EFFICACY AND SAFETY OF COMBINED PHACO TRABECULOTOMY FOR CHRONIC NARROW-ANGLE GLAUCOMA

Ahmed Abd El Kareem El Massry, Abdel Hamid Shaker El- Hofi, Ihab Mohamed Osman, Samar Hossny Abdel Fattah
Ophthalmology department , Faculty of Medicine, University of Alexandria, Resident at Ministry of Health

Introduction:

- Primary angle-closure glaucoma was determined as the presence of glaucomatous optic neuropathy caused by high IOP related to a synechial closed-angle on gonioscopy and glaucomatous defects in visual fields and absence of any cause of secondary angle closure.
- Outflow reconstructive surgery is a relatively safe procedure because of the absence of a filtering bleb. Trabeculotomy decreases outflow resistance by cleavage of the trabecular meshwork and the inner layers of Schlemm's canal, which are the regions primarily responsible for the resistance to aqueous outflow.
- Some sections of the anterior chamber angle are permanently closed by peripheral anterior synechiae in eyes with chronic angle-closure glaucoma. IOP after removal of the pupillary block depends on the degree of damage to the trabecular meshwork. We combined phacoemulsification and trabeculotomy to try to obtain the lowest possible IOP after a single surgical procedure.

Aim of the work:

- Assess the efficacy and safety of combined phaco trabeculotomy for chronic angle-closure glaucoma.

Patients:

- Retrospective clinical study that included 20 eyes of patients who underwent phacoemulsification surgery and IOL implantation combined with trabeculotomy under deep sclerectomy .
- All these patients were found to have PACG together with significant cataract.
- These eyes were found to have extensive peripheral anterior synechiae of more than 180° on gonioscopy.

Methods:

All patients included in the study were subjected to the following:

1. Full history taking with complete clinical ophthalmological examination: Visual acuity , Preoperative and postoperative IOP , Complications after surgery and The number of eye drops needed to check IOP before and after surgery.
2. Observations of the angle by indirect gonioscopy and indentation gonioscopy were performed with a Zeiss 4 mirror gonioscopy lens.
3. All patients underwent trabeculotomy under deep sclerectomy.
4. Phacoemulsification and implantation of an intraocular lens using a standard clear-corneal approach.
5. An ab externo trabeculotomy performed using Standard Harm's trabeculotome was inserted into the open Schlemm's canal under the scleral flap and rotated centrally to disrupt the inner wall of the canal and the juxtacanalicular tissue of the trabecular meshwork.
6. All surgeries were performed by the same surgeon.
7. All patients had been followed for 6 months after the surgery.

Results:

- The mean preoperative IOP of 27.0 ± 9.69 mm Hg was reduced to less than10.80 ± 3.07 mm Hg without causing severe postoperative complications.
- The mean change in visual acuity showed mild improvement which was not statistically significant after 1 week, while improvement in visual acuity in 1, 3, and 6 months were statistically significant.
- There is a statistically significant difference in mean deviation of field between before and after surgery. The mean before surgery was -18.70±5.20 and after surgery is -17.05±3.93.
- The number of anti-glaucoma medications decreased after surgery.
- The complications in the current study were minimal and not vision-threatening. Four patients had postoperative complications, including 2 cases of hyphema, 1 case of shallow AC, and 1 case of corneal edema.

Conclusion:

Combined phaco trabeculotomy is effective in lowering IOP in eyes with uncontrollable CACG and visually significant cataract. Outflow reconstructive surgery (trabeculotomy) is a relatively safe procedure because of the absence of a filtering bleb. Trabeculotomy decreases outflow resistance by cleavage of the trabecular meshwork and the inner layers of SC, which are the regions primarily responsible for the resistance to aqueous outflow.

ALEXANDRIA UNIVERSITY
FACULTY OF MEDICINE | كلية الطب