

# Overuse Achilles tendinopathy: ESWT vs placebo. An 18 months follow up study

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The purpose of this study is to evaluate if Extracorporeal Shock Wave Therapy (ESWT) be considered potentially useful for overuse Achilles tendinopathy resistant to prolonged conventional non-operative treatment.

## Methods:

A prospective, double-blind clinical trial was performed to compare the outcomes of a standard treatment with ESWT with 2000 impulses of ESWT with energy flux density of 0.25 mJ/mm<sup>2</sup> in the painful segment of the Achilles tendon, at weekly intervals for 3 weeks and placebo in subjects dedicated to sport and affected by non-insertional Achilles tendinopathy which failed to improve after current conservative treatments. The comparison was submitted to the chi-square test for a significance level of 95%. Of a total of 102 patients, affected by intractable Achilles tendinopathy, 51 received ESWT and 51 received Placebo. The main outcome measurement were Visual Analogical Scale and 60-point scoring system.

## Results:

87 patients concluded the study (44 ESWT and 43 Placebo). At 18 months follow-up: in the ESWT group 10 (22.8%) good, 23 (52.2%) fair and 11 (25.0%) poor; in the Placebo group 5 (11.6%) good, 12 (27.9%) fair and 26 (60.5%) poor.

## Discussion:

The management of Achilles tendinopathy is usually conservative and few therapeutic measures can be considered effective. Sometimes a slow spontaneous recovery is present. Surgery is indicated after exhausting periods of conservative treatment, but the results are controversial and frequently not satisfactory. The good results obtained with ESWT without significant risks and the controversial results of operative treatment of tendon disorders in athletes prompted us to consider ESWT for those sportsmen affected by non-insertional chronic tendinopathy of Achilles who failed to improve significantly after conventional conservative treatment.

## Conclusion:

In conclusion ESWT confirmed to be an effective and safe therapeutic tool for Achilles tendinopathy resistant to conventional non-surgical management.