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Trauma of the External Genital Organs in Men: About Eighteen Cases

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Abstract **Original Research Article**

The aim of the study was to study the clinical and therapeutic aspects of injuries secondary to trauma to the external genitalia. This was a prospective and descriptive study of 18 patients with trauma to the external genitalia admitted and operated on at the urology department of the Fousseyni DAOU hospital in Kayes from June 2015 to November 2020. The average age of the patients was 17 years with extremes of 10 and 62 years. 3 clinical forms have been studied (coital missteps, accidental trauma to the penis and trauma to the purses). Coital missteps affected 38.8% of patients (7 cases). The average age of the patients was 48 years with extremes of 29 years and 62 years. These were consensual, heterosexual relationships. The main reason for consultation was Cracking accompanied by pain and swelling of the penis. We had collected 9 cases of open bursa trauma, i.e. 50% of patients. The average age of the patients was 18 years with extremes of 10 and 28 years. The reasons for consultation were pain, open wound in the scrotum, bleeding. Associated lesions were urethral rupture in 3 cases, rupture of the vas deferens in 1 case, leg fracture in 1 case and loss of skin substance. Penile trauma after road accident was 2 cases (11.11%). They most often occur in the context of war or psychiatric illness. Repair of trauma to the external genitalia accounted for 0.63% of our surgical activities.

Keywords: External Genital Organs Eighteen.

INTRODUCTION

Trauma to the male external genitalia is uncommon and mainly affects a young population. These traumas are potentially serious due to the urinary or sexual complications they can cause, not to mention their psychological harm. The degree of severity of the lesions and the precocity of the management of these patients will condition the functional results. Surgical exploration of bursa trauma is the rule, except in cases of moderate trauma, for which ultrasound confirms the integrity of the testicle [1].

However, trauma to the penis must be surgically repaired urgently. The repair of trauma to the external genitalia had represented …% of our surgical activities.

Our work aimed to

Study the clinical and therapeutic aspects. Restore the anatomy and ensure the functional outcome of these patients.

METHODOLOGY

This is a prospective and descriptive study of 18 patients with trauma to the external genitalia admitted and operated on at the urology department of the Fousseyni DAOU hospital in Kayes from June 2015 to November 2020.

The average age of the patients was 17 years with extremes of 10 and 62 years. 3 clinical forms have been studied (coital missteps, penile trauma after a road accident and bursa trauma).

RESULTS

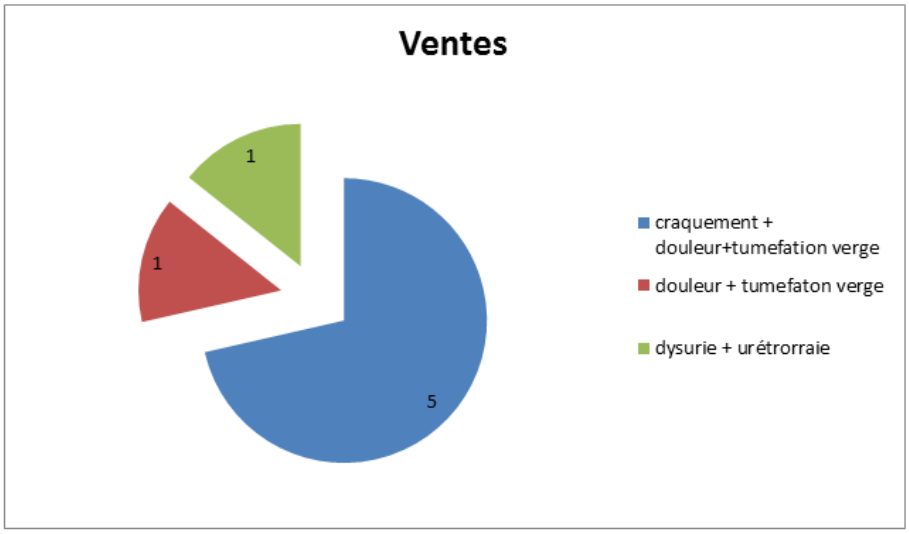
1 Cavernous body fracture

Penile fractures are defined as a rupture of the corpora cavernosa in erection and remain a rare urological emergency although probably underestimated but serious, involving sexual and more or less urinary functional prognosis. Diagnosis remains mainly clinical and early surgical treatment seems to impose itself as the "gold standard" therapy.

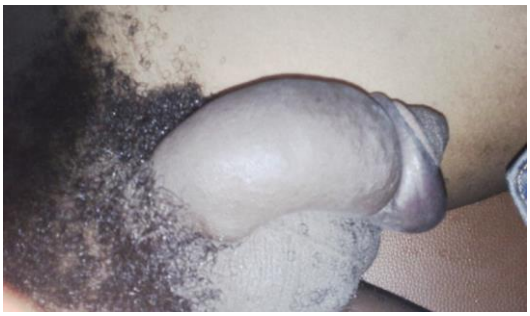
The etiology is always secondary to direct trauma to the erect penis. The main etiologies are dominated by the classic << misstep of coitus >> (slipping of the penis during a classically unforced vaginal intercourse, woman on top of the partner responsible for a perineal shock or other) and forced manipulations (masturbatory maneuver or concealment of an erection).

Missteps of coitus had affected 7 patients (38.8%) all married. In one case, the accident occurred in the context of an extramarital relationship. The average age of the patients was 48 years with extremes of 29 years and 62 years.

Circumstances of discovery: it was the famous misstep of coitus and the relationships were all consenting. The extramarital relationship had concerned one case. The consultation time varied from a few hours to 3 days after the onset of the accident. Diagram: distribution of patients according to reason for consultation



Cracking accompanied by pain and swelling of the penis was the main reason for consultation. The diagnosis of corpora cavernosa fracture is clinical. On clinical examination swelling and deviation contralateral to the lesion were present in 6 cases. In one case the hematoma was not obvious (corpus cavernosa fracture plus urethral rupture), and also the deviation contralateral to the lesion was less obvious.



Rupture of the dorsal side of the left corpus cavernosum at its proximal part.

One patient presented with urethrorrhagia accompanied by dysuria, which prompted the consultation. A doppler ultrasound of the penis was performed in the patient for elective localization of the fracture.

All our patients have been operated. The penis was approached in 6 patients with an elective longitudinal lateral incision and in one case a balanopreputial circumferential incision was made.

We carried out an evacuation of the hematoma, lavage with saline solution and closure of the fracture with 3/0 vicryl crimped in a separate point.

A ch18 urinary catheter was placed at the beginning of the operation except in the patient who presented with a partial urethral rupture.

Processing

There are multiple ways to approach
Circumferential at the level of the balano-preputial groove

- Lateral or longitudinal elective route

The Circumferential approach at the level of the balanoprepuial groove was performed in one case because of the delay in diagnosis and the size of the hematoma. In the other cases the elective lateral route was used.

The site of the fracture was midpenile in six cases and proximal in one case. The rupture was dorsal in six cases, ventral and bilateral in one case associating a partial rupture of the urethra. In the other cases it was unilateral.

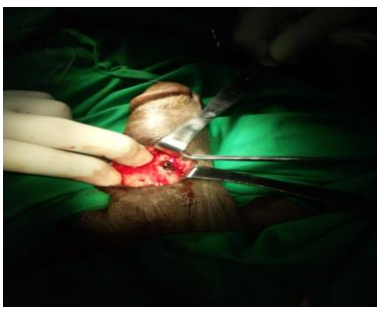
The rupture of the tunica albuginea was located on the right cavernous body in 4 cases, on the left cavernous body in 2 cases and on both in one case. The fracture line was transverse in all our patients and its length varied from 1 to 3 cm. The average hospitalization time was 3 days with extremes of 1 to 4 days.

Patients during their hospitalization benefited from antibiotic therapy, analgesics, anti-inflammatory and also valium tablet 5 mg or an anti-androgen to block nocturnal or morning reflex erections during their hospital stay and after their discharge for 4 weeks. Resuming sexual activity is allowed after 6 weeks.

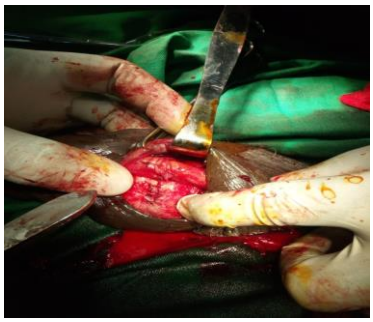
All patients were reviewed in consultation. Two patients presented with cicatricial fibrosis of the fracture zone. The patient who benefited from a circumferential approach had presented hypoesthesia of the penis.

None of our patients had an erectile or urinary problem.

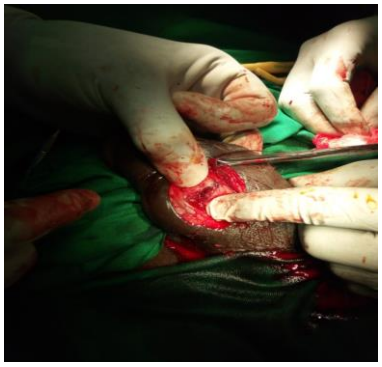
Appearance of a fracture of the penis associating a rupture urethral



Hematoma at the fracture site



Fracture on the ventral side of the corpora cavernosa extended to the urethra



Suture of the corpora cavernosa and the urethra with 3/0 vicryl in separate stitches

2. The trauma of scholarships

It is infrequent. 9 patients were victims of an open bursa trauma, i.e. 50% of the patients. The average age of the patients was 18 years with extremes of 10 and 28 years. All 9 cases were open trauma. The etiologies were represented by 2 cases of road accident (motorcycle-cart; car-pedestrian); fall astride a high place 3 cases; sports accident 2 cases; gore 2 cases. All the patients had consulted the same day with an average delay of 16 hours. The reasons for consultation were pain, open wound in the scrotum, bleeding.

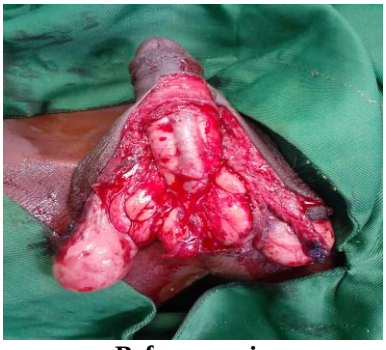
Associated lesions were urethral rupture in 3 cases, rupture of the vas deferens in 1 case, leg fracture in 1 case and loss of skin substance.

Scrotal ultrasound was performed in two patients with open trauma to the bursa without vaginal injury in search of a tunica albuginea fracture. She was normal apart from an inflammatory reaction. All patients were taken to the operating room under local or spinal anesthesia.

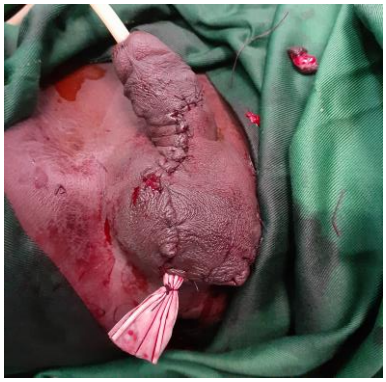
Processing

End-to-end urethrorrhaphy was performed in 3 cases, restoration of the anatomy of the vas deferens in one case, trimming and crotal sutures in 5 cases.

The patients were seen again 3 months after their operation, none of them presented testicular atrophy. Open bursa trauma without urethral involvement.

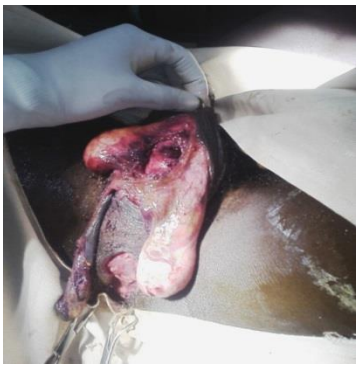


Before repair



After repair

Patient on D6 postoperative



Bursa trauma with urethral involvement

3 Trauma to the penis after a road accident

Penile trauma is most often secondary to direct trauma to an erect penis (coital misstep); damage to the penis in a flaccid state very often occurs in the context of war or psychiatric illness. We report here two cases of penile trauma admitted to the urology department following a road accident. They were all under 30 years old.

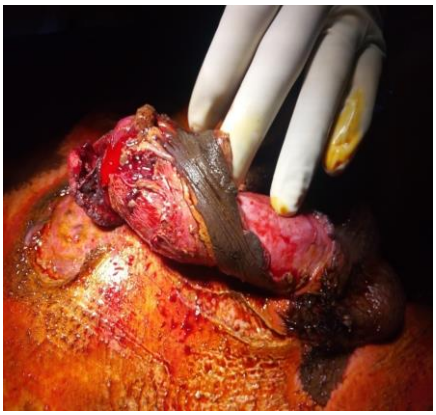
The lesions were caused by a friction mechanism on the roadway.
The clinical examination allowed us to make the lesion assessment. It was about:
Dilacerations and loss of substance of the sheath;
Rupture of the urethra with loss of substance
Rupture of the corpus cavernosum

The treatment consisted of:
Abundant washing with physiological serum,
Bypass cystostomy
Excision of devitalized tissues

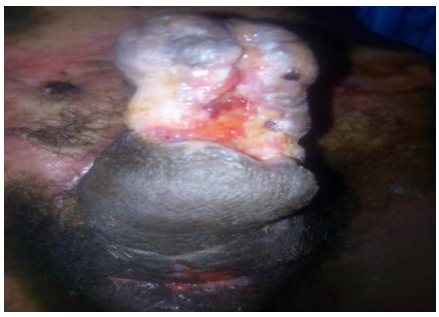
Cavernous body suture
Reconstruction of the urethra and the skin of the penis.
The postoperative course was marked by wound infection.

For the first patient, 6 months after healing, the consequences were complicated by urethral stricture, scarring fibrosis compromising subsequent repair. A two-stage urethroplasty was performed 1 year after the accident, the first stage of which was successfully performed. The patient was lost sight of during his various controls.

In the second patient, end-to-end urethrorrhaphy was performed urgently after trimming and excision of the edges of the wound.



Dilaceration of the penis after a road accident



Result after urethroplasty 1 year later

DISCUSSION

The study we conducted was prospective and descriptive involving 18 patients with trauma to the external genitalia. It had lasted 5 years.

We studied three types of traumatic lesions of the external genitalia. The cavernous body fracture involved 7 patients. This rate is close to those reported by other authors such as Kpatcha *et al.* [2] and Abdoul K *et al*. [3] of 6 cases and 5 cases respectively. This low rate does not reflect the real incidence of the pathology within a given population.

The average age of our patients was 48 years old with extremes of 29 and 62 years old. It was 37.3 years with extremes of 25 and 60 years for Kpatcha *et al*. [2]. This proves that it is a pathology of the sexually active adult.

In our series, the etiology evoked was coital faux pas; it is the most cited etiology in Western literature [4-6]. In the Middle East, the misstep of coitus comes in second place after the inopportune manipulation of the erect penis during masturbatory maneuvers, turning over in bed during sleep or straightening and camouflage of a morning erection in a context of promiscuity [7-10]. The symptomatology was dominated by Crackling audible by the patient, pain and swelling of the penis.

The consultation time varied from a few hours to a few days. The average delay was 15 hours with extremes of 6 hours to 72 hours. This delay is close to that observed by BARRY. M *et al*. [11] which was on average 11 hours with extremes of 3 and 49 hours; and lower than that of Kpatcha *et al*. [2] which was on average 74 hours. The diagnosis was clinical and based on history and physical examination data.

Urethral bleeding was present in one case, i.e. 14.3%; it complicated a bilateral fracture of the corpora cavernosa. Its incidence was 9.10% in BARRY's series. M [11].

On physical examination, the classic aubergine deformity of the penis as well as the deviation contralateral to the lesion were not present. Doppler ultrasound was performed to locate the lesion electively.

The elective lateral approach was predominant, the circumferential coronal approach was used in one case. We exposed the lesions then evacuated the hematoma with 0.9% saline lavage and 3/0 vicryl suture crimped in separate stitches.

The postoperative complications were fibrosis of the operative wound in 2 cases which disappeared within 6 months following the intervention and hypoesthesia in one case.

Bursa trauma is infrequent. This low incidence is also reported by many other authors such as BARTHELEMY [12] who collected 33 cases in 10 years and CASS [13] who observed a series with 64 cases of bursa trauma in 20 years.

It is partly explained by anatomical reasons: the mobility of the testicles in the scrotum, their arrangement below the pubic symphysis and the cremasteric withdrawal reflex. Another important factor is the thickness of the tunica albuginea that envelops the testicle. It is estimated that a pressure of 50 kg is necessary to succeed in breaking the tunica albuginea. The lesions affect young subjects between 20 and 30 years old and most often occur during blunt trauma by direct shock propelling the testicle against the pubic arch [14].

In 5 years of urological practice, we have collected 9 cases of open bursa trauma. The average age of our patients was 18 years with extremes of 10 and 28 years. The correlation between the young age of the patients and the trauma of the bursae is comparable with that of other authors [12, 14-16]. In the series consulted, accidents on the public highway are the main cause, followed by accidents at work. In our series, domestic accidents were the most frequent cause, followed by accidents on public roads and at work.

The average consultation time of our patients was 4 hours with extremes of 1 hour and 16 hours. In our series of open bursal trauma, the clinical signs were dominated by pain and bleeding from the wound.

The diagnosis was obvious on the physical examination and made it possible to take stock of the associated lesions (urethral rupture, rupture of the vas deferens, loss of skin substance and leg fracture).

The treatment consisted of an end-to-end anastomosis of the associated urethral ruptures, an anastomosis of the vas and reconstruction of the scrotal wall.

The patients were seen 3 months postoperatively and none had testicular atrophy. And we did not ask for a spermogram in the patient who suffered a rupture of the vas deferens because he had not reached the age of puberty.

Trauma to the penis is rare. Amputations and strangulations are mainly observed in psychiatric patients and constitute an exceptional phenomenon. It is also observed in the circumstances of war where the causal agent can be a bullet or a white weapon.

Trauma to the penis after a road accident is very rare. The series that publish on the trauma of the penis report cases of missteps of coitus, strangulation in the context of psychiatric illness or war. These are unusual lesions whose repair is delicate by the urologist.

Tomislav. L [17] and col had 14 penile injurient out of 4425 war casualties. In our series of 18 cases of trauma to the external genitalia, there were 2 cases of trauma to the penis, i.e. 11.11% of cases. This proves that traumatic lesions of the penis are rare.

CONCLUSION

Trauma to the external genitalia is serious due to the urinary, sexual and reproductive complications it

causes. Prompt and appropriate management by specialists would reduce complications.

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