

Integrated Neuromuscular Inhibition Technique Reduces Pain Intensity on Upper Trapezius Myofascial Trigger Point

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Abstract

Objective: The objective of the study was to examine the effect of integrated neuromuscular inhibition technique (INIT) in the treatment of MTrP of upper trapezius using pressure pain threshold (PPT) and visual analog scale (VAS). **Method:** Fifteen participants who came to manipal hospital, eight of them were randomized into INIT group and seven of them were randomized into conventional group. Two outcome measures were 1) Pain Pressure Threshold (PPT) and 2) Visual Analogue Scale (VAS) taken at baseline and after 2 weeks. **Results:** When PPT was compared between the group there was no significant change demonstrated, the mean change score between the group was 1.33 lbf/cm² (p-value>0.05) but the mean change score of VAS between the group was 14.61 mm (p-value<0.05), there was a significant improvement in VAS observed between the group. **Conclusion:** INIT is effective in relieving pain in participants with upper trapezius MTrP.

Keywords: Myofascial trigger point; Integrated neuromuscular inhibition technique; Upper trapezius; Vapocoolant spray-stretch and pressure pain threshold.

Introduction

Myofascial trigger point (MTrP) is seen in medical practice with a point prevalence from 10% to 18% and lifetime prevalence from 30% to 50%. [1,2] MTrP is commonly recognised as muscle knots and discrete, hypersensitive, localized hard palpable nodules located within taut bands of skeletal muscles that affect any age group. [3] MTrP results from injured or overloaded muscle fibers. The resulting microtrauma leads to involuntary shortening and loss of oxygen and nutrient supply, with increased metabolic demand on local tissues. [3,4] MTrPs are common in postural muscles of the neck including upper trapezius,

levator scapulae, sternocleidomastoid and scalene. Studies states that upper trapezius being one of the most predominantly affected muscle. [3,5]

The treatment approaches for MTrPs are invasive and non-invasive. Non-invasive therapy consists of manual therapy and electrotherapy. MTrPs are commonly managed using manual therapy techniques which involve spray-stretch, [6] muscle energy technique, [7] strain-counterstrain, [8] integrated neuromuscular inhibition technique, [9] ischemic compression, [10] transverse friction massage. [11] Electrotherapy modalities most frequently used are transcutaneous electrical nerve stimulation, [12] laser therapy [13] and ultrasound. [14] Invasive therapy mainly involves dry needling [15] and injections. [16]

Vapocoolant spray-stretch and transcutaneous electrical nerve stimulation (TENS) are effective conventional treatments commonly used for MTrP in practice. [3,17] In a study, integrated neuromuscular inhibition technique has shown effectiveness in treatment of upper trapezius MTrP, where this technique

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