Medications used for symptom control in palliative care

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Learning Objectives

1. For common symptoms experienced by the person managed with palliative care:
   - Recognize the symptom to be managed.
   - Understand why it is important to control the symptom (from the perspective of the person, family members or loved ones, and caregivers).
   - Identify available pharmacologic options to manage the symptom and how they work.
   - Describe the expected therapeutic effects and possible adverse effects associated with pharmacologic therapy.
2. Become familiar with how to access palliative care medications in the community/home setting.

Palliative Care - A Transition

A therapeutic intervention by both formal and informal caregivers intended to change the experience of patients as part of family units as they live with, and transition through, their illness and bereavement


Palliative Care

Illness & Bereavement


"The primary goal of palliative care is to prevent and relieve the many and various burdens imposed by diseases and their treatments and consequent suffering, including pain and other symptom distress."

Clinical Practice Guidelines for Quality Palliative Care, 2nd edition – National Consensus Project for Quality Palliative Care

Palliative Care – Patient’s Fears

Symptom Management – Physical Pain

- most feared physical symptom
- can be managed or completely resolved
- often untreated or undertreated
- if inadequately treated
  - other symptoms can worsen
  - leads to even more suffering for the patient
- may be an expression of other suffering
  - depression, anxiety, social or spiritual suffering

Symptom Management – Physical Pain

Pain assessment
- history + comprehensive physical examination
  - location
  - quality
  - intensity
  - frequency
  - onset
  - duration
  - what makes the pain better or worse

Symptom Management – Physical Pain

Nociceptive pain
- somatic
  - direct stimulation of pain fibres in cutaneous and deep tissues
  - bone, joint, muscle, skin or connective tissue damage
  - well localized
    - aching, throbbing, stabbing, or pressure sensation

Nociceptive pain – treatment
- somatic
  - non-steroidal anti-inflammatory drugs (NSAID’s)
    - ibuprofen, diclofenac, naproxen
  - adverse effects
    - GI, renal, cardiovascular

Nociceptive pain – treatment
- somatic
  - corticosteroids – prednisone, dexamethasone
    - anti-inflammatory effect
    - adverse effects
      - GI, CNS (steroid psychosis)
      - bone loss with prolonged use

Nociceptive pain – treatment
- somatic
  - opioids – hydromorphone, fentanyl
    - no maximum dose
    - safe for prolonged use without concern for organ damage
    - can be given via different routes
      - PO, SC, IV, IM, transdermal, rectal
    - around the clock with as-needed (prn) doses for breakthrough pain
**Symptom Management – Physical Pain**

**Nociceptive pain – treatment**
- somatic
  - opioids – hydromorphone, fentanyl
- adverse effects
  - constipation
  - concomitant laxative therapy is essential
  - nausea, pruritis, sedation
- proper pain management decreases the incidence of delirium

**Bishop T, Morrison R. Clin Geriat 2007;15:25-32.**

**Nociceptive pain**
- visceral
  - originates in the thoracic or abdominal cavities (internal organs)
  - poorly localized
  - gnawing, cramping, aching, squeezing or pressure-like sensation

**Bishop T, Morrison R. Clin Geriat 2007;15:25-32.**

**Symptom Management – Physical Pain**

**Nociceptive pain – treatment**
- visceral
  - opioids
  - antiemetic drugs
  - serotonin antagonists – ondansetron
  - anticholinergic drugs
  - reduce the amount of GI stimulation
  - reduce peristalsis and secretions
  - H₂ receptor antagonists and proton pump inhibitors

**Sikandar S, Dickenson AH. Curr Opin iSupport Palliat Care 2012;6:17-26.**

**Neuropathic pain**
- dysfunction of the peripheral and central nervous system
- tingling, burning, radiating, electrical sensations
  - pins and needles
  - diabetic neuropathy

**Jensen TS, Finnerup NB. Curr Opini Support Palliat Care 2007;1:126-131.**

**Symptom Management – Physical Pain**

**Neuropathic pain – treatment**
- tricyclic antidepressants
  - amitriptyline, nortriptyline
- antidepressants
  - SSRI’s – sertraline, citalopram
  - SNRI’s – duloxetine, venlafaxine
- gabapentin, pregabalin
- opioids and tramadol
- lidocaine patches, topical capsaicin

**Jensen TS, Finnerup NB. Curr Opini Support Palliat Care 2007;1:126-131.**

**Symptom Management – Physical Pain**

**Non-pharmacologic treatment**
- therapeutic/physical exercise
- massage
- hot/cold treatment
- music therapy
- relaxation/imagery techniques
- acupuncture
Symptom Management – Dyspnea

Common symptom seen in patients with:
• pulmonary disease, congestive heart failure

May be associated with:
• muscle wasting
• acid-base disturbances
• anxiety

Subjective perception or an uncomfortable awareness of breathing
• may evoke panic, anxiety, worry, frustration, anger or depression in patients
• patients are usually not hypoxic
• re-positioning the patient to an upward sitting or leaning position
• increase air flow (fans, open windows)
• non-pharmacological interventions
  – relaxation techniques

Treatment
• oxygen
  – improves ventilatory muscle function in hypoxemic COPD patients
  – may not be effective in patients with diagnoses other than respiratory disease

• opioids
  – hydromorphone preferred
  – use of nebulized opioids is questionable
  – titrate to respiratory relief not respiratory rate
  – decrease respiratory drive
  – reduce subjective sensation of breathlessness

• anxiolytics
  – lorazepam
  – reduces the increased ventilatory drive resulting from low oxygen and rising carbon dioxide levels
  – given as adjunct to opioids
  – caution hypotension, sedation, respiratory depression
  – can worsen delirium

• corticosteroids
  – esp. if COPD or asthmatic component (reversible)
  – prednisone, dexamethasone, methylprednisolone
  – budesonide (nebulizer)
  – delayed onset

• bronchodilators
  – salbutamol and/or ipratropium (nebulizer)
  – reversible bronchospasm
Symptom Management – Nausea and Vomiting

- very common symptom
- affect the entire well-being of the patient
- nausea is the sensation of impending vomiting
- nausea and vomiting can occur independently
- retching may evoke panic, anxiety, worry, frustration, anger or depression in patients

Symptom Management – Nausea and Vomiting

- cause
  - disorders of the GI tract
    - obstruction, gastroparesis
  - central nervous system disturbances
    - motion sickness, intracranial lesions
  - vestibular apparatus, chemotrigger zone (CTZ)
  - metabolic abnormalities
    - uremia, acidosis, hyperparathyroidism
  - adrenal insufficiency
  - drug induced
    - opioids, antibiotics, digoxin

Symptom Management – Nausea and Vomiting

Treatment

- if drug induced, stop drug if possible
- replace fluid and electrolytes
- pharmacologic treatments can be targeted to the cause if known

Symptom Management – Nausea and Vomiting

Treatment

- dopamine antagonists
  - target CTZ and vomiting centre
  - haloperidol
  - metoclopramide
  - prochlorperazine and promethazine
  - caution extrapyramidal adverse effects with the above
  - domperidone (GI prokinetic)
  - oral agent with less central but greater peripheral effects
  - EPS occurs rarely

Symptom Management – Nausea and Vomiting

Treatment

- Serotonin (5-HT₃) antagonists
  - targets CTZ and gut
  - ondansetron

Symptom Management – Nausea and Vomiting

Treatment

- Anticholinergic agents/histamine (H₁) antagonists
  - targets the vestibular apparatus
    - movement induced n & v
    - dimenhydrinate
    - scopolamine
  - can cause dryness, sedation
**Symptom Management – Nausea and Vomiting**

**Treatment**
- Corticosteroids (dexamethasone)
  - central anti-emetic action
- Anxiolytics (lorazepam)
  - anxiety
  - anticipatory nausea and vomiting

**Symptom Management – Constipation**

**Causes**
- can cause great discomfort
- can negatively affect ADL’s and can decrease nutritional intake, socialization and quality of life
  - can lead to fecal impaction and bowel obstruction
- affects 50-90% of terminally ill patients

**Symptom Management – Constipation**

**Treatment**
- mobility
- increase fluid intake
- remove medication cause
- none of the above are always possible

**Symptom Management – Constipation**

**Treatment**
- laxative therapy – onset of action 24-48 hrs
  - osmotic laxatives
    - lactulose
    - polyethylene glycol (PEG)
    - sorbitol
  - saline laxatives
    - magnesium hydroxide
      - use with caution in renal dysfunction
- stimulant laxatives
  - senna
  - bisacodyl
  - avoid in bowel obstruction
Disordered consciousness and cognition
- occurs in about 30-80% of persons in the last weeks of life
- often worse at night

Symptom Management – Delirium

- features
  - acute onset
  - fluctuating course
  - inattention
  - altered level of consciousness
  - cognitive impairment
  - impaired memory, disorientation, delusions, hallucinations

Symptom Management – Delirium

- cause
  - medications
  - infections
  - organ failure
  - intracranial processes
  - metabolic abnormalities

Symptom Management – Delirium

Treatment
- address cause if possible
- haloperidol
- atypical antipsychotics
- benzodiazepines
  - lorazepam

End of Life Care

Providers’ Role
- Health care providers need to recognize signs that indicate death may be near.
- Detection and communication of symptoms is vital to ensure they are well managed.
- Sometimes the signs are obvious (such as congested breathing), but others can be more subtle
  - reduced intake over a few days/weeks
  - increasing fatigue

Symptom Management – Others

- depression
- anorexia and cachexia
End of Life Care

Signs of Approaching Death
Breathing changes:
• slow, shallow, or loud breathing
• apnea (periods of no breathing)
Food/Fluid:
• loss of appetite & decreased thirst is common.
• body is beginning to shut down and does not need nourishment
• last supper

End of Life Care

Common End of Life Symptoms
• pain (#1 symptom)
• shortness of breath
• terminal restlessness
• terminal secretions
• nausea
• anxiety
• seizures

End of Life Care

Medication Administration
• up to 70% of palliative patients will be unable to take oral medication & require parenteral (subcutaneous) administration
• advantages of SC route
  – less painful
  – more steady absorption than IM
  – subcutaneous port (butterfly) can reduce the number of injections

End of Life Care

Medications
Pain
• regularly dosed analgesic
  – hydromorphone (Dilaudid®) 2 mg/mL
  • 0.5 mg (0.25 mL) subcutaneous via butterfly q4h
  • PRN analgesic for breakthrough pain
    – hydromorphone (Dilaudid®) 2 mg/mL
    • 0.5 mg (0.25 mL) subcutaneous via butterfly q2h pm pain or dyspnea

End of Life Care

Medications
Agitation, Anxiety, Delirium, Restlessness
• lorazepam (Ativan®) 1 mg
  – 1 tab po/si q4h pm for dyspnea, anxiety, agitation or restlessness
• lorazepam 4mg/mL (Ativan®) injection
  – inject 1 mg sc via butterfly q4h pm
• haloperidol (Haldol®) 5 mg/mL injection
  – 1 mg (0.2 mL) s/c q6h pm
• methotrimeprazine (Nozinan®) 25 mg/mL injection
  – 12.5-25mg s/c via butterfly q6h pm
Nausea, vomiting
- haloperidol (Haldol®) 0.5 mg po q4h pm for nausea, vomiting, agitation
- haloperidol (Haldol®) 5 mg/mL injection
  - 2mg (0.4 mL) s/c q4h pm for nausea and/or vomiting
- dimenhydrinate (Gravol®) 50 mg q4h pm
  - PO, PR, IM

Fever
- acetaminophen 325 mg
  - 2 tablets (650 mg) po q4h pm for fever over 38°C
- acetaminophen 650 mg supp
  - insert 1 supp rectally q4h pm for fever over 38°C

Excessive salivation, terminal secretions, chest congestion
- atropine 1% drops
  - instil 2 drops under tongue q8h pm for excessive salivation
- scopolamine 0.4 mg/mL injection
  - inject 0.4 mg (1 mL) s/c via butterfly q4h pm for terminal secretions
- furosemide 20 mg/2 mL injection
  - inject 20 mg (2 mL) IM q4h pm for excessive secretions or chest congestion

Seizures
- lorazepam 4mg/mL (Ativan®) injection
  - inject 4 mg sc via butterfly (2 mg/min)
  - may repeat in 10-15 minutes
- phenobarbital
  - 120 mg s/c q12h

Medications – Exceptional Access Program
- a program through the MOHLTC to cover the cost of medications not usually covered by the Ontario Drug Benefit program (ODB)
  - dimenhydrinate 50 mg/mL injection
  - furosemide 10 mg/mL injection
  - lorazepam 4 mg/mL injection
  - scopolamine 0.4 mg/mL or 0.6 mg/mL injection
Medications – Exceptional Access Program

• Specific products used to treat ODB-eligible patients undergoing palliative care are reimbursed under the Ontario Public Drug Programs, through its Facilitated Access process.
• Under this process, a select group of participating physicians are exempt from obtaining approval under EAP on a case-by-case basis.
• This assumes that the physician’s College of Physicians and Surgeons of Ontario registration number appears on the prescription, for purposes of verification.

End of Life Care

Medications – Exceptional Access Program

• In order to participate in the Facilitated Access to Palliative Care Drugs process, these physicians must be registered by the Ontario Medical Association ("OMA") and must meet pre-defined criteria the OMA sets.
• To facilitate the reimbursement process at the pharmacy, these physicians are asked to indicate either, “Palliative” or “P.C.F.A.” on the prescription.

End of Life Care

Symptom Response Kit

• SWOCCAC symptom management kit
• http://thehealthline.ca/libraryContent.aspx?id=192

“A Symptom Response Kit is a kit of medications that can be ordered by a physician, to be available in a client’s home to relieve potential symptoms for clients requiring hospice palliative care services or who are at the end of life stage in their disease management.”
Two Rules of Life and Death

Rule #1
• people die

Rule #2
• no one can change rule #1