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Manipulation and Mobilization of the Cervical Spine

A Systematic Review of the Literature

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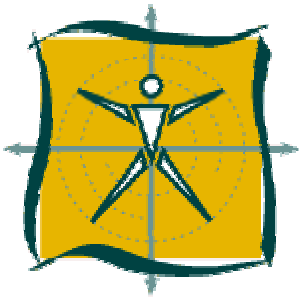
Study Design: Cervical spine manipulation and mobilization were reviewed in an analysis of the literature from 1966 to the present.

Objectives: To assess the evidence for the efficacy and complications of cervical spine manipulation and mobilization for the treatment of neck pain and headache.

Summary of Background Data: Although recent research has demonstrated the efficacy of spinal manipulation for some patients with low back pain, little is known about its efficacy for neck pain and headache.

Methods: A structured search of four computerized bibliographic databases was performed to identify articles on the efficacy and complications of cervical spine manual therapy. Data were summarized, and randomised controlled trials were critically appraised for study quality. The confidence profile method of meta-analysis was used to estimate the effect of spinal manipulation on patients' pain status.

Results: Two of three randomised controlled trials showed a short-term benefit for cervical mobilization for acute neck pain. The combination of three of the randomised controlled trials comparing spinal manipulation with other therapies for patients with subacute or chronic neck pain showed an improvement on a 100-mm visual analogue scale of pain at 3 weeks of 12.6 mm (95% confidence interval, -0.15, 25.5) for manipulation compared with muscle relaxants or usual medical care. The highest quality randomised controlled trial demonstrated that spinal manipulation provided short-term relief for patients with tension-type headache. The complication rate for cervical spine manipulation is estimated to be between 5 and 10 per 10 million manipulations.



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Conclusions: Cervical spine manipulation and mobilization probably provide at least short-term benefits for some patients with neck pain and headaches. Although the complication rate of manipulation is small, the potential for adverse outcomes must be considered because of the possibility of permanent impairment or death.

Key words: headache; neck pain; spinal manipulation.