

**Comprehensive treatment of jaw bone defects caused by complications
after COVID-19**

Dilnoza T. Bobamurotova, Sitora S. Ruziyeva

PhD, Dentistry and maxillofacial surgery

Department, Multidisciplinary Clinic of Tashkent Medical Academy,

Tashkent, UzbekistanE-mail: dbobamuratova@mail.ru

Assistant lecturer Dentistry and maxillofacial surgery

Department, Tashkent Medical Academy, Tashkent, UzbekistanE-mail:

dbobamuratova@mail.ru

Abstract: The problem of treatment of purulent-inflammatory diseases of the maxillofacial region is relevant both for dentists in clinics and maxillofacial surgeons in hospitals. As a result of not treating purulent inflammatory diseases on time, serious complications such as sepsis, mediastinitis, cavernous sinus thrombosis, and the development of atypical and severely developing phlegm on spreading in several cellular spaces at the same time were observed.: Research and development of orthopedic constructs to help patients restore jawbone function for comprehensive treatment of jawbone defects resulting from post-COVID-19 complications.

Key words: mediastinitis, hematogenous way, acrylic plastic, mycolic microflora, rhino-orbitocerebral mucormycosis.

Introduction: From the beginning of 2020, the new coronavirus infection (COVID-19) began to spread rapidly in Asia, America, and Europe. The first outbreak of COVID-19 occurred in Wuhan, People's Republic of China, in December 2019. On February 11, 2020, the International Committee on Taxonomy of Viruses gave an official name to the infectious agent - SARS-CoV-2. On February 11, 2020, the World Health Organization gave an official name to a new infectious disease - COVID-19 ("Coronavirus Disease 2019"). The new disease has set new tasks for all medical workers related to prevention, rapid diagnosis and medical care for patients. Information about the epidemiology, etiology, pathogenesis, clinical and laboratory diagnosis, as well as prevention and treatment of this disease is expanding and being studied. In patients with COVID-19 who require surgical intervention, purulent inflammatory diseases of the maxillofacial area and neck have a specific origin, and as a result, the treatment of changes in the middle and lower areas of the face is relevant for us. The spread of inflammation can be through the fascial spaces or through the hematogenous way.

As the number of COVID-19 cases around the world rises, so too does the rate of complications. This disease causes severe complications in the maxillofacial region, namely osteomyelitis or osteonecrosis of the jaw, thrombosis of the

cavernous sinuses, rhino-orbitocerebral mucormycosis, loss of vision, neurological complications leading to disability and death of people.

Materials and methods:

1. Patients being treated in the Department of Maxillofacial Surgery of TMA.
2. Dentures made of acrylic plastic.
3. Microbiological.
4. Laboratory analyses.
5. Clinical methods.

Result:

1. To study the distribution of purulent-necrotic lesions in the face area in patients infected with COVID-19.

2. Evaluation of the specificity of purulent-necrotic wounds in the face in patients with COVID-19.

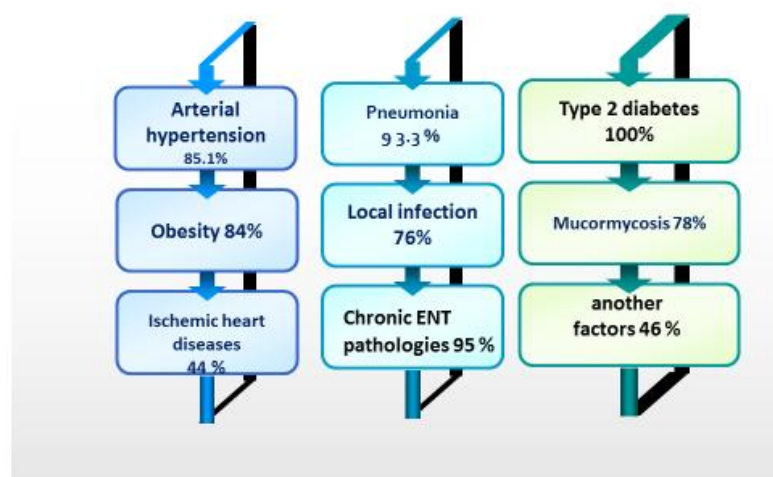
3. Development of orthopedic structures for necessary patients after surgical treatment of purulent-necrotic wounds in the face of patients infected with COVID-19.

Development of new orthopedic constructions for the treatment of jaw bone defects caused by complications after COVID-19.

Surgical treatment method was used in 16 patients. Conservative treatment method was used in 2 patients.

1. Opening phlegmons of soft tissue of the face - 7
2. Gymrotomy necroectomy – 9
3. Gymrotomy, necroectomy, FESS- 3
4. FESS- 5
5. Pathomorphological examination of 18 patients was conducted.

INFLUENCING THE DEVELOPMENT OF CAVERNOUS



Conclusion: The implementation of the research results in diagnostic, preventive and clinical medicine will allow to determine the optimal medical tactics for the treatment of purulent-necrotic wounds of the face in patients with COVID-19, which will meet practical health care needs. The proposed concept allows patients with purulent-necrotic facial ulcers with COVID-19 to improve chewing and speech functions in patients after surgical procedures.

Purulent-necrotic process of the face-jaw area observed among patients with COVID-19 occurs in the middle and upper 1/3 of the face. These processes are formed on the basis of aseptic necrosis on the basis of bacterial and mycolic microflora in the nasal cavities, the bone skeleton and soft tissue in the middle and upper 1/3 of the face. Among patients, this pathological condition is observed in 35% of cases among those with complications;

Purulent-necrotic wounds on the face of patients infected with COVID-19, morphological changes in the mucous membrane of the face-jaw, nasal mucosa, and the nasal mucosa are represented by the process of fungal damage. The processes are based on purulent necrotic process due to violation of blood aggregation and rheology in the blood vessels and aseptic necrosis in the tissue, which in turn causes the process to take a long time. With the presence of an inflammatory element, systemic vasculitis and necrosis, and in other cases, with a large secretion of mucous secretion, which leads to the development of persistent hypoxia with a violation of natural breathing

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