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Sir,

Pseudophakic posterior iris chafing syndrome

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Abrasion of the iris is a well-documented complication of sulcus-fixated intra-ocular lenses.[1,2] It can give rise to intermittent microhyphaemas, pigment dispersion, transient rise in intra-ocular pressure and, less commonly, progress to pigmentary glaucoma.

We describe a patient who presented with recurrent transient visual obscurations and was eventually diagnosed with pseudophakic posterior iris chafing syndrome (PPICS).

Case report

Mr JB, a 60-year-old man, underwent extracapsular lens extraction with intra-ocular lens (IOL) implantation in his left eye in 1988 and in his right eye in 1989. Both eyes required Nd:YAG laser capsulotomies approximately 3 months postoperatively, and subsequently achieved good visual acuities (BCVA 6/9). Both IOLs were of the 10° angulated loop design and were placed in the sulcus.

Approximately 1 year following his initial left cataract surgery, Mr JB began to complain of transient painless blurring of vision in his left eye. These episodes would typically last for a few hours, with vision dropping to the level of counting fingers at 1 m. Vision returned to 6/9 between episodes. No obvious precipitating factors were found.

In 1992, he was noted to be in atrial fibrillation, his visual symptoms were attributed to amaurosis fugax and he was commenced on warfarin. Unfortunately, his episodes of blurred vision increased in frequency. Nd:YAG laser enlargement of the capsulotomy in his left eye in 1994 did not improve his symptoms. In 1996, he was noted to have a prominent iris blood vessel overlying an area of iris atrophy, and the possibility of recurrent microhyphaemas as a cause of his symptoms was postulated. In support of this, the frequency of his episodes noticeably decreased on cessation of warfarin therapy (although he was continued on aspirin).

Fortunately, Mr JB attended the eye clinic during a typical episode of visual disturbance; slit-lamp examination of the left eye demonstrated a microhyphaema suspended in the anterior chamber, with the IOL haptics visible through crescents of iris atrophy (Figure 1). The right eye, although asymptomatic, also showed similar though less pronounced iris atrophy. Gonioscopy and intra-ocular pressure was normal in

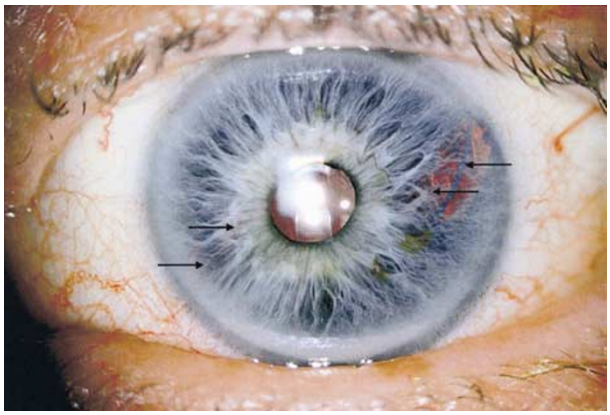

Figure 1 The edge of the IOL optic and the haptics (arrowed) are visible through the iris transillumination defect.

both eyes. Based on these findings, a diagnosis of PPICS was made.

Comment

PPICS was first described in 1986 as a complication of sulcus-fixated IOLs.[1] It was also described in 1983 as the only slightly more cumbersome 'iris transillumination defect and microhyphaema syndrome'.[2] It is part of a spectrum of IOL-related iris abrasion syndromes, the first of which was described by Ellingson in 1977 in relation to anterior chamber IOLs (uveitis–glaucoma–hyphaema syndrome).[1–3,5,7]

As the haptics of the sulcus-fixated IOL are in direct contact with the posterior surface of the overlying iris they are thus thought to cause focal iris atrophy and pigment dispersion.[1,2] Indentation of the peripheral iris by lens haptics has been demonstrated by ultrasound biomicroscopy.[4] The resulting window defects in the iris are seen in up to 15% of sulcus-fixated IOLs. Of these defects, 91% of these occur in blue irides.[2] Pigment dispersion occurs less commonly (3–10%)[1,3] and subsequent glaucoma is rare.[2]

Intermittent microhyphaemas occur in 1–2%, when the iris or angle vasculature is abraded.[2] The anterior angulation of the haptics is thought to increase the abrasive effect of sulcus-fixated IOLs.[1]

Management of these recurrent microhyphaemas includes avoidance of aspirin and anticoagulants (if possible) and antiglaucoma treatment for raised intra-ocular pressure if present. Mydriatics and miotics have also been used in an attempt to decrease iris movement and therefore iris chafing.[2,5] Surgery, in the form of rotation, exchange or removal of the IOL, has been tried with some degree of success,[6] as has argon laser to occlude visible blood vessels.[5,6]

Although sulcus-fixated IOLs are now less common with the success of in-the-bag fixation, it is still occasionally necessary to place IOLs in the sulcus. There are also still many patients in clinics with sulcus-fixated IOLs from earlier days of extracapsular cataract surgery. For these reasons, it is worth remembering PPICS in cases of transient visual obscuration, microhyphaemas, intermittent spikes in intra-ocular pressure or pigment dispersion in pseudophakic patients. Early diagnosis can avoid unnecessary anxiety, and the investigations and interventions associated with an incorrect diagnosis of amaurosis fugax. Worsening of symptoms, as a result of the inappropriate use of aspirin or warfarin,[7] can likewise be avoided.

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