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A Case Report on Penile Fracture with Urethral Injury and its Management

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INTRODUCTION

A penile fracture is defined as a rupture of the tunica albuginea, leading to disruption of the corpora cavernosum. It is a rare urological emergency, which results from trauma to erect penis during vigorous sexual activity. with a frequency of about 1 in 175,000 hospital admissions in the United States. Men aged 30 to 50 who are sexually active are most commonly affected.

A rare complication of penile fracture is the rupture of the urethra, which can be partial or complete. Patients usually experience intense pain after hearing a cracking or popping noise, followed by rapid loss of erection, bruising, and swelling in the penis. Symptoms like urinary retention, blood in the urine, and bleeding from the urethral opening may indicate urethral injury (1,2).

Early and immediate penile fracture repair has lower complication rates and better outcomes. Surgical intervention is recommended over conservative management to avoid long-term complications, such as erectile dysfunction or penile deformity (1). Early and immediate penile fracture repair has lower complication rates and better outcomes. Herein we are presenting a case report of a 35-year-old male who presented to our Surgical emergency department at Government Medical College, Srinagar with penile fracture with urethral injury.

CASE PRESENTATION

A 35-year male, with no medical comorbidity, came to our emergency surgery department with chief complains of acute swollen and rapid detumescence of the penis 5h before admission. The patient was having sexual intercourse and then suddenly heard a “cracked” sound followed by pain discomfort and immediate loss of erection. Blood discharge was present at meatus of the penis accompanied by an inability to urinate. Patient was not taking any medications and there was no history of surgery in past.

On physical examinations, patient was hemodynamically stable with normal vitals. Complete blood counts (CBC) and biochemical parameters were all within normal range.

On abdominal examination, lower abdomen was distended and urinary bladder was palpable (suggestive of urinary retention). On examination of penis, it had significant hematoma (bluish discoloration) running from proximal to distal. Physical examination also revealed a characteristic “Eggplant Deformity “on the penis (Fig. 1). The blood was present on the tip of the penis. Ultrasound revealed a large hematoma with a rent in tunica albuginea.

The patient was taken to emergency theatre and planned for surgical exploration. A circumferential incision was made just below the coronal ridge to expose the penis. Upon exploration, a tear in the tunica albuginea was found, extending into both corpora cavernosum at the midshaft of the penis, along with a urethral injury (greater than 70% disruption)(Fig. 2). The rupture was substantial, affecting around two-thirds of the corpora cavernosa.

We performed debridement and removed all blood clots, followed by precise suturing to close the tears in both corpora cavernosa. The urethral ends were easily brought together, then carefully spatulated, allowing for an end-to-end tension free repair using 4.0 polyglactin sutures over Foley’s catheter (Fig. 3). The reconstruction was finalized by suturing the skin back around the glans penis (Fig. 4). A tight bandage was applied to the area at the end of the procedure.

Patient was followed on routine OPD basis and Foley’s catheter was removed on 4th week. Patient was put on estrogen therapy for 6 months. The Patient reported a good sexual outcome and no difficulty in voiding.

PHOTOGRAPHS AND RADIOGRAPHY

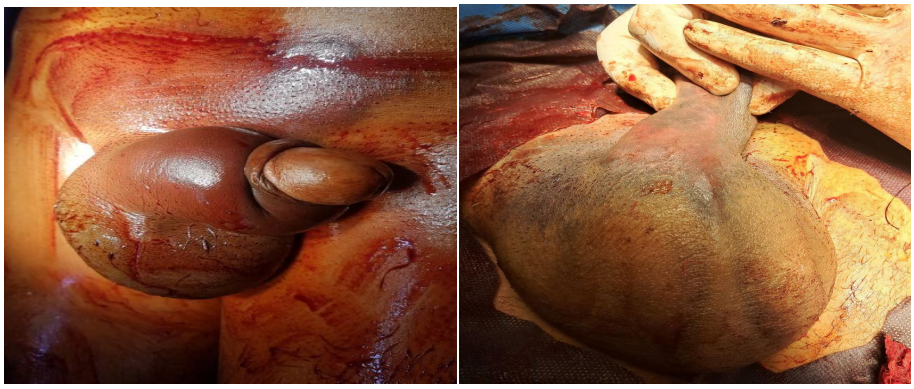

Fig1: Egg plant deformity sign

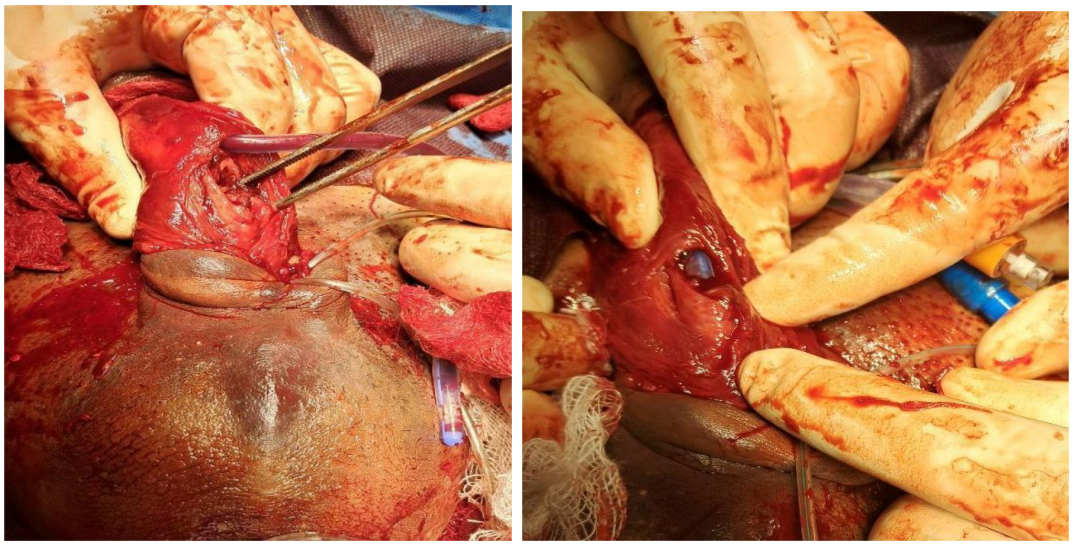

Fig 2: Intra-Operative; Ruptures of Penile Corpora and Urethral Injury

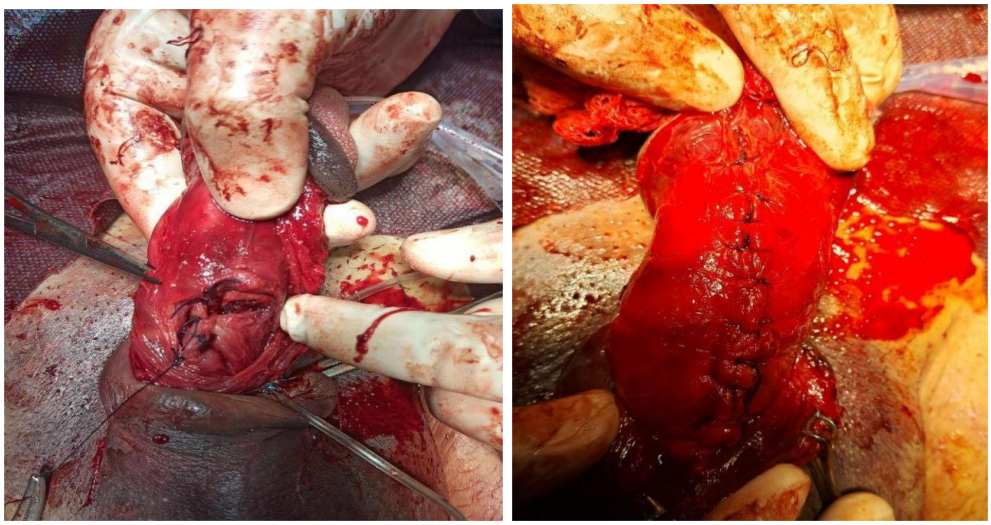

Fig3: Evacuation of hematoma with end to end primary repair of urethral injury

Fig 4: post operative pictures after surgery with catheter insitu

DISCUSSION

Penile fractures often results when the erect penis forcefully hits the perineum or pubic bone during vigorous sexual activity, resulting in a buckling injury. Other causes of penile fractures include accidents during masturbation, turning over in bed, or forcefully bending the penis resulting in detumescence. The tunica albuginea's tendency to stretch excessively contributes to the risk of these fractures, thinning from 2.4 mm when flaccid to just 0.25–0.5 mm in the erect state. Although the corpora cavernosa are usually involved, there are rare cases where the corpus spongiosum and urethra can also be affected (5).

Diagnosing a penile fracture is usually straightforward due to the typical symptoms. A cracking sound is often heard, followed by immediate loss of erection, severe pain, swelling, and bruising, which leads to the characteristic "Eggplant Deformity." Signs of urethral injury, such as hematuria, or difficulty urinating, may also be present (2,3). In this case, the patient experienced a loud popping sound, followed by swelling, detumescence, and pain. Urethral bleeding and acute urinary retention also indicated a urethral injury. Ultrasound is the most common imaging modality used in our setup for the confirming the clinical diagnosis. Magnetic resonance imaging (MRI) is the most accurate method to localize lesions, but its use is limited due to cost, availability, and time consumption. Cystoscopy can be used for urethral patency.

Surgical exploration is the treatment of choice for penile fractures. Current expert consensus is that prompt surgical repair offers the best outcomes for both erectile function recovery and cosmetic appearance. In this case, surgery was conducted immediately to explore the injury, evacuate the hematoma, and repair the torn tunica albuginea. The most commonly used surgical method is a sub coronal circumferential incision, which allows for full exposure of the penile structures by moving the skin proximally (4,5). This approach ensures proper visualization of both corpora cavernosa and the corpus spongiosum, helping to prevent missed urethral injuries. In this instance, the procedure involved clot evacuation, debridement, water-tight suturing to close the ruptured tunica albuginea, and urethroplasty.

We presented a case of a 35 year old man with a penile fracture followed by urethral injury. Urgent surgical intervention was under taken, revealing both corporal tears and urethral injury. In follow-up, the patient presented with normal sexual and voiding function

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