Penile fracture in a 65 - year old man: Combined approach with conservative treatment and delayed surgical repair

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Abstract

Introduction: Penile fracture is a relatively uncommon urologic emergency, happening mainly during coitus. Although it occurs in young males, our case demonstrates that competent, elderly men are also affected.

Case report: A 65 year old man presented with the typical history of a penile fracture. Physical examination showed a painful, swollen, ecchymosed penis. Since the involvement of urethra was considered unlike, the patient underwent to a combined conservative and surgical treatment.

Conclusion: A combination of conservative and surgical treatment offered equal results with the immediate approach. The patient preserved his potency, reporting no pain or deviation 2 months after the surgery.

Introduction

Penile fracture is considered to be a rather infrequent event in the list of urologic emergencies. Sometimes, due to the violent manipulation during erection, tunica albuginea is unable to tolerate the high intracorporeal pressure and is ruptured. The result is the creation of a localized or diffuse hematoma which in case of Buck’s rupture is expanded in the scrotum and the lower abdominal wall. Urethra may be affected if corpora spongiosum is involved¹.

The diagnosis of a penile fracture is mainly clinical and is based on physical history and examination. Most of the patients report a violent deviation of the penis during coitus or other manipulation, resulting in acute pain, loss of erection and a rapid expanding swelling of the penile shaft. Hematuria, difficulties in urination or bloodstain from the meatus implicate involvement of the urethra, condition which demands rapid evaluation².

Surgical correction consists of evacuating the hematoma, closing the defect of the tunica albuginea and the Buck’s fascia, as well.

In case of urethra involvement,
urethral meatus could not be seen due to the swollen prepuce, but no blood tearing was observed. A Tiemman catheter was placed successfully in blind (figure 1). The patient denied underlying diseases and he reported no co-existent Peyronie’s disease, a previously otherwise healthy penis, aesthetically and functionally. He was admitted in our hospital and the appropriate diagnosis for penile fracture led to careful management scheduling.

**Case presentation**

We report the case of a 65-year-old male who presented to the emergency department a few hours after a blunt self-injury of his penis. Specifically, the patient said that he had tried to put his erected penis back into his underwear in order to void; a “cracking” sound was then followed by a rapid detumescence and severe penile pain. Nevertheless, the patient said that he had voided well several times, reporting no hematuria.

Physical examination revealed a flaccid and entirely swollen penis, totally ecchymosed from the pubic symphysis up to the prepuce. In the ventral aspect the swelling was found up to the scrotum.

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**Treatment**

Initially, the patient received conservative treatment with antibiotics and anti-inflammatory drugs. Approximately 2 days after the event, the man was scheduled for a surgical exploration and repair.

A sub coronal, circumcision-like incision was made. The penis was degloved up to the penoscrotal junction. A hematoma in the left aspect of the penis was recognized (fig. 2) and was evacuated. The rupture of corpora cavernosa was found, at 3 o’clock position. Buck’s fascia was also ruptured in an unclear manner. Corpus spongiosum was found intact. A folley catheter No. 16
was placed. The rupture of tunica albuginea was then closed in an interrupted manner, with 3-0 absorbable sutures. The Buck’s fascia was used to cover the site of the rupture and was also closed with interrupted absorbable 3-0 sutures, in order to avoid multiple knots sensation. An artificial erection with saline injection into the glans was performed in aim to confirm the correction of the leakage and rule out over-treatment which could have led to penile deviation (fig. 4).

A circumcision was performed, in order to free the penis from the swollen prepuce and to optimize the final result. The patient was hospitalized for 4 days in order to ensure no further complications due to his advanced age, receiving antibiotic, anti-inflammatory and anti-androgenic therapy, for suppression of his erections. He was counseled to avoid any sexual intercourse for 1 month.

Results
The patient was examined 2 months after the discharge. He reported preserved potency with intercourse 8 weeks postoperatively, no postoperative penile curvature or pain during erection.

Discussion
The etiology of the penile fracture depends on geographical criteria, since in Western World the main reason is the sexual intercourse, while in Eastern World “Taghaandan” (a manipulation of the erect penis to achieve detumescence) is considered as the main cause of blunt penile injury. The contemporary injury of the urethra is also extremely low in the Persian Gulf and Japan and to up to 38% in the U.S. and Europe, pointing out the relation of the complicated penile fracture with sexual intercourse. Since seeking of medical attention for such a reason often causes embarrassment or fear, the true incidence is greater than the number reported in the literature. In our case, the patient reported an uncommon clumsy manipulation which led to the penile injury.

The thinning of the tunica albuginea and the increase of intracavernous pressure during abrupt loading or bending of the penis is known to be responsible for such injuries. In addition, during age the ratio collagen/elastin fiber in the tunica is increased, by making tunica less compliant and more prone to injuries. Even we have no tactile evidences for that in this case, we could assume that our elderly patient might have an extra risk factor.

The history and physical examination clearly pointed out a penile fracture. Thus, considering this a typical case, there was no need for further imaging exploration, like ultrasound of the penis, cavernosonography or MRI in order to establish the diagnosis. The absence of a bloodstain from the urethral meatus and the unreported dysuria or hematuria till the arrival in the ERs excluded the possibility of a urethra’s rupture and the need for an antergrade urethrography.

As far as the therapeutic approach is concerned, we chose an initial short-term conservative treatment of 2 days with anti-inflammatory drugs and antibiotics, followed by the final surgical exploration. The first one aimed to the avoidance of the acute stage of trauma, allowing the extensive edema and hematoma to be reduced and stabilized, making clear the position of the rupture and offering us a more clearly visible surgical field. The surgery offered the opportunity of the final correction of the injury, keeping away the possible sequelas of conservative treatment, such as expanded or infected hematoma, abscess formation, severe penile angulations, arteriovenous fistulas or Fournier's Gangrene.

In addition, the actualization of surgical repair >24 hours after the presentation did not worry the surgery team, as the literature does not report differences in rates of ED or other complications, between immediate and delayed repair. Specifically, in their systematic review, Wong et al., analyzed 10 retrospective observational comparative studies of immediate versus delayed surgical correction of penile fractures. The delayed groups had a mean time to repair ranging from 29 hours to 16 days, while the immediate correction was considered correction within 24 hours. Amongst these two groups, the complications of ED, plaque or curvature did not differ significantly, a conclusion that render delayed repair as a “reasonable alternative to immediate surgery”. Considering that, we can assume that as long as the definitive approach of a penile fracture remains the surgical correction of it within a reasonable interval - which still remains a debate -, the time itself does not makes things worse.

As a technique, we chose the subcoronal circumferential approach and the degloving of the penis. In spite of alternatives techniques such as direct
longitudinal incision over the injury, inguino- scrotal approach, midline incision of the raphe, suprapubic approach\textsuperscript{10}, we strongly advocate penile degloving because it offers excellent exposure of the 3 corporas, which apprehend any urethral or tunica injuries that have been eluded of the evaluation. We used absorbable sutures, contrary to the most common used Nylon sutures\textsuperscript{7}, since our experience with them in Peyronie’s disease repair has demonstrated excellent results.

**Conclusions**

In our case, the combination of conservative and surgical treatment was proved to be equally effective with the standard immediate approach of a penile fracture, reproducing the reports of the literature. The age of our patient did not alter our approach to the case and did not seem to affect the outcome as well. Finally, we advocate the subcoronal circumferential incision as the most trustworthy approach for the repair of a penile fracture.

**References**