



## Penile Rings: No Innovation without Evaluation

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Doi: 10.12890/2019\_001292 - European Journal of Case Reports in Internal Medicine - © EFIM 2019

Received: 23/09/2019

Accepted: 03/10/2019

Published: 18/12/2019

**How to cite this article:** Monib S, Amr B. Penile rings: no innovation without evaluation. *EJCRIM* 2019;7: doi:10.12890/2019\_001292.

**Conflicts of Interests:** The Authors declare that there are no competing interest

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### ABSTRACT

Penile strangulation is a rare clinical entity which if left untreated can cause serious urogenital problems. We present the case of 45-year-old male patient who presented with penile strangulation after applying a metallic ring. Strangulation of the external male genitalia is a serious problem that requires urgent intervention in order to avoid serious complications. If left untreated, it can result in gangrene and penile amputation. Management of penile strangulation is a real challenge for the treating surgeon and should be treated as an emergency in order to avoid vascular compromise.

### LEARNING POINTS

- Penile strangulation by metallic rings is not routinely encountered in daily emergency practice and can be a challenge for the treating surgeon.
- Problem awareness is a crucial part of the management of such a rare entity.
- Every attempt should be made as early as possible to preserve penile arterial supply.

### KEYWORDS

Penile rings, penile strangulation, sexual activity

### INTRODUCTION

The use of a wide range of metallic and non-metallic objects to enhance sexual satisfaction has been reported in the literature. Although rarely encountered in emergency surgical practice, incorrect application of such devices on or within the genital organs can have serious consequences, leading to wide variety of complications ranging from superficial skin abrasion to gangrene. All ages can be affected including newborns and children where these instruments are applied accidentally for fun or for child sexual abuse. Emergency intervention is required in order to prevent serious consequences.

### CASE PRESENTATION

We present the case of a 45-year-old man who presented to the emergency department 24 hours after intentionally placing a metallic key ring around his penis for sexual stimulation while having sexual intercourse with his partner. He had applied ice packs together with lubricant jelly in order to remove it but without success. The pain associated with progressive swelling of his penis led him to present to the emergency department.

General examination was unremarkable. Local examination of his external genitalia revealed a grossly oedematous and deformed penile shaft (*Fig. 1*). A metallic key ring was found placed around the root of the penis. Scrotal examination was normal with normally placed testicles and preserved sensations. Baseline investigations in the emergency department including a full blood count, liver function tests, urea and electrolytes and a urine dip test were all normal. As the patient presented 24 hours after the onset of the problem, manual removal of the ring was not attempted but it was successfully removed with a metal cutter (*Fig. 2*).



Figure 1. A grossly oedematous penile shaft after removal of the key ring

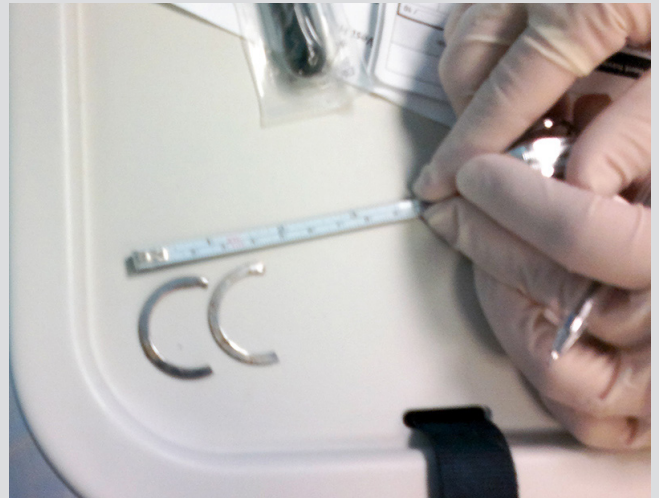


Figure 2. The removed metal key ring

Examination of the underlying penile skin revealed a superficial skin laceration and ecchymosis with penile oedema but no signs of skin necrosis or gangrene. An urgent urological consultation was arranged, which confirmed intact penile vascular structures. The patient was discharged home on a 5-day course of antibiotics and analgesics. He was seen later by the urology consultant in the outpatient department and discharged with no further treatment.

## DISCUSSION

Penile strangulation following the application of constricting devices is a rare but serious problem. A few cases have been reported in the literature<sup>[1-3]</sup> since the first case was reported in the 18th century<sup>[4]</sup>. Devices are usually applied intentionally to achieve sexual satisfaction by maintaining erection and increasing sexual sensation and orgasm, although they can also be used for the sexual abuse of children<sup>[1]</sup>. The use of different devices has been described in the literature including plastic and metal steel rings. Wedding rings, rubber bands, thread and bottles have been also reported<sup>[3, 5, 6]</sup>.

The application of such constricting devices while the penis is flaccid could result in oedema and engorgement secondary to venous and lymphatic drainage obstruction during full erection<sup>[7, 8]</sup>. At this stage, the damage is minor if urgent treatment is successful. Minor local complications range from superficial skin abrasion to skin necrosis which requires skin grafting<sup>[6]</sup>. If left untreated, more significant damage to the penile vascular structure results in prolonged vascular ischaemia and penile gangrene that may necessitate urgent life-saving penile amputation<sup>[6]</sup>. Urgent intervention to remove the constricting device is crucial in order to re-establish penile blood flow, which should be confirmed by duplex examination before the patient is discharged.

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