Efficacy and Safety of Ab-Interno Canaloplasty with and without GATT in Glaucoma - 5-Year Results

Poster

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Purpose: To investigate the outcomes of ab-interno canaloplasty with the iTrack microcatheter (Nova Eye Medical, Fremont, USA) performed as a standalone procedure or in combination with gonioscopy-assisted transluminal trabeculotomy (GATT).

Method: This single-center, retrospective case series included patients with moderate to severe primary open-angle glaucoma and no history of glaucoma surgery, except for SLT or CPC, who underwent ab-interno canaloplasty (ABiC group) or ABiC combined with GATT (ABiC+GATT). All eyes, except one, underwent canaloplasty combined with phacoemulsification. The primary endpoints were mean intraocular pressure (IOP) and the mean number of medications. P values were provided only for groups with ≥10 eyes.

Results: 21 eyes (5 ABiC and 16 ABiC+GATT) were included. The mean baseline IOP (mmHg) was 24.0±5.1 in the ABiC group and 21.8±5.4 in the ABiC+GATT group. At the 3- and 5-year follow-up, mean IOP decreased to 13.2±1.1 (-45%) and 13.4±1.5 (-44%) in the ABiC group, and to 13.6±1.8 (-37%; $p<0.001$) and 13.6±2.1 (-37%; n=8) in the ABiC+GATT group. In the ABiC group, the p value was not available (n=5), but the IOP reduction ranged from 5 to 20 mmHg. Medication use remained stable in the ABiC group (from 1.8±1.1 at baseline to 1.4±1.5 at all timepoints), while the reduction was significant in the ABiC+GATT group: 3.1±1.4 at baseline vs 1.8±0.8 (p=0.003) and 1.3±0.5 (n=8) at the 3- and 5-year follow-up.

Conclusions: In eyes with glaucoma, ab-interno canaloplasty combined with phacoemulsification resulted in a sustained and comparable reduction in IOP up to 5 years postoperatively, whether performed as a standalone procedure or in combination with GATT. A larger cohort is needed to validate these results.