Postoperative Tilting of a Well-enclaved Retropupillary Iris Claw Intraocular Lens: A Rare Complication

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Abstract

Here, we report a rare complication of the retropupillary iris claw intraocular lens (IOL) which in recent times has emerged as a good option for implantation in cases with inadequate capsular support following cataract surgery. Three weeks after undergoing iris claw IOL implantation, our patient presented with sudden decrease in visual acuity. On examination, we found the iris claw IOL to be tilted by 90° and lying perpendicular to the pupillary plane with the haptics still enclaved. Resurgery was done to reposition the IOL. The tremulousness of the iris causing an anterior movement of the iris diaphragm and IOL, aided by prolapse of vitreous could have caused the tilt.

Keywords: Postoperative complication of iris claw intraocular lens, repositioning iris claw intraocular lens, tilted iris claw intraocular lens.

Case Report

A 67-year-old male presented to our hospital with an immature cataract with no history of trauma and no other pre-existing cause for weak zonules. During cataract surgery, a very large inadvertent zonular dialysis occurred and the capsular bag could not be salvaged. Adequate vitrectomy was done, and a retropupillary rigid (polymethyl methacrylate, 5.5 mm optic, 8 mm overall diameter) iris claw IOL (Excelens, Excel Optics Pvt. Ltd., Chennai, India) was implanted. On the next day, the postoperative examination showed a clear cornea with a quiet anterior chamber and a well-enclaved iris claw IOL. The patient was discharged with an uncorrected visual acuity (UCVA) of 6/12 and was improving to 6/6 (p) with pinhole.

Three weeks later, the patient reported to us with a sudden diminution of vision for the past 2 days, with no history of trauma since surgery. There was no notable triggering event that he could recollect preceding the decrease in vision. The UCVA was 4/60 and improving to only 6/60 with pinhole.

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On slit lamp examination, the cornea was clear, the anterior
chamber was normal in depth, and there were no signs of iritis
or hyphema. The iris claw IOL was found to have rotated by 90°
and was now horizontal, perpendicular to the iris and pupillary
plane as seen in Figures 1–3. The edge of the IOL optic was
seen protruding out of the pupil but not touching the cornea,
and the iris at the sites of enclavation was kinked.

It was presumed that there could have been an optic
capture of the IOL in the early preoperative period. Another
possibility was a mild anteroposterior tilt due to minor
deformation and offset of the two arms of the haptics due
to undue pressure during enclavation. Further, tilt of the
slightly tilted IOL could have been due to the prolapse of
vitreous. Repositioning of the iris claw IOL and anterior
vitrectomy was, therefore, planned. During the resurgery,
staining with triamcinolone acetate did not show any vitreous
prolapse into the anterior chamber suggestive of syneretic
vitreous. The haptics were found to be enclaved well at the
midperiphery of the iris.

The iris claw IOL was duly reposited and there was no evident tilt
that could indicate damage to the haptics during the enclavation.
On the next day, the anterior segment examination showed a
clear cornea, a quiet eye, and a well-enclaved IOL parallel to the
pupillary plane and in the posterior chamber [Figure 4]. There was
tremulousness of the iris and the IOL. The UCVA on discharge
following resurgery was 6/18 improving to 6/9 with pinhole.

**DISCUSSION**

The posterior or the retropupillary iris claw IOL has been
found to be a safe and effective alternative which can be
implanted in patients with inadequate capsular support.[3] The
complication unique to the iris claw IOL reported in literature
is the disenclavation of one of the haptics reported to be 8.7%
in the study by Johannes Gonnermann et al.[1] The other
complications include dislocation of the IOL in the vitreous,
pupillary distortions, cystoid macular edema, and endothelial cell
loss.[3] However, a tilting of the iris claw IOL, as in this case, is
a rare complication and to our knowledge has not been reported.

**Figure 1:** Slit lamp photograph showing 90° tilt of the posterior/
retropupillary iris claw intraocular lens, with the iris still enclaved

**Figure 2:** Retroilluminated slit lamp photograph of the tilted iris claw
intraocular lens

**Figure 3:** Slit lamp photograph with retroillumination showing the tilted
iris claw intraocular lens after pupillary dilatation

**Figure 4:** Slit lamp photograph after surgically repositioning the intraocular
lens
There was no damage to the haptics causing minor tilt as confirmed following the reposition. Hence, we hypothesize that in the early postoperative period, optic capture of the IOL could have occurred due to minimal vitreous prolapse through a dilated pupil. In the later postoperative period, probably due to bending down, the already slightly tilted IOL could have rotated to this position due to an anterior movement of the iris-IOL diaphragm and push by the vitreous. The IOL would then have stayed in the position perpendicular to the plane of the pupil due to the kinking of the iris. Vitreous was not found in the anterior chamber during resurgery probably because it was syneretic, which also explains the tremulousness of the iris and the IOL noticed following the resurgery.

Conclusion

We report this case to stress upon the fact that an adequate vitrectomy, a water-tight closure of the wound, avoiding undue pressure during enclavation that could cause minor deformation of the haptics, avoiding optic capture or wide dilatation of the pupil, and counseling the patient to avoid even minor trauma such as rubbing of eyes or bending down in the early postoperative period are vital to prevent such rare complications.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that name and initials will not be published and due efforts will be made to conceal the identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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