



PENILE GANGRENE FOLLOWING PENILE BANDAGING FOR UNCONTROLLABLE BLEEDING BENIGN PROSTATIC HYPERPLASIA: CASE REPORT AND REVIEW OF LITERATURE

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ABSTRACT

Background: Benign Prostatic Hyperplasia (BPH) is one of the commonest ailments affecting many 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, making the surgeon to sometimes 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 as a complication of these unorthodox methods of managing bleeding BPH.

Case report: Here, we present the case of a 62-year-old man who had his penis bandaged and suspended for two years following an episode of uncontrollable haematuria following a two-day penile bandage for uncontrollable bleeding BPH 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 haematuria. Subsequently, he had prostatectomy and penile skin grafting.

Conclusion: 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 gangrene, penile bandaging, suprapubic cystostomy*

INTRODUCTION

Benign prostatic hyperplasia is a non-malignant enlargement of the prostate gland associated with rapid proliferation of the glandular cells.¹ BPH is usually seen in elderly men². Affected patients usually present with both obstructive and irritative lower urinary tract symptoms (LUTS).^{1,3}

Haematuria is one of the lower urinary tract symptoms which patients with benign prostatic hyperplasia present with and can be a challenging problem necessitating urethral catheterisation or other interventional emergency procedures.⁴ Generally, 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 such as transurethral resection of the prostate, transurethral electrovaporisation, prostatic arterial embolization, and other non-operative treatment measures are employed in management of these patients.^{5,6} In the developing world, where facilities and skills for minimally invasive procedures are limited, management becomes very challenging.⁷ 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.⁸ This is further compounded by late presentation even in patients with BPH and advancing age, which is common to both conditions.^{2,3} The aim of this study was to present the challenges of managing bleeding BPH and the dangers of employing unconventional and unorthodox treatment protocol in the management of bleeding BPH.

CASE REPORT

Mr S. P is a 61-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 and dysuria. He had a failed painful urethral catheterization by the wife of the attending physician (who was said to be absent) at that time. This worsened the haematuria and was then referred to a tertiary centre. There, at their Accident and Emergency department, he was said to have had another failed urethral

catheterization following which he had suprapubic urine tap regularly using a cannula and drip-giving set. There, the penile shaft was said to have been bandaged and suspended vertically using a string tied to the roof of the bed for two days. Patient eventually became febrile, weak and requested to be sent to our centre which was a second Nigerian states beyond the state of referral (a distance of about 315km) in order to be close to the daughter. His medical history was unremarkable. On presentation at our centre, patient was septic with a PR of 126b/m, BP of 90/60, RR of 32c/m, temperature of 39.6°C, and a 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 2/3 of the penile shaft was noted with complete denudation of the involved spongiosum. Other areas of physical examination were grossly normal. He was immediately resuscitated, placed on empirical antibiotics, and samples sent for necessary investigations. The wound was debrided and dressed after a bed-side suprapubic cystostomy has been performed. Patient also received 2 units of whole blood. He underwent transvesical prostatectomy for a prostatic volume of 295ml with prominent median lobe a month later and penile refashioning about 8 months later. Patient has since been discharged home happy.



Figure 1: Ventral view of the gangrenous penis



Figure 2: Dorsal view of the gangrenous penis



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

DISCUSSION

Benign prostatic hyperplasia (BPH) is commonly associated with the ageing process. The enlarged prostate is a frequent cause of bladder outlet obstruction and usually results in progressive lower urinary tract symptoms.⁹ Bleeding is one of the lower urinary tract symptoms seen in patients with benign prostate enlargement and can be a challenging problem necessitating urethral or suprapubic catheter placement or other acute interventional procedures.^{4,7} Massive haematuria with haemodynamic instability is a great source of concern to both the patients, 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.⁷ 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.^{7,10,11} In recalcitrant cases, minimally invasive procedures such as transurethral resection of the prostate (TURP) and LASER ablation of the prostate have been successfully utilised.^{6,10} Emergency open transvesical prostatectomy can be employed where these endoscopic modalities are not available.⁷ Our patient had resolution of haematuria following transfusion of two units of fresh



whole blood and irrigation with normal saline for two days. He had emergency suprapubic cystostomy to divert urine. These methods were not applied in the referring hospital. He subsequently had skin grafting on the penile wound and open prostatectomy about 8 months after presentation.

Application of unconventional means and methods as noted in the management of this patient can result in serious complications with significant morbidity and mortality. Our patient developed penile gangrene from an unorthodox method of managing massive haematuria.

Penile gangrene, a rare pathologic entity usually results from significant trauma.

Gangrene of the penis may be dry or infective and the causative factors may be traumatic, infective or vascular. Dry gangrene, as in this patient, is classically vascular in origin. Some common causes of dry or non-infectious gangrene include diabetes mellitus, end stage renal disease, tourniquet syndrome, priapism, venous thromboembolism, arterial coagulopathy or injection of heroin into the femoral vessels¹². Distinction between infectious and dry gangrene is essential since the clinical management of these two subsets differs markedly.

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 they have the required patient consent and that the patient has given his consent for his clinical images and information to be reported in the medical journal. The patient understand that his names and initials will not be published and due efforts will be made to hide his identity, but anonymity cannot be guaranteed.

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Conflicts of Interest

There was no conflict of interest.

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