



Comparison of the effects of low energy laser and ultrasound in treatment of shoulder myofascial pain syndrome: a randomized single-blinded clinical trial

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Background. Myofascial pain syndrome (MPS) is one of the most prevalent musculoskeletal diseases. MPS impaired quality of life in the patients. There is a lot of controversy about different treatment options which include medical treatments, physical therapy, injections, ultrasound and laser. The effects of laser in MPS are challenging.

Aim. To assess the effects of laser and ultrasound in treatment of MPS.

Design. Randomized single blinded clinical trial
Setting. Outpatient physical therapy clinic at university hospital

Population. Sixty three subjects (females: 46, males: 17), (age range: 17-55 year old) who had a diagnosis of definite MPS were entered in the study.

Methods. We measured the pain intensity at rest, during activity and at night using Visual Analogue Scale (VAS) questionnaire. The patients also filled the Neck Disability Index (NDI) form and the pain threshold provoked by pressure was determined using algometric assessment. Then, the patients were categorized randomly in groups A, B and C (receiving laser therapy, ultrasound and sham laser therapy, respectively). Six weeks after the initial visit, they were visited again and filled the forms again.

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Results. Ultrasound was effective in VAS improvement during activity (46%), at rest (39%) and at night (35%). It also improved NDI scores (34%) and algometric assessment (37%). Laser was effective in VAS improving during activity (54%), at night (51%) and at rest (51%) and also improved NDI scores (73%). It was also found effective in algometric assessment improvement (105%). Laser resulted in more NDI score and algometric assessment improvements comparing to ultrasound ($p < 0.05$).

Conclusion. This study introduces laser as one of the preferred treatments of myofascial pain syndrome in shoulder.

KEY WORDS: Myofascial pain syndromes - Pain measurement - Laser therapy.