An Indian Primer of Palliative Care

For medical students and doctors

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Table of Contents

4. SYMPTOM ASSESSMENT AND MANAGEMENT

"Nothing so concentrates experience and clarifies the central conditions of living, as a serious illness" - Arthur Kleinman

Sukumaran, a 60-year-old man diagnosed with chronic renal failure, complains of breathlessness, nausea, vomiting and sleeplessness. He has not passed motion for the past 9 days. He had been a heavy smoker. He lives with his wife and two children. He is a carpenter and is now unable to work due to illness.

What is the impact of illness on Mr. Sukumar's life?
How will you approach these issues in a holistic manner?

Learning Objectives of this Chapter

By the end of the chapter, the student should be able to:

1. Enumerate the common symptoms in patients with chronic illness and their implications on quality of life.
2. Demonstrate the key features of holistic assessment of the patient. Describe the management plan of the common symptoms.

Relief of suffering is the cardinal goal of medicine…
with cure whenever possible.

Principles of symptom Assessment and Management

Symptoms are inherently subjective and hence self-report must be the primary source of information. Detailed history-taking is important.

The assessment of symptoms is a vital aspect of clinical care to provide comfort and enhanced quality of life. Ideally the management should be guided by a comprehensive assessment of symptoms both subjectively and objectively.

What is holistic approach?

The term "holistic" means considering the patient as a whole person in the physical, psychological, social and spiritual domains.

The mnemonic "EEMMA[26]" might help in assessment and management of symptoms.

EEMMA Approach to Symptom Assessment

Evaluation	Evaluate details of the symptoms. Understand the person with symptoms.
Explanation	Understand all the contributing factors.
	Explain clinical symptoms according to what the patient wants to know.
Management	Manage symptoms based on etiology–including symptom control, psychosocial support and relevant non-pharmacological interventions.
Monitoring	Review regularly for relief of symptoms, side effects and the need to optimize the dose.
Attention to details	Fine tune the control and individualize the treatment.

The key points in managing symptoms are as follows:

1. Base the care components on the patient's idea of quality of life.
2. Follow the five "A"s of chronic care – "Assess, Advice, Agree, Assist, Arrange."
3. Correct the correctable contributory factors.
4. Involve the multidisciplinary team to address the care needs in all dimensions – physiotherapist, psychologist, nutritionist, medical social worker, speech and swallow therapist, occupational therapist, yoga therapist etc.
5. Use non-drug as well as drug treatment.
6. Prescribe drugs prophylactically for persistent symptoms. For any continuous pain, analgesia is better achieved with round the clock administration of analgesics rather than giving them p.r.n basis.
7. Keep the treatment regimen as simple and clear as possible for the patient.
8. A formatted prescription with names of drugs, reason for use, dose and timings is more advisable than a verbal advice.

26 Twycross, R. Introduction to Palliative Care.

9. Seek a colleague's advice in intractable situations.
10. Avoid false re-assurances yet maintain realistic hope "Even if a cure is not possible, your pain can be treated, and we shall do our best to get you back to office."
11. Prioritise concerns from patient's point of view.
12. Review and fine-tune care inputs.

Breathlessness

Breathlessness is one of the distressing symptoms and is a conscious and subjective phenomenon. It causes psycho-social distress not only for the patient but also for the family. It is a very difficult symptom for the professionals to manage in situations where the underlying etiology is progressive.

Breathlessness is a subjective experience of breathing discomfort that consists of qualitatively distinct sensations that vary in intensity.

Pathophysiology

Normal breathing is maintained by regular rhythmic activity of the respiratory centre in the brain-stem. This is stimulated by the mechanical receptors in the airways, intercostal muscles and the diaphragm, and by hypoxia and hypercapnoea. When there is a mismatch between the perceived demand and the ventilatory effort, it is experienced as breathlessness by the patient.

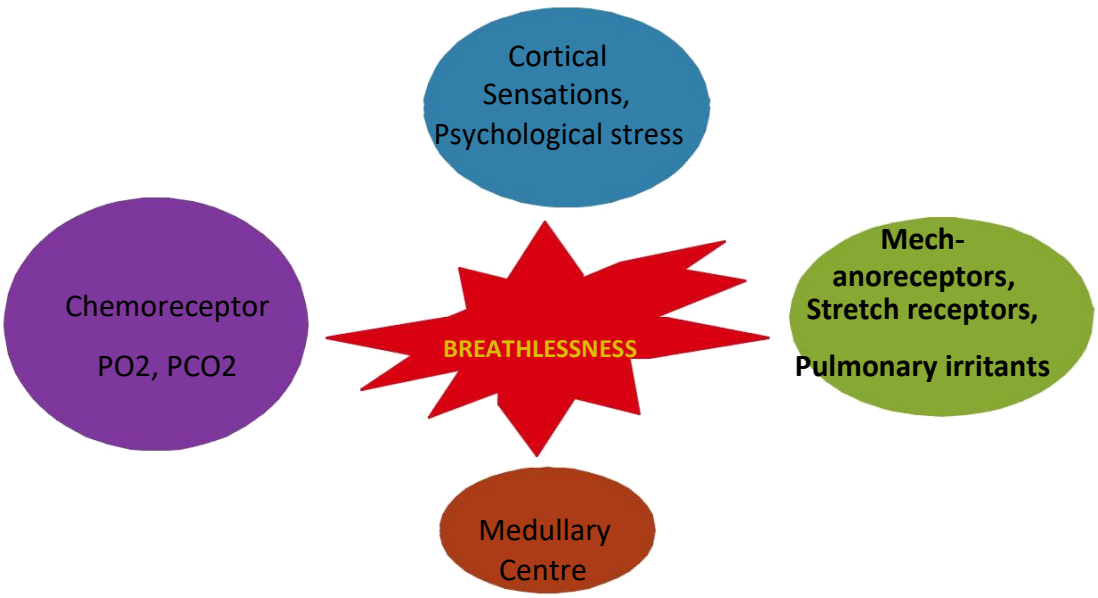

Fig 4.1 – Mechanisms of Breathlessness

Breathlessness is a common trigger for panic and a vicious cycle is set up.

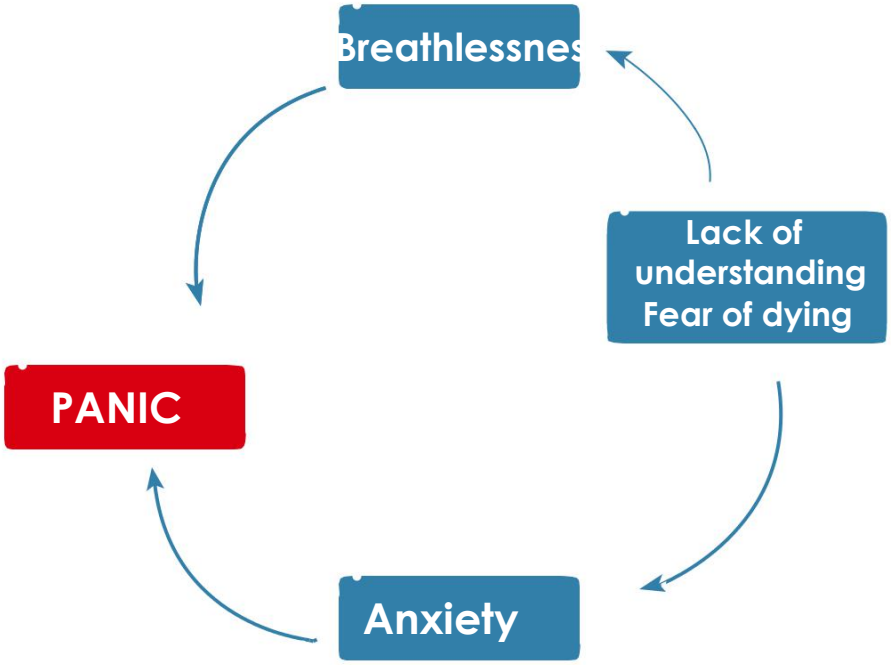

Fig 4.2 – Cycle of breathlessness at the end of life

Table 4.1 - Modified Medical Research Council (MRC) chronic dyspnoea scale

Category	Dyspnoea	Activity level that causes dyspnoea
0	Nil	
1	Mild	Rapid walk on level or normal walk up slight Hill
2	Moderate	Walks slower than people of the same age.
3	Moderately severe	Has to stop because of breathlessness when walking at own pace on level ground.
4	Severe	Stops for breath after walking about 100 yards OR after a few minutes on level ground..
5	Very severe	Breathless when dressing or undressing. Cannot leave the house.

Table 4.2 - History in patient with chronic breathlessness - mnemonic “OPQRSTUV”

Onset	When did breathlessness begin? What is the duration of an episode? How frequently does it occur?
Palliative/provocative factors	What makes it better? What makes it worse?
Quality	Can the person describe the feeling when he has breathlessness?
Related symptoms	Any other symptoms associated? (e.g. cough, anxiety, isolation).
Severity	What is the severity on a scale 0 to 10, 0 representing no breathlessness and 10 worst breathlessness imaginable.
Treatment/ Temporal Factors	What medications were used and what effect did they have?
Understanding	How does the symptom affect the person and the family?
Values	What is the comfort level which the person expects from treatment?

Investigations are not very useful in assessing chronic breathlessness due to advanced diseases, except to exclude treatable problems such as pleural effusion. X Ray, blood gases etc. can be normal in a patient with moderate to severe

Table 4.3 - Situations where the patient can be severely breathless with normal Chest x-ray

▪ Bronchial asthma ▪ Superior vena cava obstruction ▪ Pulmonary embolism ▪ Lymphangitis carcinomatosis ▪ Respiratory muscle weakness	▪ Ascites ▪ Anemia ▪ Metabolic acidosis ▪ Panic attacks ▪ Early Acute Respiratory Distress Syndrome (ARDS)

Management of Breathlessness

The approach would be to look for and correct the correctable contributors, and utilize non-pharmacological as well as pharmacological measures for control.

Table 4.4 - Controllable causes of breathlessness

1. Respiratory infection	6. Pleural, pericardial effusion
2. COPD / Bronchial asthma	7. Ascites
3. Hypoxia	8. Anaemia
4. Superior vena-caval obstruction	9. Cardiac failure
5. Lymphangitis carcinomatosis	10. Pulmonary embolism

Non- pharmacological measures for controlling breathlessness

- Calm presence of the healthcare team conveying empathy will relieve anxiety and make breathing easier. Anxiety causes the patient to attempt deep breaths, which increase the negative pressure in the lungs and may worsen any airway obstruction. On the other hand, it would be counter-productive to ask patients to “calm down”.
- Loosening the patient’s clothes.
- Using a table fan to maintain air circulation.
- Keeping room windows open to improve perception of space.
- Comfortable positioning of the patient
- Teaching modified breathing to improves efficiency of breathing: pursed lip breathing or diaphragmatic breathing with relaxed abdomen
- Music – if desired.

Supporting coping

- Addressing the patient’s fear which could be the central element. “One of us is going to stay here until you feel better” may work better than many medicines.
- Exploring anxiety and the meaning of breathlessness to the patient.
- Meaningful communication to cope with the current situation.
- Instructing carers on using medications to cope with future episodes of breathlessness and panic attacks at home.

Pharmacological management

a) Bronchodilators

Bronchodilators may have a role and are often helpful when wheezes are present OR the patient cannot move any air, and wheezing is absent.

b) Corticosteroids

They help in reducing the peri-tumor oedema or oedema of airways which often contribute to obstruction. The dose is variable between 8–32 mg orally, subcutaneously or intravenously once a day.

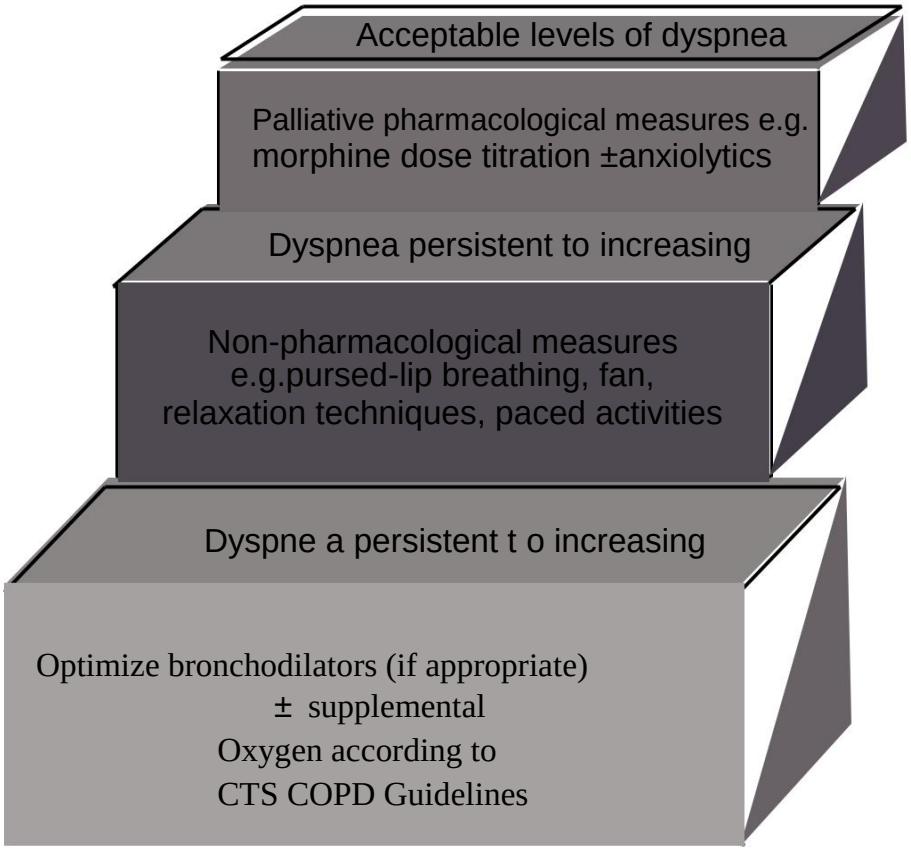

Fig 4.3 – Steps of managing dyspnoea in COPD

c) Opioids

Opioids have been the most widely studied agents in the treatment of intractable dyspnea in advanced stages of cancer and have been found to be safe and effective[29]. Morphine reduces inappropriate and excessive respiratory drive and substantially reduces ventilatory response to hypoxia and hypercarbia. By slowing respiratory rate, *breathing is made more efficient and the sensation of breathlessness is reduced.*

Short-term administration of morphine reduces breathlessness in patients with a variety of conditions, including advanced COPD, interstitial lung disease, cancer and chronic heart failure. In opioid-naïve patients, morphine is usually started at 2.5 - 5 mg Q6H and titrated according to breathlessness.

The opioid doses required for breathlessness are usually much less than that required for pain relief.

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29 A L Jennigs et al. A Systematic Review of the use of opioids in the management of dyspnea; Thorax 2002, 57; 939-944

If the patient is already on morphine for pain and then develops breathlessness, it may help to step the dose up by 50%.

d) Benzodiazepines

If breathlessness is associated with anxiety or panic, benzodiazepines have a role though they are not the first-line agent. Lorazepam 0.5 -1 mg sublingually (for longer term effect) or midazolam 1-2 mg SC or oral for the short term, can be used. Theoretically, the combination of opioid and benzodiazepine can worsen the chances of respiratory depression, though this is hardly relevant with the doses of either that we use.

e) A trial of oxygen

Though oxygen via nasal cannula may help, but should be discontinued if it does not help. Though a face-mask is more efficient in providing increased inspired oxygen, it may cause a sense of suffocation and worsen the situation. In advanced illnesses, breathlessness usually occurs not because of non-availability of oxygen, but due to inefficiency of body's mechanism to use oxygen. Patients with good oxygen saturation are found to experience breathlessness in advanced stages of illnesses. However, sometimes oxygen may help by correcting hypoxia as well as by reducing panic attacks. Hence we can give a trial of oxygen for 10-15 minutes. Prior explanation to the patient / family is necessary to avoid misunderstanding when oxygen therapy is discontinued. If there is no improvement in symptom during the trial, this fact has to be explained to the family and oxygen is discontinued. The decision to put the patient on ambulatory oxygen therapy should be after due considerations and NOT done lightly as this grounds the patient, increases the cost and could contribute to general panic within the family as focus may thereafter be on oxygen and the attendant paraphernalia.

So, how was Sukumaran managed at home by the home care team (HCT)?

> The HCT first talked to Sukumaran and his family to evaluate his symptoms and to understand the family's concerns. They positioned him in a comfortable posture and assessed the effectiveness of non-pharmacologic measures. He was started on bronchodilators, 5 mg oral morphine Q8H and oral dexamethasone 4 mg once daily after breakfast. Since his renal function was abnormal, morphine was started 8th hourly.

CONSTIPATION

Constipation can be said to be present when there is infrequent passage, small quantity, hard faeces or passage with difficulty.

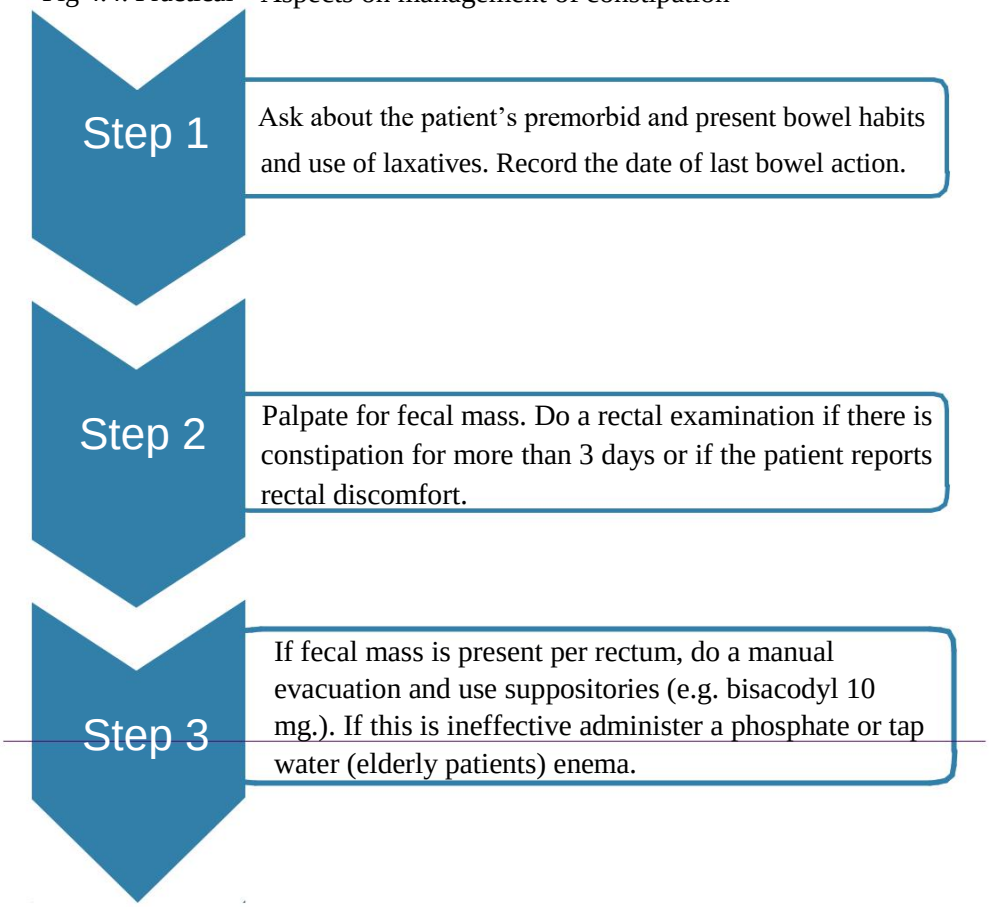
Table 4.5 Causes of Constipation

Medications	Opioids, tricyclic antidepressants, anticholinergics, 5-HT3 antagonists, antacids, diuretics, antihypertensives, chemotherapeutic agents.
Metabolic disturbances	Dehydration, hypothyroidism, hypercalcemia, hypokalemia.
Neurological	Cerebral and spinal cord lesions, parkinsonism, motor neuron disease.
Structural	Pelvic tumours, anal fissure, hemorrhoids, radiation fibrosis.
Diet	Poor food intake (particularly fibre and water).
Environmental	Lack of privacy.
Others	Old age, debility, inactivity, depression.

Constipation remains as an underestimated symptom which severely affects the sense of well-being of the patient. Constipation leads to inadequate symptom control through its complications such as loss of appetite, abdominal pain, distension and urinary retention.

Impacted faecal matter often leads to overflow diarrhoea which is manifested as frequent passage of foul smelling liquid faeces. This is often misdiagnosed as diarrhea and treated with antidiarrhoeal medications.

Fig 4.4. Practical Aspects on management of constipation



Management of constipation

Aims

The aims of management of constipation in palliative care patients are to:

- re-establish comfortable bowel habits to the satisfaction of the patient;
- relieve the pain and discomfort caused by constipation and improve the patient's sense of well being;
- restore a satisfactory level of independence in relation to bowel habits;
- prevent related gastrointestinal symptoms such as nausea, vomiting, abdominal distension and abdominal pain.

Non-pharmacological management:

- Access and ability to get to a toilet may be more important than a supply of laxatives.
- Timing and privacy – impatience may lead to straining. Straining compromises defecation and damages pelvic floor function
- Taking warm water at a pre-decided time every morning and massaging the left lower abdomen may assist in bowel movement.

- A squatting position facilitates efficient funneling of the pelvic floor, favoring defecation.

Classification of laxative

Table 4.6 Types of Laxatives

Drug Class	Examples
Bulk forming	Methyl cellulose, Ispagula husk
Lubricants	Liquid paraffin
Surface wetting	Docusate sodium
Osmotic	Lactulose, polyethylene glycol, milk of magnesia
Stimulants	Bisacodyl, senna, sodium picosulphate

* Remember to avoid using phosphate enemas in the elderly and inpatients with renal failure.

What was done for Sukumaran's constipation by the home care team?

He had not moved his bowel for the past 9 days and he was straining a lot which was adding to his breathlessness. He was on hypertensives, antacids and antidepressants all of which contributed to poor bowel motility. Rectal examination showed hard fecal matter. Phosphate enema was given followed by bowel evacuation and Sukumaran was very relieved.

Carers were given advice regarding diet modification and Sukumaran was started on bisacodyl tablet 10 mg daily at bed time. Since the toilet was away from his bedroom, the home care team also arranged for a chair commode and advised the family regarding responding early to his defecation urge and maintaining privacy during the time of bowel movement.

Diarrhoea

Diarrhoea is less common than constipation in patients requiring palliative care. It is the passage of more than three unformed stools within a 24 hour period.

Common causes of diarrhoea in palliative care setting:

a. Imbalance in laxative therapy
b. Drugs (antibiotics, NSAIDs)
c. Faecal impaction leading to spurious diarrhoea
d. Radiotherapy to abdomen
e. Bowel fistula
f. Endocrine tumours
g. Odd dietary habits

Table 4.6 Types of Laxatives

Pattern	Diagnosis
Loose stools twice or thrice a day without warning	Anal incontinence
Profuse watery stools	Colonic diarrhoea
Sudden onset of diarrhoea after a period of Constipation	Faecal impaction
Alternating diarrhoea and constipation	Poorly regulated laxative therapy Impending bowel obstruction
Pale fatty offensive stools (steatorrhoea)	Malabsorption (pancreatic or ileal disease)

Management of diarrhoea

With the exception of patients with AIDS, diarrhoea is much less common than constipation in patients with advanced disease. Less than 10% of those with cancer admitted to hospital or palliative care units have diarrhoea. Diarrhoea can be highly debilitating in a patient with advanced disease because of loss of fluid and electrolytes, anxiety about soiling, and the effort of repeatedly going to the lavatory.

Symptomatic relief is generally achieved with non-specific anti-diarrhoeal agents — loperamide (up to 16 mg daily). There are certain specific conditions, which should be treated with specific agents like:

- ranitidine for Zollinger-Ellison syndrome,
- metronidazole for pseudomembaraneous colitis,
- cholestyramine for cholestasis as well as radiation-induced diarrhoea.

Supportive measures include oral rehydration with home-made sugar and salt-containing fluids or commercially available ORS (oral rehydration solution). Parenteral re-hydration is rarely indicated.

NAUSEA AND VOMITING

Nausea and vomiting are common symptoms in patients with advanced cancer. It is important to know the various mechanisms involved in nausea and vomiting for targeted drug therapy rather than prescribing the same antiemetic for various types of vomiting.

Nausea: It is an unpleasant sensation associated with autonomic symptoms like sweating and alterations in heart rate, with an imminent need to vomit. Vomiting: It is the forceful and sustained contraction of abdominal muscles and diaphragm, resulting in expulsion of gastric contents.

1. Clarify whether the person is reporting nausea, vomiting, retching or regurgitation.
2. Identify the cause of nausea and vomiting.
3. Identify the pathway and receptor involved.
4. Document the intensity, frequency, volume and content of vomitus and associated distress.
5. Assess nausea and its impact on the daily activities in a holistic manner.
6. Evaluate whether the symptom is caused by drugs, radiotherapy, chemotherapy, raised intra-cranial pressure etc.

Non-pharmacological management of nausea and vomiting

- Control of malodour from colostomy, fungating tumour, decubitus ulcer etc.
- A calm, reassuring environment, away from the sight and smell of food.
- Avoid foods which precipitate nausea for that patient.
- A few mouthfuls given frequently are often more effective than infrequent large meals.

Pharmacological management:

Table 4.8 Management of nausea and vomiting based on etiology

Aetiology	Examples	Appropriate first line drug
Chemicals	Drugs - e.g. opioids, digoxin, antibiotics, cytotoxic drugs. Toxins - e.g. ischaemic bowel, infection. Metabolic - e.g. hypercalcemia.	Haloperidol, 1.5 mg bd or 5 mg SC over 24 hrs. 5-HT_3 receptor antagonists e.g. ondansetron 8 mg tds. Neurokinin-1 antagonists e.g. aprepitant (very expensive).
Delayed gastric emptying	Drugs, e.g. opioids, tricyclic antidepressants; ascites; hepatomegaly; autonomic dysfunction.	Metoclopramide, 10 mg qds; 40 mg subcutaneously over 24 h OR Domperidone, 10 mg qds.
Gastrointestinal	Gastro-intestinal obstruction - partial (caused by cancer)	Dexamethasone 8-24 mg/day along with metoclopramide 60-90 mg/day as SC or IV infusion to try to overcome obstruction.
	Gastro-intestinal obstruction – total	Hyoscine butyl bromide 60 mg SC over 24 hr to reduce gastrointestinal secretions. Altermatively, Octreotide SQ 150 to 300 mcg/day (more efficient; expensive).
	Radiation colitis	Ondansetron 4-8 mg bd
CNS causes	Raised intracranial pressure, e.g. from tumour or intracranial bleed; meningeal infiltration	Dexamethasone 16-32 mg (even up to 100 mg/day) SC/ oral
Psychological	Anxiety, anticipatory nausea to chemotherapy, pain	Benzodiazepines, e.g. oral lorazepam, 0.5 mg as required

Clinical points to consider:

- Nausea and vomiting in cancer is often multifactorial and combinations of anti-emetics which act at different receptors are often needed.
- If a second anti-emetic is added, choose one from a different class of anti-emetics.
- Always give anti-emetic regularly, not PRN.
- If vomiting is preventing drug absorption, use alternative route (SC or IV).
- Combination of prokinetics (e.g. metoclopramide) and anti-spasmodics (e.g. hyoscine butyl bromide) is not advised.
- Opioids can cause nausea and vomiting through a number of mechanisms. These include stimulation of chemoreceptor trigger zone, increased vestibular sensitivity, gastric stasis, impaired intestinal motility and constipation. If nausea and vomiting are not controlled by anti-emetics, consider switching over to another opioid.

How was Sukumaran's nausea and vomiting managed by the Home Care Team (HCT)?

Sukumaran being a patient with chronic kidney disease, uraemia is a very likely cause for his nausea. He also said he did not like the smell emanating from the kitchen. Constipation could be another cause for his vomiting.

The home care team advised his family to give him small frequent feeds rather than 3-4 meals a day. The wife was requested to keep the kitchen door closed while she cooked. (In fact she was keeping the door wide open to keep an eye on her husband.) He was also started on tab haloperidol 1.5 mg at bed time as the etiological factor was suspected to be uraemia stimulating the CTZ.[31]

Nutrition and Hydration

Requests for nutrition and hydration are common at the end of life. Understanding the pathophysiology, ethics and the appropriate treatment are paramount in assessing and managing these requests.

Anorexia

The absence or loss of appetite for food is common in patients with advanced cancer and other chronic illnesses.

It is important to look for secondary anorexia which may be reversible.
e.g. dyspepsia, altered taste, malodour, nausea, vomiting, constipation, sore mouth, pain, biochemical abnormalities, drugs, radiotherapy, chemotherapy, anxiety and depression

Cachexia

Cachexia is a multifactorial syndrome defined by an ongoing loss of skeletal muscle mass (with or without fat mass) that cannot be fully reversed by conventional nutritional supports and leads to functional impairment. Cachexia is characterized by negative protein and energy balance caused by variable combination of reduced food intake and abnormal metabolism.

Anorexia-cachexia syndrome is often accompanied by asthenia or fatigue. This is described by the patient as unusual tiredness, decreased capacity for work, decreased motivation, mood and energy, decreased concentration and mental agility.

Non-pharmacological management of anorexia

- Small but frequent meals
- Energy-dense food
- Limit fat intake
- Avoid extremes in smell
- Pleasant environment
- Presentation of food to the patient in a pleasing manner.

Pharmacological management of Anorexia

Progesterones (megestrol acetate and medroxyprogesterone acetate) are the first-line therapy for cancer anorexia. They are effective in relieving the symptoms of cancer anorexia and thus are widely prescribed. In a recent systematic review of randomized clinical trials, Maltoni and co-workers showed that high-dose progesterones (up to 800 mg/day of megestrol acetate and up to 1000 mg/day of medroxyprogesterone acetate) improve food intake and to a lesser extent, body weight and performance status.

Dexamethasone may be used at doses of 2-4 mg daily as an appetite stimulant and to treat nausea. Its effect is generally short. Side effects limit its use as an appetite stimulant.

Prokinetic drugs such as metoclopramide may help in anorexia due to gastric stasis.

Thalidomide, omega-3-fatty acids, melatonin and NSAIDs are also considered as emerging medicines in the management of anorexia-cachexia but they need more research.

Hydration in Terminally ill patients

Artificial hydration should be used judiciously, so as to allow maximum patient comfort. It is best administered subcutaneously. Hypodermoclysis (HDC), also known as “clysis,” is the infusion of isotonic saline into the subcutaneous (SC) space for rehydration or for the prevention of dehydration.

- In ambulatory patients, common sites for SC injections include the abdomen, upper chest above the breast, over an intercostal space and the scapular area.
- In bedridden patients, the preferred sites are the thighs, the abdomen and the outer aspect of the upper arm.
- Normal saline can be delivered subcutaneously by gravity at a rate of not more than 100 ml per hour at one site; thus, about 1.5 L can be delivered at one site and 3 L at two separate sites over 24 hours.
- Average duration for which the subcutaneous cannula can be retained at a single site is 4-7 days.
- Subcutaneous route is usually used for administration of common medications like morphine, midazolam, haloperidol, metoclopramide, hyoscine butyl bromide and glycopyrrolate.

Table 4.9 Advantages and disadvantages of subcutaneous infusion

Advantages	Disadvantages
Low cost, easily taught to lay person	Local oedema (usually not significant)
More comfortable than IV administration, does not cause thrombophlebitis	Local reactions (rare)
Less likely than IV to cause fluid over-Load	Not good for rapid rehydration; limited total volume per day
Simple insertion, less pain than IV	Contra-indicated in bleeding disorders
Usually does not cause systemic Infections	Local infection more visible

Anxiety and Agitation

Anxiety is a state of apprehension, uncertainty and fear resulting from the anticipation of a realistic or fantasized threatening event or situation, often impairing physical and psychological functioning.

Anxiety may be acute or chronic and implications of anxiety could vary from person to person. Anxiety is a common symptom in persons with advanced illness and in the terminally ill for a variety of reasons including the fear of death, of uncertainty, of uncontrolled symptoms and of being left alone to die.

Assessment of Anxiety

Symptoms like excessive worrying or increased motor or autonomic hyperactivity should trigger further evaluation.

- Assessment of the nature of anxiety, acute or chronic.
- Assessment of any reversible factors such as pain or inappropriate medications.
- Assessment of medication history (stimulant drugs or excessive alcohol intake or withdrawal may precipitate or exacerbate anxiety).
- Assessment of worries and concerns of the person

DELIRIUM

Delirium is characterized by acute and fluctuating cognitive impairment. It is important to differentiate delirium from dementia, the latter being a state of progressive impairment. In some cases, delirium might complicate an underlying dementia.

Delirium is a disorder of consciousness and attention combined with abnormalities of cognition and perception. Delirium is an acute syndrome that usually has an organic cause.

Table 4.10 Differentiating delirium and dementia

Delirium	Dementia
Acute	Chronic
Incoherent speech	Speaks less
Aware & anxious	Unaware & not concerned
Lucid intervals may be present	No lucid interval
Reversible except in terminal phase	Progressive and irreversible

Predisposing factors for delirium:

- Severe medical illness
- Poor functional state
- Primary or metastatic malignancy in brain
- Other parenchymal brain lesions
- Faecal impaction
- Unfamiliar environment
- Sensory deprivation (hearing, vision)
- Psychological stress
- Metabolic imbalances, including hyponatremia and hypercalcemia
- Urinary tract infection
- Indwelling urinary catheter.

The typical patient is elderly, has advanced disease, forgets a hearing aid and/or reading glasses when moving to the unfamiliar environment of the hospital and gets disoriented on the next day.

Clinical features and assessment of delirium

1. Acute onset of altered level of consciousness
2. Impaired attention
3. Altered sleep-wake cycle
4. Motor and affective changes

5. Hallucinations, delusions
6. Cognitive performance failure at formal testing
7. Involuntary movements

Early in the course of delirium, the patient has transient momentary forgetfulness and short periods of impairment of cognition. It is important to identify it at this phase, and treat it to prevent it from worsening to distressing delirium or even agitation.

Agitation

Agitation is a state of chronic restlessness and increased psychomotor activity generally observed as an expression of emotional tension and characterized by purposeless and restless activity.

There are many causes for agitation including delirium, dementia, schizophrenia etc. Diagnosis of terminal agitation is made when reversible conditions are excluded and when it is associated with other signs of the dying process.

Management of delirium and agitation:

Delirium is one of the most under-diagnosed clinical conditions and grossly disturbs the quality of life. It is entirely a clinical diagnosis.[32] An attempt should be made to help the patient to express their distress. Family needs education and support to understand the pathological process.

Non-drug treatment:

- Keep calm and avoid confrontation.
- Respond to patient's comments.
- Clarify perceptions and validate those which are accurate.
- Explain what is happening to the family and why.
- State what can be done to help.
- Repeat important and helpful information.
- Explain to the patient and family that delirium is not madness.
- Continue to treat the patient with courtesy and respect.
- Avoid restraints.
- Patient should be allowed to walk about with an accompanying person.
- Allay fear and suspicion and reduce misinterpretation by using night lights, explaining every procedure and event in detail and ensuring the presence of a family member or a close friend with the patient.
- Reorientation and grounding of the person to space and time – dentures, hearing aids, spectacles, albums, photos, clock, calendar etc.

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32 Hospital Elder Life Program. Long CAM Instrument. Available at http://www.hospitalelderlifeprogram.org/ private/cam-disclaimer.php

Pharmacological Management of Delirium:

- Haloperidol is the most commonly used medication for symptomatic treatment of delirium. If started early, 1-3 mg/day of haloperidol can often effectively palliate the symptoms of delirium.
- Other atypical anti-psychotics like risperidone and olanzapine are also used in management of delirium.
- If delirium does not easily respond to haloperidol, the dose may have to be increased. In some cases, doses as high as 20 mg per day (in divided doses) may be necessary.
- In refractory delirium/agitation, it may become necessary to add a benzodiazepine if haloperidol alone is inadequate. Usual doses are lorazepam at doses of 0.5-1 mg given 1-2 hourly orally/intravenously; or titrated infusions of midazolam along with haloperidol may be effective in rapidly. Sedating the agitated delirious patients may help minimize the extra-pyramidal side effects associated with haloperidol.

MALIGNANT WOUNDS

Malignant wounds occur when cancerous cells invade the epithelium and infiltrate the supporting blood and lymph vessels. This results in a loss of vascularity and therefore nourishment to the skin, leading to tissue death and necrosis.

Fungating lesions are fast growing and typically resemble a cauliflower or fungus-shaped structure extending beyond the skin surface. On the other hand, ulcerative lesions are characterized by deep craters with raised margins.

Malodorous wounds result from bacteria that reside in necrotic wound tissue. They are usually polymicrobic, containing both aerobic and anaerobic bacteria. For the most part, it is the anaerobic bacteria that emit putrescine and cadaverine, which result in foul odours. Some aerobic bacteria such as Proteus and Klebsiella can also produce offensive odours.

Table 4.11 - Problems of a malignant wound

Physical problems	Psycho-social problems
Malodour	Body image alteration
Exudate	Depression
Bleeding	Embarrassment, shame
Pain	Social isolation, rejection by relatives
Pruritus	Problems with sexuality
Infection	Fear
Nausea and anorexia	Anxiety

Wound assessment

There are a variety of wound assessment tools in current use, which may include the following baseline measurements.

- Type of wound, e.g. adherent/non-adherent, black/necrotic, green/yellow slough
- Amount of exudate produced
- Depth, e.g. superficial/deep
- Presence/absence of odour
- History of bleeding
- Description and intensity of pain
- Signs of fistula/sinus formation
- Condition of the surrounding skin – e.g. red, macerated, fragile, showing signs of infection
- Site, location, surface area and presence of nodules
- Physical, psychological, social and spiritual problems due to wound

Management of malignant wounds

The proper approach to the management of malignant fungating wounds shifts from healing to addressing quality of life.

Wound cleaning

Unless otherwise indicated, the fluid of choice for cleaning is by boiled and cooled water, if so desired, with a pinch of common salt. Use of normal saline or other sterile intravenous fluid is needless and an unjustifiable expense in a country like India. Cleaning is best achieved, if possible, by showering the wound. Swabbing can be painful and traumatic, and should be avoided. The water used for cleansing should be warmed to at least room temperature. Chemical or surgical debridement of these wounds is not recommended. Maintaining a moist environment also prevents trauma resulting from wound drying and fissuring and stimulates epithelial cell migration over any normal tissue to facilitate resurfacing.

Fig 4.5. Empowering the family to apply a simple dressing helps not only to keep the wound clean, but also to improve body image.

Management of malodour

Malodour is one of the most distressing problems associated with fungating malignant wounds. The use of topical metronidazole in the fungating wound avoids the side effects like nausea and vomiting normally associated with oral metronidazole. Laboratory studies suggest that 0.8% metronidazole is active against a range of microorganisms, not just the anaerobic species with which malodour is most generally associated. Dressing with charcoal, foam dressings, papaya and many other home remedies have been used to reduce the smell and exudate.

Management of exudate

Fungating wounds often produce moderate or large quantities of exudate, as a result of increased permeability of vessels within the tumour and the action of bacterial enzymes. Unless exudate is controlled, related problems such as soiling, periwound maceration, leakage and odour will not be effectively managed. To contain and remove excess exudate from the wound, a plethora of absorbent dressings have been developed. Major categories of dressings include foams, alginates, and hydrofibers, along with super absorbent products based on diaper technology.

Silicone polymers, zinc oxide/petrolatum inorganic compounds, acrylates, hydrocolloid or adhesive film dressing can be used to protect the normal peri-wound skin.

Management of pain

Pain during dressing changes can be managed by local and systemic agents. Local anesthetic agents like lignocaine 1% and bupivacaine 0.25% (with or without further dilution) could be applied over a piece of gauze covering the wound about 15 minutes ahead of dressing to reduce the pain.

Management of bleeding

Bleeding occurs mainly during cleaning, dressing, dressing removal and any other traumas. Profuse bleeding may occur sometimes due to infiltration of large vessels. The patient and family should be informed if there is a chance of bleeding. Use of green or red towels during severe bleeding may be useful to decrease the anxiety and fear of the patient and family.

The dressing should be soaked with normal saline or home-made saline before its removal in order to reduce the pain of removal. Local pressure should be applied carefully, as the tissues are fragile. Application of powdered sucralfate will help to reduce the bleeding. Adrenaline may help to control bleeding by local vasoconstriction, but carries the risk of systemic absorption, increase in blood pressure and rebound bleeding. Oral or parenteral ethamsylate (increases platelet adhesion) and tranexamic acid (antifibrinolytic) may help. If the bleeding is very severe and if patient has a very advanced disease, interventions to stop bleeding may not be useful. In such cases, the non-pharmacological management (described above) along with anxiety reduction measures can be instituted.

Management of maggots:

If there are maggots, a piece of gauze soaked in turpentine can be held close to the wound. This will bring the maggots out so that they can easily be removed.

What more is required for our patient Sukumaran?

We managed his breathlessness, constipation and nausea. He was moving his bowels regularly, his nausea had settled and his sleep too had improved. His family informed the home care team that he was talking irrelevantly and that his sleep was disturbed. He was accusing his wife of plotting to poison him. This was diagnosed as delirium. His distraught and devoted wife was given explanations about the cause for his behaviour and educated regarding non-pharmacological measures as described above. His haloperidol dose was stepped up. The team followed him up and found his symptoms resolving.

He and his family would continue to require regular visits and communication based on the progress of his renal failure and other concerns that come up. They may need assistance in decision-making for acute episodic issues and in understanding the prognosis and course better.

All these aspects are discussed in the module on optimisation.

Suggested Reading:

1. http://www.who.int/hiv/pub/imai/generalprinciples082004.pdf
2. A L Jennigs et al - A Systematic Review of the use of opioids in the management of dyspnea; Thorax 2002, 57; 939-944
3. Wilson V. 2005. Assessment and management of fungating wounds. Wound Care, S28-32.
4. Woo.K.Y. & Sibbald.R.G.2010. Local wound care and malignant and palliative wounds. Advances in Skin and Wound Care23, pp.417-428
5. Brien.C.O. 2012.Malignant wounds-managing odour. Candian Family Physician, 58, pp. 272-274.
6. http://www.hospitalelderlifeprogram.org/private/cam-disclaimer.php