

# The Expanding Role of the Comprehensive Cataract Surgeon

A trabecular micro-bypass stent is a logical next step in treating patients with concomitant cataract and glaucoma.

BY LOUIS D. "SKIP" NICHAMIN, MD

There is a large and growing population of patients with coexisting cataract and glaucoma. More than 20% of the 3.3 million patients in the United States who undergo cataract procedures each year take at least one ocular hypotensive medication for IOP control.<sup>1</sup> When these patients present to the OR for cataract surgery, surgeons are afforded an opportunity to also address the glaucoma. There has been a surge in the development of new techniques and devices that treat both conditions, one of which is the FDA-approved iStent Trabecular Micro-Bypass Stent (Glaukos Corporation).

Changes in the health care reimbursement environment are bringing about modifications to ophthalmologists' business models, and many surgeons are burdened with balancing higher expectations from patients with narrower financial margins. Providing a broader range of care, therefore, has become essential not just for satisfying patients but also for achieving financial success. By using combination procedures, comprehensive cataract surgeons can treat mild to moderate open-angle glaucoma at the time of phacoemulsification, making the combined procedure efficient and financially viable for surgeons.

## THE PROCEDURE

In my experience, implanting the iStent is an intuitive surgical procedure with a brief learning curve. This surgical procedure falls well within the repertoire of all contemporary cataract surgeons: it uses the same phaco incision, is performed under topical anesthesia, is blebless, and has an overall safety profile similar to that of cataract surgery alone.<sup>2</sup>

The device is inserted ab interno through a temporal

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clear corneal phaco incision. The disposable inserter, with the implant positioned at the tip, traverses the anterior chamber and is advanced past the pupillary margin. A surgical gonioprism is then placed on the eye to view the angle. The leading edge of the device is then gently inserted through the trabecular meshwork into Schlemm canal. When the iStent is released, the inserter is withdrawn, and the viscoelastic is removed. Once in place, the device creates a patent opening in the trabecular meshwork, thereby increasing the outflow of aqueous humor through Schlemm canal and reducing IOP.

Surgeons new to the device will require training for using a surgical gonioprism and repositioning the patient's head to optimize the visualization of the angle. They will also need to familiarize themselves with the anatomy of the angle.

## RESULTS

I have witnessed how implantation of the iStent increases aqueous outflow and is able to eliminate the burden of taking glaucoma medications for many of my patients. I have been impressed with the lack of complications with the device as well. It safely and significantly reduces IOP in combined cataract cases.<sup>2</sup> With no added side

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effects, it is a low-risk and convenient solution for patients with mild to moderate glaucoma compared with conventional filtering surgery, which has increased risks and complications.<sup>3</sup> During clinical trials of the device, I witnessed a reduction of 1 to 3 mm Hg in a patient who underwent cataract surgery alone versus a reduction of 3 to 9 mm Hg in a patient who received the implant at the time of cataract surgery. Based on these results, I find this to be a preferable treatment modality compared with cataract surgery alone.

### RISK VERSUS BENEFIT

Conventional combined procedures, such as trabeculectomy and cataract, are associated with increased risks, including hypotony, bleb formation, choroidal detachment, late infections, and hyphema.<sup>3</sup> Although every surgery performed carries some potential risks, the iStent procedure is straightforward, unlike trabeculectomy or other ab externo procedures that involve significant dissection. Topical hypotensive medications are generally the first-line therapy for glaucoma, and compared with other classes of drugs, the side effects are considered benign. The literature, however, is replete with evidence that patients' compliance with these medications is poor,<sup>4-6</sup> and there is growing concern regarding ocular surface damage from extended use of glaucoma medications.<sup>7</sup> Clinical trials have demonstrated that combining the iStent with cataract surgery does not change the safety profile of cataract surgery alone, and it offers continuous, 24-hour therapy, independent of patients' compliance.<sup>2</sup>

### CONCLUSION

The greatest innovations in medical science create win-win situations for both the patient and the surgeon. When my patients learn that the procedure does not alter the risk profile, most are receptive. For myself, there is a certain sense of accomplishment and success that comes with successfully delivering the iStent into the angle. It is a very clean and exquisite surgery, and I believe it is going to be one of our safest and simplest approaches to the treatment of concomitant cataract and open-angle glaucoma. ■

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