



0490

**Osteonecrosis of the Jaw Post Covid-19: a Case Report**

A. Aliberti, R. GASPARRO, A. Romano, A. Valletta

Department of Neuroscience, Reproductive Science and Dentistry, Oral and Maxillofacial Surgery Section, University of Naples Federico II, Naples, Italy, Italy

**Objectives** Aspergillosis and Mucormycosis encompass a spectrum of clinical diseases, ranging from asymptomatic infection and colonization to life-threatening invasive conditions. Aspergillus hyphae can spread through the blood vessels, resulting in a secondary thrombosis and subsequent tissues necrosis. The primary risk factor for contracting aspergillosis and mucormycosis is the severe alteration of the host immune system caused, for example, by prolonged steroid use. COVID-19 was a recent disease characterized by a otolaryngological symptoms and other non-specified symptoms. Patients affected by Post-acute Covid-19 syndrome (PACS), typically show an imbalanced immune system that is responsible for the occurrence of opportunistic bacterial and fungal secondary infections. This case report describes a unique and complex presentation of osteonecrosis of the maxilla, complicated by Aspergillosis and Mucormycosis, developed in an immunocompetent patient recovering from COVID-19.

**Methods** A 74-year-old male patient was referred with the complaint of unilateral rhinorrhea, cacosmia, persistent cough and frontal headache. The patient suffered from a severe form of COVID-19 infection three months before the access to our clinic and following the SARS-CoV-2, he developed a maxillary sinus bacterial infection treated with corticosteroids. The intraoral examination showed an edentulous maxillary ridge, a left oro-antral fistula with purulent exudate, and a diffuse necrotic bone exposure. The patient was treated with sequestrectomy surgery to remove necrotic bone tissue.

**Results** Histologic examination revealed, in both sinuses, the presence of severe lymphoplasmacytic infiltrate, bone necrosis, and broad aseptate hyphae. These aspects were consistent with the diagnosis of Mucormycosis. Moreover, the bone sample also showed the presence of septate hyphae with dichotomously branching suggesting an Actinomyces-like bacteria coinfection.

**Conclusions** This clinical study showed a potential association between SARS-CoV-2 infection and osteonecrosis of the jaws, as complication arising from COVID-19-induced coagulopathy, particularly prevalent in long-COVID patients. Furthermore, SARS-CoV-2 infection may amplify the risk of superinfections by opportunistic pathogens like Aspergillus and Mucor.