



A- A+

# Efficacy of Micropulse Laser Trabeculoplasty in Open Angle Glaucoma

[View Session](#)[View Presentation](#)[Add to Schedule](#)[Print Abstract](#)**Posterboard#:** B0174**Abstract Number:** 696 - B0174**AuthorBlock:** *antonella clemente*<sup>1</sup>, *Caterina Toma*<sup>1</sup>, *Stela Vujosevic*<sup>1</sup>, *chiara padovan*<sup>2</sup>, *stefano de cillà*<sup>1,2</sup><sup>1</sup>Eye Unit, University Hospital Maggiore della Carità, Novara, , Italy; <sup>2</sup>science of health, Università del Piemonte Orientale, , Italy;**DisclosureBlock:** antonella clemente, None; Caterina Toma, None; Stela Vujosevic, None; chiara padovan, None; stefano de cillà, None;

## Purpose

To evaluate the efficacy of micropulse laser trabeculoplasty(MLT) in reducing intraocular pressure(IOP) and slowing down visual field(VF) defect progression in patients affected by poorly controlled OAG during a period of 6 months.

## Methods

45 eyes of 26 patients underwent a single MLT treatment using a Diode True-Yellow 577-nm Laser with MicroPulse technology (IQ 577 Laser System, Iridex Corporation, 1212 Terra Bella Avenue, Mountain View, CA). Inclusion criteria: diagnosis of OAG; use of antiglaucoma drugs for at least 6 months without satisfactory IOP reduction and/or with VF defects progression. Exclusion criteria: angle closure glaucoma; previous glaucoma surgery/laser; concomitant ocular diseases requiring surgery; corneal anomalies. At baseline, each patient underwent a complete ophthalmologic examination with best-corrected visual acuity(BCVA) and IOP measurement, slit-lamp examination, gonioscopy and VF testing (SAP, Humphrey Visual Field Analyzer 24-2). After treatment, visits were scheduled at 1 week and 1, 3 and 6 months. BCVA and IOP measurement, slit-lamp examination and gonioscopy were performed at each visit, while VF testing was repeated only during the last visit. IOP and mean defect(MD) on VF testing were evaluated prior and after treatment in the entire population and in 4 subgroups divided on the base of number of antiglaucoma agents taken.

## Results

Mean IOP was  $21.2 \pm 6.12$  mmHg at baseline,  $17.73 \pm 5.98$  mmHg 1 week after MLT,  $17.62 \pm 6.01$ ,  $17.91 \pm 6.1$  and  $18.16 \pm 6.68$  mmHg 1, 3 and 6 months after MLT respectively. IOP reduction started early and was significant at each visit compared to pre-MLT values ( $p < 0.0125$ ). IOP reduction compared to baseline was -16.37% 1 week after MLT, -16.89%, -15.52% and -14.34% 1, 3 and 6 months after MLT respectively ( $p < 0.0001$ ). Mean MD was  $-4.93 \pm 8.35$  at baseline and  $-5.38 \pm 8.43$  6 months after treatment ( $p = 0.09$ ). We found a more evident decreasing trend in post-MLT IOP values in groups taking less antiglaucoma drugs, with no statistical significance.

## Conclusions

577-nm MLT is an effective, safe, painless, potentially repeatable and cheap procedure. Our results confirm that it is effective in lowering IOP and stopping glaucoma damage progression in a period of 6

months in patients with poorly controlled OAG. Further investigation is warranted to determine the relationship between MLT efficacy and the number of antiglaucoma drugs taken.

**Layman Abstract (optional): Provide a 50-200 word description of your work that non-scientists can understand. Describe the big picture and the implications of your findings, not the study itself and the associated details.**

