

# Penile Fracture at the Crus of the Penis - A Rare Case Report

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## ABSTRACT

Penile fracture is an uncommon acute surgical emergency, typically occurring after sexual intercourse, self-manipulation and at times, may be accidental. We report here a 39-year male who attended the department of emergency with swelling and bruising of the scrotum and penis. Physical examination exhibited a diffuse abdominal and perineal ecchymosis. Imaging confirmed a crural penile fracture. Operative fixation was performed appropriately and satisfactory erectile function was reported at the follow-up. We report a very rarely documented case involving the penile crus fracture and its management.

**Key Words:** *Crus, Penile fracture, Surgical repair.*

**How to cite this article:** Hina S, Iqbal N, Khilan MH, Khan A, Shukla C. Penile Fracture at the Crus of the Penis - A Rare Case Report. *J Coll Physicians Surg Pak* 2022; **32(JCPSPCR)**:CR89-CR91.

## INTRODUCTION

Penile fracture is a condition in which there is a break in the continuity of the tunica albuginea as a result of a corporeal tear owing to a blunt trauma afflicting an erected penis.<sup>1</sup> This is an uncommon urological emergency, and an underreported condition in literature. Penile fracture usually involves the penile shaft and thus far there have been no reports of a rupture occurring at the level of the crus of the cavernosa. Fracture typically occurs mechanically when the penis smacks the pubic bone or a forceful thrash into the perineum while doing sexual intercourse.<sup>2</sup> Typical physical findings along with the patient's history usually unfold the diagnosis almost always, hence making ancillary imaging methods unnecessary. However, when other causes of such injuries or unusual mechanisms of such injuries occur, it may become a challenging situation. In patients, who otherwise deny prior blunt trauma or sexual intercourse, and still exhibit typical features of penile fracture, penile swelling, ecchymosis, and expeditious detumescence (typical of a blunt penile trauma), imaging is necessary to identify the pathology, presence of intra-corporeal fibrosis and location.<sup>3</sup> Magnetic resonance imaging (MRI) is deemed vastly superior in terms of soft tissue imaging refinement and can signify tunical tears noninvasively if the diagnosis is unclear.<sup>3</sup>

We report here a 39-year male who attended the department of emergency with swelling and bruising of the scrotum and penis. He was diagnosed with a case of penile crural fracture which was surgically repaired successfully.

## CASE REPORT

A 39-year gentleman presented to the emergency room with swelling and bruising in the scrotum, penis and lower abdomen for 3 days. He noticed a sudden onset of painful bruising and swelling. The patient denied any history of trauma or sexual intercourse. He was able to void well and admitted achieving early morning erection normally since the onset of the bruising. Physical inspection manifested an ecchymotic, swollen, and deviated penis (uncircumcised) without blood at the meatus. Moreover, he presented with a significant butterfly pattern of bruising, which is usually typical of a perineal injury such as that associated with a urethral disruption from a pelvic trauma (Figure 1). Bruising was more marked in the perineum and extended to the suprapubic region towards the inguinal region.

Due to the very unusual distribution of the bruising and lack of suggestive history, an MRI penis/pelvis was performed. This revealed a defect in tunica at the base of the right corpora cavernosa, with evidence of hematoma extending from here into the right hemiscrotum (Figures 2 and 3).

A decision was made to surgically repair this injury of an unknown/undisclosed mechanism. Intraoperatively, after lubrication of the urethra, a catheter was passed. A midline creation of perineal incision was followed down to the bulbar urethra. After the removal of substantial hematoma on the right side, a notable defect was found on the right crus of the penis just as it terminated at the crural separation (Figures 4 and 5).

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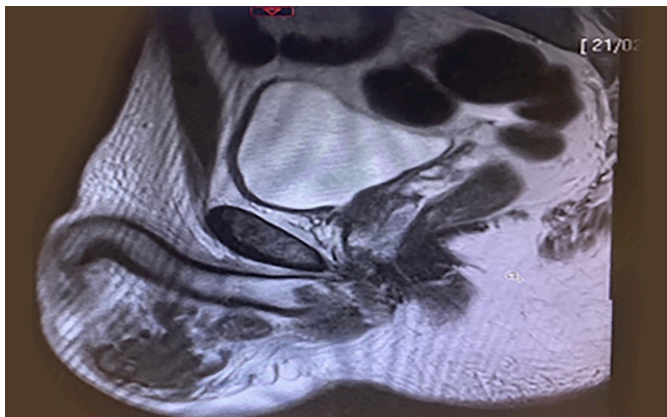
Received: August 27, 2020; Revised: July 07, 2021;

Accepted: August 14, 2021

DOI: <https://doi.org/10.29271/jcpsp.2022.JCPSPCR.CR89>



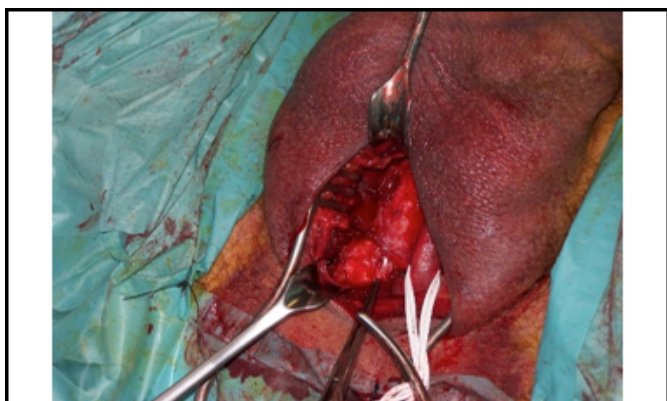
**Figure 1:** The distribution of ecchymosis in the patient. The pattern is typical of the “butterfly pattern” associated with pelvic trauma and urethral disruption.



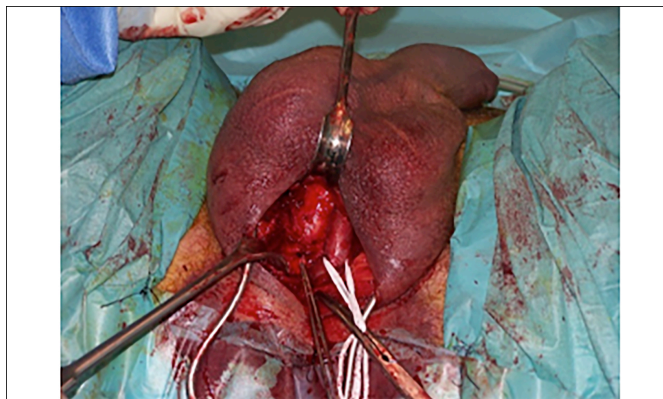
**Figure 2:** Defect at the base of the right corpora cavernosa (arrowhead) and hematoma extending into the right hemiscrotum.



**Figure 3:** Defect at the base of the right corpora cavernosa (arrowhead).



**Figure 4:** Intra-operative demonstration of the site of injury at the base of the right crus with the forceps showing the tunical disruption.



**Figure 5:** The closure of the tunical disruption.

The urethra was mobilised and was found to be intact. The defect was repaired with 3-0 polydioxanone suture in a continuous fashion. The midline incision was closed and the patient was discharged the following day with the advice to avoid intercourse for six weeks. He had sufficient painless erections and did not complain of penile curvature. He was satisfied with his overall sexual life in terms of maintenance of erection, penetration, and time till ejaculation.

## DISCUSSION

Penile fracture, an urgency that necessitates acute involvement of surgical care in order to mitigate the risks of intracavernosal fibrosis and its consequences of erectile dysfunction and curvature.<sup>3-7</sup> The first description of such an entity dates back to more than 1000 years. Almost 1600 such cases (penile fracture) have been reported in surgical archives to date.<sup>1</sup> Concomitant urethral injury is sporadic, with reported rates varying from 9% to 20%.<sup>8</sup> While all the cases of penile fracture reported have involved the penile shaft, there are no reports of fracture occurring in the crus of the cavernosum so far in the literature. The mechanism of this injury remains unclear with the patient categorically denying any such mechanism.

Imaging is potentially desired, in cases wherein subjects portray atypical features, and with dire local pain/swelling, precluding an exhaustive examination of the penis. MRI and ultrasonography can be used not only in the appraisal of penile trauma but also to decide on the surgical approach required. This case highlights the importance of clinical suspicion based on atypical history and clinical findings, the role of imaging to diagnose the defect and allowing planning for an unusual surgical approach necessary for early diagnosis and surgical repair. Regarding corporal repairs, literature has communicated the vitality of swift surgical restoration of anatomy. This brings superior end results and fewer drawbacks when contrasted to non-operative care. Bennani and colleagues announced complications of 40.7% for surgical and 8.2% for conservative therapy.<sup>6</sup>

The perineal approach tailored to the patient's injury obviates the need for surgical degloving, circumcision, and difficulties with access to the defect of the penis that would have been encountered if imaging had not been performed and if the traditional surgical approach would have been utilised.<sup>5-7</sup> A peno-

scrotal incision is usually an acceptable strategy for almost 2/3<sup>rd</sup> of fractures situated proximally.<sup>3,8</sup>

A penile fracture involving the crus of the penis in the absence of any trauma is a very rare entity. Imaging becomes obligatory, peculiarly in conditions with a non-typical clinical picture, extreme local pain or swelling that precluded an exhaustive penile examination. MRI and ultrasonography can be used not only in the assessment of penile trauma but also to decide on the surgical approach required. A penoscrotal incision is usually a reasonable approach for the majority of fractures situated proximally.

#### PATIENT'S CONSENT:

Informed consent was obtained from patients to publish the data concerning this case.

#### COMPETING INTEREST:

The authors declared no competing interest.

#### AUTHORS' CONTRIBUTION:

SH: Literature search, main concept, methods, and writing.

NI: Literature search, writing, proofreading, and critical review.

MHK: Literature search.

AK: Literature search and writing.

CJS: Literature search, main idea, writing, and proofreading.

All the authors have approved the final version of the manuscript to be published.

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