Urology Case Reports 40 (2022) 101933

Contents lists available at ScienceDirect

Urology Case Reports

journal homepage: www.elsevier.com/locate/eucr

Occult penile fracture: An atypical presentation

Vaddi Chandra Mohan, Paidakula Ramakrishna, P.M. Siddalinga Swamy, Rakesh Panda *, Soundarya Ganesan, Hemnath Anandan

Preeti Urology and Kidney Hospital, 307, Remedy Hospital Lane, Mig1, Kphb Colony, Kukatpally, Hyderabad, Telangana, 500072, India

ARTICLE INFO

Keywords:
Penile fracture
Corpora cavernosa
Blunt trauma

ABSTRACT

Penile fracture is a urological emergency. Most cases are under reported due to social stigma. It is caused by rupture of the tunica -albuginea of corpora cavernosa.

Here we present an atypical case of penile fracture, with normal physical examination findings. But characteristic history and ultrasonography, led us to penile exploration and timely repair. Delay in diagnosis and treatment could have led to complications.

Objective of our case report is to raise suspicion of fracture penis in patients with typical history, even without physical findings with normal appearing penis. This helps in early repair and prevent complications.

1. Introduction

Penile fracture is a misnomer, in fact this condition is defined as a rupture of the tunica albuginea of one or both corpora cavernosa.[1] The presentation of penile fracture may vary depending upon the time interval between occurrence and treatment and on the presence of associated injuries. Delay in presentation is mainly due to fear and embarrassment. The usual cause is abrupt bending of the erect penis by blunt trauma, which may occur during sexual intercourse, masturbation or falling onto the erect penis.[2] Classically these patients present with history of cracking (pop-up) sound, followed by rapid detumescence of the erect penis and intense local pain3.

Patient may develop hematoma, bruising & characteristic deformity known as 'eggplant deformity' of the penis.[3] But here we present an atypical case of fracture penis with normal physical findings and no cracking sound. Ultrasonography (USG) & retrograde urethrography (RGU) help in confirming the diagnosis when a diagnostic dilemma occurs.[4] Early diagnosis and treatment can prevent complications like penile ischemia, necrosis, deformity & erectile dysfunction.[5]

2. Case report

A 31 years old man presented to our hospital with complaints of per urethral bleeding while having sex with sudden detumescence. It was not associated with any penile swelling, hematoma or deformity (Fig-1). Patient was able to pass urine with mild per-urethral bleed at the end of micturition. Local penile examination was unremarkable with normal appearing penis, which was misleading. Palpation of corpora revealed no significant defect. Only mild tenderness on distal penile shaft was found ventrally. Retrograde urethrogram was done & found to be perfectly normal.

Penile ultrasonography confirmed a defect in tunica albuginea of distal 1/3rd of right corpora cavernosa involving Buck's fascia. It also showed altered urethral contour in distal penile shaft (Fig-2) confirming penile fracture. Although physical findings were not suggestive of penile fracture, patient was explained about the complications of delayed repair, in view of USG findings.[3]

Penile exploration was planned. With a circum-coronal incision, penis was degloved. No obvious hematoma or rent was seen either in tunica albuginea of corpora cavernosa or spongiosum.

Initially we thought there is no defect. But on pressing the cavernosa of distal penile shaft, there was urethral bleeding. With USG report confirming the diagnosis and urethral bleed, we explored most ventral distal aspect of corpora cavernosa hidden by spongiosum.[3,4]

After separating the urethra from corpora, altered blood with 1cm long tear was found in tunica albuginea of distal ventral penile shaft. It was completely hidden by urethra. It was located 1cm proximal to glans. We found 1cm long tear in urethra and spongiosum (Fig-3).

Altered blood along with hematoma drained and tear in tunica was repaired with vicryl 3-0 with inverting sutures. Urethra was closed with

* Corresponding author.
E-mail addresses: vcmohan2001@yahoo.co.uk (V. Chandra Mohan), paidakula@hotmail.com (P. Ramakrishna), drsidda@gmail.com (P.M. Siddalinga Swamy), rakeshmkcg@gmail.com (R. Panda), drsoundarya.ganesan@gmail.com (S. Ganesan), hemusound@gmail.com (H. Anandan).

https://doi.org/10.1016/j.eucr.2021.101933
Received 16 October 2021; Received in revised form 5 November 2021; Accepted 8 November 2021
Available online 10 November 2021

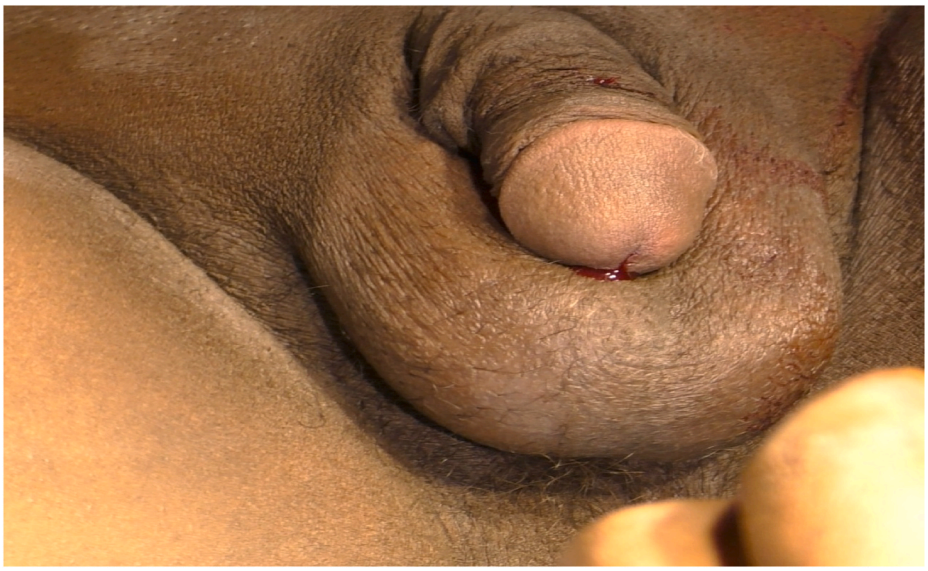

Fig. 1. Atypical presentation of Fracture Penis, showing Normal External appearance of Penis.

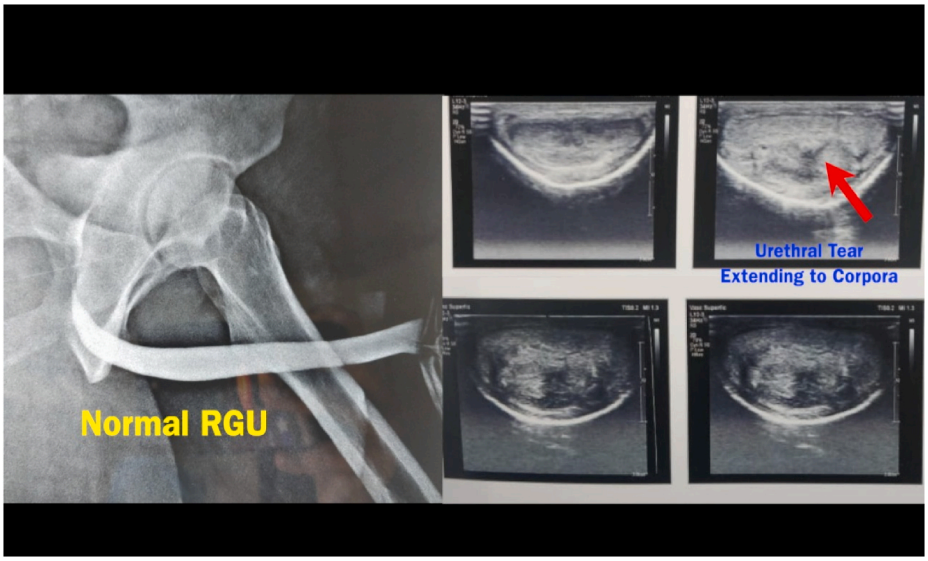

Fig. 2. Penile USG showing defect in tunica albuginea of Right Distal corporal shaft with altered Urethral contour.

PDS 3-0. Spongiosum was again fixed to corpora. Circumcision was done.16Fr Foley's catheter was placed for 1week.After Foley's catheter removal, he voided urine normally and could obtain normal erection episodes there-after.

3. Discussion

Fracture Penis is rupture of tunica albuginea of corpora cavernosa. It is an emergency urological condition.[4] Usually this is underreported due to social embarrassment and guilt. Patient also presents late to hospital for the same, which can lead to penile deformity & sexual impairment.[4,5]

Recently there is rise on it's incidence. Largest number of cases reported in Middle East & North Africa.[1,2] In the Western world, penile fracture usually occurs when the erect penis hits the female pelvis during enthusiastic sex, while in the Middle East the "taqaandan" (or taghaandan) manoeuvre is responsible for a significant number of cases.[4]

Still the most common etiology is vaginal intercourse.[4,5] Typical sexual positions like girl on top & anal intercourse increase risk of penile fracture. Some other causes are forceful bending during masturbation, rolling over on the bed, or falling onto the erect penis.[1,2]

The tunica albuginea is a fibroelastic sheath covering each corpora cavernosa.[4,5] It provides flexibility, rigidity & tissue strength to penis. It's bilayered structure. Outer layer is absent in 5 & 7 'O' clock position of corpora cavernosa & spongiosum.[1,5] It is 2mm thick when flaccid, but thins to 0.25–0.5mm during erection. Vigorous sexual intercourse with abnormal bending of erect penis leads to abrupt increase in intra-cavernosal pressure exceeding tensile strength of tunica albuginea. This leads to fracture penis.[5]

Diagnosis is usually from typical history and clinical examination.[1,2] A cracking or popping sound is reported at the time of intercourse or penile manipulation as tunica tears. This is followed by pain and sudden detumescence, discoloration & swelling of penile shaft.

If Buck's fascia is intact, it results in typical 'Egg-plant' deformity.[4,5] Difficulty in passing urine or bleeding per urethra points to suspect urethral injury. Retrograde-urethrogram helps in diagnosing urethral injury. Ultrasound helps in confirming diagnosis by detecting any breach in tunica albuginea.[3]

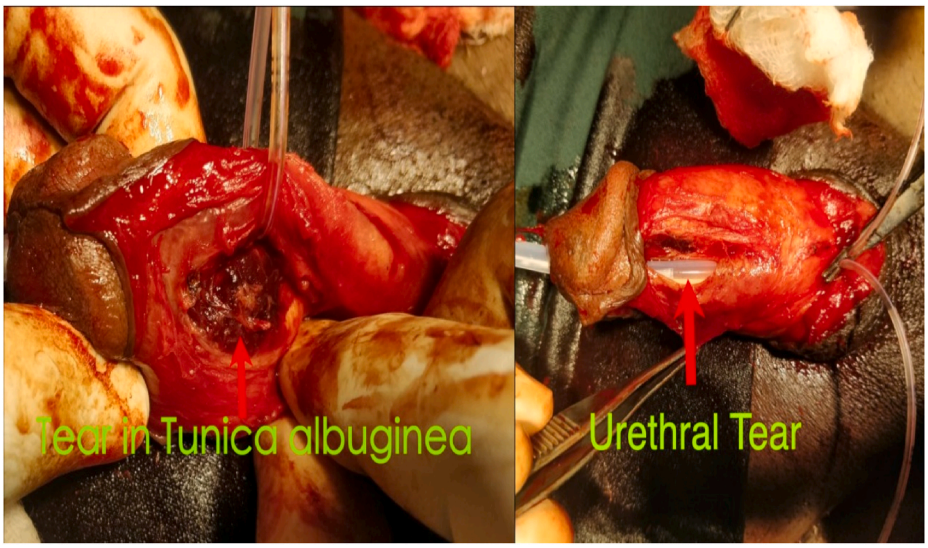

Fig. 3. Showing tear in tunica albuginea of Right distal penile corporal shaft & Urethral tear.

Penile fracture is a urological emergency.[1] Earliest surgical exploration is treatment of choice.[4,5] Exploration with subcoronal circumcising incision allows complete exposure of corporal bodies along with spongiosum. Any hematoma should be evacuated with ligation of bleeding vessels & tunical tears to be repaired with absorbable suture with buried knots. Spongiosal injury with urethral involvement should be repaired with sutures if any.[5]

Early surgical repair of fracture penis results in faster recovery, decreased morbidity and complications.[4,5] Recent studies have shown delayed repair may lead to complications like penile deformity, pain during intercourse, necrosis, erectile dysfunction & stricture urethra.[5]

Physical findings & RGU in our case was normal, which is very unlikely as reported in literature. We did early surgical exploration, based on Ultrasound findings.[3] We could repair the tunical tear as well as urethral tear, which led to early recovery of patient.[4,5] He could pass urine normally after Foley's removal and achieved normal erection episodes after that.

4. Conclusion

Sometimes physical examination is deceiving in diagnosis of penile fracture. In these cases low threshold for early surgical repair is indicated based on typical history & Ultrasound findings. Timely diagnosis & early surgical repair prevents complications & fastens recovery.

Declaration of competing interest

Nil.

Acknowledgments

We will be thankful to **Dr Manas Babu (7th Author)**, for his contribution in concept, designing of manuscript.

References

1. Dubin J, Davis JE. Penile emergencies. *Emerg Med Clin North Am.* 2011;29:485–499.
2. Ekwere PD, Rashid MA. Trends in the incidence, clinical presentation and management of traumatic rupture of the corpus cavernosum. *J Natl Med Assoc.* 2004; 96:229–233.
3. Nomura JT, Sierzenski PR. Ultrasound diagnosis of penile fracture. *J Emerg Med.* 2010;38:362–365.
4. Cummings J, Parra RO, Boullier JA. Delayed repair of penile fracture. *J Trauma.* 1998;45(1):153–154.
5. Gamal WM, Osman MM, Hammady A, et al. Penile fracture: long-term results of surgical and conservative management. *J Trauma.* 2011;71(2):491–493.