Resolution of Bowel Obstruction Due to Newly Diagnosed Inoperable Advanced Ovarian Cancer With Medical Therapy

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About half of patients with ovarian cancer suffer bowel obstruction at some point in the course of their disease. In most of these patients, bowel obstruction occurs late in the course of the disease and is relieved surgically in only about half. Factors predicting a poor result with surgical therapy include advanced age, severe nutritional deficiency, a large volume of tumor, ascites, and the failure of previous therapy. A much smaller group of patients presents initially or soon after the diagnosis of ovarian cancer with tumor-related obstruction. These patients, not described separately in most surgical series, survive longer than expected. In the series of Clarke-Pearson and co-workers, 13% of their patients operated on for ovarian cancer with bowel obstruction had received no previous chemotherapy and were presumably newly diagnosed. Five of six survived more than two months postoperatively. The frequency of inoperable bowel obstruction in patients with newly diagnosed ovarian cancer is low, at least in university centers from which series are reported.

Tunca describes a small series of such patients with newly diagnosed ovarian cancer and inoperable bowel obstruction treated with nasogastric suction, total parenteral nutrition, and cisplatin-based chemotherapy. Seven of six patients responded to a median of 1.5 courses of chemotherapy with the resolution of bowel obstruction, with three deaths at 4, 9, and 11 months and three patients alive with follow-up of 2 to 11 months. Krebs and Goplerud mention from their large series the cases of three patients treated for bowel obstruction with combination chemotherapy, presumably after surgical treatment, who had prolonged intervals before subsequent episodes of obstruction. Only fragmentary data exist to support the concept of effective, and not simply palliative, medical management of patients with inoperable obstruction.

In this report I describe the case of three patients seen consecutively by one medical oncologist in a small community hospital within a year. Each had newly diagnosed ovarian cancer with inoperable bowel obstruction and was treated with prolonged nasogastric suction, parenteral hyperalimentation, and cisplatin-based chemotherapy. All three patients responded to medical therapy with the resolution of obstruction, and two patients later underwent complete surgical cytoreduction. They are now—23 and 28 months from presentation—clinically disease-free following the completion of chemotherapy.

Report of Cases

Patient 1

This 76-year-old woman with several months of weight loss, abdominal pain, and distention underwent a laparotomy in November 1988. Ascites and a large volume of abdominal carcinomatosis with several levels of small bowel obstruction precluded a surgical correction of the obstruction, nor could cytoreduction be attempted. Biopsy specimens revealed metastatic papillary cystadenocarcinoma. A baseline CA 125 level was 1,490 units per ml. Postoperatively, she was found to have an obstructive pattern on abdominal films, and nasogastric suction could not be discontinued. Chemotherapy with cyclophosphamide, 1,000 mg per m², and doxorubicin (Adriamycin) hydrochloride, 60 mg per m², was given on day 8. Neutropenia with fever developed on day 18 and resolved on intravenous cefazidime and vancomycin hydrochloride therapy. Total parenteral nutrition was begun on day 22 and continued for a month. Chemotherapy with cyclophosphamide, 500 mg per m², and Adriamycin, 35 mg per m², was repeated on day 50. Nasogastric suction was successfully discontinued, and she was discharged eating normally on day 56. She subsequently continued monthly courses of cisplatin and cyclophosphamide for eight months. Complete cytoreduction was done in September 1989, followed by five cycles of a regimen of carboplatin, 250 mg per m², and cyclophosphamide, 600 mg per m². Her CA 125 level has
been normal since the operation. All chemotherapy was discontinued in February 1990, 15 months after the laparotomy, and she had a negative laparoscopy in July 1990. She remains free of evidence of disease, with a CA 125 level of 8 units per ml and normal findings on physical examination in March 1991, 28 months from diagnosis.

Patient 2

This 55-year-old woman with a 15-year history of schizophrenia presented in February 1989 with complete small bowel obstruction. Nasogastric suction was begun, and at an operation, massive ascites and abdominal carcinomatosis with multiple levels of small bowel obstruction were encountered. No attempt at a bypass of obstructed small bowel or cytoreduction could be made. Biopsy specimens revealed poorly differentiated mucinous cystadenocarcinoma. A 3-cm mass was palpable in the cul-de-sac, and a baseline CA 125 level was 43 units per ml with a normal carcinoembryonic antigen level. After the operation, total parenteral nutrition was begun and nasogastric suction was continued. On day 5 she received a regimen of cisplatin, 100 mg per m², and cyclophosphamide, 1,000 mg per m². Hyperalimentation was interrupted for a week because of fever and neutropenia, which responded to intravenous cefazidime and vancomycin therapy. Chemotherapy with cisplatin, 100 mg per m², and cyclophosphamide, 500 mg per m², was repeated on day 33. Nasogastric suction and total parenteral nutrition were discontinued on day 43. A CA 125 level was 26 units per ml three months after the operation, and the mass in the cul-de-sac and ascites were no longer palpable. Eating well, she regained her normal weight.

At that point the patient refused any further treatment and was discharged. She failed to keep any follow-up appointments. She was again admitted with severe dehydration, massive ascites, acidosis, and gastrointestinal hemorrhage in December 1989 and died the following day.

Patient 3

The patient, a 60-year-old woman with a long history of alcoholism and chronic obstructive pulmonary disease, presented in May 1989 with abdominal distention and constipation. A computed tomographic scan of the abdomen showed multiple cystic abdominal and pelvic masses. Barium enema films revealed nearly complete obstruction of the transverse colon, and on chest x-ray film a large left pleural effusion was seen. The CA 125 level was 1,950 units per ml. She was taken to surgery on June 5, but only a biopsy of extensive abdominal carcinomatosis and a transverse colonotomy were done. Postoperatively, total parenteral nutrition and nasogastric suction were continued, but she still showed evidence of bowel obstruction with dilated loops of small bowel, poor colostomy output, and hyperactive bowel sounds. Respiratory distress due to massive ascites and left pleural effusion responded to oxygen therapy and thoracentesis. Biopsy specimens from the operation revealed poorly differentiated adenocarcinoma.

On day 15 she received chemotherapy with cyclophosphamide, 500 mg per m², and cisplatin, 100 mg per m². Her course was complicated by episodes of respiratory distress, massive anasarca, and oliguria. Bowel function improved within one week of chemotherapy, and she was discharged on day 23 taking oral food and fluids well. Her CA 125 level dropped to 970 units per ml, and the pleural effusion, ascites, and abdominal masses resolved with the first course of chemotherapy.

Chemotherapy was continued in monthly courses through September 1989 with the same doses of cyclophosphamide and cisplatin.

Complete surgical cytoreduction was done in mid-October. Her course has been complicated by moderate peripheral neuropathy, an episode of deep vein thrombophlebitis requiring anticoagulants, and acute cholecystitis requiring surgical intervention. She has received six more courses of chemotherapy since the cytoreduction. A CA 125 level was 14 units per ml in December 1989 and remains normal. She is felt for medical reasons not to be a candidate for surgical restaging. At the last follow-up visit in April 1991, she remained free of evidence of disease, with a CA 125 level of 21 units per ml and normal findings on physical examination, 23 months from presentation.

Discussion

This report of the successful medical treatment of patients with inoperable bowel obstruction complicating newly diagnosed ovarian cancer adds to the meager literature addressing treatment for this group of patients. The incidence and outcome of this set of circumstances cannot be easily discerned from the published series of patients treated for bowel obstruction from ovarian cancer, as these patients are rarely described separately from the rest, in most of whom bowel obstruction developed as a late manifestation of chemotherapeutic failure. Patients with newly diagnosed cancer deemed inoperable may be more common in community practice than in series published from university hospitals.

This report and that of Tunca suggest that therapy with prolonged nasogastric suction, total parenteral nutrition, and cisplatin-based chemotherapy can salvage a substantial number of these patients. Beyond short-term survival in terms of discharge from the hospital eating normally, some of these patients may go on to receive adequate cytoreductive surgical therapy and may have the same long-term survival that can be expected from optimally applied de novo surgical cytoreduction and aggressive chemotherapy. These findings should be extended and confirmed in a larger number of patients through prospective cooperative trials, perhaps comparing surgical with medical therapy in patients with newly diagnosed ovarian cancer presenting with bowel obstruction, a group in whom initial surgical cytoreduction is difficult at best. A positive therapeutic approach even to the poorest risk patient is justified.

References