Managing cancer-related fatigue with acupuncture: is it all good news for patients?

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Chronic fatigue linked with cancer and cancer treatments is a complex, debilitating and burdensome symptom or side effect, which affects almost all patients. This is a symptom that is about tiredness, but also with cognitive, psychological and motivational parameters. In the past decade researchers have started looking at non-pharmacological interventions to manage fatigue, in the absence of any credible pharmacological treatments, identifying a small pool of potentially effective interventions. Self-management is often the norm.1 Acupuncture has gained increasing attention among researchers and several small-scale trials have been conducted, largely with positive results. For example, Johnson et al 2 have reported that acupuncture, in addition to patient education, decreased fatigue in comparison with that in a usual-care group, despite finding difficulty in recruiting more than a few patients. In this issue of the journal, Smith et al 3 also provide initial evidence of significant improvements in fatigue levels in a group of patients with breast cancer and show the feasibility of such a trial. Similarly, it might be possible to extend positive results to other patient groups with chronic fatigue, such as those with multiple sclerosis, as reported in another observational study in this issue.4 Results from such uncontrolled studies need confirmation.

We have recently published results of the largest trial using acupuncture for managing cancer-related fatigue (N=302), through a well-controlled multisite and fully powered trial, comparing acupuncture with enhanced standard care.5 Acupuncture was given weekly for six sessions. Primary outcome was measured using the Multidimensional Fatigue Inventory, and showed significant improvements in the acupuncture group in fatigue parameters and also levels of anxiety and depression (symptoms closely linked with fatigue) and quality of life. Although this study may be criticised for not using a ‘sham’ group, it does demonstrate concretely the benefits of acupuncture.

The acupuncture group, at the end of treatment, was again re-randomised to receive further acupuncture treatments to assess whether top-up/maintenance acupuncture is needed and to assess whether patient self-needling might be an acceptable alternative to maintenance acupuncture delivered by a therapist. We provided patients with a further four weekly sessions either through an acupuncturist or self-needling (after patient training), and compared results with those for a third group of patients receiving no further treatments.6 One hundred and ninety-seven patients were re-randomised. Fatigue scores were equivalent for the therapist-delivered acupuncture and self-acupuncture groups (p>0.05). A non-significant trend in improving fatigue was seen at the end of 4 weeks in the combined acupuncture arms compared with the group receiving no further treatment (p=0.07). There was no impact on mood or quality of life after further acupuncture sessions at 18 weeks beyond the improvement seen in the initial (main treatment) part of the trial. These results suggest that maintenance acupuncture, at least at the frequency delivered here, may not be required, and also that results from self-needling and therapist treatment were almost identical.

Despite the increasing number of publications showing positive results for the effect of acupuncture on fatigue, other studies show that it is not effective.7 Nevertheless, for all positive and negative studies, we need to take into consideration any methodological shortcoming.
they may have, including often small-scale underpowered studies, influence of other concurrent cancer treatments, acupuncture points used, ‘dose’ and intensity of acupuncture treatments, and so on. A sham group may be an appropriate addition to a trial design, but again we need to consider what sham approach has been used or whether the sham group is an active control group if minimal needling is used, with potentially positive effects. There is a strong continuing debate about whether or not ‘sham’ approaches should be used in acupuncture trials. The ethics and scientific basis for such designs need to be agreed soon by the medical community, to prevent different scientifically questionable procedures being approved by part of this community for the ‘wrong’ reasons. I discussed my views on the state of complementary and alternative medicine research and practice in an editorial in 2005,8 and 8 years later I can see little change in ideals, arguments or consensus.

Where do we go from here in the use of acupuncture for the management of fatigue? Certainly there are clear indications that acupuncture can improve fatigue, coming from at least one large randomised and well-controlled trial and several small-scale studies. It probably does not improve the symptoms of every patient, but in an area with few effective interventions available, it is another option for patients. The key problem, however, is that although we know that acupuncture probably works for managing fatigue, we do not know how it works. Primary outcomes in trials have largely been based on patient-reported outcomes. While this is appropriate, we must ensure in the future that such trials also include physiological and alternative measures, probably those linked to cytokine levels. The choice of outcome measures is also important, as some scales may not be sensitive to change or may not be reliable and valid.

Some treatment-related questions need to be answered—for example, whether it is necessary to use traditional Chinese medicine acupuncture concepts such as precise diagnosis and choice of points, and eliciting de qi or whether the Western medical acupuncture approach is as good? (Note that our large trial was based on the Western approach.) What is the ‘right’ dose of treatment, which points do we use (or does it matter which points we use) or is there a role for top-up maintenance treatment? We have conducted the first study assessing the effect and appropriateness of self-needling, but this needs to be investigated further, as it makes more financial sense in healthcare systems to focus on reducing costs and minimising unnecessary access to treatment and therapists. We have not looked at the health economics of acupuncture treatment, although any demonstrable cost savings from acupuncture could be a strong point in policy change and ease its usability within the current healthcare systems. Finally, enough small-scale studies have been carried out showing feasibility and early data; what we need are well-powered studies that follow acceptable principles of carrying out high-quality trials and testing innovative research questions that have not yet been answered.

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