Case Report

Penile Strangulation by Self-placement of a Metal Nut in an Adult Male

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ABSTRACT

External genitalia entrapment is a rare clinical entity requiring urgent and efficient management. If left untreated, it may result especially in vascular compromise to the external genitalia soft-tissue structures. Management is challenging as the presentation can be variable as well as the lack of specifically designed treatment options.

Key words: Metal, nut, penile, strangulation

INTRODUCTION

Metallic objects are often used by adults for sexual stimulation.[1] Sometimes, it may be fatal and can lead to gangrene of the organ.[1] Entrapment or strangulation of the penis is usually associated with an attempt to improve sexual act by maintaining a prolonged erection.[1] It is a rare condition but requires urgent intervention and treatment.[1] Nonmetallic, thin objects can easily be cut off, but penile entrapment with heavy metal objects can pose difficult problem, especially as the object cannot be removed by the standard equipment available in the wards and hospitals.[2] Penile entrapment could lead to different degrees of vascular obstruction ranging from mild non-significant vascular obstruction that resolves after decompression to severe gangrene of the penis.[3] The previous studies have shown that management is done by removal of the foreign body using saws, air grinders, or dental drills. However, these methods are not always effective and also the cutter blade as well as the heat produced while cutting the metal can potentially injure the penis.[2]

Our method is a novel one which surgical decompression of the penile shaft was done by giving lateral incisions over the shaft and the collected blood from corpora cavernosa was drained. The metallic object was then removed by sliding over a flaccid penis. Our method is safer and more controlled one in which untoward injuries to the penile shaft due to use of the metallic drills are prevented.

Access this article online	
Website: www.themmj.in	Quick Response Code
DOI: 10.15713/ins.mmj.55	

CASE REPORT

We report a case of a 60-year-old male who presented with a history of penile strangulation with a 2 cm wide metallic nut. He presented with slipping of the nut at penoscrotal junction while attempting sexual pleasure, followed by penile swelling and lividity with blebs on penile shaft [Figure 1]. He presented within 5 h in emergency department (casualty) at our hospital.

He was immediately shifted to emergency OT. Penile block was given with 2% xylocaine 10 ml (with great difficulty because of the nut).

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Cutting of nut tried with all possible cutter including bone cutters/metal cutters. Finally, decision was taken to decompress penis by taking two lateral incisions over penile shaft upon corpora cavernosa [Figure 2] and draining the collected blood. Further decompression was done by gentle squeezing.

After complete decompression, nut was gradually made to slip over shaft and taken out [Figure 3]. The metal nut was kept on a gauze piece and measured using a metallic scale [Figure 4].

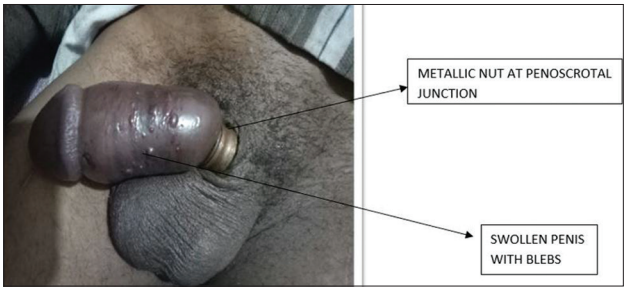

Figure 1: Penile swelling and lividity with blebs on penile shaft

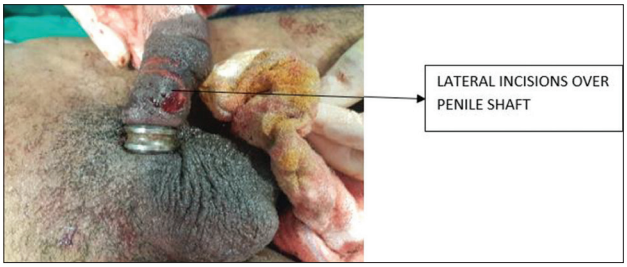

Figure 2: Lateral incisions taken over penile shaft upon Corpora Cavernosa

Figure 3: Exclusion of metallic nut

Fascia of corpora cavernosa was closed by polyglactin absorbable suture material and skin was sutured by non-absorbable suture material. The swelling over penis slowly subsided postoperatively [Figure 5]. The patient was hospitalized for 4 days. Psychiatry reference was done during hospitalization.

After end of 1 month, wound was completely healed and the patient had good erection and sexual function on follow-up at the end of 2 months.

DISCUSSION

Most reported cases of penile strangulation involve the placement of the metallic rings and devices for sexual gratification. However, our patient apparently placed the nut on the flaccid penis while attempting

Figure 4: Size of metallic nut

Figure 5: Postoperative wound

sexual pleasure. The penis is a very delicate and sensitive organ and even minor injury may cause serious discomforts. Any penile trauma should be managed urgently.[4] Penile entrapment by metal ring if left untreated can result in ischemia, necrosis, and amputation of the penis. The reported motives for placing a metal incarcerating device include enhancement of sexual response, erectile dysfunction self-treatment, and psychiatric disturbance.[5] Entrapping the penile shaft with rings and constricting bands may reduce venous return and maintain erection.[6] Entrapment of the penis by an encircling object leads to swelling of the penis distal to the object due to the initial blockage of the venous return and later arterial supply. After several hours, penile strangulation can result in ischemic necrosis and fibrosis of the tissue.

Reported complications occurring with time and degree of incarceration include urinary retention, skin ulceration, desquamating epithelium and bullae, urethral stricture, urethral fistulas, priapism, gangrene, and autoamputation.

Bhatt *et al*.[7] graded such injuries according to severity as:

Grade I	Edema of the distal penis, no evidence of skin ulceration or urethral injury
Grade II	Injury to the skin and constriction of corpus spongiosum but no evidence of urethral injury, distal penile edema with decreased penile sensation
Grade III	Injury to the skin and urethra but no urethral fistula, there is a loss of distal penile sensation
Grade IV	Complete division of corpus spongiosum leading to urethral fistula and constriction of corpus cavernosa with the loss of distal penile sensation
Grade V	Gangrene, necrosis, or complete amputation of the distal penis

Depending on the degree and material of entrapment and distal edema caused by it, releasing it can be challenging. If the constricting object is non-metallic object, it can be easily cut off, but thick, hardened steel or iron is very difficult to remove.[7]

CONCLUSION

Penile strangulation by a foreign body is an unusual clinical condition and the consequences can be severe. Penile strangulation could lead to different degrees of vascular obstruction. Prompt diagnosis and early treatment are essential to avoid the potential complications of ischemic necrosis and autoamputation. Early consideration for surgical intervention can save not only the gangrenous changes of the organ but also retains sexual function in cases of penile strangulation. Psychological counseling and awareness is an absolute necessity in such cases to prevent recurrence of such an episode.

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How to cite: Vaidhya S, Gawade S. Penile Strangulation by Self-placement of a Metal Nut in an Adult Male. MIMER Med J 2020;4(2):44-46.

Source of Support: Nil. **Conflicts of Interest:** None declared.