



hormones measured by ELISA using a set of reagents for quantitative ELISA determination of hormones in blood serum: "IFA gonadotropin-FSH", "Gonadotropin-LH ELISA."

The value of P (authenticity difference) was determined by Student's table-Fischer. Differences between contrasting averages were considered significant at $P < 0.05$.

Analyzed the results of our research stated that women with endometriosis associated with infertility 2-3 days of the menstrual cycle endocrine function of gonadotropocytes anterior pituitary did not differ from that of the control group. This fact appeared to have additional criteria for the formation of the main group.

LH level at 2-3 second day of the menstrual cycle in women with infertility differed from indicators in the control group slightly. LH to FSH ratio in the study and control groups was within 0,58-0,63.

According to the literature ratio LH / FSH ranges in healthy women within 1.5-2.0. In our patients as the control group and the main factor is now slightly below that can explain the features of the methodology for determining the level of hormones in blood plasma. We used a method of determining the amount of hormone (pg / ml), while in a number of laboratories measured activity in international units (IU / L). Attention is drawn to the fact that our patients at an altitude of superovulation stimulation stated statistically significant reduction in the level of luteinizing hormone $16,2 \pm 5,27$ to $1,08 \pm 0,06$ pg / ml. This reduction in blood lutropin explained reciprocal dependence between synthesis and activity of estradiol vertical luterin-lutropin-progesterone.

Along the surveyed women was found a slight increase of folitropin of $7,05 \pm 0,8$ to $10,7 \pm 1,16$ likely due to circulating levels of outside administered hormone. Value LH / FSH was respectively: 0.1 stimulated cycle; 2.2 in the control group. This is quite important because the normal functioning of the ovaries is possible only at a ratio of LH / FSH 1-1.5.

Thus, in patients with endometriosis associated with infertility found significant disorders of rhythm and secretion of blood gonadotropin hormones that are proportionate to the degree of severity of the disease. Thus, basal levels of LH and FSH hardly different from the targets, and the folliculin phase of the menstrual cycle decreased concentrations of LH to normal levels of FSH background. However, despite the presence of abnormalities in the secretion of gonadotropin hormones compensation body's response in this disease provide a state of homeostasis because ovulation in 2/3 patients retained, while the reproductive function is much impaired.

Berbets A.M.

CHANGES OF THE LEVELS OF MELATONIN IN CASE OF IUGR

Department of Obstetrics and Gynecology

Bukovinian State Medical University

Intrauterine growth restriction (IUGR) is a common reason for perinatal morbidity and mortality. Also, it is often complicated with fetal distress. Melatonin is widely known as an anti-oxidant agent, which might decrease the damage of tissues caused by hypoxia. We aimed to investigate whether the level of melatonin in umbilical blood after birth is different in case of IUGR, comparing to normal fetuses.

14 women, whose pregnancies were complicated with IUGR, were included in study group. The presence of IUGR was confirmed by ultrasound fetometry in the 3rd pregnancy trimester, 30-36 weeks of gestation (estimated body weight of the fetus was below 10th percentile for current pregnancy term). The control group consisted of 13 women who had uncomplicated pregnancies. All patients delivered their children vaginally in pregnancy term over 37 weeks. The cases of severe fetal distress which required a caesarian section, obstetrical forceps or vacuum extraction of the fetus, were excluded from the study.

The umbilical blood was taken immediately after birth of a baby from the placental side of clamped and cut umbilical cord. The concentrations of melatonin were assayed using ELISA kit manufactured by IBL (Germany), the results were estimated using Mann-Whitney U-test.

It's been established that the mean concentration of melatonin in umbilical blood is significantly lowered in case of IUGR (7,50 pg/ml, 95% confidence interval for mean 3,0818 –



13,4042 pg/ml) comparing to normal pregnancies (14,60 pg/ml, 95% confidence interval for mean 9,58 – 23,79 pg/ml, $P=0,00101$). No significant difference in daytime of delivery was found between the groups.

The concentration of melatonin in umbilical blood at labor is significantly lowered in case of IUGR, comparing to normal pregnancies. This fact, as we consider, is caused by altered production of melatonin by placenta. Therefore, the protective action of melatonin for the fetus at labor is decreased in case of IUGR.

Goshovska A.V.

**FEATURES OF THE VASCULAR COMPONENT AT THE STAGE OF THE PLACENTAL
COMPLEX FORMATION AGAINST A BACKGROUND OF INFLAMMATORY
DISEASES OF THE FEMALE GENITAL ORGANS**

*Department of Obstetrics, Gynecology and Perinatology
Bukovinian State Medical University*

One of the main complications during early embryogenesis and placentation is placental dysfunction. Under the influence of various factors, namely infectious, which, depending on the biological peculiarity, badly affect the germ cells of the parents, embryo development, trophoblast and placenta formation, which, in its turn, leads to placental dysfunction and gestational complications during pregnancy

According to this goal, an ultrasound examination was performed on 67 women at 6-7 and 12-14 weeks of gestation. The main group consisted of 37 women with signs of inflammatory diseases of the female genital organs, and 30 practically healthy women constituted the control group.

To identify the patterns of the vascular component formation against a background of inflammatory diseases of the female genital organs and at physiological pregnancy, the volume of chorionic tissue was determined at the stage of the placental complex formation. It has been determined that gradual increase from 5,5 to 15,8 cm³ till the 13th week of gestation occurred in chorionic tissue in women of the control group in the first trimester of pregnancy, in addition to that a villi wave-like growth almost twice till 34,6 cm³ occurs during 2 weeks in the period of completion of the chorionic volume formation. Nevertheless, it has been established that chorionic tissue area was within 2.3 till 7.4 cm³ till the 13th week of gestation in the vast majority of women of the main group-32 (86.5%), but during the period of chorion volume formation the villi wavy growth was not recorded and volume indices reached till 17.8 cm³.

The following parameters were used in the study of the blood flow in the intervillous space: VI - vascularization index, which reflects the percentage of vascular elements of the placental tissue volume under study; FI - blood flow index, which reflects the number of blood cells transported at the time of the study.

In the study of the blood flow in different parts of the chorion in women of the control group it was diagnosed that during pregnancy up to 11 weeks of gestation, hermophroditism of the blood circulation in the peripheral and central areas was not detected. Thus, the blood flow indices in the central zone VI reached 15.1, FI -36.1, and in the peripheral zone VI-12.8, FI -30.0. However, in women of the main group VI in the central area it was 8.9, and in the peripheral zone VI - 14.6, FI - 33. After 12 weeks of pregnancy in women of the control group vascular hermophroditism was expressed - the index of vascularization in the central area significantly exceeded blood flow VI - 20.8, FI-55.6 in comparison with the peripheral regions of the chorion VI-7.7, FI -33.6. Vascularization index in the central zone VI-9.7, FI-35.1 almost did not exceeded the indices of the peripheral area of chorion VI-6.9, FI -31.4 in women of the main group.

Impaired blood flow in the first trimester of gestation against a background of infectious factor, that penetrates into various vascular parts of the mother-placenta-fetus system, with calculation of indices of blood flow volume demonstrates the regularity formation of the impaired hemodynamics at the stage of placental complex formation. These indicators can serve as a criterion for the selection of women at risk for the formation of primary placental dysfunction.