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Dementia and adult-onset unprovoked seizures

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Abstract

Objective: We tested the hypothesis that dementia increases the risk of unprovoked seizure among adults. Partial- and generalized-onset seizures were considered together and separately. Additionally, we explored whether the increased risk was restricted to Alzheimer's disease (AD), as previously shown.

Design: Subjects in this population-based case-control study were 145 incident cases of first unprovoked seizure (without prior stroke, CNS infection, brain tumor, head trauma, mental retardation, or cerebral palsy) aged 55 years or older and 290 controls matched to cases on age, gender, and duration of medical follow-up. Using the records-linkage system of the Rochester Epidemiology Project, we obtained, for both cases and matched controls, information on dementia prior to onset of unprovoked seizure. Subjects were classified as having dementia if they met ad hoc criteria equivalent to those in the DSM-III. AD was distinguished from other dementias.

Results: Both a diagnosis of AD and a diagnosis of other dementia were associated with at least a six-fold increased risk of unprovoked seizure when controlling for age, sex, and length of medical follow-up in Rochester. There was no difference in risk when comparing generalized-onset seizures with partial-onset seizures.

Conclusions: In the absence of other prior neurologic insult, both AD and other dementias increase the risk of generalized- and partial-onset unprovoked seizures.

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