Penile injuries in children are usually uncommon and are predominantly associated with pelvic trauma or as postcircumcision injuries. The authors present a rare case of penile dislocation with penile inversion in a 5-year-old child occurring due to blunt pelvic injury. The child presented 3 months after pelvic injury with a suprapubic catheter for urinary diversion and absent penis with only penile skin visible. The presence of dislocated penile body was detected on magnetic resonance imaging, which was subsequently confirmed intraoperatively. During the surgery, the dislocated penis was identified and mobilized into its normal anatomical position within the remnant penile skin. Very few cases of penile dislocation have been reported in the literature. Pubic fracture with pulling of suspensory ligament resulting in dislocation of the penis would have been the probable mechanism of injury.

**Keywords:** Pelvic trauma, penile dislocation, suspensory ligament pull

**INTRODUCTION**

Common types of penile injuries include soft-tissue injury, penetrating injuries, penile amputations, and occasionally penile fractures. Most of these injuries are due to automobile and industrial accidents and postcircumcision injuries in children. Penile dislocation injury is extremely rare, with only few cases reported in the literature and all occurring after trauma. Prompt identification of the condition with early surgical intervention will restore normal penile anatomy.

**CASE REPORT**

A 5-year-old boy had multiple pelvic fractures and right femur fracture after a road traffic accident. He was unable to pass urine and there was blood at meatus. After resuscitation, his femur fracture was repaired along with suprapubic cystostomy for urinary diversion elsewhere. No attempts were made to catheterize the child per urethra. The child had uneventful recovery.

After 3 months of his trauma and initial orthopedic procedures, the child was referred to us for definitive management. At presentation, the child had a suprapubic catheter for urinary diversion and complete disappearance of penis from its normal position with only penile skin visible at that area without any palpable corporal bodies. The child also had a small sinus-like wound in the right inguinal region with occasional urine dribbling through the wound [Figure 1a]. A cord-like structure was palpable in the right inguinal region. Both the testes were normal.

Ultrasound evaluation of the local area was inconclusive. Magnetic resonance imaging (MRI) study of the pelvis revealed the presence of an intact penis with normal corporal bodies in the subcutaneous plane of the right inguinal region [Figure 1b and c]. Urinary bladder, proximal urethra, and both the testes were normal.

Surgical exploration was performed by incising the penile skin ventrally till the penoscrotal junction. Penile shaft was exposed and had dislocated to the right inguinal region. Penile glans was embedded in the subcutaneous plane and a small cavity had been formed around the glans [Figure 2a]. This cavity communicated with the wound over the right inguinal area. Penile shaft was mobilized from the surrounding soft tissue and the penis was repositioned. The surgical wound was closed in layers and a Penrose drain was placed. Penile inversion was reduced and the child had an uneventful recovery. The child was discharged on the 5th postoperative day with a clean drain site and was seen at 2-week follow-up, where the surgical drain was removed and child was doing well with normal voiding function. The child had been followed up for 1 year, and there has been no recurrence of symptoms.

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The child had an uneventful recovery with good cosmesis and normal phallic length at 6-month follow-up.

**DISCUSSION**

The penis comprises of two corporal bodies and one corpus spongiosum covering the urethra. These structures are covered by a tough fascial layer with neurovascular bundles running over it. The penis is covered by a mobile penile skin and attached at its base to the pubic bone by suspensory ligaments, hence fixing the penis to the pubis.\(^3\)

Penile dislocation is an exceedingly rare injury, with only few cases reported in the literature and all cases are associated with pelvic trauma. The exact mechanism of injury is not well understood. As all the reported cases are associated with pelvic injury, it is postulated that pubic fractures and dislocation cause a sudden pull over the suspensory ligaments, resulting in penile traction.\(^4\) This violent traction over the penis backward results in abrupt circumferential coronal tear around the prepuce with separation of penile skin from the shaft and subsequent penile dislocation.\(^5\) Depending on the direction of pull, the penis may be displaced into scrotum, groin, or in front of the pubis.\(^1\) The underlying tight phimosis causes increased propensity for prepuce tear in high-impact trauma.\(^5\) In our case, it was a complex fracture of the right superior pubic ramus with minimal displacement of fragments which could have transmitted pulling forces to the pubic arch where cavernosal bodies are attached.

Ultrasonography (USG) can be readily used for the evaluation of penile injuries and confirmation of penile tissue in ectopic locations and with color Doppler, viability of injured penis can also be evaluated.\(^6\) USG is still considered as first choice in penetrating and

![Figure 1](image1.jpg)

*Figure 1:* (a) Photograph showing only loose penile skin. (b) T1-weighted image showing hyperintense signal of corpora dislocated into the prepubic area (arrow). (c) T1-weighted image showing normal corporas with intact cavernous spongiosum (arrow)

![Figure 2](image2.jpg)

*Figure 2:* (a) Dislocated penile body buried in the suprapubic area, identified, and mobilized. (b) Normal penile anatomy restored by releasing its attachment from suspensory ligament

![Figure 3](image3.jpg)

*Figure 3:* Schematic depicting the mechanism of penile dislocation associated with pelvic fracture
Computed tomography scan is routinely used for abdomen and chest trauma assessment and can also be used in evaluating pubic bone fractures with penile dislocations and identifying its ectopic position. MRI has little value in the emergency setting; however, is very useful in delineating corporal and urethral anatomy as in isolated penile dislocations and penile fractures. MRI can also be used in identifying corporal and tunica albuginea disruptions and also is helpful in differentiating extratunical and intracavernosal hematomas. MRI appears to be more sensitive compared to ultrasound in identifying corporal injuries. MRI evaluation was helpful in our case in identifying the displaced penis in front of the pubic bone with delineation of both corporal bodies.

Surgical intervention can be planned after understanding the mechanism of injury and pathophysiology of penile dislocation. Penis is attached by suspensory ligaments to the pubis and remains fixed. In our patient, due to displaced pubic bone posttrauma, penis was violently pulled inside through the suspensory ligaments, resulting in penile dislocation [Figure 3]. During the surgery, the penis was identified, mobilized, and brought into its normal anatomical position and suspensory ligament was detached from the penile root to release the traction. Simple skin closure is usually sufficient in these cases, but if there is skin deficiency, these children may require dorsal skin V-Y plasty. In our child, we could successfully repair and restore the normal penile anatomy with good cosmetic and functional outcome.

This case highlights a very rare complication of traumatic penile injury and its expectant surgical management.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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