

# IMAGE OF THE MOMENT

# Rubeosis

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**Figure 1** Close view of the right eye showing injection of the conjunctiva and irregularly arranged blood vessels around the inner margin of the iris in the trabecular meshwork of the anterior chamber (rubeosis iridis, or neovascularization of the iris).

A 70-year-old man presented following the subacute onset of loss of vision in his right eye. In the previous weeks he had also experienced a dull ache around the right eye (ocular angina) and dimming of his vision in the right eye when out in sunlight, which was slow to recover. He was a smoker and taking medication for hypertension and diabetes.

Examination revealed:

- episcleral vascular congestion and neovascularization of the iris of the right eye (Fig. 1);
- reduced visual acuity in the right eye to light perception only;
- a mid-dilated right pupil and right relative afferent pupillary defect;
- fundoscopic appearances of severe retinal ischaemia, similar to those of central retinal artery occlusion (Fig. 2); there was no evidence of venous stasis retinopathy, which is characterized by dilated veins and dot and blot haemorrhages and microaneurysms in the deeper layers of the mid peripheral retina (and can be mistaken for central retinal vein occlusion);
- intraocular pressure of 20 mmHg (normal < 22 mmHg);
- absence of the right temporal artery pulse.

Carotid ultrasound and carotid catheter angiography revealed occlusion of the origin

# iriditis

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of the right internal carotid artery and 50% diameter stenosis of the origin of the right external carotid artery (Fig. 3). The ESR was normal.

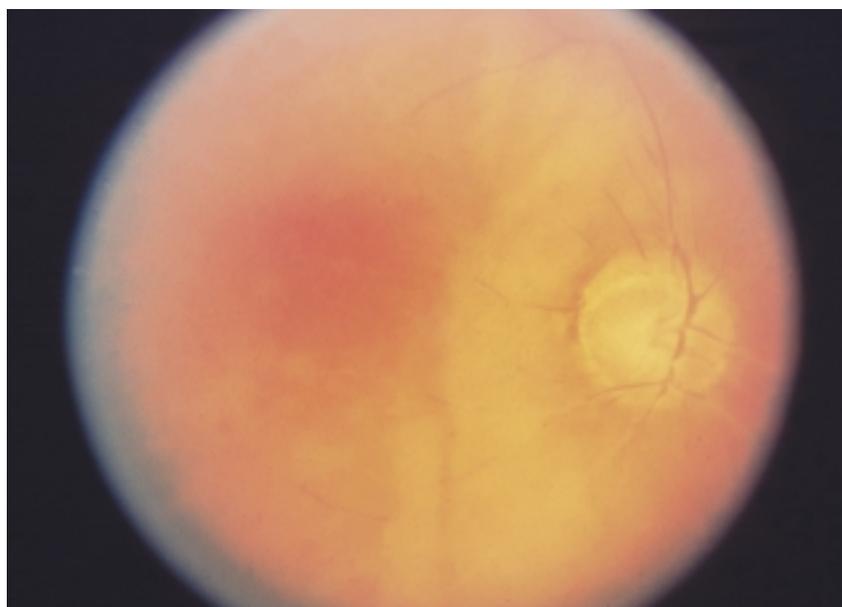
Vision in the right eye never recovered.

The diagnosis was ocular ischaemic syndrome (ischaemic oculopathy), with chronic ischaemia of the anterior and posterior segments of the eye, caused by chronic occlusion of the ipsilateral internal carotid artery along with poor collateral flow to the eye because of the stenotic ipsilateral external carotid artery (Carter 1985; Mizener *et al.* 1997).

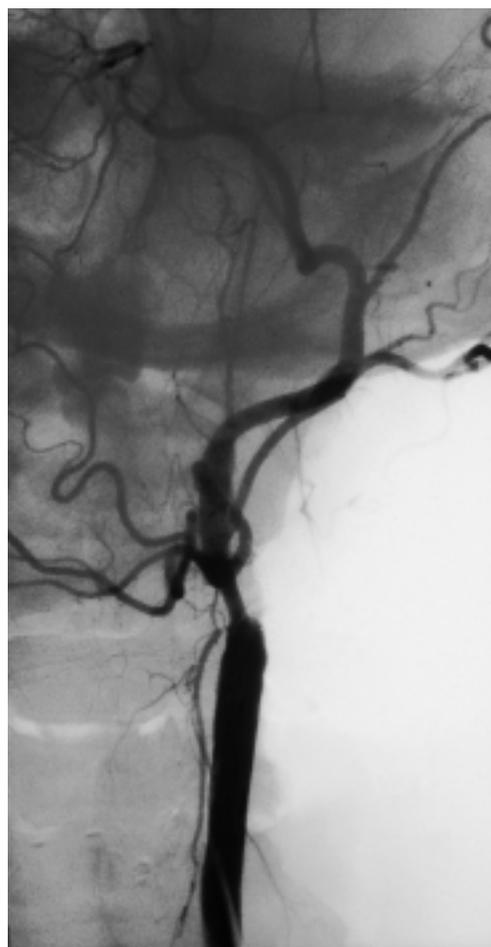
Patients with rubeosis iridis are at risk of developing neovascular glaucoma because the new vessels in the trabecular meshwork of the anterior chamber of the eye obstruct aqueous flow. However, this patient did not have neovascular glaucoma, presumably because of impaired ciliary body perfusion leading to reduced production of aqueous humour. Intravenous fluorescein angiography was not performed, but usually shows delayed or patchy choroidal filling, retinal capillary nonperfusion, and micro-aneurysms.

## References

- Carter JE (1985) Chronic ocular ischaemia and carotid vascular disease. *Stroke*, **16**, 721–8.  
Mizener JB, Podhajsky P & Hayreh SS (1997) Ocular ischaemic syndrome. *Ophthalmology*, **104**, 859–64.



**Figure 2** Fundus of the right eye showing extremely narrow arterioles and veins, pallor of the retina due to retinal oedema, and redness around the macula (ischaemia of the inner layer of the retina).



**Figure 3** Carotid angiogram showing occlusion of the origin of the right internal carotid artery and 50% diameter stenosis of the origin of the right external carotid artery