

Next, effect of challenge by tumor extract to regional lymph node was studied in animal experiments.

Furthermore, correlation between immuno-suppression of regional lymph node and frequency of metastasis was examined.

In these experiments, tumor extract (TE) of mouse ascites hepatoma 134 (MH134) was used after sonicated.

In the result, challenge of TE lowered the cellular immunocapacity of regional lymph node and accelerated the regional lymph node metastasis.

Therefore, immunosuppression by some substance coming from tumor was found to induce acceleration of regional lymph node metastasis.

### 23. Histopathological Study on Participation of Immune Reactions of Advanced Uterine Cervical Carcinoma

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Histopathological studies were carried out to clarify whether there was any participation of immunological reactions in primary lesion or pelvic lymph nodes in advanced uterine cervical carcinoma. A total of 144 patients who had received radical hysterectomy were subjected to this study: 32 patients received radical hysterectomy, 66 patients exposed to test-irradiation with 1,000 rads, 46 patients who were administered with PS-K and also exposed to test-irradiation with 1,000 rad.

The results obtained were as follows:

1) Pelvic lymph nodes were markedly enlarged in group of combined therapy of PS-K and 1,000 rad irradiation.

2) The reaction in germinal center or paracortical area was suppressed with 1,000 rad irradiation, whereas in cases of administration with PS-K the reaction was restored to the pre-irradiated condition.

3) The stromal exudative reaction was increased with PS-K administration.

4) Good radiosensitivity of the carcinoma was observed in remarkably more patients and poor radiosensitivity of the carcinoma in less patients in the group administered with PS-K than the group

not administered with this agent.

5) With regard to the prognosis, the enlargeness of lymph nodes, the degree of exudative reaction in primary region, and the radiosensitivity were close correlation with prognosis.

6) We were able to recognize the existence of immunological anti-tumor effects on the uterine cervical carcinoma.

### 24. Cytotoxic Effect of Lymphocytes from Patients with Tumor against Two Kinds of Ovarian Cancer Cell Lines

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The target cells were HOC-21 (HOC) from serous cystadenocarcinoma and YS-K from yolk sac tumor, cultivated successively, and effector cells were prepared by Ficoll-Conray's method using peripheral blood of 51 subjects including good healthy, 2; ovarian cyst, 11; uterine myoma, 3; ovarian cancer, 20; uterine cancer, 9; choriocarcinoma, 2; uterine sarcoma, 1; cancer of the Fallopian tube, 1; ca. of the rectum, 1; ca. of the stomach, 1. Cytotoxicity was tested by microcytotoxicity assay according to the method of Takasugi and Klein. The results of the case that effector cell-target cell ratio is 100:1 are described below.

Results: In the classification according to histology, cytotoxicity in malignant group was higher than that in benign group with significant difference in YS-K. Significant difference was also noted between benign group and adenocarcinoma. When cytotoxicity on HOC and YS-K was compared in each patient, histological specificity was not clearly pointed out between them. In uterine cancer, cytotoxicity showed a slight decrease with progress. On one hand, cytotoxicity showed a slight increase with progress of ovarian cancer. There was relatively great difference between cytotoxicity in stage I and that in recurrent case. In particular, the difference was significant in YS-K, and this finding should be emphasized in the present study.