

Dry needling for the treatment of poststroke muscle spasticity: A prospective case report.

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Abstract

BACKGROUND:

Spasticity is a common symptom that can be detrimental to the quality of life and daily function of patients with stroke.

OBJECTIVE:

To introduce the use of dry needling (DN) as a novel method for the treatment of affected upper limb spasticity in a patient with chronic ischemic stroke who was admitted at the Stroke Physiotherapy Clinic.

METHODS:

The pronator teres (PT), flexor carpi radialis (FCR), and flexor carpi ulnaris (FCU) on the affected side were needed. The patient received deep DN for 1 session, and the duration of needling for each muscle was 1 minute. The main outcomes were the Modified Modified Ashworth Scale (MMAS) muscle spasticity score, and the Hmax/Mmax ratio which were measured before (T0), immediately after (T1), and 15 minutes after the end of needling (T2).

RESULTS:

The case was a 53-year-old man with a 13-year history of right hemiparesis poststroke. After DN, the spasticity scores improved and maintained as indicated in the MMAS grades (PT 3 to 2, finger flexors 1 to 0) and the Hmax/Mmax ratio (0.39, 0.29, and 0.32 at T0, T1, and T2, respectively). The patient was able to voluntarily extend the wrist and fingers slightly after DN. The upper limb Brunnstrom recovery stage (3 to 4) and hand function (2 to 3) improved and maintained. The passive supination increased at T1 (75°) and T2 (50°) compared to T0 (38°).

CONCLUSIONS:

This prospective case report presents dry needling as a novel method in neurorehabilitation for the treatment of poststroke spasticity. Further research is recommended.

KEYWORDS:

H-reflex; Stroke; dry needling; spasticity

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