541 The comparison of adult peripheral blood and cord blood for the unique lymphocyte subpopulations. T. Matsuda, T. Kagabu, I. Nishiya, Dept. of Obst. and Gynec., Iwate Medical Univ., Iwate.

The development of two-color analysis of lymphocytes and newly identified surface antigens enable us to distinguish the unique subpopulations of lymphocytes. $\gamma\delta$ T cells, $CD5^+$B cells and NKH-1^+T cells(non-MHC-restricted cytotoxic T cells) are these ones and their roles in immune system are vigorously investigated. To investigate the development of human immune system, the percentages of these populations in adult peripheral blood lymphocytes(PBL) and cord blood lymphocytes (CBL) were analyzed by flow cytometer using two-color fluorescence staining. Interestingly, in CBL, the level of $\gamma\delta$T cells were lower than in PBL. B cells were determined by CD19 or CD20. In CBL, most of B cells($CD19^+$) expressed CD5 as reported previously. In adult PBL, $CD5^+$B($CD20^+$) cells were devided into two subsets:$CD5^{dim+}CD20^{bright+}$, $CD5^{bright+}CD20^{dim+}$. In CBL, the latter didn't exist. Cells that possess NK surface antigens were fewer in CBL. Especially, NKH-1^+ $CD3^+$ cells were few. These populations that increse in adult PBL may play a special role in adult immune system.

542 Two human monoclonal anti-cardiolipin antibodies derived from the same patient and their reactivity against endothelial cells.
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To elucidate a possible mechanism of thrombosis caused by anti-phospholipid antibody with its immunological characteristics, the immunological and coagulogical analyses were performed by human monoclonal anti-cardiolipin antibodies. Two monoclonal anti-cardiolipin antibodies (A,B) were obtained by EB virus transformation followed by limiting dilutuion from B cells of the same recurrent aborter with anti-phospholipid syndrome. Direct binding assay to various phospholipids on ELISA revealed that antibody A reacted exclusively with cardiolipin, while antibody B reacted with negatively charged'phospholipids including cardiolipin in common. Both antibodies (especially A) showed the lupus anticoagulant activity on APTT, suggesting the close correlation between anti-cardiolipin antibody and lupus anticoagulant. In addition, antibody B strongly reacted with the endothelial cells (HUVEC) on cellular ELISA. These results suggest that there are variations in anti-cardiolipin antibody and that antibody to negatively charged phospholipids might perticipate in thrombosis through the reaction with endothelial cells.

543 Establishment of in vitro model for placenta with chorioamnionitis. T. Kameda, M.Yamazaki, Osaka Rousai Hospital, Osaka

Intrauterine infection is one of the major cause of preterm delivery. Some studies reported the increase of IL-1 and TNFα in the amniotic fluid complicated with intrauterine infection, and that IL-1 and enhance the production of prostaglandins which were one of the major stimulators of uterine contraction. However the cell population which produces these cytokines r emained to be determined. In this study, we demonstrated by tissue culture and immunohistochemical analysis method that the trophoblasts in the placentas, especially those comlpicated with chorioamnionitis, actively produced these cytokines. Moreover, we established the in vitro model for chorioamnionitis by stimulating the purified trophoblasts with mitogens to investigate the mechanism for the enhanced production of the IL-1 from the trophoblast complicated with chorioamnionitis. Our in vitro analysis demonstrated that trophoblasts showed an unique response to lipopolysaccharide and Staphylococcus aureus Cowan I, but not to concanavarin A. Our data suggested that trophoblast-derived IL-1 and TNFα produced during chorioamnionitis might contribute in triggering the uterine contraction.