

154 Platelet aggregation inhibiting activity of human placental villi. H.Iioka, S.Akada, H.Hisanaga, K.Morimoto, I.Moriyama, M.Ichijo, Dept. Obstet. Gynec., Nara Med. Univ., Nara.

We study the platelet aggregation inhibiting activity and ADP degrading activity of human placental villi (tissue culture supernatant) and brush border membrane vesicles (BBMV) and obtained the next results. 1. There existed a platelet aggregation inhibiting activity in tissue culture supernatant of villi (S-villi) but not in that of decidua and amnion. The S-villi inhibited the platelet aggregation induced by ADP, but not induced by collagen, arachidonic acid and ristocetin. And, there existed an ADP degrading activity (ADPase activity) in the S-villi. ADP was quickly degraded by S-villi. When ADP was preincubated with S-villi, platelet aggregation induced by ADP was lost perfectly. 2. There existed a very strong platelet aggregation inhibiting activity in placental BBMV. The BBMV inhibited almost perfectly the platelet aggregation induced by ADP, collagen, arachidonic acid and ristocetin. And, there existed a very strong ADP degrading activity in the placental BBMV. ADP was quickly degraded by BBMV. When ADP was preincubated with BBMV, platelet aggregation induced by ADP was lost perfectly. 3. The enzymatic character (heat stability, enzymatic kinetics,  $Ca^{++}$  dependency and pH dependency) of ADP degrading activity in BBMV had an very similarity with that in S-villi.

155 Clinical Evaluation of the Effect of Placenta Exchoriativa on Perinatal Anomalies. M. Yagishita, S. Izuchi, Y. Hara and K. Yoshida, Dept. Obst. and Gynec., Tokyo Med. Coll., Japan.

Placenta exchoriativa that is thought to result from an anomaly in the conceptus implantation site is considered a high-risk factor for various perinatal abnormalities. However, some reports contradict this hypothesis; thus, the related details have not been clarified. Recently, we compared 1,624 cases of placenta exchoriativa and their clinical courses with controls, evaluating the effect of placenta exchoriativa on perinatal anomalies. Results showed that perinatal death, threatened abortion, premature delivery, and fetal malformation in patients with placenta exchoriativa was significantly more frequent than in the controls, suggesting that placenta exchoriativa is a high-risk factor. Recent progress in ultrasonographic diagnosis has enabled this disease to be predicted in some cases, suggesting the necessity of closely observing not only the fetus but the placenta as well.

156 Sonographic detection of pathological hypertortion of umbilical cord by the "Pitch" of cord twisting

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The twisting "Pitch" of umbilical cord was calculated by measuring the length of a twist of the cord divided by its diameter after 653 deliveries. Normal length of postpartum umbilical cord was 38 to 74cm, the diameter 0.8 to 1.7cm, the number of twists 3 to 20 times, twisting "Pitch" 2.0 to 9.7. 60 cases of intrauterine hypertortion of umbilical cord were diagnosed by real-time ultrasonography when the "Pitch" was less than 2.0, and its diagnostic accuracy was 60.6%. The resistance index of umbilical arterial blood flow was significantly lower in cases of cord hypertortion than that of normal cases. The umbilical vein blood flow wave form showed characteristic fluctuation synchronized with arterial pulsation, particularly in the case of PROM caused by intrauterine infection or IUGR.