

A pilot study to investigate the short-term effects of specific soft tissue massage on upper cervical movement impairment in patients with cervicogenic headache.

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Abstract

OBJECTIVES:

Upper cervical movement impairment and muscle dysfunction have been identified as core components of cervicogenic headache (CGH) pathogenesis. The purpose of this single-group pre-post test pilot study was to investigate the short-term effects of a specific soft tissue massage (SSTM) intervention to the cervical spine on range of upper cervical motion.

METHODS:

Eight subjects (mean age 28.1 years) with published criteria of CGH (mean history of headache for 7.1 years) were investigated. Range of rotation of the upper cervical spine to the left and right was determined by the flexion-rotation test. Movement was assessed in three phases: pre-intervention, intervention, and post-intervention. The SSTM intervention consisted of an 8-minute soft tissue massage to the cervical muscles bilaterally.

RESULTS:

Pre-intervention measures of flexion-rotation test range of motion prior to the intervention over two assessment points were consistent. In contrast, a repeated measures analysis of variance revealed a significant improvement in range of rotation to the left and right after the first ($P < 0.01$), second ($P < 0.01$), but not third intervention ($P = 0.19$), from an average range of 27.5° at baseline to 45.9° at the third treatment session. After the 2-week post-intervention phase, range of motion remained stable without decline, and was considered full range.

DISCUSSION:

This pilot study provides preliminary evidence of the potential for SSTM to improve, at least in the short-term, upper cervical range of motion in people with CGH.

KEYWORDS:

Cervical movement impairment, Cervicogenic headache, Flexion–rotation test, Massage