

127 Hypocalciuria in women with preeclampsia. T.Anai, Y.Hirota, M.Oga, I.Miyakawa, Dept.Obst.and Gynec., Medical College of Oita.

To assess the significance of hypocalciuria in pregnant women, 24-hour urinary calcium excretion and calcium/creatinine ratio (mg/g) in random urine samples were measured using a Toshiba TDA-30R autoanalyzer in the following 4 groups: 3 mild preeclamptic patients, 5 severe preeclamptic patients, 4 patients with intrauterine growth retardation (IUGR), and 10 healthy pregnant women. The urine samples were collected in the last week of gestation.

The mean 24-hour urinary calcium excretion in the 4 groups was 44.3 ± 21.3 mg/day, 11.6 ± 2.7 mg/day, 161.4 ± 80.4 mg/day and 145.0 ± 45 mg/day, respectively. Calcium excretion was significantly lower in the mild and severe preeclamptic patients than in the women with IUGR and the normal pregnant women. There was also a significant difference between the values in the mild and severe preeclamptic patients. The mean calcium/creatinine ratio in random urine samples was 53 ± 30 mg/g, 18 ± 5.6 mg/g, 192 ± 85 mg/g and 169 ± 70 mg/g, respectively. Also, such significant differences as 24-hour calcium excretion were found in the mean calcium/creatinine ratio.

From these results, we conclude that determination of urinary calcium excretion is a reliable index of preeclamptic status.

128 Effects of a circulating factor of changes in intracellular ionized calcium concentration in pregnancy induced hypertension (PIH). M.Takashima, H.Morikawa, M.Yamasaki, T.Ohta, K.Teramoto, A.Tanaka, M.Mochizuki, Dept.Obst.and Gynec., Kobe Univ. Sch.Med., Hyogo.

We have reported that the intracellular ionized calcium concentration (p-Ca) in pregnancy induced hypertension (PIH) has been increased significantly compared to normal pregnancy. Accordingly in order to clarify the effects of circulating factors on p-Ca in PIH patients, we determined the changes in p-Ca after incubation with serum of non-pregnant, pregnant or hypertensive pregnant women, or hormones which seem to be related to the pathophysiology of PIH. Although the values of p-Ca were slightly increased after incubation with serum obtained from normal pregnant women (the change rate of p-Ca was $20.3 \pm 8.3\%$), they were significantly increased after incubation with serum obtained PIH patients. Incubation with 17β -estradiol, PTH or endothelin-1 increased p-Ca significantly. On the other hand, incubation with progesterone or ANP decreased p-Ca, but these changes were not significant. Incubation with hormones, such as hCG, HPL, DHA or DHAS did not affect any significant changes on p-Ca. These findings strongly suggest that circulating factors which increase p-Ca may be closely related to the increase of peripheral vascular resistance in the patients with PIH.

129 Morphological study on early-onset pure type gestosis placenta and placental bed. T.Kurashima, H.Seo, T.Tanaka, N.Tsutsumi, H.Itoh*, M.Ohishi**. National Okura Hosp,* Kanagawa Prefecture Atsugi Hosp.**

Early-onset pure type gestosis has maternal symptoms of hypertension type which are evidently different from late-onset case in view of fetal growth, etc. The body weight of newborn at delivery is markedly smaller (about 1,500 grams) and the placental weight is all within 460 grams (M-1SD). We studied the morphological changes in the placental bed in addition to ultrastructural investigation on the placenta. Our subjects were consisting of 11 patients of early-onset type (onset before week 28 of Pregnancy). The tissue samples were collected from the placental bed and the three localizations of the placenta to be observed under a transmission electron microscope. Electron microscopic observation on the placenta revealed evident changes in the syncytial cells, Langhans cells and basement membrane with atherosclerotic findings in the villous blood vessels. In other two localizations in the placenta, the changes were not so marked as the maternal site of the placenta. On the other hand, in the placental bed, degenerative and necrotic endothelial cells in the blood vessels, etc. were evident and several atherosclerotic findings appeared. Conclusion: It was considered that in this disease the changes might first of all occur in the placental bed rather than in the placenta itself in priority possibly, resulting in growth retardation of placenta.