Comparison of 360° Viscocanaloplasty Alone to 360° Viscocanaloplasty Plus Trabecular Bypass Stent to 180° Canaloplasty/Goniotomy Plus Bypass Stent to Bypass Stent Alone

Poster

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Purpose: To compare the efficacy and safety of iTrack with Hydrus, OMNI with Hydrus, OMNI alone, and Hydrus alone in reducing intraocular pressure (IOP) in patients undergoing minimally invasive glaucoma surgery combined with cataract surgery (MIGS).

Methods: A retrospective comparative analysis of eyes undergoing cataract surgery with MIGS for the treatment of primary open-angle glaucoma from June 2023 to July 2024 at a single surgical center. Patients were divided into four groups: iTrack with Hydrus, OMNI with Hydrus, OMNI alone, and Hydrus alone. The primary outcome measure was the reduction in IOP at 1 month, 3 months, and 6 months postoperatively. Secondary outcomes included the number of glaucoma medications required postoperatively, complication rates, and the need for additional surgical intervention.

Results: A total of 87 eyes were included from the study period, with 29 eyes receiving iTrack with Hydrus, 14 eyes receiving OMNI with Hydrus, 14 eyes receiving OMNI alone, and 30 eyes receiving Hydrus alone. At post-op month 6, there was an average IOP reduction of 15.04%, 18.87%, and 18.34% in the Hydrus, Hydrus with OMNI, and Hydrus with iTrack groups, respectively; the differences between the 3 groups were not statistically significant. There was a statistically significant IOP increase of 2.57% in the OMNI group compared to the other 3 groups ($p<0.05$). At post-op month 6, the average number of glaucoma medications required postoperatively decreased by 0.53. Only the difference between the Hydrus group (-0.27) and Hydrus with iTrack group (-0.79) was significant ($p<0.05$). No patients required additional surgical intervention during the study period.

Conclusion: The study aims to elucidate the comparative effectiveness of combining iTrack or OMNI with Hydrus versus Hydrus alone versus OMNI alone, potentially guiding clinical decisions in optimizing IOP control and reducing reliance on glaucoma medications in patients undergoing MIGS.

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