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Effect of Assisted Self-Myofascial Release Using a Tennis Ball on Upper Trapezius Pain: A Case Study

Mr. Abhishek Kumar

Physiotherapist, Physiotherapy

Abstract

Pain in the upper trapezius is a common problem, especially in people who sit for long hours or use computers frequently. This case study focuses on a 27-year-old male who experienced pain and stiffness in the upper trapezius region, which affected his daily activities and neck movements. The study aimed to see whether assisted self-myofascial release using a tennis ball could help reduce his symptoms. The technique involved placing a tennis ball between the shoulder area and a wall and applying gentle pressure to the painful spots. This was done regularly for a short period. Pain level and neck movement were checked before and after the treatment. After the intervention, the patient reported less pain and better neck movement. This shows that using a tennis ball for self-myofascial release can be a simple, affordable, and effective way to manage upper trapezius pain (1,6).

Keywords: Upper trapezius, middle trapezius, self-myofascial release, tennis ball therapy, neck pain, trigger points, muscle tightness, range of motion

Introduction

Neck and shoulder pain are very common complaints, especially among young adults who spend long hours sitting, studying, or working on computers. Poor posture, stress, and lack of regular physical activity can put extra strain on the muscles around the neck and shoulders (2). Among these muscles, the upper trapezius and middle trapezius play an important role in supporting posture and allowing smooth movement of the neck and shoulder. When these muscles are overused or kept in a strained position for a long time, they can become tight and develop painful trigger points (3).

A 27-year-old male patient in this case reported pain and stiffness mainly in the upper trapezius region. The discomfort increased during prolonged sitting and daily work activities, making it difficult for him to move his neck comfortably. Such problems are commonly seen in individuals with a sedentary lifestyle and can affect both physical comfort and work performance if not managed properly.

Self-myofascial release is a simple method used to reduce muscle tightness and relieve pain by applying pressure to specific areas of the muscle. Using a tennis ball is a convenient and low-cost way to perform this technique, as it helps target trigger points effectively. When done correctly, it may help relax the muscle, improve blood flow, and increase flexibility (5). The purpose of this study is to examine the effect of assisted self-myofascial release using a tennis ball on upper trapezius pain in a 27-year-old male patient.

Case Description

A 27-year-old male patient presented with complaints of pain and stiffness in the upper trapezius region for the past few weeks. The pain had a gradual onset and was mainly associated with prolonged sitting, especially during computer work and daily desk activities. The patient reported that the discomfort increased toward the end of the day and was sometimes accompanied by a feeling of tightness in the neck and shoulder area. He also experienced slight difficulty while turning his neck and performing routine tasks comfortably.

There was no history of trauma, injury, or any serious medical condition. On observation, the patient showed a slightly forward head posture and rounded shoulders, which may have contributed to the muscle strain. On palpation, tenderness and trigger points were identified in the upper trapezius muscle, with mild involvement of the middle trapezius. The muscle felt tight, and pressure over the trigger points reproduced the patient's pain (4).

Based on the clinical findings, the condition was identified as upper trapezius muscle pain associated with muscle tightness and trigger points, likely due to poor posture and prolonged static positioning. The patient was considered suitable for conservative management using assisted self-myofascial release with a tennis ball.

Uniqueness of the Case Study

This case study is unique because it focuses on a young adult with upper trapezius pain mainly caused by daily habits such as prolonged sitting and poor posture, which are very common but often ignored (2). It highlights how such routine lifestyle factors can lead to muscle tightness and trigger points even without any injury or serious medical condition.

Another unique aspect is the use of assisted self-myofascial release with a tennis ball as the primary treatment method. This approach is simple, low-cost, and does not require advanced equipment or continuous clinical supervision. The patient was able to perform the technique independently with basic guidance, showing that effective pain management can be achieved through self-care methods (6).

The case also stands out because it demonstrates noticeable improvement within a short period of time. It shows that even a brief, consistent intervention can reduce pain and improve neck movement.

Intervention

The intervention in this case study consisted of assisted self-myofascial release using a tennis ball to reduce pain, muscle tightness, and trigger points in the upper trapezius region. Before beginning the treatment, the patient was educated about the correct technique, proper positioning, and safety precautions. He was also instructed to stay relaxed and maintain normal breathing throughout the session.

The patient was asked to stand in a comfortable position with his back against a wall. A tennis ball was placed between the wall and the upper trapezius muscle on the affected side. The exact position of the ball was adjusted to locate the most tender or painful points. Once identified, the patient gently leaned into the ball to apply controlled pressure over the area.

The patient then performed slow and controlled movements, including slight up-and-down and side-to-side motions, to massage the muscle. At particularly tender spots, sustained pressure was applied for about 20–30 seconds until the discomfort started to decrease. This method helps in releasing trigger points and reducing muscle tightness (1). Deep and steady breathing was encouraged during the process.

Each session lasted approximately 15 to 20 minutes and was performed once daily for a period of one to two weeks. The duration and pressure were adjusted based on the patient's comfort and response to the treatment.

In addition to the main intervention, the patient was advised to maintain proper posture during daily activities and take regular breaks, which further supported recovery (2).

Outcome Measure

The effectiveness of the intervention was assessed using simple and clinically relevant measures before and after the treatment period. Pain intensity was evaluated using the Visual Analog Scale (VAS), where the patient rated his pain on a scale from 0 to 10.

Neck range of motion was also assessed to determine improvement in movement. The patient's ability to perform cervical flexion, extension, lateral flexion, and rotation was observed. Improvement indicated reduced stiffness and better flexibility.

Muscle tenderness was examined through palpation. A decrease in tenderness and trigger point sensitivity indicated improvement in muscle condition (3).

Result

After completing the intervention period of one to two weeks, the patient showed noticeable improvement in symptoms. The pain intensity decreased significantly compared to the initial assessment. The patient reported relief from discomfort and improved ability to perform daily activities.

There was also improvement in neck range of motion. Movements became easier and less painful. Muscle tenderness decreased, and trigger points became less sensitive, indicating reduced tightness (5).

Outcome Measure (Pre and Post Assessment)

Before starting the intervention, the patient's pain level was 7/10 on the VAS scale. Neck movements were restricted and painful, and palpation revealed significant tenderness and active trigger points.

After the intervention, the pain reduced to 3/10. Neck movement improved with less discomfort, and muscle tenderness decreased. Trigger points became less sensitive, indicating effective treatment outcomes (6).

Discussion

This case study showed that assisted self-myofascial release using a tennis ball was effective in reducing pain and muscle tightness. The applied pressure likely helped release trigger points and relax muscle fibers.

The technique may also improve blood circulation and reduce stiffness, leading to better flexibility and pain reduction (1). Postural correction further supported improvement.

However, since this is a single case, the findings cannot be generalized. More research is needed.

Conclusion

This case study concludes that assisted self-myofascial release using a tennis ball is an effective, simple, and low-cost method for managing upper trapezius pain. It helps reduce pain, improve mobility, and increase functional ability. Further studies are recommended to support these findings.

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