

Acupuncture for chronic knee pain: a randomized clinical trial.

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Abstract

IMPORTANCE:

There is debate about benefits of acupuncture for knee pain.

OBJECTIVE:

To determine the efficacy of laser and needle acupuncture for chronic knee pain.

DESIGN, SETTING, AND PARTICIPANTS:

Zelen-design clinical trial (randomization occurred before informed consent), in Victoria, Australia (February 2010-December 2012). Community volunteers (282 patients aged ≥ 50 years with chronic knee pain) were treated by family physician acupuncturists.

INTERVENTIONS:

No acupuncture (control group, n = 71) and needle (n = 70), laser (n = 71), and sham laser (n = 70) acupuncture. Treatments were delivered for 12 weeks. Participants and acupuncturists were blinded to laser and sham laser acupuncture. Control participants were unaware of the trial.

MAIN OUTCOMES AND MEASURES:

Primary outcomes were average knee pain (numeric rating scale, 0 [no pain] to 10 [worst pain possible]; minimal clinically important difference [MCID], 1.8 units) and physical function (Western Ontario and McMaster Universities Osteoarthritis Index, 0 [no difficulty] to 68 [extreme difficulty]; MCID, 6 units) at 12

weeks. Secondary outcomes included other pain and function measures, quality of life, global change, and 1-year follow-up. Analyses were by intention-to-treat using multiple imputation for missing outcome data.

RESULTS:

At 12 weeks and 1 year, 26 (9%) and 50 (18%) participants were lost to follow-up, respectively. Analyses showed neither needle nor laser acupuncture significantly improved pain (mean difference; -0.4 units; 95% CI, -1.2 to 0.4, and -0.1; 95% CI, -0.9 to 0.7, respectively) or function (-1.7; 95% CI, -6.1 to 2.6, and 0.5; 95% CI, -3.4 to 4.4, respectively) compared with sham at 12 weeks. Compared with control, needle and laser acupuncture resulted in modest improvements in pain (-1.1; 95% CI, -1.8 to -0.4, and -0.8; 95% CI, -1.5 to -0.1, respectively) at 12 weeks, but not at 1 year. Needle acupuncture resulted in modest improvement in function compared with control at 12 weeks (-3.9; 95% CI, -7.7 to -0.2) but was not significantly different from sham (-1.7; 95% CI, -6.1 to 2.6) and was not maintained at 1 year. There were no differences for most secondary outcomes and no serious adverse events.

CONCLUSIONS AND RELEVANCE:

In patients older than 50 years with moderate or severe chronic knee pain, neither laser nor needle acupuncture conferred benefit over sham for pain or function. Our findings do not support acupuncture for these patients.

TRIAL REGISTRATION:

anzctr.org.au Identifier: ACTRN12609001001280.

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