



E-ISSN: 2616-3470
P-ISSN: 2616-3462
© Surgery Science
www.surgeryscience.com
2023; 7(4): 41-44
Received: 03-08-2023
Accepted: 07-09-2023

Tshiband Moshabilond
Department of Urology, Urology
Resident, Amourou Boubacar
Diallo National Hospital, Benin

Dan Baki
Department of Urology,
Urological, Surgeon, Amourou
Boubacar, Diallo National
Hospital, Benin

Amadou Mahamane Kaka
Urological Surgeon, Department of
Urology, Amourou Boubacar,
Diallo National Hospital, Benin

Dimitri Kanyanda Nafatalewa
Département de Chirurgie,
Cliniques Universitaires de
Lubumbashi, Faculté de Médecine,
Université de Lubumbashi,
Lubumbashi, République
Démocratique du Congo

Augustin Kibonge Mukakala
¹ Département de Chirurgie,
Cliniques Universitaires de
Lubumbashi, Faculté de Médecine,
Université de Lubumbashi,
Lubumbashi, République
Démocratique du Congo
² Département de Chirurgie,
Cliniques Universitaires
de Bukavu, Faculté de Médecine,
Université Officielle de Bukavu,
Bukavu, République
Démocratique du Congo, Congo

Josué DG Avakoudjo
Department of Urology, Urological
Surgeon, HKM National
University Hospital Center, Benin

Corresponding Author:
Tshiband Moshabilond
Department of Urology, Urology
Resident, Amourou Boubacar
Diallo National Hospital, Benin

International Journal of Surgery Science

Fracture of the penis associated with complete rupture of the urethra: Clinical evaluation and management

Tshiband Moshabilond, Dan Baki, Amadou Mahamane Kaka, Dimitri Kanyanda Nafatalewa, Augustin Kibonge Mukakala and Josué DG Avakoudjo

DOI: <https://doi.org/10.33545/surgery.2023.v7.i4a.1028>

Abstract

Fracture of the penis associated with urethral rupture remains one of the rare urogenital emergencies. The diagnosis is mainly clinical in typical cases, based on the data from the interview and physical examination, while imaging is reserved for atypical, doubtful and/or late-presenting cases. Early surgical management is essential, allowing for assessment and repair of the lesions (cavernoraphy, urethroplasty) in order to ensure a good functional outcome.

We report the importance of preoperative clinical evaluation of the genitourinary organs in the diagnosis of bilateral fracture of the cavernous bodies associated with complete urethral rupture, which occurred after a coital misstep in a young adult male after intoxication with aphrodisiac substances.

Introduction: Fracture of the penis remains one of the urogenital emergencies, whose frequency is still underestimated today (1, 2). It corresponds to the rupture of the tunica albuginea of one of the corpora cavernosa and/or the corpus spongiosum, in a state of erection. Of various etiologies, penile fracture most often occurs during a "misstep" of intercourse, with consequences for sexual and urinary function. The diagnosis is based on data from the interview and physical examination, while imaging is reserved for atypical, doubtful and/or late-presenting cases. Management is primarily surgical (9).

The purpose of this article is to present the importance of preoperative clinical evaluation in the diagnosis of bilateral fracture of the cavernous bodies associated with complete urethral rupture, which occurred after a coital misstep following the use of traditional aphrodisiacs, and to discuss through a literature review.

Keywords: Fracture de la verge, abuginée, corps caverneux, cavernoraphie, Uréthroplastie termino-terminale

Introduction

Clinic Observation

A 24-year-old patient with no pathological medical or surgical history presented at the surgical emergency department of the National Hospital Amourou Boubacar Diallo with pain, swelling of the penis and testicles, and urethrorrhagia following a coitus misstep that occurred seven (07) hours before admission. The patient had ingested two doses of aphrodisiac products at close intervals in order to have an effective erection.

Upon inspection, there was swelling of the penis "like an eggplant," extensive bruising on the penis and entire scrotal surface, with a hematoma on the ventral surface near the root of the penis (Face 1). Urethrorrhagia was evident (face 2), aggravated by the slightest manipulation of the penis. Palpation revealed painful tenderness about 3 cm from the root of the penis, on the median raphe.

A diagnosis of a fracture of the penis associated with a probable urethral rupture was made based on clinical data. The patient underwent emergency surgical treatment with a coronal incision below the balanopreputial sulcus, followed by a finger-glove inversion of the envelopes of the penis to its root. Surgical exploration, after evacuation of the hematoma, confirmed the presence of a fracture line on the ventral surface of the right and left corpus cavernosum, each measuring about 1 cm, 2 cm from the root of the penis, associated with a complete rupture of the urethra (Face3, 4, 5, 6); The actual surgical treatment consisted of restoring the continuity of the albuginea of the corpus cavernosum by separate stitches with resorbable thread and of the urethra around a urinary catheter, charriere 18 (Face 7, 8). Postoperative recovery was

uneventful. The patient was kept for 48 hours and was seen as an outpatient without complications.

Arguments

Penile albuginea rupture is still an underestimated event ^[1, 2]. This rarity has been relativized based on the increasing number of observed cases, linked to the disappearance of certain sexual taboos, the non-reluctance of patients to consult for genital pathology, and education about sexual life. It remains a pathology of young adults characterized by an experience and sexual competition to be demonstrated with the use of aphrodisiac substances, traditional and/or modern. However, some cases have been observed in elderly subjects and published in the literature ^[3].

The circumstances of the penis fracture are diverse. The coital misstep is the most frequently encountered mechanism, during which, often in the Andromaque position, the erect penis comes out of the vagina and hits the partner's perineum or pubic symphysis. This position, "the woman on top," thus limits the man's control of movements during sexual intercourse ^[4].

The diagnosis of penis fracture is first clinical. In our patient, the clinical picture was dominated by pain, swelling (hematoma) and bruising of the penis (eggplant appearance) and testicles (Face). This appearance reflects rupture of the fascia of Buck and Colles with extension of the hematoma towards the perineum; Urethrorrhagia was evident, (Face), aggravated by any manipulation of the penis and/or during urination, indicating an associated urethral rupture. However, imaging (doppler ultrasound of the penis, cavernography, MRI, UCR) is recommended in atypical, doubtful and/or late-appearing forms ^[5].

The injury assessment in our patient confirmed the presence of a proximal, transverse, and bilateral fracture line on the ventral surface of the corpus cavernosum, each measuring approximately 1 cm and located 2 cm from the base of the penis (see Face). This was associated with a complete urethral section (see Figure). Previous studies have reported that the fracture line is typically unilateral and on the right side without any clear explanation. The direction of the fracture line is usually transverse, often located proximally on the penis and less commonly in the distal third, and is often observed on the dorsal surface of the corpus cavernosum ^[8, 9].

In addition, urethral rupture, as complete as in our case, is rarely found in cases of bilateral fracture on the ventral surfaces of the cavernous bodies and only occurs in 3 to 38% of cases. This associated injury constitutes one of the serious morbidities, as untreated it can progress to the formation of an urohematoma which can subsequently become infected, creating an urethrocutaneous fistula, or to gangrene of the penis ^[10].

Several approaches have been described, varying depending on the suspected injuries. Following some authors ^[6, 13], we performed a coronal incision under the balanopreputial groove with degloving of the penis, which allowed for better exposure of the bilateral rupture of the tunica albuginea of the cavernous bodies and especially of the complete rupture of the urethra. This coronal incision at the level of the balanopreputial groove has the advantage of providing wide access to the cavernous bodies and the corpus spongiosum, but exposes the patient to complications such as infection, edema, and skin necrosis. Unlike other authors, the lateral, longitudinal incision in front of one of the cavernous bodies allows for elective access to the fracture site without cutaneous risk but sometimes at the cost of an unsightly scar ^[8, 13].

The emergency surgical treatment consisted of evacuating the

hematoma, achieving hemostasis of the vessels, trimming and suturing the tear of the tunica albuginea of the cavernous bodies with separate resorbable stitches, and finally repairing an associated urethral rupture as described by most authors. It is currently the reference treatment for rupture of the tunica albuginea of the penis because it is the only way to ensure recovery of erectile function. This approach generally allows for shorter hospitalization and reduces the risk of several complications (erectile dysfunction, residual penile curvature) ^[3, 12].



Fig 1: Tuméfaction de la verge « en aubergine »



Fig 2: Urétrorragie



Fig 3: Incision coronale, en dessous



Fig 4: Retournement en doigt de gant du sillon balano-prepucial des enveloppes de la verge



Fig 5: Hématome sur la face ventre de la verge

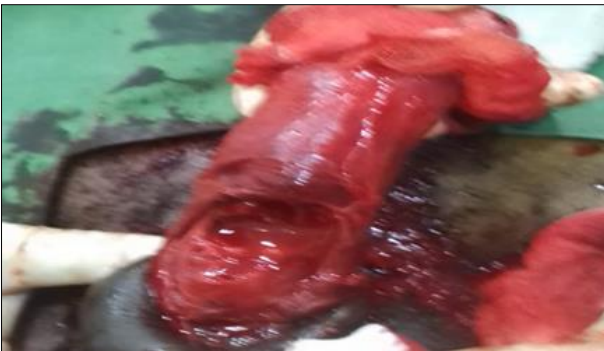


Fig 6: Rupture des corps caverneux et urètre

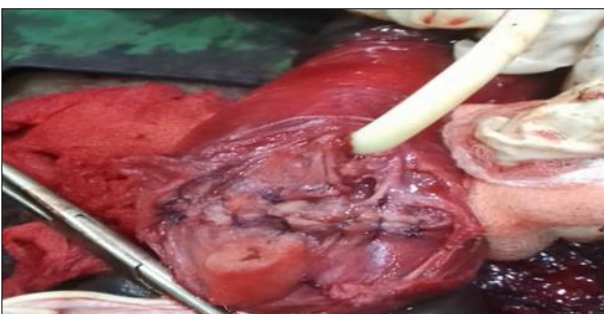


Fig 7: Suture albuginée des corps caverneux

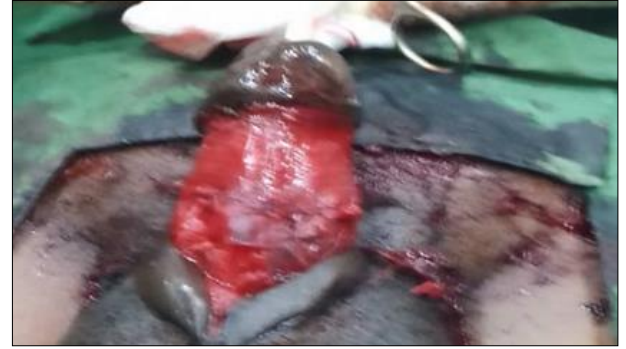


Fig 8: Suture complète corps caverneux et urètre

Conclusion

Fracture of the penis remains a urological emergency, and the sexual and urinary consequences are evident in the absence of early management. Clinical evaluation based on data from the patient's history and physical examination remains key to diagnosis, and imaging is reserved for atypical or doubtful cases and those diagnosed late. Early surgical management allows for functional recovery of sexual function.

Reference

1. Nicolaisen GS. Rupture of the corpus cavernosum: surgical management. *J Urol.* 1983;130:917-9.
2. Kamdar C, Mooppan UMM, Kim H, Gulmi FA. Penile fracture: pre-operative evaluation and surgical technique for optimal patient outcome. *BJU Int.* 2008;102(11):1640-4.
3. Bouya PA. Les fractures du pénis. *Progrès en Urologie.* 2005;15:742-744.
4. Kpatcha TM, Tengue k, Botcho G, Sikpa KH, Léloua E, Sewa EV, et al. Notre expérience de la prise en charge de la fracture de verge au CHU de Lomé. *African Journal of Urology.* 2017;23:342-346.
5. Abdoul-Karim P, Adama O, Gnimdou B, Brahim K, Fasnwendé AK, Amidou B, et al. La fracture de verge: à propos de six observations au CHU Sanou Souro de Bobo-Dioulasso, Burkina Faso. *The Pan African Medical Journal.* 2019;33:257.
6. Barry MII, Kanté D, Bah I, Diallo TMO, Bah MD, Diallo AB, et al. Fracture de verge: Analyse rétrospective de 22 cas au service d'urologie de l'hôpital Ignace Deen, CHU de Conakry Guinée. *Uro'Andro.* 2016;1(6):273-8.
7. Wisarda MD, Aymomb JY, Meuwlyc P, Jichlinski BV, Praz. Fractures « fermées » de la verge: à propos de deux cas. *Progrès en urologie.* 2008;18:617-9.
8. Padjja E, Bahri A, Tayiri A, Chafiki J, Janane A, Ghadouane M, et al. Traitement chirurgical des fractures de verge: Résultats fonctionnels et complications à propos de 24 cas. *Uro'Andro.* 2016;1(5):251-5.
9. Muqim RU, Alamjan QE, Zarin M. Management of penile fracture. *Pak Med Sci.* 2006;22:23-7.
10. Molimard B, Durand X, Desfemmes F-R, Deligne E, Berlizot P, Houllatte A, et al. Faux-pas du coït et rupture urétrale complète. *Progrès en urologie.* 2009;19:226-30.
11. Amer T, Wilson R, Chlosta P, AlBuheissi S, Qazi H, Fraser M, et al. Penile fracture: A meta-analysis. *Urol Int.* 2016;96(3):315-29.
12. Falcone M, Garaffa G, Castiglione F, Ralph DJ. Current management of penile fracture: an up-to-date systematic review. *Sex Med Rev.* 2018;6(2):253-60.
13. Ahmed I, Idriss Z. Fracture du corps caverneux de la verge. *Pan African Medical Journal.* 2020;37(272):1-3.

How to Cite This Article

Moshabilond T, Baki D, Kaka AM, Nafatalewa DK, Mukakala AK, Avakoudjo LDG. Fracture of the penis associated with complete rupture of the urethra: Clinical evaluation and Management. International Journal of Surgery Science 2023; 7(4): 41-44.

Creative Commons (CC) License

This is an open-access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.