

Incorporating MicroPulse® into a Comprehensive Practice: Durable Results that Ease Treatment Burden for Glaucoma and Retinal Disease



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After using the IRIDEX IQ 577™ laser for nearly two years now, I can't imagine practicing without it. I use this laser every day, and it has changed the way I practice. Having continuous-wave mode and MicroPulse mode in the same unit creates outstanding versatility in my setting where we have five ophthalmologists treating all types of ocular disease. I began using the IQ 577 to perform MicroPulse laser trabeculoplasty (MLT) in glaucoma patients. I was so pleased with the results that I started incorporating MicroPulse to treat retinal diseases.

The IQ 577 laser is a practice-wide asset from an efficiency and logistics point of view. Delivering treatment doesn't take long and the TxCell™ Scanning Laser Delivery System further enhances efficiency and ease of use. Because the laser is portable and durable, I routinely transport it to and from our main office and several satellite offices.

DURABLE RESULTS THAT EASE TREATMENT BURDEN

In my experience, MLT has been a procedure with

only benefits. It's not difficult to perform, and after close to 800 cases, I've seen only two mild cases of iritis and no IOP spikes, synechiae, or other complications. MLT often reduces or eliminates a patient's reliance on topical medications.

In addition to glaucoma, I've utilized MicroPulse to treat diabetic eye disease, central serous retinopathy, and retinal vein occlusion with equally favorable results and similar reduction of treatment burden. I've come to expect the effect of MicroPulse to last longer than the effect of an anti-VEGF injection, which results in fewer injections and copays a patient must endure. My colleagues and I have found that it's not uncommon for patients to require no additional treatment for months or years after MicroPulse. It adds peace of mind when we can expect IOP or macular edema to be under control even when a patient is noncompliant with recommended follow-up.

MicroPulse is very patient-friendly especially compared with anti-VEGF injections. None of my patients have mentioned any discomfort, and I've noticed that it takes only 10-15 minutes for their vision to return to the level it was when they arrived at the office on treatment day. Occasionally, MicroPulse is the only treatment a patient will accept, such as in the following case.

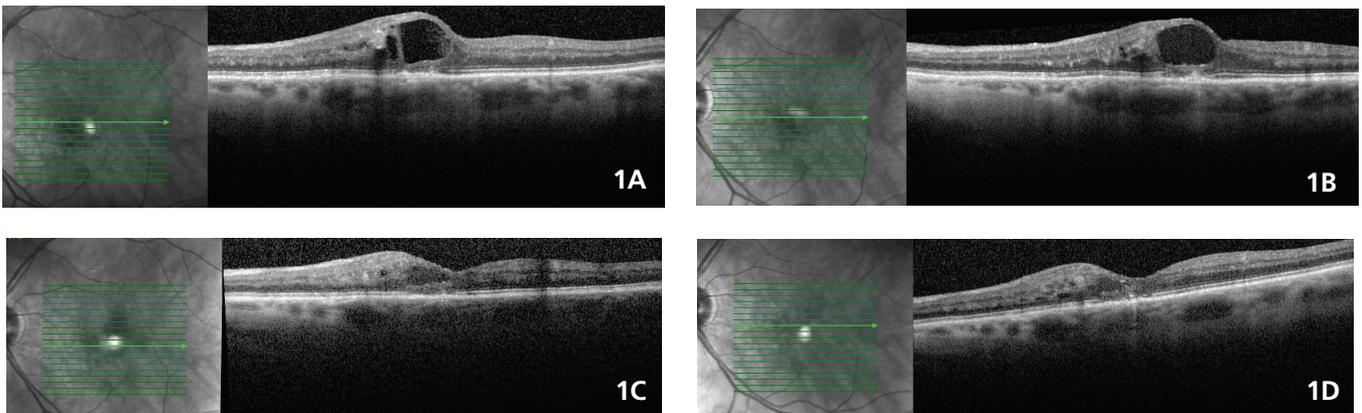


Figure 1. (A) 2 yrs+ prior to MicroPulse, s/p bevacizumab injections; (B) just prior to MicroPulse | CRT 465 μm | VA 20/80; (C) 6 weeks post MicroPulse | CRT improved | VA 20/30; (D) 5 months post MicroPulse | CRT 305 μm | VA 20/30.

Ideal for:
Non-compliant patients
Multiple retinal disorders
Glaucoma

Ideal to:
Treat sooner
Reduce treatment burden
Reduce financial burden

Ideal as:
Alternative to anti-VEGF non-responders
Alternative to continuous-wave and to observation
Adjunct to other interventions

“In addition to glaucoma, I’ve utilized MicroPulse to treat diabetic eye disease, central serous retinopathy, and retinal vein occlusion with equally favorable results and similar reduction of treatment burden.”

A CASE WHERE MICROPULSE WAS THE ONLY OPTION

Prior to seeing me, this patient, a 68-year-old white male, had been treated with several anti-VEGF injections for BRVO but had been lost to follow-up. (Figure 1A) Nearly three years later, he presented to me with a chief complaint of cloudy vision. In the left eye, visual acuity (VA) was 20/80 and central retinal thickness (CRT) on OCT was 465 μm (Figure 1B). I had planned to recommend an anti-VEGF injection until the patient conveyed that he would prefer no treatment at all to undergoing an injection again. He was happy to try MicroPulse (Table 1).

Six weeks after MicroPulse treatment, (Figure 1C) CRT decreased and VA improved to 20/30. Five months after treatment, (Figure 1D) VA remained 20/30, CRT measured 305 μm , and the patient was extremely grateful.

“I’ve come to expect the effect of MicroPulse to last longer than the effect of an anti-VEGF injection, which results in fewer injections and copays a patient must endure.”

WHAT TO EXPECT AND HOW TO GET STARTED WITH MICROPULSE

As my experience with MicroPulse grew, several patterns emerged. First, MicroPulse results can take time to fully manifest. Because of this, I usually don’t see patients again until three months after treatment. Second, when first using MicroPulse, given the absence of a visible tissue burn, there is a tendency to under-

treat. Once I committed to a high-density treatment pattern,¹⁻³ my results improved. In addition, it’s no longer surprising to me when a patient reports improved vision even with only mild improvement in CRT.

I continue to use MicroPulse for my glaucoma patients and for a range of retina conditions and individual patient scenarios, but I limited my initial retina cases to a narrower range. I chose patients who had mild macular edema, refused or strongly preferred not to receive an intravitreal injection, or were expected to be poorly compliant with follow-up. However, with experience and increased confidence, expanding my patient selection criteria came naturally. ■

REFERENCES

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3. Lavinsky D, Cardillo JA, Melo LA Jr, Dare A, Farah ME, Belfort R Jr. Randomized clinical trial evaluating mETDRS versus normal or high-density micropulse photocoagulation for diabetic macular edema. *Invest Ophthalmol Vis Sci*. 2011 Jun 17;52(7):4314-23.

Table 1. TREATMENT PARAMETERS

IRIDEX IQ 577™ Laser with MicroPulse for macular edema associated with BRVO

- Wavelength: 577 nm
- Spot size on slit lamp adapter: 200 μm
- Contact lens: Mainster Standard
- Power: 400 mW
- Exposure duration: 200 ms
- Duty cycle: 5%
- MicroPulse delivery: high-density (zero spacing) application of approximately 400 spots to all areas of edema as observed on clinical exam, including over the fovea, utilizing a 7x7 grid with the TxCell™ Scanning Laser Delivery System

Hear more about how Dr. Phillips and other comprehensive ophthalmologists have incorporated MicroPulse into their practice.



Treatment techniques and opinions presented in this case report are those of the author. IRIDEX lasers are cleared for retinal photocoagulation of vascular and structural abnormalities of the retina and choroid; and iridotomy, iridectomy and trabeculoplasty in angle-closure glaucoma and open-angle glaucoma. IRIDEX assumes no responsibility for patient treatment and outcome. IRIDEX, IRIDEX logo, and MicroPulse are registered trademarks, and IQ 577 is a trademark of IRIDEX Corporation.

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