soho2023
ELEVENTH ANNUAL MEETING

Sinusitis as a Presentation of Acute Myeloid Leukemia (AML) and Myeloid Sarcoma (MS)

F, Fuentes[1], C. Vargas[2]
1, 2. University of Costa Rica, Costa Rica

UCR
UNIVERSIDAD DE COSTA RICA

INTRODUCTION

AML is a clonal condition characterized by infiltration of bone marrow, peripheral blood, and other tissues by poorly differentiated myeloid cells. Myeloid Sarcoma (MS) and central nervous system (CNS) compromise is rare.

CASE PRESENTATION

A 58-year-old man presented with 1 month of constitutional symptoms, fever, gingival lesions, facial pain, nasal congestion, and skin lesions.

Laboratory tests showed: hemoglobin level 11.9 g/dL, platelet count 59 000/µL, and white blood cell count 70800/µL with 66% blasts. Uric acid was 15.6 mg/dL, ureic nitrogen 22 mg/dL, creatinine 2.13 mg/dL, phosphorus 4.5 mg/dL, potassium 3.84 mEq/L, calcium 8.9 mg/dL, and lactate dehydrogenase 428 U/L .

Computed tomography (CT) showed thickening of the maxillary and rhinopharynx mucosa. Endoscopy exhibited a rhinopharynx mass, and a biopsy was performed.

Bone marrow flow cytometry detected 84.12% blasts of monocytic lineage (cytoplasmic myeloperoxidase [cyMPO]+, cluster of differentiation [CD]-13+, CD33++, CD64++, human leukocyte antigen [HLA]-DR isotype +). Molecular studies showed *NPM1*+, *BCR-ABL*(–) and *FLT3* internal tandem duplication +; karyotype and fluorescence in situ hybridization were normal. A lumbar puncture (LP) was performed; flow cytometry showed 98.17% blasts.

Hydration resolved the acute kidney injury and tumor lysis syndrome. Cytarabine plus idarubicin was started; FLT3 inhibitor therapy and stem cell transplantation were not available. Transfusions were provided as needed. Antibiotics were started for neutropenia and fever. His condition deteriorated on day 7 of induction, requiring mechanical ventilation and vasopressors. Chest CT showed bilateral interstitial infiltrates; he underwent bronchoalveolar lavage, adjustment of therapy, and subsequent extubation.

After induction, the skin lesions and upper respiratory tract symptoms improved. Bone marrow flow cytometry after neutrophil recovery showed <0.1% of cells at diagnosis. Nasopharyngeal biopsy was consistent with MS (CD64+, CD15+ focal, CD43 weak, MPO+).

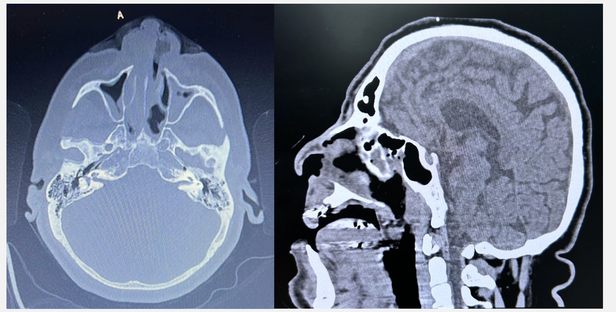


Figure 1. Patient's computed tomography (CT): axial and sagittal view

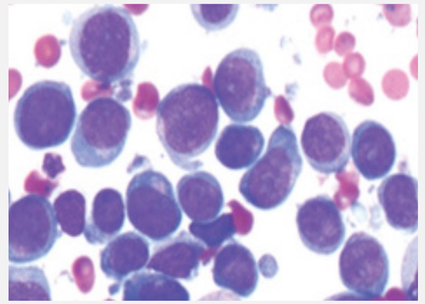


Figure 2. Monoblastic leukemia (illustrative image)

CLINICAL LESSONS

This case of high-burden disease is important since few data related to extramedullary compromise in AML are available. Current evidence suggests that the outcome of AML patients with MS may be similar or worse to that of AML without MS. CNS involvement is rare and may remain undetected because diagnostic LP is not performed routinely. Regimens with FLT3 inhibitors (when available) have shown improved complete remission and survival rates.

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CONTACT INFORMATION

fabiola.fuentesa18@gmail.com