

ESWT as a treatment for chronic insertional Achilles tendinosis

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Purpose:

The purpose of this study was to determine the efficacy of high energy extracorporeal shockwave therapy (ESWT) for the treatment of adults with chronic insertional Achilles tendinosis and to determine if use of a local anaesthesia field block has an adverse effect on outcome.

Type of Study:

Retrospective case-control.

Methods:

Between June 1 2003 and January 31 2004, 68 patients with chronic insertional Achilles tendinosis were enrolled in this study. Each patient had failed to respond to a minimum of six months of traditional non-operative treatments. Thirty-five patients were treated with a single dose of high energy shock wave therapy (ESWT group). Thirty-three patients were treated with additional forms of traditional non-operative measures (control group). All procedures were performed by a physician using either a local anaesthesia field block (12 patients) or an anaesthesia other than local (23 patients). Each of the ESWT patients received a total of 3000 shocks for a total energy flux density of 604mJ/mm². T-tests and analysis of variance (ANOVA) were used to test for differences in visual analog scores (VAS) between the ESWT and control groups.

Results:

Four weeks post treatment, the mean visual analog score (VAS) for the control and ESWT groups were 8.2 (range, 6-10; SD=1.1) and 4.2 (range, 1-10; SD=2.4) respectively ($t=8.7$, $P < .001$). Twelve weeks post treatment, the mean VAS for the control and ESWT groups were 7.2 (range, 5-9; SD=1.3) and 2.9 (range, 1-10; SD=2.1) respectively ($t=10.1$, $P < .001$). Fifty-two weeks post treatment, the mean VAS for the control and ESWT groups were 7.0 (range, 4-9; SD=1.2) and 2.8 (range, 1-10; SD=2.2) respectively ($t=9.7$, $P < .001$). Using the Roles and Maudsley scale, 2 of the control patients (6.1%) and 6 of the ESWT patients (17.1%) were assigned an excellent result and 11 of the control patients (33.3%) and 23 of the ESWT patients (65.7%) had a good result at the final endpoint. ANOVA testing at 52 weeks post treatment revealed that the mean improvement in VAS score for the local anaesthesia subgroup was significantly less than the corresponding gain in the anaesthesia other than local subgroup ($F=16.77$ versus $F=53.95$, $P < .001$). There were no significant complications.

Conclusions:

ESWT is a safe and effective treatment for chronic insertional Achilles tendinosis. Local field block anaesthesia appears to decrease the effectiveness of this procedure.