



Efficacy and Safety of Cataract Surgery Combined with Canaloplasty and Micro-Trabecular Bypass Stent Surgery in Open Angle Glaucoma

Paper

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Purpose: To evaluate the effectiveness of canaloplasty via an ab-interno technique using the iTrack (Nova Eye Medical, Fremont, USA.) combined with microtrabecular bypass stent surgery with the Hydrus microstent (Ivantis, Inc, Irvine, CA) following cataract extraction.

Method: Retrospective, two-center, case series including patients with primary open-angle glaucoma (POAG). 51 POAG eyes undergoing canaloplasty combined with microtrabecular bypass stent surgery and cataract extraction. A second group of patients with POAG, intraocular pressure (IOP) >18 mmHg, and/or on 3+ medications was included (uncontrolled group). Eyes were also categorized by glaucoma severity: mild (-6dB or better), moderate (-6dB to -12dB), or severe (-12dB or worse). Primary outcome measures include mean IOP and mean number of medications at 12, 24 and 36 months.

Results: Baseline IOP (mmHg) and medications (no.) were 19.1 ± 4.0 and 2.25 ± 1.15 and reduced to 13.9 ± 2.57 (-27%; $p < 0.001$) and 1.15 ± 1.4 (-50%; $p < 0.001$) at 12 months, 13.7 ± 2.0 ($p < 0.001$) and 1.5 ± 1.5 ($p = 0.008$) at 24 months ($n = 31$) and 14.4 ± 3.22 ($p < 0.001$) and 2.05 ± 1.47 ($p = 0.469$) at 36 months. In the uncontrolled group ($n = 27$) baseline IOP and meds were 21.9 ± 3.1 and 1.89 ± 1.3 and reduced to 14.6 ± 4.2 (-33%; $p = 0.006$) and 1.7 ± 1.6 ($p = 0.821$) at 36 months. Baseline IOP and meds of severe patients ($n = 12$) were 19.0 ± 4.8 and 1.9 ± 1.1 . IOP reduced to 12.8 ± 2.4 (-32%; $p = 0.005$) at 12 months while medications did not show any statistically significant change: 1.91 ± 1.64 ($p = 0.388$). No eyes underwent additional glaucoma surgery.

Conclusions: Canaloplasty combined with microtrabecular bypass stent surgery and cataract extraction demonstrated efficacy in reducing IOP and medication burden up to 24 months postoperatively. IOP reduction was also sustained up to 36 months postoperatively. The combined MIGS procedure is also effective in eyes with uncontrolled glaucoma.

Disclosures: Dr. Gallardo is a consultant to Nova Eye Medical. The other authors have no disclosures with the products mentioned.

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Cataract Surgery- Techniques
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