

Glaucoma Surgery Redefined

The last time I performed a trabeculectomy, *Ghostbusters* was the top grossing movie, Madonna was entering the music scene, Michael Jordan was an NBA rookie, and Ronald Reagan was President. In other words, it has been a very long time. After more than 2 decades in practice, my perception of glaucoma management has suddenly changed. With the FDA expected soon to approve the iStent (Glaukos Corporation), I look forward to a new era of glaucoma surgery.

To be clear, I am not talking about old-school glaucoma surgery. Trabeculectomies and tube shunts are invasive procedures that I leave in the capable hands of my partners who are glaucoma specialists. They will execute the procedures and handle their complications more skillfully than I. In the Tube Versus Trabeculectomy (TVT) Study, 7% of the eyes receiving a tube shunt and 10% of the eyes undergoing a trabeculectomy experienced intraoperative complications. During the first year, 34% of the eyes in the tube shunt group and 57% of those in the trabeculectomy group had postoperative complications.¹

My interest lies with microinvasive glaucoma surgery (MIGS). The new MIGS procedures are to trabeculectomy what phacoemulsification was to intracapsular cataract extraction or LASIK was to RK. A recent article by Saheb and Ahmed defined MIGS as "procedures that

share the following features: ab interno microincision, minimal trauma, efficacy, high safety profile, and rapid recovery."² As a cataract surgeon, I would add a feature: MIGS comprises procedures that I will perform.

In the FDA trial comparing a trabecular microbypass stent (iStent) combined with phacoemulsification to phacoemulsification alone, a significantly higher percentage of patients in the combined treatment arm were off their glaucoma medications while the safety profile was similar in the two groups. Internationally, many surgeons are now implanting two of the devices for greater efficacy.

One in five (or more than 600,000) patients per year undergoing cataract surgery in the United States has the comorbidity of glaucoma. Although cataract surgery can lower the IOP of many of these patients, a majority of them will require glaucoma medical therapy postoperatively, with its associated problems

of compliance and expense. How exciting would a MIGS procedure be that could be combined with cataract surgery to offer better IOP control and either reduce or eliminate patients' need for glaucoma medication? The common benefits of cataract and refractive surgery are rapid visual rehabilitation, technology-driven precision, safety, elegance, and efficacy that improve patients' quality of life. It is my great hope that MIGS will share these benefits. ■



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1. Gedde SJ, Schiffman JC, Feuer WJ, et al. Treatment outcomes in the Tube Versus Trabeculectomy Study after one year of follow-up. *Am J Ophthalmol.* 2007;143:9-22.

2. Saheb H, Ahmed II. Micro-invasive glaucoma surgery: current perspectives and future directions. *Curr Opin Ophthalmol.* 2012;23(2):96-104.