

Complete Rupture of the Urethra Associated With a Fracture of the Two Corpora Cavernosa: About Two Cases

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ABSTRACT

We report two cases of fracture of the two cavernous bodies associated with a complete rupture of the secondary urethra to a false step of coitus. This association is exceptional. Emergency surgical exploration makes it possible to make a precise lesion assessment and to repair them to obtain better functional results.

Keywords: Rod fracture; Complete rupture of the urethra; Surgery

CASE 1

A 32-year-old male presented to the emergency department with painful swelling of the penis during sexual intercourse. The pain had sudden onset and was preceded by an audible snapping and prompt detumescence. The medical history revealed that the penis crushed into the pubic symphysis of his partner.

On examination, he had a painful penile hematoma and urethrorrhagia, no urinary retention was found. No ultrasound was performed.

The patient was diagnosed with a penile fracture and taken immediately to the operation room.

During surgical exploration, a hematoma was discovered facing a trauma of both the corpus cavernosums at the level of the Root of the penis associated with a complete section of the urethra. After evacuating the hematoma, the defect was closed primarily by an anastomotic urethroplasty with six 4-0 resorbable sutures with a foley catheter in place, then the corpus cavernosums were repaired with 3-0 resorbable sutures.

The urethral catheter remained for 2 weeks. Postoperative was simple with antibiotics, analgesics and Cyproterone acetate to prevent unintentional erections

The patient returned 3 months later fully recovered and able to achieve micturition with no problems whatsoever. No stenosis was found on the urethrocytography.

Sexual activity was preserved with no problem whatsoever but a penile curvature of 20 degrees remained (Figures 1-3).



Figure 1: Eggplant rod associated with urethrorrhagia.

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Figure 2: Complete rupture of the urethra and both corpora cavernosa.



Figure 3: Voiding image of the postoperative retrograde urethrocytography.

CASE 2

A 21-year-old male presented to the emergency department 24 hours after an accident during intercourse, with painful swelling of the penis. The pain had sudden onset and was preceded by an audible snapping and prompt detumescence. The medical history revealed that the penis crushed into the pubic symphysis of his partner. The patient had urethrorrhagia and urinary retention after the incident.

On examination, he had a painful penile deformity, urethrorrhagia and urinary retention. No ultrasound was performed.

During surgical exploration, a hematoma was discovered facing a symmetric trauma of both the corpus cavernosums at the proximal third of the penis associated to a complete section of the urethra (Figures 4 and 5). After evacuating the hematoma, the defect was closed primarily by an anastomotic urethroplasty with 3-0 resorbable sutures with a 16Fr foley catheter in place (Figure 6), then the corpus cavernosums were repaired with 3-0 resorbable sutures.

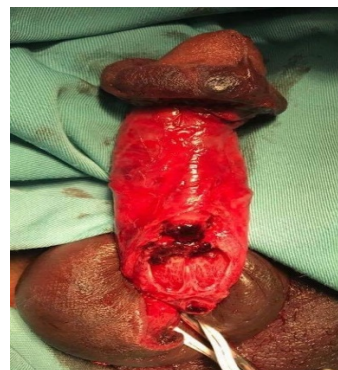


Figure 4: Complete rupture of the urethra and both corpora cavernosa.



Figure 5: Complete rupture of the urethra and both corpora cavernosa.



Figure 6: Image after repair of the urethra and the two corpora cavernosa.

The urethral catheter remained for 2 weeks. Postoperative was simple with antibiotics, analgesics and Diazepam to prevent erections.

The patient was fully recovered and able to achieve micturition and sexual activity with no problems whatsoever.

DISCUSSION

The tunica albuginea is one of the most resistant fascias of the human body, its likelihood to fracture is high due to the erection, and its diameter goes from 2mm to 0.5mm [1-3].

The association of urethral lesion in penile fractures varies between 10 and 22% and it's often partial. The complete tear of

the urethra is exceptional and often associated to the break of both corpus cavernosums [4,5].

The urethrorrhagia and urinary retention are the most frequent sign of associated urethral lesion [6]. That was the case for our two patients. However, their lack does not allow to eliminate the possibility of urethral lesion [7].

Many authors suggest to do cystography each time we a urethral lesion is suspected [8,9]. We did not do it for our patients. In fact, in our conditions a good surgical exploration was enough to find the associated urethral lesion.

The ideal management of the penile fracture is surgery. The management of the urethral lesion consists on a spatulation and anastomosis without tension [3,4]. Touti and Mangin used the multi perforated catheter to drain the urethra that they left in the anterior urethra for five to ten days. Urin is drained by a supra pubic catheter for fifteen to twenty one days [6,10,11]. For our patients however, we managed the penile fractures with an urgent surgical exploration and repaired the corpus cavernous lesion with simple sutures and anastomotic surgery for the urethral lesions. We didn't use the supra pubic catheter drainage, as described by Karasaneni and Masarani [10,12].

After nine months, we found a penile curvature of 20 degrees in one patient, it didn't need any further management and didn't bother the patient for his sexual activity. Kasaraneni has found a urethral stenosis in one of his patients as well as one penile curvature. He managed the stenosis by a Direct Vision Internal Urethrotomy DVIU, while the penile curvature didn't need any further treatment. Like Kasaraneni and Ketata [10,13] our patients did not have any erectile dysfunction whatsoever.

According to Patil, el al. a quick management of the penile fracture under the deadline of 24 hours can reduce the risk of ED, penile curvature, postoperative pain and infection [14]. That goes along with our results, because the deadline of 24 hours was always respected in our patients.

CONCLUSION

Penile fracture is a rare urologic emergency. Its association with a urethral lesion is exceptional. The quickness of the surgical

management for our patients allowed us to obtain good functional outcome.

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