

Sudden Sensorineural Hearing Loss Increases the Risk of Stroke: A Five-Year Follow-up Study

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Abstract

Background and Purpose—No previous study has investigated the incidence or risk of cerebrovascular diseases developing after the sudden sensorineural hearing loss (SSNHL). This study sets out to estimate the risk of stroke development among SSNHL patients during a 5e-year follow-up period after hospitalization for acute episodes of SSNHL.

Methods—Our study design features a study cohort and a comparison cohort. The study cohort consists of all patients hospitalized with a principal diagnosis of sudden hearing loss (n=1,423), whereas the control cohort comprised all patients hospitalized for an appendectomy in 1998 (n=5692) as a surrogate for the general population. Each patient was tracked from hospitalization in 1998 until the end of 2003. Cox proportional hazard regressions were performed as a means of computing the 5-year stroke-free survival rates after adjustment for possible confounding factors.

Results—Of the total sample, 621 patients (8.7%) had strokes during the 5-year follow-up period: 180 (12.7% of the SSNHL patients) from the study cohort and 441 (7.8% of patients undergoing an appendectomy) from the control cohort. After adjusting for other factors, the hazard of stroke during the 5-year follow-up period was 1.64-times (95% CI, 1.31 to 2.07; P<0.001) greater for SSNHL patients than for appendectomy patients.

Conclusions—Our findings suggest that SSNHL can be an early warning sign of impending stroke. We suggest that SSNHL patients should undergo a comprehensive hematologic and neurological examination to help clinicians identify those potentially at risk for stroke developing in the near future.

Key words: hearing loss • stroke • sudden sensorineural hearing loss

