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Case Report

Section: Urology

Clinical Profile, Management, and Outcomes of Penile Fracture: A Case Series of Four Patients

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HIGHLIGHTS

- Rare urological emergency requiring surgery.
- Four cases analyzed for outcomes.
- Sexual intercourse main causative factor.
- Early repair ensures functional recovery.
- Prompt diagnosis prevents erectile dysfunction.

Key Words:
Penile Fracture
Surgical repair
Erectile Dysfunction
Corpora Cavernosa
Urological emergency

ABSTRACT

Background: Penile fracture is an uncommon urological emergency that requires prompt surgical management to prevent long-term complications such as erectile dysfunction and penile curvature. **Material & Methods:** We present a case series of four patients with penile fracture managed surgically at our institution. Patient demographics, clinical presentation, operative findings, surgical methods, and outcomes were analyzed. **Results:** The mean age was 45.7 years (range: 35–58). The duration from injury to presentation varied between 6 and 48 hours. Sexual intercourse was the most common cause (three cases, 75%), with one case resulting from accidental fall on an erect penis. All patients presented with penile pain, swelling, and immediate detumescence; two reported an audible 'snap'. Intraoperative findings revealed tunical tears in the right corpora cavernosa (n=2), left corpora cavernosa (n=1), and bilateral corpora cavernosa (n=1). Surgical repair was performed using subcoronal degloving in three patients and direct incision in one. No urethral injuries were noted. Postoperatively, one patient developed wound infection, managed conservatively. At follow-up, three patients had normal erectile function, while one developed mild penile curvature with preserved functional erections. **Conclusion:** Early surgical repair of penile fracture results in favorable outcomes. Our series reinforces the importance of prompt diagnosis and intervention to preserve sexual function.

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INTRODUCTION

Penile fracture, defined as rupture of the tunica albuginea of the corpus cavernosum, is a rare but well-recognized urological emergency [1]. It typically occurs during vigorous sexual intercourse, masturbation, or trauma to the erect penis [2]. Clinical diagnosis is usually based on a characteristic history of sudden pain, a cracking sound, rapid detumescence, and swelling of the penis [3].

Early surgical intervention is associated with superior outcomes compared to conservative management, minimizing the risks of erectile dysfunction, penile curvature, and fibrosis [4]. Here, we present a case series of four patients with penile fracture managed surgically at our institution, highlighting clinical features, operative details, and outcomes.

MATERIALS & METHODS

This is a retrospective case series of four consecutive patients with penile fracture who presented to our institution. Patient data were collected from hospital records, including age, cause of injury, duration from injury to presentation, clinical features, intraoperative findings, surgical technique, type of anesthesia, postoperative complications, and outcomes.

All patients underwent emergency surgical repair. Follow-up data were obtained during outpatient visits. Erectile function and postoperative complications were recorded.

RESULTS

Four patients aged 35 to 58 years (mean: 45.7) were included. Duration from injury to presentation ranged from 6 to 48 hours. Sexual intercourse was the cause in three patients (75%), while one sustained injury after an accidental fall over an erect penis. All patients presented with penile pain, swelling, and rapid detumescence; two described an audible 'snap' [4,5].

Tunical tears were identified in the right corpora cavernosa (2 cases), left corpora cavernosa (1 case), and bilaterally (1 case). No urethral involvement was observed. Three patients were operated using a subcoronal degloving incision, while one underwent direct incision over the hematoma. Two procedures were performed under spinal anesthesia and two under general anesthesia [6,7]. One patient developed wound infection, managed with antibiotics. At follow-up, three patients regained normal erectile function, while one developed mild penile curvature but retained functional erections [8].

Table 1. Clinical profile, surgical management, and outcomes of patients with penile fracture

Case No.	Age (yrs)	Duration from Injury	Cause	Symptoms	Site of Tear	Associated Injury	Anaesthesia	Repair Method	Complications	Outcome
1	35	6 hrs	Vigorous sexual intercourse	Pain, swelling, detumescence, 'cracking' sound	Right corpora cavernosa	None	Spinal	Subcoronal degloving, tunical repair	None	Normal erectile function
2	40	20 hrs	Accidental fall during bathing	Pain, swelling, deviation	Bilateral corpora cavernosa	None	GA	Subcoronal degloving, tunical repair	None	Satisfactory sexual function
3	50	48 hrs	Sexual intercourse (female on top)	Pain, swelling, audible snap, detumescence	Left corpora cavernosa	None	Spinal	Direct incision, tunical repair	Wound infection	Normal erectile function
4	58	12 hrs	Sexual intercourse (female on top)	Pain, swelling, detumescence	Right corpora cavernosa	None	GA	Subcoronal degloving, tunical repair	None	Mild penile curvature

Figure 1. Preoperative photograph showing penile swelling and ecchymosis (Case 3).

Figure 2. Intraoperative photograph showing direct incision over hematoma with exposure of tunical tear (Case 3).

Figure 3. Preoperative photograph showing diffuse penile swelling (Case 2).

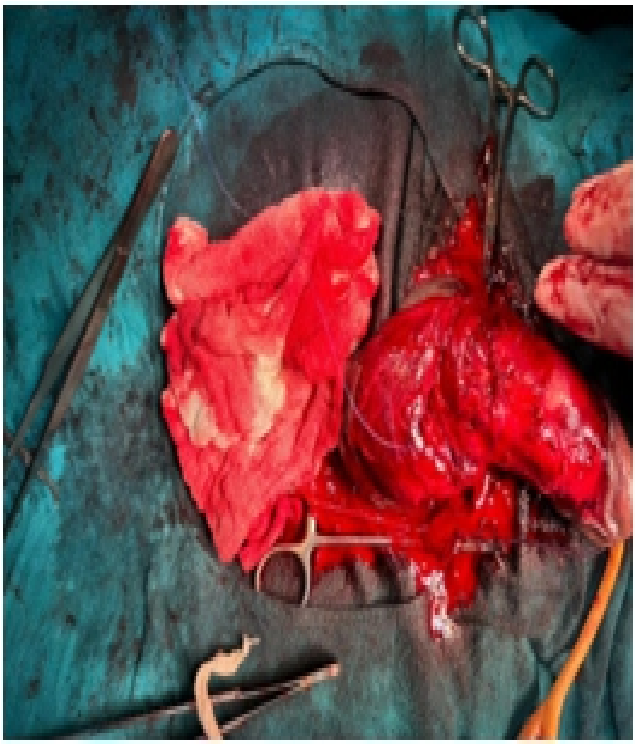

Figure 4. Intraoperative photograph showing exposure of corpora cavernosa after subcoronal degloving incision (Case 2).

DISCUSSION

Penile fracture is an uncommon injury but remains under-reported due to patient embarrassment. The typical mechanism involves bending of the erect penis, most frequently during sexual intercourse. In our series, intercourse accounted for 75% of cases, similar to other reports, where intercourse-related fractures range from 50–80% [8,9]. The 'female on top' position is recognized as a high-risk position and was implicated in two of our cases [10].

Delayed presentation beyond 24 hours, as seen in one of our patients, is not unusual and is associated with higher risk of complications. The mean delay in our study was 21.5 hours, comparable with international data [11].

The diagnosis of penile fracture is primarily clinical; imaging is rarely required unless urethral injury is suspected. None of our patients had urethral involvement [12]. Early surgical repair is the current standard of care, yielding better functional outcomes than conservative management [13,14]. In our series, prompt surgical repair resulted in preservation of erectile function in three patients and only mild curvature in one, consistent with literature where surgical management yields 80–90% satisfactory outcomes [15].

CONCLUSION

Penile fracture, though rare, should be promptly recognized and surgically repaired to prevent long-term complications. Our case series demonstrates that early surgical exploration and tunical repair result in favorable outcomes with preserved sexual function in most patients.

ABBREVIATION

PF: Penile Fracture
ED: Erectile Dysfunction
SC: Subcoronal
CC: Corpora Cavernosa
Dx: Diagnosis

LIMITATIONS & FUTURE PERSPECTIVES

The study was limited by its single-centre design, relatively small sample size, and short duration, which may restrict generalizability. Future research could focus on multicenter studies with larger cohorts to validate findings, evaluate long-term outcomes, and explore innovative diagnostic and management strategies for appendicular perforation, improving patient prognosis and reducing complications.

CLINICAL SIGNIFICANCE

Timely detection and management of acute appendicitis are crucial to prevent perforation, reducing morbidity and mortality. The study identifies high-risk groups, such as males and individuals at age extremes, highlighting the need for targeted preventive strategies and clinical vigilance. Delayed presentation significantly increases perforation risk, underscoring the importance of early healthcare access and Dawareness campaigns. Postoperative complications, including surgical site infections and prolonged ileus, emphasize the need for thorough preoperative risk assessment and tailored postoperative care. Recognizing the distal third of the appendix as the most common perforation site aids surgeons in effective intraoperative planning and management.

AUTHOR INFORMATION

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AUTHOR CONTRIBUTIONS

All authors significantly contributed to the study conception and design, data acquisition, or data analysis and interpretation. They participated in drafting the manuscript or critically revising it for important intellectual content, consented to its submission to the current journal, provided final approval for the version to be published, and accepted responsibility for all aspects of the work. Additionally, all authors meet the authorship criteria outlined by the International Committee of Medical Journal Editors (ICMJE) guidelines.

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CONFLICT OF INTEREST

Authors declared that there is no conflict of interest.

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CONSENT FOR PUBLICATION

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DATA AVAILABILITY

All data generated and analyzed are included within this research article. The datasets utilized and/or analyzed in this study can be obtained from the corresponding author upon a reasonable request.

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The authors confirm that no AI & LLM tools were used in thewriting or editing of the manuscript, and no images were altered or manipulated using AI & LLM

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