

# Dyspnea and Delirium



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# Acknowledgement



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# Objectives/Acknowledgement



- List three common causes of dyspnea and delirium in the dying patient.
- Review drug and non-drug treatments for dyspnea and delirium.
- Describe ethical principles when treating symptoms in the dying patient.

# Disclaimer



While this program provides educational information, this information is not medical advice. Health care providers should exercise their own independent clinical judgment. Some of the information cites the use of a product in a dosage, for an indication, or in a manner other than that recommended in the product labeling.

Accordingly, the official prescribing information should be consulted before any such product is used.

# Case Question



- You are caring for a hospitalized man dying from lung cancer; currently on no opioids. The patient is sitting up, sweating, unable to talk or eat due to dyspnea. The goals of care have been established as symptom relief for this patient.
  
- Write an initial drug order for treatment of severe dyspnea in this patient?

# Dyspnea -- Definition



- A subjective sensation of difficulty breathing
- An abnormally uncomfortable awareness of breathing

# Dyspnea -- Causes



## Obstructive airway process

tracheal obstruction  
asthma  
COPD

## Parenchymal / pleural disease

aspiration  
diffuse primary or metastatic  
cancer  
lymphangitic metastases  
pneumonia  
pleural effusion  
pulmonary drug reaction  
radiation pneumonitis

# Dyspnea -- Causes



## Vascular disease

pulmonary embolus  
superior vena cava  
obstruction  
pulmonary vascular tumor  
emboli

## Cardiac disease

congestive heart failure  
pericardial effusion--  
malignant / other  
arrhythmia  
myocardial ischemia

# Dyspnea -- Causes



## Chest wall/ respiratory muscles

## Other

primary neurological disease  
(e.g. ALS)  
malnutrition

anxiety  
anemia  
constipation

# Dyspnea -- Assessment



- How common is it?
  - 50-70% in dying cancer patients
  - 24% of cancer patients w/no cardiopulmonary disease
  - 61% dying from cardiac disease
  - 56-94% with COPD and restrictive lung disease
- *Note: In symptomatic COPD, dyspnea ratings are better predictors of general health status than physiologic measurements*

# Dyspnea -- Assessment



- Patient rating: Numeric scale (1-10)
- Physical signs: sitting up, accessory muscles, nasal flaring
- ADL's: impairment of eating, talking, exercise tolerance
- Lab/X-Ray:
  - Assess the overall goals of care—this will help you decide what if any level of testing is necessary to establish an etiology. If the goal is purely symptom relief until death, and death is felt to be imminent, then no or minimal diagnostics are necessary.

# Dyspnea -- Treatment



## ■ Non-Drug Treatments

- Positioning—sitting up
- Open window; Bedside fan
- Humidified air
- Noninvasive positive pressure mask
- Pulmonary rehab; Relaxation training
- Thoracentesis
- Radiation therapy
- Debulking Surgery
- Complimentary Medicine

# Dyspnea -- Treatment



- Drug Therapy—mainstay of symptomatic treatment is opioids
  - Adjuvant to therapies aimed at reversing etiology or when etiology cannot be reversed
  - Opioids—best drug to alleviate symptom of dyspnea
  - Usually small doses suffice, 5-15 mg of oral morphine in opioid naïve patients.
    - SQ or IV opioids for severe dyspnea or when patients are unable to swallow; 1-5 mg morphine q 10 minutes.

# Dyspnea -- Treatment



- Benzodiazepines may help relieve associated anxiety. (e.g. lorazepam)
  - Not first-line therapy but can be helpful adjuvant

**Note:** when combined with opioids they will produce additive sedative/ CNS depressant effects which may or may not be desirable.

- Other drugs which can be added
  - Cough suppressants
  - Steroids
  - Sedatives
  - Inhaled local anesthetics

# Dyspnea -- Treatment



- Oxygen
  - Think of Oxygen as any other drug
    - not all dyspneic patients benefit
  - Pulse oximetry will generally not be of benefit in decision-making for treating terminal dyspnea
  - Masks and positive pressure devices are poorly tolerated; use nasal cannula
  - Near the end of life, trial of 2-4 liters O<sub>2</sub>
  - For continued dyspnea use drug therapy (e.g. opioids) rather than using higher flow rates or face mask.

# Treating dyspnea and the “double effect”



The fear of using drug therapy to ease the distress of terminal dyspnea often leads to inadequate symptom control. Health professionals and the public often mistakenly equate use of drugs to ease terminal dyspnea with euthanasia or assisted suicide.

- Ethically, the use of these drugs are appropriate and essential, as long as **the intent** is to relieve distress, rather than shorten life.
- **There is no justification for withholding symptomatic treatment to a dying patient out of fear of potential respiratory depression.**
- Understanding the patient's wishes for symptom control, and good communication with both family and other caregivers (e.g. nursing staff) regarding why drugs to relieve distressing dyspnea are administered, is essential to avoid misunderstanding.

# Case Question



- You are caring for a hospitalized man dying from lung cancer; currently on no opioids. The patient is sitting up, sweating, unable to talk or eat due to dyspnea. The goals of care have been established as symptom relief for this patient.
  
- What is your initial order to treat this patient's severe dyspnea?

# Delirium



# Delirium -- Definition



*An acute, altered level of consciousness (arousal) associated with ...*

- Reduced attention and memory
- Perceptual disturbances—delusions and hallucinations
- Incoherent speech
- Altered sleep-wake cycles

# Delirium -- Spectrum



- Hyperactive Delirium
  - Agitated, picking at clothes and bed covers, rambling and loud incoherent speech
- Hypoactive Delirium
  - Quiet, sleepy, little spontaneous movement, soft incoherent speech
  - More common than hyperactive delirium but is often overlooked since patients are not “causing problems”

# Differential Diagnosis



- **Dementia**
  - Chronic and progressive loss of intellectual (executive) function in setting of normal state of arousal/level of consciousness.
- **Psychosis**
  - Relapsing and remitting hallucinations and delusions with a normal state of arousal/level of consciousness.

# Delirium -- Common Causes



- Drugs, Drugs, Drugs!!!
  - Anti-cholinergics
    - *Anti-depressants, anti-secretory agents, anti-emetics, etc.*
  - Benzodiazepines
  - Opioids
  - Steroids
  - NSAIDs
  - Alcohol/Illicit drugs
  - Others

# Delirium -- Common Causes



- Infections: UTI, pneumonia, sepsis
- CNS pathology: mets, bleed, infection
- Sleep deprivation
- Drug withdrawal: alcohol, benzo's, opioids
- Metabolic:
  - Hypercalcemia, hyper- or hypo-natremia, hypercapnea
  - Hypoglycemia, hypoxia
  - Dehydration, uremia, hepatic encephalopathy

# Delirium -- Common Causes (cont)



- **Imminent death**
  - Approximately 80% of patients will exhibit a hypoactive or hyperactive delirium in the days leading up to death.

# Delirium -- Assessment



- Use a bedside mini-mental test.
- Determine if the patient is in danger of hurting themselves or others.
- Review the medication history—this is typically the most common and easily reversed problem.
- Formal assessment tools are available, such as CAM

# Delirium -- Assessment



- **Confusion Assessment Method (CAM)**
  - Validated assessment tool to help distinguish between delirium and dementia
  - Looks at different aspects of patient's mental status to evaluate for delirium
  - CAM has been adapted for different settings, such as the ICU
  - Features evaluated to diagnose delirium include:

Inouye, SK et al. Clarifying confusion: The confusion assessment method. *Annals of Internal Medicine* 1990. 12:941-48.

# Delirium -- Assessment



- Assess the overall goals of care—this will help you decide what if any level of testing is necessary to establish an etiology.
- If the goal is purely symptom relief until death, and death is felt to be imminent, then no or minimal diagnostics are necessary.

# Delirium -- Treatment



- Non-Drug Treatments
  - A quiet, well lit room
  - Have a family member present to relieve anxiety
  - Avoid physical restraints
  - Re-hydration—in selected cases may be of benefit.

# Delirium -- Treatment



- Drug Therapy—the primary drug class for terminal delirium are the antipsychotics (e.g. haloperidol).
  - Although benzodiazepines are commonly used, they may lead to paradoxical worsening of the delirium, especially in the elderly.

# Delirium -- Treatment



- **Antipsychotics—a.k.a. neuroleptics**
  - For short-term use, there is no benefit of using newer (atypical) vs. older drugs.
  - Haloperidol or Chlorpromazine are readily available, inexpensive and easy to administer.
  - Dosing is similar to opioids for pain—give enough to reduce the target symptom, there is no maximum dose.
    - Starting dose of Haloperidol is 1-2 mg; can be given every hour as needed to reduce symptoms until the patient has stabilized, then converted to a dose given every 6-12 hours.

# Delirium -- Treatment



- Haloperidol
  - Many possible routes of administration
  - Comparatively low propensity for sedation or hypotension
  - Few active metabolites
  - Limited anticholinergic effects

# Delirium -- Treatment



- Benzodiazepines
  - Use cautiously; watch for paradoxical worsening
  - Additive CNS depressant effects with opioids
  - Use when patient not controlled with antipsychotics alone
  - Use as first agent for delirium from EtOH withdrawal
  - Lorazepam is preferred agent
    - Rapid onset
    - Shorter duration of action
    - Low risk of accumulation
    - No major active metabolites

# Learning Points



List 3 new things you learned from this presentation.

- 1.
- 2.
- 3.

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