

## Introduction

Priapism is described as persistent unwanted penile erection of more than 4 hours without sexual stimuli. The hyperviscosity nature of malignancy puts the patient at risk of ischemic priapism. Our case emphasizes the relief of acute priapism in the emergency department (ED) and how haematological screening is crucial in non-traumatic priapism.

## Case Description

A 14-year-old boy, previously healthy, presented to the ED with first episode of painful spontaneous penile erection for 27 hours. Further history, he had an intermittent fever for 2 weeks associated with constitutional symptoms. He denied any history of drug abuse, trauma, or arousal stimulation. Genital examination showed penis was engorged, firm, and tender but no sign of penile necrosis. Investigations revealed leucocytosis of  $222 \times 10^3/\mu\text{L}$ , Hb 12.2g/dL, and thrombocytosis of  $1158 \times 10^3/\mu\text{L}$ . Peripheral blood film (PBF) showed myeloproliferative neoplasm likely Chronic Myelogenous Leukemia (CML) in chronic phase. Cold compression and hyperhydration were initiated. He underwent corpus cavernosum aspiration at 2 and 10 o'clock, saline irrigation, and administration of 200mcg phenylephrine followed by Winter shunt under sedation and penile block; and achieved full detumescence. He was admitted to the paediatric department for chemotherapy and co-managed with urology team.

## Discussion

Priapism is a painful erectile penis without sexual stimulation.<sup>3</sup> Physical examination may not reveal splenomegaly in patients suspected of CML presenting with priapism. Bedside ultrasound demonstrated poor flow along the dorsal artery of penis.<sup>3</sup> Hyperleukocytosis of  $>200000$  cells/ $\text{mm}^3$  and thrombocytosis and detection of blast cells in PBF suggestive of CML.<sup>3</sup>



Therapeutic aspiration has a success rate of 30%.<sup>2,3</sup> Cannulation using branulla size 16-18G at lateral aspect of the corpus cavernosum to avoid urethral and neurovascular bundle injury.<sup>2,3</sup> Alpha sympathomimetic agent injection over the intracavernosal region or leukapheresis is recommended to relieve compartmental pressure over the penile region and to achieve rapid detumescence. Surgical shunting can be considered if the above methods fail to achieve detumescence.<sup>3</sup> Systemic therapy by chemotherapeutics will treat the underlying CML.<sup>2,3</sup>

## Conclusion

Priapism is a rare symptom that may be encountered in ED. If left untreated, it can cause permanent tissue damage and fibrosis, ultimately erectile dysfunction. Engagement of multidisciplinary team and commencement of chronic treatment for CML can prevent recurrent episodes of priapism.

## References

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