

air-bubble misdirection, steroid therapy, and/or aging. However, the advantage of preserving accommodation in relatively young patients may outweigh the risk for inadvertent (iatrogenic) cataract development because phacoemulsification after DMEK seems a viable treatment option in these cases.

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Repositioning technique and rate for toric intraocular lenses

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I previously reported the excellent rotational stability of the AcrySof toric intraocular lens (IOL) (Alcon, Inc.) in a consecutive series of my first 100 cases.¹ Ninety percent and 99% of the IOLs were aligned within 5 degrees and 10 degrees of the intended axis, respectively, and no IOL required surgical repositioning. I compared the results in this series with those in my retrospective series of 90 consecutive Staar toric IOLs using an identical surgical technique. The mean IOL rotation was 3.35 degrees \pm 3.41 degrees in the AcrySof group and 5.56 degrees \pm 8.49 degrees in the Staar group ($P = .0232$).

By the end of 2008, I had implanted 263 AcrySof toric IOLs. Three of the IOLs had rotated more than 15 degrees off axis, and all 3 required surgical repositioning,

for an overall rate of 1.1%. Because of the expanded study size, this represents a more accurate repositioning rate for this toric IOL model. I am also reporting my repositioning technique and results because of the infrequency of this complication. The clinical features of the 3 eyes are shown in Table 1. In the first case, the IOL was properly aligned on the first postoperative day but was misaligned by postoperative day 9. The patient reported being accidentally kicked in the eye by his infant son, immediately after which he noted a persistent decrease in the uncorrected vision.

In all cases, the repositioning surgery was performed in the operating room under topical anesthesia. The (+) astigmatic axis was marked in the same manner as for primary toric IOL implantation. Immediately before surgery, 2 pen marks were made at the 3:00 and 9:00 limbus with the patient seated upright. Intraoperatively, a Dell marker (Rhein Medical Inc.) was used to mark the intended axis of toric IOL alignment. To reinflate the capsular bag, balanced salt solution (BSS) was injected through a 30-gauge bent cannula via a paracentesis site. The tip of the cannula was first used to lift the capsulorhexis edge from the anterior optic surface to gain access to the capsular bag. In all 3 cases, the bag was easily reopened without the use of an ophthalmic viscosurgical device (OVD) and the toric IOL was then rotated into the proper alignment using the same BSS cannula tip. In each case, the capsular bag diameter appeared to be larger than average. Care was taken to avoid overinflating the capsular bag as the anterior chamber was refilled at the conclusion of surgery. Each IOL remained properly oriented at the 1 day and 1 month postoperative visits.

DISCUSSION

Although significant postoperative rotation of the AcrySof toric IOL is rare (1.1%), this series of 3 cases suggests that it is more likely to occur in larger myopic eyes that have what subjectively appear to be large-diameter capsular bags. Minor blunt trauma was a factor in 1 case. Within 2 weeks of the initial

Table 1. Characteristics of 3 toric IOL cases requiring surgical repositioning.

Case	Age (Y)	AL (mm)	IOL (D)	Target Axis (Degree)	Postop Axis (Degree)	Time to Repositioning	Post-Repositioning Axis (Degree)	Large Bag Diameter Noted Intraop?
1	43	27.10	11.0 (T5)	90	130*	14 d	90	Yes
2	66	26.56	11.5 (T4)	90	125	5 d	90	Yes
3	79	25.84	18.0 (T5)	165	30	7 d	165	Yes

AL = axial length; IOL = intraocular lens

*Axis was 90 on postoperative day 1 and 130 on postoperative day 9

surgery, surgical repositioning of the IOL was easily achieved under topical anesthesia using BSS alone to inflate the capsular bag. Because of the risk for poor rotational stability, OVD was avoided to facilitate immediate frictional contact between the posterior capsule and IOL surface. Partial shrinkage of the capsular bag following the original surgery may

have been a factor in the stability of these 3 repositioned toric IOLs.

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