

## **Evaluation of the efficacy of subtenon autologous platelet-rich plasma therapy in patients with retinitis pigmentosa and factors affecting response to the treatment**

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### **Abstract**

#### **Purpose**

To evaluate the effect of subtenon platelet-rich plasma (PRP) treatment in retinitis pigmentosa (RP) patients and to determine the factors affecting the response to treatment.

#### **Methods**

For this purpose, 85 eyes of 43 RP patients with visual acuity of 1 logMAR and above were included in the study and subtenon autologous PRP treatment was applied 3 times at two-week intervals. In addition to a full ophthalmological examination, functional tests such as visual acuity, visual field, central retinal sensitivity measurement, and electroretinography (ERG) and structural measurements including the thickness of the outer retinal layers, and the length of the ellipsoid zone in optic coherence tomography, and the dimensions of the hyperautofluorescent ring in fundus autofluorescence imaging (FAF) were performed on the patients before and one month after the treatment.

#### **Results**

A statistically significant improvement was achieved in the patient's visual acuity, visual field MD and PSD index, and dark-adapted 10.0 ERG response b wave amplitude. There was no significant change in average central retinal sensitivity, fixation stability, outer retinal layer thickness and ellipsoid zone length. No statistically significant change was detected in the diameter and area of the hyperautofluorescence ring measured by FAF. It was found that the age of the patients and the age of onset of the disease were parameters affecting the treatment response.

#### **Conclusion**

With PRP treatment applied periodically in RP patients, it may be possible to improve visual function and stop the progression of the disease, which can be detected by structural evaluations.