

### 307. Steroid Sulfatase Activity in Human Leucocytes

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Placental production of estrogens in human pregnancy is controlled by steroid sulfatase (S.S) and other enzymes. Pregnancies with S.S deficiency were first described by France & Liggins (JCEW, 29: 138, 1969) by in vitro study of placental tissue. For the rapid diagnosis of S.S deficiency, S.S activity was assayed in peripheral blood leucocytes from patients with S.S deficiency (X-linked ichthyosis) and normal controls. S.S activity was measured by desulfation of [<sup>3</sup>H]-DHA-S using a modification of the method of Burstein & Dorfman (J. Biol. Chem., 238: 1656, 1963). Protein content of the enzyme solution was measured by the Bio-Rad method. Using our method, the precision of variation of intra- and interassay were 3.5% and 11.4%, respectively. S.S activity in leucocytes was significantly greater ( $p < 0.01$ ) in the 3rd trimester pregnant women ( $n=21$ ,  $0.139 \pm 0.029$  p mol/mg protein/8 h., mean  $\pm$  SD) than nonpregnant women ( $n=12$ ,  $0.108 \pm 0.028$ ) and males ( $n=18$ ,  $0.088 \pm 0.014$ ). Also S.S activity was extremely lower ( $p < 0.001$ ) in leucocytes from patients with X-linked ichthyosis ( $n=7$ ,  $< 0.005$ ) than fetuses (umbilical cord blood,  $n=15$ ,  $0.116 \pm 0.024$ ) and other groups. These results suggest that our assay of S.S activity in leucocytes offers a fast and simple method for the diagnosis of placental S.S deficiency and the identification of patients with X-linked ichthyosis.

### 308. Role of X-ray CT Estimating Prognosis of Cervical Carcinoma

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We studied on the relationship between CT findings and prognosis of the cervical carcinoma. CT was performed by our routine method, using EMI-5005 or CT/T. CT findings were classified as follows: (1) enlargement of the cervix; (2) poorly defined cervical

margin; (3) low density area within the cervix; (4) necrotic cavity formation; (5) pyometra; (6) parametrial soft tissue pattern (type A, B, C); (7) enlargement and/or increase of lymph nodes; (8) extension toward the vagina; (9) extension toward the urinary bladder (grade 0, I, II, III).

Eighty-eight patients of cervical carcinoma were examined by CT before treatment and followed up at least 3 years. Forty-one cases were non-recurrent, and 47 cases were recurrent or died.

Eighty-one point eight percent of cases with enlargement of the cervix, 86.4% of cases with poorly defined cervical margin, and 81.3% of cases with necrotic cavity formation were recurrent or died. Eighty-two point six percent of cases with type B or C parametrial soft tissue pattern, 95.0% of cases with enlargement and/or increase of lymph nodes and 100% cases with extension toward vagina also recurrent or died.

The result suggests of importance of CT findings of lymph nodes and extension toward vagina for supposing prognosis of cervical carcinoma.

### 309. Differential Diagnosis of Gynecologic Tumors by X-ray CT —With Special Reference to Malignant Ovarian Tumors—

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The differentiation of malignant ovarian tumors from other gynecologic tumors is one of the most important problems in the diagnosis of gynecologic disease. This study was made on 509 patients who were performed preoperative X-ray CT (CT) and surgically proven the pelvic tumors. In the cases of the ovarian tumor, the differentiation of malignant tumors from benign was evaluated using our previously published scoring system.

CT was performed on EMI-5005 or CT/T, and contrast enhancement achieved by our routine technique.

The accuracy of CT diagnosis for uterine myoma was 98%, in 3 cases of pedunculated subserous myomas with marked degeneration were misdiagnosed as ovarian cancers. In the patients with dermoid cysts, the accuracy was 99% due to their characteristic findings on CT. The other benign ovarian