

γth Article:

Management of refractory glaucoma using fixed energy diode laser cyclophotocoagulation

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Journal: Delta journal ophthalmology accepted 2020 and Oral presentation, **WOC** Barcelona, 2018.

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Abstract:

Aim: To evaluate the efficacy and safety of transscleral diode laser cyclophotocoagulation using fixed energy technique in management of patients with refractory glaucoma. **METHODS:** In this prospective study, twenty-two eyes (22 adult patients) with refractory glaucoma and visual acuity of $\leq 3/60$ (≥ 1.3 LogMAR) were included. Following complete ophthalmological examination; patients were treated with trans-scleral diode laser cyclophotocoagulation using slow coagulation technique. Follow up of patients was done at one week, one month, three months and six months intervals. Postoperative complications as were monitored and reported. **RESULTS:** The mean age of patients was 57.1 ± 10.6 . There was no significant change in visual acuity or optic disc appearance between preoperative and postoperative period in all cases. There was significant reduction in mean intraocular pressure after six months of follow up from 42.41 ± 8.8 mmHg preoperatively to 18.5 ± 8.8 mmHg postoperatively ($P=0.02$). The mean number of antiglaucoma medications was reduced significantly from 2.45 ± 1.1 preoperatively to 1.0 ± 0.5 postoperatively ($P=0.0001$). Mild to moderate anterior chamber reaction was reported in 16 (72.7%) patients among them hyphema in 2 (9%) patients and vitreous hemorrhage, transient hypotony due to choroidal detachment were encountered in one patient each. Seven patients (31.8%) reported smooth postoperative course without any complications or pain. **CONCLUSION:** Fixed energy method of transscleral diode laser cyclophotocoagulation represents an effective technique for management of refractory glaucoma with low potential for serious complications.