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Results of amniotic membrane using in patients with different risk of trabeculectomy failure in more than 1 year follow-up
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Purpose: To compare efficacy of amnion-shielded trabeculectomy and standard trabeculectomy in patients with risk of glaucoma surgery failure in more than 1 year follow-up.

Methods: We observed 129 patients with refractory glaucoma since May 2006 to April 2010: 61 patients were operated using standard trabeculectomy (Group 1) and 68 patients were operated using amnion-shielded trabeculectomy (Group 2). Each group was subdivided into two subgroups: with low and moderate risk of trabeculectomy failure, and with high risk of trabeculectomy failure. Exclusion criteria were inner fistula obstruction and unknown fistula condition. Inner fistula was visualized by optical coherence tomography. Efficacy of surgery was evaluated by survival analysis. Definition criteria of failure were: IOP more than 26 mmHg by Maklakov with highest dose of medications, repeated glaucoma surgery, cyclophotocoagulation.

Results: We found no evident differences in hypotensive effect, amount of medication and visual function between two groups (p > 0.05). In patients with low and moderate risk of trabeculectomy failure at the end of follow-up cumulative survival in Group 2 (28 patients) was 83.3%, and in Group 1 (42 patients) was 75.5% (p > 0.05). In patients with high risk of trabeculectomy failure at the end of follow-up cumulative survival in Group 2 (40 patients) was 69.4% and in Group 1 (19 patients) – 54.5% (p < 0.05). We found no statistically evident differences of postoperative complications rate among comparing groups.

Conclusions: Amniotic membrane using as an adjuvant during trabeculectomy in patients with risk of surgery failure may prolong a time of controlled glaucoma surgery hypotensive effect. Amnion-shielded trabeculectomy may be used in patients with different risk of surgery failure.