

Platelet rich growth factor in the treatment of complex corneal disorders.

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Background. Platelet rich growth factor (PRGF) is an autologous blood product rich in proteins and growth factors which can be rapidly obtained from patient blood. Clinically, it is an affordable treatment with potentially broad spectrum of applications in ophthalmology especially in the treatment of complex or refractory corneal wounds. The aim of this study was to evaluate the efficiency of autologous platelet-rich factor in the treatment of complex corneal disorders.

The study was performed at the Ophthalmology Department of International Clinic, Orhei, Moldova in January - December 2022.

Materials and Methods. There were 28 patients with corneal surface disorders, among which 7 patients with chemical burns, 4 patients with corneal ulcers, 5 patients with corneal dystrophies, 8 with advanced pterygium and 4 with neurotrophic keratopathy. Visual acuity varied from hand motion to 0.7. Solid PRGF was either just placed on the corneal surface or sutured with 2 nodes of 10-00 nylon suture at conjunctiva. If necessary, the procedure was repeated. All patients had corneal OCT scan before and after the treatment.

Results. Improved visual acuity and less subjective symptoms were observed in all patients. Complete healing of cornea was observed in all patients with chemical burns and corneal dystrophies. As well considerable improvement experienced 3 of 4 patients with corneal ulcers (reduced size and depth of the ulceration, improved visual acuity, smaller conjunctival injection). Also an improvement was seen in 2 of 4 patients with neurotrophic keratopathy. All patients after pterygium surgery had clear cornea and no recurrences over 6-month period after treatment. None of the patients reported general or local side effects of the treatment.

Conclusions: PRGF is a reliable and effective therapeutic tool to promote wound healing in complex corneal disorders.

Keywords. Platelet rich growth factor, corneal disorders, wound healing