

21. Others

Reference

Isobe H, Yamamoto K, Cyong JC. Effects of hachimi-jio-gan (ba-wei-di-huang-wan) on blood flow in the human central retinal artery. *The American Journal of Chinese Medicine* 2003; 31: 425-35. CENTRAL ID: CN-00457563, Pubmed ID: 12943173

1. Objectives

To evaluate the effect of hachimijiogan (八味地黄丸) on human central retinal artery.

2. Design

Randomized cross-over controlled trial (RCT-cross over).

3. Setting

Single facility (the University of Tokyo), Japan.

4. Participants

Twelve healthy volunteers (6 males and 6 females; mean age, 26.0 years).

5. Intervention

Since allocation of patients to these treatment arms is not mentioned, the treatment arms are described in terms of treatment regimen.

Arm 1: single-dose administration of 27 g of Uchida no Hachimigan M (八味地黄丸) (n=12).

Arm 2: single-dose administration of 27 g of placebo (lactose) (n=12).

6. Main outcome measures

Systolic blood flow velocity, diastolic blood flow velocity, mean blood flow velocity, and vascular resistance of the central retinal artery, measured by ultrasonic diagnosis device before administration and every 15 min after administration for 60 min.

7. Main results

In arm 2, there were no changes from baseline in systolic blood flow velocity, diastolic blood flow velocity, mean blood flow velocity or vascular resistance of the central retinal artery. In arm 1, although vascular resistance did not change, there were increases in systolic velocity at 15 and 45 min, diastolic velocity at 45 min, and mean velocity at 30, 45, and 60 min. Group comparison revealed significantly higher systolic blood flow velocity at all postdose time points until 60 min, higher diastolic blood flow velocity at 45 min, and significantly higher mean blood flow velocity in the time period from 30 to 60 min in arm 1.

8. Conclusions

This study provides evidence that hachimijiogan increases the blood flow velocity of the central retinal artery.

9. From Kampo medicine perspective

When compared with hachimijiogan-non-responders (with unsuitable *sho*, n=9), hachimijiogan-responders (with suitable *sho*, n=3) had higher systolic, diastolic, and mean flow rates in the time period from 15 to 60 min (statistical analysis not performed due to the small sample size).

10. Safety assessment in the article

None.

11. Abstractor's comments

It was reported some time ago that hachimijiogan acts on the central nervous system to improve hypobulia in the elderly, and to improve eye symptoms. The present report showed an increase in blood flow rate of the central retinal artery, providing evidence for efficacy in improving visual acuity. Moreover, it was shown that intracerebral blood flow may also increase, suggesting effects on the central nervous system. Also, this report provides a valuable discussion from a Kampo medicine perspective of increased blood flow velocity in responders. However, a larger sample size will be necessary in the future. Another problem is that the systemic blood pressure was not indicated, making it impossible to determine whether the increase in blood flow velocity is attributable to a systemic or local reaction. Furthermore, since this RCT did not evaluate clinical efficacy and used single-dose administration, it is hoped that clinical research examining the persistent effects of long-term oral administration will be conducted.

12. Abstractor and date

Namiki T, 15 June 2007, 1 April 2008, 1 June 2010, 31 December 2013.