

## Septic shock:

1. Therapeutic priorities for patients with sepsis and septic shock include securing the airway, correcting hypoxemia, and administering fluids and antibiotics. Intubation and mechanical ventilation are required in some patients
2. The adequacy of perfusion should be assessed in patients with suspected severe sepsis and septic shock. Hypotension is the most common indicator of inadequate perfusion. Common signs of hypoperfusion include warm, vasodilated skin in early sepsis that progresses to cool, vasoconstricted skin in late sepsis, tachycardia  $>90$  per min, obtundation or restlessness, oliguria or anuria, and lactic acidosis
3. For patients with severe sepsis and septic shock, we recommend intravenous fluids, rather than vasopressors, inotropes, or red blood cell transfusions as first-line therapy for the restoration of tissue perfusion
4. For patients who remain hypotensive following intravascular volume repletion, we recommend vasopressors (NE preferred)
5. For patients with severe sepsis and septic shock that are refractory to intravenous fluid and vasopressor therapy, additional therapies, such as inotropic therapy and blood transfusions, are administered based on individual assessment. We typically reserve red blood cell transfusion for patients with a hemoglobin level  $<7$  g per deciliter
6. For most patients with sepsis and septic shock, we suggest fluid management be guided using specific targets (early goal-directed therapy [EGDT]), rather than being managed without specific therapeutic targets. The optimal target to guide fluid management is unknown. For most patients, we target mean arterial pressure  $\geq 65$  mmHg and urine output  $\geq 0.5$  mL/kg/hour and integrate it with static measures of determining adequacy of fluid administration (eg, central venous pressure [CVP] 8 to 12 mmHg), or dynamic predictors of fluid responsiveness (eg, respiratory changes in the radial artery pulse pressure) or central venous oxygen saturation  $\geq 70$  percent. In addition, we follow serum lactate (eg, every six hours), until there is a clear clinical response
7. Antibiotics should be administered within six hours of presentation, preferably after appropriate cultures have been obtained. The routine administration of antifungal therapy is not warranted in non-neutropenic patients
8. Potentially infected vascular access devices should be removed (if possible), abscesses should be drained, and extensive soft tissue infections should be debrided or amputated
9. Glucocorticoid therapy, nutritional support, glucose control, and investigational therapies are additional considerations in the management of patients with severe sepsis or septic shock.

Question:

The expected SVO<sub>2</sub> in a patient with early septic shock is:

- a. Lower than normal
- b. Higher than normal
- c. Unchanged
- d. Elevated in early sepsis and decreased in late septic shock

Answer: A –  $SVO_2 = SpaO_2 - (VO_2/Hg \times CO \times \text{constant})$ .