Guideline Name: Management of Malignant Intestinal Obstruction

Diagnosis

Intestinal obstruction is a recognised complication of advanced cancer of abdominal or pelvic origin but can also occur secondary to metastases from other sites. Incidence is reported as being between 5.5-42% in ovarian carcinoma and 4.4-24% in colorectal cancer.\(^1\) It represents the cause of death in 25-59% of patients with advanced ovarian malignancy.\(^2\) Obstruction may be mechanical (intraluminal, intramural or extrinsic) or functional (peristaltic failure) in nature or a combination of these.\(^3\) It can occur as a result of a single obstructing lesion but often (especially in patients with ovarian carcinoma) it can be at multiple levels. Benign adhesions can also occur in patients with malignant disease. Constipation is an important differential diagnosis. Intestinal obstruction is often associated with a poor prognosis of a few months.\(^3\)

Intestinal obstruction should be considered in patients who present with nausea, vomiting, constipation, abdominal pain or distension. Sometimes there is a build up of nausea over time, relieved by vomiting. Examination may reveal abdominal distension, palpable abdominal masses, tympanic percussion and tinkling or abnormal bowels sounds (absent bowel sounds if paralytic ileus occurs). In practice it is difficult to distinguish between complete and partial obstruction and often the obstruction may seem to alter from one type to the other as the illness progresses.

If there is doubt over the diagnosis then a plain abdominal X-ray can help distinguish between obstruction and constipation. Plain film X-rays may not identify low grade small bowel obstruction or the cause of an obstruction. If further investigation indicated consider either CT or Contrast Enema.\(^4\)

Management

Malignant intestinal obstruction is rarely an acute emergency so there is usually time to get the patient symptom controlled before considering any additional investigations and exploring alternative management options.

- **General**
  - All medications should be given parenterally as absorption from GI tract will be poor
  - A loading dose of each drug should be considered prior to starting the syringe driver
  - Avoid high fibre foods
  - Good mouth care

- **Laxatives**
  - Stop all stimulant laxatives
  - If large bowel obstruction seems likely try Docusate 100-200mg bd or Macrogol\(^3\)
  - Gentle rectal measures if loaded rectum
**Antiemetics**

No colic: Metoclopramide 30-120mg /24hrs via continuous subcutaneous infusion (CSCI) [usually start at low doses and titrate up according to symptoms]

If colic occurs switch to Cyclizine or Haloperidol

Colic: Cyclizine 150mg /24hrs via CSCI or Haloperidol 2.5-10mg /24hrs via CSCI

+/- Levomepromazine 6.25-25mg /24hrs via CSCI.

Last line: Ondansetron 8-16mg /24hrs via CSCI

**Analgesics**

Abdominal distension: Diamorphine 5-10mg /24 hrs via CSCI if opioid naïve

Diamorphine 2.5mg subcutaneously (SC) 2-4 hourly PRN

If already on opiates use appropriate dose conversion

(NB in renal impairment may consider Alfentanil as alternative)

Colic: Hyoscine butylbromide (Buscopan) 60-240mg /24 hrs via CSCI

Hyoscine butylbromide 20mg SC 4 hourly PRN

**Antisecretory**

No colic: Octreotide 300-1500mcg /24hrs via CSCI. 75-90% respond to 600-800mcg. Usual practice at HitW is to start at 500mcg/24hrs and increment in steps of 500mcg to max 1500mcg/24hrs.

Evidence shows this has quicker onset and is more effective than Hyoscine especially in high level obstruction although overall symptom relief is similar after 4-6 days in patients responding to either drug

Colic: Hyoscine Butylbromide 60-240mg /24hrs via CSCI (Dual action for secretions and colic)

**Steroids**

- Act primarily as anti-emetics and secondarily to reduce peri-tumour oedema which may also provide short term relief of the obstruction
- Has anti-inflammatory and anti-secretory benefits
- Role in bowel obstruction is still under debate as evidence is lacking. A Cochrane review revealed a trend towards corticosteroids resulting in resolution of bowel obstruction but it was not statistically significant (small numbers)
- 5 day trial of Dexamethasone 8-16mg daily as SC bolus
- If no resolution of obstruction or improvement in symptoms after 5 days stop

NB: Entonox is contraindicated in bowel obstruction.

**Consider Other Measures**

**Hydration**

- Hydration may be appropriate for patients with repeated vomiting or high obstruction proximal to mid-jejunum but may increase bowel secretions
- Fluid requirements will decrease as the patient deteriorates
- Dry mouth and thirst are independent of hydration status but nausea is better controlled in patients receiving >1litre of parenteral fluid / day
• Surgery
  o There is weak evidence in support of surgical management to prolong survival, however mortality and perioperative complications are high in ovarian cancer patients who are being managed palliatively\(^6\)
  o Prognosis is better if patient is well-nourished; has a low grade tumour; if there is a long interval since original operation; if there has been no previous chemotherapy or radiotherapy; if there are no known metastases; if the patient has large bowel obstruction; and if there is a high suspicion of a benign cause of bowel obstruction (RT or adhesions)
  o H2 Antagonists and PPIs sometimes used to reduce gastric secretions perioperatively e.g. Ranitidine 50mg slow IV 8hrly or 150mg CSCI or Pantoprazole 40mg slow IV o.d\(^9\)

• Stenting
  o Expanding metal stents can be used
  o In particular for carcinomas of colon or rectum, gastric outflow or proximal small bowel obstruction
  o Clinical success of emergency surgery is statistically higher than stent insertion; however stenting has comparable mortality and morbidity. Benefits of stenting include shorter hospital admission, procedure time and reduced blood loss\(^10\)

• NG tube
  o If vomiting not settling with conservative measures and is very distressing for patient
  o Should really only be considered as a temporary measure
  o Traditional artificial hydration and NG tube drainage approach is ineffective in 80% of cases of malignant bowel obstruction\(^3\)

• Venting Gastrostomy
  o Patients who are stable clinically but who are suffering with intractable nausea, frequent large volume vomits or pain due to stomach distension should be considered for this procedure
  o Usually done endoscopically or radiologically; better tolerated than NGT but infrequently performed

• Nutritional Support
  o For patients with poor performance status and disease-related bowel obstruction, parenteral nutrition is hard to justify. TPN (total parenteral nutrition) cost-benefit outcome is currently determined by prognosis of 2-3 months\(^2,11\)
  o TPN is usually only given in UK if definitive surgery is to be attempted
  o Consider TPN if death from starvation seems more likely than from tumour burden

References


