

# **Effect of radial extracorporeal shock wave therapy for trochanter pain syndrome.**

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## **Device and producing company:**

Swiss Dolor Clast, EMS

## **Introduction:**

Trochanteric pain syndrome or trochanteric bursitis is a common regional pain syndrome. It is characterized by chronic and intermittent aching pain over the lateral side of the hip and limitation of function. The prevalence is higher in females than males (rate 4:1), and the incidence is highest between the ages of 40 to 60, even though cases have been reported in all age groups. The etiology is not well known. Upon physical examination, the clinical signs are pain on resisted abduction and pain to the palpation of the greater trochanter.

Treatment includes physical therapy methods, painkillers, and local steroid injection. The aim of this study was to evaluate the effect of radial extracorporeal shock wave therapy (rESWT) in trochanter pain syndrome. This study is a starting point for a future randomized clinical trial.

## **Methods:**

Between June 2005 and March 2007, 81 patients with trochanter syndrome were treated with rESWT, 15 of them with bilateral syndrome (total of 96 trochanter pain syndromes).

These patients consisted of 14 men and 67 women, aged 29-69 years old (mean 56). The patients must have had clinical symptoms for at least 3 months before the treatment.

The patients were treated in 3 sessions (at intervals of 1-2 weeks, mean 12 days) with 3,000 impulses per session. Device used: Swiss Dolor Clast (EMS-Switzerland). Energy flux density: 0.12-0.16 mJ/mm<sup>2</sup>. The pain center was detected by biofeedback. The intensity of pain was evaluated by a Visual Analogue Scale (VAS). The pain on palpation of the greater trochanter and pain during daily activity were evaluated in each examination. Evaluation was performed several times: immediately before treatment and on the week 4<sup>th</sup>, 26<sup>th</sup> and 52<sup>nd</sup> week after treatment. Analyses: The non-parametric Wilcoxon test for dependent samples has been used to compare means of VAS. At the end of follow-up, the patients were asked to assess their level of residual pain compared with pain before treatment, according to the Roles & Maudsley scale (RM scale).

## **Results:**

Patients showed a considerable pain level decrease four weeks after the treatment (to the palpation  $p < 0.05$  and during daily activity  $p < 0.05$ ), and pain levels decreased further in the following examinations (to the palpation  $p < 0.01$  and during daily activity  $p < 0.01$ ). Good and excellent results (grades 1 and 2 by RM scale) were obtained in 69 trochanter pain syndromes (72%). These side effects were observed: small superficial haematomas (76%), petechiae (32%), swelling (52%) and pain (88%). All side effects were tolerated by all the patients and disappeared after 2-15 days.

## **Conclusion:**

rESWT is an effective treatment method for trochanter pain syndrome. Further randomized and controlled studies are necessary to underline the results of this investigation.