

Post needling soreness and tenderness after different dosages of dry needling of an active myofascial trigger point in patients with neck pain: a randomised controlled trial.

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Abstract

BACKGROUND:

Previous studies in asymptomatic subjects have demonstrated that myofascial trigger point (MTrP) dryneedling is frequently associated with postneedling soreness. However, to the author's knowledge, there is not any study that performs a detailed description of postneedling soreness characteristics in patients with myofascial pain. This information could help clinicians to make evidence-informed decisions considering the benefits and negative effects of different dryneedling dosages.

OBJECTIVE:

(1) to compare the prevalence, intensity and duration of postneedling soreness and tenderness after different dosages of deep dryneedling (DDN) and (2) analyze the influence on postneedling soreness of

psychological factors and other factors involved in the DDN process DESIGN: A 1-week follow-up, double-blind randomized controlled trial.

SETTING:

University community.

PARTICIPANTS:

Patients (n=120: 34 males; 86 females) aged 18 to 53 years (median±IR, 21.0±7.0y) with active MTrPs in the upper trapezius.

INTERVENTION:

All patients received DDN in an active MTrP. They were randomly divided into 4 groups: no local twitch responses (LTRs) elicited (Control group), 4 LTRs elicited, 6 LTRs elicited and DDN until no more LTRs were elicited.

MAIN OUTCOME MEASURES:

post-needling soreness and pressure pain threshold (PPT) were assessed before treatment, during DDN procedure and every 24 hours during one week.

RESULTS:

Postneedling soreness showed a significant effect for time ($F_{2,006}=173.603;P<.001;\eta_p^2=0.659$) and a significant interaction between group and time ($F_{6,017}=3.763;P=.001;\eta_p^2=0.111$). PPT showed a significant effect for time ($F_{2,377}=16.833;P<.001;\eta_p^2=0.127$) and a significant interaction between group and time ($F_{7,130}=2.100;P=.04;\eta_p^2=0.052$). Psychological factors did not show relevant correlations with the intensity of postneedling soreness.

CONCLUSIONS:

Postneedling soreness is present in most of subjects after DDN of active MTrPs. The groups in which DDN was performed eliciting LTRs exhibited greater post-needling soreness. The number of needle insertions was associated with postneedling soreness but psychological factors did not seem to play a relevant role on its perception.

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KEYWORDS:

Needles; Trigger points; pain; post-needling soreness; psychological factors