268 Characteristics of nuclear steroid receptors in human ovarian endometriosis, adenomyosis and endometrium. T.Bando, M.Asai, Y.Sagara., Dept.of Obstet. and Gynecol., Kochi Medical School, Kochi.

Nuclear estrogen(ER), progestin(PR) and androgen(AR) receptors were analysed in human endometriosis and normal endometrium. Partially purified nuclear fractions from human ovarian endometriosis, adenomyosis and normal endometrium were incubated with 3H-estradiol(E2), 3H-R5020 or 3H-R1881 with the corresponding unlabeled steroids. Human endometriosis tissues contained the specific nuclear ER as well as PR and AR. The levels of nuclear ER in ovarian endometriosis were similar compared with normal endometrium, whereas those in adenomyosis were lower than those in endometrium. The levels of PR and AR in endometriosis were similar to those in endometrium. There was no significant difference in the ability of pharmacological doses of danazol to compete with nuclear receptor for E2, R5020 and R1881. Our data indicate that human endometriosis tissues contain similar level of nuclear ER, PR and AR as endometrial tissues do and that danazol has high affinity for nuclear ER. It was therefore suggested that danazol might have a direct local effect on human endometriosis by interaction with ER as well as with PR and AR.

269 Lipid peroxides and E_2-17-Sulfate in pregnancy. -Part 1. Serum E_2-17-S in the second and the third trimesters.- K.Tanaka, H.Honjo, K.Naitoh, J.Yasuda, T.Yamamoto, H.Okada, I.Yoshizawa*, K.Watanabe**, Dept.Obst.Gynec., Kyoto Pref.Univ.of Med., Kyoto, *Hokkaido Institute of Pharm. Sciences, Otaru, **Sumitomo Metal Industories, Eniwa

Lipid peroxides and its scavengers increase in pregnancy. Estradiol-17-Sulfate(E_2-17-S) is converted by 2-and 4-hydroxy-lase to 2-and 4-OH-E_2-17-S. These metabolites antagonize lipid peroxidation as strongly as non-conjugated catechol estrogens in vitro. E_2-17-S was extracted from serum samples with ethanol-ether mixture (4:1), and its levels were measured using an RIA. E_2-17-S stayed at about 500pg/ml(mean) during 20~30 weeks of gestation, but afterwards linearly increased up to about 1.000~1.500pg/ml (mean). After delivery, it rapidly decreased in several hours. The levels in the umbilical vein and artery were almost the same, but they were slightly higher than in the maternal vein. In non-pregnant women(n=15), its levels were $\leqq$64.0pg/ml, and in men (n=3), <30. In the late pregnancy, serum lipid peroxides, measured with Yagi's method, inversely correlated with serum E_2-17-S. In pregnancy, the metabolites of E_2-17-S is likely to be antagonizing lipid peroxidation in vivo .

270 Significance of plasminogen activators in tissue to asses tumor characteristics in endometrial cancer. H.Yabushita, T.Masuda, S.Nozaki, K.Sawaguchi, M.Ohashi, M.Noguchi, M.Nakanishi, Dept.Obst.and Gynec., Aichi Medical Univ., Aichi

To study the significance of tissue plasminogen activator (tPA) and urokinase (uPA) in endometrial cancers, the tissue localization of tPA and uPA was investigated immunohistochemically in 28 stage I endometrial cancer and 15 normal endometrium. Normal endometrium in secretory phase showed presence of both tPA and uPA immunoreactivity. The uPA localization was observed more frequently in endometrial cancers than in normal endometriums, however, there was no difference of tPA localization in tissue between endometrial cancers and normal endometriums. In endometrial cancer, uPA immunoreactivity was demonstrated more frequently than tPA immunoreactivity. The uPA localization was related to the regression of histological differentiation and the progression of muscle invasion, however, the tPA localization can not be related to them. Also, the uPA localization was demonstrated more frequently in DNA aneuploidy group than in DNA diploidy group. From these results, it was suggested that uPA produced by endometrial carcinoma cells is possible to indicate the tumor characteristics of their growth behavior and invasiveness.