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Sir,

Massive spontaneous expulsive suprachoroidal haemorrhage in a blind glaucomatous eye treated with chronic topical steroid

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Expulsive suprachoroidal haemorrhage is a rare event, usually complicating intraocular surgery, with often devastating results. There are few reports of spontaneous expulsive haemorrhage in the literature. We present a case of spontaneous expulsive choroidal haemorrhage and highlight potential aetiologies.

Case report

A 74-year-old lady presented as an emergency with a history of severe pain of sudden onset and bleeding from her left eye while sitting at home. She described enough blood to fill two large tissues trickling onto her cheek. Her medical history included systemic hypertension, chronic renal failure, gout, and hypothyroidism.

On examination, she had no light perception in the affected eye and 6/6 in the fellow eye. There was extensive prolapse of tissue through a large corneal defect onto the left cheek with blood-clot admixed (Figure 1). The right eye was normal apart from a shallow anterior chamber and a peripheral surgical iridectomy.

Twenty years earlier, she had a broad surgical iridectomy after admission for left acute-angle closure glaucoma, plus contralateral prophylactic peripheral iridectomy. The patient was lost to follow-up for 17 years, when she re-presented with failing painless vision in her left eye over several weeks. On this occasion she had perception of light only, corneal oedema, a shallow anterior chamber, a large cataractous lens, a raised intraocular pressure (IOP) of 44 mmHg, a closed drainage angle, a left afferent papillary defect, and a grossly cupped optic disc. Her other eye saw 6/6 with a pressure of 13 mmHg and a healthy optic disc. After intense medical treatment failed to control her IOP, ocular

comfort was maintained with a drop regime of dexamethasone 0.1% b.d. and timolol 0.25% b.d. Unfortunately she was again lost to follow-up shortly with persistently raised IOP but a comfortable eye and a clear cornea, until her spontaneous expulsive choroidal haemorrhage.

An evisceration with a 16 mm acrylic ball implant was performed. Histology confirmed the extent of corneal perforation with stromal infiltration by neutrophils but no identifiable organisms. The iris was degenerate with necrotic uveal tissue and blood clot. There was no evidence of malignancy or vasculopathy.

Comment

There are few reports of spontaneous corneal perforation with expulsive haemorrhage in the literature.¹ Our patient had multiple predisposing factors for this dramatic event, including advancing age, arteriosclerosis, systemic hypertension, persistently raised IOP, and chronic use of topical steroid. De Laage² reported a case of giant corneal perforation secondary to chronic misuse of local steroid to the eyelids. We feel that this was the most likely trigger factor in our patient, resulting in a sudden reduction in the IOP and massive suprachoroidal haemorrhage in the presence of multiple other predisposing factors. Although the cornea was noted to be clear at her last assessment, 2 years elapsed before she presented with spontaneous expulsive suprachoroidal haemorrhage, and bullous keratopathy may have ensued in that time in an eye known to have a chronically raised IOP. It is unlikely, however, that bacterial keratitis would have complicated pre-existing bullous keratopathy as non identifiable organisms were noted on histological examination. Of note, there was no evidence of keratopathy in the fellow eye that could predispose to perforation,³ and a vasculitis screen was

Figure 1. Acutely prolapsed uveal contents from left eye.

unremarkable. It is possible that the corneal perforation followed the suprachoroidal haemorrhage and further rise in IOP, but less likely.

This case highlights the potential risks of long-term topical steroid use, especially in the context of prior eye disease, which may have compromised the integrity of the cornea.

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Sir,

Microbial keratitis following orthokeratology
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Orthokeratology is a means of temporarily correcting myopia by wearing rigid gas-permeable contact lenses overnight to modify the corneal shape during the day. It is currently regaining popularity with newer contact lens technology. We describe a case of suppurative keratitis in a patient using these lenses.

Case report

A 22-year-old man presented to the eye department with a 4-day history of red, sore right eye. He had been to his general practitioner on the second day of symptoms, who had prescribed chloramphenicol ointment four times a day to the right eye. The eye had become increasingly red and sore, and in the last 24 h had lost vision. He had been wearing nightly rigid gas-permeable

contact lenses for 8 h each night, to correct his myopia during the day. This reduced his myopia during the day, with the beneficial effect most noticeable in the mornings and wearing off in the evenings. His previous refraction in the affected eye was $-2.75/-0.75 \times 170^\circ$. There had been no problems with his lens hygiene. He had had a previous sore, red right eye 6 weeks before, which responded well to antibiotic drops prescribed by his general practitioner.

On examination the patient's corrected Snellen visual acuity was 6/5 OS and perception of light OD. The right eye was intensely injected. There was a 4.2 mm $\times$ 3.9 mm central infiltrated corneal ulcer in the right eye, with surrounding corneal stromal oedema and a 1.5 mm hypopyon.

Corneal scrapes were taken from the ulcer for Gram staining and for plating onto blood agar, 'chocolate' agar, and Sabouraud's dextrose agar. In addition, the patient's contact lenses and lens cases were sent for culture. Treatment of g. ofloxacin half-hourly day and night, and g. cyclopentolate t.d.s. was started. The Gram stain did not show any organisms. The next day there were signs of improvement with less pain, resolution of the hypopyon, and less corneal stromal oedema. The topical ofloxacin was reduced in frequency to hourly. The following day there was continued improvement, vision improving to 6/18 with a pinhole. The cyclopentolate was stopped and the ofloxacin further reduced to six times a day. There was no growth from any of the scrapes or from the contact lenses or their cases. Resolution continued, and at 2 months only a faint central stromal scar remained, with a corrected visual acuity of 6/9.

Comment

Orthokeratology is defined as the temporary reduction in myopia by the programmed application of rigid gas-permeable contact lenses. New reverse geometry contact lens designs and materials have led to a renewed interest in this field.¹ To our knowledge, corneal ulcer as a complication of orthokeratology has only been described once before, when the organism responsible was *Serratia Marcescens*.² Unfortunately, no organism was identified in this case. Orthokeratology has also been associated with filtering bleb infection in a myopic patient with glaucoma.³

Contact lens wear is an important risk factor for microbial keratitis,⁴ with overnight contact lens wear being the overwhelming risk factor.⁵ Overnight wear causes corneal hypoxia, swelling and increases microbial binding to the corneal epithelium, with the amount of binding inversely proportional to the oxygen transmissability of the contact lens.⁶ Orthokeratology