



APPLICATION OF INSTRUMENT ASSISTED SOFT TISSUE MOBILIZATION IN FROZEN SHOULDER – A REVIEW ARTICLE



RITA SHARMA 

Department of Physiotherapy, Sharda University, Greater Noida 201306, India



Article Type: Review Article

Article Citation: Sharma R. Application of instrument assisted soft tissue mobilization in frozen shoulder– a review article. SALT J Sci Res Healthc. 2022 February 10; 2(1): 17-19.

Received Date: January 30, 2022
 Accepted Date: February 09, 2022
 Published Date: February 10, 2022

Corresponding Author: Rita Sharma, Assistant Professor, Department of Physiotherapy, Sharda University, Greater Noida 201306, India.
 ORCID ID: 0000-0002-3788-8977
 Email: rita.sharma@sharda.ac.in

ABSTRACT

Physical therapy is the basic treatment for frozen shoulder, a frequent disease in the middle-aged population. Several traditional therapy approaches have been shown effective in this situation. Instrument Assisted Soft Tissue Mobilisation (IASTM) is a relatively new therapy widely used for the speedier recovery of numerous sports-related injuries. IASTM also mobilises scar tissue and myofascial adhesions. This paper presents a brief review of IASTM in shoulder disorders and the use of IASTM to treat patients with shoulder injuries and disorders.

Keywords: Frozen shoulder, Adhesive capsulitis, IASTM, Soft tissue mobilization.

INTRODUCTION

Frozen shoulder, also known as Adhesive Capsulitis, is a common shoulder ailment that produces pain and restricts the active and passive range of motion (ROM). In the general population, 2-3 per cent of adults have frozen shoulders. It commonly appears between the ages of 40 to 70 years¹. Physical therapy is the basic treatment for frozen shoulder, which is a frequent disease in the middle-aged population². In 1872, Duplay was credited with being the first person to describe the frozen shoulder. He proposed that the pathology in these painful, stiff shoulders was caused by periarticular soft tissues rather than glenohumeral joint arthritis³.

IASTM, or instrument aided soft tissue mobilisation, is a common skilled myofascial technique used in the treatment of musculoskeletal diseases and sports medicine. Various direct compressive stroke techniques are used to provide soft tissue mobilisation utilising specially designed tools. By triggering a localised inflammatory response that

releases cellular mediators and growth factors, IASTM therapy can repair and remodel soft tissues. The IASTM assists with actuating connective tissue redesigning by extreme fibrosis re-ingestion and helping fibroblast enrollment, which prompts collagen fix and recovery. Thus, this will prompt disturbance of scar tissue and fascial restriction⁴. In this review article, less study has been conducted to determine the effects of IASTM in the frozen shoulder; as a result, this review paper aims to explain how IASTM might help patients with shoulder difficulties improve their discomfort range of motion and functional capacity.

METHODOLOGY

Different “keywords” and “Boolean Operators” were used to search databases such as PubMed, CINAHL, REHABDATA, etc. Databases were searched from 2014 through 2021. Only those research papers were considered in the investigation, which has reported IASTM use in shoulder rehabilitation. Research reports only written in

English were included in the review process. Different parameters such as range of motion, pains, functions etc., were considered for assessment. Reports which included subjects with a neurological disorder or other chronic illness were not considered for the investigation. Case reports and conference proceedings were also excluded.

Application of IASTM in improving Pain, Rom and Function

According to Sami et al.⁵ (2020) mobilisation combined with traditional physiotherapy for frozen shoulder treatment can be more effective at increasing shoulder ROM and reducing pain. Frozen shoulder patients can also benefit from strengthening exercises, such as ROM exercises, which can be done with or without electrotherapy.

Amita et al.⁶ (2020) used IASTM in adhesive capsulitis research. Instrument aided soft tissue mobilisation combined with conventional therapy was shown to be more effective than conventional treatment for increasing mobility and function in adhesive capsulitis in their study.

According to Gohil et al.⁷(2020), the efficacy of IASTM in treating athletes with Gleno-humeral internal rotation limitation. They discovered that using IASTM on the posterior shoulder muscles and capsule increased both internal and horizontal adduction ranges of motion and flexibility. They discovered that using IASTM on the posterior shoulder muscles and capsule increased both internal and horizontal adduction ranges of motion and flexibility.

Comparison of IASTM versus self stretch to quantify

the improvement in Rom in the shoulder in overhead athletes, according to Hussey et al.⁸ (2018), It was concluded that IASTM, in combination with self-stretching, helps enhance Rom.

Varun Naik et al.⁹ (2017) conducted a comparative investigation on the impact of MFR employing the M2T blade, and kinesiotape were shown to be equally effective in lowering pain and enhancing the quality of life in recreational badminton shoulder discomfort individuals.

Instrument aided soft tissue mobilisation was studied by Jooyoung Kim et al.¹⁰ (2017). They treated the patient with IASTM as well as stretching, strengthening exercise, and cryotherapy in their study, and they found that there was an improvement in soft tissue function, as well as increased range of motion and pain relief.

McMurry et al.¹¹ (2015) conducted research titled "comparison and review of indirect MFR, IASTM, and active release method to aid clinical decision making" and found that IASTM improved pain, numbness, and function.

CONCLUSION

IASTM was found to be beneficial in all research on shoulder injuries and diseases. IASTM therapy showed substantial improvements in pain, function, and quality of life in shoulder injuries and diseases, as well as increased joint mobility. . More study is needed, however, to examine the therapeutic effects of IASTM treatment in Frozen shoulder disorders since there is presently inadequate data in the literature.

REFERENCES

1. Gurudut P, Welling A, Kudchadkar G. Combined effect of gross and focused myofascial release technique on trigger points and mobility in a subject with a frozen shoulder. *Int J Health Sci Res.* 2019; 9(4):52-61.
2. Aggarwal A, Saxena K, Palekar TJ, Rathi M. Instrument assisted soft tissue mobilization in adhesive capsulitis: A randomized clinical trial. *J Bodyw Mov Ther.* 2021 Apr;26:435-442. <https://doi.org/10.1016/j.jbmt.2020.12.039>. Epub 2020 Dec 31. PMID: 33992280.
3. Lambert M, Hitchcock R, Lavalley K, Hayford E, Morazzini R, Wallace A, Conroy D, Cleland J. The effects of instrument-assisted soft tissue mobilisation compared to other interventions on pain and function: a systematic review. *Phys Ther Rev.* 2017; 22(1-2):76-85. <https://doi.org/10.1080/10833196.2017.1304184>
4. Amin F, Abdel-Aal NM, Ali NS, Moharram A. Effect of instrument-assisted soft tissue mobilisation on handgrip strength in patients with subacromial impingement syndrome: a randomised controlled study. *Turk J Phys Rehabil.* 2021. 32:3. 17898- 17909.

5. Sami S. Almureef, Waleed Medhat Ali, Sharick Shamsi, Mansour Bakheet Al Zahrani. Effectiveness of Mobilization with Conventional Physiotherapy in Frozen Shoulder: A Systematic Review. *Int J Recent Innov Med Clin Res*. 2020; 2(4):22-29. <https://doi.org/10.5281/zenodo.4361726>
6. Aggarwal A, Saxena K, Palekar TJ, Rathi M. Instrument assisted soft tissue mobilization in adhesive capsulitis: A randomized clinical trial. *J Bodyw Mov Ther*. 2021 Apr;26:435-442. <https://doi.org/10.1016/j.jbmt.2020.12.039>. Epub 2020 Dec 31. PMID: 33992280.
7. Gohil D, Swami A, Baxi G, Tai Z, Edgaonkar R, Palekar T. Effectiveness of Instrument Assisted Soft Tissue Mobilisation in Management of Athletes with Gleno-Humeral Internal Rotation Deficit. *Indian J Physiother Occup Ther*. 2020; 14(1): 88-93.
8. Hussey MJ, Boron-Magulich AE, McLeod TC, Bacon CE. The comparison of instrument-assisted soft tissue mobilisation and self-stretch measures to increase shoulder range of motion in overhead athletes: a critically appraised topic. *J Sport Rehabil*. 2018; 27(4):385-389. <https://doi.org/10.1123/jsr.2016-0213>.
9. Naik V, Koyande S, Shaikh R. Comparative study between the effect of myofascial release using M2T Blade and kinesiotope on recreational badminton shoulder pain subjects: a randomised clinical trial. *Int J Med Res Health Sci*. 2017;6(5):1-6.
10. Kim J, Sung DJ, Lee J. Therapeutic effectiveness of instrument-assisted soft tissue mobilization for soft tissue injury: mechanisms and practical application. *J Exerc Rehabil*. 2017 Feb 28;13(1):12-22. <https://doi.org/10.12965/jer.1732824.412>. PMID: 28349028; PMCID: PMC5331993.
11. McMurray J, Landis S, Lininger K, Baker RT, Nasypany A, Seegmiller J. A comparison and review of indirect myofascial release therapy, instrument-assisted soft tissue mobilisation, and active release techniques to inform clinical decision making. *Int J Athl Ther Train*. 2015; 20(5):29-34. <https://doi.org/10.1123/ijatt.2015-0009>.



ARTICLE TYPE: Review Article; Open Researcher and Contributor Identifier (ORCID) ID of corresponding author: <https://orcid.org/0000-0002-3788-8977>; **ETHICAL:** NA; **ACKNOWLEDGEMENT:** None; **FINANCIAL DISCLOSURE:** The authors declare that there was no financial aid received.; **CONFLICT OF INTEREST:** No conflict of interest associated with this research work.; **AUTHORS CONTRIBUTION:** R.S., reviewed and wrote the article for publication.; **CORRESPONDING AUTHOR AFFILIATIONS:** Rita Sharma, Assistant Professor, Department of Physiotherapy, Sharda University, Greater Noida 201306, India.; **CORRESPONDING AUTHOR EMAIL:** rita.sharma@sharda.ac.in ; **ARTICLE CITATION:** Sharma R. Application of instrument assisted soft tissue mobilization in frozen shoulder— a review article. *SALT J Sci Res Healthc*. 2022 February 10; 2(1): 17-19.

PUBLISHER'S NOTE: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

© [Rita Sharma](#).

Originally published in the *SALT Journal of Scientific Research in Healthcare* (<https://saltjsrh.in/>), 10.02.2022.

This is an open-access article distributed under the terms of the Creative Commons License (<https://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work, first published in the *SALT Journal of Scientific Research in Healthcare* (<https://saltjsrh.in/>), is properly cited. The complete bibliographic information, a link to the original publication on <https://saltjsrh.in/>, as well as this copyright and license information must be included.