

# Lens Options in a Difficult Case

Two surgeons outline how they would treat a patient with a long history of ectopia lentis.

BY MICHAEL AMON, MD; AND A. JOHN KANELLOPOULOS, MD

## CASE NO. 4

**Patient D is a 20-year-old man with a long history of ectopia lentis and spherophakia. His congenital spherophakia was originally diagnosed in childhood as myopia, but the discrepancy between his axial length and the degree of myopia in evaluation a few years ago suggested spherophakia in both eyes. He later developed ectopia lentis in both eyes, with superonasal lens subluxation (Figure 1). Prior to surgery to remove his subluxated lenses, the patient wore -12.00 D contact lenses with a BCVA of 20/70 in both eyes. He underwent anterior lensectomy and vitrectomy with a bimanual technique, and surgical iridectomies were created at the 1-o'clock position in each eye. What IOL solution would you recommend for this patient?**

– Case and all images submitted by  
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### MICHAEL AMON, MD

There are many IOL options in this case. Because Patient D is only 20 years old, an anterior chamber angle-supported IOL is contraindicated because of the risk of progressive endothelial cell loss. If the iris has a normal anatomic structure and if there is no iridodonesis, then an iris-fixated anterior chamber IOL is a good option depending on the anterior chamber depth. One point to mention is that, cosmetically, an anterior chamber IOL is visible in some situations.

In principle, I would prefer to implant an IOL in the posterior chamber, as this is the physiologic position of the crystalline lens. A retropupillary sutured IOL is an option, but, again, the patient is young, and suture ero-

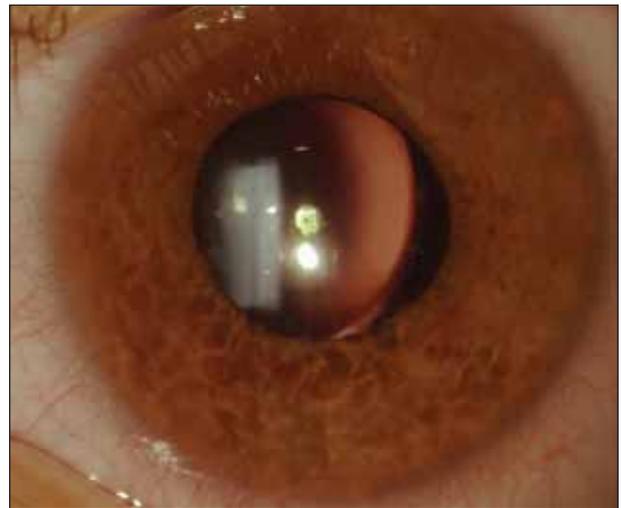


Figure 1. Patient D developed ectopia lentis with superonasal subluxation of the crystalline lens in his left eye.

sion is possible over time due to biodegradation. As an alternative, the lens either could be glued into the scleral bed or the haptics could be captured in scleral tunnels. I have no personal experience gluing an IOL, and if I were to choose this approach for Patient D I would use scleral tunnel fixation.

The option I would prefer is to use a retropupillary iris-fixated IOL, positioned 90° to the iris coloboma. Depending on Patient D's corneal astigmatism, I would use either a corneal incision on the steep axis or an astigmatically neutral scleral incision. This surgical option is straightforward, and my results using this technique in similar cases have been promising.

### A. JOHN KANELLOPOULOS, MD

The options for an IOL in this case include an angle-supported anterior chamber IOL, an iris-fixated anterior chamber IOL, a retropupillary sutured posterior chamber IOL, and a scleral tunnel-fixated or glued posterior chamber IOL.

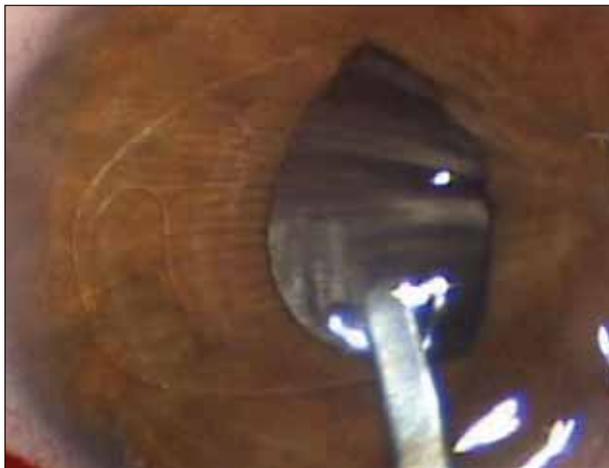


Figure 2. Enclavation of the first (left) haptic. The IOL forceps are visualized holding the Artisan IOL, with the left half under the iris and the right half over the iris. The bent needle is visualized in the up-down enclavation of the first claw haptic under the iris.



Figure 3. Enclavation of the second haptic.

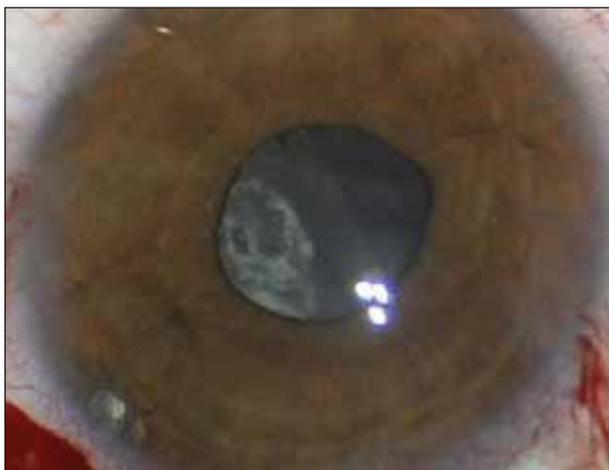


Figure 4. At the end of the procedure, the IOL is in place with haptics enclaved behind the iris at the 8- and 2-o'clock positions. The surgical iridectomy is visualized at the iris periphery at 2 o'clock, and the whitish material visualized in the posterior chamber is triamcinolone remnants.

Patient D was treated at my clinic. In this case, I used the same technique that I have preferred for the past 10 years, which is an Artisan Aphakia IOL (Ophtec BV) with retro-pupillary iris fixation (Figures 2 through 5). The whitish material visualized behind the iris in these intraoperative pictures is triamcinolone acetate. Triamcinolone is used to prevent cystoid macular edema and to visualize the vitreous, which can possibly become entangled in the IOL and/or the anterior chamber. The IOL calculation included adjustment for the posterior placement of the IOL. One month after surgery, Patient D's UCVA was 20/25, BCVA was 20/20, and refraction was +0.50 -0.75 X 170°. ■



Figure 5. Just 1 week after surgery, Patient D's UCVA was 20/25, and the IOL was in place with small iris dimples visualized over the enclaved haptics.

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