

## A CASE OF PENILE ENTRAPMENT IN METAL RINGS TREATED BY ASPIRATION AND PUNCTURE TECHNIQUE

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### **A CASE OF PENILE ENTRAPMENT IN METAL RINGS TREATED BY ASPIRATION AND PUNCTURE TECHNIQUE (Abstract):**

**INTRODUCTION:** Application of constriction over penis by means of various objects for autoerotic purpose is a practice that may lead to dangerous consequences. A large variety of objects have been used for this purpose leading to a spectrum of complications. Management of such cases poses a great challenge to the treating surgeon, as it often requires teamwork involving not only doctors but also technical experts from engineering department. We report a case where a man presented with acute retention of urine with two metallic rings over his penis. **CASE REPORT:** A 50 years old man presented to the surgical emergency ward with complaint of acute retention of urine. He had pushed two metallic rings over his penis about two hours back in a bid to get sexual pleasure while he was under influence of alcohol. The rings later got impacted over the penis because of congestion of distal part of penis. Soon the patient developed the complaint of mild pain and swelling of penis and inability to pass urine and was brought to the hospital. The physical exam revealed that the part of penis distal to the rings was congested, swollen and slightly discolored. We started with urinary bladder emptying by putting a wide bore needle suprapubically and connecting it to a urobag through a drip set. Penile block was given. Blood was then aspirated from both corpora cavernosa distal to the rings and the rings were manipulated after generous application of lubricant jelly. This way, rings could be moved almost up to corona glandis obstructed only by a band of edematous skin. Now multiple needle punctures were given in this skin and the area was kept compressed for a while using a tape-gauze wrapped tightly over it. On removing the gauze, rings could be moved up to corona. Now the distal ring was placed with its wide stone bearing part against the ventral aspect of glans. Glans was then decongested by means of needle punctures and digital compression. Ring was rotated with traction while glans was compressed to negotiate through it. The attempt was successful and both rings were removed in this fashion. The post operative course was uneventful. **CONCLUSIONS:** Aspiration and puncture technique facilitates the removal of constricting objects from the penis. This technique is safe and does not require sophisticated equipment.

**KEY WORDS:** PENILE ENTRAPMENT; METAL RINGS; ASPIRATION AND PUNCTURE TECHNIQUE

**SHORT TITLE:** Penile entrapment: aspiration technique

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### **INTRODUCTION**

Application of constriction over penis by means of various objects for autoerotic purpose is a practice that may lead to dangerous consequences. A large variety of

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doctors but also technical experts from engineering department. The emergency physicians should be well aware of the appropriate line of management in such cases in order to be able to coordinate the teamwork. We report a case where a man presented with acute retention of urine with two metallic rings over his penis.

### CASE REPORT

A 50 years old man presented to the surgical emergency ward with complaint of acute retention of urine. He had pushed two metallic rings over his penis about two hours back in a bid to get sexual pleasure while he was under influence of alcohol. The rings later got impacted over the penis because of congestion of distal part of penis. Soon the patient developed the complaint of mild pain and swelling of penis and inability to pass urine and was brought to the hospital.

On examination he was conscious and talkative but a little apprehensive. His vital parameters were within normal limits. His urinary bladder was distended and palpable. He had two ornamental rings impacted over his penis (Fig. 1). The part of penis distal to the rings was congested, swollen and slightly discolored. Tenderness was minimal.

At first an intravenous line was established and the patient was given 200 mg of ciprofloxacin intravenously and 75 mg of diclofenac-sodium intramuscularly. As wire cutters were not immediately available in the emergency ward, a plan to attempt removal of intact rings was made before wire cutters could be arranged. To start with urinary bladder was evacuated by putting a wide bore needle suprapubically and connecting it to a urobag through a drip set. Penis was then cleaned and antiseptic solution was applied. Penile block was given. Blood was then aspirated from both corpora cavernosa distal to the rings and the rings were manipulated after generous application of lubricant jelly.

This way, rings could be moved almost up to corona glandis obstructed only by a band of edematous skin. Now multiple needle punctures were given in this skin and

the area was kept compressed for a while using a tape-gauze wrapped tightly over it. On removing the gauze, rings could be moved up to corona. Now the distal ring was placed with its wide stone bearing part against the ventral aspect of glans. Glans was then decongested by means of needle punctures and digital compression. Ring was rotated with traction while glans was compressed to negotiate through it. The attempt was successful and both rings were removed in this fashion.

The patient was kept in the hospital for a few hours under observation during which there was no significant bleeding from puncture wounds and patient could pass clear urine without any difficulty. He was discharged from the hospital thereafter on oral ciprofloxacin. The patient was later seen in outpatients department one week later. He had no complaints related to micturition or sexual intercourse and his penis looked healthy.



**Fig. 1** Penile entrapment in metal rings

### DISCUSSION

Penile entrapment in a constricting object is a surgical emergency requiring immediate attention because of the risk of irreversible ischemic injury. A large variety of objects has been implicated in cases of penile strangulation injury such as rings, nuts, bushes, bottleneck, pipes and loop wrench etc. Such objects are placed over penis deliberately either for autoerotic purpose or secondary to psychiatric disturbance. Some people use constricting

band over penis in a bid to overcome impotence. In children the constricting objects are usually non-metallic such as rubber band, thread or hair. These are used to prevent enuresis or incontinence or may represent an innocent childish experiment.

When an encircling object is placed over penis it impairs the venous and lymphatic return of penis while the arterial flow is maintained. This results in congestion of distal part of the penis and, if the object is not removed, it gets impacted. Patient may present with edema or ulceration of penile skin, loss of sensation, retention of urine, urethral fistula or even gangrene. Bhat et al. [1] classified the penile strangulation injury into five grades according to severity, with *grade one* characterized by only edema of distal penis without skin ulceration or urethral injury, *grade two* having injury to skin, constriction of corpus spongiosum, distal penile edema and decreased penile sensation, *grade three* having injury to skin and urethra and decreased penile sensation but no urethral fistula, *grade four* comprising complete division of corpus spongiosum leading to urethral fistula and constriction of corpus cavernosum with loss of distal penile sensation, and *grade five* representing gangrene, necrosis or complete amputation of distal penis.

Management issues in such cases are relief from retention of urine, removal of constricting object, prevention of sepsis and prevention or treatment of complications. To relieve the retention of urine urethral catheterization is possible in many cases but suprapubic cystostomy is often required [2,3].

The most challenging job however is the removal of the constricting object. The object may be either cut apart or removed intact, depending upon the type and size of the object, duration of penile incarceration and the availability of equipment. Non-metallic thin objects are easy to remove but objects like thread or hair may erode deep inside the skin and may cause severe urethral injury. Thin metallic rings, at times, can be

removed easily by means of metal cutters but a variety of tools has been used for this purpose when the constricting object is composed of hard metal and is difficult to cut. These include saw, cutting tongs, high speed drills, hammer and chisel, and Dremel Moto-Tool etc. [1,4,5]. When a drill is used to cut the object, a lot of heat is produced which can cause thermal injury to underlying penile tissue. To prevent this, continuous irrigation with copious amount of ice water is required [1,5]. Such sophisticated tools are not easily available in emergency wards and this lack of adequate resources often warrants an attempt at manual removal of the constricting object.

The choices of methods for removing the object intact include the String Method which was originally described by Flatt for removing strangulating ring from a finger [6]. Vahasarja et al. [7] reported two cases successfully managed by this method. Detweiler and Perkins [8] used latex band in a similar fashion calling it the Wrapping Technique. We used the Aspiration Technique in this patient. Aspiration of blood was done from the shaft and glans of penis to achieve detumescence followed by manual expression of fluid and successful removal of the constricting agent. The penile skin edema was overcome by wrapping the penis tightly in a tape-gauze and thus providing sustained compression over a length of penis. So this combination of maneuvers made it possible to remove the two rings intact without the use of sophisticated tools, leading to the desired result and an uneventful recovery. There have been few previous case reports of successful use of this technique [9-11].

Surgery in the form of degloving of penis to reduce its effective diameter may be required in some patients. Coverage with skin graft or flap is required. Surgery is also indicated in case there is ulceration or necrosis of skin, debridement of devitalized tissue is done followed by skin replacement [3]. Urethra should be evaluated radiologically soon after removal of the constricting object if injury is contemplated.

Urethral fistula may require reconstruction. Urethral stricture may be a late complication.

### CONCLUSION

Aspiration and puncture technique facilitates the removal of constricting objects from the penis. This technique is safe and does not require sophisticated equipment. The procedure saves valuable time and hence may prevent development of irreversible ischemic changes in many cases. In our case the technique was used successfully with an uneventful recovery.

### CONFLICT OF INTEREST

The author and co-author have no conflict of interest.

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