Bowel Obstruction in Advanced cancer

Practical management

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Objectives

- Understand the causes of obstruction in cancer
- Be able to discuss goals of care with patients and family
- Plan various treatments depending on the goals of care and clinical context
Outline

- Case
- Epidemiology
- Pathophysiology
- Clinical
  - Diagnosis
  - Treatment
    - Surgical
    - Medical
Case 1  Norman

- 78 year old man, lives on Gabriola Island
- Cecal carcinoma resected
- 3 years later: recurrent obstructive Sx several admissions
- Admitted via ER with mild nausea, moderate abdominal pain, no flatus or stool for days
Epidemiology: Bowel Obstruction

- Occurs in 3-10% of all cancer-related terminally ill
- Most common
  - Ovary 25% (10-42%)
  - Colorectal 15% (5-25%)
- Less common
  - Pancreas, gynecological, prostate, gastric, bladder
Typical Locations of Obstructions
• Esophageal
• Biliary
• Gastro-duodenal
• Small Bowel
• Colorectal
Pathophysiology...

- Small bowel (61%) or large bowel (33%) or both (20%)
- Single or multiple sites
- Partial or complete
- Malignant or benign causes

- Final common path: occlusion of the lumen of the bowel
Etiology: Related to the Cancer

- Tumour Mass
  - Single or multiple
  - Intraluminal
  - Intramural
  - Extraluminal
  - Separate from the bowel
- Tumour invasion of mesentery, muscle or nerve plexus
- Volvulus/torsion
  - Around tumour
  - Around adhesions
  - Around fistula
- Massive ascites
- Paraneoplastic syndrome

Often Multifactorial
Etiology: Related to the Cancer treatment

- Adhesions
  - Postoperative
  - Malignant
  - Post radiation
- Radiation enteritis
- Chemotherapy (ileus)
Etiology: unrelated or indirectly related to the cancer

- Constipation / Impaction
- Ileus
  - Infection
  - Drugs
  - Diabetes
- Peritonitis
- Bowel infarction

- Other unrelated
  - Hernia
  - Diverticulitis
  - Pancreatitis…
  - Inflammatory bowel disease
  - Adhesions

• a significant number are benign causes
Diagnosis of Bowel Obstruction

- History
- Physical examination
- Imaging of the abdomen
  - Plain films
  - CT
  - Contrast studies
Clinical: History and symptoms...

- Rarely an acute event- usually develops slowly and often is partial
- Cramps, nausea, vomiting, abdominal distension
- Gradually become more severe and continuous
...symptoms and signs

- Constant abdominal pain in 90% (related to the underlying tumor ?)
- Intermittent colic in 75%
- Vomiting early and in large amounts in proximal (gastric, duodenal and small bowel) and later in large bowel
Radiology

- Plain radiographs useful (and easy)
- CT very useful to assess (new gold standard)
  - Global extent of disease
  - Staging including complications (ischemic bowel)
  - Assist in choice of surgical treatment

*if appropriate and patient is well enough*
General approach.....

- As with any problem in palliative care, we must consider whether our inquiries or investigations will change the management of the patient.
...General approach

• This is rarely an emergency - take time to:
  • Monitor
  • Investigate appropriately
  • Provide symptom control

• Remember the overall context…
  (stage of disease etc)
Care…the right thing for this particular patient
Principles of Care...

- Primary areas of symptom control
  - Pain
  - Nausea
  - Vomiting
  - Thirst

- Secondary areas of support
  - Nutrition, including hydration
  - Education
  - Patient & family support
...Principles of Care... Management is highly patient specific
Active Treatment Approaches

- **Active surgical**
  - Resection
  - By-pass
  - Venting
    - Colostomy etc
    - Gastrostomy

- **Active medical**

- **Comfort Care only**
Norman

- Surgery Day 2
  - Diffuse carcinomatosis
  - Omental caking
  - Not resectable, bypass not possible
  - Moderate symptoms (N, pain)
Active Surgical

- Not routine in our patient population, but should be considered in selected patients with
  - mechanical obstruction
  - single site of obstruction
  - reasonable performance status and prognosis

- Excellent clinical judgment is necessary. Is it technically feasible and will the patient benefit?
Surgical

- 25-35% of obstructions due to benign factors or unrelated second primary
- Some individuals symptom free for long period after palliative surgery
- Operative mortality 10-20%, similar morbidity and complication rate
- Median post-op. survival 2.5-11 months
- Surgical studies rarely look at Quality of Life
Poor prognostic factors

- Prior failed surgery
- Widespread carcinomatosis
- Gross Ascites
- Multiple levels of obstruction
- Multiple liver metastases
- Cachexia
- Elderly
- Previous radiotherapy to abdomen
Other Surgical / Interventional Options: decompression techniques

- Cecostomy etc
- Percutaneous Gastrostomy “PEG”
  “Venting Gastrostomy”
  - Endoscopic
  - Radiologic
  - Very effective for persistent nausea and vomiting (up to 92%)
Other Surgical / Interventional Options

- Metal stents placed under endoscopic or fluoroscopic guidance
  - Flexible and self expanding
  - Expensive, not always available in Canada
  - Overall cost effective
  - Technical success rate 90% (?)
  - Esophageal, gastro-duodenal, biliary, colorectal
Stent partially deployed
Norman

- Recurrence of distension, vomiting
- Still on dexamethasone and haldol
- Increase steroids, move to PCU
- Temporary NG tube (his choice)
Medical Treatment of Obstruction:
symptom relief and possible reversal

- NG tube and rehydration: 30-50% will reverse (but usually takes several days)
  - Temporary – patients choice
- Medications:
  - Analgesics
  - Motility agents
  - Antiemetics
  - Antisecretory
Medical Treatment of Obstruction: Analgesics

- Usual opioids by parenteral route (s.c., transdermal etc)
- Anticholinergics for colicky pain
  - Scopolamine hydrobromide 0.4-0.8 mg sc q2-4h
Medical Treatment of Obstruction: Motility agents

- Metoclopramide: 10-40mg sc qid (Domperidone po only)
- The classic approach is not to use it in complete obstruction because it might cause increased cramps.
  - No evidence for this
  - How do you really know complete vs. partial vs. ileus?

- My approach: try it for all and see if increased cramps
Medical Treatment of Obstruction: antinauseants

- Metoclopramide 10-40 sc qid
- Haloperidol 0.5-2 mg sc/po/iv q12h and prn
Medical treatment of obstruction: corticosteroids

- Dexamethasone 10-20mg daily for trial of five days (mechanism unknown- helps the nausea, may relieve obstruction by reducing bowel wall edema)

- Reduce peritumoral edema

- Antisecretory: reduce water and salt secretion
Medical Treatment of Obstruction: 
Antisecretory…

- Octreotide 100-200 mcg sc q 8h
  - Reduce GI secretions
  - Slow intestinal motility
  - Increase absorption of water and electrolytes
- Good clinical evidence to support use in malignant bowel obstruction (RCT’s – total vomiting control in 92%)
- Use it early in obstruction
  - Rapid and effective
Grenoble Study JPSM June 2006

- Stage 1: NG, hydrate, haldol, scopolamine, steroids, analgesics
- Stage 2 (after 5 days): still obstructed? Stop steroids and scopol., and start octreotide
- Stage 3: gastrostomy
- Sx control in 90% without ng tube
Comfort : for all patients

- Pain
  - Colic
  - Continuous pain
- Nausea & vomiting
- Mouth Care and Thirst
- Nutrition
- Emotional support
Comfort Care Only

- Very advanced stage of disease
- Multiple medical problems
- Desire to stay at home
- In complete obstruction the average survival is 10-20 days

**(often misinformed about a quick demise)**
Norman

- Start octreotide 200 tid sc
- Metoclopramide 20 sc qid
- Dexamethasone 8 mg sc daily
- Settled well, bowels remained open
- Discharged home day 14
- Managed well at home (Gabriola Island) with sc meds, low residue diet.
- Died 1 month later at home
Overall approach

1. If urgent (severe Sx) – NG suction
2. Start optimal medical management in almost all patients unless really end stage
3. Metoclopramide plus octreotid plus dexamethasone (+/- haldol) (can combine in one CSCI) is easy and very effective
4. Consider hydration options (may reduce nausea)
5. Consider other options/investigations
6. Acceptable level of control may be vomiting 1-2 times/day (as long as nausea is well controlled)
# References

5. Dean, Andrew The Palliative effects of Octreotide in Cancer patients Chemotherapy 2001;47 Suppl 2: 54-61


