Radial shock wave therapy in patients with lateral epicondylitis.

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Author information

Abstract
INTRODUCTION:
Lateral epicondylitis, or "tennis elbow", is a relatively common disorder. Various therapeutic modalities have been tried in an attempt to manage the disorder but neither the conservative methods nor the surgical options have proved to be beneficial so far. During the past decade in the USA and European countries and the past several years in Bulgaria, the shock wave therapy (focused and radial) has been introduced as a method of choice in the treatment of chronic tendynopathies. The AIM of the present study was to make quantitative assessment of the effect of radial shockwave therapy in patients with lateral epicondylitis.

PATIENTS AND METHODS:
The study included 16 patients with lateral epicondylitis (9 males, 7 females, mean age 47.2 +/- 2.3 yrs) of mean duration of 15.06 +/- 4.06 months. We used the BTL-5000 radial shockwave therapy equipment and performed 5 procedures (one per week). The total number of shocks was 2500, the pressure was 2 Bars: 1500 shocks of 5 Hz frequency followed by 500 shocks of 10 Hz frequency were applied locally on the lateral epicondyle and 500 shocks of 2 Bar pressure and 5 Hz frequency were applied along the muscles near the insertion. The patients were evaluated 5 times: before treatment, immediately after the end of treatment and at 3, 6 and 12 months of follow-up. Pain was assessed at rest, on palpation and by the Thomsen test using a visual analogue scale (VAS). The patient-rated tennis elbow evaluation (PRTEE) questionnaire was used to assess the patients' pain, functional condition and limitations in performing specific activities, as well as for the overall self evaluation.

RESULTS:
We found significant difference (p < 0.05) between the mean pain scores (at rest, on palpation and by Thomsen test) before treatment and these scores obtained immediately after treatment, the decrease sustained at 3, 6 and 12 months. VAS showed decrease from 3.75 +/- 0.49 before therapy to 2.44 +/- 0.39 after treatment, to 1.94 +/- 0.46 at 3 months and to 0.69 +/- 0.38 at one year at rest, from 7.44 +/- 0.38 before therapy to 4.69 +/- 0.51 after treatment, to 3.56 +/- 0.40 at 3 months and 1.46 +/- 0.56 at one year at palpation, and from 5.87 +/- 0.46 before therapy to 3.5 +/- 0.29 after it, to 2.5 +/- 0.40 at 3 months and 1 +/- 0.38 at one year in the Thomsen test. The pain, function and the total score as assessed on the patient-rated scale (PRTEE) also showed statistically significant improvement (p < 0.05) after completion of therapy and over the whole follow-up. Total score decreased from 56.75 +/- 2.34 before therapy to 39.38 +/- 3.96 after treatment, to 27.53 +/- 3.7 at 3 months and to 13.69 +/- 4.48 at one year.

CONCLUSION:
Based on the results of this preliminary study we could recommend the radial shock wave therapy in the treatment of lateral epicondylitis of more than 6 months' duration if the condition is recalcitrant to other conservative methods of treatment.