

Clinical Pearl

Surgery for Bowel Obstruction in Ovarian Cancer

Palliative surgery can be considered for terminally ill patients with bowel obstruction if the patient is likely to benefit from the surgery.

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Introduction

Unfortunately, bowel obstruction is a common sequela of advanced abdominal or pelvic cancers, including ovarian cancer. This challenging complication adversely affects both length of survival and quality of life. Reports suggest that from 5.5 percent to 51 percent of ovarian cancer patients with Stage III or Stage IV disease develop a malignant bowel obstruction [1]. Of course, the obstruction may be due to benign, non-cancerous causes such as adhesions, hernias, edema, inflammatory bowel disease, or radiation-induced strictures. Typically, however, in the case of gynecological cancers, the obstruction is related to tumor growth and blockage [2].

Ovarian cancer tends to spread regionally by local extension into the peritoneum, and tumor deposits may occlude both the large and small intestine at either single or multiple sites.

Clinical Features

Clinical features vary depending on the site of the occlusion with obstructions higher in the gastrointestinal tract (such as the duodenum or proximal jejunum) causing intense nausea and vomiting. A small bowel obstruction will also induce some moderate abdominal distension with hyperactive bowel sounds on auscultation and abdominal pain. Occlusion of the large intestine is associated with more significant abdominal distension.

Suspected bowel obstruction in the terminally ill cancer patient should not be considered an emergency, inasmuch as the course of the obstruction is generally gradual. Compression of the lumen tends to occur insidiously and often remains partial [3].

Signs and Symptoms of Bowel Obstruction

- Nausea and vomiting (worse with duodenal or jejunal obstruction)
- Abdominal or visceral pain (often near site of obstruction)
- Abdominal distension (worse with obstruction in large intestine)
- Absent bowel sounds (complete obstruction)
- High-pitched or tympanic bowel sounds (partial obstruction)
- History of infrequent bowel movements and flatus (partial obstruction)
- History of absent bowel movements and flatus (complete obstruction)
- Anorexia

Treatment

When the presence and location of malignant bowel obstruction have been verified through radiologic evaluation, the

goals of treatment must be considered carefully in patients with end-stage ovarian cancer. Improved survival may be a secondary gain. The primary aim of intervention, whether medical or surgical, is usually improvement and palliation of symptoms. Individual patient values and goals become especially important at the end of life. Some patients, such as Ms Macias (from this month's clinical case), may desire a return, even if brief, to eating and enjoying a regular diet. Others may wish to remain at home for hospice care, which can be difficult in the case of recurrent obstructive episodes.

Medical Management. Medical management for bowel obstruction in the terminally ill patient is appropriate for situations in which the patient's condition prohibits invasive treatment or when the patient refuses such treatment. Some common pharmacological therapies for relief of symptoms associated with a malignant bowel obstruction are:

- Analgesics (such as opioids)
- Anti-emetics (such as metaclopramide)
- Anti-secretory drugs (such as octreotide, a synthetic analog of somatostatin)
- Anti-cholinergics to slow down peristaltic contractions (such as scopolamine)
- Corticosteroids to decrease peritumoral edema and for anti-emesis activity
- Fluids to prevent dehydration and electrolyte imbalances (controversial for hospice patients)

Endoscopic Management. These procedures may be useful for patients who are refractory to medical management but are considered poor candidates for surgery. Endoscopic therapies can also benefit patients who refuse more invasive surgical correction. The 2 chief methods of endoscopic management are endoscopic stent placement and percutaneous endoscopic gastrostomy (PEG) placement. While PEG placement can be very effective at relieving the symptoms associated with obstruction and in enabling home hospice, it does not usually allow the patient to return to a regular oral diet [4].

Surgical Management. If the obstruction is amenable to surgical correction and the patient is deemed an appropriate candidate, surgery may be recommended for relief of a malignant bowel obstruction. Overall, however, success following surgery is greatly variable, with significant morbidity and mortality risks which must be discussed with the patient. Both the operative mortality (9-40 percent) and complication rates (9-90 percent) are high, with survival in the 3- to 6-month range [3]. Complications include re-obstruction, pain, wound infection, and the development of intestinal fistulae.

A survey of Society of Surgical Oncology members found that increasing patient survival received the lowest priority scores when physicians were asked what they considered to be important goals to achieve in performing palliative surgery [5]. Success should be evaluated in quality-of-life terms, outcomes (symptom control, comfort, restoration of diet, maintaining function, decreased hospitalization etc.) which may vary depending on the goals of the patient. Estimates of success, in terms of quality of life, for surgical palliation of bowel obstruction also vary greatly.

Other Options. A nasogastric (NG) tube may provide temporary relief from the abdominal symptoms of bowel obstruction but should not be used long-term in the terminally ill patient. Most patients find NG tubes very uncomfortable.

Indications for Palliative Surgery

There is no clear consensus in the literature on indications for palliative surgery for the correction of bowel obstruction in the terminally ill cancer patient [6]. During evaluation for surgical candidacy, 3 key questions need to be considered:

1. Is the surgery technically feasible?
2. Is the patient fit, both physically and emotionally, for surgery and recovery?
3. Is the patient likely to benefit from the surgery?

One group, after a review of the literature and panel discussion, has attempted to delineate absolute and relative contraindications to palliative surgery for the correction of bowel obstruction [3]. A slightly abbreviated version of

their tables follows (content not substantially altered):

Absolute Contraindications to Surgery.

- Laparotomy demonstrating that further corrective surgery was not possible
- Previous abdominal surgery showing diffuse metastatic cancer
- Involvement of the proximal stomach
- Intra-abdominal carcinomatosis with severe motility problem
- Diffuse palpable intra-abdominal masses
- Massive ascites which rapidly recurs after drainage

Relative Contraindications to Surgery

- Extra-abdominal metastases producing difficult-to-control symptoms (ie. dyspnea)
- Non-symptomatic but extensive extra-abdominal metastatic disease (ie. pleural effusion)
- Poor general performance status
- Poor nutritional status (marked weight loss, cachexia, hypo-albuminemia)
- Advanced age in association with cachexia
- Previous radiotherapy of the abdomen or pelvis

References

1. Davis MP, Nouneh D. Modern management of cancer-related intestinal obstruction. *Curr Pain Headache Rep.* 2001;5:257-264.
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2. Clarke-Pearson DL, Chin NO, DeLong ER, Rice R, Creasman WT. Surgical management of intestinal obstruction in ovarian cancer. I. Clinical features, postoperative complications, and survival. *Gynecol Oncol.* 1987;26:11-18.
[View Article](#) [PubMed](#) [Google Scholar](#)
3. Ripamonti C, Twycross R, Baines M, et al. Clinical practice recommendations for the management of bowel obstruction in patients with end-stage cancer. *Support Care Cancer.* 2001;9:223-233.
[View Article](#) [PubMed](#) [Google Scholar](#)
4. Gemlo B, Rayner AA, Lewis B, et al. Home support of patients with end-stage malignant bowel obstruction using hydration and venting gastrostomy. *Am J Surg.* 1986;152:100-104.
[View Article](#) [PubMed](#) [Google Scholar](#)
5. McCahill LE, Krouse R, Chu D, et al. Indications and use of palliative surgery: Results of society of surgical oncology survey. *Ann Surg Oncol.* 2002;9:104-112.
[View Article](#) [PubMed](#) [Google Scholar](#)
6. Ripamonti C. Management of bowel obstruction in advanced cancer. *Current Opinion Oncol.* 1994;6:351-357.
[PubMed](#) [Google Scholar](#)

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