Exacerbations of Chronic Obstructive Pulmonary Disease

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This month's quiz is based on the article "Evidence-Based Approach to Acute Exacerbations of Chronic Obstructive Pulmonary Disease," which begins on page 9 of this issue. Choose the single best answer for each question.

1. **What is the most common cause of chronic obstructive pulmonary disease (COPD)?**
   (A) Air pollution
   (B) Airway hyperreactivity
   (C) α_1-Antitrypsin deficiency
   (D) Cigarette smoking
   (E) Occupational exposure

2. **A 50-year-old man presents to the emergency department and is diagnosed with an acute exacerbation of COPD. The patient has a history of diabetes mellitus, chronic kidney disease, and frequent COPD exacerbations. On examination, his vital signs are as follows: blood pressure, 150/90 mm Hg; respiratory rate, 24 breaths/min; temperature, 97.6°F; heart rate, 96 bpm; oxygen saturation, 94% on 2 L/min via nasal cannula, 88% on room air. What is the next best step in managing his COPD exacerbation appropriately?**
   (A) Admit to hospital
   (B) Admit to intensive care unit
   (C) Immediate intubation
   (D) Manage as outpatient
   (E) More information is required prior to making a decision regarding appropriate triaging of this patient

3. **A 60-year-old woman with a 40-pack-year history of smoking is admitted to the hospital due to a COPD exacerbation. Which of the following treatments will lead to prevention of further exacerbations?**
   (A) Antibiotics and bronchodilators
   (B) Bronchodilators and steroids
   (C) Patient education and antibiotics
   (D) Patient education and steroids
   (E) Steroids and oxygen

4. **The patient is started on intravenous steroids, antibiotics, and frequent nebulizer treatments. Analysis of arterial blood gas (ABG) several hours following the initiation of treatment reveals worsening hypercapnia and respiratory acidosis compared with the ABG drawn in the emergency department. What is the next best step in managing this patient's hypercapnia and acidosis?**
   (A) Immediate institution of oxygen
   (B) Immediate intubation
   (C) Institution of bilateral positive airway pressure
   (D) Institution of intravenous sodium bicarbonate drip
   (E) Transfer to the intensive care unit

5. **Which of the following is not a contraindication to using bilateral positive airway pressure?**
   (A) Acidosis
   (B) Burns
   (C) Copious secretions
   (D) Impaired mental function
   (E) Respiratory arrest

6. **Which of the following interventions following discharge of a patient admitted with an acute exacerbation of COPD will reduce the risk of future hospitalization?**
   (A) Home nebulizer treatments
   (B) Long-acting bronchodilators
   (C) Oxygen therapy at home
   (D) Prophylactic antibiotics
   (E) Pulmonary rehabilitation

For answers, see page 48.

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Answers to the Clinical Review Quiz, which appears on page 30. The article on COPD exacerbations begins on page 9.

1. (D) Cigarette smoking
2. (A) Admit to hospital
3. (D) Patient education and steroids
4. (C) Institution of bilateral positive airway pressure
5. (A) Acidosis
6. (E) Pulmonary rehabilitation

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