

Special Report) TECHNOLOGICAL **ADVANCES IN IOLS****Single-piece, silicone toric IOL design yields 'excellent' rotational stability**

Surgeon finds user-friendly platform to be cost-effective option for eyes with astigmatism

By **Cheryl Guttman Krader**; Reviewed by **Ehsan Sadri, MD**

NEWPORT BEACH, CA ::

TORIC IOLS ARE the fastest-growing segment in the IOL market, and surgeons have several excellent models from which to choose.

Among the options, a single-piece, silicone toric IOL (AA4203TF/AA4203TL, STAAR Surgical) represents a user-friendly platform for use

in eyes needing correction for low-to-moderate regular or irregular astigmatism, according to Ehsan Sadri, MD.

"Toric lenses are a great starting point for cataract surgeons who would like to bring refractive IOLs into their practice," said Dr. Sadri, private



Dr. Sadri

practice, Atlantis Eyecare, Newport Beach, CA.

ROTATIONAL STABILITY

"This single-piece IOL is easy to implant and easy to align, because once it is inside the eye it can be rotated in either direction," Dr. Sadri said. "In addition, the current version of the STAAR toric IOL has excellent rotational stability."

Surgeons can rest assured that the rotational stability of this toric IOL compares favorably with other toric platforms, he noted.

"Whereas the original version of the STAAR toric IOL was prone to off-axis rotation, its stability has been improved through several design changes," said Dr. Sadri, adding that having implanted the STAAR toric IOL in more than 80 eyes, he has not encountered any cases of significant postoperative rotation.

Proper surgical technique is probably the most critical issue when it comes to avoiding postoperative rotation with this lens, according to Dr. Sadri.

"When implanting the IOL, surgeons should be careful not to overinflate the bag," he said. "Keeping the eye safely but moderately soft enables immediate collapse of the capsular bag around the IOL.

"Then once the IOL is implanted, surgeons

tic from behind the lens in order to maximize optic contact with the posterior capsule," he said.

MORE ON TORIC TECHNOLOGY

Creating a properly sized capsulorhexis is also critical for increasing the predictability of the effective lens position with the STAAR toric IOL and any toric platform. For that reason, toric technology pairs very well with use of a femtosecond laser, said Dr. Sadri, adding that surgeons should be targeting a 5.5-mm anterior capsule opening.

Accurate preoperative measurements are also essential. Surgeons should be performing topography to identify irregular astigmatism, but no matter what technology they use for keratometry, they should be using the same diagnostic modality consistently because different systems will generate different data.

While the STAAR toric IOL can be used in eyes with irregular astigmatism, Dr. Sadri cautioned surgeons to be very careful with power selection in these cases. He recommended aiming

to leave a little cylinder behind, because overshooting the target will leave the patient with worse vision than preoperatively.

Although there are many techniques for marking the eye to guide intraoperative alignment of toric IOLs, Dr. Sadri noted that he gets good results using a toric axis marker (Whitman toric axis marker E2430, Bausch + Lomb Storz Ophthalmics).

He also mentioned there is growing appreciation for the importance of considering posterior

corneal surface astigmatism in choosing toric IOL power. Research in this area is ongoing, but a nomogram from Baylor surgeons that takes this factor into account has been demonstrated to achieve good results.

Dr. Sadri noted that the out-of-pocket cost to the patient for the STAAR toric IOL is roughly half that of other competing technologies. On average, patients pay about \$1,500 to \$2,000 per eye above what their insurance covers, he said.

take-home

► A single-piece, silicone toric IOL is a user-friendly platform with good rotational stability and a lower price point than other toric technology, noted Ehsan Sadri, MD.

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TECHNOLOGY AIDS REAL-TIME ADJUSTMENT OF TORIC IOLS

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(Video courtesy of William F. Wiley, MD)

THOUGH TORIC IOL implantation is a growing segment of refractive cataract surgery, there are several hurdles in achieving success with these lenses, explained William F. Wiley, MD. With the use of intraoperative aberrometry, toric IOLs can be precisely positioned in the eye for optimal visual results.

Find out how at <http://bit.ly/1kVcVAX>

was well over 60%, and the main reason for our success is that patient counseling is a team effort in our practice," Dr. Sadri said. "The entire staff is excited about the toric technology, understands its effectiveness for the patient and financial benefits for the practice, and is able to educate patients appropriately."

The STAAR toric IOL is available in two cylinder powers: 2 D that corrects 1.5 D of corneal astigmatism and 3.5 D that corrects 2.25 D. The optic is non-aspheric. ■

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