

## **Manual treatment for cervicogenic headache and active trigger point in the sternocleidomastoid muscle: a pilot randomized clinical trial.**

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### **Author information**

#### **Abstract**

##### **OBJECTIVE:**

The purpose of this preliminary study was to determine feasibility of a clinical trial to measure the effects of manual therapy on sternocleidomastoid active trigger points (TrPs) in patients with cervicogenic headache (CeH).

##### **METHODS:**

Twenty patients, 7 males and 13 females (mean  $\pm$  SD age,  $39 \pm 13$  years), with a clinical diagnosis of CeH and active TrPs in the sternocleidomastoid muscle were randomly divided into 2 groups. One group received TrP therapy (manual pressure applied to taut bands and passive stretching), and the other group received simulated TrP therapy (after TrP localization no additional pressure was added, and inclusion of longitudinal stroking but no additional stretching). The primary outcome was headache intensity (numeric pain scale) based on the headaches experienced in the preceding week. Secondary outcomes included neck pain intensity, cervical range of motion (CROM), pressure pain thresholds (PPT) over the upper cervical spine joints and deep cervical flexors motor performance. Outcomes were captured at baseline and 1 week after the treatment.

##### **RESULTS:**

Patients receiving TrP therapy showed greater reduction in headache and neck pain intensity than those receiving the simulation ( $P < .001$ ). Patients receiving the TrP therapy experienced greater improvements in motor performance of the deep cervical flexors, active CROM, and PPT (all,  $P < .001$ ) than those receiving the simulation. Between-groups effect sizes were large (all, standardized mean difference,  $>0.84$ ).

##### **CONCLUSION:**

This study provides preliminary evidence that a trial of this nature is feasible. The preliminary findings show that manual therapy targeted to active TrPs in the sternocleidomastoid muscle may be effective for reducing headache and neck pain intensity and increasing motor performance of the deep cervical flexors, PPT, and active CROM in individuals with CeH showing active TrPs in this muscle. Studies including greater sample sizes and examining long-term effects are needed.

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##### **KEYWORDS:**

Cervicogenic Headache, Manual Therapy, Neck Muscles, Trigger Points