

# Symptom management in a patient with end-stage ovarian cancer: case report

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## Summary

Bowel obstruction is a common complication in patients with far advanced abdominal or pelvic cancer. In patients with recurrent or advanced disease, where options for curative treatment have been exhausted, palliation of symptoms with minimal additional morbidity is the aim of therapy. Owing to the difficulties inherent in conducting perspective randomized trials, clinicians face a significant challenge in managing terminally ill obstructed patients. We evaluated the case of a woman with ovarian cancer. Clinically, the objective of the study was to focus attention on the most up-to-date evidence concerning the treatment of malignant bowel obstruction.

*Key words:* Bowel obstruction; Ovarian cancer; Palliation; Octreotide.

## Introduction

Malignant bowel obstruction is a well recognized complication in advanced cancer patients, especially for those with abdominal or pelvic cancer. It occurs most frequently at the advanced stage, with the highest incidence ranging from 5% to 40% in ovarian carcinoma, and from 3% to 15% in other advanced cancers [1, 2]. Moreover the rate of operative mortality ranges from 30% to 40%, and complication rates vary greatly, from 27% to 90% [3, 4]. Clinical settings, admission criteria of the palliative care unit, diagnosis parameters, or clinical evaluation may explain these differences [5, 6].

Successful surgical palliation is defined as patient's survival > 60 days after surgery, ability to return home, and relief of obstruction postoperatively > 60 days [7].

We consider four main positive prognostic factors for surgery:

- Volume of ascites less than 3 l;
- Unifocal obstruction;
- Absence of palpable abdominal or pelvic masses;
- Preoperative weight loss less than 9 kg.

Table 1 shows absolute and relative contraindications for surgery [8, 9, 10], while the most common non surgical strategies for inoperable bowel obstruction are shown in Table 2.

Short term proximal bowel decompression performed with a nasogastric tube is useful in improving the patient's clinical condition before surgery or while making therapeutic decisions.

Due to the discomfort of such a device, in the presence of an obstruction lasting for > 72 hrs, it is rational to start a therapeutic protocol with analgesics, antisecretories, antiemetics and reduced water intake in order to remove it [11].

According to several authorities [12], in up to 90% of cases, an early and aggressive pharmacologic approach may overcome the obstruction and improve bowel conditions.

Actually, we have to point out that the clinical history of these patients is often characterized by multiple subsequent episodes of reversing obstruction, even functional.

Thus it is difficult to say if the recovery of intestinal transit is due to treatment or to natural evolution.

Table 1. — *Contraindications for surgery.*

### *Absolute contraindications*

Previous laparotomy demonstrating that no further corrective surgery is possible  
 Previous surgery demonstrating diffuse metastatic cancer  
 Involvement of the proximal stomach  
 Intraabdominal carcinomatosis demonstrated radiologically with severe dismotility  
 Diffuse palpable intraabdominal masses  
 Massive ascites which rapidly recurs after drainage

### *Relative contraindications*

Poor general performance status  
 Poor nutritional status  
 Advanced age in association with cachexia  
 Previous radiotherapy of the abdomen or pelvis  
 Extra abdominal metastases producing symptoms which are difficult to control (e.g., dyspnoea)  
 Nonsymptomatic extraabdominal malignant disease (e.g., widespread metastases, pleural effusion)

Table 2. — *Non-surgical treatments.*

Nasogastric tube  
 Percutaneous gastrostomy-endoscopic stents [11, 23, 24]  
 Parenteral hydration and nutrition [22]  
 Analgesics  
 Antiemetics  
 Antisecretory drugs/steroids [25]  
 Amidotrizoato [26]

Revised manuscript accepted for publication February 1, 2007

## Case report

The patient was a 79-year-old woman with relapse of ovarian cancer. She had undergone right salpingo-oophorectomy 15 months before, and left salpingo-oophorectomy five months before our observation. Chemotherapy was also performed (> 4 weeks before).

The patient was admitted to hospital because of frequent fecal vomiting, regurgitation, and severe abdominal pain lasting for more than one week. She underwent an explorative laparotomy which showed spread of peritoneal carcinomatosis, multiple sites of occlusion, and multiple adhesions (namely involving the small intestine).

Two weeks later the patient came under our observation at our Palliative Care Center because of severe nausea and vomiting (> 6 episodes/day of biliary and fecal vomiting), moderate colicky pain, constipation and severe abdominal distension. The patient also had tachypnea (35-40 breaths/min) and slight drowsiness.

Nasoenteric drainage put out 850 ml of secretion/24 hours and daily water intake was 1500 ml.

Owing to the worsening of the patient's general condition, the recent laparotomy and the inappropriateness of further chemotherapy, the patient was judged inoperable. To improve her abdominal symptoms, a pharmacologic protocol was started with an antisecretory (octreotide 0.3 mg/day), antiemetic (haloperidol 2 mg/day) and analgesics (tramadol 200 mg/day and ketorolac 60 mg/day). The drugs were administered via continuous intravenous infusion by means of a single syringe driver. Correct mouth care was performed.

The intensity of pain, nausea, dry mouth, thirst, dyspnoea, feeling of abdominal distension and drowsiness were assessed by means of a verbal scale before starting treatment ( $T_0$ ) and then daily for five days, until discharge from hospital.

We achieved a significant reduction of nasogastric drainage at 24 hrs (150 ml/day), with improvement of abdominal pain (slight and inconstant), reduction of vomiting (1 episode/day) but persistence of slight drowsiness.

At 72 hours we obtained a further reduction of nasogastric drainage (80 ml/day), improvement of abdominal distension (from severe to moderate with no more need for postural adaptation and reduction of tachypnea), and absolute control of nausea/vomiting (0/day).

The nasogastric drainage tube was removed and the patient was allowed 1/3-1/4 of total daily hydration postoperatively. She was discharged to a home care setting two days later (5 days after starting treatment). Parenteral hydration and drug administration were now performed via hypodermoclysis.

Exitus occurred 22 days after with an acceptable quality of life.

## Discussion

Of the overall population of terminally ill obstructed patients, a significant number are on strong opioids at the time of diagnosis [13].

Morphine is the most flexible analgesic for patients with severe pain (short onset time, possibility of titration against the effect, parenteral administration), but it tends to accumulate in intestinal tissue and to interact with local opioid receptors. Other strong opioids like methadone and fentanyl seem to have a more favorable constipation/analgesia ratio. However, in the presence of moderate to mild pain a weak opioid and/or a non-steroidal anti-inflammatory drug (NSAID) is preferable to reduce opioid bowel syndrome [13].

Continuous IV infusion, rather than boli, limits some gastrointestinal side-effects (e.g., nausea) of these drugs. Octreotide is a somatostatin analogue which prevents secretion of vasoactive intestinal polypeptide (VIP) [14] and other secretagogue mediators (gastrin, secretin, CCK) [15]. It has proven to be effective (0.3-0.9 mg/day IV or SC) in reducing fluid secretion and increasing proabsorptive effects both in preclinical and clinical studies on inoperable bowel obstruction [13, 16-18].

Hyoscine butylbromide (40-120 mg/day) was the first antisecretory used in patients with malignant bowel obstruction [19, 20]. According to the literature it is as effective as octreotide in reducing colicky pain but has a worse trend and longer onset time in reducing secretions and other gastrointestinal symptoms [13, 16]. It has a synergistic effect when administered with octreotide.

Looking at total parenteral nutrition (TPN) and parenteral hydration, according to the literature an overall fluid intake > 1500 ml/day is often unnecessary and may increase intestinal secretions [21].

However a daily amount of water < 500 ml leads to nausea and vomiting due to metabolic derangement associated with severe dehydration [13, 22].

The use of antiemetics such as haloperidol (up to 15 mg/day) and phenothiazines, while effective, has only been reported in anecdotal experiences [13].

Metoclopramide and other prokinetic drugs are not recommended (worsening of vomiting and colicky pain), unless for a functional or potentially reversible obstruction.

The treatment strategy we planned under these considerations proved to be highly effective in a patient with inoperable bowel obstruction and a nasogastric tube.

Signs and symptoms showed consistent improvement, and the patient died with no further episodes of vomiting, possibly drinking small amounts of water, with no need of nasogastric drainage.

The antisecretory drug is the main drug to reduce GI symptoms. The role of antiemetics is actually less important: their use can prevent vomiting due to reabsorption of toxins from the gastrointestinal tract or drugs (e.g., opioids).

In our patient an overall daily hydration of 1,000 ml was not associated with a worsening of dry mouth and drowsiness, allowing further reduction of GI secretions.

The analgesics of choice are opioids.

Pain was less significant than other symptoms in our patient so a weak opioid (tramadol) and a NSAID (ketorolac) were used, and an acceptable recovery with no side-effects resulted.

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