Current Research Report

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ACUPUNCTURE FOR TREATING FIBROMYALGIA

Fibromyalgia (FM) is a complex musculoskeletal condition which involves widespread pain, fatigue and other symptoms such as stiffness and sleep disturbance. FM affects two to four percent of the general population.[1] It is mostly treated by pharmacological means such as antidepressants and anticonvulsants.[2] Non-pharmacological treatments such as acupuncture, massage and relaxation therapy are also being used.[3]

OBJECTIVES: This systematic review aims at investigating the benefits and safety of acupuncture for FM.[4]

METHODS: English and Chinese electronic databases were searched from inception to 2012. There was no restriction on the type of language. Randomised and quasi-randomised controlled clinical trials of acupuncture for FM patients of 18 years old or older were included. The patients met the 1990 American College of Rheumatology classification criteria for fibromyalgia. The type of intervention was limited to acupuncture that penetrates the skin. Pain, physical function, global well-being, sleep, fatigue, stiffness and adverse events were the main outcome measures. Studies were selected and examined by two pairs of researchers. The researchers also assessed the risk of bias, quality of acupuncture treatments, adequacy of acupuncture treatment and the confidence in the diagnosis and treatment delivery.

RESULTS: Five hundred and two studies (439 from the English databases and 63 from the Chinese databases) were obtained from the search. Duplicates were removed and irrelevant studies were excluded. The full-texts of 49 studies were examined for inclusion. A total of nine studies were included in the systematic review. Five types of comparisons were carried out: real acupuncture versus non-acupuncture treatment; acupuncture versus sham acupuncture; acupuncture versus medication; acupuncture as an adjunct therapy; and a particular type of acupuncture versus another. Acupuncture was found to be better than non-acupuncture treatment in the reduction of pain and improvement of global well-being, fatigue and stiffness by a mean of 22, 15, 1 and 0.9 respectively on a 100-point scale. No significant differences were found between real and sham acupuncture in pain reduction. Subgroup analyses compared manual acupuncture with electro-acupuncture and found that electro-acupuncture was better than sham acupuncture overall, and suggested that electro-acupuncture was better than manual acupuncture. Compared to sham acupuncture, Electro-acupuncture reduced pain by about 13 points, fatigue by 15.3 points and stiffness by 9 points on a 100-point scale, and improved global well-being and sleep and by 11 and 8 points respectively on a 100-point scale. One study suggested that acupuncture reduced the number of tender points at up to one month after treatment when compared with standard medication (17.30 points on a 100-point scale). One study compared acupuncture plus standard therapy and standard therapy alone. Acupuncture plus standard therapy reduced pain significantly compared to standard therapy alone by 3 points on a 0 to 10 scale. One study suggested that deep needling with stimulation did not differ from deep needling without stimulation in the reduction of pain and fatigue and in the improvement of physical function.

CONCLUSION: This review points out that the supporting evidence for acupuncture analgesia is modest when compared with no treatment or standard therapy, as only one study was available for each of these comparisons. Another highlight of this review is that no significant difference was found between real acupuncture and sham acupuncture. However, subgroup analysis of the comparison of electro-acupuncture with sham acupuncture suggested that electro-acupuncture was more effective than manual and sham acupuncture in reducing pain and improving the global wellbeing. These effects last up to a month. Acupuncture is a safe intervention to treat FM. The authors recommend that twice per week acupuncture treatments over a period of four weeks appear to be adequate for treating FM. However, maintenance acupuncture sessions are also required. Studies with larger populations are needed to further assess the evidence for efficacy of acupuncture for FM.

COMMENTS: This review was well designed. It has helped to shed some light on the actual position of acupuncture in the treatment of FM. The authors also identified the main concerns about the need for FM Chinese medicine diagnosis and an ideal sham intervention for acupuncture studies, which will be further discussed below.

To date, the causes and influencing factors of FM are still not well understood. Furthermore, the diagnosis of FM is controversial. The American college of rheumatology (ACR) recently updated their diagnosis criteria for FM, the 1990 ACR criteria[5] and the 2010 ACR criteria.[6] Some clinicians still advocate the 1990 ACR criteria, which lay emphasis

on the tender points as an objective way to identify FM patients. Others support the 2010 ACR criteria, which use a more subjective approach to assess the patients' symptoms, and include an assessment of sleep disturbance, fatigue, cognitive function and other physical symptoms.

Chinese medicine considers FM as Bi-syndrome, which is a condition that is mainly caused by the stagnation of Qi and may involve pain.[7] Other FM symptoms such as depression and fatigue can also be explained by the Chinese medicine understanding of Qi stagnation or deficiency. As FM is a Western medicine diagnosis, a standard Chinese medicine differential diagnosis is yet to be established. Differential diagnosis is an important factor for the choice of treatment. In the systematic review, the Chinese medicine diagnosis in the selected studies was poorly reported or neglected. Consequently, most of the studies used formula acupuncture that is one type of treatment for all the patients. Ideally, in practice, treatments should be individualised according to diagnosis. This may be one of the factors that have led to the moderate results that support acupuncture for the treatment of FM. Studies developing new strategies to develop differential diagnosis and incorporate individual treatments should be encouraged.

Another factor that may be reflected by the results of this systematic review is the type of sham intervention. There is still no consensus on the ideal type of sham acupuncture. Furthermore, the mechanism of real acupuncture is not fully understood. Traditional Chinese acupuncture style involves deep needling and strong stimulation whereas the Japanese acupuncture style prefers shallow needling and gentle stimulation. However, both methods seem to have beneficial effects as reflected by this review. Some types of sham acupuncture may be considered to be similar to the Japanese acupuncture style. In this review some studies used non-skin penetrating intervention while others used skin breaking methods with the addition of stimulation. The skin-breaking sham interventions may have the same type of mechanism as real acupuncture and thus produce a similar effect.[8] This is another area of research that needs to be explored more. The design of a good control intervention that has no specific physiological effects is needed.

From this systematic review it can be concluded that in order to better understand the efficacy of acupuncture in the treatment of FM, studies with individualised treatments and better designed sham intervention are required. Better understanding of Chinese medicine diagnosis of FM is urgently needed. From a clinical point of view, the moderate results of this systematic review might be due to the complexity of FM itself. FM also involves cognitive symptoms, which may demand the administration of more than one type of intervention. Frequent treatments and long-term treatments might be a good step forward as the practitioner can monitor the change in symptoms and apply particular treatments.

Pain is one of the main burdens of FM. Long-term use of pharmacological means such as analgesics, anti-depressants or anticonvulsants can lead to side effects such as gastrointestinal bleeding, sedation and physical dependence and also psychological dependence.[2,9] Acupuncture is increasingly being used in the treatment of pain and studies have shown that it is a safe intervention. Thus, acupuncture has its place in the treatment of FM. Moreover, Chinese medicine is a holistic intervention. With a proper diagnosis, acupuncture could be one of the non-pharmacological interventions to alleviate pain as well as the other symptom. This again stresses the urgency to develop Chinese medicine diagnosis for FM.

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Deare JC, Zheng Z, Xue CC, Liu JP, Shang J, Scott SW, et al. Acupuncture for treating fibromyalgia. The Cochrane database of systematic reviews. 2013;5:CD007070.

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