2. Cancer (Condition after Cancer Surgery and Unspecified Adverse Drug Reactions of Anti-cancer Drugs)
5. Psychiatric/Behavioral Disorders

References

Sugano N, Aoyama T, Sato T, et al. Randomized phase II study of TJ-54 (Yokukansan) for postoperative delirium in gastrointestinal and lung malignancy patients. *Molecular and Clinical Oncology*. 2017; 7: 569-73. CENTRAL ID: CN-01421749, Pubmed ID: 28855990

1. Objectives

To evaluate the efficacy and safety of yokukansan（抑肝散）for postoperative delirium in patients with gastrointestinal or lung cancer

2. Design

Randomized controlled trial (RCT)

3. Setting

Nine hospitals, including one university hospital, Japan

4. Participants

A total of 186 patients aged 70 years or older who underwent surgery for gastrointestinal or lung cancer with an Eastern Cooperative Oncology Group Performance Status score of 2 or less, who underwent a mini-mental state examination (MMSE), and who had normal hepatic, renal, and bone marrow functions. Patients were excluded if they had a history of severe hypersensitivity to drugs, had serious constipation, were pregnant, or were lactating.

5. Intervention

Arm 1: TSUMURA Yokukansan（抑肝散）Extract Granules 7.5 g/day (2.5 g t.i.d.) administered orally for 7 days preoperatively and 4 days postoperatively, excluding the operation day (n=93)

Arm 2: Control group (n=93)

6. Main outcome measures

Primary endpoints were the incidence of postoperative delirium and safety. Secondary endpoint was the length of hospital stay. Delirium was assessed according to the Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV, independently by two physicians.

7. Main results

The incidence of delirium was 6.5% in Arm 1 (n=6) and 9.7% in Arm 2 (n=9), showing no significant difference between the two arms. A subgroup analysis showed that, among patients with MMSE scores of ≤26, the incidence of postoperative delirium was 9.1% in Arm 1 and 26.9% in Arm 2 (risk ratio, 0.338; 95% CI, 0.078–1.462, *P*=0.115). Among patients with MMSE scores of ≥27, the incidence of postoperative delirium was 6.8% in Arm 1 and 3.6% in Arm 2 (risk ratio, 1.864; 95% CI, 0.356–9.778, *P*=0.453). The length of hospital stay was 16 days in Arm 1 and 15 days in Arm 2, showing no difference between the arms.

8. Conclusion

In patients with MMSE scores of ≤26, yokukansan reduces the risk of delirium after surgery for gastrointestinal or lung cancer.

9. From Kampo medicine perspective

None

10. Safety assessment in the article

Occurrence of adverse reactions did not differ between the two arms. No adverse reactions appeared to be related to yokukansan.

11. Abstractor's comments

Postoperative delirium is an important postoperative management issue. With a focus on this, and using yokukansan, which has been widely used recently for delirium in patients with other behavioral and psychological symptoms of dementia (BPSD), the authors conducted this interesting clinical study evaluating the effects of yokukansan on postoperative delirium in patients with gastrointestinal or lung cancer. Analysis of the primary endpoint failed to show an intergroup difference, partly because the incidence of delirium in the control group was lower than expected, as stated by the authors in the Discussion section, for which further studies in larger samples would be needed. The subgroup analysis showed reduction in the risk of delirium after yokukansan administration in those with MMSE scores of ≤26. This indicates that yokukansan may be effective in suppressing delirium in patients with lower cognitive function. However, regarding those with MMSE scores ≥26, the article does not provide details such as the number of the patients. Furthermore, the article does not provide any basis for the MMSE cutoff score of 26, and therefore the efficacy may not be convincing. Given that this was a phase 2 study, a phase 3 clinical study based on these data is awaited to further clarify the disease conditions for which yokukansan is indicated.

12. Abstractor and date

Goto H, 1 June 2020.