

### 13. Diseases of the Musculo Skeletal System and Connective Tissue

#### Reference

Yang JH, Han SC, Oh RS, et al. A clinical study of the effects of KamiWooseul-tang on low back pain and kidney function. *Daehan-Hanui-Hakhoeji (Journal of Korean Oriental Medical Society)* 2000; 21(4): 216–26 (in Korean with English abstract).

#### 1. Objectives

To evaluate the nephrotoxicity of Kami Wooseul-tang (加味牛膝湯) and its efficacy for low back pain.

#### 2. Design

Randomized controlled trial (RCT).

#### 3. Setting

One Oriental hospital (Oriental Medical Hospital at Jeonju, Wonkwang University), Republic of Korea.

#### 4. Participants

Patients with low back pain (n=64).

#### 5. Intervention

Arm 1: KamiWooseul-tang (加味牛膝湯) treatment (n=32).

Arm 2: OhJeokSan (五積散) treatment (n=16).

Arm 3: Dokhwalkisaeng-tang (獨活寄生湯) treatment (n=16).

Three times a day for 3 weeks.

1) Bedside rest

2) Acupuncture treatment at the Yaoyangguan (GV3, 腰陽關), Dachangshu (BL25, 大腸俞), Guanyuanshu (BL26, 關元俞), Huantiao (GB30, 環跳), Shenshu (BL23, 腎俞), Zhishi (BL52, 志室), Weizhong (BL40, 委中), Kunlun (BL60, 崑崙), and Taixi (KI3, 太溪) acupuncture points. According to the symptoms, acupuncture points were added or subtracted, and other pain therapies (cupping therapy and venipuncture) were used simultaneously.

3) Physiotherapy: Interferential Current Stimulation therapy, ultrasound therapy, pelvic traction.

4) Injection of Western drugs: Restricted in most cases, but in others, nonsteroidal anti-inflammatory drugs were injected intramuscularly.

#### 6. Main outcome measures

Low back pain self-assessed on a visual analog scale (VAS) and renal function (blood urea nitrogen [BUN], creatinine (Cr), urine test, blood electrolyte concentration).

#### 7. Main results

Treatment in Arm 1 significantly reduced low back pain compared to Arm 2+Arm 3 during the entire course (1 week, 7.25±1.05 vs. 8.36±1.62; 2 weeks, 5.21±1.52 vs. 7.15±2.56; 3 weeks, 4.10±1.77 vs. 6.50±3.44;  $P<0.05$ ).

#### 8. Conclusions

KamiWooseul-tang is more effective than the conventional treatment methods, OhJeokSan and Dokhwalkisaeng-tang. Moreover, it is not nephrotoxic even after long term use.

#### 9. Safety assessment in the article

No adverse events occurred. The BUN was within normal range (8–20 mg/dl) on hospitalization (14.7±4.0), after 1 week of treatment (13.6±3.9), 2 weeks of treatment (13.5±3.0), and 3 weeks of treatment (13.3±3.7) ( $P<0.05$ ). The creatinine was within normal range (0.7–1.4 mg/dl) on hospitalization (0.76±0.19), after 1 week of treatment (0.77±0.19), 2 weeks of treatment (0.82±0.21), and 3 weeks of treatment (0.87±0.21) ( $P<0.05$ ).

There was no abnormal change in microscopic and chemical urine analysis during 3 weeks.

#### 10. Abstractor's comments

The conclusion of this study was that KamiWooseul-tang was more effective than conventional treatment methods for low back pain. However, because of its design, the study could not confirm the efficacy of OhJeokSan and Dokhwalkisaeng-tang. Moreover, the causes of low back pain in the subject group were heterogeneous (herniation of intervertebral disk, acute or chronic lumbar sprain, and spinal stenosis), and clinical applicability was unclear because each patient was also receiving additional treatment (i.e., acupuncture or Western medicine).

#### 11. Abstractor and date

Kim JI, 5 July 2010.