

rapid changes as in acute DIC occur, the increase of TAT is accompanied by a decrease of ATIII, platelet counts and protein C, and an increase of FDP and D-dimers; this demonstrates much more clearly the chronic DIC nature of preeclampsia than the results from studies carried out so far.

85. The Study of Phospholipase A₂ Activity Derived from Umbilical Endothelial Cells of Toxemia of Pregnancy

H. SEKI, T. JIMBO and K. SATOH*

*Dept. Perinato-Gynec.,
Kagawa Med. Sch., Kagawa*

**Dept. Obst. & Gynec.,*

Saitama Med. Center, Saitama Med. Sch., Saitama

It is suggested that low production of PGI₂ by endothelial cells is one of aggravating factors in toxemia of pregnancy (TOX). Therefore, we investigated whether phospholipase A₂ (PLA₂) activity, which released arachidonic acid (A.A.) from cell membrane, affected PGI₂ production in TOX.

(1) Conversion volume from phosphatidylcholine to A.A. in normal pregnancy (NOR) was more than mild and severe TOX, but no significant difference was shown between them.

(2) The Vmax values for PLA₂ in NOR was significantly larger than in mild and severe TOX ($p < 0.05$).

(3) The Km values for PLA₂ in NOR was significantly larger than in severe TOX ($p < 0.05$). The Km values for PLA₂ in mild TOX was larger than in severe TOX, and smaller than in NOR, but no significant difference was shown between them.

The fact that both of Vmax and Km values are large, implies that A.A. is released very much in case of much existence of phosphatidylcholine. The volume of phosphatidylcholine in vivo is more than in this study. Therefore, it was concluded that A.A. supply in severe TOX was significantly less than in NOR, and that reduced A.A. supply was one of aggravating factors in low production of PGI₂ in severe TOX.

86. Evaluation of Serotonin Metabolism in Toxemia of Pregnancy

S. TAMURA, Y. TSUKAHARA, K. TANIGUCHI,
Y. OKATANI and Y. SAGARA

*Dept. Obst. & Gynec.,
Kochi Med. Sch., Kochi*

We evaluated the 5-HT metabolism in toxemia of pregnancy using a newly developed high sensitive simultaneous determination of plasma serotonin metabolites using HPLC with an electrochemical detection.

The mean plasma free 5-HT concentration in the toxemic subjects were significantly higher than that in the normal group. The mean plasma β -thromboglobulin concentration in the toxemic group was also significantly higher than that in the normal group. The mean platelet counts in the toxemic group showed a significantly lower value, however, the mean hematocrit level was significantly higher in the toxemic group. However, there were not significant differences in serotonin contents in platelet and total 5-HT/tryptophan ratio value. The mean plasma 5-HIAA/5-HT ratio in the toxemic group were significantly lower than that in the normal group.

We demonstrated that plasma 5-HT concentration was significantly higher in the toxemia of pregnancy. It is suggested that the higher plasma 5-HT concentration in the toxemia of pregnancy were attributed to the excess release of 5-HT from platelet. The lower monoamine oxidase activity in the toxemia of pregnancy were also an additional factor for the increase of plasma 5-HT levels.

87. A Study on the Prediction of Preeclampsia by Measuring Serum Antinuclear Factors and Anti-DNA Antibodies

O. TAKEMOTO, M. AKAMINE, T. KOBORI
and H. TAKAMIZAWA

*Dept. Obst. & Gynec.,
Sch. Med., Chiba Univ., Chiba*

We found many cases where pregnant women with collagen diseases developed preeclampsia. Therefore, we studied the relationship of the antinuclear factors (ANFs) and anti-DNA antibodies (A-DNAs) with the occurrence of preeclampsia. In addition, a questionnaire regarding 20 symptoms of collagen diseases was developed and used to study pregnant women. Thirty-four preeclampsia women, including 5 women complicated with collagen diseases, and 38 normal pregnant women were tested for serum ANFs and A-DNAs. The results are as follows:

1) Four items, i.e., cheek erythema, sunlight anaphylaxis, eczema (urticaria) and asthma were significantly higher in preeclampsia women than in normal pregnant women, according to the questionnaire.

2) ANFs and/or A-DNAs were positive in 45% of