

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

Seike J. Efficacy of rikkunshito for anorexia and nausea/vomiting caused by cancer chemotherapy*. *Kampo Igaku (Science of Kampo Medicine)* 2010; 34: 12–3 (in Japanese).

Seike J, Sawada T, Kawakita N, et al. A new candidate supporting drug, rikkunshito, for the QOL in advanced esophageal cancer patients with chemotherapy using docetaxel/ 5-FU/ CDDP. *International Journal of Surgical Oncology* 2011; 2011: 1-7. DOI: 10.1155/2011/715623.

1. Objectives

To evaluate the efficacy of rikkunshito (六君子湯) for anorexia and nausea/vomiting occurring after cancer chemotherapy for advanced esophageal cancer.

2. Design

Randomized controlled trial (RCT).

3. Setting

Department of Thoracic, Endocrine Surgery and Oncology, Tokushima University Hospital, Japan.

4. Participants

Nineteen patients to receive DFP (docetaxel+5-FU+cisplatin) therapy for advanced esophageal cancer (mainly stage II–III).

5. Intervention

Two-week administration.

Arm 1: TSUMURA Rikkunshito (六君子湯) Extract Granules 2.5 g t.i.d. (n=9).

Arm 2: no administration (n=10).

6. Main outcome measures

Grade of anorexia and nausea/vomiting (Common Terminology Criteria for Adverse Events [CTC-AE] ver. 3.0), QOL score (the QOL Questionnaire for Cancer Patients Treated with Anticancer Drugs [QOL-ACD]-based original questionnaire).

7. Main results

One of the participants in arm 1 was ineligible because of age violation and excluded from the analysis. Anorexia, nausea, and vomiting occurred as adverse drug reactions by 14 days after the start of chemotherapy in 3 (37.5%), 3 (37.5%), and 1 (12.5%) subject, respectively, in arm 1, and 7 (70%), 8 (80%) and 4 (40%) subjects, respectively, in arm 2, but there was no significant between-group difference. The change in mean vomiting score was 0 in both arms by day 8, but was 0.13 in arm 1 and 0.90 in arm 2 on day 14. Nausea score increased from day 8 and day 5 to 0.50 and 1.80 on day 14 in arm 1 and arm 2, respectively, showing significant difference on day 14 ($P<0.05$). Likewise, anorexia score reached 0.75 in arm 1 and 1.70 in arm 2 on day 14, showing a tendency toward lower score after rikkunshito administration. Rikkunshito also prevented significant suppression of depressed mood and decreased activities of daily living (both $P<0.05$).

8. Conclusions

Rikkunshito significantly suppresses anorexia and nausea/vomiting caused by chemotherapy (DFP therapy) for advanced esophageal cancer, and thereby prevents significant decline in QOL.

9. From Kampo medicine perspective

None.

10. Safety assessment in the article

The paper includes a section on adverse events and mentions that there was no adverse event associated with rikkunshito.

11. Abstractor's comments

This study is highly valued because it demonstrated by RCT that rikkunshito significantly relieves nausea and prevents QOL score from decreasing after chemotherapy. It is possible that the mechanism for improvement of anorexia is mediated by blood ghrelin. The 2010 paper in Japanese mentioned blood ghrelin analysis, but the 2011 paper in English makes no mention of blood ghrelin at all, perhaps because the widely scattered measurement results were an issue. The authors should conduct a large-scale clinical trial to find out whether it significantly alleviates vomiting and anorexia.

12. Abstractor and date

Motoo Y, 30 December 2010, 31 December 2013.