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The Palliative Care Handbook

Guidelines for clinical management and symptom control, featuring extensive support for advanced dementia

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Gastrointestinal system

Nausea/vomiting

These are common symptoms in palliative care and are often difficult to control.

- it is important to separate nausea from vomiting
- consider how each affects the individual patient
  - a vomit a day with no nausea may be more acceptable than continuous low-level nausea
  - for some patients, nausea is more distressing than pain
- nausea and/or vomiting often has more than one cause
- choose a management strategy to fit the cause(s)
- antiemetics work at differing sites and receptors
- antiemetics that affect multiple receptors in multiple areas, such as levomepromazine (methotrimeprazine), may be useful choices regardless of cause
- a combination of antiemetics is useful, particularly where there are multiple causes

Causes

There are two distinct areas in the central nervous system (CNS), which are predominantly involved with nausea and vomiting:

- chemoreceptor trigger zone (CTZ) close to the area postrema
  - part of the central nervous system, the CTZ is thought to lie outside the blood/brain barrier and so can be affected by causes and treatment which are unable to penetrate the CNS
- the vomiting centre in the medulla oblongata
  - can be directly stimulated or inhibited by certain agents

The CTZ sends impulses to the vomiting centre, which then initiates nausea and/or vomiting. Higher centres involved with fear and anxiety also communicate with the vomiting centre, as do the peripheral vagal and sympathetic afferents and the vestibular nerve.

The causes can be summarised as:

- higher centre stimulation - fear/anxiety
- direct vomiting centre stimulation - radiotherapy to the head, raised intracranial pressure
- vagal and sympathetic afferent stimulation - cough, bronchial secretions, hepatomegaly, gastric stasis, constipation, intestinal obstruction
- chemoreceptor trigger zone stimulation - uraemia, hypercalcaemia, drugs e.g. opioids, cytotoxics
- vestibular nerve stimulation - motion

Management

- higher centre stimulation (emotion - fear/anxiety)
  - counselling/explanation/listening
  - a benzodiazepine

- direct vomiting centre stimulation (radiotherapy to the head, raised intracranial pressure)
  - cyclizine
  - dexamethasone
- vagal and sympathetic afferent stimulation (cough, bronchial secretions, hepatomegaly, gastric stasis, constipation, intestinal obstruction)
  - cough - see 'Cough' p. 45
  - bronchial secretions - see 'Excessive (retained) secretions' p. 47
  - constipation - see 'Constipation' p. 35
  - hepatomegaly
    - dexamethasone
    - cyclizine
  - gastric stasis
    - domperidone (minimal extrapyramidal effects)
    - metoclopramide
    - erythromycin - a strong prokinetic
  - intestinal obstruction
    - cyclizine
    - levomepromazine (methotrimeprazine)
    - avoid prokinetics e.g. metoclopramide in complete obstruction although use in partial obstruction may help - see 'Intestinal obstruction' p. 38
- chemoreceptor trigger zone stimulation (uraemia, hypercalcaemia, drugs e.g. morphine)
  - haloperidol
  - levomepromazine (methotrimeprazine)
- vestibular nerve stimulation (motion)
  - cyclizine
  - hyoscine patch (scopolamine)
- other drugs which may be useful where others have failed
  - atypical antipsychotics e.g. olanzapine
  - ondansetron, palonosetron* (may cause constipation) - experience in palliative care is limited
  - aprepitant (a neurokinin 1 (NK1) antagonist from the class of drugs known as substance P antagonists) - used with steroids and ondansetron for delayed emesis following highly emetogenic chemotherapy. Its place in palliative care has not been established.
- other therapies with little evidence include acupuncture, ginger, cannabis

*** Drugs that are either not available or not funded in New Zealand**

Bowel management

- alteration in bowel function is common in terminally ill people
- constipation is more common than diarrhoea
- efficient bowel management may alleviate distress
- carefully assess bowel function on a daily basis
- regimens should be discussed, carried out and reported on daily

Constipation

- diagnose through an accurate history followed by examination
- it is the difficult or painful and infrequent passage of hard stools
- comparison with an individual's normal bowel habit and usual use of laxatives may highlight changes related to disease or treatment
- a record of bowel habits will help in the management
- examination of the abdomen and the rectum may exclude faecal impaction or rectal pathology

Causes

- metabolic disturbances e.g. hypercalcaemia
- dehydration from vomiting, polyuria, sweating, tachypnoea
- drugs
  - cytotoxics e.g. vinca alkaloids (via neuropathies)
  - opioids via opioid receptors in the GI tract and perhaps in the CNS - > 95% of people taking morphine will become constipated although other opioids may be less constipating e.g. fentanyl, methadone
  - anti-cholinergics e.g. tricyclic antidepressants
  - aluminium salts in antacids
  - iron
  - antispasmodics e.g. hyoscine butylbromide
  - anti-Parkinsonian drugs e.g. levodopa
  - antipsychotics/anxiolytics
  - ondansetron, palonosetron*
- immobility e.g. weakness
- low fibre diet e.g. milky/invalid foods or reduced intake
- inability to obey the call to stool
- concurrent medical problems e.g. haemorrhoids, anal fissure, diabetes, hypothyroidism
- intestinal obstruction from tumour, faeces or adhesions (abdominal X-ray may help with diagnosis)
- gastrointestinal tract nerve compression or damage or autonomic neuropathy

Symptoms

- anorexia
- vomiting/nausea

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- abdominal discomfort or cramping
- spurious diarrhoea or overflow
- confusion
- anxiety
- bowel obstruction
- pain

Management

- prevention is the key
- if a cause (or causes) are identified remove it (or them) if possible
- exercise reduces the risk of constipation so encourage it where possible
- encourage increased fibre e.g. bran, kiwi crush or soluble fibre formulations (require activity and fluids to avoid impaction)
- laxatives
  - when opioids are prescribed anticipate constipation and prescribe an oral softener with a stimulant laxative e.g. docusate with senna or bisacodyl which may prevent the need for rectal intervention later (NB if combinations cause cramps reduce the dose or use an osmotic laxative such as macrogol 3350 with electrolytes (Movicol™, Lax-Sachets™)
  - low dose opioid antagonists such as naloxone (marketed in combination with oxycodone and methylnaltrexone*) are effective in opioid-induced constipation without affecting analgesia
  - if constipation is already present give a bisacodyl 10 mg suppository and a glycerin suppository or a sodium lauryl sulphoacetate enema (Micolette™)
  - avoid stimulant laxatives in people with signs of GI obstruction
  - if the patient has a partial obstruction use an osmotic/softener laxative e.g. docusate, and avoid stimulant laxatives
  - if the patient has a spinal cord compression where evacuation is difficult keep the bowel motion firm (avoid softeners) and use a stimulant
  - if a patient taking laxatives has no bowel motion for two days and this is not their normal bowel habit give extra laxatives and, if appropriate, kiwi fruit or prune juice
  - if a patient taking laxatives has no bowel motion for three days and this is not their normal bowel habit a rectal examination should be carried out
    - > if soft faeces are found give 2 bisacodyl 10 mg suppositories or 1 to 2 Micolette™ enemas
    - > if hard faeces are found give 1 or 2 glycerine suppositories or 2 bisacodyl 10 mg suppositories or consider macrogol 3350 with electrolytes (Movicol™, Lax-Sachets™)
    - > if rectum is empty (or no result from first action) repeat abdominal palpation and consider an abdominal X-ray
  - suppositories must make contact with the bowel wall to work
  - methylnaltrexone*

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- faeces consist of approximately 50% water, 25% bacteria and 25% food residue so even if the patient is not eating there will be faeces in the bowel

Diarrhoea

- a relatively uncommon problem in palliative care
- rotation from morphine to fentanyl may result in a sudden reduction in opioid constipating effects resulting in diarrhoea

Causes

- faecal impaction (overflow) - identify with a clinical examination (including rectal)
- colo-rectal carcinoma (also causes discharge and tenesmus)
- loss of sphincter tone and sensation e.g. from spinal cord compression
- incomplete gastrointestinal obstruction - frequent or recurrent diarrhoea suggests partial obstruction so try lower bowel evacuation
- malabsorption or food intolerance e.g. from lack of pancreatic enzymes
- concurrent disease e.g. diabetes mellitus, hyperthyroidism, inflammatory bowel disease
- radiotherapy to the torso
- cytotoxics (e.g. capecitabine)
- antibiotics - *C.difficile*
- bowel surgery or inflammation
- anxiety
- opioid rotation to a less constipating opioid e.g. from morphine to fentanyl

Management - dependent on cause

- assess bowel habit and faecal consistency
- consider likelihood of infection
- maintain skin integrity around anal area - use barrier creams to prevent excoriation e.g. zinc oxide
- think about overflow from impaction or partial obstruction
- use abdominal examination or X-ray to rule out obstruction
- restrict oral intake (except fluids) to rest the bowel
- withhold laxatives where appropriate
- administer antidiarrhoeal medications such as loperamide, opioids
- if impacted use manual removal followed by laxatives
- in partial obstruction, diarrhoea may be very unpleasant
- in spinal cord compression, a constipating drug may help e.g. codeine, loperamide (although patients already receiving morphine may not benefit) followed by regular suppositories and/or manual removal
- in colo-rectal carcinoma a palliative colostomy or radiotherapy should be considered
- in malabsorption states, the addition of pancreatic enzymes at meal times will help the situation e.g. pancreatin or, in bile salt malabsorption, cholestyramine
- secretory diarrhoea (associated with carcinoid syndrome or AIDS) may respond to octreotide

- ondansetron or palonosetron* may be worth considering especially if nausea/ vomiting are also present

Intestinal obstruction

Intestinal obstruction is a difficult area of palliative care. There is considerable inter-individual and intra-individual variation in symptoms and optimal management.

Causes

- can be mechanical or paralytic
- blockage of intestine by intraluminal or extraluminal tumour, inflammation or metastasis
- blockage can occur at multiple sites in patients with peritoneal involvement
- may be aggravated by drugs e.g. anticholinergics, opioids
- radiation fibrosis
- autonomic nerve disruption by tumour

Management

The management of intestinal obstruction should be tailored to the individual at the time with different strategies being employed when needed.

- explain the predicament
- give dietary advice e.g. foods with minimal residue
- minimise colic by stopping osmotic/stimulant laxatives (continue softeners) and give subcutaneous hyoscine butylbromide (20 mg bolus followed by 60 to 80 mg subcut infusion over 24 hours)
- give analgesia (commonly subcutaneous opioids)
- reduce vomiting by giving appropriate antiemetics e.g. cyclizine with or without haloperidol - metoclopramide should only be used if there is clear evidence that there is only a partial obstruction
- consider alternative measures e.g. surgery, radiotherapy
- steroids e.g. dexamethasone should be given a trial
- iv fluids and nasogastric tubes should be avoided but may be preferred where drug treatment has not worked. Subcut fluids may have a role in some
- somatostatin analogues (octreotide) may be used subcutaneously in specialist practice to reduce secretions and minimise symptoms
- if subacute intestinal obstruction, the aim may be to clear the obstruction using steroids e.g. dexamethasone to reduce the inflammation around the obstruction and hyoscine butylbromide to minimise secretions and colic then, at an appropriate time, to push gut contents through with a prokinetic agent e.g. metoclopramide
- the timings of each change in therapy will depend on the individual patient and their condition
- review the situation regularly

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Mouth care

Poor oral hygiene is probably the most significant factor in the development of oral disease near the end-of-life.

- good mouth care is essential to the wellbeing of patients debilitated by advanced disease
- mouth problems are common - occurring in up to 90% of patients
- risk factors for oral problems include
  - debility, dry mouth (drugs, mouth breathing, radiotherapy), chemotherapy, dehydration, cachexia, weight loss, ill-fitting dentures

Assessment/causes

- appropriate and effective oral assessment should be carried out on each patient daily using a pen torch and spatula
- remember functions of saliva – cleansing and lubrication, buffering, remineralisation, antimicrobial, digestion, maintenance of mucosal integrity
- key questions for effective mouth care are
- is the mouth dirty, dry, painful or infected?
- also assess mental, nutritional and physical state, concurrent medications, tongue, teeth/dentures, mucous membranes, type of saliva, and lips
  - mental state will determine the patient's ability and willingness to participate in their care
  - nutritional state will give an indication of the patient's ability to chew and swallow as well as their general wellbeing - a well balanced diet and adequate fluid intake are important in mouth care
  - physical state may also contribute to mouthcare issues e.g. low haemoglobin increases susceptibility to infections and may be accompanied by lethargy, weakness and dyspnoea, all of which contribute to mouth care problems
  - patients in pain may require extra help with their mouth care
  - concurrent medications can affect the state of the mouth e.g. opioids/ antidepressants may cause dry mouth, steroids/antibiotics may encourage oral candidiasis
  - other causes of poor mouth care include debility, reduced oral intake, inability to brush teeth, dehydration, saliva-reducing drugs, chemotherapy or radiotherapy, oxygen therapy and mouth breathing

Management - prevention is a priority

- regular tooth and denture brushing, twice daily at least
- regular use of anti-bacterial and anti-fungal mouthwash
- consider using oral probiotic lozenges
- check fit of dentures
- regular dental checks if possible
- regular mouthcare; frequency dictated by assessment
- check for infection
- check for bone or nerve damage
- check mucosa

- reduce caffeine and alcohol, diet drinks (have a low pH)
- hypersalivation may be helped with atropine eye drops 1%, 1 to 2 drops in the mouth 3 to 4 times a day, ipratropium bromide nasal spray, 1 to 2 puffs in the mouth 3 to 4 times a day, radiotherapy or botulinum toxin to salivary glands

Dirty mouths

- chlorhexidine mouthwash is a useful cleansing agent
- sodium bicarbonate mouthwash is used by many, especially in oncology
- there is little point in cleaning the mouth if dentures are worn unless those dentures are also meticulously cleaned (including soaking overnight in ¼ strength Milton™)

Dry mouths

- salivary stimulants e.g. lime juice, fresh melon or pineapple are useful in dry mouths as is a saliva substitute (often useful to freeze fruit first); also, lollies or mints (sorbitol, xylitol-containing gum)
- pilocarpine solution (1 mg/mL, 5 to 10 mL or 1 to 2 drops 4% eye drops rinsed three times a day) may be useful for dry mouths

Infected mouths

- nystatin suspension is useful in the treatment of oral candidiasis but may take up to two weeks to clear an infection and many candidal infections are now resistant to it
- miconazole oral gel is also useful in the treatment of oral candidiasis, usually after nystatin suspension has failed
- systemic anti-fungals e.g. fluconazole (50 mg a day for 7 to 14 days or 100-150 mg stat) are sometimes needed for intractable oral candidal infections
- aciclovir may be useful for herpetic infections

Painful mouths

- may need systemic opioids
- coating agents
  - sucralfate suspension (use crushed tablets)
  - topical anaesthesia e.g. lignocaine viscous (watch for choking hazards)
- benzydamine is an analgesic mouthwash for painful mouths
- topical corticosteroids e.g. triamcinolone in orabase may be useful for aphthous ulcers (not used if oral candidiasis present)
- Bonjela™ (choline salicyclate) may soothe sore gums

Taste alteration

- reduction in taste sensitivity i.e. hypogeusia
- absence of taste sensation i.e. ageusia
- distortion of taste i.e. dysgeusia

Causes

- local disease of mouth and tongue
- systemic diseases
- partial glossectomy
- nerve damage
- zinc deficiency
- alteration to cell renewal via malnutrition, metabolic endocrine factors, viral infections, hyposalivation
- dental pathology/hygiene
- diabetes
- gastric reflux
- drugs
  - cyclizine
  - anticholinergics (leads to dry mouths)
  - chemotherapy
  - lithium
  - ACE inhibitors
  - citalopram (uncommon)

Management

- remove or treat causes e.g. give, pilocarpine for dry mouth, stop likely drugs
- zinc (but only if zinc is deficient)
- use sialogogues such as chewing sugar-free gum or sour-tasting drops
- may be unresponsive to interventions

Swallowing difficulties

Swallowing oral formulations of drugs often becomes difficult for palliative care patients.

- drugs which are available in the capsule form may be more easily swallowed using the 'leaning forward' technique
  - this involves bending the head down rather than tipping it back when swallowing capsules
  - when leaning the head down and forward the capsule floats to the back of the throat ready to be swallowed
  - the standard way of swallowing solid oral formulations - head is tipped back- results in the capsule floating to the front of the mouth making swallowing the capsule difficult
  - this 'leaning forward' technique will not work for tablets as they do not float so use the standard tilting the head back approach
- if swallowing remains an issue consider crushing tablets or opening capsules if appropriate (do not crush slow or modified release or enteric coated solid dose forms), oral liquids or other routes e.g. subcut, intranasal, sublingual, rectal

Malignant ascites

This is a common symptom in patients with breast, colon, endometrial, ovarian, pancreatic or gastric cancers.

Assessment

- consecutive measurements of abdominal girth
- respiratory function - shortness of breath may occur
- early fullness e.g. squashed stomach
- portable ultrasound examination

Causes

- peritoneal fluid build-up in the abdomen due to a failure of the lymph system to adequately drain
- tumour in the peritoneal cavity
- low serum albumin
- excess fluid production
- venous compression or vena cava/hepatic vein thrombosis

Management

Symptoms usually appear at > 1L of fluid in the abdomen.

- if the prognosis is short and the symptoms are not troublesome then no action may be needed
- explanation of the problem and likely outcomes may be enough to allay fears or anxieties
- if the symptoms warrant further intervention, the bowel is not distended or the ascites is not loculated, consider paracentesis
- beware of loculation - use of ultrasound is now common
- suction may be used if the fluid is viscous, e.g. of ovarian origin
- drain no more than 2L in the first hour then drain slowly for 12 to 24 hours (to a maximum of 5L in 24 hours)
- place an ostomy bag on the site once the paracentesis needle is removed to collect any residual leaking fluid
- check biochemistry frequently
- some centres advise daily measurement of girth
- a surgical opinion, for the insertion of a peritoneo-venous shunt, may help in recurrent ascites if the patient's life expectancy is greater than 3 months

repeated drainage may be followed by rapid reaccumulation

- drugs
  - if the patient is fit for diuretics, give spironolactone 100 mg (or more) with or without frusemide 40 mg once daily although benefit is often extremely limited
  - for gastric stasis give a prokinetic e.g. metoclopramide
  - if there is evidence of liver capsule stretch pain use a steroid e.g. dexamethasone - see 'Co-analgesics protocol' p. 30