

343 Endocrinological study of amenorrhea associated with weight loss in young women. G.Yamashiro, K.Murakami, T.Harada, Y.Tomita, K.Araki, K.Akasofu, E.Nishida, Dept.of Obst.and Gynec., Kanazawa Univ.Sch.Med., Ishikawa.

The endocrine function of 20 cases with anorexia nervosa (AN) and 21 cases with simple weight loss related amenorrhea (SWL) were investigated comparing them with those of 12 control young females (C). The LH-RH tests revealed that the 47% of AN showed poor LH response, while the 26% of SWL. In both AN and SWL, serum basal levels of LH and PRL were significantly lower ($p < 0.05$); the basal FSH and GH levels had a tendency to be lower; the basal TSH levels were significantly higher ($p < 0.05$); serum cortisol (COL) levels were higher ($p < 0.01$); the dehydroepiandrosterone (DHA) and DHA-S levels were lower ($p < 0.01$); the ratio of DHA/COL and DHA-S/COL were lower ($p < 0.01$); testosterone (T)/DHA, androstenedione (AD)/DHA and T/AD were higher ($p < 0.05$) than those of C. Comparing AN to SWL, in AN, the basal LH and PRL levels were higher ($p < 0.05$); serum AD levels were lower ($p < 0.05$); the DHA-S levels were lower ($p < 0.01$); E1/AD ratio was higher ($p < 0.05$) than those in SWL.

344 Changes of blood leukotriene B4 and leukotriene C4 in patients with preterm labor. T.Nakaya, S.Hanada, Y.Yagami, Dept. Obst. and Gynec., Nagoya City Univ.Med.Sch., Aichi.

To elucidate mechanisms of uterine contractions in preterm labor, prospective studies have been conducted on leukotriene B4 (LT-B4) and leukotriene C4 (LT-C4), by way of 5-lipoxygenase pathway in arachidonic acid cascade, in normal pregnant women and patients of labor with chorioamnionitis. LT-B4 and LT-C4 of normal pregnant women were constant during pregnancy, and then LT-B4 of patients slightly elevated, with LT-C4 significantly increasing at 1st stage of term labor. With comparing to normal pregnant women, LT-B4 of patients were higher between 24-31 g.w. ($p < 0.001$), 32-36 g.w. ($p < 0.001$), and LT-C4 of patients were higher between 24-31 g.w. ($p < 0.005$), and 32-36 g.w. ($p < 0.01$). As patients were treated with cefmetazole-ritodrine, LT-C4 of patients markedly decreased between 24-31 g.w. ($p < 0.001$) and 32-26 g.w. ($p < 0.01$), with LT-B4 of patients slightly decreasing between both 24-31 g.w. and 32-36 g.w.. After treatment of cefmetazole-ritodrine, uterine contractions of patients were markedly decreased. From these results, it was suggested that elevated LT-B4 protect effectively against chorioamnionitis, but LT-C4 cause more active uterine contractions than prostaglandins by way of cyclooxygenase pathway.

345 Evaluation of chorioamnionitis and fetal infection by measuring polymorphonuclear leucocyte elastase in the amniotic fluid. H.Hirano, A.Tsuda, M.Higuchi, T.Matsuura, M.Maki, Dept. Obst. & Gynec., Akita Univ.Sch.Med., Akita.

By measuring polymorphonuclear leukocyte elastase (PMNE) we investigated the detection of chorioamnionitis (CAM) and fetal infection. We evaluated 63 patients with the threatend premature labor including 27 patients with CAM. As control study we used 31 cases of amniotic fluids obtained by amniocentesis except for threatend premature labor. The stages of CAM were decided by the classification of Blanc.

Results are as follows, 1) PMNE levels in the amniotic fluid were 72.9 ± 8.8 (Mean \pm SE) $\mu\text{g/l}$ in the control group, $286.4 \pm 135.2 \mu\text{g/l}$ in the group of threatend premature labor without CAM. Between two groups there was no significant difference. But in the group of CAM it was significant high levels, $6650.9 \pm 1475.4 \mu\text{g/l}$ ($p < 0.001$). 2) The PMNE levels increased together with the stages of CAM, it was $1365.8 \pm 439.2 \mu\text{g/l}$ in the stage 1 ($n=11$), $3062.5 \pm 720.1 \mu\text{g/l}$ in the stage 2 ($n=7$) and $15204.3 \pm 2222.1 \mu\text{g/l}$ in the stage 3 ($n=9$). 3) Between PMNE in the amniotic fluid and IgM in the cord blood there was a significant correlation and the coefficient of correlation was 0.57. PMNE in the amniotic fluid is the reliable marker of CAM. The levels of PMNE show the severity of CAM and complication of the fetal infection.