

Immediate Effect of Transcutaneous Electrical Nerves Stimulation on Flexibility and Health Status in Patients with Chronic Nonspecific Low Back Pain (A Pilot Study)

Authors : Narupon Kunbootsri, Patpiya Sirasaporn

Abstract : Low back pain is the most common of chief complaints in chronic pain. Low back pain directly affect to activities daily living and also has high socioeconomic costs. The prevalence of low back pain is high in both genders in all populations. The symptoms of low back pain including, pain at low back area, muscle spasm, tenderness points and stiff back. Transcutaneous Electrical Nerve Stimulation (TENS) is one of modalities mainly use for control pain. There was indicated that TENS is widely use in low back pain, but no scientific data about the flexibility of muscle after TENS in low back pain. Thus the aim of this study was to investigate immediate effect of TENS on flexibility and health status in patients with chronic nonspecific low back pain. Eight chronic nonspecific low back pain patients 1 male and 7 female employed in this study. Participants were diagnosed by a doctor based on history and physical examination. Each participant received treatment at physiotherapy unit. Participants completed Roland Morris Disability Questionnaire (RMDQ), numeric rating scale (NRS) and trunk flexibility before treatment. Each participant received low frequency TENS set at asymmetrical, 10 Hz, 20 minutes per point. Immediately after treatment, participants completed RNS, RMDQ and trunk flexibility again. All participants were treated by only one physiotherapist. There was a statistically significant increased in flexibility immediately after low frequency TENS [mean difference -6.37 with 95%CI were (-8.35)-(-4.39)]. There was a statistically significant decreased in numeric rating scale [mean difference 2.13 with 95%CI were 1.08-3.16]. Roland Morris Disability Questionnaire showed improvement of health status average 44.8% immediately after treatment. In conclusion, the results of the present study indicate that immediately effect after low frequency TENS can decrease pain and improve flexibility of back muscle in chronic nonspecific low back pain patients.

Keywords : low back pain, flexibility, TENS, chronic

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