

## Priapism - A Rare Presentation in Chronic Myeloid Leukemia

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### ABSTRACT

A young boy had stopped therapy for CML and developed priapism, which was not relieved by aspiration and decompression. Hyperleukocytosis was controlled after treatment with Imatinib with gradual improvement of priapism. Regular treatment of the underlying disorder needs to be emphasised to patients that are prone for this manifestation we here report a case of Priapism a rare presentation in chronic myeloid Leukemia.

**Key-words :** Priapism, Chronic Myeloid Leukemia.

### Introduction :

Priapism is a rare complication of haematological disorders like Sickle cell disease and Chronic Myeloid Leukemia accounting for 20% cases<sup>1</sup>. The incidence of priapism in adult leukemic patients is about 1-5%, most of these are painful and due to hyperleukocytosis.<sup>2</sup>

We here report a case of Priapism a rare presentation in chronic myeloid Leukemia .

### Case History :

A 22-year-old male with chronic myeloid leukaemia had painful penile erection for 8 hours prior to hospitalisation. On examination, the patient was anaemic with hepato-splenomegaly. The penis was erect, firm, and tender with superficial venous engorgement (*Fig.1*). Rest of the examination was normal. Investigations revealed haemoglobin 5.4 g/dl, haematocrit 25.7%, total leucocyte count (TLC) 1.57 lakh/mm<sup>3</sup>, blasts 6%, promyelocytes 6%, myelocytes 18%, band 15% and Platelet count 670000/μL. Penile Doppler revealed no blood flow in the corpora cavernosa and spongiosa. Other investigations were normal. USG guided cavernosa aspiration was unsuccessful. He was

started on Tablet Imatinib 600 mg daily with adequate hydration and blood transfusion. Follow up after one month revealed Hb 8.3g/dl, TLC 9600/mm<sup>3</sup>, penile softening and improvement of priapism.

### Discussion :

Priapism is a painful involuntary prolonged erection unrelated to sexual activity and not relieved by ejaculation. Priapism is classified as either low-flow (ischemic) or high-flow (non-ischemic).<sup>3,4</sup>

Low-flow priapism is more common and results from pathologically decreased penile venous outflow with stasis and manifests as a painful, rigid erection. This can lead to irreversible cellular damage and fibrosis, if not treated within 24 to 48 hours. The causes are idiopathic, hematologic disorders, tumour infiltrate, or drugs.<sup>1</sup>

High-flow or arterial priapism results from increased arterial inflow into the cavernosal sinusoids, which overwhelms venous outflow and is painless. This type of priapism is usually due to penis or perineal trauma that results in injury to the internal pudendal artery causing fistula between the cavernosal artery and the corpus cavernosum with unregulated inflow.

Differentiating between low-flow and high-flow priapism can be achieved with a detailed history, physical examination, gas analysis of the blood within the corpora cavernosa, and penile Doppler ultrasound study.<sup>4,5</sup>

Priapism may be relieved by immediate aspiration with an additional injection of α-adrenergic agents

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such as phenylephrine or epinephrine. If the erection persists for 24-48 hours, the patient should have a surgical shunt. One study cited 35% and 60% impotence rates for patients priapistic for 5 days and 10 days, respectively.<sup>5</sup> So decompression of the penis should be done within the first 24 hours.<sup>5</sup>

**Conclusion :**

Priapism is an uncommon presentation in CML and all physicians should be aware of this disorder and the need for early intervention and management.

**Conflicts of interest :** Nil

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**Legend for Fig. 1 : Priapism on hospitalisation**