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Palliative care

MANAGEMENT OF INTESTINAL OBSTRUCTION IN PALLIATIVE CARE

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Intestinal obstruction is a problem sometimes encountered in patients suffering from a malignant condition. The commonest primary cancers causing intestinal obstruction are of the ovary or large bowel.[1] Traditional management includes palliative surgery, which carries a high morbidity and mortality, or prolonged conservative treatment using intravenous fluids and a nasogastric tube.

Not all patients can be offered surgery, and in cases where surgery is not appropriate, effective palliative care measures can be implemented to control symptoms and relieve distress.

Pathophysiology

Pathophysiologies often co-exist and may involve several sites (Table I).

The pathophysiology may be helpful in arriving at a working diagnosis, which in turn will direct the treatment plan.

Making a diagnosis

Clinical features

The signs and symptoms will depend on the level of obstruction, and may be intermittent. The onset may be acute, but is usually insidious, developing over days or weeks. The key features, namely vomiting, colic pain and distension, can be used to differentiate the different levels of obstruction (Table II).

Investigations

Supine and erect abdominal radiographs are required to differentiate between severe constipation and intestinal obstruction, and also to indicate the site and nature of the obstruction.[2] Barium enema, sigmoidoscopy or colonoscopy may provide additional information. Other investigations of value are electrolytes and serum calcium, since both play a role in functional obstruction.

Immediate measures

Assess the patient:

- Reach a working diagnosis as to the cause and level of the obstruction.
- Radiographs often confirm clinical suspicion.

Start symptomatic treatment:

- A nasogastric tube and suction should provide immediate relief, but not all patients will tolerate a tube. Some cases of intestinal obstruction will resolve and the patient may pass stool spontaneously.
- Keep nil per mouth to give the obstruction a chance to resolve. Intravenous fluids may be given to prevent dehydration; administer analgesics and anti-emetics as required.
- Nausea and vomiting may be controlled with cyclizine (acts on the vomiting centre in the brain),

Table I. **Pathophysiology of intestinal obstruction**

	Intraluminal	Extraluminal	Functional
Caused by the cancer	Annular occlusion Synchronous tumour at a different site	Compression of lumen by tumour mass or nodes	Interferences with peristalsis by infiltration of intestinal muscle, mesentery or coeliac plexus
Cause related to the cancer	Inflammatory oedema	Inflammatory oedema	Paraneoplastic syndrome caused by lung cancer (pseudo-obstruction that usually resolves spontaneously)
Cause unrelated to the cancer	Constipating drugs	Adhesions from previous surgery	Autonomic dysfunction

Table II. **Signs and symptoms of intestinal obstruction**

Site	Pain	Vomiting	Distension	Bowel sounds
Duodenum	Local, upper gastrointestinal tract	Large amounts of undigested food	None	Succussion splash
Small bowel	Upper – central abdominal colic	Early, large amount, may be faecal	Moderate	Hyperactive and borborygmi
Large bowel	Central – lower abdominal colic	Late	Severe	Borborygmi

Adapted from Doyle *et al*.[3]

or haloperidol — rectally or by subcutaneous infusion. Dexamethasone may be used as an adjuvant anti-emetic, and also to reduce inflammation in the abdomen.

- Colic pain may be controlled with a combination of morphine and hyoscine butylbromide. The latter acts as an antispasmodic, and reduces secretions. This may be administered via titrated intravenous infusion if the patient already has venous access, otherwise via subcutaneous infusion. A prokinetic such as metoclopramide would not be indicated, and may worsen the colic.
- Diarrhoea sometimes occurs with subacute obstruction or constipation and overflow. Stimulant laxatives should be avoided, although stool softeners may be used if the obstruction does not seem complete.
- Drug causes should be eliminated by reviewing current medication and discontinuing bulk-forming or stimulant laxatives.

Treatment options

In all cases symptoms have to be controlled and psychosocial and spiritual issues addressed. Additional options will depend on each individual patient, and are as follows:

Table III. **Factors influencing the appropriateness of surgery**[4]

Patient's wishes
Performance status
Presence of distant secondaries
Easily reversible cause likely or not
Presence of intra-abdominal masses or ascites
Previous radiation to abdomen or pelvis
Life expectancy
Number of surgical events in the previous year
Length of symptom-free time
Large bowel v. small bowel

Conservative treatment

- If surgery is not an option, it should be explained to the patient and family and a joint decision reached on where the patient should be nursed.
- Once it becomes apparent that the obstruction is complete and persistent, the patient can be kept comfortable by subcutaneously infusing a cocktail (morphine, hyoscine butylbromide and haloperidol) via a syringe driver.
- Octreotide is an expensive, synthetic analogue of somatostatin that reduces intestinal secretions, providing relief from nausea and vomiting.[3] Octreotide is usually administered subcutaneously, either in the cocktail, or by injection twice daily.

Surgery

If surgery is an option, admit and prepare the patient and family for referral and possible surgery. To decide if surgery is appropriate certain factors have to be considered (Table III).

Disease-modifying treatment

Further chemotherapy, radiotherapy or hormone treatment may be indicated, depending on the findings at surgery, and should be discussed with the patient, family and oncologist.

General measures

Explanation

- Explaining the diagnosis and plan will alleviate some of the anxiety experienced by the patient and family.
- If surgery is offered it is important to discuss the diagnosis, the possible findings at laparotomy, and the implications to patient and relatives. Patients and their families struggle to grasp the concept of palliative surgery and tend to think that surgery is a

cure. The high morbidity and mortality associated with this type of surgery should be discussed.

- Even in cases where no surgery is offered the obstruction may resolve. However, the patient and family should be prepared for the fact that the obstruction invariably recurs, and symptom control may become difficult towards the end of life.

Non-pharmacological measures

- Nutrition becomes important if the obstruction is resolved, and nausea and vomiting are reasonably controlled. The patient should be able to consume small amounts of fluids and small low-volume meals. The family should be encouraged not to make an issue of food, and to experiment with different textures and tastes.
- Realistic aims should be set in terms of recovery and returning home. Resuming tasks and roles at home, recurrent symptoms and further treatment options are issues that should be explored.

Family conference

- It would be appropriate to convene a family conference to address emotional, spiritual and social issues.
- The purpose would be to answer questions, offer support, and create a space for the family to vent their feelings, reassure them of the normality of their response to the crisis, and identify specific issues.
- Preparation for the future is important since the obstruction could recur.
- Counselling should be offered to the patient and family. Spirituality has a different definition for each person, and the patient should be given the opportunity to explore spiritual issues, whatever form they take in his/her life.
- The task of the health care team is to strive for a balance between encouraging hopefulness, being honest, and assisting with the tasks of grieving. Anticipatory grief is an extremely powerful process that prepares and empowers both patient and relatives, and should be encouraged by open communication regarding the implications of the disease progression.

Summary of management

Intestinal obstruction can usually be anticipated and treatment negotiated with the patient and relatives and planned in advance.[2] The key deciding factor is whether surgery will benefit the patient or not. If

surgery is planned then, in addition to symptomatic treatment, nasogastric intubation, intravenous rehydration and appropriate investigations are performed. If no surgery is planned, the patient's wishes determine whether he/she is admitted to hospital for conservative management and symptom control, or managed at home. Excellent symptom control can be provided with appropriate medication via a syringe driver, and only in a small number of patients with refractory symptoms will additional measures such as a venting gastrostomy or permanent nasogastric intubation be required.[2]

References

1. Baines M. Intestinal obstruction in patients with advanced cancer. *Pallot Care Today* 1995; **4**: 4-6.
2. Doyle D, Hanks GWC, MacDonald N. *Oxford Textbook of Palliative Medicine*. 2nd ed. New York: Oxford University Press, 2001.
3. Fallon MT. The physiology of somatostatin and its synthetic analogue, Octreotide. *Eur J Pallot Care* **1**(1): 20-22.
4. Finlay I. End-of-life care in patients dying of gynaecological cancer. *Hematol Oncol Clin North Am* 1999; **13**(1): 77-108.

MANAGEMENT OF DYSPNOEA IN PALLIATIVE CARE

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Dyspnoea is described as an unpleasant awareness of difficulty in breathing. It is a complex symptom to assess because it is subjective and multidimensional. Severe dyspnoea can be a frightening experience for the patient and distressing for the caregiver and family to observe. Effective palliative care interventions can relieve the distress of dyspnoea and improve the comfort of the patient.

Dyspnoea must not be confused with tachypnoea, hyperpnoea or hyperventilation.

Prevalence

The prevalence of dyspnoea is greater in lung cancer patients, 70% of whom complain of this symptom. Twenty-nine to seventy-four per cent of all cancer patients suffer from dyspnoea in the last six weeks of life.

Causes

The causes of dyspnoea are listed in Table I.

Management

Dyspnoea is managed best by a multidisciplinary team, and also involves a pharmacological and non-pharmacological approach.

Table I. **Causes of dyspnoea**

Caused by cancer	**Related to cancer and/or debility**
Pleural effusion(s)	Anaemia
Obstructions of main bronchus	Atelectasis
Replacement of lung by cancer	Pulmonary embolism
Lymphangitis carcinomatosa	Pneumonia
Mediastinal obstruction	Empyema
Pericardial effusion	Cachexia-anorexia syndrome
Massive ascites	Weakness
Abdominal distension	
Caused by treatment	**Concurrent causes**
Radiation-induced fibrosis	Chronic obstructive pulmonary disease (COPD)
Chemotherapy, e.g. bleomycin, doxorubicin	Asthma
	Heart failure
	Acidosis

Firstly, a thorough history has to be taken, e.g. when or how it started, rapidity of onset, and if it is present at rest, on climbing stairs or during social interaction. Also one should assess how dyspnoea affects the patient, such as limiting his outings and climbing of stairs, and the effect on his speech or appetite. The patient's fears and anxieties have to be discussed — he has to be reassured regarding unrealistic fears, and management of realistic fears has to be planned. This would be an opportune time to talk to a family member regarding the family's feelings about the patient's dyspnoea. Are they also afraid and do they panic? Do they understand his illness? Do they know the simple methods of reassuring and relaxing the patient? Can they cope with the breathlessness?

On examining the patient, one should look for cachexia, signs of superior vena cava syndrome, enlarged glands, hepatomegaly, ascites or fractured ribs.

Investigations may include chest radiographs or an ECG, blood tests for haemoglobin, potassium or glucose, and a sputum test for tuberculosis.

General principles

General principles for treating dyspnoea are the same as for any other aspect of intervention in palliative care:

- to determine and treat the underlying cause of dyspnoea wherever possible and reasonable for the patient (e.g. to drain a new pleural effusion)
- to relieve dyspnoea without adding new problems (e.g. side-effects, social or financial burden)
- to consider whether a specific treatment will be worthwhile for the patient and his family (bearing in mind the prognosis, adverse effects, social and financial cost, need for travel from home)
- to discuss all reasonable treatment options (including non-intervention) with the patient and family, allowing them to make the final decision (if possible).

Treatment

The subjective element of dyspnoea can be eased by explanation, with reassurance that the patient will not suffocate. It can also be eased by increased air movement across the face and chest (open windows, fan) or by relaxation techniques. Some patients may be more comfortable in a soft chair and prefer sleeping in this position. An occupational therapist could advise on increasing the patient's mobility with appropriate adjustments, e.g. to the toilet seat, or handles on stairs.

Reversible causes such as congestive cardiac failure or infection should be treated. Stridor can be caused by malignant obstruction of the airway, vocal cord paralysis due to mediastinal tumour, or laryngeal oedema due to superior vena cava obstruction. This requires administering corticosteroids to reduce peritumour oedema, initially 16 - 24 mg intravenously, then 16 - 8 mg by mouth daily.

Anxiety can be a major contributing factor in a dyspnoeic patient. Counselling and reassurance are important, but panic may be so severe that anxiolytic drugs may be required, e.g. lorazepam 0.5 - 1 mg by mouth/sublingually or midazolam 2 - 10 mg by mouth/per rectum/intravenously. Repeated episodes of panic may respond to relaxation or cognitive therapy.

Dyspnoea caused by multiple lung metastases or lymphangitis carcinomatosa may respond to high doses of dexamethasone (16 mg daily, reducing to the lowest dose that will control symptoms). Palliative radiotherapy is worth considering in mediastinal lymphadenopathy. Palliative chemotherapy may also be helpful, especially in small cell carcinoma of the lung, where there can be a 90% response rate. Hormone therapy may also be helpful in breast carcinoma.

Dyspnoea can cause secondary problems such as anxiety, dryness of the mouth and loss of appetite. The family members should be advised on how to handle breathlessness at home, and that they should phone for advice and not panic.

Oxygen is a nonspecific treatment for breathlessness, except in hypoxia or pulmonary hypertension. Usually explanation, nonspecific drugs, e.g. anxiolytics, or the use of a fan will be sufficient.

With persistent dyspnoea where treatments may be unsuccessful, morphine can be given. Morphine can reduce the sensation of dyspnoea. Doses of 5 - 15 mg 4-hourly can be used orally or 15 - 30 mg by subcutaneous infusion. In some patients no treatment will be sufficiently effective — they remain severely dyspnoeic at rest, causing fear and restlessness. It may then be appropriate to consider sedation so that the patient is less aware of his surroundings. This should be done with the permission of the patient and the family. Midazolam is the sedative of choice and can be given intramuscularly or subcutaneously.

FURTHER READING

Davidson S, Milroy R. *Respiratory Update* 2000: 25-31.

Doyle D, Hanks GWC, McDonald N. *Oxford Textbook of Palliative Medicine*. 1999: 586-602.

Kaye P. *Tutorials in Palliative Medicine* 1997; **11:** 237.

Rudd RM. *Inoperable Lung Cancer*.

Ripamonti C, Bruera E. Dyspnoea: pathophysiology and assessment. *J Pain Symptom Manage* 1997; **13:** 220-232.

Simmonds P. Managing patients with lung cancer. *BMJ* 1999; **319:** 527-528.

The management of dyspnoea in advanced cancer. *Hosp Med* 1998; **59:** 348-349.

Twycross R. *Symptom Management in Advanced Cancer*. 1997: 148-155.

TERMINAL DEHYDRATION — ARE WE OVERTREATING?

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Hydration of patients in the last stages of their illness is a difficult and emotive decision where good palliative care, including oral care, may be the most effective intervention. In this article artificial hydration in end-of-life care is discussed.

Terminally ill patients, during their last few days of life, are often too frail to take oral fluids and nutrition. This may be caused entirely by the natural progression of the disease, although there may be many confounding or contributing variables, e.g.:

- sedative drugs, deemed necessary for symptom control, resulting in a decreased level of consciousness and consequently a diminished fluid intake
- antisecretory, anticholinergic and opioid drugs, resulting in a dry mouth, often incorrectly attributed solely to dehydration
- oral infections
- mouth breathing or non-humidified oxygen, resulting in a dry mouth.

At times a patient's disinclination to take fluids or nutrition may be a way of letting go or a desire to regain control of his/her own destiny.

The controversy surrounding terminal dehydration has arisen because some feel that dehydration in the terminally ill results in unacceptable symptomatology. The term is emotionally charged and may precipitate the practice of hydrating all dying patients by invasive techniques, without any scientific evidence to support this approach.

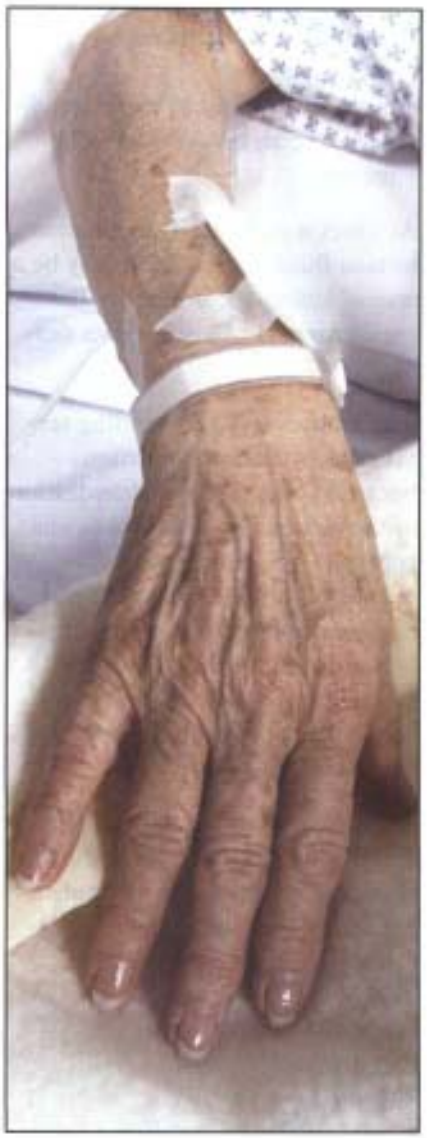
The proponents of artificial rehydration believe that dehydration results in a wide range of unpleasant symptoms, including:

- dry mouth
- thirst
- apathy
- delirium
- dysuria
- headache
- nausea.

Conversely, others have argued that dehydration can be beneficial to the patient, e.g. it leads to

- a decrease in secretions and therefore less suctioning
- a decrease in oedema around tumours
- renal failure with increasing urea, which is sedative and analgesic
- a decreased urine output, resulting in less incontinence.

Some have argued that rehydration may prolong the dying process, or that a drip is invasive and artificial, or may send false messages to the family that curative treatment is still in progress.



Much of the debate regarding these opposing views stems from the fact that there is no conclusive evidence in the literature that dehydration in the terminally ill patient is associated with intolerable symptoms, or symptoms that are not amenable to normal palliative care protocols. There are several reasons for this uncertainty:

- As much of the original work was done on healthy volunteers, these findings cannot be extrapolated to the terminally ill who, for various reasons, have metabolic and paraneoplastic endocrine dysfunction.
- Symptoms experienced are not always linked to dehydration but rather to the dying process.
- Very few, if any, of these symptoms have been categorically proven to be associated with pathophysiological changes of dehydration.

Dunphy *et al.*[1] refer to the biochemical effects of terminal dehydration and ask the question, 'If all the symptoms mentioned are indicative of dehydration, how come most dying patients, who are obviously dehydrated, do not show these symptoms?'.

They also noted, surprisingly, that 50% of patients dying within 48 hours, had normal blood biochemistry, and that the remainder had only moderately abnormal biochemistry (urea, electrolytes, creatinine, serum osmolality). These findings suggest a greater degree of biochemical normality than might have been predicted.

Ellershaw *et al.*[2] found no association between biochemical markers of dehydration and complaints of thirst or dry mouth. Other workers have come to similar conclusions, which prompted Billings[3] to postulate that a third form of salt and water deficiency may occur. This so-called terminal dehydration may possibly be a pathophysiological response to the process of dying and may be less problematic in terms of symptomatology than other forms of dehydration.

In light of the uncertainty and ongoing controversy we must be clear in what we are trying to achieve for the patient (benefit v. burden), i.e. will the instigation of artificial hydration restore some form of meaningful, independent life or will the intervention only prolong a non-meaningful biological existence and possibly prolong the dying process?

There is no clinical, moral or ethical obligation for the physician and family members to adhere to an escalating regimen of invasive techniques with diminishing returns. Consequently, many palliative care physicians find that it is seldom necessary to provide fluid artificially while maintaining holistic, palliative care. Occasionally, circumstances may dictate otherwise.

The purpose of treatment in the terminally ill is to provide maximum comfort, and it is possible that dehydration may be 'normal' at the end of life — evidence supporting this concept is accumulating slowly.

Decisions regarding hydration in the terminally ill can only be arrived at by practical judgement at the bedside of a unique patient with a unique set of circumstances. It seems reasonable to suggest that rehydrating patients failing to take fluids in the terminal phase of their illness, in the absence of any other identifiable and potentially remedial cause of dehydration, is unlikely to confer benefit. However, until more definitive research is at hand, we must be prepared to admit our uncertainty.

Discussion with the patient and family promotes the understanding that the decision not to institute artificial hydration does not signify the withdrawal of medical care. Rather, the emphasis is more directed at palliative and holistic care, more effectively addressing the symptoms and concerns that inevitably accompany this sad time at the end of a loved one's life.

References

1. Dunphy G, Finlay I, Rathbone G, Gilbert J, Hicks F. Correspondence, Hospice of St Francis, 27 Shrublands Road, Berkhamsted, Herts HP43HX, UK.
2. Ellershaw JE, Sutcliffe JM, Saunders CM. Dehydration in the dying patient. *J Pain Symptom Manage* **10**(3): 192-197.
3. Billings JA. Comfort measures for the terminally ill: is dehydration painful? *J Am Geriatr Soc* 1985; **33**: 808-810.