Symptom Management in Hospice: Case Review

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• Lastly, we’ll open the conference line up for any remaining questions
Terri Maxwell PhD, APRN: Bio

• Vice President of Clinical Education at Enclara Pharmacia and the Chief Operating Officer of Turn-Key Health (a division of Enclara Pharmacia)

• Previously VP of Strategic Initiatives for Weatherbee Resources Inc. and the Hospice Education Network (HEN).

• Frequent presenter at state and national meetings and a well-published author on a range of palliative care topics

• Obtained her BSN from the University of Rhode Island and a Masters Degree and PhD in Nursing from the University of Pennsylvania
Symptom Management in Hospice: Case Review

July 8, 2015

Prepared by: Terri Maxwell PhD, APRN
Objectives

- Discuss prevalence of symptoms common in patients at the end of life
- Describe etiology for end of life symptoms
- Recommend appropriate non-pharmacologic and pharmacologic management of common end of life (EOL) symptoms
# Symptom Prevalence in Cancer

Systematic review of the most common symptoms in end stage cancer (N=46 studies)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>In general (%)</th>
<th>Last 7-14 Days of Life (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue</td>
<td>74</td>
<td>88</td>
</tr>
<tr>
<td>Pain</td>
<td>74</td>
<td>88</td>
</tr>
<tr>
<td>Weakness</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>Weight loss</td>
<td>46</td>
<td>86</td>
</tr>
<tr>
<td>Appetite loss</td>
<td>53</td>
<td>56</td>
</tr>
<tr>
<td>Nervousness/anxiety</td>
<td>48</td>
<td>30</td>
</tr>
<tr>
<td>Constipation</td>
<td>37</td>
<td>29</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>35</td>
<td>39</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>40</td>
<td>34</td>
</tr>
<tr>
<td>Depressed mood</td>
<td>39</td>
<td>19</td>
</tr>
</tbody>
</table>

### Table 1. Prevalence of Key Symptoms in the Last Year of Life in 1998 and 2010

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Group</th>
<th>Prevalence (%)</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Whole population</td>
<td>54</td>
<td>61</td>
</tr>
<tr>
<td>Pain</td>
<td>Whole population</td>
<td>45</td>
<td>57</td>
</tr>
<tr>
<td>Depression</td>
<td>CHF and/or chronic lung disease</td>
<td>50</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Frailty</td>
<td>42</td>
<td>59</td>
</tr>
<tr>
<td>Periodic confusion</td>
<td>Whole population</td>
<td>41</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>CHF and/or chronic lung disease</td>
<td>45</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Frailty</td>
<td>69</td>
<td>83</td>
</tr>
</tbody>
</table>

Symptom Clusters

• Depression
• Pain
• Sleep disturbance
• Fatigue... often coexist
  • Look for a medication that treats multiple symptoms rather than single symptom treatment to reduce polypharmacy
Principles of Symptom Control in Hospice

- Perform standard assessments and reassess frequently
- Use oral medications when possible
- Alter the route of administration PRN
- D/C drugs no longer contributing to symptom control
- Anticipate and treat drug side effects
Mr. Smith, age 68, was diagnosed a year ago with advanced non-small cell lung cancer. He recently enrolled in hospice after discontinuing chemotherapy due to extreme fatigue and disease progression.

Over the past few days, his wife reports that Mr. Smith is increasingly bed bound, not interested in eating or drinking and is sleeping most of the time. Over the past few days, he has experienced increasing SOB, not relieved by oxygen or nebulized albuterol treatments. His wife calls this am reporting that she is frightened by how short of breath her husband is.
Case Scenario 1 cont’d

Home visit:
Mr. Smith reports 6/10 on a dyspnea rating scale. He requests that any treatment be used to relieve his SOB

PE: cachectic, alert and oriented

Vitals: Temp 37.2 C, 126/60, HR 128, RR 38

Lungs: distant lung sounds, expiratory wheezing throughout, accessory muscle use. SpO₂ 88% on 3 L nasal cannula
Dyspnea

• Definition: Uncomfortable awareness of breathing (subjective symptom)

• Results from a mismatch between the perceived need to breathe and the ability to breathe

• Severe dyspnea results in affective responses including panic, worry, anxiety, anger, and depression
Primary Causes of Dyspnea

- Muscle Weakness/Deconditioning
- Pneumonia
- COPD, CHF
- Cancer: Ascites Effusion Obstruction, etc.
- Psychological Distress
- Hydration
- Anemia

Hydration
Initial Evaluation

- Obtain a history
- Assess level of functioning
- Rate the severity (0-10 NRS)
- Physical examination
  - Listen for wheezes or crackles
  - Percuss for dullness that suggests a pleural effusion
- Chest x-ray, labs as appropriate
- Spirometry - measures obstruction or restriction in the lungs
- Pulse oximetry
- Identify patient’s comfort goals
Question

Pulse oximetry is useful in evaluating the severity of dyspnea in a hospice patient.

- True
- False

• Ans. False
General Approach to Managing Dyspnea

- Identify the cause
- Treat what is treatable
- Employ both pharmacologic and non-pharmacologic measures
- Reinforce that the symptom can be managed
The Dyspnea Ladder

Persistent or increasing dyspnea

Optimize short and long-acting bronchodilators. Add oxygen therapy for hypoxia.

Non-pharmacological measures:
- Pursed lip breathing
- Fan
- Relaxation
- Paced activities

Palliative pharmacological measures:
- Opioids
- Anxiolytics
Role of Oxygen Therapy

• Hypoxic patients
  • Low grade evidence that oxygen improves dyspnea in hypoxic patients with advanced disease at rest
  • Provide supplemental oxygen

• Non-hypoxic patients
  • Insufficient evidence that oxygen is beneficial to support use in non-hypoxic patients
  • Use other interventions first line

Non-pharmacologic Measures

- Open windows
- Fans
- Re-position patient
- Provide reassurance
Question

Which of the following do you initially recommend to manage Mr. Smith’s dyspnea?

- A. Nebulized morphine 10 mg/ml inhaled every 1 hour PRN
- B. Dexamethasone (Decadron®) 4 mg PO TID
- C. Oral morphine (Roxanol®) 5 mg PO for one dose, repeat every 30 min until relief is achieved; give effective dose every 2-4 hours PRN
- D. Lorazepam (Ativan®) 0.5 mg PO every 4 hours PRN anxiety

• Ans. C
Pharmacologic Management

Role of opioids - drug of first choice in the palliation of dyspnea in advanced disease

• Intermittent dyspnea (opioid naïve)
  • Morphine 2.5 to 5 mg PO every 3-4 hours PRN
  • Oxycodone (OxyIR®) 5 mg PO; titrate every 4 hours PRN
  • Hydromorphone (Dilaudid®) 0.5 to 1 mg PO every 4 hours PRN

• Opioid tolerant: increase dose by 25-50%

• Note: Nebulized morphine is not recommended; controlled trials do not support its use over oral opioids. Nebulized fentanyl (a lipophilic opioid) may have efficacy.
Pharmacologic Management

Role of benzodiazepines

• Fail to show a significant effect for the relief of dyspnea but may help when an anxiety component exists
• Use 2\textsuperscript{nd} line or in combination with opioids
• Start at a low dose and titrate
  • e.g., Lorazepam 0.5 to 1 mg PO every 2-4 hours PRN
Mr. Smith was prescribed Morphine 10 mg PO q 3 hours PRN for shortness of breath with good relief. Lorazepam 0.5 mg was added to help relieve his night time anxiety. He is encouraged to use fans in his room and keep the temperature cool.

Over the past few hours, his breathing has rapidly worsened such that he rates his shortness of breath as 10/10. His wife is panicked. What do you do?
Dyspnea Crisis

- Pursue comfort **aggressively**
- Make visit/remain on site until comfortable
- Provide reassurance
- Opioids first line (ideally IV if available)
- Sedatives second line
- Oxygen
Management of Dyspnea Crisis

Administer morphine very 10 minute IV/SC with escalating doses

Example: Morphine IV push:

5-10 mg
If no better in 10 minutes

10-15 mg
If no better in 10 minutes

15-20 mg

Consider adding midazolam 2.5-5.0 mg IV in panic
# Disease-Specific Medications

<table>
<thead>
<tr>
<th>Medication</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diuretics (e.g., Furosemide)</td>
<td>CHF</td>
</tr>
<tr>
<td></td>
<td>Lymphangitic carcinomatosis</td>
</tr>
<tr>
<td>Corticosteroids (e.g., Dexamethasone)</td>
<td>Airway obstruction</td>
</tr>
<tr>
<td></td>
<td>Pulmonary fibrosis</td>
</tr>
<tr>
<td></td>
<td>COPD</td>
</tr>
<tr>
<td></td>
<td>Radiation pneumonitis</td>
</tr>
<tr>
<td></td>
<td>Lymphangitic carcinomatosis</td>
</tr>
<tr>
<td></td>
<td>Superior vena cava syndrome</td>
</tr>
<tr>
<td>Anticoagulation (e.g., Warfarin)</td>
<td>Pulmonary embolism</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>Pneumonia, pericarditis</td>
</tr>
<tr>
<td>Bronchodilators (e.g., Albuterol)</td>
<td>Obstruction/Airway disease</td>
</tr>
<tr>
<td></td>
<td>COPD</td>
</tr>
</tbody>
</table>
Case Scenario 2

Lucille is a 94 yr old woman with FAST 7 b dementia who resides in a nursing home. Her family enrolled her in hospice after Lucille was hospitalized for pneumonia 2 months earlier. They request “comfort measures only and no further antibiotics or hospitalizations.”

Over the past day, her level of consciousness has decreased and she is no longer arousable. She appears comfortable, but her breathing is irregular and she is making gurgling sounds with each breath. Lung sounds reveal scattered rhonchi. Her family asks you to do something to prevent Lucille from suffocating.
Question

What is causing Lucille’s secretions?

- A. Oropharyngeal secretions from her inability to swallow
- B. Pulmonary secretions due to pneumonia
- C. Both A & B

Answer: C

Due to her low level of consciousness and end stage dementia, Lucille is not able to manage her salivary secretions. The presence of rhonchi and her history of pneumonia also make pneumonia a likely possibility.
Terminal Secretions

• Type of noisy breathing from retained secretions that sounds like snoring or rattling during the inspiratory and expiratory phases of respiration

• Reduction in ability to swallow in dying patients results in pooling of secretions in back of throat and lungs

• Air moving over pooled secretions produces gurgling or rattling noise

• Occurs during the final days or hours of life in approximately a third of patients
Risk Factors

• IV hydration therapy
• Tube feedings
• Diminished cough reflex or dysphagia
• Prolonged dying phase
• Medications that dry and thicken secretions
  • Anticholinergics (e.g., Hyoscyamine (Levsin®))
  • Anticholinesterase inhibitors (e.g., Donepezil (Aricept®))
Classifications

• Type I - Predominantly salivary secretions
• Type II - Predominantly bronchial secretions as part of normal mucous production and/or respiratory infections
  • Accumulates over days as cough reflex lessens
  • May be more resistant to medication therapy
Secretions and Distress

• Unlikely to be a source of distress for patients, but may be for family members
• Providing education and reassurance about the cause and management of secretions is important to reduce caregiver distress
Interventions

What do you suggest/prescribe for Lucille’s noisy breathing?

- A. Antibiotics to treat her pneumonia
- B. Scopolamine patch 1.5 mg every 72 hrs
- C. Hyoscyamine 0.125 mg SL PRN
- D. Hold off on prescribing medications and provide education and reassurance to the family and nursing home staff instead

Ans. Let’s discuss management and revisit this question
Interventions

Despite being the standard of care in hospice, there is *no evidence that any intervention*, whether pharmacologic or nonpharmacologic, is superior to placebo in reducing the severity of death rattle.
Non-Pharmacological Management

- Reassure family: explain why symptoms are occurring and remind that the patient is no longer responsive and appears comfortable
- D/C IV’s or tube feedings if still being administered
- Reposition the patient into an upward, supine position to facilitate drainage
- Oropharyngeal suctioning - only if secretions are in the mouth/throat region and easily obtainable. Deep suctioning is not effective and may be uncomfortable for the patient and disturbing to the family
Anticholinergic Therapy

• Assess whether medication is needed after non-pharmacological interventions have been implemented

• Current literature does not support the standard use of anticholinergic drugs in the treatment of terminal secretions

• Less likely to be effective when secretions are of a pulmonary origin, such as from pneumonia or congestive failure

• Have no effect on secretions that are already present
Anticholinergic Therapy

• If therapy is indicated, initiate treatment at the first sign of congestion with a fast onset of action such as hyoscyamine or atropine

• Scopolamine patches take up to 12 hours for effect and 24 hours to reach a steady state, making them a poor choice in the management of terminal secretions

• Using more than one anticholinergic together provides no additional clinical benefits and increases potential for adverse effects
Anticholinergic Side Effects

• May cause excessive drying leading to thickened mucous and mucous plugging
• Other potential side effects: dry mouth, urinary retention, blurry vision, constipation and confusion
Hyoscyamine (Levsin\textsuperscript{\textregistered})

- Available as an immediate-release disintegrating tablet that is totally absorbed either sublingually or orally
- Recommended starting dose is 0.125–0.25 mg every 4 hours PRN
- Use of hyoscyamine for terminal secretions is purely anecdotal and is based on its anticholinergic mechanism of action
- Compared to other anticholinergics, hyoscyamine is cost effective; has a very fast onset of action (3 to 5 minutes)
- Available in Enclara Pharmacia’s emergency kits
Atropine 1% eye drops

• May be given orally to the back of the throat or sublingually to reduce secretions
• Initial recommended dose for oral administration is 1–2 drops every 4–6 hours PRN
• NOTE: Due to a manufacturing shortage, atropine eye drops are in very limited supply, driving the cost of a 2 ml bottle to $30 or more
Glycopyrrolate (Robinul®)

• Oral absorption is slow and erratic, requiring higher starting doses compared to parenteral administration
• Recommended oral dose is 1 – 2 mg two to three times daily PRN for effect
• Does not cross blood brain barrier; less likely to cause CNS side effects
• Studies of glycopyrrolate generally based upon parenteral route of administration
What do you suggest/prescribe for Lucille’s noisy breathing?

- A. Antibiotics to treat her pneumonia
- B. Scopolamine patch 1.5 mg every 72 hrs
- C. Hyoscyamine 0.125 mg SL PRN
- D. Hold off on prescribing medications and provide education and reassurance to the family and nursing home staff instead

Ans. D. Antibiotics are not in keeping with the patient/family’s goals of care. Anticholinergics are likely ineffective and may contribute to side effects and excessive drying of the mouth.
Case Conclusion

The hospice nurse instructed the nursing home team to continue to turn the patient every 2 hours, keeping her head of bed elevated.

The nurse explained to the family that the noisy breathing was likely caused by accumulation of mucous in the lungs that frequently occurs during the final hours of life.

Due to the presence of extensive rhonchi that is unlikely to respond to anticholinergic therapy, no medication was recommended.

The patient was prescribed 0.5 ml of oral morphine every 1 hour PRN distress. She died peacefully later that evening.
Mrs. Banks is an 88 year old with end-stage heart failure and a history of osteoarthritis, type II diabetes, HTN and UTIs. After many hospitalizations for exacerbations of heart failure, she now opts for comfort care and enrolls in hospice. She lives with her son and his family.

Over the past few days, Mrs. Bank’s condition has declined precipitously. It is thought that she may have sepsis, but in accordance with her wishes, she is being managed at home with comfort measures. Over the past few hours, she has become agitated and confused. Her family is upset and wonders if they should “call 911”.
Delirium

• Clinical diagnosis based upon four key features
  • Acute onset and fluctuating course
  • Inattention
  • Disorganized thinking
  • Altered level of consciousness

• Cause of delirium is not always evident but includes polypharmacy, sepsis, brain metastasis, organ failure, alcohol or drug withdrawal and electrolyte changes

• Agitation is often a form of delirium that can develop into an acute psychotic state

• Fluctuating symptoms make it hard to detect - important to anticipate and continually assess for delirium
Delirium Management

• Non-pharmacological therapies:
  • Avoid physical restraints, reduce noise, lights, and other sensory stimulants, comfort measures, provide education and orientation by familiarization, provide structure & routine

• Pharmacological therapies:
  • Discontinue medications that precipitate
  • Slow taper of medications during discontinuation and initiation
  • Use lowest effective dose
  • Benzodiazepines – proceed with caution, Lorazepam preferred
  • Antipsychotics – considered first line treatment, Haloperidol (Haldol®) preferred
What do you suggest/prescribe for Mrs. Bank’s agitation/delirium?

- A. Assess for pain and begin Morphine 0.5 ml PO every 4 hours PRN
- B. Encourage family to stay with patient and provide reassurance and support
- C. Begin Haloperidol 0.5 mg PO or SC every 2-4 hours PRN
- D. Start Lorazepam 1 mg PO every 6 hours PRN

Ans. B and C
Delirium Treatment

- **Haloperidol** 0.5 to 5 mg every 2-4 hours PO/SC/IV/IM
  - Treatment of choice for acute/general agitation
  - If parenteral doses are needed, administer slowly to avoid hypotension

- **Lorazepam** 1 mg PO/SL/IV/IM, up to 10mg per day
  - Reserve use for those unresponsive to neuroleptic therapy
  - Use lower doses in elderly patients
  - Paradoxical reactions may occur
Case Scenario 4

Martha is a 53 year old with metastatic non-small cell lung cancer with extensive metastasis to the bones and liver. She enrolled in hospice a week ago after being informed by her oncologist that chemotherapy was no longer an option. She lives with her boyfriend and 29 year old daughter.

Upon meeting with the social worker, Martha states that she is afraid of dying and is awakening at night feeling panicked. She’s afraid to go to sleep and is anxious much of the day. Her symptoms are otherwise well controlled with morphine for dyspnea, senna for constipation, and a diuretic for lower extremity edema.
Anxiety

• Definition - state of apprehension and fear resulting from the perception of a threat to one’s self. Can be a symptom or a manifest of a psychiatric disorder.
• Disorders with anxiety as a prominent symptom
  • Generalized anxiety disorder
  • Panic disorder
  • Adjustment disorder
  • Acute or post traumatic stress
  • Phobias
• Anxiety and agitated delirium are NOT the same
Panic Disorders

- Disabling anxiety that is different from “normal” death-related anxiety
- Panic attacks develop suddenly and peak in minutes
- Accompanied by physical symptoms such as heart palpitations or accelerated heart rate, chest pain, sweating, shaking, breathless, lightheaded, dizzy, or nauseous, and a fear of loss of control
Management of Panic Disorder

• If lifespan predicted to be days or weeks - begin with a benzodiazepine such as lorazepam or alprazolam (Xanax®)

• Selective serotonin reuptake inhibitors (SSRIs) alone or in combination of benzodiazepines
  • Example SSRIs: Paroxetine (Paxil®) 10 to 50 mg per day
  • Example benzodiazepines: Alprazolam 0.25 mg PO TID or PRN, or Lorazepam 0.5 mg PO every 4-6 hours PRN

• Combine with complementary therapies such as music therapy, massage therapy, guided imagery

• Discuss fears and provide reassurance
Case Conclusion

Martha was prescribed Lorazepam 0.5 mg PO TID with 1 mg PO at bedtime with some relief. Lorazepam dose was doubled (1 mg TID and 2 mg at bedtime) with additional improvement in symptoms.

The social worker and chaplain each met with her weekly to discuss her fears and help her plan for her daughter and boyfriend’s future. She died peacefully at home 3 weeks later.
Summary

• Most symptoms can be well managed at the end of life through careful assessment and the combination of pharmacological and non-pharmacological approaches

• “Start low and go slow” when initiating most symptom medications, especially in the elderly

• Titrate PRN

• EDUCATE your patients and caregivers about their symptoms and medications to manage them

• Provide continual reassurance and a calm presence
Questions??

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Consensus statement on the management of dyspnea in patient with advanced lung or heart disease from the American College of Chest Physicians. Available at: http://medind.nic.in/iaa/t12/i2/iaat12i2p476.pdf.


References Cont’d


