SHORT-TERM EFFECTS OF DRY NEEDLING ON HAMSTRING LENGTH: A RANDOMIZED CONTROLLED TRIAL

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Background: An impairment in hamstring length is commonly encountered in the clinic and has been linked to a variety of pathologies. While there is promising research on the impact of dry needling for pain, less is understood regarding muscle length.

Purpose: The purpose of this study is to identify the short-term effect of dry needling on hamstring length in an adult population being treated with dynamic stretching.

Study Design: Double Blinded, Randomized Controlled Trial.

Methods: Twenty-three subjects volunteered with 20 subjects being included after identifying hamstring length impairments of greater than 20 degrees with the 90-90 active knee extension test. Thirty-seven hamstrings from the 20 included subjects were then randomized into a control group of dynamic stretching and sham dry needling (n=21) or an intervention group of dynamic stretching and dry needling (n=16). Two treatments sessions of true or sham dry needling were completed over the course of a week, in which subjects and researchers were blinded to which subjects received dry needling or sham dry needling. The dynamic exercises were completed daily with instructions and supervision from the researchers for both groups.

Results: There was a significant change in hamstring length from pre-treatment to post-treatment in both groups combined (6 degrees, p=.009). However, no significance in hamstring length change between the dry needling and control groups (p=.74).

Discussion/Conclusion: The addition of dry needling did not alter the short-term improvements of dynamic stretching for shortened hamstring length. Based off the outcomes of this study, dynamic stretching without the addition of dry needling is sufficient to quickly improve the hamstring length of an adult with limitations. Assessing the intervention group through the lens of a case series may paint a different picture, as it would yield a significant change in hamstring length with the intervention of dry needling and dynamic exercise. Therefore, considering the context of the patient's presentation may impact the clinical decision making necessary to include dry needling with a dynamic stretching program for adults with restricted hamstring length.

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