Abstract

Title: *Comparative Effectiveness of Instrument-Assisted Soft Tissue Mobilization and Extracorporeal Shock Wave Therapy in Myofascial Neck Pain: A Pilot Study*

Background: Myofascial neck pain, often stemming from trigger points in the upper trapezius, is a prevalent musculoskeletal condition among young adults, especially students. Instrument-Assisted Soft Tissue Mobilization (IASTM) and Extracorporeal Shock Wave Therapy (ESWT) are two emerging non-invasive modalities with reported effectiveness in managing myofascial pain. However, limited research directly compares their outcomes.

Objective: This pilot study aims to compare the effectiveness of IASTM and ESWT in reducing pain and improving functional outcomes in students with myofascial neck pain.

Methodology: A single-blinded, randomized pilot study was conducted on 36 college students with diagnosed myofascial neck pain at Brainware University. Participants were randomly divided into three groups (IASTM, ESWT, Control), with each group receiving treatment three times a week for two weeks. Outcome measures included Pressure Pain Threshold (PPT), Cervical Range of Motion (CROM), Numeric Pain Scale (NPS), and Neck Disability Index (NDI), assessed at baseline and post-intervention.

Results: Both IASTM and ESWT groups showed significant improvement in pain reduction and functional outcomes compared to the control group, with ESWT showing marginally better results in enhancing cervical mobility and reducing pain intensity.

Conclusion: Both IASTM and ESWT are effective in treating myofascial neck pain, with ESWT demonstrating slightly superior clinical outcomes. This study supports the use of non-invasive interventions in physiotherapy practice and highlights the need for further large-scale studies to validate these findings.

Key words : Pain pressure threshold, Neck disability index , myofascial neck pain, neck pain, upper trapeizius

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