Sir,

Traumatic dislocation of an iris-fixated phakic intraocular lens

High myopia (≥5.0 D) occurs in 3% of the population and accounts for up to 55% of patients attending for excimer laser refractive surgery.[1] Although laser-assisted *in situ* keratomileusis (LASIK) and related procedures are well proven for the correction of mild-to-moderate myopia, the outcomes for higher levels of myopia are less predictable[2] and are dependent on appropriate corneal architecture. Phakic intraocular lenses (PIOL) are an alternative to laser refractive surgery and their efficacy for the correction of high myopia is well reported.[3–5] There are three main types of PIOL: anterior chamber iris fixated, anterior chamber angle fixated, and posterior chamber. Recognised complications of PIOL implantation include pupil ovalisation,[6] cataract,[7] retinal detachment,[8] and endophthalmitis.[9] However, very little is known of their susceptibility to dislocation following trauma. We report a case of iris-fixated PIOL dislocation following trauma.

Case report

A 32-year-old woman presented with reduced vision and monocular diplopia in her right eye for 4 days after being accidentally struck by a football. Three years previously she had undergone successful refractive surgery for high myopia with bilateral implantation of Artisan (Ophtec BV, Groningen, The Netherlands) iris-fixated anterior chamber PIOLs.

At presentation, her unaided visual acuity was 6/12 right eye, improving to 6/6 with pinhole, and 6/6 left eye. Slit-lamp examination of her right eye showed a subluxed anterior chamber PIOL with the released temporal claw haptic resting inferotemporally in the angle (Figure 1). The nasal claw remained intact with enclaved iris. Although no direct contact between the PIOL and the corneal endothelium was detectable clinically, the peripheral cornea was oedematous adjacent to the displaced temporal claw haptic. Intraocular pressure was normal and posterior segment examination unremarkable.

Following surgical repositioning of the PIOL with re-enclavation of the iris into the temporal claw, the lens remained stable in the horizontal position. Visual acuity returned to 6/6 unaided with resolution of the corneal oedema.

Comment

There are only a few reports in the literature of iris-claw PIOL dislocation following trauma. In a study by

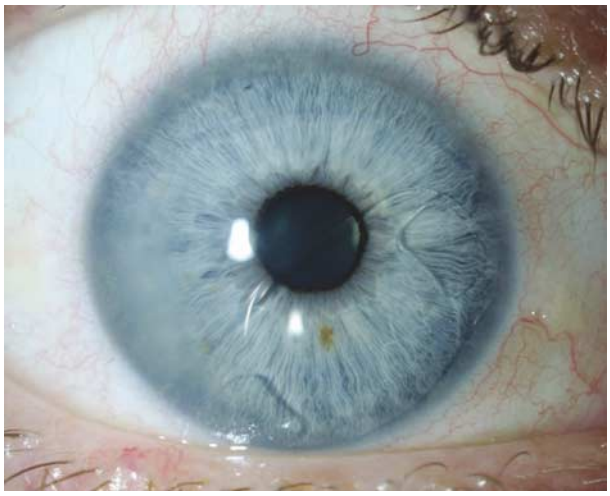

Figure 1 Dislocated iris-fixated phakic intraocular lens.

Lombardo *et al*,[10] while examining changes in contrast sensitivity after Artisan PIOL implantation in 49 eyes, one patient was reported to have suffered a blow to the eye, sufficient to cause periorbital ecchymosis, which also resulted in disenclavement of one claw. The second report is of a patient who underwent bilateral implantation of Artisan PIOL as part of the phase III US clinical trials. She was accidentally hit in her left eye by a roll of packing tape thrown by her 4-year-old child.[11] This also resulted in detachment of one of the claws. The Artisan PIOL study reports only one case of traumatic dislocation out of 662 subjects.[12] We assume that this is the same patient. The study also reports that a further 4 out of the 662 subjects required PIOL repositioning following inadequate fixation. In addition, apparently spontaneous, nontraumatic dislocation of a Worst iris-claw PIOL has been described following initial successful implantation.[13,14]

Iris-claw PIOL reattachment requires special instrumentation and a surgeon familiar with the iris enclavement procedure. Additionally, successful repositioning does not exclude future redislocation. The degree of endothelial cell loss following PIOL dislocation and reattachment is not known. In the case reported by Yoon *et al*[11] on traumatic dislocation of an Artisan PIOL, the endothelial cell count fell from 3046 cells/mm^2 before placement of the PIOL, to 2700 cells/mm^2 following trauma. However, endothelial cell counts are not given following primary placement or reattachment, limiting interpretation of this report.

Current patient and professional product information for iris-claw PIOLs do not mention participation in contact sports as a relative contraindication.[12] We recommend that the risk of traumatic dislocation of iris-claw PIOLs is discussed fully with patients at

preoperative counselling, especially in those who participate in sports with a high risk of ocular injury.

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Eye (2007) **21,** 121–122. doi:10.1038/sj.eye.6702425; published online 2 June 2006

Sir,

Eccentric macular hole formation associated with macular hole surgery

Eccentric macular hole formation has been recently described as a complication of macular hole surgery. We have also experienced this complication following epiretinal membrane peeling surgery, suggesting that the development of this entity reflects is related to generic surgical trauma occurring at the posterior pole.

Case report

Rubinstein *et al*[1] describe an interesting complication following macular hole surgery, namely the development of an eccentric macular hole. They speculate that the hole develops as a consequence of operative trauma, mostly likely as the result of elevation of the ILM. They note that the four cases in their series had stable outcomes and did not require further intervention.

We have noted a similar complication following epiretinal membrane peeling and found the risk appears higher in eyes operated on by vitreoretinal fellows and have called this

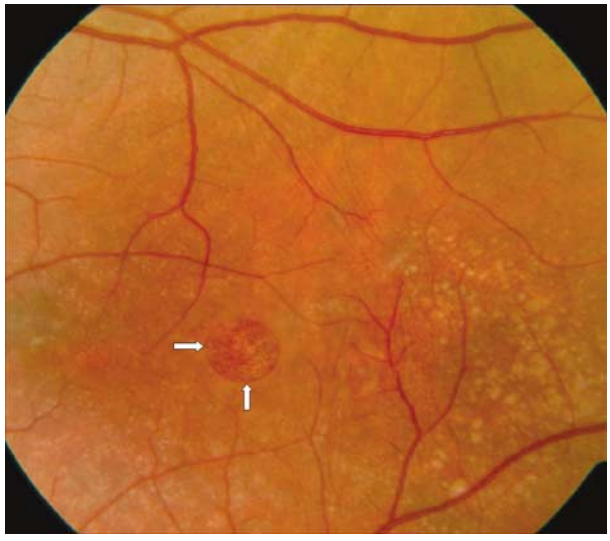

Figure 1 Full thickness macular defect following epiretinal membrane peel.