Clinical and economic evaluation of acupuncture for back pain (n=11,630 cohort; 3,093 randomised)


Patients who presented to their GPs with back pain and either asked for acupuncture or were thought by their GPs to be suitable for acupuncture were invited to join an RCT in which they would either have acupuncture straightaway, or after a waiting period of three months. They could decline of course, and four out of five of them (n=8,537) did: in which case they received acupuncture straightaway, but still completed all the forms.

This is the basic design of the so-called ARC (Acupuncture in Routine Care) trials in Germany. They have the advantage of very large numbers – this one involved 3% of all German GPs, 12% of all GPs giving acupuncture, so the results are generalisable. They are unblinded, so there is the theoretical problem of bias in measuring the changes, though the authors provide arguments that this is likely to be small.

This study has several important results.

1) Acupuncture produced a 33% improvement in back pain function after three months, compared with 11% in the control group (P<0.001).

2) Acupuncture was cost effective according to the usual criteria. The additional cost of acupuncture per QALY gained was about €10,526, which compares favourably with many conventional treatments and is well within the suggested threshold of €50,000 per QALY.

3) Acupuncture was more effective for younger patients, those with more severe pain, and men.

4) All the acupuncturists met the minimum criterion of 140 hours training. The effectiveness of the treatment did not vary according to additional hours of training or years of experience.

5) Interestingly, the benefits of acupuncture given within the RCT were no different from the benefits of acupuncture outside it, which is reassuring for the interpretation of pragmatic clinical trials.

Adrian White

Acupuncture for knee pain (n=1007)


This is the report of the large GERAC study in which patients with at least six months’ knee pain and radiological confirmation of osteoarthritis were randomised to three groups: 1) conservative care with anti-inflammatory analgesics; 2) acupuncture – some local obligatory points and optional additional points, with *de qi*; or 3) sham acupuncture – shallow insertion of 10 needles at standard locations that were non-points, above and below the knee, in the arms, bilaterally including the contralateral leg. An average of 12.5 sessions of acupuncture were given over six weeks. All groups also had up to six physiotherapy sessions.

Only 22 patients were lost to follow up at 26 weeks, a remarkable rate of follow up. The main outcome measure was the proportion of ‘responders’, using a standardised definition (OARSI), in each group at 13 and 26 weeks. The response rates at 13 weeks for the three groups were: conservative, 26.1%; acupuncture 51.5% and sham acupuncture 49.0%. At 26 weeks, the figures were similar, ie the improvements were maintained. There was no significant difference between the acupuncture and sham acupuncture groups, but both were significantly better than conservative care. Interestingly the side effects were similar in all groups; flare up of joint pain was the commonest in about 5% of patients, for all groups including the conservative treatment group.

Why did this study find only a trend between acupuncture and sham acupuncture when three other recent rigorous studies found a significant difference? Possible explanations are that the sham needling was active – given in the same neural segments as the knee joint, and bilaterally. One could speculate that this may have reinforced the effect and that the adjunctive physiotherapy could have influenced the outcome in some way.

Adrian White

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