癌化学療法施行時の担癌宿主における免疫反応の解明

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2001 Fiscal Year Final Research Report Summary

Analysis of the immune response of tumor-bearing host at the immunochemotherapy -from the viewpoint of optimum combination of chemotherapy and immunotherapy -

Research Project

Project/Area Number

12671212

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

Digestive surgery

Research Institution

Kanazawa University

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Project Period (FY)

2000 – 2001

Keywords

Irinotecan(CPT-11) / OK-432 / Th1 / IL-12 / immunochemotherapy / tumor bearing state

Research Abstract

Chemotherapy with lower dose of irinotecan (CPT-ll) exerts larger antitumor effect. In this study, SN-38, the active metabolite of CPT-ll, exerted dose-dependent inhibition of interferon (IFN)-γ and interleukin (IL)-10 production induced by streptococcal preparation OK-432 in mouse splenocytes. In contrast, the optimum concentration of SN-38 (0.4-0.8(μg/ml) increased IL-6 and IL-12 production by OK-432 activated macrophages. In tumor-bearing mice (C57BL/6 mice bearing with B16 melanoma), CPT-11

inhibited tumor growth and OK-432 had an additive antitumor effect with CPT-11. Investigation of cytokine production showed that CPT-11 treatment principally inhibited IL-12 and IFN-γ production, which was improved by the combined administration with OK-432. These results indicate that CPT-11 inhibits type-1 T helper (Th1) cells despite its potential to stimulate macrophages and that OK-432 enhances the antitumor activity of CPT-11 by increasing Th1-cytokine production (Anticancer Research 21 : 2505-2510, 2001).
In the treatment for the peritoneal metastasis of gastric carcinoma, we may control disseminated cancer cells by intraperitoneal immunochemotherapy using MMC and OK432 in patients with curative resection (Oncology, 2002, in press).
Briefly, these results have demonstrated the efficacy of the combination of chemotherapy and immunotherapy.

Research Products (10 results)

All Other

All Publications

[Publications] 藤本敏博: "胃癌の腹膜播種に対するMMC+OK-432腹腔内投与の臨床効果"Therapeutic Research. 21. 1940-1945 (2000)

[Publications] T.Fujimoto, et al.: "The effect of OK-432 on the cytokine production of the tumor bearing mouse splenocytes"Biotherapy. 14. 528-528 (2000)

[Publications] X.Wang, T.Fujimoto, et al.: "Streptococcal preparation OK-432 enhances the antitumor activity of CPT-11 by increasing Th1 cytokine production in tumor-bearing mice"Anticancer Research. 21. 2505-2510 (2001)

[Publications] T.Fujimoto, et al.: "Evaluation of intraoperative intraperitoneal cytology for advanced gastric carcinoma"Oncology. (in press). (2002)

[Publications] 藤本敏博, 他: "肝転移、メカニズムと臨床「免疫療法」"医学書院. 228 (2000)

[Publications] Fujimoto T: "The efficacy of intrapertioneal administration of MMC and OK-432 against peritoneal metastasis of gastric cancer"Therapeutic Research. 21. 1940-1945 (2000)

[Publications] Wang X, Fujimoto T, Zhang B, Shimizu A, and Mai M: "The effect of OK-432 on the cytokine production of the tumor bearing mouse splenocytesy"Biotherapy. 14. 528 (2000)

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[Publications] Fujrmoto T, Zhang B, Minami S, Wang X, Takahashi Y, and Mai M: "Evaluation of intraoperative intraperitoneal cytology for advanced gastric carcinoma"Oncology. (in press). (2002)

[Publications] Fujimoto T: "Imraunotherapy for liver metastasis. Liver metastasis- its mechanism and clinical experience. (Mai M, Seiki M and Takahashi Y ed.)"Igaku-shoin, Tokyo. 212-219 (2000)

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