

## ETIOPATHOGENETICALLY BASED DETECTION OF PERIODONTITIS ASSOCIATED WITH CANDIDA AMONG PATIENTS.

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### Abstract

Timely diagnosis and proper treatment give a positive prognosis for the patient. It is quite possible to cure candidiasis. However, the treatment process is long, tedious and complex. Therefore, it is best to prevent the pathology than to treat it later. The main rule of prevention of candidiasis is considered to be proper oral care. In addition, it is necessary to treat removable dentures well with special preparations.

### Key words

Assimilation process, immunological markers, periodontal tissue diseases, immunohistochemical examination, etiopathogenetic view.

Candidiasis of the oral cavity is an inflammatory process that occurs due to infection of the body with fungi of the genus *Candida*. These microorganisms are quite natural for the intestinal microflora, since in an inactive state they are found in the intestines, in the vagina, on the nasopharyngeal mucosa, on the skin of 80% of people[1,2].

Usually, the fungus is activated in case of a decrease in the protective functions of the body. Candidiasis often affects young children, who often have relapses of the disease. The risk group includes smokers, men over 60 years old, and women of all ages. In recent years, the number of candidiasis patients has increased significantly. The main reason for this trend is the irrational and uncontrolled use of antibiotics, which reduce the body's immune functions and disrupt the balance of microflora[2,5].

Timely diagnosis and proper treatment provide a positive prognosis for the patient. It is quite possible to cure candidiasis. However, the treatment process is long, painstaking and complex. Therefore, it is better to prevent pathology than to treat it later. The main rule of prevention of candidiasis is considered to be proper

oral care. In addition, removable dentures must be carefully treated with special preparations[3,4].

In the prevention of candidiasis, timely treatment of various chronic diseases, which often lead to a decrease in immunity, occupies an important place. At the same time, the immune system needs to be further strengthened. To strengthen the immune system, you need to lead an active lifestyle, exercise more, be outdoors, and eat lots of fruits. Of course, it is necessary to eat properly and fully[2].

If the patient has already undergone antimicrobial therapy and has been cured of candidiasis, vitamins, levorin and nystatin are prescribed to prevent possible complications. It is very important to take a responsible approach to the prevention of candidiasis in babies. Namely, it is necessary to boil pacifiers, pacifiers and baby dishes, do not take the bathroom with the child, do not put his toys in his mouth. It is always worth remembering that adults are carriers of candida, so during contact with them, a child can become infected very easily. The baby's menu should include foods that are rich in fermented milk bacteria, as they boost immunity[3].

A large number of healthy people are carriers of candida fungus. To date, scientists have studied about 150 varieties of the fungus, 20 of which can cause various diseases in the human body. In the oral cavity, fungi can be on the tonsils, on the mucous membrane, in the channels of damaged teeth, in carious cavities[1,4].

Fungi are usually activated in an alkaline environment, which occurs in the oral cavity due to eating foods rich in carbohydrates. Fungi usually enter the active stage of vital activity due to a decrease in immunity or the influence of any other risk factors on the body. The factors of candidiasis development primarily include the following:

- pregnancy, since it is accompanied by changes in metabolism, decreased immunity, and hormonal levels.;

- long-term use of drugs that depress the immune system (cytostatics and corticosteroid medications);

- various concomitant diseases – tuberculosis, diabetes, HIV, adrenal gland diseases;

- a long course of antibiotics that disrupt the composition of the microflora;

- radiation therapy in the process of cancer treatment;

- minor injuries to the oral mucosa;

- oral contraceptives that create good conditions for the activation of the fungus;

- bad habits (alcohol abuse and smoking);

- wearing dentures.

Symptoms of oral candidiasis

Thrush usually occurs in acute and chronic forms. Both of these forms can arise separately or transform from one another. Usually, chronic candidiasis occurs due to the lack of adequate treatment of the acute form of the disease for a long time. As for the signs of the disease, they directly depend on the stage of its development[2,5].

At the initial stage of the disease, fungi enter the cells and begin to actively multiply in them, releasing enzymes that strongly irritate the mucous membrane. Due to this process, patients experience swelling, redness and a feeling of dry mouth, increased sensitivity and soreness. As a result of the active reproduction of fungi, pseudomycelia is formed – a colony of white microorganisms accumulates on the surface of the mucous membrane. In addition to microorganisms, pseudomycelia also include fibrin, keratin, dead epithelial cells, and food residues[2,4].

Initially, plaque is very small grains that accumulate on the surface of the cheeks. However, over time, the amount of plaque begins to increase rapidly, it spreads to the gums, tongue, teeth, and tonsils. This plaque is easily eliminated, but in its place a red surface with ulcers forms, the cause of which is the destructive effect of fungi on the mucous membrane[3].

The sooner the disease progresses, the sooner the patient develops symptoms of candidiasis such as itching and burning, which only worsen during eating and swallowing saliva. If fungi have infected the pharyngeal mucosa, the patient may complain of difficulty swallowing. The proliferation of fungi, as well as their release of toxins, inevitably leads to an increase in temperature. Some patients may also develop a white plaque at the corners of their mouth[3].

To make a diagnosis, the doctor uses the data obtained during the examination of the patient, collection of complaints, laboratory tests and instrumental studies. During the examination, the dentist identifies the most characteristic signs of the disease. The doctor may also need to consult a pediatrician, a general practitioner, an infectious disease specialist, an endocrinologist, an allergist, and an immunologist[2,3].

The dentist prescribes the following laboratory tests: scraping and seeding for candidiasis, which helps not only to confirm the diagnosis, but also to determine the patient's sensitivity to various drugs. Candidiasis is confirmed if the candida fungus was detected in the tests during an overview microscopy of stained smears that were taken from areas affected by the fungus.

The symptoms of candidiasis of the oral mucosa are similar to those of many diseases. Therefore, the doctor needs to differentiate candidiasis from allergic and

chronic aphthous stomatitis, lichen planus, desquamative glossitis, actinic cheilitis, streptococcal congestion, herpes simplex, lip eczema[1,5].

Treatment of oral candidiasis in adults can be local and general. General treatment focuses on taking medications that have an effect on the entire body. Taking antifungal drugs allows in this case to destroy candida fungi throughout the body.

Polyene antibiotics (levorin and nystatin) are considered effective antifungal drugs, which are recommended to be taken within two weeks. A few days after the start of taking these pills, the patient's well-being returns to normal, the erosions heal and the white plaque disappears. Imidazoles – econazole, clotrimazole, miconazole - have also shown their effectiveness in the treatment of candidiasis. The duration of their administration and dosage are prescribed depending on the severity of the disease and the age of the patient[3,4].

Since candidiasis of the oral cavity often occurs against the background of suppressed immunity, drugs for restoring the protective functions of the body occupy a special place in the treatment of the disease. Vitamins B, C, PP are usually prescribed for this purpose. To restore iron metabolism, which is significantly disrupted due to the disease, it is advisable for the patient to take Ferroplex or Conferon. Despite the effectiveness of general treatment, it can also have a negative effect on the human body, as it has side effects[2,4].

Local treatment is safer than general treatment for the reason that it allows you to act directly on the focus of inflammation. In addition, doctors prescribe drugs that are not absorbed into the blood, which eliminates possible complications after the use of antibiotics. Topical preparations are able to quickly and effectively stop the reproduction of fungi, relieve symptoms of the disease and repair damage caused by candida[2,5].

For local treatment, doctors usually prescribe various aniline dyes: methylene blue, brilliant green, fucorcin solution. Iodine is used for the application. Drugs such as lysac and lysozyme have a bactericidal effect. To eliminate the white plaque that is localized in the corners of the mouth, levorin and nystatin ointments are prescribed. During the treatment of the disease, it is extremely important to pay special attention to the elimination of all possible inflammatory processes in the oral cavity[3,4].

Mouthwashes with special solutions of borax, boric acid, and baking soda are indicated for more effective treatment of the disease. This procedure will help to cleanse the oral mucosa of white plaque, eliminate inflammation, eliminate fungal colonies and accelerate the healing of erosion. It is worth rinsing your mouth with solutions three hours after eating.

Diet is of great importance in the treatment of the disease. Excessive consumption of products that contain yeast, as well as confectionery, leads to the creation of good conditions for the reproduction of candida. Spicy and acidic foods that irritate the oral mucosa also have a bad effect on the body[4].

During treatment, it is necessary to limit the use of sweet fruits, coffee, tea, alcohol, carbonated drinks, ketchup, mayonnaise, mushrooms, fatty meat, smoked meats, confectionery. The candidiasis diet provides for the predominance of cereals, lean meat, herbs and vegetables, herbal teas, natural juices, coconut, linseed and olive oils, seeds, nuts, and fermented dairy products in the patient's diet. After recovery, the list of products can be expanded. However, it is advisable not to consume prohibited foods during the year in order to avoid a recurrence of candidiasis.

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