



AN UNUSUAL CASE OF URINARY BLADDER INJURY IN A POST HYSTERECTOMY PATIENT

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ABSTRACT

A 26 years old young female presented with hematuria and pus in the drain after subtotal hysterectomy that was carried out for uncontrolled bleeding post ectopic pregnancy. The USG revealed a urinoma and communication with a 4 cm rent in the posterior wall of bladder. On exploration, the catheter was found to be outside the rent of urinary bladder. The large tear in the posterior wall of bladder was repaired in two layers with a drain in the pre vesical space. The postoperative period was uneventful and patient recovered successfully. The bladder injuries after hysterectomies are uncommon nowadays but can present as a challenge in management.

KEYWORDS : Bladder Injury; Hysterectomy; Urogynaecology; cystoscopy; scar ectopic pregnancy

INTRODUCTION:

With advancement in surgical care, the bladder injuries following hysterectomies is a rare phenomenon. However, there can be numerous causes of urinary bladder injuries after hysterectomy.

- Intraoperative-1) Electrocautery and 2) Blunt, sharp, and laser dissection¹
- Concomitant bladder or pelvic anomalies or pathologic conditions (prior pelvic or bladder surgery, endometriosis, malignant infiltration, bladder diverticula, amyloidosis, or previous radiation) are predisposing factors that increase the chances of this bladder injury *Ostrzenski and Ostrzenska*¹⁹⁹⁸.

Surgeries	Incidence of bladder injuries
Cesarian section	0.28 to 0.47 % phips et al 2005
Laparoscopic hysterectomy	0.75 % wong et al 2008
Abdominal hysterectomy	0.58 %teeluckdharry et al 2015
Vaginal hysterectomy	0.51 %teeluckdhari et al 2015
inguinal hernia repair	0.08 to 0.3% summerton et al 2012
lap hernia repair	1.6 % Gomez et al 2004

The factors that increase the risk for bladder injury especially during pelvic surgery include,

1. Challenges of exposure,
2. Retractor placement, and
3. Small working space.
4. Anatomic distortion from tumor mass effect,
5. Prior to surgery or radiation therapy, or any combination of these features raises case complexity and the likelihood of bladder injury. Pelvic organ prolapse can also cause significant anatomic distortion, and bladder injury may also occur in the setting of pelvic reconstructive surgery

It has been observed that Laceration is the most common mechanism of intraoperative injury to the bladder.

The small defects of bladder injury can be treated by laparoscopic repair, either suturing with absorbable suture or,

if the injury is small, very small treated using preformed suture loops to encircle and secure the cystotomy (*Ostrzenski and Ostrzenska, 1998; Poffenberger, 1996*).

But extensive defects require open repair. When bladder injury is diagnosed postoperatively, the key factor is whether the drainage is extraperitoneal or intraperitoneal, which is largely dependent on the preceding laparoscopic access. Extraperitoneal extravasation without any complicating additional problems may be treated by simple placement of a transurethral indwelling Foley catheter.

Intraperitoneal drainage is an indication for subsequent laparoscopic or open repair. Prevention is always better than cure. Prevention of bladder injury begins with 1. preoperative placement of a Foley catheter. 2. Avoidance of excessive coagulation near the bladder and 3. dissection with exact knowledge of bladder anatomy (urachus, medial umbilical and vesico - cervical ligaments).

Significant factors for management influencing the bladder injury include,

1. The extent of hematuria,
2. Patient's requirement for postoperative anticoagulation,
3. significance of the perforation,
4. anticipated requirement of postoperative continuous bladder irrigation, and
5. development of abdominal distension during endoscopy etc.

A case report_ we are presenting an unusual case of urinary bladder injury that happened during obstetric and gynecological emergency – presented postoperatively with hematuria and pus in the drain.

A 26 years old female took MTP pills for abortion on 25-01-22, as she didn't want to continue the pregnancy. Vaginal bleeding stopped after 4 days; however, she again started bleeding and underwent D&C on 22- 02-2022.

Her condition did not improve and her hemoglobin dropped to

5 gm%. She was admitted on 24-02-2022, and USG revealed scar ectopic pregnancy. She was P3, L3, A1 with 2 FTND and 1 LSCS.

She was referred to a private hospital, where she underwent Subtotal Hysterectomy and transfusion of 3 points of PCV was given.

Accidentally, there was a urinary bladder injury during the operation and it was primarily repaired. But after the operation the patient did not improve and went into urosepsis. There was pus into urosac and hematuria in the postoperative period. When her condition did not improve, she was referred to us for further management.

On admission, she had fever and pus was pouring from the Foley's catheter and CT scan revealed urinoma and a large defect in the superior wall of the urinary bladder approximately 1.4 cm in axial plane with large ill-defined thick walled loculated collection adjacent to it with foci of air within. The collection measured 9.2 x 9.9 x 4.8 cm. A frank extravasation of contrast on excretory phase from urinary bladder into the collection was noted.

Another small focal area of outpouching noted medial to the above defect in superior wall of urinary bladder consistent with site of previous repair.

The patient's condition was optimized by intravenous fluids higher antibiotics and resuscitation.

Initially cystoscopy⁴ done to confirm the findings of rent at postero superior border of urinary bladder suggestive of around 4 cm rent on postero superiorly to urinary bladder.

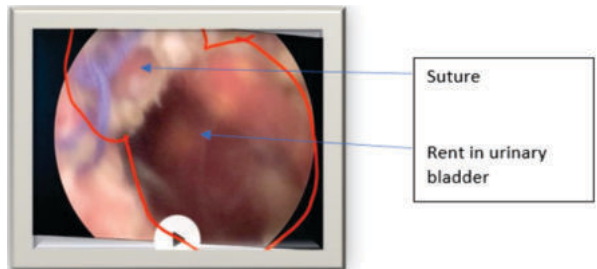


Figure 1 cystoscopy view of urinary bladder

Patient optimized, electrolyte correction and build up hemoglobin done. The patient was taken up for surgery.

Operative findings-incision taken with excision of the previous scar and reached up to bladder, urinoma aspirated, a rent of around 4cm noticed on postero- superior aspect of the bladder and tagging sutures were removed and previous foleys catheter had gone through the urinary bladder rent into retroperitoneum it was removed.

Bladder wash given then urinary bladder was opened up superiorly and involving the rent was almost split in 2 halves.

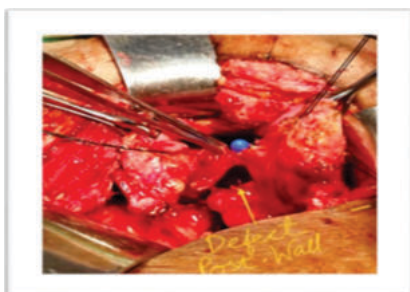


Figure 2 defect after exploration



Figure 3 cect of patient

SURGERY - surgery began with excising the previous scar of LSCS, urothelioma suctioned out around 500 ml.



Figure 4.1 exploration

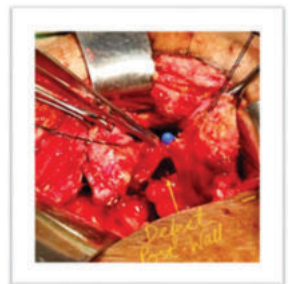


Figure 4.2 repair of Urinary bladder.

Rent identified and findings confirmed, Urinary bladder opened up from superiorly and rent closed with vicryl 1-0, rest of the urinary bladder⁵ biwalled with vicryl 1-0. After complete repair of urinary bladder a leak proof test was done on table and sutured site was tested for any leak by filling it with saline. through this foleys catheter again a through Bladder wash was given with ASEPTO syringe. Silicone catheter inserted and patient shifted to recovery room.

Post operatively patient improved dramatically and she came out of sepsis. Urine output was adequate and clear, patient was discharged on pod 5 with foleys in situ. Post operative period was uneventful. Although urinary bladder injuries are rare, a high index of suspicion is necessary.

DISCUSSION-

Around 50% of deaths occurs if such cases of urinary bladder injury are neglected or go unnoticed.

CONCLUSION-

Appropriate investigations timely decisions, cystoscopy and effective management and team work can avoid a premature death in such unusual cases of urinary bladder injury post hysterectomy.

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