

**6. Nervous System Diseases (including Alzheimer's Disease)****Reference**

Murase K, Toyama Y, Harada Y, et al. Evaluation and comparison of the effect of two Chinese herbal medicines (Bofu-tsusho-san and Dai-saiko-to) on metabolic disorders in obstructive sleep apnea patients. *American Journal of Respiratory and Critical Care Medicine* 2013; 187: A5694. CENTRAL ID: CN-00870751

**1. Objectives**

To evaluate the lipid lowering and antihypertensive effects of bofutsushosan (防風通聖散) and daisaikoto (大柴胡湯) for patients with obstructive sleep apnea as a complication of obesity and hypertension.

**2. Design**

Randomized controlled trial (RCT).

**3. Setting**

Not mentioned (the corresponding author belongs to the Faculty of Medicine, Kyoto University, Japan).

**4. Participants**

One hundred and twenty-eight obstructive sleep apnea patients with hypertension and obesity remaining after at least six-month CPAP treatment.

**5. Intervention**

Arm 1: Bofutsushosan (防風通聖散) (manufacturer unknown) for six months (n=65).

Arm 2: Daisaikoto (大柴胡湯) (manufacturer unknown) for six months (n=63).

**6. Main outcome measures**

Body mass index (BMI), blood pressure.

**7. Main results**

The patients who completed the study were 44 in arm 1 and 41 in arm 2. BMI decreased significantly in arm 1 from  $34.6 \pm 6.3$  kg/m<sup>2</sup> before treatment to  $33.7 \pm 6.6$  kg/m<sup>2</sup> after six months of treatment, while in arm 2 the scores were  $34.9 \pm 7.9$  kg/m<sup>2</sup> before administration and  $34.9 \pm 8.1$  kg/m<sup>2</sup> after six months. Although in statistical terms no antihypertensive effect with a significant difference between groups was found, a decrease in morning systolic blood pressure was observed in home blood pressure measurements in arm 1 (from  $143.3 \pm 13.4$  mmHg to  $138.7 \pm 13.9$  mmHg,  $P=0.03$ ) and a decrease in diastolic blood pressure was observed in arm 2 (from  $84.3 \pm 10.4$  mmHg to  $80.2 \pm 11.1$  mmHg,  $P<0.01$ ). A decrease in sleep onset latency was observed.

**8. Conclusions**

The results suggest bofutsushosan (防風通聖散) and daisaikoto (大柴胡湯) have lipid lowering and antihypertensive effects for patients with obstructive sleep apnea as a complication of obesity and hypertension.

**9. From Kampo medicine perspective**

None.

**10. Safety assessment in the article**

Not mentioned.

**11. Abstractor's comments**

Having evaluated the lipid-lowering and antihypertensive effects of bofutsushosan and daisaikoto for patients with obstructive sleep apnea as a complication of obesity and hypertension, the authors' interim report suggests that bofutsushosan has a BMI-lowering action. While no significant antihypertensive effect was observed between the two groups, blood pressure measurements taken in the morning with a home sphygmomanometer suggest a decrease in systolic blood pressure in the bofutsushosan group, and a decrease in diastolic blood pressure in the daisaikoto group. As this paper is an interim report, completion of the trial must be awaited for the final results.

**12. Abstractor and date**

Okabe T, 6 June 2015.