Cardiac-Vascular Nursing (CVRN) Practice Exam (Sample)

Study Guide



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Questions



- 1. What symptom might a patient with chronic venous obstruction frequently complain of?
 - A. Thin, shiny skin
 - B. Hair loss of the affected extremity
 - C. Diminished sensory function
 - D. Swelling of the lower legs
- 2. What is the most important action for a cardiac-vascular nurse when monitoring a patient after cardiac catheterization for signs of adequate perfusion?
 - A. Assess the patient's pain levels regularly
 - B. Monitor vital signs every hour
 - C. Palpate peripheral pulses
 - D. Review lab results for electrolyte imbalances
- 3. Which of the following symptoms might indicate a need for immediate cardiac evaluation?
 - A. Shortness of breath
 - **B.** Irregular bowel movements
 - C. Frequent headaches
 - D. General fatigue
- 4. What does a pulse pressure measurement indicate?
 - A. The average blood pressure over a heartbeat
 - B. The difference between systolic and diastolic blood pressure; reflects arterial health
 - C. The total blood volume in the circulatory system
 - D. The overall heart rate during exercise
- 5. When a patient presents with a swollen and painful leg but no injury, why is it important to ask when the symptoms began?
 - A. Irreversible anoxic injury to muscles and nerves can occur in a few as four hours
 - B. A compartment syndrome develops days after an arterial occlusion
 - C. An arterial thrombus is sudden and emergency, while an embolism develops gradually
 - D. Metabolic alkalosis from muscle swelling in cardiotoxic

- 6. When developing an educational plan for a patient with heart failure, what is the primary focus?
 - A. Managing medication regimens
 - **B.** Dietary modifications
 - C. Recognizing symptoms of worsening heart failure
 - D. Exercise prescriptions
- 7. When is the optimal time to begin ambulating a stable, post cardiac surgery patient?
 - A. 3rd-5th postoperative day
 - B. 1st-2nd postoperative day
 - C. Immediately following extubation
 - D. 6th-7th postoperative day
- 8. Describe how peripheral vascular disease affects limb circulation.
 - A. It results in increased blood flow to the extremities.
 - B. It leads to reduced blood flow to the extremities, causing pain and potential tissue damage.
 - C. It has no significant impact on limb circulation.
 - D. It causes varicose veins exclusively.
- 9. Which condition is a contraindication for giving amiodarone?
 - A. Worsening hypertension
 - B. High potassium levels
 - C. Reactive airway disease
 - D. Severe liver dysfunction
- 10. What is the primary purpose of an echocardiogram?
 - A. To measure blood pressure
 - B. To assess the structure and function of the heart
 - C. To monitor cholesterol levels
 - D. To visualize blood vessels

<u>Answers</u>



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



Explanations



- 1. What symptom might a patient with chronic venous obstruction frequently complain of?
 - A. Thin, shiny skin
 - B. Hair loss of the affected extremity
 - C. Diminished sensory function
 - D. Swelling of the lower legs

Chronic venous obstruction often leads to increased venous pressure, resulting in fluid accumulation in the lower extremities. This accumulation manifests as swelling, or edema, particularly in the legs and ankles. Patients typically report this swelling, especially after periods of prolonged sitting or standing, as the gravitational forces exacerbate the condition. In contrast, thin, shiny skin, hair loss on the affected extremity, and diminished sensory function may be more associated with arterial issues or long-term venous insufficiency rather than acute symptoms of chronic venous obstruction. Thus, swelling of the lower legs is a direct and common symptom experienced by patients suffering from chronic venous obstruction.

- 2. What is the most important action for a cardiac-vascular nurse when monitoring a patient after cardiac catheterization for signs of adequate perfusion?
 - A. Assess the patient's pain levels regularly
 - B. Monitor vital signs every hour
 - C. Palpate peripheral pulses
 - D. Review lab results for electrolyte imbalances

The most important action for a cardiac-vascular nurse when monitoring a patient after cardiac catheterization for signs of adequate perfusion is to palpate peripheral pulses. This practice is critical because peripheral pulses provide direct information about the patient's blood flow and circulation to the extremities. Adequate perfusion means that blood is reaching the tissues, and palpating peripheral pulses helps assess the strength and quality of blood flow in the extremities. Any changes in the pulses, such as weakness or absence, may indicate complications such as arterial occlusion or inadequate perfusion due to potential thrombus formation at the catheterization site. While regularly assessing pain levels, monitoring vital signs, and reviewing lab results for electrolyte imbalances are important components of patient care, they are not as immediate or specific for detecting perfusion status as palpating peripheral pulses. Monitoring vital signs can indicate systemic changes, but may not directly reflect localized perfusion issues. Similarly, pain can be subjective and does not always correlate with perfusion adequacy. Lastly, electrolyte imbalances can impact cardiac performance, but they are not immediate indicators of tissue perfusion status post-procedure. Therefore, focusing on peripheral pulses is the most effective way to ensure that the patient is adequately perfused after cardiac catheterization.

3. Which of the following symptoms might indicate a need for immediate cardiac evaluation?

- A. Shortness of breath
- **B.** Irregular bowel movements
- C. Frequent headaches
- D. General fatigue

Shortness of breath is a critical symptom that can signify various underlying cardiac conditions, such as heart failure, myocardial infarction, or pulmonary embolism. When a patient experiences sudden or worsening shortness of breath, it may indicate that the heart is not effectively pumping blood or that there is inadequate oxygenation. This symptom warrants immediate evaluation because prompt diagnosis and intervention can be lifesaving. In contrast, while irregular bowel movements, frequent headaches, and general fatigue can be concerning, they are more generalized and could stem from numerous non-cardiac conditions. These symptoms, although they might require attention, do not typically necessitate urgent cardiac evaluation like shortness of breath does. Thus, the urgency associated with shortness of breath makes it the primary indicator for potential cardiac issues that must be addressed without delay.

4. What does a pulse pressure measurement indicate?

- A. The average blood pressure over a heartbeat
- B. The difference between systolic and diastolic blood pressure; reflects arterial health
- C. The total blood volume in the circulatory system
- D. The overall heart rate during exercise

The measurement of pulse pressure is determined by calculating the difference between systolic and diastolic blood pressures. It provides valuable information about the health of the arteries; a wider pulse pressure can indicate increased arterial stiffness, which is often associated with cardiovascular problems. High pulse pressure can reflect various conditions such as hypertension or a heightened risk for cardiovascular events, while low pulse pressure might suggest potential heart failure or hypovolemic states. Understanding pulse pressure helps healthcare professionals assess the cardiovascular system's functioning and make informed clinical decisions related to patient care.

- 5. When a patient presents with a swollen and painful leg but no injury, why is it important to ask when the symptoms began?
 - A. Irreversible anoxic injury to muscles and nerves can occur in a few as four hours
 - B. A compartment syndrome develops days after an arterial occlusion
 - C. An arterial thrombus is sudden and emergency, while an embolism develops gradually
 - D. Metabolic alkalosis from muscle swelling in cardiotoxic

Determining when the symptoms of swelling and pain in a leg began is crucial for assessing the urgency of the situation. Sudden onset of symptoms can indicate conditions that require immediate intervention, as irreversible damage can occur rapidly. Specifically, in cases like acute limb ischemia, if blood flow is compromised, muscle and nerve cells can suffer from anoxic injury, leading to necrosis if not promptly treated. This emphasizes the importance of time in the context of blood supply disruption. Knowing the timeline can help the healthcare provider ascertain the most likely underlying cause and decide on the appropriate treatment. Delays in addressing conditions that have a rapid onset can lead to severe complications, making it critical to understand when the symptoms started. The timeframe is instrumental in guiding both diagnosis and treatment plans.

- 6. When developing an educational plan for a patient with heart failure, what is the primary focus?
 - A. Managing medication regimens
 - **B.** Dietary modifications
 - C. Recognizing symptoms of worsening heart failure
 - D. Exercise prescriptions

The primary focus when developing an educational plan for a patient with heart failure should involve recognizing symptoms of worsening heart failure. This aspect is crucial because timely identification of deteriorating heart failure symptoms is key to preventing hospitalizations and improving patient outcomes. Patients equipped with the knowledge to identify symptoms such as increased shortness of breath, sudden weight gain, or swelling can take proactive measures to manage their condition more effectively. Additionally, recognizing worsening symptoms allows patients to communicate changes to their healthcare provider quickly, facilitating timely interventions. While managing medication regimens, dietary modifications, and exercise prescriptions are essential components of comprehensive heart failure management, the ability to recognize and respond to worsening symptoms is foundational to maintaining stability and preventing exacerbations in heart failure patients.

- 7. When is the optimal time to begin ambulating a stable, post cardiac surgery patient?
 - A. 3rd-5th postoperative day
 - B. 1st-2nd postoperative day
 - C. Immediately following extubation
 - D. 6th-7th postoperative day

Beginning ambulation on the 1st-2nd postoperative day for a stable post-cardiac surgery patient is considered optimal as it plays a crucial role in promoting recovery. Early ambulation helps to prevent complications such as deep vein thrombosis (DVT), pulmonary complications, and loss of muscle strength. When patients are encouraged to ambulate soon after their surgery, they benefit from improvements in circulation and respiratory function, which can help in the clearance of secretions and enhance lung capacity. Early movement can also stimulate bowel function, reducing the risk of gastrointestinal complications, which are common after surgery. In addition, early mobilization can positively affect the patient's mental well-being by providing a sense of normalcy and encouraging participation in their own recovery process. The choice of starting ambulation on the 1st-2nd postoperative day aligns with current evidence-based practices that advocate for early post-operative rehabilitation in cardiovascular surgery patients, promoting better overall outcomes.

- 8. Describe how peripheral vascular disease affects limb circulation.
 - A. It results in increased blood flow to the extremities.
 - B. It leads to reduced blood flow to the extremities, causing pain and potential tissue damage.
 - C. It has no significant impact on limb circulation.
 - D. It causes varicose veins exclusively.

Peripheral vascular disease (PVD) significantly impacts limb circulation by causing reduced blood flow to the extremities. This condition often results from atherosclerosis, which is the buildup of fatty deposits within the arteries. As these arteries become narrowed or blocked, the volume of blood that can be delivered to the limbs decreases. This reduced blood flow can lead to a range of symptoms, including intermittent claudication, which is characterized by pain or cramping in the legs during physical activity. If the blood supply is severely compromised, it can result in ischemia, leading to tissue damage and, in severe cases, limb loss. Consequently, individuals with PVD often experience symptoms at rest and may develop chronic non-healing wounds due to inadequate perfusion, reinforcing the potential for significant complications associated with this condition. The focus on reduced blood flow and its consequences, such as pain and potential tissue damage, elucidates why this aspect of PVD is critical for understanding its impact on limb health.

9. Which condition is a contraindication for giving amiodarone?

- A. Worsening hypertension
- B. High potassium levels
- C. Reactive airway disease
- D. Severe liver dysfunction

Amiodarone is an antiarrhythmic medication commonly used to treat various cardiac dysrhythmias. However, one critical contraindication for its use is severe liver dysfunction. This is because amiodarone is primarily metabolized by the liver, and in individuals with significant liver impairment, the drug can accumulate to toxic levels, leading to potentially harmful side effects. Liver function tests are typically monitored during amiodarone therapy, but in cases of severe liver dysfunction, the risks associated with the drug's metabolism outweigh the benefits, leading to the decision to avoid its use. In contrast, other conditions listed, such as worsening hypertension or high potassium levels, are generally managed with alternative therapies or monitoring, rather than constituting absolute contraindications. Additionally, while reactive airway disease may complicate treatment, it does not directly contraindicate the use of amiodarone as effectively as severe liver dysfunction does.

10. What is the primary purpose of an echocardiogram?

- A. To measure blood pressure
- B. To assess the structure and function of the heart
- C. To monitor cholesterol levels
- D. To visualize blood vessels

The primary purpose of an echocardiogram is to assess the structure and function of the heart. This imaging technique uses ultrasound waves to create pictures of the heart, allowing healthcare professionals to visualize its chambers, valves, and overall function. It helps identify various cardiac conditions, such as heart valve diseases, cardiomyopathy, and congenital heart defects. Additionally, an echocardiogram provides valuable information about the heart's pumping ability, which is crucial for diagnosing heart failure and planning appropriate treatment strategies. This comprehensive assessment is why an echocardiogram is a vital tool in cardiac diagnostics and management.