

# Radial Shock Wave Therapy (RSWT) for the Treatment of Chronic Tendonopathies - our Experience

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The aim of this prospective study was to analyze the results obtained during treatments with RSWT for chronic tendonopathy pathologies.

Prospective study. Between January 2002 and December 2004, 112 patients (mean age = 45+/- 14 years) with a diagnosis of chronic tendonopathy pathologies (patellar tendon, Achilles tendon, lateral epicondylitis, plantar heel pain, supraspinatus tendon with or without calcific deposit and bursitis trochanterics), a history of chronic symptoms for at least 4 months (mean chronicity = 18.22+/-17.67 months), and failure of or poor results from two conventional treatments were treated in our clinic with a radial shock wave device Swiss Dolor Clast (EMS, Switzerland). Of the total patients, 4 did not complete the treatment protocol and 13 could not be evaluated in the follow up period (15% lost patients). The other 95 patients were treated in 3 sessions, at intervals of one week, with 2,000 impulses per session at 2.5-3.5 bars of intensity (energy flux density = 0.1-0.16 mJ/mm<sup>2</sup>) and a frequency of 6 Hz. A visual analogue scale (VAS) evaluated the pain intensity during daily life activity (DLA) and sports activity (SA). Functional impairment of the corporal segment injured was evaluated by using functional tests according to the indicated pathology. Evaluation was performed immediately before treatment and at 4, 26 and 52 weeks after the final session. During follow up the patients' satisfaction was evaluated on the Roles and Maudsley scale (RM).

The non-parametric Wilcoxon test for dependent samples to compare means of VAS and functional test. The pain intensity of DLA and SA decreased significantly ( $p < 0,001$ ) and functional tests showed significant improvement ( $p < 0,001$ ) at 4, 26 and 52 weeks post RSWT. The excellent and good results obtained in 68 patients (73%) at 4 weeks post RSWT remained approximately constant at 26 weeks (74%) and 52 weeks (70%) after treatment. Only minor side effects such as swelling, petechia and discomfort during treatment were reported.

Radial shock wave therapy is an effective and safe method (minor side effects) for the treatment of chronic tendonopathy pathologies with a history of chronic symptoms for at least 4 months and failure of or poor results from two conventional treatments.