

- events following acupuncture (SAFA): a prospective study of 32,000 consultations. *Acupunct Med* 2001; 19(2):84-92.
9. Vickers A. Editorial: National health service funding for complementary medicine research: the NHS acupuncture trials. *Complement Ther Med* 1999;7(1):1-2.
  10. Vickers A, Rees R, Zollman C, Smith C, Ellis N. Acupuncture for migraine and headache in primary care: a protocol for a pragmatic, randomized trial. *Complement Ther Med* 1999;7(1):3-18.
  11. Tunis SR, Stryer DB, Clancy CM. Practical clinical trials: increasing the value of clinical research for decision making in clinical and health policy. *JAMA* 2003;290(12):1624-32.
  12. Vickers A. Acupuncture. *Effective Health Care* 2001; 7(2):1-12.

### Distal point electroacupuncture for tension-type headache (n=40)

Xue CC, MAppSc LD, Polus B, English RA, Zheng Z, Costa CD *et al.* Electroacupuncture for tension-type headache on distal acupoints only: a randomized, controlled, crossover trial. *Headache* 2004;44(4): 333-41.

#### Summary

The aim of this study was to investigate the efficacy of electroacupuncture, applied to distal acupoints only, for tension-type headache. Electroacupuncture is commonly used for tension-type headache, but when applied to distal acupoints only, evidence of its efficacy is lacking. A randomised, single-blinded, sham-controlled, crossover clinical trial was conducted. The trial had five stages: baseline (two weeks), phases I and II (each four weeks), washout period (two weeks), and follow-up (three months after phase II). Forty patients were randomly assigned to either group A or group B. Group A received real electroacupuncture during phase I, then sham electroacupuncture in phase II. Group B received the treatments in reverse order. Outcome measures were headache frequency and duration, pain intensity using a visual analogue scale, mechanical pain threshold, headache disability, and sickness impact. Data were analyzed by univariate two-way analysis of variance. Thirty-seven patients completed the trial. There were no significant differences between the two groups at baseline. At the end of phase I, group A, but not group B, demonstrated a significantly lower mean (standard error of the mean [SEM]) headache frequency (3.0 per month [0.3] versus 12.0 per month [1.7]), duration (13.3 hours [3.5] versus 32.0 hours [6.2]), pain intensity (32.8 mm [4.1] versus 47.5 mm [2.7]), pain threshold (right side, 2.9 kg/second [0.1] versus 0.9 kg/second [0.1]; left side, 2.4 kg/second [0.1] versus 1.1 kg/second

[0.1]), headache disability score (6.0 [1.0] versus 16.3 [1.6]), and sickness impact score (288.7 [48.0] versus 687.1 [77.2]). For each parameter, significant differences also were demonstrated for both groups between baseline and phase II, and baseline and follow-up. There were no significant differences between the groups at the end of follow-up ( $P>0.05$ ). Electroacupuncture to distal points alone is effective for short-term symptomatic relief of tension-type headache.

#### Comment

This is a well reported study with remarkably good results for electroacupuncture. Purists will complain that they included patients with both episodic and chronic tension-type headache, but this will not worry the pragmatists as much. The other problem is the use of a cross-over method. This is a very useful way of increasing statistical power in a trial, but there are drawbacks if the active intervention has effects that last beyond the end of the washout period between the treatment phases, as occurred in this trial. The washout period in this trial was two weeks. After ten sessions of electroacupuncture the effect in responders might last 3 to 4 months (this is estimated from observations in clinical practice by the reviewer); however, the drawback of having an extended washout period is the problem of retaining the subjects in the study and minimising the use of other interventions. The value of using the crossover method (increased statistical power for the same number of subjects) was not realised in this study, since differences between the groups were only found at the end of phase I. In effect, therefore, in terms of the significant results, this was a simple sham controlled trial, with a short follow up.

The authors comment that there were still significant changes within each group at the three month follow up compared with baseline, but this within group observation is uncontrolled, and it

cannot be attributed to the specific effect of real electroacupuncture with any degree of certainty.

The sham method used here was superficial off point electroacupuncture at very low frequency (0.2Hz) and intensity (0.1V). Deluze et al used a very similar sham technique in their positive RCT of electroacupuncture for fibromyalgia.<sup>1</sup> In this study the authors included a Chinese medicine syndrome diagnosis to guide point selection and the intensity of treatment, but as they rightly point out, since there was no control for this element of the intervention, there is no way of knowing how, if at all, it contributed to the results.

From a neurophysiological perspective, all the points used were peripheral heterosegmental points, so it does not seem likely that there would be any difference with regard to the location of the sensory stimulus. It is plausible, however, that a Chinese syndrome diagnosis may select out groups of patient with different response profiles. The latter has yet to be tested in any substantial way.

**Reference**

1. Deluze C, Bosia L, Zirbs A, Chantraine A, Vischer TL. Electroacupuncture in fibromyalgia: Results of a controlled trial. *BMJ* 1992;305(6864):1249-52.

**Acupuncture for keratoconjunctivitis sicca (n=25)**

Gronlund MA, Stenevi U, Lundeberg T. Acupuncture treatment in patients with keratoconjunctivitis sicca: a pilot study. *Acta Ophthalmol Scand* 2004;82(3):283-90.

**Summary**

The aim of this study was to evaluate the effects of acupuncture in patients with keratoconjunctivitis sicca (KCS). Twenty-five patients (20 women, five men) with KCS were randomly assigned to an acupuncture treatment group or a control group. The effects of acupuncture were evaluated by a questionnaire on symptoms, visual analogue scale recordings, registration of drop frequency, and dry eye tests. Ten acupuncture sessions were given. Follow-up was carried out 2 to 3 weeks after the last acupuncture session, and again after a mean period of 8 months. Patients receiving acupuncture felt better at the first follow-up compared with the control group (P=0.036). However, no statistical significance could be found concerning any change, or difference, in the total number of subjective symptoms, dosage frequency or, as indicated by the dry eye tests, tear quality, tear secretion and ocular surface disease. The results indicate that acupuncture has subjective beneficial

effects in patients with KCS and could therefore be tried as a complement to ordinary treatment.

**Comment**

This paper includes a useful introductory overview of keratoconjunctivitis sicca (KCS), and a comprehensive discussion with thorough referencing. The outcomes used were a mixture of standard subjective and objective measures for evaluating this condition, with the exception of the visual analogue scale (VAS) of the degree of discomfort in the eyes. The latter is reported to have been translated into 'better', 'no change' or 'worse'. As this was the only measure showing a significant difference between the groups, this reviewer would have like to see more details in the methods section related to this outcome. Since the VAS of the degree of discomfort in the eyes was the measure that was most likely to be affected by bias, the authors' statement that 'acupuncture has subjective beneficial effects in patients with KCS' seems rather too confident considering the small number of subjects and the negative findings from the objective measures. However, as there is little that can be done to help the condition, and the subjective improvement in responders lasted about four months, acupuncture does seem worthy of further evaluation in KCS.

## Other clinical papers

### Acupuncture and cerebrovascular response in migraineurs (n=20)

Bäcker M, Hammes M, Sander D, Funke D, Deppe M, Tolle TR *et al.* Changes of cerebrovascular response to visual stimulation in migraineurs after repetitive sessions of somatosensory stimulation (acupuncture): a pilot study. *Headache* 2004;44(1):95-101.

#### Summary

The aim of this study was to evaluate the effect of repetitive somatosensory stimulation (acupuncture) on cerebrovascular response in migraineurs by functional transcranial Doppler. Changes of cerebral blood flow velocity in the right posterior and left middle cerebral arteries were measured by functional transcranial Doppler during visual stimulation (flickering light over 57 seconds) in 10 migraineurs before and after 10 acupuncture sessions. The same stimulation paradigm was performed in 10 control subjects. Cerebral blood flow velocity data were analysed with a previously validated technique based on automated stimulus-related averaging. To evaluate the clinical effect of the treatment, a headache diary monitored the frequency and intensity of the migraine attacks. A positive treatment effect was defined as a reduction of at least 50% in the attack frequency or the mean headache intensity (or both). Before treatment, migraineurs showed overshooting cerebral blood flow velocity changes at the beginning and at the end of the stimulation and a delayed decline to baseline compared with control subjects. After treatment, this response pattern was significantly diminished ( $P \leq 0.05$ ) in those who benefited from treatment ( $n=6$ ). Those who did not benefit from treatment ( $n=4$ ) showed a

significantly ( $P \leq 0.05$ ) more marked alteration of the cerebral blood flow velocity pattern. Data indicate that repetitive somatosensory stimulation (acupuncture) might positively influence the abnormal cerebrovascular response in migraineurs. In a subgroup of migraineurs, however, the dysfunction of the cerebrovascular system might deteriorate under the treatment.

#### Comment

This may be the first study to examine the influence of acupuncture on the responsiveness of cerebral arteries. Migraine is considered to be a neurovascular headache, in which there may be exaggerated responsiveness in the cerebral vasculature to metabolic demands. In this study, a metabolic demand was generated through a visual stimulus, and consequently the cerebral blood flow (CBF) increased in the monitored posterior cerebral artery (PCA), which supplied the right visual cortex in this case. There was no change in the blood flow in the middle cerebral artery (MCA) on the other side. There may have been technical reasons for choosing the right PCA and the left MCA, but this was not explained in the paper. Whilst migraineurs showed the same pattern of CBF changes as measured in the normal subjects, the baseline reactivity was significantly greater in the former. Following 10 sessions of acupuncture this reactivity reduced to normal in the six migraineurs who had an improvement in their condition, however, the four others showed an increased reactivity. It is tempting to suggest a causal link between the acupuncture, the observed changes in CBF reactivity and the symptomatic changes in the migraineurs; however, it would be premature to do this. The authors suggest that further research is necessary.

## Non-clinical papers

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### Physicians' perspectives on combining Eastern and Western models of health and illness

Frank R, Stollberg, G. Conceptualising Hybridisation. On the Diffusion of Asian Knowledge to Germany *International Sociology* 2004;19(1):71-88.

#### Summary

The expansion of Western ideas to Eastern and developing countries often leads to the suppression of local knowledge or 'Coca-colonisation'. By contrast, flow of Eastern knowledge to the West rarely has such a dominating effect. This paper examines the factors influencing physicians who have adopted the Asian practices of acupuncture or Ayurveda in Germany.

Chinese and Indian medicine defers to a perceived balance of 'forces' or 'energy' as the key to health and illness. This approach varies considerably from Western medicine which relies on scientific explanations of illness and the responses to treatment. Semi-structured interviews were used to examine the perspectives of Western-trained physicians using treatments based on Eastern philosophy. The authors used the term 'hybridisation' to represent the union of Western biomedical concepts with Asian medical knowledge. Hybridisation is defined as the way in which forms become separated from existing practices and recombine with new forms in new practices. The authors identify four types of hybridisation – biomedically dominated coexistence, coexistence under heterodox

dominance, biomedical incorporation of Asian medicine, and "The great medical melting pot". They note that none of the physicians interviewed practise a non-hybrid version of Asian medicine and that the inclusion of biomedical diagnostics is uncontroversial.

#### Comment

This article is particularly relevant for those interested in examining the way in which they integrate therapies originating from Asia into their practice. Western medicine works in a different paradigm to Asian medicine making total integration difficult. However, the authors rightly comment on the relative ease with which a biomedical model can be applied to acupuncture compared with Ayurveda. The concept of hybridisation is an interesting one and is discussed at length in this article for those keen to explore it in detail. It explains why this is a more appropriate term than either polarisation or homogenisation (other terms used to explain the consequences of cultural globalisation). A large appetite for sociologist terminology is needed to digest this article; however, those that do will find themselves more aware of why they practise in the way that they do. Furthermore, the authors draw interesting comparisons to help the reader understand these complex sociological processes more readily. The origins of the term 'donor kebab', and the reasons why a Moroccan woman might be found doing Thai boxing in Amsterdam are just a few of the examples given.

*Carolyn Rubens*

## Reports of adverse events & related papers

### Necrotising fasciitis following acupuncture (n=1)

Saw A, Kwan MK, Sengupta S. Necrotising fasciitis: a life-threatening complication of acupuncture in a patient with diabetes mellitus. *Singapore Med J* 2004;45(4):180-2.

#### Summary

Acupuncture is used for some conditions as an alternative to medication or surgical intervention. Several complications have been reported, and they are generally due to physical injury by the needle or transmission of diseases. The authors report a case of life-threatening necrotising fasciitis that developed after acupuncture treatment for osteoarthritis of the knee in a 55 year old diabetic woman. She presented with multiple discharging sinuses over the right knee. As the patient did not respond to intravenous antibiotics, extensive debridement was performed. She made a good recovery. Since many old diabetic patients with degenerative joint diseases may consider this mode of treatment, guidelines on cleanliness and sterility of this procedure should be developed and practised.

#### Comment

This is the third case of necrotising fasciitis (NF) that has been linked to acupuncture treatment,<sup>1,2</sup> though the term NF has not been used in all the reports. There are approximately 1000 cases of NF

in the UK each year, and some 60 to 80 are fatal according to a UK based support group (<http://www.nfsuk.org.uk>). Two of the cases occurred in patients with diabetes, which is known to be a predisposing factor. Acupuncture is clearly a risk factor as it potentially allows the causative organisms, particularly *Streptococcus pyogenes*, to penetrate down to deep tissue layers. It has been argued that an acupuncture needle cannot carry sufficient organisms through the skin to cause local infection under normal circumstances; however, the pathogenicity of the organism, and factors such as host immunity would influence the critical number of organisms required in any individual case.

It is tempting to consider skin disinfection prior to acupuncture in patients at higher risk; however, we cannot be sure that standard skin disinfection procedures, such as wiping the skin with an alcohol impregnated swab, are actually beneficial in this regard.

#### Reference list

1. Onizuka T, Oishi K, Ikeda T, Watanabe K, Senba M, Suga K et al. [A fatal case of streptococcal toxic shock-like syndrome probably caused by acupuncture]. *Kansenshogaku Zasshi* 1998;72(7):776-80.
2. Shah N, Hing C, Tucker K, Crawford R. Infected compartment syndrome after acupuncture. *Acupunct Med* 2002;20(2-3):105-6.