Managing constipation in advanced cancer care

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ABSTRACT Constipation is a common and debilitating symptom in patients with advanced cancer. If ignored, constipation will get worse. If left untreated, it can greatly reduce a patient’s quality of life. An improved understanding of bowel function and knowledge of the recognised risk factors will lead to a greater appreciation of the signs and symptoms of constipation.

Constipation is a common and debilitating symptom in patients with advanced cancer with an estimated prevalence ranging from 30 to 80 per cent (Baines, 1988; Grond et al, 1994; Sykes, 1998; Potter et al, 2003). Despite its prevalence in patients with advanced cancer and its adverse effect on quality of life, constipation can still be an overlooked symptom, which often receives little attention until significant problems occur.

Many risk factors are associated with constipation in the cancer patient and a thorough and methodical assessment will help identify the underlying cause(s). In Western culture, bowel function is regarded as a private event and not a subject to be discussed openly. A professional and sensitive approach is required to minimise embarrassment for the patient.

The nurse has a significant role to play in the management of constipation in patients with advanced cancer. Particular areas of influence include prophylaxis, early detection, the identification of risk factors, patient education, developing an individualised plan of care, administering laxatives and monitoring the effect of treatment.

Laxatives are the mainstay in the treatment of constipation in patients with advanced cancer. However, the nurse can promote a number of non-pharmacological measures that patients may find beneficial.

Definition
Bowel habits vary greatly between different individuals. With such a wide variation as to what constitutes a ‘normal’ bowel habit, it is difficult to precisely define constipation (Richmond, 2003).

The symptoms associated with constipation are varied and largely subjective, with individuals placing varying degrees of emphasis on the symptoms that do occur (Cameron, 1992; Sykes, 1998; Smith, 2001; Richmond, 2003). Clinically the symptoms most frequently associated with constipation are:

- Difficulty in passing stool (due to pain, straining, incomplete evacuation);
- Stool consistency (hard, dry);
- Reduced frequency of defecation.

Function of the large intestine
To understand constipation it is necessary to be familiar with the function of the large intestine and the rectum. The large intestine is primarily concerned with propulsion, absorption and defecation (Marieb, 1989).

Propulsion
The main propulsive forces in the large intestine are termed ‘mass movements’. Mass movements are strong peristaltic waves that begin within the transverse colon and drive the luminal contents towards the rectum. Such movements occur three to five times a day, usually on waking and after meals (Cameron, 1992; Sykes, 1998).

Absorption
Approximately 9–10L of fluid a day enter the small intestine. This fluid is mainly derived from gastric secretions (about 7.5L) and ingested fluids (about 1.5L). The bulk of this fluid is absorbed within the small intestine with 0.5–1L entering the large intestine. The large intestine absorbs all but approximately 100mL. The longer the luminal contents are in contact with the mucosal surface of the large intestine, the more water is reabsorbed.

Learning objectives

Each week Nursing Times publishes a guided learning article with reflection points to help you with your CPD. After reading the article you should be able to:

- Understand the workings of the bowel;
- Be familiar with how constipation develops;
- Understand the different symptoms of constipation;
- Know the various management techniques for constipation;
- Understand the nursing implications for people with constipation.

REFERENCES


正常蠕动时，肠道内的内容物被不断推送并排出体外。但当正常蠕动被阻断时，内容物在肠道中滞留，导致粪便积聚，这便是便秘。便秘的常见原因包括肠道阻塞、肌肉或神经损伤以及药物副作用等。

预防便秘的方法包括保持规律的饮食、增加水分摄入、定期运动等。

该研究还发现，长期使用阿片类药物的患者更容易出现便秘。

因此，对于便秘患者，应采取综合治疗措施，包括药物治疗、生活方式调整等，以改善症状并提高生活质量。

参考文献


Department of Health (1991) Report on health and social subjects; dietary reference values for food energy and nutrients for the UK – report of the panel on dietary reference values of the Committee on Medical Aspects of Food Policy. London: HMSO.


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TABLE 2. ASSESSING BOWEL FUNCTION IN PATIENTS WITH ADVANCED CANCER

<table>
<thead>
<tr>
<th>Question</th>
<th>Options/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the patient’s normal bowel habit?</td>
<td>Frequency, Difficulty experienced, Usual routine, Laxatives used (regular or intermittent, including ‘natural’ remedies)</td>
</tr>
<tr>
<td>What is the patient’s current bowel habit?</td>
<td>Frequency, Difficulty experienced, Any noticeable change in bowel habit and if so, since when? When was last bowel action? What was the result of the last bowel action (amount, consistency)?</td>
</tr>
<tr>
<td>What is the patient’s general health?</td>
<td>Oral intake (diet and fluids), Assess oral cavity (dry, painful, ulcerated, infected), Episodes of nausea and/or vomiting, Mobility, Performance status, Mental state (confused, depressed), Medications (current and recently discontinued)</td>
</tr>
<tr>
<td>Physical examination</td>
<td>Evidence of dehydration (lack of skin turgor, dry mouth, cachetic), Abdominal distension, Medical staff to organise: Abdominal examination, Rectal examination, Blood tests (dehydration, hypothyroid, hypercalcaemia, hypokalaemia), Abdominal X-ray, Neurological examination (especially in the presence of deteriorating mobility, altered sensation, neuropathic pain)</td>
</tr>
</tbody>
</table>

- Fermentation may also allow for the release of absorbed bile acids that also stimulate the colon;
- The irritating effect of insoluble particles may act to increase motility.

The Department of Health (1991) recommends a daily fibre intake of approximately 18g (about five portions of fruit and vegetables and one portion of cereal a day). For fibre in the diet to be effective it must be coupled with an adequate fluid intake of approximately 2L a day (Canty, 1994). Liquids serve to add fluid to the colon and subsequently add bulk to the stool, thereby making stools softer and easier to pass (Christer et al, 2003).

However, patients with advanced cancer often have a reduced appetite for a variety of reasons, with fibre in particular being difficult to tolerate:
- Some tumours produce chemical substances that suppress appetite (Bruera, 1997);
- The dying process slows many bodily functions including gastric emptying, which results in early satiety and decreased hunger;
- Nausea and/or vomiting are associated with an aversion to food.
- Oral pain when attempting to eat and drink. Possible causes include oral thrush, mouth ulcers, mucositis;
- The patient may only be able to tolerate a low residue diet as they are too weak to chew for any length of time (Sykes, 1998);
- Appetite may be reduced in the presence of any pain.

Fatigue
Patients with advanced malignancy often present in a weakened state and this can have a detrimental effect on their bowel function including:

References
Activity stimulates peristalsis and there is a correlation between constipation and reduced mobility (Doughty, 1991; Richmond, 2003; Christer et al, 2003)

Extreme weakness may result in the patient being unable to give the push necessary for defecation.

**Opioids**

Opioids delay the transit of luminal contents through the large intestine by increasing intestinal smooth muscle tone, suppressing forward peristalsis, increasing anal sphincter tone and reducing sensitivity to rectal distension (Cameron, 1992; Canty, 1994; Sykes, 1998; Hendon et al, 2002).

The result is that the luminal contents are in contact with the mucosal surface for longer, thereby increasing the amount of fluid absorbed. Consequently the stool becomes drier and harder, which reduces the transit time still further.

The relationship between opioid dose and the severity of constipation is debateable. Bennett and Cresswell (2003) suggest lower doses of opioids are just as likely to induce constipation as higher doses. Mancini et al (2000) note there is little relationship between the dose of opioid that an individual is taking and the dose of laxative required to maintain their bowel function.

Opioid use is strongly associated with constipation in patients with advanced cancer and prophylactic measures should be considered at the onset of opioid therapy (Sykes, 1998; Campbell et al, 2001; Kurz and Sessler, 2003). Opioids have a constipating effect whether given orally, sub-cutaneously or transdermally, although the incidence of constipation may be reduced with non-oral administration (Sykes, 1998; Mancini, 2000; Campbell et al, 2001; Hendon et al, 2002).

**Environmental factors**

Environmental factors should not be overlooked. Toilet seats and bedpans can be very uncomfortable, especially for the cachectic patient. On busy wards with staff shortages a patient’s discomfort is increased all too often as a result of being left on the toilet or bedpan for longer than necessary. Defecation will be aided if the patient is able to utilise their abdominal muscles. However, this cannot be optimised if the toilet is too high or too low. Patients unable to get to the toilet unaided may be reluctant to ask for assistance due to embarrassment or a desire not to bother the staff. Whatever the reason, negative environmental factors can result in the patient ignoring the urge to defecate.

**Adverse effects of constipation**

Untreated constipation can be a source of both physical and emotional distress for the patient, giving rise to problems including:

- Abdominal pain, discomfort and distension;
- Anorexia;
- Increased lassitude;
- Emotional irritation;
- Feelings of incomplete evacuation;
- Pain on attempting defecation;
- Exacerbation of haemorrhoids;
- Rectal tears and fissures;
- Bowel obstruction;
- Bowel perforation;
- Overflow diarrhoea;
- Fear of constipation may result in patients avoiding opioid analgesia or taking suboptimal doses resulting in reduced pain control.

**Assessment**

Assessment is vital to establishing an individualised care plan. McMillan (2002) highlights that constipation that goes without being assessed or reported tends to remain untreated. There is evidence to suggest assessment is performed haphazardly and is of variable quality (Smith, 2001; Cadd, 2000; McMillan, 2002; Richmond, 2003).

To accurately ascertain the underlying cause(s) of an individual’s constipation, assessment must be methodical and incorporate both a patient history and a physical examination (Table 2). The ward nurse is uniquely placed to assess a patient’s bowel function, being able to monitor the patient 24-hours a day. Such closeness can allow the nurse to build a relationship with the patient that permits them to openly discuss such a sensitive subject.

Excellent communication and documentation will enhance both the process of assessment and ongoing review. Statements such as ‘bowels opened’ mean little. Similarly repeated comments such as ‘no bowel action’, with no intervention to address the problem are unacceptable (Smith, 2001). The recording of the appearance of a patient’s stool together with stool frequency is a simple, non-invasive and objective measurement of gut function (Sykes, 1998).

**Management of constipation**

There are a range of non-pharmacological measures that can help in the prevention and treatment of constipation and these should not be overlooked. Oral fluids and diet should be encouraged within patient tolerance. Where correctable causes are found for a patient’s reduced appetite they should be addressed. For example, the treatment of a painful mouth, the relief of nausea and vomiting, provision of correctly fitting dentures.

When cancer is advanced, however, it is to be expected that appetite will decrease. It would be inappropriate to be overly enthusiastic in encouraging diet in those who are too weak to tolerate it or who simply do not want to eat.

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**REFERENCES**


The environment should be such that privacy is assured, dignity protected and comfort issues addressed. Patients often prefer going to the toilet, even if they require the use of a wheelchair to get there. If a bedside commode or bedpan is required, visitors should be diplomatically asked to vacate the area. Good ventilation and the use of deodorisers may help limit unpleasant odours.

Cadd et al (2000) believe that non-pharmacological interventions, particularly those that the patient themselves uses, such as massage, positioning and herbal remedies are not incorporated into the management plan of constipation as often as they should be.

In the face of advancing disease with diminishing oral intake, decreased exercise tolerance and opioid analgesia, non-pharmacological measures are often insufficient on their own.

Laxative therapy is the mainstay in the management of constipation in patients with advanced cancer. The aim of laxative therapy cannot be stated in terms of frequency of bowel actions. Rather, it is to promote comfortable defecation and maintain the patient’s normal bowel pattern.

Careful assessment of the underlying cause(s) of a patient’s constipation and knowledge of laxatives and their mode of action will promote logical prescribing. Broadly speaking, laxatives can be classified as having a softening or a stimulant action. However, no laxative acts purely as a faecal softener or as a stimulant. A laxative that softens stool will also increase its bulk, thereby stimulating peristalsis. Laxatives that act as a stimulant will also enhance fluid secretion and so improve stool consistency. Each laxative will have a predominant effect that will guide choice (Sykes, 1998).

Bulk-forming laxatives are not recommended in the treatment of constipation in patients with advanced cancer. This is because they require a high fluid intake to be effective and often have an unacceptable consistency. They are also associated with an increased risk of intestinal obstruction in those already at risk (Sykes, 1998; Twycross and Wilcock, 2001; Twycross et al, 2002). Stimulant laxatives should be avoided in cases of suspected intestinal obstruction as they can induce colic.

Regular administration of laxatives is important, especially when the patient is receiving opioid analgesia (Campbell et al, 2001; Herndon et al, 2002). The nurse will need to educate the patient not to stop their laxatives just because they have had their bowels open. If loose stool occurs while on laxative therapy, the underlying cause must be assessed rather than assumed, for example, infection, constipation and changes in medication considered. If loose stool is related to laxative therapy, administration should be stopped for 24 hours and reintroduced at a lower dose.

Oral measures should always be the first-line treatment in the management of constipation. Rectal measures such as suppositories and enemas can be an undignified and embarrassing experience for the patient. However, they can bring about quick results.

Rectal measures should be avoided in patients with neutropaenia or thrombocytopaenia due to the risk of abscess formation and bleeding (Dougherty, 1991; Smith, 2001).

**Faecal impaction**

If constipation is not dealt with adequately stool accumulates in the large intestine. The mucosa continues to absorb fluid from the faecal mass making it increasingly drier and harder. As faecal material continues to accumulate the mass enlarges until it becomes impossible to pass naturally. Faecal material proximal to the mass liquefies due to the action of colonic bacteria. The liquid stool can seep around the solid mass and present as diarrhoea.

Over 90 per cent of faecal impaction occurs in the rectum and a rectal examination will reveal a mass of hard faeces (Sykes, 1998; Twycross and Wilcock, 2001). If the site of faecal impaction is higher up the colon abdominal X-ray should confirm the diagnosis.

The aim of treatment is to soften and lubricate the stool to aid defecation. An arachis oil enema, retained overnight, followed by a phosphate enema prior to attempting defecation may prove sufficient to allow the stool to be passed (Twycross and Wilcock, 2001).

An alternative method is the use of sufficient doses of oral macrogels. Stimulant laxatives should be avoided until the faecal impaction has actually been removed.

Manual evacuation should only be attempted after all other measures have been tried. Analgesia and anxio-lytics should be administered before the procedure is carried out to reduce any distress the patient may feel.