Module 4
RESPIRATORY PROBLEMS

"If you can't breathe,
nothing else matters."
Canadian Lung Association

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Module 4
Outline

- Section 1: Theory Burst
- Section 2: Case-based Group Discussion

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Dyspnea

Dyspnea is a:
- subjective feeling, awareness of being short of breath
- devastating symptom in advanced cancer, ALS, end-stage lung and heart disease
  - Occurs in over 60% of these patients
- complex symptom

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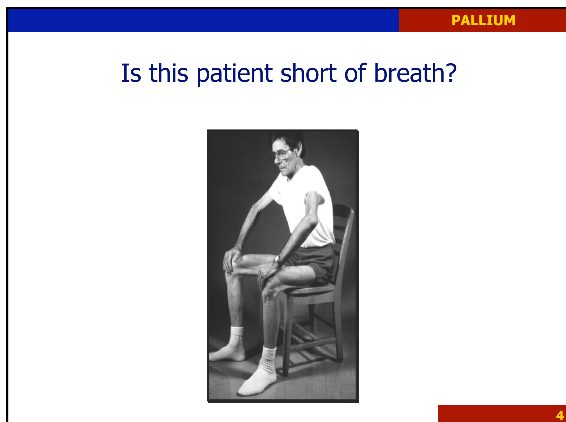
Is this patient short of breath?



4

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Causes of Dyspnea

- Often multifactorial etiology
- Pulmonary causes
  - airway obstruction, pleural effusion, COPD, lymphangitic carcinomatosis, pneumonia, pulmonary embolism, etc.
- Cardiac causes
  - CHF, pericardial effusion
- Systemic causes
  - Anemia
- Neurological
  - ALS, cachexia (muscle weakness)
- Other
  - Ascites
- Psychological

5

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Assessment of Dyspnea

The patient's assessment of their dyspnea is the most reliable

- Clinical signs don't always correlate with the symptom experience
- Dyspnea is NOT necessarily related to the respiratory rate or oxygen saturation
- Do not use oxygen saturation as a sole measure of dyspnea
- In last days of life, STOP measuring oxygen saturation

6

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Assessment of Dyspnea

- Pattern
  - Intermittent
  - Continuous
  - Acute intense episodes
- Triggers
- Alleviating factors
- Associated emotions
- Use scales to measure and monitor
- Investigations as needed

7

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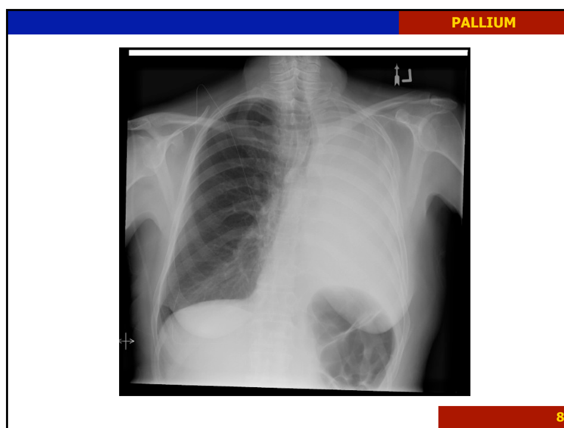

8

Managing Underlying Causes

- Pleural effusion: thoracentesis
- Large airway obstruction: stenting, radiotherapy
- Pneumonia: antibiotics (if appropriate)
- Lymphangitic carcinomatosis: steroids
- Anemia: therapeutic trial of transfusion
- CHF and COPD: optimize medications
- ALS: non-invasive ventilation

Pharmacological Measures to Control Dyspnea

List possible interventions

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-
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Pharmacological Measures to Control Dyspnea

- Oxygen
- Opioids
- Adjuvant therapies

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Oxygen in Dyspnea

- Useful for patients with hypoxia
  - Use cautiously in patients with severe COPD
- Role in non-hypoxic patients less clear
  - Some individuals may benefit
- Not clear whether it is the oxygen or the airflow that is helpful
- Trial of oxygen and air flow (fan)

13

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Opioids in Dyspnea

- Safe and effective
- Diminishes the sensation of being short of breath
- Randomized controlled trial have confirmed the usefulness and safety of opioids in patients with advanced cancer, ALS and end-stage heart and lung diseases

14

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Opioids in Dyspnea

- Regular regimen is required along with breakthroughs as needed
- Start with small doses (e.g. morphine 2.5mg PO q4hrs) and titrate gradually up to effect. po, parenteral
- Use the oral, SC or IV routes
- Nebulized opioids do not show significant benefit

15

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Adjuvant Medications for Dyspnea

- Methotrimeprazine
  - 2.5-12.5 mg bid-tid PO or SC
- Benzodiazapines
  - Limited role
  - Only useful if panic attack or severe anxiety underlying shortness of breath
  - Clonazepam 0.5-1 mg q6-8hr
- Steroids
  - for lymphangitic carcinomatosis, severe COPD
- Bronchodilators
  - only if broncho-constriction
- Diuretics – CHF, pulmonary edema

16

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Non-Pharmacological Management

- Use a fan
- Position: lean forward, head up
- Avoid exacerbating activities
- Conserve energy
- Limit people in room
- Reduce room temperature, maintain humidity
- Open window and allow to see outside
- Avoid irritants, e. g. smoke
- Relaxation therapy

17

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Severe Dyspnea in Last Hours of Life

- Opioid naïve
  - 2.5 – 5 mg morphine IV/SC stat then reassess
- Opioid tolerant
  - 25% to 100% increase in dose IV/SC stat
- Add methotrimeprazine and titrate dose if above ineffective
- Intractable dyspnea
  - Methotrimeprazine
  - Consider palliative sedation

18

Intractable Cough

- Most often in lung cancer
- Exhausting and debilitating. Exacerbates pain in patients with rib/chest wall metastases.
- Opioids are mainstay of treatment
- Codeine is not more effective than other opioids
- Sodium cromoglycate nebs/inhaler qid
- Nebulized lidocaine 5ml of 2% solution qid
- Steroids for COPD

Hemoptysis

- Consider radiotherapy
- Be prepared for massive hemorrhage
  - Dark towels
  - Midazolam bolus

Respiratory Congestion

- Pooling of upper airways secretions in last hours of life and/or pulmonary edema
- May be made worse if patient still receiving fluids IV or SC
- Very distressing for the family unless explanation given
- Repositioning the patient often helps
- Atropine 0.3 - 0.6 mg, scopolamine 0.4mg SC or glycopyrolate SC q 30-60 minutes prn if severe (long term treatment can cause delirium)
- Suction rarely needed

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Take Home Points

- Dyspnea is what the patient says it is
- Dyspnea occurs in many illnesses
- Opioids are safe and effective in managing dyspnea in advanced disease
- Oxygen is useful in hypoxic patients
- Non-pharmacological management plays a key role in dyspnea

22

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Section 2

- Case study
- Small or large group

23