NREMT Cardiology & Resuscitation Practice Test (Sample)

Study Guide

Everything you need from our exam experts!

Questions

1. **If a 75-year-old female struck by lightning is unresponsive and pulseless after five minutes of CPR, what should you do next?**

   A. Apply a mechanical CPR device.

   B. Look for entry and exit wounds.

   C. Have them stop CPR so you can assess her.

   D. Apply the AED while they continue compressions.

2. **An 84-year-old male has chest pain described as squeezing. What should you do for him considering his history of heart disease?**

   A. Assist with the administration of nitroglycerin

   B. Administer oxygen by nasal cannula

   C. Administer aspirin

   D. Administer oxygen by non-rebreather mask

3. **A 6-month-old girl is non-responsive with central cyanosis. What cause should you suspect for her bradycardia?**

   A. Hypoxia

   B. Pneumothorax

   C. Myocardial ischemia

   D. Congenital heart disease

4. **If a resuscitated patient states they do not recall the event, what should you do next?**

   A. Disconnect the AED.

   B. Document the patient's response.

   C. Continue your treatment.

   D. Assess neurological function.

5. **A 49-year-old male complains of left-sided chest pain. Given his smoking history and symptoms, what condition should you suspect?**

   A. Emphysema

   B. Acute myocardial infarction

   C. Prinzmetal's angina

   D. Lung cancer

6. What should be checked in a patient who has just regained consciousness post-resuscitation?

A. Their response to verbal prompts

B. Neurological status and GCS

C. Pupil reaction and symmetry

D. Airway patency

7. What does a decreased respiratory rate typically indicate in an unresponsive patient?

A. Blockage of the airway

B. Improvement in condition

C. Need for immediate chest compressions

D. Possibly a respiratory compromise

8. What is the primary purpose of cardiopulmonary resuscitation (CPR)?

A. To restore the normal heartbeat

B. To maintain blood circulation and oxygenation

C. To provide oxygen directly to the brain

D. To monitor heart activity

9. An 84-year-old male complains of right-sided weakness and has a history of hypertension. What should you do?

A. Administer oxygen by non-rebreather mask

B. Administer oxygen by nasal cannula

C. Assist with the administration of his insulin

D. Notify the receiving hospital of your findings

10. A 71-year-old male is unresponsive; what should be your first action?

A. Perform a stroke assessment

B. Assess his blood glucose level

C. Move him to the floor

D. Assess his breathing and pulse

Answers

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

Explanations

1. If a 75-year-old female struck by lightning is unresponsive and pulseless after five minutes of CPR, what should you do next?

A. Apply a mechanical CPR device.

B. Look for entry and exit wounds.

C. Have them stop CPR so you can assess her.

D. Apply the AED while they continue compressions.

In a situation where a 75-year-old female has been struck by lightning and is both unresponsive and pulseless after five minutes of CPR, the next appropriate action is to apply the AED while continuing chest compressions. This is critical because early defibrillation can significantly increase the chances of survival, especially in cases of sudden cardiac arrest where an underlying shockable rhythm may be present. Using the AED as soon as it becomes available is essential, as it can deliver a shock to help restore a normal heart rhythm. Continuing compressions while the AED is prepared helps maintain blood circulation to vital organs, optimizing the patient's chances until defibrillation can occur. While examining for entry and exit wounds may be necessary for thorough assessment after the initial management and resuscitation, it should not delay critical interventions like CPR and defibrillation. Similarly, stopping CPR to assess the patient is counterproductive since high-quality CPR should be continuous until advanced care takes over. Applying a mechanical CPR device is useful but might not be immediately feasible or available; the priority remains on utilizing the AED and continuing compressions to maximize the chances for a successful resuscitation.

2. An 84-year-old male has chest pain described as squeezing. What should you do for him considering his history of heart disease?

A. Assist with the administration of nitroglycerin

B. Administer oxygen by nasal cannula

C. Administer aspirin

D. Administer oxygen by non-rebreather mask

In the context of an 84-year-old male with a history of heart disease presenting with squeezing chest pain, administering aspirin is a critical intervention. Aspirin acts as an antiplatelet medication, which helps to inhibit the aggregation of platelets in the blood, reducing the likelihood of clot formation, particularly in cases of myocardial ischemia or infarction. By preventing platelet clumping, aspirin can help to maintain blood flow to the heart muscle and mitigate further damage during a cardiac event. This action is especially important given the patient's age and history of heart disease, as these factors increase the risk of serious cardiac complications. Aspirin should be given as soon as possible, provided there are no contraindications, such as an allergy to aspirin or active gastrointestinal bleeding. Other management strategies, like administering oxygen or assisting with nitroglycerin, may also be appropriate in specific situations. However, the immediate use of aspirin for its cardioprotective effects is paramount in patients with chest pain associated with potential cardiac issues. Thus, in this scenario, administering aspirin is the most clinically significant and immediate intervention to take.

3. A 6-month-old girl is non-responsive with central cyanosis. What cause should you suspect for her bradycardia?

A. Hypoxia

B. Pneumothorax

C. Myocardial ischemia

D. Congenital heart disease

In the scenario of a 6-month-old girl who is non-responsive and exhibiting central cyanosis, hypoxia is a primary concern that can lead to bradycardia. In infants, the body can respond to inadequate oxygen levels by slowing the heart rate as a protective mechanism. This is to preserve function and oxygenation of vital organs in the face of low oxygen saturation. Cyanosis indicates a lack of oxygenated blood circulating in the system, which often suggests that the respiratory system is compromised. When the body detects low levels of oxygen (hypoxia), it may trigger vagal responses that slow the heart rate, leading to bradycardia. Particularly in infants and young children, bradycardia can be a direct response to respiratory distress, poor perfusion, or reduced oxygen saturation, making hypoxia a critical factor to consider in this context. While other conditions like pneumothorax, myocardial ischemia, or congenital heart disease may also lead to bradycardia, hypoxia is the most immediate and common cause in an unresponsive infant with central cyanosis. Recognizing and addressing hypoxia is essential in managing the condition effectively.

4. If a resuscitated patient states they do not recall the event, what should you do next?

A. Disconnect the AED.

B. Document the patient's response.

C. Continue your treatment.

D. Assess neurological function.

The appropriate action after a resuscitated patient states they do not recall the event is to continue your treatment. In the context of post-resuscitation care, it is important to ensure that the patient is monitored closely for any potential complications or changes in their condition. Continuing treatment allows for the assessment of vital signs and neurological function, which are crucial for determining the patient's stability and ongoing needs. Patients who do not recall the event may be experiencing a variety of neurological responses, and their condition could change rapidly. Therefore, maintaining a proactive approach in treatment is essential to address any potential issues that may arise. By keeping up with treatment protocols, you can provide necessary interventions that could be life-saving. While documenting the patient's response, assessing neurological function, and disconnecting the AED may be relevant tasks in the overall patient care process, they should not take precedence over the immediate need to stabilize and monitor the patient following resuscitation. Focusing on continuing treatment ensures that all bases are covered in managing the patient's health effectively.

5. A 49-year-old male complains of left-sided chest pain. Given his smoking history and symptoms, what condition should you suspect?

A. Emphysema

B. Acute myocardial infarction

C. Prinzmetal's angina

D. Lung cancer

In the context of a 49-year-old male presenting with left-sided chest pain, particularly with a smoking history, acute myocardial infarction is a strong consideration. This is due to the fact that chest pain, especially on the left side, is a classic symptom of myocardial infarction. Additionally, the patient's smoking history significantly increases the risk for coronary artery disease and subsequent heart-related complications, such as a heart attack. Acute myocardial infarction occurs when blood flow to a part of the heart is blocked, often due to plaque buildup in the coronary arteries. The symptoms can include not only chest pain but also shortness of breath, sweating, nausea, and possibly radiation of pain to the arm or jaw. While the other conditions listed might exhibit chest pain as a symptom, they are less likely given the patient's age and risk factors. Emphysema can cause discomfort but typically manifests with breathing difficulties rather than acute chest pain indicative of a myocardial event. Prinzmetal's angina presents as chest pain due to coronary artery spasms and would be more episodic and related to specific triggers. Lung cancer could present with chest pain but is often associated with additional symptoms such as cough, hemoptysis, or weight loss, and generally occurs at an

6. What should be checked in a patient who has just regained consciousness post-resuscitation?

A. Their response to verbal prompts

B. Neurological status and GCS

C. Pupil reaction and symmetry

D. Airway patency

When a patient regains consciousness following resuscitation, assessing their neurological status and Glasgow Coma Scale (GCS) is crucial. The GCS is a standardized tool used to evaluate a patient's level of consciousness based on their ability to open their eyes, respond verbally, and move in response to stimuli. In a post-resuscitation scenario, accurately assessing the GCS allows healthcare providers to determine the patient's neurological recovery and identify any potential presence of brain injury or dysfunction. This assessment is vital as neurological status can be affected by multiple factors, including anoxia during the cardiac arrest event, metabolic changes, and medication effects. Monitoring the GCS can also guide further management, including the need for imaging studies or other interventions based on the patient's score. While checking pupil reaction and symmetry, airway patency, and response to verbal prompts are also important aspects of a patient's assessment post-resuscitation, the GCS provides comprehensive insights specifically related to neurological function, which is of paramount importance in this acute setting.

7. What does a decreased respiratory rate typically indicate in an unresponsive patient?

A. Blockage of the airway

B. Improvement in condition

C. Need for immediate chest compressions

D. Possibly a respiratory compromise

A decreased respiratory rate in an unresponsive patient often suggests a potential respiratory compromise. This means the patient may not be able to maintain adequate ventilation, which can lead to insufficient oxygen delivery to the body's tissues. In an unresponsive patient, various factors can contribute to a lowered respiratory rate, including central nervous system depression from medications, head injury, or other critical health issues. Recognizing respiratory compromise is essential as it can escalate to respiratory failure, where the patient may not be able to breathe adequately on their own. This situation requires quick assessment and possible intervention, such as providing supplemental oxygen or assisting with ventilation, to prevent severe complications. Monitoring the patient's airway and supporting breathing are critical components of managing an unresponsive individual.

8. What is the primary purpose of cardiopulmonary resuscitation (CPR)?

A. To restore the normal heartbeat

B. To maintain blood circulation and oxygenation

C. To provide oxygen directly to the brain

D. To monitor heart activity

The primary purpose of cardiopulmonary resuscitation (CPR) is to maintain blood circulation and oxygenation to vital organs, particularly the brain and heart, during a cardiac arrest. When the heart stops beating effectively, blood flow to the body ceases, leading to a lack of oxygen in the tissues and organs. CPR involves chest compressions and, in some cases, rescue breaths, which help to artificially circulate blood and deliver oxygen. The goal is to keep the blood flowing until advanced medical help can arrive and restore a normal heartbeat, ideally minimizing brain damage and increasing the chances of survival. While restoring a normal heartbeat is a critical goal of resuscitation efforts, CPR itself primarily aims to sustain circulation and oxygenation during the critical moments before more comprehensive medical interventions can take place. Monitoring heart activity does not contribute to the immediate physical actions required in CPR, and providing oxygen directly to the brain is a beneficial outcome but not the primary function of the procedure.

9. An 84-year-old male complains of right-sided weakness and has a history of hypertension. What should you do?

A. Administer oxygen by non-rebreather mask

B. Administer oxygen by nasal cannula

C. Assist with the administration of his insulin

D. Notify the receiving hospital of your findings

In cases of sudden onset weakness, especially when accompanied by a history of hypertension, there is a significant concern for a possible stroke or transient ischemic attack (TIA). The rapid assessment and management in such situations are critical. Notifying the receiving hospital of your findings, including the patient's age, symptoms, and medical history, is essential for several reasons. First, it allows the hospital to prepare for the patient's arrival. Advanced stroke care is time-sensitive, and informing the hospital can initiate protocols such as a stroke team alert. This timely notification can lead to rapid diagnostic imaging and treatment, such as the administration of thrombolytics, if appropriate. Furthermore, hospitals often have specific guidelines they follow when dealing with potential stroke patients, including protocols for triage and intervention. By communicating the patient's condition early, you can facilitate a smoother transition to definitive care, which is crucial for the patient's outcomes. In this scenario, while oxygen administration may be necessary if the patient is hypoxic, it does not directly address the underlying condition or prepare for stroke management. Assisting with insulin would be irrelevant unless there were signs of hypoglycemia, which isn't indicated here. Thus, focusing on notifying the receiving facility ensures the patient receives timely and appropriate care for their acute condition

10. A 71-year-old male is unresponsive; what should be your first action?

A. Perform a stroke assessment

B. Assess his blood glucose level

C. Move him to the floor

D. Assess his breathing and pulse

The first action when encountering an unresponsive individual is to assess their breathing and pulse. This is crucial because it helps to determine whether the patient is in cardiac arrest or if they are breathing but unresponsive, which informs the immediate actions required for their care. If the patient is not breathing or has no pulse, it signals the need for urgent cardiopulmonary resuscitation (CPR) and potentially advanced life support interventions. Other actions, such as performing a stroke assessment or checking blood glucose levels, may be relevant, but they can only be performed after ensuring the patient is stable. Moving the patient to the floor is not a priority unless it is necessary for safety or to provide adequate care. Therefore, focusing first on identifying the patient's breathing and circulatory status is essential for initiating appropriate life-saving measures.