

EARLY HEMODYNAMIC AND HORMONAL MARKERS OF NORMAL PREGNANCY

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In modern obstetrics one of the key problems remains RAS latter diagnostics and forecasting of placental insufficiency (PIIn). Existing methods of additional examination of pregnant risk PIIn: ultrasound, Doppler, endocrinology, biochemical and other applied separately, do not allow to give an objective assessment of the degree of development of this complication, that considerably complicates the definition of pathogenetic preventive therapy worsens the prognosis of pregnancy, perinatal indicators (Radzinsky V.E., 2002; N. Protopopova N.V. et al., 2007).

A significant drawback is also the lack of obstetricians convincing data about the diagnostic value of each of these limited above examination methods in the dynamics of a normal pregnancy, especially in its first half, i.e. in its most responsible periods - placentation, fetal organogenesis, the establishment of a functional the maturity of the placenta. At the same time, these indicators can be used in co-operation markers of further development of the pregnancy and forecasting PIIn.

Therefore the aim of our study was the correlation analysis di-agnostic and predictive values of hemodynamic, endocrine-logical examination of pregnant women in the first trimester, 13-16 weeks and 17-20 weeks of normal gestation. Just examined in the dynamics 40 somatically healthy women with physiological developing pregnancy, giving voluntary by writing consent to participate in the study. In a comprehensive survey were:

- the separate simultaneous study of the intensity of circulation of blood in the uterus (IP) and in the emerging uterine-placental system, i.e. on the side of the implantation of the ovum (PI) method of the vaginal bipolar reohistography in modification of L.P. Peshev (1998). Side implantation was confirmed by the method of ultrasound;

- the definition of levels of basic indicators of endocrine status pregnant: estriol (E), human chorionic gonadotropin (HCG), pregnandiol, trophoblastic b-glycoprotein (TBG), dehidroepiandrosterone (DEA).

The analysis included only statistically significant results ($p < 0.05$). Correlation analysis of the results was performed by a system Pearson, according to which the strong is the link if the value of the coefficient from $\pm 0,7$ up to $+ 1$; middle - $\pm 0,3$ up to $+ 0,699$; weak - 0 up to $+ 0,299$. As a basis-governmental when compared taken indicators of blood flow in the uterine-placental system-theme V_{max} . and V_{mid} .

The results of the study. It is established that in the first trimester Maximum speed of the blood flow (V_{max} .) on the side of implantation in the uterus employed $0,650 \pm 0,021$ Om/s the average velocity (V_{mid} .) - $0,175 \pm 0,044$ Om/s The level of estriol in the urine of pregnant women was $3,32 \pm 0,55$ umol/l, HCG - 69633 ± 1812 IU/l, pregnandiol - $6,95 \pm 0,39$ (nmol/l), DEA - $0,365 \pm 0,029$ nmol/l, and the TBG in the blood $29,8 \pm 2,77$ mg/L.

At the end of the first half of pregnancy a maximum speed of blood-current PI was 198,3% ($P < 0.001$), and V_{mid} . - 118,4% ($P < 0.05$) from the outcome, while the indices of hormonal activity uteroplacental of the complex have changed accordingly: estriol - has increased in 2 times, HCG - decreased by 34.2% ($P < 0.05$), pregnandiol - by 30.1% ($P < 0.01$) , DEA - by 30.2% ($P < 0.05$), TBG - increased 5.5 times in comparison with their level in the first trimester of pregnancy. In physiological pregnancy, the intensity of blood flow in the main vessels of the uterus side placentation closely linked to the level of estriol ($r - 0,79$) and pregnandiol ($r - 0,97$) and to a lesser extent ($r - 0,68$) - with TBG level in the body pregnant and on the intact side such relationship can only be traced with $deja$ ($r - 0,73$) and HG ($r - 0,79$).

At the same time the speed of blood flow in vessels of medium and small calibres (V_{mid}), i.e. in the vessels providing during pregnancy vasculaturetion placental bed-side placentation to the greatest extent correlated with the level of DEA

($r = 0.97$) and HCG ($r = 0.99$), and on the intact side - E - ($r = 0.80$), with DEA ($r = 0.99$), HGH ($r = 0.97$) and with TBG ($r = 0.89$) in the mother's body.

Changes of these indicators should be used as an early diagnostic markers for monitoring the development of pregnancy.