CLiP

15 minute Worksheet

Helping patients with symptoms other than pain

6: Bowel obstruction

Intermediate level

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Aim of this worksheet

To learn how to assess and manage bowel obstruction due to cancer.

How to use this worksheet

- You can work through this worksheet by yourself, or with a tutor.
- Read the case study below, and then turn to the Work page overleaf.
- Work any way you want. You can start with the exercises on the Work page using your own knowledge. The answers are on the Information page - this is not cheating since you learn as you find the information. Alternatively you may prefer to start by reading the Information page before moving to the exercises on the Work page.
- This CLiP worksheet should take about 15 minutes to complete, but will take longer if you are working with colleagues or in a group. If anything is unclear, discuss it with a colleague.
- If you think any information is wrong or out of date let us know.
- Take this learning into your workplace using the activity on the back page.

Case study

John is a 54 year old man who had surgery for a carcinoma of the colon.
He has been having problems with nausea and vomiting. At first this responded to cyclizine, but he calls you because the nausea has returned and he has started having bouts of colic. He normally opens his bowels every few days but has not opened his bowels for nearly a week. He has noticed that his abdomen is swollen today.

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INFORMATION PAGE: Bowel obstruction

Is this bowel obstruction?

It may seem strange to ask this question, but many symptoms of bowel obstruction can have other causes:

- distension: tumour, ascites or constipation
- pain: tumour, bowel irritation, constipation, peritonitis, recent abdominal surgery, vomiting
- absent bowel motion: antimuscarinics, constipation or recent surgery
- diarrhoea: bowel irritation, constipation ('overflow diarrhoea) or laxatives
- nausea: tumour, bowel irritation, peritonitis
- thirst: vomiting, diarrhoea
- vomiting: causes of nausea plus gastric stasis (caused by antimuscarinics, ascites, tumour)

Consequently, it is not always easy to decide if a physical obstruction is present and it may be necessary to use investigations (ultrasound, abdominal X-ray) or to keep John under observation.

Clinical decisions

- **Is a physical blockage absent or unlikely?** A bowel obstruction is not always due to a physical blockage. If the bowel slows or stops working (an 'ileus') this will have a similar effect to a bowel obstruction (absent bowel sounds, distension, no bowel motions). Several conditions can cause ileus such as peritonitis, septicaemia or recent cord compression. Drugs that slow the bowel can be a cause such as antimuscarinics (eg. amitriptyline, hyoscine).
- **Is thirst present?** In bowel obstruction fluid is secreted into the bowel lumen. This fluid is effectively lost and makes the patient dehydrated. If a patient feels thirsty they will have lost at least 1 litre and this fluid needs to be replaced.
- **Is surgery or stenting possible?** This should always be considered. It may only require a loop colostomy or dividing adhesions, but surgery can have a significant mortality and morbidity. An understanding surgical opinion can be helpful, although it can be difficult to decide if there is a single level obstruction that is amenable to surgery. Stenting of duodenal or colonic obstructions can be an alternative.
- **Is nausea or vomiting present?** Patients find that the most distressing problem is nausea. Vomiting may remain but at a reduced volume or frequency and patients perceive it as much less distressing than constant nausea. Vomiting is less of a problem in more distal obstructions. Patients with distended colons may later restart with nausea, possibly since bacterial toxins are now adding to the nausea. See CLiP worksheet, *Nausea and vomiting*
- **Is pain present?** The commonest cause of pain is colic caused by the bowel trying to push bowel contents against the obstruction. It usually comes in regular waves each lasting several minutes. Colic does not respond well to opioids and needs a drug to relax the bowel such as SC hyoscine butylbromide 60-120mg/24hrs.
- **Is this complete or partial bowel obstruction?** In partial obstruction keep the bowel moving with gentle laxatives while avoiding colic- docusate is helpful in this situation. Drugs such as hyoscine have to be used sparingly to avoid slowing the bowel too much. With a complete obstruction that is inoperable, any bowel movements have no benefit and laxatives should be stopped, while colic can be safely treated with hyoscine butylbromide.

Treatment

- **Ileus:** Stop antiperistaltic drugs (eg. antimuscarinics) and osmotic laxatives. A stimulant laxative such as senna or bisacodyl may help to stimulate the bowel.
- **Feeding and hydration**: In advanced disease there is no advantage in restricting fluids or snacks. Cups of tea when wanted are preferable to 25ml water each hour! Sometimes managing a dry mouth is all that is needed. Troublesome dehydration will need to be intravenous or subcutaneous fluid replacement.
- **Surgery:** Surgery is possible if the patient agrees and they are in good or reasonable nutritional and medical condition. The prognosis is poor if there are abdominal masses or ascites, multiple blockages, a small bowel blockage, or there has been previous abdominal radiotherapy.
- **Nausea and vomiting**: cyclizine 25-50mg PO 8-hourly (or SC infusion 75-150mg/24hours) is the first choice. Some patients need to have haloperidol added 1.5-3mg SC at night. If this is ineffective, replace both antiemetics with levomepromazine 5mg (0.2ml) SC at night. If the vomiting persists then antisecretory drugs such as hyoscine butylbromide or octreotide can be used. Nasogastric tubes are very inefficient at easing the symptoms of bowel obstruction, but can help in reducing distress due to faeculant vomiting caused by infected small bowel contents.
- **Pain:** if this is colic give hyoscine butylbromide 20mg SC (it is ineffective given orally). With inoperable complete obstruction, this can be given as a continuous SC infusion 30-90mg/24hours. Some patients have abdominal distension pain which usually responds to analgesics on the WHO analgesic ladder. Coeliac plexus pain will need gabapentin 100mg 8-hourly and then titrated to achieve a response.
- **Laxatives:** in partial obstruction a gentle laxative such as docusate can be continued. Lactulose may cause bloating while senna or danthron can cause colic. With inoperable, complete obstruction, all laxatives should be stopped.

With medical management, it is possible to manage inoperable bowel obstruction at home.

True or False answers: 1)T 2)F 3)T 4)F 5)F 6)T

Treatment-symptom links: colic-hyoscine; nausea-cyclizine; vomiting-bucket; dehydration-IV or SC fluids; thirst-cup of tea; faeculant vomiting-nasogastric tube.

Link each feature of bowel obstruction with an alternative cause other than bowel obstruction

The first has been done for you

Feature of bowel obstruction	Alternative cause
Abdominal distension	Abdominal tumour
Abdominal pain	Antimuscarinics (eg. hyoscine)
Absent bowel motion	Ascites
Diarrhoea	Bowel irritation due to infection or drugs
Nausea	Constipation
Thirst	Laxatives
Vomiting	Peritonitis
	Recent abdominal surgery
	Vomiting

True or false? Consider the following statements about bowel obstruction

1.	A physical obstruction does not have to be present to cause bowel obstruction	True	False
2.	The pain of bowel obstruction usually responds to morphine	True	False
3.	Laxatives should be continued in partial bowel obstruction	True	False
4.	Restricted oral fluids are a key part of treatment	True	False
5.	Nasogastric tubes are an effective treatment for vomiting	True	False
6.	Patients with inoperable bowel obstruction can be managed at home	True	False

Match the following treatments to the symptoms they can treat

The first has been done for you.

Colic	Nasogastric tube
Nausea	Cup of tea
Vomiting	Cyclizine
Dehydration	Hyoscine butylbromide
Thirst	Bucket
Faeculant vomiting	IV or SC fluids

FURTHER ACTIVITY: Bowel obstruction

Find a patient who is troubled with nausea and/or vomiting.

- Can you identify a pattern suggesting gastric stasis?
- What possible causes are there in this patient?

FURTHER READING: Bowel obstruction

Journal articles

Bittinger M, Messman H. Self-expanding metal stents as nonsurgical palliative therapy for malignant colonic obstruction: time to change the standard of care? *Gastrointestinal Endoscopy.* 2007; **66**: 928–9.

Dean A. The palliative effects of octreotide in cancer patients. *Chemotherapy.* 2001; **47**(Suppl 2): 54-61.

Feuer DJ, Broadley KE. Corticosteroids for the resolution of malignant bowel obstruction in advanced gynaecological and gastrointestinal cancer. *Cochrane Database of Systematic Reviews*. 2000; **(2)**: CD001219.

Gwilliam B. Bailey C. The nature of terminal malignant bowel obstruction and its impact on patients with advanced cancer. *International Journal of Palliative Nursing.* 2001; **7**(10): 474-81.

Lagman RL, Walsh D. Are abdominal X-rays useful in palliative medicine? *European Journal of Palliative Care.* 2009; **16**(1): 6–10.

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Mercadante S, Casuccio A, Mangione S. Medical treatment for inoperable malignant bowel obstruction: a qualitative systematic review. *Journal of Pain and Symptom Management.* 2007; **33**(2): 217–23.

Mercadante S, Ferrera P, Villari P, Marrazzo A. Aggressive pharmacological treatment for reversing malignant bowel obstruction. *Journal of Pain and Symptom Management.* 2004; **28**(4): 412–16.

Meyer L, Pothuri B. Decompressive percutaneous gastrostomy tube use in gynecologic malignancies. *Current Treatment Options in Oncology.* 2006; **7**(2): 111–20.

Miller G. Boman J. Shrier I. Gordon PH. Small-bowel obstruction secondary to malignant disease: an 11-year audit. *Canadian Journal of Surgery.* 2000; **43**(5): 353-8.

Ripamonti C. Twycross R. Baines M. Bozzetti F. Capri S. De Conno F. Gemlo B. Hunt TM. Krebs HB. Mercadante S. Schaerer R. Wilkinson P. Working Group of the European Association for Palliative Care. Clinical-practice recommendations for the management of bowel obstruction in patients with end-stage cancer. *Supportive Care in Cancer.* 2001; **9**(4): 223-33.

Ripamonti C, Mercadante S, Groff L, Zecca E, De Conno F, Casuccio A. Role of octreotide, scopolamine butylbromide, and hydration in symptom control of patients with inoperable bowel obstruction and nasogastric tubes: a prospective randomised trial. *Journal of Pain and Symptom Management.* 2001; **19**(1): 23–34.

Wiesel PH, Norton C, Brazzelli M. Management of faecal incontinence and constipation in adults with central neurological diseases *The Cochrane Database of Systematic Reviews*, 2002; **2**.

Further resources

A Guide to Symptom Relief in Palliative Care, 6th ed. Regnard C, Dean M. Oxford: Radcliffe Medical Press, 2010

e-lfh: e-Learning for Healthcare contains a range of online self-learning programmes, including several relating to end-of-life care (e-ecla). Registration is required but is free. http://www.e-lfh.org.uk/projects/e-elca/index.html

Oxford Textbook of Palliative Medicine 4th ed. Hanks G, Cherny NI, Christakis NA, Fallon M, Kaasa S, Portenoy RK. eds. Oxford : Oxford University Press, 2010.

PCF6- Palliative Care Formulary, 6th ed. Twycross RG, Wilcock A, Howard P. www.palliativedrugs.com

Symptom Management in Advanced Cancer, 4th edition. Twycross RG, Wilcock A, Stark-Toller C. Oxford: Radcliffe Press, 2009