Ectopic intraocular lens: An unusual complication of cataract surgery

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We wish to report an unusual complication of intraocular lens (IOL) insertion following uneventful phacoemulsification. After successful phacoemulsification surgery, a hydrophobic acrylic IOL was loaded in the injector for insertion into the capsular bag. During insertion, the IOL inadvertently extended into the corneal stromal lamella. The complication was recognized at a late stage, and the foldable acrylic lens was retrieved and reinserted correctly in the bag. The anterior chamber was made viscoelastically taut and was maintained in this state for 10 min, followed by a routine viscoelastic wash and air bubble injection. Cornea was slightly edematous with stromal haze, and the corneal thickness was 908 µm. At the 1-month follow-up visit, the patient's vision was 20/40, the stromal haze had subsided, the corneal thickness was 572 µm, and the patient was comfortable. Though it was unknown complication, following proper management patient recovered satisfactorily.

Key words: Acrylic lens, complication, ectopic lens, phacoemulsification

Phacoemulsification surgery offers many advantages in comparison with extracapsular cataract extraction. In particular, more rapid visual rehabilitation and better control over surgically induced astigmatism are well-established benefits of phacoemulsification over extracapsular cataract extraction.[1] These advantages are attributable largely to the small size of the cataract incision.[1] Common complications associated with an intraocular lens (IOL) that require secondary interventions include dislocation/decentration, incorrect lens power, IOL calcification, and glare/optical aberrations. Insertion of a posterior chamber IOL with a reversed front-to-back orientation is a surgical dilemma that will present occasionally, with a reported frequency of 1.0-1.3%.[2] Descemet's membrane detachment has been noted during the insertion of a foldable IOL.[3] We report a rare case of the occurrence and subsequent management of an inadvertent intralamellar insertion of a foldable IOL.

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Case Report

After successful, uneventful phacoemulsification surgery from 2.8 mm, a hydrophobic acrylic foldable lens was loaded in the injector for insertion into the capsular bag. During insertion, the IOL was incorrectly delivered into the corneal stromal lamella, resulting in ectopic placement of the lens [Fig. 1]. The complication was recognized when the IOL did not unfold and further insertion of the injector met with resistance. The unfolded lens occupied an area extending beyond the pupillary margin within the corneal stroma. Using a McPherson lens holding forceps and a Sinsky hook dialer, the lens was retrieved with considerable difficulty and was reinserted correctly in the capsular bag. The anterior chamber was made taut with a viscoelastic substance and was maintained in this state for 10 min, followed by a routine viscoelastic wash from anterior chamber and corneal pocket and air bubble injection. On postoperative day 1, the cornea displayed striate keratitis and edema with stromal haze; the corneal thickness at the insertion site was 908 µm. On day 4 of outpatient department

Figure 1: Lens in corneal lamella

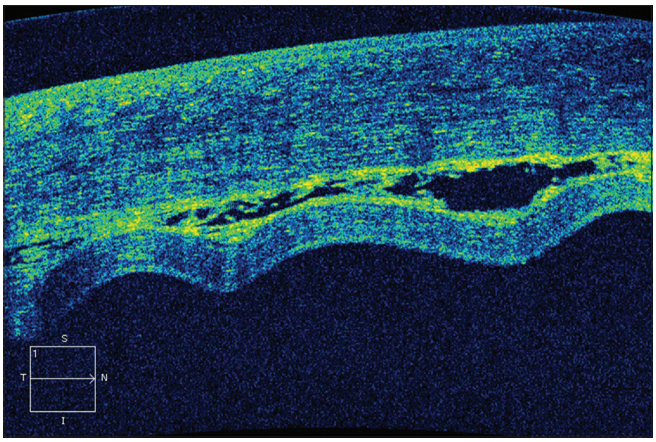

Figure 2: Optical coherence tomography (OCT) with corneal thickness on 3rd postoprative day

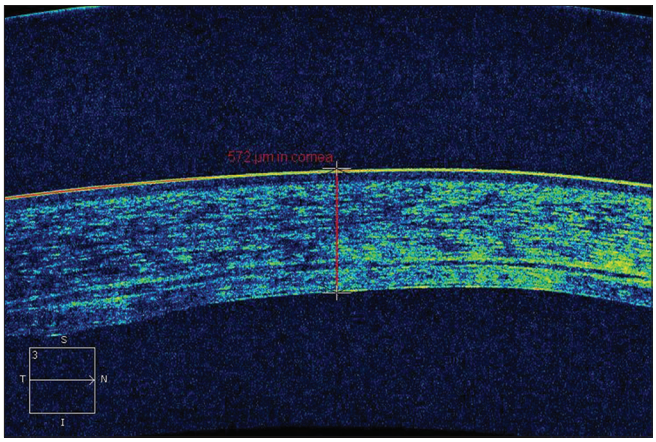

Figure 3: OCT with corneal thickness after 1 month

follow-up, the patient had an uncorrected visual acuity of 2/60 and an intraocular pressure of 14 mmHg. The central corneal thickness was 809 µm on anterior segment optical coherence tomography (OCT) [Fig. 2], compared with 496 µm preoperation. On slit-lamp biomicroscopy, the cornea displayed striate keratitis with slight edema and stromal haze, but no keratic precipitates or evidence of a Descemet's membrane detachment were observed. The anterior chamber was well-maintained, with the IOL in place. On postoperative day 15, the patient's vision improved to 6/60, with Descemet's folds in the cornea. Corneal thickness was 615 µm as determined by anterior segment OCT, and the patient was put on prednisolone eye drops six times daily and ofloxocin three times daily. At the 1-month follow-up visit, the patient's best corrected visual acuity had improved to 20/40, stromal haze had subsided, corneal thickness was 572 µm [Fig. 3], and the patient was comfortable. This case report shows that surgical complications may be encountered at any stage of surgery, even with experienced surgeons.

Discussion

Complications related to the position of an IOL following its insertion have been reported; these include its location in the anterior chamber or anterior vitreous and upward sliding.[4,5] Xia and Liu reported Descemet's detachment at the incision site during clear corneal incision in an uneventful phacoemulsification, using anterior segment OCT.[6] Morrison reported spontaneous Descemet's detachment during cataract surgery, which is a potentially reversible complication with good vision recovery.[7] We are unaware of any other reported cases of intracorneal positioning of the IOL with good vision recovery on proper management. We may prevent this complication by inserting nozzle of injector in anterior chamber before injection.

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