

THE EFFECT OF FETAL FUNCTION ON THE CONDITION OF THE ORAL CAVITY. RISK FACTORS FOR THE DEVELOPMENT OF DENTAL DISEASES DURING PREGNANCY

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Abstract:

According to the analysis of modern scientific researches the aetio pathogenical aspects of dental diseases at the pregnant women as well as the facts having influence status of pregnant women are summarized in the article. Also the peculiarities of dental diseases clinical process depending on the character of pregnancy are considered. The data about the caries prevalence and intensity and peri-odontal diseases during the pregnancy are given. The article demonstrates the scheme of dental check-up and clinical examination of pregnant women. The measures on prophylaxis dental diseases worked out according to the latest scientific publications are suggested.

Keywords: *dental status of pregnant women, prevention, dental diseases, development of dental.*

Introduction

Pregnancy is a critical period for a woman's dental health and is characterized by changes in the level and structure of oral diseases. Currently, dental diseases during pregnancy form a separate link in cariesology and periodontology due to the peculiarities of the clinic and the influence of the general condition of the body. During pregnancy, the pathogenicity of the oral flora increases due to

increased proliferation of opportunistic microorganisms. The intensity and prevalence of dental caries and periodontal diseases during pregnancy increases, which has been noted by many researchers for a long period of time. There are still no specific schemes for the etiopathogenetic treatment and prevention of dental caries and periodontal diseases during pregnancy. The dental status of pregnant women is characterized by a low level of dental knowledge, lack of motivation for the prevention of dental diseases and oral hygiene. Disease prevention, as well as pathogenetic therapy, presupposes, first of all, knowledge of their etiology and pathogenesis.

Hormonal status of pregnant women in the aspect of etiopathogenesis of dental diseases A number of scientists hold the opinion about the connection of dental status with hormonal changes in the body of pregnant women.

By the end of the first trimester, a complex hormone exchange is established between the mother and fetus. The placenta, which is forming by this time, begins to produce a large amount of hormones of a protein and steroid nature, 10-100 times higher than the daily production of hormones by classical endocrine glands.

Such a sharp jump in hormone levels is reflected in the oral cavity, which can be explained by the presence of highly specific estrogen receptors in bone cell culture, in marginal periodontal tissues, in small vessels, or by the influence of sex hormones on the condition of the gums through the immune system, which undergoes changes throughout the entire period of pregnancy.

M.Zoouashoogu describes the mechanism of influence of hormonal changes on the condition of the gums as follows: immune suppression, increased exudation, stimulation of bone resorption and stimulation of synthetic activity of fibroblasts, effect on the composition of microflora. A.O.O] apoIco-Iagp, M.R. Nagp with co-author. studying the metabolism of progesterone, it was suggested that it prevents the development of an immediate type of reaction (acute inflammation), but allows for an increase in chronic inflammation in the gum tissues.

A. Tsami-Pandi holds a slightly different opinion, regarding the influence of sex hormones as modeling, making the gum more sensitive to the effects of local irritating factors.

Scientists at the University of Amsterdam concluded that an increase in the level of estrogens and progesterone of the gingival mucosa affects vascular permeability and exudation up to the point of stopping microcirculation, leads to an increase in the formation of prostaglandin E₂ of the mucous membrane, causes folic acid salts deficiency, reduces the ability to keratinize and cellular regeneration, and, consequently, changes the barrier function of the epithelium, than this explains the increased clinical manifestations in gingivitis. Meijervan PuttenJ. B. notes an increase in the inflammatory process in the gum, in which a physiological vascular phenomenon occurs (hyperemia and swelling). In addition, estrogen and progesterone alter the microenvironment of oral bacteria and promote their growth, as well as cause the variability of their population. This is confirmed by the data of Chinese scientists S.S. Tsai, KS. Sgshp, who revealed a positive correlation between progesterone levels, pregnancy, gingivitis severity and the percentage of pigment-forming bacteria. Immunological status of pregnant women in the aspect of etiopathogenesis of dental diseases During pregnancy, the organisms of the mother and fetus are closely related to each other and the placenta. This allows for cell exchange and causes the restructuring of the immunocompetent organs of pregnancy, whose functions are performed mainly by two types of cells. In gestosis, which develops due to the depletion of the neuroendocrine system, immune shifts in the mother and fetus, the failure of the uteroplacental barrier, genetic conflict, complicating the course of pregnancy, there is a general T-lymphopenia, as well as a natural decrease in the number of active T- and B-lymphocytes with an increase in the severity of late toxicosis.

Factors influencing the dental status of pregnant women

Factors that have a direct or indirect impact on the structure of dental diseases during pregnancy include: demographic, social criteria, age, level of education, professional affiliation, duration and number of pregnancies, general somatic pathology, heredity, drug and alcohol addiction, and medication use. The risk of caries is influenced by extreme factors: background radiation, technogenic pollution, use of pesticides, etc. In addition, negative changes in the health status of pregnant women are associated with changes in social factors in recent years - deterioration of living conditions, nutrition, prolonged emotional and psychological stress. With the increase in the number of pregnancies, the intensity of caries and inflammatory periodontal diseases increases. It was found that with artificial termination of pregnancy at 8-12 weeks, women experience an increase in dental caries growth per year by 2.4 times compared to non-pregnant women. The prevalence and intensity of dental caries in women who have had two or more pregnancies increases depending on age.

Clinical course of dental diseases during pregnancy

During the physiological course of pregnancy, the prevalence of dental caries is 91.4%, damage to previously intact teeth (with a predominance of the acute course of the carious process) occurs in 38% of pregnant patients. Lesions of the oral cavity during gestosis of pregnancy have a significantly more severe course. With late gestosis, the prevalence of caries increases to 94% and the intensity of dental damage to 7.2-10.9. A clinical feature of the course of the carious process, especially with late gestosis in pregnant women, is an acute course, which leads in a short time to the development of complicated caries. When studying cervical caries in pregnant women, L.A. Aksamit found an increase in the prevalence of chalky spots from 23% at 7-9 weeks of pregnancy to 63% by the 9th month, while the intensity increased by 4-5 teeth. AND I. Bhutan observed a high prevalence of early caries in the form of focal demineralization ranging from 68.9 to 76.8%. The average number of affected teeth ranged from 1.74 ± 1.14 to 5.17 ± 1.08 per pregnant woman. The results of a number of studies have shown that the prevalence of caries in primary teeth in children whose mothers suffered gestosis in the first and second half of pregnancy is 76.5% and 74.3% with a lesion intensity of 5.5 and 5.2. At the same time, in children who were born during a physiological pregnancy, these figures are 58.81% and 3.8. The prevalence of caries in permanent teeth in children whose mothers suffered early gestosis is 75.5% with a caries intensity of 3.9, late gestosis - 88.1% and 4.4, respectively. Of interest are data on the condition of the periodontium during pregnancy. In women already in the second or third months of pregnancy, during the physiological course of pregnancy, the so-called gingivitis of pregnant women is observed (from 45% to 63%). With gestosis in the second half of pregnancy, periodontal disease reaches 100% of cases; Severe forms of gingivitis are much more common.

The first clinical signs of gingivitis in pregnant women most often occur in the third (16.99%) - fourth (14.52%) months of pregnancy. During pregnancy, gingivitis continuously progresses and occurs subacutely in the form of diffuse catarrhal (54.57%) or hypertrophic (45.43%) inflammation and is characterized by a bright red color of the inflamed gums, severe bleeding and swelling of the cervical mucosa. In the second half of pregnancy, a noticeable shift in pH to the acidic side is observed and the pH value is 0.64 units. more sour than in non-pregnant women. The lowest pH values were observed in women in the second and third trimesters of pregnancy, as well as in women with toxicosis in the first half of pregnancy. The concentration of hydrogen ions in the oral cavity affects the activity of salivary enzymes, the processes of mineralization and remineralization of enamel, microcirculation, microflora activity, specific and nonspecific resistance of oral tissues. The greatest destabilization of pH in the oral cavity is caused by the metabolic breakdown of carbohydrate-containing products by microflora - the so-called metabolic explosion. The peak of this explosion occurs in places where microorganisms accumulate - dental and lingual plaque. Along with food products and microflora, the pH value in the oral cavity is influenced by the

dilution effect of saliva, ion exchange in the “oral fluid - enamel” and “oral fluid - dental plaque” systems and the functional activity of the salivary glands. Acidification of saliva leads to an increase in the intensity of caries (CP), deterioration of the hygienic condition and aggravates the course of inflammatory processes in periodontal tissues. This makes us think about the methods and possibilities of correcting the pH of oral fluid, as one of the methods of an individual prevention program.

Conclusion:

It is advisable to include pregnant women in the risk group for the development of dental diseases.

The main cause of oral diseases in pregnant women should be considered the microbial landscape of the oral cavity, which tends to change under the influence of general and local factors.

The key point should be considered the dentist’s selection of the most sensitive and optimal diagnostic examination criteria, which would allow the clinical situation in the oral cavity to be assessed as objectively as possible and take into account all risk factors for the development of dental diseases. Coordination in the work of an obstetrician-gynecologist and a dentist is extremely important.

Timely, dynamic and objective assessment of the clinical picture in the oral cavity will allow us to offer the necessary set of treatment and preventive measures for the prevention of dental diseases during pregnancy, taking into account all individual risk factors.

Carrying out endogenous and exogenous medicinal and non-medicinal prophylaxis during pregnancy, increasing the level of hygienic knowledge will improve the dental health level and quality of life of a pregnant woman and carry out antenatal prevention of dental caries in children.

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