**AOCPMR Student Council: October Journal Club**

**Title:** Effect of aerobic exercise in the treatment of myofascial pain: a systematic review

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**Discussion by:** Adnan Ahmad, OMS-III

**Discussion:**

The goal of this paper is to review the effects of aerobic exercise on the management of myofascial pain. Strengthening and stretching exercises have been found to be capable of inducing hypoalgesia in patients with myofascial pain syndrome. The authors identified a total of 1,331 articles for this review.

Myofascial pain syndrome (MPS) is a chronic pain disorder that is experienced by up to 85% of the general population. MPS is triggered by myofascial trigger points (MTrPs), which are localized hyperirritable taut bands of muscle. It is speculated in literature that central sensitization induces MTrP formation, this is allowed by the neuroplasticity of the dorsal horn associated with chronic peripheral nociceptive input.

In order to treat MPS, the most effective methods target MTrPs. Common treatments include stretching, strengthening exercise, dry needling, and injection of local corticosteroids or anesthetics. MTrPs are recipients of low oxygen and low energy because of the chronic contracted state. These interventions look to increase the amounts of oxygen and energy (via increased blood flow) that reach these MTrPs, in order to relax the trigger point and relax the tissue. The authors wished to record how aerobic exercise could induce this increase in blood flow to combat MPS.

Of the 1,331 articles, only one study by Cantarero-Villanueva et al. (2012) met the inclusion/exclusion criteria. This study assessed the impact of aerobic swimming exercise, supplemented with stretching and strengthening, in breast cancer patients with MTrPs, cervical pain, and shoulder-axillary pain.

This review concluded that the effects of aerobic exercise in reducing MPS was equivalent to stretching and strengthening, making aerobic exercise a viable alternative to treat MPS and MTrPs.

**Discussion Question:**

1. How does change in skeletal muscle physiology from aerobic exercise affect the pain tolerance compared to stretching or strengthening exercises?
2. Aerobic exercise can be more time consuming and mentally taxing compared to stretching, how do we think that the change in patient mentality affected their experience with MPS?
3. Should we have used studies that included a more supported pain scale rating?
4. Were the inclusion/exclusion criteria too specific, since only one article of 1,331 was able to be used for this review?
5. Is the prevailing theory of MTrPs the only theory behind the causes of MPS?
6. How can we use these models of treating MPS to incorporate into rehab medicine?