

Intravitreal Avastin and 25 Gauge Vitrectomy in Treating Active Form of Proliferative Diabetic Retinopathy

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Purpose:

To study anatomic and functional findings of 25G vitrectomy combined with preoperative intravitreally injected Avastin in patients with active form of proliferative diabetic retinopathy (PDR).

Material & Methods:

9 patients (10 eyes) with PDR accompanied with expressed retinal neovascularization were included into investigation. Tractional retinal detachment was found in 8 cases, tractional and rhegmatogenic detachment was observed in 1 case, partial vitreous hemorrhage appeared in 2 cases. All patients received intravitreal Avastin injection (1, 25 mg) preoperatively, 1 to 6 weeks later 25G vitrectomy with silicon oil infusion was fulfilled. Oil removing was performed 2-5 months postoperatively. The follow-up period consisted of 4-8 months.

Results:

In all cases the reduction of newly formed vessels and decrease of retinal edema were observed on the third day after intravitreal Avastin. Strongly expressed anti-proliferative effect was marked on the 3-4 week after injection. At the same period intensification of vitreoretinal traction was seen. In 1 case it induced tractional retinal break and the increase of retinal detachment area in another one. The surgery resulted in total retinal adherence in all cases (100%). Postoperative visual acuity varied between 0.03 – 0.4, mean visual acuity made up 0,1. Anatomic and functional results remained stable during the whole follow-up period. Postoperatively 1 patient developed iris rubeosis in 6 months which showed regression 2 weeks later after additional Avastin (1,25mg) injection into anterior chamber.

Conclusions:

Preoperative anti-VEGF therapy in patients with active PDR forms provides favorable conditions for vitrectomy fulfillment and proliferation stabilization. The chance of vitreoretinal traction increase after intravitreal Avastin injection in patients with PDR is necessary to take into account determining the period of vitrectomy fulfillment.