J Acupunct Meridian Stud 2015;8(4):213–216

Available online at www.sciencedirect.com

Journal of Acupuncture and Meridian Studies

journal homepage: www.jams-kpi.com

CONFERENCE ABSTRACTS

International Scientific Acupuncture and Meridian Symposium 2015

The following abstracts are in the proceedings of the International Scientific Acupuncture and Meridian Symposium, October 1-4, 2015, University of Otago, Dunedin, New Zealand. These abstracts are some, but not all, of the abstracts for the presentations given at the symposium.

Acupuncture for Pain Management in Evidence-based Medicine

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Abstract
Pain has become an enormous and prevalent problem that troubles people of all ages worldwide. The effectiveness of acupuncture for pain management has been strongly verified by large randomized, controlled trials (RCTs) and meta-analyses. Increasing numbers of patients with pain have accepted acupuncture treatment worldwide. Nevertheless, some challenges still exist in establishing evidence for the efficacy of acupuncture. A more applicable and innovative research methodology that can reflect the effect of acupuncture in the settings of daily clinical practice needs to be developed.
Keywords: acupuncture, evidence-based medicine, pain management, research methodology

Acupuncture Reduces Memory Impairment and Oxidative Stress and Enhances Cholinergic Function in an Animal Model of Alcoholism

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Abstract
Currently, the therapeutic strategy against memory deficit induced by alcoholism is not satisfactory and is expensive. Therefore, an effective, low-cost strategy is required. On the basis of the memory-enhancing effect of stimulation of the HT7 acupoint, we aimed to determine whether acupuncture at the HT7 acupoint can reduce alcoholism-induced memory impairment. The possible underlying mechanism was also explored. Alcoholism was induced in male Wistar rats weighing 180–220 g. The alcoholic rats received either acupuncture at HT7 or sham acupuncture for 1 minute bilaterally once daily for 14 days. Their spatial memory was assessed after 1 day, 7 days, and 14 days of treatment. At the end of the study, the malondialdehyde level and the activities of catalase, superoxide dismutase, glutathione peroxidase, and

pISSN 2005-2901 eISSN 2093-8152
http://dx.doi.org/10.1016/j.jams.2015.07.011

acetylcholinesterase enzymes in the hippocampus were determined using colorimetric assays. The results showed that acupuncture at HT7 significantly decreased the acetylcholinesterase activity and the malondialdehyde level, but increased the activities of catalase, superoxide dismutase, and glutathione peroxidase in the hippocampus. These results suggest that acupuncture at HT7 can effectively reduce the alcoholism-induced memory deficit. However, further studies concerning the detailed relationships between the location of the HT7 acupoint and the changes in the observed parameters are required.
Keywords: AChE, acupuncture, alcoholism, memory impairment, oxidative stress

Efficacies of Acupuncture and Anti-inflammatory Treatment for Carpal Tunnel Syndrome

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Abstract
This study compared the efficacies of acupuncture and anti-inflammatory treatment in patients with carpal tunnel syndrome (CTS). Fifty patients with mild to moderate CTS were randomly divided into two groups. Both groups received night wrist splints as the standard conservative treatment for 1 month. The acupuncture group also received eight sessions of acupuncture therapy (twice a week for 4 weeks). The control group received 400 mg of ibuprofen three times a day for 10 days. The visual analog scale (VAS) score, the score on the Boston Carpal Tunnel Questionnaire for Functional Status and Symptom Severity (BCTQ FUNCT and SYMPT), and the electrodiagnostic findings were evaluated at baseline and 1 month after treatment. At the final follow up, significant improvements were found in both groups ($p < 0.05$). Statistically significant improvements were observed in the VAS score, the score on the global BCTQ FUNCT and SYMPT, and the electrodiagnostic findings, but not in the distal motor latency (DML), in the acupuncture group ($p < 0.05$). Our findings indicate that acupuncture affected the score on the global BCTQ FUNCT and SYMPT, the VAS score, and the electrodiagnostic findings, except the DML, more than ibuprofen did and that acupuncture might be an effective treatment for CTS.
Keywords: acupuncture, anti-inflammatory treatment, carpal tunnel syndrome, ibuprofen

Inhibitory Effects of *Scolopendra* Pharmacopuncture on the Development and Maintenance of Neuropathic Pain in Rats: Possible Involvement of Spinal Glial Cells

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Abstract
Scolopendra extracts were used for pharmacopuncture at the Kidney 1 acupoint to investigate the role of *Scolopendra* pharmacopuncture (SPP) in both the development and maintenance of neuropathic pain induced by L5 spinal nerve ligation in rats and the contribution of spinal glial cells. A single treatment and five once-daily treatments with SPP were given to evaluate its effects on the development and maintenance stages of neuropathic pain, respectively, which was followed by behavioral tests. Immunohistochemistry and Western blotting tests were also carried out. A single treatment of SPP delayed spinal nerve ligation-induced mechanical allodynia and thermal hyperalgesia and induced a profound decrease in the expression of ionized calcium binding adaptor protein in the lumbar spinal cord. Repeated SPP treatments reliably suppressed mechanical allodynia and thermal hyperalgesia at later time points, and these results correlated mainly with decreases in glial fibrillary acidic protein. Intriguingly, ionized calcium binding adaptor protein expression was also reduced after repeated SPP. These results illustrate that neuropathic pain in the development and maintenance stages is alleviated by SPP treatment, which may be ascribed principally to deactivations of microglia and astroglia, respectively. Additionally, microglial inactivation seems to be partially involved in preventing neuropathic pain in the maintenance stage.
Keywords: astrocyte, development, maintenance, microglia, neuropathic pain, Scolopendra pharmacopuncture

Effects of LI-4 and SP-6 Acupuncture on Labor Pain, Cortisol Level and Duration of Labor

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Abstract
Nowadays, acupuncture is widely used to manage pain, and childbirth is a condition requiring appropriate pain management interventions. The efficacy of acupuncture in the management of labor pain has recently been studied, but the results are not satisfactory and conflicts exist. In this study, we investigated the effects of acupuncture on labor pain, serum cortisol level and duration of labor. We conducted a randomized, single-blind, controlled trial that included 63 nulliparous women: 32 in the study group and 31 in the control group. Acupuncture was performed at the SP-6 and the LI-4 points in the study group, and sham acupuncture was performed at the same points in the control group. Pain scores and serum cortisol levels were measured before and after the intervention. Changes in these measures and in the duration of labor were compared between the groups. No significant variations in pain scores or serum cortisol levels were observed between the two control groups. However, the duration of labor was significantly lower (p-value < 0.001) in the group receiving real acupuncture. Our results show that acupuncture is significantly associated with decreased duration of labor, even though it was no better than a placebo for the treatment of labor pain.
Keywords: acupuncture, cortisol, labor pain

Ethanolic Extract of *Marsdenia condurango* Ameliorates Benzo[a]pyrene-induced Lung Cancer of Rats

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Abstract
Objectives: Condurango is widely used in various systems of complementary and alternative medicine against oesophageal and stomach ailments including certain types of cancer. However, until now no systematic study has been conducted to verify its efficacy and dose with proper experimental support. Therefore, we examined if ethanolic extract of Condurango could ameliorate benzo[a]pyrene (BaP)-induced lung cancer in rats *in vivo* to validate its use as a traditional medicine.
Methods: After one month of scheduled BaP feeding (50 mg/kg body-weight), lung cancer developed after four months. BaP-intoxicated rats were then treated with Condurango (0.06 mL) twice daily starting at the end of the four months, for an additional one, two and three months, respectively. Effects of Condurango were evaluated against controls by analyzing lung histology, reactive oxygen species (ROS) and antioxidant biomarkers, DNA-fragmentation, reverse transcriptase- polymerase chain reaction, enzyme linked immunosorbent assay and western blot of several apoptotic signaling markers.
Results: Histological study revealed gradual progress in lung tissue-repair activity in Condurango-fed cancer-bearing rats after three months of drug administration. Condurango has the capacity to generate ROS, which may contribute to a reduction in anti-oxidative activity and to an induction of oxidative stress-mediated cancer-cell death. Condurango activated pro-apoptotic genes (bax, caspase-3, caspase-9, p53, cytochrome-c, apaf-1, ICAD and PARP) and down-regulated anti-apoptotic Bcl-2 expression, both at mRNA and protein levels. Studies on caspase-3 activation and PARP cleavage revealed that Condurango induced apoptosis through a caspase-3-dependent pathway.
Conclusions: Results lend support for beneficial use of Condurango extract in various systems of traditional medicine.
Keywords: apoptosis, caspase-3, complementary and alternative medicine (CAM), Condurango, lung cancer, reactive oxygen species (ROS)

As Acupressure Decreases Pain, Acupuncture May Improve Some Aspects of Quality of Life for Women with Primary Dysmenorrhea: A Systematic Review with Meta-Analysis

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Abstract
Primary dysmenorrhea is the most common gynecological symptom reported by women and constitutes a high health, social, and economic burden. Chemotherapies, along with their side effects, have not yielded satisfactory outcomes. Alternative nonpharmacological interventions, including acupuncture and acupressure, have been advocated, but evidence regarding their beneficial effect is inconclusive. This study sought to obtain evidence on the effectiveness of acupuncture and acupressure interventions. Twelve electronic databases were searched by using menstrual pain intensity and quality of life as primary and secondary outcomes, respectively, with the PEDro guideline for quality appraisal. Data unsuitable for a meta-analysis were reported as descriptive data. The search yielded 38 citations, from which eight studies were systematically reviewed, four of the eight being eligible for meta-analysis. The systematic review showed moderate methodological quality with a mean of 6.1 out of 10 on the PEDro quality scale. Acupressure showed evidence of pain relief while acupuncture improved both the mental and the physical components of quality of life. In conclusion, physiotherapists should consider using acupuncture and acupressure to treat primary dysmenorrhea, but a need exists for higher quality, randomized, blinded, sham-controlled trials with adequate sample sizes to establish clearly the effects of these modalities.
Keywords: acupoints, acupressure, acupuncture, menstrual pain, quality of life