

2. Cancer (Condition after Cancer Surgery and Unspecified Adverse Drug Reactions of Anti-cancer Drugs)**Reference**

Ohno T, Yanai M, Ando H, et al. Rikkunshito, a traditional Japanese medicine, suppresses cisplatin-induced anorexia in humans. *Clinical and Experimental Gastroenterology* 2011; 4: 291–6.
Pubmed ID: 22235173

1. Objectives

To verify the effects of rikkunshito (六君子湯) on cisplatin-induced anorexia in gastric cancer patients.

2. Design

Crossover randomized controlled trial (RCT-crossover).

3. Setting

Gunma University Hospital, Japan.

4. Participants

Ten unresectable or relapsed gastric cancer patients.

5. Intervention

Arm 1: TSUMURA Rikkunshito (六君子湯) Extract Granules 2.5 g t.i.d. for three weeks (same period as S-1), two-weeks withdrawal, then the next course¹⁾ without rikkunshito (n=5).

Arm 2: first course without rikkunshito; then after five weeks, the next course with TSUMURA Rikkunshito (六君子湯) Extract Granules 2.5 g t.i.d. for three weeks, the same period as S-1 (n=5).

¹⁾ One course consists of three-weeks of S-1 and two weeks withdrawal, making a total of five weeks, with a cisplatin IV infusion on the eighth day.

6. Main outcome measures

Plasma acyl-ghrelin before and three hours after administration of cisplatin; amount of oral food intake at each meal during hospitalization for five days after cisplatin (scored on a 10-point scale by a nurse); grade of anorexia (using CTC-AE ver. 3.0), nausea, and vomiting; and time to treatment failure (defined as time from administration of cisplatin to vomiting, or time to antiemetic usage).

7. Main results

Plasma acyl-ghrelin level before administration of cisplatin remained unchanged after administration in the rikkunshito-on period, but tended to decrease after administration of cisplatin in the rikkunshito-off period. The mean amount of oral food intake score was significantly higher during the rikkunshito-on period than the -off period ($P=0.0496$). The grade of anorexia was significantly lower during the rikkunshito-on period than the -off period ($P=0.0441$). The grade of nausea tended to be lower during the rikkunshito-on period, but the grade of vomiting was unchanged. There was no significant difference in the number of cases considered to be treatment failures between the rikkunshito-on period (n=5) and -off period (n=9).

8. Conclusions

Rikkunshito reduces cisplatin-induced anorexia in gastric cancer patients.

9. From Kampo medicine perspective

Not mentioned.

10. Safety assessment in the article

Particular attention was paid to the possible occurrence of pseudoaldosteronism, however, no adverse event occurred in either arm.

11. Abstractor's comments

This is a valuable study and the first to clinically demonstrate by RCT that rikkunshito reduces cisplatin-induced anorexia in gastric cancer patients. The findings agree with the results of animal experiments (Takeda H, Sadakane C, Hattori T, et al. Rikkunshito, an herbal medicine, suppresses cisplatin-induced anorexia in rats via 5-HT₂ receptor antagonism. *Gastroenterology* 2008; 134: 2004–13.). However, the study found that rikkunshito had no significant effect on plasma acyl-ghrelin level, and on preventing or reducing nausea or vomiting. Hopefully the authors will conduct a large-scale RCT in Japan based on these results, as the authors mention in the discussion.

12. Abstractor and date

Motoo Y, 31 December 2013.