

## Status Asthmaticus

Anthony J. Hericks, DO

This month's quiz is based on the article "Status Asthmaticus in Adult Patients," which begins on page 13 of this issue. Choose the single best answer for each question.

1. What is the cornerstone of treatment for patients with status asthmaticus?

- (A) Intramuscular epinephrine
- (B) Intravenous fluids
- (C) Mucolytic agents
- (D) Oral theophylline
- (E) Systemic corticosteroids

2. A 45-year-old man presents to an asthma clinic with increased cough that produces white sputum, dyspnea at rest, and wheezing that has been progressively worsening over the last few days. While sitting in the chair (he refuses to lie down), he has difficulty speaking due to significant dyspnea. He is afebrile with a heart rate of 122 bpm, respiratory rate of 34 breaths/min, stable blood pressure, and pulse oximetry of 92% on 3.5 L of oxygen by nasal cannula. Despite 3 treatments with nebulized albuterol, his peak expiratory flow rate (PEFR) is 50% of predicted and his vital signs are essentially unchanged. What are your recommendations for this patient?

- (A) Admit to the general medical floor
- (B) Admit to the intensive care unit (ICU)
- (C) Discharge to home with close follow-up
- (D) Send to the emergency department (ED) for further evaluation
- (E) Urgent intubation and admission to the ICU

3. Which of the following is the most ominous sign of pending respiratory failure and the need for mechanical ventilation in an acute asthma exacerbation?

- (A) Hypocapnia (low  $\text{PaCO}_2$ )
- (B) Hypoxia
- (C) Normal or increased  $\text{PaCO}_2$
- (D) Normal oxygen level
- (E) Sustained tachypnea

4. A 34-year-old woman presents to the ED with an acute asthma exacerbation. She is treated with nebulized albuterol and ipratropium bromide every 20 minutes, a dose of oral corticosteroids, and supplemental oxygen by nasal cannula. Approximately 80 minutes after initial resuscitation, her wheezing has improved, her vital signs appear to have stabilized, and her PEFR has improved from an initial evaluation of 50% of predicted to 80% of predicted. What is your next recommendation?

- (A) Admit to the general medicine floor
- (B) Admit to the ICU
- (C) Continue monitoring in the ED
- (D) Discharge home on prednisone with close follow-up
- (E) Repeat steroids and nebulizers, then re-evaluate

5. A 64-year-old woman presents to the ED with progressively worsening dyspnea at rest and on exertion, audible wheezing, and a weak, nonproductive cough. Her initial PEFR is 40% of predicted. She is afebrile, with a heart rate of 128 bpm, respiratory rate of 36 breaths/min, blood pressure of 145/92 mm Hg, and pulse oximetry of 88% on room air. She receives several doses of nebulized albuterol and ipratropium bromide, followed by a continuous nebulizer of albuterol, a dose of intravenous corticosteroids, and supplemental oxygen over the next 2.5 hours. Currently, she is very somnolent with paradoxical abdominal wall movement. Her respiratory rate has slowed to 26 breaths/min, heart rate remains elevated at 134 bpm, blood pressure has dropped to 92/60 mm Hg, pulse oximetry has improved to 94% on 6 L by nasal cannula, and her PEFR is essentially unchanged. What is the next step in her treatment?

- (A) Admit to the general medical floor
- (B) Admit to the ICU
- (C) Discharge home with close follow-up
- (D) Send to the ICU for further evaluation
- (E) Urgent intubation and admission to the ICU

For answers, see page 45.

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*Dr. Hericks is a pulmonary/critical care fellow at the Pulmonary/Critical Care Division, University of Missouri–Kansas City School of Medicine/Truman Medical Centers, Kansas City, MO.*

**Answers to the Clinical Review Quiz which appears on page 36. The article on status asthmaticus begins on page 13.**

1. (E) Systemic corticosteroids
2. (B) Admit to the ICU
3. (C) Normal or increased  $\text{PaCO}_2$
4. (D) Discharge home on prednisone with close follow-up
5. (E) Urgent intubation and admission to the ICU

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