

## Penile Fracture with Missed Urethral Injury Leading to Urethrocutaneous Fistula and Panurethral Stricture

Dr. Krishnendu Maiti<sup>1</sup>, Dr. Alankar Jaiswal<sup>2</sup>, Dr. Dilip Kumar Pal<sup>3\*</sup>

<sup>1</sup>Assistant Professor, Department of Urology, Institute of Post Graduate Medical Education & Research, Kolkata, India

<sup>2</sup>Post Doctoral Trainee, Department of Urology, Institute of Post Graduate Medical Education & Research, Kolkata, India

<sup>3</sup>Professor & Head, Department of Urology, Institute of Post Graduate Medical Education & Research, Kolkata, India

### \*Corresponding author

Dr. Dilip Kumar Pal

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**Abstract:** Penile fracture refers to rupture of tunica albuginea during trauma to erect penis. It may involve corpus cavernosum and urethra. Urethral injuries are very likely to be missed in penile fracture patients. Surgeons should properly evaluate urethra preoperatively either by radiologically or cystoscopically because these missed injuries may lead to urethral stricture and other complications.

**Keywords:** Penile fracture, tunica albuginea, urethral stricture.

### INTRODUCTION

Penile fracture refers to rupture of tunica albuginea due to trauma to erect penis. Rarely, it is associated with urethral injury (3%-20%) [1]. These type of injuries is very likely to be missed. Classically, history of penile fracture has typical snap sound, followed by immediate penile detumescence and pain. On examination, there is penile edema and hematoma. There may be blood at meatus if urethral injury is present. So, we should carefully examine each patient of penile fracture so that urethral injury is not missed. Here, we report a case of penile fracture with urethral injury which was missed leading to a urethral fistula and later on complicated with urethral stricture.

### CASE REPORT

A 17 years-old boy presented to Urology OPD with chronic urinary retention. He had a history of penile fracture one year back, USG of penis showed breach in tunica albuginea on left side with diffuse edema and soft tissue contusion noted around penile shaft, followed by repair of fracture at that time.

After one month of repair, he developed urethrocutaneous fistula at the mid shaft of penis, which was repaired after two months, with prolonged catheterization for three weeks. Patient developed chronic urinary retention four months later for which suprapubic cystostomy was done outside. Micturating

and retrograde urethrography (Fig. 1) was done which showed long segmental stricture involving whole of anterior urethra. Urethroplasty done with Buccal mucosa graft and the patient is doing well two months after urethroplasty.



**Fig-1:** This figure (MCU) showing dilatation of posterior urethra and contrast did not flow through anterior urethra due to stricture

## DISCUSSION

Penile fracture is defined as the traumatic rupture of the tunica albuginea caused by a blunt trauma of the tunica albuginea of an erect penis. It occurs mainly in the young adults. The rupture usually involve corpus cavernosum and rarely urethra.

There are many causes of penile fracture, most common cause being sexual intercourse, other causes are violent penilemanipulation, masturbation or rolling over in bed onto an erect penis or trauma to erect penis as in above case report. Among these causes, sexualintercourse leads the most to urethral rupture, giventhe high violence of the trauma in this situation. In this situation, rupture of tunica albuginea most commonly occurs ventro-laterally as the thickness of tunica is thinnest on ventral and lateralaspect [2]. If the tunica albuginea buckles, the resultant increase in intracavernosal pressure can lead to a tunical tear. This typically occurs during an attempted reentry in a position in which the weight and thrust of the partner is brought to bear directly onto the tip of the penis.

The combination of lesions of the penile urethra and the corpus cavernosum is rare and likely to be missed. It worsens the immediate and long-term prognosis and poses a problem of management. Associated urethral injuries are reported in anywhere from 3% to 20% of patients [1, 3]. In Middle Eastern countries, “Taghaandan” is the most common cause of penile fracture. Taghaandan injuries probably have less prone of associated urethral rupture because force due to weight of partner is absent leading overall decreased force<sup>[5]</sup>. Blood at the meatus, an inability to void, or hematuria are the ominous signs of urethral injury in a case of penile fracture. Though, there can be bleeding per urethra without associated urethral rupture [6]. But, there are false negative results also in retrograde urethrography [7], retrograde urethrography or cystourethroscopy should be considered during initial workup.

Partial urethralinjuries should be oversewn with fine absorbable suture overa urethral catheter. Complete urethral injuries should be debrided, mobilized, and repaired in a spatulated, tension-free fashion over a catheter [8]. Postoperatively, catheter is removed usually after 3 weeks and patients should be counselled that the risk of erectile dysfunction remains high. If the urethral injury is missed, then patient can come with stricture urethra, which should be managed accordingly.

Immediate surgical management should be done for corporal injuries, as non-operative management leads to more penile deformities, morbidity and complications [9]. Penile curvature is present in less than 5% of cases and occurs most often in patients with a delayed presentation [6].

## CONCLUSION

Penile fracture management should include proper exploration of urethra, as urethral injuries in penile fracture patients are missed in majority of patients. This will lead to urethral fistula formation, stricture formation and other penile deformities. There should be proper pre-operative radiological evaluation of urethra in these patients.

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