



Paraplegia and Facial Nerve Paralysis as Presenting Manifestations of Acute Myelogenous Leukemia

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Abstract

Facial involvement along with paraplegia as presenting feature in acute myelogenous leukemia is rarely reported neurological presentation.

Introduction

Acute myelogenous leukemia is a neoplasm of myeloid series and usually presents with signs and symptoms related to anemia, thrombocytopenia and neutropenia. CNS involvement as presenting feature is uncommon. We hereby report a case of 25 year old male who had paraplegia and facial nerve palsy as presenting feature of AML.

Case Report

A 25 year old male presented to the emergency department with moderate grade fever for 6 days associated with rash for 2 days. Patient also complained of facial deviation 4 days and weakness of both lower limbs since 3 days along with urinary incontinence. H/o gum bleeding was present. There was no history of bleeding from any other site.

On examination patient was febrile. Pallor was present. There was no rash or any purpuric spots present over the body. Liver and spleen were not palpable and there was no evidence of any lymphadenopathy. Neurological examination

revealed intact higher functions and left LMN facial palsy. Power was grade 0/5 in both lower limbs along with loss of deep tendon reflexes. Sensations were lost below the umbilicus. Plantars were equivocal and no signs of meningeal irritation were present.

Laboratory investigations were as follows: Hb 8.8g/dl, WBC 36,500/mm³, DLC Polymorphs 38%, Lymphocytes 12%, Monocytes 2%, Myelocyte/Metamyelocyte 04% with atypical/blast cells 44%. Platelet count 15,000/mm³.

MRI spine revealed posterior and lateral epidural collection (D₃-D₁₀) with lateral foraminal extension at (D₃-D₉) with cord compression with localized edema at D₁₀. MRI brain was normal.

Patient was given platelet transfusion and sent for bone marrow examination.

On the following day however patient expired following an episode of massive hemoptysis and aspiration. Bone marrow report received later on showed findings of acute leukemia with positive myeloperoxidase staining suggestive of AML.



Fig 1: T1 weighted images of MRI cervicodorsal spine (sagittal sequence) after iv contrast showing epidural collection.



Fig. 2: T1 weighted images of MRI dorsal spine D6 level (Axial Section) showing posterior and left lateral epidural collection causing cord compression with cord displaced anteriorly and to the right

Discussion

Acute myelogenous leukemia affects primarily adults peaking incidence between ages 15-39 years. Most patients present with symptoms related to anemia, neutropenia and thrombocytopenia. Neurological involvement as presenting sign in leukemias is unusual.¹ Symptomatic facial

involvement in AML is very rare.² It may be due to leukemic cell infiltration at any site of nerve. Treatment of facial nerve involvement is chemotherapy and/or radiotherapy.³ Meningeal disease have been reported to develop in 5-20% in children^(4, 5) and 16% in adults⁶. It may be associated with cranial nerve palsies particularly of 5th and 7th nerves⁵. Spinal cord compression as presenting manifestation has been very rarely reported. Usual site of spinal cord compression occurred at thoracic level.⁽⁸⁻¹¹⁾ Jeng et al reported a case where it involved two different levels at same time.¹²

Our case was having epidural collection extending from D₃-D₉ leading to paraplegia along with lower motor neuron type of facial nerve palsy. This is very unusual presentation and very rarely reported in literature.¹³

Unfortunately we could not proceed further in our case due to death of the patient but this kind of presentation should always be kept in mind as neurological improvement has been reported with radiotherapy/chemotherapy in such cases.^(2,14)

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