

Comparative Efficacy of Dry Needling Combined with Passive Stretching Versus Dry Needling Combined with Muscle Energy Technique on Upper Trapezius Myofascial Trigger Points Associated with Neck Pain: A Randomised Clinical Trial

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Myofascial trigger points (MTrPs) in the upper trapezius contribute to neck pain, affecting daily activities. While dry needling (DN), passive stretching, and muscle energy techniques (MET) are effective individually, combined therapies may offer superior outcomes; however, no study has compared these two combinations. This study aimed to compare the efficacy of DN combined with passive stretching and DN combined with MET in treating upper trapezius MTrPs, focusing on pain intensity, neck disability, and active neck range of motion (ROM). In this single-blind randomised clinical trial, 46 participants with chronic neck pain due to upper trapezius MTrPs were randomly assigned to receive DN combined with passive stretching (n = 23) or DN combined with MET (n = 23). Treatments were administered twice per week for two weeks. Pain intensity (0-100 mm Visual Analogue Scale) was the primary outcome, while secondary outcomes included the Neck Disability Index (NDI) and active neck ROM. Assessments were conducted at baseline and after the final intervention. The groups were comparable at baseline ($P > 0.05$). Both groups showed significant improvement in neck pain intensity, neck disability and active neck ROM from baseline. However, there were no significant differences in pain intensity and NDI improvements between groups ($P > 0.05$). For ROM, significant differences were observed in neck flexion and rotation to the unaffected side ($P < 0.05$). DN combined with passive stretching was superior for neck flexion, while DN combined with MET was more effective for rotation to the unaffected side. In conclusion both treatment combinations effectively reduced pain and disability, though their effects on ROM varied. Further research extending treatment over three to four weeks could help distinguish between these treatments more effectively.

Keywords: Myofascial trigger points, passive stretching, MET, dry needling