

curve were computed by mean of the numerical integration.

This computation was applied to each cases of trophoblastic neoplasia, to find the relation

of the total RI count to the size of tumor, and a highly significant correlation was noted between them.

## On $\alpha$ -Fetoprotein in Pregnancy and in the Tumor of Women's Genitals

M. TADA, M. TAKAYAMA, T. KONDA, K. TOKORO, T. KIKUCHI, H. SŌMA

*Dept. of Obstetrics & Gynecology, Tokyo Medical College*

H. MURAYAMA, K. RIN, A. MORIYAMA

*Dept. of Radiology, Tokyo Medical College*

We report the results of our determinations of AFP in women's tumor and of the fluctuations of AFP values in pregnancy and in abnormal pregnancy. The concentration AFP in the amniotic fluid and/or in the serum were determined with radio-immunoassay, in the cases of normal pregnancy, toxemia, placenta previa, hydatidiform mole, intra uterine fetal death, anencephalia, threatened abortion, ovarian tumor, chorionepithelioma, cervical carcinoma and malignant melanoma as subjects.

The results showed that the mean AFP values of the maternal serum in normal pregnancy were below 10ng/ml in first trimester, which were not significantly different from the serum AFP values in non-pregnant women. Serum AFP values gradually increased every month, rising sharply in the seventh month of pregnancy, reaching the maximum levels in the eighth month and slightly decreasing in

the tenth month.

Serum AFP values comparing in placenta previa and toxemia to in normal pregnancy revealed no differences. In anencephalia, AFP values showed abnormally high levels both in the maternal serum and in the amniotic fluid. This phenomenon was also observed in cases of intra uterine fetal death.

However, AFP concentration in the maternal serum in the case of hydatidiform mole showed much lower levels than in normal pregnancy in corresponding gestational age. In the fourth month of pregnancy, values of AFP after curettage were higher than those before curettage. However, in the preceding months this phenomenon was not observed.

Serum concentration of AFP in cases of chorionepithelioma, cervical carcinoma ovarian tumors and malignant melanoma presented lower levels.