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**THE INFLUENCE OF MILITARY AGGRESSION FACTORS
ON THE MICROBIOTA OF THE GENITAL TRACT OF WOMEN
WITH ADENOMYOSIS AND UTERINE LEIOMYOMA**

**ВПЛИВ ФАКТОРІВ ВОЄННОЇ АГРЕСІЇ НА МІКРОБІОТУ
СТАТЕВИХ ШЛЯХІВ ЖІНОК З АДЕНОМІОЗОМ
ТА ЛЕЙОМІОМОЮ МАТКИ**

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Actuality. Military aggression is accompanied not only by the emergence of significant socio-economic problems, but also creates

conditions for a significant deterioration of women's reproductive health [1, p. 26].

Stress stimuli, in the conditions of a military conflict, threaten the homeostasis of the body as a whole, affect the release of stress hormones (cortisol, norepinephrine). The study of the impact of stress hormones on the state of reproductive health of women with adenomyosis and uterine leiomyoma requires special attention, because one of the main factors that provokes increased cell proliferation is hormonal [2, p. 568.3, p. 165].

In the conditions of a military conflict, the state of the microbiota of the vagina under the influence of psychosocial stress and due to the action of stress hormones is disturbed, which manifests itself in an imbalance between the protective and conditionally pathogenic microflora [4, p. 271].

Therefore, the **aim** of the work was to study changes in bacterial contamination of the genital tract in patients with adenomyosis and uterine leiomyoma in conditions of military aggression.

Materials and methods. In order to assess the specific and quantitative composition of the vaginal microbiota in women with hyperproliferative diseases of the uterus under martial law, a bacteriological examination of 90 patients was carried out, who were divided into groups: group I – women who were exposed to combat operations (30 women), group II – women – displaced persons (30 women), group III – 30 women who were under the influence of the factors of the armed conflict (Kyiv city and Kyiv region). Data obtained during the examination of 30 healthy women before the start of hostilities were used as a control.

Sowing was carried out by the method of sector sowing on dense nutritious differential diagnostic media, which allows to determine the degree of microbial insemination and the possible spectrum of facultatively anaerobic and anaerobic microflora.

The identification of the selected strains was carried out on an automatic bacteriological analyzer Vitek 2 Compact 15 (bioMerieux, France).

Results. Examination of vaginal contents by bacterioscopy showed that changes in indicators of vaginal microbiota in women of group I were characterized by signs of bacterial vaginosis (43.3%). Examination of women by the cultural method indicates an increase in the contamination of the vagina of women of the first group by representatives of obligate anaerobic microflora: *Atopobium* spp. (43.3%), *Gardnerella vaginalis* (26.7%), *Prevotella* spp. (26.7%) in an amount that exceeded the norm (>lg 4.0 CFU/ml).

In the spectrum of facultatively anaerobic microflora, gram-positive cocci dominated in the vaginal microbiota of group I patients: *S. epidermidis* hem+ (20.0%), *S. agalactiae* (16.7%), *S. aureus* (13.3%) and enterobacteria: *E. coli* (10.0%), *Enterobacter* spp. (16.7%), *Klebsiella* spp. (13.3%).

Quantitative indicators of contamination of the vagina with these microorganisms were lg 5.4 – lg 5.6 CFU/ml ($p>0.05$) and statistically probably exceeded the norm.

There was also a significant increase in the frequency of registration and the quantitative level of *Candida* fungi in the vaginal microbiota (respectively 20% and lg 5.6 CFU/ml) against the background of a significant decrease in the level of *Lactobacillus* spp. (lg 3.4 cfu/ml) in 76.7% of women of group I. In 86.7% of women of the first group, associative forms of microbial contamination of the vagina were found, in which obligate anaerobic microflora prevailed.

Assessment of the contents of the vagina by the bacterioscopy method in women of the II group shows that in 26.7% of patients, microbiota disturbances correspond to the state of bacterial vaginosis, as well as an increase in the content of *Candida* fungi. In patients of the II group, as well as in women of the I group, the cultural method revealed a tendency to increase the frequency and quantitative indicators in the composition of the microflora of the vagina of the obligate anaerobes *Gardnerella vaginalis* -23.3% and *Atopobium* spp. -26.7%, in amounts $>lg\ 4.0$ CFU/ml. The vaginal microbiota of patients of the II group was characterized by an increase in the level of *S. agalactiae* – 20.0%, *S. epidermidis* hem+ – 16.7% and enterobacteria (10%–13%), in an amount exceeding the diagnostic level ($>lg\ 4.0$ CFU/ml).

In 86.7% of women of the II group, the microflora isolated from the vagina was in 2- or 4-component associations, which included *Candida* fungi with a significant frequency in quantity (lg 4.8 CFU/ml). A deficiency of *Lactobacillus* spp was also detected in the composition of the vaginal microflora in 73.3% of women of the II group. Quantitative indicators of lactoflora were lg 3.8 CFU/ml.

The results of bacterioscopic studies of vaginal secretions of women of the III group indicate a significant content of mixed gram-positive and gram-negative microflora, which by morphotypes did not belong to the vaginosis-associated microflora. An increase in the frequency of registration of *Candida* fungi and pseudomycelia was revealed.

In contrast to the data obtained during the examination of the patients of the two previous groups, in women of the III group, no significant growth of *Gardnerella vaginalis* (16.7%) and *Atopobium* spp. (10.0%). Their quantitative level tended to increase, but did not reach the indicators found in patients of the I and II groups (lg 2.8–lg 4.0 CFU/ml).

Among gram-positive cocci with pathogenic properties that contaminated the vagina in patients of the III group, a tendency to increase the frequency of *Staphylococcus epidermidis* hem+ (13.3%) in the amount $>lg\ 4.0$ CFU/ml was observed. Among the various representatives of enterobacteria

in the spectrum of the vaginal microbiota of women of the III group, the indicators of *E. coli* heme+ (lg 4.4 CFU/ml) were statistically likely to exceed the diagnostic level. The quantitative level of seeding of other enterobacteria tended to increase. In 70% of patients of III group, the detected microflora was in 2- and 3-component associations, the composition of which with a significant frequency included *Candida* fungi in the amount of lg 4.2 CFU/ml. Protective microflora was detected in 93.3% of women of the III group, but quantitative indicators of vaginal contamination by *Lactobacillus* spp. (lg 4.3 CFU/ml) did not reach the normal level.

Conclusions. 1. In women of the 1st group who were exposed to combat operations, pathological changes in the microbiota of the vagina are registered, which are manifested by an increase in the frequency of bacterial vaginosis (43.3%), an increase in the quantitative indicators of the intestinal microflora, gram-positive cocci, as well as an active proliferation of *Candida* fungi in the background deficiency of protective microflora.

1. In patients of the II group (internally displaced persons), a high frequency of registration of microbial associations with a predominance of obligate anaerobic microflora was established. The frequency of diagnosis of bacterial vaginosis was reduced compared to the data found in women of the I group and amounted to 26.7%. A statistically probable increase in the quantitative indicators of cocci seeding with pathogenic properties, certain types of enterobacteria and *Candida* fungi, as well as a decrease in the level of contamination of the vagina with protective microflora was established.

2. Patients of the III group who were under the influence of the factors of the armed conflict (the city of Kyiv and the Kyiv region) showed signs of bacterial vaginosis with a low frequency (10%). Gram-positive cocci predominated in the composition of bacterial associations. Quantitative indicators of the content of enterobacteria, vaginosis-associated microflora and *Candida* fungi in the vaginal microbiota did not reach the level found in women of groups I and II.

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**INFLUENCE OF OROFACIAL DYSFUNCTION
AS A CONSEQUENCE OF THE MANDIBULA FRACTURE
ON THE QUALITY OF LIFE AND THE POSSIBILITY
OF ITS CORRECTION BY PHYSICAL THERAPY**

**ВПЛИВ ОРОФАЦІАЛЬНОЇ ДИСФУНКЦІЇ ВНАСЛІДОК
ПЕРЕЛОМУ НИЖНЬОЇ ЩЕЛЕПИ НА ЯКІСТЬ ЖИТТЯ
ТА МОЖЛИВОСТІ ЇЇ КОРЕКЦІЇ ЗАСОБАМИ
ФІЗИЧНОЇ ТЕРАПІЇ**

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Introduction. Increasing the effectiveness of complex rehabilitation of patients with injuries of the maxillofacial region is an urgent problem related not only to the state of peripheral tissues, but also to the dynamically changing state of psychophysiological functions of patients [2, p. 425–430]. Restoration of bone tissue in case of jaw fractures is a complex process due to the coordinated influence of central and local regulatory systems on the structural reconstruction of bone tissue in the area of damage [3, p. 183–189]. At the same time, despite the proven effectiveness of rehabilitation means (exercises, massage, preformed physical and natural factors) [1, p. 188–190; 4, p. 197–200] in dental practice, in particular, in maxillofacial surgery, insufficient attention is paid to the restoration of the