How to Treat Dyspnea, Cough, and Respiratory Secretions in Hospice

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  • MNHPC Conference 2018 “Providing Access for All”  
  • April 10, 2018

Disclosures

All planners, presenters, and authors have disclosed relevant relationships with commercial interests and have no conflicts of interest to report.

• I have no financial conflict of interest in presenting this information.
• All treatment recommendations are based on specialty guidelines, community standard of practice, and personal experience. Treatments are NOT FDA approved.

Dyspnea

• Described as  
  • A sensation of difficulty breathing, taking a breath, “shortness of breath”  
• Subjective, often associated with anxiety
• Causes  
  • Airway obstruction  
  • Lung space infiltration (edema, infection, tumor)  
  • Alveolar disease (barrier to oxygen absorption)  
  • Chest wall restriction, pain  
  • Anemia  
  • COPD  
  • Urinary retention, constipation  
  • High metabolic demand  
  • Anxiety
Assessment

• Is there fluid overload?
• Is oxygen system working?
• Is there uncontrolled pain, anxiety?
• Is there uncontrolled constipation, urinary retention?
• Does the patient request hospital testing and treatment?

Non medication treatments

• Energy conservation
• Reposition, sit up
• Lying on one side (good lung down or bad lung down?)
• Pain control
• Fan
• Calm, comforting environment
• Stop IV fluids

Treat the underlying disease process

• COPD
  • Steroids
  • Bronchodilators
  • Oxygen
• CHF
  • Diuretics
• Infection
  • Antibiotics
  • Anemia
  • RBC transfusion
  • Pleural effusion
  • thoracentesis
Symptom oriented treatment

• Morphine sulfate, first treatment of choice
  • Starting dose 2.5 mg to 5 mg orally every 2 hours prn (1 to 3 mg IV)
  • Titrate to symptom relief
  • Nebulized morphine?
  • Other opioids? Long-acting opioids?
• Oxygen
  • Titrate to symptoms, not to oximetry
  • Avoid mask, use nasal cannula
• Pressure-supported breathing
  • CPAP, BiPap, Non-invasive pressure ventilation (NPPV)
• Lorazepam
  • Starting dose 0.5 – 1 mg q 4 hours prn

Evidence Base for treating dyspnea

• Fentanyl + midazolam, Morphine + midazolam effective
• Fentanyl IV alone – no evidence
• Oral and IV opioids – low quality evidence
• Benzodiazepines – no evidence

• No major safety concerns using morphine, fentanyl or midazolam for dyspnea in the dying patient.

Death from respiratory failure

• Peaceful with attentive symptom management
• Low risk of “suffocation”
• Hypercapnea, heart failure, renal failure may superimpose with natural dying process
• Opioids and other symptom treatment do not hasten the dying process. Sedation occurs before respiratory depression.
Cough

- Experienced by up to 70% of advanced cancer patients
- Severe cough
  - Vomiting
  - Chest and throat pain
  - Dyspnea
  - Inability to talk
  - Caregiver distress
- Evaluation
  - Infections, asthma, COPD, CHF, esophageal reflux, aspiration, drugs
  - Treat the underlying cause if possible

Treatment of cough

- Morphine
- Benzonatate (Tessalon perles)
- Guaifenesin (Robitussin, Mucinex)
- Cough syrup with codeine or hydrocodone
- Prednisone or dexamethasone
- Gabapentin
- Nebs
  - Albuterol + ipratropium (Duoneb)
  - Consider hypertonic (3%) saline nebs
- Integrative treatments

Opioids for cough

- Suppress the brainstem cough center via opioid receptors
- Codeine 10-20 mg every 4-6 hours
- Dextromethorphan 10-20 mg every 4-6 hours (caution-serotonin syndrome)
- Hydrocodone 5-10 mg every 4 hours (less nausea than codeine)
- Morphine 5-10 mg every 4 hours (same principles as pain treatment)
Other antitussive treatments

- OTC cough syrups contain antihistamine and mucolytics
- Sweet syrups, honey
- Benzonatate 100-200 mg tid
  - Anesthetizes stretch receptors in the respiratory tract
- Expectorants/mucolytics
  - Guaifenesin 200-400 mg every 4 hours
  - Acetlycysteine nebs (Mucomyst)
  - Hypertonic saline
  - Lidocaine nebs?
- Anticholinergics/antihistamines—when cough reflex is lost
- Gabapentin at 1800 mg daily for refractory chronic cough
- CNS sensitization similar to neuropathic pain

Respiratory secretions

- As the level of consciousness decreases in the dying process, patients lose their ability to swallow and clear oral secretions. As air moves over the secretions, which have pooled in the oropharynx and bronchi, the resulting turbulence produces noisy ventilation with each breath, described as ‘gurgling’ or ‘rattling noises.’ (Fast Fact #109)
- The noises can be disturbing to the patient’s visitors and caregivers who may fear the patient is choking to death.
- Discussion:
  - What do you call this clinical sign?
  - Is treatment indicated for the sake of family distress?

Non-drug measures for respiratory secretions

- Family education
- Reposition patient
- Allow natural dehydration; stop IV fluids and GI tube feeding.
- Oral suctioning, with no tracheal suctioning.
Treatment of respiratory secretions

- Anticholinergic medications (muscarinic receptor blockers)
  - Inhaled: Duodinex and Atrovent (ipratropium), Spiriva (tiotropium)
  - Oral: atropine (0.1% ophthalmic solution), hyoscyamine (Levsin) 0.125 mg, glycopyrrolate (Robinul) 1 mg, oxybutynin (Ditropan) 5 mg
  - Topical: scopolamine patch 1.5 mg every 72 hours

- Evidence base is lacking: "No evidence supporting the use of anticholinergics for (d.r.) was found…no better than placebo."

- Big question: do you want to reduce secretions, or promote cough and expectoration?

- The cholinergic autonomic nervous system, promotes:
  - Digestion, bladder contraction, defecation, sweating, …
  - Respiratory mucus, cough

Side effects of anti-cholinergic treatment

- Dry mouth
- Palpitations
- Retained respiratory secretions
- Constipation, urinary retention
- Blurred vision
- Sedation
- Delirium, hallucinations

- Note: glycopyrrolate does not cross blood-brain barrier, less CNS toxicity
- Current practice: avoid use until final days of living, when patient has stopped oral intake.

References

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