

the mainstay of treatment with gentamycin, chloramphenicol and tetracycline being the agents of choice.^{1,2}

The presentation of this gentleman with bacterial keratitis caused by *Aeromonas sobria* in an otherwise healthy eye and lacking any history of trauma or contamination with soil or water is fairly atypical, a fact never reported before. It further emphasises the fact that when presentation is atypical, specific requests should be made to the microbiologists to search for these rare ocular pathogens.

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Orbital cellulitis after peribulbar anaesthesia for cataract surgery

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Sir,

Orbital cellulitis is an uncommon complication of ophthalmic surgery. It has been reported after strabismus surgery, blepharoplasty, radial keratotomy and retinal surgery.^{1,2} This is a short case report of orbital cellulitis following peribulbar anaesthesia. It has been described before, but alcohol preparation was thought to be a contributory factor.

Case report

A 79-year-old woman underwent uneventful phacoemulsification and posterior chamber intraocular lens implantation in the left eye. A peribulbar injection consisting of 2% lignocaine hydrochloride, 0.75% bupivacaine hydrochloride and hyaluronidase 1500 units was administered. A total of 4 ml was injected at the junction of the middle and outer thirds of the lower lid and 2.5 ml at the medial canthus via a 3/8 inch, 25 gauge needle. Skin preparation with 5% povidone iodine was done prior to peribulbar block. She developed ecchymosis following injection of the local anaesthetic. On the first postoperative day review, her unaided visual acuity was 6/12 in the left eye and, except for a trace of cells and flare, the ocular examination was unremarkable. The following day she re-presented with periorbital swelling, pain, redness and discharge in the operated eye. There were no systemic or ocular preoperative risk factors for occurrence of postoperative infection.

On examination, her uncorrected visual acuity was 6/12 in the right eye and 6/36 in the left eye. The left eye examination showed 5 mm of axial proptosis, periorbital swelling, conjunctival chemosis and severe restriction of ocular movements. The anterior chamber showed a trace of cells and flare, and the posterior segment examination was unremarkable. Pupil testing, intraocular pressure and colour vision examination was normal. The right eye was pseudophakic. A diagnosis of left orbital cellulitis was made. The patient was admitted to hospital and intravenous antibiotics were commenced. CT scan orbit and paranasal sinuses showed the left eye to be proptosed, with extensive periorbital soft-tissue swelling consistent with orbital cellulitis. The adjacent sinuses were clear and without evidence of sinusitis (Figure 1). Culture of conjunctiva, nose and pharynx was negative. Blood cultures were also negative. The leucocyte count showed mild leucocytosis. The patient was allergic to penicillin. Intravenous clindamicin and gentamicin were administered to provide Gram-positive and Gram-104 negative coverage. Renal function tests and blood gentamicin levels were regularly monitored to prevent renal toxicity. Dramatic improvement in the proptosis and ocular inflammation was seen over the next 24 h. The



Figure 1

ocular motility gradually improved with reduction in periorbital swelling. At the time of discharge, her uncorrected visual acuity was 6/9 and there was complete recovery within a week.

Comments

Orbital cellulitis following peribulbar anaesthesia for combined extracapsular cataract extraction with intraocular lens insertion and trabeculectomy has been reported in the past by Hofbauer *et al.*³ They felt that skin preparation with alcohol prior to injection of the local anaesthetic instead of povidone iodine had resulted in incomplete asepsis, thus leading to access of the skin flora into the orbit.

Redmill *et al.*⁴ reported orbital cellulitis following corneal gluing under subtenon's local anaesthesia in an immunocompromised patient. However, in their patient altered conjunctival flora due to intake of systemic immunosuppressives had been the predisposing factor.

In our patient, the short postoperative time course (less than 48 h), absence of sinus disease and occurrence of skin trauma during injection in an otherwise immunocompetent patient indicate peribulbar injection as the possible cause of periorbital cellulitis. However, in spite of skin preparation with 5% povidone iodine it is likely that trauma during injection resulted in the inadvertent access of the skin flora to the orbit through the needle track causing cellulitis. The ecchymosis facilitated the spread of infection. Prompt recognition and treatment of cellulitis resulted in a favourable outcome.

Orbital cellulitis is usually treated with parenteral broad-spectrum antibiotics such as third- or fourth-generation cephalosporins and metronidazole to cover

anaerobes. In patients allergic to penicillin, clindamycin or vancomycin is used.⁵ A combination of clindamycin and gentamicin covers most organisms. However, blood gentamicin levels and renal function test need to be closely monitored to prevent renal toxicity. It is suggested that an aseptic technique should be used with minimal soft-tissue trauma during peribulbar anaesthesia.

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