Large Bowel Injury During Total Laparoscopic Hysterectomy

Malvika Sabharwal

Chief Consultant, Obgyn Jeevan Mala Hospital,
Consultant, Obgyn La Femme Fortis Hospital,
New Delhi, India

ABSTRACT

Large bowel injuries are unfortunate complications of laparoscopic surgery, with an incidence of 0.62 to 1.6 per 1000 laparoscopies. One-third of these injuries can be diagnosed intraoperatively, with the rest going unnoticed and revealed later. Rectal injury, a very rare complication, may be caused during pelvic dissection of dense adhesions. Injury at the rectosigmoid junction due to traction with a rectal probe is extremely rare and highly underreported. We report a case of rectal injury during total laparoscopic hysterectomy in a case with dense pelvic adhesions.

Key words: Adhesiolysis, bowel injury, rectal probe, rectosigmoid

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INTRODUCTION

Over the past few years, operative laparoscopy has proved that it is a surgical discipline in its own right. Assessment of a new surgical technique requires that the risk of complications also be evaluated.[1] Studies have suggested that the rate of laparoscopic complications may be increasing worldwide, as more demanding procedures are being performed laparoscopically.[2] Large bowel injury is one of the uncommon complications and may occur while dissecting in the pelvis.[2,3]

CASE REPORT

A 43-year-old, para three, underwent total laparoscopic hysterectomy (TLH) for adenomyosis. On laparoscopy, the uterus was eight to ten weeks in size. Dense adhesions were seen extending from the posterior surface of the uterus to the posterior pelvic wall, completely obliterating the pouch of Douglas. The rectum was pulled up and was found to be densely adherent in the pouch. The anatomy of the right ureter was also distorted and it was adherent to the posterior surface of the uterus. A rectal probe was inserted to see the upper limit of the rectosigmoid. Adhesiolysis was carried out to release the rectum from the posterior uterine wall. The rectal probe penetrated the rectosigmoid junction due to excessive traction, and was seen to be lying in the pelvis. The injury being detected intraoperatively, laparotomy was done and a primary repair of the rectum was carried out using interrupted, sero-submucosal, tension-free sutures, with vicryl 3 0 [Figure 1]. The patient recovered well postoperatively and was sent home on the fifth postoperative day. She was fine on follow-up.

Address for correspondence:
Malvika Sabharwal,
Jeewan Mala Hospital, 60/33, New Rohtak Road,
New Delhi - 110005, India.
E-mail: jmh.cme@gmail.com

DISCUSSION

Surgeons operating on the abdomen and pelvis should be familiar with the management of iatrogenic injuries of the gastrointestinal tract.[4] These injuries should be recognized and appropriately managed, to minimize morbidity.[5]

A sound knowledge of the laparoscopic anatomy is essential to understand the distorted anatomy often present in the disease. Failure to keep to tissue planes, blunt dissection, diathermy in close proximity to the intestine, excessive traction, and poor visualization account for most injuries.

Previous surgery, endometriosis, chronic pelvic inflammatory disease (PID), malignancy or radiotherapy may distort anatomy and obliterate tissue planes.[6]

Figure 1: Bowel injury during laparoscopic hysterectomy

All high-risk patients should be warned about the possible risk of gastrointestinal injury. Bowel preparation is advisable before major pelvic surgery.[6]

Injuries may result from mechanical or thermal forces. Damage to the rectum is less common, but carries a higher potential for complications and may occur during pelvic dissection or adhesiolysis.[3]

Injuries with healthy edges can be repaired primarily using tension-free, single-layer, interrupted sero-submucosal 3-0 vicryl. For more extensive injuries, resection and primary anastomoses are required.[6,7]

Persistent pyrexia, tachycardia or ileus in the postoperative period should raise the index of suspicion for bowel injuries. Laparotomy followed by resection and defunctioning with an end stoma, may be required.[7]

Proctosigmoidoscopy can be performed at the end of the surgery to evaluate intraluminal abnormality or rectosigmoid injury. The pelvis is then filled with isotonic fluid and observed laparoscopically for air leakage.[8]

Dr. Brosens (Belgium) and Dr. Alan Gordon (UK) organized a multinational survey using the experience of members of the International Society of Gynecological Endocrinology (ISGE), who were requested to report the details of bowel trauma over two years and thereby learn from each others' experiences.

Early recognition and prompt management of such injuries is the key to success.

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