

Toric Correction of High Astigmatism

Two surgeons discuss their initial experiences with the new MicroSil Toric MS 6116 TU IOL.

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Correcting astigmatism during cataract surgery can be achieved by three methods. The surgeon may place an incision, perform an astigmatic keratotomy before or after cataract surgery, or implant a toric IOL. If the astigmatism is not too high, the location and type of the incision used may reduce the amount of aberration by 2.00 to 3.00 D. The results for astigmatic keratotomies are rather unpredictable, and the reduction in astigmatism does not usually exceed 3.00 D.

Although one option in toric IOLs, toric plate haptic silicone lenses (STAAR Surgical, Monrovia, CA), has been used for several years with fairly good results, these lenses are only available with a cylinder of 2.00 or 3.50 D. Also, because they can rotate after implantation, the surgeon may wish to use them in combination with an intracapsular ring, although this step may complicate the operation and incorporate additional costs. A plate haptic lens may also cause delayed postoperative complications, such as decentration and dislocation, especially in eyes with pseudoexfoliation or following a posterior capsulotomy.

A NEW TORIC LENS

Dr. Schmidt Intraocularlinsen GmbH (St. Augustin, Germany), a company of the group HumanOptics AG (Erlangen, Germany), has worked during the past few years to develop a three-piece, foldable toric IOL. The MicroSil Toric IOL is available in powers of between -3.00 and 31.00 D and cylindrical powers ranging from 2.00 to 12.00 D (Figure 1). This IOL, type MS 6116 TU, is a posterior chamber lens (PCIOL) and features stable PMMA haptics in a z-design, as well as a 6-mm optic made of silicone. The IOL's overall diameter is 11.6 mm.

The optic of the lens is marked with two peripheral lines, which indicate the steep axis. The formation of the haptics impedes the spontaneous rotation of the IOL after implantation. The surgeon folds the lens within the box, thus avoiding unnecessary manipulation or false positioning. Implanting the MicroSil Toric lens is somewhat more difficult than inserting a conventional PCIOL because of the shape of its haptics. The surgeon should begin with a capsulorhexis large enough to accommodate them and then insert the inferior haptic into the capsular bag in the usual manner. To insert the superior haptic, he should use an implantation forceps. Then, he must rotate the lens so that its lines align with the steep meridian, which he marked preoperatively at the slit lamp. Manual rotation is possible, even after

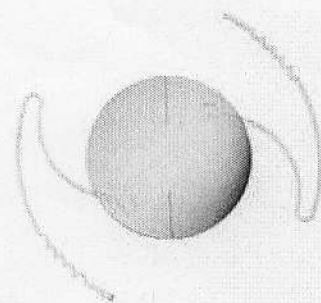


Figure 1. The MicroSil MS 6116 TU three-piece toric IOL features a silicone optic and PMMA haptics in a z-shaped design.

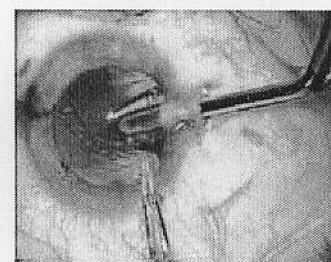


Figure 2. Dr. Gerten implants the MicroSil Toric MS 6116 TU IOL through an incision sized 3.2 to 3.4 mm.