

## 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  $29.4 \pm 13.1$  (M  $\pm$  SD; range, 12 to 54) months.

### Results:

The average thickness of the plantar fascia of the symptomatic heels was  $7.3 \pm 2.0$  mm before treatment and  $6.0 \pm 1.3$  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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