

# **Efficacy of Radial Shock Wave Therapy (RSWT) combined with Low Level Laser Therapy (LLLT) in the management of supraspinatus tendinopathies**

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## **Device and producing company:**

BTL-5000, SWT Power

## **Introduction:**

Although the literature demonstrates the effectiveness of RSWT (Radial Shock Wave Therapy) or LLLT (Low Level Laser Therapy) in the treatment of tendinopathies, there is still no work to assess the combination of these two methods. The purpose of this study is to demonstrate that the association of RSWT and LLLT is effective in the management of painful shoulder due to supraspinatus tendinopathies.

## **Methods:**

In a multicenter study the authors treated a group of patients suffering from degenerative tendinopathies of supraspinatus by combining RSWT and LLLT using a BTL-5000 SWT Power device. The protocol consists of 4 treatments in weekly sessions. The parameters of RSWT in each session are 3000 shocks at a pressure of 5 bars and a frequency of 18 Hz. With regard to LLLT, the authors treated an area of 25 cm<sup>2</sup> at 20 J/cm<sup>2</sup> for 15 minutes. The LLLT immediately follows the RSWT. All patients were assessed before treatment and at 1 month follow-up by Constant score, SF-36 and computerized analysis of movement.

## **Results:**

The combination of RSWT and LLLT is effective in the treatment of supraspinatus tendinopathies from a clinical point of view, from a functional point of view and from the point of view of quality of life perceived by the patient. By comparing the results with those in literature for each individual method it is possible to evaluate that the combination improves the results and reduces treatment time considerably. The therapy is well accepted by patients and free of side effects.

## **Discussion:**

The combination of RSWT and LLLT offers faster and more effective treatment due to:

- anti-inflammatory effect
- analgesic effect
- anti-oedematous effect
- acceleration of the healing process
- enhancement of tendon quality

## **Conclusion:**

This study (level III of evidence according to EBM), is important because it lays the groundwork for the organization of more detailed work, which could provide a comparison of this combined therapy with individual therapy or with other alternative therapies (for example ESWT) by prospective controlled single- or double-blinded studies.