

## Rationale of Ab Interno Trabeculotomy in Combined Surgery of Cataract and Glaucoma in Patients with Far-Advanced Stage of Glaucoma

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### Purpose of the Study

To estimate the status of aqueous outflow pathways in vivo during combined surgery in patients with cataract and far-advanced glaucoma. To estimate the results of phaco with ab interno trabeculotomy in patients with far-advanced glaucoma.

### Methods

An intraoperative contrast study of natural outflow pathways was performed in 50 eyes with far-advanced glaucoma after ab interno trabeculotomy during combined surgery.

A retrospective analysis of 38 operations in 32 patients aged from 59 to 83 years (23 males, 15 females) in terms of 3 years and over after surgery. Preoperative visual acuity ranged from light perception to 0.75 (mean, 0.24), IOP varied from 19 to 42 mm Hg (mean, 28 mm Hg). Preoperative hypotensive therapy was used in 85% of cases.

### Results

After trabeculotomy, in 40 eyes the contrast substance was distributed for over 180° of trabecula circumference; in 7 eyes for 120° to 180° and in 3 eyes only in trabeculotomy zone, i.e. for less than 120°.

Visual acuity in long-term period ranged from 0.01 to 1.0 (mean, 0.48). By the end of follow-up period mean IOP has decreased from 28 mm Hg (range, 19 - 42 mm Hg) to 16 mm Hg (range, 10 to 25 mm Hg). Hypotensive therapy was used in 25 cases (66%).

### Summary

The performed study of outflow pathway status has demonstrated that, in spite of far-advanced glaucoma, after trabecular block removal in most cases intrascleral outflow pathways are functional. Retrospective analysis of phaco with trabeculotomy supports the obtained experimental data.

The suggested modification of trabeculotomy with phaco and intraocular lens implantation may be used as an effective method in far-advanced stage of glaucoma.

### Conflicts of Interest and Source of Funding

None declared.

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