been obtained regarding management of decidual polyp during pregnancy. We follow up conservatively without excision when we diagnose decidual polyp. In this study, we report the perinatal events of the pregnancy complicated with decidual polyp that occurred.
Methods: This retrospective study included patients with pregnancy complicated with decidual polyp in our hospital between January 2016 and June 2019. We investigated the perinatal events including the rate of preterm delivery, gestational age of diagnosis of decidual polyp, cervical length shortening, cervical cerclage, and hospitalization due to threatened premature labor.
Results: During the study period, total of 20 women had diagnosed pregnancy complicated decidual polyp, and 1 case was spontaneous abortion at 13 weeks of gestation, 10 cases delivered prematurely. The median value of gestational age on diagnosis of decidual polyp was 9 weeks (6-18 weeks), and gestational age on delivery was 36 weeks (26-39 weeks). Cervical cerclage was performed in 13 cases with shortened cervix before 25 weeks of gestational age. 2 cases delivered before 28 weeks of gestational age with shortened cervical length without cervical cerclage. There were no cases with intrauterine infection after cervical cerclage.
Conclusion: Pregnancy complicated with decidual polyp may associate with premature delivery with shortened cervical length, and cervical cerclage may be effective.

45.
ADVERSE EFFECTS OF ENDOMETRIOSIS ON PREGNANCY

Mayo Miura, Yoshinori Moriyama, Takafumi Usida, Kenji Imai, Tomoko Kobayashi, Tomomi Kotani, Fumitaka Kikkawa. *Department of Obstetrics and Gynecology, Nagoya University Graduate School of Medicine*

Objective: Pregnancy outcome of pregnant women who had endometriosis remains unknown. The aim of this study is to evaluate the obstetrical complications and neonatal outcomes among pregnant women with endometriosis.
Methods: This was a retrospective case-control cohort study from 2010 to 2017. Maternal obstetric complications and neonatal outcomes were compared between endometriosis group (n = 80) and control group (n = 2,689).
Results: The several characteristics were significantly different in maternal age (34.2 vs 32.9 years), the percentages of primiparity (83.8% vs 54.7%) and ART (28.7% vs 12.8%) between the two groups. There were no significant differences in the proportions of preterm birth, small for gestational age and placental abruption. Neonatal outcomes including birth weight, Apgar score and NICU admission in the endometriosis group were also similar to those in the control group. The proportion of placenta previa in the endometriosis group (10/80) was higher than that in control group (109/2,689). In multivariate analysis, endometriosis significantly increased odds for placenta previa (aOR 3.19, 95% CI [1.56–6.50]).
Conclusion: Our results suggested that endometriosis might be an independent risk factor for placenta previa. The pathological mechanisms remain unknown, but severe endometriosis that was required to surgical treatment for pain or infertility might be associated with pathology of placental previa.

46.
REGULATION AND ROLE OF PROGESTERONE RECEPTOR MEMBRANE COMPONENT 1 (PGRMC1) IN ENDOMETRIAL STROMAL CELL DECIDUALIZATION

Atuya Tsuru [1], Mikihiro Yoshie [1], Ryo Yonekawa [1], Junya Kojima [2], Hirotaka Nishi [2], Keiichi Isaka [2], Kazuhiro Tamura [1]. [1] *Department of Endocrine Pharmacology, Tokyo University of Pharmacy and Life Sciences;* [2] *Department of Obstetrics and Gynecology, Tokyo Medical University*

Objective: Human endometrial stromal cells (ESCs) differentiate into decidual cells, called as decidualization during the mid-secretory phase of the menstrual cycle. Progesterone (P4) induces decidualization via the binding to its classical receptor PGR. PGR membrane component 1 (PGRMC1), a P4 binding protein has been suggested to be involved in P4 action. In this study, we examined the regulation and role of PGRMC1 in ESCs decidualization.
Methods: Expression of PGRMC1 was examined in the proliferative and secretory phases of endometrium by immunohistochemistry. Primary cultured ESCs were stimulated with P4 and dibutyryl (db)-cAMP to induce decidualization. The microRNA which regulates PGRMC1 was explored in ESCs. Furthermore, the effects of siRNA-mediated knockdown and an inhibitor (AG-205) of PGRMC1 on the expression of decidual markers (IGFBP-1 and prolactin) were evaluated by qRT-PCR.
Results: PGRMC1 was expressed in glandular epithelial and stromal cells of the endometrium throughout the menstrual cycle, but their expression was decreased in the secretory phase. PGRMC1 expression was down-regulated in P4 and db-cAMP-stimulated decidual ESCs. Transfection of miR-98 mimic into ESCs repressed PGRMC1 expression. In contrast to PGRMC1, miR-98 expression was increased in P4 and db-cAMP-stimulated decidual cells. Knockdown and inhibition of PGRMC1 significantly enhanced decidualization.
Conclusion: These findings suggest that secretory phase-specific down-regulation of endometrial PGRMC1 regulated by miR-98 may promote decidualization for the establishment of pregnancy.

47.
GENETIC ANALYSIS OF FOUR PLACENTAL MESENCHYMAL DYSPLASIA CASES

Akiko Omoto, Hirokazu Usui, Makio Shozu. *Department of Maternal and Fetal medicine, Chiba University*

Placental mesenchymal dysplasia (PMD) is a rare condition that is characterized by placentomegaly and stem villi vessels dilation. Although androgenetic/biparental mosaicism or chimerism has been reported in PMD, evidence regarding its etiologic significance in PMD is scare. Here we analyzed the genetic composition in four PMD cases and the correlation between genetic composition and placental morphology.
During 2007-2019, PMD was diagnosed in five patients based on prenatal ultrasonographic appearance of the placenta and confirmed by placental histology after delivery. Four of the five cases were examined for genetic composition by short tandem repeat (STR) genotying and karyotyping and included in the analysis. No congenital malformation was observed.
Ultrasonography showed placental multicysts in the first or early second trimester, and the number of cysts tended to decrease with the advancement of pregnancy (case #1). The histological changes in mesenchymal vessels were modest in one placenta (case #1) that was delivered at term. Karyotyping revealed 47,XXY/47,XY,+13 mosaicism in one placenta (case # 2). STR analysis of the placental tissues revealed one biparental mosaicism of two (case #1), one biparental mosaicism of at least three (case #2), and two biparental cells without mosaicism (case #3, #4). Four loci of case #2 were presumed to be uniparental origins, one paternal and three maternal. We detected mosaicism of biparental diploid cells in two cases. We also did not find any correlation between the ultrasonographic appearance of the placenta and genetic abnormality.

48.
ANTENATAL PLACENTAL PATHOLOGICAL ASSESSMENT USING SUPERB MICRO-VASCULAR IMAGING (SMI)

Natsumi Furuya, Junichi Hasegawa, Nao Suzuki. *St. Marianna University School of Medicine, Department of Obstetrics and Gynecology*

Superb Micro-vascular Imaging (SMI; Canon Medical Systems, Tokyo) is a new blood flow imaging technique which analyzes the characteristics of clutter motion and uses a new adaptive algorithm to identify and remove tissue motion and reveal the true blood flow. Therefore, compared to conventional blood flow imaging, SMI can significantly visualize low-velocity blood flow in small vessels. Therefore, we considered SMI technic was particularly valuable in placental assessment during pregnancy. In our research, comparing ultrasound findings using SMI with placental histological findings after delivery, it is demonstrated that histological findings including congestion of villous stem vessels, placental infarction, increase

of terminal villous vessels, and avascular villi were distinguishable by this technique in 8 cases. We believe this new blood flow imaging technique is acceptable not only for the purpose of perinatal clinical assessments but also pathophysiological clarifications of various placental abnormalities.

49.
NEW ASSAY FOR DETECTING ENDOPLASMIC RETICULUM STRESS-MEDIATED AUTOPHAGY FAILURE IN HUMAN TROPHOBLASTS

Akitoshi Nakashima, Tae Kusabiraki, Aiko Aoki, Akemi Ushijima, Ippei Yasuda, Sayaka Tsuda, Tomoko Shima, Shigeru Saito. *Department of OB/GYN, Faculty of Medicine, University of Toyama*

Purpose: Excessive endoplasmic reticulum stress [ERS] leads to placental dysfunction, resulting in pre-eclampsia [PE]. It is still unknown the mechanisms by which excessive ERS impacts trophoblasts. Here, we show that ERS affects autophagy via reducing the lysosomes in trophoblast cells.
Methods: Trophoblast cell lines and primary human trophoblasts [PHT] were devoted in this study. All human samples were obtained from the patients with informed consent. Tunicamycin [TM] or brefeldin A [BFA] was for inducing ERS.
Results: TM or BFA increased the LC3-II expression, an autophagosome [Ap] marker, in the trophoblast cell lines. We then compared the numbers of Ap and autolysosomes [Al] by immunocytochemistry; the number of Ap but not Al was increased in the cells with BFA or TM, but both Ap and Al were increased in the cells with control, suggesting blockade of autophagy flux by ERS. Next, ERS reduced the number of intracellular and cellular surface lysosomes, suggesting the inhibition of lysosomal exocytosis. The ERS-mediated inhibition of lysosomal exocytosis was supported with the result that the LAMP1 in the culture media was detected from the control cells, but not the cells with TM. In addition, serum LAMP1 and beta-galactosidase levels, a lysosomal hydrolytic enzyme, were significantly decreased in PE patients, compared to normal pregnancy, indicating ERS-mediated lysosomal dysfunction in PE placentas.
Conclusion: Excessive ERS inhibits autophagy via impairment of lysosomes, resulting in disruption of homeostasis in trophoblasts.

50.
A CASE REPORT; INNOVATIVE IMAGING TECHNOLOGIES OF SMI, ATI, AND SMART FUSION WITH MRI WERE USEFUL TO IDENTIFY THE LOCATIONS OF PLACENTAL HEMATOMAS

Takeshi Umazume [1], Michinori Mayama [1], Yoshihiro Saito [1], Kinuko Nakagawa [1], Kentaro Chiba [1], Satoshi Kawaguchi [1], Mamoru Morikawa [1], Yuko Tashiro [2], Ayumi Ishida [2], Hidemichi Watari [1]. [1] *Department of Obstetrics amd Gynecology, Hokkaido University;* [2] *Canon Medical Systems Corporation*

Introduction: We report a case that three new ultrasonographic technologies of superb microvascular imaging (SMI), attenuation imaging (ATI), and real-time MRI and ultrasound (MRI-US) display technology (Canon Medical Systems Corporation) were useful to determine the precise location and extent of the hematomas.
Case: A 30s-year-old nulliparous Japanese woman was referred to our hospital at gestational week (GW) 15 owing to vaginal bleeding. The posterior wall of the uterus was thickened with adenomyosis, and the placenta attached on the thickened posterior wall. Because arteriovenous fistulas at the lower right side of the uterine was confirmed, we took MRI at GW 16–6/7 and examined the placenta using real-time MRI-US display technology at GW 17–0/7. We identified post-placental hematoma and peri-, pre-placental tiny hemorrhage using MRI-US fusion technique with SMI. At GW 19, the pre-placental hemorrhage enlarged to more than half size of placenta and formed fluid-fluid level in the hematoma. The border with placenta parenchyma and the hematoma was indistinct but was able to identify using ATI.
Discussion: The placental hematoma may cause the placental abruption. However, the location of hematoma could not be determined by conventional ultrasound because hematomas may be isoechoic to placental tissue. SMI, which can reveal microscopic and low-velocity blood flow, and ATI, which displays a color maps with an attenuation coefficient of the supersonic wave signal intensity, may be useful to identify the placental hematoma.

51.
PLACENTAL POLYP FROM SECOND-TRIMESTER ABORTION

Kazuya Mimura [1,2], Masayuki Endo [1,2], Tatsuya Miyake [1], Aiko Kakigano [1], Shinya Matsuzaki [1], Yoko Kawanishi [1], Takuji Tomimatsu [1], Tadashi Kimura [1]. [1] *Department of Obstetrics and Gynecology, Osaka University Graduate School of Medicine;* [2] *Center for Fetal Diagnosis and Treatment, Osaka University Graduate School of Medicine*

Objective: Second-trimester abortion is often performed in Japan by induction using gemeprost. Although the frequency of complications is lower than in term delivery, the mental burden is large and safety needs to be more carefully considered.
Methods: We conducted a retrospective study of pregnant women who underwent second-trimester abortion for eight years in our hospital. Color Doppler ultrasound was used to investigate the incidence of placental polyps after delivery and the time required for remission.
Results: The mean appearance of placental polyps with vascularity was 3 weeks later after delivery. There were few cases of bleeding that required hospitalization. All cases disappeared within 5 months of expectant management.
Conclusion: 1) The incidence of placental polyps with vascularity after second-trimester abortion is high. 2) Because the appearance is not immediate and most are asymptomatic, there are many cases that are not noticed. 3) Even if there is bleeding, menstruation may only be resumed. Few cases need invasive treatment such as UAE or TCR. 4) All cases disappeared spontaneously on expectant management.

52.
MANAGEMENT OF RETAINED PRODUCTS OF CONCEPTION (RPOC): THE EXPERIENCE IN A SINGLE HOSPITAL

Mizuki Hattori, Chifumi Oyagi, Sayaka Suga, Mari Tabuse, Mai Nagai, Naho Umezawa, Soonna Yoon, Etsuko Nakao Kajimoto, Yumiko Kiyohara, Tateki Tsutsui. *Japan Community Health care Organization Osaka Hospital*

Objective: To compare our management for RPOC among patients who were followed under observation or aggressive treatments such as suction curettage, hysteroscopic removal, uterine artery embolization (UAE) and total hysterectomy.
Methods: We retrospectively reviewed medical records of 23 women who were treated for RPOC in our hospital between 2014 and 2019.
Results: RPOC of 12 women which could be followed under watchful observation disappeared spontaneously within an average of 120 days. Only one patient who underwent first-trimester abortion had massive bleeding during observation. Therefore, she was treated with a total hysterectomy. In other cases, we performed D&C (Dilation & Curettage) for three women, hysteroscopic removal for two women, following under observation after UAE for one woman and hysteroscopic removal after UAE for four women.
Conclusion: RPOC can trigger massive bleeding suddenly. If it happens, it is possible that we perform a total hysterectomy. Thus, we should evaluate how many risks each patients have when RPOC occurs. It is sensible that patients who are expected to have only a few risks may be allowed to be managed under observation strictly and wait for disappearance of RPOC spontaneously.

53.
IMAGE ANALYSIS AND PATHOLOGICAL DIAGNOSIS OF PLACENTAL SLOW BLOOD FLOW REGION

Rie Oyama, Yuri Sasaki, Chizuko Isurugi, Miyuki Terata, Hanae Kamura, Shinya Hatayama, Gen Haba, Atsumi Chiba, Tsukasa Baba. *Department of Obstetrics and Gynecoloy, Iwate Medical University*