

Predictors of Neovascular Glaucoma in Central Retinal Vein Occlusion

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PURPOSE: To determine the risk factors for development of neovascular glaucoma (NVG) in patients after an acute central retinal vein occlusion (CRVO) .

DESIGN: Retrospective cohort study.

METHODS: Review of medical records of 646 patients with a diagnosis of CRVO between 2013 and 2017 at the Bascom Palmer Eye Institute.

INCLUSION CRITERIA: (1) CRVO onset to presentation **RESULTS:** Thirteen of 98 patients (13%) who met inclusion criteria developed NVG. The mean adjusted time to NVG diagnosis from onset of CRVO-related symptoms was 212 days. Patients presenting with a worse initial visual acuity ($P = .034$) , a relative afferent pupillary defect (RAPD) ($P = .002$) , or a history of systemic hypertension ($P = .026$) had an increased risk of NVG compared to those who did not. Age, body mass index, history of glaucoma, history of diabetes, and central retinal thickness were not significantly associated with development of NVG.

CONCLUSIONS: Risk factors for NVG development included history of systemic hypertension, worse visual acuity on presentation, and RAPD on presentation. Patients presenting with these findings should be followed at closer intervals and informed of the greater risk for neovascularization. Intravitreal anti-VEGF therapy delayed but did not prevent NVG.

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