terior optic zones focus edge glare rays into distinct arc-shaped images whose peak intensity is an order of magnitude stronger than the peak intensity of the diffuse image formed by lenses with rounded edges. Intraocular lenses with truncated edge designs are thus much more likely to produce edge glare phenomena that can appear to the patient as a thin crescent or partial ring.

AcrySof lenses have also been found to result in higher chromatic aberration than poly(methyl methacrylate) (PMMA) lenses,[4] so some entoptic phenomena reported with these lenses may relate to the optical properties of the acrylic material. All currently available lens designs have relative advantages and disadvantages, and acrylic lenses are particularly advantageous with regard to minimizing postoperative inflammation, capsule contraction and opacification, and in cases anticipated to subsequently require vitreoretinal surgery.

I chose the MA60BM to implant in both of my father's eyes last month with great success. However, given this patient's presenting complaints at the time of her initial surgery, she might have been better served with an IOL style with a rounded edge. Of course, hindsight is 20/20.

In this case, I would exchange the IOL for a lens with a 7.0 mm optic with a rounded edge. Unfortunately, such a lens is not routinely available in a foldable material in the United States. Thus, it would be necessary to create a large wound to allow implantation of an all-PMMA IOL with these characteristics. A superiorly placed scleral tunnel using a frown architecture would minimize induced astigmatism. As a large wound would be required, it would not be necessary to cut or refold the acrylic lens inside the eye before explantation.

Preoperatively, I would extensively counsel the patient on the management options for tonic pupil. Because the pupil would cover the IOL edge in all but the most scotopic conditions, and as the anterior capsule remnant would be expected to rapidly opacify with a PMMA lens in the bag, an initial trial of conservative therapy would be recommended. The most likely scenario would be that the patient might initially require a drop of pilocarpine 0.5% before night driving; however, that requirement would probably diminish with time.

Should glare continue to be problematic, a 10-0 running polypropylene suture could be passed through multiple paracenteses and woven through the iris near the pupillary margin to perform an iris cerclage, producing a small, relatively round pupil.[5,6] Should the patient be unwilling to undertake a trial of conservative medical management for the tonic pupil, an iris cerclage could be performed at the same surgical sitting as the IOL exchange.

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■ Before we can help this patient, we must clearly understand the source of her symptoms. She had implantation of a 6.0 mm acrylic IOL (AcrySof MA60BA, Alcon). Although this IOL enjoys a reputation for a low incidence of PCO, it is also well known to cause intracameral reflections from the IOL edge design, which contributes to symptoms of halos and rings, particularly at night. This may occur with perfect implantation and a normal pupil.

We are presented with an anterior segment photograph that demonstrates an irregularly enlarged pupil and informed it has serpentine pupillary reactions, is enlarged to 6.0 mm in ambient light, and is recorded at 7.0 mm with infrared pupillometry. The patient is described as having developed a tonic pupil, possibly from the sub-Tenon's anesthesia (resulting in damage to the ciliary ganglion).

The question arises: Are the symptoms related to the tonic pupil or the AcrySof IOL? Depending on the answer, the treatment options can differ. We are told that pilocarpine 0.5% induced miosis but did not meaning-

fully reduce the symptoms. It would be useful to know how much miosis was induced and whether the symptoms would have persisted with a 4.0 mm pupil.

A trial with a custom diagnostic contact lens with a 4.0 mm central clear zone and opaque periphery would be helpful. If this adequately eliminates her symptoms, she can be offered 1 procedure to resolve the problem; that is, a pupilloplasty using the same method as that to correct postoperative atonic pupil in aphakic or pseudophakic eyes. This procedure should work equally well for a pseudophakic tonic pupil.

If this diagnostic test or a course of stronger miotics shows that the symptoms persist despite eliminating the pupil as the source of the problem, our options change and any course of action must consider an IOL exchange. I sense that the problem is likely a combination of the AcrySof IOL and the tonic pupil. Assuming this is the problem, I would proceed in this fashion after obtaining an endothelial cell count.

Option 1

Perform an A-scan and calculate for a foldable silicone IOL (Chiron LI61U), 1 for capsular bag placement and a backup calculation for sulcus placement. I would choose this IOL because it allows planar injection through a small incision, which facilitates implantation in the event of extension of the pre-existing capsule openings. Although it is not my routine, I would consider intracameral lidocaine or an anesthetic block for this patient, depending on how cooperative she was during the preoperative evaluation.

I would dilate the eye preoperatively with only 1 drop of phenylephrine hydrochloride 2.5% (Neo-Synephrine®) because a small pupil is required for stage 2 of the surgery. I would sit temporally and perform 2 diametrically opposed stab incisions close to the limbus, angled slightly down.

Next, I would make a 3.5 mm temporal 2-plane clear corneal incision. I believe that corneal incisions larger than 3.0 mm should be biplanar for better sealing; otherwise, I use a single-plane incision. I would use an easily removable viscoelastic material because there are 2 capsule openings, and I do not want to hydrate the vitreous excessively at the end of the case while trying to remove the viscoelastic agent.

Next, I would attempt to use 2 Lester lens rotators to mobilize the IOL into the pupillary plane, cut the IOL, and remove it in longitudinal pieces through the 3.5 mm incision with a forceps. At 2 months postoperatively, it is unlikely the AcrySof cannot be mobilized. If it could not, I would cut the haptics, remove the optic in pieces, and leave the haptics in place. If the bag is preserved and inflatable, I would place the LI61U in the bag. Otherwise, I would place the appropriately calculated LI61U in the sulcus. Next, I would inject acetylcholine chloride (Miochol®) and perform small incision single-suture-loop pupilloplasty[1] to treat the tonic pupil.

Option 2

Perform an A-scan and calculate for a PMMA Morcher aniridia IOL type 67G (12.5 mm overall length/5.0 mm optic) for in-the-bag placement and an aniridia IOL type 67S (13.5 mm overall length/5.0 mm optic) for backup sulcus placement. These IOLs have black PMMA surrounding the clear portion of the optic to help the aniridia. The drawback is that a much larger clear corneal incision requiring wound suturing would be used.

I would work temporally because the keratometric changes are less than with a superior approach. Once the aniridia IOL is implanted, in the bag or in the sulcus, the surgeon must make certain that the black PMMA extends beyond the edge of the scotopic, pharmacologically unaffected tonic pupil. The surgeon can be certain of this only if careful preoperative documentation of the pupil edge is done under scotopic illumination. Appropriate consent must be obtained to use this IOL.

Which option to use would likely depend on discussions with the patient. Option 2 is less surgically demanding and requires less intraocular manipulation. Cosmetically, it may not look as good as option 1. If the patient has an endothelial cell count close to 1000 or less, this would probably be the more appropriate approach. Either option offers a viable solution.

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