
The effectiveness of chiropractic manipulation in the treatment of headache: an exploration in the literature

Vernon HT

Authors' objectives

To assess the effectiveness of chiropractic manipulation for tension-type and migraine headaches.

Searching

MEDLINE and other medical databases were searched on-line, whilst CRAC and CHIROLARS, two chiropractic databases were searched manually. Search terms were not specified.

Citation searches and peer enquiries were also conducted.

Study selection

Study designs of evaluations included in the review

Case series, cohort designs and randomised controlled trials (RCTs) were included. Single case studies were excluded.

Specific interventions included in the review

Spinal manipulation. The number and duration of treatment sessions varied.

'Control' interventions included no treatment, mobilisation, ice and amitriptyline.

Participants included in the review

Headache sufferers. These are divided into two subgroups: people with tension-type headaches (vascular and non-vascular) and those with migraine-type. One study included people with post-traumatic headache.

Outcomes assessed in the review

The individual studies reported a diverse range of outcomes including: frequency, duration and severity of headaches (assessed in some cases by use of a headache diary); accompanying symptoms such as nausea, dizziness, tinnitus or ear pain, aura, visual disturbances; regional and segmental ranges of motion; and analgesic use.

How were decisions on the relevance of primary studies made?

The author does not state how the papers were selected for the review, or how many of the reviewers performed the selection.

Assessment of study quality

The quality of the studies is not systematically assessed, but the author does comment on the methodological quality of the individual studies in the text.

Data extraction

The author does not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.

Methods of synthesis

How were the studies combined?

The studies were combined by narrative summary.

How were differences between studies investigated?

The author does not state how differences between the studies were investigated.

Results of the review

There were 5 case series, 3 cohort studies and 2 RCTs involving a total of 981 people with tension-type headaches.

There was one case series, one cohort study and 1 RCT involving a total of 173 people with migraine-type headaches.

Tension-type headaches:

5 case series suggested that 'success' (not clearly defined) was achieved in more than 80% of cases, or that manipulation was 'most effective' (it is unclear what it was more effective than). 2 cohort studies reported between 60 and 77% 'success', whilst another reported a statistically-significant reduction in headache reduction and frequency after chiropractic manipulation. One small RCT showed manipulation was statistically better than ice, and another showed it was better than amitriptyline, both at the end of a 6-week intervention period and 6 weeks later.

Migraine-type headaches:

A case series and a cohort study both reported 75% 'success'. A RCT comparing chiropractic manipulation, medical manipulation and control/mobilisation performed by physiotherapists found that 2 months after the end of a 2-month intervention period, the frequency of migraines had reduced in 40% of the chiropractic group, 13% of the medical group and 34% of the control/mobilisation group. Of 14 patients who had achieved complete recovery at 20 months follow-up, 8 had received chiropractic manipulation, 5 control/mobilisation and 1 medical manipulation.

Authors' conclusions

A modest body of clinical studies deal with the effect of manipulation on headache. The overall results are encouraging, even if not that supportive in the case of tension-type headache. Further studies in this area are warranted.

CRD commentary

The author used a wide range of sources to identify relevant studies, but the quality of his strategies for searching specific databases cannot be assessed.

Key design features and aspects of methodological quality of individual studies included in the review are commented on, but not systematically assessed. Different types of study design are considered together.

The author acknowledges there are several important limitations to the available research, e.g. the inclusion criteria for individual studies are often poorly defined such that people with different types of headaches are considered together, and few studies have used control groups, baseline data collection, sufficient treatment doses and standard outcome measures. The recruitment strategies for the studies reviewed were not discussed, and the role of the placebo-effect warrants further consideration.

Implications of the review for practice and research

The effectiveness of spinal manipulation as a treatment for chronic headache sufferers appears to hold enough promise to warrant further investigation. Attention should be paid to the identification of the types of headache which are most likely to respond, and to the precise nature and duration of manipulation which is likely to yield the greatest benefit.

Bibliographic details

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