

The immediate effect of dry needling on multifidus muscles' function in healthy individuals.

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Abstract

BACKGROUND:

Dry needling of muscles is mainly used for the management of pain in musculoskeletal disorders. Yet, the association between dry needling and motor performance of muscles is still unclear.

OBJECTIVE:

To investigate the immediate effect of dry needling on lumbar multifidus muscles' function in healthy subjects.

METHODS:

Twenty-eight volunteers were divided randomly into: study group (13 subjects) and control group (15 subjects) who underwent no intervention. Study group received dry needling to the lumbar multifidus muscles using a deep insertion technique with 4 needles (2 on each side of the spine). The needles were left in situ for 10 minutes. Ultrasound imaging was used to measure multifidus muscles' thickness, pre and post-procedure during rest in a prone position and during contralateral active straight leg extension.

RESULTS:

Significant difference was found in the percentage of change of muscle activation post needling between groups on the right side at level L4-5. A slight increase in the percentage of muscle activity, post procedure was observed in the dry needling group compared with the control group, although not significant in other segments examined.

CONCLUSION:

An improvement of back muscle function following dry needling procedure in healthy individuals was found. This implies that dry needling might stimulate motor nerve fibers and as such increase muscle activity.

KEYWORDS:

Ultrasound imaging; acupuncture; back muscles; muscle strength; spine

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