Prophecy Medical Surgical Telemetry Practice Test (Sample)

Study Guide



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Questions



- 1. What should be monitored in a patient on morphine PCA therapy?
 - A. Only blood pressure
 - B. Respiratory rate and sedation level
 - C. Pulse oximetry only
 - D. Heart rhythm
- 2. During an evaluation, what does an increased level of BUN indicate about a patient?
 - A. Improved renal function
 - B. Dehydration or renal impairment
 - C. Normal metabolic function
 - D. Excess protein intake
- 3. What effect can hypokalemia have on cardiac function?
 - A. It can cause bradycardia
 - B. It can lead to arrhythmias, including potentially life-threatening ones
 - C. It improves cardiac contractility
 - D. It rarely affects cardiac function
- 4. What is the primary purpose of a cardiac stress test?
 - A. To diagnose existing heart conditions
 - B. To assess how well the heart performs under physical stress
 - C. To evaluate lung function
 - D. To monitor electrolyte imbalances
- 5. Which of the following symptoms is most indicative of a stroke?
 - A. Headache
 - B. Chest pain
 - C. Sudden weakness or numbness
 - D. Shortness of breath

- 6. When monitoring a patient for signs of hypoxia, which sign should be closely observed?
 - A. Bradycardia
 - **B.** Increased urination
 - C. Confusion
 - D. Clear lung sounds
- 7. Which cardiac rhythm is characterized by rapid heart rate and may present serious clinical concerns?
 - A. Normal sinus rhythm
 - **B.** Atrial fibrillation
 - C. Ventricular tachycardia
 - D. Bradycardia
- 8. What is the primary strategy for managing atrial fibrillation?
 - A. Control heart rate and rhythm
 - **B.** Use of diuretics
 - C. Performing surgery
 - D. Increase physical activity
- 9. Which complication requires immediate attention after a below-knee amputation?
 - A. Hypovolemic shock
 - **B.** Infection
 - C. Thromboembolism
 - D. Wound dehiscence
- 10. What is the purpose of administering aspirin during a suspected myocardial infarction?
 - A. To reduce pain and anxiety
 - B. To thin the blood and prevent clotting
 - C. To regulate heart rhythm
 - D. To decrease blood pressure

Answers



- 1. B 2. B

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



Explanations



1. What should be monitored in a patient on morphine PCA therapy?

- A. Only blood pressure
- B. Respiratory rate and sedation level
- C. Pulse oximetry only
- D. Heart rhythm

Monitoring respiratory rate and sedation level in a patient on morphine PCA (Patient-Controlled Analgesia) therapy is critical due to the risk of respiratory depression and sedation associated with opioid use. Morphine is a powerful analgesic that can significantly inhibit the respiratory center in the brain, leading to decreased respiratory drive. This is especially pertinent in a PCA setting, where patients have the ability to self-administer bolus doses of medication, increasing the likelihood of overdose if not properly monitored. In addition to tracking respiratory rate, assessing sedation level provides insight into the patient's overall state of consciousness and potential for airway compromise. Changes in these parameters can be early indicators of opioid toxicity, allowing for timely interventions to prevent complications. Other monitoring options, while important in different contexts, do not focus specifically on the most immediate and relevant dangers associated with morphine PCA therapy. Therefore, focusing on both the respiratory rate and sedation level provides a comprehensive safety net for patients receiving this type of pain management.

2. During an evaluation, what does an increased level of BUN indicate about a patient?

- A. Improved renal function
- **B.** Dehydration or renal impairment
- C. Normal metabolic function
- D. Excess protein intake

An increased level of Blood Urea Nitrogen (BUN) typically indicates that the kidneys may not be functioning optimally, or that the patient may be experiencing dehydration. BUN is a waste product formed in the liver after protein is broken down, and it is normally excreted by the kidneys. When kidney function is impaired, or when the body is dehydrated, the concentration of BUN in the blood rises. In cases of dehydration, there is less fluid available to dilute the urea in the blood, thus leading to elevated levels. Additionally, if renal impairment is present—be it from acute or chronic kidney disease—this can also impede the kidneys' ability to filter and excrete urea, resulting in increased BUN levels. In contrast, improved renal function would typically correlate with decreased BUN levels as the kidneys are effectively removing waste products from the bloodstream. Normal metabolic function would not typically present with elevated BUN, and while excess protein intake can temporarily raise BUN levels, it is not the primary indicator assessed in this context. Overall, an elevated BUN level serves as a clinical marker for potential dehydration or renal issues, guiding further evaluation and management of the patient.

3. What effect can hypokalemia have on cardiac function?

- A. It can cause bradycardia
- B. It can lead to arrhythmias, including potentially life-threatening ones
- C. It improves cardiac contractility
- D. It rarely affects cardiac function

Hypokalemia, or low potassium levels in the blood, has a significant impact on cardiac function, particularly in relation to arrhythmias. Potassium is crucial for maintaining normal electrical activity in the heart. When potassium levels drop, it can lead to disturbances in the heart's electrical conduction system. This disruption can cause a range of arrhythmias, from minor irregularities to more severe, life-threatening conditions such as ventricular fibrillation or complete heart block. The risk of arrhythmias increases notably because potassium plays a vital role in repolarization during the cardiac cycle. With lower levels of potassium, the heart muscle cells become more excitable, which can contribute to abnormal heart rhythms. If not addressed, these arrhythmias can have serious consequences, including the potential for sudden cardiac arrest. Thus, understanding the implications of hypokalemia on cardiac function emphasizes the importance of monitoring electrolyte levels and maintaining them within a normal range to ensure optimal heart health.

4. What is the primary purpose of a cardiac stress test?

- A. To diagnose existing heart conditions
- B. To assess how well the heart performs under physical stress
- C. To evaluate lung function
- D. To monitor electrolyte imbalances

The primary purpose of a cardiac stress test is to assess how well the heart performs under physical stress. During this test, patients engage in exercise, typically on a treadmill or stationary bike, while their heart rate, blood pressure, and ECG are monitored. This process helps identify any potential issues that may not be apparent while the patient is at rest, such as arrhythmias, ischemia, or other heart-related problems. By observing the heart's performance, healthcare providers can gain valuable insights into the patient's cardiovascular fitness, the presence of coronary artery disease, and how effectively the heart can supply blood during increased physical activity. This information is crucial in guiding further diagnostic evaluations and treatment plans. Other options focus on different aspects of health assessments that are not the main goal of a cardiac stress test. For instance, diagnosing existing heart conditions might occur as a secondary outcome, and evaluating lung function or monitoring electrolyte imbalances is outside the scope of what the stress test primarily aims to achieve.

- 5. Which of the following symptoms is most indicative of a stroke?
 - A. Headache
 - B. Chest pain
 - C. Sudden weakness or numbness
 - D. Shortness of breath

Sudden weakness or numbness is most indicative of a stroke because it reflects the sudden disruption of blood flow to a part of the brain, leading to neurological deficits. This symptom often presents unilaterally, affecting one side of the body, such as an arm or leg, and can involve the face. The absence of blood flow results in the loss of function, which is critical in diagnosing a stroke quickly. Recognizing this symptom is vital as it aligns with the urgency required for a stroke, where timely intervention can significantly affect outcomes. Other symptoms like headache, chest pain, and shortness of breath, while serious and potentially indicating other medical conditions, do not specifically correlate with the immediate and sudden onset of stroke. Headaches can occur in various situations and may not distinguishably indicate a stroke. Similarly, chest pain is commonly associated with cardiac issues, while shortness of breath is frequently linked to respiratory or cardiac conditions rather than a stroke. Thus, sudden weakness or numbness stands out as a key indicator of a cerebrovascular accident, guiding immediate medical evaluation and response.

- 6. When monitoring a patient for signs of hypoxia, which sign should be closely observed?
 - A. Bradycardia
 - **B.** Increased urination
 - C. Confusion
 - D. Clear lung sounds

Monitoring for signs of hypoxia is essential in ensuring patient safety and wellbeing. Confusion can be a significant indicator of oxygen deprivation to the brain. When the body lacks adequate oxygen, neurological function can become impaired, leading to changes in a patient's mental status such as confusion or disorientation. This is particularly pertinent in patients who may already have compromised respiratory function or underlying conditions that affect oxygen delivery. In contrast, although bradycardia can occur in some cases of hypoxia, it is not as direct a sign as confusion. Increased urination is not typically associated with hypoxia; instead, it may indicate other issues like fluid balance or diabetes. Clear lung sounds indicate effective ventilation and are not a sign of hypoxia but rather suggest that there is no obstruction or fluid in the airways, thus making them an unlikely choice for monitoring hypoxia. Therefore, confusion serves as a more direct and concerning indicator of inadequate oxygenation and warrants close observation in monitoring hypoxia.

7. Which cardiac rhythm is characterized by rapid heart rate and may present serious clinical concerns?

- A. Normal sinus rhythm
- **B.** Atrial fibrillation
- C. Ventricular tachycardia
- D. Bradycardia

Ventricular tachycardia is characterized by a rapid heart rate, usually defined as a heart rate exceeding 100 beats per minute originating from the ventricles of the heart. This rhythm can lead to significant clinical concerns because, if sustained, it may impair the heart's ability to pump blood effectively, leading to a decrease in cardiac output. It can also progress to more severe forms of arrhythmia, such as ventricular fibrillation, which is life-threatening. In the context of its serious implications, ventricular tachycardia can lead to symptoms such as dizziness, syncope (fainting), or even cardiac arrest. The rapid heart rate in this rhythm does not allow for sufficient filling time of the ventricles, which can result in inadequate perfusion of vital organs. This makes it crucial for healthcare providers to recognize and respond to ventricular tachycardia promptly to prevent deterioration in the patient's condition. Understanding the significance of this arrhythmia is imperative in the medical field, as it underscores the importance of monitoring patients with cardiac issues and being prepared to intervene when such rhythms are observed.

8. What is the primary strategy for managing atrial fibrillation?

- A. Control heart rate and rhythm
- B. Use of diuretics
- C. Performing surgery
- D. Increase physical activity

The primary strategy for managing atrial fibrillation focuses on controlling heart rate and rhythm due to the nature of the condition, which involves irregular and often rapid heartbeats. Atrial fibrillation can lead to insufficient blood flow and an increased risk of stroke. Therefore, maintaining a stable heart rate and restoring a normal rhythm are crucial components of effective management. This can be achieved through medications such as beta-blockers or calcium channel blockers to help control the heart rate, and antiarrhythmic drugs may be used to restore normal rhythm. In some cases, procedures like cardioversion may be performed to return the heart to a normal rhythm. While diuretics, surgery, and physical activity play roles in the overall management of heart health or specific cases of heart failure, they are not the primary focus for the management of atrial fibrillation. The most immediate goal remains stabilizing the heart rate and rhythm, making it essential in the treatment strategy for patients diagnosed with this condition.

9. Which complication requires immediate attention after a below-knee amputation?

- A. Hypovolemic shock
- **B.** Infection
- C. Thromboembolism
- D. Wound dehiscence

After a below-knee amputation, the most critical complication that requires immediate attention is thromboembolism. The surgical procedure, along with immobility post-operation, increases the risk of blood clots forming in the veins, particularly in the legs. If a clot dislodges, it can travel to the lungs, leading to a pulmonary embolism, which can be life-threatening. Recognizing the signs of thromboembolism—such as sudden chest pain, difficulty breathing, or a rapid heart rate—is crucial for prompt intervention and preventing serious complications. Other complications, while significant, may not require the same immediate response. Hypovolemic shock, though critical, can often be managed first by addressing fluid replacement and monitoring vital signs. Infection is also a major concern, especially in the surgical site; however, it typically manifests over time rather than abruptly. Wound dehiscence, or the reopening of the surgical site, while still serious, is often not as immediate as thromboembolism and can typically be managed with surgical intervention at a later stage. Therefore, the urgency associated with thromboembolism highlights it as the complication demanding immediate medical attention following a below-knee amputation.

10. What is the purpose of administering aspirin during a suspected myocardial infarction?

- A. To reduce pain and anxiety
- B. To thin the blood and prevent clotting
- C. To regulate heart rhythm
- D. To decrease blood pressure

Administering aspirin during a suspected myocardial infarction serves the critical purpose of thinning the blood and preventing clotting. During a heart attack, a blood clot often forms in the coronary arteries, obstructing blood flow to the heart muscle, which can lead to ischemia and damage. Aspirin acts as an antiplatelet agent, inhibiting the aggregation of platelets, thereby reducing the formation of new clots and alleviating the size of existing clots. This action is vital in restoring and maintaining blood flow to the heart, minimizing tissue damage, and potentially improving outcomes for the patient. The focus of treatment in this scenario is on facilitating blood flow and mitigating the immediate risks associated with myocardial infarction, which is why the use of aspirin is favored in the emergency management of this condition.