Laparoscopic Injury To Urinary Bladder And Its Identification, Repair. Distended Urosac Bag - Vigilant Observation

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Abstract: Bladder perforation during laparoscopy is seldom recognized, uncommon complication. We present a case of distended urosac bag secondary to bladder injury. Repair was done laparoscopically in two layers, Catheter was kept for 3 weeks. Patient had no complaints later on.

Index Terms - Bladder, Gaseous distention, Laparoscopy, Perforation, Urinary bag

1. INTRODUCTION

Laparoscopic gynecologic surgery has been described as an effective and safe procedure. It is associated with decreased morbidity and admission periods and is widely used in practice. However, regardless of these advantages, this procedure has its own potential for serious complications related to pneumoperitoneum, position change, and laparoscopic instrument.

It is known that the incidence of bladder injury during laparoscopic procedures ranges from 0.02% to 8.3%, and that the most common laparoscopic procedure during which bladder injury occurs is laparoscopic-assisted vaginal hysterectomy. (1)

Traumatic complications due to instruments manipulation include bowel perforation, large vessel injury, gastric perforation, bladder perforation, and ureter injury.

There are a wide range of bladder injuries during laparoscopic procedures. Here we report a case of bladder injury which was identified with distended urosac bag, and laparoscopic repair was done successfully.

Case Report:

A 38 yr old female came with multiple uterine leiomyoma, dysmenorrhea.

No significant medical history noted, patient was posted for laparoscopic hysterectomy.

Under general anesthesia, patient was positioned in head low position.

Steps of laparoscopic hysterectomy, followed.

Bladder mobilized, and ot staff (Heena, Deepika, karlina sisters) noted that uro sac bag was filling and getting tense.

Image -1: Distended uro sac bag
Under suspicion of bladder injury, urinary bladder was filled with saline + methylene blue dye.

Image -2 : Bladder injury noted, Foley's bulb visible.

Leak noted, in the dissected area, defect was around 3cm, Foley's bulb was clearly visible.

Then we planned for laparoscopic repair, 3.0 vicryl used, 2 layer closure was done.

Dye pushed again, no leak noted.
Image -3, 2 layer laparoscopic closure done

Urosac bag, was not distended.

Hysterectomy completed laparoscopically.

Image -4, 12 week size uterus extracted vaginally

Patient was discharged with Foley’s catheter, catheter was removed after 3 weeks.

Patient has good recovery.

II. DISCUSSION

Bladder perforation is an uncommon complication of laparoscopic surgery. Since it was first reported, it has been noted to occur during procedures involving a verres needle, trocars (primary or secondary), and electrocautery regardless of improvements in surgical techniques and safety instructions (2). Predisposing risk factors for complications during laparoscopic procedures include operation history of the patient, pelvic adhesion, endometriosis, obesity, urachal anomaly, and unskilled surgeons (3).

Bladder perforation during laparoscopic surgery may be detected by intraperitoneal bleeding, clear liquid in the operation field, hematuria, and gaseous distention of the urinary bag [4].

Among these, hematuria and gaseous distention of the urinary bag could be detected early by anesthesiologists. If hematuria is found intraoperatively or postoperatively, cystoscopy or cystoradiography can be used to confirm bladder perforation. Hematuria may not occur in all bladder perforation cases and there are difficulties in diagnosing intraoperatively [5].

In our case, it is thought that bladder perforation occurred through laparoscopic dissection of severe adhesion of uterus with bladder despite no previous abdominal surgery. The uterus was big 12 week size with multiple fibroids.

Early detection during laparoscopic surgery allows immediate bladder repair via laparoscopy or laparotomy and decreases postoperative morbidity. A small undetected tear may heal if bladder decompression is maintained, but may cause oliguria, peritonitis, and fistula formation [9].
Insertion of a foley catheter is associated with a risk of infection; on the other hand, this decreases the risk of bladder injury because it permits continuous decompression of bladder. It also allows early detection of bladder injury which is not found in the operation field, so insertion of indwelling foley catheter is recommended [5].

In conclusion, vigilant observation in operation theatre like distended uro sac bag can prevent disaster later on..

REFERENCES