

SHORT-TERM EFFECTS OF TRIGGER POINT DRY NEEDLING ON PAIN AND DISABILITY IN SUBJECTS WITH PATELLOFEMORAL PAIN SYNDROME

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ABSTRACT

Background: Patellofemoral pain syndrome (PFPS) is a prevalent knee disorder. A novel yet increasingly popular treatment for PFPS is trigger point dry needling (DN).

Purpose: The purpose of this study was to determine if DN is more effective at reducing pain and disability than a sham treatment in individuals with PFPS.

Study design: Randomized trial.

Materials/Methods: Sixty military health care beneficiaries (36 males) with a clinical diagnosis of PFPS were recruited and completed the study. Subjects underwent a standardized clinical examination and were randomized into a DN or sham treatment group. DN treatment consisted of insertion of an acupuncture-like needle into six sites in the quadriceps femoris muscles of the symptomatic lower extremity based on a palpation examination. The sham group received a simulated treatment with a sharp object and needle guide tube without puncturing the skin. Self-reports of pain, disability, and overall status were collected before treatment, immediately after treatment and at 72 hours. Data were analyzed with separate 2x2 repeated measures analysis of variance, with independent variables being Group (DN vs. sham) and Time (pre-treatment vs. immediately post-treatment, and pre-treatment vs. 72 hours). The hypothesis of interest in each case was the Group*Time interaction. The alpha-level was set a priori to .05 using 2-tailed tests.

Results: Both groups exhibited a clinically meaningful reduction in pain based on numeric pain rating scale scores immediately post-treatment and at 72 hours, but there was no statistically significant difference between groups ($p=0.219, 0.310$). There was no significant difference between groups for any other outcome measures.

Conclusion: These data suggest that DN treatment is not more effective than a sham DN treatment at reducing short-term pain and disability in individuals with PFPS when used as an isolated treatment approach.

Level of Evidence: 2

Key words: Dry needling, knee pain, patellofemoral pain syndrome, rehabilitation

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