P4.045
EARLY CLINICAL OUTCOMES OF MICROPULSED TRANSCLERAL CYCLOPHOTOCOAGULATION IN OPEN ANGLE GLAUCOMA

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Purpose: The aim of this study is to describe our experience with the novel micropulse transscleral cyclophotocoagulation (MP-TSCPC) in patients with the diagnosis of moderate to severe open angle glaucoma.

Methods: Patients with moderate to severe open angle glaucoma who underwent MP-TSCPC with 810 nm infrared diod laser (IRIDEX IQ810 Laser Systems, CA) were included in this retrospective study. The patients received sub-tenon anestesia prior to the procedure. Laser power was set at 2000 mW on micropulse delivery mode. MicroPulse® P3 probe was applied in a "painting" motion along the upper and lower hemisphere avoiding the 3 and 9 o'clock positions. The laser was delivered for 80 seconds to each hemisphere for a total of 160 seconds.

Results: Five eyes of five patients were included in the study. The mean age of patients (1 female, 4 male) was 60.4 ± 10.3 years. Three eyes had severe glaucoma. One patient had previously undergone cataract surgery. Average best corrected visual acuity was 0.56 ± 0.45 (Snellen). The mean baseline intraocular pressure (IOP) was 22.2 ± 4.2 mmHg and patients were on 2.4 ± 1.5 topical glaucoma medications. Mean IOP was reduced by 39.6%, 36% and 30.6% from baseline at postoperative day 1, day 7 and day 42, respectively. Mean IOP dropped to 13.4 ± 2.1 mmHg at first day ($p = 0.009$); 14.2 ± 3.6 mmHg at first week ($p = 0.04$), 15.4 ± 1.1 mmHg at sixth week ($p = 0.01$) postoperatively. Average medication use did not changed significantly at final postop visit. There were no serious adverse events.

Conclusion: Micropulsed transcleral diode laser seems to be a safe and effective treatment alternative to help lower IOP noninvasively in patients with open angle glaucoma. Long-term evaluation with a larger group of patients is needed to establish its value.