

EFFICACY OF PULSED ELECTROMAGNETIC FIELD ON PAIN AND FUNCTION IN CHRONIC MECHANICAL NECK PAIN: A RANDOMIZED CONTROLLED TRIAL

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ABSTRACT

Background: Mechanical neck pain (MNP) is a common neck disorders affecting middle-aged population. Magnetotherapy is considered as a safe and non-invasive physical therapy modality used in the treatment of musculoskeletal pain.

Subjects and Methods: A total of 60 male patients participated in this study. Their mean age, weight, height, body mass index (BMI) and duration of illness were 23.03 (2.239) years, 63.43 (5.195) Kg, 1.662 (5.1092) cm, 22.98 (1.879) Kg/m², 4.483(1.228) months respectively. They were randomly assigned in to two groups. Group I (30 Patients) was treated with PEMF plus exercises (PEMF+EX) group and group II (30 Patients) treated with placebo magnetic plus exercises (PL+EX) group. Exercise program included active range of motion, muscle stretching and strengthening exercises applied two sessions/week for 6 weeks. PEMF was applied with 20 Hz, 0.8 mT for 20 minutes two sessions/week for 6 weeks. Pain level was measured by visual analog scale (VAS) and neck functions were measured by neck disability index (NDI). The level of significance was set at p< 0.05.

Results: Wilcoxon matched-pairs signed-ranks test revealed significant differences in VAS and NDI in PEMF+EX and PL+EX groups (p <0.0001). Mann-Whitney (MW) Test showed significant decreased in VAS and NDI scores both treatment (p <0.0001) with more significant decrease in PEMF group than PL+EX group.

Conclusion: PEMF combined with exercise was effective more than exercises alone in decreasing the scores of VAS and NDI in Chronic MNP.

KEY WORDS: Chronic MNP, Exercise, Neck disability index, Pain, Pulsed electromagnetic field.

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