Symptom Management

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Acknowledgments

- Materials for this series has been adapted from the following sources:
  - Core Curriculum for the Licensed Practical/Vocational Hospice and Palliative Nurse; Second Edition (2010) Tami Borneman, editor
  - The End-of-Life Nursing Education Consortium (ELNEC) Project is a national end-of-life educational program administered by City of Hope (COH) and the American Association of Colleges of Nursing (AACN) designed to enhance palliative care in nursing. The ELNEC Project was originally funded by a grant from The Robert Wood Johnson Foundation with additional support from funding organizations (Aetna Foundation, Archstone Foundation, California HealthCare Foundation, Cambia Health Foundation, Milbank Foundation, National Cancer Institute, Oncology Nursing Foundation, Open Society Institute and US Department of Veterans Affairs). Further information about the ELNEC Project can be found at www.aacn.nche.edu/ELNEC.

Module Objectives

At the completion of this module participants will be able to:

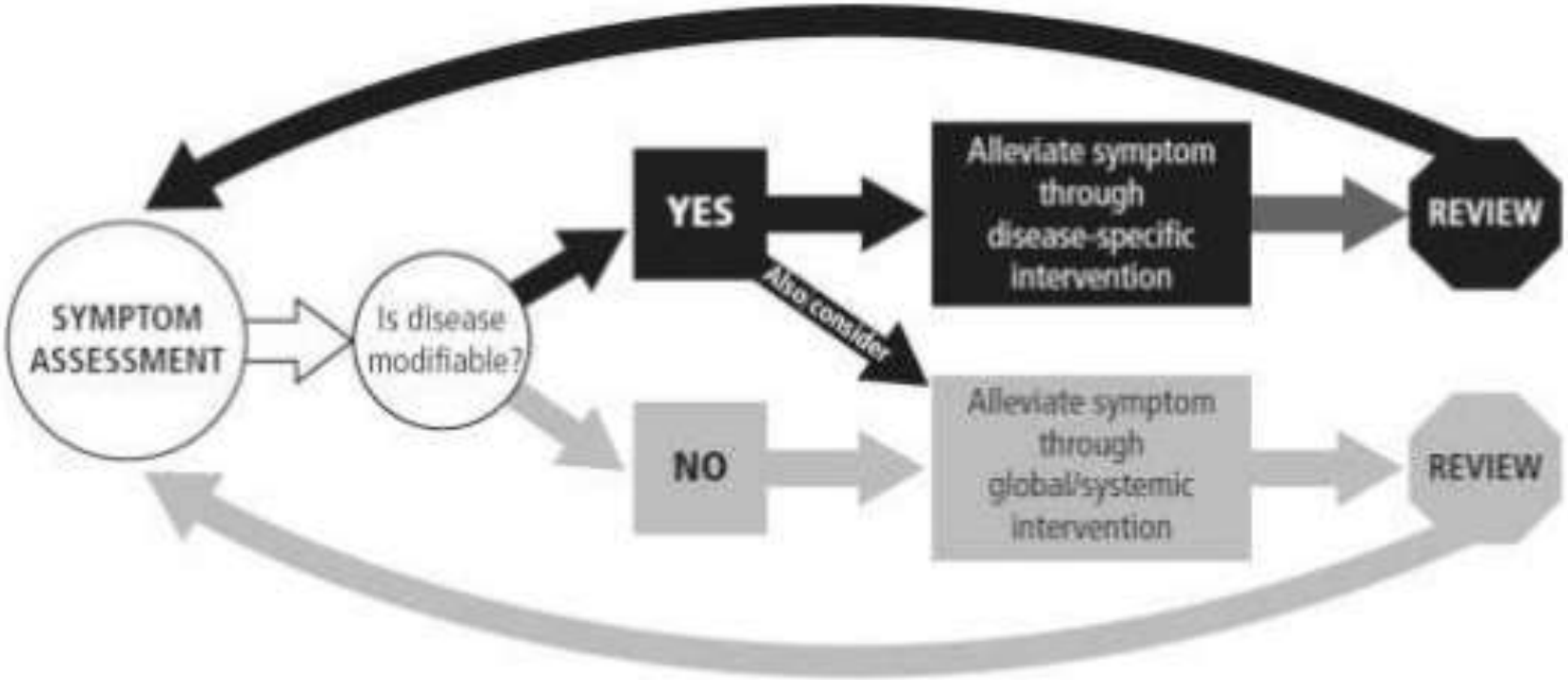
1. Describe the principles of symptom management
2. Identify common symptoms associated with life-limiting and life-threatening illnesses.
3. Identify potential causes of symptoms.
4. Describe assessment of symptoms.
5. Describe interventions that can prevent or diminish symptoms.
6. Participate in individual and family education

Essential Elements

- Ongoing assessment & evaluation
- Requires interdisciplinary teamwork
- Reimbursement
  - Affordable options
- Research needed

Coyne, 2007; Coyne et al., 2010

Palliative vs. Curative



J Palliat Medicine 2012; 15(1): 106-14

LVN Role in Symptom Mgmt

- Use the nursing process
  - Assessment, Diagnosis, Planning, Intervention, Evaluation
- Multidimensional care, emphasizing QOL as defined by pt/family, w/ respect for, support & education of pt/family

LVN Role in Symptom Mgmt

- Understanding expectations, goals of treatment, & end-of-life goals
- Facilitate palliative &/or EOL care by maximizing pt comfort to potentially enable a time of growth, reconciliation, peace, joy, & hope

Symptoms by Systems

1. Skin & Mucous Membranes
2. Respiratory Symptoms
3. Cardiovascular
4. Gastrointestinal
5. Genitourinary
6. Musculoskeletal
7. Neurologic Symptoms
   - Mental Status

Structure of this lecture

- Common symptom
  - Definition
  - Causes
  - Observation & reporting
  - Nursing interventions

Symptoms & Suffering

- Symptoms create suffering & distress
- Psychosocial intervention is key to complement pharmacologic strategies
- Need for interdisciplinary care

Sxn Mgmt in Older Adults

- May have several symptoms w/ multiple co-morbidities
- Majority of hospice diagnoses are non-cancer related, associated w/ heavy symptom burden (Ritchie, 2011)
  - Heart failure
  - COPD
  - Dementia
  - Other
- Social isolation

Section 1: Skin & Mucous Membranes

Integumentary Symptoms

- Alteration in Skin & Mucous Membranes
  - Disruption in the integrity of the skin or oral mucous membrane
- Associated Nursing diagnosis
  - Impaired skin integrity
  - Pain
  - Body image disturbance
  - Knowledge deficit

Impaired Skin - Causes

- Pressure ulcers
  - Skin pressure → ↓ blood flow & cell death
  - Shearing forces
  - Friction
  - Moisture
  - Obesity
  - Malnutrition
  - Immobility
  - Circulatory impairment
    - DM, PVD, CA
- Fistulas
- Tumor Necrosis

Skin Assessment

- Inspect
  - Wound location
    - Grade any pressure ulcers (Stage I-IV)
    - Size, length, width, depth, undermining
    - Drainage?
    - Tissue type (i.e., granular or eschar)
    - Surrounding skin?
  - Pain?
  - Potential for complications
  - Odors?
  - Nutritional status?

Malignant Wounds

- AKA: Fungating tumors, tumor necrosis, ulcerative malignant wounds
- Adds to the physical and emotional burden of pt/caregiver
- Adds to low self-esteem
  - Odor, pain, bleeding, unsightly
- May add to isolation
- Painful
- Costly

Seaman & Bates-Jensen, 2010

Kennedy Terminal Ulcer

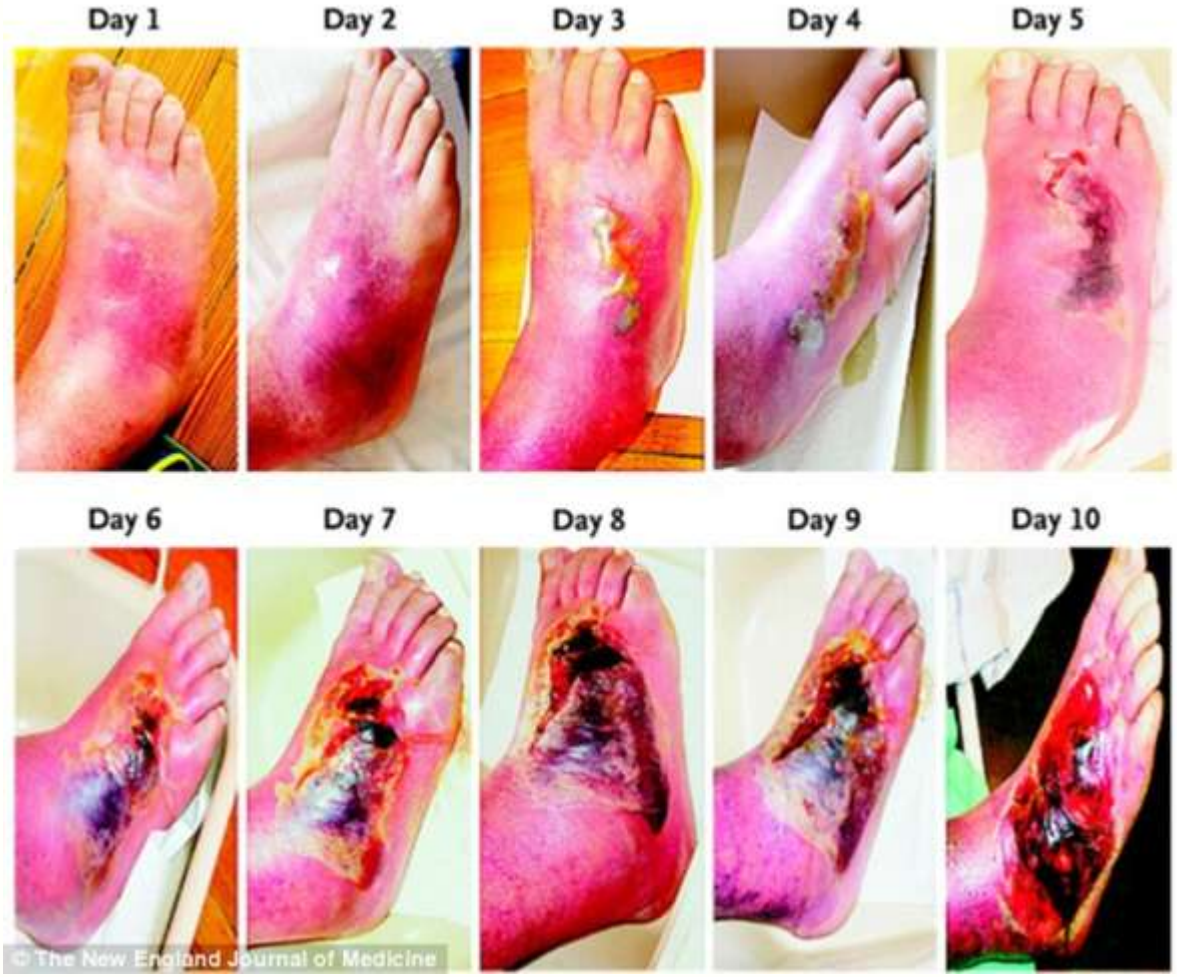
- Sudden onset
  - "That ulcer was not there when I started my shift"
- Usually starts on the sacrum
  - Shaped as a pear, butterfly, horseshoe
  - Red, yellow, black, or purple in color
  - Generally has irregular borders
  - Progresses quickly

Treatment of Wounds

- Frequent position changes
  - Turn *at least* q 2 hours
  - Utilize pressure relief & pressure reduction support surfaces
- Seek consultation
  - Dietary
  - Wound/enterostomal nurse PRN
  - Consult AHRQ guidelines

Seaman & Bates-Jensen, 2010

Diabetic foot infection progression over 10 days



Treatment of Wounds

- Provide analgesia in advance
- Wound cleaning
- Dressings
  - Select the appropriate type
    - Moist wound bed
    - Dry surrounding skin
    - Exudate control
    - Caregiver time
- PREVENTION is key

Seaman & Bates-Jensen, 2010

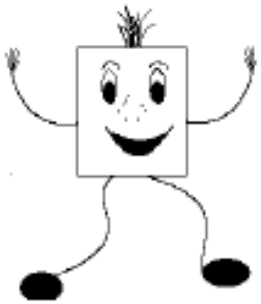
Dilemma: Wounds in Pts with Life-Limiting Illness

- Assess underlying cause
- What are the goals of care?
- Is it realistic that the wound will heal?
- Prevent further pressure ulcers/wounds
- Manage pain and odor
- Pressure ulcer may indicate organ failure

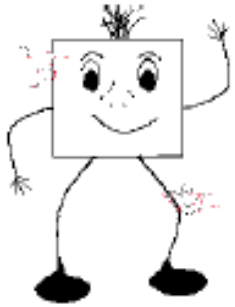
Alterations in Skin

- Pruritus
  - Uncomfortable itching of the skin
    - Dry, flaky skin
    - Wet, macerated skin
    - Contact dermatitis
    - Infestations (scabies, lice, fleas)
    - Drugs (abx, MSO_4, phenothiazines)
    - Systemic disease
    - Fungal infections

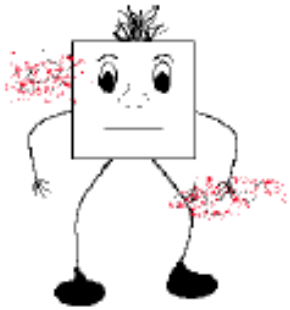
Itch Man Scale



0
Comfortable, no itch



1
Itches a little; does not interfere with activity



2
Itches more; sometimes interferes with activity

3
Itches a lot; difficult to be still, concentrate

4
Itches most terribly; impossible to sit still, concentrate

Itch Man Scale to rate itching intensity in children
Designed by Blakeney and Marvin 2000
Shriners Hospital for Children

Assessment - Pruritus

- Hx of itching
  - When, how long, where, what is tolerable?
- Examination
  - Rashes or lesions?
  - Abrasions?
  - Overall skin integrity?
- Review of medication use/orders

Pruritus: Nursing Interventions

- Non-pharmacologic
  - Avoid irritants
    - Alcohol containing agents
    - Tight or heavy clothing
    - Frequent bathing w/ harsh soaps & hot water
  - Cool starch baths
  - Avoid heat – keep room cool
  - Apply lubricating ointments or creams to skin to avoid excessive drying
  - Avoid alcohol, foods/drinks w/ caffeine, theophylline

Pruritus: Nursing Interventions

- Pharmacologic
  - Antihistamines
    - Hydroxyzine & Diphenhydramine
  - Ondansetron & Cholestryamine may be used in cholestatic, uremic, & opioid-induced pruritus
  - Topical corticosteroids
  - Antifungals for itching r/t Candida
  - TENS units may be helpful

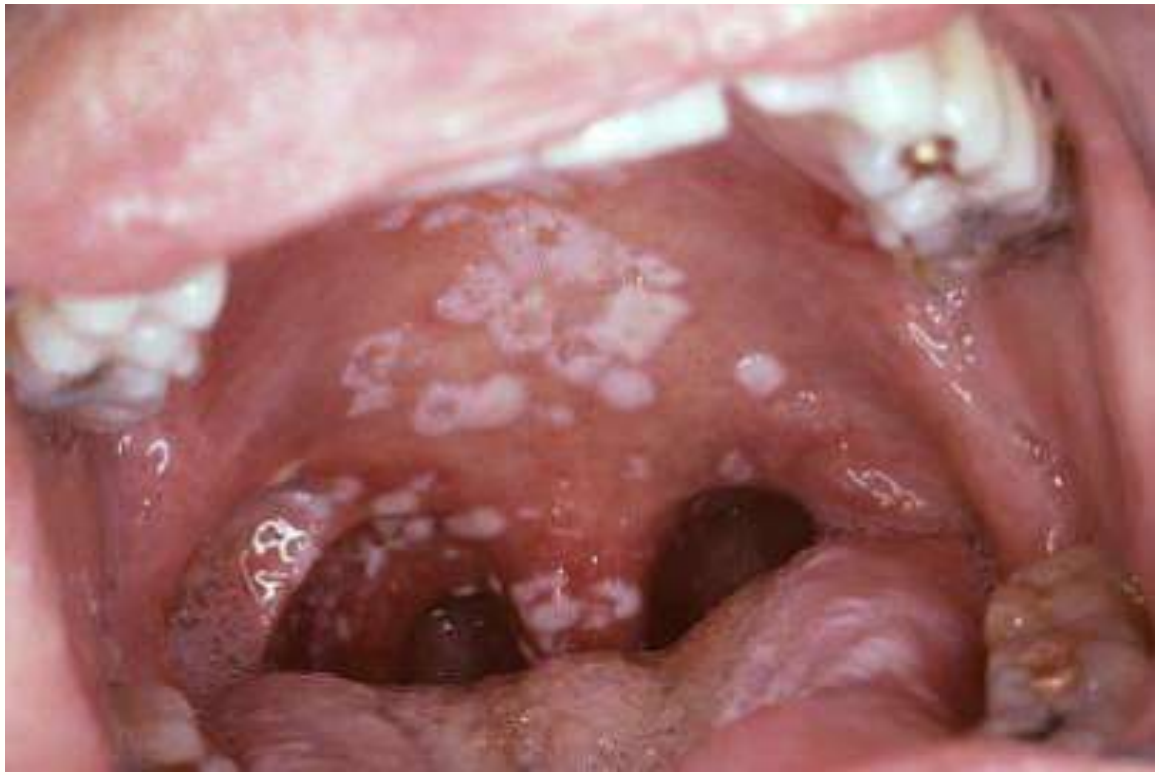
Impaired Mucous Membranes

- Dry mouth
  - Candidiasis, Meds, RT/Chemo,
  - Dehydration, Mucositis, Mouth breathing,
  - Metabolic issues
- Candidiasis
  - RT, Chemo, Mucositis
  - HSV, Meds

Oral Mucositis

World Health Organization (WHO) Grading

Candidiasis – aka THRUSH



Assess – Alt Mucous Membrane

- Pt history
- Review medications
- Examination
  - Dry cracked lips
  - Sores/white patches on buccal membranes, oropharynx, tongue
  - Bleeding lips, gums, tongue
- Pt current oral hygiene regimen?
- Pt/family knowledge of causes/mgmt

Candida, HSV, Mucositis, Stomatitis Interventions

- ATC oral care *at least* every 2 hours w/ moistened oral swabs
- 1:4 hydrogen peroxide & water rinse for mucous or hard debris in mouth
- Candida
  - Nystatin swish & spit
  - Fluconazole tablets or suspension

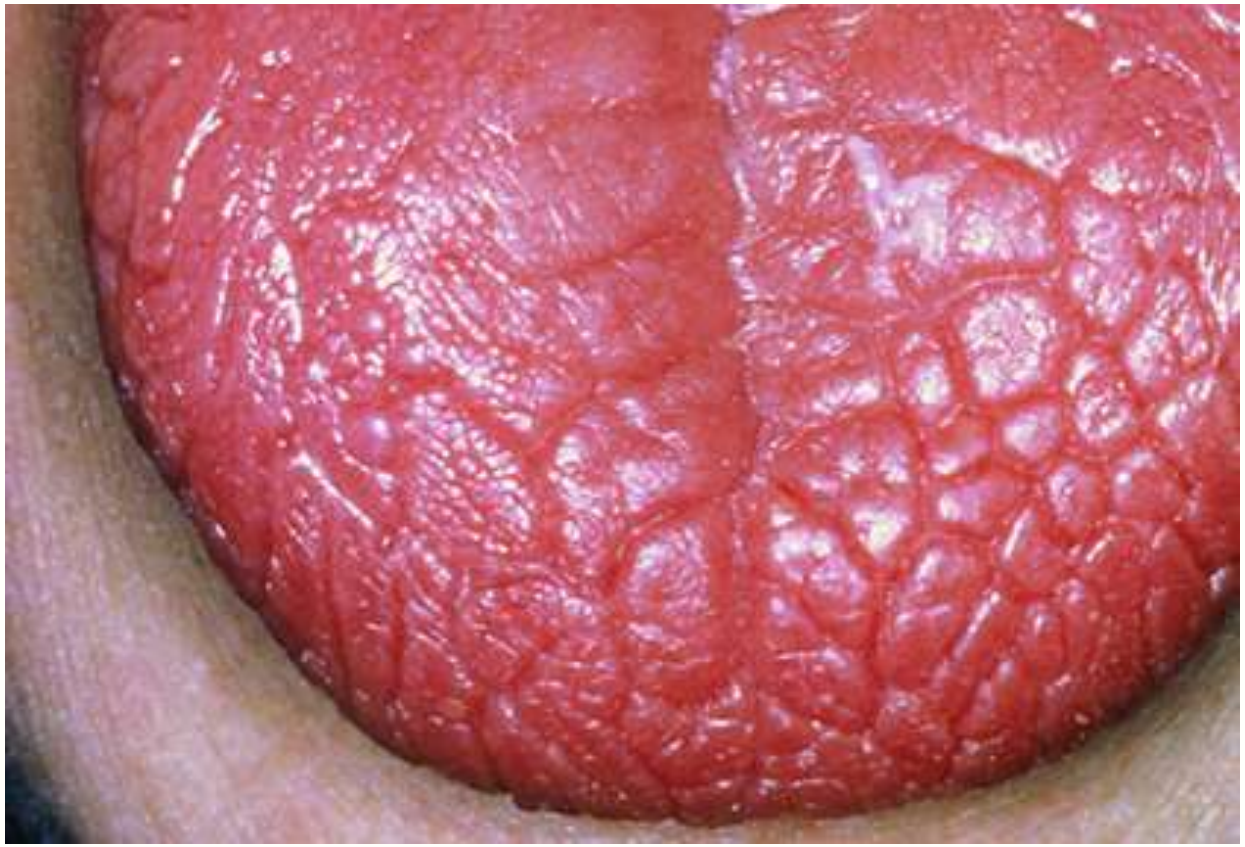
Oral Interventions continued

- Avoid overly hot or spicy food
- Possible medications &/or cocktails
  - Topical morphine
  - Viscous lidocaine
  - Sucralfate slurry
  - Miracle Mouthwash
    - MOM, diphenhydramine, viscous lidocaine

Xerostomia

- Stimulate saliva or utilize substitutes
  - Peppermint water
  - Gums, mints, hard candy
  - Ice chips or frequent sips of water
- Review meds & alter regimen PRN

Xerostomia



Xerostomia

- Treat dehydration
  - Offer fluids frequently
  - Humidification
  - Spray bottle close to pt
  - Oral swabs (AVOID lemon-glycerin)

Symptoms by Systems

1. ✔ Skin & Mucous Membranes
2. **Respiratory Symptoms**
3. Cardiovascular
4. Gastrointestinal
5. Genitourinary
6. Musculoskeletal
7. Neurologic Symptoms
   - Mental Status

Section 2: Respiratory Symptoms

Respiratory Symptoms

- Dyspnea
  - A subjective sensation of shortness of breath
  - “Air hunger”
- Cough
  - A natural defense of the body to prevent entry of foreign material into the respiratory tract

Causes of Dyspnea

- Major pulmonary causes
  - Obstructive or Restrictive
  - Vascular
  - Interstitial or Alveolar diseases
- Major cardiac causes
  - Myocardial, Valvular, Arrhythmias, Restrictive

Causes of Dyspnea

- Major neuromuscular causes
  - AML, muscular dystrophies, phrenic nerve palsy, poliomyelitis
- Other potential causes
  - GI, Anemia, Pain, Obesity, Fatigue

ELNEC Core Curriculum

Assessment of Dyspnea

- Use *subjective* report
  - Fever? Productive/nonproductive cough? SOB? Infections? Exertional dyspnea? Medication use AND response to meds? Chemical exposures? Tobacco use? Hemoptysis? Weight loss? Pain? Prior thrombosis? Nocturnal dyspnea? Hx of NM disease? Hx of anxiety/depression/trauma/abuse?

Dudgeon, 2010.

Wahls, S. (2012). Causes and evaluation of chronic dyspnea. *American Family Physician, 86*(2), 173-180.

Assessment of Dyspnea

- Clinical assessment
  - Physical exam
    - Fever? Crackles, Clubbing? Wheezing? Barrel chest? Breath sounds decreased or not symmetric? Accessory muscle use? Lower extremity swelling? JVD? Irregular rate/rhythm? Decreased heart sounds? Frequent sighing?
  - Up to 66% pts may achieve diagnosis based on clinical presentation alone
    - Diagnostic tests

Dudgeon, 2010.
Wahls, S. (2012). Causes and evaluation of chronic dyspnea. *American Family Physician, 86*(2), 173-180.

Assessment of Dyspnea

- May lead to identification of a treatable condition
  - Pleural effusion
  - Pneumothorax
  - Anemia
  - Pulmonary Embolism
  - Heart failure
  - Pneumonia

Treatment of Dyspnea

- Treating symptoms or underlying cause
- Pharmacologic treatments
  - Opioids
  - Non-opioids

Papaver Somniferum Poppy

Clemens & Klaschik, 2007;
Dudgeon, 2010

Dyspnea + Cough Medication Interventions

- Opioids
  - PO, SL, SQ, IV, Nebulized
    - Promotes bronchodilation
    - Start low (i.e., 5 mg po q2hr PRN) for naïve pts & pts w/ CO_2 retention
- High dose steroids
    - For obstructive or inflammatory causes
- Antibiotics
- Anxiolytics
- Sedation at end of life may be necessary

Non-productive Cough Medication Interventions

- Non-opioid or opioid antitussives
  - Dextromethorphan
  - Benzonatate
- Inhaled anesthetic
  - Nebulized lidocaine for 10 min q2-6 hrs
  - NPO for 1 hr post-inhaled anesthetic due to risk of aspiration

Managing Dyspnea

- Non-pharmacologic
  - Oxygen if appropriate
  - Counseling
    - Relaxation, Model calm reassurance, Guided imagery, Therapeutic touch
  - Pursed lip breathing
  - Energy conservation
  - Fans +/- Humidity
  - Elevation
  - Other
    - Palliative thoracentesis or paracentesis

Symptoms by Systems

1. ~~Skin & Mucous Membranes~~ ✔
2. ~~Respiratory~~ ✔
3. **Cardiovascular Symptoms**
4. Gastrointestinal
5. Genitourinary
6. Musculoskeletal
7. Neurologic Symptoms
   - Mental Status

Cardiovascular Symptoms

- Hematologic Symptoms
- Edema

Hematologic Symptoms

- Hemorrhage
  - Excessive bleeding
- Clotting
  - Systemic response to disease or medication that initiates coagulation cascade causing clotting

Hematologic Symptoms

- Cytopenias
  - Reduction in bone marrow blood cell components, which can precipitate a systemic response
    - Neutropenia
      - Low white blood cells
    - Thrombocytopenia
      - Low platelets
    - Anemia
      - Low red blood cells
    - Pancytopenia
      - Reduction in all cells

Hematologic Symptoms

- Clotting issues
  - DVT
  - Pulmonary embolism
  - Immune issues
  - Prosthetic heart valve
  - Medication induced
  - Disease induced
  - Treatment related
    - Chemo
    - RT

Hematologic Symptoms

- Bleeding/clotting/production issues
  - Medication induced
  - Disease induced
    - Immunologic processes
  - DIC
  - Erosion of vessels due to tumor
  - Treatment related
    - Chemo
    - RT

Hematologic Assessment

- Medical history
- Review current meds, food, herbal interactions with treatment
- DVT
  - Recent surgery? Immobility? Vascular access devices?
- PE
  - Chest pain? Dyspnea?

Hematologic Assessment

- Review CBC results
  - Low platelet count
    - Petechiae? Epistaxis? Gum bleeding? Sputum? Emesis? Urine or stool? Vaginal bleeding? Ecchymosis? Joint pain? Change in mental status?

DVT/PE interventions

- Anticoagulant therapy
- Monitor other or new medications
- Anti-embolic stockings
- Treat dyspnea
- Treat pain

Low PLT interventions

- If palliative care
  - Bleeding precautions
  - Transfusion of platelets if necessary
- If Hospice
  - Bleeding precautions
  - Treat bleeding with compression
  - Other potential comfort measures

Neutropenic interventions

- Significant efforts to reduce risk of infection to patient
  - Avoid crowds
  - Isolation precautions
  - Wash/peal/cook foods
  - HANDWASHING
  - Avoid visitors with known infections

Anemia interventions

- Transfusion if necessary
- Energy conservation measures
- Medication interventions if necessary

Edema

- Presence of excessive fluid in the intercellular tissues especially in the subcutaneous tissues

Causes of Edema

- Protein deficiency
- Obstruction of venous return
- Renal failure
- Lymphedema
- Ascites of liver failure

Assessing Edema

- Review medical history
- Cause of edema will direct plan
- Any new or changing edema?
- Extremity edema? Pitting? Perfusion? Temperature? Weeping of fluid?
- Ascites?
- SVC Syndrome

Interventions for Edema

- Cause will direct interventions
- Symptomatic relief
  - Peripheral edema
    - Compression stockings
    - Diuretics
    - Meticulous skin care
    - ROM to promote venous return
    - Limb elevation above the heart

Interventions for Edema

- Cause will direct interventions
- Symptomatic relief
  - Ascites
    - Spironolactone
    - Paracentesis
  - Lymphedema
    - Usually not responsive to diuretics
    - May not resolve despite elevation or compression stockings
    - Manual drainage therapies may promote improved QOL in pts not actively dying

Symptoms by Systems

1. ✔ Skin & Mucous Membranes
2. ✔ Respiratory
3. ✔ Cardiovascular
4. **Gastrointestinal Symptoms**
5. Genitourinary
6. Musculoskeletal
7. Neurologic Symptoms
   – Mental Status

GI Symptoms

- Nausea & Vomiting
- Dysphagia
- Hiccups
- Anorexia & Cachexia
- Bowel Incontinence
- Bowel Obstruction
- Constipation
- Diarrhea

Nausea & Vomiting

- Nausea
  - A subjectively perceived, stomach discomfort ranging from stomach awareness to the conscious recognition of the need to vomit
- Vomiting
  - The expelling of stomach contents through the mouth

SOME Causes of N/V

- Physiological
  - Fluid & electrolyte imbalances
  - GI disorders
- Psychological
- Disease related
  - Neurologic disorders
  - Renal failure
  - Chemical
- Treatment related
- Other

Assessment of N/V

- History
  - Timing & Duration
    - Acute – Delayed – Anticipatory
  - Aggravating or alleviating factors
  - Volume & appearance of vomitus
- Physical Examination
  - Oral infection? Abdominal pain, cramping, distention, bowel sounds? Neuro?
- Lab values
- Dehydration

Pharmacologic Tx of N/V

- Anticholinergics
  - Primarily for vestibular or ICP etiologies
  - May help reduce anxiety too
    - scopolamine patch, hydroxyzine
- Antihistamines
  - Primarily for visceral, vestibular, pharyngeal, or ICP causes
  - Also may help in anxiety
    - meclizine, dimenhydrinate

Pharmacologic Tx of N/V

- Prokinetic agent
  - For delayed gastric emptying
    - metoclopramide
- Butyrophenones
  - Opioid-induced nausea
    - haloperidol or droperidol
- Steroids
  - For a variety of causes of N/V
  - Should be a short-term intervention
    - dexamethasone, methylprednisolone

Pharmacologic Tx of N/V

- 5-HT3 antagonists
  - Helpful post-chemotherapy, radiation, post-operatively, or for a variety of disease conditions
    - ondansetron, granisetron
- Substance-P inhibitor
  - Helpful in delayed N/V only
    - aprepitant

Non-pharmacologic Tx of N/V

- Dietary modifications
  - Bland food that pt enjoys
  - Cool or room temp foods
  - Small frequent meals
  - Avoid fatty, greasy, spicy or very sweet foods
  - Slow feeding

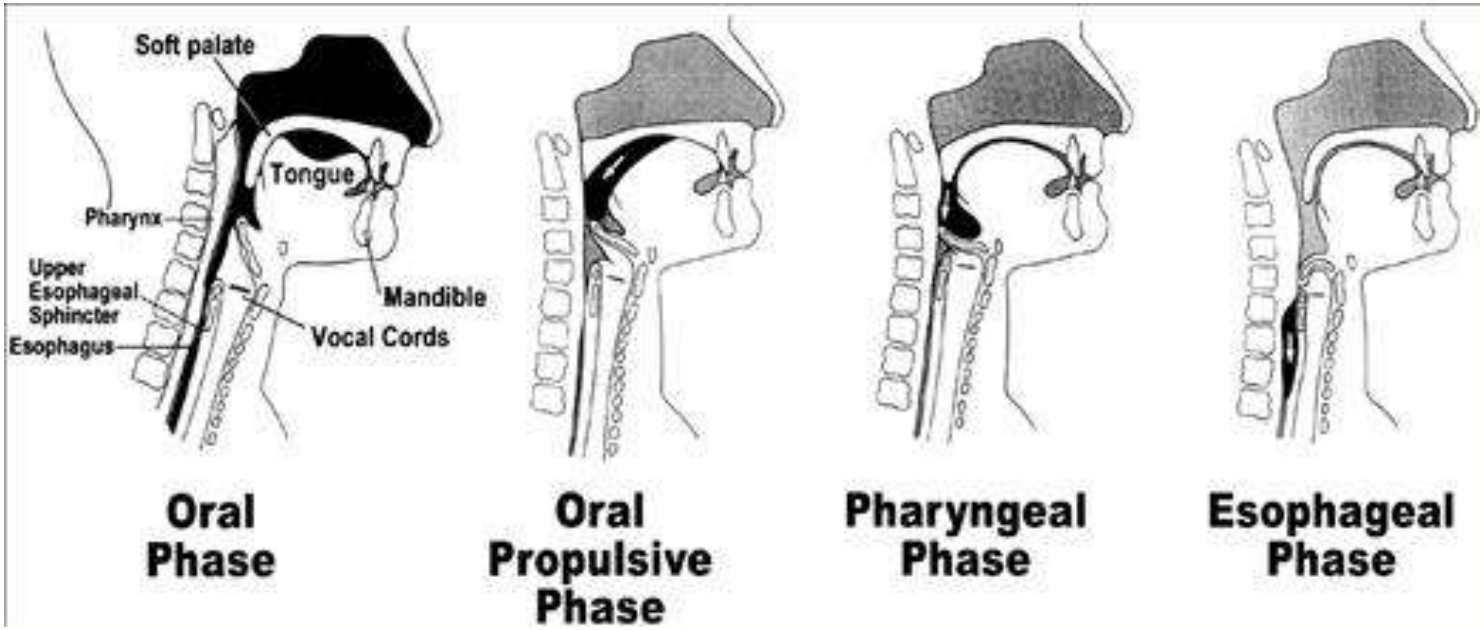
Non-pharmacologic Tx of N/V

- Complimentary therapies
  - Acupressure
  - Ginger, Lavender
  - Fans
  - Cool room
  - Relaxation techniques

Dysphagia

- Dysphagia
  - A subjective awareness of difficulty in swallowing
- Odynophagia
  - Is a report of painful swallowing

Phases of Swallowing



Dysphagia

- Possible causes
  - Obstructive
    - Cancers, other benign strictures of esophageal ring, compression of vessels or mediastinal nodes
  - Motor
    - NM, esophageal stasis, AML, Parkinson's MS, dementia
  - Systemic
    - Scleroderma, inflammation, infections
  - General deconditioning
    - Fatigue, medications

Assessing Dysphagia

- The cause directs the intervention plan
- History
  - Oral care habits?
- Current nutritional status
  - What are the current goals of care?
  - What are the pt/family expectations?
- If accompanied by anorexia, evaluate for disease progression
  - Discuss with team

Odynophagia

- Possible causes
  - Inflammatory process
    - Infection
  - Dry mucous membranes
    - Chemo, RT, anticholinergic or other meds
  - Corrosive esophagitis
  - Bronchoesophageal fistula with reports of "coughing after ingesting fluids"

Assessing Odynophagia

- The cause directs the intervention plan
- History
  - Onset, duration
  - I&O
  - Chemo, RT, DM AIDS
  - Medications
- Physical
  - Assess oral cavity
    - Look at tongue, gingiva, mucosa, lips, saliva
    - Lesions or patches?

Swallowing Interventions

- Treat the underlying cause
  - Infection, mucositis, medications, etc.
  - Consider steroids if obstruction
- Speech therapy consultation
  - Swallow study
- Alter nutritional offerings as appropriate
- Artificial feeding may need to be considered
  - Consider disease trajectory

Hiccoughs

- An involuntary contraction of the diaphragm, followed by rapid closure of the glottis

Anorexia & Cachexia

- Anorexia
  - Loss of appetite or inability to take in nutrition
- Cachexia
  - Weight loss & wasting due to inadequate intake of nutrition

Anorexia Causes

- GI causes
  - Constipation, N/V, Altered Mucous Membranes, Impaired gastric emptying, Change in food taste/smells
- Altered mental status
- Medications
  - Opioids, antibiotics
- Fatigue
- RT/Chemo
- Pain

Cachexia Causes

- ↑ nutritional losses r/t anorexia
- ↑ nutritional losses assoc. w/
  - Bleeding
  - Diarrhea
  - Malabsorption
- Metabolic disorders
  - Abnormal protein metabolism
  - Abnormal carbohydrate metabolism
  - Abnormal lipid metabolism
  - Fluid & electrolyte imbalance

Assessing Anorexia/Cachexia

- History
  - Appetite
  - Associated symptoms
  - Pt food likes/dislikes
  - Family impressions
  - Medications
  - Bowel habits

Assessing Anorexia/Cachexia

- Physical examination
  - Oral exam
  - Abdominal exam
    - Stool frequency & consistency
    - Impaction?
    - Bowel sounds
  - S/S metabolic disorders
    - Hypoglycemia, hypernatremia, hypokalemia, dehydration, hypercalcemia
  - Pt/Family knowledge

Treating Anorexia/Cachexia

- Dietary consultation
- Medications
- Parenteral/enteral nutrition
- Odor control
- Counseling

Earthman et al., 2002; MacDonald, 2003; Wholihan & Kemp, 2010

Anorexia/Cachexia Interventions

- Dietician referral
  - Nutritional supplements as appropriate
- Encourage small frequent meals
- Avoid strong odors
- Offer foods pt prefers
- Give permission to eat less
- Treat underlying cause
  - Manage N/V

Anorexia/Cachexia Interventions

- Enteral feedings
  - GI function must be adequate
  - Major decision if EOL
- Parenteral nutrition
  - Only if indicated
  - Very rare at EOL

Anorexia/Cachexia Interventions

- Pharmacologic interventions
  - Metoclopramide
  - Dexamethasone
  - Megestrol acetate
  - Dronabinol
  - Alcohol
  - Vitamins

Bowel Incontinence

- The inability to control bowel movements

Possible causes of Bowel Incontinence

- Obstruction
- Diarrhea
- Sphincter damage
- Sensory or motor dysfunction
- Changes to sphincter tone
- Dementia
- Impaired mobility

Assessing Bowel Incontinence

- History
  - Urgency? Awareness? Frequency?
  - Loose or formed?
  - Impaction?
- Physical examination
  - Mobility?
  - Neurologic & sensory function?
  - Skin integrity

Interventions: Bowel Incont.

- Bowel regimen review/implementation
- Consider constipating medication
- Disimpact PRN
- Modify diet if needed/tolerated
- Maintain skin integrity
- Utilize incontinence products
- Alter environment
  - Place close to toileting facilities
  - Place on toilet after eating

Constipation

- Difficulty in passing stools or an incomplete or infrequent passage of hard stools

Causes of Constipation

- Obstruction
- Medications
  - Opioids, TCA, 5-HT3 antagonists, antacids, diuretics, iron, VCR, HTN-meds, anticonvulsants, NSAIDs, anticholinergics or drugs with these effects
- Metabolic disorder
  - ↑ calcium, ↓ potassium, hypothyroidism

Causes of Constipation

- Diseases
  - Colitis, diverticular disease
- Dietary problems
  - Low fiber intake, inadequate fluid intake, dehydration
- Neurologic impairment
  - Confusion, depression, sedation

Causes of Constipation

- Weakness, inactivity, immobility
- Pain
- Changes in environment
  - Decreased privacy
  - Unfamiliar facilities
  - Reluctant to ask for help
    - Embarrassment
    - Loss of independence
    - Do not want to be a burden

Assessment of Constipation

- History taking from pt/family/staff
  - Bowel history
    - Last 2-3 BMs
    - Amount, color, consistency
    - Straining or pain during defecation
    - Current bowel regimen, if any
  - Fluid & food intake
  - N/V
  - Flatus?
- Medication review

Assessment of Constipation

- Physical examination
  - Abdominal assessment
    - Distention, tenderness, fullness or bloating, bowel sounds, palpable masses
  - Digital rectal exam
    - Hemorrhoids, rectal fissures, obstruction
  - Mobility assessment

Constipation Interventions

- Prevention is key!
- Rule out impaction/obstruction
  - Pre-medicate +/- pain/anxiety med
- Non-pharmacologic interventions
  - Increase fluid intake
  - Encourage high-fiber foods
  - Increase activity
  - ASK what has been effective in the past
  - Comfort measures if pain
    - Warm sitz baths

Constipation Med Interventions

- Stool softeners
- Stimulant laxatives
  - Senna, biscodyl
- Osmotic laxatives
  - Lactulose, sorbitol
- Escalate to suppository or enema
  - Glycerin, biscodyl suppository
  - Sodisum bisphosphonate enema
- Consider changing meds that may be causing the consipation

Bowel Obstruction

- Occlusion of the lumen of the intestine, delaying or preventing the normal passage of feces

Causes of Bowel Obstruction

- External compression of bowel
- Internal compression
- Ischemic or inflammatory process
- Fecal blockage
- Metabolic disorder
- Medications
- Often combination of causes

Assessment - Obstruction

- History
  - Predisposing factors
    - Cancer? Pancreatitis?
  - Habits
  - Medication use
  - Pain
    - Location? Duration? Frequency? Cramping? Aggravating/alleviating factors?
  - N/V

Assessment - Obstruction

- Physical examination
  - Distention
  - Bowel sounds
  - Constipation or inability to pass flatus
  - Diarrhea
  - Fever +/- chills

Interventions - Obstruction

- Disimpact PRN
- Surgery may be needed
- Medication for pain
- STOP stimulant laxatives
- Treat N/V
- NG tube for gastric decompression PRN
- Increase oral fluids, if tolerated

Diarrhea

- The frequent passage of loose, unformed, liquid stool

Possible Causes - Diarrhea

- Laxative overuse
- Side effect of other med
- RT +/- chemo
- Food intolerance
- Tube feedings
- Malnutrition
- Fecal impaction
- Partial obstruction

Possible Causes - Diarrhea

- Surgical procedures
  - Gastrectomy, ileal resection, colectomy
- Infection
  - Especially in the immune compromised
- Malignancies
- GI disorders
  - Crohn's disease, IBD, diverticulitis, ulcerative colitis, pancreatic insufficiency
- Chronic disorders
  - DM & hyperthyroidism

Assessment of Diarrhea

- History
  - Stool appearance? Frequency? Recent chemo/RT? Medication use?
- Physical examination
  - Abdominal assessment
  - Nature & consistency of stool
  - S/S dehydration
  - Skin integrity

Treatment of Diarrhea

- Increase fluid intake
- Clear liquids→ + light carbs→ advance as tolerated→ small frequent meals
- Disimpact PRN
- Discontinue laxatives
- Maintain skin integrity

Treatment of Diarrhea

- Antidiarrheals
  - Loperamide
  - Diphenoxylate + atropine
  - Opioids if pt not already taking
- Pancreatic insufficiency
  - Pancreatic enzymes with meals
  - Add loperamide to slow peristalsis

Symptoms by Systems

1. ✔ Skin & Mucous Membranes
2. ✔ Respiratory
3. ✔ Cardiovascular
4. ✔ Gastrointestinal
5. **Genitourinary Symptoms**
6. Musculoskeletal
7. Neurologic Symptoms
   - Mental Status

GU Symptoms

- Bladder Spasm
- Urinary Retention
- Urinary Incontinence

Bladder Spasms

- Intermittent, painful contractions of the detrusor muscle, leading to suprapubic pain & urgency

Bladder Spasms - Causes

- Indwelling catheter +/- issues associate with catheter
- UTI
- Tumor
- RT or chemo cystitis
- Urethral obstruction
- Neurologic disorders
  - Stroke, spinal cord lesions, MS

Bladder Spasms - Assessing

- Medical causes
  - Bladder or prostate CA history
  - Neurologic disorder
  - Recent RT or chemo
- S/S UTI
- Indwelling catheter function
- Hematuria
- Food & fluid intake
- Fecal impaction?

Bladder Spasms - Interventions

- Underlying cause with guide treatment
- Indwelling catheter
  - Reassess the need for a Foley
  - Change to appropriate size
  - Partially deflate balloon
  - Gently irrigate with sterile NS
  - May need continuous irrigation if R/T clots

Bladder Spasms - Interventions

- UTI
  - Antibiotics
  - Reassess need for Foley
  - Change catheter if catheterized
  - Increase oral fluid intake if possible
- Non-pharmacologic measures
  - Assist to void frequently (q2-4 hrs)
  - Sit or stand to void
  - Teach relaxation
  - Disimpact PRN

Bladder Spasms - Interventions

- Medication interventions
  - Antispasmodic drugs
    - oxybutynin
  - NSAIDs
  - Hycoscyamine
  - B&O suppositories (belladonna & opium)

Urinary Incontinence

- The inability to control urination

Urinary Incontinence

- May be caused by:
  - Urge incontinence
  - Stress incontinence
  - Overflow incontinence
  - Functional incontinence
- Metabolic disturbance
  - Hypercalcemia
- Fistula

Urinary Incontinence

- Atonic bladder
  - No awareness of full bladder or urge
    - Diabetic neuropathy
    - Spinal cord lesion or compression
    - Neurologic dysfuntion
- Medications
  - Diuretics
  - Sedatives
  - Anticholinergics
  - Antiparkinsonism meds

Assessing Urinary Retention or Incontinence

- History
  - Meds? Length & character of symptoms? Recent treatments for cancer?
  - Night-time urination? Frequency? Leakage? Distention? Discomfort? Urgency? Amount of void? Impaction? Mobility? ADL ability? Cognitive level? Depression?

Assessing Urinary Retention or Incontinence

- Physical examination
  - Bladder distention? Perineal swelling? Impaction?
  - Basic neuro-exam including sensory & motor deficits
  - Signs of hypercalcemia
  - Skin assessment
  - Functional assessment
    - Ability to dress/undress self
    - Aphasia or dysphasia

Interventions- Retention/Incont

- Review meds
- Establish regular voiding schedule
- Alter environment
  - Move closer to toilet
  - Utilize Bedside Commode, urinal or bedpan
  - Assure modesty
  - Maintain dignity
- Decrease fluids in the evening/night
- Utilize incontinence supplies

Interventions- Retention/Incont

- Urge incontinence
  - Oxybutynin or tolterodine
  - Treat UTI & give urinary analgesics
- Stress incontinence
  - Teach pelvic floor muscle exercises
  - Voiding schedule
  - Pessary or penile clamp
  - Anticholinergics at bedtime

Interventions- Retention/Incont

- Functional incontinence
  - Depends on the cause
  - May require indwelling catheter
- Incontinence r/t fistulas
  - Establish voiding schedules, catheterization, & urinary diversion (if not EOL)

Symptoms by Systems

1. ✔ Skin & Mucous Membranes
2. ✔ Respiratory
3. ✔ Cardiovascular
4. ✔ Gastrointestinal
5. ✔ Genitourinary
6. **Musculoskeletal Symptoms**
7. Neurologic Symptoms
   - Mental Status

MS Symptoms

- Extrapyramidal Symptoms
- Myoclonus
- Impaired Mobility / Weakness

Extrapyramidal Symptoms

- Involuntary movements, hyperkinetic (*akathisia*) or hypokinetic (*dystonia*); tardive dyskinesia is a late-effect, which may not respond to reversal therapies

EPS - Akathisia

- A movement disorder characterized by a feeling of inner restlessness & a compelling need to be in constant motion, as well as by actions such as
  - Rocking while standing or sitting
  - Lifting the feet as if marching on the spot
  - Crossing/uncrossing the legs while sitting

EPS - Dystonia

- A disorder characterized by involuntary muscle contractions that cause slow repetitive movements or abnormal postures.
  - Movements may be painful
  - May have a tremor or other neurologic features
  - May affect only one muscle, groups of muscles, or muscles throughout the body

Causes of EPS

- Iatrogenic drug-induced
  - Neuroleptics
  - Phenothiazines
  - Butyrophenones
  - Clozapine
  - Metoclopramide
  - Opioids
- Parkinson's disease
- Cerebral lesions

Assessing EPS

- Medical history
- Medication review
- Safety assessment
  - ADLs, Ambulation
- Anxiety of pt/family

Myoclonus

- Twitching or brief spasm of a muscle or muscle group

Causes of Myoclonus

- High dose opioid therapy
- Metabolic derangement
  - uremia
- Inflammatory or degenerative CNS diseases
  - End-stage Alzheimer's disease
  - Creutzfeldt-Jakob
  - Encephalitis
- Hypercalcemia due to bone mets

Assessing Myoclonus

- Onset, duration & impact on functional status
- Sleep/rest interruption
- Anxiety of pt/family
- Pt/family disease understanding
- Safety
- Potential causes
  - Change medications if possible

Myoclonus - Interventions

- The cause will direct the intervention
- Non-pharmacologic interventions
  - Local heat
  - Massage
  - Relaxation
  - EDUCATION

Myoclonus - Interventions

- Muscle relaxants may benefit
  - Diazepam
  - Baclofen
  - Cyclobenzaprine
  - Quinine sulfate if bedtime cramps only
- Treat hypercalcemia if appropriate
  - Pamidronate or zoledronic
  - Supplement hydration
- Treat symptoms
  - Clonanzepam
  - Valproic acid

Impaired Mobility

- A loss or abnormality of function due to physiological, anatomical, psychological or fatigue factors

Weakness

- A subjective term to indicate a lack of strength as compared to what the patient feels is normal

Symptoms by Systems

1. ✔ Skin & Mucous Membranes
2. ✔ Respiratory
3. ✔ Cardiovascular
4. ✔ Gastrointestinal
5. ✔ Genitourinary
6. ✔ Musculoskeletal Symptoms
7. **Neurologic Symptoms**

Neurologic Symptoms

- Altered Mental Status
- Aphasia
- Seizures
- Paresthesia & Neuropathy
- Fatigue

Altered Mental Status

- Confusion
- Delirium
- Terminal Restlessness
- Agitation

Altered Mental Status

- Confusion
  - Clouding of consciousness, memory impairment
  - Change in cognition, impaired perceptions, & emotional disturbances
  - May be accompanied by ↓ LOC, disorientation & misperceptions

Altered Mental Status

- Delirium
  - Exaggerated emotions or memories w/ aggression, paranoia or displays of terror
  - Disturbance of consciousness w/ reduced ability to focus
  - Disturbance develops over a short period of time & tends to fluctuate over the course of the day

Altered Mental Status

- Terminal Restlessness
  - Excessive restlessness, ↑ mental & physical activity
  - Frequent, non-purposeful motor activity, inability to concentrate or relax, disturbances in sleep/rest patterns, potential for progression to agitation

Altered Mental Status

- Agitation
  - Accompanies delirium *
  - Clouding of consciousness, memory impairment
  - Change in cognition, impaired perceptions, & emotional disturbances
  - May be accompanied by ↓ LOC, disorientation & misperceptions

* Heidrich & English, 2010

Some Causes for AMS

- Infection
  - UTI, respiratory, septicemia
- Medications
  - Opioids, phenothiazines, benzodiazepines, anticholinergics, beta-blockers, diuretics, dopaminergics, steroids, atropine, phenytoin, H_2-antagonists, digoxin toxicity
- Hypoxemia
- Bladder or bowel distention

Some Causes for AMS

- Unrelieved pain, discomfort or other sxn
- Cardiac or respiratory failure
- Brain cancer
- Nicotine, alcohol or drug withdrawal
- Extreme, uncontrolled anxiety
- Metabolic disturbances
  - Calcium, glucose, sodium, urea nitrogen

Assessment of AMS

- Physical exam
- History
- Spiritual distress
- Other symptoms

Heidrich & English, 2010

Treatment

- Pharmacologic
- Evaluate medications
- Reorientation
- Relaxation/distraction
- Hydration

Aphasia

- Absence of impairment of ability to communicate through speech, writing or signs

Aphasia

- Causes
- Observation & reporting
- Nursing interventions

Seizures

- Large numbers of neurons discharging abnormally
  - Focal / Partial
    - Involving specific regions of the brain with symptoms reflecting the location of the disturbance
  - Primary / Generalized
    - Involving large parts of the brain

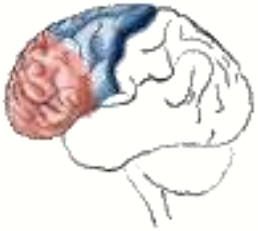
Seizures

- Definition
- Causes
  - Infections
  - Trauma
  - HIV
  - Tumors
  - Medications
  - Metabolic imbalances

Assessing Seizures

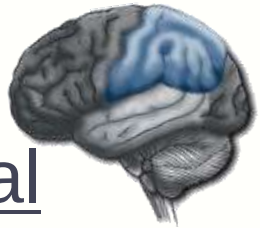
- Manifestations
  - Aura
  - Mental status changes
  - Sensory changes
- Physical exam
- Labs

Partial Seizures



Frontal

Behavior changes
Speech interruptions
Motor expressions



Parietal

Somatosensory auras
Motor/Sensory expressions
Kim et al., 2004.

Temporal

Olfactory auras
Chen, 2003.

Occipital

Visual hallucinations, visual illusions, blindness/field defect, dizziness
Lee et al., 2005.

Seizures

- Triggers
  - CNS Neoplasms
  - Metabolic Disturbances
  - Cerebral infarct or hemorrhage
  - Infections
  - Treatments
  - Sleep Deprivation
  - Weaning steroids
- Observation & reporting

Managing Seizures

- Create a safe environment
- Anticonvulsant treatments
  - Levetiracetam
  - Phenytoin
  - Phenobarbital (preferred at EOL)
  - Crisis relief
    - Benzodiazepines (Lorazepam, diazepam)

Paresthesia & Neuropathy

- Paresthesia
  - A sensation of numbness, prickling or tingling
  - Heightened sensitivity
- Neuropathy
  - Any disease of the nerves
  - May include sensory loss, muscle weakness and atrophy & ↓ DTR

Paresthesia & Neuropathy

- Causes
- Observation & reporting
- Nursing interventions

Paresthesia & Neuropathy

- Causes
- Observation & reporting
- Nursing interventions

Fatigue

- A subjective sense of exhaustion with decreased motivation, ability to do activities, and a decreased capacity for physical or mental activity

Lethargy

- Advanced fatigue
- Abnormal drowsiness or stupor

Cluster of Fatigue Symptoms

- Causes
- Observation & reporting
- Nursing interventions

Symptom Management

Wrap up

Photo by Bastienne Schmidt and Philippe Cheng

Psychosocial Issues

- Delirium/agitation/confusion
- Depression
- Anxiety
- PTSD

Depression

- Ranges from sadness to suicidal
- Often unrecognized and undertreated
- Occurs in 25-77% of terminally ill
- Distinguish normal vs. abnormal
- Should not be dismissed

Pasacreta et al., 2010

Causes of Depression

- Disease related
- Psychological
- Medication related
- Treatment related

Assessment of Depression

- Situational factors/symptoms
- Previous psychiatric history
- Other factors
  - Lack of support system
  - Pain

Pasacreta et al., 2010

Suicide

- Risk factors for suicide
- Suicide plan?
- Asking an important question
- Interdisciplinary care

Nonpharmacologic Interventions

- Promote autonomy
- Grief counseling
- Draw on strengths
- Use cognitive strategies

Anxiety

- Subjective feeling of apprehension
- Often without specific cause
- Categories of mild, moderate, severe

Causes of Anxiety

- Medications and substances
- Medical complications
- Uncertainty

Pasacreta et al., 2010

Assessing Anxiety

- Physical symptoms
- Cognitive symptoms
- Questions for assessment

APA, 1994

Anxiety

Pharmacologic Interventions

- Antidepressants
- Benzodiazepines/anticonvulsants
- Neuroleptics
- Non-benzodiazepines

Nonpharmacologic Interventions

- Empathetic listening
- Assurance and support
- Concrete information/warning
- Relaxation/imagery

PTSD

- PTSD is characterized by persistent/severe reaction to a traumatic event
  - Combat
  - Terrorist attacks
  - Sexual or physical assault
  - Accidents
  - National/natural disasters

PTSD

- Symptom clusters
  - Avoidance
  - Re-experiencing the event
  - Hyperarousal
- Occurs in about 30% of Veterans who were in war zones
- Implications for EOL

VA Advisory Council, 2009

PTSD & EOL Care

- Illness/death can be a PTSD activator
- Challenges social ties
- May affect staff-Veteran relationships
- Delirium or flashbacks?
- Medication

- GOAL
  - Reduce PTSD symptoms & create an emotionally safe environment

Veterans Advisory Council, 2009

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Conclusion

- Multiple symptoms are common
- Coordination of care with the interdisciplinary team
- Use drug and nondrug treatment
- Patient/family teaching and support