

growth was maintained  $-2.5$  to  $-3SD$ . She was admitted to hospital because she had abnormal blood flow 33 weeks of gestation. An emergency cesarean section was performed at 35 weeks of gestation because of an abnormality in the blood flow waveform in Ductus venosus and the onset of labor pain. She delivered a girl with a weight of 1596g, Apgar score of 1min 7.5min 8, UA pH: 7.337. Placenta weight was 244 g, and the pathological search showed mild MFI.

**Conclusion:** MFI emphasizes the importance of a placental examination with FGR. Given the risk of recurrence, it is also reported that low dose aspirin is useful for the next pregnancy. The identification of MFI should alert the clinician to the potential for FGR in subsequent pregnancies. It is important to carefully manage perinatal period and to carry out pathological examination of postpartum, keeping in mind this disease, especially in cases where FGR cases did not show abnormal findings before birth.

#### 58. INCREASING SOLUBLE FMS-LIKE TYROSINE KINASE1(SFLT1) IN PREECLAMPSIA CONTROLS ONESELF THROUGH ARGINASE

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**Objective:** The relationship between arginase and sFlt1 in preeclampsia was examined.

**Method:** 1. Serum samples of pregnant women, delivered at the Osaka University Hospital, Osaka, Japan, was measured. Arginase activity (units per liter of sample(U/L)) was determined to measure urea produced in the arginase reaction. Sandwich ELISA for the detection of sFlt1 was performed. 2. HUVECs from three normotensive pregnant women were mixed on fourth passages and used for experiments at passages 5 to 6. Arginase was measured by arginase assay.

**Results:** 1. Higher values of both sFlt1 and arginase activity were detected in the plasma of Hypertensive disorders of pregnancy (HDP) women compared with the normotensive (NT) group ( $p < 0.01$ ). The pregnant women were divided into four groups: group 1, sFlt1  $< 6000$ pg/ml and arginase activity  $< 110$  U/L; group 2, sFlt1  $\geq 6000$ pg/ml and arginase activity  $< 110$  U/L; group 3, sFlt1  $\geq 6000$ pg/ml and arginase activity  $\geq 110$  U/L; group 4, sFlt1  $< 6000$ pg/ml and arginase activity  $\geq 110$  U/L. The number of subjects in the NT group included in group 1 was much larger than in the HDP group (45.5% versus 0.0%  $p < 0.005$ ). The number of subjects in the NT group included in group 3 was conversely much smaller than in the HDP group (60.0% versus 0.0%  $p < 0.005$ ). 2. A slightly higher concentration of sFlt1, as in group 2, reduced arginase expression and arginase activity in HUVECs. BEC (S-(2-boronoethyl)-L-cysteine; arginase inhibitor) impaired sFlt1 secretion. In contrast, a higher level of sFlt1 increased arginase expression and arginase activity in HUVECs, as in group 3.

**Conclusion:** Our results suggest the existence of a mechanism to maintain the level of sFlt1. Soluble Flt1 negatively regulated itself against increasing serum sFlt1 in preeclampsia. Moreover, this study revealed that arginase inhibitors are a potential treatment option for preeclampsia.

#### 59. A CASE REPORT OF THE EXPECTANT MANAGEMENT FOR UTERINE ARTERIOVENOUS MALFORMATION AFTER LOSS OF ASSISTED REPRODUCTIVE TECHNOLOGY PREGNANCY

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**Introduction:** Although uterine arteriovenous malformation (AVM) is rare, cervical dilatation and uterine evacuation (D&E) is said to be one of the causes of AVM. Here we present one case of successful pregnancy after expectant management for AVM.

**Case:** A 31-year-old woman visited our hospital due to primary infertility. She got pregnant by infertility treatment, but she had missed abortion, so she underwent D&E. On the 15th postoperative day, there was a cystic lesion of 18 mm in the uterine part of right tube, and blood flow was recognized in the cyst by ultrasonography. We considered the possibility of remnants of chorionic tissue as well as AVM because serum hCG was 404 mIU/mL. At 1 month after surgery, hCG decreased to 7.9 mIU/mL and expanded the cystic lesion and increased blood flow around the cyst, so we confidently diagnosed AVM. CT showed that the right ovarian artery and the right uterine artery flowed into the AVM. Menstruation resumed at 1.5 months after surgery. At 4.5 months after surgery, hCG decreased less than 1.2 mIU/mL and the AVM disappeared at 5.5 months after surgery. At 8 months after surgery, we resumed infertility treatment, and she got pregnant afterwards.

**Discussion:** AVM may cause massive hemorrhage suddenly, so if it is necessary to cure it, total hysterectomy will be performed, but if it preserves the uterus, uterine artery embolization (UAE) is selected though UAE may impair fertility. It is suggested that if we give priority to desire to bear children, we can choose expectant management until AVM disappears.

#### 60. A CASE OF POSTPARTUM ABNORMAL BLEEDING DUE TO PLACENTA ACCRETA

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**Introduction:** Placenta accreta sometimes causes abnormal uterine bleeding after delivery. Recently, patients with placenta accreta increase due to the history of cesarean section and in vitro fertilization.

**Case:** A 41-year-old primipara, who got pregnant in vitro fertilization. She was delivered in 39 weeks of gestation by once vacuum extraction and uterine fundal pressure. Most of the placenta was separated, but the part of it remained in the uterine. Bleeding from the uterine continued, she was started oxytocin. However, bleeding was uncontrollable, so she was admitted to our hospital. Her pulse rate was 130 and blood pressure was 70/45 mmHg at the time. Ultrasonography revealed about 10 cm mass from cervical canal to cervix of internal cervix and showed the retention of placenta. Moreover, contrast CT revealed the extravasation from uterine artery, so we performed uterine artery embolization. However, bleeding continued due to retention of placenta. We removed it manually and put a Bakri balloon into the uterine in general anesthesia. We could stop uterine bleeding.

**Conclusion:** We could control emergency postpartum bleeding with placenta accreta using a combination of the uterine artery embolization, manual removal of the placenta and Bakri balloon tamponade.

#### 61. PREVALENCE OF OBSTETRIC COMPLICATIONS INCLUDING PLACENTA ABNORMALITY IN PREGNANCIES ACHIEVED BY OOCYTE DONATION IN OUR INSTITUTION

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**Objective:** To assess the risk of adverse obstetrics outcomes including placenta abnormality in pregnancies achieved by oocyte donation (OD).

**Methods:** Obstetric and neonatal outcomes were retrospectively compared between 3 groups, the oocyte donation pregnancies group (n=19), extremely advanced maternal aged pregnancies (over 42 years old) achieved by in vitro fertilization with autologous oocytes (AO) group (n=90), and natural conception (NC) group (n=100). All OD deliveries were performed in our hospital from January 2008 to June 2019.

**Results:** The oocyte recipients were aged 42 - 55 years (mean  $\pm$  SD; 48.8  $\pm$  0.9 years). In OD group, 85.7% (18 of 21) of them were nulliparous (OD: 85.7%, AO: 55.6%, NC: 24.0%,  $p \leq 0.01$ ). Compared with IVF and spontaneous