

Introduction: To evaluate the efficacy of a novel, gold-micro shunt in reducing intraocular pressure for the treatment of glaucoma. The micro shunt is implanted into the suprachoroidal space and is designed to facilitate aqueous flow from the anterior chamber into the suprachoroidal space by utilizing the eye's natural pressure gradient between the AC and the SCS.

Methods: The GMS was implanted through a micro, partial-depth scleral incision. In a 2-site, prospective clinical study, 76 eyes were implanted with the GMS and followed for two years. Patients were monitored for IOP, reduction in number of pressure-lowering medications and complications.

Results: The mean pre-operative IOP was 27.7 ± 5.9 mm Hg. The mean post-operative IOP at 1-year was 19.7 ± 7.9 mm Hg (50 eyes) and 19.7 ± 3.3 mm Hg at the 2-year follow-up (18 eyes). No serious complications were observed during the surgeries. No migration of the implant or corneal decompensation was observed in the first 6 post-operative months. The most common complication of this procedure was transient hyphema, with no cases of long-term hypotony.

Discussion: The design of the GMS is intended to facilitate aqueous flow, thereby reducing IOP, without creation of a bleb as typically seen with traditional filtration surgery. Additional safety and efficacy data continues to be collected to verify early findings.

Conclusion: The biocompatibility of a gold-micro shunt offers an option to glaucoma surgeons who have had to frequently accept significant complications with other drainage devices in order to reduce IOP in glaucoma patients. The initial results demonstrate that IOP reduction can be achieved without the creation of a filtration bleb, thus eliminating numerous post-operative management issues.