



INFLAMMATORY PROCESSES OF THE MUCOUS MEMBRANE OF THE ORAL CAVITY

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Abstract : *Stomatitis is an inflammatory process on the oral mucosa caused by the immune system's reaction to an irritant from the external environment. It manifests itself as swelling, redness and ulcers on the walls of the mucous membranes. This disease requires immediate treatment. If you delay, you cannot do without antibiotics, stomatitis spreads to healthy tissues. In addition, the patient cannot eat food calmly, he is bothered by a burning sensation, painful sensations when chewing food and talking.*

Key words : *primary inflammation, stomatitis, harmful microorganisms, propolis infusion, swelling, redness.*

The oral mucosa is an indicator that reflects the work and condition of the internal organs and systems of the entire body. Inflammatory diseases of the oral mucosa are pathologies that affect patients of different ages. Inflammatory pathology of the oral mucosa, like other diseases of the oral cavity, causes the patient some discomfort and disrupts the usual rhythm of life: speech, eating, sleep. Doctor of Medical Sciences, Professor Andrey Vladimirovich Sevbitov noted that the inflammatory process in the oral mucosa can be influenced by various factors: (bacterial, viral, infectious, traumatic, etc.) [20] .

When the mucous membrane covering the hard and soft palate, lips, gums, cheeks, floor of the mouth, lower and back surface of the tongue becomes inflamed, it is stomatitis. To this day, chronic recurrent aphthous stomatitis remains one of the most common diseases of the oral mucosa in the practice of a dentist. According to the World Health Organization, this pathology affects up to 20% of the population.



Patients experience severe pain and burning from a variety of irritants, including during speech and eating, which in turn leads to a decrease in social adaptation [1].

The oral mucosa has a number of features: it is resistant to the effects of physical, thermal and chemical irritants, prevents the introduction of infectious agents, and has an increased regenerative capacity [2].

At the same time, for colonization by microorganisms, the process of protein adsorption and bacterial adhesion seems to be more important than mechanical attachment of bacteria [16]. Inflammatory pathology of the mucous membrane, like other diseases of the oral cavity, causes the patient a certain discomfort and disrupts the usual rhythm of life: speech, eating, sleep [22] .

The development of clinical manifestations of chronic aphthous stomatitis is preceded by a prodromal period, which occurs with discomfort in the oral cavity, subfebrile temperature, and mild malaise. Subsequently, against the background of hyperemic mucosa, a primary element is formed - aphtha, which is a superficial round ulcer 3-5 mm in diameter, covered with fibrinous plaque surrounded by an edematous bright pink rim. Aphthous rashes are usually multiple; localized in the area of the transitional fold, lateral surfaces of the tongue, mucous membrane of the cheeks and lips. Aphthae cause severe pain when eating, brushing teeth, and articulating. The healing period of aphthae ranges from 7-10 days to 2-4 weeks. Epithelialization of ulcers occurs without scarring or with the formation of a delicate scar. Relapses of chronic aphthous stomatitis occur with a frequency of several weeks to several months. Frequent exacerbations exhaust patients, causing apathy, sleep disturbances, and cancerophobia [19] .

One of the pressing problems in dentistry is the early diagnosis of precancerous diseases and malignant neoplasms of the oral mucosa. Precancerous diseases (PD) are usually not diagnosed at early stages of development, 5 since they occur without visible clinical signs, and patients do not seek medical help [25].

The prevalence of diseases of the upper gastrointestinal tract in adolescence is high and, according to a number of authors, amounts to 60% to 70% of gastroenterological pathology, including the majority of which is chronic



gastroduodenitis: from 65% to 80% of cases, while *Helicobacter infection pylori* accounts for 80% to 83% of sick adolescents [3].

It is important to note that the studies conducted suggest that in combination with inflammatory diseases of the gastrointestinal tract, the incidence of recurrent aphthous stomatitis increases to 11.6% and in some cases can reach up to 40-50% of cases [4].

In long-term pathology of the gastrointestinal tract, as a rule, erosive and ulcerative lesions of the mucous membrane of the stomach and small intestine develop, which is combined with the appearance of aphthae on the oral mucosa [5].

The phylogenetic unity of the digestive tract allows us to assume that erosive and ulcerative lesions of the oral mucosa are a reflection of inflammatory changes in the underlying parts of the gastrointestinal tract; in particular, the manifestation of recurrent aphthous stomatitis may be one of the first symptoms of exacerbation of chronic gastroduodenitis [6].

Generalized stomatitis (affects most of the mouth) appears as a rash of blisters, yellow sores, or white ulcers in the mouth. Sometimes there is a burning sensation in the mouth, dryness due to changes in the composition of saliva (xerotomy). The phylogenetic unity of the digestive tract allows us to assume that erosive and ulcerative lesions of the oral mucosa are a reflection of inflammatory changes in the underlying parts of the gastrointestinal tract, in particular, the manifestation of recurrent 8 aphthous stomatitis can be one of the first symptoms of exacerbation of chronic gastroduodenitis [11].

People who wear dentures often develop candidal stomatitis, especially if patients use a removable denture made of acrylic plastic. According to medical research, 15-30% of people who do not have inflammatory complications have *Candida* fungi on the mucous membrane of the denture bed and the adjacent surface of a complete removable denture . Fungi can be present in a slightly acidic environment (pH 5.8-6.5), and they produce enzymes that break down proteins, carbohydrates, fats, and keratin. This leads to damage to the structure of the denture material, especially acrylic, including due to organic acids such as citric, oxalic,



succinic, acetic, lactic, etc. When plastic ages and its physical and chemical properties change, additional conditions are created for the best development of fungi [7].

The surface of the denture, especially the base of the removable denture, has retention points for nutrients and acts as a kind of incubator for species such as *Candida albicans* . If healthy children and young people have *Candida albicans* is found in the oral cavity in 45-65%, while older people who use removable dentures are carriers of fungi in 60-100% [15].

In severe cases, it does not even allow drinking regular water. Then the wound heals, and the person forgets about the problem for a while. Chronic herpetic stomatitis develops against the background of the proliferation of the herpes simplex virus type 1, which mainly affects the skin of the lips and the mucous membrane of the mouth. It is highly contagious and can be easily transmitted by contact and airborne droplets [21] .

Age-related characteristics and lack of skills in removing plaque from the surface of the prosthesis and natural teeth lead to conditions when the oral mucosa becomes more susceptible to opportunistic infections, both bacterial and fungal [13].

The increase in the incidence of candidiasis in recent decades is associated, in addition to the increase in the number of elderly people, with an increase in the number of patients with weakened immunity, such as cancer patients receiving chemotherapy, and those with viral infections, including the human immunodeficiency virus [14] .

Fungi of the genus *Candida* are present in the oral cavity, which usually cause stomatitis when the immune system is weakened. Children, the elderly, pregnant women and people with diabetes are at risk. Oral candidal lesions often occur if a person wears dentures or takes antibiotics without consulting a doctor. When infected with fungi of the genus *Candida*, white coatings similar to cottage cheese appear in the oral cavity and on the tongue. Pain when swallowing, burning and an unpleasant taste in the mouth are disturbing. *Candida biofilms albicans* develop in three stages. The first occurs within 1-11 hours: the fungi attach to the surface within two hours, microcolonies appear after 3-4 hours to 11 hours. The second stage occurs within 12-



30 hours. Candida biofilms appear as a bilayer consisting of yeast, germ tubes and young hyphae with an extracellular polymer matrix. The last stage is the maturation process, which occurs within 38-72 hours [8].

Advanced age is also a risk factor for the development of denture stomatitis, because in old age, cellular immunity, which provides protection against candidal infection, decreases [25].

Dietary habits can also influence the resistance of fungi in the biofilm to antifungal agents and the formation of biofilm on acrylic surfaces of dentures, promoting more active formation of extracellular matrix and metabolic activity [9].

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Another important factor is the state of the immune system. Immunological disorders are often accompanied by the formation of Candida albicans infections, including the formation of systemic and generalized candidiasis, which can manifest itself in various clinical forms with the participation of one or more strains vegetating on the oral mucosa [18].

However, the methods of treatment and diagnostics known to date, in addition to obvious advantages, also have a number of disadvantages: 1. Antibacterial drugs contribute to the development of dysbacteriosis in the oral cavity. Regular use of the same drugs, caused by frequent relapses of CRAS in patients, causes an “addiction effect” and a decrease in the body's resistance to pathogenic microflora; 2. Systematic use of such a number of drugs has a negative effect on the body as a whole; 3. Previously known algorithms do not provide for really working mechanisms for preventing relapses of CRAS [24].

After the complex therapy, the greatest positive changes in free radical oxidation and lipid peroxidation were noted in the group of patients with recurrent aphthous stomatitis who received combined local and systemic treatment with hyaluronic acid- based drugs [10].



s a result of complex treatment with Tykveol oil (Group 1), patients showed a tendency to normalize the microbial flora of the oral cavity by the 14th–18th day, a decrease in cases of dysbacteriosis with traditional therapy occurred by 10.0%, and in the main group — by 40.0%. Thus, the results of observations indicate that Tykveol oil is an effective means of symptomatic therapy of chronic recurrent aphthous stomatitis and can be recommended as a means of choice in the complex treatment of patients. Availability, simplicity, and effectiveness allow us to recommend them in clinical practice [12] .

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