



EFFECTIVENESS OF INSTRUMENT ASSISTED SOFT TISSUE MOBILIZATION IN UPPER TRAPEZIUS MYOFASCIAL TRIGGER POINT -A REVIEW ARTICLE



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ABSTRACT

The hypersensitive, palpable nodules known as myofascial trigger points (MTrPs) are located along muscular bundles. They frequently affect the shoulder girdle & cervical muscles. The muscle most usually affected is the trapezius. Trigger points in the neck are thought to be present in 85% of patients who visit pain clinics, and they affect women more frequently than males. In this study we see the effect of Instrumented assisted soft tissue mobilisation (IASTM) on upper trapezius myofascial trigger point. Most studies in our review study reported the IASTM's usefulness in treating upper trapezius trigger points, but additional research is required.

Keywords: IASTM, Upper trapezius, trigger point, M2t blade, Myofascial pain syndrome, Neck pain.

INTRODUCTION

The hypersensitive, palpable nodules known as myofascial trigger points (MTrPs) are located along myofibrils are bundled tightly. The muscles of the cervical and shoulders are commonly impacted. Muscles that are usually affected is the trapezius. Trigger points in the neck are thought to be present in 85% of patients who visit pain clinics, and they affect women more frequently than males.¹ Clinically, MTrPs are divided into latent and active forms. While latent trigger points only create pain when touched and impede mobility, active trigger points induce continual discomfort during rest and are connected to sequences of transferred pain. Trigger points are the source of the chronic pain in myofascial pain syndrome. It is linked to autonomous sign that affect the individuals physical capabilities as well as musculoskeletal issues (muscular tightness, limited range of motion (ROM), and diminished elongation of fibre).¹

Instrumented assisted soft tissue mobilisation

(IASTM) is developed by GRASTON. The James Cyriax idea forms the basis of IASTM., however, rather than using fingers to create cross-friction massage, it utilises specifically developed steel devices to cause specific soft tissue injuries (such as tissue scars or myofascial tightness), having a view to lowering discomfort and enhancing function & ROM.² Adam Berger created the M2T blade, a multipurpose tool with numerous planes that is currently employed in a variety of orthopaedic treatments. It is reasonably priced.³ The M2T-Blade is one of IASTM's newest inventions. It is a tool made of surgical-grade stainless steel (0.316).⁴ The IASTM therapy is intended to encourage collagen production in addition to fibroblast-recruited healing by resorbing excess fibres from connective tissues. In turn, this causes the relaxation and dissolution of fascial restrictions, adhesions, and scar tissues.⁵

METHODOLOGY

The database was searched through PubMed, Google Scholar, Research gate. Different keywords

were used IASTM, upper trapezius trigger point, M2t blade, myofascial pain syndrome, neck pain etc. Database were searched from 2018. Only studies reporting the impact of IASTM in orthopaedic disorders were used to compile this article. This review article was written exclusively in English language.

Application of IASTM in various Musculoskeletal conditions

Upper trapezius trigger points

El-halfez et al., (2020) conducted a study on "Instrumented -assisted soft tissue mobilisation versus stripping massage for upper trapezius myofascial trigger point" and concluded that both IASTM and SM are equally beneficial in trapezius myofascial trigger point.¹

Thakur et al., (2022) conducted a study on "Effectiveness of integrated neuromuscular inhibition technique and IASTM in the management of upper trapezius myofascial trigger point" Integrated Neuromuscular Inhibition Technique is used to treat upper myofascial trigger points is superior than IASTM.²

Frozen Shoulder

Vijayaraj et al., (2022) conducted a study on "The effect of IASTM and PNF in reducing pain and improves overhead reach activities in shoulder impingement syndrome". 74 participants took part in the study. IASTM and PNF both are equally effective in reducing pain and improve overhead activities in shoulder impingement syndrome.³

Mechanical Neck Pain

Paranjape et al., (2020) conducted a study on "comparison of manual versus instrumental assisted soft tissue mobilisation of levator scapulae in chronic neck pain" and concluded that IASTM is useful for treating chronic neck discomfort since it helps with ROM, pain, and function.⁴

Serag et al., (2022) done study on "Effect of instrument assisted soft tissue mobilization on mechanical neck pain". The duration of the study was 1 year. 30 participation took part in this study. They concluded that Instrument assisted soft tissue mobilisation is more effective than manual therapy at reducing neck discomfort, functional limitations, and ROM⁵

Tennis elbow

Jain et al., (2022) conducted on "Effect of IASTM, electric dry needling and cupping therapy in the treatment

of tennis elbow" and concluded IASTM, electric dry needling and cupping therapy work better together compared to just traditional medicine, electrical dry needling, and cupping therapy alone just to treat TE.⁶

Hamstring tightness

Gunn et al., (2018) conducted a study on "IASTM Mobilization & proprioceptive neuromuscular facilitation techniques improves hamstring flexibility better than static stretching alone" and concluded that When comparison to static stretching alone, PNF stretch and IASTM treatments significantly increased hip active and passive ROM, respectively.⁷

Lee et al., (2020) done a study on "IASTM & roller massage stick's immediate and long-term effects on the hamstring ROM. The roller massage stick is cheaper, but IASTM & roller stick massage was as effective both instantly and over time.⁸

Planter Fasciitis

Bhurchandi et al., (2021) done a study on "Efficacy of IASTM in pain with heel pain" concluded that combination of Home Exercise Programme with IASTM had positive benefits on reducing pain intensity and enhancing how the foot and ankle work in those having heel discomfort.⁹

Low Back Pain

Kumar et al., (2022) conducted a study on "Single IASTM & cupping therapy session improves pain and disability in patients with nonspecific low back pain" Using IASTM and cupping treatment together can help persons who are having LBA & impairment.¹⁰

CONCLUSION

In this review article, all studies reported the effectiveness of IASTM in various musculoskeletal conditions, i.e., frozen shoulder, mechanical neck pain, hamstring tightness, myofascial pain syndrome, tennis elbow, planter fasciitis, upper cross syndrome, low back pain. In musculoskeletal problems, IASTM reveals considerable benefits in pain, range of motion (ROM), functional impairment, as well as quality of life. There is a lack of evidence showing the IASTM's impact on the upper trapezius trigger point with a fairly large sample size, a control group, and a follow-up study. IASTM's therapeutic benefits on upper trapezius myofascial trigger point need to be further studied, nevertheless, as there is presently insufficient data in the literature.

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