

508 Monitoring of macrophage-colony stimulating factor (M-CSF) and granulocyte-colony stimulating factor (G-CSF) level of amniotic fluid. A. Ito, M. Saito, Y. Katsumoto, T. Nakagawa, K. Motoyoshi*, Dep. Obst. and Gynec., Habikino Prefectural Hosp., Osaka, * 3rd Dep. Internal Medicine, National Defense Medical College, Saitama.

We monitored macrophage-colony stimulating factor (M-CSF) and granulocyte-colony stimulating factor (G-CSF) level of amniotic fluid, cord blood serum and neonatal urine. M-CSF level of amniotic fluid was very high (17.3 ± 8.5 ng/ml) and M-CSF level of cord blood serum (12.75 ± 2.73 ng/ml) was higher than M-CSF level of adult peripheral blood serum (5.70 ± 0.74 ng/ml). We could measure high M-CSF level of neonatal urine on the day of birth, and M-CSF level was still elevated on 6 days after birth. This result suggests that new born infants produce large amount of M-CSF, G-CSF level of amniotic fluid was 1.85 ± 1.73 ng/ml, while G-CSF level of cord blood serum, adult peripheral blood serum, neonatal urine could not be detected. By the immuno-histochemical method M-CSF and G-CSF were detected at the epithelium of fetal membrane. Our conclusion is M-CSF and G-CSF are found in amniotic fluid. Fetal membrane produces both M-CSF and G-CSF and it's also suspected new born infants produce a lot of M-CSF.

509 Effect of macrophage-colony stimulating factor (M-CSF) on trophoblast cells. M. Saito, A. Ito, Y. Katsumoto, T. Nakagawa, K. Motoyoshi*, Dep. Obst. and Gynec., Habikino Prefectural Hosp., Osaka, *3rd Dep. Internal Medicine, National Defense Medical College, Saitama.

To study the effect of macrophage-colony stimulating factor (M-CSF) on human trophoblast cells, we cultured trophoblast cells of early pregnancy with M-CSF, anti-M-CSF Ab and anti-fms Ab (anti-M-CSF receptor antibody). M-CSF increased the HCG production of trophoblast cells, and anti-fms Ab decreased the HCG production. Trophoblast cells under the condition of adding 20 ng/ml M-CSF aggregated each other and became larger than trophoblast cells without exogenous M-CSF. The human trophoblast cell line, tPA30-1, could not be alive when they were incubated with anti-fms Ab. Anti-M-CSF Ab decreased the number of tPA30-1, but the number of tPA30-1 recovered with a large amount of M-CSF. Our results show that M-CSF increases HCG production of trophoblast cells and M-CSF is essential for trophoblast cells survival.

510 The ultrastructural study of the transport of human prolactin across fetal term membrane. S.Satoh, T.Tamada, Dept. Obst. and Gynec., Jichi Med. Sch., Tochigi.

The human amniotic fluid contains a considerably higher concentration of PRL. And it is widely accepted that decidual cells are the origin of amniotic fluid PRL, and decidual cell PRL moves into amniotic fluid across the fetal membranes. But, transport of PRL by decidua-chorion or fetal membrane remains to be elucidated. Our morphological study attempts to demonstrate by the help of electromicroscopy the transport of PRL across fetal membrane which obtained at normal spontaneous term vaginal delivery.

With use of immunohistochemical procedures, namely PAP complex method, immunized anti-PRL revealed PRL reactivity around the globules of the decidua-chorion cells.

These results lead us to conclude that PRL contained within the decidua-chorion cells crosses the chorion cells to the amniotic cells side and diffuse readily into amniotic fluid.