IMPACT OF PRP DOSAGE ON TREATMENT OUTCOMES IN PATIENTS WITH ORGANIC ERECTILE DYSFUNCTION

Rinat Nugumanov [1], Rustam Omarbayev [1], Yerbol Iskakov [1], Yerkebulan Yermaganbetov [1] , Alexei Suchshenko [2] , Serik Bakhtyar [3]

National Scientific Medical Center, Astana, 010000, Kazakhstan
Medi-Art Clinic, Astana, 010000, Kazakhstan
Manash Kozybayev North Kazakhstan university, medical faculty, Petropavlovsk, 150000, Kazakhstan

**Corresponding author: Rustam.omar.82@mail.ru*

Background: High prevalence of erectile dysfunction (ED) and its association with cardiometabolic risk factors necessitate early detection at the primary health care level (screening with the IIEF-5 questionnaire, risk assessment, and referral to a urologist) and integration of treatment with behavior-modification programs (smoking cessation, blood pressure and glycemic control, weight reduction, and increased physical activity). Erectile dysfunction is a significant problem worldwide, particularly in Kazakhstan. Out of the 1,550 men surveyed, aged 21 to 79 years, 784 (52.3%) were diagnosed with ED. A promising new strategy for the treatment of ED has emerged—intracavernous injection of autologous platelet-rich plasma (PRP). The aim is to assess the safety and effectiveness of intracavernosal PRP injections in Kazakh patients with moderate to severe ED.

Materials and methods: The study included 80 male participants aged 36 to 65 with moderate to severe erectile dysfunction (ED) nonresponsive to traditional treatments. The participants were divided into four groups: Group 1: continued conservative treatment with phosphodiesterase type 5 inhibitors (PDE5i). Group 2: received intracavernous injections of 4 mL of PRP. Group 3: received 6 mL of intracavernous PRP. Group 4: received a combination of 4 mL PRP and calcium chloride solution injected intracavernosally.

Results: In all groups except the control group, there was an improvement in the IIEF-EF and EHS scores after one and a half months, with a peak in the third month. However, these improvements were not statistically significant compared to the baseline values. In the sixth month, there was a negative trend in improvement. When comparing the effectiveness of different groups based on the IIEF-EF and EHS scores, there was a slight improvement in the group receiving 6 mL compared with the group receiving 4 mL. Also, the calcium chloride group showed slightly higher rates compared to the other two groups. However, in this study, there were no statistically significant differences between the two groups.

Conclusion: PRP therapy appeared to be generally safe, with only minor side effects reported, such as short-term pain at the injection site, mild redness and swelling that disappeared after a few hours. No serious complications, like infection or severe allergic reactions, were observed. PRP treatment for moderate to severe erectile dysfunction (ED) appears to be safe, but its effectiveness is limited. Further research and development are needed to standardize the application of PRP in clinical practice. Prospective and randomized controlled trials with placebo control are needed to evaluate the efficacy of PRP for improving erectile function with greater certainty.

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Keywords: PRP, intracavernous, erectile dysfunction.

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