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Case Report

Traumatic rectovesical perforation following fall injury: a rare case report

Varkala Pavan Kumar, Ajay Kumar Dhiman*, Mohim Thakur

Department of General Surgery, AIIMS, Bilaspur, Himachal Pradesh, India

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***Correspondence:**
Dr. Ajay Kumar Dhiman,
E-mail: ajaydhiman04@gmail.com

ABSTRACT

Rectovesical perforation is an extremely rare but serious consequence of pelvic trauma, often overlooked in blunt injuries. We describe the case of a 25-year-old male construction worker who sustained traumatic rectovesical perforation after a fall onto a sharp object, presenting with hematuria, per rectal bleeding and urinary retention. Contrast-enhanced CT including CT cystography revealed extraperitoneal bladder rupture with extravasation into the rectum. Surgical management involved repair of bladder and rectal injuries, with both urinary (suprapubic + transurethral catheters) and fecal (loop sigmoid colostomy) diversion. Postoperative recovery was largely uneventful, with a superficial wound infection managed conservatively. The colostomy was reversed at five months, and the patient remains well at follow-up. This case underscores the importance of prompt diagnosis via CT cystography and a combined surgical approach with adequate diversion to achieve favorable outcomes.

Keywords: Rectovesical perforation, Case report, Fall imjury

INTRODUCTION

Traumatic bladder rupture is most associated with pelvic fractures, extraperitoneal rupture often accompanies blunt trauma, whereas intraperitoneal rupture is less common but carries high morbidity and necessitates prompt surgical repair.[1,2] CT cystography has become the diagnostic modality of choice, demonstrating high sensitivity and specificity for both extraperitoneal and intraperitoneal ruptures.[3,4] Rectovesical fistula or perforation following trauma is extremely rare, with most cases reported in pediatric blunt-trauma patients.[2] Our case is unusual because of the mechanism (fall onto a sharp object) and rarity of rectal and bladder co-injury.

CASE REPORT

A 25-year-old male presented following a fall onto a sharp protrusion at a construction site. He had lower abdominal pain, gross haematuria, inability to void, and per rectal bleeding. On examination, he was hemodynamically stable; abdominal exam was notable for suprapubic tenderness, and digital rectal exam revealed a 2 cm laceration at the anal verge with blood. A urethral catheter produced frank haematuria with clots. Contrast-enhanced CT of the abdomen and pelvis, including CT cystography, showed an extraperitoneal bladder rupture with contrast tracking into the rectum and no intraperitoneal leak.

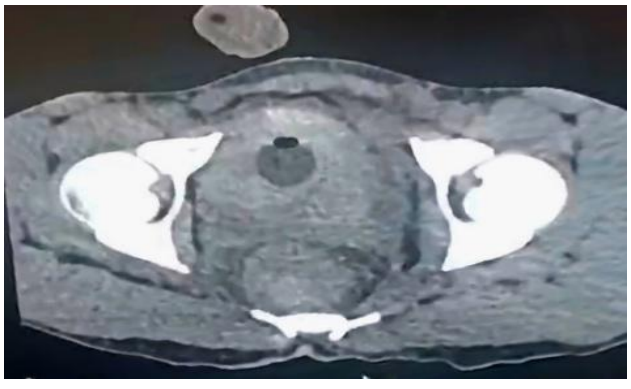

Figure 1: CT image of pelvis with foleys bulb *in situ.*

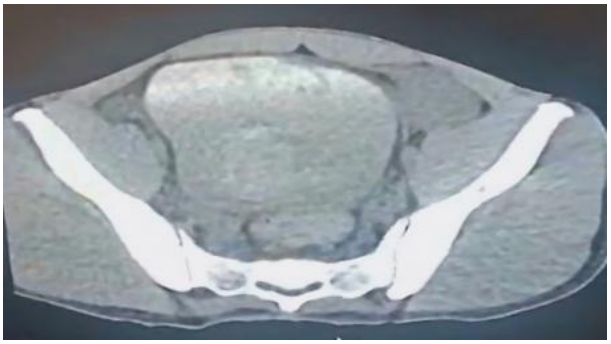

Figure 2: CT image at the level of bladder and rectum at the level of injury with bladder filled with blood clots.

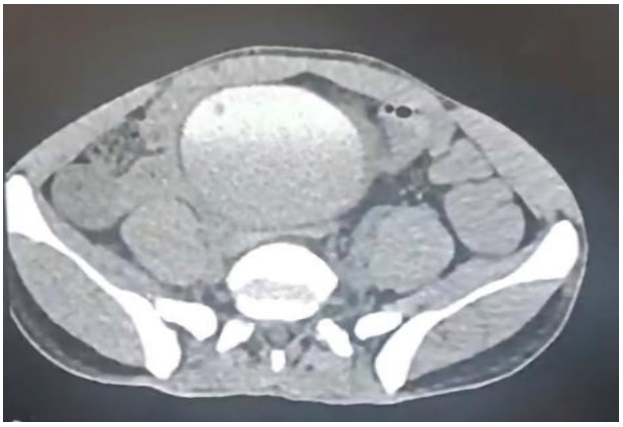

Figure 3: CT image of abdomen at the level of intraperitoneal part of bladder showing no contrast leak in the bladder.

Exploratory laparotomy confirmed a 1.5×1.5 cm posterior bladder wall defect communicating with the anterior rectal wall. A urinary bladder hematoma (~1.5 L) was evacuated. The rectal injury was repaired with absorbable sutures, and a proximal loop sigmoid colostomy was fashioned. Urinary diversion was provided with both suprapubic and transurethral catheters.

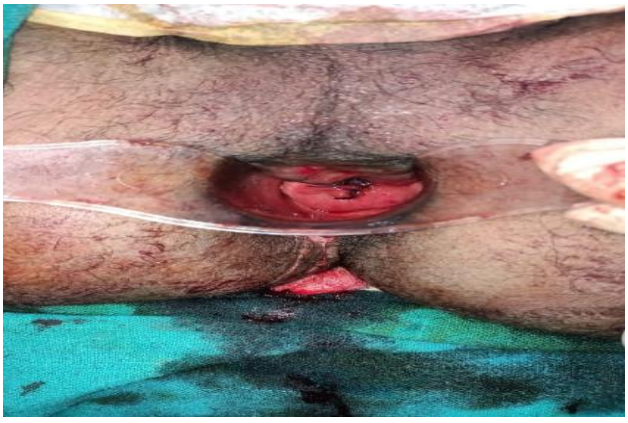

Figure 4: Intraoperative image showing 1.5×1.5 cm anterior rectal wall defect communicating with posterior bladder wall.

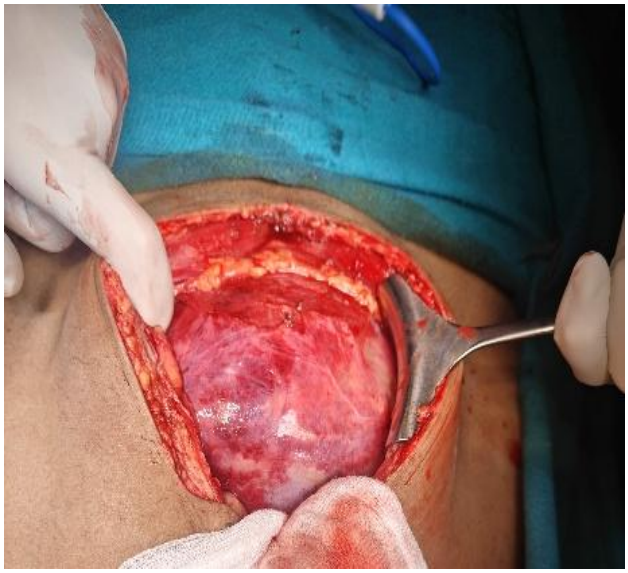

Figure 5: Intraoperative image showing distended urinary bladder with hematoma.

Broad-spectrum antibiotics were administered. The patient was discharged on postoperative day 8. He developed a superficial wound infection by day 27, managed with dressings and targeted antibiotics. Six-week distal loopogram confirmed distal bowel integrity. The suprapubic catheter was clamped at two months and removed at three months following successful voiding. At five months, colostomy reversal was performed uneventfully; the patient has remained well on follow-up.

DISCUSSION

Extraperitoneal bladder ruptures account for most traumatic bladder injuries: CT cystography is both accurate and invaluable, with reported sensitivity and specificity approaching 100% for detecting bladder rupture and differentiating extraperitoneal vs intraperitoneal injury.[4,5] Multiplanar reformation further improves localization.[5]

Rectovesical injury following blunt trauma is exceedingly rare, especially in pediatric population, though it has been reported, sometimes requiring conservative management followed by surgical repair when fistula persists.[2]

Management principles in such cases include: Urinary diversion-via suprapubic and/or transurethral catheters. Faecal diversion-to protect rectal repair, typically a proximal colostomy. Prompt surgical repair-of both bladder and rectal defects. Antibiotic therapy-to prevent pelvic sepsis.

These interventions collectively reduce morbidity and enhance recovery. Our patient's favourable outcome reflects early diagnosis, comprehensive surgical intervention, and vigilant postoperative care.

CONCLUSION

Traumatic rectovesical perforation is rare but potentially devastating. CT cystography is the diagnostic cornerstone. Timely surgical repair, coupled with urinary and faecal diversion, enables good outcomes. Recognition of this injury pattern and application of established trauma principles are key to reducing complications.

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