

Pelvic Gynecology Intervention, Complications and Significance of Teamwork Collaboration with Abdominal Surgeon



Healthcare

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Abstract

Extensive gynecologic surgery often entails meticulous dissection near the bladder, rectum, ureters, and great vessels of the pelvis. Complications of gynecologic surgery include hemorrhage, infection, thromboembolism, and visceral damage. The risk of complications depends upon the extent and approach to surgery and patient characteristics. Understandably, the more common complications from this surgery relate to injuries to these viscera and occur during extensive resections for the treatment of cancer or when anatomy is distorted due to infection or endometriosis. Injuries to the gastrointestinal components are common during open gynecological surgery. Any delay in diagnosing a bowel perforation can lead to serious fecal peritonitis and even death. If a patient is experiencing pain, tachycardia, and fever following surgery, bowel injury should be suspected, warranting immediate consultation with a general surgeon. Gynecologists routinely operate on patients with risk factors for bowel injury; obesity, endometriosis, multiple abdominal procedures, pelvic inflammatory disease, history of malignancy, and advanced age. A general surgeon is often called, however, for bowel repairs that can be performed by a gynecologist with sufficient training and experience. There are instances, however, in which a general surgical consultation may not be readily available, another reason to master repair of bowel injuries encountered during gynecologic surgery. In conclusion, sufficient training of principles of intestinal surgery, and close collaboration with general surgeons is very important for management of these complications and a successful outcome.

Introduction

In general, a brief evaluation of the gastrointestinal tract is sufficient in most patients undergoing gynecologic surgery. The more invasive the procedure, however, the more thorough the preoperative evaluation should be. Any patient who acknowledges a history of peptic ulcer disease, intolerance to certain foods, change in bowel habits, rectal bleeding, or intermittent, crampy abdominal pain or distention should have a careful evaluation of her gastrointestinal tract. For instance, those complaining of upper abdominal pain, especially related to meals, or those with a history of ulcer disease or with recurrence of symptoms should be evaluated with an upper gastrointestinal series and gallbladder ultrasound. Gastroscopy may or may not be appropriate, depending on the identification or high suspicion of a gastric or duodenal lesion. Similarly, patients with rectal bleeding, cramps, or otherwise unexplained abdominal pain should have a sigmoidoscopic examination and a barium enema, and, in some instances, a small bowel series and colonoscopy may be appropriate. Any positive preoperative finding in such a patient should be thoroughly evaluated, and the overall treatment plan should be revised according to the findings. A medical or surgical consultation may be appropriate in these patients. In the absence of such a history or specific symptoms, this workup is neither appropriate nor necessary.

Patients who have had multiple previous abdominal operations are another group who have at least the potential for postoperative bowel obstruction. These patients should be regarded at high risk not only for intestinal complications but also for infections and other types of complications.

Gastrointestinal injuries are one of the complications during gynecological operation.¹ Small intestine and colon injuries can be seen during gynecological procedures from dilatation and curettage to total abdominal hysterectomy and laparoscopic or hysteroscopic procedures. Colon injuries can occur in patients with left adnexal mass and women with a history of pelvic inflammatory disease or diverticulitis

Discussion

Exploration of the Abdomen

Exploration of the abdomen is an important part of any abdominal operation, and it should be done during a hysterectomy or other gynecologic operative procedure that permits such exploration. Systematic exploration of the abdominal cavity should include

examination of the liver and its surfaces for possible metastatic or inflammatory disease. In young to middle-aged women who have been on oral contraceptives, it is important to examine the liver for possible liver cell neoplasms. Next, the gallbladder should be examined, if at all possible, since gallstones are prevalent in women. If possible, the pancreas, esophageal hiatus, spleen, and kidneys should be palpated. At this point, adhesions involving the small bowel may be lysed, since it is difficult to explore well in the face of adhesions. When adhesions are dense, however, and freeing these adhesions is not a necessary part of the operation, exploration of the area involved is not appropriate. It is generally difficult to examine the colon thoroughly, but a brief examination of the ascending, transverse, and descending colon can be performed if indicated. In the vicinity of the sigmoid, one may find adhesions in patients who have had a history of diverticulitis. If one is using a previous abdominal incision, it is not at all unusual to have small bowel or even colon adherent to the incision: Consequently, in performing such an incision, one must take special care to avoid inadvertent enterotomy. Probably the best technique to avoid entering intestine that is adherent to the incision is to place the posterior rectus sheath and peritoneum on traction with Kocher or Allis clamps. This makes the adhesions between the small bowel or colon and the peritoneum fairly taut and also allows the surgeon to divide these adhesions under better vision. An alternative is to select an incision that is at a distance from previous incisions, if possible. Pelvic-abdominal adhesions illustrated in figure 1 and 2.



Fig. 1



Fig. 2

Intestinal Complications

One of the most common complications that can occur during an operation such as abdominal hysterectomy is an enterotomy involving small bowel or the colon, usually the sigmoid because of its proximity to pelvic structures.^{6,7,8} This injury occurs principally during the lysis of adhesions, and although sometimes unavoidable, it usually is a preventable complication. When enterotomy occurs during the division of adhesions, it usually results from tearing the serosa when using blunt dissection or cutting directly into the lumen of the bowel during sharp dissection. There is no single best method of dividing adhesions, in spite of dogma to the contrary. In some situations, particularly when the adhesions are flimsy and are torn apart easily, gentle blunt dissection is the safest method. In other situations, when adhesions are dense and, especially, when important adjacent structures such as the urinary bladder are involved, blunt dissection or pulling on the small intestine results in tears of the bowel or adherent viscus.⁸ This happens primarily because the tensile strength of the adhesions exceeds that required to maintain bowel or other visceral seromuscular layer intact. Consequently, when adhesions are dense, it is generally safer to use a sharp method of dissection.^{2,3,4} The immediate recognition of enterotomy is important because if the operation is terminated without closing the defect, peritonitis will occur in the immediate postoperative period.⁸

Injuries to the small intestine can result during gynecologic procedures ranging from dilatation and curettage to total abdominal hysterectomy.^{4,5,6,7,8} Newly introduced laparoscopic and hysteroscopic procedures, such as laser-assisted endometrial ablation, can also result in intestinal injuries.⁴ For example, trochars, cautery, or lasers used in these procedures can produce intestinal injuries, and sometimes these injuries are not immediately apparent at the time of operation. A patient with such injuries may present with postoperative ileus, compounded by signs of peritoneal irritation, elevated temperature, and leukocytosis. Early re-exploration in these situations can be life-saving.

Injuries to the colon can occur during gynecologic procedures, particularly in those involving left adnexal masses or in patients with previous inflammatory disease due to diverticulitis or previous pelvic inflammatory disease with adhesions involving the sigmoid or right colon.^{4,5} Rarely, the transverse colon can be so redundant as to be adherent to structures in the pelvis. When one is anticipating a possible resection of the colon, such as for ovarian malignancy, a bowel preparation is in order, such as the method previously described using neomycin and erythromycin base or metronidazole. This combination has been shown to be effective

against both gram-negative aerobic and anaerobic fecal organisms. Many surgeons add a parenteral intravenous antibiotic, given just before the operation.

Team work close collaboration is very important as gynecologic surgeon with general surgeon; this is likely to be present in daily basis when surgical practice disciplines are grouped together within institution. In Albania, many maternity hospitals are far away from general and other surgery services and often we face a delay in calling in the general surgeon or other specialists of surgery, which puts the patient care at high risk. However, the gynecologic surgeon must possess appropriate surgery skills to deal with abdominal and urological intra operator complication cases, which nowadays this seems not to be handled appropriately in specialty training curriculum.

Conclusions

A broad range of complications that occur in general surgical patients can occur in the gynecologic surgical patient as well. Even in the absence of intestinal injury, certain intestinal complications can occur in gynecologic patients, specifically including paralytic ileus, small bowel obstruction, and obstruction of the colon. If not properly treated or recognized, obstruction can lead to infarction with very serious consequences. Since gastrointestinal complication during gynecological surgical procedures occur, meticulous pre operation patient assessment, proficient master general surgical skills and close collaboration with general surgery service is important in today's surgical care service delivery.

References

1. Ellis H: The Clinical Significance of Adhesions: Focus on Intestinal Obstruction. *Eur J Surg.* 1997; suppl 577: 5-9.
2. Bryant T. Clinical lectures on intestinal obstruction. *Med Tim Gaz.* 1872; 1: 363-365.
3. Welch JP. Adhesions. In: Welch JP, ed. *Bowel Obstruction.* Philadelphia: WB Saunders; 1990: 154-165.
4. Operative Laparoscopy Study Group. Postoperative adhesion development after operative laparoscopy: evaluation at early second look procedures. *Fertil Steril.* 1991; 55: 700-704.
5. Krebs H. Intestinal injury in gynecologic surgery: a ten-year experience. *Am J Obstet Gynecol.* 1986; 155: 509-514.
6. Mendez LE. Iatrogenic injuries in gynecologic cancer surgery. *Surg Clin North Am.* 2001; 81(4): 897-923.
7. Sabharwal M. Large bowel injury during total laparoscopic hysterectomy. *J Gynecol Endosc Surg.* 2009; 1(1): 57-8. doi: 10.4103/0974-1216.51911.
8. Stany MP, Farley JH. Complications of gynecologic surgery. *Surg Clin North Am.* 2008; 88(2): 343-59. doi: 10.1016/j.suc.2007.12.004.