

## **Secrets of Modern Methods of Treatment of Viral Diseases of Oral Thrush**

**Shamuradov Tolibjon Fayzullaevich**

Bukhara State Medical Institute named after Abu Ali Ibn Sina

### **Abstract:**

In this article, the opinions of our country's and foreign scientists about the secrets of modern methods of treatment of oral thrush viral diseases are mentioned.

**Keywords:** oral candidiasis, candida albicans, candida tropicalis, defects of t- and b-lymphocytes, candidal glossitis, candidal cheilitis, tonsil candidiasis.

Oral candidiasis - symptoms and treatment

Definition of disease. Causes of the disease

Oral candidiasis is an infectious disease caused by opportunistic yeast-like fungi of the genus *Candida*. It often occurs in children (in the newborn and infant periods, at a younger age) under 10 years old, as well as in older people (over 60 years old), which is associated with decreased immunity.

The cause of the disease is yeast-like microorganisms of the genus *Candida*, most often *Candida albicans* and *Candida tropicalis*. Normally, they are constantly present in the human body and do no harm. However, when exposed to certain factors, fungi are activated, their concentration increases, which leads to inflammation of the mucous membrane and the formation of a white cheesy coating.

There is a high probability of the fungus spreading in feces (81%), on the mucous membranes of the oral cavity (45-53%), and in the vagina (12.6%). Quite often, the fungus is activated in pregnant women in the third trimester (31-87%).

Provoking factors are divided into endogenous (internal) and exogenous (external). Endogenous factors include:

metabolic disorders, hypothyroidism (lack of thyroid hormones), endocrine diseases, diabetes mellitus, iron deficiency conditions, chronic diseases of the gastrointestinal tract, etc.;

the presence of acquired or congenital immunodeficiency with its various defects (defects of T- and B-lymphocytes), AIDS;

hypovitaminosis;

diseases of the female genital organs: colpitis (vaginitis), vulvitis, vulvovaginitis, as well as the use of oral contraceptives. Their use leads to excessive accumulation of glycogen, lactic and acetic acids in the vaginal epithelium, which form the most favorable conditions for fungal infections;

long-term treatment with antibiotics;

acute and chronic infectious and non-infectious general diseases of severe severity: typhoid fever, cholera, diphtheria, whooping cough, syphilis, dysentery, HIV infection, trichomoniasis, tuberculosis;

pregnancy;

rickets is a disease of infants and young children, characterized by a disorder of the process of bone formation and their insufficient mineralization;

prematurity in children;

age of children (under 10 years) and elderly people (over 60).

Exogenous causes are considered a trigger that “works” when local protective factors are disrupted. Exogenous causes include local chemical and mechanical conditions that injure the integrity of the skin and oral mucosa:

chemical pollution, nitrites, nitrates, radiation, radionuclides;

poorly fitting dentures, tartar, sharp edges of teeth, sharp roots;

burns with arsenic paste, electrical burns (electrophoresis);

toxic substances with carcinogenic and mutagenic properties (for example, resorcinol and formaldehyde).

#### Symptoms of oral candidiasis

Features of the localization of the process correspond to the clinical variant. Oral candidiasis manifests itself in the form of a white “curd” coating and an easily removable film. In some cases, after their removal, an area of hyperemia (redness of the mucous membrane in the form of a spot) and erosion is discovered. Trauma to the oral mucosa can be combined with injuries to the tonsils, tongue, red border of the lips, and corners of the mouth.

Candidiasis of the tongue (candidal glossitis) manifests itself in the form of a yellowish and grayish coating. In some cases, the tongue plaque becomes saturated with fibrin (an insoluble protein that occurs in response to injury or inflammation), and rough yellowish-gray films are formed.

Another form of tongue candidiasis is atrophic, in which the back of the mucous membrane of the tongue turns into dead (atrophied), purple, dry, shiny, filiform (from the filiform papillae) tissue. There are difficult-to-remove whitish-gray coatings in the center and on the sides of the tongue or in the folds.

Candidiasis in the corners of the mouth and candidal cheilitis (inflammation of the red border of the lips) usually occur together with candidal glossitis, as well as with trauma to the oral mucosa. However, sometimes they form on their own. The skin in the corners of the mouth becomes macerated (swollen with moisture), inflamed, moist, and covered with an easily removable white coating. After removing this plaque, a hyperemic, blurred, smooth surface is observed. Candidiasis of the red border of the lips occurs in rare cases.

Candidiasis of the tonsils is characterized by slight hyperemia of the pharynx, arches and tonsils. Areas of redness are identified by enlargement (swelling) and a hard white patch that can be easily removed. When swallowing, candidiasis of the tonsils does not cause discomfort.

#### Pathogenesis of oral candidiasis

Yeast-like fungi easily saprophyte in the human body, that is, they feed on dead organic matter. The primary role in infection caused by fungi of the genus *Candida* is played by a decrease in the body's immune function, namely the absorbent (phagocytic) activity of monocytes and neutrophils (white blood cells that protect the body from infections). Also important is the

disruption of the relationship between T and B lymphocytes and the dysfunction of T lymphocytes.

In this case, phagocytes, which normally should capture and destroy foreign particles, absorb some types of yeast-like fungi, but cannot kill them. This process is called incomplete phagocytosis. At the same time, foreign agents absorbed by cells of the immune system remain viable. They are in a dormant state and under good conditions (for example, when the immune system is weakened) they begin to actively reproduce again, causing a relapse (resumption) of the process.

With a decrease in immunity, there is a decrease in the mobility of phagocytes and their chemotaxis (motor response to foreign cells). The level of the enzyme myeloperoxidase, which has a bactericidal effect, also decreases. An important role in the defense mechanisms during fungal infection is played by iron-containing metabolites in serum and external secretions - sideroferritin, transferrin, etc. They inhibit (suppress) the growth of fungi both in vivo (in the body) and in vitro (in vitro).

The protective function of the immune system can also be reduced by immunosuppressive therapy, which is sometimes used for autoimmune diseases or after organ transplantation. The essence of therapy is to take cytostatics and corticosteroid drugs. These drugs suppress the immune system and disrupt the normal composition of the body's microflora.

Classification and stages of development of oral candidiasis

Superficial candidiasis. Involves damage to mucous membranes, skin and nails.

Chronic generalized (common) granulomatous candidiasis is a severe form of fungal infection, which often recurs and has a long course. May affect the mucous membranes of the mouth and genitals, skin of the face, head, arms and legs, torso, nails of the hands and feet, teeth, eyes and internal organs.

Visceral (systemic) candidiasis of various organs. Affects internal systems and organs.

Classification of candidiasis according to the process:

Acute course:

Acute pseudomembranous candidiasis (thrush). There are white cheesy masses on the mucous membranes; the plaque is easily removed, revealing a hyperemic area underneath.

Acute atrophic candidiasis. There is no plaque, the mucous membrane is dry, it is sharply hyperemic. Atrophy of the papillae is observed on the tongue (i.e., smoothness of the pattern); the tongue is smooth and has a bright red tint.

Chronic course:

Chronic hyperplastic candidiasis. Gray-white plaques appear on the hyperemic mucosa, which are tightly fused to the mucosa.

Chronic atrophic candidiasis. Most often, this type of candidiasis appears in patients who have orthopedic structures (dentures) in their mouths.

Based on localization, oral candidiasis can be of several types:

candidal stomatitis - inflammation of the oral mucosa;

candidal gingivitis - inflammation of the gums;

candidal glossitis - inflammation of the tongue;

candidal cheilitis - inflammation of the lips, etc.

Taking into account age, there are:

candidal stomatitis of newborns and children (thrush);

candidal stomatitis and glossitis in adults;

candidal cheilitis in older people, etc.

#### Complications of oral candidiasis

If treatment is untimely or incorrect, acute candidiasis can become complicated and become chronic or invasive, which is difficult to treat. In addition, complications such as fungal esophagitis, tracheitis, gastrointestinal candidiasis, and candidal sepsis may occur. There is a high probability of inflammation of the genital organs in women and men.

Candidal esophagitis (inflammation of the esophagus). Symptoms: signs of intoxication of the body, bloating, heartburn, sore throat, dysphagia (difficulty swallowing solid food), bitterness in the mouth or sour taste. Can lead to esophageal ulcers, rupture of the esophageal tube, internal bleeding, stricture (narrowing of the lumen) of the esophagus.

Candidal tracheitis (inflammation of the trachea). Symptoms: increased body temperature up to 37 °C, severe pain in the trachea, chest, shortness of breath and a feeling of suffocation when coughing, itching, burning, pain behind the sternum or between the shoulder blades, the appearance of ulcers on the skin. Through abscesses on the walls of the trachea, the fungus can penetrate into the blood, which will subsequently lead to sepsis.

Candidiasis of the gastrointestinal tract. Candida penetrates the intestines and injures the mucous membrane, causing a severe form of dysbiosis. Symptoms: nausea, vomiting with blood and whitish films, increased body temperature to 37-38 °C, bloating and pain in the upper abdomen, diarrhea mixed with white flakes. If the stomach wall is perforated, serious consequences can occur, such as peritonitis (inflammation of the peritoneum) or internal bleeding.

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