Sir,

Monocular diplopia induced by posterior chamber intraocular lens in a patient with peripheral laser iridotomy: a case report

Diplopia and other visual disturbances are infrequently seen following laser peripheral iridotomy (LPI).[1] These symptoms are thought to be due to a prism effect of the tear meniscus at the upper eyelid margin bending the light rays that enter through the iridotomy.[2] Diplopia is also a rare complication following cataract surgery with intraocular lens implantation.[3] We report a case of a patient with large midperipheral iridotomy in both eyes who started complaining of monocular diplopia after cataract surgery and posterior chamber intraocular lens (PCIOL) implantation.

Case report

An 89-year-old man had undergone LPI in both eyes (OU) for occludable angles 20 years ago and his course was unremarkable until surgery for a 2+ nuclear cataract and PCIOL implantation in the left eye (OS). Since the procedure, he complained of double vision that appeared when the right eye (OD) was closed. On initial examination, best-corrected visual acuity was 20/30 and 20/20. Intraocular pressure was 15 mm Hg OU. Slit-lamp examination revealed bilateral large midperipheral nasal iridotomies. In the OS, although the PCIOL was well centered in the capsular bag, closer examination revealed the edge of the optics and the adjacent haptic directly behind the iridotomy (Figure 1). Fundus exam was unremarkable. Notably, the diplopia disappeared when a 3.0 mm artificial pupil was used to cover the iridotomy.

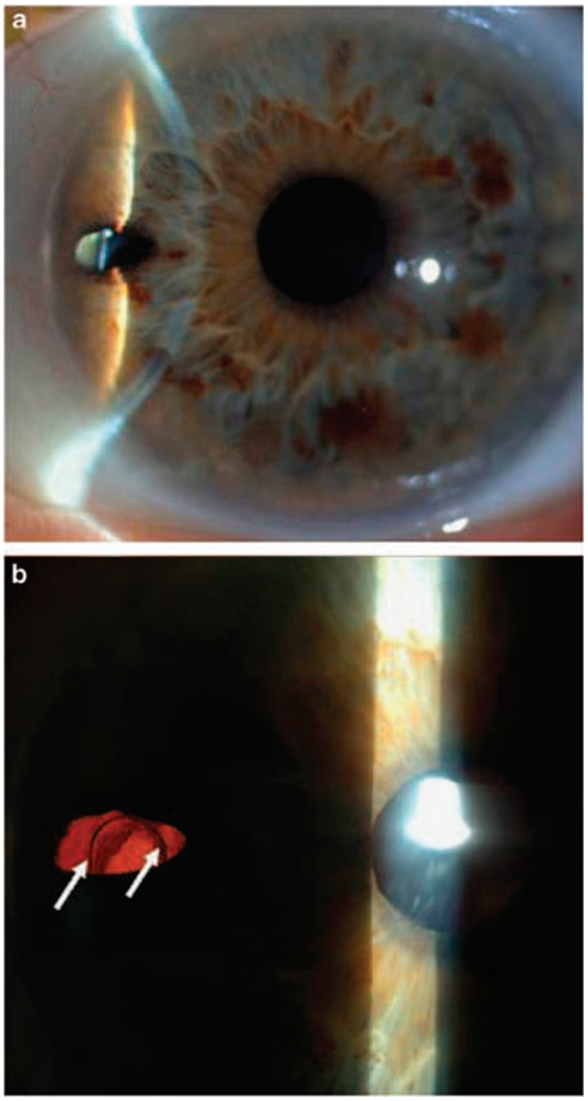

Figure 1 Anterior segment photos OS showing the size and position of iridotomy. (a) Midperipheral positioning of large peripheral laser iridotomy at the 9 o'clock position. (b) Visualisation with retroillumination confirming the position of haptic and the edge of IOL directly behind the iridotomy. Arrows show the exact position of the haptic and the edge of the optics of the IOL.

Comment

To our knowledge, this is the first described case of monocular diplopia after PCIOL implantation in a patient with previous asymptomatic LPI. The most common visual complications from this procedure include transient blurring, ghost images, and glare.[1] Monocular diplopia is associated to more midperipheral iridotomies,[4] and visual disturbances are more likely to occur in cases of partially or fully exposed iridotomies when compared with those completely covered by the lid.[1] In our case, the iridotomies were large, nasal and midperipheral, which could predispose to visual disturbances. However, diplopia manifested only after the cataract surgery.

Following cataract surgery, Nayak *et al*.[3] found a small incidence (3%) of patients presenting with diplopia from various etiologies. In these cases, decompensation of pre-existing strabismus and extraocular muscle restriction/paresis were reported as the most common underlying mechanisms. Although uncommon, monocular diplopia can occur and represents 2.5% of the total cases of diplopia following cataract surgery.[3] However, when an artificial pupil was used to eliminate the effect of the iridotomy/IOL interaction, the symptoms of our patient disappeared. Therefore, we believe that it was caused by the combination of two factors. Possibly, the light rays penetrating the iris through the large exposed LPI bend because of the interference from the edge of the PCIOL optics. In this case, treatment options include tinted soft contact lenses[5] or iris suture to close the iridotomy.

As angle-closure and cataract are a frequent combination in daily practice, one should be cautious while placing a PCIOL in patients with large and/or inadequately positioned iridotomies to avoid visual disturbances such as diplopia.

Acknowledgements

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Sir,

Acute macular neuroretinopathy: anatomic localisation of the lesion with high-resolution OCT

Acute macular neuroretinopathy has a poorly understood pathology and pathogenesis. Recent evidence has indicated a lesion in the outer retina which is now confirmed in this report using high resolution optical coherence tomography.

Case report

A 27-year-old woman presented with a 6-day history of acute painless blurring of vision in both eyes commencing 2 days after a flu-like illness. She described discrete paracentral scotomas in both eyes and was able to draw these precisely on an Amsler chart (Figure 1). Visual acuities were 6/9 bilaterally with normal pupils and clear ocular media. There was subtle, patchy red discolouration at the macula bilaterally, and a solitary haemorrhagic cotton wool spot in the right eye. Scanning laser ophthalmoscopic (SLO) infra-red imaging showed dark areas corresponding to the abnormalities on Amsler (Figure 2). High-resolution optical coherence tomography (OCT) showed disruption of the photoreceptor inner /outer segment junction in the same areas, with associated focal thinning of the outer nuclear layer (Figure 3). After 8 months, the patient still complained of paracentral scotomas, which were less dense and slightly more diffuse, corresponding to improved OCT appearance (Figure 3) and less discreet changes on the infra-red images (Figure 4). Visual acuities remained 6/9 bilaterally.

Comment

Acute macular neuroretinopathy (AMNR) is a rare and poorly understood condition. The original description by

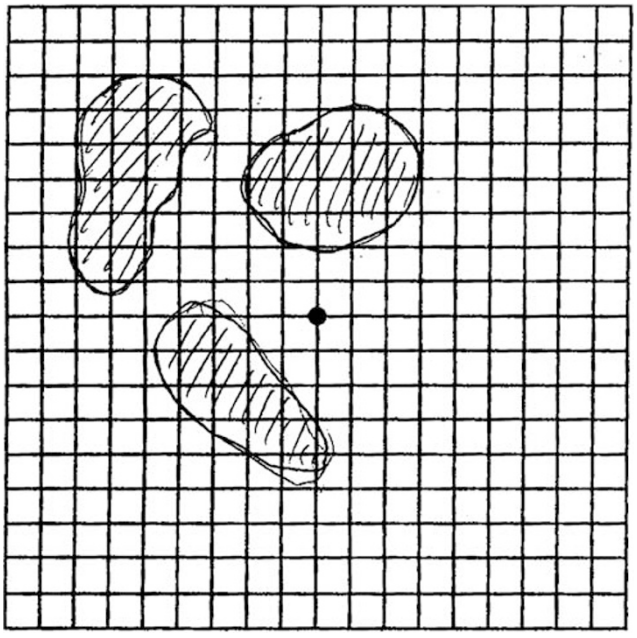

Figure 1 Left eye Amsler grid showing scotomas at presentation.