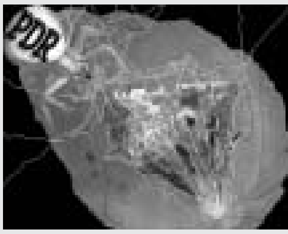

Surgical treatment of proliferative diabetic retinopathy with long-term tamponade by silicone oil

Author: Igor Seregine, Research Institute of Eye Diseases, Ufa, Russia

Purpose:
To study efficiency of surgical treatment proliferative diabetic retinopathy (PDR) with long-term tamponade by silicone oil.

Methods:
Analysis of the results of vitrectomy with infusion of siliconw oil in 30 patients with PDR of a various degrees. Twelve (40%) eyes had tractional retinal detachments; ten (33,3%) eyes had vitreous hemorrhage. Best-corrected preoperative average visual acuity was 0,03. In 96,3% of cases infusion of silicone oil was carried out at the time of primary vitrectomy. If necessary we carried out phacoemulsification with implantation of an intraocular lens. The average follow-up period was 10,2 months.

Results:
Postoperative best-corrected average visual acuity was 0,3. Five months after surgery, visual acuity decreased in two cases was induced by retinal and optic nerve ischaemia. Proliferative changes was stabilized at 28 (93,3 %) patients. In the long-term postoperative period these patients showed marked regression of new vessels and atrophy of residual fibrovascular tissue. The analysis of dynamics of electrophysiological parameters testified to decrease of amplitude a-wave and b-wave electroretinogram till 15-20%, that is connected to reduction edema of retina. In 3-4 months in 20 % cases silicone oil showed partial emulsification, however that has not affected the visual acuity of the patients.

Conclusion:
The application of long-term tamponade by silicone oil in surgery of proliferative diabetic retinopathy provides stable anatomy-functional results and eliminates the risk of postoperative vitreous hemorrhage.

Take-home message:
The application of silicone oil in surgery of proliferative diabetic retinopathy provides stable anatomic and functional results and eliminates the risk of postoperative vitreous hemorrhage.