

Penile fracture with complete urethral transection

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ABSTRACT

Penile fracture with associated urethral injury is rare, but if it is associated with a complete urethral transection, then it is very rare and needs utmost attention to deal with it. This type of cases should be dealt with very precaution, and proper investigation should be done preoperatively to avoid post-operative complications. Here, we present a case of penile injury with complete urethral rupture and its successful management.

Key words: *Cavernosum, Penile fracture, Urethroplasty*

Penile fracture with urethral injuries has an incidence of 3–20% [1], but penile fracture with complete urethral transection is very rare. It worsens the immediate and long-term prognosis and poses a problem during management. Penile fracture is basically rupture of tunica albuginea, which is one of the strongest fasciae of the body, and it was found that it needs an intracorporeal pressure of 1500 mm Hg or more during erection to tear tunica albuginea [2,3]. Although penile fracture is most commonly associated with sexual intercourse, it can also be associated with masturbation and trauma such as rolling over or falling onto the erect penis.

The first documented report of this fracture credited to an Arab physician, Abul Kasem, in Cordoba over 1000 years ago [4]. Urethral rupture must be suspected in any case of penile fracture presenting with bloody urethral discharge. We are reporting a case report of penile fracture with complete urethral transection.

CASE REPORT

A 30-year-old male presented to the emergency department with a complaint of penile swelling and acute retention of urine. He had a history of trauma to the penis by fall of a bicycle on the genital area while riding it, followed by blood at urethral meatus and acute retention of urine. Subsequently, penile swelling occurred which was generalized, associated with the pain, and there was right-sided deviation of the penis.

On general examination, the patient was conscious, cooperative, and well oriented to time, place, and person. The penile fracture was not associated with any injury, internal bleeding, and head trauma. Patient's vital parameters were within the normal range. On imaging (ultrasonography abdomen and X-ray pelvis), there were no signs of internal bleeding and fractured pelvis.

Surgical exploration of the penis was done under spinal anesthesia. On exploration, there was a breach in tunica albuginea, and urethra was found completely transected. Transected urethral ends connected by Foley's catheter (Fig. 1a). Then, repair of tunica albuginea and anastomotic urethroplasty was done (Fig. 1b). Postoperatively, the wound was healthy and the patient was discharged. Pericatheter retrograde urethrogram was done after 3 weeks which showed no leakage and catheter was removed. Retrograde urethrogram at follow-up of 3 months showed no stricture (Fig. 2).

DISCUSSION

Penile fracture can be defined as a rupture of tunica albuginea. Most common etiology is during sexual intercourse. Other etiology of penile fracture can be trauma on an erect penis such as rolling over or falling onto the erect penis. In this situation during erect penis, rupture of tunica albuginea most commonly occurs ventrolaterally as the thickness of tunica is thinnest on ventral and lateral aspect [3]. If the tunica albuginea buckles, the resultant increase in intracavernosal pressure can lead to a tunical tear. This typically occurs during an attempted reentry in a position in which the weight and thrust of the partner are brought to bear directly onto the tip of the penis. The suggestion has recently been made that fibrosclerosis and inflammation of the tunica albuginea are a predisposing risk factor [4], which would account for the devastating consequences of such a seemingly trivial mechanism of injury. The typical findings at the presentation of penile fracture consist of penile swelling, ecchymosis, and the penile deviation [5], also known as the "aubergine sign," or the "eggplant sign."

The penile fracture may be associated with urethral injury in 3–20% of cases [1,6,7]. Some authors suggest the incidence of an urethral injury associated with the penile fracture to be from

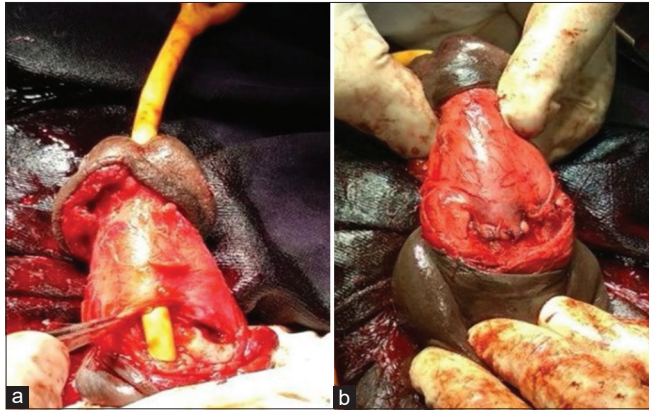


Figure 1: (a) Transected urethral ends connected by Foley's catheter, (b) wound after anastomotic urethroplasty



Figure 2: Retrograde urethrogram done after 3 months

10 to 30% [8]. However, penile fracture is rarely associated with complete urethral transection. It worsens the immediate and long-term prognosis and poses a problem of management. Blood at the meatus, an inability to void, and hematuria are the ominous signs of urethral injury in a case of penile fracture. Although there can be bleeding per urethra without associated urethral rupture [9], there can also be false negative results in retrograde urethrography [10] or cystourethroscopy, which should be considered during initial workup.

Urethral injuries are managed by primary closure over catheter by 2–0 or 3–0 absorbable sutures. Complete

urethral injuries should be debrided, mobilized, and repaired in a spatulated, tension-free fashion over a catheter [11]. Postoperatively, a catheter is removed usually after 3 weeks, and patients should be counseled that the risk of erectile dysfunction remains high. If the urethral injury is missed, then the patient can come with stricture urethra, which should be managed accordingly.

CONCLUSION

Penile fracture is rarely associated with urethral injuries, but penile fracture associated with complete urethral transection is very rare. Surgeons should not miss urethral injuries as these injuries lead to urethral fistula and urethral strictures.

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