

COVID-19 VIEWS ON IMMUNOLOGICAL ASPECTS OF THE ORAL MUCOSA Rizaev J.A.¹, Ahrorova M.Sh.² (Republic of Uzbekistan)

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Abstract: introduction. In late 2019, new coronavirus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was discovered in Wuhan, Hubei Province, China. It then spread throughout the world, becoming a global pandemic. Purpose of the study. To improve dental care, to substantiate a set of therapeutic and preventive measures for people who have had COVID-19 based on the study of patients oral cavity mucosal immunity. Materials and methods of research. We conducted a retrospective single-center study of patients who were in the infectious diseases department from May to June 2020 with a primary diagnosis at admission of coronavirus infection, non laboratory confirmed, community-acquired bilateral polysegmental pneumonia of moderate severity. Written consent for the examination was given by all patients. Research results. This study included 90 patients aged 20 to 80 years (52 men and 38 women, middle age 53.6 ± 9.7 years). Out of these patients, 31 patients had hypertension, 8 patients had diabetes mellitus, 1 patient had Hepatitis A and 1 patient had chronic bronchitis in past illnesses. Conclusions. Thus, it is advisable to study patients oral cavity mucosal immunity with COVID-19 in order to limit the deep damage to the oral mucosa, prescribe rational treatment, and carry out a set of preventive measures. Pathogenetic treatment schemes of the oral mucosa lesions in COVID-19 will be developed.

Keywords: COVID-19, SARS-CoV-2, diabetes mellitus, oral mucosa, complication.

COVID-19: ВЗГЛЯДЫ НА ИММУНОЛОГИЧЕСКИЕ АСПЕКТЫ СЛИЗИСТОЙ ОБОЛОЧКИ РТА

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Аннотация: введение. В конце 2019 года новый коронавирус, известный как коронавирус тяжелого острого респираторного синдрома 2 (SARS-CoV-2), был обнаружен в Ухане, провинция Хубэй, Китай. Затем он распространился по всему миру, превратившись в глобальную пандемию. Цель исследования. Улучшить стоматологическую помощь, обосновать комплекс лечебно-профилактических мероприятий для лиц, переболевших COVID-19, на основании изучения иммунитета слизистой оболочки полости рта пациентов. Материалы и методы исследования. Проведено ретроспективное одноцентровое исследование больных, находившихся в инфекционном отделении с мая по июнь 2020 г. с первичным диагнозом при поступлении: коронавирусная инфекция, не лабораторно подтвержденная, внебольничная двусторонняя полисегментарная пневмония средней степени тяжести. Письменное согласие на обследование дали все пациенты. Результаты исследования. В исследование включено 90 пациентов в возрасте от 20 до 80 лет. Из этих пациентов у 31 пациента была артериальная гипертензия, у 8 пациентов был сахарный диабет, у 1 пациента был гепатит А и у 1 пациента был хронический бронхит в прошлом. Выводы. Таким образом, целесообразно изучение иммунитета слизистой оболочки полости рта у пациентов с COVID-19 с целью ограничения глубокого поражения слизистой оболочки полости рта, назначения рационального лечения, проведения комплекса профилактических мероприятий. Будут разработаны схемы патогенетического лечения поражений слизистой оболочки полости рта при COVID-19.

Ключевые слова: COVID-19, SARS-CoV-2, сахарный диабет, слизистая оболочка полости рта, осложнение.

Introduction. In late 2019, new coronavirus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was discovered in Wuhan, Hubei Province, China. It then spread throughout the world, becoming a global pandemic.

The main route of transmission is through the large respiratory droplets, although the virus has also been found in the stool and urine of affected individuals. It represents a large variability in the severity of clinical

manifestations, such as dry cough, dyspnea and fever, progressing from a mild flu-like illness to a severe respiratory syndrome. Death rates vary depending on region and changes an updated number of casualties.

The oral cavity is particularly susceptible to viral infections due to its structure, especially soft tissues and salivary glands. Several viruses, including herpes simplex virus (HSV) and human papillomavirus (HPV), are associated with primary oral lesions that cause disease. In addition, the oral mucosa may be affected by secondary pathological processes of a bacterial or fungal nature due to viral immunosuppression, such as the human immunodeficiency virus (HIV).

To date, there is a limited amount of literature that describes the oral mucosa (OM) in patients diagnosed with SARS-CoV-2. Thus, the purpose of this study was to improve dental care, to substantiate a set of therapeutic and preventive measures in people who had COVID-19 based on the study of patients oral cavity mucosal immunity.

Purpose of the study. To improve dental care, to substantiate a set of therapeutic and preventive measures for people who have had COVID-19 based on the study of patients oral cavity mucosal immunity.

Materials and methods of research. We conducted a retrospective single-center study of patients who were in the infectious diseases department from May to June 2020 with a primary diagnosis at admission of coronavirus infection, non laboratory confirmed, community-acquired bilateral polysegmental pneumonia of moderate severity. Written consent for the examination was given by all patients.

Laboratory confirmation was carried out using a PCR and ELISA test system. Chest X-ray examination was performed using multisliced computed tomography. Further, upon admission, patients underwent a general blood test with a leukocyte formula, blood biochemistry and screening of the hemostasis system.

Patients were prescribed a ward regime, oxygen therapy. In most cases, medical treatment included:

hydroxychloroquine 200 mg 2 tablets 2 times a day during the day, then 1 tablet 2 times a day for 7 days;

azithromycin 500 mg 1 tablet 1 time per day for 5 days,

direct anticoagulants: clexane, faripavir, heparin. Other drugs included paracetamol, 3rd and 4th generation cephalosporin, ketoral, ascorbic acid, and were prescribed depending on the dynamics of the disease. Also, 10 patients received dexamethasone 12 mg intravenously 2 times a day for two to three days.

Research results. This study included 90 patients aged 20 to 80 years (52 men and 38 women, middle age 53.6 ± 9.7 years). Out of these patients, 31 patients had hypertension, 8 patients had diabetes mellitus, 1 patient had Hepatitis A and 1 patient had chronic bronchitis in past illnesses. None of the patients took anticoagulants before testing. The average lung injury according to MSCT was $25.2 \pm 8.5\%$ (from 6.6% to 52%).

The data of biochemical analysis, coagulation studies and clinical hematology are presented in tables 1, 2 and 3, respectively. A number of indicators are noteworthy. C-reactive protein was elevated in 81 people on admission. C-reactive protein levels in patient with type 1 diabetes mellitus were 137.5 mg/dL. The mean elevated C-reactive protein was 43.3 ± 31.5 mg/dL.

Conclusions. Thus, it is advisable to study patient's oral cavity mucosal immunity with COVID-19 in order to limit the deep damage to the oral mucosa, prescribe rational treatment, and carry out a set of preventive measures. Pathogenetic treatment schemes of the oral mucosa lesions in COVID-19 will be developed.

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