FATAL MISDIAGNOSIS OF ISOLATED CERVICAFACIAL MYELOID SARCOMA IN A YOUNG ADULT: CASE REPORT

Abstract:

Introduction

Myeloid sarcoma is a rare extramedullary manifestation of acute myeloid leukemia. Its isolated cervicofacial presentation is exceptional and often misdiagnosed.

Case Presentation

We report a case of a 19-year-old male with no significant medical history presenting with a rapidly growing cervicofacial mass initially treated as a dental abscess. Despite multiple dental interventions, there was no improvement. Histopathological examination of a biopsy specimen revealed myeloid sarcoma. Unfortunately, due to financial constraints and delayed hematological management, the patient died before initiation of chemotherapy.

Discussion

This case underscores the diagnostic challenge posed by atypical head and neck presentations of hematological malignancies. Immediate biopsy and immunophenotyping are essential. Socioeconomic barriers can have fatal consequences in such aggressive neoplasms.

Conclusion

Awareness of rare manifestations of hematological diseases is essential for early diagnosis and timely intervention.

Key Words:

Cervicofacial , myeloid sarcoma , leukemia , fatal prognosis

Introduction

Myeloid sarcoma (MS), also known as granulocytic sarcoma or chloroma, is a rare extramedullary tumor composed of immature myeloid cells [1]. It is most commonly associated with acute myeloid leukemia (AML), either concomitantly, during relapse, or as a harbinger of disease [2]. Isolated MS without marrow involvement is rare and may present a diagnostic dilemma, particularly in unusual locations such as the head and neck region [3].

We report a rare and fatal case of isolated cervicofacial myeloid sarcoma in a young adult, initially misdiagnosed as a dental abscess, illustrating the critical importance of early recognition and intervention.

Case report:

A 19-year-old male with no prior medical history presented to the Otolaryngology Department of the Military Hospital of Laayoune, Morocco, with a painful, progressively enlarging cervicofacial mass evolving over one month. The patient initially sought dental care and was treated empirically for a presumed dental abscess without improvement.

On examination, there was a firm, tender, and diffusely swollen mass predominantly involving the left cheek, extending to the periorbital region, causing complete occlusion of the left eye. Intraoral examination revealed a large, necrotic, whitish mass involving the upper vestibule and hard palate.

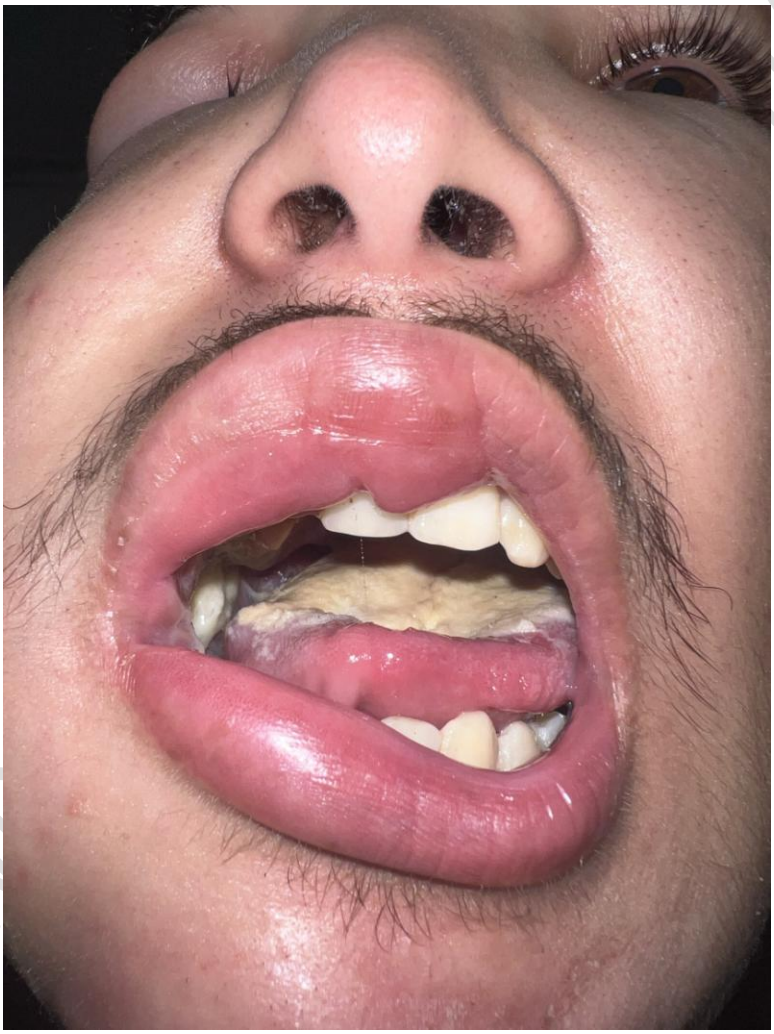

Figure 1: Extensive intraoral infiltration involving the upper vestibule and hard palate, covered by a necrotic pseudomembrane.

The patient's general condition was deteriorated with marked asthenia and weight loss. Laboratory tests showed mild anemia but no blasts on peripheral blood smear. A biopsy was performed under local anesthesia. Histopathological examination revealed a dense infiltrate of medium-sized blastic cells with irregular nuclei. Immunohistochemistry was positive for

myeloperoxidase (MPO), CD33, and CD117, confirming the diagnosis of myeloid sarcoma.

The patient was referred urgently to the Hematology Department for systemic chemotherapy. Unfortunately, due to lack of medical insurance and financial resources, the initiation of therapy was delayed, and the patient succumbed to his disease within two weeks after diagnosis.

Figure 2: Frontal view demonstrating severe cervicofacial swelling causing facial asymmetry and complete closure of the left eye due to tumor infiltration.

Discussion

Myeloid sarcoma is an uncommon entity, representing about 2–8% of cases of acute myeloid leukemia [4]. It may occur at any site, but involvement of the head and neck region is rare, accounting for approximately 12–24% of cases [5]. In isolated MS, where bone marrow is initially unaffected, diagnosis becomes particularly challenging and is often delayed.

The differential diagnosis in cervicofacial swellings typically includes odontogenic infections, benign tumors, lymphomas, sarcomas, and metastatic lesions [6]. As in our patient, misdiagnosis

as a dental abscess is common, especially when oral symptoms predominate.

Histological evaluation is essential but often inconclusive without immunohistochemistry. Markers such as MPO, CD68, CD33, and CD117 are critical for distinguishing MS from lymphoid malignancies and other small round blue cell tumors [7].

The prognosis of isolated MS is poor if systemic AML-type chemotherapy is not promptly initiated. Delayed treatment often leads to rapid progression to overt AML, with median survival less than 8 months in untreated patients [8]. Early systemic chemotherapy improves survival dramatically and may delay or prevent leukemic transformation [9].

Socioeconomic factors, as tragically highlighted in our case, play a major role in outcomes. Limited access to healthcare, delayed diagnosis, and inability to initiate timely chemotherapy contribute significantly to mortality, especially in resource-limited settings [10].

This case emphasizes the importance of maintaining a high index of suspicion for malignancy in atypical cervicofacial lesions, particularly when initial therapy fails. Biopsy and immunohistochemical analysis must be performed without delay.

Conclusion

Isolated cervicofacial myeloid sarcoma is an extremely rare and aggressive disease, prone to misdiagnosis. Early identification and initiation of AML-type chemotherapy are essential to improve prognosis. In developing countries, enhancing access to specialized care remains a critical need to prevent avoidable deaths.

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