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

Reference

Yutani S, Komatsu N, Matsuda S, et al. Juzentaihoto failed to augment antigen-specific immunity, but prevented deterioration of patients' conditions in advanced pancreatic cancer under personalized peptide vaccine. *Evidence-Based Complementary and Alternative Medicine* 2013: 1-10. doi: 10.1155/2013/981717. CENTRAL ID: CN-00919989, Pubmed ID: 23840274

1. Objectives

To evaluate the effect of juzentaihoto (十全大補湯) for antigen-specific immunity and performance status of advanced pancreatic cancer patients receiving peptide vaccine therapy.

2. Design

Randomized controlled trial (RCT).

3. Setting

Department of Immunology and Immunotherapy, Kurume University School of Medicine, Japan; Research Center for Innovative Cancer Therapy, Kurume University, Japan; Department of Surgery, Kurume University Hospital, Japan.

4. Participants

Fifty-seven patients with standard therapy-resistant advanced pancreatic cancer.

5. Intervention

Arm 1: cycles of 6 weeks of weekly subcutaneous injection of up to 4 kinds of peptide vaccines. administration of TSUMURA Juzentaihoto (十全大補湯) Extract Granules 2.5 g t.i.d. (7.5 g/day) for 35 days from the first day of the first cycle (n=28).

Arm 2: the above peptide vaccine therapy alone (n=29).

6. Main outcome measures

Cytokines such as interferon-γ as a measure of cellular immunity and peptide-specific IgG as a measure of humoral immunity. Performance status (PS) and laboratory values.

7. Main results

Five patients in the juzentaihoto group and 2 patients of the vaccine therapy group failed to complete the first cycle of the vaccine therapy and provided no post-vaccination data. After exclusion of these dropouts, remaining 50 were included in the analysis population. There were no significant differences between groups in the changes from baseline in antigen-specific T cell response (cellular immunity), antigen-specific IgG (humoral immunity), or overall survival after initiation of the vaccine therapy. However, after initiation of the vaccine therapy, PS was not significantly changed from baseline in the juzentaihoto combination group but was significantly decreased from baseline in the vaccine alone group (P=0.0156). After initiation of the vaccine therapy, significant decreases in hemoglobin concentration (P=0.0203), lymphocyte count (P=0.0351), and serum albumin level (P=0.0214) were noted in the vaccine alone therapy, but not in the juzentaihoto combination group.

8. Conclusions

Juzentaihoto does not potentiate antigen-specific immunity but prevents aggravation of general conditions and declines in hemoglobin concentration, lymphocyte count, and serum albumin level in pancreatic cancer patients receiving peptide vaccine therapy.

9. From Kampo medicine perspective

None.

10. Safety assessment in the article

The article describes that there were no significant differences in the incidence or severity of adverse events between groups and that the independent Safety Monitoring Committee judged all adverse events observed to be due to progression of pancreatic cancer or concomitant anticancer drugs, but not due to the peptide vaccine or juzentaihoto.

11. Abstractor's comments

This is the first study to verify the clinical effect of juzentaihoto combined with the peptide vaccine therapy in advanced pancreatic cancer patients. Since the study population consisted of patients with chemotherapy-resistant, rapidly-progressive pancreatic cancer, the study period may have been too short for the authors to confirm the immunity-potentiating effect. Nevertheless, it should be appreciated that they demonstrated the benefits of juzentaihoto, including improvement in performance status and suppression of aggravation in hematological values, in an RCT. The authors are expected to conduct similar clinical research with postoperative adjuvant chemotherapy for cancer or in patients with slowly-progressive cancer in future. Readers can take the study results that peptide vaccine plus juzentaihoto combination has virtually no safety problem but inconclusive efficacy.

12. Abstractor and date

Motoo Y, 6 June 2015.