

CURRENTLY VIEWING

Melissa Toyos



Melissa Toyos, MD, focuses her blog on glaucoma treatment tips and hot topics.

BLOG: The big and small picture with MP3 and Cyclo G6

March 16, 2018

We recently presented results from a retrospective analysis of 26 eyes of 20 patients who underwent MP3 treatment with the Cyclo G6. Patients ranged from mild to severe glaucoma, with the majority, 18 out of 26, in the severe category, and all except three eyes had previously had phacoemulsification and either selective laser trabeculoplasty or MicroPulse laser trabeculoplasty. Four eyes had prior trabeculectomy. Mean IOP at baseline was 25.6 mm Hg, and patients were on an average of 3.3 IOP-lowering medications.

The 810 nm infrared diode laser was set on the MP3 preset: 2000 mW on MicroPulse delivery mode, with a duty cycle of 31.3%. A painting motion was used to apply the laser of 360° for 80 seconds per hemisphere. All patients were given a postoperative dose of neopolydex ointment and were patched for 4 hours. They were then started on topical difluprednate hourly until the first postoperative visit, then tapered to four times a day. All patients were tapered off corticosteroids within the first 14 days postoperatively.

IOP 1 week postoperative had a mean 34% reduction, which declined to a mean reduction of 20% at 1 month and then settled at a 30% mean reduction at 6 to 12 months. Mean medications reduced significantly from 3.3 at baseline to 1.8 medications at 6 to 12 months. Two advanced glaucoma eyes required additional laser treatment, and two eyes of end-stage glaucoma subjects experienced a worsening of vision of two lines during the study period. Visual acuity of other patients remained stable, and no patients required incisional surgery.

Case presentation

This big picture evidence is very consistent with individual patient experiences. An 85-year-old white man was referred to us from the VA for a second opinion on a diagnosis of severe stage open-angle glaucoma. IOP as reported from the VA was in the mid-20s mm Hg, and presenting office notes showed a diagnosis of severe glaucoma. Previous office notes and testing were not available for interpretation. The VA had discussed surgical options including trabeculectomy or shunt and had referred him for additional consultation. The patient reported stable vision and comfort in the eyes. He also reported compliance with medication. No additional complaints were discussed.

At his initial examination, his corrected vision was 20/25 in the right eye, left eye and both eyes, and his IOP as measured with Goldman tonometry was 20 mm Hg in the right and left eyes. The patient was on maximum medications including latanoprost at bedtime in both eyes, dorzolamide/timolol twice a day in both eyes, and brimonidine three times a day in both eyes. The patient had a history of cataract surgery in 2006 and two prior SLTs in both eyes, one in 2006 and more recently in 2014.

Slit lamp exam revealed a centered posterior chamber IOL with open capsules in both eyes. Dilated fundus exam showed a cup-to-disc ratio of 0.7 in the right eyes with a small Drance hemorrhage noted at the optic nerve head. The left eye was 0.8. The peripheral retinal exam was unremarkable. An OCT was performed and confirmed severe retinal nerve fiber layer (RNFL) loss in the left eye with moderate RNFL loss in the right eye. The diagnosis of severe POAG greater in the left eye than the right was confirmed. Surgical options were discussed at length, and the patient ultimately elected to proceed with MP3 treatments with the Cyclo G6 glaucoma laser system (Iridex) in the more severely affected left eye first followed by the right eye.

Treatment course

The left eye procedure was performed on Feb. 26, 2016, and the right eye procedure occurred on May 26, 2016. In each procedure, the eye was prepped with alcohol. The patient received 10 cc of equal amounts 2% lidocaine with 0.5% epinephrine with bupivacaine with Wydase in the surgical area. The Cyclo G6 laser was set to MicroPulse preset, and treatment was performed superior for 80 seconds and inferior for 80 seconds. The patient tolerated each procedure well.

Outcome

Seven months after the procedure, the patient's IOP remains stable at 13 mm Hg by Goldman tonometry in the right and left eyes. All topical glaucoma medications have been tapered off except dorzolamide/timolol twice daily in each eye. The patient denies any new symptoms or complaints. Slit lamp exam and retinal views have been unremarkable.

Disclosure: Toyos reports she is a speaker and consultant for Valeant and Sun; conducts research for Lumenis, Magellan and Kala; is a speaker and consultant and does research for Shire, Mallinckrodt and MixtoLasering; is a consultant and does research for DigiSight; does research for Novaliq; and is a consultant for Iridex.