Considerations for Combining IOL and Glaucoma Surgery in Patients With UGH Syndrome

Decision-making is nuanced, and no one-size-fits-all solution exists.


BY DAVID A. CRANDALL, MD, AND CALVIN ROBBINS, MD

In uveitis-glaucoma-hyphema (UGH) syndrome, intraocular inflammation is most commonly caused by mechanical chafing of an implant against uveal tissue. Sources of this complication include IOL malpositioning (eg, a one-piece lens in the sulcus or a dislocated lens), pseudophacodonesis, and anatomic variation. Ultimately, the goal of surgical management is to address inflammation, control IOP, and avoid creating new problems.

When determining whether to combine glaucoma and lens surgery in a patient with IOL-induced UGH syndrome, it is important to consider the level of preoperative IOP control and the health of the optic nerve. In a patient with a healthy optic nerve and good pressure control on no medication or one medication, lens surgery is typically sufficient. In a patient who has moderate glaucomatous damage or requires multiple medications for IOP control, further glaucoma treatment is often beneficial.

A MOBILE IOL

In my (D.A.C.) experience, the most common cause of UGH syndrome is a mobile IOL. Depending on the status of the capsular bag, I typically either fixate the lens directly to the scleral wall or exchange it for a new scleral-fixated lens. It is important that the scleral fixation be performed far enough posteriorly to avoid new contact with the iris. For a patient whose pressure is controlled on multiple medications or who has moderate disease, I usually perform angle surgery at the time of lens surgery. For eyes with mild disease, I perform goniotomy. In cases of more severe disease, canaloplasty and goniotomy can be combined, or gonioscopy-assisted transluminal trabeculotomy can be performed. When proceeding with angle surgery, I prefer to avoid performing a stenting procedure and adding more hardware to the eye. Although the risk of UGH syndrome from Schlemm canal–based stents is low, these devices can cause

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problems related to iris chafing if not positioned properly.

ACTIVE BLEEDING

In an eye with active bleeding, pressurization with an OVD can help to tamponade the bleeding and allow an adequate view to the angle. If a definite site of bleeding is identified, that area can be treated with intraocular cautery or laser photocoagulation.

VITREOUS IN THE ANTERIOR CHAMBER

When combining lens and glaucoma surgery, it is important to clear all vitreous from the anterior chamber. In the short term, vitreous in the anterior chamber can plug a goniotomy or filter, increasing traction on the retina and reducing the efficacy of the drainage. In the long term, as vitreous strands fibrose, they can chafe the pupillary margin and create a new source of UGH syndrome.

ADVANCED CUPPING

In a patient with advanced optic nerve cupping, if the IOL will be secured to the scleral wall by suture or intrascleral haptic fixation, I (D.A.C.) avoid superior placement to preserve the conjunctiva and sclera for filtering surgery. Unless the glaucomatous damage or pressure elevation is severe, I prefer to avoid combining lens surgery with filtering surgery, whether glaucoma drainage device placement, Xen Gel Stent (AbbVie) implantation, or trabeculectomy. The additional scleral openings from scleral lens fixation can increase the risk of postoperative hypotony. If a filter is necessary, I prefer a valved tube shunt to prevent early hypotony.

When a tube shunt is indicated, I usually place the tube anterior to the iris and take care to avoid iris-tube touch. I typically do not place the tube in the sulcus of eyes with UGH syndrome, because this could create a new source of UGH syndrome with the tube's passage through the ciliary body. The tip of the tube will also be closer to potential vitreous if a thorough vitrectomy has not been performed. Alternatively, the case could be managed with a vitreoretinal surgeon, who would perform a thorough vitrectomy, after which a pars plana tube could be placed.

IN-THE-BAG UGH SYNDROME WITH A STABLE LENS

In some instances, UGH syndrome can develop in an eye with an IOL that is clinically stable in the bag. When this occurs, large, anteriorly rotated ciliary processes are often in contact with the lens-bag complex at the outer edge of the IOL haptics. An endoscopic laser treatment can be applied directly to these ciliary processes to reduce their size and create space. When performing cataract surgery on the fellow eye, I prophylactically treat the ciliary processes near the haptics to prevent UGH syndrome. Although I generally hesitate to perform cyclodestructive procedures on patients with inflammation, in this situation, this treatment approach can address the primary cause of the uveitis and therefore be beneficial.

CONCLUSION

Combining lens and glaucoma surgery in patients with lens-induced glaucoma involves nuanced decision-making and recognition that a one-size-fits-all solution does not exist. Patients should be counseled that a staged surgical approach may be necessary to optimize long-term outcomes. ■

DAVID A. CRANDALL, MD
- Ophthalmology Vice Chair of Operations and Glaucoma Fellowship Director, Henry Ford Health, Detroit
- dcranda1@hfhs.org
- Financial disclosure: None

CALVIN ROBBINS, MD
- Glaucoma fellow, Henry Ford Health, Detroit
- Financial disclosure: None