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### Bacterial endophthalmitis after anterior chamber paracentesis

EDITOR.—Bacterial endophthalmitis is one of the most serious complications of ocular surgery. Extended or complicated intraocular surgery is considered to be a risk factor for endophthalmitis.<sup>1,2</sup> We report a case of bacterial endophthalmitis following an otherwise uneventful anterior chamber paracentesis.

#### CASE REPORT

A 62-year-old woman presented to the emergency department with a 2 hour history of sudden loss of vision in her right eye. Visual acuity was limited to hand movements in her right eye. The lids, external eye, and anterior segment were normal with no sign of inflammation. Funduscopy showed a central retinal artery occlusion with a cherry red spot and reduced arterial circulation. Intraocular pressure was 22 mm Hg in both eyes. The left eye was normal. The

patient had a history of arterial hypertension. There was no evidence of arteritis or diabetes.

Massage of the eye did not improve retinal circulation. After application of antibiotic drops (Polyspectran; polymyxin, gramicidine, and neomycin) three times in 5 minutes and disinfection of the lids, an anterior chamber paracentesis was performed with a 29 gauge cannula attached to a 1 ml syringe under topical anaesthesia in the operation room under an operation microscope. Approximately 50  $\mu$ l of aqueous humour were aspirated. Thereafter the eyeball was soft, and there was no fistula at the puncture site. Retinal circulation, however, remained diminished. The patient received an antibiotic ointment patch (Polyspectran) and oral acetazolamide. After about 6 hours visual acuity and fundus were unchanged; the anterior chamber had 1+ cells. Twenty four hours after surgery the patient complained of increasing pain and redness of the right eye. Slit-lamp examination revealed corneal oedema, a 1 mm hypopyon and fibrin in the anterior chamber. Another diagnostic anterior chamber tap was performed. A Gram stained smear showed Gram positive cocci. Antibiotic treatment with intravenous vancomycin and vancomycin eyedrops was initiated. After a further 12 hour period, the anterior chamber inflammation did not improve and B-scan ultrasonography showed anterior vitreous infiltration. A pars plana vitrectomy with application of intraocular vancomycin was performed. Intraoperatively, purulent material was found infiltrating the anterior vitreous, the anterior chamber, and the zonules. The zonules were partially lysed and the dislocated lens was removed. No retinal infiltration was present. Cultures revealed coagulase negative staphylococci sensitive to vancomycin. Systemic antibiotic treatment with intravenous vancomycin was continued. The intraocular inflammation became quiescent, but visual function did not recover.

#### COMMENT

Anterior chamber paracentesis is a commonly used diagnostic<sup>3</sup> and therapeutic<sup>4</sup> procedure. In the present case the paracentesis was performed in an operating theatre under sterile conditions with the same precautions as for all other intraocular operations. The intraoperative course was uneventful. This case was the only endophthalmitis in this operating theatre in a year. The source of the inoculum could not be determined. Possible sources are contamination of the needle or the ocular surface. We have found no other cases of bacterial endophthalmitis following an anterior chamber paracentesis in recent literature. However, the presented case is a reminder that even a paracentesis can have serious complications, and should not be considered an essentially harmless procedure. It should only be performed with strict indications.

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