The Effectiveness of Extracorporeal Radial Shock Wave Therapy for Patients with Plantar Fasciitis

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Introduction:
Plantar fasciitis is a common cause of heel pain, affecting 10% of the general population. Extracorporeal shock wave therapy (ESWT) has been recommended as treatment for chronic plantar fasciitis in patients unresponsive to conservative treatment. The primary goal of this study was to determine the effectiveness of extracorporeal shock wave therapy compared with placebo in the treatment of chronic plantar fasciitis.

Methods:
A prospective, randomized, blinded, controlled study with two groups of subjects each was proposed. The study involved 104 patients (104 heels), including 52 patients (52 heels) in the shockwave treatment group and 52 patients (52 heels) in the control group. All patients had been suffering from plantar fasciitis for at least 6 months. Pre-treatment measurements included a visual analog pain scale (VAS) and the modified Roles and Maudsley scale (R&M). In the shock wave group, therapy was applied once a week for two weeks (2 x 2000 impulses) at an air pressure of 3.5 bars and frequency of 8 Hz at each session. The patients in the placebo group received treatment with the clasp on the heel. ESWT was performed without local anaesthesia. At the fourth week the subjects again completed a VAS and R&M.

Results:
At 4 weeks, there was a mean VAS decrease of 6.56 (79.7%) for the experimental group; there was a mean decrease of 2.94 (32.5%) for the control group. There was a statistically significant ANOVA group by time interaction indicating the experimental group had a greater decrease in pain when compared to the control group p and an increase in quality of life when compared with the control group p.

Discussion:
Extracorporeal shock wave therapy has a statistically significant decrease in pain scores than placebo for patients with plantar fasciitis. Extracorporeal shock wave therapy has a statistically significant increase in functional outcome (better quality of life) than placebo on patients with plantar fasciitis.

Conclusion:
Shock wave therapy is effective and safe for the treatment of chronic plantar fasciitis.