

Management of Malignant Bowel Obstruction



Susan MacDonald, BScN, MD, CCFP, FCFP

Presented at Memorial University's Grand Rounds, October 2009.

A bowel obstruction is a common enough occurrence. All GPs must be familiar with the diagnosis and management of it.

While the healthy general public is at low risk for bowel obstruction, several conditions predispose towards development. Patients with malignancy, particularly located (primary or metastasis) in the abdominal cavity, those who have had radiation therapy to the abdomen or patients who have had previous abdominal surgery are at higher risk. Obstructions can arise from within the lumen of the bowel (malignant tumour, constipation) or outside (adhesions and peritoneal metastasis).¹

While the healthy general public is at low risk for bowel obstruction, several conditions predispose towards development.

The presenting complaints are similar, despite the cause of the obstruction. Most patients experience crampy abdominal pain, nausea and

vomiting. There may be reduction in bowel movements or narrowing of stool. The course can be rapid, with patients presenting as acutely ill, or slow, developing over days or even weeks.

It is important to determine whether the obstruction is partial or complete, as this influences the management and prognosis. The presence of bowel sounds and the passing of flatus are indicative of a partial bowel obstruction. Complete obstruction is indicated by cessation of sound and movement.

As the bowel becomes occluded, peristaltic movement becomes erratic. The lumen of the bowel swells and becomes edematous. This can lead to poor oxygenation of the tissues and possible necrosis and perforation. Therefore, bowel obstruction is a potentially life-threatening condition.

Two key points need to be determined when the patient presents:

- Is this patient a surgical candidate?
- What is the goal of care?

Surgical treatment is considered when the obstruction is limited to one area, or location, or when bypass or venting is possible. All patients well enough to tolerate a surgical procedure should be assessed by a surgeon for the consideration of surgical therapy.

Some patients, by virtue of their overall condition (poor) and poor prognosis (life expectancy less than two months) will not be candidates for surgery.²

The goal of care should be determined for every individual patient. Some patients should be treated aggressively in the hope of returning bowel function. For others, the goal will be comfort only. The patient and family should participate in determining the goals of care.

Symptom management

Bowel rest

Bowel rest is important in reducing the stimulation of an edematous and stressed bowel. Absorption of medications and nutrients is reduced. Therefore, all medications should be given via a parenteral route and patients should be nil by mouth for at least 24 hours.

Regular pain medications

Regular opioid doses with the availability of a breakthrough or rescue dose hourly is preferable over only as needed doses, as most patients have frequent to constant pain. Reduction of pain improves overall well-being and reduces stress on the bowel.

Reduce the nausea

Antinauseants play an important role. A prokinetic agent with antinauseant properties such as metoclopramide is preferred, as long as the bowel is not completely obstructed. Other antinauseants that work without affecting gut

motility can be added if metoclopramide is not completely effective, or if the patient has a non-functioning bowel. Prochlorperazine, haloperidol and dimenhydrinate have demonstrated efficacy.³

Vomiting, particularly frequent or copious volumes, may be amenable to the placement of a nasogastric (NG) tube and low suction. After discussing the pros and cons of NG placement with the patient, develop a plan if/when/and how long this treatment will be used.

Some patients, by virtue of their overall condition (poor) and poor diagnosis will not be candidates for surgery

The bowel can produce copious volumes of fluids. Parenteral infusions of somatostatin analogues, such as octreotide, reduce the amount of fluid created and subsequently reduce the nausea and vomiting. Cost might reduce its availability and consideration outside of a hospital setting.²

Dr. MacDonald is an Associate Professor of Medicine and Family Medicine, Memorial University; and Divisional Chief of Palliative Care, Eastern Health, St. John's, Newfoundland.

Reduce the swelling in the bowel lumen

Dexamethasone is helpful in reducing the significant edema and swelling that occurs in the bowel lumen when obstruction occurs. Doses should be given during the day and not right before bedtime due to the possible side-effects of restlessness and excitability.

Re-establish normal bowel function

As long as there is some movement of either fluid or air through the bowel, prokinetic agents should be attempted. Monitor the patient closely for signs of complete obstruction. Clear out the lower bowel with suppositories if needed.


Maintain fluid and electrolyte balance

Fluid shifts secondary to edema and hypoperfusion can precipitate shock. Monitor fluid and electrolyte balance judiciously, keeping in mind the goals of care. Terminally ill patients do not require regular bloodwork and may not need IV therapy.

General comfort measures

All patients require standard measures to improve comfort, such as regular turning in bed, good mouth care, *etc.* Attention should be paid to ensuring the patient and the family are understanding of the situation and the goal of care.

Conclusion

While a bowel obstruction can be a preterminal event, keeping in mind the patient's goals of care to guide therapy and playing careful attention to symptom management can alleviate a great deal of suffering. 

References

1. Cappell MS, Batke M: Mechanical Obstruction of the Small Bowel and Colon. *Med Clin North Am* 2008; 92(3):575-97, viii.
2. Roeland E, von Gunten CF: Current Concepts In Malignant Bowel Obstruction Management. *Curr Oncol Rep* 2009; 11(4):298-303.
3. Glare PA, Dunwoodie D, Clark K, et al: Treatment Of Nausea And Vomiting In Terminally Ill Cancer Patients. *Drugs* 2008; 68(18):2575-90.

