

Case Report

Late Diagnosis and Treatment of a Penile Fracture with Preservation of Erectile Function: A Case Report

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Abstract

A penile fracture is a rare urological emergency that requires immediate surgical repair to preserve erectile function. Most cases occur during sexual intercourse, while others result from different causes. The aim is to report a rare case of penile fracture that occurred during sleep following an erotic dream, and to highlight the diagnostic and therapeutic challenges despite a delay in treatment. We report the case of a 26-year-old male who presented 72 hours after the injury with penile swelling and an eggplant-shaped deformity. The patient reported that the deformity occurred while he was asleep following an erotic dream, with no history of trauma or sexual intercourse. Clinical examination revealed two distinct fractures of the corpora cavernosa and a urethrovenous fistula at the level of the frenulum. Surgical exploration confirmed the injuries. Repair consisted of evacuating the hematoma, suturing the tears in the tunica albuginea with absorbable sutures, and closing the fistula using a urethral catheter. The postoperative course was uneventful. The patient was reviewed at 3-month and 24-month follow-up visits, the patient reported normal erections without curvature or pain. No recurrence of the fistula was observed. A penile fracture can occur during sleep without sexual intercourse or external trauma. A 72-hour delay in seeking treatment does not compromise functional outcomes if surgical repair is performed.

Keywords

Penile Fracture, Surgical Emergency, Diagnosis, Urology

1. Introduction

Penile fracture is a rare urological emergency with an incidence that is not precisely known but is considered low. It is defined as a rupture of the tunica albuginea of the corpora cavernosa of an erect penis following excessive bending [1-3].

Although the diagnosis of penile fracture is primarily clinical, the first warning sign is a snapping or cracking sound heard by the patient [3]. Additional tests may be helpful but do not rule out emergency surgical exploration [4].

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Immediate surgery involves draining the hematoma, repairing the tear in the tunica albuginea, and, if necessary, the associated urethral injury, in order to minimize fibrosis in the corpora cavernosa [5-7].

Delayed management can lead to complications such as painful erections, sexual impotence, a persistent hematoma, or penile curvature [1, 5].

The objective of our study is to report a case of penile fracture that was diagnosed and treated late but without complications in its course.

2. Case Report

A 26-year-old patient, unmarried and a farmer; who presented with anxiety due to penile swelling that had been present for 72 hours, having occurred suddenly after hearing a cracking sound from the erect penis, followed by immediate detumescence associated with pain, without any history of urethral bleeding or hematuria. The injury occurred due to accidental twisting during a morning erection following an erotic dream.

Physical examination revealed an uncircumcised penis that was swollen and deformed into an eggplant-like shape, with a urethropenile fistula at the level of the frenulum, which the patient reported had existed prior to the trauma (Figure 1).



Figure 1. Eggplant-shaped deformity following penile fracture.

Urgent surgical exploration under spinal anesthesia, performed via a circumferential retro-coronal incision with complete dissection of the penis, revealed two tears in the tunica albuginea of the right corpus cavernosum: one 2-cm transverse tear and one 1-cm longitudinal tear, located in the proximal and middle thirds, respectively, as well as a urethral meatus defect (Figure 2). These lacerations were repaired with separate sutures using 4-0 Vicryl, combined with meatoplasty and circumcision. The post-operative course was uneventful. The urethral catheter was removed on the eighth postoperative

day (Figure 3).

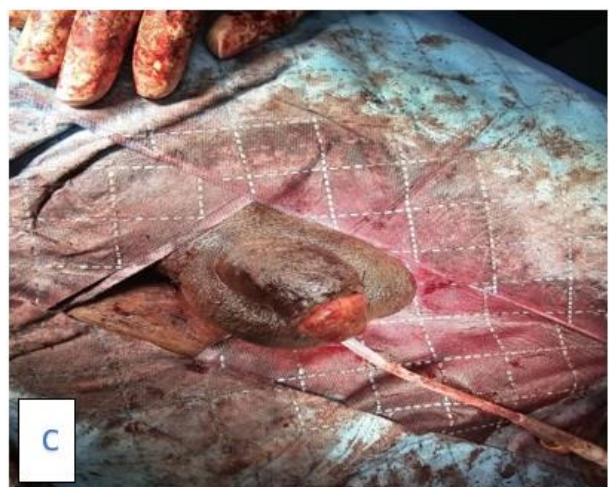
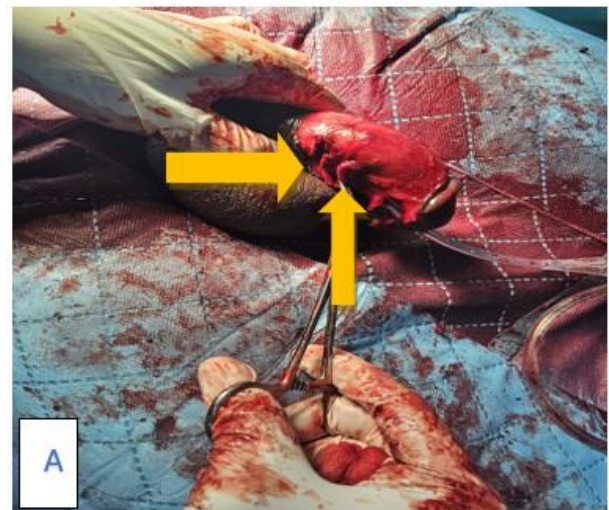


Figure 2. Two visible fractures (A), urethral fistula (B), and the final appearance after repair and meatoplasty (C).



Figure 3. Appearance of the penis on the eighth postoperative day following removal of the urinary catheter.

During a follow-up period of 3 months and then 24 months, the patient reported no erectile dysfunction or complications related to the meatoplasty.

3. Ethics Approval and Consent to Participate

The patient provided written informed consent for the publication of clinical details and images. A copy of written consent is available for review by the editor of this journal.

4. Discussion

Penile fracture is a relatively rare urological emergency that occurs in young adults [1]. Some authors cite various factors that may explain its prevalence in young people, such as the breakdown of sexual taboos and a lack of sex education [3]. The circumstances of occurrence are varied, such as the Taghaandan maneuver (which involves forcefully bending the erect penis to induce sudden detumescence), turning over abruptly in bed or urinating with an erect penis, masturbation, sexual intercourse, including the Andromache position where the penis strikes the perineum [3, 5, 8]. In fact, all these circumstances lead to increased intracavernosal pressure due to forced bending of the erect penis [9]. The tunica albuginea ruptures as a result of thinning to as little as 0.25 mm at pressures exceeding 1,500 mm Hg and due to vulnerability to sudden mechanical stress [10]. Regardless of the circumstances of onset, the pathophysiology remains the same; in our patient, accidental rotation in bed with an erect penis following an erotic dream was the mechanism of injury.

Consequently, a thorough medical history and clinical examination are key to establishing the diagnosis [5]. An audible

snapping sound, immediately followed by detumescence and penile pain, along with a hematoma and an “eggplant-shaped” deformity of the penis, are found in 97.5% of cases [3, 5].

Other signs, such as penile deviation, urethral bleeding (14%), and acute urinary retention (7%), may indicate a possible urethral injury [5, 11, 12]. Imaging may play an important role in diagnosis and allow for a selective surgical approach [5].

Our patient presented very late and had an “eggplant-shaped” penile deformity, a urethrocutaneous fistula on an uncircumcised penis, and no imaging studies had been performed. The surgical approach was via a coronal incision at the balanopreputial sulcus. This approach allows surgeons to easily explore and repair the lesions. However, the prevailing medical consensus recommends prompt surgical intervention using absorbable sutures to repair the tunica albuginea, as this approach significantly reduces the risk of long-term complications [4].

Several studies have challenged the notion that surgery fails when the patient presents late, which could call into question the recommendation for emergency surgery within 6 hours of the injury. Delayed surgery may not have a negative impact on long-term outcomes such as erectile function and penile deformity. WaelGazzah et al. [4] achieved satisfactory long-term results following 36 hours delay in consultation after penile fracture. Similarly, Kozacioglu et al. reported better outcomes with surgeries performed an average of 11.3 ± 8.5 hours after injury [13] and Hardesty et al. reported that even if surgical repair is delayed, it should be considered [14]. In our case, although the delay was 72 hours, this was likely due to the unavailability of a hospital with the required specialist.

In the literature, certain factors such as a more extensive lesion and delayed surgery have been associated with higher rates of postoperative complications [15]. Thus, in our study, over a 2-year follow-up period, there were no short- or long-term complications, resulting in positive outcomes.

However, although the literature shows that immediate surgery yields positive results, delayed and carefully planned surgery can also produce positive results [4].

5. Conclusion

Penile fracture remains a rare injury that requires prompt treatment. Diagnosis relies primarily on the patient’s medical history and clinical examination, although diagnostic imaging allows for the precise determination of the injury’s severity, thereby guiding the surgical approach. Our case report highlights the possibility of identifying multiple fracture lines, underscoring the importance of meticulous surgical technique to achieve a positive long-term outcome. This case warrants further investigation in a cohort study on the early versus delayed management of penile fractures.

6. Recommendations

Do not delay surgery for more than 24 hours: the functional prognosis remains good if a complete examination is performed.

Prioritize long-term follow-up beyond 24 months, as late complications such as penile curvature or erectile dysfunction may develop after one year.

Inform patients about atypical mechanisms: a penile fracture can occur without sexual intercourse, including during an erotic dream.

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Author Contributions

Mah Sarah Diaby: Conceptualization, Writing – original draft

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Hamidou Kiambote Kikalulu: Resources, Validation, Writing – review & editing

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Conflict of Interest

The authors declare no conflict of interest.

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