干预起到作用，最终实现改善精神分裂症患者的心脏疾病方面的预后。

方法：本研究共招募233名慢性精神分裂症患者。收集资料包括人口学资料、临床特征、血液及代谢指标、心血管指标。研究数据按心电图正常或心电图异常分为两组，其分类标准参考明尼苏达编码制定，并录入SPSS 27.0软件进行统一计算。采用t检验、卡方检验进行差异性分析；不满足正态性时，采用秩和检验。对其中存在统计学差异的变量进一步作斯皮尔曼相关；再将其中具有显著相关性的变量纳入二元logistic回归分析，并采用ROC曲线分析某因素和心电图异常结局的相关程度。

结果：以心电图是否异常为分组条件，将入组精神分裂症患者分为心电图正常组（164人）和心电图异常组（69人）。最终我们发现两组在舒张压（ $p=0.018$ ），甘油三酯（ $p=0.033$ ），是否使用利培酮（ $p=0.031$ ），苯海索当量（ $p=0.002$ ），右肱踝脉搏波传导速度、左肱踝脉搏波传导速度（ $p=0.003$ ），有无颈动脉多发斑块（ $p=0.046$ ），左侧颈动脉斑块厚度（ $p=0.040$ ）上有统计学差异。进一步采用斯皮尔曼相关，分析以上存在差异的变量和心电图之间的相关性，上述变量均表现出显著相关性，因此进一步通过二元logistic回归分析，分析上述变量与心电图异常之间的具体回归方程。其中舒张压（ $p=0.035$ ）和苯海索当量（ $p=0.011$ ）具有显著性，表示舒张压越高越容易造成精神分裂症患者心电图异常；苯海索当量越高，精神分裂症患者出现心电图异常的可能性越小。随后通过ROC曲线绘制舒张压和苯海索当量对精神分裂症心电图异常结局的影响曲线。舒张压和苯海索当量的曲线下面积分别为0.604、0.603。

结论：慢性精神分裂症患者的的心脏传导损伤可能与其舒张压升高、甘油三酯异常以及其全身血管情况相关，这一点提示了精神分裂症患者心脏传导受损和心血管损伤之间可能存在一定的联系；另外苯海索和利培酮作为两种药物相关的保护性因素，为临床治疗过程中制定和改进药物方案提供了依据。

关键词 精神分裂症；心血管疾病；心电图

基于外周血全转录组测序探讨重度抑郁症的转录组学特征

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目的：重度抑郁症是一种严重的精神疾病，据世界卫生组织公布，全球约有10亿人正在遭受精神障碍的困扰，其中抑郁症患者超过3.5亿人，预估到2030年，抑郁症将成为全球第一致残诱因。但是抑郁症

的发病机制仍然不清,抑郁症存在一定遗传易感性,本研究旨在基于全转录组测序和生物信息技术,筛选重度抑郁症患者与健康人群的差异表达基因,分析重度抑郁症发生发展过程中可能存在的信号通路,为后续研究提供分子生物学基础。

方法:本研究共招募了50名重度抑郁症患者及性别、年龄和文化程度相匹配的50名健康人。所有受试者均采集外周血样本,利用DNBSEQ测序平台完成真核生物转录组测序。基于R语言下的R Studio集成开发环境,对两组样本实施主成分分析(Principal Component Analysis, PCA)以系统解析基因表达数据的内在结构特征,识别组间整体表达模式差异。采用DESeq2筛选出重度抑郁症患者与健康人群之间的差异表达基因(differentially expressed genes, DEGs)。基于基因表达水平对差异表达基因进行基因本体论(Gene Ontology, GO)和京都基因与基因组百科全书(Kyoto Encyclopedia of Genes and Genomes, KEGG)功能富集分析。

结果:PCA分析图谱显示MDD组与对照组在基因表达谱层面存在整体性差异(PC1: 22% variance, PC2: 9% variance)。以 $|\log_2FC| \geq 0.5$ 且 $p < 0.05$ 为筛选标准,共鉴定出1086个显著的差异表达基因,其中表达上调基因435个、表达下调基因651个。差异表达基因的GO富集分析显示,差异表达基因能够参与淋巴细胞分化、单核细胞分化、细胞激活参与免疫反应等生物学过程;KEGG通路富集分析显示,差异表达基因主要富集于T细胞受体信号、破骨细胞分化、脂质与动脉粥样硬化等信号通路。

结论:本研究通过全转录组测序技术和生物信息学分析方法,系统地筛选出重度抑郁症组与健康对照组之间的差异表达基因,并运用功能富集分析深入剖析了这些差异表达基因在生物学过程及信号通路上的富集情况,阐明这些基因能够通过多种途径参与重度抑郁症的发生发展,为重度抑郁症的诊断和发病机制的研究提供了理论参考。

关键词 重度抑郁症、全转录组、差异表达基因、功能富集分析

抑郁情绪与心理生理因素交互作用的网络分析

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背景:重性抑郁障碍(Major Depressive Disorder, MDD)是一种高度异质性的精神疾病,其临床症状表现与个体的心理生理因素密切相关。既往研究多采用变量中心化方法,忽视了各症状及心理变量间的复杂交互关系。症状网络分析作为一种结构化分析工具,能够揭示症状与心理特征之间的动态连接机制,有助于识别关键症状节点及其对心理干预的潜在价值。本研究旨在运用网络分析方法探讨MDD患者抑郁情绪与心理生理因素之间的交互作用,并比较性别间的网络结构差异。

方法:本研究共纳入520例MDD患者,按照7:3的比例随机分为训练集($n = 363$)和验证集($n = 157$)。评估工具包括:汉密尔顿抑郁量表(HAMD-17)、汉密尔顿焦虑量表、斯奈思-汉密顿快感量表(SHAPS)、状态-特质焦虑问卷、反刍思维量表、康奈-戴维森心理弹性量表和童年创伤问卷。通过症状网络分析构建HAMD-17和SHAPS总分与其他心理学变量间的网络结构,进一步分析节点的中心性指标(中介度、接近度、强度、期望影响度)以及比较男性与女性群体间的网络结构异同。

结果:(1)整体网络结构显示,抑郁情绪与反刍思维三个维度呈正相关,与心理弹性三个维度呈负相关。节点中心性分析显示,情感忽视中介度最高(2.636),特质焦虑接近度最高(1.293),心理弹性中的坚韧性强度最高(1.192),情感虐待期望影响度最高(1.137);(2)性别比较结果显示,女性与男性的网络整体强度差异不显著(女性 = 5.539;男性 = 6.105; $S = 0.566$; $P = 0.378$),边缘权

重差异亦不显著 ($M = 0.139$; $P = 0.934$) ; (3) 在女性群体中, 反刍思维中抑郁反刍维度中介度最高 (2.841), 心理弹性中的坚韧性接近度 (1.399) 与强度 (1.343) 居首, 情感忽视的期望影响度亦最高 (1.363)。在男性群体中, 特质焦虑的中介度 (1.887) 与期望影响度 (0.943) 居首, 心理弹性中的力量感接近度最高 (1.289), 坚韧性强度最高 (1.208)。

结论: 本研究结果表明, 反刍思维与心理弹性在MDD患者的抑郁情绪网络中具有核心作用。性别分层分析进一步提示, 女性中情感虐待和情感忽视可能是影响抑郁情绪的关键中介节点, 而男性中特质焦虑则可能是主要的中介因素。网络分析方法有助于从系统层面揭示心理生理因素与抑郁症状之间的复杂交互机制, 并为性别敏感的干预策略提供理论依据。

关键词 抑郁障碍, 症状网络分析, 心理弹性, 反刍思维, 性别差异

青少年精神类药物中毒急救: 多学科团队 及自我控制理论一体化

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目的: 探究分析多学科团队协作机制及自我控制理论一体化在青少年患者精神类药物中毒急救中的应用及效能。

方法: 选取于2023年1月至2024年12月入住湖州市某三级甲等医院急诊抢救室的81例精神类药物中毒的青少年患者作为本次研究对象, 按照电脑盲选的方式, 将81例患者随机分为对照组 (41例) 与观察组 (40例)。对照组采用常规护理的护理模式进行干预; 观察组采用多学科团队协作机制及自我控制理论一体化的护理模式进行干预。对比分析对照组与观察组抢救室滞留时间、不良反应消失时间和并发症发生率。

结果: 经过护理干预, 观察组在抢救室滞留时间、不良反应消失时间和并发症发生率等方面均明显优于对照组, 其中 ($P < 0.05$), 差异具有统计学意义。

结论: 青少年患者精神类药物中毒急救过程中, 采用多学科团队协作机制及自我控制理论一体化效果显著, 能够明显降低并发症发生率, 缩短抢救室滞留时间和不良反应消失时间, 并提高患者及家属满意度, 在临床上具备优良的效果, 值得推广与应用。

关键词 多学科团队; 自我控制理论; 青少年; 精神类药物中毒

Investigating the Association Between Loneliness and Hypertension in Older Chinese Adults: A National Cross-Sectional Study

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Objective: Research exploring the relationship between loneliness and hypertension in older adults remains

scarce, with a lack of substantial evidence. This study applies interpretable machine learning techniques to examine the interplay between loneliness, hypertension, and psychosocial factors in Chinese older adults.

Methods: Data from a nationwide cross-sectional study were used, including 3,962 participants aged 60 and above after data cleaning. Participants were classified into hypertension/non-hypertension and loneliness/non-loneliness groups. eXtreme Gradient Boosting (XGBoost) models were constructed, and model performance was assessed through confusion matrices. The Shapley Additive exPlanations (SHAP) method was employed for model interpretation and visualization. Discrimination and net benefit were evaluated through Decision Curve Analysis (DCA) and Receiver Operating Characteristic (ROC) curves.

Results: Among the 3,962 participants, 1016 (25.6%) had hypertension, and 1,207 (30.5%) experienced loneliness. The model exhibited strong performance, with area under the curve (AUC) values of 0.895 for hypertension and 0.940 for loneliness prediction. SHAP analysis identified the top 15 predictors, such as hypertension, stress, age, etc. For loneliness, the top 15 predictors included anxiety, depression, social support, etc.

Conclusion: This study highlights the significant role of loneliness in the development of hypertension among Chinese adults aged 60 and above, with hypertension having minimal predictive value for loneliness. Psychosocial factors such as anxiety, depression, personality traits, stress, social support, and family communication are linked to both hypertension and loneliness. The interpretable predictive model offers insights into the identification of psychosocial risk factors for hypertension in older adults and can inform psychosocial interventions aimed at managing hypertension.

Key Words Keywords: Loneliness; Hypertension; Psychosomatic; Geriatrics; Machine-Learning

苏州市青少年心理健康状况现状分析

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目的: 了解苏州市青少年心理健康状况并分析其影响因素, 为提高青少年心理健康水平提供科学依据和理论指导。

方法: 采用整群分层随机抽样的方法, 于2019年6月至12月对苏州市某城区的18所中学进行调查, 采用一般情况调查表、患者健康问卷抑郁量表(PHQ-9)、广泛性焦虑量表(GAD-7)、匹兹堡睡眠质量指数量表(PSQI)调查其心理状况水平及其影响因素。

结果: 本次研究的10176名青少年睡眠质量平均得分4.99分, 焦虑情绪平均得分5.15分, 抑郁情绪平均得分5.30分, 睡眠问题检出率19.4%, 抑郁情绪检出率18.0%。多因素 logistic 回归分析显示, 消极应对方式 (OR=1.061, P<0.001)、父母关系差 (OR=2.644, P<0.001)、学校欺凌 (OR=1.446, P<0.001)、焦虑情绪 (OR=1.153, P<0.001)、高年级 (OR=1.807, P<0.001)、女性 (OR=1.217, P<0.001) 是青少年睡眠问题的危险因素。父母关系差 (OR=2.103, P<0.001)、学校欺凌 (OR=1.731, P<0.001)、焦虑情绪 (OR=1.502, P<0.001)、睡眠问题 (OR=1.305, P<0.001)、女性 (OR=1.193, P<0.05)、是青少年抑郁情绪的危险因素。

结论: 青少年心理状况问题存在, 消极应对方式、父母关系差、学校欺凌、焦虑情绪、女性是青少年心理健康状况的危险因素, 应针对危险因素进行干预, 提高青少年心理健康水平。

关键词 青少年 心理健康 影响因素 预防

Global public concern related to anxiety disorder and its influencing factors (2004–2023): Evidence from Google Search Trends

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Background: Anxiety disorder is a widespread mental health problem affecting hundreds of millions globally. As social pressure and the pace of life accelerate, the manifestations of anxiety disorders have become increasingly complex, drawing significant public attention to mental health. The widespread use of the Internet, coupled with the stigma surrounding mental illness, has led individuals to seek information and assistance through online search tools when dealing with conditions like anxiety. Despite this, there is a notable lack of research and analysis on online search trends related to anxiety disorders.

Objective: This study is to analyze global online search trends related to anxiety disorders in order to reveal changes in public concern and their relationship with environmental, socioeconomic factors, and cultural context, thereby providing insights for the development of mental health policies and interventions.

Methods: This study collected global relative search volume (RSV) data related to anxiety disorder from Google Trends, covering the period from January 2004 to July 2024, and analyzed annual trends. To predict RSV, we employed Long Short-Term Memory (LSTM) and Autoregressive Integrated Moving Average (ARIMA) models. Key turning points in the trend were identified using the Pruned Exact Linear Time (Pelt) algorithm and piecewise regression analysis. In addition, Pearson correlation analysis was used to explore the relationship between RSV for anxiety disorder and variables such as day duration and suicide rate. Cluster analysis was also performed to explore the similarity of RSV across different countries/regions, and to investigate its relationship with GDP per capita.

Results: From 2004 to 2023, the RSV related to anxiety disorder exhibited a generally upward trend. Public concern about anxiety disorder peaked in 2022 and 2023. Both LSTM and ARIMA models were utilized to predict RSV, and the results indicated high prediction accuracy for both two models. The trend of RSV varied across different countries/regions, showing distinct patterns. The relationship between day duration and suicide rates with RSV for anxiety disorders also differed among countries. Cluster analysis categorized countries and regions into two main clusters. In the first cluster, average RSV was significantly and positively correlated with GDP per capita, whereas in the second cluster, no statistically significant correlation was observed.

Conclusion: By analyzing global online search trends related to anxiety disorders, this study reveals shifts in public attention and its relationship with the natural environment, socioeconomic factors, and cultural background. These insights offer valuable references for developing mental health policies and interventions.

Key Words anxiety disorder; Google search trends; day duration; suicide rate

SleepCLNet: A GAN-Enhanced EEG Sleep Staging Model with Multi-Scale Selective Attention and BiLSTM for Sleep Disorders

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Sleep stage classification is crucial for diagnosing and treating sleep disorders, as it aids clinicians in analyzing sleep architecture and managing conditions like insomnia and hypersomnia. In clinical practice, sleep specialists often struggle with manually annotating long sleep data, a time-consuming and subjective process that can lead to inconsistencies and reduce annotation reliability. In this study, we propose SleepCLNet, a deep learning-based method for automatic sleep stage classification. The method utilizes the multi-scale selective attention module (MSAM) to effectively extract features from electroencephalogram (EEG) signal at various temporal scales, thereby obtaining a comprehensive multi-scale representation of the EEG data. To capture the temporal dependencies inherent in EEG signal, we employ a Bidirectional Long Short-Term Memory network (BiLSTM) in combination with an attention mechanism, which adaptively integrates features across all time steps, thereby improving the accuracy of sleep stage classification. To address the class imbalance issue in the dataset, we propose a data augmentation module based on Generative Adversarial Network (GAN), called CLGAN. This module generates additional training samples for underrepresented sleep stages, thereby improving the learning ability and generalization of the model. Extensive experimental evaluations were conducted on an EEG dataset comprising 20 patients with sleep disorders. The results demonstrate that SleepCLNet achieves an accuracy of 0.834 and a precision of 0.781 in classifying the five sleep stages in the test set. After incorporating CLGAN for data augmentation, the accuracy and precision improved to 0.846 and 0.813, respectively, validating the effectiveness and reliability of the proposed approach.

Key Words Internet of Behavior, Sleep staging, Deep learning, Electroencephalogram, Attention mechanism

1 例PCI术后重度抑郁患者的护理

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目的：对1例PCI术后重度抑郁患者实施双心护理模式联合正念减压法为临床护理提供实践经验。

方法：充分评估该患者因PCI术后所引起重度抑郁发作（标准ICD-10：8条核心/附加症状），所引起的生理、心理、社会、精神等方面的痛苦且存在躯体化症状（疼痛）与负性认知（悲观）的恶性循环；运用双心护理理念联合正念减压疗法（MBSR）进行个性化干预。治疗分阶段进行，逐步建立信任、识别思维、挑战信念、激活行为，并最终巩固效果。通过认知重构、行为激活和正念练习等方法，患者能够逐步恢复对生活的掌控感和积极情绪。

结果：通过双心护理模式与正念减压法的结合，患者的情绪状态明显改善：抑郁评分、焦虑评分均有所下降，对生活的兴趣和积极性有所恢复，身体疼痛感也有所减轻。患者表示，护理过程中的支持与陪伴使其感到被理解和接纳，从而逐步建立起对康复的信心。此外，患者对护理人员的信任度提高，护患关系更加和谐，护理满意度显著提升。

关键词 PCI术后 重度抑郁 双心护理 正念减压

Association Between Serum Klotho Levels and Cognitive Function in Chronic Schizophrenia

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Objective: This study aims to investigate the association between serum Klotho protein levels and cognitive function in patients with chronic schizophrenia. Methods: A total of 108 patients aged 18 - 60 years with chronic schizophrenia were recruited as the patient group between January and December 2024, along with 83 age-matched healthy controls. Serum Klotho levels were measured in all participants. Psychopathological symptoms in the patient group were evaluated using the Positive and Negative Syndrome Scale (PANSS). Cognitive function was assessed using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS).

Results: Serum Klotho levels were significantly lower in the patient group compared to the control group [(233.61 ± 50.35) pg/mL vs. (347.11 ± 62.64) pg/mL, $P < 0.01$]. The patient group also scored significantly lower than the control group on the total RBANS score and all its subscale scores ($P < 0.01$). In patients, serum Klotho levels positively correlated with Immediate Memory remained significant ($r = 0.258$, Bonferroni corrected $P = 0.042$). Klotho showed no significant associations with cognition in healthy controls (all $P > 0.05$). Further stepwise multiple regression analysis, even after adjusting for potential confounding factors revealed that Klotho protein remained significantly associated with immediate memory ($\beta = 0.195$, $t = 2.141$, $p = 0.035$). This suggests that Klotho protein acts as a protective factor for immediate memory.

Conclusion: Patients with chronic schizophrenia exhibit significant cognitive impairment and reduced serum Klotho protein levels. The observed correlation between Klotho levels and specific cognitive domains suggests that Klotho protein may be involved in the mechanisms underlying cognitive dysfunction in schizophrenia.

Key Words Schizophrenia; Klotho; Cognitive Function

抑郁症患者及配偶二元应对潜在剖面分析及影响因素研究

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目的：探究抑郁症患者及其配偶二元应对的潜在类别，进一步分析不同类别的人群特征及影响因素，为实施针对性干预提供参考。

方法：采用便利抽样法，选取2023年7~2025年1月在江苏省扬州五台山医院就诊的抑郁症患者及其配偶作为研究对象，采用一般资料调查表、二元应对问卷、夫妻沟通模式问卷进行问卷调查。采用潜在剖面分析探索抑郁症患者及其配偶二元应对的潜在类别，采用多元Logistic回归分析不同类别的影响因素。

结果：抑郁症患者及配偶二元应对分为4种潜在类别：低二元应对组（23.89%）、高消极应对组（9.44%）、低压力沟通组（28.89%）、高二元应对组（37.78%）。Logistic回归分析显示，抑郁症夫妻建设性沟通、要求/回避沟通及双回避沟通模式及患者受教育程度是抑郁症患者及其配偶二元应对不同类别的影响因素（ $P < 0.05$ ）。

结论：抑郁症患者及其配偶二元应对存在明显分类特征，临床工作者应从二元整体视角对不同二元应对特征的抑郁症夫妻开展针对性干预，以提高二元应对水平。

关键词 抑郁症；配偶；二元应对；潜在剖面分析；影响因素

整合艺术治疗对慢性精神分裂症患者康复的影响

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目的：探究整合艺术治疗干预对住院慢性精神分裂症患者阴性症状、生活质量及自尊的影响。

方法：采用随机数字表法将来自康复病区的各40名住院慢性精神分裂症患者分为干预组（ $n = 40$ ）和对照组（ $n = 40$ ）。在常规药物治疗和护理的基础上，对照组实施单一的音乐治疗，干预组实施整合艺术治疗干预，比较两组患者阴性症状、生活质量和自尊水平。

结果：干预后，干预组患者阴性症状、生活质量均低于对照组（ $P < 0.01$ ），自尊水平高于对照组（ $P > 0.05$ ）。

结论：实施整合艺术治疗干预可以改善慢性精神分裂症患者的阴性症状及生活质量，提高患者自尊水平，且优于音乐治疗。

关键词 整合艺术治疗；慢性精神分裂症；阴性症状；生活质量；自尊

预见性精细化护理对女性住院精神分裂症患者的症状改善及社会功能康复的作用分析

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目的：探讨预见性精细化护理对住院精神分裂症患者的症状改善及社会功能康复的作用。

方法：选取本院收治的女性精神分裂症患者（70例），选例时间：2022年6月至2023年10月；对研究对象进行分组，参照随机数字表法，其中35例为对照组，35例为观察组。对照组患者采用常规护理，观察组患者采用预见性精细化护理，两组患者均持续干预8周。统计比较两组患者各项指标。

结果：干预后两组患者BPRS评分较干预前均降低，且观察组更低；干预后两组患者SSRS评分较干预前均升高，且观察组更高；干预后观察组社会兴趣、社会能力、个人整洁维度评分均高于对照组，精神病表现、激惹维度评分均低于对照组；干预后两组患者CGI评分较干预前均升高，且观察组更高，以上数据经计算显示，存在统计学意义（ $P<0.05$ ）。

结论：住院精神分裂症患者采用预见性精细化护理有利于改善症状，强化社会功能，缓解行为障碍，促进康复。

关键词 关键词：精神分裂症；预见性精细化护理；社会功能；

在双向情感障碍，目前为不伴有精神病性症状的躁狂发作患者护理中运用临床路径护理模式的临床效果分析

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目的：分析临床护理路径用于双相情感障碍，目前为不伴有精神病性症状的躁狂发作患者的干预效果。

方法：收集60例双相情感障碍，目前为不伴有精神病性症状的躁狂发作患者进行随机分组，对照组接受常规护理，观察组予以临床护理路径，通过对照两组躁狂评分、生活质量评分、病耻感评分及护理满意度，分析护理效果。

结果：干预后，观察组BRMS评分更低（ $P<0.05$ ）；干预后，观察组生活质量各维度评分更高（ $P<0.05$ ）；干预后，观察组病耻感评分低于对照组（ $P<0.05$ ）；观察组非常满意率更高（ $P<0.05$ ），两组护理总满意度无显著差异（ $P>0.05$ ）。

结论：临床护理路径在双相情感障碍，目前为不伴有精神病性症状的躁狂发作患者中应用价值高，可以改善患者症状，降低其病耻感，提升生活质量。

关键词 双相情感障碍，目前为不伴有精神病性症状的躁狂发作；临床路径；护理

舞动治疗在女性应激障碍患者康复中的应用

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目的：本研究旨在探讨舞动治疗（Dance Movement Therapy, DMT）对女性应激障碍（Post-Traumatic Stress Disorder, PTSD）患者康复效果的影响，分析其在改善情绪调节、躯体症状及社会功能方面的作用，为临床心理干预提供实证依据。

方法：研究对象：选取2021年1月至2023年6月某二甲等专科医院科确诊为PTSD的女性患者80例，年龄18-50岁，随机分为实验组（40例）与对照组（40例）。干预方案：实验组：接受每周2次、每次90分钟的团体舞动治疗，持续8周。内容包括身体觉察、情绪表达、即兴创作及象征性动作整合。对照组：采用常规心理治疗（认知行为疗法，CBT），频率与时长同实验组。评估工具：采用创伤后应激障碍量表（PCL-5）、抑郁-焦虑-压力量表（DASS-21）及躯体症状自评量表（SSS）进行基线、干预后及3个月随访评估。统计学

方法：使用SPSS 26.0进行重复测量方差分析与独立样本t检验。

结果：量表评分：干预后实验组PCL-5总分较对照组显著降低（ $t=4.32, p<0.001$ ），DASS-21焦虑维度差异明显（ $t=3.78, p=0.001$ ）躯体症状改善：实验组SSS评分下降幅度高于对照组（ $\Delta M=12.3 \pm 2.1$ vs $5.6 \pm 1.8, p<0.01$ ）。长期效果：随访阶段实验组复发率（12.5%）显著低于对照组（30.0%, $\chi^2=4.02, p=0.045$ ）。质性反馈：85%实验组患者报告“通过动作释放压抑情绪”，70%表示“身体感知能力提升”。

结论：舞动治疗通过非语言表达与身心整合机制，可有效缓解女性PTSD患者的创伤反应及共病情绪问题，且长期效果优于传统CBT。建议将DMT纳入创伤康复的辅助治疗体系，未来需扩大样本量并探索神经生物学机制。

关键词：舞动治疗 女性 应激障碍 康复

罹患应激相关障碍罪犯临床特征

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目的：了解罪犯罹患应激相关障碍的临床特征，探索其应对处置策略。

方法：采用回顾性病例对照研究方法。选取某省级监狱系统在2022年3月-2025年2月间明确诊断为应激相关障碍的成年在押罪犯50例作为研究组。同时，匹配年龄、性别、犯罪类型等基本变量的非应激相关障碍精神障碍罪犯50例及无精神障碍诊断的普通罪犯50例作为对照组。收集所有研究对象的社会人口学资料、详细犯罪记录、完整的精神专科诊疗资料。采用标准化工具（如ICD-10用于诊断，HCR-20评估暴力风险，社会功能量表评估适应能力等）进行系统评估和数据分析，并运用SPSS26统计处理。

结果：研究组罪犯报告童年少年时期虐待（躯体/情感/性虐待）比例显著高于对照组（ $p<0.001$ ）。

其犯罪类型以冲动性、反应性暴力犯罪为主（如故意伤害、故意杀人、家庭暴力），占比达52.3%，显著高于非应激精神障碍组的暴力犯罪率（38.1%， $p=0.007$ ）和普通罪犯组（31.5%， $p<0.001$ ）。核心症状群包括高度警觉（92.0%）、闯入性创伤记忆/闪回（85.5%）、情绪调节困难（易激惹、愤怒爆发，78.0%）、分离症状（41.0%）、快感缺失及社会退缩（65.5%）。回避行为和负性认知改变亦普遍存在。物质使用障碍（尤其是酒精和兴奋剂滥用）、抑郁和焦虑共病率高，分别为76.0%、48.5%和42.0%，共病边缘性人格障碍也较常见。另外，研究组在人际关系、职业功能、遵守社会规范方面受损严重。HCR-20评估显示其未来暴力风险显著高于普通罪犯组（ $p<0.01$ ）。再犯率（25.4%）显著高于普通罪犯组（16.8%， $p=0.024$ ）。该类型罪犯区别于精神分裂症和人格障碍罪犯，他们往往有疾病认知和悔罪感，但常常被情绪失控所掩盖。

结论：罹患应激相关障碍的罪犯群体呈现出一系列独特而复杂的临床特征。主要为普遍存在严重创伤史，核心症状表现为高警觉性、创伤再体验、情绪失控和解离倾向；犯罪类型集中于反应性暴力；物质滥用、抑郁焦虑共病率高企；社会功能严重受损且再犯风险突出。这些特征显著区别于其他类型精神障碍罪犯及普通罪犯。针对该群体亟需开展创伤聚焦治疗、情绪调节技能训练、物质滥用干预及暴力预防方案的综合矫治模式，以有效缓解症状、修复功能、降低再犯风险，并以保障公共安全。

关键词：应激相关障碍；罪犯；临床特征；

CCL5-CCR5驱动的中性粒细胞浸润在抑郁症中的作用及机制研究

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目的：研究中性粒细胞的中枢浸润在抑郁症发生发展中的作用，发现调控中性粒细胞浸润的分子靶标，为抑郁症治疗和药物研发提供新方向和新策略。

方法：应用抑郁症患者血液样品进行单细胞测序，发现变化显著的免疫细胞类型；采用C57BL/6小鼠制备慢性社交挫败应激（Chronic Social Defeated Stress, CSDS）和慢性温和不可预知应激（Chronic Unpredictable Mild Stress, CUMS）抑郁症模型；流式细胞分析（flow cytometry, FCM）和免疫荧光检测抑郁症模型小鼠脑内浸润迁移的免疫细胞类型及主要浸润的脑区；构建CD45.1骨髓嵌合小鼠的抑郁症模型，流式细胞分析检测脑内CD45.1阳性的中性粒细胞数量比例，证实中性粒细胞从外周循环向脑内浸润迁移；应用中和抗体（Anti-Ly6G）耗竭中性粒细胞，通过社交趋避（Social Interaction, SI）、糖水偏好实验（Sucrose Preference Test, SPT）、悬尾实验（Tail Suspension Test, TST）、强迫游泳实验（Force Swimming Test, FST）和开场试验（Open Field Test, OFT）观察耗竭中性粒细胞对小鼠抑郁样行为的影响。

收集抑郁症模型小鼠脑内的中性粒细胞，进行高通量SMART-seq测序发现并证实中性粒细胞CCR5信号显著增强；应用多重免疫组化检测CCR5的配体-CCL5主要表达在星形胶质细胞；通过给予CCR5拮抗剂马拉维诺（Maraviroc, MVC）、构建Ccr5-/-骨髓嵌合小鼠和海马脑区特异性敲减星形胶质细胞CCL5（AAV-GFAP-CCL5 shRNA）等手段，靶向抑制星形胶质细胞CCL5-中性粒细胞CCR5信号通路，观察其对小鼠抑郁样行为和中性粒细胞中枢浸润的影响；应用WB（Western Blot）、免疫荧光（Immunofluorescence, IF）、高尔基体染色、透射电镜（Transmission electron microscope, TEM）、膜片钳技术检测中枢浸润的中性粒细胞对海马脑区突触数量和形态、突触传递及神经元电位活动的影响。

结果：1. 单细胞RNA测序显示抑郁症患者中性粒细胞数量增加 抑郁症患者外周血单细胞测序结果表明中性粒细胞数量显著升高。

2. 抑郁症模型小鼠外周循环及海马脑区中性粒细胞数量比例显著增加 抑郁症模型（CSDS和CUMS）小鼠脑内和外周循环的髓系细胞数量比例显著增加，其中中性粒细胞数量增加最为显著。

3. 抑郁症中中性粒细胞从外周循环向海马脑区浸润迁移 构建CD45.1骨髓嵌合小鼠的抑郁症模型，流式细胞术研究发现脑内可检测到从外周循环向脑内浸润的CD45.1免疫阳性的中性粒细胞。

4. 耗竭中性粒细胞显著缓解小鼠抑郁样行为 CSDS模型制备过程中及模型制备成功后分别给予中性粒细胞中和抗体（Anti-Ly6G），系统性耗竭中性粒细胞均可显著缓解小鼠抑郁样行为。

5. 抑郁症模型小鼠星形胶质细胞CCL5-中性粒细胞CCR5信号增强 抑郁症模型小鼠海马脑区中性粒细胞SMART-seq测序结果表明CCR5趋化因子受体表达上调，多重免疫组化发现CCR5的配体CCL5表达同步上调，且主要表达在海马脑区星形胶质细胞，提示星形胶质细胞CCL5-中性粒细胞CCR5信号可能参与调控中性粒细胞的海马浸润。

6. CCR5小分子拮抗剂抑制中性粒细胞的脑内浸润并改善小鼠抑郁样行为 给予CCR5拮抗剂治疗后，小鼠抑郁样行为改善，脑内浸润的中性粒细胞数量比例减少，海马区突触丢失现象显著缓解。

7. CCR5敲除抑制中性粒细胞的脑内浸润并缓解小鼠抑郁样行为 构建Ccr5-/-骨髓嵌合小鼠的抑郁症模型，Ccr5-/-髓系细胞移植WT受体小鼠后可显著改善小鼠抑郁样行为，减少脑内海马浸润的中性粒细胞数量与比例，缓解海马神经元突触丢失现象，增强微小兴奋性突触后电流（miniature excitatory postsynaptic currents, mEPSC）和神经元的电活动。

8. 星形胶质细胞CCL5敲减抑制中性粒细胞脑内浸润并改善小鼠抑郁表型 星形胶质细胞条件性敲减CCL5显著缓解小鼠抑郁样行为，减少脑内浸润的中性粒细胞数量比例，抑制海马神经元突触丢失，增强mEPSC频率和幅度及神经元电活动。

讨论：海马浸润的中性粒细胞在抑郁症发生发展中发挥重要作用。星形胶质细胞CCL5-中性粒细胞CCR5通路驱动抑郁症中中性粒细胞的海马浸润。浸润的中性粒细胞吞噬神经元树突棘，抑制突触传递和神经元电活动，引发小鼠抑郁样表型。抑制CCL5-CCR5信号轴可抑制中性粒细胞向海马迁移浸润，减轻中性粒细胞的病理损伤作用，缓解小鼠抑郁样表型。

关键词 抑郁症，中性粒细胞，星形胶质细胞，CCL5,CCR5

功能连接指标预测MECT治疗重度抑郁症疗效的研究

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目的：基线的功能连接指标结合机器学习预测无抽搐电休克疗法（Modified electroconvulsive therapy, MECT）治疗重度抑郁症疗效的脑影像学标志物。

方法：收集符合入组条件的重度抑郁症患者30例，MECT前后行静息态功能磁共振扫描，汉密顿抑郁量表24项评估治疗前后的抑郁症状。DPABI V8.1软件进行数据预处理，提取治疗前后低频振幅（Amplitude of Low Frequency Fluctuation, ALFF）、分数低频振幅（fractional Amplitude of Low Frequency Fluctuation, fALFF）和局部一致性（Regional Homogeneity, ReHo）值，在治疗前后两组间行配对样本t检验以获得差异脑区，以差异脑区为掩膜，基于Matlab R2022b使用自动解剖标记（Anatomical Automatic Labeling, AAL）图谱提取抑郁症患者基线的功能连接矩阵特征。T检验法选择特征，支持向量机进行预

测，留一交叉验证法估计模型的泛化能力。准确度、敏感度和特异度，以及曲线下面积描述分类能力，预测准确度行1000次置换检验。

结果：以左内侧前额叶为掩膜的功能连接在不同掩膜中预测表现最佳，在支持向量机中预测准确度为73.33%。曲线下面积0.71，左内侧额上回与右背外侧前额叶的功能连接在分类预测中的权重最高。

讨论：背外侧前额叶是额顶执行网络发挥调节作用的重要节点，作用于默认模式网络的内侧前额叶区域，左内侧额上回被划分为背内侧前额叶，属于默认模式网络中的一部分。默认模式网络在进行自我反省（反刍）时被证明是活跃的，而反刍与自杀意念和行为有关，故而推测难以调节消极思维，这可能导致情绪失调，情感调节涉及情感抑制或认知重新评估等策略，这取决于背外侧前额叶（认知评估）、腹内侧前额叶（评估的选择/抑制）（包括眶内额上回）和背内侧前额叶（语义自我反思过程）的完整性。额顶执行网络可以用于自上而下地改变我对话，而在抑郁症中额顶执行网络处于功能失调状态，相关神经影像学提示，存在一种因果神经机制，额顶执行网络通过该机制负向调节默认模式网络。本研究结果提示左内侧额上回与右背外侧前额叶的功能连接可以预测MECT治疗重度抑郁症缓解与非缓解的临床结局，推测MECT神经调控机制涉及额顶网络自上而下的注意力调节，进而调节默认模式网络紊乱的功能状态，起到情绪调节作用，从而发挥MECT抗抑郁疗效。

关键词 重度抑郁症；无抽搐电休克治疗；静息态功能磁共振成像；机器学习

住院精神分裂症患者跌倒风险感知现状及影响因素研究

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目的：本研究旨在调查住院精神分裂症患者跌倒风险感知的现实状态，并分析其影响因素，以期为制定有效的针对性干预措施提供参考。

方法：本研究选取2024年12月至2025年2月期间在江苏省某三甲精神专科医院住院的精神分裂症患者为研究对象。我们收集了患者的一般资料，使用阳性与阴性症状量表（PANSS）、Tilburg衰弱量表、匹兹堡睡眠质量指数量表（PSQI）及患者跌倒风险感知量表作为因变量进行调查。采用单因素分析及多元线性回归分析方法探讨影响住院精神分裂症患者跌倒风险感知的影响因素。

结果：有效回收调查问卷130份，回收有效率为94.9%。住院精神分裂症患者的跌倒风险感知得分为（15.07 ± 12.31）分。多元线性回归分析结果显示，性别、既往骨折史、近一年发生过跌倒情况及衰弱程度均为影响住院精神分裂症患者跌倒风险感知水平的影响因素（ $p < 0.05$ ）。

结论：住院精神分裂症患者的跌倒风险感知水平相对较低，建议精神科护理人员应当准确评估患者的跌倒风险，并结合相关影响因素进行针对性的干预，以减少住院精神分裂症患者跌倒事件的发生，提高患者安全管理水平。

关键词 精神分裂症；住院期间；跌倒；风险感知；影响因素分析

PDCA循环管理在提升精神科急性男病区晨间护理质量与效率中的实践

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目的：本研究旨在评估PDCA循环管理在精神科急性男病区晨间护理质量与效率中的效果。

方法：研究对象为江苏省某三级甲等精神专科医院，计划于2023年7月至2024年10月实施PDCA循环管理。随机抽取实施前后各100张床单元，比较晨间“*One Bed One Wet Sweep*”操作的落实率、护理质量与效率，及15名护士和60名住院患者的满意度差异。

结果：PDCA循环管理后，“一床一湿扫”的落实率显著提高至88.00% ($P=0.001$)，较前期67.00%明显上升；护士晨间护理的质量与效率也有显著提升，总得分由55分增至88分 ($P<0.001$)。完成时间方面，在落实率为67%时，实施后的时间缩短至14.33分钟 ($P<0.001$)；当落实率达100%时，时间缩短至26分钟 ($P<0.001$)。护理人员的满意度从72.5分增至90分 ($P=0.002$)，患者满意度由71.67%提升至91.66% ($P=0.029$)。

结论：PDCA循环管理在急性精神科男病房的实施，能有效提高晨间护理的执行率和质量，增强护理人员及患者的满意度，具备推广价值。

关键词 PDCA循环管理；精神科；晨间护理质量；晨间护理效率；湿式扫床；住院感受度；护理满意度。

rTMS联合舍曲林治疗青少年抑郁症的疗效及其相关性研究

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青少年抑郁症以情绪低落、精力下降为主要表现，常伴随疼痛认知异常和快感缺失，传统治疗效果有限。重复经颅磁刺激 (rTMS) 在成人抑郁症中疗效明确，但其对青少年群体的多维度症状改善作用尚需验证。本研究采用病例对照设计，纳入77例青少年抑郁症患者，分为rTMS组 ($n=62$) 和伪刺激组 ($n=15$)。研究期间，rTMS组接受20次rTMS刺激和舍曲林治疗，在基线、治疗两周和四周时，采用汉密尔顿抑郁量表 (HAMD-24)、抑郁自评量表 (SDS)、疼痛灾难化量表 (PCS)、疼痛警觉问卷 (PVAQ) 及快感缺失量表 (DARS) 进行评估，通过重复测量方差分析检验时间效应、组间效应及其交互作用。研究发现 rTMS组HAMD和SDS评分显著降低 (时间效应: $HAMD-F=50.15, p<0.01$; $SDS-F=29.43, p<0.01$)，且疗效优于伪刺激组 (交互作用: $HAMD-F=3.34, p=0.04$; $SDS-F=3.24, p=0.04$)。rTMS组在疼痛警觉性 (PVAQ) 方面显著改善 (交互作用 $F=3.24, p=0.04$)；疼痛灾难化 (PCS) 无组间交互效应 ($p=0.63$)。rTMS组DARS评分显著上升 (交互作用 $F=3.62, p=0.03$)，快感缺失

持续改善。提示 rTMS可有效改善青少年抑郁症患者的抑郁核心症状、疼痛警觉性及快感缺失，四周干预效果显著，为青少年抑郁症的非药物治疗提供了新证据。

关键词 rTMS、青少年抑郁、舍曲林、伪刺激

Inflammatory modulation of sertraline use in patients with depression: A systematic review and meta-analysis

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Background: The increased evidences indicated that there was a correlation between major depressive disorder (MDD) and inflammatory pathways. Sertraline, the frontline intervention of selective serotonin reuptake inhibitors (SSRIs) for MDD, is presumed to decrease proinflammatory cytokine levels. This systematic review and meta-analysis aim to advance comprehension of how the antidepressant sertraline intricately modulates inflammatory pathways and delineates the intricate functions of pivotal cytokines within this framework.

Methods: Electronic searches of Web of Science, MEDLINE, and Embase yielded 294 unique records for the period Jan, 2007 to Feb, 2024. The studies included measured inflammatory cytokine concentrations in patients with MDD before and after sertraline treatment. And the effects of sertraline on their inflammatory cytokines were analyzed. Two independent coders reviewed all relevant articles and extracted the data. Testing estimates were conducted through random effects meta-analysis.

Results: Seven studies (237 participants) were included. There was no significant evidence provided to demonstrate that sertraline can reduce the levels of TNF- α (SMD \pm 0.76, 95% confidence interval [CI] = -0.41, 1.93, Z \pm 1.27, p = 0.20) and IL-6 (SMD \pm 0.96, 95% CI = -0.30, 2.22, Z \pm 1.49, p = 0.14).

Limitations: Results are limited due to the small number of studies that precluded examination of some moderating variables. The results are correlation, not causation.

Conclusion: Sertraline could not reduce serum levels of IL-6 and TNF- α in patients with MDD. The antidepressant mechanism of sertraline may not base on the pathway of inflammation.

Registration This research was recorded in the International Prospective Register of Systematic Reviews (PROSPERO) database in January 2024, bearing the registration number CRD42024507002.

Key Words Keywords: Sertraline Major depressive disorder Proinflammatory cytokines

Effect of transcranial direct current stimulation on the sleep electroencephalogram in major depressive disorder: findings of intrinsic multiscale entropy from a randomized controlled study

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Background: Transcranial direct current stimulation (tDCS) is a non-invasive method of brain stimulation used to treat individuals with major depressive disorder (MDD). In this study we determined the differences in sleep electroencephalogram (EEG) complexity between patients with and without MDD.

Method: Twenty-two healthy controls (HCs) and 37 MDD patients were recruited. The patients were assigned randomly to receive either active tDCS stimulation (n = 19) or sham stimulation (n = 18). To assess sleep structure and EEG complexity, polysomnography was applied to all MDD patients and HCs. Intrinsic multi-scale entropy (iMSE) was utilized to quantify the complexity of EEG signals.

Result: By comparison with PSG data from HCs, the characteristic EEG complexity during rapid eye movement (REM) sleep was validated in MDD patients. More importantly, there was a notable increase in the iMSE of non-REM sleep stage 1(N1) following active tDCS stimulation compared to pre-stimulation, and there was no longer a significant distinction between patients and HCs. There was a marked contrast in complexity between the sham group and HCs both before and after tDCS sham stimulation.

Conclusion: tDCS was shown to nearly restore the sleep N1 EEG complexity in MDD patients to that of HCs. The intervention effect of tDCS stimulation in MDD patients is characterized by iMSE of EEG signals.

Key Words electroencephalogram, intrinsic multi-scale entropy, major depressive disorder, N1 stage, transcranial direct current stimulation.

Summary of Best Evidence for Psychosocial Interventions in Adults With Alcohol Use Disorder: An Evidence-Based Review

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Purpose: To retrieve, evaluate, and summarize the evidence on psychosocial interventions for adults with alcohol use disorder (AUD), providing a reference for healthcare professionals in guiding patients through psychosocial interventions.

Patients and methods: A systematic search was performed across domestic and international guideline databases, professional association websites, and academic databases for clinical decisions, recommended practices, guidelines, evidence summaries, expert consensus, systematic reviews, and randomized controlled trials regarding psychosocial interventions for adults with AUD. The search period extended from the inception of the database to February 2025. Two trained researchers independently evaluated the literature's quality and systematically extracted and summarized the available evidence.

Results: A total of 20 studies were included, consisting of six clinical decisions, four guidelines, six systematic reviews, and four randomized controlled trials. A total of twenty-seven pieces of evidence were synthesized across eight dimensions: pre-intervention assessment, intervention goals, scope of application, multidisciplinary team involvement, intervention timing, intervention frequency, monitoring frequency and indicators, and precautions.

Conclusion: This study systematically reviewed the most robust evidence for psychosocial interventions in adults with AUD, establishing a scientific basis for clinical application. Implementing evidence-based interventions that take into account hospital resources and patient preferences can effectively reduce alcohol consumption and enhance the quality of life for adults with AUD.

Key Words alcohol use disorder, adults, psychosocial interventions, evidence summary, evidence-based nursing

脑梗死患者伴发抑郁的危险预测模型的构建及验证

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目的: 脑梗死患者伴发抑郁的影响因素, 构建并验证其风险预测列线图模型。

方法: 选取2021年9月至2024年9月江苏省复员退伍军人精神病医院及符合入组标准的165名患者作为研究对象, 根据是否伴发抑郁将其分为脑梗死伴发抑郁组(PSD)组($n=80$)与脑梗死未伴发抑郁组(PSND)组($n=85$)。收集两组患者临床资料。采用多因素Logistic回归分析探讨PSD患者的影响因素, 采用R软件构建列线图模型并采用内部数据验证该模型的性能。采用 Hosmer-Lemeshow 检验和受试者工作特征曲线(ROC)评估该列线图模型的区分度和拟合程度, 采用临床决策曲线分析(DCA)其临床适应性。

结果: 经单因素分析发现, 两组性别、年龄、文化程度、Barthel指数、NIHSS评分、病变部位、脑梗死时间以及血清CRP水平差异均有统计学意义($P<0.05$)。经多因素Logistic回归分析可得: 性别、Barthel指数、NIHSS评分、额叶病变、丘脑病变均是PSD的独立危险因素($P<0.05$)。基于多因素Logistic回归分析结果构建PSD患者风险预测列线图模型。ROC曲线分析结果显示, 该列线图模型预测PSD的AUC为0.975, 敏感度为94.5%, 特异度为87.7%, 提示该模型具有较好的区分度。Hosmer-Lemeshow拟合优度检验显示该模型具有较好的拟合度($P>0.05$)。DCA曲线提示高风险阈值概率在0.03~0.91时, 该列线图模型预测脑梗死患者发生抑郁的临床使用价值较高。

结论: 基于性别、Barthel指数、NIHSS评分、病变部位构建的列线图模型可有效预测脑梗死患者伴发抑郁的风险, 但仍需进一步验证。

关键词 脑梗死; 抑郁; Barthel指数; NIHSS评分

文拉法辛联合重复经颅磁刺激治疗脑梗死后抑郁患者的临床疗效研究

朱姝

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目的：探讨文拉法辛联合重复经颅磁刺激(rTMS)治疗脑梗死后抑郁患者的临床疗效。

方法：选取2021年9月至2024年9月江苏省复员退伍军人精神病医院住院病房收治的98例不伴有认知功能受损的脑梗死后抑郁的患者，按照数字表法随机分为观察组和对照组，每组49例。两组均给予脑梗死常规药物治疗及综合康复训练，在此基础上，对照组(n=49)实施文拉法辛联合伪刺激治疗，观察组(n=49)采取文拉法辛联合重复经颅磁刺激治疗。分别于治疗前及治疗第4周末采用汉密尔顿抑郁量表(HAMD)、临床疗效总评量表(CGI)评估抑郁程度及疗效，改良Barthel指数(MBI)评定日常生活能力，采用治疗副反应量表(TESS)评定治疗中出现的不良反应。

结果：两组HAMD、CGI及MBI评分方面，治疗前无显著差异($P>0.05$)；治疗后，2组HAMD、CGI及MBI评分较治疗前均有改善($P<0.05$)，且r TMS组优于对照组($P<0.05$)。观察组不良反应发生率与对照组间无明显统计学差异($P>0.05$)。

结论：文拉法辛联合重复经颅磁刺激可改善脑梗死后抑郁患者的抑郁程度及日常生活能力，疗效优于文拉法辛单药治疗，并且安全性好。

关键词 文拉法辛；重复经颅磁刺激；脑梗死后抑郁

双相I型障碍不同临床相肠道菌群、粪便和血液代谢物特征及其相关性研究

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背景：双相I型障碍(Bipolar I Disorder, BDI)是以躁狂和抑郁交替发作为特征的重性精神疾病，其病理机制尚未完全阐明。本研究基于微生物-肠-脑轴理论，探究BDI不同临床相的肠道菌群特征及其与宿主粪便及血浆代谢物的关联，旨在揭示疾病不同状态时的潜在病理机制与生物标志物。

方法：纳入在徐州市东方人民医院的住院BDI患者144例，其中包括BDI躁狂发作(Manic episode of bipolar I disorder, BDI-M)47例、抑郁发作(Depressive episode of bipolar I disorder, BDI-D)47例、BDI稳定期(Stable episode of bipolar I disorder, BDI-S)50例，同时招募性别及年龄相匹配的健康对照(Healthy Control, HC)50例。收集受试者的一般情况及病情资料。采集受试者粪便样本进行16S rDNA扩增子测序分析肠道菌群特征。采集受试者粪便及血浆样本使用非靶向LC-MS代谢组学检测分析代谢特征。使用MetOrigin 2.0整合肠道菌群及代谢组学数据，构建菌群-代谢物关联网络。

结果：(1)肠道菌群特征：BDI-M与BDI-D患者菌群多样性显著降低，菌群组成显著偏离HC，

BDI-S群落结构部分恢复。肠球菌属 (Enterococcus)、马文布赖恩菌属 (Marvinbryantia) 等菌群与BDI不同临床相症状的严重程度显著相关。随机森林模型筛选出8种属水平菌群作为特异性标志物组合可较好地区分BDI-M及HC (AUC=0.822)。

(2) 粪便代谢组学特征: 在粪便样本中, BDI-M与HC的差异代谢物在抗坏血酸和醛糖酸代谢、吗啡成瘾通路显著富集; BDI-D与HC的差异代谢物在初级胆汁酸生物合成及嘌呤代谢通路显著富集; BDI-S与HC的差异代谢物在组氨酸代谢、赖氨酸降解等通路显著富集。

(3) 血浆代谢组学特征: 在血浆样本中, BDI-M与HC的差异代谢物在类固醇激素生物合成、亚油酸代谢、苯丙氨酸代谢、GABA能突触、吗啡成瘾及昼夜节律通路显著富集; BDI-D与HC的差异代谢物在可卡因成瘾、咖啡因代谢、酒精依赖性、长时程增强、谷氨酸能突触以及昼夜节律同步化等通路中显著富集; BDI-S与HC的差异代谢物在初级胆汁酸生物合成、神经活性配体-受体交互作用、亚油酸代谢及组氨酸代谢、苯丙氨酸代谢等通路中显著富集。

(4) 菌群-代谢物关联分析: 与HC相比, BDI-M患者的肠道菌群可能通过调控赖氨酸生物合成及嘌呤代谢通路导致宿主的能量代谢功能紊乱; 乳杆菌属、瘤胃球菌属 (Ruminococcus) 等菌群可能通过调控磷脂酰胆碱代谢影响神经膜稳定性, 而类固醇激素代谢异常则反映HPA轴功能紊乱。与HC相比, BDI-D患者初级胆汁酸合成通路异常, 提示存在肝肠循环紊乱, 幽门螺杆菌属与谷氨酸代谢的关联可能导致神经递质的紊乱程度加重, 色氨酸-犬尿氨酸通路向神经毒性代谢物分支偏移。与HC相比, BDI-M及BDI-D的共性特征为血浆中胞壁酸和棕榈酸含量升高、粪便中肌苷含量降低, 提示肠道屏障功能受损、慢性炎症、氧化应激和谷氨酸能系统功能紊乱可能与BDI发病有关。

结论: 本研究通过构建BDI不同临床相的菌群-代谢物的关联, 揭示BDI不同临床相中的微生物-肠-脑轴功能紊乱, 有助于阐明肠道菌群结构失调通过代谢物介导影响BDI宿主能量代谢、神经递质平衡及免疫炎症反应的潜在病理机制, 为BDI未来以微生物-肠-脑轴为干预措施的治疗策略奠定理论基础。

关键词 双相I型障碍; 肠道菌群; 代谢组学; 代谢通路; 微生物-肠-脑轴

1990-2021年中国精神障碍负担研究 ——基于全球疾病负担数据

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目的: 精神障碍是造成全球疾病负担的主要原因之一。本研究利用2021年全球疾病负担数据, 了解我国最新精神障碍的疾病负担及其变化趋势, 以期精神卫生服务策略制定、分配医疗资源提供科学依据, 保障我国居民全生命周期精神健康。

方法: 利用2021年全球疾病负担 (Global Burden of Disease 2021, GBD 2021) 研究数据库, 采用患病数、标化患病率、伤残调整生命年 (disability-adjusted life years, DALY)、标化DALY率、年度变化百分比 (annual percentage change, APC) 以及平均年度变化百分比 (average annual percentage change, AAPC) 等指标比较1990年与2021年中国居民精神障碍疾病负担情况及其变化趋势。采用Joinpoint 5.3.0版本软件进行Joinpoint回归分析, 以年龄标化患病率、年龄标化DALY率分别为因变量, 年份为自变量, 通过对数线性模型对1990-2021年我国居民精神障碍按性别、疾病种类的年龄标化患病率、年龄标化DALY率变化

趋势进行拟合模型计算。

结果：1990到2021年间，精神障碍患病数从13402.5万例增加为17443.1万例，DALY从1710.6万人年增加为2320.9万人年。2021年标化患病率、标化DALY率分别高于和低于1990年。2019年后精神障碍的疾病负担升高（标化患病率：APC=2.18， $P<0.05$ ；标化DALY率：APC=1.90， $P<0.05$ ）。2021年，男性（11440.7/10万人，95%UI: 10435.1, 12570.6）精神障碍的年龄标化患病率高于女性（11281.7/10万人，95%UI: 10425.8, 12224.2）。同样的，ADHD（3045.3 vs. 1215.7）、孤独症谱系障碍（967.9 vs. 318.2）和品行障碍（640.1 vs. 284.2）均在男性中的年龄标化患病率高于女性；焦虑障碍、抑郁障碍、智力发育障碍、双相情感障碍和进食障碍在女性中的年龄标化患病率更高。在不同性别和年份中，焦虑障碍和抑郁障碍是精神障碍中患病人数最多的病种，患病人数最少的病种为双相情感障碍和进食障碍。精神障碍在不同性别中产生的DALY均在50-59岁年龄段达到峰值。2021年，精神障碍在导致我国DALY的原因中顺位第五。根据不同精神障碍病种，抑郁障碍在2021年导致我国DALY的原因中位列12。除0-14岁组中焦虑障碍是造成疾病负担的主要原因，抑郁障碍所致DALY在所有年龄组中排名最高。

结论：2021年中国精神障碍仍给我国居民带来较大的疾病负担，特别是在2019年COVID-19大流行后。抑郁障碍、焦虑障碍仍是我国主要的精神障碍负担的主要原因。精神障碍对不同年龄段造成的伤残负担亟需关注，如需关注50-59岁群体心理健康状况，预防60岁以上群体的躯体疾病以减少精神障碍共病躯体疾病带来的疾病负担。精神障碍对女性造成的疾病负担比男性严重；与1990年相比，精神障碍疾病负担有所上升，应更深入研究我国精神障碍疾病负担及其影响因素，从而更好地防治精神障碍，降低疾病负担。

关键词 精神障碍；疾病负担；患病率；伤残调整寿命年；

帕金森病患者DBS术后焦虑抑郁症状观察

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目的：帕金森病患者常伴有焦虑抑郁的非运动症状，严重影响康复与生活质量，DBS手术可以改善帕金森病患者的运动症状，本研究关注DBS术后帕金森病患者焦虑抑郁等非运动症状的疗效，以及DBS术后期程控的相关选择。

方法：通过对一定数量入组的帕金森病 DBS 术后患者进行长期观察，定期评估其焦虑、抑郁的症状、量表评分等等，并结合术后期程控参数调整情况进行分析。

结果：结果显示，经DBS术后期程控干预，患者焦虑抑郁症状有明显改善，其焦虑自评量表（SAS）和抑郁自评量表（SDS）得分较术前及术后未程控阶段显著降低。术后期程控通过精准调控电刺激参数，影响大脑神经核团相关神经递质释放及神经环路功能，从而对焦虑抑郁情绪起到调节作用。

讨论：本研究为帕金森病患者术后综合治疗提供新思路，强调术后期程控除了改善帕金森病患者运动症状的同时，对焦虑抑郁等非运动症状也有明显改善，对患者的日常生活、康复训练等等过程中的心理状态改善也有重要价值，有助于提升患者整体预后与生活质量，未来可进一步深入探究其作用机制及优化程控方案。

关键词 帕金森病患者 DBS手术 焦虑抑郁

Shared but Distinct Functional Connectome Profiles Underlying Rumination in Depressed and Healthy Individuals

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Background Rumination—a passive, repetitive focus on negative thoughts and emotions—is a key risk factor for the onset and recurrence of depression. While prior studies have linked rumination to altered functional connectivity (FC) in large-scale brain networks, most relied on self-reported measures and resting-state fMRI, potentially missing key neural dynamics active during actual ruminative states.

Methods We recruited 43 patients with major depressive disorder (MDD) and 42 matched healthy controls (HCs). Using a validated rumination state task (RST), we induced active rumination and distraction states during fMRI scanning. We constructed whole-brain functional connectomes and examined both functional connectivity (FC) patterns and a graph-theoretical feature (eigenvector centrality) across conditions. We also examined associations between the graph-theoretical feature and depressive symptom severity.

Results Both MDD patients and HCs exhibited enhanced FC between the core and medial temporal lobe (MTL) subsystems of the default mode network (DMN) during rumination compared to distraction. However, edge-level analyses revealed group differences: HCs showed greater FC increases between the ventral attention network (VAN) and the DMN-MTL subsystem. We found a significant interaction effect regarding eigenvector centrality in a VAN node (Par_Med_4_R). During rumination, patients with MDD exhibited elevated eigenvector centrality compared to distraction, whereas HCs did not. This elevation correlated positively with depression severity.

Conclusions This study provides the first comprehensive characterization of the active rumination connectome in MDD. Results highlight a shared DMN mechanism and a VAN-specific topological alteration in MDD, supporting the theory that excessive automatic constraints from attentional systems may drive maladaptive rumination. These findings offer novel insights into the neural basis of depressive rumination and suggest new targets for individualized neuromodulation therapies.

Key Words rumination, fMRI, major depressive disorder, graph theory, functional connectome

Modulation of Adaptive and Maladaptive Emotion Regulation Strategies and Prefrontal–Motor Circuit Plasticity by rTMS in Major Depressive Disorder: A Longitudinal Functional Near–Infrared Spectroscopy Study

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Background: Major depressive disorder (MDD) is characterized by emotion dysregulation and prefrontal functional abnormalities. While repetitive transcranial magnetic stimulation (rTMS) alleviates depressive symptoms, its neural mechanisms and links to cognitive–emotional regulation remain unclear.

Objective: This study investigated how rTMS modulates emotion regulation strategies and brain function in MDD.

Methods: Seventy–one MDD patients underwent rTMS targeting the dorsolateral prefrontal cortex for two weeks. Functional near–infrared spectroscopy (fNIRS) measured prefrontal and motor cortex activation at baseline and post–treatment. Clinical symptoms [17–item hamilton depression scale (HAMD–17), hamilton anxiety scale (HAMA)], emotion regulation strategies (CERQ), and brain–behavior relationships were analyzed via parallel independent component analysis (pICA) and Spearman's correlations.

Results: Post–treatment, HAMD–17 and HAMA scores decreased significantly ($P < 0.001$). CERQ scores for maladaptive strategies (self–blame, rumination, catastrophizing, blaming others) declined, while adaptive strategies (positive focus, planning reappraisal, positive reappraisal) improved (all $P \leq 0.001$). Increased activation in Broca's area, primary motor cortex, and supplementary motor area was observed (PFDR = 0.032). Baseline bilateral medial prefrontal and left dorsolateral prefrontal activity correlated positively with adaptive strategies ($r = 0.4$, corrected $P < 0.05$), whereas left temporal activity inversely correlated with maladaptive strategies ($r = -0.29$, corrected $P < 0.05$). Baseline depression/anxiety severity strongly associated with maladaptive strategies (all $P < 0.001$), while post–treatment symptom improvement specifically correlated with enhanced positive reappraisal ($P < 0.05$).

Conclusion: rTMS concurrently ameliorates depressive symptoms, optimizes emotion regulation, and enhances prefrontal–motor cortex activation, implicating neural plasticity in this network as a potential mechanism of rTMS efficacy.

Key Words major depressive disorder (MDD), repetitive transcranial magnetic stimulation (rTMS), functional near–infrared spectroscopy (fNIRS), emotion regulation strategies, longitudinal study

急性缺血性卒中相关失眠障碍患者 炎性细胞因子的表达及对预后的影响

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目的：探讨急性缺血性卒中（Acute ischemic stroke, AIS）患者早期白介素-6（Interleukin-6, IL-6）、白介素-8（Interleukin-8, IL-8）、高敏 C 反应蛋白（hypersensitive-CRP, hs-CRP）和血小板/淋巴细胞比值（platelet to lymphocyteratio, PLR）表达水平与卒中后失眠（post-stroke insomnia, PSI）的相关性，探究其发病机制及对预后的影响，为临床诊断及预测评估提供一定理论依据。

方法：选取 2024 年 1 月至 2024 年 9 月南京医科大学附属苏州医院东区神经内科收治的 63 例患者作为研究对象。所有患者按照《中国急性缺血性卒中诊治指南2023》中标准诊断。根据《中国成人失眠诊断与治疗指南 2023 版》失眠诊断标准结合失眠严重程度（insomnia severity index, ISI）评分，将其分为 PSI 组和非 PSI 组。在根据 ISI 评分将 PSI 组分为轻度、中度、重度 PSI 组。根据改良 Rankin 评分（modified rankin scale, mRS）将 PSI 患者分成预后良好组和预后不佳组。收集患者年龄、性别、BMI、既往高血压、糖尿病、吸烟、饮酒等一般资料，采集入院 24h 内空腹血，血常规、肝肾功能，血脂四项，IL-1 β ，TNF- α 、IL-6、IL-8、hs-CRP 等指标，并根据血小板及淋巴细胞计数计算其比值 PLR。所有患者需完成美国国立卫生研究院卒中量表（national institute of health stroke scale, NIHSS）。针对具有统计学显著性的观察指标，分别与 NIHSS 评分及改良 mRS 评分执行 Pearson 或 Spearman 相关性检验。利用受试者工作特征曲线（Receiver Operating Characteristic Curve, ROC）曲线评估血清生物标志物对卒中后失眠及临床转归的预测效能。

结果：1. 本研究纳入 63 例 AIS 患者诊断 PSI 患者 29 例（男性 19 例，女性 10 例），失眠发病率为 46.03%，其中轻度失眠 20 例（68.97%）；中度失眠 7 例（24.14%）；重度失眠 2 例（6.9%）。

2. PSI 组年龄大于非 PSI 组患者，差异有统计学意义（ $P < 0.05$ ）。PSI 组和非 PSI 组在性别，BMI，高血压史，糖尿病史，吸烟史，饮酒史比较，差异无统计学意义（ $P > 0.05$ ）。

3. PSI 组和非 PSI 组在甘油三酯、LDL、HDL、肌酐、IL-1 β 、TNF- α 水平比较，差异无统计学意义（ $P > 0.05$ ）。非 PSI 组患者尿酸大于 PSI 组，差异有统计学意义（ $P < 0.05$ ）。

4. PSI 组患者 hs-CRP 水平显著高于非 PSI 组（ $P < 0.05$ ）；单因素回归分析显示 hs-CRP 与 PSI 诊断的 AUC 为 0.723（95%CI：0.589~0.857），灵敏度为 62.1%，特异性为 88.2%。PSI 组与非 PSI 组 IL-8, IL-6, PLR 水平比较，差异无统计学意义（ $P > 0.05$ ）。IL-8, IL-6, PLR 诊断 PSI 的 AUC 分别为 0.599（95%CI：0.456~0.742），0.543（95%CI：0.397~0.688），0.541（95%CI：0.396~0.685）。

5. AIS 后失眠严重程度和 mRS 评分与 IL-8 水平呈正相关（ $P < 0.05$ ）。

6. PSI 患者预后不良组血清 IL-8 水平明显高于预后良好组。

7. IL-8 判断预后能力 AUC 值为 0.788（95%CI：0.593~0.983），灵敏度为 63.6%，特异性为 94.4%。

结论：AIS 合并失眠患者血清 hs-CRP 水平升高，其水平可能对 AIS 后失眠诊断有预测价值。AIS 合并失眠患者血清中 IL-8 水平与失眠严重程度及 mRS 评分相关，IL-8 水平可能对 AIS 合并失眠患者预后具有预测价值。

U-Shaped Relationship Between Blood Pressure and Suicide Attempts in Untreated First-Episode Major Depressive Disorder with Anxiety Symptoms

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Objective Although the role of autonomic-cardiovascular interactions in affective disorders has been extensively studied, the specific mechanisms by which they influence suicide susceptibility through blood pressure dysregulation in patients with anxiety-depression co-morbidity have not been elucidated. The present study focused on the nonlinear dose-response relationship between blood pressure parameters (systolic and diastolic blood pressure) and the risk of suicide attempts among first-onset, untreated patients with major depressive disorder (MDD) with anxiety symptoms ($HAMA \geq 14$).

Methods This study used a cross-sectional design and ultimately included 1380 patients with primary untreated major depressive disorder with significant anxiety symptoms ($HAMA \geq 14$). Blood pressure parameters and history of suicide attempts were obtained by standardized blood pressure measurements (mean of three times) and structured clinical assessment, and restricted cubic spline and segmented regression models were used to explore the nonlinear association of blood pressure-attempted suicide risk and critical thresholds.

Results Our study shows a U-shaped relationship between blood pressure and suicide attempt risk, with SBP and DBP having statistical inflection points at 131 mmHg and 77 mmHg. When $SBP \geq 131$ mmHg, each 1 mmHg rise means higher risk ($OR=1.18$, $95\%CI$ 1.11-1.24, $P<0.001$). For $DBP \geq 77$ mmHg, each 1 mmHg increase is linked to elevated risk ($OR=1.09$, $95\%CI$ 1.05-1.13, $P<0.001$). $DBP < 77$ mmHg has the opposite pattern, with lower blood pressure tied to higher risk ($OR=0.96$, $95\%CI$ 0.92-1.00, $P=0.047$). $SBP < 131$ mmHg isn't statistically significant ($OR=0.99$, $95\%CI$ 0.97-1.01, $P=0.259$), yet the likelihood ratio test confirms the model's significance ($P<0.001$).

Conclusion The U-shaped association model in this study provides quantifiable physiological markers for suicide risk assessment in patients with anxiety-depression co-morbidity, suggesting the need to establish differentiated blood pressure management strategies in clinical monitoring. Meanwhile, the nonlinear association breaks through the linear assumption framework of the traditional stress-synthesis model, which provides a new perspective for exploring the physiopathological mechanisms of suicide risk.

Key Words suicide attempts, U-shaped relationship, blood pressure threshold, major depressive disorder, anxiety-depression co-morbidity

TMEM106B参与抑郁症的发生和机制研究

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目的：抑郁症（MDD）是一种以显著而持久的情绪低落、兴趣减退、快感缺失为主要表现的常见精神疾病。2019年流行病学调查数据显示我国MDD终身患病率达3.4%，已成为困扰人类身心健康的重大精神疾患，给患者、家庭和社会带来沉重负担。MDD的病因机制至今仍未完全阐明，但大量的研究表明遗传因素在其发生发展中发挥重要作用，遗传力为37%~40%。将大脑和外周血蛋白质和转录组与GWAS数据整合的研究发现TMEM106B是仅有的一个在中枢和外周多层面，蛋白质和转录组多水平均有一致证据的MDD风险基因。TMEM106B分布在大脑的多个区域，尤其是海马脑区高表达，海马中TMEM106B的水平与额颞叶痴呆、阿尔茨海默病、帕金森病和海马硬化症等密切相关但是TMEM106B在MDD中的机制未明，TMEM106B调控神经元的机制尚未阐明。

方法：1.构建抑郁小鼠模型并进行抑郁症相关行为学的评估，检测多脑区TMEM106B的差异表达。2.探索敲低背侧海马TMEM106B对小鼠的影响，构建TMEM106B条件敲除小鼠，探究是否诱发抑郁样行为。3.探究敲低TMEM106B对原代神经元可塑性的影响，解析TMEM106B参与MDD发生的机制。

结论：TMEM106B作为MDD潜在致病风险基因，通过设计进行实验，发现在CUMS小鼠的mPFC和dHip等脑区表达下调，敲低海马脑区TMEM106B诱发小鼠抑郁样行为，并引起突触相关蛋白表达异常，敲低原代神经元TMEM106B影响神经元可塑性，进一步提示TMEM106B参与MDD发生的机制。

关键词 抑郁症；TMEM106B；神经元

老年人群胰岛素抵抗与认知障碍的关联研究 及预测模型构建

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目的：探究胰岛素抵抗标志物TyG指数与老年人认知障碍发生风险的关联，构建和验证老年人认知障碍预测模型，为基层医疗机构早期识别高风险人群提供工具。

方法：基于中国老年健康长寿调查（CLHLS, Chinese Longitudinal Healthy Longevity Survey）2014–2018年的纵向数据，纳入988名基线无认知障碍的老年人，平均年龄 79.78 ± 9.21 岁。认知功能采用中国版简易精神状态检查量表（MMSE, Mini-Mental State Examination）评估，胰岛素抵抗采用TyG指数（ $\text{Ln}[\text{空腹血糖} \times \text{空腹甘油三酯}/2]$ ）评估。同时收集社会人口学特征、生活方式和健康状况等混杂因素。采用Kaplan–Meier生存分析、Cox比例风险回归模型、限制性立方样条法和阈值效应分析探索TyG指数与认知障碍风险的关联。将数据随机分为训练集（70%， $n=692$ ）和验证集（30%， $n=296$ ）。采用单因素分析和Lasso回归对训练集数据进行变量筛选，确定模型中认知障碍的关键预测因素，并基于筛选的变量构建列线图（Nomogram）预测模型。通过受试者工作特征（ROC）曲线、校准曲线和决策曲线分析

(DCA) 评估模型性能, 采用Bootstrap法进行内部验证。

结果: 研究人群基线TyG指数均值为 7.6 ± 0.9 。在调整多个混杂因素后, 在TyG指数三等分组分析中, 以T1组为参照, T3组认知障碍风险降低 (HR=0.60, 95%CI: 0.38–0.94, P=0.027)。曲线拟合图显示, 认知障碍与TyG指数之间存在非线性相关关系 (Log Rank P=0.011), 拐点值为7.57。高于7.57时, 认知障碍与TyG指数之间呈负相关关系 (HR=0.67, 95%CI:0.50–0.91)。单因素分析和Lasso回归确定9个关键预测变量, 构建预测认知障碍的列线图。模型在训练集的AUC为0.843 (95%CI:0.790–0.896), 在验证集的AUC为0.897 (95%CI:0.837–0.957), 表现出较好的区分能力。校准曲线接近45° 对角线, 表明模型预测概率与实际观察到的概率高度一致。决策曲线分析显示, 在阈值概率范围内 (10%–75%), 使用该预测模型具有较高的临床净获益。

结论: 本研究在中国老年人中发现TyG指数与认知障碍存在非线性关联, 构建了一个整合TyG指数、生活方式和饮食习惯的认知障碍预测模型, 可作为基层医疗机构和社区卫生服务中心早期识别认知障碍高风险老年人的实用工具。

关键词 认知障碍; 胰岛素抵抗; 生活方式; 队列研究; 预测模型

Oxidative Stress, Social Dysfunction, and Cognitive Impairment in Deficit Schizophrenia: A Cross-Sectional Study

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Objective: This study aimed to investigate oxidative stress markers, social functioning, and cognitive function in male patients with deficit schizophrenia (DS). Specifically, serum levels of superoxide dismutase (SOD), total antioxidant capacity (TAOC), reduced glutathione (GSH), and nitric oxide (NO) were examined in patients with DS and compared to those with non-deficit schizophrenia (NDS) and healthy controls (HC).

Methods: A cross-sectional study was conducted, including 45 patients with DS, 49 with NDS, and 46 HC. Serum SOD, TAOC, GSH, and NO levels were measured using enzyme-linked immunosorbent assay (ELISA). Clinical symptoms were assessed using the Brief Psychiatric Rating Scale (BPRS), Scale for the Assessment of Positive Symptoms (SAPS), and Scale for the Assessment of Negative Symptoms (SANS). Social functioning was evaluated with the Social Skills Performance Inventory (SSPI) and the Social Adaptive Functioning Evaluation (SAFE), while cognitive function was assessed using the Mini-Mental State Examination (MMSE) and the Mattis Dementia Rating Scale. Correlations between oxidative stress markers and clinical, social, and cognitive measures were analyzed.

Results: Compared to HC, DS patients exhibited significantly lower SOD (18.86 [17.83, 20.00] vs. 21.69 [20.76, 22.46] U/L, $P < 0.05$) and TAOC levels (0.77 [0.67, 0.88] vs. 0.89 [0.79, 1.03] mmol/L, $P < 0.05$), while both DS and NDS had reduced GSH (20.05 ± 8.17 vs. 24.60 ± 7.47 $\mu\text{mol/L}$, $P < 0.05$). NO was lower in NDS than in DS and HC (1.19 [0.95, 1.43] vs. 1.43 [1.19, 1.91] $\mu\text{mol/L}$, $P < 0.05$). Clinically, DS patients had more severe negative symptoms (SANS: 54.37 ± 9.94 vs. 40.23 ± 8.91 , $P < 0.05$), poorer social function (SAFE: 28.82 ± 5.72 vs. 24.08 ± 5.48 , $P < 0.05$), and greater cognitive impairment (MMSE: 24.46 ± 2.85 vs. 26.92 ± 2.41 , $P < 0.05$).

compared to NDS. Correlations revealed that GSH was negatively associated with negative symptoms in DS ($r = -0.346, P = 0.023$), while TAOC was positively correlated with initiation/persistence ability ($r = 0.343, P = 0.024$). In NDS, NO was negatively correlated with MMSE ($r = -0.399, P = 0.005$) and Mattis subdomains (attention: $r = -0.283, P = 0.049$; memory: $r = -0.289, P = 0.044$).

Conclusions: Deficit schizophrenia is characterized by marked oxidative stress imbalance, significant social dysfunction, and profound cognitive impairment. The observed alterations in oxidative stress markers suggest that oxidative stress may play a crucial role in the pathophysiology and cognitive deficits associated with schizophrenia, particularly in the deficit subtype.

Key Words Deficit schizophrenia; oxidative stress; social function; cognitive function

团体美术治疗对首发缓解期精神分裂症患者共情能力与临床症状改善的影响研究

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目的：探讨团体美术治疗对首发缓解期精神分裂症患者临床症状及共情能力的疗效。

方法：采用随机对照设计，将60例首发缓解期精神分裂症患者分为研究组与对照组（各30例）。对照组行药物治疗联合常规护理，研究组在药物基础上加用团体美术治疗，共治疗15周。采用阳性和阴性症状量表(Positive And Negative Syndrome Scale, PANSS)、人际反应指针量表(Interpersonal Reactivity Index-C, IRI-C) 以及个人和社会功能量表(Personal and Social Performance scale, PSP) 于干预前后对两组患者进行评估比较。

结果：干预前两组患者在IRI-C量表总分及观点采择（Perspective Taking, PT）、想象力（Fantasy, FS）、共情关注(Empathic Concern, EC)和个人痛苦(Personal Distress, PD)各分量表得分比较，差异无统计学意义($P > 0.05$)；干预后研究组IRI-C量表总分及PT、FS、EC、PD 各分量表得分均高于对照组，差异有统计学意义($P < 0.05$)。干预前两组间PANSS及PSP得分比较，差异无统计学意义($P > 0.05$)；干预后两组PANSS及PSP得分组间比较：对照组干预后PANSS总分及PSP得分比较，差异无统计学意义($P > 0.05$)；研究组干预前后PANSS总分、阴性症状因子分、一般病理因子分及PSP得分比较差异均有统计学意义($P < 0.05$)。

结论：团体美术治疗作为一种康复训练手段，能够有效改善首发缓解期精神分裂症患者的共情能力，减轻临床症状，并提升社会功能。

关键词 团体美术治疗、首发缓解期精神分裂症、共情能力

tDCS Reduces Serum IL-6 Levels in Chronically Hospitalized Schizophrenia Patients with Tardive Dyskinesia

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Objective: Immune dysregulation has been proposed as a potential mechanism underlying the pathogenesis of tardive dyskinesia (TD). Transcranial direct current stimulation (tDCS), a neuromodulation technique, has been shown to influence the synthesis of various proteins, including cytokines such as interleukins. This study aimed to investigate the effects of tDCS on serum levels of IL-2, IL-6, IL-8, and IL-10 in chronically hospitalized schizophrenia patients with TD.

Methods: Fifty-two hospitalized patients who met the DSM-IV diagnostic criteria for schizophrenia and TD were randomly allocated to either the active (n=28) or sham (n=24) group. The tDCS protocol consisted of 15 sessions, administered once daily from Monday to Friday, with one week off between treatment blocks, completing the intervention over a total of five weeks. The anode was placed over the left dorsolateral prefrontal cortex (DLPFC), and the cathode over the right supraorbital area. In the sham group, the device was turned off after 30 seconds of stimulation. Fasting elbow venous blood samples (5 mL) were collected from patients at baseline and on the day following the completion of treatment. Serum levels of IL-2, IL-6, IL-8, and IL-10 were measured using enzyme-linked immunosorbent assay (ELISA) with commercially available kits from R&D Systems. Scale assessments were conducted at baseline and at the end of the tDCS treatment. The severity of TD symptoms was evaluated by the Abnormal Involuntary Movement Scale (AIMS). Disease severity was assessed using the Positive and Negative Syndrome Scale (PANSS) and the Scale for the Assessment of Negative Symptoms (SANS). Side effects of tDCS were evaluated using an experimenter-administered, open-ended questionnaire throughout the entire experiment.

Results: Of the 52 patients, 43 (88.46%) completed the treatment. We found that, following treatment, serum IL-6 levels were lower in the active group compared to the sham group, while no significant differences were observed between groups in IL-2, IL-8, or IL-10 levels. In the active group, post-treatment IL-6 levels were positively correlated with AIMS scores but showed no significant correlation with PANSS or SANS scores. Additionally, AIMS scores were lower in the active group than in the sham group after treatment, whereas no significant differences were found between groups in PANSS or SANS scores. During tDCS treatment, the most commonly reported adverse effect was a tingling sensation, followed by itching, burning, pain, and fatigue. There was a significant difference in the incidence of tingling sensations between the two groups, whereas no significant differences were observed for other side effects.

Conclusions: These findings suggest that tDCS may help reduce peripheral inflammation, as reflected by decreased IL-6 levels, in schizophrenia patients with tardive dyskinesia. The results highlight the potential of neuromodulation as a therapeutic approach for immune dysfunction in severe psychiatric disorders.

Key Words Transcranial Direct Current Stimulation; Schizophrenia; Tardive Dyskinesia; Interleukin; Immune

恶性黑色素瘤患者睡眠轨迹类型及其临床特征研究

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目的: 本研究旨在探索恶性黑色素瘤患者睡眠质量的纵向变化模式, 识别不同睡眠轨迹亚型, 探究各亚型特征与疾病进程关系, 并分析基线心理社会因素(焦虑、抑郁)和临床特征(疼痛、治疗依从性)对睡眠轨迹的预测作用, 为精准干预提供依据。

方法: 收集南京大学医学院附属鼓楼医院肿瘤科的恶性黑色素瘤患者, 共纳入66例患者, 收集290次随访数据(中位随访次数4.4次, 间隔 21 ± 3 天)。病例收集时间为2024年10月至2025年5月, 收集患者一般人口学特征, 对患者进行匹兹堡睡眠质量指数(PSQI)、广泛性焦虑量表(GAD-7)、9项患者健康问卷(PHQ-9)、Morisky服药依从性量表(MMAS-8)、整体疼痛评估量表(GPS), 使用SPSS 26.0、R语言软件, 采用动态时间规整算法(DTW)识别睡眠轨迹亚型, 采用ANCOVA和Kruskal-Wallis检验, 将年龄、性别作为协变量, 比较亚组的焦虑、抑郁、依从性、疼痛差异, 采用Cox比例风险模型评估临床恶化风险(临床恶化定义为PSQI增加 ≥ 5 分)。

结果: 1.恶性黑色素瘤患者睡眠轨迹分为3种亚型: 早期加重型(31.8%, $n=21$), 特征为基线PSQI较低(8.7 ± 2.8), 但前2次随访快速上升 >5 分($\Delta = 7.5 \pm 1.2$), 末次PSQI达 16.2 ± 1.1 ; 后期改善型(31.8%, $n=21$), 特征为基线PSQI较高(14.2 ± 4.1), 第5次随访后显著下降 >4 分($\Delta = -5.3 \pm 1.5$), 末次PSQI降至 8.9 ± 0.8 ; 稳定型(36.4%, $n=24$)特征为多次随访中PSQI波动范围 <3 分(12.2 ± 0.5)。2.分析亚组基线特征差异发现早期加重型呈现"高疼痛+高焦虑+低依从性"三联征($p < 0.01$)。3.预测患者睡眠质量的关键因素有①患者疼痛得分每增加1分, 恶化风险增加32%($HR=1.32$, $95\%CI=[1.07-1.63]$, $p=0.008$); ②患者依从性得分每增加1分, 恶化风险下降38%($HR=0.62$, $95\%CI=[0.48-0.80]$, $p < 0.001$)。

结论: 1.恶性黑色素瘤患者存在三种特征性睡眠轨迹类型, 其中早期加重型(31.8%)需重点关注; 2.恶性黑色素瘤患者睡眠质量下降存在高危标志, 评估患者疼痛得分大于3分、焦虑得分大于6分、依从性得分小于5分, 可有效预测早期加重型($AUC=0.86$); 3.针对恶性黑色素瘤患者的睡眠质量下降可以参考的干预策略有①改善患者疼痛②提高患者治疗依从性; 4.恶性黑色素瘤患者开始规律抗肿瘤治疗的前6周是识别睡眠恶化的关键窗口, 当患者的PSQI得分变化值大于2分每次时需提高关注、及时干预, 预防睡眠质量下降。

关键词 恶性黑色素瘤; 睡眠轨迹; 临床心理干预

Brain structural and functional aberrant of hippocampal subregions was associated with somatic depression

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Background: Somatic depression (SD) was a different subtype compared to non-somatic depression (NSD)

in presentation of the resting-state MRI study. Among these studies, hippocampus was believed to be significantly associated with somatization symptoms. However, the hippocampus was a heterogeneous structure which contains five main subfields. Until now, the disruption pattern of the hippocampus subfields in SD patients were not clearly. Therefore, it is necessary to study the different function of each hippocampus subfield in SD group.

Methods: 261 subjects were recruited including 190 major depressive disorder (MDD) patients and 71 health controls (HC). All subjects underwent 3.0T resting state magnetic resonance image scanning. The disruption of grey matter volume (GMV) and the functional connectivity (FC) of the hippocampal subregion were compared between each pairs, respectively. In addition, the correlation between the abnormal functional connectivity of the hippocampal subregions and the symptom of the SD patients were estimated.

Results: Compared to the NSD group, SD group showed decreased grey matter volume (GMV) in the left hippocampus amygdala transition area (HATA) and right HATA. Relative to the NSD group, the SD group showed decreased FC between the left HATA and the left superior occipital gyrus, between the right HATA and left middle temporal gyrus. In SD group, the FC between the left HATA and left superior occipital gyrus were positively correlated with the HAMD-17 and cognitive disturbance.

Conclusion: The structural and functional aberrant of HATA was a neurobiology indicator of the SD and the left superior occipital gyrus may be a potential neuroregulatory targets for SD.

Key Words Hippocampal subregions, Somatic depression, Gray matter volume (GMV), functional connectivity

GABRA5受体基因多态性对抑郁症患者 大脑局部活动的影响

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目的：探讨 γ -氨基丁酸 $\alpha 5$ ($\alpha 5$ subunit of gamma-aminobutyric acid receptor subtype A, GABRA5)受体基因多态性对抑郁症患者大脑局部脑活动的影响及异常脑区活动与临床特征的关联。

方法：纳入符合DSM-V中抑郁发作的患者189例,同时招募性别、年龄、受教育年限与之匹配的健康对照组120例,对被试进行3.0T磁共振扫描、临床量表测定、基因多态性的测定。采用双因素方差分析疾病主效应、基因主效应、基因与疾病交互效应下fALFF值差异,事后分析探讨携带与不携带T等位基因组大脑fALFF值的差异。并对交互作用fALFF值显著差异的脑区与临床特征进行偏向关分析。

结果：基因与疾病交互作用下fALFF存在差异的脑区：右侧颞上回、右侧额中回；事后分析发现携带T等位基因的抑郁症患者组fALFF值高于CC基因型组 (1.11 ± 0.09 , 1.08 ± 0.09 , $p=0.043$), (1.14 ± 0.09 , 1.11 ± 0.08 , $p=0.038$), 偏向关分析发现携带T等位基因的抑郁症患者颞上回fALFF值与认知障碍因子分呈正相关 ($r=0.318$, $p=0.001$)。

结论：rs140685位点T等位基因可能通过影响右侧颞上回的局部活动进而影响抑郁症患者的认知功能。

关键词 GABRA5基因多态性；脑局部活动；交互作用

重复经颅磁刺激对精神分裂症患者精神症状、认知功能和甲状腺激素水平的影响

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目的：探讨高频重复经颅磁刺激（repetitive Transcranial Magnetic Stimulation, rTMS）作用于精神分裂症患者左侧背外侧前额叶皮质（Dorsolateral Prefrontal Cortex, DLPFC）后，对甲状腺激素水平、精神症状以及认知功能的影响。

方法：本研究为一项随机双盲、伪刺激的临床对照研究。研究中共纳入60例符合入组标准的精神分裂症患者，随机分为研究组（31例）和对照组（29例）。两组患者分别给予常规治疗精神分裂症的药物，研究组在常规药物治疗的基础上，进行为期4周的rTMS治疗，每周4次，每次20分钟，总共治疗16次，采用的治疗频率和强度分别为10Hz和110%的受试者运动阈值，对照组相应地予以伪rTMS治疗。两组患者均在治疗前和第4周治疗后进行可重复的成套神经心理状态测验（Repeatable Battery for the Assessment of Neuropsychological Status, RBANS）、阳性与阴性症状量表（Positive and negative syndrome scale, PANSS）的评估，并分别在治疗前和第4周治疗后采集患者空腹静脉血，使用化学发光微粒子免疫检测法检测患者血清TSH、T3、T4等甲状腺激素水平。

结果：（1）在治疗前，两组患者的PANSS总分、阳性症状分、阴性症状分，以及RBANS总分之间均无显著差异（ $P>0.05$ ）；研究组患者的FT3水平均值较对照组高，差异具有统计学意义（ $P<0.05$ ），其余甲状腺激素指标均无显著差异（ $P>0.05$ ）。

（2）在治疗后，两组患者的PANSS阳性症状量表分均有下降，其时间主效应具有统计学意义（ $P<0.05$ ），RBANS量表总分、即时记忆分、注意力分、延迟记忆分的时间主效应和交互效应均具有统计学意义（ $P<0.05$ ），语言能力分的时间主效应具有统计学意义（ $P<0.05$ ），说明rTMS联合药物治疗能显著改善精神分裂症患者的认知功能，但在改善精神分裂症患者的阳性症状方面，较单纯药物治疗无显著优势。

（3）在治疗后，患者FT3总体均值有所上升，其时间主效应具有统计学意义（ $P<0.05$ ），表明患者在治疗后FT3水平会随时间发生变化，但没有组间差异。

（4）在治疗前，对照组中患者的TT3与PANSS总分和一般精神病量表分具有负相关性（ $P<0.05$ ）；FT3与PANSS总分和即时记忆分具有负相关性（ $P<0.05$ ）；TGAb与阴性症状量表分具有负相关性（ $P<0.05$ ），与即时记忆分具有正相关性（ $P<0.05$ ）。研究组中患者的FT3与PANSS总分、阴性症状量表分以及一般精神病量表分具有负相关性（ $P<0.05$ ），与语言能力分具有正相关性（ $P<0.05$ ）；FT4与阳性症状量表分具有负相关性（ $P<0.05$ ）；TT3与语言能力分具有正相关性（ $P<0.05$ ）。以上说明，部分甲状腺激素水平与病情严重程度及语言能力表现存在关联。

（5）在治疗后，对照组中患者的FT3水平与语言能力分具有正相关性（ $P<0.05$ ）。研究组中患者的TSH水平与阳性症状量表分、即时记忆分以及视觉空间/结构能力分具有正相关性（ $P<0.05$ ）；FT3水平与PANSS总分具有负相关性（ $P<0.05$ ），与语言能力分和注意力分具有正相关性（ $P<0.05$ ）；FT4与阳性症状量表分具有负相关性（ $P<0.05$ ）；TT3水平与语言能力分具有正相关性（ $P<0.05$ ）。以上说明，部分甲状腺激素水平可能为认知功能变化和病理症状改善的潜在生物学标志物。

结论：高频重复经颅磁刺激（rTMS）作用于精神分裂症患者左侧背外侧前额叶皮质（DLPFC）可

显著改善患者的认知功能。经过4周的治疗后，研究组患者在RBANS总体认知能力、即时记忆、注意力、延迟记忆和语言能力等方面均显示出显著改善，说明rTMS对精神分裂症患者认知功能的提升具有积极作用。另外在各项数据之间的相关性分析中发现了部分甲状腺功能指标（如FT3等）与精神症状和认知功能多维度评分之间呈相关性，提示甲状腺激素水平可能参与了rTMS对精神分裂症患者治疗效果的调控机制。基于本研究结果，rTMS结合常规药物治疗可作为改善精神分裂症患者精神症状及认知功能的有效辅助治疗手段，其潜在生物标志物作用机制值得进一步探讨。

关键词 高频重复经颅磁刺激；左侧背外侧前额叶皮质；精神分裂症；甲状腺激素水平；认知功能

5q31.3区域中的调控变异rs4151680通过调节smc3结合和pcdha8的表达而赋予重度抑郁症风险

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背景及目的：重度抑郁症（MDD）的发病机制尚不清楚，一些全基因组关联研究（GWAS）发现5q31.3区域与MDD之间存在关联。在这里，我们发现了一个影响转录因子（TF）在5q31.3位点结合的变体（rs4151680）。表达数量性状位点分析显示其与PCDHA8在人脑中的表达最显著相关。本研究旨在阐明rs4151680调控PCDHA8表达的分子机制及PCDHA8参与MDD的病理机制。

方法：我们首先进行了一系列实验来验证rs4151680的调控作用，包括报告基因实验、电泳迁移转移实验、Crispr - cas9介导的基因组编辑和TF敲低。然后，我们通过在鼠mPFC中注射AAV病毒，通过敲低PCDHA8，验证了该基因参与抑郁症的致病风险。为了探讨PCDHA8在MDD中的作用机制，我们在大鼠原代神经元中敲除PCDHA8，研究其对树突棘密度、树突分支和转录组的影响。

结果：报告基因实验rs4151680不同等位基因转录活性存在差异。Crispr - cas9介导的基因组编辑证实了rs4151680对PCDHA8表达的调控作用。电泳迁移转移实验表明rs4151680的不同等位基因与TF SMC3的结合能力上存在差异。SMC3参与调控PCDHA8的表达。PCDHA8敲低大鼠表现出抑郁行为。敲低PCDHA8可减少树突分支和树突棘密度。转录组分析显示突触组织和离子运输受到影响。

结论：这些结果表明rs4151680通过改变SMC3结合和调节PCDHA8的表达而导致MDD风险，PCDHA8的表达失调通过突触形态发生影响MDD风险。

关键词 抑郁症，遗传学

母体免疫激活致子代精神分裂症模型大鼠背侧纹状体神经功能紊乱的研究

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背景：母体免疫激活（maternal immune activation, MIA）模型是研究精神分裂症（schizophrenia,

SCZ)的重要模型之一,该模型被广泛的用于SCZ病理生理学机制的研究。既往关于MIA模型的研究多集中在与SCZ相关的分子和行为学上,对该模型神经功能的研究有限。纹状体是SCZ研究中的重要脑区,其神经元活动和功能状态与多巴胺D2受体(D2R)密切相关。对纹状体神经功能的解析有助于全面深入的了解MIA模型本身的机制机理,拓展其应用领域。

目的:研究MIA致子代SCZ模型大鼠背侧纹状体神经功能活动,补充MIA模型中与神经功能相关的研究数据;进一步探讨MIA致子代SCZ模型大鼠背侧纹状体神经功能变化的分子机制。

方法:1.首先制备MIA模型,在SD大鼠孕9.5天时尾静脉注射聚肌胞苷酸(polyinosinic: polycytidylic acid, Poly I:C)(模型组)或等体积生理盐水(对照组);在子鼠成年期,利用十字高架迷宫、开放旷场、Y迷宫和前脉冲抑制等行为学评价子代大鼠焦虑、空间记忆和感觉门控功能;利用在体多通道电生理记录技术检测子鼠成年期背侧纹状体神经功能的变化;利用免疫印迹和Q-PCR检测子鼠不同发育阶段纹状体中D2R的表达变化。

2.以MIA子代大鼠为研究对象,腹腔注射D2R的抑制剂氟哌啶醇(干预组)或等体积的生理盐水(模型组和对照组),检测不同组别子鼠成年期的行为学、背侧纹状体功能状态以及纹状体D2R的分子表达变化。

3.利用GraphPad Prism 8.0、NeuroExplorer 5.0和OriginPro 8.5软件作图,SPSS 22.0进行统计学分析。

结果:1.孕鼠血浆结果显示:模型组血浆炎症因子IL-6和TNF- α 表达水平显著升高。

2.成年期行为学特点:在开放旷场实验中,两组别无差异;在高架十字迷宫实验中,模型组进入开放臂的时间和次数显著减少;Y迷宫实验中,模型组进入新异臂的时间和次数降低;在前脉冲抑制实验中,模型组在72dB、77dB和82dB中抑制率均显著降低。

3.成年期背侧纹状体功能:静息状态下,模型组背侧纹状体delta、theta、alpha、beta波的功率和能量值均显著高于对照组。

4.纹状体D2R表达:模型组D2R蛋白表达水平在离乳期和成年期均升高。

5.氟哌啶醇干预后成年期行为学:在开放旷场实验中,对照组、模型组和干预组无差异;在高架十字迷宫实验中,模型组进入开放臂的时间减少,药物干预后进入开放臂的时间恢复正常;Y迷宫实验中,模型组进入新异臂的时间降低,药物干预后进入新异臂的时间恢复正常;在前脉冲抑制实验中,模型组在72dB、77dB和82dB中抑制率均显著降低,干预后,三个分贝下的抑制率均恢复至正常。

6.氟哌啶醇干预后成年期背侧纹状体功能:静息状态下,与对照组相比,模型组背侧纹状体delta、theta、alpha、beta波的功率和能量均显著升高,干预后,异常升高的能量和功率均恢复到正常水平。

7.氟哌啶醇干预后成年期纹状体多巴胺系统表达:基因水平和蛋白水平的结果显示,模型组纹状体D2R和酪氨酸羟化酶(tyrosine hydroxylase, TH)表达水平均高于正常组,干预后恢复至正常水平。

8.纹状体低频振荡与行为学的相关性:低频(delta、theta、alpha)振荡与前脉冲抑制率成显著负相关,与其他行为学无相关性。

结论:本研究证明了MIA致子代SCZ模型大鼠背侧纹状体神经功能紊乱,背侧纹状体静息态低频振荡异常升高;且背侧纹状体功能紊乱可能与D2R异常升高有关。

关键词 多巴胺;背侧纹状体;在体电生理;精神分裂症;母体免疫激活

不同类型的童年创伤对青少年自杀意念的影响： 快感缺失的中介作用

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目的：自杀意念是个体实施自杀行为的前驱阶段，也是预测自杀行为进行早期干预的关键时期。临床中存在自杀意念的青少年常伴有童年创伤经历。然而，不同类型的童年创伤如何影响青少年自杀意念的中介因素尚未明确。因此，本研究拟探讨不同类型的童年创伤对青少年自杀意念的影响，及快感缺失在其中的作用。

方法：采用方便取样法于2021年9月至12月，抽取江苏省徐州市1800名中小學生，在取得监护人知情同意后，使用童年创伤问卷、Snaitth-Hamilton快感量表及PHQ-9量表进行问卷调查，以评估青少年童年创伤、快感缺失水平及是否存在自杀意念。共获得有效问卷1660份。运用SPSS 24.0对数据进行X²检验、秩和检验、偏相关及Logistic回归分析。使用SPSS宏程序PROCESS v4.0模型4（一个中介模型），采用偏差校正的非参数百分位Bootstrap法，检验快感缺失的中介效应。

结果：（1）青少年自杀意念检出率为20.20%；自杀意念在青少年中存在性别（ $X^2=32.966$, $p<0.01$ ）及年龄（ $t=-9.393$, $p<0.001$ ）差异。自杀意念组与非自杀意念组在不同童年创伤类型的检出率及童年创伤发生数目上均有显著差异（ $p<0.001$ ）。

（2）控制性别、年龄后，童年创伤与快感缺失（ $r=0.305$, $P<0.001$ ）及自杀意念（ $r=0.362$, $P<0.001$ ）均呈正相关，快感缺失与自杀意念呈正相关（ $r=0.226$, $P<0.001$ ）。

（3）以年龄和性别作为控制因素，童年创伤与自杀意念呈明显正关联（ $OR=2.408$, $95\% CI=2.105-2.755$ ），表明童年创伤使青少年存在自杀意念的风险增加了1.408倍。

（4）调整混杂因素（性别、年龄）后，快感缺失在童年创伤和青少年自杀意念之间发挥中介作用，其间接效应为0.122，占总效应的13.44%。

（5）校正后（控制性别、年龄），快感缺失在童年创伤类型中的情感虐待（ $95\% CI=0.064-0.162$ ）、情感忽视（ $95\% CI=0.091-0.188$ ）、躯体忽视（ $95\% CI=0.086-0.183$ ）和青少年自杀意念之间存在中介效应。

结论：童年创伤是青少年存在自杀意念的危险因素。童年创伤类型中的情感虐待、情感忽视、躯体忽视可通过快感缺失对青少年自杀意念产生间接影响。

关键词 童年创伤；自杀意念；快感缺失；青少年

肠胶质细胞来源的EVs介导小胶质细胞炎症反应调控抑郁行为

吴静

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目的：阐明肠胶质细胞来源的EVs如何通过调控小胶质细胞炎症反应参与抑郁行为发生的分子机制

方法：利用超速离心法和梯度离心法分离肠胶质细胞EVs；构建CUMS抑郁模型，观察肠胶质细胞EVs对小鼠抑郁行为的影响；利用WB和ELISA法检测肠胶质细胞EVs对小胶质细胞内IL-1 β 和IL-18的影响；利用质谱进行4D/480 label free 蛋白组学检测，分析肠胶质细胞EVs中差异表达的蛋白；利用基因沉默技术敲除PLCG2，分析EVs对小鼠抑郁行为的作用及对小胶质细胞内IL-1 β 和IL-18的影响；利用钙信号抑制剂和激动剂，分析肠胶质细胞EVs中PLCG2通过Ca²⁺信号通路作用小胶质细胞炎症反应。

结果：肠胶质细胞EVs诱导小鼠抑郁样行为；肠胶质细胞EVs促进小胶质细胞分泌IL-1 β 和IL-18；肠胶质细胞EVs中PLCG2高表达；敲减PLCG2的肠胶质细胞EVs减轻小鼠抑郁样行为；肠胶质细胞EVs中PLCG2通过Ca²⁺信号通路促进小胶质细胞分泌IL-1 β 和IL-18。

结论：慢性不可预见温和应激下，肠胶质细胞活化，分泌富含PLCG2的EVs，靶向中枢小胶质细胞，通过增强Ca²⁺/NLRP3信号促进小胶质细胞合成和分泌IL-1 β 和IL-18，继而引发中枢炎症反应促进抑郁行为的发生。

关键词 抑郁症, 肠胶质细胞, 外泌体, 小胶质细胞, PLCG2

冠心病PCI术后患者焦虑抑郁发展轨迹及潜在类别预测因素分析

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目的：本文旨在以双心医学模式为理论基础，基于潜在类别增长模型（LCGM），探讨PCI术后患者焦虑抑郁发展轨迹及潜在类别的预测因素，为临床工作中不同发展特征的患者术后焦虑、抑郁的干预提供参考依据和针对性建议。

方法：采用连续样本抽样的方法，于2024年9月到2024年12月在我院对行PCI术后的167名患者进行自填式问卷调查。采用一般情况调查表、广泛焦虑症自评量表、病人健康问卷抑郁症自评量表、躯体疼痛缓解程度、自我效能量表、家庭关怀指数、阿森斯失眠量表等收集患者基线资料，在患者术后第2天、术后第1个月和第3个月随访评估患者的焦虑抑郁发展轨迹，采用Mplus8.0软件进行LCGM分析识别轨迹类别，采用单因素及多元有序Logistic回归分析PCI术后患者焦虑抑郁的不同发展轨迹类别的影响因素。

结果：LCGM分析显示，PCI术后患者焦虑抑郁随着时间的变化均呈下降趋势，且焦虑、抑郁的发展

趋势均存在两个不同的潜在类别,分别为“焦虑缓解组”“持续焦虑风险组”和“抑郁缓解组”“持续抑郁风险组”; Logistic回归分析结果显示年龄、性别、文化程度、躯体疼痛缓解程度、自我效能、家庭关怀指数是影响患者心理状态的潜在类别因素。

讨论: PCI术后患者焦虑抑郁发展轨迹存在群体异质性,大部分患者处于持续焦虑风险组和持续抑郁风险组,医护人员可以根据轨迹类别预测的影响因素,早期识别持续风险组,实施针对性、特异性和高效性的心理、行为干预措施以改变焦虑抑郁的发展趋势。

关键词 冠心病; 经皮冠状动脉介入治疗; 焦虑抑郁; 潜类别增长模型; 影响因素分析

疫情期间我国三甲医院联络会诊精神病学调查

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中国综合医院自疫情以来精神障碍患者数量显著增加。本研究调查了2019至2022年间全国多家大型三甲综合医院联络会诊精神病学(CLP)服务情况,旨在呈现这一特殊时期的真实诊疗现状。数据来源于各医院信息系统,经标准化表格与客户端录入。研究共纳入南京、昆明、宁波、太原和成都五地19,544例CLP服务记录,结果显示:约70%患者年龄超过50岁,女性占比约60%;主治医师及住院总医师构成CLP主力团队,97%以上病例在两次会诊内解决;焦虑障碍、睡眠障碍及抑郁障碍占比超75%,镇静催眠药、心理治疗与抗抑郁药使用比例相近。值得注意的是,疫情暴发年度CLP会诊率显著攀升,其中重症监护科、内分泌科及康复科发起会诊需求最为突出。研究表明,新冠疫情后中国医疗机构对CLP服务的需求呈现持续高位态势

关键词 联络会诊精神病学

The Synergistic Effect of Previous COVID-19 on Olfactory and Gustatory Dysfunction after Recent Respiratory Infections (RRI)

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Background: Olfactory and gustatory dysfunction after respiratory infections have been reported. This study investigates the prevalence of olfactory and gustatory dysfunction following RRIs and explore the synergistic effect of previous COVID-19 in China's post-pandemic context.

Methods: A nationwide cross-sectional survey of 61,402 adults was conducted between December 2023 and January 2024. Participants completed an online questionnaire collecting demographic factors, olfactory and gustatory dysfunction, characteristics of previous COVID-19. Logistic regressions evaluated associations of olfactory and gustatory dysfunction with RRIs, previous COVID-19, demographic factors.

Results: This investigation identified olfactory dysfunction in 11202 participants (18.2%) and gustatory dysfunction in 10305 (16.8%), based on self-reporting. Among symptomatic participants, 1608 (2.6%) reported olfactory dysfunction and 1352 (2.2%) reported gustatory dysfunction on more than half days per week. RRI group had higher prevalence of both two symptoms compared with Non-RRI group (olfactory: 4.0% vs. 2.1%; gustatory: 3.3% vs. 1.8%). Logistic regression models indicated that RRI was significantly associated with olfactory and gustatory dysfunction, with ORs as 1.69 (95%CI: 1.52-1.88; $P < 0.001$) and 1.60 (95%CI: 1.43-1.79; $P < 0.001$). Female and higher economic status were protective factors ($OR < 1$, $P < 0.001$) of olfactory and gustatory dysfunction and Basic physical diseases and mental disorders were risk factors ($OR > 1$, $P < 0.001$). Previous COVID-19 was not significantly associated with olfactory and gustatory dysfunction, with ORs as 1.02 (95%CI = 0.90-1.16; $P = 0.72$) and 0.98 (95%CI = 0.85-1.12; $P = 0.72$). Nevertheless, interacted effects between COVID and RRI were indicated to be significantly associated with olfactory ($OR = 1.59$, 95%CI = 1.18-2.18, $P = 0.003$) and gustatory ($OR = 1.59$, 95%CI = 1.15-2.24, $P = 0.006$) dysfunction. In post hoc analyses, RRI significantly increased the risks of olfactory ($OR = 1.82$, 95%CI = 1.62-2.04, $P < 0.001$) and gustatory ($OR = 1.73$, 95%CI = 1.52-1.95, $P < 0.001$) dysfunction among participants with previous COVID-19, but not among those without COVID-19. In participants with both RRI and previous COVID-19, infection times and severity of COVID-19 were risk factors of olfactory and gustatory dysfunction ($OR > 1$, $P < 0.001$).

Conclusion: RRIs increased risks of olfactory and gustatory dysfunction, especially in individuals with previous COVID-19. Both infection times and severity of previous COVID-19 could increase these risks. These findings might imply the "immunity theft" effect of COVID-19 on olfactory and gustatory dysfunction following RRIs.

Key Words olfactory dysfunction; gustatory dysfunction; respiratory infection; COVID-19

Unraveling Schizophrenic Audiovisual Speech Perception Deficits through Event – Related Potential (ERP) Analysis

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This manuscript discusses the article "Deficient Audiovisual Speech Perception in Schizophrenia: An ERP Study" by Erfan Ghaneirad et al., published in *Brain Sci*. The study investigates the neural mechanisms underlying multimodal speech perception deficits in schizophrenia patients using event-related potentials (ERPs). The authors examined the N1 and P2 components of the EEG in both healthy individuals and schizophrenia patients, revealing that schizophrenia patients exhibit reduced speech comprehension and decreased N1 amplitude, particularly during the initial stages of auditory speech perception processing. However, the P2 and N1–P2 complex amplitudes did not significantly differ from those of healthy individuals.

This commentary highlights the importance of considering additional brain regions (e.g., parietal and temporal lobes) and using higher-density EEG systems (e.g., 64-electrode caps) to enhance spatial resolution and improve the accuracy of brain activity localization. Future research should also focus on differentiating schizophrenia subtypes and examining multimodal speech perception in both first-episode and relapsed patients to refine our understanding of the neural mechanisms involved. The incorporation of neuroimaging techniques, such as functional magnetic resonance imaging (fMRI), could further elucidate these mechanisms.

Overall, this study provides valuable insights into the neural basis of multimodal speech perception deficits in schizophrenia and paves the way for future research in this area.

Key Words Schizophrenia; Audiovisual speech perception; Event-related potentials; Multimodal processing

Depression and Functional Disability among Middle-aged and Older Chinese Adults: Evidence from the China Health and Retirement Longitudinal Study (CHARLS) 2020

Ju Gao

Department of Psychiatry

Background: Depression and functional disability are two major public health challenges in the aging population. However, the association between depressive symptoms and functional limitations in Chinese middle-aged and older adults remains underexplored. This study aimed to investigate this relationship using data from the nationally representative 2020 wave of the China Health and Retirement Longitudinal Study (CHARLS).

Methods: We analyzed data from 19,395 respondents aged 45 years and older. Depressive symptoms were assessed by the 10-item CES-D scale, with a cut-off score ≥ 10 indicating significant depressive symptoms.

Functional disability was defined as having at least one limitation in Activities of Daily Living (ADL) or Instrumental Activities of Daily Living (IADL). Descriptive statistics and multivariate logistic regression were performed to examine the association between depressive symptoms and functional disability, adjusting for demographic factors (age, gender, education, marital status), and chronic disease comorbidity.

Results: The prevalence of significant depressive symptoms was 33.6%. Functional disability was reported by 28.2% of respondents. Among those with depressive symptoms, 43.8% experienced functional disability, compared with 18.9% among those without depressive symptoms ($p < 0.001$). In the fully adjusted logistic regression model, depressive symptoms were significantly associated with higher odds of functional disability (adjusted OR = 2.10, 95% CI: 1.94 - 2.26, $p < 0.001$).

Conclusion: Depressive symptoms are strongly associated with functional disability in middle-aged and older adults in China. These findings highlight the need for integrated mental health and physical rehabilitation strategies to promote healthy aging and reduce disability in this population.

Key Words Depression; Functional Disability; Aging; China Health and Retirement Longitudinal Study; Mental Health

一例躯体形式障碍个案报告

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本案例是一例典型的由躯体疾病治疗后出现的精神心理障碍，在治疗的过程中采取药物与心理相结合的方式，双管齐下、心身同治，制定个性化治疗方案，采取抗抑郁药物联合多种心理治疗的方式，取得了较好的疗效。对类似心身障碍的治疗具有一定的实践指导意义。

关键词 躯体形式障碍 心身障碍 心身同治

Association of Work and Retirement Status with Mental Well-being and Functional Health among Middle-aged and Older Adults in China: Evidence from CHARLS 2020

Ju Gao

Department of Psychiatry

Background: Maintaining social engagement and an active work role may contribute to mental and functional health in later life. This study explored how current employment and retirement status were associated with depressive symptoms and functional abilities among Chinese middle-aged and older adults.

Methods: Data from 19,395 individuals aged ≥ 45 years in the 2020 wave of the China Health and Retirement Longitudinal Study (CHARLS) were analyzed. Work and retirement status were self-reported. Depressive symptoms

were assessed using the CES-D 10 scale (cut-off ≥ 10). Functional health was assessed via limitations in Activities of Daily Living (ADL) and Instrumental ADL (IADL). Multivariate logistic regression models adjusted for demographic and health variables.

Results: Being currently employed was associated with significantly lower odds of both depressive symptoms (adjusted OR = 0.72, 95% CI: 0.66 - 0.79, $p < 0.001$) and functional limitations (adjusted OR = 0.81, 95% CI: 0.73 - 0.90, $p < 0.001$), independent of age and health status. Retirement was not significantly linked to functional disability (adjusted OR = 1.05, $p = 0.32$), but was modestly associated with lower depressive symptoms (adjusted OR = 0.89, $p = 0.007$).

Conclusion: Engagement in paid work appears to confer mental and functional health benefits in later life, underscoring the importance of active roles and social participation for healthy aging. Retirement alone did not show similar associations, suggesting that continued engagement may be protective against decline.

Key Words Work Engagement; Retirement; Depression; Functional Health; Social Participation; Healthy Aging; China Health and Retirement Longitudinal Study

The effect of repetitive transcranial magnetic stimulation on gaming addiction in adolescents: evidence from a 24-week follow-up.

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Background: With the widespread popularity of online gaming, gaming addiction has come under scrutiny. However, clinically robust and reliable intervention strategies for adolescent online gaming addiction are unclear.

Methods: We conducted a single-blind, randomized, sham-controlled clinical trial to explore the efficacy of noninvasive, high-frequency repetitive transcranial magnetic stimulation (rTMS) technology to improve psychological craving in adolescents with online game addiction. 73 online game addicts completed a 24-week intervention study. The primary outcome was the change in craving levels before and after the rTMS intervention. Secondary outcomes included changes in anxiety and depression levels before and after the intervention.

Results: Our repeated-measures MANOVA results, adjusted for course variables, revealed a significant main effect of rTMS intervention on psychological craving levels in adolescents addicted to online games ($F = 11.238$; $P < 0.001$), as well as significant main effects on time ($F = 6.809$; $P < 0.001$) and group Effects ($F = 26.707$; $P < 0.001$). In addition, repeated-measures ANOVA results showed significant time effects for anxiety ($F = 20.747$, $p < 0.001$) and depression levels ($F = 22.277$, $p < 0.001$) among adolescents with online game addiction, with nonsignificant between-group effects and no intergroup interaction. In the active stimulation group, changes in psychological craving levels after 4 weeks of treatment were significantly and positively correlated with changes in anxiety levels after 4 weeks of treatment in adolescents addicted to online games ($r = 0.335$, $P < 0.05$).

Conclusion: Our findings suggest that high-frequency rTMS could be a potential treatment for adolescents with online gaming addiction on psychological craving level.

Key Words rTMS; gaming addiction; adolescents; depression; anxiety

浅谈开设神经心身门诊的经验，附病例分享： 一位头痛壮汉的脆弱

叶丹

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目的：随着医学模式由传统生物医学模式向生物—心理—社会医学模式的转变，心理、社会因素对健康的影响受到医学界的高度关注。而在大型综合性医院中，开设心身医学门诊的医院数量也并不多见。神经内科门诊是躯体症状障碍、焦虑抑郁等患者经常选择就诊的科室，常伴有慢性头晕、头痛、肢体麻木、肩颈酸痛、胸闷心悸、恶心等躯体症状，此类患者会反复就诊于各个科室，大大消耗医疗资源的同时，患者的躯体症状往往不能得到改善，医务工作者也会在接诊这类患者时屡屡受挫，各科室之间也存在“踢皮球”现象。目前，躯体症状障碍患者并没有得到有效的识别和治疗，患者也往往拒绝进一步至精神专科就诊。因此，开设神经心身门诊，以全新的医学模式接诊患者，充分评估患者生物、心理、社会因素在躯体症状发生发展中的作用，对于增加患者对疾病的认识、改善用药依从性、个性化治疗等有着积极的意义。

方法：以一名头痛患者为例：患者男性，40岁，因“头痛1年余”来院就诊，头痛呈持续性胀痛感，伴随失眠，间断服用思诺思、舒乐安定等，失眠症状有所改善，但头痛无明显缓解，止痛药物效果一般。神经系统专科查体阴性。头颅磁共振平扫+MRA+MRV未见明显异常。进一步心理访谈及量表评估：患者的头痛症状自家人生病加重后出现，经济压力较大，每天开心不起来，容易因为一些小事而紧张，脾气急躁、易与他人起冲突，入睡困难、易醒多梦，HAMA-14：18分；HAMD-24：20分。给予治疗方案：艾司西酞普兰10mg qd+舒乐安定1mg qn+心理治疗（每周一次）。

结果：经1月余的治疗后，患者头痛及失眠症状明显好转，头痛评分由8分降至1分，最后一周停用舒乐安定可正常入睡。

结论：临床开设神经心身门诊，在传统问诊躯体症状的同时对首诊患者进行心理访谈及评估，往往可以给我们提供全新的线索，帮助我们更充分地认识患者的症状并指导后续治疗。

关键词 神经心身，心理治疗

BMI介导心理认知因素与血脂代谢的关联：术前评估 在肥胖手术患者中的意义

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目的：本研究旨在探讨拟行减重手术的肥胖患者术前多维心理健康状态（包括抑郁、焦虑、睡眠障碍）以及认知功能与血脂代谢紊乱的关联性，并验证体重指数（BMI）在心理认知因素与代谢指标间的中介作用，为优化术前干预策略提供依据。

方法：选取2024–2025年拟行减重手术的肥胖患者（BMI \geq 30 kg/m²）102例，排除合并严重心、肝、肾、内分泌或神经系统疾病者。采用PHQ-9、GAD-7、PSQI量表分别评估抑郁、焦虑症状及睡眠质量；采用RBANS量表评估认知功能；检测空腹静脉血甘油三酯（TG）和高密度脂蛋白胆固醇（HDL-C）水平。运用Spearman相关分析检验心理/认知指标与代谢指标、BMI的关联；采用Bootstrap法（5000次抽样）构建中介模型验证BMI的中介路径；协变量（年龄、性别）在相关和中介分析中予以调整。

结果：1. 相关性分析显示：认知功能（RBANS总分）与HDL-C呈显著正相关，抑郁（PHQ-9）与TG呈正相关，焦虑（GAD-7）与BMI呈正相关。2. 中介效应分析证实：BMI显著介导了抑郁和焦虑对TG升高的正向影响；同时，BMI也显著介导了认知功能对HDL-C水平的影响。讨论：本研究揭示了认知功能通过BMI影响血脂代谢的路径，提示认知功能受损可能削弱患者自我管理能力，加剧代谢异常。抑郁和焦虑通过BMI介导显著增加TG水平，印证情绪障碍是代谢风险的重要通路。BMI在心理认知因素与代谢结局间具有关键中介作用，提示术前神经心理评估（如RBANS）有助于识别代谢高风险人群。临床实践中，建议整合认知行为干预与减重方案，以期通过改善治疗依从性优化代谢结局。研究局限性为横断面设计无法验证因果关系等。

关键词 减重手术，心理健康状态，认知功能

慢性焦虑障碍对患者血管内皮功能损伤及血脂代谢的影响

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研究目的：研究发现，持续的焦虑状态通常伴有交感神经张力升高，使去甲肾上腺素释放增加，引发血管收缩、内皮细胞氧化应激增强，内皮一氧化氮合酶（eNOS）活性降低，一氧化氮（NO）生成减少，导致血管舒张功能受损。此外，焦虑可以通过HPA轴（下丘脑-垂体-肾上腺素轴）促使皮质醇水平升高，促进促炎因子如IL-16、TNF- α 释放，加剧内皮炎症反应，破坏内皮细胞屏障功能，加速动脉粥样硬化斑块形成；同时通过HPA轴影响血脂代谢，导致低密度脂蛋白（LDL）升高、高密度脂蛋白（HDL）降低及血清胆固醇（TC）、甘油三酯（TG）的明显升高。故临床中对于慢性焦虑障碍患者，尤其老年患者，定期通过监测血脂水平及相应血管彩超检查，尽早发现血管病变，及时给予干预，可以降低心脑血管疾病发生的风险。

方法：研究分为2组，研究组为明确诊断焦虑障碍，病程为5–8年的患者；对照组为无焦虑障碍的本院健康人群，入组对象年龄选择在40–50岁之间。两组患者在性别、年龄、文化、躯体合并症方面均无明显差异。研究中采用HAMD（汉密尔顿焦虑表）、SAS（焦虑自评量表）评估两组情绪状态；抽取两组空腹肘静脉血，以3000r/min离心后检测血清一氧化氮（NO）、内皮素-1（ET-1）水平，同时常规检查血脂水平（TG、TCH、LDL、HDL），并通过颈部血管及双下肢血管彩超统计出现血管斑块形成的例数。采用SPSS 22.0统计软件进行数据处理。计量资料以均数 \pm 标准差（ $\bar{x} \pm s$ ）表示，采用t检验；计数资料采用 χ^2 检验；通过多元线性回归，分析各量表评分与内皮功能之间的相关性，以 $P < 0.05$ 为差异有统计学意义。

结果：入组前两组在HAMA、SAS评分存在显著差异（ $P < 0.05$ ）；研究组的NO、ET-1、TG、TCH、LDL、HDL等结果与对照组有明显差异，其中研究组的NO、HDL水平较对照组显著偏低（ $P < 0.05$ ），而ET-1、TG、TCH、LDL水平较对照组显著偏高（ $P < 0.05$ ）；通过血管彩超检查发现，研究

组患者中血管斑块形成的数量明显高于对照组 ($P<0.05$)。

结论：本研究结果显示：研究组与对照组在血清ET-1、NO、血脂水平及血管斑块形成数量比较时，其差异均有统计学意义 ($P<0.05$)，提示慢性焦虑对患者的血管内皮功能及血脂代谢存在明显的不良影响。若定期对慢性焦虑障碍患者进行血管内皮功能、血脂水平及血管彩超监测，早期进行干预和疏导，必要时对其进行药物干预，可以有效预防和减缓心脑血管发生不良病变，以此降低慢性焦虑障碍患者心脑血管疾病的发病率和死亡率。

关键词 焦虑障碍 血管内皮 血脂代谢

