Fresh Interest From the Comprehensive Ophthalmologist

Generalists are attracted by a variety of new approaches to glaucoma surgery.

BY LOUIS D. "SKIP" NICHAMIN, MD

Glaucoma management typically constitutes a significant portion of the comprehensive ophthalmologist's workload and patient base, but the amount and type of surgery offered by the generalist vary. Many surgeons who were exposed to ab externo trabeculectomy techniques during their training continue to perform filtering procedures on select patients. Few comprehensive surgeons offer tube shunt procedures, however, and the nonglaucoma specialist often quails at the prospect of managing patients with very advanced disease whose tenuous optic nerves place them at high surgical risk. Many of these patients have already undergone multiple procedures, and the prospect of encountering scarring, bleeding, and sordid intraoperative challenges provides the impetus for referral. In the same vein, the generalist typically does not look forward to the rigors of the postoperative management of these cases, because problems such as hypotony and bleb-related complications can prove to be irksome, if not frankly repugnant.

With that stated, comprehensive surgeons do seem to have a renewed interest in the surgical management of glaucoma. This trend is based upon several recent developments. First, data now show the salutary effect of routine clear corneal small-incision cataract surgery on a patient's glaucoma status.[1] In the FDA trial of the iStent (Glaukos Corporation, Laguna Hills, CA; not available in the United States), a decrease in IOP of 8.4 mm Hg could be expected in a cataract patient undergoing phacoemulsification without concomitant glaucoma surgery whose preoperative tension was 25 mm Hg without medication. Given the shared demographic of cataract and glaucoma, the cataract surgeon now plays an important role in the quest for pressure control in this large population.

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MINIMALLY INVASIVE PROCEDURES

Fueling comprehensive ophthalmologists' revived interest in glaucoma surgery is the promise of new interventions. Industry is developing an array of procedures that can be combined with modern cataract techniques to safely and effectively decrease IOP or lessen patients' dependence on medication to a greater extent than cataract surgery alone. Aptly termed *minimally invasive glaucoma surgery* (MIGS) by Richard Lindstrom, MD,[2] these new procedures are attractive to the comprehensive surgeon, because they typically have a reasonable learning curve, minimally extend operative times, and generally are not associated with the postoperative complexities already discussed in regard to trabeculectomy surgery.

MIGS procedures would include the iStent and the Transcend CyPass System (Transcend Medical, Menlo Park, CA; not available in the United States). Both ostensibly lower the IOP by increasing outflow through the device and into either the collector channels or the suprachoroidal space. AqueSys (Irvine, CA) is also vying for a space within the MIGS market; in addition, the company is developing a device that improves transscleral outflow. A different approach that has enjoyed success amongst a limited number of cataract surgeons is endo-

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cyclophotocoagulation, a technique that does not lead to the extreme complications observed with other ciliodestructive procedures.

OTHER PROCEDURES

Slightly more invasive techniques are attracting the attention of the comprehensive ophthalmologist as well. For example, the popularity of canaloplasty surgery, using the iTrack microcatheter (iScience Interventional, Menlo Park, CA), is growing. Surgeons who are comfortable with trabeculectomy surgery are finding this refinement of the viscocanalostomy procedure (as introduced by Robert Stegmann, MD) to be nearly as effective as traditional filtering surgery but much less prone to the postoperative problems that plague both the surgeon and the patient.[3] Another device in this category is the Ex-Press Glaucoma Filtration Device (Alcon Laboratories, Inc., Fort Worth, TX).

CONCLUSION

It is likely that comprehensive ophthalmologists' interest in glaucoma surgery will continue to grow as the procedures described herein gain wider exposure and data accrue on their safety and effectiveness. Patients will benefit greatly from a decreased risk of vision loss due to this insidious disease by means of procedures that avoid the visual delay, risk, and arduous postoperative course currently associated with traditional glaucoma surgery. ❑

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