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Childhood trauma in patients with self-reported stress-precipitated seizures

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Abstract

Objective: Stress is the most commonly reported precipitant of epileptic seizures, but the mechanism by which stress precipitates seizures and the risk factors for stress as a seizure precipitant are poorly understood. Previously, we observed higher levels of anxiety symptoms in patients with epilepsy who reported stress as a seizure precipitant. Given that childhood trauma increases the risk of general psychiatric symptom burden, including anxiety symptoms, we sought to examine the relationship between childhood adversity and stress as a seizure precipitant.

Methods: Sequential outpatients (N=236) evaluated at the Epilepsy Center of the University of Cincinnati Neuroscience Institute who had previously enrolled in an earlier study of stress and seizures were enrolled. Subjects either endorsed stress as a seizure precipitant [Stress (+)] or not [Stress (-)]. The Childhood Trauma Questionnaire Short Form (CTQ-SF), a 28-question scale that evaluates 5 domains of childhood adversity (physical abuse, physical neglect, emotional abuse, emotional neglect, and sexual abuse) was sent via mail and returned on paper or electronically from participants. Total CTQ-SF score and CTQ-SF domain scores were compared between Stress (+) and Stress (-) groups using Wilcoxon rank sum test. Spearman's rank correlation between CTQ-SF scores with depression and anxiety was also determined, and these analyses were followed by a multivariate analysis to identify the association of childhood trauma with other factors including anxiety and depression.

Results: A total of 119 out of 236 CTQ-SFs that were sent out were completed. Response rates were 91/195 for Stress (+) and 28/41 for Stress (-). The Stress (+) group reported higher scores in emotional abuse compared with the Stress (-) group (p=0.029); CTQ-SF total scores were higher in the Stress (+) group compared with the Stress (-) group (p=0.08), and sexual abuse scores were higher in Stress (+) group (p=0.07), but there were no statistically significant differences for other types of trauma. Depression and anxiety scores were higher in the Stress (+) group, but anxiety was the only independent factor associated with the Stress (+) group in the multivariate analysis (p=0.0021).

Conclusion: Patients with epilepsy who report stress as a seizure precipitant are more likely to endorse a history of childhood traumatic experiences, particularly emotional abuse, compared with those who do not perceive stress as a precipitant. Further study is needed to identify how childhood trauma interacts with anxiety in modulating stress response in patients with epilepsy.

Keywords: Anxiety; Childhood trauma; Depression; Epilepsy; Seizure; Stress.

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