

ABSTRACT

Comparison of Diode Laser Trans-Scleral Cyclo-Photo-Coagulation with Cyclocryopexy in Refractory Glaucoma

Farah Akhtar, DOMS, FCPS, Ayisha Kausar, MBBS

Purpose: To compare the efficacy and safety of diode laser trans-scleral cyclophotocoagulation (TDC) and cyclocryopexy in refractory glaucoma in term of intraocular pressure control, pain relief and complications.

Study design: Retrospective Case Series

Participants and methods: Medical records of 49 patients who underwent trans-scleral diode laser cycloablation (24 patients) and cyclocryopexy (25 patients) at the Al-Shifa Trust Eye Hospital during a 12 month period were analyzed.

Results: In diode laser TDC group mean pretreatment IOP was 50 mmHg with anti-glaucoma medication (SD 9.48, range 26-60) and 61 mmHg (SD 10.75, range 40-76) without medication. Mean postoperative IOP was 14 mmHg with medication and 20 mmHg without medication (SD12.73, range 2-50). 70% eyes had IOP < 21 mmHg at 3 months. None of patients had deterioration of vision. Pain was absent in 96% at 6 weeks after single TDC session. In cyclocryopexy group mean pretreatment IOP was 49 mmHg with medication (Range 26-60, SD10.48) and 56 mmHg (Range 40-76, SD11.70) without medication. Mean postoperative IOP was 22 mmHg without treatment (range 2-75, SD 17.78). 59% of patients had IOP < 21mmHg at 3 months. At 3 months, only 50% patients had significant pain reduction. 38% patients did not have any relief in pain. Postoperative complications were more frequent with cyclocryopexy and lasted longer than TDC. Neovascular glaucoma was the most common variety of refractory glaucoma in both groups.

Conclusions: Our study confirms that in refractory glaucoma, TDC is more effective in decreasing intraocular pressure as compared to cyclocryotherapy. TDC also has a lower rate of complications and is relatively safer than cyclocryopexy. Al-Shifa Journal of Ophthalmology 2008; 4(2): 54-60 © Al-Shifa Trust Eye Hospital, Rawalpindi, Pakistan.