

When the Argentinean Flag Is Raised

Techniques for mature white cataracts and strategies for handling capsular complications.

BY DARCY H. WOLSEY, MD, MPH

White cataracts are known to increase the risk of complications during cataract surgery. Fortunately, techniques introduced during the past few years, including capsular staining, and improved ophthalmic viscosurgical devices (OVDs) have helped surgeons to reduce the incidence of such problems.

Ophthalmologists' major concern when confronting a white cataract is performing the capsulorhexis without its running peripherally, perhaps even to the posterior capsule. I had viewed cases involving the dreaded Argentinean flag sign but had always managed to escape saluting it myself. That lucky streak could not last forever, and this case is a good example of what not to do with a white cataract.

THE WRONG OVD

Mature white cataracts are often associated with significant intralenticular pressure that can make the capsule more difficult to control or, worse, cause it to split open while the surgeon attempts the capsulorhexis. At the start of surgery, the application of trypan blue not only makes the capsule visible, but it also stiffens the capsule somewhat, which augments surgical control. In these eyes, a cohesive OVD with a high molecular weight will compress and flatten the capsule to counteract the internal force of the mature lens. Unfortunately in this case, Duovisc



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rather than the Discovisc I had requested (both OVDs from Alcon Laboratories, Inc.) had been opened in the room.

I stained the capsule using trypan blue under an air bubble. Next, I injected Viscoat followed by Provisc (both OVDs from Alcon Laboratories, Inc.) in the soft shell technique described by Steve Arshinoff, MD.¹ I hoped that the Provisc would apply enough downward pressure on the capsule to prevent the capsulorhexis from running peripherally. I made my usual incision (a 2.4-mm clear corneal temporal wound).

EXTENSION OF THE TEAR

For white cataracts, I recommend starting the capsulorhexis with a cystotome for better control.

Immediately after making a small opening in the capsule, I placed in this entry point a 27-gauge, half-inch needle on a 3-mL syringe to aspirate some of the milky cortical material and decompress the capsular bag. This is when my troubles began. I inadvertently hit the edge of the capsular opening with the 27-gauge cannula. I tried injecting more Provisc. The capsular tear



Figure. Mature white cataract with split capsulorhexis from interlenticular pressure.

remained under pressure, however, and I still did not have a higher-viscosity OVD in the room with which to create a tamponade. After debating whether to try starting the capsular tear versus further decompressing the capsular bag, I chose the latter course of action, which unfortunately placed additional strain on the edge of the capsule. In terror, I watched helplessly as the small opening crept peripherally and eventually extended in slow motion across the entire anterior surface of the lens (Figure).

RESCUE MANEUVERS

Finally, I received and injected some Discovisc. Using 25-gauge curved retinal scissors, I created a small flap on either side of the split capsule. With the capsulorhexis forceps, I made two half-circle openings in the capsule in an attempt to re-create a curvilinear opening. Unsure if the capsular tear had extended around posteriorly, I injected Viscoat behind the lens to create an OVD tamponade in an effort to keep the lens forward and out of the vitreous.

Lowering my bottle settings, I created space by aspirating the soft, fluffy cortex with the I/A handpiece. I then used Discovisc to viscodissect the remaining lens forward and slightly out of the bag. After again lowering the bottle height, I emulsified and aspirated the lenticular material with the phaco handpiece.

To my surprise, the posterior bag was intact. Still needing to remove the cortex and not wanting to catch a tag of the capsule, I viscodissected the cortex away from the bag. Then, I used a bimanual I/A technique to facilitate my access to the subincisional cortex.

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The large flaps of the anterior capsule made me worry that the edge of my usual single-piece IOL’s haptics might be exposed and cause iris chafing that could lead to a uveitis-glaucoma-hyphema syndrome. I therefore decided to implant a three-piece IOL but placed the haptics in the same direction as the capsular tear. I thought that placing them 90° away would exert too much force on the bag and cause a posterior extension of the tear.

THE MORAL OF THE STORY

Everyone gets lucky sometimes, but it is prudent to wait patiently for the appropriate supplies rather than to rely on one’s luck. Fortunately in this case, the capsular tear did not extend posteriorly, and the patient achieved an excellent outcome. ■

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1. Arshinoff SA. Dispersive-cohesive viscoelastic soft shell technique. *J Cataract Refract Surg.* 1999;25(2):167-173.

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