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Are Multiple Platelet-Rich Plasma Injections Useful for Treatment of Chronic Patellar Tendinopathy in Athletes?

A Prospective Study

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Abstract

Background: Chronic patellar tendinopathy (PT) is one of the most common overuse knee disorders. Platelet-rich plasma (PRP) appears to be a reliable nonoperative therapy for chronic PT.

Purpose: To evaluate clinical and radiological outcomes of 3 consecutive ultrasound (US)-guided PRP injections for the treatment of chronic PT in athletes.

Study Design: Case series; Level of evidence, 4.

Methods: A total of 28 athletes (17 professional, 11 semiprofessional) with chronic PT refractory to nonoperative management were prospectively included for US-guided pure PRP injections into the site of the tendinopathy. The same treating physician at a single institution performed 3 consecutive injections 1 week apart, with the same PRP preparation used. All patients underwent clinical evaluation, including the Victorian Institute of Sport Assessment-Patella (VISA-P) score, visual analog scales (VAS) for pain, and Lysholm knee scale before surgery and after return to practice sports. Tendon healing was assessed with MRI at 1 and 3 months after the procedure.

Results: The VISA-P, VAS, and Lysholm scores all significantly improved at the 2-year follow-up. The average preprocedure VISA-P, VAS, and Lysholm scores improved from 39 to 94 ($P < .001$), 7 to 0.8 ($P < .0001$), and 60 to 96 ($P < .001$), respectively, at the 2-year follow-up. Twenty-one of the 28 athletes returned to their presymptom sporting level at 3 months (range, 2-6 months) after the procedure. Follow-up MRI assessment showed improved structural integrity of the tendon at 3 months after the procedure and complete return to normal structural integrity of the tendon in 16 patients (57%). Seven patients did not recover their presymptom sporting level (among them, 6 were considered treatment failures): 3 patients returned to sport at a lesser level, 1 patient changed his sport activity (for other reasons), and 3 needed surgical intervention.

Conclusion: In this study, application of 3 consecutive US-guided PRP injections significantly improved symptoms and function in athletes with chronic PT and allowed fast recovery to their presymptom sporting level. The PRP treatment permitted a return to a normal architecture of the tendon as assessed by MRI.

Keywords:

patellar tendinopathy jumper's knee platelet-rich plasma treatment

Footnotes

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