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[Intervention Review]

Acupuncture for neck disorders

Kien Trinh¹, Nadine Graham², Dominik Irnich³, Ian D Cameron⁴, Mario Forget⁵

¹DeGroot School of Medicine, Office of MD Admissions, McMaster University, Hamilton, Canada. ²School of Rehabilitation Science, McMaster University, Hamilton, Canada. ³Department of Anesthesiology, University of Munich, Munich, Germany. ⁴John Walsh Centre for Rehabilitation Research, Kolling Institute, Northern Sydney Local Health District, St Leonards, Australia. ⁵Canadian Forces Health Services Group/Groupe de Services de Santé des Forces Canadiennes, National Defence/Défense Nationale, Government of Canada/Gouvernement du Canada, Kingston, Canada

Contact address: Kien Trinh, DeGroot School of Medicine, Office of MD Admissions, McMaster University, 1200 Main Street West, MDCL-3112, Hamilton, ON, L8N 3Z5, Canada. trinhk@mcmaster.ca.

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ABSTRACT

Background

Neck pain is one of the three most frequently reported complaints of the musculoskeletal system. Treatments for neck pain are varied, as are perceptions of benefit. Acupuncture has been used as an alternative to more conventional treatment for musculoskeletal pain. This review summarises the most current scientific evidence on the effectiveness of acupuncture for acute, subacute and chronic neck pain. This update replaces our 2006 Cochrane review update on this topic.

Objectives

To determine the effects of acupuncture for adults with neck pain, with focus on pain relief, disability or functional measures, patient satisfaction and global perceived effect.

Search methods

We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, the Manual, Alternative and Natural Therapy Index System (MANTIS), the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and the Index to Chiropractic Literature (ICL) from their beginning to August 2015. We searched reference lists, two trial registers and the acupuncture database Traditional Chinese Medical Literature Analysis and Retrieval System (TCMLARS) in China to 2005.

Selection criteria

We included published trials that used random assignment to intervention groups, in full text or abstract form. We excluded quasi-randomised controlled trials (RCTs).

Data collection and analysis

Two review authors made independent decisions for each step of the review: article inclusion, data abstraction and assessment of quality of trial methods. We assessed study quality by using the Cochrane Back Review Group 'Risk of bias' tool. We used consensus to resolve disagreements, and when clinical heterogeneity was absent, we combined studies by using random-effects meta-analysis models.

Main results

Of the 27 included studies, three represented individuals with whiplash-associated disorders (WADs) ranging from acute to chronic (205 participants), five explored chronic myofascial neck pain (186 participants), five chronic pain due to arthritic changes (542 participants),

six chronic non-specific neck pain (4011 participants), two neck pain with radicular signs (43 participants) and six subacute or chronic mechanical neck pain (5111 participants).

For mechanical neck pain, we found that acupuncture is beneficial at immediate-term follow-up compared with sham acupuncture for pain intensity; at short-term follow-up compared with sham or inactive treatment for pain intensity; at short-term follow-up compared with sham treatment for disability; and at short-term follow-up compared with wait-list control for pain intensity and neck disability improvement. Statistical pooling was appropriate for acupuncture compared with sham for short-term outcomes due to statistical homogeneity (P value = 0.83; I^2 = 20%). Results of the meta-analysis favoured acupuncture (standardised mean difference (SMD) -0.23, 95% confidence interval (CI) -0.20 to -0.07; P value = 0.0006). This effect does not seem sustainable over the long term. Whether subsequent repeated sessions would be successful was not examined by investigators in our primary studies.

Acupuncture appears to be a safe treatment modality, as adverse effects are minor. Reported adverse effects include increased pain, bruising, fainting, worsening of symptoms, local swelling and dizziness. These studies reported no life-threatening adverse effects and found that acupuncture treatments were cost-effective.

Since the time of our previous review, the quality of RCTs has improved, and we have assessed many of them as having low risk of bias. However, few large trials have provided high-quality evidence.

Authors' conclusions

Moderate-quality evidence suggests that acupuncture relieves pain better than sham acupuncture, as measured at completion of treatment and at short-term follow-up, and that those who received acupuncture report less pain and disability at short-term follow-up than those on a wait-list. Moderate-quality evidence also indicates that acupuncture is more effective than inactive treatment for relieving pain at short-term follow-up.

PLAIN LANGUAGE SUMMARY

Acupuncture for neck disorders

Review question

We reviewed the evidence on effects of acupuncture on function, disability, patient satisfaction and global perceived effect among individuals with neck pain.

Background

Neck pain is one of the three most frequently reported complaints of the musculoskeletal system. Treatments for neck pain are varied, as are perceptions of benefit. Acupuncture is sometimes used as an alternative to more conventional treatment for musculoskeletal pain. In this review, acupuncture was defined as stimulation of one or more specific points on the body by insertion of needles to achieve a therapeutic effect. Acupuncture typically includes manual stimulation of needles, but variations are common, such as electrical or heat stimulation of the needles, which is called moxibustion (moxa herb, *Artemisia vulgaris*, is burned at the handle end of the needle). Injection acupuncture, in which herbal extracts are injected into acupuncture points, is occasionally used as well.

Study characteristics

We included in this review 27 trials (5462 participants) that examined effects of acupuncture for acute to chronic neck pain (lasting a few days to at least three months). Acupuncture was compared with sham acupuncture, wait-list or inactive treatment (e.g. sham laser). The evidence is current to August 2015.

Key results

Researchers described variability in populations studied, acupuncture techniques used and outcomes measured, so we could not combine the results of these trials to get an overall picture of the effectiveness of acupuncture. Therefore, we could draw only limited conclusions.

Individuals with chronic neck pain who received acupuncture reported better pain relief immediately after treatment and in the short term compared to those who received sham treatments. Individuals with chronic neck pain who received acupuncture reported better pain relief and improvement in disability in the short term than those who were on a wait-list.

Acupuncture treatments appear to be safe, and investigators have reported only minor and short-lasting side effects.

Quality of the evidence

The quality of the evidence used to determine whether acupuncture is helpful remains low or moderate. Limitations in the evidence include few study participants, the tendency of researchers to not keep track of who dropped out of the study and they did not make sure that patients who entered the study were randomly assigned to a group. These types of flaws introduce bias into the studies and therefore affect how strongly we believe the results.