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Management of Trauma to the External Genitalia at the Nianankoro-Fomba Hospital in Segou Mali

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Abstract

Trauma to the male genitalia is not very common and mainly affects a young population. There is probably a particular instinct in men to defend their external genitalia; indeed, in the flaccid state, the penis is little exposed, and fairly well protected and its mobility allows it to move with the impact of trauma and thus reduce the vulnating force. Open trauma is rare, as is testicular dislocation, the most common being closed trauma. Testicular trauma is an uncommon accident that affects young people. Trauma is most often caused by road and traffic accidents. Animal bites are rare, as is genital self-mutilation related to a psychiatric disorder. Surgical exploration is the rule except in cases of moderate testicular trauma. Our objective was to report our experience in an emergency context where treatment is poorly codified and to review the literature. We recorded four patients with external genitalia trauma managed in the urology department from April 2013 to March 2022. Our patients were children with open genitalia trauma following a traffic accident, scrotal injuries were encountered in three patients, and additional penile in-

juries in one patient. All patients were treated surgically. The follow-up was straightforward.

Keywords

Trauma, Genitalia, Open, Segou

1. Introduction

Trauma to the male genitalia is uncommon and mainly affects a young population [1] [2]. There is probably a particular instinct in men to defend their external genitalia; indeed, in the flaccid state, the penis is little exposed, and fairly well protected and its mobility allows it to move with the impact of trauma and thus reduce the vulnating force. Open trauma is rare, as is testicular dislocation, the most common being closed trauma. These genital injuries are a part of urogenital trauma. Urogenital trauma is the set of open or closed lesions following an attack on the urinary or genital system. The diagnosis of urological lesions is an integral part of the systematic lesion assessment, from which this type of patient must benefit and which aims to detect all the lesions and their different associations. These genito-urinary (urogenital) lesions can be found in the context of polytrauma. Trauma in general, which accounts for 9% of mortality worldwide, is a public health problem because it leads to approximately 5 million deaths worldwide and many survivors have after-effects [3]. In France, traumatology is mainly represented by closed traumas secondary to public road accidents, falls from great heights (voluntary defenestration, leisure or work accidents), or crushing accidents (mainly work accidents). These injuries, therefore, occur in patients whose violent trauma generates psychological and physical polytrauma [4] [5]. Urogenital trauma is part of physical trauma [6].

Testicular trauma is an uncommon accident that affects young people. Trauma is most often caused by road and traffic accidents. Animal bites are rare [7] as is genital self-mutilation related to a psychiatric disorder. Surgical exploration is the rule except in cases of moderate testicular trauma [1].

Our aim was to report our experience in the management of open trauma to the male genitalia in an emergency setting where treatment is poorly codified and to review the literature.

2. Patients and Observations

We report the observations of four patients treated in the urology department of the Nianankoro Fomba Hospital in Segou between April 2013 and March 2022.

2.1. Observation 1

This was a 10-year-old patient admitted to the emergency room 1.5 hours after a road traffic accident, who had been thrown and dragged by a motor cultivator with

open trauma to the genitalia. Clinical examination revealed a scrotal opening exposing the testicles, a detachment of the skin of the penis from the balanoprepucial groove to its root, multiple suprapubic wounds.

Emergency exploration under anaesthesia revealed a large scrotal wound, fully exposed testicles without rupture of the albuginea, without haematoma.

We performed scrotal trimming, penile trimming and suprapubic lesions in the direction of the broken line wounds (**Figure 1**).

Peri-operative antibiotic therapy was given with a combination of amoxicillin and clavulanic acid. Tetanus serotherapy was administered as well as the booster vaccine.

2 days after the operation, an X-ray of the pelvis revealed a fracture of the left ischio-pubic ramus without displacement, which was monitored after advice from the orthopaedic surgeon.

Follow-up was straightforward, and the patient was discharged at D15.

2.2. Observation 2

A 12 year old patient admitted to the ward following a cycling accident with a fall astride the frame and damaged saddle tip with a large scrotal lesion extending from the perineum to the root of the penis on the left side.

On examination, there was no opening of the tunica vaginalis or testicular lesions.

We proceeded to cut and suture the lesion in two planes under general anaesthesia (**Figure 2**).

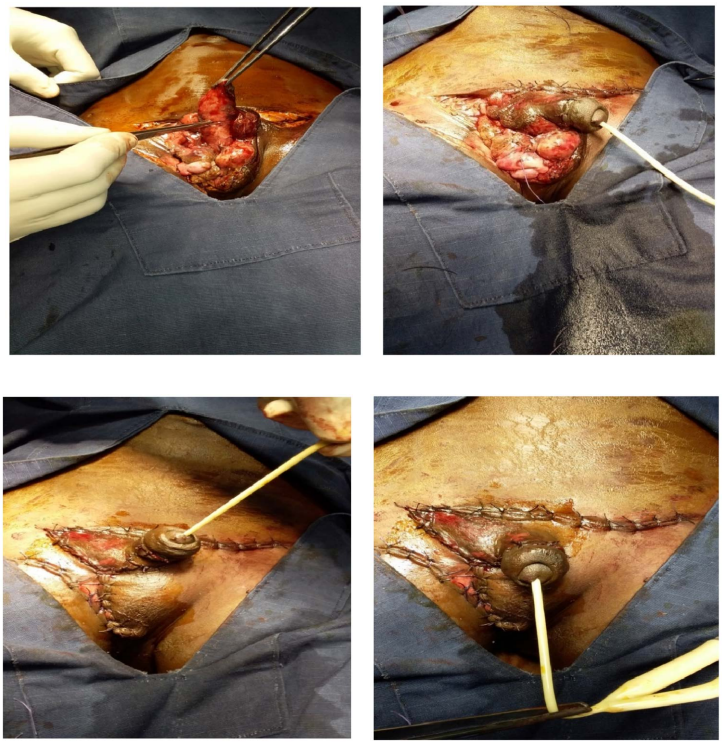

Figure 1. Investigation of lesions and suture cutting in patient 1.

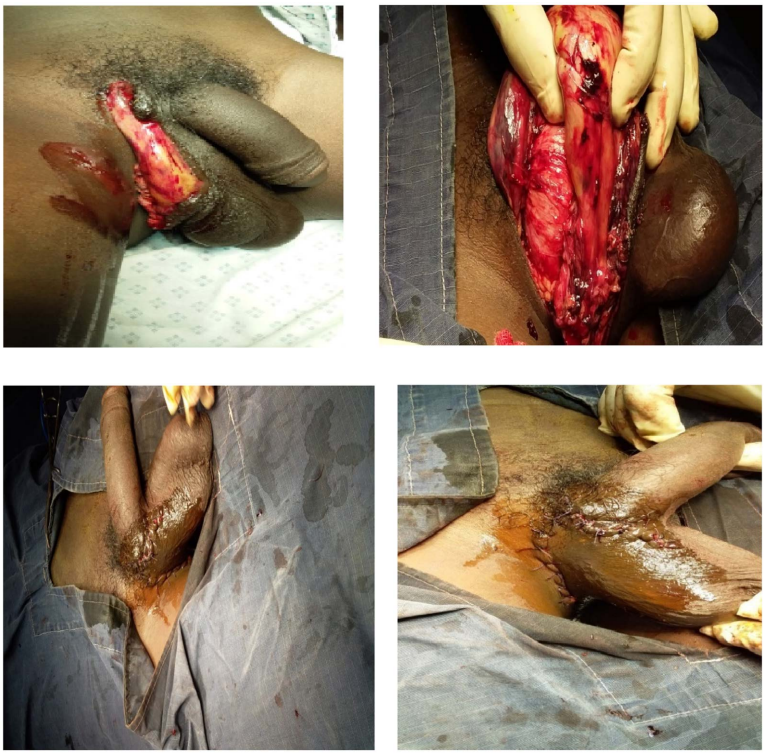

Figure 2. Investigation of lesions and suture cutting in patient 2.

Peri-operative antibiotic therapy was given with a combination of amoxicillin and clavulanic acid. Tetanus serotherapy was administered as well as the booster vaccine.

The postoperative course was straightforward, with the patient discharged on the second postoperative day.

2.3. Observation 3

This was a 13 year old child admitted to the urology department for trauma to the bursa. Following a bicycle accident, examination revealed a penetrating arcuate bursal wound on the left side, starting from the perineum and ending at the root of the penis. The testicle was not affected as it had been bypassed by the injury, however an abrasion of the scrotal skin was noted opposite the testicles (**Figure 3**). The rest of the examination was normal.

2.4. Observation 4

This is the case of a 7-year-old patient who was brought to the emergency room by his parents for a trauma to the bursa following a bicycle accident. On examination, there was no notion of initial loss of consciousness. On examination, the patient was conscious with a blood pressure of 110/60 mmHg, a temperature of 37˚C and a scrotal wound of about 2 cm, longitudinal on the right hemi scrotum, superficial without testicular involvement (**Figure 4**). The patient was discharged after 24 hours of observation under paracetamol-based analgesics, and the after-effects were simple.

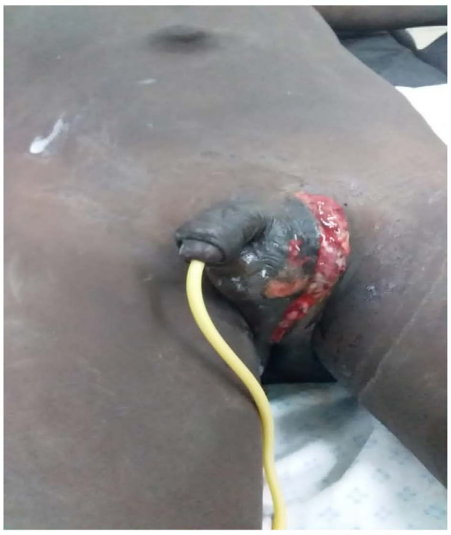

Figure 3. Exploration of lesions in patient 3.

Figure 4. Exploration of lesions in patient 4.

3. Discussion

We have recorded four cases of open trauma of the genitals in 9 years of activity in the urology department of the Nianankoro Fomba hospital, which testifies to the rarity of these open traumas of the genitals. Unlike a previous study that focused on urogenital trauma, our study [6] focused only on open genital trauma. This previous study, despite taking into account urological lesions in addition to genital lesions, reported that urogenital trauma represented 0.2% of all traumas with only 60 cases of urogenital trauma out of a total of 2650 patients received for trauma over a period of 9 years [6]. And of these urogenital injuries 33.3% were open injuries (20 cases) compared to 66.7% for closed injuries [6]. According to other studies, trauma to the genitals is not very common in general [2] [8]. Open genital trauma is even less common [1], with closed trauma being the most common. Open genital trauma can be open bursal trauma, open penile trauma (laceration, zip trauma and amputations), which are less common [2]. In our study, all our patients were children.

The average age of our patients was 10.5 years, the youngest patient was 7 years old and the oldest 13 years old.

The young age of the patients is reported in several series [1] [2]. Our patients were cases of open trauma to the genitals, mainly the bursa, with injuries often extending to the perineum and penis. The most frequent mechanism of injury was a straddle fall on the bicycle frame, landing partly on a damaged saddle, in three out of four patients. One case of throwing and then pulling the victim onto the road by a motor cultivator was reported. Thus, all our patients were victims of road or highway accidents. The predominant role of these accidents in the genesis of genital trauma has been reported in several previous studies [8] [9]. In our study, the diagnosis was clinical in all our patients and was established by physical examination. However, an X-ray of the pelvis revealed an associated fracture of the left ischiopubic branch of the pelvis, without displacement, in one patient. In the literature, the diagnosis is based mainly on clinical examination, which is made difficult by pain and oedema. The role of complementary examinations is not always well defined, but they help in the management, as in the case of Doppler ultrasound in closed trauma [10]. Complementary tests are often not necessary in the management of open trauma [11]. All our patients received emergency surgical treatment.

Emergency treatment is surgical in the majority of cases (1, 2, 4). In the follow-up, the practitioner must be attentive to the after-effects on sexual function and fertility (2).

4. Conclusion

Open trauma of the genitals is a urological emergency that affects more young people. The diagnosis is essentially clinical and the management surgical.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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