

Retinal Vein Occlusion and the Risk of Stroke

Development: A 5-Year Follow-up Study

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Abstract

PURPOSE: To investigate the risk of stroke development following the occurrence of retinal vein occlusion (RVO). **DESIGN:** Retrospective nationwide population-based administrative database study. **METHODS:** Data were collected from Taiwan National Health Insurance Research Database, which comprises 1,073,891 random subjects from 23 million Taiwan residents. The study cohort comprised of all patients with a first-time diagnosis of either central or branch RVO from January 1999 to December 2001 (n = 350). The comparison cohort comprised randomly selected patients (n = 2,100) matched with the study group for age, gender, and the date of ambulatory care visit. Each sampled patient was tracked for five years. Cox proportional hazard regressions were utilized to compute the five-year stroke-free survival rate after adjusting for possible confounding factors. **RESULTS:** Stroke developed in 35.1% and 19.9% of RVO patients and comparison group patients, respectively. After adjusting for demographic characteristics and comorbidities, RVO was not associated with an increased risk of stroke development (adjusted hazard ratio, 1.01; 95% confidence interval [CI], 0.65 to 1.57) among subjects of any age. However, RVO patients age 60 to 69 years had a 2.34-fold (95% CI, 1.05 to 5.24) higher risk of suffering a stroke. **CONCLUSIONS:** There was no overall association of RVO with stroke except in the 60-to 69-year subgroup. The possible causes include: an actually increased risk of stroke development in the 60- to 69-year group, chance finding, the presence of selection biases, small numbers of stroke patients in the <50 and 50 to 59 age groups, or a lack of power in the > or =70-year group.