

Penile fracture with urethral trauma

Fratura de pênis com trauma uretra

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INTRODUCTION

Lesions of the external genitalia are common. Loss of skin segments, penile fracture or testicular trauma, and even amputations, are examples of external genitalia trauma. As for the etiology they are divided into penetrating (45%), blunt (45%) and burns and industrial accidents (10 %) ¹.

The penile fracture (PF) is defined as penile trauma with closed rupture of the tunica albuginea, the fibrous tissue layer that surrounds the corpora cavernosa, located just below the fascia of Buck, one of the major penile sheaths. This rupture is consequent to increased pressure under the albuginea and its consequent tearing, usually during sexual activity, when its thickness is reduced up to 75%, making it more fragile. The injury occurs in most cases at the base of the penis and allows the output, under great pressure, of the blood volume accumulated in the erect penis. There is immediate loss of erection state, with large hematoma and deformation. There may be microscopic hematuria or even urethral bleeding if the rupture has reached the spongy body that surrounds the urethra, which can occur in 10 to 20% of cases ^{2,3}.

The diagnosis of penile fracture is mainly clinical. A history of sexual activity with a partner in a position of activity, error in penetration during sexual dynamics, followed by a "snap", pain and immediate loss of erection with hematoma location, make the diagnosis easier. Imaging methods are used to accurately locate the point of injury. The main differential diagnosis is with the injury of the dorsal vein of the penis and the recommended treatment is the surgical approach in the first 48 hours, associated with administration of anti-inflammatory agents and local cooling. This approach allows a faster return to sexual activity and without the feared penile curvature, more frequent in patients not submitted to surgery ².

CASE REPORT

S.C.G., male, 29-years-old, married, welder, born and raised in João Pessoa, was admitted to the Emergency

and Trauma Hospital with complaints of pain and bruising in the penis, associated with urethral bleeding about one hour before. He informs that during intercourse on top of the partner he heard a "snap", followed by severe pain and immediate loss of erection, getting scared with the big hematoma that soon became visible in his penis. He sought medical help immediately.

Initial examination showed a massive penile hematoma and urethral bleeding.

He was subjected to penile ultrasound and retrograde urethrography. There was soft tissue swelling all along the penile body (edema and subcutaneous hematoma), rupture of the tunica albuginea (bilaterally) and of the penile urethra in its proximal third. Urethrography showed extravasation of iodinated contrast media on the proximal penile urethra.

He was sent to the Operating Room for correction of lesions. With the patient in supine position, we started with circumcision about 1.0 cm from the balanopreputial sulcus and penile degloving. We identified the rupture of the right and left cavernous bodies and of the penile urethra, approximately 10.0 cm from the external urethral meatus (Figure 1). We repaired of the corpus cavernosum with vicryl 2.0 running suture (Figure 2). We ended with the urethral catheterization with an 18F Foley catheter and the repair of the urethra with 2.0 vicryl sutures (Figure 2) and preputial plastic with chrome - Catgut 4.0.

DISCUSSION

The penile fracture is not rare, although uncommon in emergency services. More than a thousand cases are reported in the literature between 1935 and 2001 ⁴. Probably the number of unreported cases is higher and factors such as shame, embarrassment or compromising situations and lack of guidance contribute to this situation. In this case, although the patient was married and the event occurred with his mistress, there was no interference of these factors in the time of search for health care.

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Figure 1 - Identification of the complete urethral section at the proximal penis.



Figure 2 - Final aspect of the repair of the albuginea of the right corpus cavernosum and proximal penile urethra.

The accident can occur during masturbation or “rolling on the bed,” when the patient in the REM (rapid eye movement) phase of sleep has a penile erection and rolls over on the penis, causing trauma^{2,4}. However, most cases occur during sexual intercourse, with the erect penis that suffers thinning of its tunica albuginea. The partner is usually positioned on top the patient, causing more physical force on the base of the penis, or when the during the

movement of repeated sexual penetration the penis comes out of the vagina and on its return it does not enter the vaginal orifice^{2,3}. The case described fits perfectly the described etiopathogenic profile, since it comes from a patient with penile fracture occurring during sex and with an erect penis.

The injury is perceived as a snap, followed by pain and rapid detumescence and scary penile hematoma. In the associated urethral injury, blood is present in the external urethral meatus and there is difficulty in urinating. The presence of hematuria or urethral bleeding suggests greater severity of the injury, trauma on the spongy body and consequent urethral injury. This injury may progress to urethral stricture or Fournier syndrome due infiltration of infected urine^{2,4}. In our case, the rich presentation, with all those symptoms and signs, was decisive for appropriate diagnostic measures.

Complementary diagnostic tests and imaging may be required to more accurately assess the extent and location of the lesion or lesions. Abdominal ultrasonography (US) can demonstrate the discontinuity of the tunica albuginea and retrograde urethrography (RU) confirms the presence or absence of associated urethral injury. Magnetic resonance imaging (MRI) is the more reliable preoperative diagnostic method, but it has high cost and restricted availability. The cavernosography has high rates of false-negative results. The infusion of saline into the corpus cavernosum during surgery allows the precise location of the leak and prompt treatment of the fracture. We use the US and RU due to the easy availability in our service and the speed of results.

The optimal treatment of penile fracture remains controversial. Until the middle of this century, the use of ice, analgesics and antibiotics was advocated. Approximately 10 % of patients treated in this way evolved with significant penile curvature³. The most recent studies advocate surgical exploration as soon as possible, preferably within 24 hours^{2,4}. The cases associated with urethral injury are more serious and require immediate surgical correction by re-anastomosis or suture with absorbable stitches³. In this case the immediate exploration with appropriate repair of the cavernous lesions and urethral suture with separate-stitches absorbable suture provided a perfect healing without urinary and sexual sequelae at one-year follow-up. The prognosis is generally good in these cases, and in 10% of cases penile permanent deformations, incomplete erections or difficulty in coitus may occur⁵.

A B S T R A C T

We reported a case of a twenty-nine-year-old male who presented a penile fracture associated with urethral injury caused by a sexual intercourse. An ideal anamnesis and a special physical examination were determinant to correct diagnostics. Ultrasonography and urethrocytography must be performed for confirmation. The treatment is based on the presence of associated urethral injury. The surgical repair of cavernous body and urethra can produce good results, with a favorable prognosis and minimal rate of complications.

Key words: Wounds and injuries. Genitalia, male. Penis. Urethra. Emergency treatment.

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