Management of constipation in people receiving palliative care

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Background
Constipation is a common symptom in patients receiving palliative care and can significantly affect a person's quality of life.

Objective
This article provides an overview of the assessment and management of constipation in patients receiving palliative care.

Discussion
Management involves treatment of reversible causes, if appropriate, as well as both non-pharmacological and pharmacological interventions. Recommended laxatives for use in palliative care are osmotic laxatives and stimulant laxatives. Prophylactic use of laxatives when prescribing opioids is essential. Methylnaltrexone can be used to manage opioid-induced constipation but should be avoided in patients with bowel obstruction.

CONSTIPATION is prevalent in patients receiving palliative care (the definition of palliative care is discussed in Table 1). The incidence of constipation in patients with advanced cancer has been estimated to be 50–90%,[1] and 50% in patients admitted to palliative care units.[2] Despite its prevalence, it is often underdiagnosed and undertreated.[3]

Constipation can have a significant effect on quality of life. It can lead to abdominal pain, distension, anorexia, nausea and malaise. It can also affect the absorption of certain oral medications.[2] Some patients can be reluctant to take opioid analgesia due to the fear of worsening constipation, which further compounds their suffering.[4] In frail elderly patients, severe chronic constipation can sometimes be associated with potentially fatal stercoral colitis.[5,6]

Aim

General practitioners (GPs) are well placed to deliver palliative care. This article provides an overview of the assessment and management of constipation in patients receiving palliative care.

CASE STUDY

Mr TB is a man aged 65 years with metastatic bladder cancer treated with palliative chemotherapy (gemcitabine and carboplatin). He lives alone and his daughter lives nearby. He presents to his general practitioner (GP) with several health issues. It has been seven days since he last opened his bowels. He also has nausea and occasional pelvic pain secondary to his disease. His medications are: oxycodone modified-release 20 mg twice daily (bd), pregabalin 25 mg bd, as required (prn)oxycodone immediate release 5 mg every two hours (q2h) orally (po), prn ondansetron 4 mg. He has tried taking a dietary fibre supplement for constipation with no effect. He is reluctant to take any breakthrough analgesia due to fear of worsening constipation. He also asks if he can reduce his OxyContin dosage to improve his constipation. He is distressed – 'I would rather put up with pain than be constipated'.

Defining constipation

Constipation means different things to different people. In clinical trials, clinician–investigators define constipation using objective criteria.[7] Patients define constipation idiosyncratically based on their understanding of what the word means compared to what they think is normal. The literature suggests these two parties often disagree.[8]

Plain abdominal radiographs do not improve agreement.[9,10] Both definitions matter. We derive the following approach: if patients say they are constipated, offer treatments. If they say they are not constipated, ask how often they have a bowel motion. If they have a good bowel motion less frequently than every three days, counsel them as to the potential effect on quality of life and offer appropriate treatment.

In summary, constipation in palliative care is fundamentally defined by the patient.[2,11] If a patient complains of constipation, further detailed assessment and management is warranted.

Causes of constipation

Constipation is caused by slow gut transit and/or inability of rectal/anal muscles (commonly due to cachexia) to expel faeces. Common causes of constipation in patients receiving palliative care are listed in Table 2. In most cases, a combination of factors leads to constipation.[12]

Assessment of constipation

Assessment of constipation aims to: (1) determine the presence and severity of constipation; and (2) identify underlying causes that will guide management.

It is essential to establish what is considered a regular pre-illness bowel pattern. Other important history includes (but is not limited to):

- frequency and consistency of bowel motion
- associated symptoms (eg defaecation pain, abdominal bloating, nausea, vomiting, anorexia)
- sensation of incomplete evacuation
- history of a patient's illnesses and treatments (including medications)
- functional status.

The presence of watery diarrhoea might suggest overflow diarrhoea due to faecal impaction.

Plain abdominal radiographs are not routinely used to confirm diagnosis; however, if bowel obstruction is suspected clinically, an abdominal X-ray can be useful to differentiate between bowel obstruction and constipation. Some cancers have a high incidence of bowel obstruction, such as ovarian cancer.

Patients with moderate-to-severe cognitive impairment who are unable to provide a clear history might benefit from assessment scales to determine the presence and severity of constipation. The Bristol Stool Form Scale is a commonly used constipation assessment scale.

Table 1. Definitions of palliative care

Organisation	Definition
World Health Organization (2002)	Palliative care is an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problem, physical, psychosocial and spiritual concerns
International Association of Hospice and Palliative Care (2021)	Consensus definition of palliative care: Palliative care is the active holistic care of individuals across all ages with serious health-related suffering due to severe illness, and especially of those near the end of life. It aims to improve the quality of life of patients, their families and their caregivers. Palliative care: • Includes prevention, early identification, comprehensive assessment and management of physical issues, including pain and other distressing symptoms, psychological distress, spiritual distress and social needs. Whenever possible, these interventions must be evidence based • Provides support to help patients live as fully as possible until death by facilitating effective communication, helping them and their families determine goals of care • Is applicable throughout the course of an illness, according to the patient's needs • Is provided in conjunction with disease-modifying therapies, whenever needed • Might positively influence the course of illness • Intends neither to hasten nor postpone death, affirms life and recognises dying as a natural process • Provides support to the family and the caregivers during the patient's illness, and in their own bereavement • Is delivered recognising and respecting the cultural values and beliefs of the patient and their family • Is applicable throughout all healthcare settings (place of residence and institutions) and in all levels (primary to tertiary) • Can be provided by professionals with basic palliative care training • Requires specialist palliative care with a multiprofessional team for referral of complex cases

Table 2. Common causes of constipation in palliative care patients

Mechanisms	Causes
Slow gut transit	• Immobility, physical inactivity • Poor fluid intake • Low fibre diet • Paraneoplastic metabolic disorders (eg hypercalcaemia) • Intestinal lymphoedema Treatment-induced factors: • Neurotoxic chemotherapy agents • Opioids • Serotonin type 3 (5HT3) antagonist • Anticholinergics • Antihypertensive agents (eg calcium channel blocker) • Diuretics
Decreased rectal/anal muscle power	• Mechanical factors (eg anal fissure, diverticular disease, haemorrhoids) • Neurological disorders causing impaired defaecation (eg spinal cord compression) • Anorexia/cachexia • Environment factor (eg lack of privacy)

Management of constipation

Management of constipation involves treatment of reversible causes, if appropriate, as well as non-pharmacological measures and pharmacological interventions.

Non-pharmacological measures

Important non-pharmacological preventative measures include:[2]

- ensuring privacy and comfort for the patient to defaecate (especially for patients in institutions)
- optimise fluid and fibre intake as tolerated by the patient
- optimise mobility and function as appropriate for the patient.

Pharmacological interventions

Table 3 summarises our recommended pharmacological agents used in the management of patients with constipation who are receiving palliative care.

Osmotic laxative

Osmotic laxatives increase the water content of stool and make it softer and easier to pass.[13]

Macrogol is a polyethylene glycol. It is commonly used in palliative care. It is not absorbed from intestinal lumen, so diffusion from tissue to the gastrointestinal tract and dehydration does not occur. It requires mixing with 125 mL of water, which some palliative patients find challenging to ingest. Different osmotic laxatives have different flavour profiles.

Lactulose is broken down by bacteria and reduces intraluminal pH. It is often used in patients with chronic liver disease for the prevention of hepatic encephalopathy (refer to section on patients with cirrhosis). However, the fermenting process can cause flatulence (reported by 20% of patients).[1] Some patients dislike the sweet taste. Patients whose fluid intake is poor should not take lactulose.

Stimulants

Stimulants are frequently used in palliative care. They promote peristalsis, inhibit sodium and water reabsorption, and increase fluid secretion into the bowel. Common stimulant laxatives used in palliative care are listed in Table 3. Sodium picosulfate oral liquid is useful for patients who have difficulty swallowing (eg patients with head and neck cancer, motor neuron disease).

Stool softener

Stool softeners alone are infrequently used in palliative care. As patients often have reduced gastrointestinal tract motility, the addition of a stimulant is often required.

Bulking agents

Bulking agents are not recommended for people receiving palliative care. These are common laxatives used to prevent constipation in the general population; examples include psyllium and sterculia. However, for bulking agents to be effective, a person must consume large volumes of fluids. This is often not possible for palliative patients. Bulking agents have no role in the prevention of constipation or opioid-induced constipation.[14]

Enemas and suppositories

Enemas or suppositories might be indicated in:[15]

- patients with constipation who are not responding to oral laxatives
- faecal impaction
- patients with spinal cord lesions who require a bowel regime.

Enemas or suppositories can have a rapid effect. Their mode of action is to induce irritation of the mucosa of the rectum, which enhances the motility of the colon and triggers the defaecation reflex. Table 4 outlines the recommended enema or suppository of choice based on physical examination findings.

Prevention of opioid-induced constipation

Taking opioids makes constipation more likely. The incidence of opioid-induced constipation has been reported to range from 15% to 90%.[17,18] A higher opioid dose does not seem to make constipation more likely than a lower dose.[19] There are trials that suggest using prophylactic laxatives can reduce the incidence of opioid-induced constipation.[20,21] Many guidelines advocate this approach. There is no good evidence supporting one type of preventive laxative over another. We would recommend individualising the laxative chosen for the patient and options include osmotic laxatives, stimulant laxatives or combination of stool softener and stimulant laxative.

Patients with cancer who also have cirrhosis

We use lactulose as the first-line laxative for the patients with cancer who also have cirrhosis as it prevents and treats the hepatic encephalopathy these patients are prone to. For patients who are unable to take lactulose orally, lactulose enemas have been successfully used.[22] A 30–60 mL dose of commercially available lactulose can be put into a disposable enema purchased from a chemist and then instilled into the rectum.

Management of refractory constipation

Diatrizoate meglumine and diatrizoate sodium solution in the treatment of patients with advanced cancer

Diatrizoate meglumine and diatrizoate sodium solution is an iodine-containing radiography contrast agent that has a strong osmotic effect.

We would perform an oral water-soluble contrast follow-through study that would help exclude a malignant bowel obstruction and might have therapeutic benefit. We give 50 mL of diatrizoate meglumine and diatrizoate sodium solution and do an upright abdominal X-ray, 6–24 hours later, looking for passage of the diatrizoate meglumine and diatrizoate sodium solution into the rectum (as well as other radiographic evidence of obstruction).[23]

Methylnaltrexone for opioid-induced constipation

For patients with refractory opioid-induced constipation, methylnaltrexone can be useful if there are no other contraindications.[24] Methylnaltrexone is an opioid antagonist that reverses the effect of opioids in the peripheral nervous system and does not cross the blood–brain barrier. Therefore, it can alleviate opioid-induced constipation without reversing the analgesic effect of opioids in the central nervous system. Methylnaltrexone is Pharmaceutical Benefits Scheme (PBS) subsidised and dosage is based on weight and creatinine (refer to product information). Refer to the below section regarding avoiding methylnaltrexone for patients with bowel obstruction.

Laxation can occur within 30 minutes, so the patient should be kept near a toilet if mobile, and patients commonly experience crampy abdominal pain prior to defaecation.

Table 3. Laxative recommendations for the management of constipation in palliative care patients[15,28]

Class	Dose range	Time of onset (hours)
Osmotic laxatives		
Polyethylene glycol	One to two sachets bd	24–48
Lactulose (for patients with end-stage liver disease – as appropriate for goals of care)	15–30mL bd to tds	24–48
Stimulant laxatives		
Bisacodyl tablets	5–10 mg noct or bd	6–10
Sodium picosulphate	10–20 drops once daily to bd	6–12
Combination of a softener and stimulant		
Docusate and Senna	One to two tablets bd	6–12

Table 4. Recommended enema or suppository of choice for palliative care patients dependent on examination findings[16]

Examination findings	Recommended enema or suppository in combination with oral laxative
Hard faeces in the rectum	Glycerol 2.8 g suppository rectally (eg glycerine suppository) PLUS Sorbitol + sodium citrate enema rectally OR bisacodyl 10 mg suppository rectally AND Bisacodyl 10 mg noct po OR oral sodium picosulphate drops (10 drops once daily)
Soft faeces in the rectum	Bisacodyl 10 mg suppository rectally AND Bisacodyl 10 mg noct po OR oral sodium picosulphate drops (10 drops once daily)
An empty rectum	Sorbitol + sodium citrate enema rectally OR Bisacodyl 2 mg/mL enema AND Bisacodyl 10 mg noct po OR oral sodium picosulphate drops (10 drops once daily)

Interventions to avoid in specific situations

Avoid methylnaltrexone in patients with bowel obstruction

Methylnaltrexone should not be prescribed to patients with bowel obstructions, gastric ulcers or gastric malignancy because there might be an increased risk of bowel and gastric perforation. Additionally, we would be reluctant to use it in patients with known peritoneal carcinomatosis, particularly those with previous malignant obstruction or cancers commonly associated with malignant obstruction (eg ovarian cancer).[25]

Avoid rectal examination in cancer patients who are neutropaenic

Per rectal (PR) examinations should be avoided in patients who are neutropaenic due to the risk of inducing sepsis by causing bacterial translocation.[26,27]

Avoid giving repeated sodium phosphate enemas in patients with severe renal failure

Sodium phosphate enemas should be avoided in patients with severe renal failure because they can cause hyperphosphataemia leading to hypocalcaemia or hypernatraemia and further worsen renal failure.

CASE STUDY CONTINUED

Mr TB's GP commences him on regular Movicol (two sachets bd) and oral bisacodyl 10 mg bd. For nausea, prn metoclopramide 10 mg is prescribed. Twenty-four hours later, Mr TB opens his bowels. His nausea improves. Education is further provided to reassure Mr TB and his daughter that constipation can be proactively managed and prevented. Mr TB also feels more confident about taking his prescribed analgesia to manage his breakthrough pain.

Conclusion

Patients receiving palliative care have a higher prevalence of constipation compared to the normal population. Ongoing assessment of constipation and proactive preventive measures are therefore important when caring for patients receiving palliative care. Treatment in most scenarios is guided by consensus opinion rather than rigorous clinical trial data. Clinicians need to be aware of some interventions to avoid in specific situations.

Key points

- Constipation in palliative care is defined by the patient.
- Proactive assessment of constipation is essential in caring for patients receiving palliative care.
- Recommended laxatives for use in palliative care are osmotic laxatives and stimulant laxatives ± stool softener. Bulking agents are not recommended.
- Prophylactically prescribe a laxative when prescribing opioids.
- Methylnaltrexone can be used to manage patients with refractory opioid-induced constipation. Contraindications need to be carefully excluded before prescribing this.

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