

Toric IOL in the Setting of a Ruptured Posterior Capsule

Complications do not always mean abandonment of a premium lens.

BY JOHN BERDAHL, MD

A tear in the posterior capsule is always unwelcome but particularly so when a premium IOL is planned. As illustrated in the following case example, a toric IOL need not necessarily be abandoned.

CASE PRESENTATION

A 28-year-old woman born with a posterior polar cataract in her right eye presented with a complaint of decreasing vision. She had a BCVA of 20/150 OD and 20/20 OS. She had been born with amblyopia in her right eye and stated that she had seen poorly since childhood. She reported that the vision in her right eye had steadily worsened over the past year.

An examination revealed a large posterior polar cataract and 4.30 D of with-the-rule corneal astigmatism (Figure).

The patient was quite nervous about eye surgery. She expressed great interest in lessening her dependence on glasses but could not afford any additional fees.

SURGICAL COURSE

I elected to provide the practice's distance refractive laser-assisted cataract surgery (what we dub "RELACS") package at no charge. This offering includes laser cataract surgery, intraoperative aberrometry, topography, and other clinical testing in addition to a toric IOL for a high amount of astigmatism. Anterior segment optical coherence tomography with the LenSx Laser (Alcon) indicated that the posterior capsule was intact, so I proceeded with laser cataract surgery. I thought that the benefits of using the laser to chop the lens and to create a perfectly

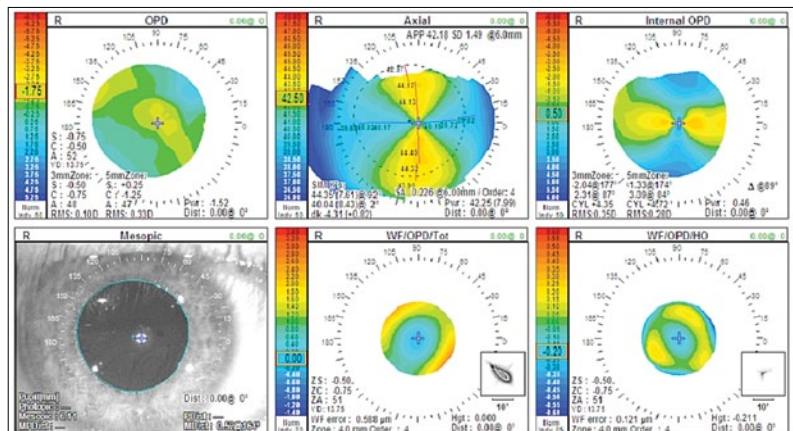


Figure. The eye has 4.31 D of with-the-rule corneal astigmatism.

centered capsulotomy without manipulating the capsule outweighed the small risk of gas' breaking through to the posterior segment.

The laser portion of the case went wonderfully, and the patient was brought to the OR. I removed the entire cataract with the posterior capsule intact. As I tried to polish the posterior capsule, I found that a dense plaque was quite adherent. I decided to place the toric IOL in the capsular bag and to perform a YAG capsulotomy during the postoperative period. During the IOL's insertion, however, the capsular bag tore. No vitreous prolapse was apparent. I faced a choice: remove the IOL and replace it with a three-piece monofocal lens in the sulcus or complete surgery with the toric IOL.

The laser capsulotomy was perfectly round and perfectly sized. I decided to perform a reverse optic capture.



I placed the haptics in the capsular bag and the optic above the anterior capsule. I then rotated the lens into position. Fortunately, this strategy worked well, and no vitreous prolapse occurred. The patient's final postoperative outcome was a UCVA of 20/40 and no improvement with refraction, indicating that the remaining visual acuity deficit was because of underlying amblyopia.

POSTERIOR CAPSULAR RUPTURE AND PREMIUM IOLs

All complications discomfit the surgeon, but they are particularly challenging when the patient has high expectations of a premium IOL. That said, a ruptured posterior capsule does not necessarily preclude an excellent outcome with a toric lens. The approach to managing a tear is the same whether the implant is a toric or monofocal. The first tip is not to panic. The second is not to remove the instruments from the eye; it is important to maintain a stable anterior chamber to prevent vitreous prolapse. Instilling a dispersive viscoelastic will tamponade the vitreous posteriorly. Then, the surgeon can assess the situation, perform a vitrectomy if needed, and remove any remaining cataract material. The next step is to place the IOL in a secure location.

Depending on the status of the anterior capsule, implanting a three-piece IOL in the sulcus with optic

capture is usually ideal. If the zonules are too weak to support a centered IOL, however, then iris or scleral fixation or an anterior chamber IOL is a better option. When only a single-piece IOL is available, the sulcus is not a good option, because the haptics may chafe the iris. A better course is to place the haptics in the capsular bag and the optic above the anterior capsule in a reverse optic capture, as used in the case described earlier. Once the lens is in position, it is important to recheck the anterior chamber to make sure that there is no vitreous prolapse. Placing a suture is prudent to prevent leakage at the incision and vitreous prolapse, which increase the risk of cystoid macular edema and endophthalmitis.

I believe that, upon completion of the case, it is important to have a straightforward conversation with the patient about what happened, why it occurred, and the expected prognosis. Most times, a complicated case can be managed successfully, and the patient will do extremely well. ■

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