

A Clinician's Experience With Combined Cataract and Glaucoma Surgery

BY JOHN P. BERDAHL, MD



In his video, John P. Berdahl, MD, demonstrates his technique for placing the iStent Trabecular Micro-Bypass Stent (Glaukos) in the trabecular meshwork. Although this maneuver appears simple in his experienced hands, the technique requires the use of a gonioscope and does have a learning curve. The stent bypasses the zone of resistance and improves conventional outflow. It may be used in cases of mild to moderate glaucoma in conjunction with cataract surgery, and more than one stent may be placed to achieve a greater reduction in IOP. The device has also been used in conjunction with cataract surgery and endocyclophotocoagulation to reduce IOP and the number of glaucoma medications. The iStent should not be used in patients with angle-closure glaucoma and elevated venous pressure.

— Soosan Jacob, MS, FRCS, DNB, section editor

The iStent Trabecular Micro-Bypass Stent is an important piece of my glaucoma armamentarium. Many patients have concurrent cataracts with mild to moderate glaucoma, and in my experience, combining the device with cataract surgery is a safe way to slow or stop glaucomatous progression and improve their quality of life by decreasing their reliance on medications.

MY APPROACH

My surgical approach is standard. I do not use acetylcholine (Miochol-E; Bausch + Lomb) or carbachol intraocular solution (Miostat; Alcon). As demonstrated in my video, the iStent usually slides elegantly into the trabecular meshwork, after which I nudge the device into position. Postoperatively, my patients use steroids and nonsteroidal anti-inflammatory drugs for 1 month and antibiotics for 1 week. I stop glaucoma medications 1 week after surgery if the IOP is stable. If the IOP is not in an acceptable range, patients continue using glaucoma medications until their pressure stabilizes.

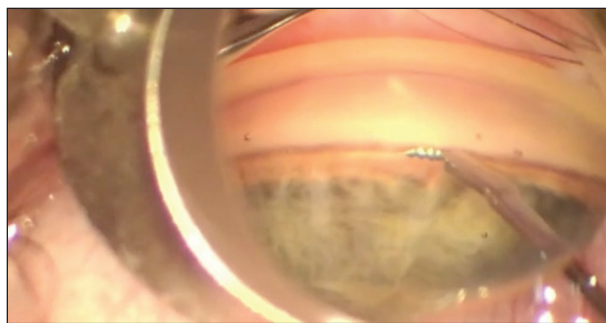


Figure. Dr. Berdahl positions the stent in the trabecular meshwork.

STUDY RESULTS

My colleagues and I recently evaluated the safety and effectiveness of the iStent in patients with open-angle glaucoma and a cataract. Our retrospective review included 168 consecutive eyes (patients' mean

age, 72 years) with open-angle glaucoma and a cataract. The data we collected included IOP, number of medications, and visual acuity. We monitored IOP for spikes greater than 15 mm Hg. The mean preoperative IOP was 18.5 mm Hg. Six months postoperatively, the mean IOP was 14 mm Hg, and the average number of glaucoma medications had decreased from 1.7 to 0.8.

Pressure increases greater than 15 mm Hg occurred in 20 eyes (12%) at different time points. Most IOP spikes happened on the first postoperative day and/or at the 1-week and 1-month visits. One patient required the implantation of an Ahmed Glaucoma Valve (New World Medical).

Based on these results, I expect to achieve a mean reduction in IOP of about 4 mm Hg and to decrease the number of glaucoma medications a patient needs by approximately 50%.



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ADVANTAGES

The key advantage of the iStent is its safety profile, followed by its efficacy. Both my experience and data collected in clinical trials have shown that cataract surgery plus the device's implantation is as safe as cataract surgery alone. The refractive neutrality of the iStent compared with other glaucoma procedures makes the device ideally suited to combine with astigmatic correction. On occasion, I will combine the stent with presbyopic correction (usually with an accommodating IOL) to help decrease patients' dependence on spectacles even further.

LEARNING CURVE

The learning curve for the iStent is challenging but certainly not insurmountable for an anterior segment surgeon. I have found that surgeons feel comfortable with the technique after performing approximately 10 to 20 cases. For most, operating under a gonioscope is a new skill set. I believe that Glaukos' training program has improved surgeons' ability to implant iStents successfully and confidently earlier in the adoption curve. ■

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