

# Management of Sepsis

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This month's quiz is based on the article "Management of Sepsis: The Surviving Sepsis Guidelines for Early Therapy," which begins on page 21 of this issue. Choose the single best answer for each question.

**Questions 1 and 2 refer to the following case.**

A 45-year-old woman presents to the emergency department with acute pancreatitis related to a history of gallstones. The patient's vital signs are as follows: temperature, 98°F; heart rate, 120 bpm; respiratory rate, 30 breaths/min; blood pressure, 70/35 mm Hg; and oxygen saturation as measured by pulse oximetry, 98% without oxygen supplementation. A chest radiograph is normal. White blood cell count is  $12 \times 10^3/\mu\text{L}$ , and urinalysis is unremarkable. No other sources of infection are identified.

**1. This patient's condition can best be defined as which of the following?**

- (A) Multiorgan dysfunction syndrome
- (B) Sepsis
- (C) Septic shock
- (D) Severe sepsis
- (E) Systemic inflammatory response syndrome

**2. After ensuring adequate airway and oxygenation, what is the next step in the management of this patient?**

- (A) Antibiotic therapy
- (B)  $\beta$ -Blocker therapy to control heart rate
- (C) Intravenous fluid resuscitation
- (D) Surgical consult for gall bladder surgery
- (E) Vasopressor therapy with dopamine

**3. All of the following therapies for septic shock have been shown to improve survival in randomized controlled trials EXCEPT?**

- (A) Low tidal volume mechanical ventilation in patients with acute respiratory distress syndrome (ARDS)
- (B) Early goal-directed therapy for initial resuscitation
- (C) Use of recombinant human activated protein C

(drotrecogin alfa [activated]) in patients with an Acute Physiology and Chronic Health Evaluation (APACHE II) score  $> 25$

- (D) Tight glucose control in postsurgical patients
- (E) Starting corticosteroid therapy more than 2 weeks after the onset of ARDS

**4. Which of the following is a contraindication to the use of drotrecogin alfa?**

- (A) APACHE II score  $> 25$
- (B) Platelet count of  $40 \times 10^3/\mu\text{L}$
- (C) History of hemorrhagic stroke within the previous 6 months
- (D) Intracranial neoplasm
- (E) Intraspinal surgery within the previous 4 months

**5. Which of the following is an indication for using corticosteroids in septic shock?**

- (A) ARDS
- (B) Necrotizing pneumonia
- (C) Peritonitis
- (D) Sepsis responding well to fluid resuscitation
- (E) Vasopressor-dependence

**6. In the treatment of septic shock, what is the goal for blood pressure?**

- (A) Systolic blood pressure  $\geq 90$  mm Hg
- (B) Mean arterial pressure  $\geq 65$  mm Hg
- (C) Diastolic blood pressure  $\geq 60$  mm Hg
- (D) Systolic blood pressure  $\geq 80$  mm Hg
- (E) Diastolic blood pressure  $\geq 40$  mm Hg

**7. In the treatment of septic shock, what is the goal for urine output?**

- (A) Urine output  $\leq 0.3$  mL/kg/hr
- (B) Urine output  $\geq 0.2$  mL/kg/hr
- (C) Urine output  $\geq 300$  mL per day
- (D) Urine output  $\geq 0.5$  mL/kg/hr

For answers, see page 55.

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**Answers to the Clinical Review Quiz, which appears on page 50. The article on sepsis begins on page 21.**

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| 1. (E) Systemic inflammatory response syndrome                                   | 4. (D) Intracranial neoplasm                  |
| 2. (C) Intravenous fluid resuscitation   | 5. (E) Vasopressor-dependence                 |
| 3. (E) Starting corticosteroid therapy more than 2 weeks after the onset of ARDS | 6. (B) Mean arterial pressure $\geq$ 65 mm Hg |
|  | 7. (D) Urine output $\geq$ 0.5 mL/kg/hr       |

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