Japan Society of Obstetrics and Gynecology

532 Immunological functions of human decidual macrophages in early spontaneous abortion. M.Mizuno, T.Kimbara, K.Aoki, Y.Yagami, Dept.obst.and Gynec., Nagoya City Univ. Sch. Med., Aichi.

The purpose of this study is to investigate the immunological functions of decidual macrophages (D.Mϕ) in early spontaneous abortion (Group I) compared with those in normal pregnancy (Group II). The D.Mϕ were obtained from pregnant women at 6-10 weeks of gestation. 1)To examine alloantigen presenting capacity (APC) of the D.Mϕ, mixed lymphocyte culture was performed. 2)For MLR inhibition test, pregnant women's MNC as responder and husbands' MNC as stimulator were cultured with the D.Mϕ as regulator. An inhibition test of PHA response was also performed. 3)The supernatant of PHA-stimulated D.Mϕ was examined for the productions of IL-1 α, β (by ELISA) and PGE_2 (by RIA). Results: 1)The APC of Group I had higher values than those of Group II. 2)On the MLR inhibition test, Group I showed a lower suppressive activity than Group II ($p<0.01$). The inhibition test of PHA response showed similar tendencies. 3)The productions of IL-1 α, β in the Group I were higher than those in the Group II. There were no differences at the productions of PGE_2 between the two groups. These results suggest that the decidual macrophages in early spontaneous abortion show disadvantageous phenomena for immunological maintenance of pregnancy.

533 Anti-Calphobindin-I auto-antibody in patients with recurrent abortions. N.Nishikimi, Y.Hayashi, K.Aoki, T.Nakaya, M.Sasaki*, Y.Yagami, Dept. Obst.and Gynec., and *Dept.of Biochem., Nagoya City Univ.Med.Sch., Aichi.

Calphobindin-I (CPB-I) is a protein found in various organs, and was first identified in human placenta. The protein blocks the coagulation process by binding to phospholipid in the presence of calcium, suppressing either the intrinsic or extrinsic cascade. In this experiment, anti-CPB-I auto-antibody levels in sera of 78 patients with recurrent abortions were determined. The level of the auto-antibody in sera of 45 women without a history of recurrent abortions were used as a control. CPB-I was purified from human placenta and used for ELISA to determine the level of anti-CPB-I auto-antibody. The level of anti-phospholipid antibody was also determined by ELISA. Patients with recurrent abortions showed significantly higher levels of IgG class anti-CPB-I antibody as auto-antibody. Those with greater values than the normal upper limit (mean plus 3 SD of the control sera) were defined as serum anti-CPB-I auto-antibody positive. In 6 out of 9 patients who were anti-CPB-I auto-antibody positive, anti-phospholipid antibody was also positive. This result suggests that anti-CPB-I auto-antibody is one of the causes of recurrent abortions associated with regulation of the blood coagulation system.

534 Binding of nuclear factors extracted from trophoblastic tumor cells to the regulatory elements of HLA class I gene. K.Ohashi, M.Koyama, A.Wakimoto, M.Kato, F.Saji O.Tanizawa. Dept. Obst. & Gynec., Osaka University Medical School, Osaka.

Restrictive expression of class I MHC antigens on human trophoblasts play an important role for the survival of feto-placental unit during pregnancy. To investigate the regulatory role of the class I regulatory element (CRE), we studied the binding of nuclear proteins to the CRE of HLA-A2 gene (CRE-A2) by the gel shift assay. We synthesized two human CRE oligonucleotides (hR1 and hR2) homologous to murine CRE. Nuclear extracts from several human trophoblastic tumor cell lines expressing different levels of surface class I molecules reveal an hR1-A2-protein complex of similar mobility, the amount of which varies in a cell type-dependent manner. In contrast to hR1, hR2 located at 80 bp upstream from hR1 could bind to at least two nuclear proteins, the binding patterns of which were different between HLA class I positive and negative cell lines. These results suggest that hR1-nuclear protein interaction may be required for transcription of HLA class I genes and the multiple trans-acting factors which recognize hR2 element seem to regulate the gene transcription as different modulations that include enhancer or receptor.

NII-Electronic Library Service