

## P5.016

**EARLY OUTCOMES OF MICROPULSE DIODE TRANSSCLERAL CYCLOPHOTOTHERAPY FOR TREATMENT OF MILD TO MODERATE GLAUCOMA****Catherina Josephine Goenadi<sup>1</sup>, Maria Cecilia D'Aquino<sup>1</sup>, Maya Suwandono L<sup>1</sup>, Paul T.K. Chew<sup>1</sup>***<sup>1</sup>Department of Ophthalmology, National University Hospital, Singapore - Singapore*

**Purpose:** Micropulse diode transscleral cyclophototherapy (MPTCP) is an established method of treatment for refractory glaucoma. However, previous studies on this procedure only included advanced, or end-stage glaucoma. Our study evaluates the efficacy and safety of MPTCP in patients with mild to moderate glaucoma.

**Methods:** Retrospective review of all patients with mild to moderate glaucoma treated with MPTCP (MP3 Iris Medical Instruments, Mountain View, CA, USA) in National University Hospital, Singapore between January 2016 to June 2017. Severity of glaucoma was assessed using the Hodapp-Parrish-Anderson (HPA) criteria. Surgical success was defined as a reduction of intraocular pressure (IOP) by 20% at the last follow-up visit or if number of medications was reduced by 2 or more despite less than 20% IOP reduction. Patients were seen at post-operative week 1, and post-operative month 1, 3, and 6. Follow up time was at least 3 months.

**Results:** Twelve patients with mild to moderate glaucoma underwent MPTCP. The mean age was  $63.5 \pm 15.7$  years. The mean follow-up period was  $5.8 \pm 4.2$  months. Visual acuity ranged between 6/6 to 6/24. Average Humphrey visual field mean deviation (MD) was  $-7.18 \pm 2.64$  dB. The mean intraocular pressure (IOP) before MPTCP was  $22.3 \pm 4.5$  mmHg. Mean IOP decreased to  $14.9 \pm 3.6$  mmHg at 1 week ( $n = 11$ ),  $14.5 \pm 4.5$  mmHg at 1 month ( $n = 9$ ),  $16.4 \pm 3.7$  mmHg at 3 months ( $n = 8$ ), and  $17.0 \pm 3.4$  mmHg at 6 months ( $n = 6$ ) ( $p$  value  $< 0.01$  at 1 week, 1 month;  $p$  value = 0.07 at 3 months;  $p$  value  $< 0.05$  at 6 months). Mean IOP was reduced by 26.5% and 23.8% at 3 months and 6 months follow up respectively. No patient had hypotony or loss of best-corrected visual acuity. None of the patients received repeat MPTCP. Overall success rate was 62.5% at 3 months and 50% at 6 months.

**Conclusion:** Micropulse diode transscleral cyclophototherapy is a safe and effective method of lowering IOP even in cases of mild to moderate glaucoma.