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Effectiveness of Myofascial Release Technique in Latissimus Dorsi Myofascial Pain with Referred Shoulder and Chest Symptoms: A Case Study

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Abstract

Background: Latissimus dorsi is a broad superficial muscle that links the thoracolumbar fascia, pelvis, lower ribs, scapular region, and humerus. Because of this extensive anatomical relationship, restriction or trigger point activity in this muscle can influence shoulder motion, thoracic posture, scapular control, breathing comfort, and functional upper-limb use. Myofascial pain arising from the latissimus dorsi may present as pain in the posterior shoulder, axillary fold, lower scapular region, lateral trunk, or anterior chest wall. In clinical practice, these symptoms may be misinterpreted as primary shoulder pathology, rib dysfunction, cervical referral, or chest-related disease. After appropriate medical screening, physiotherapy management directed toward the myofascial source can be valuable for reducing symptoms and improving function. Myofascial release is a manual therapy approach that uses sustained pressure, slow fascial stretch, trigger point release, and guided movement to reduce tissue sensitivity, improve extensibility, and normalize movement patterns.

Presentation of a Case: This case study presents a 36-year-old male patient with right-sided latissimus dorsi myofascial pain associated with referred posterior shoulder discomfort, axillary tightness, and intermittent non-cardiac anterior chest wall symptoms. The patient reported pain during overhead reaching, pulling activities, prolonged computer work, deep inspiration after exertion, and sleeping on the affected side. Examination revealed localized tenderness over the right latissimus dorsi, taut bands near the posterior axillary fold, painful restriction of shoulder flexion and abduction, increased tone of the latissimus dorsi, altered scapular mechanics, and reduced functional confidence during overhead and cross-body activities.

Intervention: A structured phase-wise physiotherapy program was implemented over six weeks. The program included myofascial release of the latissimus dorsi and related thoracolumbar fascia, trigger point pressure release, soft tissue mobilization, breathing-assisted fascial stretch, scapulothoracic mobility exercises, shoulder range-of-motion training, postural correction, progressive strengthening of the rotator cuff and scapular stabilizers, ergonomic advice, and home-based self-release and stretching activities.

Outcome Measure: Pain was measured using the Numerical Pain Rating Scale. Shoulder and thoracic mobility were measured by goniometry and functional observation. Muscle tone and tenderness were assessed by palpation. Muscle performance was assessed using Manual Muscle

Testing. Functional improvement was assessed through overhead reach, dressing, sleeping comfort, desk-work tolerance, pushing and pulling ability, chest symptom frequency, and upper-limb activity tolerance.

Result: The patient demonstrated significant reduction in resting pain, activity-related shoulder pain, chest wall discomfort, and soft tissue tenderness. Shoulder flexion, abduction, and thoracic rotation improved. Latissimus dorsi tone decreased, scapular upward rotation improved, and functional reaching became more comfortable. The patient reported better sleep, improved sitting posture, reduced fear related to chest symptoms, and improved ability to perform gym and work-related activities within the advised limits.

Conclusion: This case study supports the clinical usefulness of myofascial release technique as part of a structured physiotherapy program for latissimus dorsi myofascial pain with referred shoulder and chest symptoms. Careful screening, accurate localization of myofascial findings, graded manual therapy, movement retraining, and patient education were important for successful recovery.

Keywords: Latissimus dorsi, myofascial pain, myofascial release, trigger point, referred pain, shoulder pain, chest symptoms, physiotherapy, scapular control, case study

Background

Latissimus dorsi is one of the largest muscles of the back and plays an important role in shoulder extension, adduction, internal rotation, trunk control, scapulothoracic rhythm, and transfer of force between the upper limb and the trunk. Its attachments to the thoracolumbar fascia, iliac crest, lower thoracic spinous processes, lower ribs, inferior angle region of the scapula, and intertubercular groove of the humerus make it a clinically important muscle in both upper-quarter and trunk-related dysfunction. When the latissimus dorsi becomes shortened, overactive, sensitive, or mechanically restricted, the patient may present not only with back discomfort but also with shoulder pain, axillary tightness, limitation of overhead reach, rib cage discomfort, and referred symptoms toward the chest wall.

Myofascial pain is commonly associated with trigger points, palpable taut bands, local tenderness, motor dysfunction, and referred pain. Trigger point activity can reduce muscle length, alter movement coordination, and generate symptoms at a distance from the involved muscle. In the upper quadrant, referred pain patterns are particularly important because the patient may complain of symptoms around the shoulder, arm, neck, thoracic region, or anterior chest even when the primary tissue sensitivity is present elsewhere. This creates a diagnostic challenge for physiotherapists and requires careful history taking, clinical examination, and exclusion of serious non-musculoskeletal causes when chest symptoms are present.

Latissimus dorsi myofascial pain can develop due to repetitive overhead work, heavy pulling, gym training, poor sitting posture, prolonged computer use, sudden eccentric strain, inadequate warm-up, or compensatory overuse in individuals with weak scapular stabilizers. In desk workers, forward shoulder posture and sustained thoracic kyphosis may increase resting tension around the posterior

shoulder and lateral trunk. In athletes or gym users, repeated lat pull-downs, pull-ups, rowing, throwing, swimming, or racquet activity may overload the muscle. If recovery is inadequate, the muscle may become tender and protective, causing pain during activities that require elevation of the arm, trunk rotation, deep breathing, or forceful shoulder extension.

The referred chest component is clinically significant. Patients with chest discomfort may become anxious and avoid movement, deep breathing, or physical activity. Even when medical evaluation rules out cardiac or respiratory pathology, the fear attached to chest symptoms may continue to affect posture, breathing pattern, sleep, and confidence. Therefore, rehabilitation should not be limited to local soft tissue treatment alone. It should also include symptom education, graded exposure to movement, breathing control, ergonomic correction, and progressive strengthening to restore safe function.

Myofascial release is a manual therapy technique intended to reduce fascial restriction, improve soft tissue mobility, decrease pain sensitivity, and restore normal movement. In latissimus dorsi dysfunction, treatment may include sustained pressure over taut bands, longitudinal fascial gliding from the thoracolumbar region toward the posterior axillary fold, cross-hand release over the lateral trunk, trigger point pressure release, scapular mobilization, and stretching combined with breathing. The clinical effect may be enhanced when manual therapy is followed by active mobility, strengthening, postural correction, and a home program. Manual release alone may provide temporary relief, whereas integration into functional movement can produce more durable improvement.

In the present case, the emphasis was placed on connecting impairment-level findings with functional recovery. Pain score, shoulder mobility, tone, strength, trigger point tenderness, and functional activities were monitored before and after a structured intervention. The treatment plan was designed to address the local myofascial source, related scapular mechanics, thoracic mobility, and behavioral response to referred chest symptoms. This approach allowed observation of how myofascial release technique influenced pain, shoulder function, chest discomfort, and daily activity participation.

Epidemiology: Myofascial pain syndromes are frequently encountered in musculoskeletal physiotherapy practice and may affect adults involved in prolonged desk work, repetitive upper-limb activity, sports, gym training, or occupations requiring sustained shoulder and trunk positions. Although latissimus dorsi trigger point pain is less commonly recognized than neck or rotator cuff-related pain, it may contribute substantially to persistent shoulder and thoracic symptoms when it is not identified early.

Prevalence: Referred shoulder and chest wall symptoms from myofascial sources are commonly under-recognized because patients often describe pain away from the exact site of tissue sensitivity. In clinical settings, patients may first receive evaluation for shoulder joint pathology, cervical radiculopathy, rib dysfunction, or chest-related disorders before myofascial involvement is considered.

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Scope of the study: The purpose of this study is to evaluate the effect of myofascial release technique on pain, tenderness, shoulder range of motion, latissimus dorsi flexibility, scapular control, chest symptom frequency, and functional recovery in a patient with latissimus dorsi myofascial pain and referred shoulder and chest symptoms.

Clinical presentation

Patient data

The patient was a 36-year-old male software professional and recreational gym user who reported right-sided posterior shoulder pain with tightness along the posterior axillary fold and intermittent discomfort over the right anterior chest wall. The symptoms had developed gradually over approximately six weeks. The patient associated the onset with increased gym training, particularly repeated pull-downs, rowing exercises, and prolonged computer work during a period of extended work deadlines. There was no history of direct trauma, fracture, surgery, dislocation, inflammatory arthritis, diabetes-related neuropathy, or previous major shoulder disorder.

The primary complaint was a deep aching sensation around the lower posterior shoulder and lateral trunk. The patient described a pulling sensation when raising the arm overhead, reaching to the opposite side, lifting a backpack, or performing lat pull-down movement. He also reported a dull, non-radiating chest wall discomfort on the right side, especially after long sitting or after heavy upper-limb activity. The chest symptom was not associated with sweating, dizziness, palpitations, jaw pain, left arm radiation, syncope, fever, cough, or exertional breathlessness. Because the patient was concerned about chest pain, he had consulted a physician before physiotherapy evaluation. Medical screening did not identify any acute cardiac or respiratory condition, and the patient was referred for musculoskeletal physiotherapy assessment.

The patient reported difficulty sleeping on the right side, discomfort during overhead dressing, pain while tucking in a shirt, and reduced confidence during gym exercises. He had stopped upper-body training for two weeks, but pain persisted during daily activities. Sitting for more than two hours increased tightness in the lateral trunk and posterior shoulder. Gentle walking and supported posture reduced symptoms temporarily. The patient had used occasional analgesic medication and hot fomentation, with partial short-term relief. He expressed anxiety because the chest wall symptom appeared suddenly during activity, even though medical evaluation was reassuring.

On observation, the patient demonstrated mild rounded shoulder posture, increased thoracic kyphosis in sitting, and reduced right arm swing during walking. Overhead elevation was possible but painful beyond the mid-range. The scapula showed reduced upward rotation and early shoulder hiking during elevation. Palpation identified a taut band in the right latissimus dorsi near the posterior axillary fold and lateral border of the scapular region. Sustained pressure over this area reproduced the patient's familiar posterior shoulder discomfort and a dull referred sensation toward the right anterolateral chest wall. This reproduction of familiar symptoms helped establish the clinical relevance of the latissimus dorsi myofascial findings.

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Clinical Examination and Findings

General observation:

- The patient was conscious, oriented, cooperative, and medically stable at the time of physiotherapy evaluation.
- He entered the clinic without an assistive device but maintained a guarded right upper limb posture.
- Sitting posture showed forward head position, rounded shoulders, and mild thoracic kyphosis.
- Right shoulder elevation produced early scapular elevation and reduced smooth upward rotation.
- No visible swelling, redness, wound, deformity, or acute inflammatory sign was present around the shoulder and chest wall.
- Breathing was comfortable at rest; however, deep inspiration after overhead positioning reproduced mild lateral trunk tightness.
- Vital signs were within normal limits during assessment and treatment sessions.

Local Examination (Right Latissimus Dorsi and Shoulder-Thoracic Region)

- Skin: No local skin change, bruising, rash, or open lesion was observed over the posterior shoulder, lateral trunk, or anterior chest wall.
- Tenderness: Moderate tenderness was present over the right latissimus dorsi near the posterior axillary fold and along the lateral thoracic fascial line.
- Trigger point findings: A palpable taut band and hyperirritable point were identified within the latissimus dorsi; pressure reproduced the patient's familiar posterior shoulder and chest wall symptoms.
- Muscle length: Latissimus dorsi flexibility was reduced, especially during shoulder flexion with trunk stabilization.
- Scapular mechanics: Reduced upward rotation and posterior tilt were observed during right shoulder elevation.
- Thoracic movement: Right thoracic rotation was limited and produced lateral trunk tightness.
- Neurological screen: Upper-limb sensation, reflex behavior, and distal motor function appeared intact during screening.
- Cervical screen: Cervical movement did not reproduce the typical chest wall symptom, and Spurling-type provocation was not clinically suggestive of radicular involvement.

Table 1: Range of Motion (ROM) – Right Shoulder and Thoracic Region

Movement	Normal ROM	Pre-Rehabilitation
Shoulder Flexion	0–180°	0–132° with pain after 115°
Shoulder Abduction	0–180°	0–124° with lateral trunk pulling
Shoulder External Rotation	0–90°	0–76° mild end-range

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		discomfort
Shoulder Internal Rotation	0–70°	0–55° with posterior shoulder tightness
Thoracic Rotation Right	Approximately 45°	Restricted, painful at end range
Functional Overhead Reach	Full and pain-free	Limited and guarded

Table 2: Muscle Tone Assessment – Right Upper Quarter

Muscle Group	Muscle Tone Grade	Description
Latissimus Dorsi	2	Moderate increased tone with palpable taut band
Pectoralis Major/Minor	1	Mild adaptive tightness associated with rounded shoulder posture
Upper Trapezius	1	Mild protective overactivity during shoulder elevation
Serratus Anterior	0	Normal tone but reduced functional activation
Thoracolumbar Fascia Region	1–2	Restricted fascial glide over right lateral trunk

Table 3: Muscle Strength Assessment – Right Upper Quarter (MMT)

Muscle Group / Movement	Pre-Rehabilitation
Shoulder Extension	Grade 4-/5 with pain
Shoulder Adduction	Grade 4-/5 with tightness
Shoulder Internal Rotation	Grade 4/5
Middle and Lower Trapezius	Grade 3+/5
Serratus Anterior	Grade 4-/5
Rotator Cuff External Rotators	Grade 4-/5
Functional Pulling Activity	Poor tolerance

Table 4: Pain Assessment – NPRS Scale

Activity	Pre-Rehabilitation
At Rest	3/10
During Overhead Reach	8/10
During Pulling or Gym-Type Movement	8/10
During Deep Inspiration After Activity	6/10
During Prolonged Sitting	7/10

During Sleeping on Affected Side	7/10
Chest Wall Discomfort Frequency	Frequent, especially after sitting and exertion

Uniqueness of the Study

This case study is unique because it focuses on latissimus dorsi myofascial pain presenting with a combination of referred shoulder and chest wall symptoms. Many shoulder pain cases are assessed primarily from the perspective of the glenohumeral joint, rotator cuff, cervical spine, or acromial region. In this case, the familiar symptoms were reproduced by palpation and loading of the latissimus dorsi, making the myofascial component clinically important. The study also highlights the importance of medical screening when chest symptoms are reported, followed by a structured physiotherapy approach once serious pathology has been excluded. Instead of treating pain alone, the management emphasized fascial release, mobility restoration, scapular control, breathing-assisted movement, functional strengthening, ergonomic correction, and graded return to activity. The case therefore provides practical insight for physiotherapists managing complex upper-quarter pain patterns with referred symptoms.

Investigations and Findings – Right Latissimus Dorsi and Upper Quarter

Investigations and Findings

Table 5: Investigations and Findings

Investigation	Time	Findings
Physician Screening	Before physiotherapy referral	No acute cardiac or respiratory emergency identified; musculoskeletal physiotherapy advised
Chest and Vital Assessment	Initial evaluation	No exertional breathlessness, sweating, syncope, fever, or unstable vital signs reported during clinical assessment
Shoulder Functional Screening	Initial evaluation	Painful overhead elevation, reduced scapular upward rotation, and lateral trunk tightness
Palpation of Latissimus Dorsi	Initial evaluation	Taut band and trigger point reproduced familiar shoulder and chest wall symptoms
Cervical Screening	Initial evaluation	Cervical motion did not reproduce typical symptoms; no clear radicular sign

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		identified
Neurological Screening	Initial evaluation	Distal strength, sensation, and functional control appeared intact
Functional Reassessment	Week 3 onward	Reduced referred chest discomfort and improved overhead reach following myofascial release and movement retraining

Physiotherapy management

The physiotherapy program was designed to reduce myofascial pain, release latissimus dorsi restriction, improve shoulder and thoracic mobility, restore scapular control, reduce referred chest wall symptoms, and return the patient to safe work and gym-related activity. Treatment was organized into progressive phases over six weeks. Each session included reassessment of pain behavior, palpation response, shoulder mobility, scapular mechanics, breathing comfort, and functional tolerance. Manual therapy was applied according to patient tolerance and followed immediately by active movement so that improved tissue extensibility could be integrated into function.

Patient education was included throughout the program. The patient was informed that musculoskeletal chest wall symptoms can be frightening, but once medical screening has excluded serious pathology, graded movement and controlled breathing can help restore confidence. The patient was also educated to avoid aggressive stretching, sudden heavy pulling, and repeated end-range overhead loading during the early phase. The home program was kept simple and included self-release with a soft ball against the wall, supported latissimus dorsi stretch, thoracic mobility exercise, scapular setting, and ergonomic correction during computer work.

Phase I: Symptom control and myofascial decompression Phase (Week 0–1)

Aims

- Reduce pain, tenderness, and protective tone in the right latissimus dorsi.
- Decrease frequency of referred shoulder and chest wall discomfort.
- Improve patient confidence after medical screening and physiotherapy explanation.
- Initiate gentle shoulder and thoracic mobility without symptom aggravation.
- Teach breathing control and postural unloading strategies for desk work.

Interventions

- Gentle sustained myofascial release over the right latissimus dorsi from the lateral trunk toward the posterior axillary fold.
- Trigger point pressure release using gradual pressure within tolerable limits until reduction of local sensitivity was felt.

- Cross-hand fascial release over the right lateral thoracic wall and thoracolumbar fascial line.
- Breathing-assisted release in side-lying with slow diaphragmatic breathing to reduce guarding.
- Scapular mobilization emphasizing upward rotation and posterior tilt.
- Pain-free pendular movements and supported shoulder flexion on table slide.
- Education regarding symptom monitoring, safe activity modification, and avoidance of heavy pulling in the first week.
- Home program: supported child-pose latissimus stretch, wall slide within comfort, and postural breaks every 45–60 minutes.

Phase II: Mobility and controlled stretch Phase (Week 1–2)

Aims

- Improve shoulder flexion, abduction, and internal rotation range.
- Increase latissimus dorsi extensibility without provoking chest symptoms.
- Normalize scapulothoracic rhythm during elevation.
- Reduce tenderness of trigger point and improve fascial glide.
- Promote relaxed breathing during overhead movement.

Interventions

- Progressive myofascial release along the full latissimus dorsi line with emphasis on posterior axillary fold and lateral thoracic restriction.
- Gentle longitudinal soft tissue mobilization combined with active shoulder flexion and exhalation.
- Side-lying latissimus stretch with pelvic stabilization and controlled breathing.
- Thoracic extension over towel roll and open-book thoracic rotation exercise.
- Wall-assisted shoulder flexion, abduction wall slides, and serratus activation drills.
- Postural correction exercises including scapular retraction, chin tuck, and thoracic extension awareness.
- Ergonomic correction: monitor height, arm support, scheduled microbreaks, and avoidance of sustained rounded shoulder posture.
- Self-release using a soft ball against the wall for brief controlled periods, avoiding excessive pressure over sensitive areas.

Phase III: Strengthening and scapular control Phase (Week 2–4)

Aims

- Restore strength of scapular stabilizers and rotator cuff muscles.
- Reduce compensatory overactivity of latissimus dorsi and upper trapezius.
- Improve endurance for desk work, reaching, and light household activity.
- Enhance controlled shoulder elevation without chest wall referral.
- Prepare the patient for graded return to recreational gym activity.

Interventions

- Continued myofascial release as required, with reduced treatment duration as tissue irritability decreased.
- Theraband external rotation, low-row exercises, and scapular depression without excessive latissimus dominance.
- Serratus anterior wall slides with foam roller and controlled upward rotation.
- Prone or standing lower trapezius activation within pain-free range.
- Closed-chain wall push-up plus to improve scapular stability.
- Light resisted shoulder flexion and abduction below symptom threshold.
- Breathing coordination during strengthening to prevent rib and chest wall guarding.
- Functional reaching practice, lifting of light objects, and controlled pulling pattern retraining.

Phase IV: Advanced functional training Phase (Week 4–6)

Aims

- Restore near-normal overhead reach and upper-limb function.
- Improve tolerance for prolonged computer work and routine gym movement.
- Prevent recurrence through posture, strength, and flexibility maintenance.
- Build confidence during movements previously associated with chest discomfort.
- Ensure independent long-term self-management.

Interventions

- Task-specific myofascial release only when residual trigger point sensitivity was present.
- Progressive strengthening with controlled rows, resisted external rotation, serratus punch, and scapular stabilizer endurance work.
- Graded overhead activity including wall slides, light overhead reach, and controlled functional lifting.
- Return-to-gym education with reduced load, slower tempo, wider rest intervals, and avoidance of painful heavy pull-downs initially.
- Integrated thoracic mobility, latissimus stretching, and scapular control before and after exercise.
- Workstation endurance training with scheduled posture resets and active breaks.
- Long-term home exercise advancement including self-release, stretching, strengthening, and symptom diary review.

Goals

Short-Term Goals

1. To reduce right latissimus dorsi tenderness and referred shoulder pain.
2. To decrease right anterior chest wall discomfort after medical screening has excluded serious pathology.
3. To improve shoulder flexion and abduction range without painful guarding.
4. To reduce palpable trigger point irritability and fascial restriction.

5. To restore comfortable breathing during gentle shoulder and thoracic movement.
6. To improve sitting posture and decrease symptoms during prolonged desk work.
7. To educate the patient regarding self-release, stretching, ergonomic modification, and activity pacing.

Long-Term Goals

1. To achieve full or near-full pain-free shoulder mobility required for daily activities.
2. To restore latissimus dorsi flexibility and reduce recurrence of taut band formation.
3. To improve scapular upward rotation, posterior tilt, and dynamic control during overhead movement.
4. To restore strength and endurance of rotator cuff and scapular stabilizing muscles.
5. To enable comfortable sleeping on the affected side.
6. To return the patient to graded gym activities without recurrence of referred chest symptoms.
7. To promote independent long-term self-management through home exercise and posture correction.
8. To reduce fear of movement and improve confidence in functional upper-limb use.

Results

Following structured physiotherapy, the patient showed improvement in pain, tissue tenderness, shoulder mobility, thoracic movement, scapular control, and functional tolerance. The earliest change was reduction in resting tightness and reduced sensitivity during palpation. By the second week, overhead reach improved and the referred chest wall symptom became less frequent. By the fourth week, the patient reported better tolerance for desk work and sleeping. By the sixth week, functional overhead reach was nearly pain-free, gym-related pulling activities were resumed at a low load, and the patient showed improved confidence with movements that had previously produced discomfort.

The improvement was not attributed to manual release alone. The most consistent progress occurred when myofascial release was combined with mobility exercises, scapular strengthening, breathing control, postural correction, and a graded home program. This combined approach helped convert soft tissue change into meaningful functional recovery.

Table 6: Range of Motion (ROM) – Right Shoulder and Thoracic Region

Movement	Normal ROM	Pre-Rehabilitation	Post-Rehabilitation
Shoulder Flexion	0–180°	0–132° with pain after 115°	0–174° with mild end-range stretch only
Shoulder Abduction	0–180°	0–124° with lateral trunk pulling	0–168° without chest referral
Shoulder External Rotation	0–90°	0–76° mild end-range discomfort	0–86° pain-free
Shoulder Internal	0–70°	0–55° with posterior	0–66° with minimal

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Rotation		shoulder tightness	tightness
Thoracic Rotation Right	Approximately 45°	Restricted, painful at end range	Near full with mild stiffness only
Functional Overhead Reach	Full and pain-free	Limited and guarded	Independent and comfortable

Table 7: Muscle Tone Assessment – Right Upper Quarter

Muscle Group	Muscle Tone Grade	Description
Latissimus Dorsi	0–1	Marked reduction in tone with minimal residual tightness
Pectoralis Major/Minor	0–1	Mild tightness reduced with postural correction
Upper Trapezius	0–1	Protective overactivity decreased during elevation
Serratus Anterior	0	Improved activation during wall slide and reaching
Thoracolumbar Fascia Region	0–1	Improved fascial glide over right lateral trunk

Table 8: Muscle Strength Assessment – Right Upper Quarter (MMT)

Muscle Group / Movement	Pre-Rehabilitation	Post-Rehabilitation
Shoulder Extension	Grade 4-/5 with pain	Grade 5-/5 pain-free
Shoulder Adduction	Grade 4-/5 with tightness	Grade 5-/5 controlled
Shoulder Internal Rotation	Grade 4/5	Grade 5-/5
Middle and Lower Trapezius	Grade 3+/5	Grade 4+/5
Serratus Anterior	Grade 4-/5	Grade 4+/5
Rotator Cuff External Rotators	Grade 4-/5	Grade 4+/5
Functional Pulling Activity	Poor tolerance	Good tolerance with graded load

Table 9: Pain Assessment – NPRS Scale

Activity	Pre-Rehabilitation	Post-Rehabilitation
At Rest	3/10	0–1/10
During Overhead Reach	8/10	2/10
During Pulling or Gym-Type Movement	8/10	2–3/10 with graded load

During Deep Inspiration After Activity	6/10	1/10 occasional mild tightness
During Prolonged Sitting	7/10	2/10 after prolonged work
During Sleeping on Affected Side	7/10	1–2/10
Chest Wall Discomfort Frequency	Frequent, especially after sitting and exertion	Rare and mild; no activity fear reported

Functional Improvements Observed

- Overhead reach improved from painful and guarded movement to near-full functional reach.
- The patient could dress, reach shelves, and perform light lifting with minimal discomfort.
- Sleeping on the affected side became comfortable for longer periods.
- Desk-work tolerance improved from about two hours to a full work session with scheduled breaks.
- Referred chest wall discomfort reduced substantially in frequency and intensity.
- Scapular control improved during flexion and abduction, with reduced shoulder hiking.
- Gym activity was resumed with reduced loads, controlled form, and no significant symptom recurrence.
- The patient reported improved confidence because familiar symptoms were understood and controlled.

Outcome Measures

Pain: Numerical Pain Rating Scale (NPRS).
Range of Motion: Goniometric assessment of shoulder flexion, abduction, internal rotation, external rotation, and functional observation of thoracic rotation.
Muscle Tone and Tenderness: Palpation-based assessment of latissimus dorsi tone, taut band irritability, and reproduction of familiar symptoms.
Muscle Strength: Manual Muscle Testing (MMT) of shoulder and scapular muscle groups.
Functional Recovery: Overhead reach, dressing ability, sleep tolerance, desk-work endurance, pulling activity, scapular control, chest symptom frequency, and return to graded gym activity.

Discussion

The present case study highlights the effectiveness of myofascial release technique as part of a structured physiotherapy program in a patient with latissimus dorsi myofascial pain associated with referred shoulder and chest wall symptoms. The patient presented with posterior shoulder pain, axillary tightness, lateral trunk discomfort, restricted overhead movement, and intermittent non-cardiac anterior chest wall discomfort. Such a presentation can be clinically confusing because symptoms may resemble shoulder joint pathology, cervical referral, rib dysfunction, or even chest-

related disorders. Therefore, proper medical screening was an essential first step before initiating physiotherapy management.

A key finding in this case was reproduction of the patient's familiar symptoms on palpation of the right latissimus dorsi trigger point. This supported the role of latissimus dorsi myofascial involvement in generating both local and referred symptoms. Before treatment, the patient had restricted shoulder flexion and abduction, increased muscle tone, tenderness, altered scapular mechanics, and poor tolerance to pulling and overhead activities. These impairments were consistent with the anatomical function of the latissimus dorsi, which influences shoulder extension, adduction, internal rotation, thoracic movement, and scapulothoracic control.

Myofascial release helped reduce soft tissue sensitivity, muscle tone, and fascial restriction. Sustained pressure, slow fascial gliding, trigger point release, and breathing-assisted techniques were useful in reducing pain and improving tissue mobility. However, improvement was not due to manual therapy alone. The best functional recovery occurred when myofascial release was combined with active mobility exercises, scapular stabilization, rotator cuff strengthening, thoracic mobility, postural correction, breathing control, and a home exercise program.

The patient showed marked improvement after six weeks of rehabilitation. Shoulder flexion improved from 132° to 174°, abduction improved from 124° to 168°, and pain during overhead reach reduced from 8/10 to 2/10. Chest wall discomfort also reduced from frequent episodes to rare and mild symptoms. These changes indicate that treating the myofascial source, improving scapular control, and reducing fear of movement can produce meaningful recovery in patients with complex referred pain patterns.

Education played an important role in this case. Since chest symptoms created anxiety, explaining the musculoskeletal nature of symptoms after medical clearance helped improve confidence and participation. Ergonomic correction was also important because prolonged computer work and rounded shoulder posture contributed to symptom aggravation. Scheduled breaks, posture correction, self-release, and stretching helped maintain improvement outside the clinic.

Although the outcome was positive, this is a single case study, so the findings cannot be generalized to all patients. The improvement may reflect the combined effects of manual therapy, exercise, education, activity modification, and natural recovery. Still, the case supports the clinical importance of assessing latissimus dorsi trigger points in patients with posterior shoulder pain, axillary tightness, lateral trunk discomfort, and non-cardiac chest wall symptoms.

Limitations of the Study

- This is a single-patient case study, so the findings cannot be generalized to all patients with shoulder and chest wall symptoms.
- There was no randomized comparison group or blinded assessment.
- The improvement reflects the combined effect of myofascial release, exercise therapy, education, ergonomic correction, and activity modification.

- Advanced imaging was not required for this presentation and was not included in the case record.
- Follow-up beyond six weeks was not documented, so long-term recurrence prevention cannot be fully confirmed.
- The assessment of muscle tone and trigger point irritability was based on clinical palpation, which may vary between examiners.

Conclusion

Myofascial release technique, combined with mobility training, scapular strengthening, breathing control, posture correction, and home exercises, was effective in reducing latissimus dorsi myofascial pain with referred shoulder and chest symptoms. The patient showed improved pain, range of motion, function, sleep comfort, desk-work tolerance, and confidence in upper-limb activities.

Future Scope of the Study

Future studies should include larger samples of patients with latissimus dorsi myofascial pain and referred shoulder or chest wall symptoms. Comparative studies may evaluate myofascial release alone, exercise therapy alone, and combined treatment approaches. Standardized tools such as DASH, SPADI, NPRS, pressure pain threshold testing, thoracic mobility measures, and patient-specific functional scales should be used to improve objective documentation. Longer follow-up is needed to determine whether improvement is maintained after return to full work, sports, and gym activity.

Further research may also examine the relationship between prolonged sitting posture, scapular muscle imbalance, breathing pattern dysfunction, thoracolumbar fascial restriction, and recurrent latissimus dorsi trigger point activity. Development of clear clinical prediction features may help therapists identify patients who are most likely to benefit from myofascial release technique.

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