Acupuncture: Its Place in Western Medical Science
George T Lewith

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This little paperback, first published in 1982 by Thorsons, offers an introduction to the philosophy of acupuncture and reviews current developments since its more recent introduction to the West.

It is aimed at the lay reader, although it may be of interest to medical colleagues with no previous knowledge of the subject. Its main value is, however, as a readable account of the background and history of acupuncture together with a synopsis of its uses and effects. As such, it can safely be recommended to interested patients.

Mind-Body Medicine: A Clinician’s Guide to Psychoneuroimmunology
Alan Watkins, editor

Paperback, Pages: 314, Price: £26
Churchill Livingstone, Edinburgh (1997)
ISBN 0 443 05526 2

Mind-Body Medicine provides a fascinating glimpse at some of the possible mechanisms by which the psyche and the soma interact. It is extraordinarily well referenced and provides a wealth of information for further study. It should claim the attention of any physician practising acupuncture who has an interest in holistic approaches to medical care. It covers conditions such as cancer, heart disease, allergy and nonspecific ill health, together with sufficient research-based evidence to support the practical importance of mind-body pathways. This is an essential read.

Adam Ward

Abstract Reviews

Cardini F, Weixin H. Breech presentation may be corrected by moxibustion.

Primigravidas with breech presentation demonstrated by ultrasound at the 33rd week were treated with moxibustion at BL.67 for 7 days, with a second 7 day course if breech persisted. Foetal movement was more active in the 130 treated with moxibustion than in the 130 controls (p<0.01). By the 35th week, 75% of babies in the moxibustion group were cephalic in presentation vs 48% of controls: a statistically significant difference. Those treated twice daily rather than once achieved a higher rate of conversion. At birth 62% of controls were cephalic, still less than the continued 75% with moxibustion. The rate of Caesarian section, however, appeared equal in the two groups.

Comment: An earlier, similar study reported from Italy 2 or 3 years ago had similar results. The only worrying finding there was a high incidence of nuchal cords, though they did not report increased neonatal distress. Again, in that prior report, there was an astoundingly high rate of Caesarian sections in both treated and control mothers.


Recent studies in China have indicated that acupuncture can influence the HPG axis, with changes in testosterone, LH, FSH, etc. This axis function and these hormones tend to decrease with ageing. Rats, aged 16 months, were divided between old (aged) controls, acupuncture, non-point, moxibustion, and diet restricted groups. Subsequently, testosterone in the 22 month old rats was lower than in 4 month olds and elevated slightly, but not significantly after electroacupuncture and moxibustion at Shengshu (BL.23). LH and FSH, decreased in elderly rats, was increased significantly by both EA and moxibustion (p<0.05) as was LHRH in serum, hypothalamus and pituitary. Dietary restriction (feeding qod) did not change hormone levels. Results indicate EA and moxibustion might enhance the HPG axis function in the aging.

Comment: There seems to be considerable work in China regarding slowing ageing processes by acupuncture, herbs and moxibustion. ST.36 is also highly advocated as an anti-senility point.

A group of 90 patients with varied disorders were treated for pain by acupuncture at ST 36 and LI 4. Beta endorphin and vasoactive intestinal peptide (VIP) were measured in 30, lymphocyte subsets for cell mediated immunity in 30 patients, and NK cells and monophagocyte phagocytosis in 30. Results were compared with a homogeneous set of 30 subjects. Blood was sampled before, 30 minutes following and 24 hours after acupuncture. In the control group, there was no significant change in any immune value during 3 blood tests taken at equivalent times. The acupuncture technique is fully described, as are all tests used in the study. Beta-endorphin is increased at 30 minutes post-acupuncture and decreased at 24 hours while VIP shows a reverse effect, with both neuropeptides tending to homeostatic levels at 24 hours. T lymphocytes with CD3 phenotype and CD4 helper cells increased in 77% at 30 minutes. The value of CD8 cells increased in 60% at 24 hours and B lymphocytes in 57%. This generally confirms Chinese literature findings. At 30 minutes, CD16 cells with natural cytotoxic activity (NK cells) increased in patients with baseline levels within 10% of normal and decreased in those with initially high values; this result was still seen at 24 hours. Monocyte mediated phagocytosis was raised in most at 30 minutes and all at 24 hours.

Comment: This is a beautifully thought out and described report with an interesting description of the testing required for each analysis and a good discussion of its import. However, it suffers by not including any figures which could be analysed by the reader to check the statistical validity of the results reported. Without data to be reviewed, in essence this fine study becomes hearsay. However the authors, at the Department of Experimental Medicine, La Sapienze University, Rome, might have the figures available for those interested in communicating directly. Since the results have some importance for immune-depressed or traumatised patients, it would be useful if some other centre could revalidate this work.


Orphanin FQ (OFQ) is a recently discovered 17 aminoacid neuropeptide with structural similarities to dynorphin, but with low affinity to opioid receptors. OFQ is especially found in hypothalamus, periaqueductal gray matter, and immune cells. It can produce hyperalgesia and reverse opioid analgesia. In this experiment, rats were surgically traumatised under anaesthesia, and splenic normal killer cell activity measured. Killer cell deficiency was profound, with lysis decrease from 52% in controls to 30% after surgical trauma. Intraventricular (CNS) OFQ of 1 ug had no effect on normal rats, but 5ug inhibited NKC from 52 to 30%, as did OFQ receptor site mRNA blockage. Electroacupuncture (EA) of 2Hz at ST.36 and Lanwei (Ex.37) improved the killer cell deficiency after trauma, with lysis enhanced from 30 to 49%. EA given with 1 ug of OFQ still had full effect, showing it can overcome some opposition and might act via more than one mechanism.

Comment: This is a very erudite and complicated study which provides further backing for Chinese reports on the antagonising effect of OFQ on EA. It also gives further backing for the use of acupuncture before and after surgery to prevent the immune function drop which occurs in human and other animal studies. In humans, the profound decrease in NKC to a minimum at 7 days and recovery in 2 to 3 weeks can be halved according to earlier report, with the nadir at 3 days and recovery by 7. This could prevent some post surgical infections, but we need a Western study.


Mice were stimulated with paraffin oil intraperitoneally and divided into 3 groups: electroacupuncture (EA) to ST.36 at 2Hz, controls with peritoneal macrophages cultured, and controls with no treatment. The initial studies had found that acupuncture enhanced cellular immunity, tending to veer it toward normal levels. Heat shock protein
(hsp) increases in macrophages under stress and is protective in situations such as ischaemia and pathogen exposure. Nitrous oxide acts as a neuroendocrine transmitter and vessel relaxing factor, and in the form O=N=N=O is a potent bactericidal and tumoricidal product. In this study, macrophages were removed from the peritoneum by saline wash 48 hours after paraffin application. Using an intricate biochemical testing of macrophages (well described), the authors tested for iNOS mRNA, iNOS and hsp, and demonstrated values from mice treated with acupuncture of 4.2, 3.9, and 6.0, respectively, as compared to lower levels of 2.6, 2.4, 1.2 for controls with cultured macrophages, and 1.6, 1.2, and 2.1 for untreated controls. The results suggest that acupuncture might enhance immunity through an effect elevating the NO and hsp mechanisms.

Comment: Many studies have been done in the past few years on nitrous oxide and its amazingly complex effects within the body. This study, apparently carefully done, involving immuno-histology and with such intricate nuances as in-situ hybridisation, indicates significant differences in macrophage response between controls and EA treated mice (p<0.01 using Student’s T test). This provides support for previous papers indicating that post-operative patients had a decidedly smaller decrease in immune cell levels when treated with acupuncture at points such as ST.36. Though the concept will undoubtedly meet resistance, acupuncture prior to and following surgery really does require formal testing in the West.


Seventy patients with cerebral thrombosis, including 34 having hemiplegia, and the remainder with a variety of sequelae, were treated with acupuncture. Points GB.20, (GV.16, LI.II, LI.4, SP.10, ST.36, and LR.3 were used for a 40 day course: 33% were “basically cured” and 44% improved significantly to an acceptable level of basic self care. Nailfold and bulbar conjunctiva circulation were studied using special instruments. After therapy, microcirculation showed clearer capillary loops, more normal artery/vein ratios, significantly less erythrocyte aggregation and less local exudation, with increased blood flow rate. The authors believe acupuncture dilates microcirculation, relieves spasm and platelet and granulocyte aggregation to cause the clinical improvement seen in the stroke patients they have studied.

Comment: A control group is essential to examine the natural progression of microcirculation toward normal following stroke. This is, however, only one of several papers from China that I have reviewed over the past three years on this subject, all indicating a strong effect of acupuncture on microcirculation. This group uses a scattering of Helms’ Big Points for therapy, one of many approaches.


Thirty cases of vascular dementia, aged were 55 to 83, were selected using DSM III standards and a Dementia Severity Table devised by Zheng and Hasegawa. All patients had ischaemic signs confirmed by CT or MRI scan. Major points along the Governing vessel meridian were used, together with Sishencong, KL.3, BL.23 and 18, plus GB.39. Fu Yuan Tang (Decoction for recovery) herbs were added. Two months of therapy was given, with an average improvement in the severity of dementia from 13.5 to 19.7. The ability for self care increased significantly, and the number of neurological and psychological symptoms reported decreased notably. Two enzymes active in oxygen free radical inhibition increased to within the normal range from levels of about half normal prior to therapy, and a compound caused by free radicals decreased. The authors believe this metabolic pathway is one effector of acupuncture results.

Comment: So many papers have come from China indicating interesting and promising effects of acupuncture on neurological problems and senility that the whole area seems to invite intensive study in the West. A study here, however, would be very expensive in view of the large number of treatment sessions generally required. Another approach might be to fund a research worker to spend six months in China investigating the benefits of these changes.

PG12 is a vasodilator and platelet aggregation inhibitor released from vascular endothelial cells which rapidly metabolises to 6-keto-PGF1 alpha. TXA2 is a vasoconstrictor and platelet aggregator synthesised in platelet mitochondria which converts to TXB2. Before acupuncture treatment of dementia, TXB2 was elevated (303 vs 104 in normal controls) while 6 keto-PGF1 alpha was deficient (81 vs 128 in controls). Dementia patients with marked clinical improvement following acupuncture treatment have both compounds moved markedly toward normal levels, with less shift in those showing less improvement and none in non-responders.

Comment: This is an interesting study of a statistically valid and significant biochemical change occurring in dementia patients treated with acupuncture. The study techniques are well described.


Left ventricular ejection time (LVET) was studied before and after acupuncture at PC.6 in 29 patients aged 50 to 79 with coronary atherosclerotic cardiopathy but no history of myocardial infarction or hypertension. Acupuncture needles were manipulated inducing needling sensation four times over a period of 20 minutes. A closely related linear correlation was found for changes of LVET and for pre-ejection time, with the former elongated and the latter shortened following acupuncture. Improvement in left heart function was related to the functional state of the heart before needling, with average LVET about 30 prior to PC.6 stimulation, extending by 15 on the scale used and with greater increase found the more abnormal the initial pre-acupuncture level.

Comment: PC.6 acupuncture is shown to benefit patients with coronary atherosclerosis. With its known action on nausea and vomiting, PC.6 seems a versatile and useful point.


O’Duffy provides an analysis of her approach to the prevention of nausea and other side effects of chemotherapy using acupuncture. She notes that modern, often expensive medications for nausea and vomiting tend to have more side effects, and are more effective in the prevention of the vomiting than of the nausea following chemotherapy. She uses balancing treatments and big tonic points for two weeks prior to the onset of therapy, and looks especially at the organ (Zang Fu) effects of the drugs to be used, giving a prophylactic treatment 1 to 2 days prior to chemotherapy. She also finds acupuncture effective in the post-radiation fatigue period which is frequently seen 3 weeks beyond therapy. She provides detailed lists of points that she uses for each group of drugs involved in the various cancer treatment combinations, together with the common and possible side effects of the chemotherapy treatments.


“It has been proven in prior studies that acupuncture at Neiguan improves the heart function and prevents or cures arrhythmia in patients with myocardial ischemia”. The study involved 28 rabbits investigated under anesthesia: 18 were given electroacupuncture at PC.6 for 15 minutes, and all were made ischaemic by prolonged pituitrin infusion. Transmembrane potentials were recorded to evaluate the ischaemic effect, and left ventricular muscle was evaluated for cAMP and cGMP. With acupuncture preceding ischaemia, resting potential changed an average 4.7% vs 20.1% in controls, and action potential amplitude was reduced 4.2% vs 25.6%. Other indices were also improved in the acupuncture group. In the control animals, cAMP was 0.30 vs an average 0.15pmol/mg of tissue after acupuncture, but cGMP was unchanged. The activated cyclic adenylate monophosphate relates to myocardial membrane ion permeability and logically relates to abnormal cell depolarisation which in turn can lead to arrhythmia.

Comment: This study seems very intricate, but the results appear clear cut and make a case for the simple act of using PC.6 acupuncture in acute myocardial ischemia.

This is one of a series of papers (including the following abstracts) regarding the use of acupuncture like needling with electrical stimulation. The Fort Worth study group enrolled 50 acute patients in a well randomised, single-blind study with a 9 month follow-up. The control group was given *famciclovir* and the study group received percutaneous electrical nerve stimulation (PENS) 3 times weekly for 2 weeks. Needles were placed above and below the segment involved at four positions along the spine: anterior and posterior axilla, and anteriorly near the midline, with an electrical input alternating between negative and positive and from 4 to 100Hz. The treated group had significantly more rapid resolution of lesions, lower visual analogue pain scores, improvement of sleep, and most important: less post-herpetic neuralgia pain at 6 months, although not at 9 months, as, with 2 patients still afflicted with pain compared to 3 in the controls group.


Six experienced acupuncturists evaluated the adequacy of treatment in 12 studies, 9 of which could be included in a meta-analysis. The odds ratio of improvement with classic acupuncture was 2.30 vs 1.37 for sham-acupuncture. They concluded that acupuncture was superior to various control interventions, but that statistical evidence of superiority to sham-acupuncture was uncertain.

Comment: Again, we face the problem of diffuse noxious inhibitory control of pain (DNIC) created by non-standard acupuncture. Many studies have shown that needling at non-traditional points induces physiological response in the same way as classical needling: specifically through release of neuromodulators. Therefore, when sham-acupuncture is used in a comparison with classic acupuncture, much larger numbers are likely to be required to show statistical significance between the two forms of acupuncture.


In a randomised, single-blind, sham-controlled study, 60 persons with degenerative disc disease were treated with PENS, sham-PENS, ThNS and exercise therapy 3 times weekly for 3 weeks. PENS decreased the visual analogue pain scores from 5.7 to 3.4, which was significantly more than the other therapies, and 91% of patients noted it as the preferred therapy. The level of activity and quality of sleep were statistically better for PENS and the decrease in daily analgesic consumption was superior. A longer term follow-up study is proposed. This study, to maintain simplicity, involved only electrical stimulation at 4Hz, unlike Dr Craig's usual practice of varying frequency levels to obtain the best effect.


In this paper the PENS researchers reported that the addition of 15/30Hz treatments gave greater benefit. Further, in a paper awaiting publication (Ghonne El-SA, Craig WF. et al. The effect of the duration of electrical nerve stimulation on the analgesic response. *Anesthesia and Analgesia* in press 1999.) it has been noted that when using this PENS technique approach for chronic pain, a 30 minute or greater period of stimulation was found to be superior to 15 minutes.


Three patients with advanced cancer were treated with PENS, and two responded with significant decrease in the need for medication and in pain measured on a visual analogue scale. Rather complex montages of needles were used, with periosteal stimulation.
group. Chi-squared and Fisher’s exact tests were used to analyse the results. The study concludes that simple ear electroacupuncture was significantly more effective than “placebo” in smoking cessation.

Comment: I remain unconvinced that this so-called simple acupuncture is effective in stopping smoking when used in isolation. The statistical significance of the study was borderline \(p=0.055\) and the sample size was rather small, calculated on a predicted response rate of 30% rather than 12.5% for acupuncture. However, the authors make the important point that smoking status should be validated biochemically. It may be that those who were successful in stopping smoking were acupuncture responders who may have been more highly motivated than those who continued to smoke.

Stephen Motto

Dr Med Univ Richard Umlauf CSc

Obituary

Richard Umlauf was born in Brno, Czechoslovakia, on January 6th 1930. He was a big, friendly looking man with a character to match, reminding one irresistibly of the heraldic mascot of his home town: a large bear. Despite an independence of spirit during the communist era, he managed to obtain sufficient influence, through his obvious enthusiasm, to build up a large acupuncture clinic at the University Hospital at Brno: at the international scientific acupuncture congress held in London in 1986 he was able to present an analysis of 140,000 treatments given over the previous 10 years (Nov 1988; 5: 16-8). He also organised national standards of acupuncture training that were approved by the Czechoslovak government. Although delighted at the freedom that came with democracy, he was deeply disappointed in the division of his country into the two Republics.

As a long-serving ICMART committee member he was keen to use his experience in education to promote international training standards for acupuncture. This proved remarkably difficult, mainly due to the major variations in approach in different countries, ranging from being almost totally westernised to solidly traditional. However he was proud to help set up the system for obtaining the ICMART international diploma, and indeed had the first batch of diplomas printed under his personal supervision.

He will be well remembered as a regular participant at ICMART conferences: he much enjoyed his visit to Bath when the BMAS last hosted the conference in 1993, at which he presented a paper on the use of the Chievitz point (May 1994; 12: 70). But his greatest glory was organising the 1988 ICMART congress in Prague. This was the first at which the Eastern Europeans were able to take part, and huge numbers of enthusiastic delegates attended from East Germany, Poland, Hungary and Romania as well as Czechoslovakia itself, giving an electric atmosphere of excitement to the conference and initiating many young East European doctors into the scientific approach to medical acupuncture.

Although he based his own acupuncture practice firmly on traditional Chinese teaching, he regarded himself as taking a very scientific attitude, and he was certainly progressive, being keen to investigate modern techniques through both clinical trials and audit: his last article for this journal, on ozone therapy (Nov 1998; 16: 89-94), appeared shortly before he died.

In 1998 he was diagnosed as having a brain tumour and died in Brno on January 24th 1999. As a popular medical acupuncturist of international stature, he will be sadly missed in many countries, not least in Britain where we have valued him as an Honorary Member of the BMAS.

Simon Hayhoe
Breech presentation may be corrected by moxibustion

Stephen Motto

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