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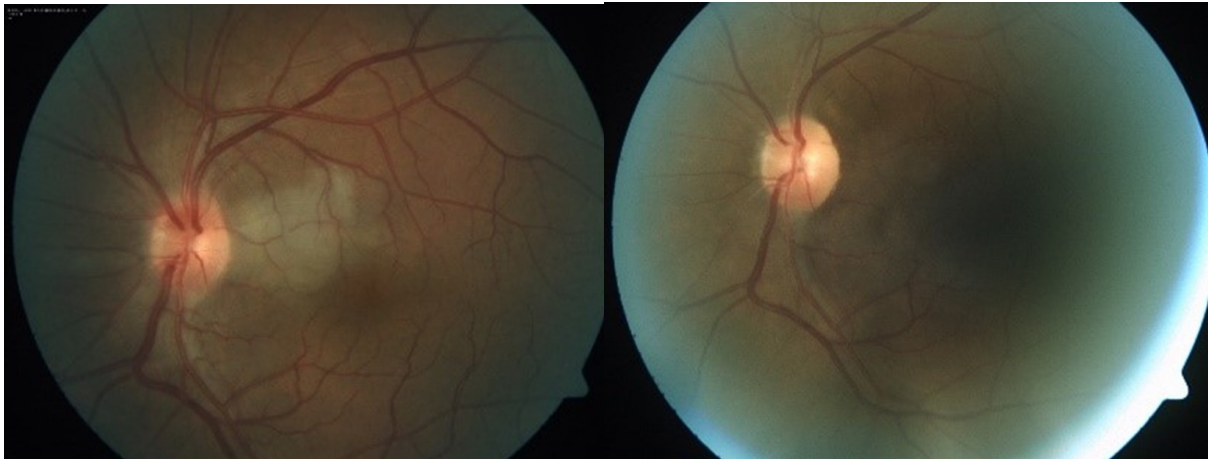


Figure 1. Left eye fundus photo at event time.

Figure 2. Left eye fundus post 1 month event (after treatment).

A 46 year old gentlemen with no previous medical comorbidities presented with acute, painless visual reduction in the left eye for 12 hours duration. He was a chronic smoker who smoke 30 cigarettes per day for the past 20 years. He denied associated headache, jaw claudication, nor other connective tissue disease symptoms. On clinical examination, his visual acuity was counting finger at a distance of 1 feet on his left eye and 6/9 on his right. Findings of anterior segment examinations of both eyes were unremarkable. Fundus examination showed a patch of whitening of the retina left of the optic nerve (Figure 1). Immediate ocular massage using Goldman 3 mirror, applying self-rebreathing bag and anterior chamber paracentesis were performed. His vision improved after the manoeuvres. Fundus examination 1 month later showed resolution of the patch of whitening in the retina (Figure 2).

What is diagnosis?

Answer: refer to page 78

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Answer: Left eye cilioretinal artery occlusion

Although retinal artery occlusion is relatively infrequent, it is an ocular emergency because it causes irreversible visual loss unless the retinal circulation is re-established prior to the development of retinal infarction. A typical painless, sudden onset blurring of vision is often the presenting complaint. Average age at presentation of patients with retinal artery occlusion is the early to mid-60s. Younger patient (especially < 45) does warrant a systemic workout.

Embolic and thrombotic cause account for 80% of arterial occlusion disease.¹ Inflammation in or around the vessel wall (e.g. giant cell arteritis–GCA, systemic lupus erythematosus, Wegener granulomatosis, polyarteritis nodosa), vasospasm (e.g. migraine) and systemic hypotension causes the minority of the cases. Emboli can be refractile yellow-white cholesterol (Hollenhorst) plaques, greyish elongated fibrin-platelet aggregates, non-scintillating white calcific particles and rarely vegetations from bacterial endocarditis, cardiac myxomatous material, fat and others.²

The hallmark on clinical examination is retinal whitening representing ischemia of the area affected, although in our case, the emboli was not clearly visible. Further systemic workout revealed hyperlipidaemia and

no other sources of emboli (such as from heart or carotid artery) was found. With the history of chronic smoking, hyperlipidaemia, and demographic of the patient (middle age male), blood investigation to rule out antiphospholipid was not required.

Cilioretinal artery (which present in 15-50% of population) occlusion otherwise usually carry fairly good visual prognosis unless the foveola is completely surrounded by retinal whitening.² The general idea of management is to establish reperfusion of the ischaemic retina either mechanically or medically to dislodge the embolic (if it is the likely cause). Adoption of supine posture, ocular massage, anterior chamber paracentesis and ocular pressure lowering agent is typically employed to achieve the above mentioned effect. Rebreathing bag is another non-invasive method that is often used, and some also promote use of carbogen (mixture of high oxygen 95%, carbon dioxide 5%) to achieve vasodilatation effect and hope to dislodge the emboli. In this case, we employed ocular massage, applying self-rebreathing bag and also anterior chamber paracentesis methods.

The duration of retinal ischemia is the most important factor in determining prognosis. However, since it is often difficult to pinpoint the actual initial occlusive event, aggressive management is appropriate, particularly in patients with a duration of occlusion less than 24 hours.

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- 2: Brad Bowling. *Kanski's Clinical Ophthalmology- A systematic approach*. Chapter 13 Retinal Vascular Disease, 8th Edition, Elsevier, 2016: 549-556.