

# A Patient with Persistent Myofascial Pain Syndrome Treated with Physical Medicine and Rehabilitation

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## Abstract

This case report presents a 45-year-old male patient with persistent myofascial pain syndrome (MPS) in the left shoulder and upper back regions. The patient underwent a multimodal treatment approach within the specialty of physical medicine and rehabilitation (PMR), including manual therapy, trigger point injections, and an exercise program. Over the course of 8 weeks, the patient reported significant pain reduction and improvement in functional abilities. This case report highlights the effectiveness of PMR interventions in the management of MPS and provides evidence for the use of a multimodal approach in improving pain and function in patients with persistent MPS.

**Keywords:** myofascial pain syndrome, physical medicine and rehabilitation, multimodal treatment, trigger point injections, manual therapy, exercise

## Introduction

Myofascial pain syndrome (MPS) is a common musculoskeletal condition characterized by myofascial trigger points (MTrPs) that can cause local or referred pain, muscle stiffness, and limited range of motion. Physical medicine and rehabilitation (PMR) is a specialty that focuses on the evaluation and management of musculoskeletal conditions, including MPS. PMR interventions, such as manual therapy, trigger point injections, and exercise, have been shown to be effective in the management of MPS. However, there is limited evidence on the effectiveness of PMR interventions in patients with persistent MPS. This case report aims to describe the management of a patient with persistent MPS using a multimodal PMR approach and provides insights into the effectiveness of these interventions in improving pain and function.

## Case Presentation:

A 45-year-old male presented to the PMR opd at Sushilatiwari government hospital with complaints of chronic pain and functional limitations in the left shoulder and upper back regions. The patient reported a history of repetitive strain injury due to his occupation as a computer programmer, as well as poor posture and high stress levels. He had been experiencing pain for the past 6 months, which was aggravated by movement, prolonged sitting, and stress. The patient had previously received physical therapy, chiropractic care, and medications, but had minimal relief of his symptoms.

On physical examination, the patient exhibited tender MTrPs in the left upper trapezius, rhomboids, and levator scapulae muscles, as well as reduced range of motion in the left shoulder joint. Based on the history and physical examination findings, a diagnosis of MPS was made.

## Intervention:

The patient underwent a comprehensive PMR evaluation, which included a detailed history, physical examination, and review of imaging studies. A multimodal treatment approach was developed, which included the following interventions.

**Manual Therapy:** The patient received manual therapy techniques, including soft tissue mobilization, myofascial release, and stretching, to address the tightness and trigger points in the affected muscles. The manual therapy was performed by a PMR physician who had expertise in these techniques.

**Trigger Point Injections:** The patient received trigger point injections with a local anesthetic and corticosteroid at the identified MTrPs in the left upper trapezius, rhomboids, and levator scapulae muscles. The injections were performed using aseptic technique and ultrasound guidance to ensure accurate needle placement.

**Exercise Program:** The patient was prescribed a home exercise program consisting of stretching and strengthening exercises targeting the affected muscles, as well as postural correction exercises to address poor posture.

**Follow-up and Outcome:**

The patient was seen for follow-up visits every 2 weeks for a total of 8 weeks. At each visit, the patient's pain intensity, functional abilities, and adverse effects were assessed. The patient reported a significant reduction in pain intensity from an initial score of 8/10

## **Discussion**

The management of myofascial pain syndrome (MPS) can be challenging, as it requires addressing the underlying trigger points and associated muscle tightness. Physical medicine and rehabilitation (PMR) interventions, such as manual therapy, trigger point injections, and exercise, have been shown to be effective in managing MPS. This case report describes the successful management of a patient with persistent MPS using a multimodal PMR approach.

Manual therapy, including soft tissue mobilization, myofascial release, and stretching, was used to address the tightness and trigger points in the affected muscles. Manual therapy techniques are commonly used in PMR to release trigger points, improve muscle flexibility, and restore normal tissue function. In this case, the patient reported significant improvement in pain and function after receiving manual therapy, which highlights the effectiveness of this intervention in managing MPS.

Trigger point injections with a local anesthetic and corticosteroid were used to provide targeted pain relief and reduce inflammation at the identified MTrPs. The use of ultrasound guidance ensured accurate needle placement, which is crucial for the success of trigger point injections. The patient reported a reduction in pain intensity after receiving trigger point injections, which supports the use of this intervention in managing MPS.

An exercise program was prescribed to the patient, which included stretching and strengthening exercises for the affected muscles, as well as postural correction exercises. Exercise has been shown to improve muscle strength, flexibility, and posture, which can help in managing MPS. The patient

reported improved functional abilities and reduced pain after following the prescribed exercise program, indicating the effectiveness of exercise in managing MPS.

The multimodal PMR approach used in this case report, including manual therapy, trigger point injections, and exercise, resulted in significant pain reduction and improved functional abilities in the patient with persistent MPS. This highlights the importance of a comprehensive and multimodal approach in managing MPS, as it addresses the different aspects of the condition and provides optimal outcomes.

### **Conclusion**

This case report demonstrates the successful management of a patient with persistent MPS using a multimodal PMR approach, including manual therapy, trigger point injections, and exercise. The patient reported significant pain reduction and improvement in functional abilities, supporting the effectiveness of PMR interventions in managing MPS. This case report provides evidence for the use of a multimodal approach in the management of persistent MPS and highlights the importance of PMR interventions in improving pain and function in these patients.

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