



Periodontal Disease - Symptoms and Treatment

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Abstract: Periodontal disease is a disease of periodontal tissues of a dystrophic nature.

Periodontal tissues include tissues whose main task is to hold the tooth in the jaw bone. These include: the gum; the ligamentous apparatus that holds the tooth — the periodontium; the tooth cement — the outer surface of the tooth covering its root; and the alveolar part of the jaw bone.

Keywords: Periodontal disease, dystrophic nature, jaw bone.

Introduction: Definition of the disease. Causes of the disease

Periodontal disease is a disease of periodontal tissues of a dystrophic nature.

Periodontal tissues include tissues whose main task is to hold the tooth in the jaw bone. These include: the gum; the ligamentous apparatus that holds the tooth — the periodontium; the tooth cement — the outer surface of the tooth covering its root; and the alveolar part of the jaw bone.

According to world statistics, about 60% of the population suffers from periodontal disease.

The risk of developing the disease increases with age and is associated with metabolic disorders in the body, a decrease in bone strength of the whole body and jaws, including (osteoporosis). The main cause of periodontal disease is insufficient blood supply to the gums (impaired trophic tissue, insufficient oxygen and other substances).

Plaque is the cause of paradontosis

Development factors

This disease is often characteristic of people suffering from:

- diabetes mellitus;
- malignant formations;
- liver pathologies;
- atherosclerosis;
- increased acidity of the stomach;
- endocrine diseases;
- chronic kidney diseases;
- lack of vitamins and trace elements in the body;
- neuropsychiatric diseases (the amount of saliva decreases and more plaque forms, and the hormone cortisol is released, which slows down the healing process of tissues).

The course of periodontal disease is significantly affected by such an addiction as smoking: in addition to reducing the immune forces of the body as a whole, the gums suffer due to a violation of oxygen supply to the tissues, as well as their irritation. Therefore, it has been observed that smokers have a threefold worse course of periodontal diseases compared to non-smokers. In recent years, scientists have also identified an important role of the hereditary factor in the occurrence of periodontal disease.

Among the causes of periodontal disease of teeth should be highlighted:

1. The presence of dental deposits (tartar, plaque) on the teeth (this factor creates an accumulation of bacteria on the teeth, which in the process of their vital activity cause gum inflammation and support it.
2. Incorrect closure and position of teeth in the dentition (malocclusion).
3. Increased chewing pressure.

The difference between periodontal disease and periodontitis

Periodontitis increases the mobility of teeth, inflames the mucous membrane and bone tissue surrounding the tooth. There are no signs of periodontal disease.

If you find similar symptoms, consult your doctor. Do not self-medicate - it is dangerous for your health!

Symptoms of periodontal disease

The first signs of periodontal disease

Tooth mobility is not observed in the early stages. At the beginning of the disease, patients may experience discomfort, itching in the gum area, and periodontal disease is characterized by increased sensitivity of the

teeth. The amount of dental deposits is usually insignificant.

The main symptoms of periodontal disease

The clinical picture of periodontal disease: exposure of the necks of the teeth (part of the tooth near the gum) and roots, recession (drooping) of the gums, the tooth becomes "elongated", while inflammation, swelling and bleeding are absent, the gum color is pale pink (may be paler than the color of healthy gums), the gum tightly covers the tooth (unlike inflammatory periodontal tissue diseases – gingivitis and periodontitis).

Periodontal disease is often accompanied by the appearance of wedge-shaped defects (in the near-gingival area). A wedge—shaped defect is a lesion of teeth of a non-carious nature, in the form of a "step" near the gums, on the cheeks and lips. Most often, the front teeth and canines suffer, less often the teeth in the lateral sections. If inflammation in the gingival tissue joins the process, the patient notices bleeding gums when brushing teeth, eating hard food, and bad breath may appear.

Patients with periodontal disease rarely go to the dentist in the early stages, because there is no pronounced pain. The course of the disease is chronic, sluggish and prolonged. The rate of progression of periodontal disease is directly related to the patient's age, general health, dental care, lifestyle and treatment, or ignoring the treatment of pathology.

Pathogenesis of periodontal disease

In periodontal disease, changes affect a part invisible to human eyes — the bone tissue of the jaw. The changes that occur in it lead to tooth mobility and, as a result, their removal. At the bone level, changes affect the process of bone tissue formation: new tissue, against the background of destruction, does not have time to recover with the help of special cells that build it. The bone tissue of the jaw is gradually decreasing. This process is only visible on an X-ray of the jaws.

Gum recession in periodontal disease

With periodontal disease, disorders appear in the blood vessels feeding the bone: their lumen narrows due to thickening and changes in the walls of the vessels. Protein metabolism at the cellular level is disrupted on the gum surface, and connective tissue fibers that support teeth in the jaw are destroyed in the deeper layers of the gum mucosa.

Against the background of these disorders, the metabolism of nutrients in the gums suffers and their deficiency occurs — dystrophy.

Stages of periodontal disease

At the moment, there is also an opinion about the destruction of bone tissue by cells of one's own body during periodontal disease. According to this theory, under certain circumstances, an immune restructuring begins in the body: cells that are usually responsible for fighting bacteria, viruses and other foreign cells begin to mistake their own cells for such. An immune response is triggered, which directs its forces to periodontal tissues (bone tissue, blood vessels and nerves of the periodontium). Thus, this process can be compared with the rejection of donor organs during transplantation into another organism.

Classification and stages of periodontal disease development

Periodontal disease occupies a separate place in the classification of periodontal diseases. According to the Russian classification, adopted at the end of the twentieth century, it is classified as a dystrophic disease.

According to its prevalence on the tissue, periodontal disease can be of only one type: generalized (i.e. it spreads to the upper and lower jaw and all teeth).

According to the nature of the course of periodontal disease, there are:

1. Chronic course.
2. The stage of remission.

The acute course is not typical for this pathology.

It should be noted that the WHO classification in some European and American countries includes 2 forms of periodontal disease: inflammatory-dystrophic and dystrophic.

Stages of periodontal disease

There are mild, moderate and severe degrees of periodontal disease.

Mild severity is characterized by the absence of complaints, changes in bone tissue are visible only on an X-ray.

The average degree of periodontal disease is characterized by exposure of the necks of the teeth and roots (up to 3mm), on the X-ray image you can see a decrease in the height of the bone partitions between the teeth, reaching half the height of the roots of the teeth. Patients may complain of unpleasant sensations in the gums, itching, and a change in the position of the teeth (tilt, fan-shaped displacement).

With severe periodontal disease, the exposure of the necks of the teeth and roots reaches 5 mm, the bone septa are already destroyed by 2/3 of the length of the roots of the teeth, which leads to the appearance of tooth mobility and a change in their position in the jaw and closure with each other.

Complications of periodontal disease

As periodontal disease occurs and develops, the mobility of teeth also progresses, which leads to their loss. As a result, the chewing pressure is distributed unevenly to the remaining teeth, and this further exacerbates the course of the disease. After the loss of teeth without proper treatment, the process of bone atrophy does not end, but continues to destroy the jaw. The loss of full-fledged chewing function leads to difficulty chewing food, and this in turn disrupts the digestive function, thus causing diseases of the stomach and intestines, the body does not fully receive nutrients and vitamins. In addition, the appearance and pronunciation of sounds suffer if teeth are lost in the smile area.

Do not forget that periodontal disease can be joined by an inflammatory process, and infection from the gum tissue through the blood and lymph vessels enters the internal organs, causing cardiovascular diseases, disrupting kidney function, and can provoke rheumatism in the joints. Abscesses (ulcers) may occur in the gum area due to the penetration of pus through the pocket between the tooth and gum.

In the oral cavity, infection can cause inflammation in the periosteum (periostitis), which further progresses into an abscess (limited inflammation) and phlegmon (unlimited inflammation), lymphadenitis of the maxillofacial region (inflammation in the lymph nodes), osteomyelitis. Such severe conditions are already life-threatening, and treatment is carried out in a hospital.

Diagnosis of periodontal disease

Periodontal disease is usually diagnosed by a dentist or periodontist. Clinical experience helps the doctor to suspect the onset of the disease, since there may be no complaints or visible changes in the oral cavity.

Finding out details about the state of health, the presence of chronic diseases and bad habits, and the type of professional activity is an integral part of collecting information about the patient. After all, the cause of periodontal disease often depends on these factors.

During the examination and examination, the specialist determines the level of oral hygiene of the patient, the presence and nature of dental deposits, changes in color, gum density, gum recession, wedge-shaped defects, checks the integrity of the dentition and the presence of chewing overload on the teeth, the presence of improper tooth closure, problems with bite.

Inflammation in the gums is determined using the Schiller-Pisarev test and evaluated on a point scale before and during treatment. The condition of the

vessels of periodontal tissues can be assessed by determining the resistance of small blood vessels (the author is Kulazhenko, the time of formation of hematomas in the gum area is recorded when exposed to vacuum). For these purposes, the method of rheoparodontography, photoplethysmography, and biomicroscopy is also used. In recent years, the polarography method has been used to determine the saturation of periodontal tissues with oxygen.

The degree of destruction of the jaw bone is examined using X-ray examination (panoramic radiography, computed tomography), by which it is possible to distinguish the stages of periodontal disease. Bone density is studied using echosteometry. Studying the composition of saliva and the microflora of the oral cavity provides great opportunities in the treatment of periodontal disease.

Differential diagnosis of periodontal disease is performed with periodontitis.

Treatment of periodontal disease

Periodontal disease treatment is selected individually, depending on the clinical situation and the general condition of the body. It should be aimed not only at correcting pathology in the oral cavity, but also at eliminating the causes that led to the occurrence of periodontal disease.

Often, thanks to modern equipment and anesthesia, treatment is painless.

Applied:

1. Drug therapy for periodontal disease: Trental (improves blood microcirculation, dilutes blood, is indicated for atherosclerosis), Insadol (also improves microcirculation, accelerates the formation of new bone tissue, increases immunity), Pumpkin (fights atherosclerosis, relieves inflammation, promotes tissue regeneration).
2. Drugs for normalization of metabolism: vitamins C, A, E, PP, group B.
3. Physiotherapy for periodontal disease: water therapy (hydrotherapy both for the whole body and topically in the oral cavity) to increase microcirculation; electrophoresis of drugs, the use of the D'Arsonval apparatus, oxygen therapy, magnetic laser therapy, phototherapy.
4. Folk remedies for the treatment of periodontal disease: decoctions of ginseng, eleutherococcus, aralia Manchuria, moralia root, roseola rosea (not indicated for hypertension). They will not cure periodontal disease, but they will help reduce inflammation of the oral cavity.
5. Toothpastes and gels. Periodontal disease is a non—

inflammatory disease, so paste, gel, or mouthwash won't help directly. But such therapy won't hurt.: careful oral hygiene prevents the formation of plaque and tartar.

In the treatment of periodontal disease at home, you can use gum massage.

The following manipulations should be performed directly in the oral cavity by the dentist:

1. Professional oral hygiene — removal of hard and soft dental deposits;
2. treatment of caries and its complications, elimination of all foci of infection;
3. correction of premature dental contacts;
4. correction of the incorrect position of teeth and bite (orthodontic treatment);
5. Replacement of dental defects and missing teeth with crowns, dentures and other structures for proper chewing and proper load distribution;
6. Surgical treatment (flap operations on gum tissues).

Additional treatment methods include:

- Selective grinding of teeth. With periodontal disease, the teeth eventually shift and stop closing normally. During the procedure, areas of the teeth are identified that are in contact with each other and do not allow the jaws to close normally. They are ground with dental drills, after which the jaws begin to close with multiple tooth contacts.
- Splinting of movable teeth. It is performed only in very severe forms, when the teeth become mobile due to pronounced root exposure. Several teeth are held together with a filling material and a special wire, such as fiberglass. The procedure helps to eliminate tooth mobility.

Diet for periodontal disease

There should be enough vegetables, fruits, fish, dairy products and fewer sweets in the diet. Proper nutrition will provide the body with vitamins and minerals that are important for immunity, gum and dental health. A sugar-restricted diet will prevent the intensive growth of bacteria in the oral cavity.

Forecast. Prevention

The prognosis of the disease depends on the stage at which the patient seeks help. The earlier the stage of periodontal disease, the higher the probability of successful treatment. It is worth noting that the course of periodontal disease is chronic and prolonged, the development of the disease and the changes that have already occurred can be stopped by choosing a comprehensive treatment.

Unfortunately, advanced stages of periodontal disease

lead to loosening of teeth, their loss and destruction of bone tissue. The resulting defect in the jaw is quite difficult to repair, for example, the success of implantation and further prosthetics in patients with periodontal disease is significantly lower than in people with healthy periodontitis.

Oral hygiene for periodontal disease

Careful and regular oral hygiene will help prevent periodontal disease. You should use a toothbrush, toothpaste, dental floss and a variety of toothbrushes to clean teeth in hard-to-reach places.

Other measures to prevent periodontal disease, as well as other gum diseases, include:

1. Finger gum massage (using an irrigator or self-massage);
2. professional oral hygiene at the dentist every six months, treatment of all foci of infection in the oral cavity;
3. eliminating dental defects (missing teeth) in a timely manner (to prevent changes in the bone tissue of the jaws);
4. elimination of occupational hazards;
5. normalization of daily routine;
6. prevention of disorders of the general condition of the body;
7. rational nutrition (hard food, the presence of vegetables, fruits, fish, dairy products in the diet, limiting the consumption of sugar and sweets);
8. giving up bad habits (smoking, alcoholism, drug addiction);
9. Avoiding stressful situations.

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