

Study #2 - Ultrasonographic Evaluation of Low Energy Extracorporeal Pulse-Activated Therapy (EPAT) for Chronic Plantar Fasciitis

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Background:

Ultrasonographic measurement of the plantar fascia can be used to objectively diagnose plantar fasciitis. The purpose of this study was to determine the long-term effectiveness of Extracorporeal Pulse-Activated Therapy (EPAT) - Shockwave therapy - for the treatment of plantar fasciitis using ultrasonographic measurement as an objective outcome measure, with a minimum follow-up of 12 months.



Methods:

Patients with chronic recalcitrant plantar fasciitis were prospectively recruited and underwent EPAT. Ultrasound measurement of the plantar fascia and patient-rated pain scores were collected before treatment and at follow-up (minimum of 12 months post-treatment). Twenty-five subjects (35 feet) met the inclusion criteria. The average follow-up time was 29.4 ± 13.1 (M \pm SD; range, 12 to 54) months.

Results:

The average thickness of the plantar fascia of the symptomatic heels was 7.3 ± 2.0 mm before treatment and 6.0 ± 1.3 mm after treatment ($p < 0.001$). The average change in thickness of the treated heels was -1.3 mm (-0.8 to -1.8 mm; 95% CI, $p < 0.0001$). No correlation was found between length of follow-up and change in ultrasound measured plantar fascia thickness ($r = -0.04$, $p = 0.818$).

Conclusion:

For patients with a greater than 12-month history of heel pain, Shockwave therapy can effectively decrease plantar fascia thickness as demonstrated objectively by ultrasound evaluation and reduce patient-reported pain. No relationship between length of follow-up and change in plantar fascia thickness was found after 12 months.

Source:

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