The American Journal of Sports Medicine

Am J Sports Med May 2006 vol. 34 no. 5 733-740

High-Energy Extracorporeal Shock Wave Therapy as a Treatment for Insertional Achilles Tendinopathy

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Abstract

Background: Results of high-energy extracorporeal shock wave therapy for the treatment of insertional Achilles tendinopathy are not determined. It is unclear how local anesthesia alters the outcome of this procedure.

Hypothesis: Extracorporeal shock wave therapy is an effective treatment for insertional Achilles tendinopathy. Local anesthesia field block adversely affects outcome.

Study Design: Case control study; Level of evidence, 3.

Methods: Thirty-five patients with chronic insertional Achilles tendinopathy were treated with 1 dose of high-energy extracorporeal shock wave therapy (**ESWT** group; 3000 shocks; 0.21 mJ/mm²; total energy flux density, 604 mJ/mm²), and 33 were treated with nonoperative therapy (control group). All extracorporeal shock wave therapy procedures were performed using a local anesthesia field block (LA subgroup, 12 patients) or a nonlocal anesthesia (NLA subgroup, 23 patients). Evaluation was by visual analog score and by Roles and Maudsley score.

Results: One month, 3 months, and 12 months after treatment, the mean visual analog score for the control and **ESWT** groups were 8.2 and 4.2 (P < .001), 7.2 and 2.9 (P < .001), and 7.0 and 2.8 (P < .001), respectively. Twelve months after treatment, the number of patients with successful Roles and Maudsley scores was statistically greater in the **ESWT** group compared with the control group (P > .0002), with 83% of **ESWT** group patients having a successful result, and the mean improvement in visual analog score for the LA subgroup was significantly less than that in the NLA subgroup (F = 16.77 vs F = 53.95, P < .001). The percentage of patients with successful Roles and Maudsley scores did not differ among the LA and NLA subgroups.

Conclusion: Extracorporeal shock wave therapy is an effective treatment for chronic insertional Achilles tendinopathy. Local field block anesthesia may decrease the effectiveness of this procedure.

- The author has declared a potential conflict of interest: He is the medical director of the orthopedic division of American Kidney Stone Management, Inc.
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