



## Pharmaceuticals

### Questions

1) A patient with severe ARDS is receiving inhaled nitric oxide (INO), initially PaO<sub>2</sub> improves from 55 mmHg to 82 mmHg. 4 hours later, you are called to the bedside because patient is cyanotic and SpO<sub>2</sub> is 60% on 100% FiO<sub>2</sub>. ABG shows PH 7.20, PCO<sub>2</sub> 48 mmHg, PaO<sub>2</sub> is 130 mmHg, SpO<sub>2</sub> is 55%. Most likely cause is:

- A) SpO<sub>2</sub> is erroneous as PaO<sub>2</sub> is 130
- B) INO caused plugging in the ventilator circuit
- C) INO delivery system not working properly
- D) Patient developed Methemoglobinemia

2) For the patient above, what is the next step in management?

- A) Change pulse oximetry and repeat ABG
- B) Change the ventilator circuit and the delivery device
- C) Start Bagging the patient
- D) Stop INO and start IV methylene blue

3) A patient with COPD in the ED receiving his 3<sup>rd</sup> dose of nebulized Duoneb (Albuterol/Ipratropium) within the first hour. He starts to feel better with less shortness of breath but starts to complain of blurring of vision. On exam, his left pupil is more dilated than the right side, rest of neurological exam is normal and CT brain is ordered for possible stroke. You should advise:

- A) MRI is more sensitive for stroke
- B) Consult ophthalmology
- C) Hold Duoneb for now and watch the patient for couple hours
- D) Change Albuterol to Levalbuterol

4) Systemic steroids for ARDS:

- A) Improves mortality
- B) Worsens mortality
- C) Improves oxygenation
- D) Only be given if concomitant COPD

5) Which inhaled medication can be useful in treatment of hemoptysis

- A) Racemic epinephrine
- B) Tranexamic acid
- C) Mucomyst
- D) Corticosteroids

6) Beta adrenergic bronchodilators use in ARDS

- A) Improves oxygenation
- B) Improve mortality
- C) Only given if high airway resistance
- D) Only given if low respiratory compliance

7) Patient is receiving Talc slurry for chemical pleurodesis for recurrent malignant effusion. What respiratory side effects can happen?

- A) Hemoptysis
- B) Bronchospasm
- C) Respiratory failure
- D) Bronchorrhea

8) The use of continuous infusion of neuromuscular blockers in ARDS

- A) Should always be used for 48 hours in severe ARDS
- B) Should never be used during mechanical ventilation for its side effects
- C) Improved oxygenation is secondary to reduced desynchronies and ventilator induced lung injury
- D) Improved oxygenation secondary to anti-inflammatory effects

9) Compared to inhaled Nitric oxide, inhaled Prostacycline has:

- A) More renal side effects
- B) Less efficacy
- C) More expensive
- D) Similar effects on oxygenation and Pulmonary artery pressures

10) In patients with refractory status asthmaticus despite bronchodilators, systemic steroids, what other sedative medications that might have a benefit?

- A) Dexmedetomidine
- B) Midazolam
- C) Ketamine
- D) Cisatracurium