

Cataract / IOL

Toric IOL users find own tricks but few new instruments

The Staar Toric Intraocular Lens (IOL) presents cataract surgeons with a great opportunity — and a potential headache. The lens can satisfy many patients, but requires more skill to place correctly than the typical IOL. A misaligned lens may require a return to surgery.

Surgeons are learning how to implant the new Staar Toric IOL, in what could become a booming market, but most instrument companies have not joined the game.

Surgeons are beginning to experiment with ways to better align the lenses more quickly, while instrument companies are just beginning to notice a new niche. Two instruments, ASICO's Fine

Toric IOL Marker and Rhein's Dell Astigmatism Marker, can be used for other purposes, as well. The double-ringed Dell marker can also be used for corneal astigmatism surgery and when implanting other IOLs.

The toric lens works to correct astigmatism only when two marks on the anterior side of the optic are aligned at the patient's steepest axis.

One of Staar's clinical investigators, David C. Brown, MD, uses a Bechert Nucleus Rotator (Storz/Bausch & Lomb) to turn the lens when it is not aligned correctly, which, he said, happens in about one of 10 or 15 cases. This tends to occur when

the globe is repressurized, said Brown, an assistant clinical professor at the University of South Florida in Tampa.

In the 200 or so cases he has performed since the trial's end, Brown has used balanced salt solution (BSS) instead of viscoelastic to implant the IOLs. He feels viscoelastic "greases it in the bag," increasing the number that rotate out of position.

At press time, Arun C. Gulani, MD, of New York City, was selecting the instrument company to market two toric implantation aids. The Gulani Millennium Astigmatic Set, comprising a diamond marker and diamond blade. He said it creates a mark "that is unique, precise, and clean — not like a needle." In addition, the mark will not be washed away during surgery. The Gulani Toric Implant Insertion Set includes an IOL inserter that allows the lens to be inserted correctly on a preset axis, thus decreasing the need for intraocular manipulation.

Charles H. Williamson, MD, of Baton Rouge, La., another clinical investigator, said he has had no problems aligning the lens.

"I line up the lens with just a Sinsky hook," said Williamson, an associate professor at Louisiana State University Medical School.

He marks the patients' corneas at 12 o'clock while they are erect to avoid incyclotorsion. Williamson uses a Mendez marker when the patient is flat to mark the correct axis, unless the axis is a simple 90° or 180°. He is careful not to overinflate the globe, fearing a lens shift. He checks that

the lens is not flipped before insertion, because the Staar Toric IOL has an anterior and posterior side.

Unlike other surgeries with plate IOLs, Williamson performs cortical cleaning on the underneath side of the capsule's anterior leaf. "I want to reduce a significant amount of capsular contraction," he said. "In the case of this lens, you want as little fibrosis as possible."

Harry B. Grabow, MD, sees no need for specific toric lens instruments. He once had to rotate a lens 40° following original surgery, but said most cases go well. Grabow waits 10 to 12 days if a cataract patient presents with an off-axis lens at the first postoperative check, then fixes it at the slitlamp or by performing surgery again.

Grabow, another investigator, uses Staar resposable injectors. Their cartridges are custom-cut at 60° bevels. He said the globe could be marked in two ways and at two locations.

Gentian violet can be used to mark the conjunctival side of the limbus or cautery can be used on the corneal side of the limbus, his own preference. And the marks can be made to show the 12 o'clock or 90° points, or in his case, the steep axis. Grabow uses his irrigation/aspiration tip to rotate the lens inside the eye.

Paul S. Koch, MD, of Warwick, R.I., said the lens can float when more BSS is added to build pressure to seal the incision, deepening the capsular bag. Sometimes, Brown said, he has to nudge the lens back into place with a cannula and reinflate the globe two or three times.

"It's just one more check," said Brown, who also was an investigator. ■

