

Dynamics of Immunological Parameters of Patients with Oral Diseases against the Background of Covid-19 Infection after the Use of Immunization

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Relevance of the study. The mechanisms of protection of the human organism can be conditionally divided into mechanical, nonspecific resistance factors and specific immune reactions. It is known that in an organism infected with a viral infection, there is a specific decrease in the protection of the cellular immune system, which protects the body from an infectious agent, in which infectious immunity serves as a humoral type. It is worth noting that at the last time, the scientific interest of researchers in protein factors that protect nonspecific immunity increased, among which proteins with multifunctional properties occupy a special place - these are considered immunoglobulins and cytokines or interleukins [13.15.17.19.21.23].

The immune system that produces interleukins in turn activates the synthesis of proteins, prostaglandins and others in the acute phase. We know that an increase in the production of cytokin enhances the inflammatory process and provokes the production of active metabolites of reactive oxygen, as well as a cascade of free radical transformations (an explosive reaction of oxygen). In a viral infection in the body, killer cells are activated, which lysis bacterial and viral infectious agents.

Most of the literature available contains data on some studies in the field, often but with no information on the status of immune system indicators in patients infected with COVID-19, although it is considered necessary to study immune indicators in patients infected with COVID-19. The lack of information on this topic led to this study to improve immune system indicators in patients with COVID-19 and prevent inflammatory diseases of the oral cavity and their complications as a result of this viral infection in such patients.

Thus, the available literature illuminates more cellular parameters of the patient's immunity, especially those of General blood analysis. However, we found a small amount of information to study the cellular zvenos of the immune system as well as interleukins in patients with COVID-19. Today, in modern medicine, great attention is paid to the treatment of patients with COVID-19 infection and those with their complications, but this urgent problem has not yet fully found its solution. At this time, treatment preventive measures come first, aimed at improving the quality of treatment of secondary diseases associated with COVID-19 infection. On our side, when 14 patients with acute and chronic gingivitis who developed as a result of COVID-19 infection were examined, 7 of these were people with acute and 7 with chronic gingivitis. Of patients with acute and chronic periodontitis, 6 were diagnosed with acute and 8 with chronic periodontitis. Of the patients examined, 10 were diagnosed with periodontosis [1.3.5.7.9.11.13.15.17.19.21.23].

In all of the above patients, immunological impressions have been identified and compared with control group indicators. The age of patients infected with COVID-19 infection ranged from 25 to 75 years, with an average age of 50 ± 0.45 years. All patients involved in the study received treatment procedures according to the generally accepted protocol. While certain changes in the immune system of patients are evident in our study, there is also a great interest in studying the cellular and humoral rings of immunity after immunization. In coordinating the immune system, we used to take vaccines against the COVID-19 virus. These vaccines are Moderna and AstraZeneca, ZF-UZ-VAC200, Sputnik V. Vaccination has been recommended to all individuals, first of all, to the category of residents who have been infected with COVID-19 or are at high risk of being infected with COVID-19 infection.

Due to the fact that in our studies, significant changes in the state of the immune system of patients were detected, the study of the state of the immune system after vaccination against COVID-19 infection aroused great interest.

Vaccination against COVID-19 infection should be done for all categories of patients tested, but primarily for individuals at risk when COVID-19 infection is combined with other infectious diseases. In our study, the vaccination dose for patients is 0, 5 and 1. 0ml. The control group was not vaccinated against COVID-19 infection, but the immunological parameters of patients with oral diseases were studied.

It is known that reliably, the main effect of vaccination against COVID-19 infection is an increase in the level of antibodies to the vaccine ($P < 0.001$), and in patients 3 months after vaccination, this indicator was 74.7 ± 17.85 , but 6 months after vaccination, there was a tendency to decrease the level of antibodies to 48.0 ± 16.00 . The study of the immune system cytokine profile in patients against the background of vaccination showed a clear proportionality at the level of cytokines, which naturally affect the course of the disease [18.20.21.22.23].

Thus, the value of IL-18 from the time of the outbreak of oral diseases was 67.4 ± 6.61 PG/ml, a figure significantly different from the control group. After treatment treatments, the incidence during remission of the disease was 48.4 ± 5.26 PG / mL, which in turn was significantly different from pre-treatment values ($P < 0.05$). The results obtained are 5. Listed in Table 1. After vaccination was obtained, a significant further increase in the value of IL-18 was noted, with a gradual decrease in the value of IL-18 to 0.4 ± 8.3 PG/ml 6 months after vaccination ($P < 0.05$).

A study of IL-1 β qimati after treatment found significant differences between pre-and post-treatment values. In addition, IL-1 β levels prior to treatment were 50.9 ± 5.54 PG/ml, whereas after treatment the rate was 33.4 ± 33.5 PG / ml ($P < 0.05$). Patients showed a clinical picture similar to IL-18 after the vaccine was administered. First, the increase in IL-1 β reached i.e. 46.7 ± 3.72 PG/ml, then by the 6th month of observation, its indicator decreased to 31.8 ± 6.61 PG/ml ($P > 0.05$). A study of the value of IL-6 showed that within 6 months after vaccination, there was a downward trend from 15.0 ± 1.61 PG/mL to 11.2 ± 1.50 PG/ml before treatment ($P > 0.05$). Thus, a downward trend in the value of IL-1 β , IL-6 and L-18 turned out to be significant, but did not approach the values of the control group. Thus, in patients with diseases of the oral mucosa against the background of COVID-19 infection, immunological studies were carried out to study the indicators of the immune system and cytokine in the peripheral blood when receiving the vaccine against COVID-19 infection, which revealed certain changes, but despite significant improvements in some indicators, against the background of immunotangiability compared with the control group, these indicators remained [2.4.6.8.10.12.14.16].

Conclusion. While the recurrence frequency of oral diseases in covid-19 infection FOI was an average of 5.1 ± 0.2 marotoba per year, with the introduction of the vaccine against COVID-19 infection into the treatment complex, this rate decreased to an average of 3.2 ± 0.4 times per year ($P < 0.001$), but this rate remained significantly higher than in patients with no COVID-19 infection but Thus, the introduction of a vaccine against COVID-19 infection in the complex treatment of advanced oral diseases against the background of COVID-19 infection made it possible to reduce the frequency of recurrence of oral diseases from 5.1 ± 0.2 to 3.2 ± 0.4 per year.

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