#### **Evidence Reports of Kampo Treatment**

Task Force for Evidence Reports / Clinical Practice Guideline Committee for EBM, the Japan Society for Oriental Medicine

#### 8. Ear Diseases

#### Reference

Onishi S. Kampo treatment for tinnitus and hearing impairment\*. JOHNS 1990; 6: 535-9 (in Japanese).

# 1. Objectives

To evaluate the efficacy and safety of goshajinkigan (牛車腎気丸) for tinnitus.

# 2. Design

Quasi-randomized controlled trial (quasi-RCT).

## 3. Setting

Otolaryngology Department, Kanto Teishin Hospital, Japan.

## 4. Participants

Thirty-nine patients who presented with tinnitus as their chief complaint (22 males and 17 females, age ranging from the 20s to 80s).

#### 5. Intervention

Arm 1: goshajinkigan group. TSUMURA Goshajinkigan (牛車腎気丸) Extract Granules (7.5 g/day) for 8 weeks (n=22).

Eight participants from arm 2 were included in arm 1 for a total of 30 after experiencing no effect from treatment in arm 2.

Arm 2: chotosan group. TSUMURA Chotosan (釣藤散) Extract Granules (7.5 g/day) for 8 weeks (n=24). Six participants from arm 1 were included in arm 2 for a total of 30 after experiencing no effect from treatment in arm 1.

Participants were allocated to arm 1 or arm 2 in the order of presentation, regardless of their Kampo pattern.

#### 6. Main outcome measures

Tinnitus severity, duration, and how it becomes concerning classified into five grades: remarkable improvement, improvement, slight improvement, no change, and deterioration.

#### 7. Main results

Although there was no significant difference between groups, effectiveness of goshajinkigan for tinnitus tended to be greater (50% with grade 'improvement' or better) than that of chotosan (30% with grade 'improvement' or better). Three out of seven participants with tinnitus following sudden hearing loss in arm 1 and one of the five such participants in arm 2 scored 'improvement' or better. In both groups, most patients experienced an effect within two months of the start of treatment.

### 8. Conclusions

Goshajinkigan may be effective for tinnitus. Its efficacy is at least equivalent to chotosan.

# 9. From Kampo medicine perspective

While the Kampo medications were administered regardless of the patient's Kampo pattern, tinnitus is a major symptom within the goshajinkigan-pattern (by stratified analysis), and no relation between effectiveness and the existence of lower limb pain, numbness, and swelling could be identified.

## 10. Safety assessment in the article

Diarrhea was observed in one participant in each group, however it was not severe enough to discontinue administration.

# 11. Abstractor's comments

This is a clinically significant study in that it compared and analyzed the clinical effects of goshajinkigan for tinnitus to those of chotosan in a controlled clinical trial. Its clinical significance would be improved by analyzing effectiveness in patients administered goshajinkigan and chotosan in a crossover manner with a required washout period after demonstrating ineffectiveness in each group. Further research is anticipated.

# 12. Abstractor and date

Kogure T, 31 December 2013.