

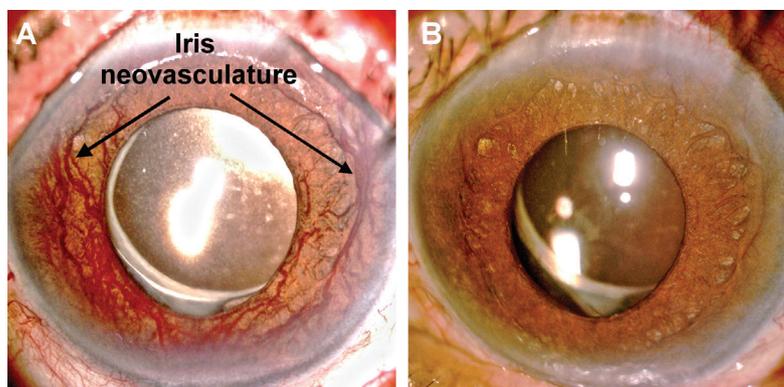
# Ocular ischemic syndrome

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**A** 74-year-old man with hypertension and diabetes mellitus presented with a three-month history of intermittent orbital pain and progressive vision loss in his left eye, deteriorating to hand motions. The intraocular pressure was in the normal range at 13 mm Hg. Biomicroscopy showed prominent iris neovasculation (Figure 1A). Fluorescein angiography disclosed dot hemorrhages in the mid-peripheral retina, as well as delayed choroidal and retinal perfusion, indicating fundus ischemia. Intravitreal injection of bevacizumab, an anti-vascular endothelial growth factor agent, achieved rapid regression of iris neovasculation within six days (Figure 1B). For iris neovasculation without retinal vascular diseases, ocular ischemic syndrome should be considered, and total occlusion of the left internal carotid artery was shown on carotid duplex ultrasonography and angiography. Subsequent angioplasty with stenting restored the blood flow (see Appendix 1, available at [www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.160459/-/DC1](http://www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.160459/-/DC1)). The patient has not had a recurrence of iris neovasculation and serial intraocular pressure measurements have not exceeded 20 mm Hg. At two-year follow-up, he was doing well, although his vision did not recover, because of the prolonged retinal ischemia.

Ocular ischemic syndrome is an uncommon but potentially blinding condition that results from severe ocular hypoperfusion. It may represent the first sign of carotid artery stenosis. The incidence rate is estimated to be 7.5 cases per million every year.<sup>1</sup> Pain may be present in about 40% of cases.<sup>1</sup> Careful examination of the anterior segment with a handheld ophthalmoscope may identify neovascularization of the iris, as it is observed in 87% of cases of this syndrome.<sup>2</sup> Because the loss of vision is usually unilateral,<sup>1</sup> examination findings for both eyes should be compared. Fundus fluorescein angiography, carotid duplex ultrasonography, cerebral angiog-



**Figure 1:** (A) Biomicroscopy examination of the left eye showing prominent iris neovasculation in a 74-year-old man. (B) Rapid regression of iris neovasculation achieved within six days after intravitreal injection of bevacizumab.

raphy and magnetic resonance angiography may help in diagnosis. The overall mortality rate for patients with ocular ischemic syndrome is 40% at five years, most commonly from ischemic cardiovascular disease, followed by cerebrovascular disease.<sup>1</sup>

## References

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**Competing interests:** None declared.

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