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

utilises nightly contact lens wear, but with rigid gas-permeable lenses. Rigid gas-permeable lenses carry a lower risk than soft contact lenses for microbial keratitis,⁷ and when used for extended wear only lead to slight and temporary increases in corneal microbial binding.⁸ However, despite the use of relatively safer gas-permeable material, orthokeratology utilises flatter, tighter-fitting rigid contact lens design to flatten temporarily the cornea. This may compromise the central corneal surface more than other contact lens designs: in this case and the only other reported case of microbial keratitis² the ulcer produced was in the central cornea, where the largest mechanical effect would occur. With the increasing popularity of orthokeratology as a means to correct myopia, treated patients should be warned of, and treating doctors aware of, the risk of keratitis.

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Sir,

Aqueous misdirection following needling of trabeculectomy bleb

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Needling of the glaucoma filtration bleb is increasingly used in the immediate and late post-operative management of glaucoma filtration surgery. Bleb needling has been shown to be effective in both these situations in improving aqueous drainage and lowering intraocular pressure (IOP) with a low complication rate.^{1–4}

Although a relatively safe procedure that can be performed in the outpatient setting, it is not without risk of serious complications. Reported adverse events include hypotony with serous choroidal detachment,⁵ bleb leak, corneal abrasion, hyphaema, iris incarceration into the sclerostomy, and endophthalmitis.⁶

We describe aqueous misdirection following the needling of a filtration bleb. This is a previously unreported and potentially serious complication of a needling procedure.

Case report

A 70-year-old African-Caribbean lady with advanced refractory open angle glaucoma (highest IOPs right –32 mmHg, left –34 mmHg) on maximal medical therapy underwent left trabeculectomy augmented with mitomycin-C (0.2 mg/ml). Surgery was uncomplicated with a fornix-based conjunctival flap and two releasable scleral flap sutures. Ten years previously she had undergone uncomplicated extracapsular cataract surgery with a 7.00 mm optic size rigid posterior chamber intraocular lens implant.

On day 1 post-operatively, the anterior chamber (AC) was deep with a formed bleb and the IOP was 10 mmHg. At 1 week following surgery the IOP was 23 mmHg and both releasable sutures were removed sequentially over 2 weeks. Despite this intervention, progressive bleb encystment occurred with reduced drainage, bleb injection, and loss of microcysts. At 4 weeks following the surgery the IOP had risen to 26 mmHg.

A needling procedure was performed at the slit-lamp using a 27G needle. The bleb increased in size and the