she delivered a boy weighing 2,960 g in Week 39 of pregnancy (normal transvaginal delivery). In the present case, she became pregnant spontaneously. The course of pregnancy was not contributory. On Day 5 of Week 37, natural labor pain occurred, and she was admitted. On the same day, a boy weighing 3,052 g was born (normal transvaginal delivery). For resuscitation, routine care alone was conducted. After birth, there was no abnormal finding including specific face. After the first session of lactation, vomiting was noted several times. On Day 1 of age, petechia of the face was observed. A blood test showed a leukocyte count of 59,700/μL and a percent blast of 28%. For detailed examination, the neonate was referred to our hospital, and bone marrow biopsy was performed on Day 5 of age. The level of a myelocyte surface marker suggested TAM or acute myelocytic leukemia M7. The blast count was approximately 10,000/μL, but both the leukocyte and blast counts decreased from Day 12 of age. Histopathologically, a large number of blasts were detected in the umbilical and stem villus blood vessels. The villus tissue consisted of mature intermediate and terminal villi, and there was no immature villus. PHA-free G-banding of peripheral blood on admission showed nuclear type 47, XY, +21 [20]. On Day 23 of age, the leukocyte count and percent blast were 13,270/μL and 1%, respectively, showing decreases. The neonate was discharged, and follow-up was continued at the outpatient clinic. The FISH method using a buccal mucosa specimen submitted during admission led to a diagnosis of mosaic Down syndrome. We present pathological findings of the placenta, and review the literature.

33.
CORE2 BETA 1, 6-N ACETYLGLCOSAMINYL TRANSFERASE PROMOTES INVASION OF CHORIOCARCINOMA CELLS THROUGH GLYCOSYLATION TO MICA AND MUC1

Kaoru Niimi [1], Eiko Yamamoto [2], Kenichi Nakamura [1], Yukari Taguchi [1], Eri Watanabe [1], Kimihiro Nishino [1], Fumitaka Kikkawa [1]. [1] *Department of Obstetrics and Gynecology, Nagoya University Graduate School of Medicine;* [2] *Department of Healthcare Administration, Nagoya University Graduate School of Medicine*

Hyperglycosylated human chorionic gonadotropin (H-hCG), which contains much larger sugar chains than regular hCG, is secreted from choriocarcinoma patients but not normal pregnancy or hydatidiform mole. O-linked H-hCG is one of important factors in invasion and growth of choriocarcinoma cells, and core2 beta 1, 6-N acetylglcosaminyl transferase (C2GnT) forms core2 O-glycan. The aim of this study is to examine roles of C2GnT in invasion mechanism of choriocarcinoma cells, especially related to the NK cell immunity. We investigated C2GnT expression in gestational trophoblastic diseases and placentas by immunohistochemistry and western blotting. We established C2GnT knockout (KO) cells with Jar and BeWo cells and investigated cytotoxicity of NK cells against those cells. MICA and MUC1 glycosylation were analyzed by immunoprecipitation. We incubated C2GnT-KO and control with TRAIL and cell viability were analyzed. We inoculated the C2GnT-KO and control cells subcutaneously into nude mice. C2GnT was highly expressed in trophoblasts of choriocarcinoma but not in hydatidiform mole and normal placenta. C2GnT-KO cells were more efficiently killed by NK cells than controls. Sugar chains attached by C2GnT on MICA and MUC1 in C2GnT-KO cells were significantly decreased. The cell viability of C2GnT-KO cells were lower than controls depending on TRAIL amount. C2GnT-KO promoted longer survival as compared with the controls. Choriocarcinoma cells may acquire a high malignant potential by expressing C2GnT with glycosylation to MICA and MUC1.

34.
STERILE INFLAMMATION IN PRETERM BIRTH WITHOUT CHORIOAMNIONITIS

Yasuyuki Negishi [1], Masahiko Kato [2], Yoshio Shima [3], Rimpei Morita [1], Hidemi Takahashi [1], Toshiyuki Takeshita [2]. [1] *Department of Microbiology and Immunology, Nippon Medical School;* [2] *Department of Obstetrics and Gynecology, Nippon Medical School;* [3] *Department of Pediatrics, Nippon Medical School Musashikosugi Hospital*

Introduction: Infectious diseases can induce preterm birth (PB). In particular, chorioamnionitis (CAM) is believed to be a trigger for PB. However, cases of PB without histological CAM and of unknown etiology are often encountered. In this study, the kinetics of immune cells in the decidua of PB without CAM was evaluated.
Methods: The decidua basalis and parietalis were obtained from women with PB without CAM at gestational ages of 24^{+0}–33^{+6} weeks. The participants were classified into two groups: those with labor pain and/or rupture of membrane (nCAM−w-LR) and those without these features (nCAM−w/o-LR). The immune cells in the decidua were analyzed using flow cytometry.
Results: Compared with the nCAM−w/o-LR group, increased population of invariant natural killer T (iNKT) cells and expressions of TLR4, receptor for advanced glycation and products, and CD1d on dendritic cells and macrophages were observed in the decidua parietalis of the nCAM−w-LR group. Moreover, the concentrations of high-mobility group box 1 (HMGB1) proteins in the viable and dead cells were up-regulated in the nCAM−w-LR group than those in the nCAM−w/o-LR group.
Conclusions: The cellular network in the iNKT cells, DCs, and macrophages may contribute to the onset of preterm labor and rupture of membrane without CAM. Endogenous molecules, such as HMGB1, may function as aggravating factors or activation triggers for these innate immune cells, and may subsequently lead to sterile inflammation in the implantation site.

35.
EG-VEGF ENHANCES THE TROPHOBLAST INVASION THROUGH ACTIVATION OF MMP-2 AND MMP-9 VIA PROKR2 IN THE HUMAN TROPHOBLAST CELL LINES

Kazumasa Tani, Sakurako Mishima, Akiko Ohira, Jota Maki, Shoko Tamada, Takashi Mitsui, Eriko Eto, Kei Hayata, Hisashi Masuyama. *Department of Obstetrics & Gynecology, Okayama University*

Objective: Trophoblast invasion is an important event in embryo implantation and placental development. Dysregulation of the finely controlled process of trophoblast invasion can lead to preeclampsia.
This study aimed to unveil the role of EG-VEGF, PROKR1/2, matrix metalloproteinase (MMP)-2 and MMP-9 in trophoblast invasion during spiral artery remodeling in the human trophoblast cell lines (HTR-8/SVneo).
Methods: The expression of HIF1-α, EG-VEGF, MMP-2 and MMP-9 was detected using real-time RT-PCR in HTR-8/SVneo under 5% oxygen condition for 24 h. MMP-2 and MMP-9 expressions were detected using real-time RT-PCR and Western blot in HTR-8/SVneo treated with recombinant EG-VEGF, PROKR1 antagonist, PROKR2 antagonist under 20% oxygen condition for 24 h.
Results: The expression of HIF1-α, EG-VEGF, MMP-2, MMP-9 was increased under 5% oxygen condition. MMP-2 and MMP-9 expressions were decreased with PROKR2 antagonist under 20% oxygen condition.
Conclusion: EG-VEGF enhances the trophoblast invasion through activation of MMP-2 and MMP-9 via PROKR2 in the human trophoblast cell lines.

36.
FREQUENCY OF PERFORMING UTERINE ARTERY EMBOLIZATION FOR TREATMENT OF THE TOTALLY RETAINED PLACENTA

Jun Okayama, Akiko Omoto, Rie Shinno, Yoshiya Suzuki, Akiko Nagasawa, Emiri Nakada, Mariko Inoue, Hirokazu Usui, Makio Shozu. *Department of Maternal and Fetal Medicine, Chiba University Hospital*

Objective: Retained placenta occurs at a frequency of about 2%, often leads to postpartum hemorrhage. Although uterine artery embolization (UAE) is implicated to be useful, there is complication for its use in the management of the postpartum hemorrhage. We reviewed the retained placenta cases managed in our hospital.
Subjects and Methods: During April 2010 and March 2019, there were 50 cases with partially retained placenta and 50 cases with totally retained placenta. The later cases only were the subject of this retrospective study.