Late-onset seizures as a predictor of subsequent stroke

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Summary

Background Cerebrovascular disease is thought to be a major cause of epilepsy in late life. We investigated the hypothesis that the onset of seizures after the age of 60 years in people with no history of overt stroke might be associated with an increased risk of subsequent stroke.

Methods Data were obtained from the UK General Practice Research Database on 4709 individuals who had seizures beginning at or after the age of 60 years, and on 4709 randomly selected controls with no history of seizures, matched for age, sex, and general practice. Individuals with a history of cerebrovascular disease, other acquired brain injury, brain tumour, drug or alcohol misuse, or dementia were not eligible for inclusion. Computerised patients' records were searched for subsequent diagnoses of stroke.

Findings Log-rank testing, adjusted for matching, showed a highly significant difference in stroke-free survival between the two groups (p<0·0001). With a Cox's model, we estimated that the relative hazard of stroke at any point for people with seizures compared with the control group was 2·89 (95% CI 2·45-3·41).

Interpretation Our findings show that the onset of seizures in late life is associated with a striking increase in the risk of stroke. Further research is warranted to assess the benefit of specific interventions to prevent stroke in patients with seizures.

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