

Penile fracture with two ipsilateral corporal tears and delayed presentation: A case report

Emad Rajih, MD,* Abdullah Alenizi, MD;† Assaad El-Hakim, MD, FRCSC†

*Department of Urology, Taibah University, Madinah, Saudi Arabia; †Department of Urology, University of Montreal, Montreal, QC

Cite as: *Can Urol Assoc J* 2015;9(9-10):E741-3. <http://dx.doi.org/10.5489/cuaj.2959>
Published online October 13, 2015.

Abstract

Although penile fracture is an infrequent injury, it is a well-described urologic emergency. It results from the rupture of the tunica albuginea of corpora cavernosa by blunt strain that mandates immediate surgical exploration. Reported cases are usually single tear unless contralateral corporal tear is present. We present a case of 56-year-old with intraoperative findings of two separate tears in the same corpus cavernosum. Clinical presentation was also delayed for 4 days post-injury and repair was performed on day 7. This case accentuates the need for a high index of suspicion to rule out concomitant ipsilateral tear. Delayed repair was possible, and full recovery ensued.

Introduction

Fractured penis is caused by a break in the tunica albuginea of one or both corpora cavernosa by a blunt trauma during erection, mostly with vigorous sexual intercourse in 33% to 58% of cases. Given the tunical physical characteristics, which cause the penis to be less resistant to angulation, a sudden increase in intracavernous pressure that results from bending leads to tunical tear and penile rupture.¹ A clinical diagnostic approach is sufficient in typical presentations to guide surgical exploration. However, additional diagnostic workup, including Doppler ultrasound, cavernosography and magnetic resonance imaging, are reserved for patients with an ambiguous history or physical examination. Retrograde urethrogram or urethroscopy are reserved when concomitant urethral injury is suspected, usually when hematuria is present.²⁻⁴ Penile fracture mandates urgent surgical exploration to decrease the risk of sequelae and hasten the healing process.⁵ We report a case of penile fracture with delayed, albeit typical presentation and two ipsilateral corporal tears.

Case report

A 56-year-old male presented with extensive genital and suprapubic subcutaneous hematoma 4 days post-vigorous sexual intercourse (Fig. 1).

The patient and his female partner report a history of penile snapping during intercourse with severe pain, followed by loss of consciousness and immediate detumescence. There was no urethral bleeding, hematuria, or lower urinary tract symptoms. The patient consulted his family physician and then was referred electively for office urologic consultation.

On physical exam he was fully oriented and alert; his vital signs were within normal limit. Focused examination revealed an uncircumcised penis with circumferential phallic ecchymosis and swelling, with left deviation and tenderness to palpation and swelling at the right penile base (peno-scrotal junction). There was no blood at the urethral meatus. The remainder of the genital examination was intact. His abdominal examination revealed lower abdominal wall hematoma that was well-demarcated. Urinalysis was normal and devoid of red blood cells on microscopic examination. Based on anamnesis and physical examination, a diagnosis of a penile fracture was made clinically.

Considering the delay in presentation, the patient agreed to undergo elective surgical exploration and repair on day 7. Surgical penile exploration was achieved through a circumferential subcoronal incision and penile degloving. After complete hematoma evacuation, two transverse corporal tears were identified separated by a 1-cm intact tunica albuginea at the 7 o'clock, right corpus cavernosum ventrolateral aspect (Fig. 2).

Primary repair of both tears was performed with interrupted and inverted monofilament absorbable synthetic suture (Maxon 3 0) (Fig. 3). The patient was discharged the same day with an indwelling urethral catheter for 24 hours.



Fig. 1. Delayed presentation of penile fracture with well-demarcated large subcutaneous hematoma.

Discussion

Penile fracture is an unusual injury; therefore new case report findings will often suggest changes in patient care and/or surgical management. This case report unravels a new finding of two ipsilateral corporal tears managed with delayed primary surgical repair.

There is expert consensus on the necessity for surgical exploration of penile fractures. Reports show that surgical exploration has better outcomes and less complication compared to the conservative approach, with level 3 and 4 evidence in cohort retrospective studies and case series.⁶ Ibrahim and colleagues published a cohort of 155 cases where corporal ruptures were isolated unilateral in 139 (89.7%), bilateral in 3 (1.9%) cases, and no tunical tear was identified in 13 (8.4%) cases. Tunical tear was found in the

right corpus cavernosum in 90 patients (58.1%), and in the left side in 49 patients (31.6%). However, no ipsilateral dual corporal tears were documented in their cohort.² Koifman and colleagues also reported a series of 56 cases with 2 cases of bilateral tears, both associated with urethral disruption.⁷ Bilateral corporal tears are usually associated with urethral disruption; however, in our case of two ipsilateral tears, the urethra was intact.

A clinical diagnosis of penile fracture is often reliably made on distinctive history and physical findings. The patient typically presents with a cracking sound in the erect phallus followed by quick detumescence. Other findings at presentation may include penile swelling, ecchymosis and deviation of the penis to the opposite side.^{8,9} Most aforementioned signs and symptoms were present in our case.

Alongside vigilant physical examination, modalities that assist in diagnosis are cavernography, urethrography, ultrasonography, colour Doppler duplex scanning and magnetic resonance imaging.¹⁰ Conservative approaches are associated with high complication rates, increased hospital stay and worse long-term outcomes; therefore, urgent surgical exploration is advocated.^{12,13} Conservative management is also associated with infected hematoma, chronic pain, penile deformity, and erectile dysfunction.^{10,12,14,15} In the large series by Ibrahim and colleagues, surgical explorations were performed between 1 to 96 hours after presentation. Surgical outcomes were also very good with delayed repair.² Similarly, in our patient, delayed repair was possible on day 7 with an excellent outcome in 4-week follow-up.

Surgical exploration includes evacuation of hematoma, debridement and hemostasis, absorbable suture closure of corporal tear, and urethral repair if needed. Repair can be

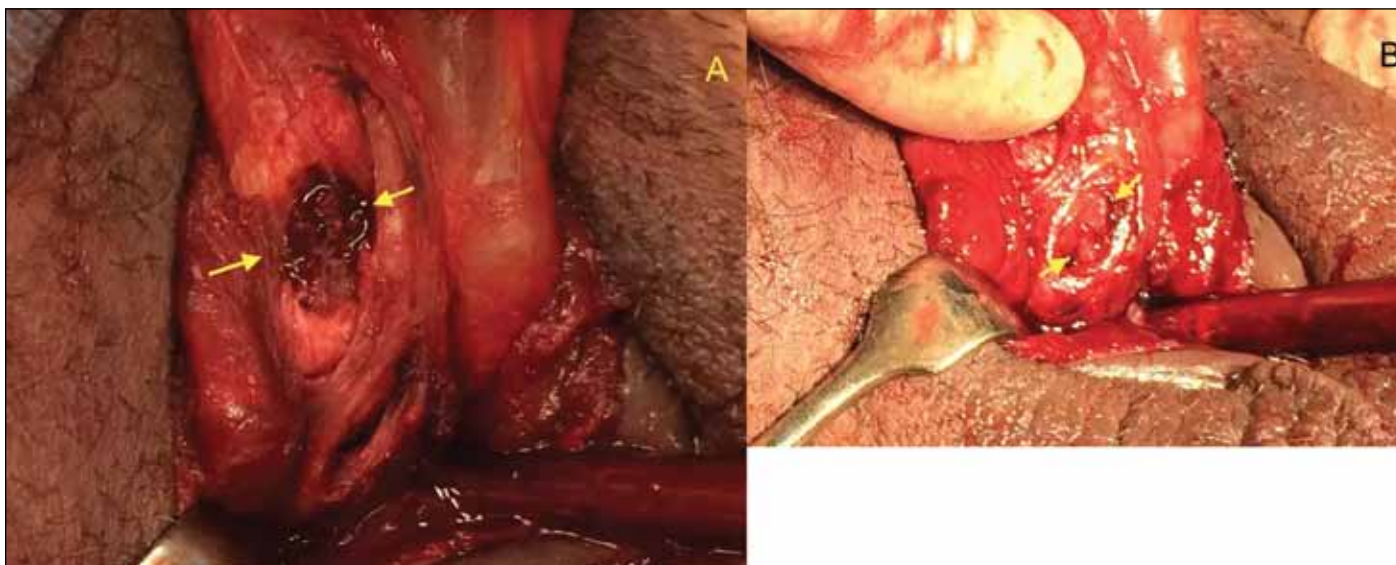


Fig. 2. Intra-operative two ipsilateral right transverse corporeal tears between yellow arrows A. Distal rupture B. Proximal rupture.

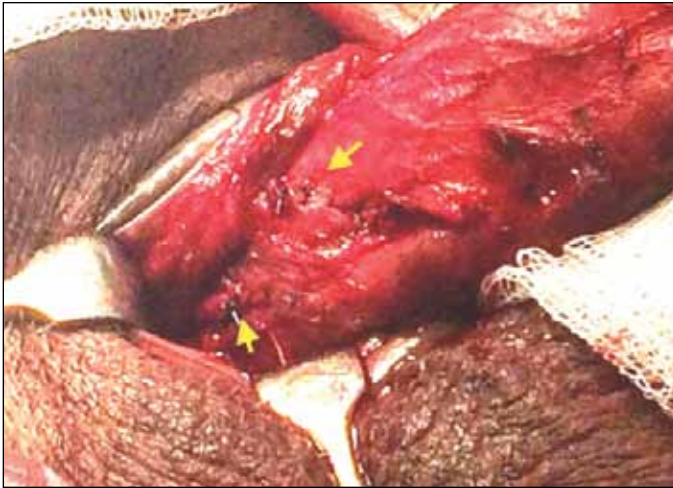


Fig. 3. Tears repaired with interrupted suture.

accomplished through a subcoronal skin incision; however, other approaches have been described with incision over the fractured site.^{12,16-18} The latter might miss associated concomitant tears in different locations.

Conclusion

Penile fractures are infrequent injuries; surgical repair is preferred even if delayed. Concomitant ipsilateral corporal tears should be suspected. This case emphasizes vigilance during surgical exploration and the need to search for concomitant ipsilateral tears.

Competing interests: The authors declare no competing financial or personal interests.

This paper has been peer-reviewed.

References

1. Martínez RJ, Pastor NH, Carrión LP, et al. Fracture of the penis: A case series. *Actas Urol Esp* 2008;32:599-602.
2. Ibrahim EL, El-Tholoth HS, Mohsen T, et al. Penile fracture: Long-term outcome of immediate surgical intervention. *Urology* 2010;75:108-11. <http://dx.doi.org/10.1016/j.urology.2009.08.057>
3. Fergany AF, Angermeier KW, Montague DK. Review of Cleveland Clinic experience with penile fracture. *Urology* 1999;54:352-5. [http://dx.doi.org/10.1016/S0090-4295\(99\)00115-6](http://dx.doi.org/10.1016/S0090-4295(99)00115-6)
4. Mydlo JH, Hayyeri M, Macchia RJ. Urethrography and cavernosography imaging in a small series of penile fractures: A comparison with surgical findings. *Urology* 1998;51:616-9. [http://dx.doi.org/10.1016/S0090-4295\(97\)00701-2](http://dx.doi.org/10.1016/S0090-4295(97)00701-2)
5. Waseem M, Upadhyay R, Kapoor R, et al. Fracture of the penis: An atypical presentation. *Int J Emerg Med* 2013;6:32. <http://dx.doi.org/10.1186/1865-1380-6-32>
6. Restrepo JA, Estrada CG, García HA, et al. Clinical experience in the management of penile fractures at Hospital Universitario del Valle (Cali-Colombia). *Arch Esp Urol* 2010;63:291-5. <http://dx.doi.org/10.4321/S0004-0614201000400008>
7. Koifman L, Andre GC, Carlos HM, et al. Penile fracture - experience in 56 cases. *Int Braz J Urol* 2003;29:35-9. <http://dx.doi.org/10.1590/S1677-55382003000100007>
8. Muentener M, Suter S, Hauri D, et al. Long-term experience with surgical and conservative treatment of penile fracture. *J Urol* 2004;172:576-9. <http://dx.doi.org/10.1097/01.ju.0000131594.99785.1c>
9. Gottenger EE, Wagner JR. Penile fracture with complete urethral disruption. *J Trauma* 2000;49:339-41. <http://dx.doi.org/10.1097/00005373-200008000-00025>
10. Eke N. Fracture of the penis. *Br J Surg* 2002;89:555-65. <http://dx.doi.org/10.1046/j.1365-2168.2002.02075.x>
11. Armenakas NA, Hochberg DA, Fracchia JA. Traumatic avulsion of the dorsal penile artery mimicking a penile fracture. *J Urol* 2001;166:619. [http://dx.doi.org/10.1016/S0022-5347\(05\)66005-3](http://dx.doi.org/10.1016/S0022-5347(05)66005-3)
12. Gamal WM, Osman MM, Hammady A. Penile fracture: Long-term results of surgical and conservative management. *J Trauma* 2011;71:491-3. <http://dx.doi.org/10.1097/TA.0b013e3182093113>
13. Dubin J, Davis JE. Penile emergencies. *Emerg Med Clin North Am* 2011;29:485-99. <http://dx.doi.org/10.1016/j.emc.2011.04.006>
14. Asgari MA, Hosseini SY, Safarinejad MR, et al. Penile fractures: Evaluation, therapeutic approaches and long-term results. *J Urol* 1996;155:148-9. [http://dx.doi.org/10.1016/S0022-5347\(01\)66578-9](http://dx.doi.org/10.1016/S0022-5347(01)66578-9)
15. El Atat RE, Sfaxi M, Benslama MR, et al. Fracture of the penis: Management and long-term results of surgical treatment. Experience in 300 cases. *J Trauma* 2008;64:121-5. <http://dx.doi.org/10.1097/TA.0b013e31803428b3>
16. Patel A, Kotkin L. Isolated urethral injury after coitus-related penile trauma. *J Trauma* 2010;68:89-90. <http://dx.doi.org/10.1097/TA.0b013e31818d0e2d>
17. Seftel AD, Haas CA, Vafa A, et al. Inguinal scrotal incision for penile fracture. *J Urol* 1998;159:182-4. [http://dx.doi.org/10.1016/S0022-5347\(01\)64051-5](http://dx.doi.org/10.1016/S0022-5347(01)64051-5)
18. Naraynsingh V, Maharaj D, Kuruvilla T, et al. Simple repair of fractured penis. *J R Coll Surg Edinb* 1998;43:97-8.

Correspondence: Dr. Assaad El-Hakim, 175 Ch. Stillview, Suite 200, Pointe-Claire, QC H9R 4S3; assaad.elhakim@gmail.com