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Short-term effects of dry needling of active myofascial trigger points in the masseter muscle in patients with temporomandibular disorders.

Fernández-Carnero J, La Touche R, Ortega-Santiago R, Galan-del-Rio F, Pesquera J, Ge HY, Fernández-de-Las-Peñas C.

Department of Physical Therapy, Occupational Therapy, Rehabilitation and Physical Medicine, Esthesiology Laboratory of Universidad Rey Juan Carlos, Spain. josue.fernandez@urjc.es

Abstract

AIMS: To investigate the effects of dry needling over active trigger points (TrPs) in the masseter muscle in patients with temporomandibular disorders (TMD). **METHODS:** Twelve females, aged 20 to 41 years old (mean = 25, standard deviation +/- 6 years) diagnosed with myofascial TMD were recruited. Each patient attended two treatment sessions on two separate days and received one intervention assigned in a random fashion, at each visit: deep dry needling (experimental) or sham dry needling (placebo) at the most painful point on the masseter muscle TrP. Pressure pain threshold (PPT) over the masseter muscle TrP and the mandibular condyle and pain-free active jaw opening were assessed pre- and 5 minutes postintervention by an examiner blinded to the treatment allocation of the subject. A two-way repeated-measures analysis of variance (ANOVA) with intervention as the between-subjects variable and time as the within-subjects variable was used to examine the effects of the intervention. **RESULTS:** The ANOVA detected a significant interaction between intervention and time for PPT levels in the masseter muscle ($F = 62.5$; $P < .001$) and condyle ($F = 50.4$; $P < .001$), and pain-free active mouth opening ($F = 34.9$; $P < .001$). Subjects showed greater improvements in all the outcomes when receiving the deep dry needling compared to the sham dry needling ($P < .001$). **CONCLUSION:** The application of dry needling into active TrPs in the masseter muscle induced significant increases in PPT levels and maximal jaw opening when compared to the sham dry needling in patients with myofascial TMD.

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