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*