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PATIENT CASE REVIEW

Glaucoma Treatment with MicroPulse: Before, After and with Other Procedures

MICROPULSE TRANSSCLERAL CYCLOPHOTOCOAGULATION (MP-TSCPC)

MP-TSCPC with the MicroPulse P3® Probe powered by the IRIDEX Cyclo G6® Laser System is a non-incisional and well-tolerated intervention that demonstrates a satisfactory efficacy and safety profile. The 810 nm, non-continuous, laser beam is delivered over 360° along the limbus, excluding 3- and 9-o'clock sites, protecting the ciliary neurovascular structures. The process requires local anesthesia or sedation and can be performed bilaterally within three minutes for each eye. Compared to traditional cyclodestructive procedures, MP-TSCPC with the MicroPulse P3 probe produces less in postoperative inflammation and pain.[1] Moreover, the bleeding is minimized and the postoperative infection risks are significantly reduced.

MP-TSCPC EFFICACY

In over 300 patients who have received MicroPulse TSCPC in my clinic, 95% are successful at 6 weeks and 82% are successful at 2 years in reducing a medication. Similar rates of success are also observed in the international literature. In a retrospective study by Vernon and colleagues that examined the efficacy and safety of MicroPulse TSCPC in 42 eyes with an average of 65 months of follow-up, the mean IOP dropped by more than 50%.[2] Moreover, 88.1% of the patients achieved IOP <22 mmHg, whereas 83.3% of eyes achieved IOP reduction by more than 30% from baseline levels. It is also remarkable that the mean number of anti-glaucoma medications required per eye dropped from 2.55 to 1.7, while the percentage of eyes needing oral medication dropped from around 93% to 12%. In another recent study, at three months after the use of MP-TSCPC, there was reported a mean reduction in IOP of almost 30 % from baseline, which equals an average drop of 8.5 mmHg.[3] The decrease in IOP was accompanied by a remarkable decrease in the number of topical medications the patients required, from an average of 3.3 at baseline to 2.4 at month three.

ADVANTAGES OF MP-TSCPC

The low rate of complications across several trials[1-4] has convinced me to utilize this therapy in the early stages of the disease.[10] It can be effectively performed on an eye at any stage of disease, in various types of glaucoma, and regardless of the number of previous surgeries. It can also be repeated as often as needed. The procedure can be performed in the operating room or the office and takes about three minutes for each eye. Following MP-TSCPC treatment, patients are usually under topical steroids but there are no restrictions on the eye. Additionally, it is cost-effective in comparison to long-term medication and more invasive procedures and is covered by Medicare, unlike MIGS. I even perform MP-TSCPC prior to blepharoplasty to prevent topical hypotensive medications from causing the skin to sag again.

ADDITIONAL INTERVENTIONS

Thankfully, we are in an era where we have many surgical options for glaucoma with excellent safety profiles, and I employ many of them. But personally, I prefer MP-TSCPC, as it is easy and quick, and can be combined with iStent, Cypass, Omni or Kahook Dual Blade. The addition of MP-TSCPC to those procedures can ensure a medication-spared, successful outcome. Patients like to get out of glasses, but they really love to get off their glaucoma drops.

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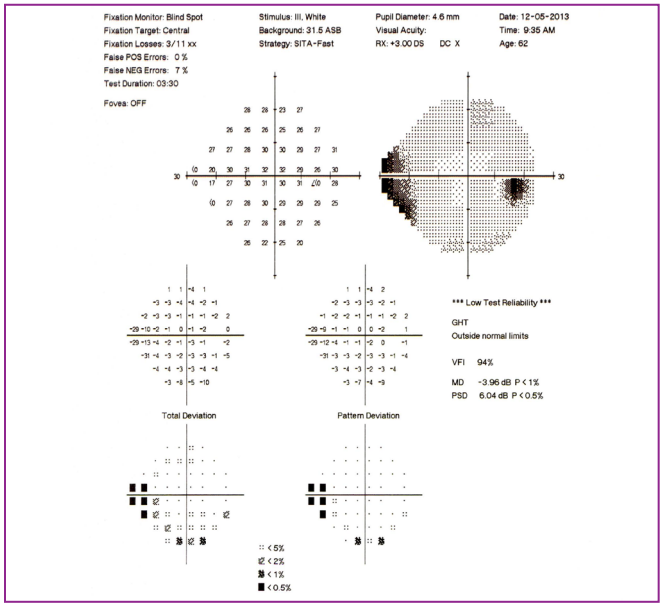
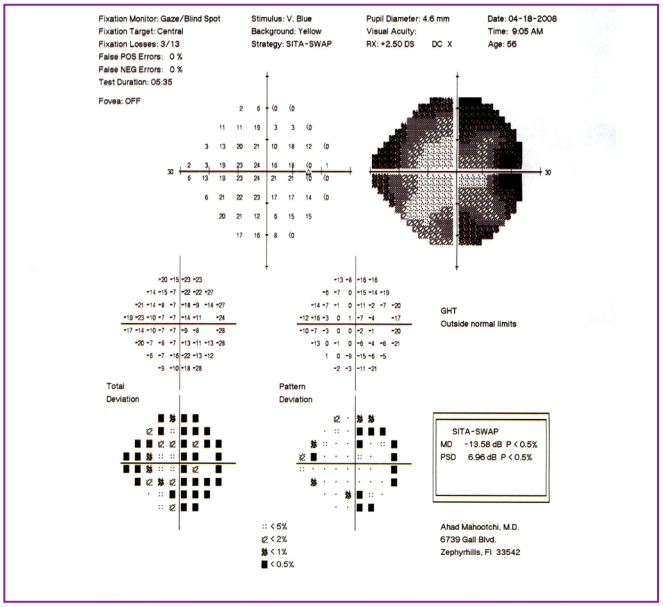
CASE REVIEW

A recent case shows the value that non-incisional, surgical therapies can have in the improvement of the quality of life for glaucoma patients. A 66-year-old woman presented on two different IOP-lowering medications. Having a strong family history, she suffered for ten years from moderate glaucoma. She was allergic to brimonidine, could not take a beta blocker due to asthma and she was experiencing hearing loss due to dorzolamide. Her IOP was 17 mmHg with proven progression and with highest IOP at 21 mmHg. When considering her treatment options, it was obvious that she needed lower pressure in her eye and cataract treatment. Our goals were to reduce both her spectacle dependence and anti-glaucoma medication. An additional eyedrop was not desired; she preferred a Crystalens (Bausch + Lomb). Additionally, given her already documented issues with medicine intolerances, we needed minimize the risk of a subsequent surgery that could change the refractive status. Consequently, the patient was scheduled for MicroPulse TSCPC prior to cataract surgery with Crystalens and iStent. Postoperatively, her IOP was reduced to 10-12 mmHg, and she achieved 20/25 in distance and intermediate, and 20/40 in near vision. Moreover, she now wears glasses only 5 % of the time for near activities.

CONCLUSION

Today, with an abundance of treatment options, it is possible to successfully control glaucoma without diminishing the patient's quality of life, or their prospects for future treatment. We owe it to our patients to make these tools part of our armamentarium and educate patients on the many options now available to treat glaucoma.





1. Gavris, M. M., Olteanu, I., Kantor, E., Mateescu, R., & Belicioiu, R. (2017). IRIDEX MicroPulse P3: innovative cyclophotocoagulation. Romanian journal of ophthalmology, 61(2), 107.
2. Vernon SA, Koppens JM, Menon GJ, Negi AK. Diode laser cycloablation in adult glaucoma: long-term results of a standard protocol and review of current literature. Clin & Experimental Ophthalmol. 2006; 34(5):411-420.
3. Radcliffe N, Vold S, Kammer J, et al. MicroPulse trans-scleral cyclophotocoagulation (mTSCPC) for the treatment of glaucoma using the MicroPulse P3 device. Poster presented at the American Glaucoma Society annual Meeting. April 2015.
4. Kuchar S, Moster MR, Reamer CB, Waisbourd M. Treatment outcomes of micropulse transscleral cyclophotocoagulation in advanced glaucoma. Lasers in medical science. 2016;31(2): 393-396.

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