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CASE REPORT

Isolated penile urethral injury: A rare case following male coital trauma

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Abstract Penile fractures are an uncommon urological emergency. Typically, penile fractures involve the corpus cavernosum and are sometimes associated with urethral injury. Isolated corpus spongiosum and urethral injuries without concomitant corpus cavernosum injury are, however, rare. With proper knowledge of the management of penile fractures and urethral injuries, this distinct entity can be diagnosed, assessed and managed successfully without complications.

1. Introduction

Penile fractures are an uncommon urological emergency [1] but are probably under-reported due to patients' embarrassment [2]. It often occurs during sexual intercourse or masturbation, although various other causes have been described. Typically, penile fractures involve the corpus cavernosum and are sometimes associated with urethral injury [3,4]. A common differential diagnosis is the isolated rupture of the superficial dorsal penile vein [5]. However, isolated corpus spongiosum and urethral injuries without concomitant corpus cavernosum injury are rare [6,7]. We report a case of isolated penile urethral injury following coital trauma.

2. Case presentation

A 54-year-old male presented to the emergency department with penile injury. The trauma occurred when the patient was having sexual intercourse with his wife at around 2 o'clock in the early morning. His wife kneeled forward and he penetrated from behind. The patient then accidentally collided his penis into his wife's buttocks. He felt a popping sensation and reported rapid detumescence followed by severe penile pain and hematoma formation. He passed blood-stained urine mainly at the beginning of the stream, but was otherwise able to void. Subsequently, he presented to the emergency department 2 h after the accident. Physical examination revealed a flaccid, uncircumcised penis with a 4 cm preputial hematoma and

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associated with blood stains on his urethral meatus (Fig. 1). With the probable diagnosis of a penile fracture with suspected urethral injury, the patient agreed for surgical exploration under general anesthesia.

Intraoperatively, flexible urethrocystoscopy revealed a distal penile urethral defect situated over the 6 to 10 o'clock position around 2 cm from urethral meatus (Fig. 2). After urethral catheterization, the penis was degloved with a subcoronal circumferential incision and the hematoma was evacuated. A transverse full-thickness tear of the right ventral aspect of the distal penile urethra and corpus spongiosum, involving nearly one-third of the circumference, was identified, compatible with the findings of urethrocystoscopy. There were no defects in the tunica albuginea over corpus cavernosa. The urethral defect was repaired primarily with 4—0 polyglyconate (Maxon) in an interrupted fashion (Fig. 3). The defect was covered with a small dartos flap (Figs. 4 and 5). Circumcision was performed and the skin was approximated with 4—0 polyglactin 910 (VICRYL Rapide) (Fig. 6). Urethral catheter was inserted for urinary diversion in order to protect the repair site.

The patient recovered well and the urethral catheter was removed 7 days after the operation. On his latest follow-up, his erectile function was preserved and he voided well with a good stream. There were no signs of stricture or fistula formation clinically.

3. Discussion

The true incidence of penile fractures has never been reported. Due to the rarity of the disease, discussion of the management depends mainly on retrospective case series. In one review article, 1331 cases were reported over 66 years in 183 publications. More than half of the cases were from Mediterranean countries including Turkey. "Taghaandan", referring to the practice of kneading an erected penis to achieve detumescence, is a common cause of penile fracture in that region [1,4]. Otherwise, sexual intercourse and masturbation are the most common etiologies of the disease [1—4].

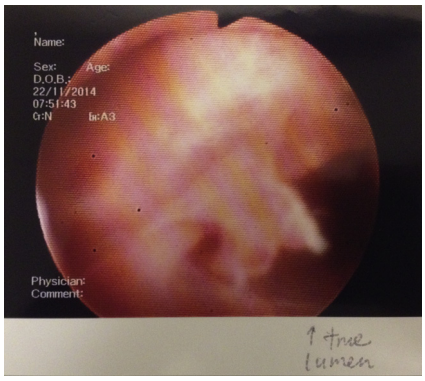

Figure 2 Endoscopic view of distal penile urethra. The true lumen was on the right side.

Penile fractures can involve one or both of the corporal bodies [4]. Up to 38% of penile fractures are associated with urethral injury [8,10,11] and are more likely to have bilateral corpus cavernosal tear than unilateral tear [4,8—10]. Penile fractures usually occur on the ventral side of the proximal shaft [3,8,18]. This may be explained by the proximal location of the fulcrum of an erect penis [23]. Our patient suffered from corpus spongiosal and urethral injury at the very distal part of the penis, which may be due to his position during intercourse with direct blow of the distal part of penis into the buttock and pelvic bone of his partner, which is slightly different from the sudden and forceful angulation of the penis during intercourse or masturbation commonly experienced by other patients [1].

The diagnosis of penile fractures is mainly clinical. Patients commonly report a "pop" sound, followed by immediate detumescence, pain, hematoma and "egg-plant" penile deformity [3,12]. Different imaging modalities including cavernosography [13,14], urethrography [10,15], ultrasonography [16], color Doppler duplex [17], magnetic

Figure 1 Clinical photo of the injured penis.

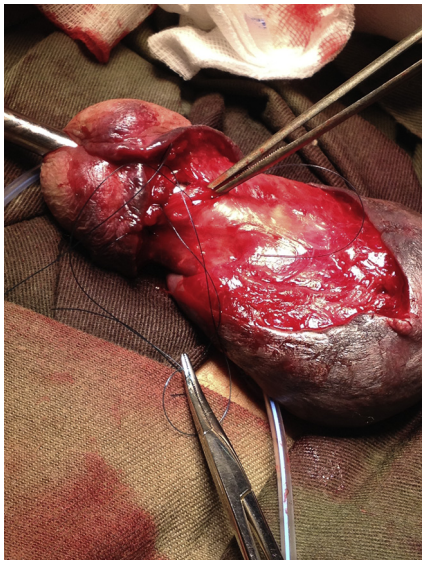

Figure 3 Repair of urethra.