NCLEX Acute Coronary Syndrome Practice Exam (Sample)

Study Guide

Everything you need from our exam experts!

Questions

1. Which group of patients is most likely to experience atypical symptoms of myocardial infarction?

A. Teenagers

B. Women

C. Men under 50

D. Older adults

2. In which stage of cardiac rehab is a patient encouraged to gradually increase their exercise?

A. Phase 1

B. Phase 2

C. Phase 3

D. Phase 4

3. What sign after thrombolytic therapy would most alarm the nurse?

A. 1 inch backup of blood in the IV tubing

B. Facial drooping

C. Partial thromboplastin time (PTT) 68 seconds

D. Report of chest pressure during dye injection

4. What common postoperative complication should the nurse monitor after CABG surgery?

A. Atrial dysrhythmias

B. Dehydration

C. Acute respiratory distress syndrome

D. Paralytic ileus

5. Which type of myocardial infarction should the nurse monitor most closely for left ventricular heart failure?

A. Inferior wall

B. Anterior wall

C. Lateral wall

D. Posterior wall

6. Which biomarker is most indicative of a myocardial infarction (MI) in a patient?

A. CK-MB

B. Troponin

C. Myoglobin

D. CRP

7. What type of antianginal medication is most effective for treating coronary artery spasms?

A. Beta blockers

B. Calcium channel blockers

C. Nitrates

D. Antihyperlipidemics

8. Which symptom is indicative of a myocardial infarction (MI)?

A. Chest pain brought on by exertion or stress

B. Substernal chest discomfort occurring at rest

C. Substernal chest discomfort relieved by nitroglycerin or rest

D. Substernal chest pressure relieved only by opioids

9. What lifestyle modification is recommended to reduce the risk of acute coronary syndrome?

A. Increase caffeine intake

B. Smoking cessation

C. Increase saturated fat intake

D. Reduce physical activity

10. What is the primary purpose of monitoring troponin levels in patients presenting with chest pain?

A. To assess potential heart failure

B. To evaluate for myocarditis

C. To diagnose a myocardial infarction

D. To understand myocardial contractility

Answers

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

Explanations

1. Which group of patients is most likely to experience atypical symptoms of myocardial infarction?

A. Teenagers

B. Women

C. Men under 50

D. Older adults

Women are known to experience atypical symptoms during a myocardial infarction (MI), often leading to a delay in diagnosis and treatment. While men may present with classic symptoms, such as crushing chest pain, women can exhibit a range of less typical signs, including fatigue, nausea, shortness of breath, and back or jaw pain. This difference in presentation might be attributed to physiological and hormonal factors, as well as differences in coronary artery disease manifestations. Many women may not recognize these atypical symptoms as being related to a heart attack, which contributes to a higher risk of delayed treatment. Understanding this can aid in recognizing the importance of thorough assessments and heightened awareness among healthcare providers when treating women, ensuring they receive timely intervention during acute coronary events.

2. In which stage of cardiac rehab is a patient encouraged to gradually increase their exercise?

A. Phase 1

B. Phase 2

C. Phase 3

D. Phase 4

The correct stage of cardiac rehabilitation where a patient is encouraged to gradually increase their exercise is Phase 2. During this phase, patients typically participate in supervised exercise programs that focus on improving cardiovascular fitness, strength, and overall endurance. This stage begins once the patient has been stabilized after their acute event, such as a myocardial infarction, and is carefully monitored to ensure safety while they engage in physical activity. In Phase 2, the emphasis is on educating the patient about the importance of exercise in their recovery and long-term health, as well as providing personalized exercise plans based on their individual needs and medical history. This phase often involves physical therapists or exercise specialists who guide patients through aerobic exercise routines and strength training, incrementally increasing intensity and duration to promote adaptation and improvement in their cardiovascular health. In contrast, the earlier Phase 1 primarily focuses on initial mobilization and education shortly after hospitalization, Phase 3 involves independent exercise and maintenance of fitness, and Phase 4 is generally about lifelong health and fitness activities. Thus, Phase 2 specifically nurtures the transition to safe, progressive physical activity.

3. What sign after thrombolytic therapy would most alarm the nurse?

A. 1 inch backup of blood in the IV tubing

B. Facial drooping

C. Partial thromboplastin time (PTT) 68 seconds

D. Report of chest pressure during dye injection

Facial drooping following thrombolytic therapy would be highly alarming to the nurse. This sign may indicate potential complications such as a stroke, or a transient ischemic attack (TIA), which can occur as a result of thrombolytic therapy. The therapy aims to dissolve clots obstructing blood flow to the heart; however, it carries risks such as intracranial hemorrhage, particularly if there is an underlying issue like a cerebral aneurysm or severe hypertension. Facial drooping is a classic symptom of neurological deficits and warrants immediate evaluation and intervention. In contrast, a minor backup of blood in the IV tubing is usually not a critical concern and can likely be managed without urgency. Similarly, a partial thromboplastin time (PTT) of 68 seconds, while elevated, does not necessarily indicate a crisis on its own; it could be monitored closely as part of the expected pharmacologic effect of thrombolytics. Lastly, a report of chest pressure during dye injection, while it may require attention, does not carry the immediate risk of life-threatening complications that facial drooping does. Therefore, monitoring for neurological signs is critical in the post-thrombolytic therapy phase.

4. What common postoperative complication should the nurse monitor after CABG surgery?

A. Atrial dysrhythmias

B. Dehydration

C. Acute respiratory distress syndrome

D. Paralytic ileus

Atrial dysrhythmias are a common postoperative complication following coronary artery bypass graft (CABG) surgery. The heart is manipulated during this procedure, which can irritate the myocardial tissue and lead to electrical conduction disturbances. It is particularly notable that atrial fibrillation can occur, especially in the immediate postoperative period. This condition manifests as an irregular and often rapid heart rate, which can increase the risk of stroke and other complications. Monitoring for atrial dysrhythmias post-CABG is crucial because they can affect hemodynamics and overall patient stability. The incidence of atrial fibrillation following such cardiac procedures can be quite significant, prompting healthcare providers to implement strategies for prevention, such as adequate analgesia, maintaining electrolyte balance, and using beta-blockers if appropriate. The other conditions listed may also be relevant postoperative concerns, but they are less directly associated with the immediate post-CABG period. For example, dehydration can occur from fluid shifts and third spacing after surgery, and while it is important to monitor for, it is not as prevalent as atrial dysrhythmias in this specific surgical context. Acute respiratory distress syndrome is a serious condition that can arise after various types of surgery but is not as common specifically following CABG. Paral

5. Which type of myocardial infarction should the nurse monitor most closely for left ventricular heart failure?

A. Inferior wall

B. Anterior wall

C. Lateral wall

D. Posterior wall

Monitoring for left ventricular heart failure is particularly crucial in cases of anterior wall myocardial infarction. This type of infarction typically results from occlusion of the left anterior descending artery, which supplies a significant portion of the left ventricle. The left ventricle is responsible for pumping oxygenated blood to the rest of the body, and damage to this area can severely impair its ability to function effectively. When the anterior wall of the left ventricle is compromised, it can lead to decreased cardiac output, increased preload, and fluid backup, ultimately resulting in heart failure symptoms such as dyspnea, fatigue, and pulmonary congestion. Nurses must be vigilant for these signs and continuously assess the patient's hemodynamics to ensure prompt intervention. In contrast, although other wall infarctions can also impact heart function, the anterior wall is most crucial due to its role in maintaining effective cardiac output. Hence, close monitoring is essential for patients with anterior wall myocardial infarctions to manage the risk of developing left ventricular heart failure proactively.

6. Which biomarker is most indicative of a myocardial infarction (MI) in a patient?

A. CK-MB

B. Troponin

C. Myoglobin

D. CRP

Troponin is considered the most indicative biomarker for myocardial infarction (MI) due to its high sensitivity and specificity for cardiac muscle injury. Troponin is a protein complex that is found in cardiac muscle, and it is released into the bloodstream when there is damage to the heart muscle, such as in the case of a myocardial infarction. The elevation of troponin levels can be detected within a few hours after the onset of chest pain, and they can remain elevated for several days, making them an excellent indicator for diagnosing an MI. Additionally, the levels of troponin can correlate with the extent of myocardial injury, providing crucial information about the severity of the infarction. While other biomarkers like CK-MB and myoglobin can also indicate myocardial injury, troponin is preferred because it is more specific to cardiac tissue. CK-MB levels can rise due to damage to other tissues, and myoglobin can increase in many non-cardiac conditions as well. C-reactive protein (CRP) is a marker of inflammation and is not specific to cardiac injury, making it less useful for diagnosing an MI. Overall, troponin stands out as the most reliable biomarker for assessing myocardial infarction in clinical practice.

7. What type of antianginal medication is most effective for treating coronary artery spasms?

A. Beta blockers

B. Calcium channel blockers

C. Nitrates

D. Antihyperlipidemics

Calcium channel blockers are the most effective antianginal medications for treating coronary artery spasms. They work by inhibiting the influx of calcium ions into vascular smooth muscle cells, which leads to relaxation and dilation of the coronary arteries. This dilation helps reduce the frequency and severity of spasms that can lead to angina or ischemic events. Additionally, calcium channel blockers help improve blood flow to the heart muscle by preventing the constriction of the coronary arteries, thus relieving symptoms associated with coronary artery spasms. These medications are particularly beneficial in conditions like Prinzmetal angina, where spasm of the coronary arteries is the primary issue. In contrast, while beta blockers and nitrates can help manage angina in general, they are not as effective specifically for the prevention and treatment of coronary artery spasms. Beta blockers primarily work by reducing heart rate and contractility, thereby lowering myocardial oxygen demand, but they do not directly alleviate arterial spasm. Nitrates can cause vasodilation, but they are more effective for typical angina-related pain rather than isolated spasms. Antihyperlipidemics are aimed at lowering cholesterol levels and preventing atherosclerosis and are not used to address acute episodes of coronary artery spasms. Thus, calcium

8. Which symptom is indicative of a myocardial infarction (MI)?

A. Chest pain brought on by exertion or stress

B. Substernal chest discomfort occurring at rest

C. Substernal chest discomfort relieved by nitroglycerin or rest

D. Substernal chest pressure relieved only by opioids

The symptom indicative of a myocardial infarction (MI) is substernal chest pressure that is relieved only by opioids. This symptom is significant because it suggests more severe and sustained ischemia of the heart muscle, which is characteristic of a myocardial infarction. Unlike other forms of chest pain, which may be exertional or relieved by rest or nitroglycerin, the severe postural nature of this pressure as well as its resistance to common treatments highlights the urgency and seriousness of an MI. In the context of MI, patients typically report a feeling of pressure, tightness, or heaviness in the chest area, often associated with radiation to the arms, back, neck, or jaw. The fact that the discomfort is relieved primarily by opioids indicates significant pain levels commonly experienced during an MI, further emphasizing the need for immediate medical intervention. The other symptoms described can indicate different types of angina or non-cardiac related chest discomfort. For instance, chest pain brought on by exertion or stress typically relates to stable angina, while substernal discomfort occurring at rest may be indicative of unstable angina, which is different from full-blown myocardial infarction. Lastly, the symptom that is relieved by nitroglycerin or rest usually

9. What lifestyle modification is recommended to reduce the risk of acute coronary syndrome?

A. Increase caffeine intake

B. Smoking cessation

C. Increase saturated fat intake

D. Reduce physical activity

Smoking cessation is a critical lifestyle modification recommended to reduce the risk of acute coronary syndrome. Smoking is a major risk factor for the development of cardiovascular diseases, including acute coronary syndrome, as it contributes to the formation of atherosclerosis, increases heart rate, raises blood pressure, and induces an inflammatory response in the blood vessels. Quitting smoking leads to immediate and long-term benefits for cardiovascular health, significantly lowering the risk of heart attacks and other serious complications. In contrast, increasing caffeine intake, raising saturated fat intake, or reducing physical activity can lead to higher risks of heart disease. These behaviors do not align with the goals of promoting cardiovascular health, which emphasize heart-healthy diets and regular exercise. Therefore, smoking cessation stands out as a vital and effective strategy to mitigate the risks associated with acute coronary syndrome.

10. What is the primary purpose of monitoring troponin levels in patients presenting with chest pain?

A. To assess potential heart failure

B. To evaluate for myocarditis

C. To diagnose a myocardial infarction

D. To understand myocardial contractility

Monitoring troponin levels in patients presenting with chest pain is primarily done to diagnose a myocardial infarction. Troponins are proteins released into the bloodstream when the heart muscle is damaged, making them highly specific and sensitive markers for heart injury. Elevated levels indicate that necrosis of heart tissue is occurring, which is a key indicator of myocardial infarction. In the context of acute coronary syndrome (ACS), timely diagnosis is critical for initiating appropriate treatment. Troponin testing helps differentiate between cardiac and non-cardiac causes of chest pain, guiding clinicians in their decision-making. It is important to note that while other conditions like heart failure and myocarditis can also involve troponin elevation, the most direct and clinically significant connection is with myocardial infarction, where the rapid recognition and management can significantly improve patient outcomes.