

Effect of Myofascial Release on the Upper Trapezius Muscle Along with Postural Correction in a Patient with Chronic Cervical Pain (A Case study)

Palak Sinotiya

Physiotherapy Department, People's University, Bhopal, Madhya Pradesh, India

DOI: <https://doi.org/10.51584/IJRIAS.2026.11070180>

Received: 06 August 2026; Accepted: 11 August 2026; Published: 19 August 2026

ABSTRACT

Background

Chronic neck pain is one of the common musculoskeletal condition associated with prolonged sitting, poor posture, increased screen time and muscle imbalance. It typically results in neck pain, tight upper trapezius muscles, decreased cervical ROM, and difficulty with activities of daily living. Myofascial release (MFR) and postural correction are common physiotherapy interventions to manage these symptoms.

Case Presentation:

A 25-year-old female student presented with a 4-month history of bilateral neck pain. She reported a VAS score of 7/10, tenderness and tightness of the bilateral upper trapezius muscles, and mild restriction in the cervical R.O.M. The symptoms were aggravated by prolonged sitting, mobile phone use and increased academic workload.

Intervention:

The patient was given 5 sessions per week for 2 weeks of myofascial release (MFR) to the bilateral upper trapezius muscles, postural correction exercises, and ergonomic education.

Results:

In this patient the pain was reduced from VAS 7/10 to 3/10 after treatment for 2 weeks. There was a decrease in upper trapezius tightness, increase in cervical ROM, improvement in posture, and ability to perform activities of daily living with less discomfort..

Conclusion

The combination of myofascial release and postural correction effectively reduced pain, improved cervical ROM, reduced muscle tightness and improved functional ability in a chronic cervical pain patient.

Keywords: Chronic cervical pain, Myofascial release, Upper trapezius, Postural correction, Physiotherapy

Background

INTRODUCTION

Chronic neck pain is a common musculoskeletal disorder in people of all ages, especially in adults who work at a desk for long periods of time or do repetitive neck movements. This condition is defined as persistent pain and discomfort in the cervical region for a period of more than three months . It is often a slow development due to mechanical stress, poor posture, muscle imbalance, repetitive strain or degenerative changes in the cervical spine.

The use of digital devices such as computers and smartphones has increased the occurrence of chronic cervical pain and has become a major public health concern. If your neck pain continues you could have a decrease in the movement of your neck, weaker muscles and difficulty doing everyday activities like reading, driving and working. In addition to the physical symptoms, chronic neck pain may also have an adverse effect on psychological well-being, sleep quality and quality of life. Early diagnosis of the contributory factors and adequate physiotherapy management including myofascial release, correction of posture, stretching and strengthening exercises play a major role in relieving pain and improving functional outcome.

Definition Chronic neck pain is pain and/or discomfort in the neck area for more than 3 months. It may be acute or chronic in nature, and is often associated with muscle stiffness, reduced range of motion in the cervical spine, and activities of daily living (ADL). The pain may be localized or radiate to the upper back and shoulders.

Etiology Chronic neck pain can be caused by many factors including: poor posture Long periods of computer or cell phone use Neck movements (repetitive) Muscle imbalance Degenerative changes of the cervical spine 4. Job Stress Previous Injury: This produces an increase in mechanical stress to the cervical spine and surrounding soft tissues, resulting in chronic pain.

Epidemiology Chronic neck pain is a common musculoskeletal disorder that affects adults around the world. It is most commonly reported in the age group of 30-60 years and is more common in females than males with a female to male ratio of 1.5:1. This condition is often caused due to sedentary occupation and long hours spent on computers or smartphones.

Prevalence Neck pain is a common problem affecting 30-50% of adults worldwide annually, with 14-22% developing chronic symptoms for longer than three months. Prevalence is most common in adults aged 30–60 years and is greater in females than males. Similar

Anatomy The cervical spine consists of 7 vertebrae (C1-C7) . These vertebrae support the weight of the head and allow for flexion/extension, lateral flexion and rotation. The stability of the cervical region is provided by muscles, ligaments and intervertebral discs. Normal neck posture and function requires the upper trapezius, levator scapulae, sternocleidomastoid, deep cervical flexors and scapular stabilisers. When they are tight or out of balance, these structures can be a source of chronic neck pain.

Biomechanics The cervical spine and shoulder girdle work together to stabilize head alignment and functional movement. The forward head posture in chronic cervical pain leads to more stress on the cervical spine and overactivity of the upper trapezius and levator scapulae muscles and weakness of the deep cervical flexor muscles. This biomechanical change results in pain, muscle fatigue, and loss of neck mobility.

Clinical features

Neck pain that continues for more than three months Cervical range of motion and neck stiffness Tenderness or tightness in upper trapezius muscles Pain that spreads to the shoulders or upper back Headache and pain in the neck Difficulty with prolonged sitting, reading or working on the computer

Investigation The diagnosis of chronic cervical pain is mainly based on a detailed history and physical examination. Examine ROM of cervical spine, muscle tenderness, posture and neurological status. Imaging studies such as X-ray and MRI may be suggested when trauma, neurological deficits or degenerative changes are suspected

Treatment / Management The goal of management of chronic neck pain is to decrease pain, restore function and improve posture. Physiotherapy includes myofascial release, postural correction, stretching of tight muscles, strengthening of deep cervical flexors, scapular stabilizers, ergonomic advice and a home exercise programme. For long-term recovery, patient education and regular physical activity are also key

Scope of the study Introduction Myofascial release (MFR) is a manual technique for the treatment of musculoskeletal pain. The aim of the study was to assess the effectiveness of MFR combined with postural correction in patients with chronic cervical pain. The present study is limited to the effects of the intervention on pain, upper trapezius muscle tightness, cervical range of motion, posture and functional activities.

Objective of the study

To assess the impact of myofascial release (MFR) on pain severity in patients suffering from chronic neck pain.

To assess the effect of MFR on tightness of upper trapezius muscle.

To assess the effectiveness of postural correction for improvement in cervical posture.

To evaluate the change in cervical range of motion (ROM) after treatment.

To assess the effect of MFR combined with postural correction on the improvement of functional activities.

Case Description

A 25 year old female student presented with persistent bilateral neck pain for 4 months. The pain was rated 7/10 on the Visual Analogue Scale (VAS). There was no history of trauma, whiplash injury, cervical surgery or neurological involvement. According to her report, symptoms started developing gradually with increase in screen time and academic load. Pain was often exacerbated by prolonged sitting (more than 1–2 h), prolonged mobile phone use and awakening from sleep in a fixed position. Intermittent rest and topical analgesics provided partial relief. She had not been previously treated with any formal physiotherapy or musculoskeletal medical intervention for this complaint. The patient was diagnosed with chronic cervical pain after clinical examination.

Observation There was no visible swelling, redness, skin discoloration or deformity over the cervical region. Neck posture slightly guarded because of pain. There was no apparent muscle wasting.

palpation On palpation, the bilateral upper trapezius muscles were tender and tight. Neck pain with tenderness to palpation. Local temperature did not increase.

Range of Motion (ROM) Active cervical range of motion was measured using a universal goniometer. Pre-treatment examination demonstrated cervical flexion of 40°, extension of 35°, rotation of 60°, and lateral flexion of 30°. All cervical movements were painful and mildly limited particularly at the end range of motion

Uniqueness of the Study This study is unique in evaluating the combined effect of myofascial release (MFR) and postural correction in the management of chronic cervical pain. Specifically on the upper trapezius muscle. It looks at improvement in pain, cervical range of motion, muscle tightness, posture and functional activities. The results may support an effective and practical physiotherapy approach to people with chronic cervical pain.

Physiotherapy treatment

Myofascial Release (MFR)

The patient underwent 5 sessions per week of myofascial release (MFR) of the bilateral upper trapezius muscles for 2 consecutive weeks. The treatment was intended to reduce muscle tension and pain, increase tissue flexibility and to restore normal cervical mobility.

Patient position The patient was placed in a comfortable position in a chair with back support and upper limbs relaxed.

Therapist The therapist stood behind the patient, with the neck in a comfortable working position.

Procedure The therapist used gentle sustained manual pressure over the upper trapezius muscle in the direction of the muscle fibres until tissue relaxation was felt. Each release was held for 90–120 seconds and repeated 3–5 times as tolerated by the patient.



Posture correction

Postural correction was given 5 sessions/week for 2 consecutive weeks after MFR. The program consisted of improved sitting posture, maintaining alignment of the cervical spine and reducing mechanical stress on the neck during daily activities.

Patient Position The patient was sitting comfortably in a chair with back support and both feet on the floor.

Procedure The patient was instructed to keep his head and neck in a neutral position while sitting and using electronics. Advice on ergonomic sitting posture, screen height and regular change of posture was provided. The patient was also instructed to perform gentle postural correction exercises, such as chin tuck and scapular retraction, 10 repetitions with a 5 to 10 second hold as tolerated.

Result:

These findings are in agreement with the study of Shewail et al. (2023) who found significant improvements in pain intensity, neck disability, and pain pressure threshold after myofascial release therapy in patients with chronic mechanical neck pain. Cabrera-Martos et al. (2020) likewise found significant improvements in pain, trigger point sensitivity, and functional ability of subjects with chronic neck pain following treatment with myofascial release. The present case study also showed significant reductions in pain and upper trapezius muscle tightness, as well as improvements in cervical range of motion, posture, and functional ability after myofascial release combined with postural correction exercises. However, our treatment protocol was different from those studies, perhaps because of differences in treatment duration, intervention protocol, .

Outcome measure	Pre treatment	Post treatment
VAS pain score	7/10	3/10
Cervical flexion ROM	40°	48°
Cervical extension ROM	35°	45°
Cervical rotation ROM	60°	75°
Cervical lateral flexion ROM	30°	40°

DISCUSSION

These findings are consistent with the study by Shewail et al. (2023), who reported significant improvements in pain intensity, neck disability, and pain pressure threshold following myofascial release therapy in patients with chronic mechanical neck pain. Similarly, Cabrera-Martos et al. (2020) reported significant reductions in pain, trigger point sensitivity, and improvements in functional ability following myofascial release treatment in individuals with chronic neck pain. The findings of the present case study also demonstrated significant reductions in pain and upper trapezius muscle tightness, along with improvements in cervical range of motion, posture, and functional ability after myofascial release combined with postural correction exercises. However, our treatment protocol differed from these studies, possibly because of differences in treatment duration, intervention protocol, .

CONCLUSION

This case study concludes that combination of MFR & postural correction exercises is an effective physiotherapy intervention for chronic cervical pain. The patient after 2 weeks of treatment had less neck pain, less upper trapezius muscle tightness, better cervical ROM, better posture and better functional ability. Patient education on correct posture, ergonomic changes and regular home exercises may help to maintain these improvements and prevent recurrence of symptoms. To summarize, the combined use of MFR and postural correction represents a safe, practical and effective conservative approach to improve neck function and quality of life in patients with chronic cervical pain

REFERENCE

1. Blanpied PR, et al. Neck Pain: Revision 2017. *J Orthop Sports Phys Ther.* 2017;47(7):A1-A83.
2. Shewail, F., Abdelmajeed, S., Farouk, M., & Abdelmegeed, M. (2023). Instrument-assisted soft tissue mobilization versus myofascial release therapy in treatment of chronic neck pain. *BMC Musculoskeletal Disorders*, 24(1), 457.
3. Cabrera-Martos, I., Rodríguez-Torres, J., López-López, L., et al. (2022). Effects of an active intervention based on myofascial release and neurodynamics in patients with chronic neck pain. *Physiotherapy Theory and Practice*, 38(9), 1145–1152.
4. Ajimsha, M. S., Al-Mudahka, N. R., & Al-Madzhar, J. A. (2015). Effectiveness of myofascial release: Systematic review of randomized controlled trials. *Journal of Bodywork and Movement Therapies*, 19(1), 102–112.
5. Ylinen, J., et al. (2020). Active neck muscle training in the treatment of chronic neck pain: A randomized controlled trial. *JAMA Network Open*, 3(6), e208217..