

CASE REPORT

Case Report of Penile Strangulation with Metal Ring of Key Chain*Raja¹, Bharathi Kannan^{2*}, Medhun¹*¹Department of General Surgery, Tagore Medical College, Chennai-600003 (Tamil Nadu) India,²Govt. Head Quarters Hospital, Pollachi, Coimbatore-642001 (Tamil Nadu) India**Abstract:**

Penile strangulation is one of the less frequently encountered cases in emergency room. Sexual pleasure leads the list of factors acting as impetus. In this case report, a case of penile strangulation presenting to Surgery outpatient after two months of insertion of metal ring (key chain ring) is discussed. After careful consideration of patient's condition, the ring was removed with help of K wire cutter.

Keywords: Penile Strangulation, Key chain ring, K wire cutter

Introduction:

Penile strangulation can occur in any age involving a wide range of objects from metal rings to plastic caps. With no proper protocol to tackle this rare yet dreadful situation, the course of management solely lies in the hands of the attending surgeon's expertise. This emergency condition calls for quick assessment and early intervention in order to prevent permanent damage to the male organ [1]. Wide varieties of cases have been reported all around the world with most of them seeking attention within 24 hours to 1 week. However, in extremely rare scenario the patient may present very late to hospital i.e. more than a month. Underlying psychiatric illness, lack of proper knowledge about the situation, shyness, sense of guilt are the possible causes attributed towards the late presentation [2]. With lack of proper guidelines, sharing the experience gained

on encounter with such cases is of paramount importance as it can help the doctors around the world to plan the course treatment with efficacy and precision. We are reporting a case of penile strangulation presenting after two months of insertion of metal ring in the key chain.

Case Report:

A 35 year old patient presented to our general surgery department with penile swelling, pain and difficulty in micturition following insertion of a metallic ring of key chain over penis, 2 months ago, for auto erotic purposes and thus resulting in strangulation.



Fig.1: Clinical Photograph Showing Strangulation of the Shaft with a Metallic Ring

He was afebrile and his vitals were normal. He did not have any co-morbid illness. His penis was severely swollen, hard and blue, constricted with a ring (key chain ring) at the base of the penis. The metal ring was corroded and the skin around ring was fibrous. Patient had minimal sensation in the distal end of penis. There was difficulty in retracting the prepuce over glans. Patient has tried some local remedies (like applying coconut oil and other lubricants) to remove the ring but was unsuccessful in his endeavors. He was a known alcoholic and cannabis addict for last 10 years. He was also under treatment for psychosis. However his compliance towards the treatment was not known.

Treatment:

Patient was immediately taken to the operation theatre. All modalities of intervention, like string technique, cutting technique, aspiration technique and surgical amputation of penis were considered. After careful analysis and examination string technique [1] and corporal aspiration technique [1, 3] were ruled out. It was then decided to cut the metal ring with K wire cutter. Consent for penile amputation was obtained just in case if the attempt to cut the ring fails or the blood supply to distal penis cannot be reestablished.

Under general anesthesia the metal ring was cut into pieces. After making sure that there was no metal piece left, the fibrous skin was removed and the fresh ends were sutured with 3-0 chromic catgut. Multiple puncture incisions were made 10 blade in the distal penis to reduce the edema. Oozing of fresh blood from puncture wound was seen indicating that the blood supply to the distal penis was, in fact, intact.



Fig. 2: Post Procedural Clinical Photograph Showing Signs of Healing Follow Up: 4 Days

Discussion:

Bhat *et al.* (1991) [4] has graded such injuries in five types according to increasing severity as follows:

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

The case under discussion had distal edema, skin involvement, spongiosum compression and decreased penile sensation. So it can be considered as Grade II – Classification of penile strangulation [4]. Initial attempts to remove a solid constricting device causing penile strangulation involve lubrication of the shaft and foreign body and attempted direct removal. Edema distal to the strangulation often makes removal difficult. A string or latex tourniquet can be wrapped around the distal shaft to decrease swelling and to improve the odds of removing the device with lubrication. Plastic constricting devices can be incised with a scalpel or an oscillating cast saw, but metal objects present a more difficult challenge. Readily available hospital equipment (ring cutters, bolt cutters, dental drills, commercially available rotary tools, orthopedic and neurosurgical operative drills) [5]

can be used but may sometimes be inadequate to cut through heavy iron or steel items. In such cases use of industrial drills, steel saws, hacksaws, saber saws, anspach saw with tungsten carbide bits [6] and high-speed electric drills is warranted. Metallic objects are difficult to remove but the injuries are usually less severe [2, 7] Micturating Cysto-Urethrogram (MCU) and Uroflowmetry may be used in long term follow up to rule out urethral stricture [1].

Conclusion:

Duration, presenting complaints and the object causing strangulation plays an important role in deciding the course of management. The clinician should have the knowledge of the various techniques. Innovative and novel methods are often required.

References

1. Shukla P, Lal S, Shrivastava GP, Singh LM. Penile Incarceration with Encircling Metallic Objects: A Study of Successful Removal. *J Clin Diagn Res* 2014; 8(6):NC01-5.
2. Choudhary SK, Taraphdar T, Thomas AJ. Penile strangulation with metallic objects in adults: 2 case reports and literature review. *Emerg Med* 2014; 4:6.
3. Baruah SJ, Bagchi PK, Barua SK, Deka PM. An innovative surgical technique for treating penile incarceration injury caused by heavy metallic ring. *Indian J Urol* 2009; 25(2): 267-8.
4. Bhat AL, Kumar A, Mathur SC, Gangwal KC. Penile strangulation. *Br J Urol* 1991; 68(6): 618-21.
5. Greenspan L. Tourniquet syndrome caused by metallic bands: a new tool for removal. *Ann Emerg Med* 1982; 11(7): 375-78.
6. McLaughlin T, Coyner W. Removal of strangulating metal bearing from penis. *J Urol* 1989; 141(3):617.
7. Silberstein J, Grabowski J, Lakin C, Goldstein I. Penile constricting devices: a case report, review of the literature and recommendations for extrication. *J Sex Med* 2008; 5(7): 1747-57.

***Author for Correspondence:** Dr. Bharathi Kannan, Govt. Head Quarters Hospital, Pollachi, Coimbatore- 642001, Tamil Nadu Email: bharathikannan02@gmail.com Cell: 9003696140