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Hospice Palliative Care Program
Symptom Guidelines

Malignant Bowel Obstruction

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☐ Rationale

This guideline is adapted for inter-professional primary care providers working in various settings in Fraser Health, British Columbia and the Fraser Valley Cancer Center and any other clinical practice setting in which a user may see the guidelines as applicable.

☐ Scope

This guideline provides recommendations for the assessment and symptom management of adult patients (age 19 years and older) living with advanced life threatening illness and experiencing the symptom of bowel obstruction. This guideline does not address disease specific approaches in the management of bowel obstruction.

Obstruction occurs in 3% to 42% of malignancies, with the higher number in patients with ovarian cancer.[1-6] Most commonly seen with colorectal cancer and ovarian cancer [7, 8] but may occur with any cancer having an abdominal or pelvic presence, usually occurring in advanced stages of the disease.[1, 3, 9-12] Obstructions may be partial or complete, acute or insidious and reversible or irreversible.[1] Obstruction usually leads to local inflammation with luminal accumulation of intestinal fluids, gases and solids producing symptoms and creating a vicious cycle of distension and secretion.[1, 5, 11] The small bowel is more commonly involved than the large bowel (61% versus 33%).[13]

☐ Definition of Terms

Bowel obstruction occurs when there is blockage of the forward flow of gastric and intestinal contents through the gastrointestinal tract and can occur in the large or small bowel.[2, 14, 15] It can be due to direct infiltration, intraluminal obstruction or external obstruction. This may occur due to tumour growth, adhesions, carcinomatosis, fecal impaction, pharmacotherapy and/or neuropathy.[2, 5, 9]

☐ Standard of Care

1. Assessment
2. Diagnosis
3. Education
4. Treatment: Nonpharmacological
5. Treatment: Pharmacological

Recommendation 1 Assessment of Bowel Obstruction

Ongoing comprehensive assessment is the foundation of effective management of bowel obstruction, including interview, physical assessment, medication review, medical and surgical review, psychosocial review, review of physical environment and the appropriate diagnostics (*see Table 1*). Assessment must determine the cause, effectiveness and impact on quality of life for the patient and their family.[9]

Table 1: Bowel Obstruction Assessment using Acronym O, P, Q, R, S, T, U and V

Onset	When did it begin? Have you had this before?
Provoking / **P**alliating	What brings it on? What makes it better? What makes it worse?
Quality	What does it feel like? Can you describe it? Is the pain constant, colicky or crampy?
Region / **R**adiation	Where is the pain? Does it spread anywhere?
Severity	What is the intensity of this symptom (On a scale of 0 to 10 with 0 being none and 10 being worst possible)? Right Now? At Best? At Worst? On Average? How bothered are you by this symptom? Are there any other symptom(s) that accompany this symptom - nausea/vomiting, pain, bloating, early satiety, hiccups, anorexia, constipation/diarrhea?
Treatment	What medications and treatments are you currently using? How effective are these? Do you have any side effects from the medications and treatments? What medications and treatments have you used in the past?
Understanding / **I**mpact on You	What do you believe is causing this symptom? How is this symptom affecting you and/or your family?
Values	What is your goal for this symptom? What is your comfort goal or acceptable level for this symptom? On a scale of 0 to 10 with 0 being none and 10 being worst possible. Are there any other views/feelings about this symptom that are important to you or your family?

* Physical Assessment (as appropriate for symptom)

Recommendation 1 Assessment of Bowel Obstruction continued...

- Plain abdominal films may demonstrate dilated loops of bowel, air and fluid levels, fecal impaction and/or the obstruction.[1, 5, 9, 11]
- Gastrografin contrast studies may further elucidate the point of obstruction and is preferred over barium, because barium can interfere with other studies.[1]
- CT scans may be required to determine the extent of the disease and help plan appropriate further treatments.[1]
- It is difficult to differentiate between partial and complete obstruction.[1, 5, 14]
- The functional adrenal insufficiency in cancer may contribute to intestinal obstruction in patients with carcinomatosis peritonei.[16]

Recommendation 2 Diagnosis

Identifying the underlying etiology of bowel obstruction is essential in determining the interventions required. The type of obstruction, the condition of the patient and the predicted prognosis determine the treatment plan for the obstruction.[12, 14]

Clinical symptoms:

- Pain may be constant, crampy or colicky[1, 3, 11, 13, 16] resulting from the accumulation of secreted bowel fluid.[2, 5, 8] Suspect bowel strangulation if refractory to opioid analgesics.[5]
- Abdominal distension.[2, 5, 11, 16]
- Nausea and vomiting are eventually present but may vary in their intensity based on the level of the obstruction and the degree of compromise of bowel patency. In obstructions of the stomach, duodenum, pancreas or jejunum, vomiting will develop early and in large volumes.[1, 2, 5]
- Bowel sounds are usually altered and may be tympanic, high pitched, diminished or absent.[5, 9]
- Abdominal exam may demonstrate visceral or peritoneal irritation or may prove benign.[14]
- In complete obstruction there will be an absence of feces and flatus.[1, 5, 11]
- Fatigue.[11]
- Anorexia.[11]
- Diarrhea with partial obstruction (overflow diarrhea).[2, 5]

Causes of Bowel Obstruction[9]

Tumour mass	Single or multiple Invasion and blockage of bowel (apple core) Extrinsic compression
Constipation	Impacted feces, obstipation
Adhesions	Post-operative Malignant Post-radiation
Volvulus	Around tumour Around adhesions Around fistula
Ileus	Infection, peritonitis Drugs
Peritonitis	Infection, bleeding
Massive ascites	

Recommendation 3 Education

The patient and family should be involved in discussions. Information should be reinforced so that appropriate decisions regarding disease modifying or symptom modifying therapies can be made.[3, 9, 13]

Recommendation 4 Treatment: Nonpharmacological

- Acute or initial treatment may include; keeping patient NPO, administering intravenous or subcutaneous fluids and performing nasogastric tube drainage. Nasogastric tube drainage should be an intermittent and temporary measure for initial treatment and decompression or while waiting to make other treatment decisions.[1, 2, 4-7, 9-14]
- Hydration should be considered in patients where dehydration causes agitated confusion or results in renal failure causing opioid metabolite accumulation leading to myoclonus or seizure[5, 6, 14] and should be considered on an individual basis.[2]
- Total parenteral nutrition should only be considered for the patient who would have clinical or life-extending benefit. It is not recommended for most terminally ill patients[5, 9] and is best used in patients with a true long term prognosis.[13]
- Good mouth care and ice chips should be given for dry mouth.[2, 9, 13]
- Nasal care should be provided to patients who have a nasogastric tube inserted.[14]
- Support should be offered to patient and family as they confront the terminal nature of the disease.[9, 13, 14]
- Give small, low residue meals for patients with controlled nausea and vomiting.[2]

Surgical Options:

- The rate of inoperable patients ranges from 6% to 50%.[6, 10]
- While surgery is the primary treatment for malignant bowel obstruction, not every patient will be a suitable candidate because of poor prognosis or advanced disease.[1, 9]
- Surgery should be avoided in patients exhibiting: palpable abdominal and pelvic mass, ascites exceeding three litres, multiple obstructive sites and pre-operative weight loss of greater than nine kilograms.[4, 6, 12, 17]
- Interventions may include resection, bypass, stenting and venting gastric or jejunal tubes[4] and should be considered when symptoms have not been relieved after 48 to 72 hours of conservative medical management.[1, 9] Stenting and gastric or intestinal venting using percutaneous endoscopic gastrostomy tubes (PEG) are less invasive, generally well tolerated and can be done under sedation.[3-7, 12, 18-20]
- Mortality from surgery may approach 30% hence careful clinical judgment must be exercised and involving other disciplines and family is advisable.[1, 9, 17]
- Prognosis, disease progression, patient's wishes and co-morbidities must be considered.[1]

Recommendation 5 Treatment: Pharmacological

Treatment should always be parenteral as absorption via PO route is variable.

- Steroids for inflammation - dexamethasone 4 to 16 mg S.C. daily for incomplete or small bowel obstruction.[1, 5-7, 9] These were found to work better in patient populations that were not already taking steroids prior to the obstruction[7] and should be discontinued if the patient does not respond to steroid treatment within 4 to 5 days.[13]
- Antiemetics for nausea – combinations work best.[5, 9, 17] See *Fraser Health Hospice Palliative Care Symptom Guidelines for Nausea and Vomiting.*
- Motility agents to stimulate bowel in cases of incomplete obstruction - metoclopramide 5 to 20 mg S.C. q.i.d.[5, 6, 9, 17] It is contraindicated in complete bowel obstruction.[5, 6, 13]
- Anti-motility agents may have a role in complete obstruction - hyoscine butylbromide 10 to 20 mg S.C. q.i.d.[1, 2, 11, 21, 22]
- Anti-secretory agents - octreotide 150 mcg S.C. daily to t.i.d.[5, 9] or 300 to 900 mcg by continuous S.C. infusion.[2, 5-7, 10, 11, 21] Octreotide was found to be more effective than hyoscine butylbromide in relieving gastrointestinal symptoms of advanced cancer patients.[21] In another study, octreotide resulted in significantly reduced gastrointestinal secretions by the second day of treatment[10] and it was also shown to reduce levels of nausea and pain when compared to scopolamine butylbromide[10] or hyoscine butylbromide.[11]
- Analgesics for pain may be given via S.C. or I.V. or transdermal route.[1, 5, 7, 9, 10, 21] Analgesics should not be avoided fearing aggravating an obstruction.[7]
- Cathartics via rectal route in cases of fecal impaction.[9]

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Approved by: Hospice Palliative Care, Clinical Practice Committee, November 24, 2006