Published online: 2019-12-20

Effectiveness of joint mobilization and dry needling in myofascial pain syndrome with neck pain

Martín Pérez S.[1] Montaño Ocaña J.[2] Barragán Carballar C.[2] Arribas Pérez H.[3]

[1] Grupo de Investigación Dolor Musculo-Esquelético y Control Motor, Universidad Europea de Canarias, Calle Inocencio García, 1, 38300 La Orotava, Santa Cruz de Tenerife, Spain
[2] Grupo de Investigación Dolor Musculo-Esquelético y Control Motor, Universidad Europea de Madrid, Calle Tajo, s/n, 28670 Villaviciosa de Odón, Madrid, Spain
[3] Máster Universitario en Terapia Manual Ortopédica en el Tratamiento del Dolor, Universidad Europea de Madrid, Calle Tajo, s/n, 28670 Villaviciosa de Odón, Madrid, Spain

Rev Fisioter Invasiva 2019;2:96–97.

Abstract

Background and Aim Almost 70% of the population has suffered from cervical pain of a mechanical origin (CPM) at some point in their life. In myofascial pain syndrome (MPS), besides the zygapophyseal joint, the myofascial trigger point (MTrP) is involved as the main source of CPM. Manual therapy (MT) based on joint mobilization (JM) in combination with dry needling (DN), are the most used treatments in these patients.
Aims 1) To compare the pain and range of motion (ROM) between the MT interventions using JM and deep DN and MT using JM and sham DN in patients with CPM and activation of MTrP 2 of the upper trapezius (UT). 2) To assess the changes in the active cervical ROM, pain pressure threshold (PPT), intensity of pain at rest and with movement (measured using the Visual Analog Scale) and post-needling soreness in these patients.
Material and Methods An experimental, double blind randomized pilot study in which the effects produced by the interventions were compared among two groups: a first group ($n = 5$) received a treatment based on sham DN of the UT and MT using JM of C2 and a second group ($n = 6$) who received deep DN of the MTrP 2 of the UT and the same mobilization technique. Three prospective measurements were performed: pre-intervention, post-intervention and follow-up (1 month after the post-intervention measurement).
Results 11 subjects participated in this study (7 women and 4 men; mean age: 49.9 ± 10.8 years) who completed both the four interventions (1 session/week) as well as the follow-up. According to the PPT, measured on the MTrP 2 of the UT, none of the two groups presented clinically significant changes, and only 3 patients presented increases beyond the MDC (MDC) in the follow-up measurement (1.11 kg/cm2). Regarding the VAS measured at rest, only the first group (sham DN) obtained a clinically significant post intervention improvement (56%) and at follow-up (150%). The VAS in response to movement decreased significantly with treatment in both groups for all movement planes and axes; however, the active cervical ROM did not display significant changes in any of the two groups; lastly, the mean, maximum and minimum

Keywords
- dry needling
- manual therapy
- cervical pain
- myofascial pain syndrome

DOI https://doi.org/10.1055/s-0039-3401874.
ISSN 2386-4591.

values of post-needling soreness in the group with placebo DN were lesser to those of the group who received the real deep DN technique, for the entire treatment.

Conclusion Deep DN combined with MT improved the intensity of pain in response to cervical movement, whereas sham dry needling combined with MT caused a greater decrease of intensity at rest. Although both techniques are similar for improving active cervical ROM, sham DN combined with MT increased post-needling soreness both during treatment as well as at follow-up. Further research is necessary to deepen our information of the effects of the combination of these two techniques in the treatment of MPS.