

Stitch in urinary bladder: A catastrophe of mesh hernioplasty

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ABSTRACT

Inguinal bladder hernia is an uncommon pathology found in less than 4% of all inguinal hernias. Pre-operative diagnosis is made in only 10% of cases and most are identified intra-operatively. The failure to diagnose bladder herniation may result in bladder injury and in rare instances are diagnosed later in post-operative period when the patient presents with peritonitis. Here we present a case of a 52-year-old male who underwent left mesh hernioplasty and presented to us after 10 days of surgery with features of peritonitis. On exploration, he was found to have a urinary bladder injury.

1. Introduction

Inguinal bladder hernia is an uncommon pathology involved in less than 4% of all inguinal hernias and mostly occurs in obese men over 50 years of age.¹ Most of the patients are asymptomatic, so the pre-operative diagnosis is made only in 10% of the cases.^{1,2} Bladder injury has been reported from 16% to 23.5% during surgery on bladder hernias.² As most complications are diagnosed intra-operatively, serious life-threatening complication like peritonitis is rarely reported.¹ Here, we present an interesting case of a 52-year-old man, who underwent mesh hernioplasty for an indirect inguinal hernia when his direct component of the urinary bladder in hernia was missed and stitched with the mesh used. He presented to our emergency department after 10 days of surgery with severe peritonitis.

2. Case presentation

A 52-year-old male was brought to the emergency department of our hospital with a history of abdominal distension, obstipation and oliguria for the last 3 days. It was associated with vomiting and abdominal pain. He was operated 10 days back at a local hospital for a left inguinal hernia. His pre-operative ultrasonography report showed left indirect inguinal hernia with content as small bowel and omentum. On examination, he was ill-looking with gross abdominal distension and generalized tenderness. His blood pressure was 110/70 mm Hg with a pulse rate of 130 beats/min. He was febrile to touch. He was catheterized and a nasogastric tube was inserted. Broad-spectrum antibiotics with anaerobic coverage were started. His blood investigations revealed

marked leukocytosis of 38400 cells/mm³ of blood and deranged renal function test with a serum creatinine of 1.7 mg/dl. Ultrasonography revealed gross ascites with dilated small bowel loops. He was subsequently planned for Contrast-enhanced Computed Tomography (CECT) abdomen and pelvis after fluid resuscitation. His CECT showed grossly dilated and thickened small bowel loops with the transition point being at the proximal ileum. Also, there was a urinary bladder wall defect with contrast spillage in the peritoneal cavity and suspicious fistulous communication with the left inguinal canal (Fig. 1). The patient was planned for exploratory laparotomy.

Intra-operatively, a midline incision was given. There was around 5 L of free fluid in the abdominal cavity which was turbid in consistency. Small bowel loops were grossly dilated without any obvious pathology, most likely due to paralytic ileus. On further exploration, necrotic tissues were present in the pelvic cavity and the bladder dome (Fig. 2). On removal of the necrotic tissues, around 5 cm defect was present in the dome of the urinary bladder (Fig. 3). The left lateral wall of the urinary bladder was fixed to the left inguinal canal with prolene sutures which were removed. The bladder was repaired in two layers with absorbable sutures after placing a supra-pubic catheter (SPC). In view of delayed presentation and infected wound, the previous mesh placed during hernioplasty was removed and anatomical repair of the left lateral abdominal wall was done.

Post-operatively, the patient was managed in the intensive care unit for 2 days. He was extubated the next day. He developed surgical site infection which was managed by proper wound care and appropriate antibiotics as required. He was discharged on 10th post-operative day with both supra-pubic catheter and per-urethral catheter in situ. Foley's

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catheters were subsequently removed following a normal cystogram on 21st post-operative day.

3. Discussion

Bladder hernia is an uncommon condition involved in less than 4% of cases.¹ The symptomatic patient may present with inguinal swelling, lower urinary tract symptoms, reduction in hernia after voiding (Mery's sign) and rarely obstructive uropathy.³ Patients with advanced cases of bladder herniation may require double voiding by compressing the scrotal bladder manually.² As most of the patients are asymptomatic and hernia is diagnosed most of the times by physical examination alone without the help of radiological investigations, only 10% of bladder hernias are diagnosed pre-operatively.^{1,2} The complication during bladder hernia surgery arises mainly due to non-suspicion of the

pathology pre-operatively. Most bladder hernias develop as direct hernias and may be overlooked while operating on indirect hernias.⁴ In our case, the pre-operative ultrasonography report showed indirect inguinal hernia with content as small bowel. So, the operating surgeon might be least worried about the possibility of bladder component as direct hernia which eventually lead to bladder injury. The protruded bladder is often misidentified as hernial sac or cord lipoma resulting in injury.

In most of the cases, the diagnosis of inguinal bladder hernia is made intra-operatively.⁵ The treatment is either resection or reduction followed by herniorrhaphy. However, in our case, the diagnosis was made when the patient eventually presented in emergency department with severe peritonitis. The bladder wall was taken up in stitch while fixing the mesh. It got sloughed out gradually over a period of 10 days when the patient developed generalized abdominal distension and oliguria.

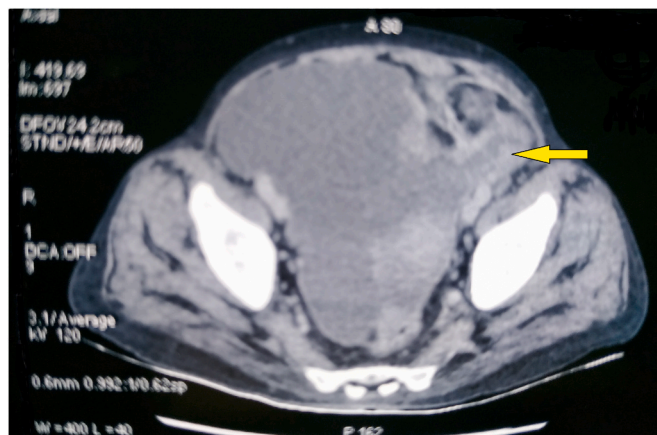
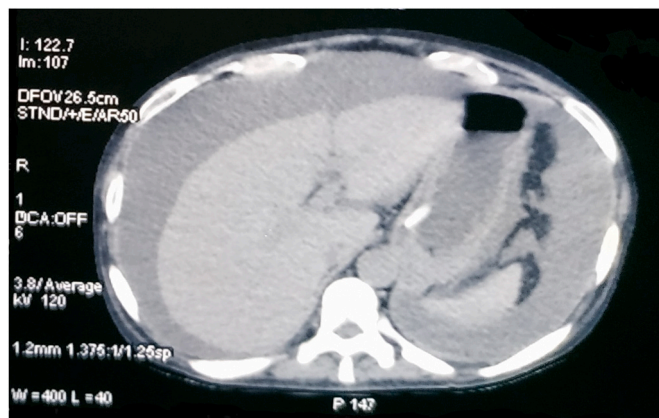


Fig. 1. CECT abdomen and pelvis: A: Dilated small bowel loops B: Gross ascites C: Part of the left lateral wall of the urinary bladder seen in the left inguinal canal (arrow).

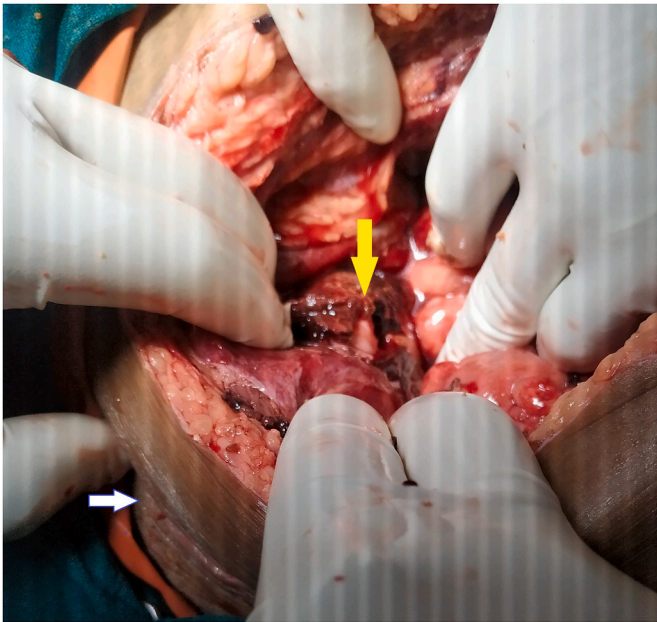


Fig. 2. Necrotic tissue on the wall of the urinary bladder (yellow arrow), hernioplasty incision (white arrow). (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

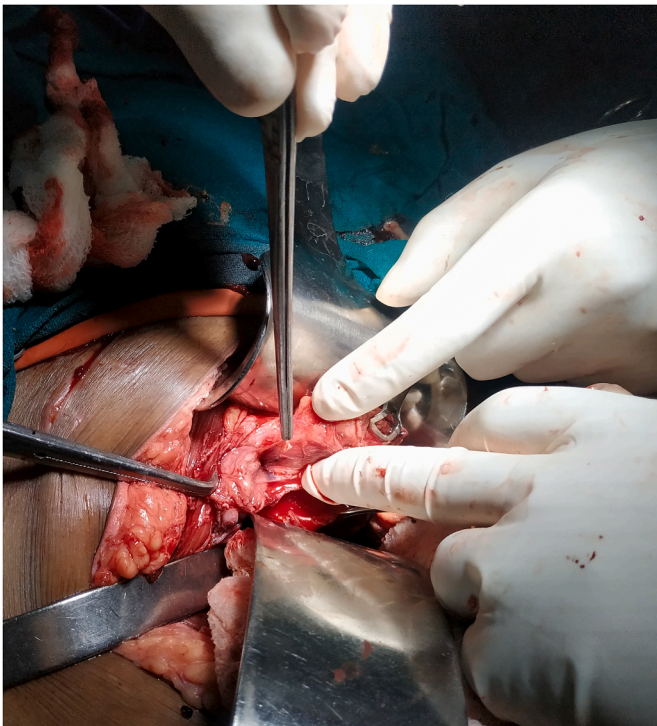


Fig. 3. Bladder defect after removal of the necrotic tissue.

4. Conclusion

Bladder hernia, though an uncommon entity, should be kept in mind

when operating on a case of inguinal hernia, especially in obese males over 50 years of age to avoid disastrous complications. Also, the ultrasonologists should be cautious while screening patients in this age group.

Consent

Written informed consent for publication of their clinical details and/or clinical images was obtained from the patient.

Declaration of competing interest

None declared.

Acknowledgement

None.

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