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ORAL CHANGES DURING PREMENOPAUSE

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Abstract
The premenopausal period in women is accompanied by significant hormonal changes that have a systemic effect on the body, including the tissues of the oral cavity. The purpose of this review article is to summarize current data on the characteristic changes in the oral mucosa, periodontium and the state of the dental system during this period of a woman's life. The main pathophysiological mechanisms underlying these changes, as well as their clinical manifestations and possible approaches to prevention and treatment are presented. It was originally believed that premenopausal period develops as a result of the indirect effect of estrogen deficiency on the synthesis of calcitonin and parathyroid hormone (PTH), 1,25OH2 vitamin D, and intestinal calcium absorption. That is, against the background of hypoestrogenemia, the balance between the level of calcium in the blood serum, parathyroid hormone, calcitriol, and calcitonin is disrupted, a negative calcium balance is formed, vitamin D deficiency, and secondary hyperparathyroidism develops. Calcium and vitamin D deficiency in postmenopause is observed in at least 70% of women

Keywords: Premenopausal period, hormonal imbalance, oral cavity, periodontium, xerostomia, women's health.

Introduction

The pre- menopausal period is a stage in a woman's life characterized by the onset of hormonal changes preceding menopause. These changes affect not only the reproductive system, but also many other organs, including the oral cavity. In recent years, there has been a growing interest in studying the gender aspects of dental diseases, in particular, in studying the relationship between hormonal fluctuations and the condition of periodontal tissues and oral mucosa.

2. Hormonal changes and their impact on oral tissues

In addition to decreased estrogen levels, several other significant factors also influence the formation of calcium and vitamin D deficiency in postmenopause: impaired gastrointestinal function (decreased lactase secretion , malabsorption), which lead to a significant decrease in calcium intake with food, decreased insolation and decreased synthesis of vitamin D3 in the skin, impaired motor activity due to coordination disorders, deterioration of neuromuscular conduction, as well as impaired synthetic function of the kidneys (deficiency of 1 α- hydroxylase), which contributes to a decrease in processing. The main pathogenetic factor in the premenopausal period is a decrease in estrogen levels. These hormones play an important role in maintaining the normal

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state of the mucous membrane, regulating inflammatory processes and maintaining bone density. Estrogen deficiency can lead to:

• decreased secretion of saliva (xerostomia);
• changes in the microflora of the oral cavity;
• increased sensitivity of periodontal tissues to inflammation;
• risk of osteoporosis of the jaw bones.

3. Clinical manifestations

The most common symptoms observed during the premenopausal period are:

• Xerostomia (dry mouth), accompanied by burning, difficulty speaking and swallowing;
• Burning mouth syndrome (burning mouth syndrome);
• Gingivitis and periodontitis of varying severity;
• Changes in taste sensations;
• Increased sensitivity and mobility of teeth.

These manifestations reduce the quality of life of women and require a comprehensive interdisciplinary approach to diagnosis and treatment.

4. Diagnostics and prevention

For early diagnosis of disorders, regular dental examinations are necessary for women aged 40+. An important component of prevention is:

• teaching patients oral hygiene;
• control of dry mouth;
• correction of diet and drinking regime;
• if necessary - hormone replacement therapy (as indicated by a gynecologist). The prescription of calcium and vitamin D preparations is based on the following principles:

- Bone mineral density testing is not necessary for prescribing calcium and vitamin D;
- Calcium supplementation effectively reduces the risk of fractures in women even with normal bone mineral density;
- the administration of vitamin D (400–800 IU/ day) is pharmacoeconomically effective in elderly and senile individuals who are predisposed to vitamin D deficiency;
- against the background of treatment with calcium and vitamin D preparations, the risk of fractures is reduced by at least 10%;
- in patients with vitamin D deficiency, treatment with calcium and vitamin D preparations reduces the risk of skeletal fractures by 30%;
- Adequate calcium intake (from food or calcium supplements) should be recommended to all women regardless of the use of other antiosteoporotic drugs.

The feasibility of the combined use of calcium salts and vitamin D has led to the creation of complex preparations containing both components. In some cases, they contain additional mineral elements (magnesium, zinc, boron, etc.). Multivitamins with calcium salts cannot be considered as drugs for the prevention of osteoporosis, since the calcium content in them is low.

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5. Treatment and interdisciplinary approach

Modern tactics include both local remedies (saliva substitutes , anti-inflammatory gels) and systemic therapy. Dentists, gynecologists and endocrinologists should work closely together, providing the patient with individualized care.

6. Conclusion

The pre-menopausal period is a time of increased risk of developing oral diseases due to hormonal imbalance. Increasing the awareness of doctors and patients about possible changes in the oral cavity and the introduction of preventive measures helps to maintain dental health and improve the overall quality of life of women during this period.

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