

Research Snapshots

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ACUPUNCTURE ENHANCES IVF SUCCESS RATE

OBJECTIVES: To evaluate whether acupuncture improves rates of pregnancy and live birth when used as an adjuvant treatment to embryo transfer in women undergoing in vitro fertilisation. **DESIGN:** Systematic review and meta-analysis. Eligible studies were randomised controlled trials that compared needle acupuncture administered within one day of embryo transfer with sham acupuncture or no adjuvant treatment, with reported outcomes of at least one of clinical pregnancy, ongoing pregnancy, or live birth. Two reviewers independently agreed on eligibility, assessed methodological quality and extracted outcome data. **RESULTS:** Seven trials with 1366 women undergoing in vitro fertilisation were included in the meta-analyses. There was little clinical heterogeneity. Complementing the embryo transfer process with acupuncture was associated with significant and clinically relevant improvements in clinical pregnancy (odds ratio 1.65, 95% confidence interval 1.27 to 2.14; number needed to treat (NNT) 10 (7 to 17); seven trials), ongoing pregnancy (1.87, 1.40 to 2.49; NNT 9 (6 to 15); five trials), and live birth (1.91, 1.39 to 2.64; NNT 9 (6 to 17); four trials). The results were robust to sensitivity analyses on study validity variables. A pre-specified subgroup analysis restricted to the three trials with the higher rates of clinical pregnancy in the control group, however, suggested a smaller non-significant benefit of acupuncture (odds ratio 1.24, 0.86 to 1.77). **CONCLUSIONS:** The preliminary

evidence suggests that acupuncture given at the time of embryo transfer improves pregnancy and live births rates among women undergoing IVF. Manheimer reports a clinically relevant benefit and estimates that the number needed to treat is 10 in order to bring about one additional pregnancy. The subgroup analysis of three trials with higher pregnancy rates found a non-significant trend, suggesting the relative added value of acupuncture maybe reduced where baseline pregnancy rates are high. However, the numbers of women and trials included in the review is small, and further research is needed. This review is important because it paves the way for future clinical research to further examine the effect of acupuncture on pregnancy rates.

Manheimer E, Zhang G, Udoff L, Haramati A, Langenberg P, Berman BM, Bouter LM. Effects of acupuncture on rates of pregnancy and live birth among women undergoing in vitro fertilisation: systematic review and meta-analysis. BMJ 2008;336(7643):545-9.

ACUPUNCTURE REDUCES DYSMENORRHOEA AND IMPROVES QUALITY OF LIFE

Dysmenorrhoea is the leading cause of time off school in adolescent girls and a common problem in women of reproductive age. The prevalence rates ranged from 18 to 81% depending on the measurement method used. **OBJECTIVES:** The aim of this clinical trial was to investigate the clinical effectiveness and cost-effectiveness of acupuncture in patients with

dysmenorrhoea. **STUDY DESIGN:** The trial was undertaken in Germany. In a randomised, controlled multi-centre trial plus non-randomised cohort, patients with dysmenorrhoea were randomised to acupuncture (15 sessions over three months) or to a control group (no acupuncture) who received acupuncture after three months. Patients who declined randomisation received acupuncture treatment. All subjects were allowed to receive usual medical care. Inclusion criteria included: age 18 or more years (age between menarche and menopause); primary dysmenorrhoea from the start of the menarche onwards or secondary dysmenorrhoea (for at least 12 months) with cramping pain during menstruation; written informed consent. Exclusion criteria were pain caused by inflammatory or malignant diseases. Each patient received a maximum of 15 acupuncture sessions. The number of needles and the acupuncture points used were chosen at the physicians' discretion. Only needle acupuncture (with disposable single-use needles and manual stimulation) was allowed; other forms of acupuncture treatment such as laser acupuncture were not permitted. **RESULTS:** Of 649 women (mean age 36.1 ± 7.1 years), 201 were randomised. After three months, the average pain intensity (NRS 0-10) was lower in the acupuncture compared to the control group: 3.1 (95% CI 2.7; 3.6) vs 5.4 (4.9; 5.9), difference -2.3 (-2.9; -1.6); $p < 0.001$. In 11.8% of patients ($n = 59$) a total of 70 side effects were reported after receiving acupuncture (74.3% minor local bleeding or haematoma, 10% pain (e.g. needling pain), 4.3% vegetative symptoms, and 11.4%

other). No life-threatening side effects were reported. The acupuncture group had better quality of life and higher costs (overall ICER €3011 per QALY). **CONCLUSION:** Additional acupuncture in patients with dysmenorrhoea was associated with improvements in pain and quality of life as compared to treatment with usual care alone and was cost-effective within usual thresholds. However, neither providers nor patients were blinded to treatment. Therefore, a bias due to unblinding cannot be ruled out.

Witt CM, Reinhold T, Brinkhaus B, Roll S, Jena S, Willich SN. *Acupuncture in patients with dysmenorrhea: a randomized study on clinical effectiveness and cost-effectiveness in usual care.* *Am J Obstet Gynecol.* 2008;198(2):166.e1–8.

NO DIFFERENCE BETWEEN DEEP OR SHALLOW NEEDLING

OBJECTIVES: The primary aim of this investigation was to compare the brain activation in response to deep and shallow acupuncture needling by utilising fMRI scans. **STUDY DESIGN:** Seventeen right-handed healthy volunteers were randomly allocated to receive either deep (8–12 mm) or shallow (1–2 mm) needling with Deqi on LI4 Hegu. Two fMRI scans were conducted to measure the increases (activations) and decreases (deactivations) in the blood oxygen level dependent (BOLD). **RESULTS:** The study demonstrated marked similarities in BOLD signal responses between two groups. **CONCLUSION:** There was no significant difference between the groups. This result was consistent with equivalent therapeutic outcomes claimed by the proponents of either Japanese or Chinese styles of acupuncture.

MacPherson H, Green G, Nevado A, Lythgoe MF, Lewith G, Devlin R, Haselfoot R and Asghar AUR. *Brain imaging of acupuncture: comparing superficial with deep needling.* *Neurosci Lett* 2008;434(1):144–9.

IS IT ALL ABOUT SEX?

A recent article in the journal *Acupuncture in Medicine* suggests that, because women experience repeated painful visceral events such as menses and labour during their life, this could cause increased sensitivity and prevalence to pain. The authors went on to explain that women exposed to experimental stimuli generally reported greater intensity than men did. They hypothesise that, due to this history of repeated pain, this could be a contributing factor for women and may be one of the reasons they are more likely to suffer or experience painful conditions such as fibromyalgia, temporomandibular dysfunction, migraine, rheumatoid arthritis and IBS.

Lund T, Lundberg T. *Is it all about sex? Acupuncture for the treatment of pain from a biological and gender perspective.* *Acupunct Med* 2008;26(1):33–45.

ACUPUNCTURE REDUCES PELVIC AND BACK PAIN IN PREGNANCY

OBJECTIVES: The objective of the study was to review the effectiveness of needle acupuncture in treating the common yet disabling problem of pelvic and back pain in pregnancy. **RESULTS:** Three studies met the inclusion criteria. Two trials with a small sample size examined mixed pelvic and back pain, and one larger trial was on pelvic pain only. The authors found in the two smaller studies that acupuncture as an adjunct to standard treatment was superior to standard treatment alone or physiotherapy in relieving mixed pelvic and back pain. In the larger study, they found that acupuncture in combination with standard care had greater relief than standard care alone or standard care and stabilising exercises. Reported adverse events were minor and few. The authors used a narrative synthesis due to significant clinical heterogeneity between trials. **CONCLUSION:** The authors concluded that limited evidence supports acupuncture in the treatment

of pelvic and back pain in pregnancy. Additional high-quality trials are needed to test the existing promising evidence for this relatively safe and popular complementary therapy.

Ee CC, Manheimer E, Pirota MV and White AR. *Acupuncture for pelvic and back pain in pregnancy review.* *Am J Obstet Gynecol* 2008;198(3):254–9.

BANXIA HOUPIU TANG PREVENTS PNEUMONIA AND RELATED MORTALITY IN ELDERLY PEOPLE WHO HAD DEMENTIA

OBJECTIVES: In this prospective, double-blinded, randomised, controlled trial, the authors evaluated whether the traditional Chinese herbal medicine formula *Banxia Houpu Tang* (BHT, *Banxia, Zhuling, Houpu, Zisu, Ganjiang*) prevented pneumonia and related mortality in elderly people who had dementia. **METHODS:** Ninety-five participants (mean age 84.0) with dementia due to cerebrovascular disease, Alzheimer's disease, or Parkinson's disease from two long-term care hospitals in Japan were randomly assigned to the BHT treatment ($n = 47$) or the control group ($n = 48$) and took BHT or placebo for 12 months. The occurrence of pneumonia, related mortality and the daily amount of self-feeding were recorded. **RESULTS:** Out of 92 patients who completed the study, four in the BHT group developed pneumonia, in comparison to 14 patients in the control group. The number of patients who died from pneumonia was one and six in the BHT and control groups, respectively. There was a statistically significant group difference. BHT reduced the risk of dementia patients developing pneumonia by 50% ($p = 0.008$). No adverse events were observed from treatment with BHT. The BHT group also self-fed better than the control group did ($p = 0.006$). **CONCLUSION:** BHT reduced the risk of pneumonia and pneumonia-related mortality in older patients with dementia.

Iwasaki K, Kato S, Monma Y, Niu K, Obrui T, Okitsu R et al. *A pilot study of Banxia Houpu Tang, a traditional Chinese medicine, for reducing pneumonia risk in older adults with dementia. J Am Geriatr Soc 2007;55(12):2035–40.*

CHINESE HERBAL MEDICINE ELIMINATES LONG-STANDING MODERATE-TO-SEVERE ATOPIC DERMATITIS IN CHILDREN

OBJECTIVES: In this clinical study, the authors aimed to assess the efficacy and tolerability of a Chinese herbal medicine concoction (TCHM, *Jinyinghua, Bohe, Mudanpi, Cangzhu and Huangbai*) in children with long-standing moderate-to-severe atopic dermatitis (AD). **METHODS:** Following a two-week run-in period, 85 children (mean age 11.7 years) with AD were randomly allocated to receive a 12-week treatment of either TCHM or placebo. The SCORing of Atopic Dermatitis (SCORAD) score, Children's Dermatology Life Quality Index (CDLQI), allergic rhinitis score, and requirement for topical corticosteroid and oral antihistamine were assessed at the baseline and at weeks 4, 8, 12 and 16 after treatment. Adverse events, tolerability, haematological and biochemical parameters were also recorded during the study. **RESULTS:** The mean SCORAD score reduced significantly in both groups, from 58.3 to 49.7 in the TCHM group, and 56.9 to 46.9 in the placebo group. However, there was no significant group difference. The CDLQI in TCHM-treated patients was significantly improved and the amount of topical corticosteroid used was reduced by a third in the TCHM group, significantly better than the placebo-control group. The results maintained for one to three months after the end of the treatment. No serious adverse effects were reported. **CONCLUSIONS:** The TCHM concoction is well tolerated. It is efficacious in improving quality of

life and reducing topical corticosteroid use in children with moderate-to-severe AD.

Hon KLE, Leung TF, Ng PC, Lam MCA, Kam WYC, Wong KY et al. *Efficacy and tolerability of a Chinese herbal medicine concoction for treatment of atopic dermatitis: a randomized, double-blind, placebo-controlled study. Br J Dermatol. 2007;157(2):357–63.*

CHAIGE QINGRE GRANULE IS EFFECTIVE FOR ACUTE UPPER RESPIRATORY TRACT INFECTION (AURTI) OF WIND HEAT SYNDROME

OBJECTIVES: In this double-blinded, randomised controlled trial, the authors aimed to evaluate the safety and efficacy of *Chaige Qingre Granule* (CQG), a traditional Chinese compound herbal medicine, in treating acute upper respiratory tract infection (AURTI) of wind heat syndrome. **METHODS:** In phase II, 60 patients with AURTI of wind heat syndrome were randomly allocated to receive CQG (*Chaihu, Gegan, Huangqin, Mahuang, Shigao, Xinren, Gancao*) or *Fufang Shuanghua Granule* (FSG, *Jingyinhuo, Lianqiao, Chuangxinlian, Banlangen*). In phase III, 112 patients were randomly allocated to receive the two treatments. The two groups were treated for three days and four times daily. No other treatment was allowed. Clinical signs and symptoms, adverse effect, blood, urine and stool test, hepatorenal function and electrocardiogram were examined before and after the treatment. **RESULTS:** After treatment, the percentage of patients experiencing 75% reduction of fever and other symptoms were 93.10% and 96.55% in the CQG group and the control group, respectively, in phase II; and 92.11%, 92.59%, respectively, in phase III. There were no statistical differences between the two groups. No adverse effects were found in the trial.

CONCLUSION: CQG is as effective and safe in treating acute upper respiratory tract infection of wind heat syndrome as the commonly used Chinese herbal medicine FSG.

Chang J, Zhang Y, Mao B et al. *A double-blind, randomized controlled trial of Chaige Qingre Granule in treating acute upper respiratory tract infection of wind heat syndrome [Article in Chinese]. Zhong Xi Yi Jie He Xue Bao 2007;5(2):141–6.*

WUWEIZI CONTAINING HERBAL FORMULA MAY HAVE A HEPATOPROTECTIVE EFFECT

OBJECTIVES: This study aimed to explore the immunomodulatory effect of a Chinese herbal formula, KY88 (*Wuweizi, Chaihu, Yinchenhao, Jingqiancao, Fuling, Zicao, Baishao, Huangbai, Huangqin, Tianhuafeng*), on Hepatitis B surface antigen carriers. **METHODS:** Thirty-three asymptomatic Hepatitis B surface antigen carriers took two capsules of KY88 daily for two weeks. Full blood tests and liver function tests were conducted before and after. **RESULTS:** The circulating monocyte count dropped significantly after KY88 from $0.72 \times 10^9/L$ at the baseline to $0.57 \times 10^9/L$ at the end of the two-week treatment. The count stayed at a lower level for 8 weeks after the treatment. White blood cell, neutrophil and lymphocyte, however, did not change significantly after the treatment. **CONCLUSION:** The results indicate that KY88 may reduce self-inflicted host immune response to HBV and has a hepatoprotective effect.

Yip AYS, Loo WTS, Chow LWC. *Fructus Schisandrae (Wuweizi) containing compound in modulating human lymphatic system – a Phase I minimization clinical trial. Biomed Pharmacother. 2007;61(9):588–90.*