In this issue of the journal, recommended articles are selected from the *Korean Journal of Acupuncture* (ISSN: 1229-7933) and from the *Journal of Pharmacopuncture* (ISSN: 1226-4849), which were published in the Korean language.


**Moxibustion for Knee Osteoarthritis: A Protocol for a Pilot Randomized Controlled Trial**

Seung-Hoon Lee, Kun-Hyung Kim, Tae-Hun Kim, Jung-Eun Kim, Joo-Hee Kim, Kyung-Won Kang, So-Young Jung, Ae-Ran Kim, Hyo-Ju Park, Mi-Suk Shin, Kwon-Eui Hong, Sun-Mi Choi

**Abstract**

**Objectives:** The purpose of this study was to evaluate the feasibility of massive clinical research and to make a basic analysis on the effectiveness and the safety of moxibustion treatment for knee osteoarthritis compared to usual care.

**Methods and Results:** This study was a protocol for a pilot randomized controlled trial. Forty participants were assigned to the moxibustion group (n=20) and the usual care group (n=20). Participants assigned to the moxibustion group received moxibustion treatment on the affected knee(s) at six standard acupuncture points (ST36, ST35, ST34, SP9, Ex-LE04 and SP10) three times per week for four weeks (total of 12 sessions). Participants in the usual care group did not receive moxibustion treatment during the study period and follow-ups were made during the 5th, 9th and 13th weeks after random allocation. Both groups were allowed to use any kind of treatment, including surgery, conventional medication, physical treatment, acupuncture, herbal medicine, over-the-counter drugs and other active treatments. Education material that explained knee osteoarthritis and current management options and self-exercise was provided for each group. The pain scale of the Korean Western Ontario and McMaster Universities Questionnaire (K-WOMAC) was the primary outcome measurement used in this study. Other subscales of the K-WOMAC, the Short-Form 36 Health Survey (SF-36), Beck Depression Inventory (BDI), Physical Function Test, Patient Global Assessment, and Pain Numeric Rating Scale (NRS) were used as outcome variables to evaluate the effectiveness of acupuncture. Safety was assessed at every visit.

**Conclusions:** The result of this trial will provide a basis for establishing the effectiveness and the safety of acupuncture treatment for knee osteoarthritis.

**Key Words:** moxibustion; osteoarthritis; pilot trial
doi:10.1016/j.jams.2012.01.007


**Historical Study of Burns Caused by Moxibustion Using Commercial Indirect Moxibustion**


**Abstract**

**Objectives:** Burn is an important adverse effect of moxibustion treatment. This research gathered basic data based on histological observation of the burn tissue generated when various commercial indirect moxa (CIM) were used on the skin. These data could be used to evaluate the burn for surgery.

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Methods: Six kinds of CIM were used on the depilated abdomens of rats. Images were observed and analyzed by using Hematoxylin & Eosin (H&E) staining and TUNEL assays.

Results: Moxibustion medical treatment using CIM could generate first to third degree burns. In some cases, no burns were generated. We used H&E staining to observe second-degree and third-degree burns and TUNEL assays to observe first-degree burns. In first-degree burns, the TUNEL reaction in the epidermal layer was confirmed. The damage to the dermal layer was observed in more than second-degree burn. In third-degree burns, tissue degeneration to the subcutaneous fat was observed, but the thickness of the skin tissue was not observed.

Conclusions: Basic data classifying the burns generated by CIM treatment through histological observation of the burn tissue caused by the CIM treatment were obtained in this research.

Key words: commercial indirect moxa; burn; thermal injury; histology; skin

doi:10.1016/j.jams.2012.01.008


Review of Stimulating Technologies of Acupuncture Points in Patients
Sang-Rok Seo, Seung-Bum Yang, Jae-Hyo Kim, Seong-Hun Ahn, In-Chul Sohn

Abstract
Objectives: This study estimated the antioxidant effects of the moxi with ginger tar (MGT), i.e., the chemical combustion products produced by moxibustion with ginger during combustion.

Methods: We investigated the total polyphenol and flavonoid contents, the SOD (superoxide dismutase) scavenging activity, and the ABTS (2,2-azino-bis-3-ethylbenzo-thiazoline-6-sulfonic acid) & DPPH (2,2-dipheny1-1-picryl-hydrazyl) radical’s scavenging ability of MGT.

Results: The total polyphenol content of MGT was 7.8 ± 0.09 mg/g in 10 mg/ml, the SOD activity was 42.51 ± 3.39% in 200 ug/ml, the DPPH radical scavenging effect of MGT was 83.24 ± 0.01% in 200 ug/ml and the ABTS radical scavenging effect was 41.88 ± 0.16% in 200 ug/ml.

Conclusions: In this study, the effects of moxi with ginger could be induced by not only heating stimuli on acupoints but also chemical stimuli produced during combustion of moxibustion. An advanced study of the biological mechanism of moxibustion with MGT based on the meridian and considering skin aging and inflammation will be required.

Key Words: moxi with ginger slice; MGT; antioxidant effects

doi:10.1016/j.jams.2012.01.009


Effects of Glycyrrhizae Radix Pharmacopuncture Intravenous Injection on Ischemia-induced Acute Renal Failure in Rabbits
Hyeong Cheol Kim, Gyoung Ho Kim, Guem San Lee, Hyung Woo Kim, Se Hyun Lim, Chi Yeon Lim, Young Gyun Kim, Su In Cho

Abstract
Objectives: The present study was undertaken to determine whether Glycyrrhizae Radix pharmacopuncture intravenous injection exerts a beneficial effect against ischemia-induced acute renal failure in rabbits.

Methods: Rabbits were treated with Glycyrrhizae Radix pharmacopuncture via i.v., followed by renal ischemia/reperfusion. The fractional excretions of glucose and phosphate were measured; the malondialdehyde content was also determined. The morphological changes of the cortical part of the kidney were observed with a light microscope.

Results: Renal ischemia/reperfusion caused increased fractional excretions of glucose and phosphate in ischemia-induced animals, which was prevented by Radix Glycyrrhizae extract treatment. Ischemia/reperfusion increased lipid peroxidation, which was prevented by Radix Glycyrrhizae pharmacopuncture administration. Morphological changes were also altered.

Conclusions: These results indicate that lipid peroxidation plays a critical role in ischemia-induced acute renal failure and that Glycyrrhizae Radix pharmacopuncture exerts a protective effect against acute renal failure induced by renal ischemia/reperfusion.

Key Words: Glycyrrhizae Radix; pharmacopuncture; ischemia; renal failure

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