Penoscrotal incarceration, four rings, and estate department bolt to the rescue

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ABSTRACT

Combined penoscrotal incarceration is rarely reported in the literature. It is a urological emergency. Depending on the nature of the constricting object, duration of constriction, and with no defined treatment methods, inventiveness is usually required in removing difficult objects. This is a report of a penoscrotal incarceration by four closed steel rings, treated in Northern Ireland with a few minor points reiterated.

Key words: Incarceration, penoscrotal

INTRODUCTION

As a means of sexual pleasure or for erection prolongation, some men place objects around the external genitalia. This is occasionally complicated by incarceration leading to reduced blood flow, genital swelling and ischemia. Although rare, penile incarceration presents more commonly than combined penoscrotal incarceration. Search of Pubmed revealed less than ten reported cases. Delayed presentations may lead to serious complications. Treatment requires prompt decompression of the constricted genitalia to restore blood flow. Considerable inventiveness may be necessary to free the genital. This is the first reported case of penoscrotal incarceration in Northern Ireland.

CASE REPORT

A 47-year old Caucasian male attended the Emergency Department of a district general hospital with penile and scrotal pain of approximately 16 hours caused by placement of closed stainless steel rings over the root of his penis and scrotum for autoerotic purpose.

Examination revealed a male in distress with a turgid, echymotic, paraphymotic, extremely tender penis, and a swollen scrotum both incarcerated at the root by four 0.5 cm thick closed stainless steel rings [Figure 1]

Following futile attempts at removal by the Emergency Department physicians, he was referred to the Urology Department.

A sagittal oscillating saw with a selection of blades and a diamond tip circular saw were obtained from the Orthopedic Theatre. Bolt cutters and an angle grinder were also sourced from the Hospital Estate Department.

With the procedure carried out under general anesthesia, both orthopedic saws were found to be ineffective and potentially dangerous, as they tended to bounce off the rings, risking iatrogenic injury to the patient.

Changing tack, 80 ml of dark colored blood was aspirated from each corpus cavernosum (blood gas analysis pH-7.161 pO2-2.62 mmHg pCO2-10.5 mmHg lactate-9.6), and the detumescence thus created enough space to safely slip the bolt cutter blade into each ring, cutting them into segments [Figure 2] and freeing the constricted genitalia. In cutting the first ring, a steel segment snapped off into the air risking injury to the personnel present in theatre, none of who wore protective goggles.

Thankfully the scary looking angle grinder was not employed.
Abogunrin: Penoscrotal incarceration, four rings, and estate department bolt to the rescue

On examination, superficial damage was limited to a mild patchy penile-scrotal skin necrosis.

The patient was catheterized post surgery. Next day, following a successful trial without catheter and a doppler ultrasound scan, confirming flow of blood in both testes, he was discharged home with oral antibiotics. Due to back-log of outpatient clinic slots, early outpatient attendance was not possible, but a telephone review three months post discharge was done and patient had no problems to report.

DISCUSSION

Men presenting with penile incarcerating objects are rare, but several have been reported worldwide, with the first report in 1755. Combined penoscrotal incarceration is reported even less in literature. This is the first reported case in Northern Ireland.

External genital constricting objects are placed usually for erotic or autoerotic purposes with various choices of metals and plastics used, but when incarcerated, removal can be challenging; both for the patient and the physician, due to variability in presentation, with no defined treatment methods. Occasionally the usual Emergency Department cutting tools may be inadequate to cut through robust objects, as was evident in this case. Removal of a difficult constricting object is preferably done under general or regional anesthesia with an important prelude of thinking through and sourcing the appropriate equipment to use to remove the rings. During initial assessment consider penile block for pain relief and administration of tetanus prophylaxis.

Various methods have been described for removal of penile constricting objects, but these are usually not practical with penoscrotal constriction. These include lubrication of the strangulated penis and object with direct removal, or wrapping a tourniquet around the distal shaft to decrease swelling thus improving the odds of removal. The string method involves a thick silk suture passed proximally under the object and wound tightly around the penis distally toward the glans. The suture proximal to the ring is grasped; unwinding it from the proximal end pushing the object distally. The scrotal contents preclude the use of these often useful methods.

In a turgid penis, corpus carvenosum blood aspiration is commonly employed to achieve detumescence, to aid in the removal of the constricting object, a method used in this case.

Previously reported complications include skin necrosis, gangrene, penile amputations, orchidectomy, and even death.

Due to the unpredictable property of the materials the constricting devices are made of, care must be taken to wear personal protective equipment (PPE) during the process of removal. Conjunctivitis from metal sparks injury in the operating physician has been reported and a mishap of a similar or graver nature may have happened, as a piece of metal snapped off during the removal process in this case.

During extrication, the genitals should be protected to prevent iatrogenic injury by improvised use of a tongue depressor, laryngoscope blade, sponges, malleable retractors, saline irrigation, and the like.

The service of the fire brigade is infrequently required; having the equipment and expertise to cut through most robust objects and contact should be made promptly if no headway in removing the constricting object is achieved.

Due to the peculiar nature of this condition a lot of curiosity can be generated among the hospital personnel,
so preservation of the patients’ dignity should be paramount with his embarrassment kept to a minimum.

In conclusion, penoscrotal strangulation is a rare emergency. Extricating can often be tricky. Robust objects usually have to be cut, preferably under general anesthesia, with PPE worn by the operating personnel. The constricting object has to be assessed before the operation, and one has to be prepared with an array of tools at hand. The patient’s dignity has to be preserved.

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