Case Report

Penile Fracture with Complete Urethral Rupture

Chin T. Heng and Andrew J. Brooks, Department of Urology, Westmead Hospital, New South Wales, Australia.

We report a rare case of penile fracture with complete urethral rupture in a 25-year-old male who sustained the injury during sexual intercourse. He presented with a tense haematoma on the ventral aspect of the penile shaft, associated with per urethral bleeding. Despite the injury, he was able to void painlessly. Retrograde urethrography revealed complete obstruction at the proximal third of the urethra. Exploration and repair of the penile fracture and urethra were performed. The patient made an uneventful recovery with good erectile and voiding function. This case illustrates the value of retrograde urethrography in assessing urethral injuries in patients with penile fracture. [Asian J Surg 2003;26(2):126–7]

Introduction

Penile fractures often present dramatically to the emergency department. It refers to the disruption of the tunica albuginea of the corpus cavernosum due to sudden bending of an erect penis. This causes rapid detumescence associated with haematoma formation at the site of the tear. Urethral injury associated with penile fracture is an uncommon occurrence. We report on a rare case of complete urethral rupture sustained during a penile fracture.

Case report

The patient was a 25-year-old man who sustained the penile fracture during sexual intercourse. There was a sudden “crack” sound associated with a sharp pain in the penis, rapid detumescence and brisk bleeding per the urethra. He presented to the emergency department 4 hours later. At that time, the bleeding had stopped. There was a tense haematoma on the ventral aspect of the proximal third of the penile shaft, which was tracking distally. He was able to void a small amount of blood-stained urine. There was no palpable defect in the tunica albuginea. The penis was otherwise flaccid, with no fixed deviation.

Retrograde urethrography demonstrated complete obstruction at the proximal third of the penile urethra with extravasation of contrast medium, draining into the peri-urethral vessels (Figure). Emergency exploration was performed. A circumcising incision was made and the penis degloved. Complete disruption of the urethra was found; there were lacerations of both corpora cavernosa adjacent to the urethral injury, the right and left corporal lacerations measuring 1.0 cm and 1.5 cm, respectively.

The corporal lacerations were repaired with absorbable sutures and the urethra repaired over a silicone catheter. The patient was also given a course of broad-spectrum antibiotics. He made an uneventful recovery.

Nocturnal erections resumed on the third postoperative day; this was controlled with nightly doses of diazepam.

Three weeks’ postoperatively, urethrography showed no leakage of contrast medium from the urethra and the urethral catheter was removed. Three months postoperatively, the patient reported good erections and a normal urinary stream.

Discussion

Penile fractures are most commonly related to sexual intercourse, in 58% to 94% of cases.1–3 Urethral injury associated with penile fracture is uncommon, occurring in 11% to 22% of cases.2,3 Complete urethral rupture is even more infrequently seen, with only a few cases having been reported.4,5
PENILE FRACTURE WITH URETHRAL RUPTURE

Figure. Retrograde urethrogram demonstrating complete obstruction at the proximal penile urethra with extravasation of contrast medium into the peri-urethral vascular tissues. The bulbar urethra is not visualized.

The mechanism of urethral injury in penile fractures has not been studied. Presumably, it would be more likely when the force is directed at the ventral aspect of the penile shaft, i.e. a dorsiflexion force. This is consistent with the presentation of our patient, where the tunical tear was ventral and traversing both corpora and the urethra. It has also been suggested that urethral injuries are more common when the force of injury is greater.5

The diagnosis of penile fracture is usually quite obvious with a definite history of trauma, a “crack” sound and rapid detumescence of the erection. Urethral injuries, on the other hand, can be difficult to diagnose. As seen with our patient, the ability to void can be misleading.4 We suggest that the classical signs of urethral injury be used as indications for urethrography, i.e. blood at the meatus, inability to void or gross haematuria, particularly in association with a ventral tunical tear.

Most surgeons advocate open exploration of all penile fractures as it results in better outcomes than does conservative management in terms of penile deformity and erectile function.2–3 Partial urethral injuries have been variously treated with placement of a urethral catheter alone, suprapubic catheterization alone or with primary repair.2,3 Due to the small numbers of such cases, a comparison of these approaches cannot be performed. A complete rupture would more likely be associated with a significant tunical injury and should be repaired primarily.1

Conclusion

Urethral injury in penile fractures is uncommon, with complete rupture even more so. This case illustrates the value of retrograde urethrography in the assessment of patients with penile fractures who are suspected of concomitant urethral injuries.

References