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Oral and Maxillary Mucormycosis in a Patient with Acute Myeloid Leukemia: A Rare Case Report

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Introduction: Mucormycosis is an opportunistic fungal infection with rapid progression and high mortality, typically occurring in patients with hematologic malignancies, diabetes mellitus, organ transplantation, or prolonged immunosuppression. Clinically, the most common forms are rhinocerebral, pulmonary, cutaneous, and gastrointestinal involvement. Rhino-cerebral mucormycosis often originates in the paranasal sinuses and may extend to the orbit and brain. Oral mucormycosis is less common and usually presents with maxillary bone necrosis and palatal perforation. Early diagnosis and appropriate antifungal therapy are critical for improving prognosis. In this report, we present a case of newly diagnosed acute myeloid leukemia (AML) who developed rhino-orbito-cerebral mucormycosis involving the maxilla following chemotherapy. **Case Report:** A 52-year-old male patient was admitted to the hematology outpatient clinic with complaints of epistaxis and fatigue. Laboratory evaluation revealed pancytopenia, and peripheral smear, bone marrow aspiration, and flow cytometry confirmed the diagnosis of acute myeloid leukemia (AML). The patient received induction chemotherapy with daunorubicin (60 mg/m^2 for 3 days) and cytarabine (100 mg/m^2 for 7 days). In the second week of treatment, the patient developed pain in the left maxillary region and was referred to the Faculty of Dentistry, Inönü University. Oral and radiological examination (Figure 1)revealed a fixed dental bridge with good marginal adaptation.The prosthetic device was removed, and no pathology was observed in the teeth or surrounding mucosa, Türkiye.

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A CASE OF COVID-19 PNEUMONIA DEVELOPING DURING ALLOGENEIC STEM CELL TRANSPLANTATION IN A PATIENT WITH ACUTE MYELOID LEUKEMIA

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Objective: Allogeneic hematopoietic stem cell transplantation (HSCT) is a curative therapeutic modality for patients with acute myeloid leukemia (AML)[1]. Patients undergoing HSCT are highly susceptible to SARS-CoV-2 infection due to profound immunosuppression, delayed immune reconstitution, and graft-versus-host disease (GVHD) prophylaxis[2],[4]. Covid-19 infection in HSCT recipients, particularly during the early post-transplant period, has been associated with high morbidity and mortality[5]. Studies have demonstrated increased mortality in patients diagnosed with Covid-19 during HSCT, especially in the early phase[6]. Herein, we present a case of Covid-19 pneumonia that developed during allogeneic HSCT with myeloablative conditioning in a patient with high-risk AML. **Case report:** Our patient was a 33-year-old female diagnosed with AML in March 2025. Following diagnosis, she received induction therapy with the 3+7 regimen (Idarubicin + Cytarabine). As remission was not achieved, she was administered FLAG-Mito as reinduction therapy. Despite two cycles of induction, no response was obtained, and the patient was considered refractory AML; thus, allogeneic transplantation was planned. During the pre-transplant period, she received two cycles of azacitidine + venetoclax. On July 21, 2025, myeloablative conditioning (Fludarabine + Treosulfan) was initiated. During conditioning, her caregiver developed upper respiratory tract infection symptoms and tested positive for Covid-19. Since the patient was asymptomatic, the transplantation procedure was continued. On July 28, 2025, she underwent allogeneic transplantation from her HLA-matched sibling donor. GVHD prophylaxis consisted of CsA + MTX, and voriconazole was given for antifungal prophylaxis. On day +3 post-transplant, the patient developed fever (38°C) and was treated as febrile neutropenia with broad-spectrum antibiotics (Meropenem). SARS-CoV-2 PCR testing was positive. Initially, she presented with mild symptoms, but one week after positivity, chest imaging revealed diffuse pulmonary infiltrates consistent with Covid-19 pneumonia (Figure-1). Despite broad-spectrum antibiotics, she required high-dose corticosteroids and a single dose of tocilizumab (400 mg) for cytokine release syndrome. Oxygen support was initiated. Ten days after pneumonia diagnosis, respiratory distress worsened, and she was admitted to the intensive care unit. On day +18, CPAP was initiated. Neutrophil engraftment was achieved on day +19. However, despite non-invasive respiratory support, progressive respiratory failure necessitated intubation. Shortly after intubation, the patient developed cardiac arrest and, despite CPR, she passed away. **DISCUSSION:** Patients undergoing allogeneic HSCT develop profound immunosuppression, predisposing them to opportunistic infections with high mortality. COVİD-19, which caused a global pandemic in 2020, has also emerged as a life-threatening infection in HSCT recipients[5]. Even after neutrophil engraftment, severe viral pneumonia-related mortality has been reported in transplant patients diagnosed with Covid-19[7]. When SARS-CoV-2 infection occurs in the very early post-transplant period, such as the first week, rapid clinical deterioration may occur due to insufficient immune response and cytokine dysregulation[8]. Multicenter studies have demonstrated that early post-HSCT Covid-19 infection is associated with high non-relapse mortality (NRM)[5],[9]. In our case, Covid-19 symptoms began in the early post-transplant phase and rapidly progressed to pneumonia. Despite neutrophil engraftment, the pulmonary disease worsened. This