Case Report

Penile Entrapment: A Case where Innovation is the Need of the Hour

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Abstract

Penile entrapment is a rare and unique condition requiring urgent decompression to preserve the organ function and prevent complications. There is no universal method that is applicable to all cases as there are hardly any guidelines. Management of a 35-year-old male who presented to our emergency room with a metal ring around his penis has been described here. The case report highlights the need to devise one's own method to decompress the entrapped penis based on the available technology and manpower on hand in a given situation.

Keywords: Decompression, hacksaw, penile entrapment

Introduction

Since the first report of penile entrapment by a constricting device by Gauthier M in 1755,[1] there have been reports of about 65 cases in the literature describing similar cases with various types of constricting devices such as metal ring, thread, and plastic bottle. The case in itself is a challenge to treating urologist as no book describes the treatment and evolving an innovative method as per situation in hand becomes inevitable to save the trapped penis in time. Here is a report of a case of penis entrapped in a metal alloy ring in a 35-year-old adult male. This is the only case that is reported where the metal ring was cut using hacksaw keeping a bard-parker (BP) handle like a guard under the ring to prevent damage to the underlying penile skin.

Case Report

A 35-year-old male presented to the emergency room on a general holiday with a metal alloy ring around the penile shaft which he himself placed 48 hours prior. He presented with severe pain and urinary retention. History revealed similar self-mutilating behavior by the patient in the past, and the patient was not on any psychiatric treatment.

On examination, there was a metal alloy ring just proximal to the glans penis with distal edema [Figure 1a]. The glans was exquisitely tender to touch with a normal temperature and sensation. There was suprapubic fullness suggestive of full bladder.

Lignocaine jelly was applied over the penile shaft, and multiple punctures were made in the glans to reduce the swelling, which drained out some amount of serosanguinous fluid; however, it was insufficient to remove the ring. As it was a general holiday, anesthetists were not in station, and hence, removing the ring under anesthesia was ruled out. Sensing the urgency of the situation, we decided to use the hacksaw [Figure 2a] to cut the ring. As there was every chance of injury to penile tissue while cutting the ring, we decided to use the narrow tip of the BP handle which was passed between the ring and the penile skin with difficulty as a protective covering over the penile skin from incised injury from the hacksaw. The points to cut were decided as two lateral aspects over the penile shaft, and the same could be done within 2 hours to release the penis from a ring which was 2.5 cm in outer diameter, 1.5 cm in inner diameter, and 0.5 cm thick [Figure 2b].

Postremoval of the ring, per urethral catheterization was done using 16Fr Foley catheter, which went in easily after initial difficulty which was felt at the site of incarceration. Post removal, except for a pale band on the penile skin at the site of incarceration, no other abnormality was found [Figure 1b]. The patient voided comfortably after removal of per urethral catheter.

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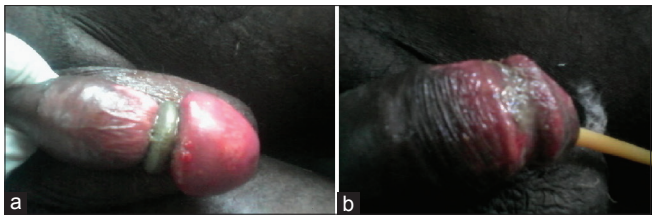

Figure 1: (a) Penis with the constricting device *in situ* and (b) penis after removal of constricting device with per urethral Foley's catheter *in situ*

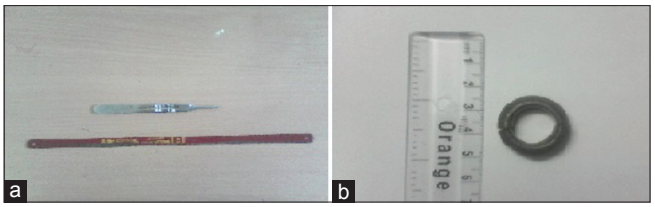

Figure 2: (a) Instruments used and (b) constricting device that was removed

Discussion

Penile entrapment is a rare clinical entity seen in urological practice, which is an emergency, and the treating urologist faces the necessity of devising his own way of dealing with the situation based on the infrastructure at hand. The various constricting devices reported in the literature and the methods devised by the treating doctors for these are neither universally applicable nor universally available, and hence, each case report can provide new insight to a treating urologist.

Penile entrapment can result in various types of injuries which include penile engorgement, ulceration, urinary fistula, gangrene, septicemia, and even death.[1,2] Although it is easy to pass a constricting device up to the penile shaft in the flaccid condition, resulting edema makes its removal difficult and the resulting embarrassing situation makes the patient to approach for medical help late resulting further damage to the sensitive soft tissues of the male external genitalia.

The only grading system available in the literature is devised by Bhat *et al*.,[3] which is as follows:

- Grade I – Edema of the distal penis. No evidence of skin ulceration or urethral injury
- Grade II – Injury to the penile skin and constriction of corpus spongiosum without any urethral injury. Distal penile edema with decreased penile sensation
- Grade III – Injury to skin and urethra but no urethral fistula. Loss of distal penile sensation
- Grade IV – Complete division of corpus spongiosum leading to urethral fistula and constriction of corpora cavernosa with loss of distal penile sensation
- Grade V – Gangrene, necrosis, or complete amputation of the distal penis.

Our case came under Grade I, where the penis was decompressed by cutting the constricting ring using hacksaw with a protecting BP handle underneath the ring. The patient's cooperation was of paramount importance which in our case was very difficult to obtain as the patient had some untreated psychiatric ailment.

Although penile strangulation presents acutely, there are reports of penile strangulation which presented quite late, and one was of a case that presented as late as 14 years after entrapment.[1] Later the presentation more are the complications.

The ultimate aim of all the treatments described is the preservation of the organ function with the least possible complications. Detweiler[4] described treatment techniques based on the grade of injury. The aspiration of the edema fluid with the resultant release of the compressing device is possible in the early cases whereas the application of string as described for an entrapped ring on the finger can be tried if there is enough space to pass the string under the constricting device. If prevention of collateral damage is ensured, various cutting devices can be employed to cut the constricting agent. Grade IV and V injuries require debridement and repair using tissue transfer techniques and may have significant morbidity. Attention to relieve the urinary retention either by per urethral catheterization or by the suprapubic technique is of utmost importance, especially in Grade IV and V cases where penile decompression may take longer time. Failure to obtain timely treatment can have fatal consequences.[1-5]

Conclusion

Penile entrapment is a rare clinical condition, which requires emergency management to preserve the organ function. As the situation is so unique, the management is based on the individual cases and the circumstances.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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