



Micropulse Transcleral Cyclophotocoagulation in a 26 year-old female with Bilateral Advanced Glaucoma secondary to Sturge Weber Syndrome

NJ Mamaclay¹, JM Cruz¹, J Aduan¹

¹Department of Ophthalmology, Quirino Memorial Medical Center, Manila, Philippines

Purpose

- present a case of bilateral advanced glaucoma secondary to Sturge Weber Syndrome(SWS)
- highlight use of Micropulse Transcleral cyclophotocoagulation (MP-TSCPC) as an effective treatment option

Case

- 26 year old female, seen at the ER with severe left eye pain and loss of vision associated with headaches.
- vision was CF on right eye NLP on the left eye
- well-defined dusky red to violaceous plaques with areas of telangiectasias on the forehead, bilateral malar regions, eyelids and chin
- patchy scleral pigmentation on both eyes with dilated and tortuous episcleral vessels
- IOP: 50mmHg RE and 71mmHg LE.
- Disc: advanced glaucomatous optic neuropathy BE

Management

- oral acetazolamide and topical medications at ER
- pressure still elevated on follow up visits
- tube surgery was an option but there was a note of ciliochoroidal effusion
- MP-TSCPC done BE, which offered optimal IOP lowering
- Patient was maintained on topical medications.

Discussion

- Ophthalmologic involvement present in 50% of patients with SWS(glaucoma, conjunctival, episcleral, choroidal, and retinal vascular malformations)
- Glaucoma is the most frequent ocular abnormality occurring in 30% to 70% of cases.
- It is difficult to treat, medical management is usually inadequate
- Filtering procedure on our patient is not ideal due to the potential complications like expulsive hemorrhage.
- Glaucoma drainage device was used in several other reports but was not amenable to our patient



Figure 1. A Right Eye B. Left eye

Results

- Optimal IOP was noted 2 weeks post laser
- IOP maintained on optimal levels after 2 months and 6 months post laser even without topical medications

MicroPulse® P3 Cyclo G6 Glaucoma laser system(IRIDEX Corp., Mountain view, CA)

- 2000 watts, 80 seconds total duration with an ON cycle of 31.3%

Proposed mechanisms

- off cycles prevents accumulation of thermal injury, preventing damage to adjacent tissues
- increase drainage of aqueous via the uveoscleral pathway
- enlarge the trabecular spaces and Schlemm's canal, improving the trabecular outflow.



Figure 1. well-defined dusky red to violaceous plaques with areas of telangiectasias on the forehead, bilateral malar regions, eyelids and chin

Conclusion

- MP-TSCPC provided good IOP control and reduced the need for anti-glaucoma medications.
- It can be used for those who are not good candidates for incisional surgical procedure. It can also be used in those with difficult compliance to medications and those who live alone.