МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

М А Т Е Р І А Л И

106-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького колективу
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Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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EXPRESSION NLRP3-INFLAMMASOME AS MARKER OF ENDOMETRIOSIS-ASSOCIATED INFERTILITY

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Introduction. Endometriosis is one of the most urgent problems in modern gynecology. Since this disease is observed in almost every third woman and there is a tendency to increase the frequency of cases, endometriosis remains a "subject" of special interest not only for scientists, but also for practicing doctors. According to statistics, endometriosis affects more than 10% of women of reproductive age, which is about 176 million women worldwide.

The aim of our study. The aim was to examine the expression Nlrp3-inflammasome in the blood of women with endometriosis-associated infertility using assisted reproductive technologies with included probiotic and estimate a new approach with included probiotic for preparation to assisted reproductive technologies.

Materials and methods. For the purpose of the research we examined 30 infertile women. Control group consisted of 10 women with tubal infertility due to an inflammatory process in the anamnesis, in whom, as a result of a complex clinical and laboratory examination, no other diseases were detected and in terms of their health they could be equated with practically healthy women (age from 21 to 42 years, the average age was 29.75 years) and who did not take probiotic. The main group consists from 20 women with external genital endometriosis were included in assisted reproductive technologies. Patients from main group took probiotic produced by Unic Biotech Ltd, India. 1 tablet twice a day with 10×10^9 Lactobacillus during 1 month in complex preparation (treatment) before assisted reproductive technologies. The indices of Nlrp3 – Inflammasome determined before and after preparation. The study was performed in Bukovinian State Medical University and Centre of Reproductive Medicine. The primary infertility incidence was significantly higher in patients from main group. To analyze the expression of the NLPP3-inflammasome gene and determine the relative normalized expression of NLPP3 mRNA, we used the polymerase chain reaction with reverse transcription in real time (RT-PCR). The object for molecular genetic studies by the RT-PCR method was the fraction of mononuclear cells isolated from the whole blood of patients with endometriosis.

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

Results. Analized the results of our research stated that in main group expression of Nlrp-3 inflammasome was 24,43, which is significantly higher than after preparation (0,70 accordingly). In control group expression of Nlrp3-inflammasome was 0,54.

Expression of Nlrp-3 inflammasome increased in patients before preparation more than 34 times compare with patients after preparation accordingly.

Conclusions. Consequently, after using probiotic, the increased level of Nlrp3-inflammasome sharply decreases, indicating the effectiveness and the possibility of use in the programme for assisted reproductive technologies preparation.

Berbets A.M.

MELATONIN LEVELS DECREASE IN THE BLOOD OF PREGNANT WOMEN IN CASE OF IUGR

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Introduction. 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.

Aim of the study. We aimed to investigate whether the level of melatonin in umbilical blood after birth is different in case of IUGR, comparing to normal fetuses.

Materials and methods. 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.

Results. 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.

Conclusions. 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.

Dubyk L.V.

HEMODYNAMIC INDICATORS IN WOMEN WITH THREATENED ABORTION

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Introduction. Miscarriage accounts for 20-25% of all pregnancies, and there is no tendency to decrease the level of this problem. The pathogenesis of early pregnancy loss includes the activation of the hemostasis system and is usually realized due to the pathology of the vascular endothelium, the development of placental infarctions. Detection of such changes of women with a history of spontaneous abortion can serve as predictors of a possible threat of spontaneous abortion and help in the implementation of preventive measures aimed at preserving the desired pregnancy.

The aim of the study. The aim was to assess changes in hemodynamic indicators in women with threatened abortion against the background of endothelial dysfunction.

Materials and methods. We examined 2 groups of women. The first (main) group consisted of 60 women with miscarriage who were undergoing inpatient treatment in the gynecological department of the Chernivtsi Regional Perinatal Center in the period from 2021-2022. The control group included 30 patients with uncomplicated pregnancies in the period of 6-12 weeks of gestation. We established a reliable increase in the concentration of endothelin-1 by 3-5 times and a decrease in the level of nitric oxide by 1.7-2 times and E-selectin by 1.3-1.6 in women of the main group.

Results. We found that women with a threat of miscarriage have a tendency to decrease the number of platelets. Analysis of the platelet aggregation activity of patients with a threat of early termination of pregnancy revealed a small but significant increase in platelet aggregation, in fibrinogen and in prothrombin index compared to the indicator during a physiological pregnancy (Table).

Table

Data of hemostasiological studies in women of the examined groups (M±m)

Indicator	I group, n=60	II group (the control), n=30
Number of platelets, g/l	239,5±16,5	286,3±22,2
Fibrinogen, g/l	4,63±0,66	2,98±0,51
Prothrombin index, %	108,1±3,3	90,4±8,3
Platelet aggregation, %	40,2±0,3	39,5±0,4