MIGS UPDATE FOR CATARACT SURGEONS

An argument in favor of embracing combined surgery and an update on some tools to come.

BY I. PAUL SINGH, MD

A philosophical shift in thinking is required when caring for glaucoma patients who present for cataract surgery. We ophthalmologists must view these patients not as cataract surgery patients who happen to have glaucoma but rather as glaucoma patients whose cataract presents an opportunity for us to enter the eye and treat both conditions. Too often, these patients undergo cataract surgery alone and present with glaucomatous progression requiring incisional surgery a few years later. We should not be complacent about glaucoma when it is at a mild stage. Advances in the MIGS space provide us with a greater variety of options, so it is incumbent on us to become comfortable offering at least one.

SAFE, EFFECTIVE, AND EFFICIENT

MIGS procedures are safe, effective, and efficient treatments that can improve patients' quality of life and decrease the likelihood of disease progression compared to topical medical therapy.[1,2] Patients who use drops tend to experience more disease progression than those who undergo MIGS or any intervention that reduces the drop burden, even when IOP control is equal.[1,2] Patients who are able to discontinue topical medical therapy also report a better quality of life, overall vision, and general health.[3] Getting patients off drops is therefore an important measure of success. For instance, even if their IOP is not much lower after surgery, it can be considered a success if they no longer need topical medication.

GLAUCOMA PROGRESSES

We should consider long-term ocular health when planning cataract surgery for individuals with glaucoma. IOLs that decrease contrast sensitivity are less desirable in patients with glaucoma because they are likely to experience visual field progression and thus a loss of contrast in 5 to 10 years. Even ocular hypertension and preperimetric glaucoma can progress. In the HORIZON trial, 60% of patients who experienced progression had mild glaucoma to start.[2] Additionally, if topical medical therapy is eventually required to control the patient's IOP and slow disease progression, they could be administering multiple medications and experience dry eye and associated unwanted visual phenomena such as glare and halos.

THE INTERVENTION PIPELINE

Automated direct selective laser trabeculoplasty (SLT; Eagle, Belkin). Automated direct SLT may be performed directly through the limbus without gonioscopy. In the first prospective clinical trial, treatment was found to be safe and effective at reducing IOP in patients with open-angle glaucoma.[4] Automated direct SLT is an excellent option for surgeons uncomfortable performing intraocular glaucoma surgery or laser treatment through a gonio lens.

IOL-mounted, controlled-release drug delivery platform (Spyglass). Dual pads securely attached to each IOL haptic are designed to elute treatment continuously for multiple years. Early first-in-human data demonstrated a 45% mean IOP reduction across all treatment groups 6 months after implantation of the SpyGlass drug delivery platform with bimatoprost at the time of cataract surgery.

Excimer laser trabeculostomy (ELT; Elios). ELT creates 110 microchannels between the anterior chamber and Schlemm canal. The procedure has been shown to be safe and effective for lowering IOP over the long term.[4] ELT is approved in Europe for adults who have glaucoma with or without cataract and is currently undergoing phase 3 trials in the United States under an Investigational Device Exemption.[4] It is an exciting offering for surgeons who want to avoid placing a foreign body in the eye or minimize manipulation of their hand position during surgery.

Noninvasive image-guided femtosecond laser trabeculotomy (ViaLase). Image-guided technology is incorporated into a femtosecond laser. Channels are created between the anterior chamber and Schlemm canal. The learning curve for this procedure is intuitive thanks to the OCT image-guided technology.

Supraciliary stenting (Istar Medical). The Miniject glaucoma drainage device, composed of a biocompatible porous silicone material, is a novel MIGS implant developed to target the suprachoroidal space. Six-month data have been published; the study evaluated the efficacy and safety of the Miniject device over a 2-year follow-up period. The implant is 5 mm long and consists of approximately 200,000 interconnected, hollow spheres. Empty space accounts for 70% of the device's total volume. The Miniject is open to inflow and outflow on all sides, and soft, highly flexible implant-grade silicone membranes maintain this structure. Approved in Europe, the stent is under investigation in the United States as a standalone procedure for patients with mild to moderate open-angle glaucoma.

CONCLUSION

Growth in MIGS options makes it easier for all of us to find at least one

procedure we feel confident offering at the time of cataract surgery. Let's ensure that patients with glaucoma who present for cataract surgery receive treatment for both conditions. ■

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