Platelet-Rich Plasma Is More Effective Than Cortisone Injection for Severe Chronic Plantar Fasciitis

Foot & Ankle Category: Hindfoot

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Introduction
Chronic plantar fasciitis is a common orthopedic condition that can prove difficult to successfully treat. In this study, autologous platelet-rich plasma (PRP), a concentrated bioactive blood component rich in cytokines and growth factors, was compared to traditional cortisone injection in the treatment of chronic cases of plantar fasciitis resistant to prolonged traditional nonoperative management.

Methods
The cortisone group included 9 males and 11 females with an average age of 59 (range 24-74). Symptoms averaged 5.4 months (range 4-24) in duration prior to treatment. The cortisone group had a pretreatment average AOFAS score of 52 (range 24-60) which initially improved to 81 (range 56-90) at 3 months post-treatment but decreased to 74 (range 54-87) at 6 months and returned to near baseline levels of 58 (range 45-77) at 12 months post-treatment. The PRP group had 8 males and 12 females with an average age of 51 (range 21-67). They averaged 5.7 months of symptoms prior to treatment (range 4-26). In contrast to the cortisone group results, the PRP group started with an average pretreatment AOFAS score of 37 (range 30-56) which increased to 95 (range 88-100) at 3 months, remained elevated at 94 (range 87-100) at 6 months, and had a final post-treatment score of 94 (range 86-100) at 12 months. The difference between the post-treatment AOFAS scoring results of the cortisone and PRP groups was clinically significant (P=0.001 CI 95%) at 3, 6 and 12 month follow-up evaluations.

Results
The cortisone group had a pretreatment average AOFAS score of 52 which initially improved to 81 at 3 months post-treatment but decreased to 74 at 6 months and returned to near baseline levels of 58 at 12 months post-treatment. In contrast, the PRP group started with an average pretreatment AOFAS score of 37 which increased to 95 at 3 months, remained elevated at 94 at 6 months, and had a final post-treatment score of 94 at 12 months. These results were clinical significant at all follow-up intervals (P=0.001 CI 95%).

Conclusion
Platelet-rich plasma is more effective and durable than cortisone injection in the short and long term treatment of severe chronic refractory cases of plantar fasciitis.