In this issue of the journal, recommended articles are selected from the Journal of Meridian & Acupoint ISSN: 1229-7933) and from Eelim (The Korean Oriental Medicine Scientific Information), which were published in Korean language.


A Study of the Clinical Meanings and the Characteristics of Eight Extra Meridians

In-Chul Sohn

Abstract
Objectives: The purpose of this study was to inquire into the clinical meanings and the characteristics of eight extra meridians by researching the building and the progression of the theory for the eight extra meridians.

Results: As a result of the research on the building and the progression of the theory of the eight extra meridians, we can regard the origin of the eight extra meridians to be based on the lower Danjeon, which is the root of primordial energy, and the origin of the twelve meridians and collaterals to be based on the middle energizer, which is the root of acquired energy. From this, we conclude that the eight extra meridians and the twelve meridians and collaterals are based on the primordial energy and the acquired energy and that the functions of the eight extra meridians and the twelve meridians and collaterals complement each other. Thus, we can say that the twelve meridians and collaterals are clinically valued for acquired energy and that the eight extra meridians are valued for the primordial energy in the health-preserving method.

Keywords: Eight extra meridians, Clinical meaning, Characteristic


Study on the Prohibition of Acupuncture of Hapgok (LI4) and Samumgyo (SP6) During Pregnancy

Soo-Jin Lee

Abstract
Objectives: The aim of this study was to investigate the mechanism and the clinical significance of the prohibition of acupuncture of LI4 and SP6 during the period of pregnancy.

Methods: The prohibition of acupuncture during the period of pregnancy was investigated based on a literature review. Previous studies identified acupuncture treatment of animals and clinical studies during the period of pregnancy and labor in a Chinese Academic Journal (CAJ). These papers were classified and investigated to clarify the rationale for the prohibition of acupuncture during the period of pregnancy.

Results and Conclusions: The contraindicated points during the period of pregnancy are Hapgok (LI4), Samumgyo (SP6), Songmun (CV5), Kwanwon (CV4), Sosang (LU11), Chium (BL67), and Kollyun (BL60). Uterine contraction can be induced by the stimuli of Hapgok (LI4) via the endocrine system and by the stimuli of Samumgyo (SP6) via the nervous system. Both Hapgok (LI4) and Samumgyo (SP6) can be used in various diseases, such as induction of abortion, facilitation of parturition, stabilization of embryos, cross birth, and so on.

Keywords: Pregnancy, Contraindicated acupoint, Hapgok (LI4), Samumgyo (SP6)


Anti-oxidative Effect of Electroacupuncture to Yinlingquan (SP9) in AAPH-induced Oxidative Stress of Rats

Jung-Tae Lee, Young-Il Kim, Yun-Kyoung Yim

Abstract
Objectives: The purpose of this study is to observe the anti-oxidative effects of electroacupuncture to Yinlingquan (SP9) in AAPH-induced oxidative stress of rats.
Methods: The authors measured the body weight, the levels of albumin, total bilirubin, LDL-cholesterol, GOT and GPT in serum, and the levels of SOD, glutathione, catalase, NO, and MDA in the liver. They also performed a histological analysis of liver.

Results: 1. In the SP9-EA group, the level of LDL-cholesterol was significantly decreased in comparison with that of the holder group and control group. 2. In the SP9-EA group, SOD activity, and glutathione concentration in the liver were increased, and NO concentration was decreased significantly in comparison with the control group and the holder group. 3. In the SP9-EA group, the density of liver tissue was more similarly to that in the normal group in comparison with those of the control group and the holder group. 4. The results of the SP9-NR group showed similar tendencies with those of the SP9-EA group, but the effects were lower than those of the SP9-EA group.

Conclusion: These results suggest that electroacupuncture at SP9 has an anti-oxidative effect through suppressing both the reduction of anti-oxidative enzymes and production of oxidized substances.

Keywords: Anti-oxidative effect, Yinlingquan (SP9), Electroacupuncture


Study on the Anti-allergic Effects of Arctii Fructus Herbal Acupuncture

Seok-Chang Jang, Choon-Ho Song

Abstract

Objectives: We studied the anti-allergic effects of Arctii Fructus herbal acupuncture (AFHA) and Arctii Fructus herbal acupuncture solution (AF).

Methods: In vivo, animals were herbal-acupunctured AFHA at both ST36 three times for 5 days. Then, we investigated compound 48/80-induced active systemic anaphylaxis (ASA) by using ICR mice and anti-DNP IgE-induced passive cutaneous anaphylaxis (PCA) by using Sprague Dawley rats. In vitro, we measured the cell viability, b-hexosaminidase, IL-4, and TNF-a release from RBL-2H3 cells after treatment with AF at various concentrations.

Results: In vivo, AFHA pretreatments at both ST36 inhibited compound 48/80-induced ASA. PCA was inhibited by AFHA pretreatments at both ST36. In vitro, AF treatments did not affect cell viability and inhibited b-hexosaminidase, IL-4, and TNF-a release.

Conclusions: These results suggest that AFHA and AF may be beneficial in the inhibition of allergic inflammatory responses.

Keywords: Anti-allergic effect, Arctii Fructus herbal acupuncture


Anti-apoptotic and Neuroprotective Effects of Acupuncture Techniques of Tonification or Sedation at HT9 LR1, HT3 KI10 on Focal Brain Ischemic Injury Induced by Intraluminal Filament Insertion in Rats

Jeong-Yun Byun, Dae-Hwan Youn, Chang-Su Na

Abstract

Objectives: Acupoints of LR1 (Dadun)•HT9 (Shaochong) and KI10 (Yingu)•HT3 (Shaohai) are used to control diseases from heart problems. Especially, when they are used, tonification or sedation techniques are used to control the medication for early stroke in Korean medicine. Thus, the aim of this study is to investigate the anti-apoptotic and neuroprotective effects of the acupuncture techniques of tonification or sedation at LR1•HT9, and KI10•HT3 on focal ischemia induced by intraluminal filament insertion in rats.

Materials and Methods: Focal ischemia was induced by intraluminal filament insertion into the middle cerebral artery. The animals were divided into five groups (n = 7 in each group): The control group, no therapy group after induced ischemia; the AT-1 group; acupuncture therapy at LR1•HT9 and KI10•HT3 after induced ischemia; the AT-2 group, acupuncture therapy at the right LR1, HT9 (forward direction), and KI10•HT3 (opposite direction) inserting in the direction of route of the each meridian; the AT-3 group; acupuncture therapy at the right LR1, HT9 (twirling forward with the thumb of right hand 9 times) and KI10•HT3 (twirling forward with the forefinger of the right hand 6 times); the AT-4 group; acupuncture therapy at the right LR1, HT9 (twirling forward with the thumb of right hand 9 times) and KI10•HT3 (twirling forward with the forefinger of the right hand 6 times) inserting along the direction of the route of each meridian. The anti-apoptotic and neuroprotective effects of acupuncture techniques of tonification or sedation at LR1•HT9 and KI10•HT3 were observed by Bax, Bcl-2, mGluR5, Cytochrome c, Cresyl violet, and ChAT-stain.

Results: The intensity of Bax and the Bax/Bcl-2 ratio were increased in the ACU-2 and the ACU-4 groups but were decreased in the ACU-3 group. The intensity of mGluR5 was increased in the ACU-1, ACU-2, ACU-3, and ACU-4 groups.
The intensity of cytochrome c was decreased in the ACU-3 and ACU-4 groups. The densities of neurons stained by Cresyl violet and ChAT were increased in the ACU-1, ACU-3 and ACU-4 groups.

**Conclusions:** Our study suggests that acupuncture therapy of tonification at LR1 and HT9 by twirling forward with the thumb of the right hand 9 times and sedation at KI10-HT3 by twirling forward with the forefinger of the right hand 6 times after perpendicularly inserting the needle shows anti-apoptotic and neuroprotective effects on cholinergic neuron in focal cerebral ischemia due to stroke in rats.

**Keywords:** Ischemia, Acupuncture techniques, LR1 (Dadun), HT9 (Shaochong), KI10 (Yingu), HT3 (Shaohai)

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**Current Concept for the Anti-inflammatory Mechanism of Acupuncture Based on the Latest Studies**

Jong-Hyun Jo, Seong-Hun Ahn, In-Chul Sohn

**Abstract**

**Objectives:** Acupuncture has been in the classic arsenal of Oriental medicine for inflammatory diseases. Its physiologically mechanism is not fully understood, but is becoming better understood everyday. We reviewed several papers to describe current concepts for the anti-inflammatory mechanisms of acupuncture.

**Methods:** Some computerized literature searches were done using the key words of ‘acupuncture’ and ‘Anti-inflammatory’ in Medline via PubMed between March 2007 and December 2007. Only rationally-designed studies were picked from among associated materials. A well-known hypothesis on acupunctural physiology was adapted for integration.

**Result:** Eighteen studies were selected; 17 studies were laboratory experiment, and 1 was a clinical study. Data were classified into some comprehensive categories. The authors’ opinion was added at the end of each category. Study results supported the hypotheses on acupunctural physiology; acupuncture has some influences on the autonomic nerve system (ANS), it stimulates several receptors from target cells like macrophages, and finally, it inhibits cytokines like TNF-α, IL-1β, and IL-10, which mediate inflammation. Acupuncture increases the release of opioids, thereby relieving inflammation. Also, acupuncture inhibits cyclooxygenase (COX), but its mechanism is still controversial.

**Conclusion:** Current concepts for the anti-inflammatory mechanisms of acupuncture are as follows: Acupuncture suppresses inflammation by stimulation of ANS, increasing the release of opioids by inhibition of COX. However, more studies are needed to fully describe the anti-inflammatory effect of acupuncture.

**Keywords:** Acupuncture, Anti-inflammatory mechanism

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**Effects of Moxi-tar Herbal Acupuncture at Cheonchu (ST25) on Crohn’s Disease Induced by TNBS in Mice**

Yong-Tae Kim, Seong-Hun Ahn, Jae-Hyo Kim, In-Chul Sohn

**Abstract**

**Objectives:** Crohn’s disease is a severe chronic inflammation that is treated mainly by immunosuppression, which often has serious side effects. There is a need to develop new therapeutic methods or drugs that have few side effects in order to treat this disease. Acupuncture with Moxi-tar at Cheonchu (ST25) has anti-inflammatory properties, but the mechanism of its anti-inflammatory action is unclear. We investigated the protective effects and speculated on the mechanisms of acupuncture with Moxi-tar at ST25 for trinitrobenzene-sulfonic-acid (TNBS)-induced colitis in mice, which is a well-known Crohn’s disease animal model.

**Methods:** TNBS, 5%, was administered at day 1 and day 7 into the rectum of mice. To investigate the therapeutic effects of acupuncture with Moxi-tar at ST25, we performed acupuncture on day 3 and day 6. For the data analysis, we observed macroscopic and microscopic findings of the colon. The weight and the width of the colon, the degree of damage, changes in body weight, and myeloperoxidase (MPO) activity were checked. For analyzing protein expression, we carried out immunohistochemical staining and Western blots. For analyzing mRNA expression, real time PCR was used.

**Results:** TNBS-induced damages of the colon of mice while acupuncture of Moxi-tar at ST25 suppressed TNBS-mediated damages and the colons were similar to those of mice in the control (not treated with TNBS) group. The average body weight of TNBS treated mice (77.4%) was decreased compared with that of the control mice (105%), and acupuncture with Moxi-tar at ST25 suppressed the loss of body weight caused by TNBS (from 77.4% to 95.3%). TNBS-induced infiltration of immune cells in all layers of the colon while acupuncture with Moxi-tar at ST25 suppressed infiltration of immune cells caused by TNBS. Furthermore, acupuncture with Moxi-tar at ST25 suppressed macro-, micro-, and colonic-damage caused by TNBS. Acupuncture with Moxi-tar at ST25 dramatically improved the clinical and the
histopathological symptoms, such as an increase in the weight of the distal colon and the MPO activity in TNBS-induced colitis. Acupuncture with Moxi-tar at ST25 down-regulated the nuclear transcription factor kappa B (NF-κB) activity and suppressed tumor necrosis factor-a (TNF-α), interleukin-1β (IL-1β), and intracellular adhesion molecule-1 (ICAM-1) expressions caused by TNBS.

**Conclusions:** Acupuncture with Moxi-tar at ST25 helps recovery from TNBS-induced colonic damage by down-regulation of NF-κB activity and by suppressing TNF-α, IL-1β, and ICAM-1 expressions. This may be an important method for treating Crohn’s disease.

**Keywords:** Moxi-tar herbal acupuncture, Acupoint ST25, Crohn’s disease, TNBS

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**A Study of Antinociception of Electroacupuncture to SI6 on Rats with the Acute Ankle Sprains**

Bum-Sik Yang, Jae-Hyo Kim, Jae-Hun Jang, Sung-Hun Ahn, Kyoung-Sik Kim, In-Chul Sohn

**Abstract**

**Objectives:** The purpose of the present study is to determine the effective analgesic parameters of manual acupuncture (MA) and/or electroacupuncture (EA), thus determining how the MA & the EA of specific acupoints work after acute ankle sprain in rats. Thus, one series of experiments was designed to analyze the analgesic effects of acupuncture in both normal or sprained rat by comparing the behavioral features before and after MA or EA at several acupoints.

**Methods:** Ankle sprain was induced manually by hyper-extension of the ligaments in the right ankle in a rat. Either MA or EA was applied to the LI4, TE17, ST36, and SI-6 acupoints at an intensity of 2 mA (1-ms pulse duration) at a frequency of 10 Hz for 30 minutes.

**Results:** Behaviorally, manual acupuncture or electroacupuncture produced potent analgesic effects on the animals with acute ankle sprains, as measured by the weight-bearing capacity of the affected limb. Furthermore, the antinociceptive effect of EA was suppressed by the alpha adrenoceptor antagonist phentolamine (5 mg/kg, i.p.), but not by the opioid antagonist naltrexone (10 mg/kg, i.p.).

**Conclusions:** Acupuncture-induced antinociception may involve the descending inhibition of the α2-adrenoceptor.

**Keywords:** SI6, Acute ankle sprain, Electroacupuncture

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**A Case Report of an ADHD Child Treated with Oriental Medicine**

Ki-Won Byeon, In-Chul Sohn

**Abstract**

**Objective:** This study was performed to evaluate oriental medical treatment for ADHD in childhood.

**Methods:** We analyzed the DSM-4 and the ADS scores before and after treatments, such as acupuncture, decoction of medical ingredients, correction treatment and oriental kinesitherapy, of ADHD in 12 elementary school students who visited Byon oriental medical clinic (Dogok-dong Seoul) from March to October, 2007. All patients were treated twice a week for 3 months.

**Results:** In this study, oriental medical treatments, such as acupuncture, decoction of medical ingredients, correction treatment, and oriental kinesitherapy, to balance the left and the right brains, which is based on oriental medicine theory, were not only effective for treating attention deficit and hyperactivity, which is the major problem of children with ADHD, but also effective for resistance, sociality, homology, and communication. We conclude that oriental medical treatments that treat the imbalance disorder of the brain are effective for treating ADHD.

**Keywords:** ADHD, Case report, Oriental medicine, Acupuncture