

Muscle pain syndrome: Evaluation and treatment

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This presentation will specialise in two muscle pain syndromes, myofascial pain and fibromyalgia. It will specialise in the etiology which remains in debate and therefore the evaluation necessary to form the diagnosis. Both syndromes will be discussed from the point of view what these have in common and how they are dissimilar. The new ARA classification of fibromyalgia are going to be discussed. A significant amount of time will be spent on the evaluation of both history and physical exam, which is necessary to make the diagnosis. Treatment are going to be presented that covers pharmaceutical, physiotherapy, and psychological intervention necessary to manage these two syndromes. Emphasis are going to be placed on pain reduction and physical rehabilitation. The presentation will conclude with a discussion of outcomes that can be expected.

Introduction-

Myofascial pain syndromes arise from acute and chronic musculoskeletal pain and sometimes have a referred neuropathic component. It affects more than three quarters of the world's population and is one of the most important and overlooked causes of disability. The origins of pain are thought to reside anywhere between the motor end plate and the fibrous outer covering of the muscle, with involvement of microvasculature and neurotransmitters at the cellular level. Diagnosis is formed by clinical examination for the presence of myofascial trigger points, though some ancillary tests may provide supportive evidence.

Keywords: chronic pain; dry needling; sensitization; trigger point.

Purpose of review: Myofascial pain syndrome may be a chronic pain condition characterized by the presence of myofascial trigger point, a hyperirritable painful spot involving a limited number of muscle fibers. The literature suggest that myofascial trigger points should be considered peripheral pain generators and this review will summarize recent findings concerning the clinical evaluation and therefore the treatment of myofascial trigger points.

Recent findings: The clinical features of myofascial trigger points and their contribution to the patient pain and disability are detailed in several recent studies, which support the clinical relevance of the condition. Recent studies reported that manual palpation to spot MTrPs has good reliability, although some limitations are intrinsic to the diagnostic criteria. During the last decade, a plethora of treatments are proposed and positive effects on pain and performance demonstrated.

Summary: The myofascial trigger point phenomenon has good face validity and is clinically relevant. Clinicians are encouraged to think about the contribution of myofascial trigger points to the patient's pain and disability through a careful medical record and a selected manual examination. Patients with myofascial trigger points will enjoy a multimodal treatment plan including dry needling and manual therapy

techniques. Internal and external validity of research within the field must be improved

Methods: Forty-eight patients with chronic myofascial pain enrolled during a prospective interventional trial of three weekly dry-needling treatments for active myofascial trigger points. Trigger points were evaluated at baseline and at treatment completion using palpation, the pressure-pain threshold, and therefore the mechanical heterogeneity index. Thirty patients were reevaluated at 8 weeks. Trigger points that "responded" changed to tissue that was not spontaneously painful, with or without the presence of a palpable nodule. Trigger points that "resolved" changed to tissue without a palpable nodule. The mechanical heterogeneity index was defined because the proportion of the upper trapezius that appeared mechanically stiffer on elastography. Statistical significance for comparisons decided at $P < .05$.

Results: Following 3 dry needle treatments, the mechanical heterogeneity index decreased significantly for the 38 myofascial trigger points (79% of 48) that skilled treatment. Among these, the baseline mechanical heterogeneity index was significantly lower for the 13 trigger points (27% of 38) that resolved, but the decrease after 3 dry needle treatments did not reach significance. The pressure-pain threshold improved significantly for both groups. At 8 weeks, the mechanical heterogeneity index decreased significantly for the 22 trigger points (73% of 30) that responded and for the ten (45% of 22) that resolved. The pressure-pain threshold improvement was significant for trigger points that responded but didn't reach significance for resolved trigger points

Conclusions: The mechanical heterogeneity index identifies changes in muscle tissue properties that correlate with changes within the myofascial trigger point status after dry needling. The myofascial trigger point irritability might be suppressed after a remote acupuncture treatment. It appears that needling to the remote AcP points with multiple needle insertions of modified AcP technique may be a better technique than simple needling insertion of straightforward needling technique in terms of the decrease in pain intensity and prevalence of endplate noise and therefore the increase in pressure absolute threshold within the needling sites (represented either AcP points and or myofascial trigger points). We have further confirmed that the reduction in endplate noise showed good correlation with a decreased in pain.

References-

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