

# Challenge in the OR: Opening the Treasure Trove

Surgeons' pearls for handling complex cases.

BY RICHARD M. AWDEH, MD, AND WILLIAM B. TRATTLER, MD

EyeTube.net provides a forum where ophthalmologists demonstrate new surgical techniques, describe the use of new technologies, and relate their sometimes creative off-label use of currently approved drugs and devices. The exchange of "trade secrets" by surgeons around the world helps everyone add to his or her cache of tips and tricks for challenging cases. The videos selected for this month's column were chosen in this spirit.

## FINDING GOLD

Marcos Gomez, MD, from Valencia, Spain, demonstrates phacoemulsification without the use of an ophthalmic viscosurgical device. He creates a capsulorhexis through a 1.8-mm incision with a cystotome needle and does not use a Utrata forceps. Dr. Gomez injects lidocaine into the eye and employs a hydrodissection and microchop technique to remove the crystalline lens (Figure 1) (<http://eyetube.net/v.asp?vekili>).



Figure 1. The surgeon creates a capsulorhexis through a leakage-free wound.

"The exchange of 'trade secrets' by surgeons around the world helps everyone add to his or her cache of tips and tricks for challenging cases."

## PEARLS OF WISDOM

In a video titled "ORange in the OR With Dr. Donnenfeld," Eric Donnenfeld, MD, offers a glimpse of how he uses ORange intraoperative wavefront aberrometer (WaveTec Vision Systems, Inc., Aliso Viejo, CA) to perform aphakic intraoperative IOL power calculations prior to the insertion of a 1.50 D AcrySof Toric IOL (Alcon Laboratories, Inc., Forth Worth, TX). Dr. Donnenfeld then uses ORange to confirm the proper placement of the IOL, an acceptable amount of residual cylinder (0.34 D), and no need for clockwise rotation of the IOL (Figure 2) (<http://eyetube.net/v.asp?lenida>).

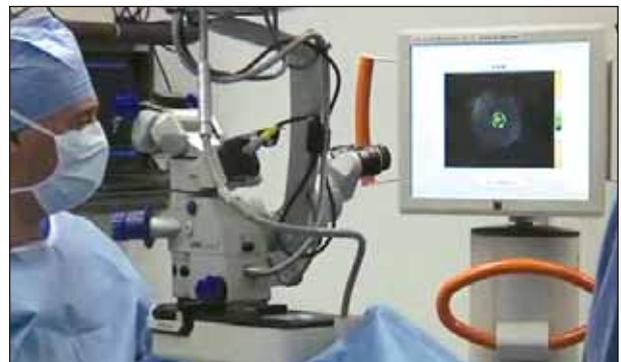


Figure 2. The surgeon uses ORange intraoperative wavefront aberrometer to confirm the proper placement of the IOL.

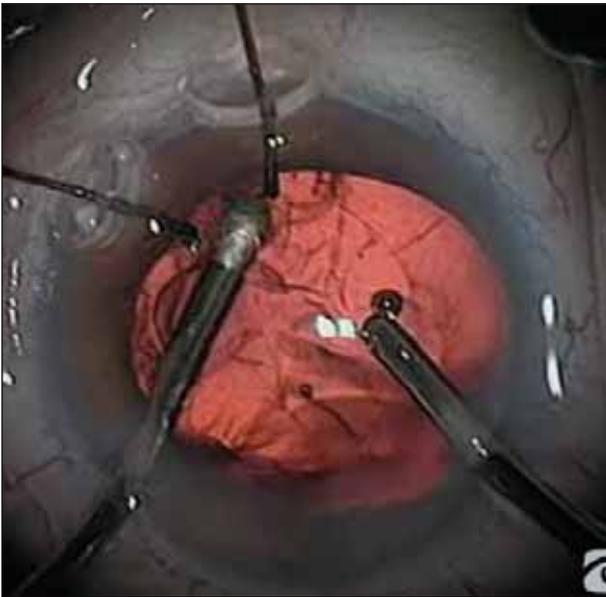


Figure 3. The surgeon uses retractors from the Mackool Cataract Support System to hold the capsular bag forward as the nucleus is removed.

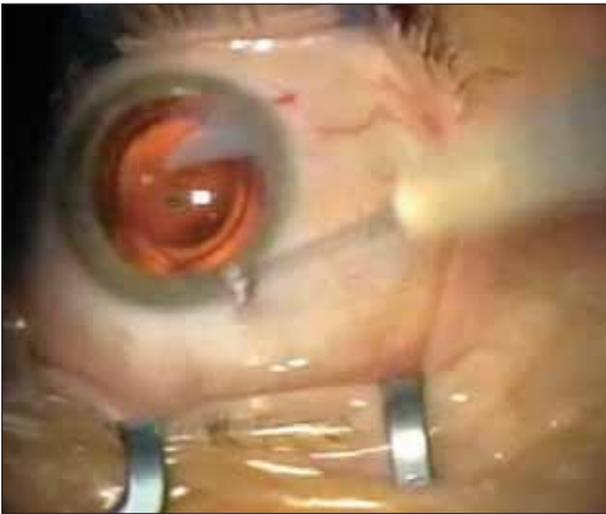


Figure 4. The surgeon injects vancomycin into the corneal stroma surrounding a phaco wound.

**THE SILVER LINING**

After observing zonular weakness, David Chang, MD, demonstrates the use of two retractors from the Mackool Cataract Support System (Duckworth & Kent Ltd., Hertfordshire, England; distributed in the United States by FCI Ophthalmics, Inc., Marshfield Hills, MA) to support several clock hours of the capsule. He proceeds carefully with phacoemulsification of the lenticular material and stops to add a dispersive viscoelastic in order to reinflate the capsular bag and prevent a “tram-

poline” effect on the posterior capsule. After removing the cortex, Dr. Chang inserts a capsular tension ring before removing the Mackool Cataract Support System. He places the IOL in the ciliary sulcus due to a large nasal zonular dialysis. Once the haptics are in the sulcus, he gently captures the optic behind the capsulorhexis’ edge (Figure 3) (<http://eyetube.net/v.asp?runiva>).

**A DIAMOND IN THE ROUGH**

James McDonald, MD, demonstrates his off-label injection of vancomycin (1 mg/0.1 mL) into the corneal stroma surrounding a phaco wound. He uses a 30-gauge needle on a tuberculin syringe to introduce a bolus of vancomycin into the corneal stroma at the conclusion of the case. The idea is to provide a depot for the drug near the surgical incision. Whether this technique decreases the incidence of endophthalmitis has yet to be seen, but this approach is interesting nonetheless (Figure 4) (<http://eyetube.net/v.asp?losibi>).

**CONCLUSION**

Although ophthalmologists discover surgical pearls through routine experiences, they often make the same discoveries through the exchange of ideas between friends and colleagues. As evident on Eyetube.net, this transfer of information is particularly useful for addressing challenging cases or integrating new devices and techniques into a practice. ■

Section editor Richard M. Awdeh, MD, is the director of technology transfer and innovation and assistant professor of ophthalmology at the Bascom Palmer Eye Institute in Miami. He acknowledged no financial interest in the products or companies mentioned herein. Dr. Awdeh may be reached at (305) 326-6000; [rawdeh@med.miami.edu](mailto:rawdeh@med.miami.edu).



Section editor William B. Trattler, MD, is the director of cornea at the Center for Excellence in Eye Care in Miami and the chief medical editor of Eyetube.net. He is a consultant to WaveTec Vision Systems, Inc. Dr. Trattler may be reached at (305) 598-2020; [wtrattler@earthlink.net](mailto:wtrattler@earthlink.net).

