

patients with advanced cancer. In conclusion, the substances which lower the function of red blood cells and lymphocytes exist in the serum of patients with advanced cancer and binding of the substance to the cell membrane induces these phenomena.

381. Anti-embryoglycan Antibody in Sera of Patients with Uterine Cervical Cancer

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Embryoglycan is high molecular weight glycopeptide, abundantly found in cell surface of F9, stem cell clone derived from mouse teratocarcinoma. And it is thought to be differentiation-associate and tumour-associate antigens. We investigated anti-Embryoglycan antibody in sera of patients with uterine cervical cancer, considering the possibility of appearance of Embryoglycan-like antigen accompanied by malignant change of uterine cervix. Reactivity between the patients sera and Embryoglycan (or F9 cells) was assayed by modified Farr's assay and indirect immunofluorescence method. Among the patients with uterine cervical cancer (squamous cell carcinoma), 26% was positive in invasive cases, while early cases were negative. Cases of benign ovarian and uterine tumours were also negative. Antigenic determinant is found to involve alpha-galactosyl residue since alpha-galactosidase treated Embryoglycan lost the activity to bind these antisera. The antigenic structure of Embryoglycan is thought to be somewhat similar to blood type B antigen by absorption test.

These knowledges indicate that unusual alpha-galactosyl residue is expressed on some of uterine cervical cancer and immune system of patients responds to its antigenic stimulation. It would be helpful to consider the monitoring of patients specific immune responsiveness and immunotherapy.

382. Spontaneous and MMC Induced SCE in Lymphocytes from Patients with Cervical Cancer

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The frequency of spontaneous and MMC induced sister chromatid exchanges (SCEs) were investigated in the peripheral blood of women in different stage of cervical cancer. Cell cycles were also examined by the replicative index (R.I.) method. The following results were obtained. (1) The spontaneous SCE frequency was found to be significantly higher in the cancer group than in the control group (8.35 ± 2.93 S.D. to 5.54 ± 2.03). (2) The SCE frequency gradually increased with the progression of the cervical cancer. (3) The SCE frequency of carcinoma in situ, the lowest stage of cervical cancer (CIS), was significantly higher than in controls. (4) The frequency of MMC induced SCE was higher than that of spontaneous SCE in both groups, and the frequency gradually increased with the stage of the cancer. (5) The frequency of MMC induced SCE in the cervical cancer group was higher than that in the control group. (6) The R.I. of the cervical cancer group was higher than that of the control group, but it was not statistically significant.

383. Colposcopy in the Management of Cervical Dysplasia —Analysis of Regressive Cases—

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Follow-up studies of 27 patients with severe dysplasia and 133 patients with mild dysplasia were performed and 51.9% of the former and 60.9% of the latter were regressed to normal within a follow-up period.

As for the colposcopic examinations, abnormal findings were disappeared on 89 cases within the period of 3 to 12 months after the initial diagnosis, and on many cases, their abnormal findings were limited to the small area.

The trauma caused by taking biopsies from the cervix was proved to be a main cause of disappearance of the lesions.

384. Immunohistochemical Demonstration of Papillomavirus Antigen in Dysplastic Lesions of the Uterine Cervix

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Recently, it has been widely recognized that human papillomavirus (HPV) plays an important role in the etiology of carcinoma of the cervix. Paraffin sections of cervical malignancies and premalignancies were screened for the presence of papillomavirus antigen by means of the peroxidase-antiperoxidase (PAP) method.

No case of invasive carcinoma, carcinoma in situ or normal cervix revealed positive HPV staining. In 80 cases of 460 cervical dysplasias, positive reaction for HPV was detected as brown intranuclear precipitate in the superficial layer of the epithelium. Among the three degrees of dysplasia, moderate cases exhibited the highest positive rate. The dysplasia with koilocytosis showed significantly higher positive rate than did the dysplasia without koilocytosis. The mean age of the women with HPV was significantly lower than that of the women without HPV.

A matched-pairs analysis was performed for age and degree of dysplasia between the cases with HPV and without HPV. Between the matched pairs, no significant difference was found in obstetrical background. Histological features of the dysplasia with HPV were koilocytosis and binucleation. Cytological features of the dysplasia with HPV were the presence of koilocytes, condylomatous parabasal cells and binucleated cells.

385. Analysis of Nuclear DNA Histogram for Gynecological Malignant Tumor Cells by Flowcytometry—Dealing of Clinical Specimens by Percoll Gradient Method—

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Clinical specimens seem to have various mixtures. In order to analyze an accurate nuclear DNA histogram of cancerous cells, the authors collected target cells from clinical specimens by the density gradient centrifuge method by percoll gradient and the useful-

ness of this method was determined. Nuclear DNA histograms of the collected gynecologically malignant tumor cells were analyzed and interesting findings were obtained. The patients included were 12 with uterine cervical cancer, 5 with cancer of corpus uteri and 12 with ovarian cancer, in total, 29. Solid tumors taken on an operation were mainly examined. As a result, DNA aneuploid was observed in 16 (55%) out of the 29 patients and 5 out of the 16 presented two-peak-results. In this study, the relationship between DNA ploid and clinical diagnoses or histological types was not determined. It is concluded that the DNA ploid seems to correlate to the efficacy of treatment. We will study more patients in the same regard and also examine in detail the clinical progress. Response to treatment and further, prognosis of the patients.

386. Colposcopic Findings of Abnormal Glandular Openings and their Histological Studies—With Findings of Non-malignant Glandular Openings

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We examined 100 abnormal glandular opening specimens through biopsy and 130 uteri of hysterectomy (30 CIS, and 100 myoma uteri). For histological specimen, vertical sections to the epithelial surface were made in order to have the glands appear as a whole. At the same time serial sections of the periphery of the glandular opening were prepared for detailed measurement of histological structure. They were then compared with their colposcopic findings. When considering a glandular opening with white rings as aGO, glandular opening accompanied by squamous cell metaplasia is apt to show a similar pattern as that of glandular involvement in CIS. It is thus necessary to differentiate non-neoplastic glandular opening from abnormal opening.

1. We measured the thickness of the epithelia around the opening (a) and those invading into the opening (b). The ratio between (a) and (b) is higher in CIS and lower in non-malignancy. This means that glandular involvement in CIS frequently occurs in the deeper glands and the invading epithelia become thicker.

On the other hand, the opening in non-malignancy has a strong tendency of (b) becoming thicker with the growth of (a). Also, the cervical glands become