



# RINGS AT THE WRONG PLACE: ACUTE PENILE INCARCERATION, A CASE REPORT AND REVIEW OF TREATMENT OPTIONS

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## ABSTRACT

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Penile strangulation and entrapment is an unusual acute urologic emergency with a potential for serious complication. It can occur in adults and children. Penile incarceration from metallic and non-metallic objects has been reported since 1755. Patients present with various grades of penile injury & treatment varies with the grade at presentation. Removal of the offending objects can be cumbersome and tricky at times. We present a case and review the treatment options in such situations.

**Keywords:** Penile strangulation, penile incarceration.

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*“Penile strangulation injuries can result in serious short and long term complications, preservation of organ integrity and long term function is of utmost importance.”*

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## INTRODUCTION

Penile strangulation and entrapment is an unusual acute urologic emergency with a potential for serious complication. It can occur in adults and children. Penile incarceration from metallic and non-metallic objects has been reported since 1755. Patients present with various grades of penile injury & treatment varies with the grade at presentation. Removal of the offending objects can be cumbersome and tricky at times. We present a case and review the treatment options in such situations.

## CASE DETAILS

A 70 year-old widower was brought to the casualty with history of pain & swelling of the penis of more than 30 hours duration caused by placement of 4 stainless steel metallic rings. Further history revealed, the patient was of unsound mind and he reported the incident when he was in urinary retention. Examination revealed an elderly male with a turgid ecchymotic, swollen extremely tender penis with 4 metal rings at the root of the penis. Fig1a, b. There was gross penile edema with colour changes up to the root of penis and a palpable bladder.



Figure 1a.4 rings incarcerated at the root of the penis.



Figure. 1b: 4 rings incarcerated at the root of the penis. Following futile attempts to remove the foreign body in the casualty he was taken to the operating room. The procedure was performed under general anesthesia. Bolt cutter & angle grinder was obtained from the hospital maintenance department. By giving external compression on the penis near the rings few punctures were made with an 18G needle to let out the edema fluid, the bolt cutter could be slid into place to cut the rings. Fig2. On examination, superficial damage was limited to a transverse penile skin necrosis. Fig3. Urethral catheterization was done and maintained for 5days post op. Patient had a smooth post operative recovery and had normal micturition with no sequel of urethral stricture at 6 months follow-up with a retrograde urethrogram and cystoscopy. Fig4.

## DISCUSSION

Penile strangulation is an acute emergency needing urgent relief, otherwise gangrene sets in with serious consequences, and rarely death.<sup>1</sup> External genital constricting devices are placed for erotic or autoerotic purposes. Intentionally wrapping of strangulating objects is reported in certain cultures in an attempt to ward off evil spirits or treat nocturnal enuresis<sup>2</sup>. A variety of metallic or non-metallic objects like metal rings, plastic bottles,



Figure 2. 4 rings removed (size in comparison to a coin)

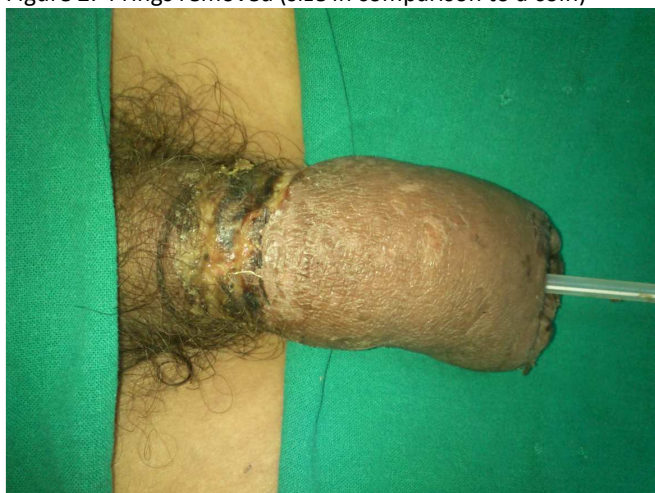


Figure 3. Post operative photo of the affected part elastic rubber bands or rarely accidental by prolonged strangulation by hair.<sup>3,4</sup> Removal of these objects can be challenging, due to the variability in presentation. Patients presenting after 72 hours are more likely to sustain higher grade of penile injury<sup>5</sup>.

Bhat et al<sup>6</sup>, have categorized penile incarceration injuries as: Grade 1, Edema of the distal penis only; Grade 2, distal edema with injury to the skin, corpus spongiosal compression and reduced penile sensation; Grade 3, injury to the skin & urethra (without urethral fistula) with no penile sensations; Grade 4, complete division of corpus spongiosa with urethral fistula, compression of corpus

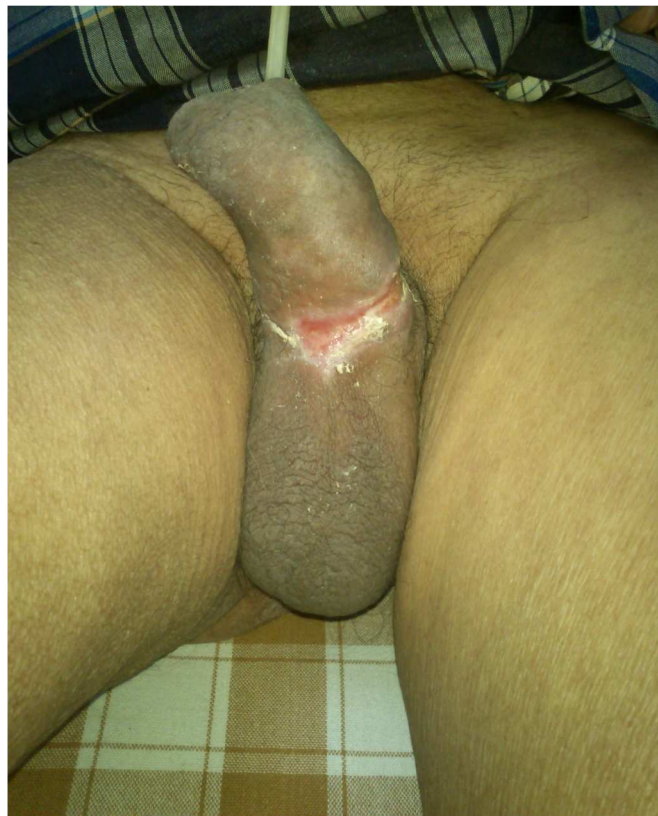


Figure 4. Three weeks post operatively.

cavernosa & loss of penile sensations; Grade 5, gangrene or complete amputation of distal penis. The usual cutting tools may be inadequate or even dangerous. During initial assessment a local anaesthetic penile block may be helpful. Various methods have been described for removal of penile constricting objects. The string technique (with a string or umbilical tape) with or without aspiration of blood<sup>7</sup>; in a turgid penis aspiration of corpus cavernosum blood can be employed to achieve detumescence & aid removal of the object; lubrication of strangulated penis and the object with direct removal; wrapping a tourniquet around the distal shaft to reduce the swelling, improving the odds of removal<sup>8</sup>. Various cutting devices have been utilized depending on the dimension of the metal object. A variety of tools have been used such as hammer & chisel, hand saw, Dremel Moto-tool, circular orthopaedic saw with diamond teeth

and heavy drills have been used. Penis has to be adequately shielded during removal or it may result in thermal burns or lacerations. Surgical treatment is usually reserved for grade 5 cases with degloving<sup>8,9</sup> done to the level of Buck's fascia or corpus cavernosa followed by skin grafts. Penile amputation with replantation using microsurgical techniques for grade 4 & 5 have been suggested when there is loss of distal penile pulsation for more than 1 week postoperatively<sup>8</sup>.

Incarceration can rarely be chronic, leading to penile lymphedema, voiding dysfunction, UTI, skin ulcerations and urethro-cutaneous fistula. Surgical treatment of lymphedema involves lymphangiectomy with covering of denuded areas with skin flaps or grafts, and in some cases, penectomy may be needed<sup>10</sup>.

Post operative duplex sonography is done to rule out cavernous body thrombosis that may result from delayed presentations. Long-term follow-up with retrograde urethrogram is necessary to rule out urethral strictures. Due to the peculiar nature of this condition, preservation of the patient's dignity and avoiding embarrassment is of utmost importance.

## CONCLUSION

Penile incarceration is an uncommon emergency & removing the object can be tricky at times. Robust objects need to be cut, taking extreme care about the penis. Urethral strictures can result and patients need long term follow up.

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