

Anti-VEGF (bevacizumab) before vitrectomy in severe proliferative diabetic retinopathy

Authors: Stanislav Rodin, Veronika Aslanova, Nikolai Umanetz, Odessa, Ukraine

Advantages:

Intravitreal injection of bevacizumab before VE for severe PDR reduced hemorrhage risk and allowed to perform more effective surgery with complete and safe neovascularized ERM removal.

Methods:

The results of treatment of 17 patients (18 eyes) (20-67 y/o, 7 males, 10 females) with severe PDR who underwent vitrectomy (VE) were analyzed. The indications for surgery were the following: massive neovascularized epiretinal membrane (ERM) with tractional retinal detachment (RD) (extramacular or macular), neovascularized ERM with traction-rhegmatogenous RD (TRRD), vitreous hemorrhage, iris rubeosis. Intravitreal injection of 1.25 mg bevacizumab was performed 2-4 days before planned surgery. Such intraoperative parameters as intraoperative bleeding use of endodiathermy and silicone oil endotamponade were evaluated.

Effectiveness / Safety:

On the day of VE complete regression of ERM new vessels was achieved in 10 cases, as well as complete regression of iris rubeosis (1 case). Partial regression of ERM neovascularization was observed in 8 cases. In 16 cases ERM was successfully removed with minimal bleeding during dissection of fibrovascular tissue. So, there was no necessity to use endodiathermy in any case. In 5 cases C3F8 endotamponade were used because of retinal breaks during ERM removal. In 2 cases moderate bleeding was observed during ERM removal. Complete retinal reattachment was achieved in all cases. Silicone oil endotamponade was used in 3 cases. There was no increase of fibrosis and ERM adhesion after intravitreal bevacizumab in our case series.

Take home message:

Intravitreal injection of bevacizumab before VE for severe PDR caused the regression of ERM and iris new vessels during 2-4 days reduced hemorrhage risk and allowed to perform effective surgery in our case series. The reduction of overall surgical time was observed. No any side systemic or topical effects of intravitreal bevacizumab were noted.