

## Open pelvic trauma revealing urological disaster in a young patient

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### Abstract

open pelvic trauma is rare, prognosis depends on associated lesions and initial management. management is multidisciplinary. urological lesions are very rarely associated, but their management can prevent very serious complications. we report the case of a young patient who suffered an open pelvic trauma resulting in a urological disaster.

**Keywords:** Trauma; Pelvis; Ureter; Corpus Cavernosum

### 1. Introduction

Open trauma to the perineum is a serious, life-threatening condition,

It is a urological emergency requiring immediate intensive care and surgical treatment.

Most often caused by road accidents and industrial accidents (1).

Lesions in this region are anatomically very complex, involving several structures - pelvic, anorectal and urogenital - requiring the intervention of a multidisciplinary team.

Their potential complications can compromise the continence and sex life of often young patients.

We report a case of open pelvic trauma resulting in urological disaster, including complete sectioning of the urethra and complete sectioning of the right corpus cavernosum in a young patient.

### 2. Clinical case

This is a 21-year-old patient with no notable pathological history.

who consulted for an open pelvic trauma following a 2-meter fall with perineal landing

#### 2.1. On admission

The Patient was conscious, tachycardic at 110, blood pressure 8/5, agitated

Presence of a transfixing wound extending from the right perianal region to the inguinal region

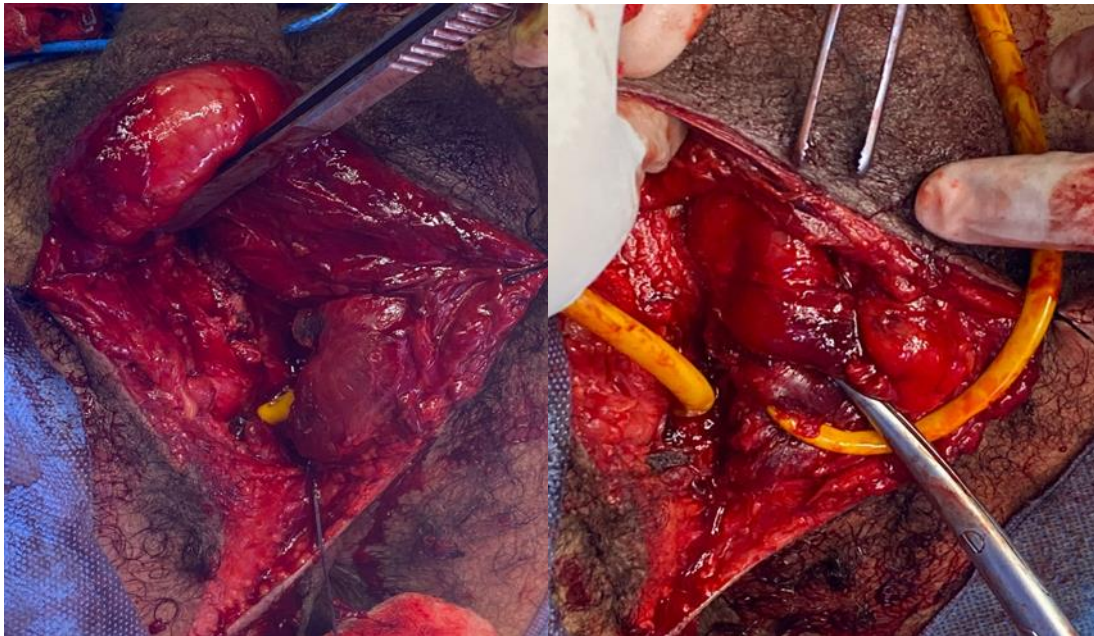
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The patient was then admitted, where 2 peripheral venous lines were taken, vascular filling and noradrenaline infusion were performed, with temporary hemostasis using a compression bandage.

An emergency abdomino-pelvic angioscan revealed no extravasation of PDCI and no post-traumatic abnormalities at the abdominal level, in particular no rectal or bladder involvement.

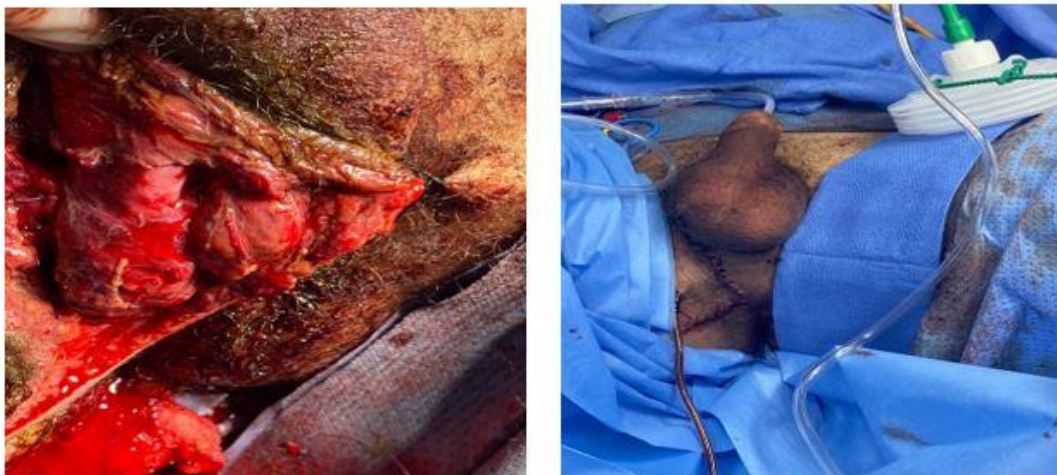
The patient was admitted to the OR in the gynecological position.

Exploration revealed a very deep wound extending from the right perianal region to the left iliac region, flush with the pubis, with complete sectioning of the right corpora cavernosa and urethra . (Figure 1 )



**Figure 1** Complete section of urethra and right corpora cavernosa

The procedure consisted of a terminal uretroraphy with suture of the corpora cavernosa and placement of a ch 18 bladder catheter with transfusion of 3 CG during the procedure. (Figure 2)



**Figure 2** Terminal uretroraphy with suture of the corpora cavernosa and placement of bladder catheter

Postoperative follow-up was simple, and the patient was transferred from the intensive care unit to the urology department on D+2.

The patient was put on antibiotics, analgesics, and an antiandrogen for 3 weeks with bladder catheterization using a folley ch 18 bladder catheter.

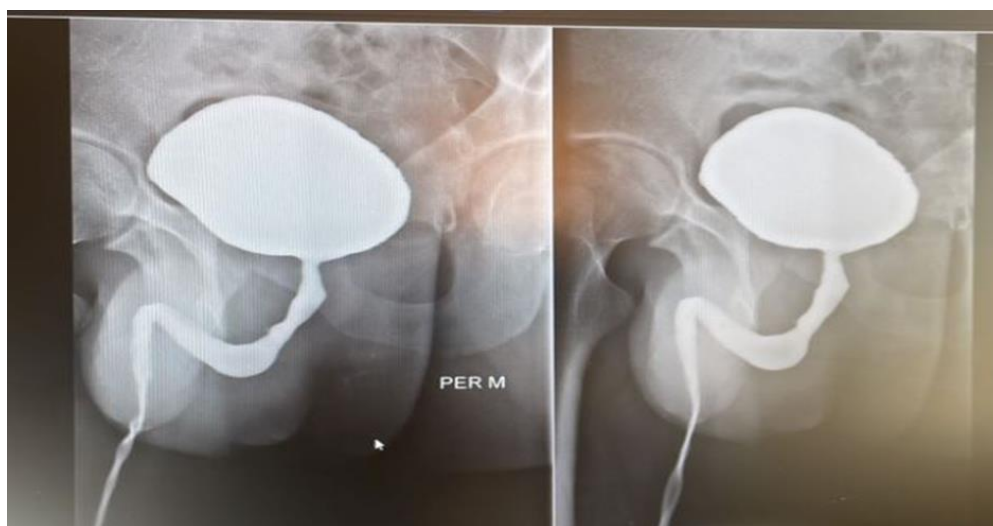
## 2.2. At 1 month post-op,

The wound healed completely, and the bladder catheter was removed after a urethrographic check showed no extravasation.

Concerning micturition: the patient presented a good urine flow with zero post-micturition residue and very satisfactory debimetry.

Concerning erectile function: the patient presented a severe erectile dysfunction with an IIEF5 score of 8, at 3 months his erectile function returned to normal with an IIEF5 score of 21 after being put on vitaminotherapy and IPDE5.

A retrograde urethrocytogram 2 months after the trauma revealed good opacification of the various segments of the urethra with no image of stenosis, and homogeneous opacification of the bladder with no reflux or post-micturition residue. (figure3)



**Figure 3** Retrograde urethrocytogram : no image of stenosis

## 3. Discussion

in general, trauma is the main cause of death among people aged 1 to 44. (2)

Open pelvic trauma represents a challenge for surgeons, given the absence of a standardized management protocol, The mortality rate is very high if the management is not optimal, which requires multidisciplinary management in specialized centers, Early recognition of hypovolemic shock and massive blood transfusion in trauma cases has saved lives, particularly for patients whose hemodynamics status is not stable on admission. (3)

Imaging, in particular abdominal and pelvic CT scans, help to better characterize the associated lesions.

In our case, the damage was urological; miraculously, there were no bone fractures or visceral damage.

Penetrating trauma generally requires emergency surgical exploration to assess the urethral lesion and look for associated lesions with immediate surgical treatment

Depending on the lesion, two types of treatment can be applied.

A tension-free primary suture can be performed in a clean wound, a Foley-type bladder catheter, preferably silicone, 14 F or 16 F, is left in place for 10 to 15 days

if the wound is large, dirty, with contused or jagged edges, or with loss of urethral substance, suturing is not possible and should not be attempted. In such cases, aggressive urethral mobilization or extensive spongy tissue trimming should be avoided in favor of directed healing with a bladder catheter with secondary repair. (4)

The main risk is the formation of a stenosis, usually localized to the traumatized area. A urethrocutaneous fistula may result from penetrating trauma or an attempt at immediate surgical repair. Sexual Impotence has occasionally been reported, linked to periurethral nerve damage or psychological factors (5).

In all cases, subsequent checks at 6 months and 12 months, or even longer, will look for the formation of urethral stenosis (6)

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#### 4. Conclusion

Penetrating trauma generally requires emergency surgical exploration to assess the urethral lesion and look for associated lesions of the external genitalia and rectum.

A primary suture without tension can be performed on a partial and/or frank lesion in a wound with little soiling; a Foley catheter is left in place.

Every effort must be made to interpose different planes between the urethra and the skin. Antibiotic therapy is instituted. A urethrographic check is carried out. The catheter is definitively removed only when there is no more extravasation.

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#### Compliance with ethical standards

##### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

##### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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