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## ADVANTAGES OF EARLY DETECTION AND TREATMENT OF ODONTOGENIC HEMORRHOIDS IN PREVENTING COVID-19 COMPLICATIONS

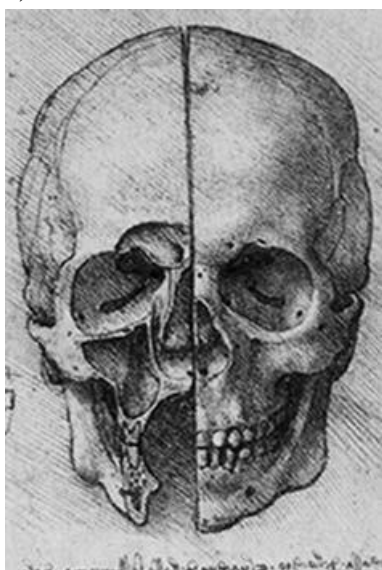
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**Abstract:** In individuals with Covid-19 illness, delayed diagnosis and treatment of chronic odontogenic sinusitis lead to upper jaw osteomyelitis, as well as one form of the clinical course of sinusitis even after surgery. During a pandemic, early detection and treatment of odontogenic sinusitis are critical for patients' speedy recovery, as well as the prevention of upper-jaw osteomyelitis and other complications.

**Keywords:** maxillary cavity, antritis, sinusitis, CoVID-19, osteomyelitis

**The purpose** is to emphasize the importance of early identification and therapy with CoVID-19 in individuals with chronic odontogenic sinusitis.

The anatomical shape of the upper jaw, as well as the patient's age and any concomitant conditions, influence the development and course of odontogenic hemorrhoids. The anatomical nature of the Gaimor hollow is depicted in Leonardo Da Vinci's drawings from the 15th century (Figure 1).



The maxillary sinus has three separate anatomical structures:

- a) Pneumatic
- b) Sclerotic
- c) Mixed [1]

The closer and softer the bone plate at the bottom of the cavity to the root apex depends on the anatomical shape of the maxillary cavity, i.e., the more pneumatic the cavity, the larger the volume. The bone plate at the bottom of the cavity is eroded as a result of a pathological process caused by chronic inflammation of the

periapical tissues (periodontitis, purulent cyst-granulomas, dystopia, and inflammation of the retinal teeth). [2]

Figure 1. L. Davinci  
Frontal section of facial bones

Sources of odontogenic infection can often be chronic inflammatory foci of large and small upper teeth: teeth attached to the lower wall of the sinus, granulomas at the apex of tooth roots, subperiosteal abscesses, periodontitis, as well as foreign bodies in the upper jaw cavity: filling, dental small instruments, tooth root cavity infiltration. [3]

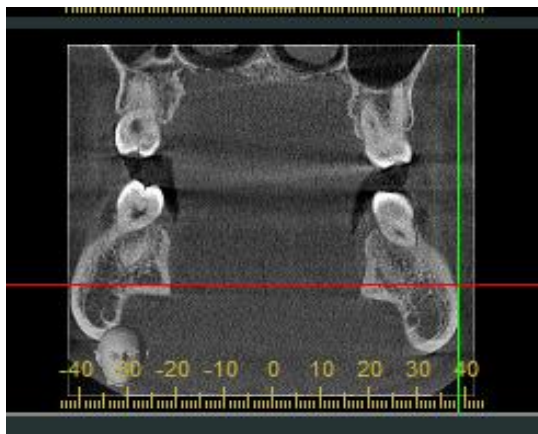


Figure 2

### **The location of the tooth roots relative to the bottom of the maxillary cavity**

Coagulase-negative staphylococci (36 percent), *Staphylococcus aureus* (25 percent), *Streptococcus viridans* (8.3 percent), *Corynebacterium* (4.6 percent), and anaerobes (6.4 percent) are the most common infectious agents in acute odontogenic sinusitis [4].

In addition to the examples of patients with CoVID-19 who had a distinct course of disease during the pandemic, the number of probable cardiovascular and respiratory problems among patients after recovery is growing day by day. Treatment of problems in the facial and jaw area, such as persistent odontogenic sinusitis and arterial thrombosis, presents a new challenge for facial and jaw surgeons. Chronic odontogenic sinusitis in CoVID-19 patients is marked by rapid disease progression, which varies from the ordinary sinusitis caused by the virus.

In 2020, 35 patients with chronic odontogenic sinusitis were treated with chronic odontogenic sinusitis surgery, antibacterials, and immunomodulators at Tashkent 7th city clinical hospital's Department of "Facial and Maxillofacial Surgery". Nine of them were diabetics, both type I and type II (diagram-1).

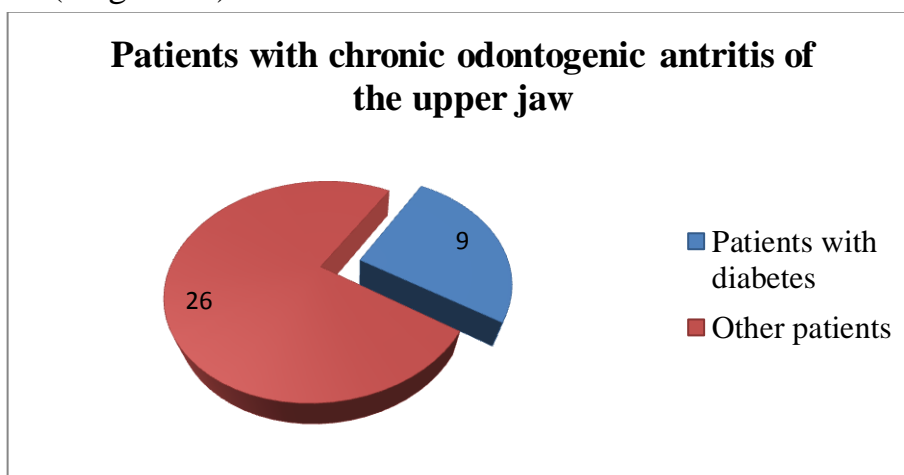


Diagram 1

Basic and further clinical laboratory procedures were performed on the patients, including a general blood test, coagulogram, MSCT, 3D computed tomography, chest X-ray, ECG, and blood biochemical analysis. Furthermore, the medications acquired.

When patients initially arrive, they complain of pain in the upper jaw, unfinished teeth following tooth extraction, abscess, pain in this area, and general weakness.

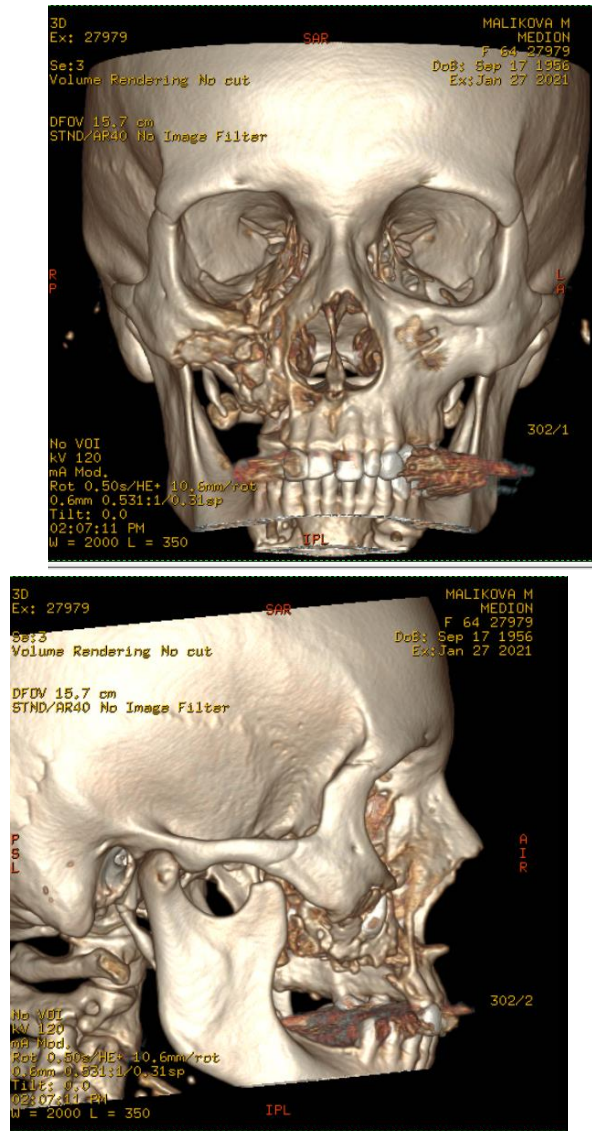


Figure 4

Chronic odontogenic osteomyelitis of the right upper jaw in patient M.M. The situation following CoVid-19. The right maxillary sinus's walls are destroyed. Frontal and lateral perspectives

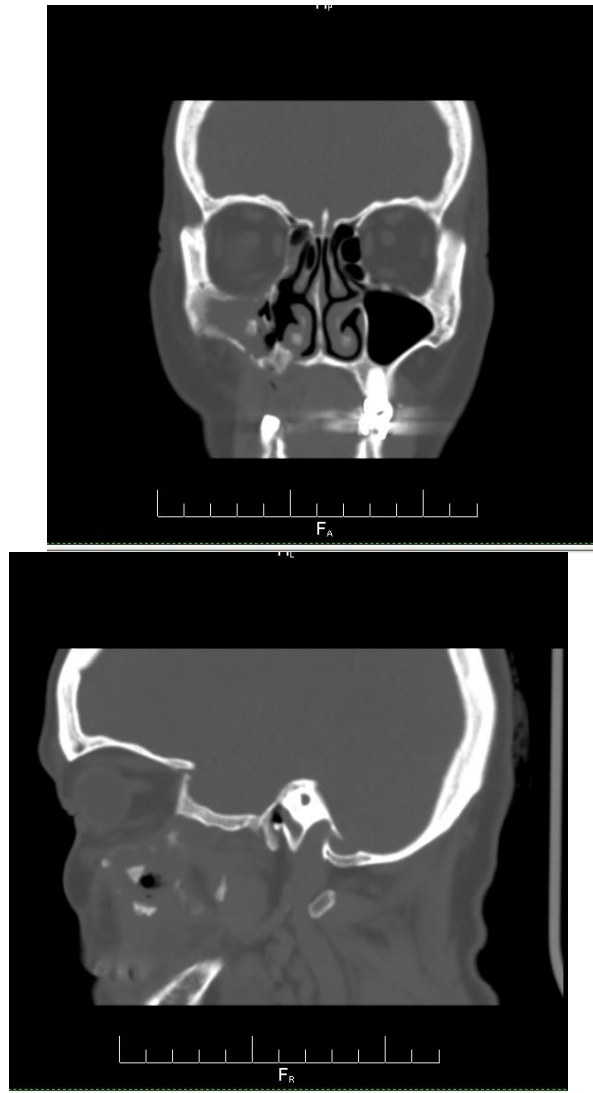


Figure 5

Chronic odontogenic osteomyelitis of the right upper jaw in patient M.M. The situation following CoVid-19. The right maxillary sinus's walls are destroyed.

After removing the causative tooth or foreign substances in the cavity in patients with odontogenic hemorrhoids as a result of iatrogenic or chronic periodontitis, we frequently witness an improvement in the patients' condition and the surgical procedure's success (filling or tooth root). In contrast to odontogenic osteomyelitis, Covid osteomyelitis shows erosion and necrosis of the mucous membrane in the vestibular and oral portions of the upper palate alveolar tumor. The bones in the area where the

necrotic process began were stripped and the bone tissue turned pale yellow, according to the findings. (Figure 8)



Figure 8

Odontogenic hemorrhoids after Covid-19. Wound and exposed bone tissue in the area of the hard palate on the left side.

The status of the sinus cavity can be noticed in most cases of endoscopic examination in odontogenic hemorrhoids and osteomyelitis in the presence of mucous membrane hyperemia and purulent discharge.

Endoscopic examination of the maxillary sinus in patients treated with Covid-19 may indicate a redness or darkening of the mucous membrane. (Figure 9)





## Figure 9

An endoscope was used to check the upper jaw cavity of a patient diagnosed with odontogenic hemorrhoids who was being treated with Covid-19.

Twelve of the 35 Covid-19 patients experienced upper jaw osteomyelitis. Three of the patients were middle-aged non-diabetic patients, and nine were elderly patients with diabetes. In the collected bone springs, histological findings of postoperative medicines in patients with diabetes mellitus revealed cystic cavities and inflammatory infiltration (sequestrations).

The wound healed in 23 patients, the patient recovered, and their capacity to work was restored.

In conclusion, early detection and treatment of odontogenic hemorrhoids in Covid-19 patients can help patients avoid consequences such as upper jaw osteomyelitis and other disease-related bone tissue.

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