Is acupuncture safe and effective for smoking cessation?

Evidence-Based Answer

Although acupuncture appears to be safe (SOR: B, based on surveys of adverse reactions), there is currently no consistent evidence showing that acupuncture is an effective intervention for smoking cessation. (SOR: B, based on a meta-analysis of low quality RCTs.)

In 2011, the Cochrane collaboration published a review of the existing literature examining acupuncture’s effect on smoking quit rates. Results of 18 comparisons of acupuncture with sham acupuncture in the short term (up to 6 weeks after quit date) with 1,385 patients in the treatment arm and 1,143 in the control arm found a risk ratio of 1.18 (95% CI, 1.04–1.33) favoring acupuncture. Of note, the strong effect of a single trial was the major contributor to this positive result.

In the long-term (6–12 months after quit date) analysis of 6 studies with 881 patients in the treatment arm and 781 patients in the control arm, acupuncture did not alter quit rates (RR=1.03; 95% CI, 0.82–1.35). When a waiting list or no intervention was used as a control in 3 studies (197 intervention patients and 196 control patients), the pooled results also showed no significant effect (RR=1.79; 95% CI, 0.98–3.28). Furthermore, in comparison with nicotine replacement therapy (496 patients), acupuncture (418 patients) was found to be less effective in both the short term (RR=0.76; 95% CI, 0.59–0.98) and the long term (RR=0.64; 95% CI, 0.42–0.98).1

The Cochrane review noted significant heterogeneity and risk of bias in several of the published trials. A further limitation was the combination of disparate forms of acupuncture with different treatment periodicity into a group effect. Safety outcomes were not addressed.1

An investigation of physician acupuncturists in Germany examined the question of safety.2 In the study, 9,249 practitioners reported on 97,733 patients over a 10-month period. Serious adverse events reported as likely or certainly attributable to acupuncture were reported to be rare and included 2 pneumothoraces and 1 vasovagal hypotensive episode.

A prospective survey of acupuncturists performed in the United Kingdom also looked at the question of safety.3 A total of 547 practitioners reported on 34,407 treatments over a 4-week period. No serious adverse events (defined as events requiring hospital admission, leading to permanent disability, or resulting in death) were reported. Mild transient reactions, such as bruising or pain, were associated with 15% of treatments. Minor adverse events were found in 43 instances (0.1%), the most common being severe nausea, fainting, and dizziness.

What is the best treatment strategy for ingrown toenails?

Evidence-Based Answer

Partial or total avulsion of the toenail with subsequent phenol chemical matrixectomy (PCM) results in fewer recurrences than surgical treatment not utilizing PCM, although the postoperative infection rate is higher. (SOR: A, based on a meta-analysis.) Addition of a topical antibiotic does not appear to reduce the postoperative infection rate for PCM. (SOR: B, based on a RCT.)

A Cochrane systematic review of RCTs from 2003 (edited without changes to conclusions in 2008) compared the efficacy of nail avulsion alone with nail avulsion plus either PCM or surgical excision of the nail matrix in patients of all ages.4 Avulsion with PCM resulted in fewer recurrences than surgical matrixectomy at >6 months (OR 0.44; 95% CI, 0.24–0.80; NNT=16). Avulsion with PCM was also superior to avulsion without matrixectomy for preventing symptomatic recurrence (OR 0.07; 95% CI, 0.04–0.12; NNT=1). However, the rate of postprocedure infection was significantly increased (OR 5.7; 95% CI, 1.9–16; NNH=9).

An RCT published in 2007 (not included in the above Cochrane review) randomized 117 patients...
into 4 study groups for treatment of ingrown toenails. All patients received partial nail avulsion followed by one of the following treatments of the matrix: surgical matrix excision; surgical matrix excision followed by topical gentamycin application; PCM; or PCM followed by topical gentamycin.

Postoperative follow-up at 2 days, 1 week, 1 month, 6 months, and 12 months revealed that partial nail avulsion with PCM was associated with a smaller rate of recurrence than avulsion with surgical matrix excision (OR 0.23; 95% CI, 0.09–0.58; NNT=3). The use of gentamycin was found to have no significant effect on the rate of symptomatic recurrence (OR 0.51; 95% CI, 0.21–1.23) or postoperative infection (OR 0.87; 95% CI, 0.41–1.83). Here, PCM was not associated with an increased rate of postexcision infection at 1 week (OR 0.79, 95% CI, 0.38–1.62).

A 2010 German retrospective cohort study examined 84 patients with 112 ingrown nail sides who underwent either PCM or surgical matrixectomy. On a 1-to-10 ordinal postoperative pain scale, the PCM group reported a lower mean pain intensity compared with the surgical matrixectomy group (2.5 vs 4.3; mean difference –1.92 points; 99% CI, –3.3 to –0.57; P<.001). Also, more patients in the PCM group reported recovery within a week than in the surgical matrixectomy group (56% vs 19%; OR 5.2; 99% CI, 1.6–17.5; NNT=3).

Self-evaluation of cosmetic results showed no difference between the groups. While recurrence rates were higher in the PCM group, the confidence interval was wide (OR 6.2; 99% CI, 1.12–33.67). Weaknesses of the study included the small population, the retrospective nature of the study, and lack of mention of the length of postsurgical follow-up.

### What is the most effective first-line medical treatment of patients with primary Raynaud’s phenomenon?

#### Evidence-Based Answer

Nifedipine is the most effective calcium-channel blocker (CCB) for treating primary Raynaud’s phenomenon and is usually dosed at 5 to 20 mg 3 times daily. (SOR: B, based on a meta-analysis of lower-quality clinical trials.) Non-CCB vasodilators do not appear to be effective. (SOR: B, based on a meta-analysis of lower-quality clinical trials.)

In 2005, a meta-analysis of CCBs used in the treatment of primary Raynaud’s phenomenon evaluated 17 randomized, double-blinded, placebo-controlled studies including 348 patients. As a group, CCBs provided a weighted mean decrease (WMD) of –5 attacks/week (95% CI, –9.02 to –0.99; P=.01) compared with placebo and also reduced severity of attacks by a WMD of –1.4 (95% CI, –2.2 to –0.58; P<.00001) on a 10-cm visual analogue scale (VAS). When 2 trials were removed from the analysis to decrease heterogeneity, the effect was less robust (WMD for frequency, –2.8 attacks/week; 95% CI, –3.9 to –1.7; P=.01).

When the analysis was limited to the 12 trials encompassing 215 patients comparing nifedipine with placebo, the effect was larger (WMD for frequency, –6.05 attacks/week; 95% CI, –11.19 to –0.19; P=.04; and WMD for severity, –1.81 points on the VAS; 95% CI, –3.08 to –0.54, P=.005). Doses of nifedipine ranged from 5 to 20 mg 3 times daily, with 1 trial using 30 mg nifedipine XL daily. Nifedipine use for primary Raynaud’s phenomenon was associated with adverse effects including edema, headache, flushing, palpitations, and tachycardia. Trials evaluating nicardipine and nisoldipine with placebo did not demonstrate a significant difference in either the severity or frequency of attacks.

A 2008 Cochrane review examined captopril, enalapril, and 5 vasodilators not currently available in the United States in 8 studies that included 290 patients with primary Raynaud’s phenomenon. The foreign medications included beraprost (inhibits platelet aggregation); dazoxiben (inhibits thromboxane synthetase); ketanserin (an antihypertensive and serotonin antagonist; and the nonclassified peripheral

### References