Management of Dyspnea and Cough in Lung Cancer

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• Faculty: Dr. Chris Ogaranko

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• Not Applicable
Objectives

Improve your understanding of cough and dyspnea assessment, causes and management
“The relief of suffering and the cure of disease must be seen as twin obligations”

(Cassel, NEJM, 1982)
Mrs. R: 53 y/o female with stage IV NSCLC. Presents to clinic with “difficulty breathing”. History of COPD. Dyspnea is continuous with exertional exacerbations; significant associated anxiety.

• What are the potential causes?
Causes of Dyspnea

- Direct tumor effects
- Indirect tumor effects
- Treatment-related
- Unrelated
• **Definition:** uncomfortable awareness of breathing
• it’s SUBJECTIVE
• The only reliable measure is patient self-report
• Respiratory rate, pO$_2$, blood gas determinations DO NOT correlate with the feeling of breathlessness
Assessment

- May be described as
  - Shortness of breath
  - A smothering feeling
  - Inability to get enough air
  - Suffocation
Assessment

- **Impact:** one of most frightening symptoms
- Profound effect on QOL
- “TOTAL dyspnea” (Abernethy 2008):
  - Physical
  - Psychological
  - Social
  - Spiritual
Prevalence and Prognosis

- Prevalence 21–90% in patients with life-threatening illness
- Prognosis < 6 months when no underlying treatment for malignancy
And Another...
Dyspnea Management

- Treat the underlying cause, e.g. thoracentesis, stent, steroids, antibiotics, transfusion, anticoagulation, etc.

- Symptomatic management
  - Oxygen
  - Opioids
  - Anxiolytics
  - Non-pharmacologic interventions
Opioids

- Most effective to control symptoms
- Dosage:
  - Opioid-naïve: small doses
  - Using opioids: increase dose
  - Titrate to effect
- Nebulized opioids not recommended
• What about respiratory depression?

• RR, O₂ and CO₂ effects?

• What if she gets SOB with every short walk?
## Incident Dyspnea

<table>
<thead>
<tr>
<th>Step</th>
<th>Medication</th>
<th># micrograms SL (50 microgm/ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fentanyl</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>Sufentanil</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>Sufentanil</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>Sufentanil</td>
<td>100 *</td>
</tr>
</tbody>
</table>

Source: WRHA Palliative Care Program
Anxiolytics

• Can be considered in some patients

• Safe in combination with opioids
  ➢ Lorazepam
    0.5–2.0 mg PO q 1 h prn until settled
    then routinely q 4–6 h to keep settled
Oxygen

• Potent symbol of medical care

• Fan or breeze may be just as helpful

• Negative RCT result in non-hypoxemic palliative patients*

* Abernethy et al, Lancet, 2010
Non-pharmacologic...

- Cognitive and emotional components
- Maintain calm to reassure patient, family
- Manage patient’s anxiety
- Behavioural approaches, e.g., relaxation, distraction, hypnosis
Non-pharmacologic...

- Limit number of people in room
- Eliminate environmental irritants
- Keep line of sight clear to outside
- Adjust room temperature
- Avoid chilling the patient
Non-pharmacologic

- Introduce humidity
- Reposition
  - Elevate the head of the bed
  - Move patient to one side or other
- Educate, support patient, family
Specific Situations

- Lymphangitic carcinomatosis
- Radiation pneumonitis
- Bronchospasm
- Thick secretions/congestion
- Pulmonary embolism
- Airway/SVC obstruction
Dyspnea Crisis

• Sudden onset / rapid worsening of dyspnea
• Often imminently terminal situation (minutes or hours)
• Examples:
  – pulmonary embolism
  – fulminant pneumonia
  – upper airway obstruction
  – hemoptysis
Approach to Dyspnea Crisis

• Aggressively pursue comfort
• Remain on site until comfortable
• Generally employ non-specific measures:
  • calm reassurance
  • oxygen
  • opioids
  • sedatives: methotrimeprazine, midazolam
Take Home Messages

• Dyspnea is patient-centered
• Treat the cause (if possible) and the symptom
• Use opioids
• Prepare for a dyspnea crisis
• Don’t forget incident dyspnea
Case Continued

• Following thoracentesis and talc pleurodesis, Mrs. B develops a frequent, troublesome cough.

• What are possible treatments?
Cough in Lung Cancer

• “very distressing” in ¼ patients

• Only 3 RCT’s (< 50 patients in total) found in UK review*

*Wee et al, Palliat Med, 2012
Cough Treatment

- Treat disease
- Treat co-existing condition (e.g. asthma, infection, GERD)
- Sodium Cromoglycate – Moroni et al. N=20 NSCLC. 2 puff QID (40 mg/day). Better than placebo. Not available here.
- Opioid (DM, codeine, hydrocodone, morphine)

Wee et al, Palliat Med, 2012
“Disappointingly Little” Opioid Evidence

• Matthys et al: n=16. Lung CA, TB and COPD. Dextromethorphan ≈ codeine > placebo

• Sevelius et al: n=12. No lung CA. Codeine 7.5, 15, 30, 60 mg and placebo daily for 5 days.

• Morice et al: RCT morphine SR 5mg q12h for chronic idiopathic cough. 40% cough reduction.
Some of the content of this presentation has been adapted from the following sources:

1. Education in Palliative and End-of-Life Care (EPEC™-O) Canada curriculum
2. Manitoba Palliative Care Teaching Material – accessed at palliative.info