NCLEX Hypertension Practice Test (Sample)

Study Guide

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Questions

1. **How does rebound hypertension occur with antihypertensive medications?**

   A. When weight loss is not maintained.

   B. When medications are stopped abruptly.

   C. When dietary sodium intake is increased.

   D. When exercise is not performed regularly.

2. **The nurse is caring for a client with hypertension. Which gland's dysfunction may be evaluated using a 24-hour urine collection?**

   A. The adrenal gland

   B. The thymus

   C. The thyroid gland

   D. The pituitary gland

3. **Which of the following dietary modifications is encouraged for hypertension management?**

   A. Increased processed food intake

   B. Reduction of saturated fats

   C. Higher caffeine consumption

   D. Decreased fruit and vegetable servings

4. **Which adverse effect is most commonly associated with the use of antihypertensive medications?**

   A. Headache

   B. Postural hypotension

   C. Nausea

   D. Insomnia

5. **What is the maximum systolic blood pressure identified as stage 1 hypertension?**

   A. 159 mm Hg

   B. 160 mm Hg

   C. 180 mm Hg

   D. 140 mm Hg

6. Which medication is often administered in a hypertensive emergency?

A. Methyldopa

B. Carvedilol

C. Nitroprusside

D. Atenolol

7. For a patient taking amiloride (Midamor) and lisinopril (Zestril), which laboratory value should the nurse monitor closely?

A. Magnesium level

B. Potassium level

C. Calcium level

D. Sodium level

8. Which of the following is a target organ damage from untreated hypertension?

A. Diabetes

B. Stroke

C. Hyperlipidemia

D. Chronic fatigue

9. Which risk factor should be emphasized as contributing to primary hypertension?

A. Diabetes and use of oral contraceptives

B. Obesity and high intake of sodium and saturated fat

C. Metabolic syndrome and smoking

D. Renal disease and coarctation of the aorta

10. A systolic blood pressure of 135 mm Hg would be classified as?

A. Normal

B. Stage 1 hypertension

C. Stage 2 hypertension

D. Prehypertension

Answers

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

Explanations

1. How does rebound hypertension occur with antihypertensive medications?

A. When weight loss is not maintained.

B. When medications are stopped abruptly.

C. When dietary sodium intake is increased.

D. When exercise is not performed regularly.

Rebound hypertension occurs when antihypertensive medications are discontinued suddenly, leading to a sharp increase in blood pressure. This phenomenon can happen because the body has adapted to the presence of these medications, which help to regulate blood pressure. When the medications are stopped abruptly, the compensatory mechanisms the body has developed can cause blood pressure to rise significantly, as the vasodilatory effects and other actions of the medication are no longer in effect. Patients who experience rebound hypertension may find their blood pressure exceeds its previous uncontrolled levels, potentially leading to health complications. This situation highlights the importance of tapering down medications under the guidance of a healthcare professional rather than stopping them suddenly. The other options do not directly relate to the mechanisms of rebound hypertension. For instance, maintaining weight, dietary sodium management, and regular exercise are all important aspects of overall blood pressure management, but they do not illustrate the acute physiological response seen with abrupt cessation of medication.

2. The nurse is caring for a client with hypertension. Which gland's dysfunction may be evaluated using a 24-hour urine collection?

A. The adrenal gland

B. The thymus

C. The thyroid gland

D. The pituitary gland

The adrenal gland's dysfunction is often assessed through a 24-hour urine collection because this test can measure specific hormones and metabolites that are produced by the adrenal glands. Conditions such as pheochromocytoma or primary hyperaldosteronism (Conn's syndrome) can lead to abnormal levels of catecholamines or aldosterone in the urine. Elevated levels of these substances can provide critical insights into the adrenal gland's function and its role in hypertension. In contrast, the thymus primarily plays a role in immune system development and is not related to hypertension. The thyroid gland, while important in regulating metabolism and influencing blood pressure, is usually evaluated through serum hormone levels rather than urine tests. The pituitary gland is responsible for hormonal regulation but does not specifically require a 24-hour urine collection for assessing conditions directly related to hypertension. Instead, it is typically evaluated through blood tests and imaging studies.

3. Which of the following dietary modifications is encouraged for hypertension management?

A. Increased processed food intake

B. Reduction of saturated fats

C. Higher caffeine consumption

D. Decreased fruit and vegetable servings

Reduction of saturated fats is a key dietary modification encouraged for the management of hypertension. High saturated fat intake can contribute to increased cholesterol levels and lead to the development of atherosclerosis, which can increase blood pressure. Diets rich in saturated fats are often associated with cardiovascular disease risk, whereas reducing these fats while increasing healthy fats (such as those found in fish, nuts, and avocados) can have a beneficial effect on overall heart health and blood pressure. In the context of hypertension management, it is also important to emphasize the DASH (Dietary Approaches to Stop Hypertension) diet, which focuses on whole foods such as fruits, vegetables, whole grains, and lean proteins while limiting saturated fats, refined sugars, and sodium. This dietary pattern has been shown to effectively lower blood pressure and improve overall cardiovascular health. Therefore, promoting the reduction of saturated fats aligns well with the goals of hypertension management.

4. Which adverse effect is most commonly associated with the use of antihypertensive medications?

A. Headache

B. Postural hypotension

C. Nausea

D. Insomnia

Postural hypotension is a significant adverse effect commonly associated with antihypertensive medications. This condition occurs when there is a sudden drop in blood pressure upon standing up, which can lead to dizziness or fainting. Antihypertensive medications, particularly those that lower blood pressure aggressively or those that act as vasodilators, can disrupt the body's ability to regulate blood flow in response to changes in position. This side effect is particularly important for nursing assessments and patient education, as it can place patients at a higher risk for falls, especially in the elderly or those who may also be taking other medications that affect blood pressure. Monitoring for symptoms of postural hypotension, like lightheadedness or vertigo, is critical, as is encouraging patients to rise slowly from sitting or lying positions.

5. What is the maximum systolic blood pressure identified as stage 1 hypertension?

A. 159 mm Hg

B. 160 mm Hg

C. 180 mm Hg

D. 140 mm Hg

Stage 1 hypertension is defined by specific blood pressure ranges according to the American College of Cardiology and the American Heart Association. For adults, stage 1 hypertension is classified as having a systolic blood pressure ranging from 130 mm Hg to 139 mm Hg or a diastolic blood pressure ranging from 80 mm Hg to 89 mm Hg. Therefore, the maximum systolic blood pressure recognized for stage 1 hypertension should not exceed 139 mm Hg. Recognizing that options A (159 mm Hg) and B (160 mm Hg) exceed this threshold confirms they cannot be classified as stage 1 hypertension. On the other hand, option D (140 mm Hg) is actually classified as stage 2 hypertension, as it goes beyond the maximum systolic limit for stage 1. Understanding these classifications is crucial for proper diagnosis and management of hypertension, ensuring timely intervention to reduce risks associated with elevated blood pressure levels.

6. Which medication is often administered in a hypertensive emergency?

A. Methyldopa

B. Carvedilol

C. Nitroprusside

D. Atenolol

Nitroprusside is a potent vasodilator that is commonly used in hypertensive emergencies due to its rapid onset of action and ability to provide precise blood pressure control. This drug works by relaxing the smooth muscles of blood vessels, leading to reductions in both systemic vascular resistance and arterial blood pressure, which is critical in situations where immediate intervention is necessary to prevent complications such as stroke or myocardial infarction. In hypertensive emergencies, the goal is often to lower blood pressure quickly and safely, and nitroprusside allows for continuous intravenous infusion, enabling real-time adjustments based on the patient's response. This level of control is particularly important when managing severe hypertension, where excessive drops in blood pressure can also pose risks. Other medications mentioned in the options are more commonly used in other contexts. Methyldopa is typically used for chronic hypertension, carvedilol is often used for heart failure and chronic hypertension management, and atenolol is utilized for various cardiac conditions but not usually in acute hypertensive crises. These alternatives do not provide the same immediacy and titratability as nitroprusside in emergency situations.

7. For a patient taking amiloride (Midamor) and lisinopril (Zestril), which laboratory value should the nurse monitor closely?

A. Magnesium level

B. Potassium level

C. Calcium level

D. Sodium level

Monitoring the potassium level is essential for a patient taking both amiloride and lisinopril. Amiloride is a potassium-sparing diuretic, which means it helps the body retain potassium while promoting the excretion of sodium and water. On the other hand, lisinopril is an ACE inhibitor that can also increase potassium levels by reducing the production of aldosterone, a hormone that promotes sodium retention and potassium excretion. The combination of these medications can lead to hyperkalemia, a condition characterized by elevated potassium levels in the blood, which can have serious cardiac implications, including arrhythmias. Therefore, it is vital to closely monitor a patient's potassium levels to ensure they remain within the normal range, preventing any potential complications associated with both drugs. Other electrolyte levels, such as magnesium, calcium, and sodium, are important to monitor but are not as critical in this specific context as potassium.

8. Which of the following is a target organ damage from untreated hypertension?

A. Diabetes

B. Stroke

C. Hyperlipidemia

D. Chronic fatigue

The correct answer is stroke, as untreated hypertension can lead to significant damage to the blood vessels and organs throughout the body. High blood pressure puts excessive strain on the vascular system, increasing the risk of cerebrovascular accidents, commonly known as strokes. This occurs because elevated blood pressure can cause the blood vessels in the brain to either rupture (hemorrhagic stroke) or become blocked (ischemic stroke), leading to impaired brain function and potential mortality. In contrast, diabetes, hyperlipidemia, and chronic fatigue do not represent direct target organ damage caused by hypertension. While these conditions may be associated with or exacerbated by hypertension, they are not the immediate consequences of untreated high blood pressure. Instead, they are more often seen as contributing factors or comorbidities that can increase cardiovascular risk rather than direct outcomes of poorly managed hypertension.

9. Which risk factor should be emphasized as contributing to primary hypertension?

A. Diabetes and use of oral contraceptives

B. Obesity and high intake of sodium and saturated fat

C. Metabolic syndrome and smoking

D. Renal disease and coarctation of the aorta

The emphasis on obesity and a high intake of sodium and saturated fat as significant risk factors for primary hypertension is well-supported by extensive research and clinical findings. Obesity is directly correlated with hypertension, as excess body weight can lead to increased cardiac output, higher blood volume, and resistance in the blood vessels. This added strain can elevate blood pressure. Moreover, a diet high in sodium has been widely recognized to contribute significantly to hypertension. Excessive sodium consumption leads to fluid retention, which increases the volume of blood, causing higher pressure on the arterial walls. Similarly, saturated fats are associated with the development of atherosclerosis and can negatively impact vascular health, contributing to high blood pressure. While the other factors listed do pose risks for hypertension, they are often more associated with secondary hypertension rather than primary hypertension, which develops without identifiable causes. Primary hypertension typically results from a combination of lifestyle factors such as those encapsulated by the focus on obesity and dietary habits. This makes the association with obesity and high intake of sodium and saturated fat particularly relevant in understanding the development of primary hypertension.

10. A systolic blood pressure of 135 mm Hg would be classified as?

A. Normal

B. Stage 1 hypertension

C. Stage 2 hypertension

D. Prehypertension

A systolic blood pressure of 135 mm Hg falls into the category of prehypertension according to the American Heart Association guidelines. Prehypertension is defined as a systolic blood pressure reading ranging from 120 to 139 mm Hg or a diastolic reading from 80 to 89 mm Hg. This classification serves as a critical warning sign for individuals that they are at risk of developing hypertension in the future if lifestyle modifications are not implemented. Prehypertension indicates that blood pressure is elevated but not yet high enough to meet the criteria for Stage 1 hypertension, which starts at a systolic reading of 140 mm Hg. It is essential for individuals with prehypertension to monitor their blood pressure regularly and engage in health-promoting behaviors such as dietary changes, increased physical activity, and weight management to prevent progression to hypertension. Understanding these classifications helps healthcare providers and patients identify risk factors and take appropriate preventive measures against cardiovascular diseases.