Sir,

Acute angle closure glaucoma secondary to a luxated lens associated with retinitis pigmentosa

Acute angle closure glaucoma caused by anterior subluxated lens is rare. To the best of our knowledge, there are only few reports of the anterior chamber angle closed by subluxation of the lens. Here, we report another unusual case of acute angle closure glaucoma.

Case report

A 66-year-old slightly myopic (−4.0D) Chinese lady with a history of retinitis pigmentosa, diabetes, and cataract, presented with a 5-day history of severe left eye pain and vomiting. On initial examination there appeared to be peripheral iridocorneal contact, however, the view through the oedematous cornea was poor. Intraocular pressure was 66 mmHg and visual acuity was no perception of light. She was treated medically with intravenous acetazolamide and topical beta-Blocker. This failed to reduce the intraocular pressure and an intravenous infusion of mannitol was commenced. The intraocular pressure was reduced to about 45 mmHg and the patient was more comfortable. The next day, the cornea was less oedematous and the cause of the angle closure became apparent. The crystalline lens had luxated into the anterior chamber causing a 'reverse pupillary block' (Figure 1). The patient underwent urgent pars plana vitrectomy with lensectomy and was left aphakic. Postoperatively, the intraocular pressure normalised but unfortunately visual acuity failed to improve. She subsequently underwent phacoemulsification surgery to remove the cataract in her fellow eye.

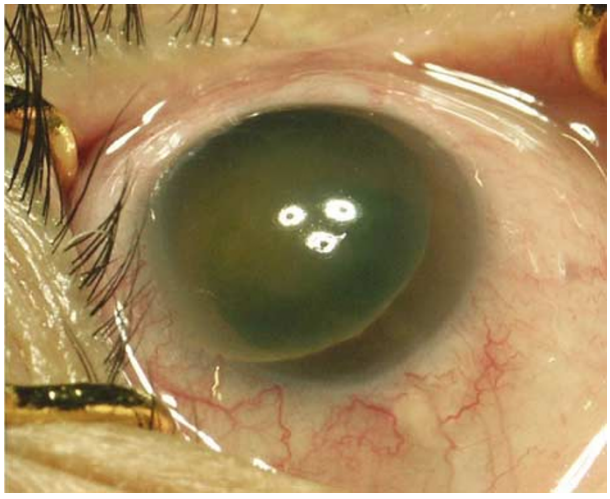

Figure 1 Showing crystalline lens to be luxated into the anterior chamber causing a 'reverse pupillary block'.

Comment

Ectopia lentis is associated with a number of ocular and systemic disorders.[1] Its association with retinitis pigmentosa is rare.[2,3] The presentation of angle closure glaucoma secondary to a luxated cataractous lens in a patient with retinitis pigmentosa has only been reported once before to the best of our knowledge.[2]

Inatani *et al*[4] found that in 14 cases of lens subluxation only three resulted in glaucoma of the closed-angle type. It is known that the ultrastructure of cataract in retinitis pigmentosa is altered, showing lens fibre disorganisation.[5] This may contribute to the instability of the lens *in situ*. There was no history of trauma in this case, however, the patient did admit to frequent rubbing of the eyes. The specific type of retinitis pigmentosa was not determined in this case, although there was no family history of note. Further examination ruled out more common causes of lens instability such as pseudoexfoliation syndrome or Marfans syndrome.

Ectopia lentis may be secondary to a weakening of the zonules by uveitis or degeneration associated with hypermature cataract, pseudoexfoliation syndrome, and ciliary body tumours.[6]

Familial causes include an autosomal dominant form, which is usually bilateral, and may be congenital, or may develop in youth. A recessive form is also recognised, which is associated with other ocular developmental abnormalities, including iris coloboma and microspherophakia.[6]

Deficient zonular development associated in those with systemic conditions include Marfan syndrome, Weill–Marchesani syndrome, homocystinuria, hyperlysinaemia, sulphite oxidase deficiency, Stickler syndrome and Ehler–Danlos syndrome.[1]

Acute angle closure glaucoma caused by anterior subluxated lens does not usually respond well to conventional medical treatment. Definitive management remains surgical.[4] In terms of elective cataract surgery for patients with retinitis pigmentosa, the risks of intraoperative and postoperative complications are higher. Dada *et al*[7] described a modified phacoemulsification technique for cataracts in eyes with anticipated weak zonular apparatus. Sudhir and Rao[8] presented a case in which their patient underwent planned extracapsular cataract extraction (due to dense nuclear sclerosis and zonular laxity) with continuous curvilinear capsulorhexis and implantation of a capsular tension ring and a single-piece poly(methylmathacrylate) (PMMA) intraocular lens in the capsular bag. Nd:Yag laser anterior capsulotomy was required in this patient as

severe anterior capsule of fibrosis with decentration of the intraocular lens implant developed postoperatively. Another similar case was described by Nishi and Nishi.[9] Their patient underwent phacoemulsification but postoperatively developed severe anterior capsular fibrosis leading to complete posterior chamber lens encapsulation. Aside from anterior capsule fibrosis, there is a high rate of postoperative posterior capsule opacification in these patients. Tassignon *et al*[10] studied the effect of posterior curvilinear capsulorhexis in patients prone to postoperative inflammation, including patients with retinitis pigmentosa. They found that reclosure of the capsule still occurred and even though the technique did not prevent posterior capsular opacification, it can be useful in certain situations. Despite higher potential complications when performing cataract surgery in this group of patients, Jackson *et al*[11] showed that majority of patients with retinitis pigmentosa do benefit from surgery especially those with relatively minor lens opacities. Knowing and anticipating the potential peroperative and postoperative complications, and by adjusting one's surgical technique and management when treating this group of patients, will help in maximising the visual benefits for patients with this disorder.

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Sir,

Re Diagnostic effectiveness of noncontact slitlamp examination in the identification of retinal tears

Natkunarajah *et al* claim that indirect ophthalmoscopy is superior to noncontact slit-lamp examination in the identification of retinal tears. They may be correct, but unfortunately this conclusion is not supported by their data. No statistical analysis of their figures was included.

McNemar's test shows no evidence of any difference in detection rates ($P = 0.5$) between the two groups.

There are now publication standards for reporting studies of diagnostic accuracy (STARD),[1] which readers may find useful in planning work of this type.

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