



Case Report

Successful removal of a penoscrotal constricting ring in a 49-year-old male



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KEYWORDS

Constricting metal ring;
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Abstract Placement of constricting devices around the penis and scrotum for autoerotic purposes or increasing sexual performance represents a well-known challenge for urologists and can result in serious complications. The removal of the constricting devices can be challenging and often requires resourcefulness and multidisciplinary approach. We report one case of successful removal of a penoscrotal constricting metal ring in a 49-year-old male using a hand-held orthopaedic saw under ketamine and midazolam sedation in the emergency department. © 2017 Editorial Office of Asian Journal of Urology. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Penile incarceration is an emergency with potentially severe clinical consequences. The removal of the constricting devices can be challenging. We report one case of successful removal of a penoscrotal constricting metal ring in a 49-year-old male using a hand-held orthopaedic saw under ketamine and midazolam sedation in the emergency department.

2. Case report

A 49-year-old Malay male presented to the emergency department with a grossly swollen penis and scrotum. He

had used a stainless steel penoscrotal ring for enhancement of sexual performance two nights before presentation. He had forgotten to take the ring off after sexual intercourse. He failed in his attempts to remove the ring the following day with pliers and later with oil, which resulted in minor abrasions on the dorsal shaft skin.

He was afebrile, and denied dysuria or difficulty passing urine. On examination, a thick metal ring was noted at the base of his penis and scrotum, with moderate distal oedema (Fig. 1A). Initial attempts to remove the ring using lignocaine gel as lubrication failed due to the distal oedema. Attempts to break the ring using a ring cutter were unsuccessful due to the thickness of the ring, which was about 2 cm thick.

Our orthopaedic colleagues were consulted and they proposed using a combination of bone cutter, wire cutter and orthopaedic saw to break the ring. In the emergency department, the patient was given a penile and ilioinguinal

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Figure 1 The operation charts. (A) Patient at presentation. Note distal oedema. (B) Attempted removal using wire cutter. (C) Illustration of tongue depressor placement and hand-held saw used for removal. (D) Successful removal of ring.

block with lignocaine and bupivacaine, as well as midazolam and later ketamine sedation by the emergency physician. A metal tongue depressor was then placed between the ring and the patient's penis to protect the skin. Initial attempts to use bone cutter and wire cutter to cut the ring again failed due to the thickness of the ring (Fig. 1B). The decision was then made to use the hand-held orthopaedic saw to cut the ring (Fig. 1C).

The ring was successfully cut on one side but due to the thickness of the ring, we were unable to retract it sufficiently to remove it. The ring was finally removed after cutting it on the other side. There was no damage to the underlying skin. No iatrogenic damage to the phallus/scrotum was noted (Fig. 1D). The patient was monitored in the emergency department overnight and went home the next morning. He was seen again 1 week after in the outpatient clinic with no complain and the penoscrotal swelling had gone down.

3. Discussion

The motivation for intentional placement of penile constricting devices in the adult population has previously been reported and were due to attempts to achieve erotic or autoerotic goals [1]. This was the case in our patient. In the literature, a few methods have been described for the removal of constricting metal devices, taking into account the severity of penile injury and the availability of tools. With metal rings that cannot be removed with conventional ring cutters, circular saw attachment (which is usually used for total joint arthroplasty), Gigli saw, pedal cutter [2] and power-driven cutting tools including dremmel saws [3], and orthopaedic oscillating saws [4] have been employed previously.

In our case, after discussion with our orthopaedic colleagues, it was decided that a hand-held orthopaedic saw was the safest option for our patient, especially in view of the oedema in his scrotum and penis. Adequate anaesthesia is the key before proceeding with the removal. An option is to remove the ring under general anaesthesia [2]. However

in our case, we were successful using a combination of regional block and moderate sedation, thus avoiding the risks of general anaesthesia. Using a hand-held saw is more time consuming than using power-driven tools, but it also gives more control to the surgeon in order to avoid any iatrogenic injury to the genitalia. Of course, there is report of utilization of the "pseudo-pulley" method to remove the constriction device that does not rely on specialized equipment and industrial drills [5]. The effectiveness of removing thick ring with severe distal penoscrotaledeema remains unclear.

However, penile strangulation was first reported in 1755. It is an uncommon clinical condition and can lead to different degrees of vascular obstruction, ranging from mild vascular obstruction that resolves after decompression to severe gangrene of the penis accompanied with impaired renal function [6]. Patients who present with incarceration after 72 h are more likely to sustain higher-grade injuries. Prompt diagnosis and early treatment are essential. Hence in our case, we had to be resourceful and expediently removed the constricting ring to avoid potential complications of ischaemic necrosis and auto-amputation. However, if the penis were to be gangrenous, or necrotic, or when other modalities have failed, de-gloving, or amputation of the penis may be indicated depending on the extent of devitalized tissue [4].

4. Conclusion

This case highlights the successful use of a hand-held orthopaedic saw to remove a metal penoscrotal constriction ring in a 49-year-old male 2 days after placement. Penile incarceration is an emergency with potentially severe clinical consequences. Treatment often requires resourcefulness and a multidisciplinary approach.

Conflict of interests

The authors declare no conflict of interests.

References

- [1] Silberstein J, Grabowski J, Lakin C, Goldstein I. Penile constriction devices: case report, review of the literature, and recommendations for extrication. *J Sex Med* 2008;5: 1747–57.
- [2] Sathesh-Kumar T, Hanna-Jumma S, De Zoysa N, Saleemi A. Genitalia strangulation—fireman to the rescue! *Ann R Coll Surg Engl* 2009;91:W15–6.
- [3] Brock S, Kuhn W. Removal of constricting bands using the Dremel drill. *Acad Emerg Med* 1999;6:1182–3.
- [4] Suttle TK, Palmer B, Heinlen JE, Roth CC, Reiner WG, Frimberger D. Successful removal of a penile constriction ring in a 14-year-old male. *Adv Urol* 2009;916507. <http://dx.doi.org/10.1155/2009/916507>.
- [5] Katz DJ, Chin W, Appu S, Harper M, Vukasin F, Tay YK, et al. Novel extraction technique to remove a penile constriction device. *J Sex Med* 2012;9:937–40.
- [6] Ivanovski O, Stankov O, Kuzmanoski M, Saidi S, Banev S, Filipovski V, et al. Penile strangulation: two case reports and review of the literature. *J Sex Med* 2007;4:1775–80.