After 24 weeks' gestation, a 50 g, 1-hour glucose test was given to 271 pregnant women without obert diabetes. As well as a 1-hour plasma glucose level (1-hr PG), a preloading plasma glucose level (pre PG) was examined. To all 44 women with 1-hr PG exceeding 130 mg/dl, a 75 g glucose tolerance test was given. Using a criteria of Japan Diabetes Society, women were devided into three groups; normal (group N), abnormal at one point (group A1) and two points or more (group A2). Thirteen women (4.8%)were in group A2. In this group, the incidence of either large-for-gestational age infant or cesarean section due to fetal distress was higher than those in other groups. Insulinogenic index was significantly lower in group A2 than those in others. As a screening test for women in group A2, a threshold of 130 mg/dl of 1-hr PG has a sensitivity of 1.00 and a specificity of 0.88. When a threshold of 220 mg/dl of 1-hr PG plus pre PG is added to the 1-hour method, both sensitivity and specificity become 0.92. To detect the women with abnormal glucose tolerance during pregnancy, this new screening method could be expected to improve specificity while maintaining good sensitivity.

271. The Clinical Significance of Urinary NAG Activity in Toxemia of Pregnancy

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The urinary N-acetyl- β -D-glucosaminidase (NAG) activity was assayed with MCP-NAG in 140 normal, 19 mild toxemic pregnancies and 5 severe toxemic pregnancies.

In normal pregnancy, the urinary NAG activity rose progressively with advancing gestation, reaching the highest level (12.3 U/l) at 28~31 weeks. Urinary NAG activity in toxemic women with proteinuria was higher than that with hypertention.

In cases with severe toxemia of pregnancy, urinary NAG activity tended to rise before the manifestation of symptom, and progress of the disease correlated closely with NAG activity. In puerperium, urinary NAG activity in severe toxemia of pregnancy was gradually decreased from 20th day postpartum.

These results suggest that renal tubular function is slightly disturbed even during normal pregnancy and tubular dysfunction in toxemia of pregnancy becomes worse especially complicated with proteinuria.

NAG seems to be considered an indicative marker

of renal dysfunction of toxemia of pregnancy.

272. Evaluation of Serum SP₁ and Maximum Gestational Sac Measurements for the Screening of Abnormal Pregnancies in Early Gestation

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Simultaneous assessment of serum SP₁ levels and ultrasonographic evaluation was performed before nine weeks of gestation in 111 normal singleton and 49 abnormal pregnancies consisted of 22 threatened abortions with good prognosis, 8 blighted ova, 10 spontaneous abortions (5 with viable fetus), 3 incomplete abortions, 5 ectopic pregnancies (2 unruptured) and one hydatidiform mole. In 27 threatened abortions with poor prognosis, 23 cases (85%) showed SP₁ levels below the normal range and 17 cases (70%) showed abnormal maximum gestational sac diameters. All cases of spontaneous abortions with viable fetus showed abnormal SP1 levels. Serum SP1 measurement was more useful than ultrasound evaluation for abnormal pregnancies with poor prognosis in early gestation and in predicting the outcome of spontaneous abortion with viable fetus. A prediction accuracy of 100% was possible when we utilized simultaneous assessment of serum SP₁ and maximum gestatinal sac measurement.

273. Evaluation of Peripheral Circulation in the Field of Obstetrics and Gynecology

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A little is known about biodynamics of peripheral circulation under physiological condition with advancing age.

We studied on the changes of peripheral circulation along with age by using plethysmographic accleration pulse wave meter (APTG) and korotkoff sound graph (KSG). We evaluated cardiac output, total pulmonary resistance, PK time manifesting arteriosclerosis. We investigated also changes in wave from obtained from APTG and KSG at different position. Furthermore, peripheral circulation changes before and after treatment in patients with