Dyspnea

DDx (5 major categories of disease to consider)

Pulmonary

- Pneumonia = fever, purulent vs dry cough, pleuritic chest pain
- Pneumothorax = acute onset, pleuritic chest pain. Consider in any intubated patient.
- Pulmonary embolism = Hx DVT, recent surgery, pleuritic chest pain, tachypnea, tachycardia, hypoxia - Often difficult to rule in or out by history/exam. Consider this early.
- Aspiration = common problem if acute loss of consciousness
- Bronchospasm = seen with CHF, pneumonia, asthma/COPD
- Upper airway obstruction = often acute onset, stridor/focal wheezin- If albuterol fails, consider vocal cord dysfunction
- ARDS = usually in pts hospitalized with another dx (e.g. sepsis

Cardiac

- MI/ischemia = dyspnea can be an anginal equivalent
- CHF = common in elderly pts on IVF or due to ischemia
- Arrhythmia = can cause dyspnea with or without CHF/ischemia
- Tamponade = consider if signs of isolated right heart failure

Metabolic

- Acidosis = pts become tachypneic to blow off CO2 in compensation
- Sepsis = dyspnea can be an early, non-specific sign of systemic infection

Hematologic

- Anemia = easy to miss this by Hx/exam
- Methemoglobinemia = rare; consider if taking dapsone, nitrates, topical/local anesthetics
  - - Cyanosis, blue discoloration of skin/mucous membranes confusion, seizures, normal PO2

Psychiatric

- Anxiety = common, diagnosis of exclusion

Evaluation of Patient

History

- Learn about acuity of onset of dyspnea
- Associated symptoms? (cough, chest pain, palpitations, fever)
- Review recent events or meds given at time of symptoms onset (IV fluids)
- Review relevant PMHx and admitting diagnosis

Physical exam

- Start by asking nurse for vital signs HR, RR, BP, O2 sat). Ask for second set 15-30 minutes later.
- Lung exam = listen for wheezes, rales, stridor, symmetry of breath sounds
- Cardiac exam = attention to JVP, carotids, rate/rhythm, murmurs/rubs
- Keep in mind adventitial lung sounds may be absent in someone with severe airflow limitation
- Look at extremities for edema (unilateral vs. bilateral) and perfusion (cool vs. warm, cap refill, cyanosis).
- Mental status = gives you idea of cerebral oxygen delivery

Labs/Studies

- EKG, CXR, ABG, CBC
- 4 basic studies will give you a good deal of information, and help you sort out what might be going on with your patient if it’s not clear from above.
- Consider CTPA if high risk of PE/DVT (Wells criteria)

Initial Management

A. Oxygen

- Initial intervention for any patient with dyspnea. Even CO2 retainers need O2 and it takes longer than the few minutes you need to evaluate them for significant respiratory depression to develop. Your goal is a PO2 > 60 or O2 sat > 92%. if nasal cannula isn't working (max FIO2 is ~40%), try a simple mask (up to 50%), non-rebreather (70%) or high humidity mask (90%). Remember that respiratory therapist (RT) is your friend; call early if you’re having any trouble and they will help with nebs, suction, masks, ABGs, oral/nasal airways

B. Diuretics

- Consider Lasix in any patient with history or exam consistent with CHF; other processes associated with increased lung water (pneumonia, ARDS).
- One dose of Lasix is unlikely to do any irreversible damage.

C. β-Agonists

- Bronchodilators will benefit patients with wheezing from any etiology
- Remember wheezing can occur in many conditions other than asthma (e.g., CHF, pneumonia)

D. Intubation

- Assess potential to protect airway (see Pulmonary section); consider calling ICU

E. Other

- Once you stabilized patient and results of initial studies returned, you can initiate directed therapy at the specific etiology of dyspnea.

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