Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Urology

Strangulation of the Penis by Metal Ring on a Right Inguino-Scrotal Hernia: About a Case at Sikasso Hospital

Dr. Ousmane Dembélé[1*], Traoré S[1], Ballo B[2], Traore O[1], Sanogo A[3], Dembélé A[3], Dembélé A[5], Touré N[5], Ouattara K S[1], Coulibaly S[1], Berthé O[1], Kassongué O[4], Mariko M[4,] Deh A[6], Kamissoko B[6]

[1]Urology Department, Sikasso Hospital, Mali
[2]Urology Department of Koutiala District Health, Mali
[3]Radiology Department
[4]Analysis Laboratory
[5]Ophthalmology Department, Sikasso Hospital, Mali
[6]Resuscitation Anesthesia Service

DOI: 10.36347/sjmcr.2023.v11i04.030 | **Received:** 07.03.2023 | **Accepted:** 11.04.2023 | **Published:** 17.04.2023

***Corresponding author:** Dr. Ousmane Dembélé
Urology Department, Sikasso Hospital, Mali

Abstract **Case Report**

Strangulation of the penis by a metal ring is a rare situation in urology. It requires emergency care because it can jeopardize the functional prognosis of the penis. We report the case of strangulation of the penis by a metal steel ring associated with a right inguino-scrotal hernia from which we will present the non-surgical management of this urological emergency.

Keywords: Penis, metal ring, strangulation, urological emergency.

I. INTRODUCTION

Strangulation of the penis by a metallic object or not is a rare trauma requiring urgent treatment because it affects the functional prognosis [1, 2]. Since 1755, several cases have been reported throughout the world. The largest series dates from 1948, published by Dakin in the United States [3]. The age of the patients varies between 15 and 56 years. The objects used most often are wedding rings, steel nuts or cogs, plastic bottles, the purpose of which is to maintain a prolonged erection in order to improve sexual performance or sometimes as a result of psychiatric disorders [4-8]. The extraction of these objects represents a great stress for the patient and a real challenge for the practitioner [9]. Non-metallic objects are generally easy to extract, however those made of steel require the use of special cutting equipment (hand or electric saw, metal pliers, compressed air pliers) which are often not available in the service emergencies [10]. Decompression surgery may be indicated if the above attempts fail. We report the case of strangulation of the penis by a metal steel ring associated with an inguino-scrotal hernia that did not require a surgical approach.

II. COMMENT

Mr. M.T., 65 years old, tailor, divorced with poorly followed hypertension history consults the emergency department for strangulation of the penis by a metal ring for 24 hours for the purpose of self-mutilation. During the interview, the patient expresses a feeling of guilt following an involuntary erection followed by ejaculation that he would have had in front of clients in his sewing workshop, thus motivating his act of voluntary self-harm. The physical examination found a steel metal ring at the level of the distal third of the penis associated with right inguino-scrotal swelling. The proximal part of the penis was flexible; lymphedema downstream of the ring, elsewhere there was no urethrocutaneous lesion or AUR (figure 1). The ablation of this ring was made under local anesthesia with xylocaine (penile block). The gesture consisted of a double section of the ring on a Kelly forceps placed between the penis and the metal using an electric grinding wheel under continuous irrigation with 0.9% Salt as a means of cooling associated with a sounding. trans-urethral and manual reduction of the hernia (figure 2). After removal of the ring, the two corpora cavernosa had no lesion, and revascularization of the glans (figures 3 and 4). The patient benefited from local care of the penis, the follow-up was simple and the follow-up at 1 month, 3 months then at 6 months is unremarkable. We were unable to carry out the penile echo-Doppler due to lack of financial means. The patient was referred to the psychiatry department after

48 hours of hospitalization for screening for any disorder then to the general surgery department for the cure of his right inguino-scrotal hernia.

Figure 1: Strangulation of the penis by a metal ring at the level of the distal third of the penis

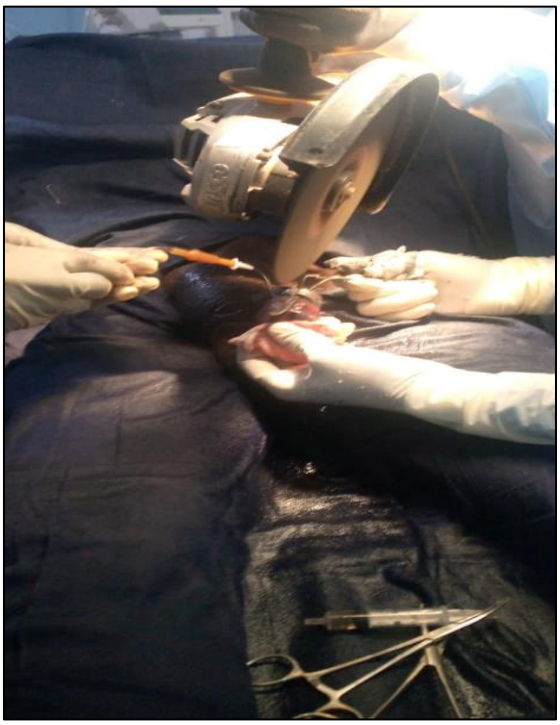

Figure 2: Removal of the metal ring using an electric grinder

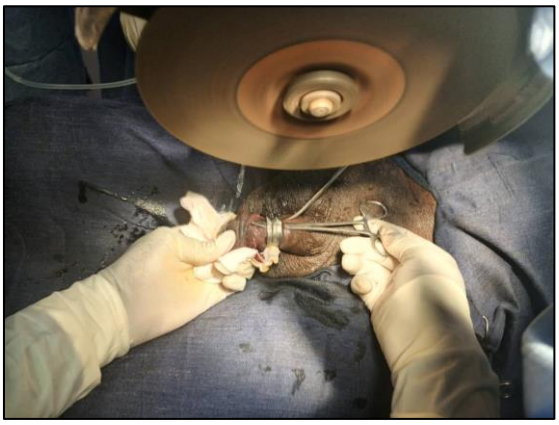

Figure 3: Section of the annulus using an electric grinder on a Kelly forceps

Figure 4: Recoloration of the glans after removal of the metal ring

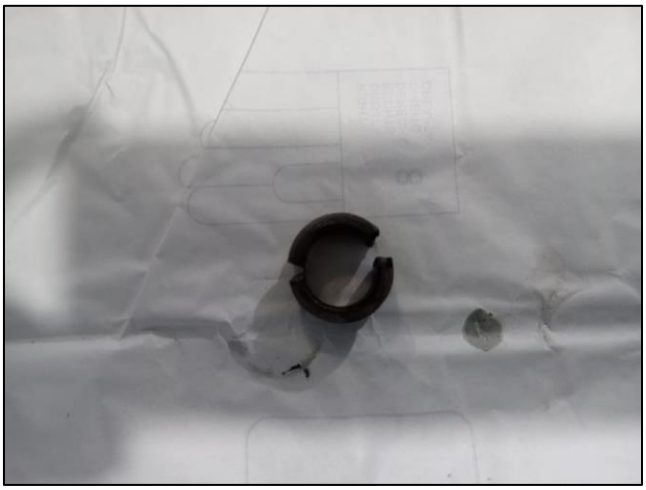

Figure 5: Removal after double section of the metal ring

III. DISCUSSION

The strangulation of the penis by a metallic ring or not is a rare and serious pathology. It is most often part of self-mutilation (psychiatric disorders with self-harm) or it can be a simple accident when the ring is used to improve erectile function or as a method of auto-erotism [10, 11]. Strangulation of the penis requires emergency treatment, the aim of which is to ensure decompression in order to allow good vascularization of the tissues. Several complications can occur in the absence of decompression, depending on the duration and severity of the compression. These are urinary retention, urethral fistulas, priapism, ulceration and skin necrosis that can progress to gangrene or even amputation of the penis, none of which was found in our patient [11, 12]. The extraction of the rings most

often represents a great stress for the patients and a challenge for the practitioner. Non-metallic objects are generally easy to extract, on the other hand those made of steel, as was the case in our observation, require the use of special cutting equipment (hand or electric saw, metal pliers, compressed air pliers) which are often not available in the emergency department, we had recourse to a metal carpenter with his electric grinding wheel [9]. Decompression surgery can be performed if the attempts described above fail [12]. Several therapeutic varieties have been proposed for the management of penile strangulation by metallic objects, but the choice remains difficult given the unusual nature of this accident. The main therapeutic techniques are grouped into 5 categories according to Detweiler [13]. These are the thread method, aspiration, ring cutting, decompression surgery and amputation and reimplantation of the penis under microsurgery. The choice of therapeutic technique can be guided by the grade of the lesions according to Bhat *et al.*, [14] (classification of trauma by strangulation of the penis): Grade I: isolated distal oedema; Grade II: urethral and skin trauma, corpus spongiosum compression, distal hypoesthesia; Grade III: urethral and skin trauma with loss of distal sensation; Grade IV: rupture of the corpus spongiosum and/or urethral fistula, compression of the cavernous body, distal anesthesia; Grade V: gangrene, necrosis or distal amputation of the penis. In our patient it was Bhat Grade I. After decompression, psychiatric treatment is necessary because voluntary strangulation of the penis by a metal ring is not pathognomonic for any particular condition. It can occur in a psychotic patient who will require systematic psychiatric care [11, 12]. Voluntary strangulation of the penis can occur in the context of schizophrenia, melancholic depression, alcoholism and in certain sexual perversions that we could not find in our patient.

IV. CONCLUSION

The strangulation of the penis by metal ring or not is easily diagnosed. Psychologically and sexually affected patients are the preferred field. Urgent removal of the band is the first therapeutic step. This management depends above all on the reasoning and common sense of the urologist and the means at his disposal.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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