Cough and Dyspnea in Serious Illness

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Objectives

- Review cough and dyspnea, including symptom progression during illness trajectories
- Discuss cough and dyspnea etiologies and associated treatment options
- Highlight education and management of cough and dyspnea during advanced illnesses
Cough

- Explosive expiration, consciously or via reflex response
- Defense mechanism
- Debilitating
  - Sleeplessness, fatigue, pain, fractures, social impairments, incontinence
- Chronic cough lasts > 8 weeks

**Dry Cough**
- No sputum production

**Productive Cough**
- Cough with sputum raised

**Hemoptysis**
- Sputum contains blood

**Massive Hemoptysis**
- Expectoration of 100-600 mL blood
Cough: Patient History

- Duration
- Type
- Triggers
- Timing Pattern
- Severity
- QOL Impact
- Past Medical History
- Heart Failure
Cough: Non-Malignant Causes

**Acute**
- Laryngitis or Bronchitis
- Aspiration
- Infections
- COPD
- Environmental Irritants

**Chronic**
- Medications
- Bronchitis
- GERD
- Heart Failure
- Lung Disease
- Smoking
Cough: Malignant Disease

- Malignancies of the airways, lungs, pleura, and mediastinum
- Metastases to the thorax
- Present in ~90% of patients with advanced lung or head and neck cancers
- Direct and indirect causes
Cough: Ineffective Swallowing

- Multiple attempts to clear secretions
- Inability to coordinate effective swallowing
- Indicators: Drooling, coughing when eating/drinking
- Bedside swallowing evaluation
  - Chewing, swallowing, breathing
- Goals of care
Cough: Nonpharmacologic Treatment

Breathing Exercises

Suppression Techniques ↔ Linctus
Cough: Mild Symptoms

- Nonpharmacologic therapies
- Peripherally acting antitussives

**Demulcents**
- Increased saliva and swallowing
- Protective barrier
- Examples: pectin, glycerin

**Benzonatate**
- Anesthetizes vagal stretch receptors
- 100-200mg po tid prn cough
- Limited data

**Inhaled Local Anesthetics**
- Suppresses irritant induced cough
- Nebulizer
- Higher doses can cause constriction
- Eating precautions

**Miscellaneous**
- Leukotriene receptor antagonists
- Menthol
Cough: Moderate to Severe Symptoms

- Nonpharmacologic therapies
- Centrally acting antitussives

**Opioids**
- Mainstay
- Routes, formulations, frequency
- Anticholinergic potential

**Gabapentin, Pregabalin**
- GABA analogs
- Gradual dose escalation
- Sedation
- Nonspecific evidence

**Combination Therapies & Adjuvants**
- Adverse effects
- Start sequentially

**Dextromethorphan**
- Mixed data
- Non-productive cough
- Combination products available
Cough: Pearls & Education
Dyspnea

- Subjective breathing discomfort
  - Air hunger, increased breathing effort, chest tightness, rapid breathing, suffocation
- Multidimensional
- Commonly experienced in end of life
  - Cancer, AIDS, heart disease, COPD, renal disease
- Psychologic factors
- Clinical characteristic
Dyspnea: Management

- Goal: Reduce distress
- Treatment of underlying disease
- Nonpharmacologic Interventions
  - Oxygen
  - Opioids
  - Anxiolytics
  - Acupuncture
  - Palliative Sedation
## Dyspnea: Nonpharmacologic Measures

<table>
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<tr>
<th>Relaxation</th>
<th>Activity Modification</th>
<th>Air Movement</th>
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<tr>
<td>· Relaxation techniques</td>
<td>· Restroom aids</td>
<td>· Fan</td>
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<tr>
<td>· Psychosocial support</td>
<td>· Wheelchairs</td>
<td>· Open Window</td>
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Dyspnea: Pharmacologic Measures

- In combination with nonpharmacologic measures

**Opioids: Naïve Patients**
- Morphine 5mg
- Titration
- Routes
- Schedule

**Opioids: Tolerant Patients**
- Calculate total daily dose
- Dose increase
- Breakthrough dose

**Anxiolytics***
- Benzodiazepines
- Co-prescribed with opioids

**Uncertain Benefit**
- Cannabis
- Nebulized Opioids
- Helium/Oxygen
- Promethazine

*Dyspnea-associated anxiety*
Dyspnea: Pearls & Education
Thank you
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References


References


- Dudgeon D. Assessment and management of dyspnea in palliative. In: *UpToDate*, Post TW (Ed), UpToDate, Waltham, MA. Accessed July 2022.