

# SOB

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**Editor:** James Edwards

**Interviewee:** Lauren Troy

James talks to Dr Lauren Troy, Respiratory Physician, about a common presentation of breathlessness.

Lauren Troy is a Respiratory Physician, working as a Staff Specialist in the Department of Respiratory and Sleep Medicine at Royal Prince Alfred Hospital, Sydney. She is currently undertaking a PhD in exercise and sleep physiology in interstitial lung disease. Lauren has a strong interest in training and education, with involvement in teaching programs for general practitioners, junior medical officers, basic physician trainees and respiratory advanced trainees. Lauren has been a communications tutor with The Sydney Medical School since 2008, and holds a Clinical Associate Lecturer position with the University of Sydney.

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*with Dr Lauren Troy (Respiratory Physician at Royal Prince Alfred Hospital, May 2013), New South Wales, Australia*



## 1. Differentials

- Atelectasis, pulmonary embolism, fluid overload, tachyarrhythmias, anaemia, hospital acquired pneumonia, aspiration, exacerbation of underlying COPD/asthma



## 2. On the phone

- Triage appropriately – ask for the vital signs, oxygen if hypoxic, brief clinical history, and ask to arrange an ECG if there is any concern for cardiac causes of dyspnea



## 3. On arrival

- Read the patient's file quickly for co-morbidities, and do an end of the bed assessment (is the patient's work of breathing increased – accessory muscles, tripod positioning, in-drawing of intercostal muscles), are they on large amounts of oxygen – do you need to call intensive care immediately?
- If not, do a directed clinical examination
  - COPD/asthma – auscultate for wheeze
  - Heart failure – auscultate for inspiratory crackles, raised JVP, pedal oedema, S3 gallop, cardiomegaly
  - Atelectasis – bibasalcrales (particularly following abdominal or thoracic surgery)

## 4. Investigations

- CXR
  - Heart failure – upper lobe diversion, distension of blood vessels in the upper third of the lung, Kerley B lines, fluid in fissures, ground glass appearance in perihilar region.
  - Atelectasis – loss of volume.
  - Pneumonia – consolidation.
  - Also check for pneumothorax and pleural effusion (less likely).
- ABG – do not do an ABG to confirm hypoxia or take the patient on oxygen just to do an ABG. Hypoxia is clinically determined by the patient's oxygen requirement to maintain safe saturations (usually >92%). ABG is useful to check for hypercapnia and assess for adequacy of ventilation or if looking for a metabolic acidosis.
- FBC (anaemia), EUC, troponin
- D-dimer has limited utility in the post operative setting
- CTPA –if clinical suspicion of PE (check for history of PE, clinical signs of DVT, risk factors such as pregnancy or cancer). Also check if normal renal function and no allergies.

## 5. Management

- Atelectasis – give adequate analgesia to allow deep breathing, sit upright, chest physiotherapy
- Pulmonary embolism – heparin/enoxaparin but consult the surgical team
- If concern about adequacy of ventilation (raised RR, increased work of breathing, ongoing hypoxia or hypercapnia) call intensive care service for assistance

- Dyspnoea post operatively is common
- The common causes are atelectasis and pulmonary embolism, and the most common causes are pulmonary embolus and postoperative infection

- Hypoxia and O2 therapy
- Hospital acquired pneumonia
- Spirometry
- Part 1: Non-invasive ventilation
- Part 2: Non-invasive ventilation