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Erkek Cinsel Sağlığı

An unusual case of severe penile fracture: Bilateral corpus cavernosum rupture without urethral injury

İlginç olarak üretra rüptürünün olmadığı, bilateral korpus kavernozum rüptürü olan şiddetli penil fraktür

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ABSTRACT

Although penile fracture is a rare emergency, it can lead to morbidity, particularly affecting the patient's sexual life. If not managed appropriately, penile deformities may develop, potentially resulting in more complex complications. A 42-year-old male patient presented to the emergency room with swelling and bruising on his penis, which occurred approximately two hours earlier during sexual intercourse. A diagnosis of penile fracture was established. Physical examination revealed the characteristic "Eggplant Deformity." There was no evidence of urethrorrhagia, and the patient had no difficulty urinating. An emergency surgical procedure was performed within six hours, and, interestingly, bilateral corpus cavernosum rupture was observed in the absence of urethral injury. The corpus cavernosum and other affected structures were primarily reconstructed. No penile curvature or erectile dysfunction was detected during the 6-month follow-up period.

Keywords: penile fracture, emergency repair, urethra, corpus cavernosum, bilateral

ÖZ

Penil fraktür nadir görülen bir acil durum olmasına rağmen, hastada özellikle cinsel yaşam açısından morbiditeye neden olabilir. Vakalar uygun şekilde yönetilmezse, peniste düzensizlikler ortaya çıkabilir ve daha karmaşık sorunlara yol açabilir. İki saat önce cinsel ilişki sırasında peniste şişlik ve morarma şikâyeti ile acil servise başvuran 42 yaşındaki hastaya penil fraktür tanısı konuldu. Fizik muayenede peniste karakteristik "Patlıcan Deformitesi" tespit edildi. Hastada üretroraji yoktu ve idrar yapması rahattı. Altı saat içerisinde acil ameliyat yapıldı ve ilginç olarak üretra rüptürünün olmadığı, bilateral korpus kavernozum rüptürü görüldü. Korpus kavernozum ve diğer yapılar primer olarak onarıldı. Altı aylık takip süresi boyunca penis eğriliği veya erektil disfonksiyon saptanmadı.

Anahtar Kelimeler: penil fraktür, acil onarım, üretra, korpus kavernozum, bilateral

INTRODUCTION

Penile fracture is an uncommon urological emergency that arises due to blunt trauma to the erect penis. It is typically marked by an audible "cracking" sound, accompanied by rapid detumescence, swelling, and ecchymosis. [1] Blunt trauma may result in tunica albuginea rupture, and in 1–38% of cases, it is associated with urethral injury, primarily affecting the anterior urethra (penile and bulbar segments).[2]

Extensive evidence suggests that emergency surgical exploration provides superior outcomes compared to conservative management in penile fracture cases. Surgical intervention is associated with fewer complications and improved long-term outcomes, particularly regarding erectile function and penile curvature.[3–5]

This case presents a severe case of penile fracture involving bilateral corpus cavernosum rupture, with the absence of urethral injury.

CASE PRESENTATION

A 42-year-old male patient presented to the emergency room with swelling and bruising on his penis, which occurred approximately two hours earlier during sexual intercourse. The patient described hearing a distinct "cracking" sound during intercourse, immediately followed by rapid detumescence and marked discomfort. He had no history of medication use, allergies, or metabolic disorders. On physical examination, the characteristic "eggplant deformity" was observed. There was no evidence of urethrorrhagia, and the patient had no difficulty

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urinating. The penis exhibited swelling and leftward deviation, with a sizable hematoma extending proximally. All laboratory test results were within normal limits. An emergency surgical procedure was performed within six hours. After placing a 16 F Foley catheter, the penile skin was degloved proximally to healthy tissue following a circumferential incision at the circumcision line. Bilateral rupture of the corpus cavernosum was detected, and notably, no urethral rupture was observed. The urethra was mobilized, and no rupture was found in its posterior segment. Corpus cavernosum repair was performed using 3–0 polyglactin sutures. After completing the repair, an artificial erection test was performed. No fluid leakage or penile curvature was observed. The dartos fascia and skin were closed with 3–0 plain catgut sutures. A mild compression dressing was applied with a coban bandage, and the procedure was completed. The Foley catheter was removed on postoperative day 1, followed by the removal of the coban bandage on day 4. The hematoma had regressed, and the wound appeared normal. Sexual activity was restricted for 6–8 weeks. No penile curvature or erectile dysfunction was detected during the 6-month follow-up period. The patient was informed that the surgical images would be used for scientific purposes and written consent was obtained (Fig. 1. a–h).

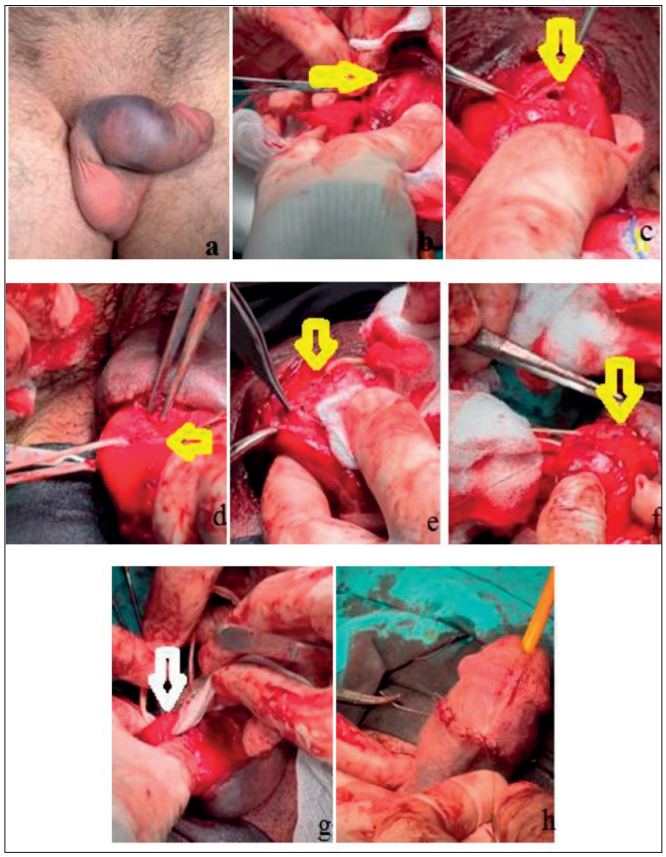

Figure 1. a) Penile fracture appearance, b-c) right corpus cavemosum fracture, d) left corps cavemosum fracture, e-0 repair of right and left fracture line, g) intact urethra appearance, h) final postoperative appearance.

DISCUSSION

Penile fracture is most frequently caused by direct trauma to the penis during sexual activity.[6] Additional causes include the Taghaandan maneuver, a traditional practice commonly seen in the Middle East, in which an erect penis is intentionally bent to achieve detumescence. Other mechanisms of injury involve blunt trauma sustained while rolling over in bed with an erection or during masturbation.[7,8] Compared to a flaccid penis, an erect penis exhibits significantly increased susceptibility to trauma-related injuries. This case study documents a penile fracture resulting from sexual intercourse-related trauma.

The occurrence of bilateral corpus cavernosum rupture accompanied by urethral involvement is exceedingly rare. Injury to the urethra is known to occur in patients with bilateral corpus cavernosum rupture and this association has been documented.[9–11] A study by Panella et al. identified only two reported cases of penile fracture involving bilateral corpus cavernosum rupture with urethral involvement.[12] Likewise, Barros et al. conducted a study based on 20 years of experience in Brazil, reporting that 15 out of 288 penile fracture cases (5.2%) involved bilateral corpus cavernosum rupture with complete urethral disruption.[13] This case study documents bilateral rupture of the corpus cavernosum. The absence of a urethral rupture despite the severity of the penile fracture makes this case particularly unique. A review of the literature reveals no cases of bilateral corpus cavernosum rupture without urethral involvement.

The diagnosis of penile fracture is predominantly established through clinical history and physical examination. Nonetheless, imaging modalities, including retrograde urethrography, ultrasonography, and flexible cystoscopy, are suggested for identifying tunical disruptions and concomitant urethral injuries.[14–16] Suspicion of urethral injury should arise in patients exhibiting urinary retention, hematuria, or visible blood at the urethral meatus. In this case study, retrograde urethrography and cystoscopy were considered unnecessary in the absence of urethrorrhagia or visible blood in the urethral meatus. As clinical history and physical examination provided strong evidence supporting penile fracture, further diagnostic testing was not warranted.

A circumferential subcoronal incision extending to the proximal penis is considered the most appropriate technique for assessing the anatomical region of the injury, regardless of whether there is a rupture in the urethra. This surgical approach enables a comprehensive evaluation of the corporal bodies, aiding in the identification of

contralateral corporal or urethral injuries while streamlining the repair process.[17] In this case, a circumferential subcoronal incision was chosen due to uncertainty regarding the exact location of the tunical tear, which was obscured by a sizable hematoma extending proximally along the penile shaft.

RESULT

This case underscores the critical role of prompt surgical intervention and the necessity of increasing awareness regarding penile fractures. Although bilateral corpus cavernosum rupture was evident, the absence of urethral involvement renders this case particularly remarkable. Furthermore, documenting penile fracture surgery with a case study is expected to provide valuable information to the current surgical literature.

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