

## SELECTIVE LASER TRABECULOPLASTY FOR THE TREATMENT OF GLAUCOMA

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37

**Introduction:** Selective laser trabeculoplasty (SLT) has been widely used in the clinical management of Glaucoma (OAG) and Ocular hypertension (OHT), both as adjunctive and primary treatments.

**Aim:** The Aim of the study is to investigate the benefits of SLT in relation to reaching the target intraocular pressure (IOP) and reducing topical medication.

**Materials and Methods:** SLT was performed on 43 patients, or 54 eyes, in both eyes in 11 patients and in one eye in 32 patients. There were 23 patients with Primary open angle glaucoma (POAG), 11 patients with Pseudoexfoliation glaucoma (PXFG), 7 patients with Pigmentary glaucoma, and two with Ocular hypertension (OHT). All patients, except for two, used topical medication before SLT treatment (monotherapy, combination therapy, double or triple therapy). Intraocular pressure (IOP) was measured before SLT, as well as 1 week, 1 month (5 weeks), 3 months and 6 months after SLT. The use of topical medication before and after SLT was also recorded.

**Results:** The average decrease in IOP after SLT was 2.7 mmHg, with a standard deviation of  $\pm 2.05$  mmHg. The decrease in IOP after SLT ranged from 1 mmHg to 10 mmHg. We found that 80.48% or 44 eyes had a lower IOP after SLT, while the same IOP had 9.26% or 5 eyes and elevated IOP had 9.26% or 5 eyes. Elevated IOP was in the range of 1-3 mmHg, the one patient had an elevated IOP of 3 mmHg in both eyes, but with the exclusion of dual topical medication. IOP values at control measurements 1, 3, and 6 months after SLT were almost the same, and IOP values one week after SLT were elevated in 16.66% or 9 eyes and in the range of 3–8 mmHg. According to the use of topical medication, in 53.70% or 29 eyes, the therapy remained the same before and after SLT, in 35.18% or 19 eyes (14 patients), the therapy was reduced by one or two topical drugs, and in 5.55% or 3 eyes (2 patients), topical drugs were completely excluded. In 3.70% or 2 eyes, it was necessary to add one topical drug or combination drug, and one patient was left without a topical drug before and after SLT.

**Conclusion:** SLT is effective and safe procedure, and has its place in the treatment of patients with OAG and OHT in order to reach the target IOP with the least possible use of topical medication, or as a substitute for topical medication, or as an initial treatment in some cases. Wider use of SLT, especially in newly diagnosed and selected cases, will contribute to even better results in treatment.