

Trigger Points in Myofascial Pain Syndrome - Role of Pregabalin And Trigger Point Injections.

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Abstract: Myofascial pain syndrome is a common regional musculoskeletal pain syndrome that can cause local or referred pain. There is a lack of specific diagnostic criteria for Myofascial pain syndrome. Electrodiagnostic and morphological findings have been identified; however, they cannot be practically applied in the clinical setting due to cost and time constraints. This adds to the difficulty of definitive treatment. In a clinical setting with limited diagnostic approach, a myofascial pain mimics fibromyalgia and often is a complex problem to be solved. It can be better approached by pharmacological methods like oral pregabalin and local trigger point injections.

I. Introduction

Myofascial pain syndrome is a common regional musculoskeletal pain syndrome that can cause local or referred pain. [1,2]It is characterized by myofascial trigger points, which are hard, palpable, localized nodules located in the taut bands of the skeletal muscle and can be painful upon palpation. There are two different kinds of trigger points: active and latent. Active trigger points cause pain in the muscle all the time, and latent trigger points are painful only when they are pressed or irritated. Trigger points are associated with muscle dysfunction and weakness and decreased range of motion. There are no laboratory tests or imaging studies to diagnose trigger points and they are typically identified by clinical examination only. This syndrome affects primarily adults and predominantly females.[3,4] Physical overloading of the muscle is the key factor in developing this condition and the exact pathophysiology is not clearly understood. Manual labourers to industrial workers and even house wives are commonly seen being affected with this condition. Literature reviews conclude that acute trauma or repetitive microtrauma has been implicated in the formation of trigger points owing to the mechanical stress inflicted on muscle fibres.[5] Lack of physical activity, prolonged poor posture, vitamin deficiencies, sleep disturbances, and joint problems may all increase the likelihood of developing trigger points.[6] It is common to find patients with these non specific symptoms often radiating to neck and shoulder in our practise. Trapezius is one of the most commonly affected muscle. In this study we evaluate the role of pregabalin and local trigger point injection with a steroid in treating these conditions.

II. Methodology

All the patients with clinical findings of vague non specific pain often radiating along the muscle are further evaluated with River`s criteria to diagnose to have trigger points.[7]

River`s diagnostic criteria for trigger points.

1. A tender spot is found with palpation, with or without referral of pain (“trigger point”) and;
2. Recognition of symptoms by patient during palpation of tender spot and;
3. At least three of the following:
 - a. Muscle stiffness or spasm
 - b. Limited range of motion of an associated joint
 - c. Pain worsens with stress
 - d. Palpation of taut band and/or nodule associated with atender spot

Diagnosed patients are treated with oral pregabalin of dose 75 mg daily bed time for 1 week. After one week the criteria are again evaluated and the trigger point injected with 80 mg of depomedrol steroid (depot preparation of methyl prednisone). They are further prescribed with oral pregabalin 75mg bed time for 1 month. Patients are evaluated with VAS scores before the initiation of treatment and every 2 weeks until 3 months. They are asked to review every 3 months to assess the recurrence of symptoms. Oral pregabalin is usually stopped if the patient is symptom free for at least 2 weeks duration.

III. Results

A total of 38 females were diagnosed to have myofascial trigger points based on River's criteria in our study. The mean age of the patients was 34.7 years (Range 29-48) and there were no males in the group during the study period. The average VAS score at diagnosis was 7.2(Range 6-9). Mean VAS Score at one week of starting oral pregabalin was 4.2 (range 3-8) and the mean VAS Score at 1 week after injecting steroid was 1.2(Range 0-4). patients were on oral pregabalin for a mean period of 1.8 months (Range 1.4-3 months). 15 patients had recurrence of symptoms in 1 year of follow up . The average time for recurrence in the study group was 7.2 months (Range 3-12 months).

IV. Discussion

There is a lack of specific diagnostic criteria for Myofascial pain syndrome. Electrodiagnostic and morphological findings have been identified; however, they cannot be practically applied in the clinical setting due to cost and time constraints. This adds to the difficulty of definitive treatment. Role of NSAIDs in myofascial pain syndromes is limited to its side effects. Most patients would complain of recurrence of symptoms after the dose of the drug. Muscle relaxants have little evidence in support of its effect on myofascial pain. Pregabalin have analgesic, anxiolytic-like, and anticonvulsant activity, which reduces the release of several neurochemicals, including glutamate, noradrenaline, and substance P [8].MPS may be mediated at the spinal level; therefore, anticonvulsants might be considered in its treatment [9].A Cochrane literature review found that very few trials examined anticonvulsant effectiveness on acute pain; most examined their use in chronic pain [10]. A multicenter, double-blind RCT compared the effects of placebo with pregabalin on fibromyalgia. This demonstrated asignificantly reduced average severity of pain in the pregabalin group and significantly more patients in this group had >50% improvement in pain (P = 0.003) [8] Local infiltration of steroid in to the trigger point would better act as antiinflammatory agent. The spacing of trigger point injection for a week of starting oral pregabalin would give clear diagnostic approach to myofascial pain. If the myofascial pain is associated with fibromyalgia, the pain would drastically improve with pregabalin and then the trigger point injection would help in controlling better.

V. Conclusion

In a clinical setting with limited diagnostic approach, a myofascial pain mimics fibromyalgia and often is a complex problem to be solved. It can be better approached by pharmacological methods like oral pregabalin and local trigger point injections.

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