Poster

2025年9月26日(金) 14:00 ~ 15:10 Poster Session (Foyer 1)

Poster 11

[P-11-07] Investigating Neurophysiological Correlates of Depression in Children with ADHD: A qEEG Study

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キーワード：Attention-deficit/hyperactivity disorder、Depression、Electroencephalography、Child、Adolescent

Although depression is a common comorbidity in children with attention-deficit/hyperactivity disorder (ADHD), its neurophysiological relationship according to each symptom has rarely been explored. This study aimed to inform clinical practice by exploring the neurophysiological underpinnings of depression comorbidity in ADHD. We conducted a cross-sectional study on 87 children with ADHD (68 males) aged 5 to 18 at a child and adolescent psychiatric clinic. Resting quantitative electroencephalography (qEEG) recordings were collected with eyes closed. We used various questionnaires to evaluate ADHD symptoms, depression levels, and anxiety. Pearson correlation coefficients were used to investigate the relationship between the z-score relative spectral power of qEEG and each psychological symptom. Data were analyzed using IBM SPSS 27.0 (SPSS Inc., Chicago, IL, USA). The study's findings indicated that theta activity at the Fz (frontal), Cz (central), and Pz (parietal) locations had a negative correlation with the severity of ADHD symptoms in children diagnosed with ADHD. In contrast, alpha activity in these same regions demonstrated a positive correlation with symptom severity. Additionally, delta activity in the regions was negatively correlated with depression severity. These findings suggest that alpha and theta activity might serve as a reliable neurophysiological marker of ADHD symptom severity, while delta activity might function as a reliable biological marker of depression severity in children with ADHD. However, further research is needed to generalize the results of this study.