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**USE OF MICROPULSE TRANSSCLERAL CYCLOPHOTOCOAGULATION IN GLAUCOMA ASSOCIATED WITH PENETRATING KERATOPLASTY OR KPRO**

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**Purpose:** To evaluate the outcomes of micropulse transscleral cyclophotocoagulation (MP-CPC) for intraocular pressure (IOP) control in patients with penetrating keratoplasty and Kpro.

**Methods:** Retrospective case series of 29 consecutive patients who underwent MP-CPC at Oftalmosalud with 12 months of follow-up. Treatment success was defined as an IOP of 6-18 mmHg or a reduction of IOP by 20%. Failure was defined as an inability to meet the criteria for success or need for incisional glaucoma surgery. Two different groups were compared. Group one with 2000 mW power for 90 seconds per hemisphere and group two with 2000 mW power for 180 seconds per hemisphere. Mean preoperative and postoperative IOP, reduction in number of glaucoma medications, best corrected visual acuity (BCVA), keratoplasty survival and complications were compared.

**Results:** The mean IOP prior to MP-CPC was  $24.68 \pm 8.6$  mmHg. The IOP was reduced by an average of 50% at the last follow-up. Mean intraocular pressure after MP-CPC was  $12.41 \pm 3.71$  mmHg ( $p < 0.001$ ), with a greater reduction in the group two ( $p < 0.001$ ). The majority of patients (65,5%) used 4 IOP lowering medications before MP-CPC which were reduced to 2 in 37.93% of patients at the last follow-up ( $p < 0.001$ ) without differences between two groups. The mean BCVA changed from 1.11 to 0.92 logMAR ( $p = 0.83$ ). Only 2 eyes (7%) received subsequent glaucoma filtration surgery. The significant complications of MP-CPC included 1 (3.4%) patient with hypotony and 8 (28%) patients with loss of 2 or more lines of BCVA at 12 months of follow up. Grafts remained clear in 89% of eyes in group one and 90% of eyes in group two at 1 year. Failure of glaucoma outcome or graft survival was associated with prior intraocular surgeries.

**Conclusions:** MP-CPC is an effective and safe treatment for patients with penetrating keratoplasty and Boston keratoprosthesis at the 12-month follow up. When with 180 seconds per hemisphere, the mean intraocular pressure is more greatly reduced, but this difference between the interventions is no clinically significant.