

# Rare Complication of a Routine Hernia Repair in a Preterm Infant

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## Background

Inguinal herniotomy is one of the most commonly performed procedures in pediatric surgery and is generally considered safe. However, rare but severe complications, such as bladder injury, can occur, particularly in preterm neonates. The incidence of bladder injury during inguinal hernia repair in children is reported between 0.08% and 0.3%. Awareness of these rare complications is critical for timely recognition and management.

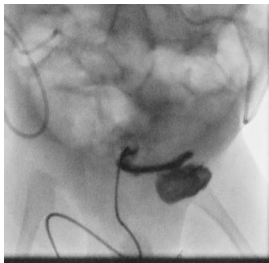
## Case Report

### Patient Overview

We present a preterm infant with a corrected postmenstrual age of 49 weeks at the time of elective inguinal herniotomy performed at an outside hospital. According to operative records, the procedure was completed without intraoperative complications. Shortly after surgery, the child developed abdominal distension, exacerbation of pain, anuria, and ascites. Two revision surgeries were performed at the referring center for suspected bladder perforation before the patient was transferred to our institution for further evaluation.

### Clinical Findings at Referral

Upon admission, the neonate was septic due to urosacitis and evolving peritonitis. Cultures from the peritoneal fluid grew *Klebsiella oxytoca*. Antibiotic therapy with tazobactam was initiated immediately, and further imaging was performed. Cystography through a urethral catheter demonstrated prompt leakage at the inguinal incision, with no visualization of the bladder, confirming the need for revision surgery.



### Surgical Management

Intraoperatively, the bladder trigone was identified with Tachosil patches attached and covered by inflamed small intestine. After removal of the patches, only the trigone remained; both ureteral orifices were visible, and the urethral catheter ended freely within the peritoneal cavity. On the left side, the spermatic duct appeared transected. Open ureteroileocutaneostomy was performed, creating an incontinent conduit using the Wallace technique.

Postoperative management was prolonged due to peritonitis, but serum creatinine remained within normal limits throughout. The child was discharged nine days postoperatively with adequate urinary output through the conduit.

### Follow-Up

The patient has been followed closely with regular outpatient ultrasounds. At 22 months of age, the child was thriving and stable. In August 2025, the patient was readmitted with urinary retention via the ileal conduit and signs of urosepsis. The urostoma could no longer be adequately flushed. Intraoperatively, an ileal loop adherent to the abdominal wall caused obstruction of the conduit. Adhesiolysis was performed, and the conduit was re-anastomosed. Since then, the patient has had an uncomplicated course. The patient is in regular follow-up with pediatric urology and nephrology. Renal retention parameters remain within normal limits. Parents have been counseled regarding the potential long-term option of a continent, catheterizable urinary diversion if required in the future.

## Discussion

Bladder injury during inguinal hernia repair, although extremely rare, can lead to life-threatening complications in preterm infants. Factors include the proximity of the bladder to the inguinal canal and fragility of neonatal tissues (Bakal et al., 2015). Early recognition of warning signs such as abdominal distension, anuria, or ascites is critical. Management may require complex reconstructive surgery; in this case, ureteroileocutaneostomy successfully restored urinary diversion and led to a stable outcome after revision surgery for conduit obstruction.

## Conclusion

Even routine pediatric procedures can result in rare, severe complications. Vigilant postoperative monitoring, prompt imaging, and timely referral to specialized centers are essential. Long-term follow-up, including urological and nephrological care, is required to monitor renal function and manage potential complications.