

The Role of Trigger Point Injections in Managing Chronic Myofascial Pain

SATHVIK SRIKALYANI & DANIEL CLEARFIELD

University of North Texas Health Science Center; Fort Worth, TX
Motion is Medicine; North Richland Hills, TX

Category: Graduate Student

ABSTRACT

CASE HISTORY: A 48-year-old male Ex-Army Ranger who was actively involved in mixed martial arts (MMA) presented with bilateral posterior leg pain persisting for about a year. The pain radiated from his posterior legs to his calves, accompanied by tight hamstrings and enlarged, cramping calf muscles. He experienced issues with gluteal muscle engagement during squats and reduced hip range of motion. The patient had tried rest, ice baths, massages, and stretching for more than a year but the conservative measures yielded no relief. **PHYSICAL EXAM:** Examination revealed moderate tenderness over the posterior leg muscles, especially the hamstrings and calves, along with palpable nodules in the taut bands of the lower extremity skeletal muscles. **DIFFERENTIAL DIAGNOSES:** 1. Myofascial pain Syndrome (MPS) with trigger points 2. Chronic exertional compartment syndrome 3. Vascular claudication **TESTS & RESULTS:** An ultrasound was performed and ultimately confirmed the identification of trigger points in the patient's lower extremities. The trigger points were identified in the patient's biceps femoris, semimembranosus, semitendinosus, popliteus, medial and lateral gastrocnemius, and soleus muscles. **FINAL DIAGNOSIS:** Myofascial pain syndrome (MPS) with trigger points within the lower extremity muscles. **DISCUSSION:** Literature on MPS primarily focuses on non-invasive treatments such as ice, heat, NSAIDs, stretching, and massage and explores trigger point injections as an adjuvant to these treatments. However, this case is different because it features a patient with chronic lower extremity MPS unresponsive to conventional therapies. The case challenges the traditional view that non-invasive methods suffice for MPS and highlights trigger point injections as a potential first-line treatment. For similar unresponsive MPS cases, future management should consider the early use of trigger point injections, particularly with ultrasound guidance for safety and precision. This case stresses the importance of individualized care, encouraging healthcare practitioners to explore alternative treatments when conventional ones fall short. In addition, this case underscores the value of personalized and integrative approach to care, reflecting the individualized nature of MPS management. **OUTCOME OF THE CASE:** Ultrasound-guided trigger point injections were administered, significantly reducing the patient's pain, improving the patient's range of motion, and allowing the patient to resume their high level of running activity after the trigger point injections had been performed. **RETURN TO ACTIVITY AND FURTHER FOLLOW-UP:** Follow up appointment indicated decreased lower extremity pain and no identification of trigger points. The patient was given handouts containing stretches and exercises, along with educational guidance. Additionally, a referral to physical therapy in the area was recommended for the implementation of a strengthening and stabilization program. Furthermore, patient was informed about the potential benefits of magnesium supplementation to alleviate any future muscle spasms.