Endotrabeculoectomy and phacoemulsification for combined glaucoma and cataract surgery
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Purpose: To examine effectiveness and safety of the new technique of glaucoma and cataract surgery.

Methods: 52 patients (53 eyes) with cataract and glaucoma were observed. Mean IOP was 23.6 ± 1.8 mm Hg with maximum medication. All of the patients underwent combined surgery: endotrabeculoectomy and phaco with IOL implantation. After intracameral 1% lidocain anesthesia two corneal paracentesis were made. Anterior chamber was filled and deep with viscoelastic. Through one of paracentesis special designed forceps was inserted and under gonioscopic control trabecula was removed in the border of one or two quadrants. Then clear corneal incision and phacoemulsification with intracapsular IOL implantation was performed. Viscoelastic was removed by irrigation-aspiration. Complete ophthalmic examinations, including gonioscopy, tonometry and tonography were done before and after surgery. Follow-up period was up to 12 months. Criteria of effectiveness were time of the surgery, number of intra- and postoperative complication, compensation of IOP, necessity of repeated surgery.

Results: Surgery time for endotrabeculoectomy prolonged procedure for 5.1 ± 1.2 minutes. In 7 cases from 53 little hemorrhage was observed at the time of trabecula capture which stopped and after viscoelastic aspiration and corneal incisions hydroadaptation didn’t repeat. On second day in two cases observed hyphema 1 and 2 mm. Hyphema dissolved during three days without any treatment. In one case iridocyclitis was observed in early postoperative period. The symptoms of inflammation disappeared after 7 days of corticosteroid drops treatment. Postoperative gonioscopy showed white sclera of external wall of Shlem’s channel in the place of trabecula removing. 7 days after surgery IOP significantly (p = 0.001) decreased for 8.4 ± 1.2 mmHg and was 15.2 ± 1.3 mmHg. After 1 month IOP was 15.8 ± 1.2 mmHg except of 1 patient whom repeated surgery (trabeculoectomy) was performed. After 6 months mean IOP was 15.9 ± 1.3 mmHg and was stable with using prostaglandin drops 1 time daily for two patients.

Conclusion: Combined endotrabeculoectomy and phacoemulsification is effective and safe procedure. It is easy to perform, takes short time and leads to significant and stable decreasing of IOP.