

9. Cardiovascular Diseases

Reference

Tamano M, Toyoda S, Kato S, et al. Clinical investigation of the combined effect of goreisan and tolvaptan in tolvaptan-responder elderly patients with heart failure. *Progress in Medicine* 2018; 38: 751-6 (in Japanese). Ichushi Web ID: 2018339804

1. Objectives

To investigate combined effect of goreisan (五苓散) in elderly tolvaptan-responder patients with heart failure.

2. Design

Randomized controlled trial (RCT).

3. Setting

Not mentioned (the author belongs to the University of Tsukuba Hospital and Kyowa Chuo Hospital, Oriental Medical Center), Japan.

4. Participants

Twenty patients admitted with acute exacerbation of chronic heart failure who were assessed as tolvaptan-responders, after receiving intravenous furosemide at an average dose of 40–80 mg/day for 2 days without improvement in symptoms or physical findings, followed by addition of tolvaptan 7.5 mg/day from Day 3, resulting in an increased urine output compared with the previous day.

5. Intervention

Arm 1: TSUMURA Goreisan (五苓散) Extract Granules 5–7.5 g/day for 1 year (n=10).

Arm 2: Control (without goreisan) (n=10).

6. Main outcome measures

Changes in the frequency of re-hospitalization due to exacerbation of heart failure within 1 year after discharge, the New York Heart Association (NYHA) class one year after discharge, B-type natriuretic peptide (BNP), and renal function (estimated glomerular filtration rate [eGFR]) were compared.

7. Main results

The measures that significantly decreased or improved in Arm 1 compared with Arm 2 included frequency of re-hospitalization due to exacerbation of heart failure within 1 year after discharge (mean \pm standard deviation) (0.7 ± 0.5 times vs 1.6 ± 0.6 times, respectively, $P < 0.05$), BNP at 1 year after discharge (186 ± 156 pg/mL vs 332 ± 321 pg/mL, respectively, $P < 0.05$), and change in BNP at 1 year (853 ± 371 pg/mL vs 540 ± 422 pg/mL, $P < 0.05$). The NYHA class at 1 year was 1.3 ± 0.4 in Arm 1 and 2.2 ± 0.7 in Arm 2, showing significant improvement in Arm 1 compared with Arm 2 ($P < 0.05$).

8. Conclusions

In tolvaptan-responder elderly patients with heart failure, add-on goreisan may prevent further exacerbation of heart failure.

9. From Kampo medicine perspective

The pathological condition of heart failure can be regarded as “*Suidoku* (水毒) (water intoxication [fluid congestion])”, for which goreisan is considered to be indicated.

10. Safety assessment in the article

Not stated.

11. Abstractor's comments

This is a valuable clinical study that followed elderly patients with heart failure for one year. Moreover, this study is unprecedented in that it looked at the effectiveness of goreisan in tolvaptan-responder elderly patients with heart failure, attempting to reveal unknown benefits of Kampo medicine. The article states that no cardiac deaths occurred in either group during the follow-up period, but does not mention anything about dropouts. Given that the study followed elderly patients with severe heart failure for one year, there could be deaths other than cardiac deaths. Deaths of patients with severe heart failure could affect the analysis results in this study with a small sample size. In addition, since this was an open-label study, use of “frequency of re-hospitalization” as an endpoint required establishing the criteria for hospitalization. It is also important to state other details as to whether or not other drugs were additionally used. Despite some limitations, this clinical study is valuable in that it suggested possible efficacy of goreisan in elderly patients with heart failure, and further results on this topic from more patients by the authors are awaited.

12. Abstractor and date

Goto H, 2 September 2019.