IS-57 Adrenomedullin And Fetal Growth Restriction
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Purpose: To determine the Adrenomedullin (ADM) levels in peripheral blood and umbilical cord blood, and the hemodynamic parameters of umbilical cord blood flow and fetal blood flow of pregnant with Fetal Growth Restriction (FGR) during late gestation. And to evaluate the association between ADM and FGR. Methods: Twenty pregnant with FGR and 20 without FGR were included in this study. The ADM levels in serum of peripheral blood and umbilical cord blood were determined by ELISA. The ultrasonic Doppler method was used to evaluate the hemodynamic parameters of umbilical cord blood flow and fetal blood flow of pregnant with FGR during late gestation. Results: The serum ADM level of umbilical cord blood in pregnant with FGR was 25.42 ± 6.65 ug/L, which was higher than that in normal pregnant (21.365 ± 5.42 ug/L) (P<0.05): The serum ADM level of peripheral blood in FGR group was significantly higher than that in normal controls (22.04 ± 4.99 ug/L vs 17.61 ± 1.56 ug/L, P<0.05): The serum ADM level was higher in umbilical cord blood (25.42 ± 6.65 ug/L) than that in peripheral blood (22.04 ± 4.99 ug/L) in pregnant with FGR. The serum ADM level of umbilical cord blood in pregnant with FGR was negatively correlation with pulsatility index of fetal middle cerebral artery. Conclusions: ADM as a useful maker of indicative FGR, be involved in the pathological and physiological process of FGR, and may also be involved in the blood flow construction of fetoplacental circulation. Keywords: Adrenomedullin, Fetal Growth Restriction, Fetal-placental circulation

IS-58 Perinatal outcomes and maternal clinical characteristics in IUGR with absent or reversed end-diastolic flow velocity in the umbilical artery
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Objective: The aim of this study is to evaluate the effect of absent or reversed end-diastolic umbilical artery Doppler flow on neonatal outcome independent of oligohydramnios and gestational age, and the maternal characteristics. Methods: Throughout the period of January 2004 to March 2010 at our hospital, we reviewed 76 cases diagnosed with intrauterine growth restriction (IUGR) and the existence of absent or reversed end-diastolic velocity of umbilical artery (AEDV) was considered abnormal. We set the group that has no abnormal signs as the control group (57 cases), and compared the AEDV group (19 cases). Logistic regression was used to control for oligohydramnios and gestational age. Results: The gestational age was lower in AEDV group compared to those in control group. There were also statistical differences of neonatal weight, platelet count, serum SGOT level, the frequency of non reassuring fetal heart beat pattern between two groups independent of gestational age. Perinatal outcomes such as Apgar score at 1 min below 4, use of ventilator, admission of neonatal intensive care unit (NICU), respiratory disease, neurologic disease, neonatal sepsis, anemia, thrombocytopenia, neonatal mortality were poor statistically in AEDV group compared to those in control group independent of gestational age and presence of oligohydramnios. There were more FDIU (intrauterine fetal death) history and preeclampsia in AEDV group compared to those in control group. Conclusion: The waveform of umbilical artery Doppler velocity is one of good parameters of perinatal outcomes independent of gestational age and presence of oligohydramnios in IUGR patients, and it is especially important to check the waveform of umbilical artery Doppler velocity in IUGR patients with preeclampsia or in IUGR patients who has FDIU history.

IS-59 The pathological differences of the Placenta in IUGR with ARDEF (absent and reversed end diastolic flow) compared to IUGR without ARDEF
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Background: Intrauterine growth restriction (IUGR) and abnormal umbilical artery Doppler velocimetry are correlated with placental insufficiency, and associated with high perinatal mortality and morbidity. The aim of this study was to evaluate the placenta pathological differences between IUGR with ARDEF and IUGR without ARDEF. Materials and methods: Among the cases undergone prenatal follow-up in our institute, retrospective slide review was made for 18 cases of IUGR with AREDV and 17 cases of control group with IUGR but normal end-diastolic flow of umbilical artery. Results: Gestational age, birth weight, and placental size and weight were significantly small in AREDV group. Histologically, chronic decidualitis, villous infarct, massive pseudovillous fibrin deposition, chorangiosis, syncytiothrophoblastic knot and advanced villous maturation were more frequently found in AREDV group and their presence showed statistical significances. Conclusions: These findings suggest that abnormal pathological findings especially in the chorionic villi may be associated with absent and reversed diastolic blood flow in the umbilical artery.