Retained lens fragment in the anterior chamber five years after uncomplicated phacoemulsification with posterior chamber intraocular lens implantation

Dear Editor,

We report a case of retained lens fragment in the anterior chamber five years after uncomplicated phacoemulsification with posterior chamber intraocular lens implantation.

A 76-year-old woman had presented with four days' history of sudden-onset redness, mild pain and blurring of vision in her left eye. Her background medical history included Type II diabetes mellitus, hypertension and hyperlipidemia. The patient had undergone an uneventful left eye phacoemulsification with posterior chamber intraocular lens (IOL) implantation in the same centre five years ago. She developed epiretinal membrane (ERM) with macular pseudo-hole in the left eye one year after cataract surgery. She also had bilateral mild non-proliferative diabetic retinopathy (NPDR) without macular edema. The best-corrected visual acuity in the left eye was 20/40 six months prior to onset of current symptoms. The presenting visual acuity was counting fingers at 2 meters. Slit-lamp examination revealed injected conjunctiva, presence of inferior wedge-shaped corneal edema with Descemet's folds extending up to the pupillary axis and a lens fragment near 6 o'clock in the inferior anterior chamber [Fig. 1]. There was anterior segment inflammation with 2+ cells. The intraocular pressure was normal (11 mm of Hg). The posterior segment examination reaffirmed ERM with macular pseudo-hole and mild NPDR. The patient was not a myopic before cataract extraction in either eye. The axial length was 22.0 mm in the affected eye.

The patient underwent surgical removal of the lens fragment five days later under topical anesthesia. The corneal edema and the anterior chamber inflammation resolved completely. The best-corrected visual acuity returned to 20/40 at one-month follow-up.

Past studies had documented retained lens fragment in the anterior chamber six to eight months after uncomplicated

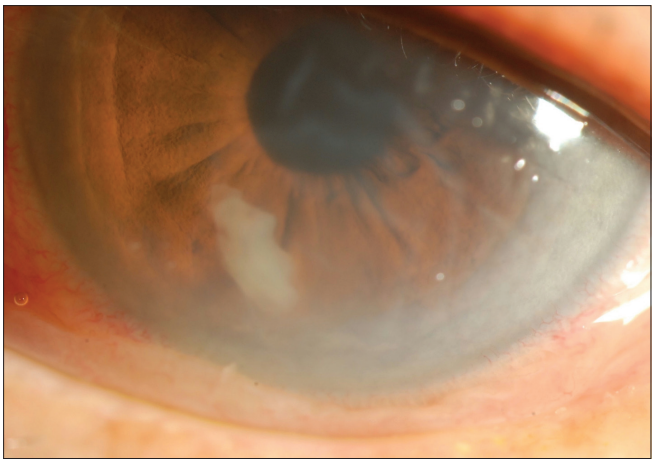

Figure 1: Lens fragment in the anterior chamber with corneal edema

cataract surgery.[1,2] Teo *et al*., suggested that these retained lens fragments are more likely to occur in high myopes, patients with small pupil and hard nucleus.[1] The authors postulated increased chattering of the nucleus due to high ultrasonic power as a possible mechanism. Occasionally, the lens fragment may migrate anteriorly possibly due to postural changes along with movement of the iris in changing ambient lighting.[2] Rarely, a tiny lens fragment may remain hidden in the anterior chamber angles.[3]

In our case, the patient remained asymptomatic for five years without a single episode of anterior uveitis in the past. The patient was neither myopic nor had a small pupil during the cataract surgery. She underwent routine dilated fundus examination in her every visit due to her retinal conditions when she demonstrated moderate pupillary dilation. Although she precisely denied any episode of pain, redness or discomfort in the past, it is possible to have low-grade inflammation in the anterior chamber with minimal symptoms that she may have ignored. The lens fragment was reasonably large [Fig. 1] to be missed out in the previous visits if it was sequestered at an obvious position. It is possible that the fragment was trapped under one of the IOL haptics close to the equator. The lens fragment rather looked fresh with a sharp edge that was indeed unusual. Possibly a firm adhesion of the anterior capsule to the anterior surface of the IOL had provided a relative protection to the lens fragment from aqueous current. The same could explain the lack of significant inflammations. Some unknown factor may have triggered the opening of capsular adhesion from the IOL and eventual release of the lens fragment after five years.

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