

Case Report

Acute Abdomen Due to Traumatic Urinary Bladder Rupture

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ABSTRACT

Urinary bladder rupture / perforation is a rare Incident. ^[1] Early diagnosis and prompt management is needed as the condition is associated with high morbidity and mortality. Trauma to lower abdomen at intraoperative injury to bladder is most common causes reported in surgical events. We present two cases of urinary bladder perforation - One due to blunt lower abdominal trauma and other post vaginal hysterectomy bladder injury leading to perforation.

Keywords: Spontaneous Bladder rupture, Urine Ascites

INTRODUCTION

Bladder rupture occurs as a complication in cases of vaginal or abdominal Hysterectomy. Abnormal sharp dissection in the wrong anatomical plane between the base of bladder and the cervical fascia is most common cause in such cases. But this injury gets detected & treated immediately & settles without any serious consequences.

Lower abdominal trauma with full bladder is another cause. Incidence of such cases is less than 10 %.

CASE 1

A 52 years old female started complaining of something coming out of vagina. She was found to have uterine prolapse. She was advised Hysterectomy. Her vaginal Hysterectomy was carried out in her town. She was kept in the same hospital postoperatively for 9 days. On 4th postoperative day she started complaining of abdominal distension and pain in

abdomen. Pain was sudden in onset and progressive in nature. There were 2 episodes of vomiting.

Vital signs- Tachycardia, Tachypnea

P/A examination- Generalized abdomen tenderness, distension present

Per vaginal examination- Not significant (i.e. usual post-vaginal hysterectomy status noted)

Ryle's Tube insertion was done and she was started with Intravenous fluids and antibiotics.

Foley catheter no. 14 Fr was in present & draining urine, which was clear.

Her USG (Abdomen & pelvis) was done. It showed

-Thick sludge with multiple tiny gall stones with Gall bladder lumen. Large bowel showed gaseous distension. Collapsed Urinary bladder. Free fluid in abdomen and pelvis. Mild dilated fluid filled small bowel loops in periumbilical region

Her CECT (Abdomen & Pelvis) was done. It showed

-Urinary bladder partially distended. Foleys catheter traversing through urinary bladder in peritoneal cavity at junction of dome & right posterolateral bladder wall. Foleys bulb & tip of catheter abutting adjacent bowel loops. Dye was noted around bowel loops. Suggestive of bladder perforation.

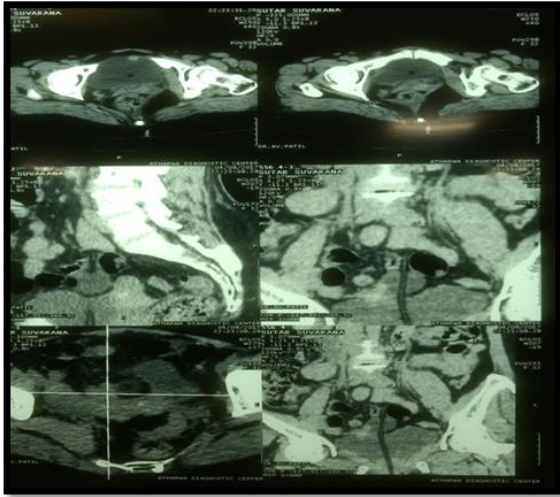


Figure 1

Cystoscopy followed by abdominal exploration was planned. Cystoscopy showed

-large perforation in posterior bladder wall. Catheter gone out through large 3cm perforation in posterior bladder wall, 3cm distal to the interureteric bar. Balloon of catheter could be seen at the perforation site. Both ureteric orifices were normal [fig 2].

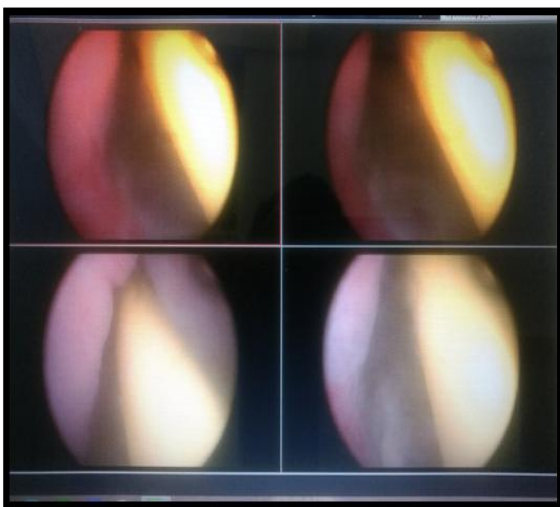


Figure 2

After cystoscopy abdominal exploration was done. Lower abdominal midline incision was taken through existing scar of previous LSCS.

On exploration it was found that catheter had passed into the peritoneum through large 3cm opening in bladder. Approximation sutures taken on fallopian tube were gone through out bladder resulting in injury. Vaginal vault was deep & posterior to this area (i.e. vault closure sutures were not responsible for the injury). Bladder dissected from sutures. Bladder closed with 2-0 vicryl in 2 layers. Omentum mobilized and interposed between bladder and vaginal vault.

Tube drain placed in pelvis. 20 No three way catheter inserted from urethra & positioned in bladder. Rectus sheath and abdominal layers closed.

No complains postoperatively were present. Catheter was removed after 20 days and patients passed urine comfortably without any complains.

CASE 2

A 50 years old male was evaluated for pain in abdomen & abdominal distension. Patient gave history of heavy alcohol consumption prior to fall and loss of control and loss of coordination leading to inability to walk and fall in roadside sanitary gutter. Next day he started complaining of abdominal distension. It was sudden in onset and progressive in nature. Distension was associated with pain and 1 episode of vomiting.

At primary health care center 16 Fr Foleys catheter was tried, but failed. Suprapubic aspiration was done but only 10cc urine was drained. Distention persisted

No 8 Fr Foleys catheter was inserted and blood stained urine was drained. Patient was referred to our institute for further intervention.

No history DM, HTN, TB, ASTHMA. History of hospitalization for treatment of pancreatitis 1 year back. Her Serum lipase was 300 IU/L & Serum amylase was 562 IU/L

CECT (Abdomen & Pelvis) showed

-Rupture of posterior superior part of bladder wall with Foleys bulb seen located outside the bladder lumen Mild free fluid is seen in between bowel loops in right iliac fossa and around bladder. Perivesical fat stranding was seen

-pancreas appeared bulky and showed small calcifications and mild peripancreatic fat stranding suggesting resolving pancreatitis

Cystogram showed dye in the peritoneum passing from ruptured bladder:-



Figure 3



Figure 4



Figure 5

Cystoscopy followed by abdominal exploration was planned. Cystoscopy showed

-small false passage through bulb membranous urethra

-bladder tear seen more on right side

-scope easily passed into the peritoneal cavity.

-ureters normal well away from edges of tear

After cystoscopy abdominal exploration was done. Lower abdominal midline incision was taken

Urine ascites present. On exploration it was found that catheter had passed into the peritoneum through large 4cm opening in bladder. No bowel or intraperitoneal injury to other organ. Bladder closed in layers with 2-0 vicryl. Tube drain kept in pelvis. Rectus sheath and abdominal layers closed. No complains postoperatively were present. Catheter was removed after 20 days and patients passed urine comfortably without any complains.

Picture of ruptured bladder with Foleys catheter inside:-

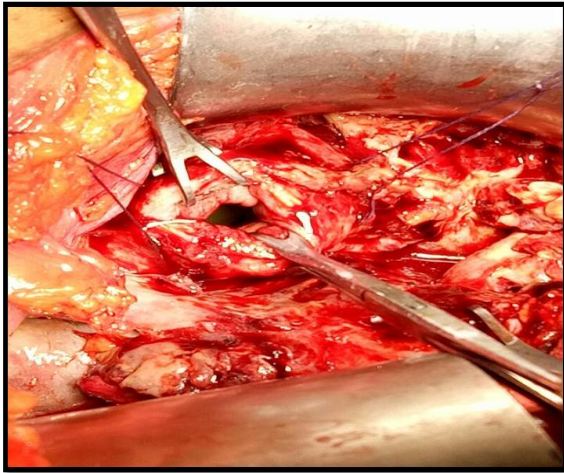


figure 6

Picture of urinary bladder sutured with 2-0 vicryl

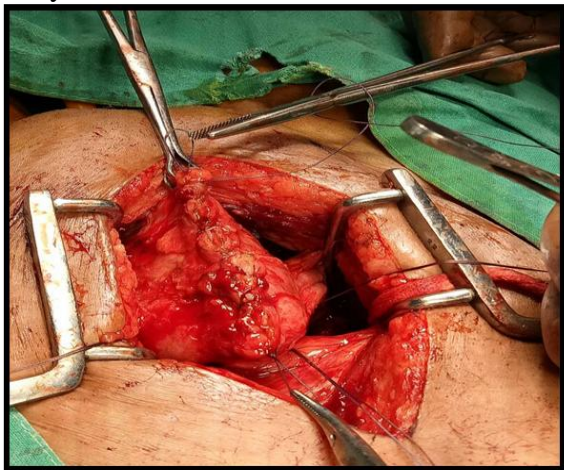


Figure 7

DISCUSSION

Bladder injury may occur during vaginal or abdominal Hysterectomy.

Bladder rupture is mostly commonly associated with Blunt abdomen trauma on full bladder. [1]

Emergency laparotomy or laparoscopy with perforation closure is the mode of treatment. Adequate IV fluids should be given to patient and resuscitated properly

Adequate Blood should be preserved. A broad spectrum antibiotic with step by step administration of oral intake postoperatively is important. Foleys catheter is not removed at least for 2 to 3 weeks postoperatively to avoid excessive bladder distension. Urinary Bladder perforation diagnosed in late stage may lead to uremia & urosepsis. Therefore early surgical intervention with postoperative Foley catheterization is necessary for adequate period of time. [2]

CONCLUSION

Urinary bladder perforation is a surgical emergency which requires immediate surgical intervention without any delay followed by adequate proper postoperative care and follow-up.

Diagnosis is done with clinical correlation and imaging modalities.

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