FISDAP EMT Airway Practice Test (Sample)

Study Guide

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Questions

1. **Where is Sellick's Maneuver applied during assisted ventilations?**
   - **A. Arytenoid Cartilage**
   - **B. Throat**
   - **C. Cricoid Cartilage**
   - **D. Thyroid Cartilage**

2. **What complication should be monitored for after airway interventions?**
   - **A. Hyperventilation or hypoventilation risks**
   - **B. Increased heart rate and blood pressure**
   - **C. Development of a headache**
   - **D. A decrease in body temperature**

3. **What is the purpose of "end-tidal CO2 monitoring"?**
   - **A. To measure blood pressure levels during procedures**
   - **B. To confirm that the endotracheal tube is correctly placed and assess ventilation**
   - **C. To analyze heart rhythm abnormalities**
   - **D. To determine the patient’s level of consciousness**

4. **What is the primary method to ensure ventilation in patients with a decreased level of consciousness?**
   - **A. Bag-mask ventilation**
   - **B. Chest thrusts**
   - **C. Positive pressure ventilation**
   - **D. Suctioning**

5. **In what scenario might an EMT opt for advanced airway management?**
   - **A. When a patient is unconscious with no gag reflex**
   - **B. When a patient is presenting with a minor allergic reaction**
   - **C. When a patient is experiencing mild shortness of breath**
   - **D. When a patient reports dizziness only**

6. What is a major indication for Advanced Airway Management like endotracheal intubation?

A. Presence of a cough reflex

B. Inability to maintain a patent airway or inadequate ventilation

C. Patient preference for intubation

D. Lack of oxygen saturation monitoring

7. What is the formula for calculating the proper oxygen flow for a non-rebreather mask?

A. The oxygen flow should be set at 6-10 liters per minute

B. The oxygen flow should be set at 10-15 liters per minute

C. The oxygen flow should be set at 5-7 liters per minute

D. The oxygen flow should be set at 8-12 liters per minute

8. In the case of an unresponsive trauma patient who is gurgling, what should you do when you suction the oropharynx and the patient gags?

A. Remove the catheter immediately

B. Assess insertion depth of the catheter

C. Continue suctioning

D. Administer oxygen

9. In an unconscious patient, what reflex should you check to assess airway protection?

A. The cough reflex

B. The gag reflex

C. The blink reflex

D. The respiratory reflex

10. A febrile 2-year-old male in respiratory distress is noted to have crackles in the lower left lung field. What should you suspect?

A. Bronchiolitis

B. Pneumonia

C. Croup

D. Asthma attack

Answers

1. C
2. A
3. B
4. A
5. A
6. B
7. B
8. B
9. B
10. B

Explanations

1. Where is Sellick's Maneuver applied during assisted ventilations?

A. Arytenoid Cartilage

B. Throat

C. Cricoid Cartilage

D. Thyroid Cartilage

Sellick's Maneuver is applied to the cricoid cartilage during assisted ventilations. This maneuver involves applying firm pressure to the cricoid cartilage, which is located just below the thyroid cartilage in the anterior aspect of the neck. The pressure serves a dual purpose: it helps prevent air from entering the esophagus during positive pressure ventilation and can help reduce the risk of regurgitation and aspiration of stomach contents, particularly in patients who may have an altered level of consciousness or are at risk for aspiration. By targeting the cricoid cartilage, which is the only complete ring of cartilage around the trachea, this technique also can help align the airway for improved ventilation. When appropriately executed, Sellick's Maneuver may facilitate better overall airway management, making it an important skill for EMTs and other healthcare providers involved in emergency care.

2. What complication should be monitored for after airway interventions?

A. Hyperventilation or hypoventilation risks

B. Increased heart rate and blood pressure

C. Development of a headache

D. A decrease in body temperature

Monitoring for hyperventilation or hypoventilation risks after airway interventions is essential because both conditions can lead to significant physiological changes. Hyperventilation occurs when a patient breathes too rapidly or deeply, causing a decrease in carbon dioxide levels in the blood (hypocapnia). This can lead to symptoms like lightheadedness, tingling in the extremities, or even loss of consciousness. Hypoventilation, on the other hand, involves inadequate ventilation and can result in elevated carbon dioxide levels (hypercapnia), which may lead to respiratory acidosis and can compromise oxygenation. These risks are particularly important to monitor after interventions such as intubation or the use of bag-valve-mask devices, when the patient's breathing pattern may change significantly. Understanding and recognizing these complications can help in managing the patient's airway more effectively, ensuring that adequate ventilation is maintained and preventing further complications from arising.

3. What is the purpose of "end-tidal CO2 monitoring"?

A. To measure blood pressure levels during procedures

B. To confirm that the endotracheal tube is correctly placed and assess ventilation

C. To analyze heart rhythm abnormalities

D. To determine the patient's level of consciousness

End-tidal CO2 monitoring serves a critical function in prehospital and clinical settings primarily by confirming the correct placement of an endotracheal tube and assessing a patient's ventilation status. When an endotracheal tube is properly positioned in the trachea, the exhaled air will contain carbon dioxide (CO2), which is a byproduct of cellular metabolism. The presence of CO2 in the exhaled breath indicates that air is moving in and out of the lungs and that the tube is likely in the correct place. The measurement also gives valuable information about the effectiveness of ventilation. For instance, if the level of CO2 is consistently low, it may indicate that the patient is not adequately ventilating and may require assistance or intervention. Conversely, unusually high levels may suggest inadequate respiratory function or inability to clear CO2 from the body. This monitoring is particularly useful in emergency situations, as it provides immediate feedback on the patient's respiratory status, allowing responders to make timely decisions regarding airway management and ventilation support.

4. What is the primary method to ensure ventilation in patients with a decreased level of consciousness?

A. Bag-mask ventilation

B. Chest thrusts

C. Positive pressure ventilation

D. Suctioning

In patients with a decreased level of consciousness, the primary method to ensure adequate ventilation is bag-mask ventilation. This technique allows for effective delivery of positive pressure air directly into the lungs, which is crucial for patients who may not be able to maintain their own airway and breathing effectively due to their altered mental state. When the level of consciousness decreases, patients can become less responsive, which often leads to compromised airway patency and ineffective spontaneous breathing. Bag-mask ventilation helps to keep the airway open while providing the necessary air to the lungs, facilitating gas exchange and preventing hypoxia. Other methods, while useful in specific scenarios, do not serve the same foundational purpose as bag-mask ventilation for managing ventilation in these patients. Chest thrusts are primarily used to relieve severe airway obstruction, whereas suctioning is used to clear secretions and maintain airway patency but does not actively provide ventilation. Positive pressure ventilation generally refers to more advanced techniques or mechanical ventilation settings, which may not be immediately available in all patient care scenarios. Thus, bag-mask ventilation remains the most effective initial approach to ensure ventilation when consciousness is decreased.

5. In what scenario might an EMT opt for advanced airway management?

A. When a patient is unconscious with no gag reflex

B. When a patient is presenting with a minor allergic reaction

C. When a patient is experiencing mild shortness of breath

D. When a patient reports dizziness only

An EMT might opt for advanced airway management in the scenario where a patient is unconscious with no gag reflex. This is important because the absence of a gag reflex indicates a compromised ability to protect the airway from aspiration, which can lead to serious complications. In cases of unconsciousness, the patient's level of consciousness is such that they cannot maintain their airway or respond to stimuli, increasing the risk of airway obstruction. Advanced airway management techniques, such as intubation or the use of supraglottic airway devices, can provide a secure airway and ensure that the patient can breathe adequately. Intervening in this situation is critical to prevent hypoxia and ensure proper ventilation, making it a clear justification for the need for advanced airway support. In contrast, scenarios involving a minor allergic reaction, mild shortness of breath, or reports of dizziness do not typically warrant advanced airway interventions, as these conditions often involve patients who are still conscious and able to maintain their airway independently. These patients may require other forms of treatment or monitoring, but their airway remains intact and does not necessitate immediate advanced management.

6. What is a major indication for Advanced Airway Management like endotracheal intubation?

A. Presence of a cough reflex

B. Inability to maintain a patent airway or inadequate ventilation

C. Patient preference for intubation

D. Lack of oxygen saturation monitoring

Advanced airway management, such as endotracheal intubation, is indicated primarily when there is an inability to maintain a patent airway or when the patient is experiencing inadequate ventilation. This situation often arises in cases where the patient's level of consciousness is impaired, which could be due to trauma, respiratory failure, or other medical conditions that compromise the airway. In these scenarios, the ability to protect the airway becomes critical. If the airway is obstructed or if the patient cannot effectively ventilate due to muscle weakness or decreased responsiveness, endotracheal intubation ensures that the airway remains open and facilitates adequate oxygenation and ventilation. The procedure involves placing a tube directly into the trachea, thereby bypassing potential obstructions, which is essential for life support in emergencies. While other options, such as the presence of a cough reflex or a patient's preference for intubation, may be relevant in certain contexts, they do not directly indicate the need for advanced airway management. Oxygen saturation monitoring can provide valuable information but is not a direct indication for intubation by itself. Therefore, the inability to maintain an open airway or ensure proper ventilation is the critical reason that supports the need for advanced airway interventions like intubation.

7. What is the formula for calculating the proper oxygen flow for a non-rebreather mask?

A. The oxygen flow should be set at 6-10 liters per minute

B. The oxygen flow should be set at 10-15 liters per minute

C. The oxygen flow should be set at 5-7 liters per minute

D. The oxygen flow should be set at 8-12 liters per minute

The proper oxygen flow for a non-rebreather mask is set at 10-15 liters per minute. This flow rate is necessary to ensure that the reservoir bag remains inflated, allowing for a high concentration of oxygen to be delivered to the patient. Non-rebreather masks are designed to deliver nearly 100% oxygen to patients who are in serious respiratory distress or have critical conditions requiring supplemental oxygen. When the flow rate is set within this range, it helps to create a suitable environment for the patient to receive sufficient oxygen while minimizing the risk of rebreathing expired gases. An adequate flow rate fills the mask's reservoir bag quickly, ensuring that the patient inhales supplemental oxygen with each breath, thereby maximizing the oxygen delivered to the lungs. Other flow rates outside the 10-15 liters per minute range might not provide enough oxygen flow to keep the bag inflated, thereby compromising the effectiveness of the non-rebreather mask and possibly leading to inadequate oxygenation for the patient.

8. In the case of an unresponsive trauma patient who is gurgling, what should you do when you suction the oropharynx and the patient gags?

A. Remove the catheter immediately

B. Assess insertion depth of the catheter

C. Continue suctioning

D. Administer oxygen

When suctioning the oropharynx of an unresponsive trauma patient who is gurgling, encountering a gag reflex is a critical response. The correct action in this scenario is to assess the insertion depth of the catheter. The gag reflex is a protective mechanism that indicates the presence of stimulation in the oropharynx, which can be caused by the suction catheter touching the back of the throat. By assessing the insertion depth, you can ensure that the catheter is not positioned too far back, which may trigger the gag reflex and potentially lead to complications, such as vomiting or airway obstructions. The goal is to manage the airway without causing additional distress to the patient. While removing the catheter immediately might seem like a logical choice, it does not address the need for effective airway management. Continuing suctioning could exacerbate the gag response and cause further airway complications. Administering oxygen is important in managing unresponsive patients, but it does not address the immediate issue of airway clearance and could be futile if the airway is compromised. In summary, understanding the importance of proper technique and depth of suctioning is essential in maintaining an airway without further provoking the gag reflex.

9. In an unconscious patient, what reflex should you check to assess airway protection?

A. The cough reflex

B. The gag reflex

C. The blink reflex

D. The respiratory reflex

The gag reflex is an important indicator of a patient's ability to protect their airway. This reflex involves a contraction of the muscles at the back of the throat in response to stimulation, which can occur when something touches the soft palate or the back of the throat. In an unconscious patient, the presence of the gag reflex suggests that the protective mechanisms of the airway are still functioning to some degree. This reflex helps to prevent aspiration by initiating a protective response when foreign materials enter the throat. Assessing the gag reflex is particularly critical in unconscious patients, as losing the ability to gag can significantly increase the risk of airway obstruction or aspiration of vomitus or other foreign objects. The absence of this reflex indicates a higher risk for airway complications and often necessitates more immediate intervention, such as the placement of an advanced airway or suctioning. In this context, while other reflexes like the cough reflex could also be relevant to airway management, the gag reflex specifically is a direct measure of the protective mechanisms at play in the pharyngeal region, making it the most appropriate choice for assessing airway protection in an unconscious patient.

10. A febrile 2-year-old male in respiratory distress is noted to have crackles in the lower left lung field. What should you suspect?

A. Bronchiolitis

B. Pneumonia

C. Croup

D. Asthma attack

The presence of crackles in the lower left lung field of a febrile 2-year-old indicates fluid or infection in the lung tissue, which is characteristic of pneumonia. In young children, pneumonia can often present with fever, respiratory distress, and localized lung findings such as crackles or rales. These crackles are typically caused by the presence of fluid, pus, or inflammatory debris within the alveoli, leading to an infection that can affect one or more lobes of the lungs. Pneumonia can be caused by various organisms, including viruses and bacteria, and given the child's fever and respiratory distress, it signals a need for immediate medical evaluation and potential treatment. While other conditions such as bronchiolitis, croup, and asthma can cause respiratory distress, they present with different clinical features. For instance, bronchiolitis typically presents with wheezing and is more common in children under two but does not typically cause localized crackles. Croup generally presents with a distinctive "barking" cough and stridor rather than crackles. An asthma attack usually presents with wheezing rather than crackles and involves a history of reactive airways. Thus, the presence of localized crackles alongside fever points directly to pneumonia as the