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The safety and efficacy of supraciliary stenting following failed glaucoma surgery

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Abstract

Purpose: To evaluate the safety and efficacy of supraciliary stenting following failed glaucoma surgery.

Design: Interventional case series.

Methods:
Setting: Moorfields Eye Hospital, London, United Kingdom.
Study population: Twenty eyes from 20 patients with glaucoma refractory to prior glaucoma surgery.
Intervention: Ab interno microstent (CyPass Micro-Stent; Alcon, Fort Worth, TX) implantation into the supraciliary space.
Main outcome measures: Outcome measures included the occurrence of ocular adverse events, mean intraocular pressure (IOP) change, and glaucoma medication use through 12 months.

Results: Mean baseline IOP was 22.5 ± 8.0 mmHg and number of medications was 2.7 ± 1.0. The majority of patients had undergone either prior trabeculectomy or aqueous shunt surgery. There were no serious intraoperative complications or major adverse events following supraciliary stenting. The most common adverse events included transient hyphema (3/20, 15%), transient IOP > 30 mmHg (4/20, 20%), and transient IOP < 6 mmHg (4/20, 20%). At 12 months, mean IOP was 14.9 ± 4.3 mmHg – a 33.7% reduction (P = 0.01). Mean medication usage decreased 56% to 1.2 ± 1.5 at 12 months (P = 0.01). Two patients (10%) required subsequent aqueous shunt insertion.

Conclusion: Ab interno supraciliary stenting has a favorable safety profile and provides an effective approach to controlling IOP and reducing medication burden in eyes where previous glaucoma surgery has failed.