

A Transformative Event

Almost 2 years ago, I received an unexpected and, in retrospect, fortuitous phone call from an old friend who had joined a late-stage glaucoma device company. On the surface, his request was simple: would I travel to Armenia to implant a new microinvasive glaucoma surgical device, the iStent (Glaukos Corporation), which had just received an approvable recommendation from the FDA ophthalmic devices advisory panel? My initial thought was that he had dialed the wrong number. I explained that I was a refractive cataract surgeon who had not performed a glaucoma procedure since my residency. He responded, "Eric, you are the perfect person. We want to see if cataract surgeons in addition to glaucoma surgeons can perform this surgery." Most people would have mercifully stopped right there, but not him. He concluded, "We believe that, if you can do this procedure, then anyone can do it." Like most of my friends, I know he enjoyed the last remark, and I think he was joking, although I am not quite certain.

This phone call was the beginning of a transformative experience. In December 2010, Kerry Solomon, MD, and I travelled to Yerevan, Armenia, where we implanted more than 140 trabecular bypass and suprachoroidal devices. All patients completed an informed consent, had been diagnosed with glaucoma, could not afford their medications, and were going blind without intervention. They were largely indigent, intelligent, and overwhelmingly appreciative. Dr. Solomon and I made some wonderful friends, drank vodka made from jalapeño peppers (that is another story), and felt like we had made a difference in many patients' lives. These individuals have been observed for almost 2 years now, and other surgeons have followed us to Armenia to perform surgery. I learned firsthand that

I could easily appreciate the anatomical landmarks in the angle and implant the iStent and that there were no notable surgical complications. The IOP has greatly improved in the vast majority of treated patients. My personal transformation is that I now consider myself a refractive cataract and glaucoma surgeon.

Another epiphany I had in Armenia was that treating comorbid glaucoma is a logical extension of using cataract surgery as a platform from which to advance and improve patients' care and quality of life. Cataract and refractive surgery both offer rapid visual rehabilitation, technology-driven precision, safety, elegance, and efficacy that improve patients' quality of life. I warmly welcome microinvasive glaucoma surgery (MIGS), which offers many of the same attributes. Numerous studies have documented patients' poor compliance with long-term topical medical therapy such as glaucoma drops and their damaging effect on the ocular surface. In addition,

diurnal fluctuations in IOP may stealthily compromise the vision of patients whose IOPs seem to be well controlled by medication. I predict that the new gold standard for mild to moderate glaucoma and cataracts will be phacoemulsification combined with MIGS, providing visual rehabilitation without glasses and reducing or eliminating patients' need for glaucoma medication. With the FDA's recent approval of the iStent, a new class of surgery has become available, and many technologies will follow that will use an ab interno approach to glaucoma management subconjunctivally or through the canal of Schlemm or the suprachoroidal space. Although new, MIGS will be a welcome addition to the cataract and glaucoma surgeons' armamentarium, and I believe it will change forever our management of the glaucoma patient. ■



A handwritten signature in dark ink, appearing to read "Eric D. Donnenfeld".

Eric D. Donnenfeld, MD
Chief Medical Editor