Comment

Corneal dermoid is a congenital benign tumour consisting of tissues of ectodermal and mesodermal origin appearing as raised yellowish white vascularized bulbous lesions.[1]

Mann[2] classified corneal dermoids into three broad types. Our case belonged to grade II with corneal involvement sparing deep stroma, descemet's membrane, and endothelium. This was elucidated well on UBM.

The surgical management of corneal dermoid depends on the size, site and depth of involvement.[3] Simple excision is generally not sufficient by itself to manage an extensive lesion.[4]

Corneal dermoids with no anterior chamber involvement require LK in which the lesion is excised to its entirety and a lamellar graft is tailored to fit the defect.[1]

LK has the advantage of avoiding most postoperative complications associated with PK especially less risk of allograft rejection but has the major disadvantage of interface scarring and hazy graft. Of late, DLK is being performed more commonly over LK/PK with minimal reports of interface scarring. We decided to perform DK using big bubble technique as UBM elucidated the lesion to be distinct and sparing the underlying descemet's membrane and endothelium.

The case is being reported because of the rarity of the condition and use of relatively new diagnostic tool UBM to assist in its management. To the best of our knowledge DLK has not been previously reported in corneal dermoid management.

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Sir,

Stenotrophomonas maltophilia keratitis after penetrating keratoplasty

Stenotrophomonas maltophilia is an aerobic, Gram-negative ubiquitous bacillus, isolated from water, soil, plants, and animals.[1] Previously described to be of limited pathogenic potential, it is now emerging as an important nosocomial pathogen.[2] Microbial keratitis due to *S. maltophilia* is rare with only 11 cases reported in literature.[3–7] We report a case of *S. maltophilia* keratitis following penetrating keratoplasty that was managed by topical fluoroquinolone monotherapy.

Case report

A 70-year-old lady presented with diminished vision of 1 week's duration in her right eye. In the affected eye a penetrating keratoplasty was done for a corneal scar (a sequel of burnt-out trachoma) 5.5 months earlier. Postoperatively, a persistent epithelial defect resolved over 2 months with topical preservative-free tear substitutes, antibiotic eyedrops and a bandage contact lens. On examination, her best-corrected visual acuity in the right eye was 20/400. She had lagophthalmos with no corneal exposure. The lid margins were thickened and irregular with significant meibomitis. Trichiasis was not noted. The graft–host junction was well-apposed. There was no bandage contact lens. There was a central epithelial defect with an underlying stromal infiltrate (3.5×3.7 mm) and surrounding stromal oedema (Figure 1a). The remaining details were not visualised. An ultrasound B scan of the right eye was normal. Grams, Giemsa, and KOH stains of the corneal scrapings revealed no organisms. She was started on half-hourly fortified Cefazolin eyedrops (50 mg/ml) and fortified Gentamicin eyedrops (14 mg/ml). These were discontinued after 2 days due to significant growth of Gram-negative bacilli in culture, sensitive only to ciprofloxacin and chloramphenicol. The organism was identified as *Stenotrophomonas maltophilia* by API 20NE (API, Biomerieux, France). Gradual resolution with 0.3% ciprofloxacin hydrochloride eyedrops was noted. A measure of 0.1% betamethasone sulphate was added to reduce inflammation. The lesion healed after 2.5 months of therapy (Figure 1b). She is currently awaiting a regraft in the right eye.

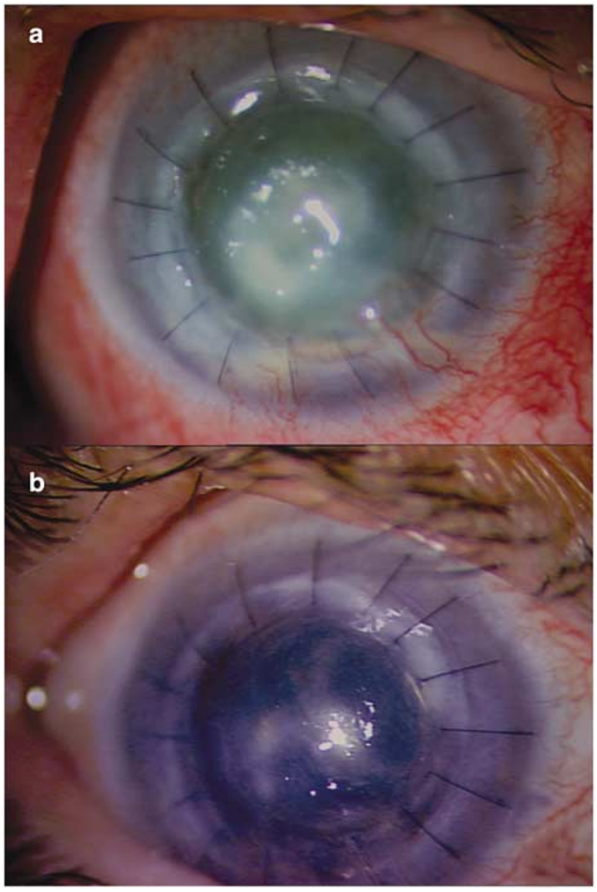

Figure 1 (a) Showing a central epithelial defect with an underlying stromal infiltrate (3.5×3.7 mm) and surrounding stromal oedema. (b) The lesion healed after 2.5 months of therapy.

Discussion

S. maltophilia is an aerobic, nonsporulating, nonfermentative motile bacillus.[2] The predisposing factors for microbial keratitis include trauma,[4,7] contact lens wear,[4,5] herpes simplex virus,[4] and penetrating keratoplasty.[4]

Several factors contributed towards microbial keratitis due to *S. maltophilia* in this case. She had a compromised ocular surface with a predisposition to epithelial breakdown, due to healed trachoma and its sequelae. Topical antibiotic eyedrops and a bandage contact lens were used for a prolonged period for a persistent epithelial defect prior to the development of microbial keratitis. The bandage contact lens was not *in situ* at presentation. *S. maltophilia* was cultured from the lens case and the cornea in a case of contact lens keratitis,[5] and responded to fortified gentamicin within a week.[5] Four cases of *S. maltophilia* graft infiltrates described earlier were polymicrobial.[4] Two were soft contact lens wearers, one had prior trauma, and one had herpes simplex virus infection.[4] Corneal coinfection with *S. maltophilia* and *Aspergillus flavus* has been reported.[7]

S. maltophilia is less virulent than *Pseudomonas aeruginosa*. It is multidrug resistant due to its poor outer membrane permeability and the production of two enzymes L1 and L2.[2] *S. maltophilia* infections are thus more difficult to treat. Trimethoprim-sulphamethoxazole despite being bacteriostatic, is the combination of choice.[2] A combination of ticarcillin and clavulanate has been recommended[8] and was effective in 80% of *S. maltophilia* ocular infections[4] and in combination with antifungal therapy.[7]

We routinely do antibiotic sensitivity testing using the Kirby–Bauer disc diffusion method, and test sensitivity to ciprofloxacin, chloramphenicol, cefazolin, vancomycin, gentamicin and amikacin. *S. maltophilia* isolated in this case was only sensitive to ciprofloxacin and chloramphenicol and resistant to the rest. Based on this, we discontinued topical cefazoline and gentamicin. The percentage susceptibility of the organism to cefazoline is not known. It ranges from 0 to 63% with gentamicin.[2] This method of sensitivity testing is believed to be inaccurate and of poor reproducibility. It tends to overstate activity of quinolones against *S. maltophilia*.[9] Our patient resolved on topical ciprofloxacin with formation of a corneal scar and is now awaiting a regraft.

S. maltophilia is an uncommon cause of microbial keratitis which is difficult to treat. This is due to the multidrug resistant nature of the organism, emerging resistance to existing and newer antibiotics, the need for drug combinations whose minimum inhibitory concentration may exceed that achievable *in vivo* and due to differences in *in vivo* response compared to *in vitro* susceptibility.

In conclusion, predisposing factors for the development of *S. maltophilia* keratitis include a compromised ocular surface following trachoma and corneal transplant, bandage contact lens, and prolonged use of antibiotics which may be responsible for emerging drug resistance. Quinolones may be effective as monotherapy in the treatment of *S. maltophilia* keratitis.

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Sir,

First-choice treatment preferences for primary open-angle glaucoma in the United Kingdom

There is currently a wide variety of options available for the treatment of primary open-angle glaucoma (POAG). Guidelines for the management of POAG have been published by the Royal College of Ophthalmologists,[1] the European Glaucoma Society (EGS),[2] and the American Academy of Ophthalmology (AAO).[3] None of these guidelines give specific recommendations in regard to choice of initial treatment. Where there is lack of a consensus opinion and with growing treatment choices, we feel it is important for ophthalmologists, particularly trainees, to know the practice patterns of their colleagues. The aim of this study was to find out first-choice treatment preferences in the United Kingdom.

Methods and results

A questionnaire was sent to all consultant ophthalmologists in the United Kingdom whose names were held by the Royal College of Ophthalmologists. All were sent out by the end of October 2003. In all, 547 (69.2%) responses were received by the end of 2003. A total of 28 respondents indicated that they did not treat glaucoma patients and were excluded from the analysis.

Respondents were asked to select their first choice of initial treatment for three hypothetical patients with either mild, moderate, or severe POAG. They were also asked if they routinely use one-eyed therapeutic trials when instituting therapy for bilateral POAG. Each hypothetical patient was characterized as a 65-year-old white (largest ethnic group in the UK: Office for National Statistics, Census, April 2001) patient with no medical or ocular history, and intraocular pressures of 28 mmHg in both eyes. The differing severities were given as per the AAO guidelines with the mild POAG patient having characteristic optic nerve abnormalities consistent with glaucoma, but with a normal visual field (16 respondents commented that this hypothetical mild POAG patient did not have glaucoma). The moderate POAG patient having visual field abnormalities in one hemifield but not within 5 degrees of fixation. The severe POAG patient was described as having visual field abnormalities in both hemifields and loss within 5 degrees of fixation.

Respondents were also asked to select their first-line surgical technique of choice, even if surgery was not their first choice for any of the hypothetical patients.

Only 31 respondents (6.0%) indicated that they routinely use one-eyed therapeutic trials. This approach has been suggested by EGS and AAO guidelines when initiating treatment. It can give an idea of the drug effect in the face of diurnal variation, but a crossover effect into the nontreated eye must be taken into account. However, it is obviously not widely employed. The preferred treatment choices are summarized in Table 1 (for this study, we have included bimatoprost in the class of prostaglandin analogues rather than group it separately as a prostamide).

The first-choice medical treatment preferences of respondents were similar for each severity category. Prostaglandin analogues being the most popular followed by nonselective beta-blockers. Latanoprost was the prostaglandin analogue chosen by 87.2% of respondents and timolol was the nonselective beta-blocker of choice for 72.7%. No respondents chose surgery as a first choice for mild or moderate POAG. Of those who perform filtration surgery, trabeculectomy was the first-line surgical method chosen by 95.6% with the remainder using nonpenetrating methods and none choosing artificial drainage shunts.