

NEGATIVE SYMPTOMS IN TEMPORAL LOBE EPILEPSY

Negative Symptoms in Temporal Lobe Epilepsy

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OBJECTIVE: This study examined the frequency of negative and positive symptoms in nonpsychotic patients with temporal lobe epilepsy and the relationship of negative and positive symptoms to cognition, quantitative magnetic resonance imaging (MRI) volumetrics, and depression.

METHOD: Eighty-four patients with temporal lobe epilepsy and 74 healthy comparison subjects were evaluated for negative and positive symptoms and underwent comprehensive neuropsychological evaluation, quantitative MRI volumetrics, and assessment of mood state and depression.

RESULTS: Negative symptoms were significantly more prevalent in the patients with temporal lobe epilepsy (31%) than in the comparison subjects (8%). There was no difference between groups in the rate of positive symptoms. Although the epilepsy patients as a group exhibited generalized cognitive impairment relative to the comparison subjects, the epilepsy patients with negative symptoms performed significantly worse than patients without negative symptoms and comparison subjects across measures of nonverbal intelligence, visuoperception, speeded visuomotor processing, and memory. The epilepsy patients with negative symptoms exhibited significantly greater diffuse atrophy than the healthy comparison subjects and higher CSF volumes than the epilepsy patients without negative symptoms. The epilepsy patients with and without negative symptoms had statistically equivalent Beck Depression Inventory scores and lifetime history of mood disorders, including major depression.

CONCLUSIONS: Negative but not positive symptoms were more prevalent in temporal lobe epilepsy patients than in healthy comparison subjects. Negative symptoms

were independent of current and past depression and were associated with neuropsychological deficits exceeding the general cognitive morbidity associated with temporal lobe epilepsy and with quantitative MRI indices, suggesting greater cerebral atrophy.

COMMENTARY

When we think of negative symptoms, we think of a patient with schizophrenia that has a poor prognosis (1). In this article, Getz et al. bring to our attention that negative symptoms do occur in temporal lobe epilepsy (TLE); their prevalence is significantly higher than that in a control group, affecting almost one third of these patients. In addition to the impact that negative symptoms may have on the psychiatric semiology of patients with TLE, their presence is associated with widespread cognitive deficits and diffuse brain atrophy. Very few psychiatric symptoms are predictive of such cognitive disturbances and neuroradiologic findings.

Despite their semiologic resemblance to the symptoms of a depressive disorder, the authors clearly demonstrate that negative symptoms are independent of a past or concurrent depressive disorder. Yet if clinicians and researchers were not looking for negative symptoms in TLE, how were these symptoms interpreted? Were they mistaken for “atypical” symptoms of depression? This question should be addressed in future studies in which psychiatric semiology discriminates between negative symptoms and symptoms of depression.

Recent investigations of negative symptoms in Alzheimer's dementia (2) and stroke (3) revealed that just as in TLE and schizophrenia, they are associated with a poor outcome and are suggestive of frontal lobe disturbance, evidenced by decreased perfusion of frontal lobe cortex. The presence of negative symptoms in various neurologic and neuropsychiatric disorders is not only indicative of their nonspecific nature, but may suggest that in TLE, negative symptoms may not be directly related to the actual seizure disorder (in the same way as are the symptoms of an interictal dysphoric disorder or postictal psychosis). Rather they may be a reflection of the brain damage resulting from the cause of the seizure disorder and/or from the consequences of a chronic and persistent seizure bur-

den. If this hypothesis is correct, negative symptoms may be identified in extratemporal epilepsy, as well as in the secondarily generalized epilepsies, but significantly less in primary generalized epilepsy. This question should be studied in larger samples of patients with temporal and extratemporal epilepsy as well as in patients with primary and secondarily generalized epilepsy. In the meantime, those of us who have suggested that depression in epilepsy may be different from that of nonepilepsy patients (4) must reassess to what degree our conclusions may have been influenced by our failure to recognize the presence of negative symptoms.

References

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