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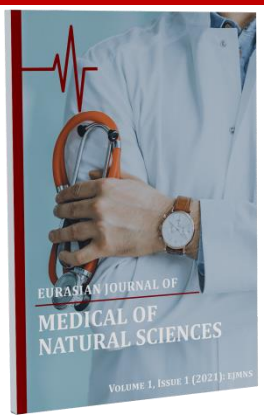

CLINICAL AND LABORATORY FEATURES OF ORAL DISEASES IN PREGNANT WOMEN (Literature review)

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ABSTRACT

The article discusses the clinical and laboratory features of oral diseases in pregnant women. The relevance of the study is due to the high prevalence of dental diseases in pregnant women and their potential impact on the course of pregnancy and the health of the unborn child.

Introduction. The study analyzed the dental status of pregnant women using modern clinical and laboratory diagnostic methods. Special attention is paid to the study of the condition of periodontal tissues, oral mucosa and hard dental tissues[1]. The characteristic changes in the oral cavity associated with the physiological characteristics of the body of pregnant women were revealed.

The results obtained make it possible to optimize approaches to the prevention and treatment of dental diseases in pregnant women, taking into account their special status. The practical significance of the work lies in the development of recommendations for the timely diagnosis, prevention and treatment of oral diseases in pregnant women, which contributes to the preservation of the health of mother and child[2].

Currently, it has been proven that the frequency of carious process and inflammatory periodontal diseases (gingivitis and periodontitis) increases significantly during pregnancy. According to WHO, "one of the most common diseases during pregnancy are diseases of the oral cavity (OCD), which are one of the most significant medical and social problems"1. ZRS are a provoking factor for an inflammatory response from the whole body and in the future can have an adverse effect on the course of pregnancy, childbirth and the postpartum period. ZRS are a stomatogenic focus of infection in the pregnant woman's body, pathogenic microorganisms and their waste products penetrate into all organs and systems of the mother and child's body, which can cause purulent-septic complications. At the beginning of the new millennium, paradoxically, infections occupy the fourth place in the structure of maternal mortality and account for 11%, and in developing countries septic shock associated with

septic abortion and postpartum endometritis still occupies one of the leading places [3]. According to foreign statistics, the incidence of sepsis with fatal outcomes in obstetric practice increases by 10% per year, while the main risk factors are: late maternal age, obesity, pregnancy against the background of chronic diseases, ART and multiple pregnancies, high frequency of cesarean sections (the risk is 5-20 times higher). According to a confidential study of maternal mortality and morbidity in the UK, 63% of fatal maternal sepsis cases had a delay in recognition or treatment.

The results of studies conducted to date on a global scale have shown that septic complications in the postpartum period, as a cause of maternal mortality, continue to lead, taking 1-2 place, sharing it with obstetric bleeding. According to WHO experts [4], despite significant advances in diagnosis and antimicrobial therapy, a high proportion of postpartum sepsis remains in the structure of maternal mortality in the world: from 10.7% to 15%. According to J. Barton and B. Sibai [5], the incidence of severe sepsis with fatal outcomes increases by 10% annually. WHO experts note that 1/10 of maternal deaths are caused by septic complications of pregnancy and childbirth, most of which are registered in low-resource countries, however, birth infection still remains the direct cause of maternal mortality in highly developed countries. In addition, infectious diseases of the mother before or during childbirth are the cause of death of 1 million newborns per year[4].

A woman's oral health and oral microbiota can directly affect her pregnancy and developing fetus. A review of 23 systematic publications on the relationship between maternal periodontitis and pregnancy complications showed that if a mother has periodontal disease, she has a 1.6 (95% confidence interval: 1.3-2.0) times higher risk of premature birth, 1.7 (95% confidence interval: 1.3-2.1) times higher risk of premature birth, the risk of having a low-weight baby is higher, the risk of preeclampsia is 2.2 (95% confidence interval: 1.4-3.4) times higher, and the risk of premature birth is 3.4 (95% confidence interval: 1.3-8.8) times higher, plus the birth of a child with a low birth weight [6]. It may seem more than reasonable to treat periodontal disease during pregnancy to reduce these risks. However, there is currently insufficient evidence to conclude that periodontal treatment during pregnancy is effective in reducing the risk of adverse pregnancy outcomes [7]. With regard to such a common disease as caries, it was found that even during the physiological course of pregnancy, the prevalence of dental caries is 91.4% of lesions of previously intact teeth (with a predominance of the acute course of the carious process) in 38% of pregnant patients. In addition, after analyzing more than 300 placental biopsies and comparing the results with the results of the Human Microbiome project, for numerous body sites, Aagaard et al. [8] concluded that the microbiome of the placenta resembles the microbiomes of the tongue and tonsils. The coevolution of the host and its microbes, as well as the knowledge that microbial symbionts in invertebrates are transmitted vertically [9], leads to the hypothesis of what the biological role of the oral microbiome in the development of complications of the postpartum period may be. Good oral health of the mother and the balance of the oral microbiota with the mother's body are of paramount importance for a healthy baby. There is increasing evidence that, in addition to environmental factors such as diet and exposure to microbes, the host's genetic background affects the microbiome [10]. In the oral cavity, very few studies went beyond the bacterial component, and fungal studies were the most frequently studied of the

list of “forgotten” microbes. Several cultural studies have examined the vertical transmission of fungi from mother to infant. Babies born vaginally from mothers

with vaginal colonization by candidiasis, there was a higher prevalence of oral candidiasis than infants born by caesarean section, or infants born vaginally from mothers without vaginal colonization by candidiasis. The role of the intrauterine environment in mediating this effect is still being investigated. Emerging preclinical and clinical data indicating the existence of microbial communities in utero are discussed. Possible mechanisms of translocation of bacteria into the intrauterine environment and immune responses are also described. When studying the role of the microbiome of the vagina, gastrointestinal tract and oral cavity in pregnant women, their possible association with postpartum infection was revealed [5]. Common bacterial species identified in infections associated with postpartum diseases include Ureaplasma urealyticum, Mycoplasma hominis, Bacteroides spp., Gard nerella vaginalis, and Fusobacterium nucleatum. These organisms usually exhibit low virulence unless they enter the intrauterine environment.

It should be noted that the role of microbes other than the bacterial component of the microbiome in creating and maintaining a healthy microbial ecosystem of the oral cavity of pregnant women is extremely poorly understood [11].

Unfortunately, there is insufficient data in the literature on the possibility of using microbiological data and immune status indicators as predictors of purulent-septic postpartum diseases in pregnant women with oral diseases. The pathogenetic mechanisms of the development of postpartum infection in pregnant women with oral diseases have not been clarified. In our republic, the test of complex quantitative polymerase chain reaction in real time (PCR-RV) using Femoflor-16 reagents as a marker of complications of the postpartum period has not been introduced into practice, despite the fact that it has high specificity and prognostic value for preventive measures in pregnant women.

Conclusions: Thus, improving a woman's dental status and preventing purulent-septic complications during pregnancy, childbirth and the postpartum period is one of the main problems of modern medicine.

References:

1. Alexandrova L.L., Kruglik Yu.N. Features of the dental status of pregnant women // Modern dentistry. 2021. No.2. pp. 28-32.
2. Borovsky E.V., Ivanov V.S. Therapeutic dentistry: textbook. M.: GEOTAR-Media, 2019. 840 p.
3. Vavilova T.P., Ostrovskaya I.G. Saliva. Analytical possibilities and prospects // Biomedical Chemistry. 2020. Vol.66, No. 3. pp. 232-238.
4. Gorbacheva I.A., Orekhova L.Yu., Shestakova L.A. Connection of diseases of internal organs with inflammatory lesions of the oral cavity // Periodontics. 2019. No.3. pp. 3-7.
5. Kuzmina E.M., Yanushevich O.O. Preventive dentistry: textbook. M.: Practical medicine, 2020. 544 p.
6. Lukinykh L.M., Kruglova N.V. Physiological changes in the body of a pregnant woman and their effect on the development of major dental diseases // Medical Almanac. 2021. No.2. pp. 177-181.

7. Orekhova L.Yu., Musaeva R.S. Features of the dental status of pregnant women. Modern methods of treatment // Periodontics. 2020. No.4. pp. 51-54.
8. Uspenskaya O.A., Shevchenko E.A. Dentistry of pregnant women. Methodical manual. Nizhny Novgorod: NizhGMA, 2019. 84 p.
9. Cobb K.M., Kelly P.J., Williams K.B. Oral microbiome and adverse pregnancy outcomes // International Journal of Women's Health. 2020. Volume 12. pp. 87-97.
10. Hartnett E., Haber J., Krainovich-Miller B. Oral hygiene during pregnancy // Journal of obstetric, gynecological and neonatal nursing. 2019. Volume 48, No. 1. pp. 40-51.
11. Mariotti A., Mavinni M. Endocrinology of sex steroid hormones and cell dynamics in periodontitis // Periodontology 2000. 2020. Volume 61, No. 1. pp. 69-88.