Genital strangulation caused by metal ring successfully removed using electric saw

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ABSTRACT

The genital strangulation is uncommon urological emergency, due to self placement of encircling constricting peno-scrotal objects. It represents a great challenge to remove the constricting device. Herein, we present a case of peno-scrotal strangulation in a young drug addict man, that we saved by quickly removing the constricting device using a rotating electric saw.

Introduction

The genital strangulation is an impressive phenomenon, rare but not new. More than 80 cases have been reported in the literature with different terms: strangulation, constriction, entrapment. It is a real urological emergency because it can cause serious consequences on the external genital organs.

Different metallic and non metallic encircling objects used, cause genital strangulation. This causes swelling of the penis distal to the object due to the initial obstruction of the venous return and arterial supply. After several hours, strangulation can lead to ischemic necrosis and gangrene of the tissues. It represents a big challenge to remove quickly the constricting device.

Here, we report a case of peno-scrotal strangulation due to metallic constricting ring that we had successfully removed using rotating electric saw.

Case report

This is a healthy young man, 36 years old, who has been transferred to the surgical emergency unit for genital organs pain related to a metal ring that he placed around the penis and the scrotum, for 12 hours before his arrival, in order to prolong the erection during self stimulation. This patient has a history of a drugs addiction and there was no medical follow-up.

On clinical examination, the patient was fully conscious, oriented in time and space, he did not have a fever, and his hemodynamic state was normal.

However, his external genital organs were severely edematous, bluish, cold and very painful. The penis was in hard erection. He didn’t want to urinate. The device was a golden metallic ring, 40 mm in diameter and 10 mm thick (A).

After placement of a peripheral venous catheter and under nitrous oxide mask analgesia in the emergency room, we proceeded to the ablation of the constructive ring. We initially tried the bolt cutter brought back from the maintenance department, but it was not suitable view of the directory form of the device and its great thickness. then, we decided to use a rotating electric saw (B) to cut the ring while protecting the underlying skin from a possible iatrogenic wound by putting a metal blade between the Skin and the ring, and continuous irrigation with cold water to also prevent possible burns from the engine heat.

1 The ring was cut successfully on two sides (C), and was finally removed without significant damage on the skin, then we warmed up the genital organs with tepid saline solution. The penis in detumescence, gradually regained flexibility with the scrotum and a pink coloration of viability (D). A testicular ultrasound performed, was without particularity.

The patient remained under surveillance in the urology department for 12 h, he urinated without difficulty and an addictive care was considered.

Discussion

The genital strangulation was reported for the first time by Gautier M

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in 1755. It is a rare clinical entity which is caused by the patient himself who suffers from a psychological imbalance and who engages in self-mutilation practices or in a context of self-eroticism and the desire to improve sexual performance through a hard and prolonged erection.

According to literature, the most commonly reported objects used by men, are metal ring. this device obstruct venous blood flow and lymphatic channels, resulting in penile congestion with enhanced penile erection, but, over the hours, serious damage appears and which depends on the duration of the genital constriction.

The treatment of genital strangulation is decompression of the constricted penis to facilitate free blood flow and micturation. This decompression must be rapid as soon as the patient arrives at the hospital, in order to recover the genital organs function as much as possible and prevent major complications such as urethral fistula, gangrene necrosis and amputation.

Numerous techniques have been described in the literature; however there exists no universal technique given the varied nature of the constricting devices and individual presentations.

Different tools were used to remove the constructive device. Some authors have used mechanical tools such as the bolt cutter, others have used Motorized tools powered by electricity or compressed air. In these methods, protection of the underlying skin, against cutting edges using metal tongue, is necessary, this must be continuously cooled by water against heat of the motorized tool.

It happens in some cases described in the literature, that the installation of the protective metal is impossible, because of the edema and the significant swelling of the penis and the scrotum.

The penile aspiration technique using needles solves this problem which leads to the detumescence of the penis gradually and leaves space to put the metal tongue. In our case, we did not perform this technique because we were able to insert a protective metallic blade between the device and the skin.

**Conclusion**

Genital decompression should be as quick as possible to try to recover the external genital organs. The electric saw is very useful, particularly for devices with large thickness, but it is absolutely necessary to take precautions so as not to damage the underlying tissues.

**Declaration of competing interest**

There is no conflict of interest.
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