

Oral Mucosa in Coronavirus Infection

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Abstract

Inflammatory diseases of the oral mucosa can manifest themselves by various nosological processes of the oral cavity, but sometimes even against the background of pronounced inflammatory processes, stomatitis, gingivitis and many other diseases do not form, often this is due to systemic viral processes, for example, coronavirus infection. At the same time, clinical symptoms can be very diverse, or even absent even against the background of changes in the immune and microbial landscape of the oral cavity. With the progression of the disease, the process may spread to the palate, gums, palatine tonsils, larynx, and digestive tract. It is important to distinguish weakened individuals, individuals with immunodeficiency conditions who were on long-term use of antibacterial agents, corticosteroids and antineoplastic drugs. The persistence and recurrent nature of such inflammatory lesions requires not only the usual hygienic measures for the care of the oral cavity and teeth, but also appropriate justified therapy aimed at stimulating the protective forces of the oral mucosa.

Introduction

The oral cavity is anatomically and functionally connected with the pharynx, whose inflammatory diseases are currently in the focus of attention of otolaryngologists due to their wide prevalence, and mainly in people of working age. These diseases are dangerous because they can cause the development of severe complications from the cardiovascular system, kidneys and joints. Most respiratory diseases are accompanied by damage to the pharyngeal mucosa and the lympho pharyngeal ring, which is part of the immune system and plays an important role in the formation of both local and general protective reactions of the body. In response to the introduction of an infectious agent, an inflammatory process develops, which is characterized by a number of protective mechanisms: a change in the permeability of the vascular wall, increased blood flow, increased activity of macrophages and polymorphonuclear cell elements, the release of inflammatory mediators, free oxygen radicals. Macrophages, through the release of cytokines, play a major role in the protective mechanism, causing an increase in the level of T-lymphocytes. The occurrence of non-specific infectious and inflammatory diseases of the pharynx and upper respiratory tract occurs due to an imbalance of local and systemic immunity. The leading role in local immunity is played by cytokines acting on biochemical messengers that regulate the stimulation and inhibition of inflammatory reactions that initiate an immune response. Cytokines are produced by lymphocytes and macrophages embedded in the epithelium of the mucous membrane, the source of cytokines in saliva is serum transudate and salivary glands. Cytokines are also produced by the epithelial cells of the mucous membrane themselves when they come into contact with a microbe. It is important to note that the content of cytokines in saliva does not correlate with their level in the blood, which indicates the autonomy of local immunity. Viral infection can serve as an initiating factor for the attachment of a bacterial pathogen in the future. From the point of view of modern clinical immunology, the state of immunity of the oral cavity is a mirror reflecting the state of systemic, that

is, general immunity, which in particular is an indicator primarily of the state of immunity of the gastrointestinal and respiratory tracts.

The purpose of the study

To study the features of adaptive mechanisms of local immunity of the oral mucosa against the background of coronavirus infection and to justify the principles of immunocorrecting therapy based on the identified changes.

Methods and techniques

Patients who were taken to the Special Hospital of Zangiota No. 2 of the Republic and who were diagnosed with 46 COVID - 19 were examined by dental examination of the oral cavity.

Other infectious diseases were also detected. At the time of the examination, the general condition of the patient is very serious. Welcome, without glasses. Answers the questions correctly. To hurt. The skin and visible mucous membranes are pale, without a rash. The nose-lip triangle and the fingers-toes have a slightly bluish hue. Body weight is normal. The tongue is clean, dry. There are no deformities in the musculoskeletal system, but intuition and behavior in both legs of the patient are not fully observed until the chest becomes numb. Breathing through the mouth-nose, with the participation of auxiliary muscles. Against the background of auscultative bubbly breathing, a mixed wheezing is heard. Exhalation and inhalation are observed in hansas. Respiratory conduction is not audible on the left side (SpO₂-84-86%, when it comes to patients with acute respiratory failure and taking into account the severity of the patient's behavior.) the patient begins with oxygen therapy with warm and moistened oxygen through a nasal cannula. After that, the symptoms of respiratory failure in the patient are somewhat improved by reducing the axvoli. SpO₂-increased to 95%. The heart tones are muted, rhythmic. Peripheral vascular stroke has an average fullness and tension. The stomach is soft, painless, intestinal peristalsis is audible. The appearance of constipation was independent, it was not present during the examination. Diuresis is performed through a yellow-colored urethral catheter. Treatment is very important for me, because I am a clinical immunologist who deals with the immunology of infectious processes. At the very beginning of the pandemic, a Chinese reference book came into my hands. He was urgently transferred, and I was surprised that "Plakvinil" appeared everywhere there. I knew that it is used not only for malaria, but also rheumatologists prescribe patients in order to suppress the immune response. This drug is an immunosuppressor. It suppresses the immune system. To give it to a person with a hyperergic reaction of the body means not to let him die. But there is also a dualism in this: on the one hand, the person remained alive, on the other-the intervention did not allow the body to form adequate antibodies, and after some time he will be vulnerable again. Therefore, over time, this drug was abandoned. In medicine, this is called "did not show its effectiveness". "Dexamethasone" is another story. It is a systemic corticosteroid hormone. Since the 60s, it has been used for autoimmune rheumatoid processes. Corticosteroid hormones have a very wide range of indicators: anti-allergic, decongestant (which is important for COVID-19), anti-inflammatory. Compared with the immunosuppressive "Plakvinil", which belongs to the category of C preparators (very weak), "Dexamethasone" was more successful.

Conclusion

Another difference is the duration of immunosuppression, that is, the suppression of the immune response. At "Plakvinil" it is long-lasting, so rheumatologists prescribed it to chronicles. Dexamethasone has a short one. It is done once a day. After this time, the hormone may no longer be in the body — it is easily injected and excreted. At the same time, he can also successfully remove a hyperergic reaction with pulmonary edema. Therefore, sometimes you do not need to invent a bicycle, but just remember what our predecessors did. In medicine, you always work according to the

fact. An important point: there are significantly fewer official diagnoses than there are pathological processes that are realized in the human body. The doctor looks at the body, analyzes, and understands how it reacts.

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