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We implanted the tumor of cervical carcinoma in skin of back of nude mouse. The tumor type is keratinizing, large cells, small cell and adenocarcinoma. The size of tumor is 0.5 mm and 1.5 mm in diameter. After implantation tegafur (90~120 mg/kg) were administered to nude mice every day. We evaluated the effect of effect of tegafur with the proliferation of the tumor. The result of this study was that; proliferation of the tumor depended on the volume of the implanted tumor during tegafur administered. In especially small cell and adenocarcinoma tegafur was effective for inhibition of the tumor proliferation. The proliferation of the tumor (small cell type and adenocarcinoma) was completely sttoped. The tumor proliferation was sttoped; in large cell type: less than 1.5 mm in diameter, in keratinizing type : less than 1.0 mm in diameter. In short adjuvant chemotherapy with tegafur will be effective in order to prevent the recurrence of cervical carcinoma in case of that the volume of residual carcinoma after operation is smaller than a certain volume.

28. Cell Kinetic Effects of Cis-platinum by Intra-arterial Infusion in Cancer Patients of the Cervix

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Primary chemotherapy of CDDP by intra-arterial infusion were done on 32 cases of cervical cancer. Tumor reduction was remarkably observed 19 cases out of 32 cases. On the other hand, 5 out of 32 cervical cancer cases did not change to show clinical findings by arterial-infusion of CDDP.

Cell cycle analysis were done on 11 cases with cervical cancer on primary chemotherapy of CDDP by intra-arterial infusion using monoclonal antibody of DNA synthesized cell (BrdUrd).

Main cytokinetic change of cancer cells induced by CDDP was accumulated to early S phase cell fraction.

29. The Effect of 5-azacytidine on Expression of Tumor Antigen (TA-4) of Squamous Cell Carcinoma

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The effect of 5-azacytidine (5-azaC) on TA-4 expressions in squamous cells was studied in a squamous cell carcinoma cell line, SKG IIIa. The cells were treated with 1, 5 or 10 μM 5-azaC for 24, 48 or 72 hrs. In another experiment, the cells were treated repeatedly up to 4 times with 10 μM 5-azaC. After exposure to 5-azaC, cells were cultured in a fresh medium for 5 days, and TA-4 activity in the medium was measured by RIA. The rate of methylated cytosine/cytosine, which was measured by HPLC, decreased from 1.39% to 1.03% by 5-azaC treatment. Treatment of 5-azaC decreased the growth of cells, but significantly increased TA-4 activity release into the medium. TA-4 concentrations in the medium were directly relating to the concentration of 5-azaC and length or times of exposure. These data indicated some possible role of the gene activation in the TA-4 expression of tumor cells.

30. The Effect of the Chemoendocrine Therapy on the Metabolism of Free-radicals in Endometrial Carcinoma

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ADM involves free-radicals in its mode of action but we reported that the activities of superoxide dismutase (SOD) and peroxidase that scavenge free-radicals were high in the endometrial carcinoma tissue.

In order to study the effect of the chemoendocrine therapy on the metabolism of free-radicals, SOD and peroxidase activities were measured in the human endometrial carcinoma cell line (Ishikawa cells) incubated with ADM, CDDP and MPA.

Incubation with 50 ng/ml ADM or 200 ng/ml CDDP for 14 days increased SOD and peroxidase activities in the existing cells. After additional 14 days