

(CASE REPORT)



Longitudinal tear of the right corpus cavernosum in penile fracture: A rare case report

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Abstract

Penile fracture is the term given to a ruptured *Tunica Albuginea* of the corpus cavernosum and is considered a serious emergency. Most of the tears are present across the width. In this report, a rare case of a 4 cm long tear of the *Tunica Albuginea* of the right corpus cavernosum in a 43-year-old man following vigorous sexual intercourse. During surgery, tear was confirmed to be 3 cm. He presented at the emergency department with classic "eggplant deformity," "urinary retention", and "blood at urethral meatus". Cystoscopy ruled out concomitant urethral injury. Emergency surgery using a circumcoronal incision was performed, and the repair was done using 3-0 Prolene sutures. The functional and cosmetic results at 6 months were very satisfactory. This case report emphasises the value of early recognition of atypical tear orientations and the effectiveness of prompt surgical intervention as the definitive management regardless of the geometry of the tear.

Keywords: Penile Fracture; *Tunica Albuginea*; Longitudinal Tear; Corpus Cavernosum; Surgical Repair; Urinary Retention

1. Introduction

Penile fracture, a rare urological emergency, is diagnosed when the tissue around the penis is torn, usually during aggressive sexual activity due to the sudden bending of the erect penis (1). It typically manifests as a loud cracking sound, with sudden loss of erection, followed by swelling and bruising of the penis, leading to the distinctive "eggplant deformity" (2). About 10-20% of the cases develop concomitant urethral injury, which should be actively excluded in cases with hematuria or urinary retention (3, 4).

Surgical intervention for fixing the *Tunica Albuginea* tear forms the first and most effective line of management. This prevents erectile dysfunction, the development of hard tissue lumps, a curved penis, and urethral stricture (5).

By far, tunical tears are mostly sideways, as the pressure building up inside the penis is too high for the *Tunica Albuginea* to handle, as a squeezing force acts on it. However, longitudinal defects are very rare and have not been reported in many published cases (6). In this case report, a longitudinal tear of the "right corpus cavernosum" that was managed surgically and its postoperative follow-up through six months has been described.

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2. Case Presentation

A 43-year-old male presented to the casualty department at 04:00am with a two-hour history of acute penile swelling and inability to void. He reported that, during vigorous and physiologically unnatural sexual intercourse, he heard a sudden cracking sound followed immediately by severe throbbing pain, rapid detumescence, and progressive swelling of the penis. There was no prior history of penile trauma, Peyronie disease, or erectile dysfunction.

On general examination, the patient was conscious, oriented, and hemodynamically stable (pulse 90 beats per minute; blood pressure 110/80 mmHg). The genitourinary exam showed a severely swollen penis that looked like an eggplant, had noticeable bruising in the middle, and was very painful.

An urgent Doppler ultrasound of the penis showed a tear about 4 cm long in the tough tissue of the right side of it, along with a collection of blood around it. No Doppler flow abnormality suggestive of major arterial injury was identified.



Figure 1A Eggplant deformity (Front view)



Figure 1B Egg-plant deformity (Lateral view)



Figure 2A Long tear in corpora cavernosa



Figure 2B Repair of defect in corpora cavernosa

2.1. Surgical Management

Given the blood at the meatus and acute urinary retention, cystoscopy was performed in the operating theatre before exploration. No intrinsic urethral injury was identified. Retrograde urethrography was not performed separately, as cystoscopy provided adequate urethral evaluation.

Emergency surgical exploration under spinal anaesthesia was undertaken without delay. A circumcoronal degloving incision was made, allowing complete exposure of the penile shaft. During the operation, a longitudinal tear about 3 cm in length with uneven edges was found in the *Tunica Albuginea* of the right corpus cavernosum. The intraoperative findings confirmed ultrasound evidence. After controlling the bleeding from the defect, it was repaired primarily using

separate Prolene 3-0 sutures to securely connect the tissues for maintaining their original position. Thereafter, re-approximation of the penile skin was done with absorbable 3-0 Monocryl sutures. A 14 French Foley's urethral catheter was inserted after the surgical procedure.

2.2. Postoperative Course and Follow-Up

The patient was followed up for micturation difficulties (straining, stream of urine, projectility of the urine stream), painful erection or priapism and Erectile dysfunction. The postoperative recovery was remarkable without any complications. The patient was treated with "Intravenous antibiotics" and "analgesics" postoperatively and the oral intake was resumed after six hours. Oral "anti-erectile" medication was prescribed for six weeks to minimise tension at the repair site. The discharge was given on fifth postoperative day with urethral catheter in situ.

Follow-up was conducted at 10, 15, 30, 45, 60, 90, and 180 days postoperatively. After achieving a successful void at day 15, the catheter was removed. There was no hematuria, dysuria, or evidence of wound dehiscence. Follow up was done at 45 days along with the discontinuation of anti-erectile medications. Then another follow up visit was made at 90 days for assessing the long term surgical and functional outcomes without any voiding dysfunction, penile curvature, or pain was achieved. At six-months follow-up, functional and cosmetic outcomes were excellent, with no evidence of infection, fibrosis, or erectile impairment.

Table 1 Summary of Clinical and Surgical Findings

Parameter	Finding
Patient Age	43 years
Mechanism of Injury	Vigorous sexual intercourse (physiologically unnatural)
Presenting Symptoms	Acute penile swelling, urinary retention, and blood at the urethral meatus
Examination Finding	Eggplant deformity, mid-shaft ecchymosis, marked tenderness
Imaging (Doppler US)	Longitudinal <i>Tunica Albuginea</i> defect ~4 cm, right corpus cavernosum, surrounding haematoma
Urethral Injury	Absent (confirmed by cystoscopy)
Intraoperative Finding	Longitudinal tear ~3 cm, irregular margins, right corpus cavernosum
Incision	Circum-coronal degloving
Repair Suture	3-0 Prolene (non-absorbable) for tunical repair; 3-0 Monocryl for skin closure
Postoperative Catheter	14 Fr. Foley, removed at day 15
Anti-erectile Medication	For 45 days and then discontinued
Six-Month Outcome	No erectile dysfunction, no curvature, no voiding dysfunction; excellent cosmesis

3. Discussion

The present case of penile fracture was diagnosed based on symptomatology depicting the typical signs, such as a loud crack, immediate loss of erection, quick swelling, and a purple swelling with the shape of an eggplant. The additional signs, like blood at the urethral meatus and sudden difficulty urinating, were also observed, raising the suspicion of possible urethral injury mandating a thorough preoperative examination. However, on evaluation, there were no signs of urethral injury. Our patient maintained urethral integrity, which was consistent with the published series (5).

This case report is primarily distinguished from the rest due to the longitudinal orientation of the tunical tear. This defies the common parlance of horizontal tearing of the *Tunica Albuginea* when an erect penis bends sharply, mainly due to circular forces acting upon it. These forces are much stronger than the endurance of the *Tunica Albuginea*, which is about 1,500 mmHg (7). This could be suggestive of a different kind of force at work such as a sideways or twisting

force on the penis which and has been reported very rarely in previous studies (4, 8). The precise biomechanical explanation for longitudinal failure remains incompletely understood and warrants further study.

Despite the atypical tear geometry, the principles of surgical management remains unchanged (9). Prompt management within 24 hours reduces the chances of erectile dysfunction, penile curvature, and urethral stricture as compared to delayed or less aggressive conservative management (10). The circum-coronal degloving method allows for a clear view of the whole penile shaft and enables thorough examination of both corpora cavernosa and the urethra. Using non-absorbable polypropylene stitches for primary closure has shown to be strong and is in line with current surgical methods (11).

After the repair, anti-erectile medication is given for 6 weeks to reduce pressure on the healing tissue during early recovery period. Although there isn't much research on specific medications or its optimal duration, it's commonly recommended in medical practice to prevent erections after surgery temporarily.

Satisfactory post-surgical outcomes in the present case after six months with restoration of normal urination, maintained erectile function, no bending, and good cosmetic appearance are similar to those demonstrated by other studies (12, 13). Prompt surgical repair of a penile fracture, irrespective of the orientation or direction of the tear, leads to high chances of complete and satisfactory recovery.

4. Conclusion

We describe an unusual case of a long tear in the *Tunica Albuginea* of the right corpus cavernosum that appeared as a typical penile fracture along with urinary retention. Doppler ultrasonography was instrumental in characterizing the atypical defect orientation preoperatively. Quickly checking for any injury to the urethra with a cystoscope and then performing surgery right away with a Prolene repair led to excellent functional results. This case adds to the small amount of information available on long corpora cavernosal tears and emphasizes that early surgery is key to treatment, no matter the shape of the tear.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare no conflicts of interest.

Statement of ethical approval

This case report was prepared in accordance with the principles of the Declaration of Helsinki. Formal institutional ethics committee review was not required for the publication of a de-identified single case report at our institution; however, institutional approval was obtained as appropriate.

Statement of informed consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying clinical data. A copy of the written consent form is available for review by the editor-in-chief of this journal.

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References

- [1] Imran M, Kamran A, Tanveer A, Farho MA. Penile fracture: A case report. *Int J Surg Case Rep*. 2023 Sep;110:108749. doi: 10.1016/j.ijscr.2023.
- [2] Diaz KC, Cronovich H. StatPearls [Internet] StatPearls Publishing; Treasure Island (FL): 2022. Penis fracture. [Updated 2022 Jul 29] Available at: <https://www.ncbi.nlm.nih.gov/books/NBK551618/> Accessed 25th Jan. 2026

- [3] Dell'Atti L. The role of ultrasonography in the diagnosis and management of penile trauma. J Ultrasound. 2016;19(3):161–166. doi: 10.1007/s40477-016-0195-4. Sep.
- [4] Bhardwaj R., Gaurav G., Alam S. Penile fracture during masturbation - a case report. J Fam. Med. Prim. Care. 2020;9(11):5790–5792. doi: 10.4103/jfmprc.jfmprc_1160_20. Nov30.
- [5] Shah N., Khan I.U., Aslam R., Latif A. Penile fractures: the successful outcome of immediate surgical intervention. PJMHS. 2022;16(12):21–23. doi: 10.1038/sj.ijir.3900571.
- [6] Ateyah A, Mostafa T, Nasser TA, Shaeer O, Hadi AA, Al-Gabbar MA. Penile fracture: surgical repair and late effects on erectile function. J Sex Med. 2008;5:1496–150 2.
- [7] Bitsch M, Kromann-Andersen B, Schou J, Sjontoft E. The elasticity and the tensile strength of the *Tunica Albuginea* of the corpora cavernosa. J Urol. 1990;143:642–645.
- [8] Jallu A, Wani NA, Rashid PA. Fracture of the penis. J Urol. 1980;123:285–286.
- [9] Karadeniz T, Topsakal M, Ariman A, Erton H, Basak D. Penile fracture: differential diagnosis, management, and outcome. Br J Urol. 1996;77:279–281.
- [10] Muentener M., Suter S., Hauri D., and Sulser T. Long-term experience with surgical and conservative treatment of penile fractures. J Urol. 2004;172:576–579.
- [11] Nicolaisen GS, Melamud A, Williams RD, McAninch JW. Rupture of the corpus cavernosum: surgical management. J Urol. 1983; 130:917–919.
- [12] El-Sherif AE, Dauleh M, Allowneh N, Vijayan P. Management of a fracture of the penis in Qatar. Br J Urol. 1991;68:622–625.
- [13] Morey AF, Metro MJ, Carney KJ, Miller KS, McAninch JW. Consensus on the workup, treatment, and follow-up of genitourinary trauma: American Urological Association. World J Urol. 1999;17:135–140.