

A Rare Urologic Emergency of Penile Strangulation with a Metallic Ring

Metalik Halkanın Neden Olduğu Penil Strangülasyona Bağlı Nadir Bir Ürolojik Acil

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Abstract

A 31-year-old man was presented to our emergency room in a distressed state with a heavy metallic ring 4 cm wide and 0.6 cm thick placed at the root of the penis for attempting masturbation. The ring was placed approximately 6 hours previously and the patient had tried several maneuvers using different tools to remove it. The patient suffered proximal penile strangulation with painful priapism. Under general anesthesia, multiple punctures to the glans penis and circumcision scar were made in order to aspirate entrapped blood and edema. After minimal regression of distal penile edema, we tried to cut the ring with metal cutters that orthopedicians use, but it was not successful. With a quite amount of lubricant, surgery string to keep the distal penis compressed, and the application of steady force to the ring, we were able to remove the metallic ring. The operation time was 2 hours without any complications. At 36 hours after the operation, the penis looked quite normal and the patient was discharged after 48 hours. The urethral catheter was removed at the first week after the operation. At the end of 12 months, there were no findings of urethral stricture and erectile dysfunction.

Keywords: Emergency, metallic ring, penile strangulation

Öz

Otuz bir yaşında erkek acil servise penis proksimalinde 4 cm uzunluk 0,6 cm kalınlıkta metal halkaya bağlı peniste şişme ile başvurdu. Metal halka 6 saat önce masturbasyon amacıyla hasta tarafından yerleştirilmiş olup değişik aletlerle denemesine rağmen gelişen şişliğe bağlı çıkarılamamış. Hastanın fizik muayenesinde metal halkaya bağlı ciddi düzeyde penis distalinde şişmeye sekonder ağrılı priapizm mevcuttu. Bu bulgularla hastaya genel anestezi altında glans penis ve sünnet insizyon hattına çok kez iğne ile delikler açıldı. Manüel kompresyon ile beraber şişlik ve ödemin dereceli olarak azaldığı gözlenince halkayı kaydırarak çıkarmaya karar verdik. Cerrahi monofilament bir iplik ile halkanın distaline helikal biçimde kompresyon uygulandı; halka altına kayganlaştırıcı jel sıkılması sonrası sürekli bir güç ile halka distale doğru çekildi ve metal halka bu sayede çıkarıldı. Operasyon sonrası 1. haftada hastanın Foley'i çekildi. Operasyon sonrası 1. yılda üretra darlığı veya erektil disfonksiyona ait bir bulgu saptanmadı.

Anahtar Kelimeler: Acil, metalik halka, penil strangülasyon

Introduction

Penile strangulation by an encircling metallic object is an emergency in urologic practice. Enforcement of foreign metallic or nonmetallic objects around the penis is used by adults as sexual gratification and is also seen in children as a childish play (1). In children, these objects are usually nonmetallic, while in adults metallic objects are used for having longer sexual intercourse (1,2).

In this report we present our experience in managing penile strangulation by a hard metallic ring.

Case Presentation

A 31-year-old man presented to our emergency room in a distressed state with a heavy metal ring 4 cm wide and 0.6 cm thick around the base of the penis. The ring was placed approximately 6 hours previously and the patient had tried

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several maneuvers with different tools to remove it in this time period. He had applied this encircling automotive industry ring around his penis for the first time in order to masturbate and he had no urinary complaints at the time of admission. Upon physical examination, the ring was noticed around the base of his penis and he had proximal penile strangulation with painful priapism (Figure 1).

We did ureteral catheterization to prevent any possible intraoperative urethral damage. Under general anesthesia, multiple punctures to the glans penis and circumcision scar were made in order to aspirate entrapped blood. After minimal regression of distal penile edema, we tried to cut the ring with metal cutters that orthopedicians use, but it was not successful. With further manual decompression of the glans penis, edema was gradually decreased, and we decided to pull out the ring over the glans penis (Figure 2). With a quite amount of lubricant, surgery string to keep the distal penis compressed,



Figure 1. Metal ring around the penile base



Figure 2. After reduction of edema and pulling out the ring during operation

and the application of steady force to the ring, we were able to remove the metal ring.

At 36 hours after the operation, the penis looked quite normal and the patient was discharged after 48 hours. The urethral catheter was removed at the first week after the operation. In the first month after the procedure, the patient did not report any voiding difficulties or erectile dysfunction. The patient was informed about the possible urethral stricture and the need for follow-up visits. At the end of 12 months, there were no findings of urethral stricture (Figure 3).

Discussion

Foreign bodies around the penis causing strangulation present as a urologic emergency. Many different foreign bodies and therapeutic options have been reported (3,4). Donate Moreno et al. (5) reported a case of a steel ring at the medial part of the penis that was placed for 16 hours, causing necrosis involving a small area and hypoesthesia of the glans penis. Our patient had no complaint of hypoesthesia, but he had serious penile pain and edema. Donate Moreno et al. (5) were able to cut the steel with a strong cutting tool. We also tried to cut the metal ring with metal cutters that are used by orthopedicians, but we did not succeed because we could not get enough space to apply cutters' jaws along the ring. With these cutter tools, the surgeon must be very careful as there is a great risk of damage to the penile skin and vessels.

Joshi et al. (3) recommended applying lubricant underneath the ring and distal penile skin to make slippery after reducing the venous priapism, and then applying steady persistent forward force to dislodge the ring off the penis. Talib et al. (6) reported that they performed penile aspiration with 4 needles which were introduced from the glans penis. Then they also performed



Figure 3. Removed metallic ring, string compressing distal penile edema

multiple needle pricks to the skin to relieve skin edema and using the lubricants they were able to remove the ring. However, in our case, this was impossible at the beginning because there was a prominent amount of subcutaneous penile edema. So we used surgical string to compress the distal penis to make it elongated and narrow as Browning and Reed (7) described.

Some authors reported degloving of the distal penis to the level of cavernous tissue before foreign body could be removed (4,8). Wasadikar (4) reported a patient who had the ring for a month. Penile degloving and subsequent skin grafting from the medial side of the right thigh was applied in this case and the result was excellent according to the author. In our case, there was no need to deglove the distal penis.

Santucci et al. (9) reported removal of a metal iron and steel items incarcerating the penis with a heavy-duty air-driven grinder provided by the fire department. They also recommended cooling the metal item with ice to prevent tissue heating, protecting the patient from sparks, and protecting the penis from the cutting blade (9). Kyei et al. (10) reported a case in which they used an electrical circular grinder to cut a ring around the penis. Unfortunately, their cooling was non-effective, and thus this resulted in circumferential denudation of penile skin, a urethro-cutaneous fistula at the penoscrotal junction, and a mid-bulbar urethral stricture. The patient underwent later surgeries including urethroplasty. We had already called the hospital atelier for a motor cutting tool, and while they were getting the tools, we succeeded in removing the ring without non-medical aids. Sometimes, Santucci's and Kyei's approach may be an option to an unsuccessful medical procedure, but we must keep in mind the complications of unexpected thermal effects.

Joshi et al. (3) reported urethral stricture in two of three patients who were treated with end-to-end urethroplasty procedures at a later period following emergency procedures. Patients must be informed about the risk of ischaemic urethral stricture at a later date and follow-up visits must be scheduled.

Penile strangulation by a metallic ring is an unusual urologic emergency and unusual therapeutic approaches and tools may be needed to remove such an object.

Ethics

Informed Consent: It was taken.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: Hasan Hüseyin Tavukçu, İbrahim Halil Bozkurt, Concept: Hasan Hüseyin Tavukçu, Design: Hasan Hüseyin Tavukçu, Data Collection or Processing: Hasan Hüseyin Tavukçu, Analysis or Interpretation: İbrahim Halil Bozkurt, Literature Search: İlker Tinay, Writing: Hasan Hüseyin Tavukçu, Cem Akbal.

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