CO2 Laser Assisted Sclerectomy Surgery in Mexican Patients with Open Angle Glaucoma. Long Term Results

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Purpose:
To evaluate the long term results of CO2 laser-assisted sclerectomy surgery system (CLASS) in mexican patients with primary open angle glaucoma.

Methods:
Patients with primary open angle glaucoma with indication for primary filering surgery underwent CLASS with a CO2 laser system (OT-134-lotomate; IOPtima Ltd, Israel). Intraocular pressure (IOP) was measured up to a three year follow-up. Complete success was defined as IOP ≤ 5 and ≤ 18 mmHg and 20% IOP reduction with no medication at up to 3-year end point visit, and qualified success as the same IOP range with or without medication.

Results:
13 patients were included, 12 completed 1 year follow-up, 9 and 8 patients completed 2 and 3 years follow-up respectively. Mean preoperative IOP was 24 ± 5.4 mmHg and postoperative mean values of 14.5 ± 3.0, 12.8 ± 2.3 and 13.4 ± 2.3 mmHg at 1, 2 and 3 years. Qualified and complete success at 1, 2 and 3 years reports as follows 92.3% and 38.5%; 90% and 10%; and 88.9% and 11.1%. Few mild complications on the early postoperative period presented but resolved with no sequela. Mean preoperative medications were 3.8 ± 0.7 and mean postoperative medications were 1.2 ± 1.2 at year one, and 1.6 ± 0.7 at years 2 and 3.

Conclusions:
Long-term results suggest that CLASS is a safe and effective mean for the surgical treatment of open-angle glaucoma.

Upper left: Scleral flap. Upper right: Tissue ablation with the CO2 laser, Lower left: Fluid percolation, Lower right: End of the procedure.

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