Acute Myeloid Leukemia Presenting As Priapism

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Citation

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Abstract

Priapism is most commonly caused by drugs used for treatment of erectile dysfunction or impotence. In younger populations (<20 years age group), it is commonly due to sickle cell anemia or leukemia. Any advanced cancer may lead to priapism. In hematological malignancies, priapism is usually associated with other features e.g.lymphadenopathy, splenomegaly, purpura. Only clinical feature of acute myeloid leukemia may be priapism. But such presentations are extremely rare. We hereby report a case of acute myeloid leukemia in young adult with only clinical manifestation of priapism.

INTRODUCTION

Priapism refers to the medical condition in which the patient experiences a persistent and painful erection of penis that is present for longer than 6 hours, which is not induced by stimulation or sexual desire. The most common cause of priapism is drugs used in the treatment of erectile dysfunction or impotence. Other causes are advanced cancer, leukemia, sickle cell anemia, Fabry`s disease, use of medications e.g. anticoagulants & antipsychotics. Hemoglobinopathies (e.g. sickle cell anemia) are commonest cause in young adults followed by hematological malignancies (e.g. leukemia). Hematological malignancies may manifest with priapism as presenting clinical feature, but it is extremely rare.

CASE REPORT

A 16 year young male presented with priapism of 2 days (Figure1). On physical examination, liver & spleen were not enlarged and lymphadenophathy was not present. Gum hypertrophy was noticed on examination of oral cavity (Figure 2). No history of sexual stimulation was present. Penis was enlarged and tumescent on local examination. Laboratory investigations were as: Hemoglobin 7.1 gm/dl; Total leukocyte count 66900/mm^3, Myeloblast 65%, Promyelocytes 10%, Myelocytes 10%, Metamyelocytes 5%, Band cells 4%, Neutrophils 3% and Lymphocytes 3%: ESR 35mm platelets 6.80 lac/mm^3.

Figure 1

Figure1: Clinical photograph of priapism

Figure 2

Figure 2: Clinical photograph of gum hypertrophy

General Blood picture (GBP) examination (Figure 3a and 3b) revealed majority of cells composed of large round and oval immature myeloblast like cells with round oval to indented nuclei with indistinct nucleoli in few and moderate pale basophilic cytoplasm. A fair number of promyelocytes, myelocytes, metamylocytes, few band cells, neutrophils, lymphocytes and a few mitotic cells were seen. Finally a diagnosis of acute myeloid leukemia type M2 with normocytc, normochromic picture and raised platelets was made.

Figure 3

Figure 3a: Microphotograph of GBP revealing acute myeloid leukemia.

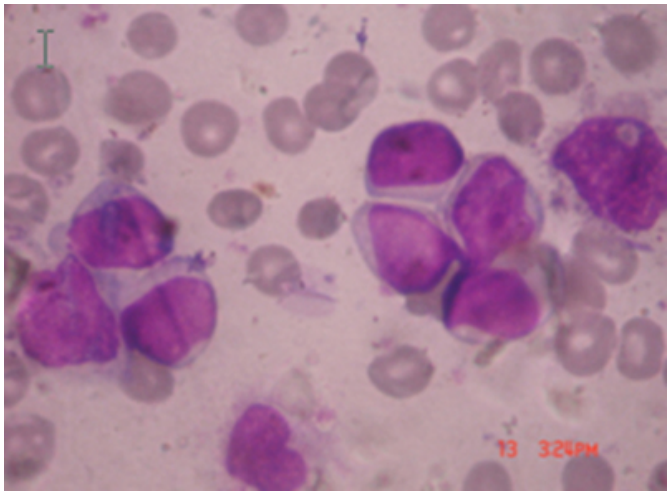
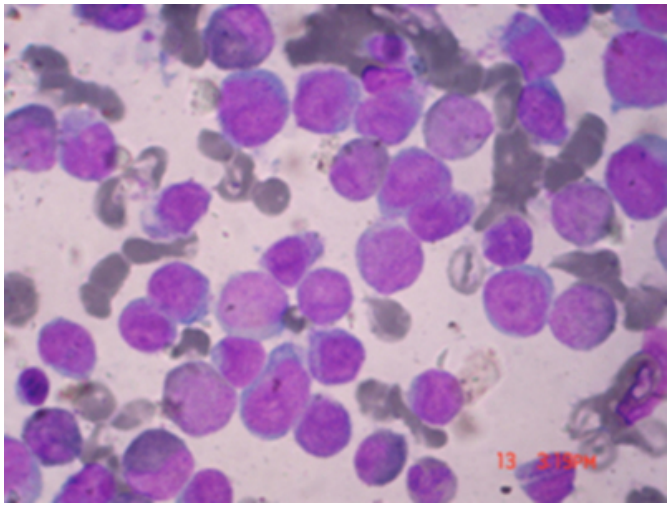


Figure 4

Figure 3b: Microphotograph of GBP revealing acute myeloid leukemia.



Patient was kept on intravenous fluids, analgesics, sedatives and anxiolytics. Under local anaesthesia (1% lidocaine solution), aspiration of cavernosal blood and irrigation with epinephrine (1 ml of 1: 1000 epinephrine dilated in 1 Litre Normal Saline) was attempted but result was not successful. After failure of this treatment, shunt was created between glans and cavernosum which also failed. Ultimately, a shunt was made between corpus cavernosum and corpus spongiosum. Detumescence resulted and patient was shifted to hematology division for chemotherapy and management of acute myeloid leukemia.

DISCUSSION

Priapism is a sustained, unwanted, and painful erection usually unrelated to sexual activity [1]. It usually mainly affects the corpus cavernosa of the penis. This condition is exceedingly rare. In older population cause is mainly medications used for erectile dysfunction or impotence. In younger population, hemolytic disorders (e.g. sickle cell anemia) and leukemias are common causes.

Hemolytic anemias and leukemias may manifest with priapism. Priapism in leukemia is usually accompanied by other constitutional manifestations of hematological malignancies. It is extremely rare if a patient with acute myeloid leukemia presents with only priapism and no other clinical findings. Our case was an example of acute myeloid leukemia presenting with priapism. In younger population without past history of hemolytic crisis or anemia, priapism should be labeled as manifestation of leukemia. Prolonged priapism is a urologic emergency requiring urgent intervention to avoid irreversible ischemic penile injury,

corporal fibrosis, and impotence [2]. Numerous therapeutic interventions, alpha blockers, antiandrogens, digoxins, surgical shunt are used to treat priapism. We managed priapism manifested in acute myeloid leukemia on emergency basis. Ultimately cavernoso-spongiosus shunt was made to resolve priapism successfully after all medical management failures.

Priapism in a young adult without any other features should be managed on emergency basis. Diagnosis of leukemia should be made early to guide the proper treatment. Multidisciplinary team approach comprising urologist, pathologist, medical oncologist and radiologist is pivotal for the early diagnosis and successful management of acute myeloid leukemia with priapism.

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