

ESWT for Soft Tissue Pathologies: Case Review

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Introduction: The aim of this retrospective study is demonstrating the experience of three Brazilian Centers of Extra corporeal Shockwave Therapy using an electro hydraulic high-energy device (REFLECTRON -HMT) to treat Soft Tissue Pathologies.

Materials and Methods:

From March 2001 to May 2003, 260 consecutive patients with soft tissue pathologies were treated: 60 calcarea tendinitis of the shoulder, 26 tendinosis of the shoulder, 42 epicondylitis; 24 trochanteric bursitis, 39 Achilles tendinopathy with or without calcification; 69 plantar fasciitis and heel spur.

We used the parameters recommended for such pathology by ISMST in the selection of all patients.

One application was performed on 235 patients, 21 patients needed a second application and 4 patients needed a third application, using local anesthesia and treated with a variation of 1200 to 2000 impulses and E3 to E7 of energy flux density were applied as the parameters suggested by HMT.

We used the analogical-visual scale of pain intensity as subjective evaluation, considering optimum/good values between 0-3, fair 4-6, unsatisfactory 7-10.

We observed side effects such as local irritation, petechia, hematomas, swelling and increase in pain 24-36 hours after treatment. By an objective point of view, we matched x-rays and ultrasound performed before treatment with those performed 90 and 180 days after treatment.

Results:

The Roles and Maudsley criteria were used for outcome analysis:

Grade 1: excellent - no pain, full movement and activity.

Grade 2: good - occasional pain, full movement and activity.

Grade 3: acceptable - some discomfort after prolonged activity.

Grade 4: poor - pain limiting activity.

Seven patients were excluded because of inadequate follow-up. The remaining 253 patients were included in the analysis with follow-up ranged from 6 to 20 months.

We considered “excellent” and “good” (Grade 1 - 2): 46 cases (77.96%) of tendinosis calcarea of the shoulder; 23 cases (88.46%) of tendinosis of the shoulder; 32 cases (80%) of epicondylitis; 22 cases (91.66) of hip bursitis; 24 cases (66.66%) of Achilles tendon calcifying (or not) tendinosys and 52 (74.47%) of plantar fasciitis and heel spur.

The improvements in pain score (VAS) were statistically significant when follow-up examination were scheduled at 30, 90 and 180.

The authors confirmed the effectiveness of ESWT in the treatment of soft tissue pathologies after this case review.