Amniotic membrane using as an trabeculectomy adjuvant in glaucoma patients with different risk of surgery failure
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Purpose: To compare efficacy of amnion-shielded trabeculectomy and standard trabeculectomy in patients with different risk of glaucoma surgery failure.

Methods: We observed 121 patients with risk of surgery failure and refractory glaucoma: 57 patients (58 eyes) were operated using standard trabeculectomy (Group 1 - control) and 64 patients (73 eyes) were operated using amnion-shielded trabeculectomy (Group 2 - study). Each group was subdivided into subgroups: A - with low and moderate risk of failure, B - with high risk of failure. Group 1A included 39 eyes of 38 patients - 11 with low and 28 with moderate risk, Group 2A included 26 eyes of 24 patients - 4 with low and 22 with moderate risk, Groups 1B and 2B included 19 eyes of 19 patients and 47 eyes of 40 patients respectively. Follow-up time in Group 1A averaged 164.31 ± 179.32 days, in Group 2A - 155.77 ± 138.66 days, in Groups 1B and 2B - 82.21 ± 90.97 and 114.11 ± 126.24 days. Efficacy of surgery was evaluated by Kaplan-Meier survival analysis. Failure definition criteria were: IOP more than 24 mmHg by Maklakov with highest dose of medications, dose increase in comparison with preoperative dose of glaucoma medications, repeated glaucoma surgery or cyclophotocoagulation.

Results: Cumulative survival in Groups 1A and 2A at 226th day was 92% and 100% respectively and kept on this percent to follow-up end (592 days). Cumulative survival in Groups 1B and 2B at 65th day was 80% and 89%, at 125th day - 57% and 81%, at 429th day - 0% and 35% respectively. We found no statistically evident differences of postoperative complications rate among comparing groups, but Group 2 had more significant rate of slow wound healing than Group 1.

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 low, moderate and high risk of surgery failure.