

Podcast Questions – Hypertension

Pre-podcast questions

QUESTIONS 1 AND 2 REFER TO THE FOLLOWING PATIENT CASE:

JA is a 72 year-old African American female whose vitals today are: T 36.3°C, P 74, R 16, BP 164/95. Her past medical history includes hypertension, hyperlipidemia, arthritis, and chronic stable angina. Home medications include Crestor 20 mg once daily, metoprolol succinate 200 mg once daily, and meloxicam 7.5 mg once daily.

1. What is JA's blood pressure goal according to the JNC 8 guidelines?

- A. Systolic BP <150 mmHg, diastolic BP <90 mmHg
- B. Systolic BP <140 mmHg, diastolic BP <80 mmHg
- C. Systolic BP <140 mmHg, diastolic BP <90 mmHg
- D. Systolic BP <150 mmHg, diastolic BP <80 mmHg

Answer: SBP <150 mmHg and DBP <90 mmHg

Rationale: The JNC 8 guidelines recommend a blood pressure goal of <150 mmHg for SBP and <90 mmHg for DBP in the general population aged 60 years and older.

Objective: Suggest blood pressure goals for a patient using current guidelines.

2. Although JA was started on metoprolol succinate over 1 month ago, her blood pressure is still uncontrolled (HR 74, BP 164/95). She tells you that she has also been having recurrent symptoms of angina in the past couple of weeks. Which of the following is the best medication to add for both her symptoms and blood pressure control?

- A. diltiazem 120 mg once daily
- B. lisinopril 10 mg once daily
- C. amlodipine 5 mg once daily
- D. spironolactone 12.5 mg once daily

Answer: amlodipine 5 mg once daily

Rationale: In patients who have uncontrolled blood pressure and/or continuing symptoms of angina who are already on a beta-blocker, it is recommended to add a long-acting dihydropyridine CCB to use in combination. Nondihydropyridine CCBs should be avoided in patients already taking a beta-blocker as they can also decrease heart rate and when in combination with a BB, may cause severe bradycardia or high degrees of heart block.

Objective: Choose appropriate antihypertensive medications for any given patient.

3. Which of the following is a relative contraindication for beta-blocker use?

- A. A 21 year-old male currently being treated for cellulitis who reports daily cocaine use.
- B. A 33 year-old Caucasian male with hypertension, hyperlipidemia, GERD, and COPD.
- C. A 54 year-old African American female being treated for a UTI with a past medical history of chronic heart failure.
- D. A 70 year-old Hispanic female with chronic stable angina.

Answer: A 21 year-old male currently being treated for cellulitis who reports daily cocaine use.

Rationale: Cocaine use/intoxication is a contraindication to beta-blocker use.

Objective: Apply general treatment strategies for treating hypertension in an adult patient case.

Post-podcast questions

1. In which of the following patient scenarios is a blood pressure goal of <140 mmHg (systolic) and <90 mmHg (diastolic) appropriate?
- A. A 61 year-old Asian female with heart failure.
 - B. A 45 year-old Hispanic male with diabetes.
 - C. A 69 year-old Caucasian male with CAD.
 - D. A 90 year-old African American female with a history of stroke.

Answer: A 45 year-old Hispanic male with diabetes.

Rationale: The JNC 8 guidelines recommend a blood pressure goal of <140 mmHg (systolic) and <90 mmHg (diastolic) for the general population younger than 60 years and those with diabetes.

Objective: Suggest blood pressure goals for a patient using current guidelines.

2. AF is a 56 year-old Hispanic male whose vitals today are: T 37.3°C, P 78, R 18, BP 166/89. He suffered a stroke last month and is currently not on any blood pressure medications. Which of the following medications would you choose for him?
- A. enalapril 5 mg once daily
 - B. verapamil 180 mg once daily
 - C. atenolol/HCTZ 50/25 mg once daily
 - D. lisinopril/HCTZ 10/12.5 mg once daily

Answer: lisinopril/HCTZ 10/12.5 mg once daily

Rationale: There is evidence from the PROGRESS trial to suggest that a combination of an ACEI with a diuretic can reduce stroke recurrence. Although the new guidelines do not discuss this population directly, the earlier JNC 7 guidelines recommend this combination in anyone with a previous stroke/TIA.

Objective: Choose appropriate antihypertensive medications for any given patient.

3. SF is a 44 year-old Native American female whose vitals today are: T 36.9, P 68, R 16, BP 142/80. Her past medical history includes diabetes and hypertension. Her home medications include metformin 1000 mg BID, HCTZ 25 mg once daily, multivitamins, and raspberry ketones. Which of the following is the best choice to add to her blood pressure regimen?
- A. metoprolol tartrate 25 mg BID
 - B. Increase HCTZ dose to 50 mg once daily
 - C. lisinopril 10 mg once daily
 - D. No changes.

Answer: lisinopril 10 mg once daily

Rationale: An ACEI should be used in all patients with diabetes, as long as there are no contraindications, for renal protection.

Objective: Apply general treatment strategies for treating hypertension in an adult patient case.