

Outcomes of Trabecular Micro-Bypass Stent Alone Vs. Combined with Ab-Interno Canaloplasty during Cataract Surgery

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Purpose

This study investigates whether combining trabecular micro-bypass using the iStent® (Glaukos, CA, USA) with ab-interno viscocanaloplasty using the OMNI® (Sight Sciences, CA, USA) during cataract surgery can achieve superior IOP control while maintaining a similar excellent safety profile compared to the iStent® alone.

Methods

Retrospective, consecutive case series from a single surgeon of 112 eyes (72 patients) with mild to moderate primary open angle glaucoma requiring at least one medication, that underwent cataract surgery with either iStent® alone or iStent® plus ab-interno canaloplasty with OMNI® between June 2018 and August 2019. Primary outcomes were IOP and number of glaucoma medications. Secondary outcomes were post-operative complications and need for repeat glaucoma procedures. Outcomes were compared using a two-sample t-test, Wilcoxon rank sum test, or chi-square test, as appropriate, while adjusting for two eyes from the same patient.

Results

The iStent® group had 75 eyes, and the combined procedure group had 37 eyes. Preoperatively, the mean medicated IOP was 15.2 mmHg and 14.1 mmHg in the iStent® and combined procedure groups ($p=0.10$), respectively, and the mean number of glaucoma medications was 1.2 and 1.0 ($p=0.30$). At post-operative month nine, the mean IOP was 11.8 mmHg and 11.5 mmHg ($p=0.54$), respectively, and the mean number of glaucoma medications was 0.8 and 0.0 ($p=0.11$). Early complications included one and three transient IOP spikes >30 mmHg and two and four transient hyphemas, respectively, that resolved by week one. There were no complications after week one. This data will be updated for the annual meeting.

Conclusion

Early results show that combining iStent® with ab-interno viscocanaloplasty using OMNI® during cataract surgery yields similar IOP reduction to iStent® alone while requiring fewer glaucoma medications and maintaining an excellent safety profile. Long-term follow-up and data collection are ongoing.