Palliative Care Symptom Management: Nausea/Vomiting Constipation- Bowel Obstruction Dehydration- Artificial Hydration Dyspnea and Delirium

Darlene Grantham RN, MN, CHPCN (c)

Nausea & Vomiting
Pallium Project (2002)

- Cause is often multi-factorial etiology:
  - Constipation
  - Drugs
    - Opioids
    - Anti-depressants, neuroleptic, anti-psychotics
    - NSAIDS
  - Reduced Gastro-intestinal inhibitors
    - Autonomic neuropathy (damage to involuntary NS)
  - Metastatic bowel disease/obstruction
  - Metabolic causes(Hyper Ca+, Uremia)
  - Oral Candidasis
  - Anxiety
  - My be aggravated by uncontrollable pain

Management of Nausea & Vomiting Pallium Project (2002)

- Identify the underlying cause and correct
- Treat Symptom
  - Anti-emetics are selected according to the underlying mechanism
- Prevent Nausea
  - Employ a regular anti-emetic regimen if nausea is prolonged
  - Prevent Constipation
  - If one agent not effective, review and add another or replace with another

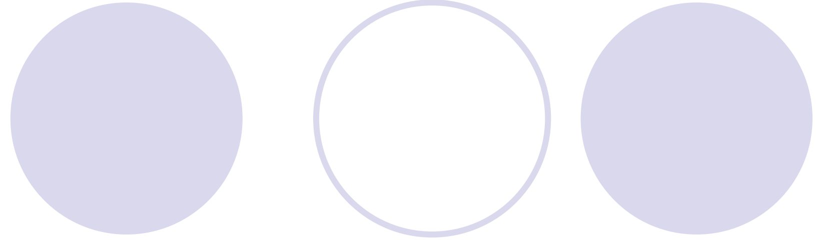
Nausea & Vomiting

Anti-dopamine agents -Maxeran -Domperidone -Haldol -Olanzipine	5HT antagonist -Ondansetron -Granisetron
Anticholinergic and Antidopaminergic agents -Nozinan -Stemitil	Antihistamines -Gravol -Scopolamine

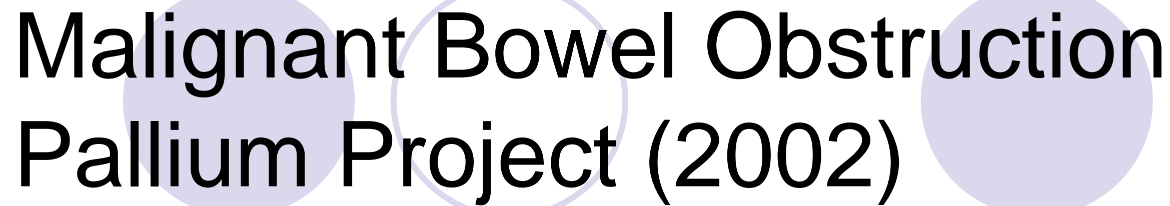
Constipation

- Very common at end of life
- Very seldom considered part of cause
- Prevention best intervention
- Common cause of nausea and abdominal pain

Constipation
Pallium Project (2002)



- Prevent with
  - Stimulants- Senna
  - Osmotic cathartics- lactulose
  - Stool Softeners-colace
  - Lubricates-mineral oil
- If constipated
  - Increase dose of laxatives
  - Fleet: phosphate enema or suppositories



Malignant Bowel Obstruction Pallium Project (2002)

- Key Clinical Questions
  - What is causing it?
  - Is the obstruction high or low in the GI Tract?
  - Is it complete or partial?
  - Is it reversible or irreversible?
  - Is surgery appropriate?
  - Is surgery an option?
  - How can we manage the symptoms?

Management of Malignant Bowel Obstruction Pallium Project (2002)

- Manage pain
  - Opioids
  - Colic pain: antispasmodics (Buscopan)
- Manage Inflammation/Secretions
  - Decadron
  - Octreotide (Anti-secretory agent)
- Manage nausea & vomiting
  - NPO/ NG Tube
  - Anti-emetics (haldol, nozinan, gravol, scopolamine)
- Alternative routes of medications (IV/SC)

Bowel Obstruction- Surgical Options Pallium Project (2002)

- Resection
- Bypass
- Colostomy or ileostomy
- Esophagectomy
- Endoscopic laser resection (esophageal, duodenal and rectal)
- Stenting (esophageal, duodenal and rectal)
- Gastrostomy (PEG tube)

Artificial Hydration

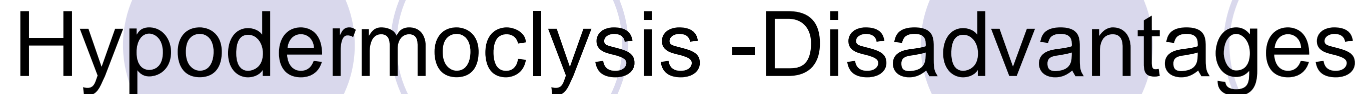
Pallium Project (2002)

- When to hydrate
  - Patient not able to hydrate orally and not close to dying
  - Patient goal to extend life and hydrating will help improve symptoms (e.g. delirium)
- When not to hydrate
  - Patient is close to dying
  - Patient has severe edema or ascities
  - Prone to pulmonary edema/CHF
- How to hydrate artificially
  - IV Fluids
  - Hypodermoclysis (especially in community)

Hypodermoclysis - Advantages

- Can be nurse administered in all settings
- Two sites may be used simultaneously if medications are incompatible when mixed or if the fluid volume ordered is to great for absorption from one site
- Home care ideal setting rather than IV
- Can be started and stopped at any time
- Patients can be hooked off it with ease

Hypodermoclysis -Disadvantages



- Difficult to infuse higher volumes > 1 litre in 24 hours
- Limitations on administration of electrolytes, nutrition additives and medications
- Edema at infusion site is common
- Possibility of local reactions

Respiratory Problems- Dyspnea

“I struggled to breathe, hoping that the attack would soon end. I was so scared. I thought I’d die!”

- A patient

Dyspnea- an unpleasant awareness of breathing

Deborah Dudgeon, 2000

Prevalence of Dyspnea – Disease Specific

COPD	95%
CHF	61%
Stroke	37%
ALS	47%
Dementia	70%
Cancer	70%
Lung Cancer	90%

Causes of Dyspnea

Pallium (2002)

- Often multifactorial
  - Pulmonary causes (airway obstruction, pleural effusion, COPD, carcinomatosis, pneumonia, pulmonary embolism
  - Cardiac causes (CHF, pericardial effusions)
  - Systemic causes (anemia)
  - Neurological (ALS, cachexia - muscle weakness)
  - Other (Ascities)
  - Psychological (constant expression of SOB)

Multidimensional Assessment of Dyspnea

- Tachypnea- rapid respiratory rate, not dyspnea
- Patient states they are having discomfort with breathing – must believe they are
- To assess simply ask, “Are you short of breath?”
- Then assess when they are SOB i.e. with walking, talking, eating, etc.

Diagnostic tests

- Chest x-ray (COPD, Pleural Effusion)
- Electrocardiography (irregular findings)
- Pulmonary function tests (lung capacity)
- Arterial blood gases (O2 retainer in COPD)
- CBC,(HBG,)
- Diagnostic testing should be guided by the stage of the disease, prognosis and risk/benefit of any tests/interventions
- Psychological factors (anxiety)

Managing Underlying Causes Pallium Project (2002)

- Pleural effusion – thoracentesis
- Large airway obstruction- stenting, radiotherapy
- Pneumonia- antibiotics
- Lymphangitic carcinomatosis- steroids
- Anemia- transfusion
- CHF and COPD- optimize medications
- ALS- non-invasive ventilation

Management of Dyspnea

- Sit upright, supported by pillows or leaning on overbed table
- Fan (+) or (-) oxygen
- Relaxation techniques and other appropriate non-pharmacological measures
- Identify and treat underlying diagnosis
- Opioids (opioid receptors are present on sensory nerve endings in airways)
- Chlorpromazine
- Ativan

Patient and Family Teaching

- Signs and Symptoms of Impending Exacerbation and how to manage.
- Problem-solving techniques prevent panic
  - Ways of conserving energy
  - Prioritize activities
  - Use of fans
  - Ways to maximize the use of their medications
    - Using a spacer with their inhaled drugs
    - Taking an additional dose before exercise

Delirium Pallium Project (2002)

- Delirium is a common complication near end-of-life.
  - 15-25% of hospitalized cancer patients
  - Up to 88% of terminal cancer patients
- Delirium:
  - Is distressing to patients, loved ones and caregivers
  - Alters symptom assessment and control
  - Is under-diagnosed and under-treated
  - Constitutes a “medical emergency” in palliative care

- Clinical Features of Delirium
  - Awareness altered/altered LOC
  - Attention deficit
  - Disorientation
  - Memory deficit
  - Disorganized thoughts
  - Altered speech hallucinations
  - Delusions or paranoia
  - Sleep disturbances
  - Emotional lability
  - Increased agitation or decreased psychomotor activity

Delirium: DSM IV Diagnostic Criteria

A) Disturbance in consciousness with impaired ability to focus, sustain, or shift attention.

B) Change in cognition (memory, disorientation, language or perceptual disturbance) that is not dementia.

C) Abrupt onset (hours-days) with fluctuation.

D) Evidence of medical condition judged to be etiologically related to the disturbance.

Clinical Presentation

Hypoactive: patients demonstrate psychomotor retardation often mistaken for depression- confusion, decreased alertness, withdrawn, tend to sleep more. Commonly undiagnosed

Hyperactive: agitation, aggression, hallucinations.

Mixed: features of both, fluctuates (worse at night, lucid intervals during the day).

- 20% - 44% on admission to a palliative care unit (common reason for admission)
- 28% - 45% of patients developed delirium while on the palliative care unit
- 68% - 90% prior to death

Common Causes of Delirium
Pallium Project (2002)

- Drugs
  - Opioids
  - Anticholinergic drugs (tricyclic antidepressants)
  - Anticonvulsants
  - Benzodiazepines
- Infections
- Dehydration
- Metabolic/organ failure
  - Renal or liver failure, hypercalcemia, hyponatremia
- Hypoxemia
- Brain disease
  - Metastases or primary brain tumors

Delirium versus Dementia

- Delirium often misdiagnosed as dementia.

Delirium	**Dementia**
Abrupt onset	Progressive onset
Decreased LOC	LOC intact, alert
Random behavior	Consistent behavior
Sleep/wake cycle	Minimal changes
Reversible	Irreversible

Management Approaches to Delirium Pallium Project (2002)

- Manage underlying causes
  - Dehydration- hydration (IV or SC)
  - Opioid toxicity- dose reduction – opioid switch
  - Drug causes- discontinuing drugs
  - Hypercalcemia- bisphophonate or calcitonin
  - Hypoxia- oxygen
  - Infection- antibiotics, antiviral, antifungal

Case Study

- Kevin is a 59 year old man diagnosed with colon cancer two years ago. At diagnosis, he had a bowel resection and received chemotherapy. At six months after completing chemotherapy developed recurrent multifocal disease in the remaining bowel. Second-line chemotherapy was unsuccessful. He has ongoing diffuse abdominal pain for which he uses long-acting morphine 60 mg po bid, with morphine 10 mg po q1 hour for breakthrough pain. Kevin also takes colace 200 mg po daily and senekot 2 tabs po at hs. He now complains of persistent nausea for the last two weeks.

Case Study

- There is no obvious relieving or exacerbating features to his nausea. He vomits a small amount of yellowish emesis two or three times per day. He has lost his appetite but is able to keep small amounts of fluid down. Kevin is also loosing weight (6 lbs in last two weeks). His last bowel movement was three days ago.

Case Study

- What are some of the causes for Kevin’s nausea and vomiting?
- What examinations and investigations would you order and what would be your initial management?
- How would you manage?

Case Study

- Causes for Kevin's nausea?
  - Drugs, metabolic, constipation, dehydration
- Examinations and investigations?
  - Abdominal x-ray, bloodwork, rectal exam
- How would you manage?
  - Change drugs
  - Good hygiene, decrease food odors, decrease volume of meals, upright position

Case Study

- Kevin gets only partial relief from your initial nausea management. Despite taking the medication he is still having episodes of nausea and his appetite is still very poor.
  - What do you do now to control the nausea?

Case Study

- What do you do not to control nausea?
  - Motility agents (maxeran/domperidone)
  - If severe haldol
  - Gravol
  - If constipation
    - Fleet enema, dulcolax suppository, lactulose
    - Laxative protocol

Case Study

- Kevin feels better with your management of his symptoms. However, one week later he presents to the emergency room with increased vomiting. He has been unable to keep anything down. He is experiencing increased diffuse abdominal pain and has used 10 breakthrough doses of morphine in the past 24 hours. His last bowel movement was six days ago. He is not passing flatus.

Case Study

- Kevin tells you he has been experiencing times when he is short of breath. His wife tells you that he has had several episodes of confusion over the last week and they appear to be getting worse. Today she could not keep him in the house because he had to go to work to finish an important project. Examination of the abdomen reveals high pitched, tympanic bowel sounds. The abdomen is tender to palpation. The rectum is empty.
- What is the most likely etiology of Kevin's symptoms?

Case Study

- What is etiology of Kevin's symptoms
  - Malignant Bowel Obstruction
  - Delirium
  - Dyspnea

Case Study

- Kevin returns home diagnosed with bowel obstruction. His pain is managed well on morphine Kevin has also been started on octreotide to help with secretions in his gut. The nausea and vomiting is managed. Kevin's wife calls the visiting nurse a few days later because he kept her up all night. He was saying things that do not make sense and paced the house all night. Kevin appears uncomfortable. He is cachectic. He is unable to focus on the conversation. Temp (38.2). His respiratory rate is 18/min and his pulse 110. He is flushed. He has moderate pedal edema. His mucosa are dry. Chest examination reveals some crackles in the right middle lobe. His heart sounds are normal.

- What are the possible causes for delirium in Kevin?

Case Study

- Causes for Kevin’s delirium?
  - D- Drugs
  - E- Electrolytes
  - L- Liver Failure
  - I- Ischemia/Hypoxia
  - R- Renal Failure
  - I- Impaction
  - U- UTI
  - M- Mets to Brain

Case study

- Kevin has received a 10 day trial of antibiotics for a suspected pneumonia (not confirmed by x-ray). Kevin's condition continues to deteriorate. You are called once again to the home. Kevin has become very agitated and confused again. The family has been giving him Haloperidol. This is what was used when he had a previous delirium. He has received 3 doses of 2.5 mg each in the last 6 hours with minimal effect. You note that he seems a little jaundiced and he is also febrile. On examination you hear crackles the base of both lung. His respiratory rate is 24/min. Kevin and his family had previous discussions that he would like to die at home. Kevin is in the terminal phase of his disease process.
- What other option is available to Kevin and his family at this time?

Case Study

- What other options are available at this time?
  - Consult for Palliative Care Physician to assess the need for palliative sedation
  - Supportive Counseling Goals
    - Explore feelings, fears and goals
    - Identify strengths and coping skills
    - Re-frame hope
    - Provide ongoing support
  - Prepare Family for Death in the Home
    - Decreased ability to swallow
    - Changes in breathing patterns
    - Decrease circulation
    - Decrease consciousness
    - Letter of anticipated death in the home