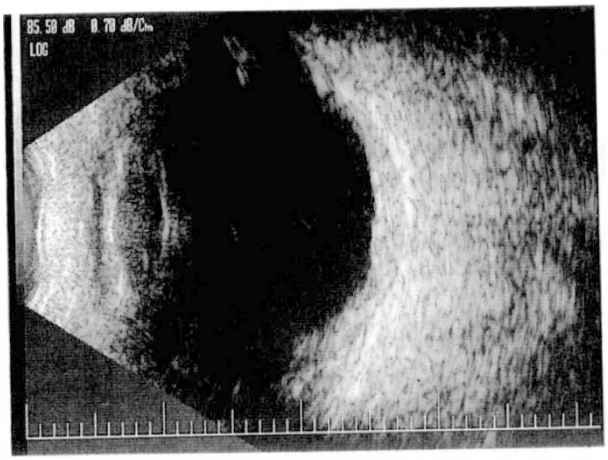

Fig. 3. *B-scan ultrasound of the right eye shows thickening of the choroid at the posterior pole.*

ocular involvement.[3,5,7] This distribution corresponds to the pattern of the retinal pigment epithelial changes observed – although it does not explain why the epitheliopathy is so rare. Additional factors such as anaemia and drug toxicity have been postulated. However, our patient maintained a normal haemoglobin level and had not received any treatment. This suggests the underlying choroidal infiltration was probably the most important factor in our case.

The case presented differs from those previously reported in that it occurs in an adult with untreated chronic lymphatic leukaemia. It also appears to be a more benign form with well-maintained vision and no clinical signs of optic nerve disease or vitreal infiltration.

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S. Wheatcroft FCOphth
P. Watts FRCS, FCOphth
J. McAllister, FRCS, FCOphth
Prince Charles Eye Unit
King Edward VII Hospital
Windsor
Berkshire SL4 3DP
UK

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Sir,

Salmonella Endophthalmitis in an Infant with Presumed Retinopathy of Prematurity

Endogenous endophthalmitis is a rare complication of salmonellosis and has been reported in several immunocompromised hosts and infants.[1] Six cases of endophthalmitis attributed to *Salmonella* species have been reported; *S. typhimurium* was isolated in three.[1,2]

A male child born at 34 weeks gestation was placed on oxygen therapy for 1 month. At age 4 months his mother noted bilateral leucocoria. He became febrile with nausea and vomiting at age 8 months. Rehydration and unknown systemic antibiotic treatment were instituted at that time through a local clinic 3 days prior to hospitalisation.

On admission his temperature was 39°C and the right eye had marked periorbital swelling, proptosis, and corneal melting with a total hypopyon. The diagnosis was fulminant endophthalmitis of the right eye, possibly secondary to acute necrosis from an advanced retinoblastoma, based on the history of leucocoria and observation of proptosis/cellulitis. The left eye had a shallow anterior chamber, an irregular pupil, and a retrolental membrane compatible with retinopathy of prematurity, grade V.

Significant haematology test results were: white blood count of 30 700, 49% polys, 2% bands, 39% lymphs and 10% monos. Blood, stool and conjunctival cultures grew no pathogens. Chest roentgenogram results were normal. Computed tomography of the orbits revealed periorbital soft tissue swelling, optic nerve thickening, and a small soft tissue mass superior to the distal optic nerve in the right eye; the left eye had evidence of a long-standing retinal detachment consistent with retinopathy of prematurity. Ultrasound examination of the right eye revealed a diffuse opacification of the vitreous without calcification, suggestive of endophthalmitis with obliteration of retinal detail; the left eye showed a total funnel-shaped retinal detachment compatible with retinopathy of prematurity.

The right cornea perforated spontaneously 8 hours after admission despite administration to the right eye of topical fortified drops of cephazolin 50 mg/ml and gentamicin 14 mg/ml every hour. The right eye was enucleated 12 hours after admission due to this perforation and the possibility of a necrotic intraocular tumour. Cultures of intraocular contents grew *Salmonella* serogroup B sensitive to cephazolin. Histopathological examination revealed an acute, suppurative panophthalmitis with necrosis obscuring retinal detail—neither confirming nor excluding retinopathy of prematurity. There was no evidence of tumour. The subarachnoid space of the optic nerve and

*Correspondence to: Medical Library, PO Box 7191, King Khaled Eye Specialist Hospital, Riyadh 11462, Saudi Arabia. Fax: 966-1-482-7776.

portions of the vitreous that were attached to the retina contained fibrin adhesions and neutrophilic exudates.

Post-operatively the stable patient was discharged on oral cephalexin, after 5 days of divided doses of intravenous cephazolin 50 mg/kg per day and gentamicin 5 mg/kg per day. The patient has remained well over a 1-year follow-up interval. Subsequent attempts to culture *Salmonella* from the gastrointestinal tract remain negative.

The gastrointestinal tract is implicated in two-thirds of all salmonellae infections. Frank bacteraemia is noted in only 5–10% of patients, and such dissemination can create distant foci of disease.[2] Our patient had retinal vascular anomalies from gliosis secondary to probable retinopathy of prematurity. Despite negative blood cultures, salmonella may have caused a transient bacteraemia. Subsequently, organisms may have been trapped in the altered, gliotic ocular end-loop circulation. This scenario appears plausible, as salmonellae can localise to sites of pre-existing disease.[3]

Retinoblastoma must be ruled out in the paediatric age group; therefore, enucleation, not evisceration, is necessary after endophthalmitis/perforation to establish a definitive diagnosis.

This case, to our knowledge, is the first report of *Salmonella*-induced endophthalmitis in an eye with presumed retinopathy of prematurity. It serves to increase the clinician's awareness of the spectrum for metastatic endogenous endophthalmitis.

Susan H. Senft, MD, FCOphth*
Department of Ophthalmology,
King Khaled Eye Specialist Hospital,
and King Saud University,
Riyadh, Saudi Arabia
Abdulaziz Awad, MD
King Saud University,
Riyadh, Saudi Arabia
Luanna Bartholomew, PhD
Department of Research,
King Khaled Eye Specialist Hospital,
Riyadh, Saudi Arabia.

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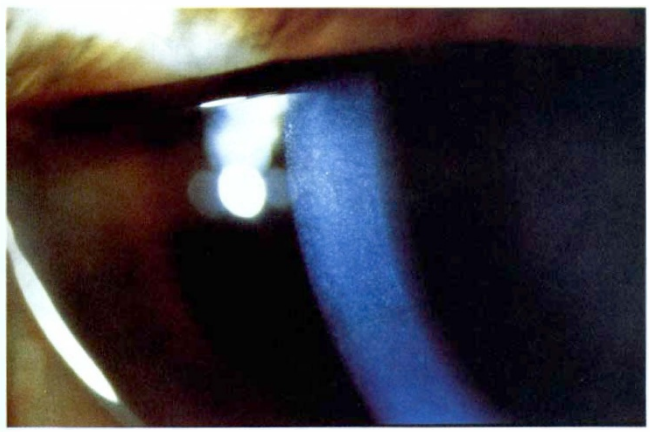

Fig. 1. *Full-thickness corneal crystals.*

Sir,

Bilateral Proptosis and Corneal Crystals in Multiple Myeloma

We report the case of a 65-year-old man with multiple myeloma presenting with both acute bilateral proptosis and corneal crystals. Orbital myeloma commonly presents as unilateral proptosis with a solitary soft tissue mass often arising from bone with associated bony destruction. Only two other cases with bilateral orbital masses in multiple myeloma have previously been reported.

Multiple myeloma is a relatively common neoplastic proliferation of plasma cells or their precursors.[1] Proptosis is a well-recognised if somewhat rare presenting sign of multiple myeloma in ophthalmic practice.[2,3,4,8,9] Involvement of other ocular structures may coincide and may include corneal crystallisation.[5–7] We describe the first case of multiple myeloma presenting with both bilateral proptosis and corneal crystals.

Case Report

A 65-year-old man was referred to the orbital clinic with a 2-week history of blurred vision and bilateral proptosis. He had no previous significant medical history. His visual acuity was reduced to 6/36 in both eyes. There was 2 mm bilateral proptosis with inferior conjunctival chemosis. Slit lamp biomicroscopy revealed bilateral full-thickness corneal crystals (Figs. 1 and 2). Fundal examination showed bilateral choroidal folds (Fig. 2). Initial haematological investigations revealed anaemia (haemoglobin 10.9 g/dl) and an elevated erythrocyte sedimentation (30 mm/hour).

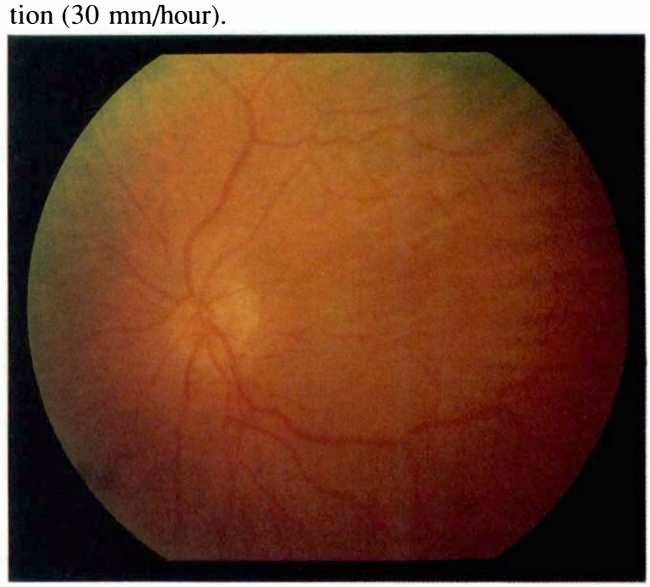

Fig. 2. *Left fundus showing choroidal folds.*