

Case Report

Phallic ring entrapment and strangulation at a tertiary hospital in North-Central Nigeria: a case report

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ABSTRACT

Strangulation of the phallus by metallic ring is an uncommon emergency in our environment however its presentation requires urgent intervention and treatment. There is a need to remove any entrapped ring by the most efficient method with minimal complications. We present a case of phallic strangulation caused by metal ring insertion in a known drug addict. The metallic ring was successfully removed using a metal clamp. Phallic strangulation by metallic ring can be properly managed using available mechanical tool in a timely manner in an emergency setting.

Keywords: Phallic entrapment, Metal ring, Penile strangulation

INTRODUCTION

The entrapment of the phallus is a rare phenomenon with its attendant complications and morbidity. The condition was first described in 1755 by Gauthier and often applied to enhance sexual performance through prolonged erections and erotic purposes.¹ The spectrum of phallic entrapment ranges from vascular obstruction to severe gangrene depending on the duration of entrapment and the delay at presentation.² Each case is managed individually depending on the clinical findings and operative settings as there is no standard of care found to be superior.³

Lubricants, coiled strings, gauze, needle aspiration, and cutting of the rings have been utilised in the past as means of removal of the rings.⁴ In the emergency and operating room setting, mechanical and electrical devices have proven to be successful in the removal of objects often made of steel or iron. This report seeks to create an awareness of phallic ring entrapment in our sub region,

the association of psychiatric disorders and the need to access the psychological, psychiatric state of the patients to prevent future episodes and to review the challenge encountered during extraction of the metallic ring.

CASE REPORT

A 24-year-old single male drug addict accompanied by his mother and relatives presented to the emergency room with a bolt ring surrounding the base of his penis. The man had inserted his penis into the bolt ring 9 hours prior to presentation with associated swelling of the phallus, however no associated pain. Several attempts were made by the patient and his relatives with application of lignocaine jelly and manual compression with no success. The patient admitted to delay in seeking medical attention because of associated embarrassment and publicity.

At the emergency unit, physical examination revealed an ecchymotic, oedematous and excoriated penile surface in keeping with grade 2 injury with difficulty urinating

however no history of haematuria. Attempt at manual removal of the entrapped ring at the emergency unit was unsuccessful warranting the procedure at the operating room. Sedation and lidocaine infiltration was unsuccessful as patient is a known drug addict necessitating general anaesthesia to allow for removal of the ring.



Figure 1: Metallic ring foreign body seen at the base of the phallus causing compression at the base and edema.

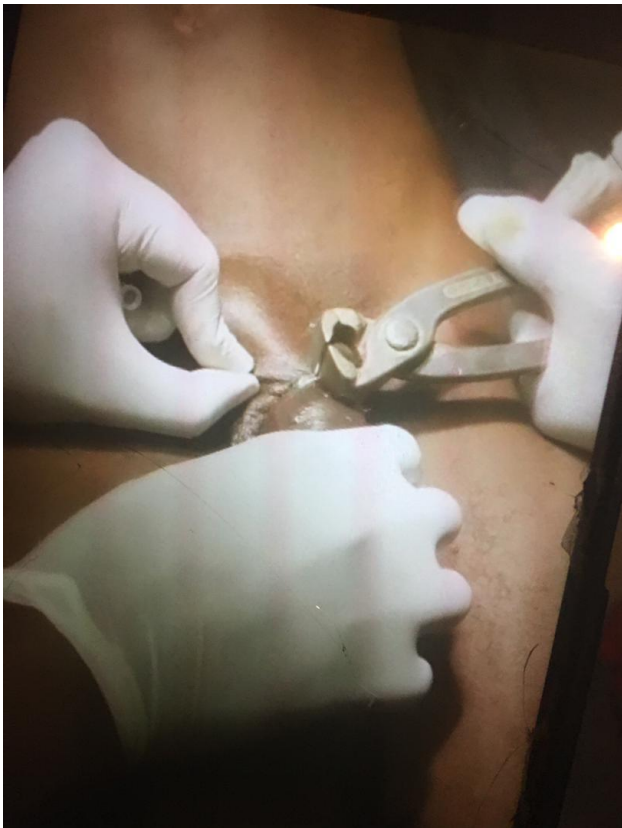


Figure 2: Application of the ring cutter intraoperatively to remove the retained foreign body on the phallus.

The bolt ring was so thick making several attempts at retrieval unsuccessful however we had to employ the services of a metal welder with his cutting manual device despite several attempts at that. After removal of the constricting ring, there was edema and hyperesthesia of the penis and slight skin necrosis and a size 16Fr 2-way Foley catheter insitu to allow for bladder drainage.



Figure 3: The ring cutter used to remove the foreign body was brought in from a welder.



Figure 4: Phallus following removal of the entrapment ring and the excoriation post operation; urethral catheter *in situ* to allow for free bladder drainage and as a stent.

There was no difficulty in micturition. The patient was treated with intravenous antibiotics and was discharged against medical advice after 24 hours in stable condition. Prior to discharge the penile oedema had subsided. Patient was lost to follow-up.

DISCUSSION

Strangulation of the phallus following an attempt at inserting circular foreign objects with a diameter matching or slightly smaller than the penile diameter is a rare urological emergency. This strange behaviour is often motivated by the desire of the patient to achieve sexual enhancement and to solve erectile difficulties and in some instances psychiatric problems or by drug addicts. The challenge in its management arises from the delay in seeking prompt treatment occasioned by an attempt to release the entrapment or the associated embarrassment.⁵

In our index case, patient used a bolt of about 1.5 cm thickness and sought surgical intervention about 9 hours following an unsuccessful attempt at releasing the strangulation.

The venous return to the penis may be reduced eventually resulting in distal penile oedema from the site of entrapment, associated blockage of arterial supply and eventually resulting in damage of the soft tissue of the male external genitalia.⁵

If the aforementioned processes go unchecked and reversed, the strangulation of the phallus may result to ischaemic necrosis, urinary retention, tissue fibrosis and resultant multiorgan failure from septic shock.⁶

Several grading systems have been used to describe the severity of the spectrum of phallic entrapment however the one by Bhat et al⁷ has remained of immense significance in the management of patients with entrapped metallic ring around the phallus (Table 1).

Table 1: Penile strangulation classification system.

Grade	Description
1	Oedema of distal penis. No evidence of skin ulceration or urethral injury.
2	Injury to skin and constriction of corpus spongiosum, but no evidence of urethral injury Distal penile oedema with decreased penile sensation.
3	Injury to skin and urethra but no urethral fistula. Loss of distal penile sensations.
4	Complete division of corpus spongiosum leading to urethral fistula and constriction of corpora cavernosa, with loss of distal penile sensations.
5	Gangrene, necrosis, or complete amputation of the distal penis.

Removal of phallic entrapment and strangulation has no known acceptable method with universal acceptability with most urologists intervening alone however several authors have recommended that other specialists be involved to ensure holistic care.⁵⁻⁷ Previous studies have documented the role of orthopaedic or trauma surgeon, non-health personnel like emergency or fire who are more familiar in the utilization of the right tools (such as bolt and nut cutter) saving time and preventing further damage to the penile tissue.⁷

A higher incidence of high-grade injuries is reported in patients presenting after 72 hours when compared to patients presenting within 72 hours.⁸ In our case, patient presented within 12 hours and therefore was having low grade injuries. The primary aim of treatment is the prompt removal of the constricting foreign body and care of the phallus.

In certain situations, the mechanical and electrical tools for extraction may fail resulting in devitalized or gangrenous tissue allowing for penile degloving and amputation.

The treatment is based on the grade of the injuries with advanced injuries requiring wide tissue debridement of devitalised tissue and the use of partial thickness skin graft. Grade IV and V injuries may require penile amputation and re-implantation with the skills and instruments for microsurgery very handy to achieve optimum care.⁹ Partial or total amputation is the surgery of choice in cases of penile gangrene following entrapment.³

The duration and grade of incarceration determines to a large extent the complications and includes urinary retention, urethral stricture, urethral fistula, skin ulceration, insensate penis, priapism, penile skin gangrene with eventual complete gangrene of the penis.¹⁰

Non-metallic objects as compared to metallic objects are associated with high grade injuries with the cause probably due to the fact that non-metallic objects are more elastic producing more severe constriction on the phallus.¹¹ The severity of the clinical presentation is dependent on the duration of incarceration which is often a cause of delayed presentation to most facilities due to the embarrassment associated with the condition.⁹

There is a need for long term follow-up with micturating cysto-urethrogram and uroflowmetry. Close monitoring, infection prevention, care of the penile skin and heparinization are required for the preservation of the underlying tissues however detailed psychiatric evaluation for the assessment of behavioural disorders is necessary to make appropriate diagnosis and manage background cognitive impairment.¹⁰

CONCLUSION

Phallic entrapment and strangulation from a constricting metallic object is a rare urological emergency requiring urgent intervention however there is a need for multidisciplinary approach to its management with the Psychiatrist playing a major role in the evaluation of patients. The condition is amenable to available mechanical or electrical tools in a timely manner especially in emergency settings. Each case presentation is unique requiring several components with the expertise of the attending surgeon, the condition of the affected organ and the duration of the injury as important factors. Amongst all, the duration of injury is the single most important factor affecting the outcome of the treatment.

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