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FAST TRACK

Spinal manipulative therapy reduces the pain of cervicogenic headaches

Is osteopathic manipulation effective for headaches?

Evidence-based answer

It can be. Spinal manipulative therapy (SMT), a component of osteopathy, has been shown to be variably effective for the treatment of headaches. For the prophylactic treatment of cervicogenic headaches and for acute tension headaches, SMT is superior to placebo. For tension headache prophylaxis, research shows a trend toward better outcomes with amitriptyline than with SMT. For migraine prophylaxis, SMT has an effect similar to amitriptyline (strength of recommendation: **B**, based on a systematic review of various quality studies).

Clinical commentary

3 osteopathic techniques that work for my patients

Headaches often have more than one cause—physical, psychological, and pharmacological—and each requires treatment. I start by systematically eliminating specific headache triggers. Meanwhile, I find osteopathic manipulative treatment to be an easy and timely intervention to abort headache symptoms and improve patient well-being. I use a variety of manipulation techniques, including cervical soft tissue massage, occipital decompression, and myofascial unwinding.

1. Cervical soft tissue massage of the paraspinal tissues helps relieve the spasms of tension headaches.

2. Occipital decompression involves using the fingertips to manually stretch the paraspinal tissues at the base of the occiput; it works well in my experience to abort migraine headaches. I teach patients to use a rolled up hand towel behind their neck to do occipital decompression at home, which helps prevent further headaches.

3. Myofascial unwinding is a technique that literally unwinds the tissues encasing muscles in spasm.

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Evidence summary

For cervicogenic headaches: Spinal manipulative therapy reduces pain

Three studies[1] evaluated SMT for treatment of recurrent cervicogenic headaches). A multicenter trial[2] randomized 200 patients with cervicogenic headaches to either SMT (8–12 sessions over 6 weeks) or placebo. The SMT group had significantly reduced pain (at 1 week, effect size [ES]=0.7; 95% confidence interval [CI], 0.3–1.2; and at 12 months, ES=0.4; 95% CI, 0.0–0.8) and fewer headaches (ES=0.7; 95% CI, 0.3–1.1 at both time points) than placebo.

Another RCT[3] with 105 patients compared SMT (3 times a week for 3 weeks) with placebo. The SMT group

reported significantly less pain after 3 weeks (ES=2.2; 95% CI, 1.7–2.7).

A third trial[4] randomized 30 patients to either SMT, mobilization (small oscillatory movements to a joint within its normal range), or wait-list placement. At the end of treatment, there was a nonsignificant trend toward greater pain reduction in patients receiving SMT than either those receiving mobilization (ES=0.4; 95% CI, –0.5 to 1.4) or those on the wait list (ES=0.6; 95% CI, –0.4 to 1.5).

For tension-type headaches: Results are mixed

Two trials[5] investigated the efficacy of SMT on tension-type headaches. The first, an RCT with 150 patients with recurrent headaches, compared SMT (2 sessions per week) with amitriptyline (10 mg daily week 1, 20 mg daily week 2, then 30 mg daily) for 6 weeks. At the end of 6 weeks, the SMT group reported a nonsignificant trend toward more headache pain (ES for SMT vs amitriptyline = –0.4; 95% CI, –0.8 to 0.0), but fewer side effects. They had similar headache frequency and medication use.

Another study[6] of 22 patients compared SMT with 2 different controls (palpation and rest) for acute tension-type headache. The SMT group was significantly more likely to experience immediate improvement (ES=1.8; 95% CI, 0.4–3.2).

For migraine: Spinal manipulative therapy is similar to amitriptyline

In 1 trial[7] of migraine prophylaxis, 218 patients were randomized to either 14 sessions of SMT for 2 months or oral amitriptyline (titrated up weekly during the first month and continued at 100 mg daily over the second month). The headache index (a measure of daily pain intensity) was equivalent in both groups in the last 4 weeks of treatment (ES for SMT vs amitriptyline = –0.1; 95% CI, –0.5 to 0.3).

A month after both therapies were stopped, there was a nonsignificant trend toward a lower headache index in the group that had received SMT than the group that had received amitriptyline (ES=0.4; 95% CI, 0.0–0.8). Ten percent of the medication group withdrew from this study due to side effects; no side effects were reported from SMT.[7]

Another RCT[8] of migraine prophylaxis with 88 patients compared SMT twice weekly for 8 weeks with mobilization techniques. At 8 weeks post-treatment, there was a nonsignificant trend favoring SMT over mobilization in decreasing pain (ES=0.4; 95% CI, –0.2 to 1.0).

Recommendations from others

The National Headache Foundation[9] states that "the value and cost-effectiveness of chiropractic, osteopathic medicine, and physical therapy in migraine have not been proven in clinical trials. Conflicting results and poor clinical trial design limit the ability to judge the effectiveness of manipulative treatments. Physical therapy, although limited in its study, has proven more effective than manipulative treatment in selective cases." ■

FAST TRACK

For migraine, spinal manipulative therapy is as effective as amitriptyline

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