Non-thermal Effect of Pulsed Ultrasound Therapy for Shoulder Pain Due to Acute Adhesive Capsulitis: An Ultrasonographic Study

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**Purpose:** We investigated the non-thermal effect of pulsed ultrasound therapy as an anti-inflammatory treatment and analgesic for shoulder pain due to acute adhesive capsulitis.

**Method:** Our study population included twelve patients with acute adhesive capsulitis who were randomized to either a control(C) group or an ultrasound treatment(US) group. The ultrasound-treated patients underwent 6 sessions (three times/week) of pulsed ultrasound therapy for 10 min each at a frequency of 1.0 MHz, intensity of 0.5 w/cm² and pulse mode of 20%. Pain (VAS), range of motion, muscular strength, and quality of life (SF-36) were assessed before and after treatment.

**Results:** Compared to the C group, the US group showed a significantly greater supraspinatus tendon thickness by ultrasonography, night pain, and range of motion (flexion, external rotation).

**Conclusion:** These results show that non-thermal treatment by defined pulsed ultrasound therapy in this study may be effective for patients who have acute adhesive capsulitis.