

Pulsed Magnetic Field Versus Low Frequency Transcutaneous Electrical Nerve Stimulation in Management of Chronic Mechanical Low Back Pain

Mohamed H. Elgendy

*Department of Basic Science, Faculty of Physical Therapy, Cairo University

ABSTRACT

Background: Chronic mechanical low back pain is reported to be a major health problem worldwide. **Purposes:** To investigate and compare the efficacy of pulsed magnetic field and low frequency transcutaneous electrical nerve stimulation in management of chronic mechanical low back pain. **Study Design:** A pre test post test control group design. **Materials and methods:** Thirty patients with chronic mechanical low back pain from both sexes were involved, aged between 35– 50 years old. They were divided into three equal groups, ten patients each. Patients in the first group (control group) received a therapeutic ultrasound in addition to traditional exercise program in the form of stretching and strengthening exercises for the back and abdominal muscles. Patients in the second group received pulsed magnetic field in addition to the program of the control group. Patients in the third group received low frequency transcutaneous electrical nerve stimulation in addition to the program of the control group. Treatment was done 3 times a week for 4 weeks. Range of motion, pain level and functional performance were measured before and after treatment. **Results:** There were significant differences within the three groups before and after treatment ($P<0.05$) and between the three groups after treatment in range of motion, pain level and functional performance ($P<0.05$). **Conclusion:** Pulsed magnetic field proved to be more beneficial than low frequency transcutaneous electrical nerve stimulation in improving range of motion, functional performance and perceived back pain in patients with chronic mechanical low back pain. **Key words:** Chronic mechanical low back pain, pulsed magnetic field, transcutaneous electrical nerve stimulation.