hyphaema. This increased the rebleed rate, possibly because of excessive pull on the traumatised blood vessel.[4]

Cases 1 and 2 required a washout for persistently high IOP. The IOP remained high for a few days. This may have been because of trabeculitis or the residual erythrocytes within the trabecular meshwork. The use of latanoprost in the early stages of IOP control in these patients may have been counterproductive because of its tendency to weaken the blood aqueous barrier. Pilocarpine drops were commenced to reduce outflow resistance by constricting the pupil and mechanically opening up the trabecular meshwork. It appears that pilocarpine reduced the IOP when conventional treatment failed. In all three patients, the IOP remained low on pilocarpine alone when all other medications were discontinued. We discontinued the other medications at an earlier stage in cases 2 and 3 following our experience of its efficacy. Perhaps the IOP was going to fall anyway, as in the first two cases the AC had been washed out and the delay in reduction of IOP was secondary to residual RBCs within the trabecular meshwork. The outflow resistance may have returned to normal even without pilocarpine 2–3 days following washout. However, the third patient did not have a washout and there was visible macrohyphaema in the AC when the effect of pilocarpine was noted.

Pilocarpine is generally felt to be contraindicated in hyphaema because its miotic effect is undesirable in the presence of active inflammation but the mechanical effect may help lower the IOP. We have found pilocarpine to be effective if the elevated IOP is refractive to conventional treatment in the second or third week. The number of patients is small and there may be other factors influencing the fall in IOP, mainly the timing of the introduction of pilocarpine. It would be necessary to examine the effect of pilocarpine in a greater number of patients to confirm that it is effective in the control of persistent hyphaema-related OHT.

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Sir,

Abnormal lens shape on CT in a patient with Aniridia

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CT is a useful tool in detecting and localizing intraocular and orbital foreign bodies.[1] However, total reliance on scan information may be injudicious. We present a case that illustrates an unusual CT appearance of a congenitally subluxed lens.

Case report

A 40-year-old man was referred to the neuro-ophthalmology department complaining of a subjective reduction in vision. He was diagnosed with aniridia at birth that has an autosomal dominant inheritance within his pedigree.

Visual acuity was CF (counting fingers) RE and HM (hand movements) LE; this had been stable for 2 years. He had peripheral corneal scarring and bilateral subluxed lenses (left more than right). The lens zonules were intact superiorly but stretched and missing inferiorly. There was an anterior cortical and posterior subcapsular cataract in both lenses and the intraocular pressures were 14 mmHg RE, 12 mmHg LE. Fundal examination showed bilateral macular hypoplasia, and both discs were pale. In view of his recent symptoms and disc pallor, a CT scan was arranged.

CT, 2 mm axial sections along the meatoinfraorbital plane through the orbits, showed evidence of bilateral hypoplastic optic nerves. It also showed that the lens shape appeared reversed, that is, the anterior lens surface was more and the posterior lens surface less convex (Figure 1).

Comment

Aniridia (absence of iris) was first described by Barrata in 1818. This panocular disorder is bilateral in 98% of cases, two-thirds are familial (autosomal dominant), one-third sporadic.[2] The sporadic variant is associated with extraocular pathology, for example, Wilms tumour and a high incidence of deletion at 11p13.[3] Glaucoma, cataracts, dislocated lenses (due to a molecular defect of the zonules), corneal defects and optic nerve/macular hypoplasia are commonly found.[4]

Figure 1 Abnormal CT appearance of lens shape demonstrating increased anterior curvature and reduced posterior curvature.

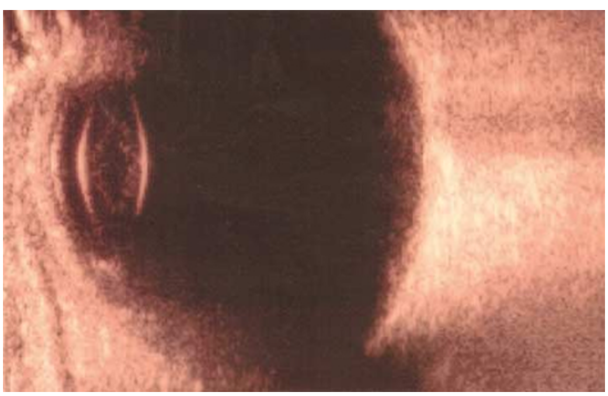

Figure 2 B-mode ultrasound showing a normal lens capsule shape but also delineating the cataract.

The human lens is a biconvex structure, with anterior radius of curvature 10 mm, posterior 6 mm. The distance between the anterior surface and posterior surface in an adult is between 4.5 and 5 mm. The lens continues to grow (0.023 mm per year) and alters shape throughout life, becoming more rounded.[5] It is held in position by the zonular fibres that have an ultrastructure similar to elastin and insert around the equator of the lens. The capsule consisting of type IV collagen and sulphated glycosaminoglycans possesses elastic properties, and when not under tension of the zonules the capsule assumes a more rounded shape.

As a result of molecular defect of the zonules in aniridia, the capsule will be under a variable tension that could affect its shape. However, there is no loss of shape on CT with other causes of dislocated lens.[6,7] B-mode ultrasonography was performed to assess the lens (Figure 2). The scan showed that the capsule shape was normal, but it also showed the shape of the cataract. This was the same shape as the CT image. The CT had imaged the cataract of the patient as opposed to the lens capsule hence giving the abnormal appearance.

CT is a useful tool in the diagnostic armament for the ophthalmologist. However, the clinician must be aware of possible scan misinterpretation[8] when assessing patients as our case exemplifies.

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