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Platelet-rich plasma versus corticosteroid injection in pain and disability outcomes in patients with plantar fasciitis: a systematic review and meta-analysis

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ABSTRACT

Introduction: Plantar fasciitis is the most common cause of heel pain and often responds to a wide range of therapies. Many treatment options are currently available, such as platelet-rich plasma and corticosteroid injection, with great success for pain relief. However, there is no consensus concerning the best treatment method. The aim of this systematic review and meta-analysis was to investigate the effects of platelet-rich plasma versus corticosteroid injection in pain and disability outcomes in patients with plantar fasciitis.

Methods: Studies were comprehensively searched in Pubmed MEDLINE, the PEDro database, the Scientific Electronic Library Online, and the Cochrane Central Register of Controlled Trials, from the earliest date available to January 2019. Randomized controlled trials comparing the effects of platelet-rich plasma versus corticosteroid injection for patient with plantar fasciitis were included. Mean differences (MD) and 95% confidence intervals (CIs) were calculated, and heterogeneity was assessed using the I^2 test. Calculations were performed using a random effects model.

Results: Ten trials met the study criteria, including 475 plantar fasciitis patients. The main outcomes included changes from baseline in the Visual Analogue Scale Score (pain) and the American Orthopedic Foot and Ankle Society Score (disability). Platelet-rich plasma therapy resulted in improvement in pain MD (-1.01 95% CI: -1.8 to -0.3 N=375) compared with corticosteroid injection. No significant difference in disability MD (6.5 95% CI: -15.8 to 29.0 N=156) was found in participants in the platelet-rich plasma therapy group compared with the corticosteroid injection group. In addition, no serious adverse events were reported.

Conclusion: Platelet-rich plasma was more effective than corticosteroid injection and has the potential to reduce pain in patients with plantar fasciitis.

Keywords: Fasciitis, Plantar; Pain; Platelet-rich plasma; Corticosteroid injection.

