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

Reference

Nishi M, Shimada M, Uchiyama H, et al. The beneficial effects of Kampo medicine dai-ken-chu-to after hepatic resection: a prospective randomized control study. *Hepato-Gastroenterology* 2012; 59: 2290-4. CENTRAL ID: CN-00912891, Pubmed ID: 23435143

1. Objectives

To evaluate the usefulness of daikenchuto (大建中湯) in postoperative patients who underwent hepatectomy.

2. Design

Randomized controlled trial (RCT).

3. Setting

One hospital (Tokushima University Hospital, Japan).

4. Participants

Thirty-two patients who underwent partial hepatectomy for primary/metastatic liver cancer or other liver diseases, except patients undergoing laparoscopic surgery, gastrointestinal resection, or splenectomy, etc.

5. Intervention

Arm 1: group receiving TSUMURA Daikenchuto (大建中湯) Extract Granules 2.5 g t.i.d. before meals via a nasogastric tube or orally, starting from the day after operation (n=16).

Arm 2: control group receiving no TSUMURA Daikenchuto (大建中湯) Extract Granules 2.5 g (n=16).

6. Main outcome measures

Hematology of the following parameters on the day of and 1, 3, 5, and 7 days after operation: WBC, total bilirubin, ALT, total protein, prothrombin time (INR), ammonia, CRP, and β-D-glucan. The numbers of days until the postoperative initial passage of flatus, initial defecation, initial intake of ordinary diet, and discharge, and complications.

7. Main results

There were no significant differences between groups in WBC, total bilirubin, ALT, total protein, prothrombin time (INR), or ammonia. On the third hospital day, CRP was significantly lower in arm 1 than in arm 2 ($P<0.05$). On the third hospital day, mean β-D-glucan level was significantly lower in arm 1 than in arm 2 ($P<0.05$). There were no differences in postoperative complications between groups. The numbers of days until the postoperative initial passage of flatus, defecation, and intake of ordinary diet were smaller in arm 1 than in arm 2. In contrast, there was no significant difference in the number of days until discharge.

8. Conclusions

Daikenchuto can be safely used as a useful medication to suppress inflammation, promotes bowel motility, and stimulates appetite after hepatectomy.

9. From Kampo medicine perspective

None.

10. Safety assessment in the article

Daikenchuto is associated with no adverse reactions.

11. Abstractor's comments

The study demonstrated that daikenchuto administered at a low dose (half the usual dose) early after partial hepatectomy significantly decreased blood CRP and β-D glucan levels on postoperative day 3 and promoted postoperative improvement in bowel peristalsis. Daikenchuto has traditionally been used for relief of abdominal symptoms including abdominal pain, abdominal distension, Crohn's disease, and irritable bowel syndrome. Mentioning recent studies that have shown the effects of daikenchuto to improve bowel motility and defecation and shorten the duration of hospitalization after colon cancer surgery, to exert efficacy for intestinal obstruction after abdominal surgery, and to reduce postoperative complications after total gastrectomy by improving bowel motility, etc. The authors explained that they conducted this study since there was only one previous study on daikenchuto administration after hepatectomy. The authors assumed the following possible mechanisms of action of daikenchuto: enhancement of gastrointestinal motility through stimulation of $5HT_3$ receptors and promotion of VIP and motilin secretions; increase in blood flow in gastrointestinal tract and portal vein mediated by calcitonin gene-related peptides; anti-inflammatory effect via inhibition of COX-2 activity; and suppression of bacterial translocation via suppression of proinflammatory cytokines. The authors did not explain the reason for reducing the dose of daikenchuto by half. Use of the usual dose may produce different results (effects and adverse reactions), necessitating investigation of the optimal dose.

12. Abstractor and date

Hoshino E, 6 June 2015.