

MICRO-INVASIVE GLAUCOMA SURGERY/THE TRABECTOME

Ab-interno trabeculotomy using the Trabectome surgical device (NeoMedix Corporation) permanently ablates the portion of the trabecular meshwork (TM) and the inner wall of the Schlemm's canal to *increase* aqueous outflow and to *decrease* the intraocular pressure (IOP) (Fig. 1.). It is an effective treatment with a favorable safety profile. The surgery can be offered as a combined procedure to patients with a visually significant cataract as well.

INSTRUMENTATION

The Trabectome is a bipolar instrument with irrigation and aspiration that is powered by a high frequency electro-surgical generator and a peristaltic irrigation-aspiration console (Fig. 2.). The hand piece is a 19.5 gauge instrument with a tip/footplate to insert into Schlemm's canal through the TM. 90° - 120° of circumference of the TM and inner wall of Schlemm's canal is ablated using high frequency electro-surgical pulses to create an opening from the anterior chamber into Schlemm's canal and the collector channels (Fig. 3.).

INDICATIONS

The indications for ab-interno trabeculotomy include variations of open-angle glaucoma: primary open-angle glaucoma, pseudoexfoliation, pigment - dispersion, uveitic and steroid induced glaucomas. Patients, who have early to moderate glaucomatous damage and uncontrolled IOP are good candidates for Trabectome procedure.

RESULTS

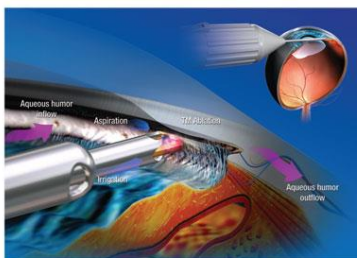
A cohort study of 538 eyes with uncontrolled open-angle glaucoma found that the success rate following the Trabectome procedure at one year was 64.9% with 31% IOP reduction and with 28% decrease in medication use¹. Results from other retrospective studies show that the procedure does not result in an IOP as low as standard trabeculectomy with antimetabolites². Ab-interno trabeculotomy procedure therefore is not suitable for patients with very advanced glaucomatous optic neuropathy. The advantages of this procedure is such as a temporal clear corneal approach, which

leaves the conjunctiva available for subsequent conventional filtration surgery as necessary, a rate of postoperative complications comparable with that of phacoemulsification, and the potential for combination with cataract extraction using the same temporal corneal incision.

REFERENCES

- Mosaed S, Rhee D, Filippopoulos T, Tseng H, Deokule S, Weinreb RN
Trabectome Outcomes in Adult Open-Angle Glaucoma Patients: One-Year Follow-Up Clinical & Surgical Ophthalmology 2010; 28(8): pp. 5-9.
- Jea SJ, Francis BA, Vakili G, et al.
Ab-Interno Trabeculotomy versus Trabeculectomy for Open-Angle Glaucoma Ophthalmology 2012; 119(1): 36-42.

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The Trabectome tip, moving through Schlemm's canal, ablates trabecular and juxtacanalicular tissues to improve aqueous access to outflow channels and lower IOP.

Fig 1

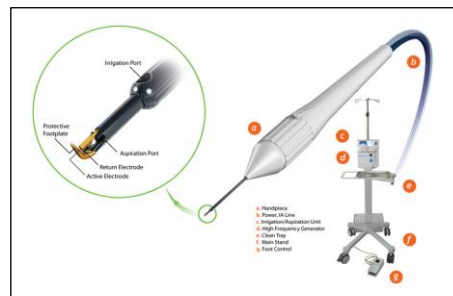


Fig 2

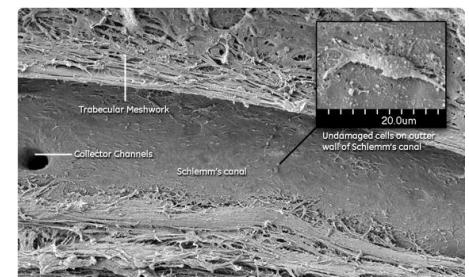


Fig 3

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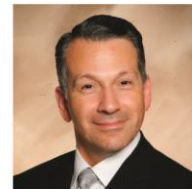
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