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Abstract Submission

OSTEONECROSIS OF THE MAXILLARY AND ZYGOMATIC BONE AFTER SEVERE COVID-19 INFECTION: A CASE REPORT

SECTION: 2C

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Introduction: The Sars-CoV2 (covid-19) is known to affect the respiratory system as a complication. However, some cases of involvement of the maxillofacial area have been reported in the literature, including osteonecrosis and osteomyelitis. It can either be the result of the pathogenic mechanism or therapy administered.

Case report: This article presents a case of osteonecrosis of the maxillary and zygomatic bone after severe Covid-19 infection in a 75-year-old man. He denied any intake of antiresorptive drugs or radiotherapy. The patient had type II diabetes mellitus and had undergone high-intensity care admission to the intensive care unit for respiratory failure in Sars-Cov-2 infection. During hospitalization, he received dexamethasone 8 mg daily for 36 days.

The case was treated with extensive hemimaxillary and zygomatic sequestrectomy combined with orbital-zygomatic-maxillary reconstruction with custom titanium mesh (T-mesh) using CAD/CAM technology designed by our team, under general anesthesia.

Discussion: Numerous factors have the potential to contribute to the initiation and progression of osteonecrosis of the jaw following a post-COVID-19 infection. The virus itself, leading to a hyperinflammatory state. Additionally, microvascular thromboses and a hypercoagulable state may further exacerbate the condition. Furthermore, medications employed for managing the hyperinflammatory syndrome and cytokine storm, specifically corticosteroids and biological drugs like monoclonal antibodies. Recent investigations into individuals who have recovered from COVID-19 reveal an elevated susceptibility to developing osteonecrosis when exposed to glucocorticoids. Some authors suggest the connection between COVID-19 and osteonecrosis, particularly in relation to corticosteroid usage as it could be in this case.

Conclusions: This article aims to raise awareness on rarer causes of osteonecrosis of the jaw, such as use of extensive corticosteroid treatment in COVID-19 patients. We believe it is important to take this into consideration for better management of diagnosis, treatment, and subsequent follow-up. [Inizio modulo](#)

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3. Fenelon, Mathilde et al. "Identifying Risk Factors Associated with Major Complications and Refractory Course in Patients with Osteomyelitis of the Jaw: A Retrospective Study." *Journal of clinical medicine* vol. 12,14 4715. 17 Jul. 2023, doi:10.3390/jcm12144715

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