

MALIGNANT BOWEL OBSTRUCTION: A PRIMER FOR SURGEONS

DEFINITION OF A MALIGNANT BOWEL OBSTRUCTION

Mechanical or functional obstruction of gastrointestinal tract.

- Beyond the ligament of Treitz
- Evidence of obstruction via history, physical, or radiographic examination
- Intra-abdominal primary cancer with incurable disease, **OR** Non-intra-abdominal primary cancer with clear intraperitoneal disease

IMPORTANT OVERARCHING MANAGEMENT GOALS

- Treatment of a MBO is notoriously difficult and the life-expectancy is very limited (usually weeks)
- Providing an accurate prognosis and a clear assessment of risks with an empathetic approach is essential for effective care planning
- Restoration of bowel patency in advanced malignancy will not reverse the weight loss and anorexia that marks widespread metastatic disease
- Intestinal gangrene rarely occurs in MBO, allowing time for deliberation and multi-disciplinary care planning

ETIOLOGIES

- Large bowel MBO may be more amenable to surgical / endoscopic intervention
- Small bowel MBO tend to be related to carcinomatosis and / or malignant ascites and surgical options are very limited

PRIMARY THERAPEUTIC OBJECTIVES

1. Relieve symptoms
2. Resume cancer treatment
3. Continue treatment not in the acute care setting

DIAGNOSTICS AND INITIAL MANAGEMENT

- CT scan with oral and IV contrast is the diagnostic modality of choice
- Ensure hydration and normalization of electrolytes
- Use an NGT for short term decompression until further goals of care are established (larger is better, usually 16-18Fr)

MEDICAL SYMPTOM MANAGEMENT

- The goal should be to reduce the symptoms of nausea and bowel secretion volume sufficiently to eliminate the need for NGT decompression and IV hydration
- Opiates are appropriate for continuous abdominal pain
- Glycopyrrolate PRN is appropriate for crampy abdominal pain
- Refractory nausea may respond to haloperidol, dexamethasone and / or octreotide
- Parenteral nutrition can be considered if patients are NPO for > 1 week or unable to take 60% or more of calories for 1-2 weeks AND prolonging life through artificial nutrition is consistent with their goals of care
- Supplemental hydration is indicated only for patients who become dehydrated despite adequate oral intake AND if artificial hydration for the purpose of extending their life is consistent with their goals

Patients with inoperable MBO are usually candidates for hospice care and most hospice agencies can manage complex symptom regimens at home.

SURGICAL OPTIONS

- More likely to help in patients with a single site of obstruction and better cancer prognosis, performance status and nutritional status

- Less likely to help in patients with a poor performance status, ascites, multiple palpable masses or carcinomatosis
- Significant morbidity and mortality is to be expected, even with limited surgical interventions, due to the nature of the disease and frequently poor pre-operative functional status

Operative care planning depends upon the patient's goals of care, the nature and anatomy of the MBO as well as their functional status and cancer prognosis.

MULTI-DISCIPLINARY CARE PLANNING IS ESSENTIAL

Possible surgical options include:

- Creation of a diverting ostomy
- Resection or bypass of a single point lesion / focal obstruction
- Lysis of malignant adhesions
- Placement of decompressive gastrostomy and jejunostomy tubes
- Endoscopic stenting

VENTING GASTROSTOMY TUBES (VGT)

- Effective palliative intervention for malignant bowel obstruction (MBO) when medical management fails to control symptoms
 - Venting PEGs have been shown to provide symptom relief in up to 92% of cases without a difference in survival
 - VGTs provide superior symptom relief and quality of life compared to NGTs
 - VGTs result in fewer hospital readmissions and lower-intensity end-of-life care compared to both medical management and surgery
- Appropriate for patients with:
 - Diffuse peritoneal carcinomatosis or multifocal obstruction where surgery is not feasible
 - Poor performance status precluding surgical intervention
 - Limited life expectancy (weeks to months)
 - Refractory nausea and vomiting despite optimal medical management
- Relative contraindications
 - Anatomical barriers to accessing the stomach, including peritoneal carcinomatosis
 - Significant, recurrent ascites despite utilization of methods to control drainage
 - Ascites should be drained prior to VGT placement to reduce infectious complications
- Goals of care discussions are paramount, as hospitalization with MBO carries significant prognostic implications and presents a critical opportunity to align treatment with patient priorities



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