

Traumatic brain injury worsens outcomes for those with nonepileptic seizures

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A new study by a Rhode Island Hospital researcher has found that traumatic brain injury (TBI) can significantly increase the odds of having major depression, personality impulsivity and post-traumatic stress disorder (PTSD) in patients with psychogenic nonepileptic seizures (PNES). The paper, by W. Curt LaFrance Jr., M.D., M.P.H., director of neuropsychiatry and behavioral neurology, is published online in advance of print in the journal *Epilepsia*.

"Some patients who sustain a TBI develop seizures," LaFrance said. "Very often, these seizures are believed to be epileptic in nature, and the patient, therefore, is treated for epilepsy. Later the seizures are found to be PNES. This study demonstrates the prevalence of co-morbid mild TBI and PNES, which could suggest that some patients are being inappropriately treated for epilepsy with [antiepileptic drugs](#), while not being treated for their actual illness: nonepileptic seizures."

In this study, which compared patients with PNES and TBI to those without TBI, LaFrance found that 45 percent of patients with PNES also had TBI, and 73 percent of those TBIs were mild TBI. Patients who suffered a TBI had more mood disorder diagnoses, were more likely to receive disability, and had lower global functioning than PNES patients who did not have a TBI. This study underscores the importance of identifying and addressing the impact of TBI in patients with [seizure disorders](#) to ensure appropriate and effective treatment.

Patients who have both PNES and TBI are not only more likely to

develop [major depressive disorder](#), but also are more likely to have a history of abuse. While these psychiatric disorders are common in patients with PNES, they are exacerbated by the presence of TBI. Both groups of PNES patients – with and without TBI – had similarly high rates of unemployment, but twice as many patients with TBI received [disability payments](#). This may not only reflect a greater severity of symptoms, but also may reflect the criteria for granting disability.

"Another significant finding from the study was that if a patient had both PNES and TBI, the combination resulted in 2.75 odds increase of having PTSD, and triple the odds increase of having a history of trauma/abuse," LaFrance said. "This finding illustrates the importance of the 'double hit' of emotional and physical traumatic experiences that may occur with abuse and/or a head injury commonly found in the PNES population. This study shows that TBI and PNES are significantly associated with a cluster of diagnoses including depression and PTSD, personality, and/or trauma/abuse history, all of which could have an impact on functioning."

Mild TBI appears to be a significant risk factor in patients with PNES, and is associated with increased psychiatric co-morbidity, symptom severity, poor functioning and increased disability. Developing appropriate protocols to more accurately diagnose these patients is the first step to ensuring proper care is provided.

"This study underscores the necessity of assessing not only the seizures, but also the somatic and psychiatric co-morbidities in patients with seizures," LaFrance emphasized.

Previous studies have assessed TBI as a risk factor for PNES, but did not measure psychiatric and functioning outcome measures. More study is needed to explore the development of new treatments as new pharmacological and rehabilitative options become available.

Provided by Lifespan

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