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Changes in the State of the Immune System in Gi Patients against the Background of Covid-19 Infection with Acute and Chronic Periodontitis

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Relevance of the study. Clinical signs that occur in patients infected with coronavirus infection when the upper respiratory tract is damaged are:increased body temperature, coughing, superficial and short breathing, runny nose, separation from the nose, loss of sense of smell and taste, sore throat, itchy throat, sneezing, suffocation of voice, dry cough and a large amount of sputum separation. In addition, pain in the muscles, diarrhea and pain in the abdominal area are annoying. Most often, the disease, bypassing mild symptoms, develops viral pneumonia, causing a deficiency of all vital organs. The principles of early diagnosis, prevention and special treatment of inflammatory diseases of the oral cavity in patients infected with coronavirus infection have not been fully developed.

The material of the service. We conducted immunological studies of 14 patients with acute and chronic periodontitis who developed against the background of acute COVID-19 infection during the acute and remission period of the disease, in the control group, as well as in 14 patients. In all controlled patients, immunological parameters were compared with the main group and control group of our study. The average age of all patients examined was 39.5±0.45 years. All patients examined received treatment procedures under the standard protocol.

Results and analyzes. The results of the study of the values of the immune system T-cellular system of patients with acute and chronic periodontitis against the background of COVID-19 infection are presented in Table 1. From the data presented, it can be seen that the average number of leukocytes in the patients of the main group is the control group ($r<0.01$) values. Obviously, the leukocytosis we have identified has shown the presence of systemic inflammation. The data shows that the relative number of lymphocytes in peripheral blood tends to decrease, although it does not differ significantly. In acute tonsillopharyngitis, which develops against the background of COVID-19 infection, cell zveno sores have significantly increased the absolute value of lymphocytes compared to the control group ($r<0.001$).

The results of the analysis of T-cell zvenos of immunity showed that the relative composition of SD3+ T-lymphocytes in the main group of patients was lower than the values of the comparison group and the control group. Thus, the SD3+ value in this control group is 44.62±0.79%, and in the main group of patients averaged 49.8±2.30% on this indicator, compared to 48 in the acute period of the disease. 7± 2. 28% and was equal to 45.11±1.79% ($r<0.001$) in the remission phase of the disease, which differed significantly ($r<0.05$). An analysis of the subpopulation content of immune T-cell zvenos, including the properties of subpopulations of lymphocytes such as SD4+ and SD8+, found a 1.6-fold decrease in the content of T-helpers/inducers (SD4+) in the main group of patients [2.4.6.8.10.12.14].

Due to the high values of leukocytes, the absolute number of T-lymphocytes had a tendency to increase. Apparently, this was due to the insufficient presence of leukocytes, including lymphocytes, as well as the suppression of subpopulations of T-helpers /inducers that perform the main regulatory function in the immune state against this background. Consequently, the relative composition of the T-helpers/inductors in the main group of patients was much lower than that of the control group ($r<0.05$).

It is known that SD4+ / SD8 + ratio analysis (immunoregulatory index - iri) showed an unreliable decrease in comparison with control group indicators ($r>0.05$). In the main group of patients, the range of invidual iri values ranged from 0.43 to 0.95, but most patients had iri below 0.75. Such a change in IRI was observed due to a decrease in SD8 + lymphocytes against the background of unreliable altered

values of SD4 + lymphocytes. We found that the number of SD8 + lymphocytes does not differ significantly from the values of the control group. Apparently, this is due to the presence of a state of immunodeficiency in patients, which was aggravated by the presence of an infectious inflammatory process and insufficient immunity to the pathogen.

Thus, in this case, the lack of T-lymphocyte population in the main group of patients is associated with a dominant decrease in SD4+ T-helpers/inducers, which regulate the adequate inflammatory process and directly eliminate infectious agents-killers, a necessary link in the formation of cells.

Consequently, a clear T-cell immunodeficiency in the main group of patients was associated with a deficiency of immunoregulatory subpopulations of T - lymphocytes, manifested by a clear deficiency in the number of SD4+ T-cells and SD8+ T-Cytotoxic lymphocytes.

A comparative analysis of SD16 + expression on lymphocytes was found to have not significantly increased this value in the main group patients compared to control group Data ($r>0.05$). Thus, in acute tonsillopharyngitis, which developed against the background of COVID-19 infection, the SD16+ content in the main group of patients was 7.17±0.87%, and karshi 17. 5±1. 01%, which was 1.2 times higher than the values of the control group.

In patients with elevated levels of B lymphocytes in the blood, there is a tendency to decrease the number of lymphocytes with SD20+ markers, but not to decrease the level of B lymphocytes. According to Schubert, this is due to the fact that SD20+ is a sign of maturity of B lymphocytes, as well as in patients with impaired lymphocyte development, immunocompetence and the ability to perform their functions.

Patients with an increased risk of developing sd25+ withdrawal syndrome have an increased sensitivity to analgesic drugs. Thus, such a decrease in SD25+ expression in lymphocytes may be due to the fact that interleukin-2 does not significantly affect the body's immune system, which leads to a decrease in the level of sd25+ expression in lymphocytes [1.3.5.7.9.11.13.15].

In patients with autoimmune hepatitis C, late activation of sd95+ markers was detected against the background of covid - 19 infection caused by the human immunodeficiency virus. In addition, SD95+ increases the number of lymphocytes in the brain, which makes it more sensitive to the effects of ultraviolet radiation.

SD95+ does not contain mutations that can cause mutations in ($R<0.01$), which gave rise to the assumption that they are descendants of Neanderthals. Thus, in patients with autosomal dominant immunity, an increase in the level of SD3+ lymphocytes, SD4+ T helper cells/inducers against sd8+ T cytotoxic lymphocytes and the immunoregulation index was observed.

Interleukin il-1β levels were estimated at 15.67±1.32pg/ML to control group patients, so that in the primary group patients, 48.7±7.3pg/ml ($r<0. 01$), while during remission of the disease this indicator was 31.2 ± 8.23pg/ML. Il-6 levels in the patient control group were 5.30±1.24pg/ml in the control group, and 13.2±1.3 PG/ml ($R<0.01$) in the acute stage of the disease in the main group patients, while the remission period of the disease was 12.1± 1.9 PG/ml ($R<0.01$). While il-18 levels in the patient control group were 20.20±1.97 in the control group, and 47.2 ± 11.5pg/ml ($R<0.01$) in the acute phase of the disease in the main group patients, this indicator was 46.2 ± 14.5pg/ml ($R<0.01$)during remission of the disease.

Conclusion: In patients with acute and chronic gingivitis against the background of COVID-19 infection, the development of the disease clearly enhances the state of T - and V-cell immunodeficiency, which is associated with immunodeficiency of immunoregulatory subpopulations of T-lymphocytes, and a clear deficiency in the number of SD4+ T cells is manifested by SD8+ T-Cytotoxic lymphocytes, SD25+ il-2 receptors and SD95+ factor apoptosis. An analysis of the cytokine profile showed that the presence of a pronounced inflammatory process in acute and chronic gingivitis, developed against the background of COVID-19 infection, leads to an increase in the activity of anti-inflammatory cytokines.

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