### GLAUCOMA DISEASE CLINICAL VIEW AND TREATMENT METHODS

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#### **ABSTRACT**

Purpose - to evaluate the results of complex treatment of primary open-angle glaucoma. We observed 61 patients (61 eyes). The patients were divided into 2 groups depending on the treatment. Group 1 patients (31 patients, 31 eyes) underwent complex treatment (surgical, drug, physiotherapy). Surgical treatment consisted of sinustrabeculectomy and posterior trepanation of the sclera, medication — subconjunctival inection of Emoxipin 10 mg, 0.5 ml for 10 days, and physiotherapy — laser stimulation of the optic nerve. The control group consisted of 30 patients (30 eyes) who underwent sinustrabeculectomy. The results of complex treatment of patients of the 1st group showed improvement of visual functions and stabilization of the glaucomatous process after 1 year in 87% of cases, while in patients of the 2nd group - in 68% of cases.

**Keywords:** Emoxipin, glaucoma, laser stimulation, sinustrabeculectomy, posterior trepanation of the sclera, optic nerve.

# **INTRODUCTION**

Today, glaucoma is the most important and social issue of modern ophthalmology remains one of the important problems. In the treatment of the disease. Despite the achievements, this disease is the cause of blindness in the whole world remains one of the main reasons. Academician Nesterov A.P. information.

According to 1973, the total number of patients worldwide was approximately 20 million. According to J. Goldberg, glaucoma by 2030 the number of patients infected with it reaches 120 million.

Continuous study of the state of internal hydrodynamics of the eye, ophthalmotonus leading to the development of new conservative and radical methods of normalization will come. But many ophthalmologists prefer surgical treatment and

This method has been proven to achieve the target level of intraocular pressure (IOP) and are considered effective. Achieved in the treatment of primary open-angle

glaucoma (BOBG), despite the achievements, stabilization of vision functions is the most important in ophthalmology remains one of the urgent and important problems.

## Main body

It is known that an increase in the level of intraocular pressure (IOP) causes the process of apoptosis develops: due to the increase in KIB, the axons of ganglion cells are bent direct compression with the laminar filament not only the axoplasmic current, but also also reduces the work of retrograde axonal transport. This, in turn, is the retina causing a decrease in the delivery of neurotrophic factors to ganglion cells will come. The decrease in neurotrophic factors affects the mechanism of apoptosis in the optic nerve causes programmed cell death. These processes loss of cell nutrients, accumulation of free radicals, some leads to the activation of enzymes and the accumulation of metabolic products.

Another factor is the proximity of damaged neurons is a chain reaction. Damaged neurons are a source of toxic mediators serve as, they significantly affect the toxic effect of the extracellular space increasing the level, causing secondary degeneration of nearby neurons emits. As a result of such a disorder, although the KIB remains at a normal level, neurons appears to be a self-destructive mechanism.

The results of numerous studies show that neuropathy in glaucoma one of the main reasons for its development is hemodynamic deficiency and blood chronic ischemia associated with regional and systemic rheological diseases and is hypoxia.

Glaucoma, intraocular fluid in patients with diabetes in addition to impaired outflow and increased intraocular pressure, new occurs with the appearance of capillaries. Newly formed blood vessels not functional enough, so eye structures with enough blood not provided.

Accordingly, the process of apoptosis of nerve cells is accelerated. In addition to the vascular system of the eye and the optic nerve, the retina is colored pathological changes occur in the membrane. It is a co-development of changes quickly leads to blindness. With the rapid development of glaucoma on the background of diabetes described, so it requires a serious attitude. If the disease timely measures for treatment and prevention of further changes if it is not seen, the changes in the eye become irreversible.

In this regard, for the treatment of primary open-angle glaucoma we we proposed a complex method that includes surgical treatment - sinustrabeculectomy (STIE) and scleral posterior trepanation (SOT), conservative treatment - Emoxipin injection under the conjunctiva and physiotherapy - optic nerve (KN) laser stimulation.

The active substance of the antioxidant drug Emoxipin is methylethylpyridinol (methylethylpyridinol). Antioxidant. The permeability of the vascular wall reduces, has an antihypoxant and antioxidant effect. Blood viscosity and reduces platelet aggregation. Blood vessels and erythrocyte cells stabilizes membranes, mechanical

damage of erythrocytes and increases resistance to hemolysis. It has angioprotective properties. Improves microcirculation. Lipid peroxidation of biomembranes effectively inhibits, increases the activity of antioxidant enzymes. Antitoxic has an effect. In extreme cases, with increased lipid peroxidation and hypoxia simultaneously optimizes bioenergetic processes.

Emoxipin has retinoprotective properties. Above the retina protects against the harmful effects of light. Intraocular hemorrhages stimulates resorption and improves eye microcirculation. Laser stimulation increases the blood flow rate in the eyeball, new blood to the increase in the number of vascular collaterals, to the improvement of regional blood circulation leads to physiological and reparative regeneration of parts of the eyeball will help.

### **Conclusion**

- 1. In the treatment of primary open-angle glaucoma sinustrabeculectomy (STIE) and scleral posterior trepanation (SOT) vision with subconjunctival injection of Emoxipin after surgery laser stimulation of the nerve is a pathogenetically proven complex treatment treatment.
- 2. Sinustrabeculectomy and posterior trepanation of the sclera then laser of the optic nerve with subconjunctival injection of Emoxipin complex treatment in the form of stimulation in the dynamics of visual functions significantly improves.

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