

## Case Report

# Penile Gangrene following Penile Bandaging for Uncontrollable Bleeding Benign Prostatic Hyperplasia: A Case Report

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## ABSTRACT

Benign Prostatic Hyperplasia (BPH) is one of the most common ailments that affect elderly men. Frequently, affected patients present with lower urinary tract symptoms and complications such as urinary retention and haematuria. Haematuria complicating BPH can be very daunting and challenging to manage, pushing the surgeon sometimes to employ some unconventional and unorthodox methods when all management protocols in his armamentarium are exhausted. The complications resulting from these unconventional methods of managing bleeding BPH may be costly with high morbidity and mortality. Penile gangrene, a generally rare entity has not been reported (to the best of our knowledge) as a complication of these unorthodox methods of managing bleeding BPH. Here, we present the case of a 62-year-old man who had his penis bandaged and suspended for two days following an episode of uncontrollable haematuria in the Accident and Emergency Unit of a tertiary health facility. He subsequently developed penile gangrene necessitating his presentation to our facility after discharging against medical advice. He eventually had suprapubic cystostomy and control of the haematuria. Subsequently, he had a prostatectomy and penile refashioning. This case report emphasizes the challenges of managing bleeding BPH and the dangers of employing unconventional and unorthodox treatment protocol in the management of bleeding BPH.

**Keywords:** Benign prostatic hyperplasia, Haematuria, Penile bandaging, Penile gangrene, Prostatectomy

## INTRODUCTION

Benign prostatic hyperplasia is a non-malignant enlargement of the prostate gland associated with the rapid proliferation of the glandular cells. BPH is usually seen in elderly men. Affected patients often present with both obstructive and irritative lower urinary tract symptoms (LUTS).<sup>1</sup>

Haematuria is one of the presentations in patients with BPH and can be a challenging problem necessitating urethral catheterisation or other interventional emergency procedures. Generally, minimal haematuria doesn't frequently cause haemodynamic instability. However, when haematuria becomes massive and

uncontrollable, management becomes a great challenge to the attending surgeon. In advanced nations, treatment options such as minimally invasive procedures (like transurethral resection of the prostate, transurethral electrovaporisation, prostatic arterial embolization), and other non-operative treatment measures are employed in the management of these patients. In the developing world, where facilities and skills for minimally invasive procedures are limited, management is usually very challenging. The challenge is not only in differentiating bleeding prostate from other similar pathologies like bladder tumours, but also in managing the accruing complications resulting from the management of the massive haematuria. The aim of this study is to present the challenges of managing bleeding BPH and the dangers of employing unconventional and unorthodox treatment protocols in the management of bleeding BPH

## CASE REPORT

Mr SP is a 62-year-old farmer who presented to a private hospital with a one-year history of worsening LUTS and a two-day history of total gross haematuria. He had a failed and painful urethral catheterization in a private health facility. This worsened the haematuria

and he was then referred to a tertiary health centre. There, at their Accident and Emergency department, he had another failed urethral catheterization following which he had regular suprapubic urine taps using a cannula and drip-giving set. The penile shaft was then bandaged and suspended vertically using a string tied to the roof of the bed for two days by the casualty doctors. The patient eventually became febrile, weak and requested to be discharged against medical advice and came to our centre in order to be close to his daughter. His past medical history was unremarkable. On presentation at our centre, the patient was septic with a pulse rate of 126beats per minute, blood pressure of



Figure 2: Ventral surface of the gangrenous penis.



Figure 1: Dorsal surface of the gangrenous penis with suprapubic catheter in situ.

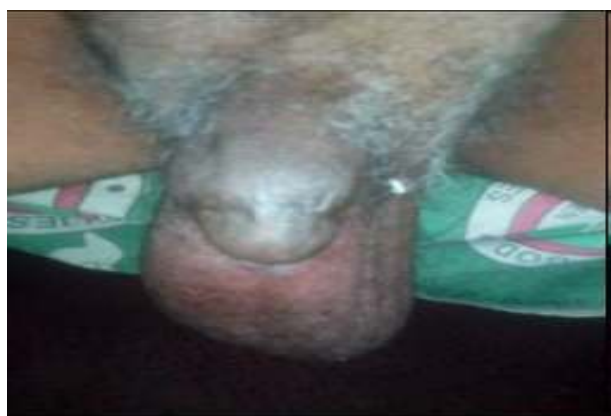


Figure 3: The penis, after skin grafting at three years follow up

90/60mmHg, respiratory rate of 32cycles per minute, the temperature of 39.6°C, and a packed cell volume (PCV) of 23%. He had a dirty bandage dressing over the penis with foul-smelling purulent stains. On exposure, a gangrenous segment of the distal two-third of the penile shaft was noted with complete denudation of the involved spongiosum (**Figure 1 and 2**). Other aspects of physical examination were grossly normal. He was immediately resuscitated, and placed on antibiotics. The wound was debrided and dressed after a suprapubiccystostomy had been performed. He also received three units of whole blood and underwent transvesical prostatectomy for a prostatic volume of 295ml with prominent median lobe a month later and penile refashioning about 8 months later (**Figure 3**). He has been followed up for three years now without any urological sequelae.

## DISCUSSION

Benign prostatic hyperplasia (BPH) is commonly associated with ageing. The enlarged prostate is a frequent cause of bladder outlet obstruction and usually results in worsening lower urinary tract symptoms. Bleeding, one of the lower urinary tract symptoms seen in patients with benign prostate enlargement, can be a challenging problem necessitating urethral or suprapubic catheter placement or other acute interventional procedures.<sup>4,7</sup> Massive haematuria with haemodynamic instability is a great source of concern to both the patient, his relatives and the managing surgeon.

Measures employed in the management of bleeding benign prostatic hyperplasia include fluid replacement, blood transfusion, irrigation with normal saline, povidone iodine and occasionally, alum and administration of oral finasteride.<sup>7</sup> Ahmed and colleagues, following a ten-year review of bleeding prostate in Maiduguri, north-eastern Nigeria noted that these methods of managing bleeding benign prostatic hyperplasia are satisfactorily comparable to the more sophisticated methods like bladder irrigation with

thrombin, and embolization of the prostatic artery.<sup>7</sup> In recalcitrant cases, minimally invasive procedures such as transurethral resection of the prostate (TURP) and LASER ablation of the prostate have been successfully utilised.<sup>6,10</sup> Emergency open transvesical prostatectomy can be employed where these endoscopic modalities are not available.<sup>7</sup> Our patient had resolution of haematuria following transfusion of three units of fresh whole blood and irrigation with normal saline for two days. He also had an emergency suprapubic cystostomy to divert urine, and subsequently had transvesical prostatectomy a month later, and penile refashioning about 8 months after presentation.

Penile gangrene is a rare pathologic entity with various aetiology and classification. The causes of dry gangrene are varied and include chronic renal disease, poorly managed diabetes mellitus, priapism and tourniquet syndrome. Gangrene of the penis may be dry or infective.<sup>12</sup> It is imperative to differentiate between infectious and dry gangrene as the management of both groups are essentially different. Our patient had tourniquet syndrome resulting from the pressure bandaging of the penile shaft for two days. Application of unconventional means and methods as noted in the management of this patient can result in serious complications with significant morbidity and mortality.

## CONCLUSION

The number of patients with benign prostatic hyperplasia is increasing. Massive haematuria with haemodynamic instability complicating benign prostatic hyperplasia requires urgent attention using conventional methods. Unorthodox and unproven methods may result in life threatening complications with resultant high morbidity and mortality.

### Declaration of patient consent

The authors certify that the patient gave all necessary consent for his clinical images and information to be reported in the medical journal. The patient understands that his name will not be published and due efforts will

be made to conceal his identity; although anonymity cannot be guaranteed.

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None.

#### Conflicts of interest

Nil.

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