PRELIMINARY COMMUNICATION

INFLUENCE OF β-ADRENERGIC ANTAGONISTS ON TEAR SECRETION IN CHILDREN

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The aim of the study was to compare the results of tear film volume, conjunctival and corneal state of children eyes both treated with β-blocker and healthy ones. We have examined 40 eyes of 20 children at the age from 7 to 17 years. Group I – 20 glaucomatous eyes treated with 0.5% timolol twice daily during at least 12 months. Group II – 20 eyes of control age-matched group. Schirmer I test without anesthesia and lissamine green staining was performed to evaluate conjunctival and corneal surface. The values of Schirmer I test were: group I from 12 to 24 mm, the mean 17.06 ± 1.78 mm and group II from 16 to 35 mm, the mean 29.3 ± 2.67, p = 0.000004. Keratoepitheliopathy was observed in 4 eyes (20%) of group I and was rated as 3rd and 6th degree of Franck classification. In the group II, there were only single staining points classified as 1st degree noticed in 2 eyes (10%), p = 0.37. The long-term treatment with timolol causes a decrease in tear secretion in children, which can further generate keratoepiteliopathy. Therefore, we suggest application of the artificial tears in these patients.

Key words: tear film, β-blockers, cornea, glaucoma, children, dry eye

The surgery is the first line therapy in childhood glaucoma. The pharmacotherapy is performed just before operation and after it if decreasing of intraocular pressure is not satisfactory. In these patients, antiglaucoma drugs are applied, sometimes for a long time. Among them β-adrenergic antagonists are used most often to decrease aqueous humor production. The constant tear secretion depends on

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