

# Electromagnetic transduction therapy and shockwave therapy in 86 patients with rotator cuff tendinopathy: A prospective randomized controlled trial

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## ABSTRACT

Rotator cuff (RC) tendinopathy is the most common cause of shoulder pain. The effectiveness of electromagnetic transduction therapy (EMTT), a high energetic pulsed electromagnetic field therapy in this field has not been tested yet in combination with extracorporeal shock wave therapy (ESWT).

A total of 86 patients with RC tendinopathy were randomized to undergo three sessions of ESWT in combination with 8 sessions of EMTT or sham-EMTT. Both intervention groups experienced significant and clinical relevant decrease of pain at all follow-up visits, and the functionality of the shoulder evaluated by the Constant Murley score increased significantly as well. The combination of EMTT + ESWT produced significantly greater pain reduction in the visual analogue scale compared to ESWT with sham-EMTT after 24 weeks, during which the Constant Murley score improved significantly when the combination of ESWT and EMTT was employed.

In patients with RC tendinopathy, electromagnetic transduction therapy combined with extracorporeal shock wave therapy significantly improves pain and function compared to ESWT with sham-EMTT.

**KEYWORDS:** EMTT PEMF ESWT rotator cuff tendinopathy electromagnetic transduction

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