

## Commentary: Controls for acupuncture—can we finally see the light?

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Irnich et al are to be congratulated for performing this rigorous trial. Funding is not easy to obtain for trials of acupuncture, so a sample size of 177 is considered large in this specialty. The result is hard to interpret. Advocates of acupuncture will call it a “positive” result. Opponents will argue that acupuncture is no better than placebo and that a similar trial on low back pain gave the opposite result.<sup>1</sup> We are left to speculate on whether acupuncture has specific efficacy in neck pain. A response rate of 57% would certainly be typical of an effective treatment in acute and chronic pain,<sup>2</sup> but even if this trial had shown a significant effect of acupuncture over sham laser acupuncture, we would still be unsure of the size of the non-specific component related to the needle.

Sham laser acupuncture was a good choice of control when this trial was designed. It can be considered inert, and it controls for the concept of having “acupuncture” in the mind of a participant who recognises it as a valid form of treatment. We cannot be sure, however, that this would equate to controlling for the concept of needle insertion. In the past, researchers have focused on the concept of acupuncture points, and, ironically, controls were often chosen simply by missing the real point—that is, inserting needles at sites not classically described as acupuncture points. The pressure stimulus applied to the nervous system from a solid needle, however, in the absence of direct impingement on a nerve bundle, is likely to be comparable at any soft tissue site within the same region, so the stimulus applied in such trials was virtually identical in the real and control groups. The response rate seen with such controls often reaches 50%. Reviews that fail to take this into account, by assuming that penetrating sham controls represent inert placebos, are open to criticism.<sup>3</sup>

Within the past three years the “placebo” needle has been developed. Such a device aims for credible simulation of needle penetration with minimal sensory stimulus. Rather like a stage dagger, the shaft of the placebo needle disappears into its own handle as the blunted tip presses on to the skin at the site of simulated insertion. The remaining challenge is in supporting the needle if it is to be left in place for any length of time. The first randomised controlled trial to use such a device yielded positive results for acupuncture in the treatment of supraspinatus tendonitis.<sup>4</sup> Further trials with a similar type of needle are underway at the department of complementary medicine in Exeter University.

In the light of these methodological developments, the suggestion from Irnich et al that acupuncture is likely to be more effective in the myofascial pain syndrome, and the considerable empirical support for this suggestion, we can be confident that future studies of sufficient size will determine whether or not the acupuncture needle has efficacy beyond placebo. Musculo-skeletal pain has such an important impact on the community<sup>5</sup> that we must find funding for large scale, methodologically sound trials of this simple, relatively safe, and potentially efficacious technique.

- 1 Cherkin DC, Eisenberg D, Sherman KJ, Barlow W, Kaptchuk TJ, Street J, et al. Randomized trial comparing traditional Chinese medical acupuncture, therapeutic massage, and self-care education for chronic low back pain. *Arch Intern Med* 2001;161:1081-8.
- 2 McQuay HJ, Moore RA. *An evidence-based resource for pain relief*. Oxford: Oxford University Press, 1998.
- 3 Cummings TM. Teasing apart the quality and validity in systematic reviews of acupuncture. *Acupunct Med* 2000;18:104-7.
- 4 Kleinhenz J, Streitberger K, Windeler J, Gussbacher A, Mavridis G, Martin E. Randomised clinical trial comparing the effects of acupuncture and a newly designed placebo needle in rotator cuff tendinitis. *Pain* 1999;83:235-41.
- 5 Woolf AD, Akesson K. Understanding the burden of musculoskeletal conditions. *BMJ* 2001;322:1079-80.