Viscosurgery-assisted glaucoma minishunt implantation
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Purpose: To improve the technique of the Ex-PRESS minishunt implantation by using of the viscosurgery methods for the intra- and postoperative complications prevention.

Material and methods: Ex-PRESS minishunt implantation was performed in 25 eyes of 25 patients 62 to 85 years old with an open-angle glaucoma. After making the superficial scleral flap deep layers of the sclera were partially removed and a piece of the choroid exposed. Local choroid detachment was made by injecting a small amount of the OVD through a thin cannula. Afterwards cannula of the viscoelastic syringe was replaced with a 25g needle, which was used for a tunnel for minishunt implantation formation. Entering the anterior chamber with a needle a small amount of viscoelastic was injected. Viscoelastic sealed the wound and anterior chamber depth retained after the needle removal. The introduction of the Ex-PRESS minishunt was performed according to the traditional scheme. To improve the effect and to avoid excessive fibrosis a collagen drainage was put in the scleral bed at the site of the surgery. Sharp end of it was introduced into the space between the sclera and ciliary body, formed by viscodissection. Blunt end of it was placed at the bottom of the flap, covering the "hat" of the minishunt. The superficial scleral flap was fixed in the original position by two absorbable sutures 7-0.

Results: The introduction of the OVD into the anterior chamber at the time of the scleral tunnel formation ensures stability of the anterior chamber and enable to avoid restoration of it with a BSS or air injection through the additional paracentesis. Uveoscleral outflow formed by viscodessection makes it possible to avoid the risk of the excessive external filtration as well as diffuse filtration bleb formation. Implantation of the additional collagen drainage makes the path for aqueous humor and impede fibrosis at the site of the surgery. Postoperatively all patients had intraocular pressure within 8 - 18 mm Hg. No hyphema, choroidal detachment or cystoid bleb formation was found.

Conclusion: 1. Viscosurgery-assisted glaucoma minishunt implantation helps to avoid complications inherent to a classic method of the surgery. 2. The combined employment of minishunt Ex-PRESS with a collagen drainage implantation in the suprahoroidal space enhances the uveoscleral outflow and reduces the risk of external filtration and excessive bleb formation.