

DOI: 10.5455/msm.2025.37.80-82

Received: Feb 03 2025; Accepted: Mar 06, 2025

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CASE REPORT

Mater Sociomed. 2025; 37(1): 80-82

Manifestation of Necrotic Palatal Ulceration in COVID-19 Infection: a Case Report

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ABSTRACT

Background: The global pandemic caused by the COVID-19 virus is a serious disease that has significantly affected the lives of millions of people. **Objective:** The objective of this case study is to describe the development of a necrotic ulcer on the palate in a COVID-19 patient.

Case presentation: This is the clinical case of a 35-year-old male patient with a 20-year history of two pack-a-day smoking who contracted COVID-19. He was admitted to the Department of Oral and Maxillofacial Surgery at the "Mother Teresa" University Hospital Center in Tirana, Albania, presenting with oral pain, facial swelling, and necrosis in the palatal region and the lower lip. **Conclusion:** This case report from Albania is significant as it presents an ulcer with necrotic tissue located in the hard palate region of a patient infected with SARS-CoV-2.

Keywords: acute brain injuries, case report, cerebral hemorrhage, COVID-19, necrotic palatal ulcer.

the connection between COVID-19 infection and palatal ulcers.

2. OBJECTIVE

The objective of this case study is to describe the development of a necrotic ulcer on the palate in a COVID-19 patient. case presentation

The patient, a 35-year-old man infected with COVID-19, was admitted to the Department of Oral and Maxillofacial Surgery at the Mother Teresa University Hospital Center in Tirana, Albania, at the end of November 2022. He had an increased body temperature (39.5 °C), tachycardia, fatigue, and a severe cough. In addition to muscle soreness and a decreased sense of taste and smell, there was evident inflammation and pain in the palate, especially near the teeth. The patient was conscious during hospitalization and had a 20-year history of smoking two packs a day. The palatal area showed mucosal necrosis, gingival overgrowth, and tooth movement. During the oral examination, necrosis was also found in the lower lip, and the lesions were painful to touch (Figure 1).

According to the patient, he had never experienced palatal necrosis before. The results of a medical check-up revealed a blood pressure reading of 174/90 mmHg. The glucose level in the serum was 188 mg/dL, the creatinine level was 0.94 mg/dL, and the hemoglobin level was 9.1 g/dL. A computed tomography scan revealed cavernous sinus thrombosis and hyperdense areas in both lungs. The patient was treated with ORO-Clense (0.12% chlorhexidine gluconate oral rinse) and paracetamol 1.0 g/100 mL injection.

1. INTRODUCTION

The COVID-19 pandemic has caused the deaths of about 7 million people worldwide (1). On March 9, 2020, the Ministry of Health and Social Affairs officially announced the introduction of COVID-19 in Albania with the confirmation of the first case (2). Many studies have reported a significant association between COVID-19 and the risk of acute ischemic stroke (3-5). Individuals affected by COVID-19 are also at a higher risk for oral diseases (6). Poor oral hygiene and smoking have been linked to deteriorating oral health and increased complications in COVID-19 patients (7-11). This clinical case highlights



Figure 1. Necrosis of palatal region and the lower lip

tion. The treatment plan also included magnesium sulfate (4 g/100 mL), prednisolone sodium phosphate (15 mg/5 mL daily), Pantoprazole (40 mg once a day), Flagyl (500 mg twice daily), azithromycin (500 mg daily), and ceftriaxone (1 gram every 12 hours).

However, despite these treatments, the patient's condition did not improve. The patient was eventually transferred from the Department of Oral and Maxillo-facial Surgery to the Infectious Diseases Clinic at Mother Teresa Hospital in Tirana, Albania. Two doctors from the Medical University visited the patient daily at the Hospital of Infectious Diseases and reported that he had acute brain damage and brain hemorrhage. Smoking was identified as a significant risk factor that contributed to central nervous system damage, severe respiratory issues, and damage to the oral mucosa. Albanian medicine, like the rest of the world, was caught off guard by the COVID-19 pandemic. The hospital wards were swamped with patients, causing scheduled surgeries, including oral treatments, to be delayed. The patient was closely monitored and treated to the best of the Albanian medical service's abilities.

3. DISCUSSION

This case report describes a necrotizing palatal ulcer that developed during the patient's COVID-19 infection. The patient's compromised immune system due to COVID-19 and his long history of smoking two packs a day contributed to his deteriorating oral health. The Albanian doctors prioritized the patient's urgent needs. They anticipated that following the resolution of central nervous system issues and breathing complications in the next phase, the patient would be treated for oral cavity problems.

This case supports previous research findings that COVID-19 can lead to necrosis of the palate mucosa and facial inflammation (12) and is consistent with other studies (13–15). COVID-19 is mainly linked to acute respiratory and neurological consequences, but as this clinical case shows, it can also cause oral health issues, such as a necrotic ulcer in the hard palate.

4. CONCLUSION

This case study highlights the presence of necrotic palatal ulceration and lower lip necrosis caused by COVID-19 infection.

- **Acknowledgments:** We wish to express our heartfelt thanks to my colleagues for their support and contribution in conducting this study. The authors wish to express their gratitude to the patient who took part in this study.
- **Patient Consent Form:** The authors certify that they have obtained the appropriate patient consent form.
- **Authors contribution:** M.C. and I.M. gave substantial contributions to the conception and design. A.Q. contributed to the acquisition of data and helped with data interpretation. M. C. has performed drafting the article. E.XH. carefully assessed the intellectual content and provided the final approval for the publication of the version. All authors have committed to taking responsibility for every aspect of the work, making sure to address and resolve any questions regarding the accuracy or integrity of any part of the work.
- **Conflict of interest:** None to declare. The authors state that they have no conflicts of interest.
- **Financial support and sponsorship:** Nil.

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