Bowel Care: Symptom Control and Management

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Objectives

By the end of the session participants will have an understanding of the:-

• likely causes of altered bowel habit and contributing factors
• the management and treatment options for constipation and diarrhoea
• causes of malignant bowel obstruction
• symptom control in bowel obstruction
• reflect on professional practice issues related to caring for a patient with altered bowel habit / bowel obstruction
Group Excercise

Altered bowel habit:

• Symptoms
• Causes
• Assessment
• Management
Constipation: Definition

• A universal definition does not exist
• It can be a subjective symptom, varying from one patient to another. Often described as painful
• “Difficulty in passing faeces and/or a decrease in frequency of defecation” (Sykes 1998)
• “The passage of small hard faeces infrequently and with difficulty” (Fallon & O’Neill 1997)
Constipation: Relevance

- 50-80% of palliative care patients complain of constipation.
- Clark et al 2012 - 96.9% palliative care patients over 6.3yr period complained of altered bowel function, with increasing severity of symptoms closer to time of death.
- Over 80% need laxatives (McMillan et al 2000).
- Effective management is poor (Kyle 2007).
Constipation: Complications

- Pain
- General malaise
- Loss of appetite
- Nausea and vomiting
- Headache
- Confusion in the elderly
- Urinary incontinence
- Urinary retention
- Bowel obstruction
- Rectal discomfort

- Excessive gas production
- Faecal impaction/overflow diarrhoea
- Psychological distress or anxiety
- Bloating/ abdominal fullness
- Repeated straining or incomplete evacuation.
Constipation: Causes

• **Disease related** – immobility, poor nutrition, decreased dietary intake, low residue diet.

• **Fluid depletion** – poor fluid intake, increased fluid loss (vomiting, polyuria, fever).

• **Weakness** – inability to raise intra-abdominal pressure, inability to reach toilet when needed, immobility reduces peristalsis, loss of rectal sensation.

• **Intestinal obstruction.**
Constipation: Causes cont.

• **Biochemical** – Hypercalcaemia, hypokalaemia.

• **Medication** – Opioids (90% need laxatives), diuretics, antimuscarinics (TCAs, hyoscine), ondansetron/granisetron/tropisetron, octreotide, ferrous sulphate.

• **Other** – embarrassment/ lack of privacy or access to toilet, pain on defaecation (fissure in ano).
Constipation: Classification

- **Primary constipation**: no underlying cause (pathophysiology) - is associated with lifestyle/diet habits
- **Secondary constipation**: resulting from physiological disease or conditions that affect bowel function – tumours, partial or complete bowel obstruction, spinal cord compression
- Other causes – metabolic i.e. hypercalcaemia, fatigue, depression
Constipation: Classification cont.

- **Iatrogenic constipation**: consequence of treatment or medication (pharmacological agent) such as opioid induced, chemotherapy or tricyclic anti-depressants (Economou 2002)
Constipation: Assessment

- What is normal for the individual – frequency, quantity, timing, consistency?
- Last bowel movement – when, quantity, consistency, colour, ease of passage, presence of blood/mucus? (Bristol Stool Chart)
- Laxative use – past, present?

- Any abdominal discomfort, cramping, nausea/vomiting, excessive gas or rectal fullness?
- Current medication regime?
- Current diet?
- Has this symptom changed recently?
- Usual coping strategies?
Constipation: Assessment cont.

- Physical examination – general observation, abdominal palpation and rectal examination.
- Routine bloods – U&Es, calcium, thyroid function tests.
## Bristol Stool Chart

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Separate hard lumps, like nuts</td>
</tr>
<tr>
<td>2</td>
<td>Sausage-like but lumpy</td>
</tr>
<tr>
<td>3</td>
<td>Like a sausage but with cracks in the surface</td>
</tr>
<tr>
<td>4</td>
<td>Like a sausage or snake, smooth and soft</td>
</tr>
<tr>
<td>5</td>
<td>Soft blobs with clear-cut edges</td>
</tr>
<tr>
<td>6</td>
<td>Fluffy pieces with ragged edges, a mushy stool</td>
</tr>
<tr>
<td>7</td>
<td>Watery, no solid pieces</td>
</tr>
</tbody>
</table>
Constipation: Management Plan

- Focus on prevention where possible
- Assess and identify those at risk
- Maintain privacy and dignity of the patient
- Depends on the cause and symptoms
- Lifestyle advice
- Encourage mobility
Constipation: Management

- Inform staff nurse or senior healthcare professional
- Diet – encourage fibre
- Fluids – encourage volume
- Mobility / activity
- OT adaptation
- Quick & easy access to toilet
- Commode
- Complementary therapy
- Request medical review of patient, medications and laxative regime
Constipation: Medication

• Always prescribe a laxative when commencing opioids

• **Stimulant laxatives** - increase peristalsis (gut motility) in large bowel and can cause cramps (Senna). Bisacodyl and Dantron work on both small and large intestine.

• **Softeners** - lubricate the faeces and ease passing (Docusate)
Constipation: Medication

- **Osmotic laxatives** - draw water into the large bowel which encourages peristalsis and softens the faeces (Movicol/Lactulose)

- **Bulk forming laxatives** - increase volume of faeces by increasing the fibre in the diet (useful in chronic constipation, less useful in palliative care) (Fybogel)
<table>
<thead>
<tr>
<th>Treatment Option</th>
<th>Mode of action</th>
<th>Examples</th>
<th>Time to action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulant Laxative</td>
<td>Increases intestinal motility by stimulating peristalsis</td>
<td>Senna, bisacodyl</td>
<td>8 – 12 hours</td>
<td>Senna and bisacodyl both rely on bacterial transformation in the large bowel to produce active derivatives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sodium picosulphate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Softening laxative</td>
<td>Softens stools by acting like detergents to reduce surface tension and improve water penetration of stools</td>
<td>Docusate</td>
<td>1 - 2 days</td>
<td>Docusate probably acts as both a softener and mild stimulant</td>
</tr>
<tr>
<td>Osmotic laxative</td>
<td>Increases the amount of water in the large bowel by drawing fluid from the bowel or retaining liquid they were administered with. This increases stool mass, stimulating peristalsis</td>
<td>Lactulose macrogols Polyethylene glycol</td>
<td>12 – 48 hours</td>
<td>Osmotic laxatives need to be taken with adequate fluids 2-3l fluid/day. Movicol is licensed for the treatment of faecal impaction</td>
</tr>
<tr>
<td>Bulk – forming laxative</td>
<td>Absorbs water to soften stools and increases faecal bulk which stimulates peristalsis</td>
<td>Methylcellulose Ispaghula husk</td>
<td>Several days</td>
<td>Rarely used in palliative care. Adequate fluid intake must be maintained to avoid intestinal obstruction</td>
</tr>
<tr>
<td><strong>Combination laxative</strong></td>
<td>Usually stimulant and softening laxatives</td>
<td>Co-danthramer Co-danthrusate Magnesium hydroxide with liquid paraffin</td>
<td>6 – 12 hours</td>
<td>Contain dantron only licensed for use in terminally ill patients. Co-danthramer contains dantron and a softening polymer, co-danthrusate contains dantron and docusate. Avoid in incontinent patients as these drugs can cause severe skin reactions</td>
</tr>
<tr>
<td>--------------------------</td>
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<td>-------------------------------------------------------------------</td>
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<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Peripheral opioid antagonist</strong></td>
<td>Displaces opioids from peripheral mu–opioid receptors in the gastrointestinal system</td>
<td>MethylNaltrexone Oral Naloxone (e.g. Targinact®)</td>
<td>30 – 60 minutes</td>
<td></td>
</tr>
<tr>
<td><strong>Suppository</strong></td>
<td>Stimulates rectum due to mild irritant action (glycerol) or stimulates peristalsis (bisacodyl)</td>
<td>Glycerol, bisacodyl</td>
<td>Glycerol 1 -6 hours Bisacodyl 20-60 mins.</td>
<td>Glycerol suppositories dissolve with body heat. Bisacodyl suppositories should come into contact with the bowel wall.</td>
</tr>
<tr>
<td><strong>Softening retention enema</strong></td>
<td>Softens and lubricates stool to ease passage</td>
<td>Arachis oil</td>
<td>15-30 mins Or overnight</td>
<td>Do not use if allergic to nuts as contains peanut oil</td>
</tr>
<tr>
<td><strong>Osmotic enema</strong></td>
<td>Softens stool and stimulates peristalsis</td>
<td>Sodium citrate, micro enema, phosphate enema</td>
<td>20 mins</td>
<td>Use with caution in the elderly and with debilitated patients</td>
</tr>
</tbody>
</table>
Opioid antagonists

• Oral naloxone reverses opioid induced constipation (OIC)
• Analgesia maintained
• Preparations
  – Methylnatroxone
  – Alvimopan
  – Naloxone (Targinact)
Opioid receptors are present in both the central nervous system (CNS) as well as the peripheral nervous system (PNS), including in the gut. This leads to GI-related side-effects.


PERIPHERAL GI SIDE EFFECTS: A RANGE OF SYMPTOMS

Opioid-induced constipation is the most common and most troublesome GI side effect\(^1\).

Opioid-induced constipation can reduce the benefits of analgesia by up to 30\(^2\).

*GORD, gastro-oesophageal reflux disorder

OPIOID ANTAGONISTS

- Can displace opioid agonists already bound
- Can prevent opioid agonists binding
- Can overcome some opioid-related side-effects
Prolonged release oral naloxone has a greater affinity for opioid receptors in the gut than oxycodone and therefore preferentially binds to these receptors.\(^1\)

Faecal Impaction

- Firm faeces accumulate in rectum with incomplete evacuation
- Difficult to pass
- Overflow diarrhoea & faecal leakage
- PR to determine impaction
- Regular laxatives
- Manual evacuation of faeces
Diarrhoea: Prevalence and definition

• Diarrhoea occurs in up to 10% of patients with cancer on admission to hospice. (Watson et al 2011)

• Characterised by the passage of frequent loose stools.

• Subjective symptom – clarify patient’s understanding

• Defined as the passage of more than three unformed stools within a 24hr period.
Diarrhoea: Causes

- Imbalance of laxative therapy
- Drugs: antibiotics, antacids, NSAIDs, iron preparations.
- Malignant partial intestinal obstruction/faecal impaction
- Radiotherapy
- Infection

- Malabsorption: Ca pancreas (steatorrhoea), gastrectomy, ileal resection, colectomy
- Colonic/rectal tumour: mucous
- Rare endocrine tumours: hormone secretion
- Odd dietary habits
Diarrhoea: Patterns

- Anal incontinence: 2-3 episodes/day without warning
- Colonic diarrhoea: profuse watery stools
- Impaction/overflow: sudden diarrhoea after period of constipation
- Impending obstruction/poor laxative regime: alternating diarrhoea/constipation
- Pancreatic/ileal disease: pale, fatty, offensive stools - steatorrhoea
Diarrhoea: Management

• **Determine cause:** rectal/abdominal examination by qualified healthcare professional, stool specimen for MC&S

• **General measures:** Increase fluid intake and monitor for dehydration, reassurance that symptom usually self-limiting, patient isolation and infection control measures

• **Mucosal prostaglandin inhibitors** (aspirin): reduce electrolyte and water secretion.

• **Opioids** (codeine): reduce peristalsis, increase sphincter tone. Loperamide doesn’t cross blood brain barrier – opioid of choice

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codeine</td>
<td>200mg/day</td>
</tr>
<tr>
<td>Diphenoxylate</td>
<td>10mg/day</td>
</tr>
<tr>
<td>Loperamide</td>
<td>4mg/day</td>
</tr>
</tbody>
</table>
# Diarrhoea: Specific measures

<table>
<thead>
<tr>
<th>Causes</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat malabsorption</td>
<td>Pancreatin</td>
</tr>
<tr>
<td>Radiation diarrhoea</td>
<td>Ondansetron 4mg tds</td>
</tr>
<tr>
<td>Pseudomembranous Colitis (C-Diff)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; line Metronidazole 400mg tds</td>
</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; line Vancomycin 125mg qds</td>
</tr>
<tr>
<td></td>
<td><em><strong>Check local policy</strong></em></td>
</tr>
<tr>
<td>Profuse secretory diarrhoea</td>
<td>Octreotide infusion</td>
</tr>
</tbody>
</table>
Malignant Bowel Obstruction

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6th June 2014
Malignant Bowel Obstruction

- Complication of advanced abdominal /pelvic cancer
- Single lesion or multiple levels
- Partial or complete
- Benign adhesions can occur in malignancy
Incidence

• Ovarian Cancer
  – 4th most common in women - Occurs in 5-51%
  – Responsible for 4,000 deaths/year (ONS 2011)

• Gastrointestinal Cancer
  – Most common - 4.4-24%
  – Responsible for 26,000 deaths/year
# Incidence of bowel obstruction in cancer

<table>
<thead>
<tr>
<th>Authors</th>
<th>Primary cancer</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castaldo et al</td>
<td>Ovary</td>
<td>5.5</td>
</tr>
<tr>
<td>Tunca et al</td>
<td>Ovary</td>
<td>25</td>
</tr>
<tr>
<td>Solomon et al</td>
<td>Ovary</td>
<td>14.7</td>
</tr>
<tr>
<td>Baines et al</td>
<td>Various/Colorectal</td>
<td>3-10</td>
</tr>
<tr>
<td>Phillips et al</td>
<td>Large bowel</td>
<td>16</td>
</tr>
<tr>
<td>Kyllonen</td>
<td>Colorectal</td>
<td>3-24</td>
</tr>
<tr>
<td>Soo et al</td>
<td>Gynaecologic</td>
<td>5</td>
</tr>
<tr>
<td>Lund et al</td>
<td>Ovary</td>
<td>14</td>
</tr>
<tr>
<td>Beattie et al</td>
<td>Ovary</td>
<td>42</td>
</tr>
<tr>
<td>Steiner</td>
<td>Various</td>
<td>6</td>
</tr>
</tbody>
</table>
Pathophysiological Mechanisms & Investigations

- Extramural obstruction
- Intramural obstruction
- Intraluminal obstruction
- Motility disorders
  - Tumour infiltration
  - Drugs (opioids, anticholinergics, chemotherapy agents)
- Constipation/faecal impaction
- Plain X rays – is constipation present, fluid levels, gut dilatation ? – use of laxatives
- CT – extent of disease and progression
- Gastrograffin
Symptoms of malignant bowel obstruction

- Nausea & vomiting—normally nausea builds up and is relieved by vomiting (mechanical vomit)
- Constipation/diarrhoea
- Lack of flatus
- Abdominal pain – constant or colic
- Abdominal distension
- Examination may reveal abdo masses, tympanic percussion, tinkling bowel sounds
- Difficult to distinguish between levels of obstruction, complete or partial
- Any doubt – plain abdo Xray to distinguish between obstruction & constipation
Management of Bowel Obstruction

• In palliative care malignant bowel obstruction rarely presents as an acute emergency
• Surgical intervention
• Other interventions (stents, venting gastrostomies)
• Conservative management – syringe driver, anti-emetics, analgesics, anti-secretories, gentle laxatives (Docusate 100-200mg BD)
• Stop all stimulant or bulk forming laxatives
• Avoid high fibre foods
• Good mouth care
Surgical interventions

• Mortality high in palliative care patients surgical morbidity 22% perioperative mortality 6%
• Median survival overall 12.6 months - if successful palliation v 3.7 months for non surgical patients (Li-Zi-ting et al 2004)
• Unclear if surgery helps with symptom control
• Recurrent obstruction in 10-50% of patients
• Soriano et al (2011) review of literature suggesting a select few may benefit from surgery
• Challenge is to identify the select few
Other interventions

• Stenting – expanding metal stent
  – Colon, gastric outflow or proximal small bowel obstruction

• NG tubes –
  – if vomiting persists & patient distressed

• Venting gastrostomy –
  – patient stable with intractable nausea, large volume frequent vomits, abdo pain, stomach distensions
  – Performed under endoscopic or radiological control
Other interventions

• Nutritional support
  – TPN may be used if surgery attempted
  – Consider if death more likely from starvation than tumour spread

• Hydration
  – IV fluids may worsen symptoms
  – Secretion-distension-contraction cycle
Palliation of nausea and vomiting: Antiemetics

- Absorption poor via oral route – medications parenterally – CSCI
- If no colic - Metoclopramide 30-120mg per 24hrs via CSCI
- Colic – Cyclizine 150mg per 24hrs via CSCI, Haloperidol 2.5-10mg / 24hrs via CSCI +/- Levomepromazine 6.25 – 25mg /24hr via CSCI
Palliation of pain: Analgesics

• Constant abdominal pain
  – Diamorphine
  – Oxynorm
  – Alfentanyl (depending on renal function)
  – Dose conversion based on previous use of opiates

• Colicky pain
  – Buscopan 60-240mg /24hrs via CSCI & 20mg PRN
Palliation of secretions: Antisecretory

**Action**

- **No colic**
  - Octreotide 300-1500mcg/24hrs via CSCI (synthetic analogue of somatostatin)

- **Colic**
  - Buscopan 60-240mg/24hrs via CSCI

**Blocks release of vasoactive intestinal polypeptide (raised during secretion-distention-contraction cycle)**

**Reduces excretion of water, sodium & chloride into the small bowel**

**Increases re-absorption of water & electrolytes**

**Inhibits pancreatic and gastric enzyme secretion & GI blood flow (splanchnic and portal blood flow)**

**Net effect – decreased volume of intestinal secretions; therefore reducing abdominal distension and vomiting.**
Palliation: Steroids

- Antiemetic properties
- Analgesic properties
- Reduce peri-tumour oedema
- Evidence for steroids is lacking but appear more beneficial in high obstruction
- Dexamethasone 8mg OD for 5 /7
- Stop after 5 days if no resolution or improvement
References/Further Reading

- Comparison of symptoms across life limiting conditions
  1= Kings Study 2= Solano, Gomes, Higginson Journal of pain and Symptom Management 2006.31. 58-69
- HiTW Constipation Guideline 2012
References/Further Reading

• Thomas, S. et al. (2008). Opioid induced constipation in palliative care, a healthcare professional’s guide. Available from www.choices-in-oic.co.uk

• Li-Zi-ting etal. (Benefit of palliative surgery for bowel obstruction in recurrent ovarian cancer. Zhonghua fu can ke za zhi 2004 39; 260-3 Abstract only


• HitW Guidelines -Management of malignant intestinal obstruction


Case Study 1

- Marissa is a 65 yo lady with Ovarian Ca diagnosed 2 years ago with extensive peritoneal & retroperitoneal mets. She has had 1\textsuperscript{st} and 2\textsuperscript{nd} line chemotherapy which she tolerated poorly and has refused further treatment options.

- On discussion/assessment she has not had her bowels open properly for 7 days, her abdomen is distended with reduced bowel sounds. She is vomiting regularly twice a day quite large volumes and has no appetite; however she is thirsty. She has had constant abdominal pain for a few months and is currently well controlled with Zomorph 30mg BD.

- Her husband is very stressed about her poor oral intake and feels she is deteriorating steadily. Advance care planning discussions have been started, but haven’t progressed very far.
Case Study 1

- Discuss concerns with patient and family
- Consider Advance Care Planning concerns – how aggressive to manage, preferred place of care etc
- Initiate further investigation with PR +/- urgent abdominal X-ray.
- Rationalise oral medication (poor absorption)
- Antiemetic – Metoclopramide 30mg (no colic present)
- Analgesia – Diamorphine 20mg (replace Zomorph)
- Laxative – Sodium Docusate
- Consider anti-secretory – Octreotide 300mcg
- Consider steroids – Dexamethasone 8mg OD.
Case Study 2

- Tom is a 45 year old man who has colorectal cancer. He has previously had a course of chemotherapy with good response. He is currently on a break from treatment.
- On assessment Tom has been complaining of abdominal pain which he describes as cramps and has been increasing in severity over several days.
- His bowels have never been normal since his diagnosis, but lately he has only been passing small amounts of gritty liquid stool infrequently. He denies nausea or vomiting, and states he has been tolerating a small diet.
- He has been taking Paracetamol 1gm QDS for some time, and frequently takes Codeine Phosphate 30mg PRN, over the last 2 days he has been taking 60mg QDS with minimal effect. Tom also takes Movicol once/day.
Case Study 2

- Determine cause – could be constipation/impaction with overflow diarrhoea or progressive disease
- Arrange urgent examination (could be via GP, but most appropriate likely to be via local A&E)
- Likely to include: abdominal exam, PR exam, X-ray, bloods, and if indicated CT scan
- Medication considerations – Buscopan, laxative switch (or increase dependant on cause)
QUIZ

• 5 bowls each containing a sample...
• Can you identify the different grades of the Bristol Stool Chart?
• Bonus points if you can identify the true origin of the sample...

• Disclaimer- All samples are edible, have a chocolate origin and may contain traces of nuts.