

Extracorporeal Shockwave Therapy (ESWT) in The Treatment of Plantar Fasciitis

Authors:

P.Papandrea MD, M. Ciurluini MD, A. Ferretti MD

Institution:

"Kirk Kilgour" Sports Injury Center,
Department of Orthopaedic Surgery
St. Andrea Hospital, University of Roma "La Sapienza", Italy

Objectives:

evaluate medium-term clinical results of symptomatic treatment of plantar fasciitis.

Methods and Measures:

From October 1998 to December 2004, 82 patients affected by plantar fasciitis, 14 of whom with a bilateral pathology, for a total of 96 cases, were treated with ESWT.

On the basis of the inclusion criteria indicated by ISMST, 58 patients (67 cases) were included in the study.

44 patients (29 males and 15 females) aged between 21 and 77 years (average 56 year) were reviewed at 1 month, 4 month, 17-month follow up. 9 patients were affected by bilateral plantar fasciitis, for a total of 53 cases re-examined. 25 patients (30 cases) played sports activity.

X-rays showed the presence of calcaneal spur in 34 patients.

In the pre-treatment phase, the symptomatology was classified into 5 stages according to the severity of pain and its effects on daily activities.

- a) Stage 0: lack of pain;
- b) Stage 1: pain only after intense physical activity or after playing sports;
- c) Stage 2: pain and stiffness during intense physical activity or during sports;
- d) Stage 3: pain during daily activities;
- e) Stage 4: pain at rest and at night.

An average of four sessions (min 3, max 5) of shockwaves were administered (power from 0.04 to 0.250 mJ/mm², 2000-2.500 impulses for each session).

Clinical outcomes were evaluated according to the following criteria (based on the symptomathological classification mentioned above):

-Excellent: lack of pain (stage 0);

-Good: stage I with an improvement of at least two stages;

-Fair: improvement of one stage;

-Poor: no improvement.

Results:

At 1 month follow-up, 49% of patients reported satisfactory results (excellent and good results), at 4 months follow-up the percentage increased to 68%, at 17 month follow-up to were 81%. At 40 month f. up it was possible to review 15 patients (19 cases), satisfactory results were 84%.

Regarding the 34 patients affected by plantar fasciitis in association with calcaneal spur, at 17 month follow-up satisfactory results were 73%, no radiological evidence of disappearing of the spur was obtained.

Among the 25 sport players (30 cases) satisfactory results were 57% at 1 month, 80% at 4 month, 90% at 17 month follow-up.

Conclusion:

shockwave therapy represents a valid, non-invasive symptomatic treatment for patients with plantar fasciitis.