Hypertension: Review Questions

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QUESTIONS

Choose the single best answer for each question.

1. **Which of the following statements regarding the epidemiology of essential (primary) hypertension in the United States is correct?**
   A) Mexican American women have a higher prevalence of essential hypertension than do Mexican American men
   B) More women than men have essential hypertension
   C) Non-Hispanic black adults have a lower prevalence of essential hypertension than do Mexican American adults
   D) Non-Hispanic white men have the lowest prevalence of essential hypertension
   E) The overall prevalence of essential hypertension in Americans is approximately 20%

2. **Which of the following statements about the causes of secondary hypertension is NOT true?**
   A) Causes of secondary hypertension occur more frequently than do those of essential hypertension
   B) Cocaine and methamphetamine use may cause secondary hypertension
   C) Dietary factors that may cause secondary hypertension include excessive intake of caffeine, licorice, or alcohol
   D) Medications associated with secondary hypertension include corticosteroids and oral contraceptives
   E) Potential causes of secondary hypertension include hyperthyroidism, Cushing's syndrome, and primary aldosteronism

3. **Which of the following statements regarding drugs used to treat hypertension is NOT true?**
   A) Angiotensin-converting enzyme inhibitors can worsen renovascular disease
   B) β-Blockers are contraindicated in patients with congestive heart failure
   C) β-Blockers are relatively contraindicated in patients with heart block
   D) Calcium channel blockers can worsen congestive heart failure
   E) Diuretics can exacerbate gout

4. **Which of the following is the most common cause of death in patients whose hypertension is under control?**
   A) Aortic dissection
   B) Coronary artery disease
   C) Left ventricular dysfunction
   D) Renal failure
   E) Stroke

5. **Which of the following statements is INCORRECT regarding the diagnosis of hypertension?**
   A) About 30% of people diagnosed with hypertension are unaware that they have the disease
   B) Blood pressure should be accurately measured twice daily on 3 separate days before the diagnosis is made
   C) Hypertension is usually an asymptomatic disease
   D) Only approximately 10% of patients on medical therapy for hypertension have their blood pressure controlled to less than 140/90 mm Hg
   E) Small blood pressure cuffs tend to overestimate blood pressure

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EXPLANATION OF ANSWERS

1. **(B) More women than men have essential hypertension.** Although the prevalence of essential hypertension in women is less than that in men, the actual number of women with essential hypertension is greater. Between 1988 and 1991, an estimated 21,900,000 American women and 21,287,000 men had the condition. The age-adjusted prevalence of essential hypertension is greatest in non-Hispanic black adults (32%); in Mexican American adults, it is 23%. Mexican Americans have a lower prevalence of the disease than do white or black adults. Non-Hispanic white men have the lowest prevalence of essential hypertension. The overall prevalence of essential hypertension in Americans is approximately 25%.[1]

2. **(A) Causes of secondary hypertension occur more frequently than do those of essential hypertension.** Essential hypertension is much more common than is secondary hypertension; approximately 90% of cases of hypertension involve essential (primary) hypertension.[2] Both hyperthyroidism and hypothyroidism can cause secondary hypertension. Other causes associated with secondary hypertension include renal parenchymal disease, coarctation of the aorta, and renovascular disease.[1]

3. **(B) β-Blockers are contraindicated in patients with congestive heart failure.** β-Blockers can be cautiously used in patients with congestive heart failure. These agents improve diastolic relaxation and, as a result, can improve cardiac output.[2]

4. **(B) Coronary artery disease.** Coronary artery disease is the most common cause of death in patients whose hypertension is under control. Hypertension is the strongest risk factor for stroke, and 1 of the 3 main risk factors for coronary atherosclerosis (the other risk factors are smoking and hyperlipidemia). Hypertension can also lead to renal failure at a young age. Uncontrolled hypertension causes increased left ventricular pressure, which over time can cause cardiomegaly and left ventricular dysfunction.[1]

5. **(D) Only approximately 10% of patients on medical therapy for hypertension have their blood pressure controlled to less than 140/90 mm Hg.** Approximately 25% of patients with known hypertension have their condition under control. Multiple blood pressure measurements should be obtained before making the diagnosis. Several patients have labile blood pressures, and experience "white coat hypertension" in the office. Although these patients are at higher risk for developing sustained hypertension later in life, they do not need medical treatment for labile blood pressures alone. Hypertension is known as "the silent killer," because affected patients are usually asymptomatic until complications occur.[1]

REFERENCES

1. Beers MH, Berkow R, editors. The Merck manual of diagnosis and therapy. 17th ed. Whitehouse Station (NJ): Merck Research Laboratories; 1999:1629–46.
2. Dambro MR, editor. Griffith's 5-minute clinical consult. Philadelphia: Lippincott Williams & Wilkins; 2000:528–9.

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