Commentary (Selman/Copeland): Management of Intestinal Obstruction in the Patient With Ovarian Cancer

August 01, 2000
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Authors Thomas Randall, MD, and Stephen Rubin, MD, provide a thoughtful, state-of-the-art discussion on current controversies in the management of intestinal obstruction in patients with ovarian cancer.

Epithelial ovarian cancer is the fifth most commonly occurring tumor in women and is associated with the highest mortality rate of the neoplastic disorders of the female genital tract. Most patients with ovarian cancer are diagnosed with advanced disease, contributing to a poor overall survival rate. The treatment of advanced ovarian cancer generally consists of surgical cytoreduction to no gross residual disease followed by chemotherapy. Of the prognostic factors for ovarian cancer, the amount of residual disease is the one that gynecologic oncologists can influence.

**Cytoreductive Surgery**

Cytoreduction of an ovarian cancer, so that no residual lesion is greater than 1 cm, effectively doubles the patient’s survival.[1] For this reason, in recent years, increasingly radical surgery has been advocated to eliminate as much residual tumor as possible. Therefore, cytoreductive surgery with intestinal resection or diversion should be considered in patients with ovarian carcinoma who have complete bowel obstruction or in those left with no intraperitoneal or retroperitoneal residual disease after undergoing debulking surgery.

Initial response rates to chemotherapy in patients with advanced disease are encouraging—greater than 70%, of which more than half are complete responses. Despite this initial response, most advanced ovarian cancer patients experience a recurrence and ultimately die of progressive disease. The treatment for a patient with recurrent ovarian cancer is influenced by the patient’s prior treatment interventions, her general health, and the nature of the current problem. To help a patient make an informed decision regarding her care, she must be provided with realistic information concerning expected effectiveness, side effects, goals of treatment, and costs.

**Tumor Dissemination**

Tumor dissemination comprises penetration of the tumor capsule by clonogenic cells and their implantation on peritoneal surfaces, as well as spread to retroperitoneal lymph nodes. Hematogenous spread, usually a late manifestation, appears to be a consequence of lymphatic dissemination.[2]

In almost half of patients who succumb to ovarian cancer, the tumor has not spread beyond the abdominal cavity and retroperitoneal lymph nodes. As a group, the epithelial carcinomas are relatively noninvasive, and their destruction of vital organs is infrequent. Burgeoning tumor growth, however, leads to mechanical interference with gastrointestinal function. Disordered small bowel motility secondary to tumor implantation and interference with neurotransmission through the myenteric plexus results in a segmental ileus or carcinomatosis ileus, which may simulate partial obstruction of the small intestine. This effect may be augmented by the pressure of ascites on the stomach causing premature satiety.

The catabolic effects of enlarging tumor bulk are no less adverse. Death follows a protracted course of inanition, with ascites and pleural effusions further contributing to cardiac decompensation and terminal respiratory failure.

**Intestinal Obstruction**

Intra-abdominal and pelvic malignancies are frequently complicated by intestinal obstruction. Patients may develop bowel obstruction at any time in their clinical history, with prevalence ranging from 5.5% to 42% in those with ovarian cancer and from 10% to 28% in those with colorectal cancer. The causes of obstruction may be benign postoperative adhesions, a focal malignant or benign...
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Published on Physicians Practice (http://www.physicianspractice.com)

Deposit, relapse, or diffuse carcinomatosis. Symptoms almost always include intestinal colic (reported in 72% to 76% of patients), continuous abdominal pain due to distention, hepatomegaly or tumor masses (in 92% of patients), and nausea and vomiting (68% to 100% of cases).[3] However, the majority of patients with advanced disease who present with bowel obstruction are incompletely obstructed, and their situation is rarely an emergency. Computed tomography (CT) is a highly accurate method of evaluating intestinal obstruction, especially for determining the level and cause of the obstruction. It is the technique of choice when clinical or plain radiographic findings are equivocal.

Although surgery should be the primary treatment for malignant obstruction, it is now recognized that some patients with advanced disease and those in generally poor condition are unfit for surgery and require alternative treatment. Several options are now available for these patients. How energetically this complication should be treated, however, is controversial.

Variables to consider prior to surgical intervention include site and characteristics of the current tumor, tumor grade, duration of disease, age, ascites, nutritional status, previous radiotherapy/chemotherapy, and performance status. Various conclusions have been reached regarding surgery, based on evidence from retrospective case series and the incidence of mortality. Without further validated outcome scores that reflect the reasons that surgery was performed, this information is clearly of limited value.

**Palliation**

Palliative surgery is inevitably associated with a high mortality and morbidity rate. Aggressive surgical intervention and secondary tumor debulking may offer reasonable results in patients with slow-growing or focal tumors. Likewise, if the patient has achieved a prior sustained response to chemotherapy and has been off treatment for more than 6 to 12 months, surgery may reinduce a tumor response and alleviate the obstruction. Conservative treatment with intravenous fluids and nasogastric suction is a less than ideal solution to obstruction because it involves hospitalization, immobility, and discomfort.

We believe that in terminal cancer patients—with the exception of those with high obstruction—vomiting and pain resulting from inoperable intestinal obstruction can be controlled via the administration of analgesic and antiemetic drugs (at home or in a hospice), without recoursing to nasogastric tube placement or intravenous hydration. Pharmacologic management and percutaneous gastrostomy for intractable vomiting allows gastric drainage and decompression without the disadvantages of nasogastric tubes. Fluids can be administered orally or, if needed, by intravenous infusion. In general, parenteral nutrition and gastrointestinal decompression do not significantly extend quantity or quality of life.

Counseling the patient with an intestinal obstruction secondary to recurrent ovarian cancer requires careful consideration of a number of factors—the nature of the tumor process, prior treatments, and the potential for additional effective treatment (both local and systemic). Physicians must be careful not to present surgical intervention in the context of inappropriate expectations, and the patient and family should be supported regarding end-of-life issues. The cited article and editorial by Feuer et al and Rubin, respectively, provide excellent perspectives on the difficulties of dealing with this clinical dilemma.[4,5]

**References:**


5. Rubin SC: Intestinal obstruction in advanced ovarian cancer: What does the patient want? Gynecol...

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