

7<sup>th</sup> International Conference & Exhibition on

# Physiotherapy & Physical Rehabilitation

March 25-26, 2019 | Rome, Italy



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### Manual therapy and dry needling in the treatment of chronic mechanical neck pain

Neck pain is a common musculoskeletal complaint, with a point prevalence of 15% of males and 23% of females experiencing symptoms. Recent evidence suggests that trigger point (TrP) dry needling (DN) could be effective in the treatment of neck pain. However, no studies have directly compared the outcomes of TrP DN and TrP manual therapy (MT) in this population. This randomized clinical study compares the effects of TrP DN and TrP MT on pain, function, pressure pain sensitivity, and cervical range of motion in subjects with chronic mechanical neck pain. Ninety-four patients (mean±SD age, 31±3 years; 66% female) were randomized into a TrP DN group (n=47) or a TrP MT group (n=47). Neck pain intensity (11-point numeric pain rating scale), cervical range of motion, and pressure pain thresholds (PPTs) over the spinous process of C7 were measured at baseline, postintervention, and at follow-ups of 1 week and 2 weeks after treatment. The Spanish version of the Northwick Park Neck Pain Questionnaire was used to measure disability/function at baseline and the 2-week follow-up. Mixed-model, repeated-measures analyses of variance (ANOVAs) were used to determine if a time-by-group interaction existed on the effects of the treatment on each outcome variable, with time as the within-subject variable and group as the between-subject variable. In relation to the results, the ANOVA revealed that participants who received TrP DN had outcomes similar to those who received TrP MT in terms of pain, function, and cervical range of motion. The 4-by-2 mixed-model ANOVA also revealed a significant time-by-group interaction ( $P<.001$ ) for PPT: patients who received TrP DN experienced a greater increase in PPT (decreased pressure sensitivity) than those who received TrP MT at all follow-up periods (between-group differences: posttreatment, 59.0 kPa; 95% confidence interval [CI]: 40.0, 69.2; 1-week follow-up, 69.2 kPa; 95% CI: 49.5, 79.1; 2-week follow-up, 78.9 kPa; 95% CI: 49.5, 89.0). We can conclude that 2 sessions of TrP DN and TrP MT resulted in similar outcomes in terms of pain, disability, and cervical range of motion. Those in the TrP DN group experienced greater improvements in PPT over the cervical spine. Future trials are needed to examine the effects of TrP DN and TrP MT over long-term follow-up periods.

### Biography

Ines Llamas-Ramos has completed her PhD at The University of Salamanca, Salamanca, Spain. Currently, she is working as a Physiotherapist in the University Hospital of Salamanca. Along with her clinical practice, she has been working as a Visiting Professor at The University of Salamanca, in the Department of Nursing and Physiotherapy. She has published several articles about cancer and dry needling in reputed international journals and has been serving as an Editorial Board Member of various medical journals.

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