Micropulse Transscleral Cyclophotocoagulation as a Primary Intervention in Primary Open-Angle Glaucoma Patients

Purpose
To determine the safety and efficacy of using micropulse transscleral cyclophotocoagulation (MP-TSCP) (Iridex cyclo G6 Probe) as the initial procedural intervention in primary open angle glaucoma patients not controlled medically in an urban hospital setting.

Methods
Retrospective series of 36 eyes representing 31 POAG patients without any prior history of laser or surgical interventions managed medically with elevated intraocular pressure treated initially with MP-TCP performed at Stroger Hospital of Cook County in Chicago, Illinois from 2015-2017. Patients with secondary glaucomas were excluded. Patients with a previous history of a procedural or surgical intervention were also excluded. Intraocular pressure data was collected prior to and after MP-TSCP. Complications and need for further procedures were also recorded.

Results
Pre MP-TSCP, the average IOP per eye (n=36) was 25.3 mmHg. Post-op 1 month, the average IOP (n=33) was 17.82 mmHg, a 24.7% change from baseline. Post-op 3 months, the average IOP (n=15) was 16. Post-op 6 months, average IOP (n=16) was 20.9. Post-op 9 months, average IOP (n=8) was 13.1. Post-op 1 year, average IOP (n=5) was 13.4. 6 of 36 (16.7%) eyes required a 2nd MP-TSCP. 1 patient required a third MP-TSCP. 6 of 36 (16.7%) eyes required a different type of procedural intervention. 3 eyes experienced transient blurry vision. 2 eyes experienced transient ocular foreign body sensation. 1 eye experienced ciliary nerve damage leading to anisocoria. 1 eye experienced chronic hypotony.

Conclusion
G6 MP TCP is an effective and safe primary treatment option for medically refractive or medically difficult to manage POAG in an urban hospital setting. The procedure is repeatable and due to the relative ease should be considered as a viable initial procedural intervention for patients with POAG.

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