



контролю та попередження появи недостовірних результатів через обсіменіння з повітря під час засіву поживних середовищ залишили відкритими у зоні стерильності дві чашки Петрі із поживними середовищами. Дослідні чашки Петрі перенесли в термостат для культивування. Середовища для перевірки нових хімічних речовин на бактеріальну мікрофлору культивували при $t\ 37^{\circ}\text{C}$, а для перевірки нових хімічних речовин на забрудненість грибковою мікрофлорою культивування проводили при $t\ 28^{\circ}\text{C}$.

В результаті проведених досліджень було встановлено, що серед 16-ти нових хімічних сполук похідних [(5-гідроксиметил-1H-імідазол-4-ил)тіо] оцтових кислот виявили 2 сполуки (2355, 2396) контаміновані пліснявими грибами роду *Aspergillus*. Дані сполуки були вилучені з подальших досліджень і проведено повторний синтез. Забруднення хімічних сполук різного роду мікроорганізмами можливе на будь-якому етапі синтезу чи зберігання, контамінація мікроорганізмами з повітря приміщень, технологічного обладнання, одягу, сировини, води, упаковки тощо, тому перевірка на стерильність сполук є необхідною.

Таким чином, у процесі синтезу нових хімічних сполук можлива мікробна контамінація з зовнішнього середовища бактеріальними або грибковими збудниками, тому обов'язковим є насамперед проведення мікробіологічних досліджень на стерильність, так як мікроорганізми є обов'язковим компонентом будь-якого середовища. Перевірка стерильності нових хімічних сполук забезпечить в подальшому отримання точних результатів при вивченні протимікробної активності.

СЕКЦІЯ 11 АКТУАЛЬНІ ПИТАННЯ АКУШЕРСТВА, ГІНЕКОЛОГІЇ, ДИТЯЧОЇ ТА ПІДЛІТКОВОЇ ГІНЕКОЛОГІЇ

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MICROBIOM AT ENDOMETRIOSIS ASSOCIATED WITH INFERTILITY

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Our aim was to investigate vaginal microbiome in women with infertility-associated endometriosis. The study of urogenital tract biocenosis was performed in women of reproductive age by real-time PCR with bacterioscopy (smear microscopy with Gram staining).

The material of the study was collected from the posterior vaginal vaults with a disposable sterile Cytobrush instrument, which was placed in an Eppendorf tube with a transport medium. Normobiocenosis of the vagina was treated according to the instructions of the manufacturer: total bacterial mass - 10^6 - 10^8 (Lg 5.5-9.0), *Lactobacillus* - 10^6 - 10^8 (a significant amount higher than -0.1 Lg), aerobic and anaerobic condition- pathogenic microorganisms in absolute numbers less than 10^4 (relative amount less than -0,2Lg).

278 patients with infertility-associated endometriosis has been examined. According to the results, it was found that chlamydia was found in 18% of women (50 women), urea and mycoplasmosis in 26% of patients, which amounted to 72 women, gardnerelosis in 28% (77 women) and the combination of infection was observed in 27% of patients (75 The main groups in the case of urogenital infections in our study were women in the age spectrum from 21 to 30 years (139 women, 50.0%).

The second largest group of patients was from 31 to 40 years - 102 women (37%). Other groups were, respectively, 12.0% (33 patients from 41 years of age) and 2% (4 patients under 20 years of age). sexually active. Analyzing the structure of the incidence of urogenital infections in our study, it is worth noting that the largest share in the study was actually women with gardnerelosis - 28% (77 women).

Among them, in the group from 21 to 30 years - 104 women (75.0%). Urea and mycoplasmosis with a specific gravity of 72 women (26%) took second place, including 83 women (60%) in the group from 21 to 30 years.



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.

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

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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.

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

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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