Trabeculectomy with internal Tube Shunt - A novel Glaucoma surgery


This is a pilot study evaluating the efficacy and mechanism of action of a new glaucoma operation, trabeculectomy with internal tube shunt. Here in this article the author evaluates twenty-three patients who underwent this new operation in one eye for open angle glaucoma. Under a scleral flap, a deep sclerectomy was performed, resulting in an intrascleral lake. Laterally, on both sides a small silicone tube was placed between the Intrasceral lake and the suprachoroidal space. A trabeculectomy stoma and a peripheral iridectomy permitted easy access of aqueous to the tube. Post operative and preoperative results were analyzed and also compared with results of 45 eyes that underwent a conventional trabeculectomy. After a mean follow up time of 324 days, the mean postoperative IOP was 13.8 mm of Hg compared with a preoperative value of 25.4 mm of Hg. The mean number of postoperative medications was only 1.1 compared with a preoperative value of 3.0. No significant change in outflow facility was seen.

This study concludes that trabeculectomy with internal tube shunt is very effective in lowering IOP. It is postulated to work, to a large extent by allowing access of the aqueous humor to the suprachoroidal space where the protein colloid osmotic pressure of uveal blood causes its absorption.

Diode Laser Transscleral Cyclophotocoagulation as Primary Surgical Treatment for Medically Uncontrolled Chronic Angle Closure Glaucoma, Long-term clinical outcomes


This study reports the long term efficacy and safety of Diode Laser Transscleral Cyclophotocoagulation as primary surgical treatment of medically uncontrolled chronic angle closure glaucoma. Thirteen eyes of 13 Chinese patients with medically uncontrolled chronic angle closure glaucoma were treated with Diode Laser Transscleral Cyclophotocoagulation between February 2000 and May 2001, and followed up for over 18 months. Post treatment anti-glaucoma medications were adjusted according to intraocular pressure. If intraocular pressure remained above 21 mm of Hg despite medications for more than 4 weeks after Cyclophotocoagulation, the procedure was repeated. The mean follow up of the study was +/-SD was 26.5 +/- 4.2 months. Two eyes required repeat Cyclophotocoagulation at 6 weeks. Rate of relative success, defined as maintaining an intraocular pressure of 21 mm of Hg or below with or without medications,
was 92.3%. Rate of absolute success, defined as maintaining an intraocular pressure of 21 mm of Hg or below without medications, was 0%. Mean +/- SD Intraocular pressure was reduced from 36.4 +/- 12.6 mm of Hg pre-operatively, to 18.7 +/- 12.2 mm of Hg at final follow up. The visual acuity improved after treatment in 2 of 13 eyes, remained unchanged in 6 of 13 eyes and deteriorated in 5 of 13 eyes. No major complications were encountered.

Diode laser photocoagulation appeared to be an effective and safe primary surgical treatment of medically uncontrolled chronic angle closure glaucoma, with IOP lowering effect persisting up to two years.

Intravitreal Triamcinolone Acetonide for Diabetic Macular edema


This paper evaluates the clinical outcome of an Intravitreal injection of Triamcinolone Acetonide as treatment for diffuse diabetic macular edema. This study was conducted as a retrospective, interventional, clinical case series examining 210 eyes of 174 patients who received an Intravitreal injection of 1 or 4 mg of Triamcinolone Acetonide for treatment of diffuse diabetic macular edema. Inclusion criteria were clinically significant macular edema, visual acuity loss, and leakage shown by flourescein angiography. Main outcome measures were visual acuity and Intraocular pressure. Mean follow up time +/-SD was 6.6 +/- 3.1 months.

In the study group, visual acuity improved significantly from a median of 20/200 at baseline to 20/80 at 6 months. Mean IOP +/- SD increased from 15.4 +/- 3.4 mm of Hg to a maximal value of 20.4 +/- 6.2 mm of Hg during the follow up period. Complications included culture negative sterile endophthalmitis in six cases and cataract extraction in 5 cases.

This study concludes by saying that Intravitreal injection of 1-4 mg of Triamcinolone Acetonide may benefit patients by improving visual acuity in eyes with clinically significant diabetic macular edema. This study did not provide significant evidence to justify its routine use in clinical practice for all patients with macular edema. A randomized clinical trial on this issue would provide more conclusive evidence and help identify those patients most likely to benefit from Intravitreal Triamcinolone Acetonide.

Effect of Cataract Extraction on the Visual Fields of Patients With Glaucoma


This study was to investigate the effect of cataract extraction on the visual fields of patients with open angle Glaucoma. Patients in this prospective cohort study in a tertiary center underwent standard automated perimetry every 6 months. The authors compared the mean results of 2 examinations immediately before and 2 examinations immediately after Phacoemulsification cataract extraction and IOL implant and the mean results of the first 2 and last 2 examinations from 4 consecutive examinations obtained more than 1 year after the cataract surgery.

The study included 34 eyes of 26 patients. While the mean log-MAR best corrected visual acuity improved significantly by approximately 2 Snellen lines after
surgery, the average change in mean deviation in both the effect and control analysis was less than 0.1 dB and not statistically significant. There was a strong correlation between change in foveal sensitivity and change in mean deviation in the effect analysis but not in the control analysis. There was no relationship between change in visual acuity or initial mean deviation and change in mean deviation in either analysis. This study finds that, while there was an improvement in best-corrected visual acuity after cataract surgery, the changes in the visual field as a group were negligible.

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