

ESWT: a Tool Against Neurogenic Inflammation in "Pillar Pain" Disease

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"Pillar pain" is a painful syndrome, probably due to neurogenic inflammation, locally complicating 20% of carpal tunnel releases. The aim of this study was to confirm our previous preliminary results about the effectiveness of Extracorporeal Shock Waves (ESW) in this disease, and to postulate further explanations about the mechanism of action.

Forty patients suffering from subcutaneous painful swelling in the interthenar area, scar redness, thenar and/or hypothenar discomfort, 2 to 3 months after surgery, were subjected to ESW (3 weekly treatments, 0.03 mJ/mm², 2,500 – 3,000 shocks/session), under "in- line" ultrasound examination. Some of them, before and after treatment, were subjected to wrist NMR or ultrasound and Doppler examination.

The results confirmed our previous observations about the effectiveness of ESW in rapid relief of pillar pain.

More than 90% of the patients reported complete recovery within approximately 1 month; many of them had significant improvement after the first treatment; usually, pain relief followed swelling and scar redness resolution. Moreover, there was a strict correlation between pathological NMR and ultrasound findings and clinical data. No side effects were observed during or after ESW treatment.

Pillar pain is a self-relieving condition, but it takes a relatively long time for pain resolution. ESW proved to be a valid tool, with a strong positive effect in rapidly resolving pain, swelling and scar redness. The authors, on the basis of these results and some theoretical and experimental data from the literature, will discuss the pathophysiological basis of ESW efficacy in neurogenic inflammation, thus providing new perspectives in this field.