Conference Report

Report on the 10th Annual Symposium of Society for Acupuncture Research (SAR)
- held at Harvard Graduate School of Education, Cambridge, Massachusetts,

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The SAR symposium has become a regular feature of the acupuncture research calendar. It started with a small group of people who longed for an open arena in which to discuss acupuncture research without any professional tensions or barriers, and celebrated its tenth anniversary this year. It is a worthy aim to establish a successful society in this under-funded field, and I was pleased to be able to attend this year’s symposium and meet many acupuncture researchers. I have summarised a selection of the presentations for readers to share. Please note that further details of the symposium can be obtained from the society’s website (www.acupunctureresearch.org).

The meeting started with an overview of the symposium by Helen Langevin, one of the co-chairs. Ted Kaptchuk’s lunch time lecture, Should acupuncture be researched or should we research the research? was entertaining and enthusiastic. He raised some thought provoking questions about the value and meaning of placebo-controlled randomised controlled trials (RCTs) in acupuncture research. Research into external generalisability and the question of whether the results of RCTs have ecological validity raise serious concerns about the uncritical acceptance of the RCT as the sole basis of accurate clinical knowledge. He suggested that the ideal placebo-controlled RCT is the least subjective, fairest, most explicit and standardised procedure ethically possible for generating evidence of clinical efficacy, although it might have its own biases, distortions and systematic errors. Kaptchuk said it may be that clinical truth is independent of the method of its production. He added: “The claim that medical research or any other scientific research can be totally objective and free of subjectivity is not congruent with what we know from the philosophy and sociology of science. Evidence does not speak for itself and must be judged for quality and likelihood of error. Interpretation is never completely independent of a scientist's beliefs, preconceptions, or theoretical commitments.” The acupuncture community in the Western world has roots in a radical critique of biomedicine, he said. Acupuncture researchers have a parallel responsibility to examine research critically and to perform the research, he concluded.

Kathleen Hui presented functional MRI images of 24 acupuncture-naïve healthy volunteers after they had received manual acupuncture stimulation to ST36 in the right leg, by rotating at the rate of 1Hz for two minutes. The same procedure was repeated once after a three minute interval. For control intervention, tactile stimulation was performed over the acupoint. This report of an fMRI study of acupuncture focusing on the cerebellum, which was said to be the first, found that the images of volunteers who experienced de qi, acupuncture-specific sensation, showed extensive reductions in the signal in the anterior and posterior lobes of the vermis, medial and lateral hemispheres of the cerebellum, indicating that multiple regions related to nociception, cognition, affect, balance, and sensorimotor functions were involved. In addition, a similar response with reductions in signal intensity was observed in the cerebral limbic and subcortical network and in the brainstem. Interestingly, in the occasional subjects who experienced sharp pain, signal increases predominated in the entire brain. She concluded by suggesting that the cerebellum
might play a coordinating role within the cerebral network in mediating diverse acupuncture modulatory actions. Several questions remained unanswered, including: whether information given to the volunteers prior to consent could have affected their expectation; and, was the defining acupuncture-specific sensation well enough differentiated from pain sensation?

Vitaly Napadow reported the difference in fMRI between manual acupuncture and electroacupuncture. Fifteen acupuncture-naïve healthy volunteers were studied after receiving manual rotating at the rate of 1Hz or electroacupuncture stimulation at 2Hz and 100Hz to ST36 in the right leg for two minutes. The same procedure was repeated once after a three minute interval. Tactile stimulation was performed over the acupoint as a control. Reductions in the signal were found in limbic and paralimbic structures including the amygdala, anterior hippocampus, and the cortices of the subgenual and retrosplenial cingulate, ventromedial prefrontal cortex, frontal and temporal poles. The anterior insula and SII also demonstrated signal reductions. Vitaly Napadow's interpretation of the results was that, overall, manual stimulation produced more widespread signal reductions than electroacupuncture, which produced more signal increases, particularly at low frequency. It was thought-provoking to hear a novel proposal for analysing de qi, a psycho-physical sensation which is acupuncture specific.

Jian Kong presented the results of a sham controlled, randomised controlled trial assessing the different effects of electroacupuncture and manual acupuncture on the psycho-physical and analgesic responses to noxious heat stimuli in 11 healthy volunteers. Volunteers pre-rated the sensory intensity and unpleasantness of heat stimulation (36Hz, 40-52º Celsius, four second duration) applied across the four extremities during the first and second sessions of five. Only those who demonstrated reliable ratings received an identical series of noxious stimuli before and after one of the three modes of acupuncture (manual acupuncture, electroacupuncture, or sham acupuncture) in the order allocated by randomisation and performed at the LI4, ST36 and SP6 on the right side. Heart rate, palm skin temperature, skin conductance, and blood pressure were monitored during the sessions. The results suggest that both electroacupuncture and manual acupuncture reduced sensory and affective ratings of pain stimuli, but the changes did not reach statistical significance. No significant autonomic effects of the acupuncture treatments and interaction between responses to pain and treatment were found. Additionally, the study explored an acupuncture sensation scale based on a visual analogue scale of 10 descriptive words and reported finding three main factors - sharp pain factor, heaviness factor and diffuse factor - and that there was a significant correlation between analgesia and the ratings on numbness and soreness.

Shin Lin reported on three recent collaborative research studies conducted at the several laboratories under International Alliance for Mind/Body Signalling and Energy Research. The first was using the single square voltage pulse method measuring electrical conductance before polarisation at 24 Jing-Well acupoints (located at the edge of the base of finger nail) in a group of qigong practitioners after a session of qigong practice in comparison with non-practitioners. It was found that the electrical conductance could increase by 50%, although the sample size was very small. In the second study, the heart rate variability of the qigong practitioners during regulation of respiration showed a strong low frequency peak corresponding to the deep breathing cycles. During a deep meditative state involving mind regulation, a high frequency peak similar to that seen during deep sleep was observed, suggesting that qigong practice might increase parasympathetic and decrease sympathetic responses, with subsequent modulatory effect on the autonomic nervous system. In the third study, it was found - using laser Doppler flowmeter - that the local blood flow in the hands quickly increased when the qigong practitioners were asked to 'send qi to the hands' during mind regulation. A question may arise about publication bias as the experiments can only be done on highly selected subjects.

Richard Hammerschlag systematically reviewed all randomised controlled trials of acupuncture from 1997 to 2002 under the sub-
Pilot test of a CONSORT and STRICTA based quality of reporting instrument. A new instrument called Oregon CONSORT STRICTA instrument (OCSI) was developed to assess the quality of RCT, converting 27 items from both the CONSORT and STRICTA guidelines into a series of questions, retaining the numbering scheme and the original wording. Each question was to be scored on a three-point scale (Yes=2, Partial=1, No=0) or Not Applicable (NA) based on the composite scoring of its sub-questions. In order to identify relevant RCTs, Medline (Nov 1997-Oct 2002), and the database of the Oregon College of Oriental Medicine library were searched, along with the speaker’s own personal database. The predefined inclusion criterion was a full article published in English, testing a treatment with acupuncture needles using manual or electrical stimulation. A total of 105 articles were identified from 53 journals in 16 countries. Eight of them were randomly selected and five raters used OCSI to assess their quality, later meeting to discuss their scores, clarify assumptions and reach consensus. (Inter-rater reliability and validity data were not reported.) The remaining articles were then randomly distributed for single-rater scoring. The full report is awaited and will be presented later.

Hugh MacPherson presented the results of a pragmatic randomised controlled trial testing acupuncture for low back pain. The study recruited 241 patients, who were identified by their general practitioners in York. Patients who joined the study were randomly allocated either to the option of up to 10 individualised acupuncture treatments or to a control group. Both groups continued to receive conventional primary care from their general practitioner. The key outcome measure was the bodily pain subscale (range 0-100 points) of the SF-36 at 12 and 24 months post-randomisation, where a difference of five points is considered to be clinically significant. Patients received an average of 8.6 treatments. There was no statistically significant difference at 12 months (95% CI [-0.6, 12.6]), but a marginally significant difference (95% CI [1.8, 16.2]) at 24 months in favour of acupuncture. It was concluded that it is possible to conduct a large pragmatic RCT in a primary care setting, and that at longer term follow-up (such as 24 months) the group of low back pain patients who received acupuncture may have had a better outcome.

Albrecht Molsberger reported the results of German Research of Acupuncture for shoulder pain (GRASP) recruiting 427 patients who had only one sided shoulder pain rating 50 or higher on a visual analogue scale. Treatment was given by 48 office-based orthopaedicists who have attended 140 hours of training. Patients (age 25-65) were allocated through randomisation into either verum group (n=154) to receive 15 treatments (period not stated), sham group to receive 15 treatments of non-specific needling, minimal effective acupuncture, or conventional conservative orthopaedic treatment (COT). The primary endpoint was numbers achieving pain reduction of 50% or higher on VAS at three months post-treatment. Secondary endpoints were pain reduction of 50% or higher on VAS directly after the end of the treatment, and global assessments on a four-score scale directly after the end of the treatment. The results after three months were: verum 78%, sham 47%, and COT 43%. The difference between verum and sham or COT was significant. Conclusively, acupuncture is an important supplement in the management of chronic shoulder pain.

Rosa Schnyer presented a therapist-blind and assessor-blind, randomised controlled trial of acupuncture as a treatment for major depression. The aim was to evaluate the effectiveness of acupuncture as a treatment for major depression as compared to both non-specific acupuncture and to a waiting list control. Individuals aged 18-65 meeting DSM-IV diagnostic criteria were recruited through an exclusion process. Treatments, which were individually tailored on the basis of their pattern configuration using treatment manual, were provided twice a week for the first four weeks and once per week for the following four weeks. As control groups, the non-specific group received valid and credible acupuncture that did not directly address depression, and the waiting list group had to wait before they received specific treatment. The outcome was measured using the Hamilton Rating Scale for Depression. There was no statistical difference between the groups. The
findings of the presenter’s previous study, that there was a greater improvement with specific acupuncture than with non-specific, were not confirmed by this bigger study.

Karen Sherman shared the results of a sham controlled, subject-, assessor- and data analyst-blind, RCT of acupuncture for the treatment of fibromyalgia. One hundred patients with fibromyalgia recruited via multiple methods, including media, notices, and letters to support groups, were allocated into one of the following four treatments twice weekly for 12 weeks: acupuncture specifically designed to treat fibromyalgia; acupuncture for an unrelated condition; needle insertion at non-acupoint locations; or non-penetrating simulated acupuncture. The primary outcome was VAS of pain, the McGill Pain Questionnaire, and the physical functioning sub-scale of the SF-36. Secondary outcomes included fatigue, sleep, well being, and general functioning. Participant masking and adverse effects were ascertained by self-report. The results showed no significant differences between groups. Overall, nearly half of all participants had clinically meaningful improvements in pain, fatigue, sleep and general well-being, with no significant difference noted between groups. Participants’ masking was adequate throughout the trial and no serious adverse effects were noted. It was concluded that the specific effects of acupuncture did not improve the primary symptoms of fibromyalgia.
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