

Mechanical Ventilation: A Review and Update for Clinicians: Review Questions

Sonia F. Howman, MD

These questions are based on the article "Mechanical Ventilation: A Review and Update for Clinicians," which begins on page 26 of this issue. Choose the single best answer for each question.

- All of the following are complications of mechanical ventilation most commonly related to the endotracheal tube EXCEPT:**
 - Tracheomalacia
 - Sinusitis
 - Decreased myocardial contractility
 - Laryngeal injury
- Which of the following methods is efficacious in preventing ventilator-associated pneumonia?**
 - Routine antibiotic prophylaxis
 - Use of histamine 2-receptor antagonists
 - Withholding nutritional support
 - Semirecumbent positioning of the patient
 - All of the above
- The diagnosis of pneumothorax is often difficult to make in mechanically ventilated patients because:**
 - The typical supine position of mechanically ventilated patients causes the classic apical position of pneumothorax to occur less frequently than in nonventilated patients.
 - The positive pressure generated by the ventilator keeps the lung mostly inflated.
 - The high fraction of inspired oxygen that most mechanically ventilated patients receive keeps the lungs mostly inflated; therefore, pneumothorax is difficult to detect.
 - All of the above
- Clinical goals of mechanical ventilation may include all of the following EXCEPT:**
 - Reversal of acute, severe hypoxemia
 - Prevention or reversal of atelectasis
 - Reversal of metabolic alkalosis
 - Reduction of intracranial pressure by controlled hyperventilation
- Which of the following best describes a mode of mechanical ventilation that delivers a breath of preset tidal volume in response to each of the patient's inspiratory efforts and, if the patient fails to make an inspiratory effort within a preset time period, delivers a breath to maintain a minimum backup rate?**
 - Synchronized intermittent mandatory ventilation (SIMV)
 - Assist/control ventilation (ACV)
 - Pressure support ventilation (PSV)
 - Pressure-controlled ventilation
- To trigger an assisted breath during ACV or a pressure-supported breath during PSV, the patient must lower airway pressure by a preset amount known as:**
 - Tidal volume
 - Functional residual capacity
 - Trigger sensitivity
 - Positive end-expiratory pressure
- Which of the following best describes a mode of mechanical ventilation in which the actual tidal volume a patient receives depends partly on patient effort and pulmonary mechanics?**
 - PSV
 - ACV
 - SIMV
 - Airway pressure release ventilation
- Discontinuation of mechanical ventilation is usually not considered until:**
 - The patient is hemodynamically stable
 - The patient has the ability to protect his or her upper airway
 - The patient has an intact respiratory drive
 - All of the above

For answers, see page 84.

Dr. Howman is Clinical Assistant Professor of Medicine, University of Hawaii, Honolulu, HI, and Director, Intensive Care Unit, St. Francis Hospital, Honolulu.

Answers to Review Questions

Answers to the review questions asked on page 43.

- | | |
|----|---|
| 4. | (C) Reversal of metabolic alkalosis frequently than in nonventilated patients. |
| 3. | (A) The typical supine position of mechanically ventilated patients causes the classic apical position of pneumothorax to occur less frequently than in nonventilated patients. |
| 2. | (D) Semirecumbent positioning of the patient |
| 1. | (C) Decreased myocardial contractility |
| 5. | (B) Assist/control ventilation (ACV) |
| 6. | (C) Trigger sensitivity |
| 7. | (A) Pressure support ventilation (PSV) |
| 8. | (D) All of the above (The patient is hemodynamically stable; the patient has the ability to protect his or her upper airway; the patient has an intact respiratory drive) |

Copyright 1999 by Turner White Communications Inc., Wayne, PA. All rights reserved.