Anterior segment ischaemia following segmental scleral buckling

Jeffrey Kwartz, Stephen Charles, Paul McCormack, Alan Jackson, Michael Lavin

Anterior segment ischaemia is a well recognised complication following retinal detachment surgery. This case report describes postoperative anterior segment ischaemia in a patient with known atheromatous disease of the intracranial vessels.

Case report
A 55-year-old white man presented with an 8 month history of poor vision in the left eye. He had a history of mild asthma and 2 years previously had suffered a subarachnoid haemorrhage caused by a left middle cerebral artery aneurysm which was subsequently clipped. There was no visual disturbance associated with the subarachnoid haemorrhage.

On examination the right eye was normal but left visual acuity was reduced to counting fingers. Funduscopy revealed a left subtotal retinal detachment, involving the macula, associated with two small retinal breaks in the inferotemporal periphery.

Retinal reattachment surgery was performed under general anaesthesia. A 360° conjunctival limbal peritomy was performed, the retinal holes were localised, and transcleral cryopexy to the retinal breaks was performed. Subretinal fluid was drained below the lateral rectus muscle and ocular volume replacement was attained with an injection of sterile air. A circumferential 277 silicone episcleral explant was secured to the whole of the inferotemporal quadrant. Patency of the central retinal artery was confirmed, the peritomy was closed, and a subconjunctival injection of cephradine given with atropine drops instilled into the eye. The patient was positioned with right cheek to pillow.

On the first day postoperatively, the left cornea was very oedematous with marked folding of Descemet’s membrane. The anterior chamber was deep with flare present and a dilated pupil (post atropine). The intraocular pressure was 2 mm Hg. There was a good red reflex and the retina appeared to be flat. A diagnosis of anterior segment ischaemia was made.

The patient was treated with hourly topical dexamethasone drops. Ultrasonic corneal pachymetry was performed, which showed a normal right corneal thickness (556 μm) and increased left corneal thickness (1032 μm). The left corneal oedema gradually subsided and by 4 months the cornea was clinically normal (ultrasonic pachymetry 587 μm). There was mild iris atrophy, normal intraocular pressure, and the retina was attached. Left visual acuity was 2/60 because of post detachment atrophy.

The cerebral angiograms taken just before neurosurgical intervention 2 years previously have subsequently been reviewed. These show a normal patency of the right ophthalmic artery (Fig 1). On the left, ipsilateral to the anterior segment ischaemia, there is occlusion of the ophthalmic artery (Fig 2), with a collateral blood supply to the central retinal artery from branches of the maxillary division of the external carotid artery. It has subsequently been revealed that following neurosurgery the patient suffered a mild but transient dysphasia and left ptosis.

Comment
Anterior segment ischaemia is a well described but uncommon complication following retinal detachment surgery. Predisposing factors include surgical manoeuvres such as an encircling scleral buckle, disinsertion of ocular muscles, and diathermy or cryotherapy to the long posterior ciliary vessels or an underlying systemic vascular or haematological condition such as haemoglobin S-C disease which may compromise ocular blood flow. ¹

The pathogenesis of anterior segment ischaemia following retinal detachment surgery
Posterior scleritis with retinal vasculitis and choroidal and retinal infarction

N Andrew Frost, John M Sparrow, A Ralph Rosenthal

Posterior scleritis is a rare but probably underdiagnosed disease process. The clinical features are variable and the lesions may cause diagnostic confusion. Visual impairment is common but visual loss due directly to vascular involvement is unusual. In the case presented vascular involvement was exceptionally severe and determined the long term visual outcome.
Anterior segment ischaemia following segmental scleral buckling.

J Kwartz, S Charles, P McCormack, A Jackson and M Lavin

Br J Ophthalmol 1994 78: 409-410
doi: 10.1136/bjo.78.5.409

Updated information and services can be found at:
http://bjo.bmj.com/content/78/5/409.citation

These include:

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/