Acute Myeloid Leukemia with Non-specific Cutaneous Manifestation

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Abstract

Acute myeloid leukemia is not uncommon in upper Assam. Primary skin manifestation in AML though very rare, may be found. The skin manifestation may be the first presentation in AML. Here such a case has been discussed which presented with primarily skin manifestation, subsequently diagnosed as AML. Therefore routine investigations are mandatory in all patients before going for a sophisticated investigation so that the diagnosis is not missed.

INTRODUCTION

Skin manifestations are the most specific markers of internal malignancy although it is a relatively uncommon site for secondaries as compared to other organs like liver and lungs. Myeloid leukemias are a heterogeneous group of diseases characterized by infiltration of blood, bone marrow and other tissues by neoplastic cells of the hematopoietic system. Skin lesions are either specific or non-specific depending on the nature of infiltrates.

CASE REPORT

A female of 25 yrs, presented with fever and cough for 2 months; painful gum swelling for 1½ months; painful swelling and ulceration of the skin around the mouth since 1 month. The fever was high grade intermittent with no diurnal variation, no chill and rigor. The cough was dry and not associated with chest pain or breathing difficulty. There was no history of gum bleeding, epistaxis, petechiae or bleeding from abnormal sites. There was history of fatigue, weakness, loss of appetite, and loss of weight. The swelling around the mouth was painful papulovesicular with rupture, discharge and crusting. Swelling and ulceration were rapidly increasing in size. There was no past history of tuberculosis, diabetes mellitus or any long term illnesses. She was a school teacher, non smoker and non alcoholic. Her menses were regular and normal in flow and duration. There is no suggestive family history.

Examination findings:

General examination: built- average; looks- ill; gum hypertrophy present; afebrile; pulse-90 bpm; BP- 100/60 mm Hg; pallor- present; icterus/cyanosis/edema- absent; lymph node- enlarged; skin and hairs- normal.


Examination of the ulcers of mouth:

Inspection- the ulcers were well defined, covering the left angle of the mouth and above the right upper lip. It was hyperkeratotic. Ulcerated plaques with crusting were seen. There was oozing over it.

Palpation- ulcers were tender, indurated, firm, and not fixed with the underlying structures. Oral mucosa was normal. On examination, the gums were hypertrophied without bleeding on touch.

Lymph nodes: bilateral cervical LN enlarged, discrete, firm, tender and mobile.

Investigations:

Hb- 6.6 gm%; ESR- 140 AEFH; TC- 65000/mm³; DLC-myeloblasts- 92%; promyelocytes- 4%; myeloperoxidase-positive- AM1, M1; platelet count- 30000/mm³; urea- 18 mg%; s. creatinine- 0.7 gm%; SGOT-17 IU/L; SGPT- 35 IU/L, stool and urine examination- NAD. Skiagram of the chest (PA view) – NAD.

Histopathological examination of the skin lesion-

HPE shows acute on dense chronic pandermal inflammation. No tubercular granulomas, malignancy, fungus or parasite seen.

FNAC of the Lymph Node-

FNAC shows reactive lymphadenopathy. Z- N stain from the lesion- negative for TB.

DISCUSSION

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Half of the patients of AML have non-specific symptoms ≥ 3 months before diagnosis.2

The peripheral blood generally shows leukocytosis as a result of involvement by malignant cells, although occasionally these may not be detectable in spite of massive marrow involvement. In such cases skin may be the initial presenting feature of leukemia in evolution.3

The skin lesions of internal malignancy may be specific or non-specific. Cutaneous infiltrates may present as red to purpuric patches, plaques, papules, or nodules, with or without ulceration. The specific lesions contain malignant cells whereas non-specific lesions represent benign dermatoses due to either systemic effect of the disease or paraneoplastic phenomena.

Specific lesions are more common in myelomonocytic leukemia and T-cell prolymphocytic leukemia than in other forms.4 Non-specific lesions include petechiae, purpura, Sweets syndrome, sarcoidosis, panniculitis, erythema multiforme, erythema nodosum, urticaria, pyoderma gangrenosum, pigmented changes, other granuloma and cutaneous lymphoma.

Our patient of acute myeloid leukemia presented with plaques on the face which revealed no myeloblasts on histopathology and were therefore considered as non-specific cutaneous manifestation of the underlying malignancy.

In this case, skin lesions alerted us which ultimately led to the diagnosis of AML. Diagnosis of the specific type of leukemia depends on detailed examination of blood and bone marrow. The cutaneous infiltrate rarely indicates type of leukemia involved.5

Skin lesions are relatively uncommon in myelogenous leukemia (skin lesions in myelogenous leukemia are much less frequent, with only 72 recorded cases)5 and if overlooked, would lead to loss of precious time.

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REFERENCES


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