

## VARIATIONS IN THE DISTURBANCE OF UTEROPLACENTAL BLOOD FLOW IN PREMATURE BIRTH

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**Relevance:** In modern obstetrics, premature birth (PB) remains the main cause of high perinatal morbidity and mortality. In threatened PB, placental insufficiency of varying severity reaches 85% of cases.

**Objective:** The aim of our study was to study the disorders of the uteroplacental blood flow in threatened premature birth (TPB) requiring urgent delivery.

**Materials and methods:** A comprehensive examination was conducted in 93 pregnant women at 28–34 weeks. Two clinical groups were identified: the 1st (main) group consisted of (n=53) patients with symptoms of threatened preterm labor (TPL). The 2nd (control) group consisted of (n=40) pregnant women with uncomplicated course of this gestational period. The inclusion criteria for the 1st group were complaints of periodic pain, increased uterine tone, cervical length of 25 mm or more according to cervicometry. Excluded were those with fetal defects, rupture of membranes, and conditions requiring emergency delivery on the part of the mother. The examination included anamnesis assessment, obstetric and laboratory examination, Doppler assessment of blood flow reserves during ultrasound examination (US). The average age of patients in the study groups was  $29.1 \pm 1.3$  and  $29.4 \pm 1.6$  years ( $p > 0.05$ ).

**Results:** In the 1st group, compared with the control group, there was a significantly increased incidence of chronic inflammatory diseases of the pelvic organs 18 (33.96%) and 5 (12.4%), respectively, and hypertension 12 (22.64%) and 4 (10%) ( $p < 0.05$ ). The course of pregnancy in the 1st group was characterized by a threat of termination in the 1st and 2nd trimesters in 32 (60.37%) cases, in the second 3 (7.5%) cases ( $p < 0.05$ ). When studying the blood flow in the fetoplacental complex in the 1st group, 3 variations of disorders were identified, only 13 (24.52%) pregnant women had no disorders. The first variation in the 1st group was noted in 28 (52.83%) pregnant women and was characterized by hemodynamic disorders of grade 1-A or 1-B. Vaginal pregnancies occurred in 2 patients, in the rest, pregnancy was prolonged until term delivery. In the 2nd group, only the first variation was noted in 7 (17.5%) cases, which was reliably significant between the groups ( $p < 0.05$ ). The second variation in 9 (16.98%) patients was characterized by grade 2 hemodynamic disorders, with bilateral changes and dicrotic notch, grade 1–2 IGR, decreased basal rhythm variability, the number of accelerations, their amplitude and duration according to CTG data. Caesarean section was performed in 2 cases with progression of blood flow disorders and in 3 cases with the onset of labor and the absence of effect from tocolytic therapy. In 4 patients, due to the presence of an adequate increase in fetometric parameters during dynamic ultrasound, pregnancy was prolonged to 35–36 weeks. The third variation was detected in 3 (5.66%) patients and

was represented by IGR 3 (severe) with signs of pronounced centralization of fetal arterial blood flow (pulsation index above - 0.74). All patients in this subgroup were urgently delivered by cesarean section.

**Conclusion:** Variations of blood flow disturbance in the fetoplacental system in UPR requiring urgent operative delivery were progressive disturbances in the mother-placenta-fetus system of the 2nd degree in combination with IGR 1-2 degrees or in combination of these indications with the onset of true labor, as well as IGR - 3 degrees in combination with critical changes in fetal hemodynamics.

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