



Therefore, patients with endometriosis and women with urogenital infections were diagnosed with varying degrees of inflammatory syndrome and bacterial contamination, dysbiotic manifestations and candidiasis. Chlamydia is diagnosed in some patients.

Therefore, patients with endometriosis have dysbiotic changes of varying degrees, which were not detected by routine microscopy smear tests, but require correction. Disorders of microbiocenosis probably play a major role in the worsening of the clinical course of genital endometriosis.

Berbets A.M.

CHANGES OF THE LEVELS OF MELATONIN AND CYTOKINES IN CASE OF IUGR

Department of Obstetrics and Gynecology

Higher state educational establishment of Ukraine

«Bucovinian State Medical University»

Our purpose was to investigate the levels of melatonin, proinflammatory and anti-inflammatory cytokines in pregnant women with placental insufficiency (PI).

The PI was manifested as the intrauterine growth restriction syndrome of fetus (IUGR) in the third pregnancy trimester. The control group consisted of 20 women with uncomplicated pregnancy in the same term. The blood concentrations of melatonin, proinflammatory cytokines, such as tumor necrotizing factor- α (TNF- α), interleukin-1- β (IL-1- β), interleukin-6 (IL-6), and anti-inflammatory cytokines, such as interleukin-4 (IL-4), and interleukin-10 (IL-10), were studied.

The concentration of melatonin was found to decrease significantly if pregnancy was complicated by intrauterine fetal growth retardation (study group 126.87 ± 14.87 pg/ml, control group 231.25 ± 21.56 pg/ml, $p < 0.001$). The levels of proinflammatory cytokines in the study group were significantly higher as compared with the control group (TNF- α : study group 10.05 ± 1.35 pg/ml, control group 5.60 ± 1.50 pg/ml, $p < 0.05$; IL-1- β : study group 14.67 ± 2.13 pg/ml, control group 3.96 ± 0.92 pg/ml, $p < 0.001$; IL-6: study group 6.91 ± 0.99 pg/ml, control group 2.69 ± 0.99 pg/ml, $p < 0.05$). The same is true about anti-inflammatory cytokines (IL-4: study group 5.97 ± 0.50 pg/ml, control group 3.74 ± 0.62 pg/ml, $p < 0.05$; IL-10: study group 11.40 ± 1.50 pg/ml, control group 4.70 ± 3.20 pg/ml, $p < 0.001$). A moderate negative correlation between melatonin and IL-1- β in the group with PI ($r = 0.3776$, $p < 0.0097$), a closed negative correlation between the same indexes in the control group ($r = 0.6785$, $p < 0.001$), and a moderate negative correlation between melatonin and TNF- α ($r = 0.4908$, $p < 0.02$) were found.

The blood level of melatonin significantly decreases in case of placental insufficiency, manifested as intrauterine fetal growth restriction. Strengthening of the proinflammatory immunity shown as the increasing of the levels of TNF- α , IL-1- β , and IL-6 levels is also present in case of IUGR. Increase of the serum concentration of the anti-inflammatory cytokines, such as IL-4 and IL-10, in our opinion, can be explained by activation of compensatory mechanisms, which decrease the risk of premature labor.

Byrchak I.V.

EVALUATION OF VOLUME AND VASCULAR COMPONENT OF CHORION IN HABITUAL NONCARRYING OF PREGNANCY WITH THE OBJECT OF PLACENTAL DYSFUNCTION PREDICTION

Department of Obstetrics, Gynecology and Perinatology

Higher State Educational Establishment of Ukraine

«Bucovinian State Medical University»

Placental dysfunction (PD), being the cause of many perinatal complications, remains one of the major problems in modern obstetrics. The development of this pathological condition, caused by the morphofunctional changes in the placenta, is accompanied by distress and delayed fetal growth and is known to be one of the main causes of perinatal morbidity and mortality. Therefore, finding of the new ways to predict the development of the placental dysfunction in pregnant women at risk



is a necessary prerequisite for the development of the right tactics for pregnancy and optimal delivery in such patients.

Ultrasound scanning with volumetric reconstruction and determination of choral blood flow by means of VOCAL (Virtual Organ Computer-Aided Analysis) programs of 30 healthy pregnant women (control group) and 30 pregnant women with habitual noncarrying of pregnancy (main group) in terms of 6-8 and 12-13 weeks has been carried out. According to the ultrasound findings indices of the blood flow volume (vascularization index and the blood flow index), as well as the chorion volume were determined. The studies have led to the conclusion that the chorion average volume in women with a habitual noncarrying of pregnancy at 5-8 weeks was $8.77 \pm 0.99 \text{ cm}^3$, in healthy women - $11.76 \pm 1.3 \text{ cm}^3$, 0.05. In the 12-13 weeks of gestation the average chorion volume decreased significantly in women of the main group in comparison with the control ($51.28 \pm 4.2 \text{ cm}^3$ vs. $72.28 \pm 4.7 \text{ cm}^3$, respectively, <0.05).

When studying the percentage of the vascular elements in a certain volume of the placental tissue, namely the vascularization index, it was ascertained that its increase was observed in both groups, but there were some differences. Reliable decrease of vascularization index in comparison with pregnant women of the control group, respectively 7.81 ± 1.03 and 16.58 ± 1.75 ($p < 0.05$) was observed in women with habitual miscarriage in 5-8 weeks. At 12-13 weeks of gestation, this index underwent more significant changes (9.55 ± 0.88 and 20.56 ± 1.55 ; in the main group and the control, respectively, $p < 0.05$). The blood flow index gradually increased in the first trimester of pregnancy in both groups under study, but these data did not have reliable difference. In pregnant women with habitual miscarriage in the anamnesis and control group in 5-8 weeks FI was 34.81 ± 1.3 and 33.96 ± 1.1 ($p > 0.05$), in 12-13 weeks - 46.35 ± 3.1 and 40.54 ± 2.9 , respectively ($p > 0.05$).

Therefore, the above data indicate a slowdown in the development of the chorionic tree, which in the future will negatively influence on the formation and functioning of cotyledons. The data obtained are evidence of inadequate gestational transformation of extraembryonic structures. A high risk of primary placental dysfunction should be predicted in order to prevent perinatal complications in pregnant women with a habitual noncarrying of pregnancy with chorion volume $< 65 \text{ cm}^3$ and vascular index < 19 .

Dyak K.V.

LIKELIHOOD OF POSSIBLE PREPARATION IN WOMEN WITH THREATS TO PREGNANCY AND EROSION OF THE CERVIX

*Department of Obstetrics and Gynecology
Higher State Educational Establishment of Ukraine
«Bukovinian State Medical University»*

In women with pathology of the cervix, the incidence of infertility, miscarriages, premature birth, infection of the fetus and other complications in childbirth and the postpartum period increases. This is due to the fact that pathological changes in the cervical epithelium lead to the disruption of one of the physiological barriers that provide infectious resistance.

Therefore, the objective of our work is to determine the role of IL-8 in the development of preterm birth in women with the risk of preterm birth and erosion of the cervix. Clinical and laboratory examination of 60 pregnant women with additional definitions of IL-8 was conducted: 40 - the main group who were on inpatient treatment diagnosed with apparent contractions; 20 - the control group, which included pregnant women without diagnosis of apparent contractions. Determination of IL-8 was performed in cervical mucus and serum on Rider Myltiskan EX enzyme analyzer using reagent kits and test systems.

IL-8 is known to be a proinflammatory cytokine. The presence of a local inflammatory process was determined by bacterioscopic examination of vaginal discharge and the presence of underlying pathology of the cervix. When determining the level of IL-8 in the period of 22-30 weeks and 6 days of gestation its significant increase was found in the cervical mucus and in the serum when compared with the control group. In the group of pregnant women with 22-27 weeks and 6 days of gestation structural changes of the cervix were found only in two cases (8.7%), in the