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Fetal brain venous return in complicated pregnancy

Objective. To estimate the fetal brain venous return in the complicated pregnancy.

Methods. Blood flow waveforms (BFW) in jugular vein (JV) were recorded in 162 fetuses from 13 to 40 weeks of normal gestation and in 63 growth restricted fetuses. Peak velocity in ventricular systole (S), peak velocity in early diastole which corresponds to passive ventricular filling (D), peak velocity in atria contraction with active ventricular filling (A), mean velocity (TAV) were measured and pulsatility index ($PIV = S - A / TAV$), systolic to diastolic ratio (S/D) were calculated.

Results. S, D, A, TAV in growth restricted fetuses were significantly greater and PIV, S/D were significantly lower than in normal fetuses after 36 weeks of gestation.

Conclusions. The results demonstrate that there are neuroprotective reactions of fetal cerebral venous blood flow after 36 weeks of gestation.

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The special biochemical measures to women with OPG-gestosis, having an artificial abortion in their anamnesis

The goal of the present work consists in usage of biochemical methods complex, which allow estimating the peculiarities of pregnancy current of women with OPG-gestosis, complicated by artificial abortion in their anamnesis. There were studied 45 pregnant women in the age 21-36 years with OPG-gestosis (20- first-pregnant – the 1-st group) and 25 – repeatedly-pregnant women, who had from 1 to 5 artificial abortions in their anamnesis (the 2-nd group) and 17 women with physiological pregnancy (control group). The intensity of lipid peroxidation was measured by level of a final product – malonic dialdehyde (MDA). Its concentration in erythrocytes and plasma was the highest (25 % and 34% accordingly) at 2-nd group in comparison with control group. In addition, there were lipid the activity reduction of antioxidative system basic component – erythrocytes superoxidedismutase (SOD) 11,8 – 12,74 % at all women with OPG-gestosis. Identical changes were observed relative to methemoglobin level and ammonium concentration in all women with OPG-gestosis (there were rise in 271-296 % and 35% accordingly, in comparison with control group). The rise of endogenous intoxication level correlated with decrease ones in plasma. Concentration of middle and low molecular mass of compounds in erythrocytes was higher in 14 and 9%, and was 13 and 6% lower in plasma accordingly in 1-st and 2-nd groups, in comparison with control. Analysis of data leads to a conclusion that pregnant woman with OPG-gestosis, complicated by artificial abortion in their anamnesis, and had more considerable changes of lipid peroxidation and endogenous intoxication level.

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The peculiarities of the period of pregnancy and labor in women with chronic placental insufficiency and infection

The structure of perinatal and neonatal pathology has a permanent trend of growth of the part of in womb infections. Having a target of studying the peculiarities of pregnancy and labor of women with chronic placental insufficiency and infection, there were chosen 96 women that made up two groups:

- The 1st group (63 pregnant women) – with different infectious pathology (without signs of feto placental insufficiency)
- The 2nd group (33 pregnant women) – with infectious pathology and chronic feto placental insufficiency

The diagnosis of chronic feto placental insufficiency was based upon the data of Ultra-Sound Research, Cardio-Toco Graphics, Ultra Sound Dopplero Graphics and some information that concerned the infant: the length of the body, its weight and its condition according the Apgar scale. The diagnosis of infectious pathology was confirmed by immunological methods of research: immunoferment analysis and analysis of immunofluorescentation. To verify the data of influence of mix-infections on feto placental complex there was made an examination of placenta.

The results of the examination showed that the pregnancy on the infection background, especially in combination with chronic feto placental insufficiency is frequently became complicated with interruption of pregnancy, violation of in womb development and as a result lower index of conditions of health of infants.

This research confirms the necessity of picking out a group of risk because of formation of chronic feto placental insufficiency within pregnant women with infection. This group of risk consists of pregnant women that have in their