

# Open-angle glaucoma and the risk of stroke development: A five-year population-based follow-up study

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摘要

## Abstract

**BACKGROUND AND PURPOSE:** Although open-angle glaucoma (OAG) is associated with some of the risk factors of stroke development, there is still no published study addressing whether OAG increases the risk of stroke development. We investigated the risk of stroke development after a diagnosis of OAG. **METHODS:** Data were retrospectively collected from the Taiwan National Health Insurance Research Database, which is comprised of 1 073 891 random subjects from among Taiwan's 23 million residents. The study cohort comprised all patients with a diagnosis of OAG (International Classification of Diseases, 9th Revision, Clinical Modification code 365.1 to 365.11) in 2001 (n=4032). The comparison cohort was comprised of randomly selected patients (5 for every patient with OAG, n=20 160) matched with the study group in terms of age, gender, geographic location, and comorbid medical disorders. Patients were tracked from their index visits for 5 years. Cox proportional hazard regression was used to compute the 5-year stroke-free survival rate after adjusting for possible confounding factors. **RESULTS:** Stroke developed in 14.9% of patients with OAG and 9.5% of patients in the comparison cohort during the 5-year follow-up period. Patients with OAG had significantly lower 5-year stroke-free survival rates than patients in the comparison cohort. After adjusting for patients' demographic characteristics and selected comorbidities, patients with OAG were found to have a 1.52-fold (95% CI, 1.40 to 1.72) higher risk of having a stroke than the matched comparison cohort. **CONCLUSIONS:** Patients with OAG demonstrated a significantly increased risk of stroke development during the 5-year follow-up period