EP18.25

Fetal condition and pregnancy outcomes at pre-eclampsia

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**Objectives**: To evaluate a fetal biometric parameters and Doppler indicators in the umbilical artery during pregnancy with pre-eclampsia and compare them with postnatal outcomes.

**Methods**: Total examined 67 single pregnancies with pre-eclampsia. There were 38 (56,7%) pregnant women with moderate pre-eclampsia and 29 (42,3%) pregnant women with severe pre-eclampsia. We spent a fetal ultrasound for calculation of fetal weight (Hadlock). Fetal growth retardation (FGR) was diagnosed if the estimated fetal weight was below the 5th percentile or below the 10th percentile with abnormal blood flow in the umbilical artery. Critical blood flow disorders was revealed absent end diastolic flow (AEDF) or reversal of end diastolic flow (REDF) at the umbilical artery Doppler.

**Results:** We diagnosed 14 (20,89%) cases of FGR, all of which were accompanied by reduction in end diastolic flow (increasing PI UA) or AEDF/ REDF. In patients with moderate pre-eclampsia we identified 21% cases of FGR and 14,3% cases AEDF/ REDF without FGR. All these patients were operated on for 36,29±0,48 weeks. No antenatal losses. Early infant mortality up to 3 days was in the 2,6% and early infant mortality after to 3 days was in 5,2% cases. These were FGR fetuses with AEDF/ REDF. In patients with severe pre-eclampsia we identified 20,68% cases AEDF/ REDF with FGR and 3,8% cases AEDF/ REDF without FGR. The term of delivery was 33,8±0,76 weeks. All cases had delivered by urgent Caesarean section. Perinatal loss was 34,48%, of them - antenatal fetal death consist 6,9%, early infant mortality up to 3 days consist 6,9%, early infant mortality after to 3 days - 20,69%.

**Conclusions**: The study of blood flow in the umbilical artery at pre-eclampsia rationally as for fetuses with FGR so for non-FGR fetuses. Urgent delivery improves perinatal outcomes in AEDF/REDF at moderate pre-eclampsia. FGR with AEDF/ REDF at severe pre-eclampsia had been associated with poor perinatal outcomes.