436 The study about prediction of toxemia of pregnancy by urine level of plasmin-α_2PI complex. S.Ohshima, M.Takahashi, H.Okamiya, Y.Yoshimura, Y.Nakamura, M.Suzuki, Dept.Obst.and Gynec., Kyorin Univ.Sch.Med., Tokyo.

This study was undertaken to evaluate the possibility of prediction of toxemia of pregnancy (toxemia) by measuring the urine levels of Plasmin-α_2PI complex (PAP). Urine levels of PAP were measured in 129 normal pregnant women and 26 patients with mild toxemia and 2 patients with severe toxemia during the entire period of pregnancy. Urine levels of PAP were also measured in 5 patients who were transported to our hospital because of the onset of severe toxemia. In normal group, urine levels of PAP increased as the pregnancy progressed as following. 1st trimester 9.96±1.58ng/ml (mean±S.E.), 2nd trimester 13.05±1.25ng/ml, 3rd trimester 22.60±4.64ng/ml. In toxemia group, especially in severe group urine levels of PAP became higher than those of normal group as 1166.50±475.79ng/ml in 3rd trimester. Especially in two cases with severe toxemia the urine levels of PAP increased in 2nd trimester prior to the onset of toxemia as 97.50ng/ml and 41.25ng/ml. Measuring urine PAP may be useful in prediction of the onset of toxemia.

437 Hyperuricemia and hyperactivity of leukocytes in PIH cases. S.Iijima, S.Majima, K. Someya E.Kotani, N.Takayama, N.Mesaki, H.Iwasaki, Dept. Obst.and Gynec., Institute of Clin ical Medicine, Univ. of Tsukuba.

In PIH cases leukocytes are more highly activated and more irritable to the stimulation by FMLP(formyl- methionyl- leucyl- phenylalanine) than those in normal pregnant cases. We measure the activity of leukocytes by means of a rheological technique which is adopted to measuring the deformability of erythrocytes. From the result of this experiment, there is the signifiant difference of leukocytes between in PIH cases and in normal pregnant ones, and we stnongly estimate that PIH occurs from the tissue damage by activated leukocytes. It's well known that PIH presents hyperuricemia and which has been attributed to renal dysfunction. But, in many PIH cases (10/19) with normal renal function the serum uric acid concentration is over normal limit. There is two causes of hyperurcemia. One is dim imishing of excretion of uric acid from kidney, and the other is overproduction.There is a significant correlation ($\gamma = 0.715$) between the density of leukocyte in blood and the con centration of serum uric acid. When leukocytes of PIH cases are always activated, they are likely short-lived to resolve more than those in normal pregnant cases, as the result much uric acid is released to blood. Furthermore damaged tissue collapses to release uri c acid simultaneously and the worsening of remal function increases it more in blood.

438 Changes in the Coagulative and Fibrinolytic Systems and the Protective Mechanism against Peroxidation in Maternal and Umbilical Cord Blood in Patients with Severe Gestational Toxicosis

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Elevation of TAT, decreases of AT-III and protein-C and acceleration of the coagulative system were observed in the maternal blood of patients with severe gestational toxicosis. Elevation of t-PA and α_2PI-plasmin-complex, and decrease of plasminogen, PAI-I and α_2PI showed acceleration of fibrinolytic system. While, umbilical cord blood showed acceleration of the coagulative system, no consistent trend was noted in the fibrinolytic system. These results suggest poor response of the fibrinolytic system which corresponds to the accelerated coagulative system, and fetuses and neonates are prone to suffer from DIC. The umbilical cord blood showed no elevation of glutathione peroxidase when lipid peroxide level increased, and the anti-peroxidation mechanism obstruction was observed in fetuses and neonates.