Qualitative systematic review of randomized controlled trials on complementary and alternative medicine treatments in fibromyalgia


CRD summary
This review of complementary and alternative medicine treatments for fibromyalgia found some positive evidence for balneotherapy and hydrotherapy. There was little or no evidence of positive effects for other interventions. The authors’ conclusions appeared to appropriately consider the limitations of the studies and lack of data, but there was a risk that relevant data were missed.

Authors' objectives
To review the evidence from trials of different complementary and alternative medicine treatments for fibromyalgia.

Searching
EMBASE, PubMed, PsycINFO, Cochrane Central Register of Controlled Trials (CENTRAL) and CAMbase were searched from 1190 to July 2007 for studies published in English or German. Search terms were reported.

Study selection
Randomised controlled trials (RCTs) that evaluated at least one complementary and alternative medicine intervention in patients with fibromyalgia confirmed (as diagnosed using American College of Rheumatology criteria) were eligible for inclusion. Nutritional, herbal and hormonal supplements were not included in the review. Studies that used a crossover design were included only if first phase (pre-crossover) data were available.

Included studies assessed acupuncture, balneotherapy, thermotherapy, magnetic therapy, homeopathy, manual manipulation, diet therapy, mind-body medicine and music therapy. Complementary and alternative medicine interventions were mostly defined using National Institutes of Health (NIH) criteria. Interventions were compared with an alternative complementary and alternative medicine, no intervention, sham/placebo, alternative active treatment and usual care. Study treatment periods ranged from one session to six months. Most studies assessed pain; around half of the studies used a visual analogue scale (VAS). Fibromyalgia Impact Questionnaire (FIQ), a tool specifically designed to assess fibromyalgia, was commonly used. Other outcomes included tender point count, tender point dolorimetry and Beck Depression Scale. Publication dates ranged from 1992 to 2007.

The authors did not state how papers were selected for review.

Assessment of study quality
Two reviewers assessed study quality with 16 published criteria; discrepancies were resolved by discussion. Criteria included homogeneity, comparability of baseline characteristics, randomisation method, description of dropouts, lost to follow-up, use of intention to treat analysis, study group size, intervention description, pragmatic study/control group, cointerventions avoided, use of placebo control, patient/assessor blinding and relevancy of outcome measures. Each study was awarded a score up to a maximum of 100. Further details were reported in the review.

Data extraction
The main results for each study were extracted.

The authors did not state how data were extracted for the review.

Methods of synthesis
The studies were grouped by complementary and alternative medicine type. Data were combined in a narrative synthesis accompanied by summary tables of the main findings and characteristics.

Results of the review
Twenty-four RCTs (n=1,461) were included. Mean sample size was 57. Mean group size was 25. Quality scores ranged
Mixed results were reported for various outcomes that included fibromyalgia impact questionnaire, pain and depression for: acupuncture (four RCTs) with significant improvements that favoured acupuncture in two RCTs, but no difference between groups for one RCT; balneotherapy/thermotherapy/hydrotherapy (seven RCTs), with significant improvements that favoured the intervention in five RCTs, but no significant differences between groups for two RCTs; manual manipulation (three RCTs) with two RCTs that reported favourable effects for the intervention groups and one RCT that found no significant differences between groups; and mind-body interventions (six RCTs) with two RCTs that reported positive effects for mindfulness-based stress reduction therapy (MBSR) alone and Integrated Group Therapy and four studies that found no significant differences between MBSR or body awareness therapy, both combined with qigong. A decrease in pain intensity was reported for magnetic therapy in comparison with control, but not for the other outcomes (one RCT). Significant improvements were reported in favour of a homeopathy intervention versus a placebo control for tender point count and tender point pain on palpation, fibromyalgia scores, global health ratings and helpfulness of treatment (one RCT). Pain reduction was significantly greater for participants on a vegetarian diet (one RCT) in comparison with those who received amitriptyline. No significant differences between music vibration therapy and control groups were found (one RCT).

Authors’ conclusions
The best evidence available was for balneotherapy and hydrotherapy interventions, which showed mostly positive results in multiple studies. Vegetarian diet, autogenic training, a session of music vibration and chiropractics appeared to be superior to other control interventions. There was no positive evidence for biofeedback, body awareness therapy and qigong. Evidence for other interventions was limited to single RCTs.

CRD commentary
The review assessed a well-defined research question. Searches were carried out in a number of databases. Relevant data may have been missed through use of language limitations and exclusion of unpublished studies. The risk of reviewer error and bias was unclear as the authors did not report how studies were assessed for inclusion and how data were extracted. Some attempts were made to reduce risks of bias during study quality assessment. Relevant criteria were used. Study quality was variable, but in most cases was poor and sample sizes were often small. Although the authors attempted to restrict inclusion so as to reduce heterogeneity between studies, included studies were too heterogeneous to combine in a meta-analysis, particularly with regard to outcomes and interventions. A narrative synthesis appeared appropriate, but it would have been more informative if effect sizes had been reported to support the findings.

Overall, the authors’ conclusions appeared to appropriately consider the limitations of the included studies and the lack of data, but there was a risk that relevant data were missed.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that further studies were required to assess the effectiveness of complementary and alternative medicine interventions for fibromyalgia, including massage. Future studies needed to report details of randomisation, blinding and follow-up and should use standardised outcome measures such as visual analogue scale for pain measurement and Fibromyalgia Impact Questionnaire.

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