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From Sexual Aid to Urological Emergency: Raising Awareness of Penile Ring-Related Injuries—A Case Report

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Abstract

The use of penile constriction rings, often marketed as sexual enhancement devices, has become increasingly visible in recent years. Although the true prevalence remains unclear, urologists are encountering occasional but concerning cases of penile strangulation resulting from improper or prolonged application. Such strangulation injuries, while relatively uncommon, can cause vascular compromise, urethral damage, and even tissue necrosis if not promptly managed. We report a case of a middle-aged man who presented with penile strangulation following the use of a metallic constriction ring. Conservative removal attempts were unsuccessful, necessitating mechanical extraction under multidisciplinary care. The patient recovered fully, with restoration of penile function and complete symptom resolution. This case highlights the emerging clinical and psychosocial challenges associated with sexual enhancement device use and emphasizes the importance of early recognition, multidisciplinary management, and patient education to prevent irreversible complications.

Keywords

Penile Ring, Urological Emergency, Sexual Enhancement Devices, Case Report

1. Introduction

Penile strangulation is a rare urological emergency first described by Gauthier in 1755 [1]. It occurs when a foreign object constricts the penis, most commonly

applied to enhance erection or sexual performance. The penis is anatomically predisposed to vascular compromise due to its enclosed structures - the corpora cavernosa, corpus spongiosum, and dorsal vessels—which are bound by fascial layers that restrict expansion under pressure [2]. Consequently, prolonged or improper use of constrictive devices, especially those made of rigid materials such as metal rings, can rapidly transform a recreational practice into a medical emergency [3]. The resulting obstruction of venous and lymphatic outflow may progress to arterial compromise, ischemia, and ultimately, tissue necrosis if not promptly relieved [4] [5].

In recent years, the increasing availability and promotion of sexual enhancement devices through online platforms appear to correlate with a rise in both clinical presentations and published case reports of penile strangulation [2] [6]. This observation highlights an emerging public health concern that calls for heightened clinical vigilance and timely intervention.

Here, we present a case of penile strangulation in a middle-aged man and review the current management approaches. This report underscores the importance of early recognition, multidisciplinary care, and public awareness in preventing severe and potentially irreversible complications.

2. Case Presentation

A 41-year-old homeless man presented with severe penile pain and swelling. He reported placing a metal ring at the base of his penis one week prior, to enhance erections. Symptoms began three days before presentation and progressively worsened. Despite multiple self-attempts to remove the ring, he was unsuccessful. He had no known psychiatric illness but had previously undergone finger amputations due to constrictive rings causing gangrene.

On examination, patient was alert and oriented. Vital signs were stable, and no active bleeding or necrosis was noted. A tight metal ring was partially embedded at the penile base, causing severe distal swelling (**Figure 1(A)**), reduced sensation, and coolness of the glans, indicating poor blood flow. The patient also had urinary retention, a palpable bladder with intermittent jets of urine flow and amputated digits on both hands (**Figure 1(C)**).

Investigations showed mild leukocytosis (12,870 cells/mm^3) with 79% neutrophils; a Doppler ultrasound was not done due to urgency.

After administration of analgesia with intramuscular morphine 10 mg and sedation with diazepam 10 mg, initial attempts to remove the constricting ring using lubrication and the string technique were unsuccessful. The urology team proceeded with mechanical removal using a biomedical hacksaw, which was completed without additional tissue injury (**Figure 1(B)** & **Figure 1(C)**). A 2 cm wound was noted on the ventral aspect of the penile shaft where the ring had become embedded (**Figure 1(D)**). The patient received tetanus prophylaxis (1500 IU) and was admitted to the urology ward for continued management. This included alternate-day wound dressing by wound care team, intravenous paracetamol 1 g three times

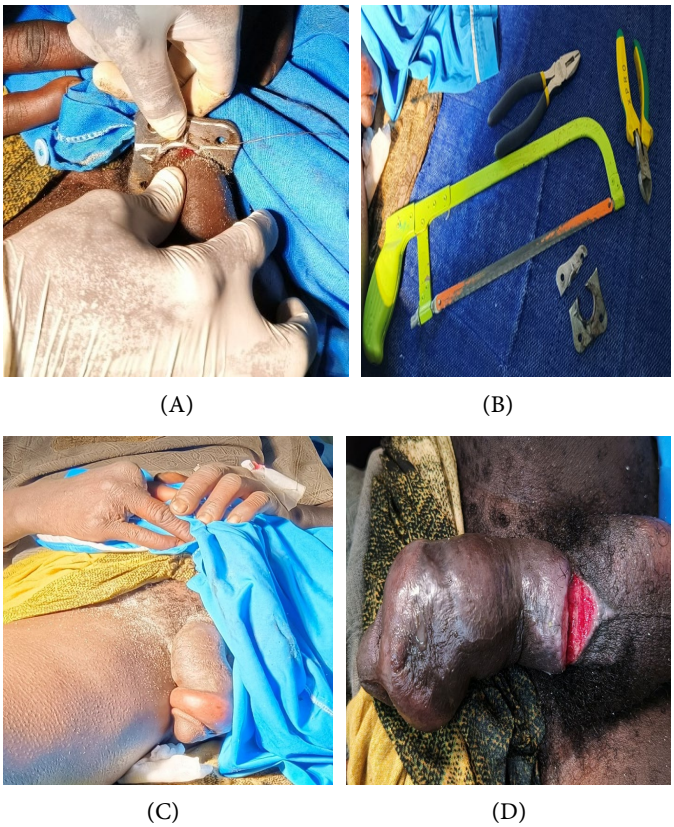
daily, and a seven-day course of antibiotics—Augmentin 1200 mg twice daily and metronidazole 500 mg three times daily, as per guidelines [7].

Due to concerns over a possible psychiatric condition given a history of self-inflicted digital amputations, he underwent psychiatric evaluation on the first day of admission. While no definitive psychiatric diagnosis was made, he was started on olanzapine 10 mg once daily for suspected psychosis, with plans for outpatient follow-up two weeks post-discharge.

By day five, penile swelling had significantly decreased (**Figure 2(A)**), and the wound bed showed healthy granulation tissue (**Figure 2(B)**). The patient maintained normal urinary function throughout his admission. By day seven, glans sensation had returned, and delayed wound closure was performed.

At the time of discharge, the patient demonstrated marked clinical improvement complete resolution of penile edema and restoration of sensation. He was scheduled for outpatient follow-up in two weeks with both the urology and psychiatric teams. A retrograde urethrogram was planned at six weeks to evaluate for any delayed urethral injury or stricture formation.

Long-term outcomes were to focus on monitoring for complications such as erectile dysfunction, urethral narrowing, or recurrence of self-harming behavior. Continued psychiatric support was deemed essential in reducing future risk.



(A) (B)

(C) (D)

Figure 1. (A) Penile Strangulation by metal ring, (B) Instruments used to cut ring, (C) Penile Swelling and eggplant appearance after ring cut. Note also the prior amputated digits, (D) Ventral penile skin lesion from ring encrustation.

(A) (B)

Figure 2. (A) Significant resolution of penile swelling by day five, (B) Good granulation tissue at wound bed.

3. Discussion

Penile strangulation is an uncommon but serious urological emergency that demands timely intervention to prevent irreversible damage [4]. Patients often delay seeking care due to embarrassment or lack of awareness, which worsens outcomes [1]. The type of constricting material and duration of entrapment are critical in determining injury severity [2].

From a pathophysiological perspective, the initial effect of constriction is to impede venous outflow, leading to progressive edema. If the constriction persists, it eventually compromises arterial inflow, resulting in ischemia and, ultimately, tissue necrosis [8].

The **Bhat *et al.*** classification helps assess injury severity, elaborated as follows [9];

- **Grade I:** Involves only distal edema (swelling),
- **Grade II:** Includes distal edema, skin and urethral trauma, compression of the corpus spongiosum, and decreased penile sensation,
- **Grade III:** Characterized by skin and urethral trauma, with no distal sensation,
- **Grade IV:** Features separation of the corpus spongiosum, urethral fistula, compression of the corpus cavernosum, and no distal sensation and,
- **Grade V:** Indicates gangrene, necrosis, or distal penile amputation.

Our patient presented with a **Grade II** injury, evident by distal swelling, skin trauma, and reduced sensation.

The primary treatment goal is to promptly relieve constriction, restore perfusion, and preserve penile and urethral integrity [10] . Treatment strategy depends on both the nature of the object and extent of injury. Lubrication and the string technique may be sufficient in mild cases [4], while aspiration or mechanical removal (e.g., cutting tools) is needed in moderate to severe cases [11] . In advanced cases (Grades IV - V), surgical debridement or even amputation may be required [10].

Cases involving metallic objects or delayed presentation often necessitate a multidisciplinary approach [8]. Collaboration with the Biomedical Engineering Unit may be essential for safe removal of constrictive devices [11]. Additionally, psychiatric assessment is important in patients with a history of self-harm or suspected mental illness, as demonstrated in this case. Plastic and reconstructive surgery input may also be necessary in cases of tissue loss or deformity, while wound care teams support optimal healing and infection control [12].

Importantly, there is a rising trend in both the use of penile constrictive devices and published cases of penile strangulation, reflecting its growing clinical relevance [12]. This surge is likely driven by the widespread, often unregulated availability of sexual enhancement devices, particularly online [3].

Strategies to prevent penile strangulation are essential and should include community sexual health education, patient counselling, and regulation of sexual devices to reduce access to hazardous materials like rigid rings [12]. Public health messaging should target vulnerable populations, particularly those with psychiatric conditions or unstable social environments. Recent studies have emphasized the importance of structured interventions and regulatory oversight in curbing genitourinary injuries from misuse of enhancement devices [3].

4. Conclusions

This case highlights the critical importance of early recognition and timely intervention in managing penile strangulation, a potentially devastating urological emergency. Clinicians must maintain a high index of suspicion as delayed treatment significantly increases the risk of erectile dysfunction, urethral injury, or even penile loss. Optimal outcomes often require a multidisciplinary approach involving urological, surgical (Plastics), mental health/psychiatric, and biomedical teams.

While formal data on usage trends are limited, anecdotal observations suggest a growing interest in these devices, particularly among younger men. Preventive measures including public education, mental health assessment, and regulatory oversight of enhancement devices, are vital to reducing the incidence and impact of this emerging public health concern.

Conflicts of Interest

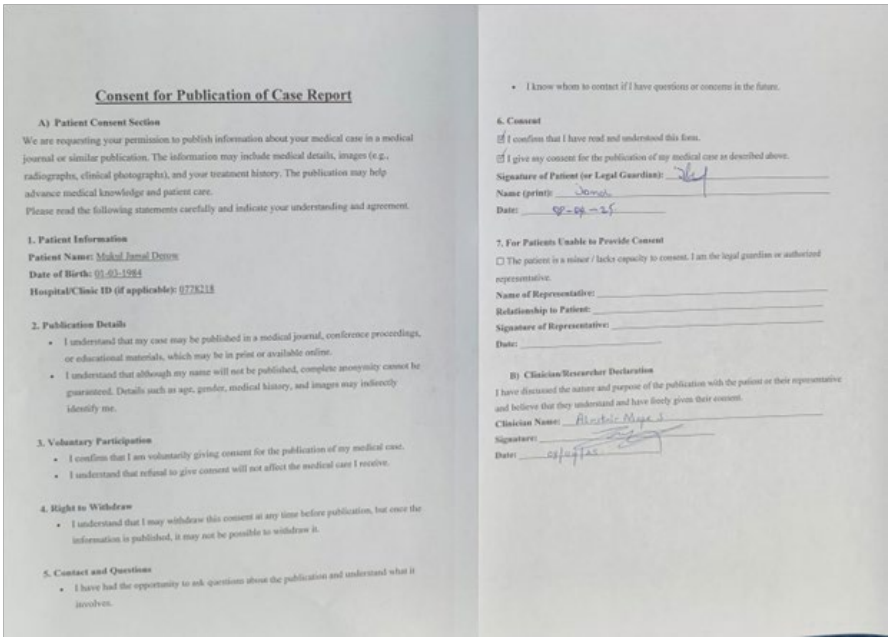
The authors declare no conflicts of interest regarding the publication of this paper.

Consent

Informed written consent was obtained from the patient for publication of this case report and accompanying images.

Declarations

- ✓ Ethics approval and consent to participate: Not Applicable
- ✓ Consent for publication



Consent for Publication of Case Report

A) Patient Consent Section

We are requesting your permission to publish information about your medical case in a medical journal or similar publication. The information may include medical details, images (e.g., radiographs, clinical photographs), and your treatment history. The publication may help advance medical knowledge and patient care.

Please read the following statements carefully and indicate your understanding and agreement.

1. Patient Information

Patient Name: Mukul Jamal Deuwa

Date of Birth: 01-03-1984

Hospital/Clinic ID (if applicable): 0778218

2. Publication Details

- I understand that my case may be published in a medical journal, conference proceedings, or educational materials, which may be in print or available online.
- I understand that although my name will not be published, complete anonymity cannot be guaranteed. Details such as age, gender, medical history, and images may indirectly identify me.

3. Voluntary Participation

- I confirm that I am voluntarily giving consent for the publication of my medical case.
- I understand that refusal to give consent will not affect the medical care I receive.

4. Right to Withdraw

- I understand that I may withdraw this consent at any time before publication, but once the information is published, it may not be possible to withdraw it.

5. Contact and Questions

- I have had the opportunity to ask questions about the publication and understand what it involves.
- I know whom to contact if I have questions or concerns in the future.

6. Consent

☑ I confirm that I have read and understood this form.

☑ I give my consent for the publication of my medical case as described above.

Signature of Patient (or Legal Guardian): [signature]

Name (print): Jamal

Date: 08-09-25

7. For Patients Unable to Provide Consent

☐ The patient is a minor / lacks capacity to consent. I am the legal guardian or authorized representative.

Name of Representative:

Relationship to Patient:

Signature of Representative:

Date:

B) Clinician/Researcher Declaration

I have discussed the nature and purpose of the publication with the patient or their representative and believe that they understand and have freely given their consent.

Clinician Name: Abubakar Magaji

Signature: [signature]

Date: 08/09/25

✓ Funding: Not Applicable

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