Safety & Effectiveness Study of the Hydrus Microstent for Lowering IOP in Glaucoma Patients Undergoing Cataract Surgery (HORIZON)

THE LENS

Objective

To evaluate the efficacy and clinical outcomes of Hydrus Microstent in patients with mild to moderate primary open angle glaucoma (POAG) undergoing cataract surgery

Methods

Design: RCT

Sample Size: 556 patients with POAG

Treatment Groups:
- 369 in Hydrus (HMS) group
- 187 without Hydrus (CS) group

Outcome Measures:
- Intraocular pressure
- Glaucoma drop use
- Corneal endothelial cell counts

Results

Point 1: Lower IOP in HMS group
- The HMS group included a higher proportion of eyes with IOP of 18 mmHg or less without medications than the Cataract Surgery Only (CS) group (49.5% vs. 33.8%; P = 0.003)

Point 2: Increased IOP reduction in HMS Group
- The HMS group had a greater likelihood of IOP reduction of 20% or more without medications than the CS group (54.2% vs. 32.8%; P < 0.001).

Point 3: Fewer glaucoma drops in HMS group
- The number of glaucoma medications was 0.5 ± 0.9 in the HMS group and 0.9 ± 0.9 in the CS group (P < 0.001), and 66% of eyes in the HMS group were medication free compared with 46% in the CS group (P < 0.001).

Point 4: No difference in endothelial cell loss between the groups
- There was no clinical or statistically significant differences were found in the rate of endothelial cell loss from 3 to 60 months between the HMS and CS alone groups (P = 0.261).

TLDR: Use of Hydrus Microstent with cataract surgery was found to be safe and effective in lowering intraocular pressure and reducing glaucoma drops

Ahmed, I. I. K., De Francesco, T., Rhee, D., McCabe, C., Flowers, B., Gazzard, G., Samuelson, T. W., Singh, K., & HORIZON Investigators (2022). Long-term Outcomes from the HORIZON Randomized Trial for a Schlemm's Canal Microstent in Combination Cataract and Glaucoma Surgery. *Ophthalmology*, *129*(7), 742–751

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