

Late-Adult-Onset Idiopathic Epilepsy and Dementia Risk

A large study of older veterans finds a nearly twofold increase in risk for dementia following diagnosis of late-onset seizures without known cause.

Do late-adult-onset seizures have an association with risk for dementia or just reflect an independent cause without concern for a degenerative disease? To address this question, researchers examined data from a random sample of nearly 1 million veterans aged 55 and older to identify incident cases (over a 5-year baseline) of late-onset seizures of unknown etiology (LOSU). Patients with existing diagnoses of epilepsy/seizures, possible secondary causes of seizures, dementia, or neurotoxin exposure were excluded.

During the baseline period, 2166 veterans were diagnosed with LOSU, of whom 181 (8.36%) were diagnosed with dementia during the mean 6.1 years of follow-up. In contrast, only 4.79% of the 290,096 veterans without LOSU were diagnosed with dementia. The unadjusted hazard ratio for dementia with LOSU was 1.99 (95% confidence interval, 1.71–2.32). Even after adjusting for history of depression, traumatic brain injury, and the requirement for a 2-year lag between LOSU and dementia diagnoses, the HR was 1.71 (95% CI, 1.39–2.11). The 2-year lag between diagnoses was an attempt to diminish the effect of possible reverse causation — dementia pathophysiology responsible for the epilepsy. The authors conclude that this association is particularly important to future dementia research, given the relatively high incidence of LOSU combined with the aging of our population.

COMMENT

This work provides some of the strongest evidence to date for an increased risk for dementia following late-adult-onset idiopathic epilepsy. However, whether treating the epilepsy reduces the dementia risk remains unclear. For example, a diagnosis of temporal lobe epilepsy in an older patient presenting with memory complaints and concern for early signs of dementia might be either a cause for relief — receiving a diagnosis of a condition that is mostly treatable — or a harbinger of a relentless, progressive cognitive decline until death. The results from this study should raise some concern that the latter scenario might be the case. — **Robert C. Knowlton, MD, MSPH**

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Dr. Knowlton is at the same institution as the study authors but had no role in the study.

Keret O et al. Association of late-onset unprovoked seizures of unknown etiology with the risk of developing dementia in older veterans. JAMA Neurol 2020 Mar 9; [e-pub]. (<https://doi.org/10.1001/jamaneurol.2020.0187>)