

Asymptomatic Hypertension in the Emergency Department



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KEYWORDS

- Asymptomatic hypertension • Hypertensive urgency • Hypertensive emergency
- Hypertension in the ED • ED workup hypertension • ED treatment hypertension

KEY POINTS

- Data are limited, and there is a paucity of evidence on which to base treatment of asymptomatic patients with elevated blood pressure.
- A recheck of the blood pressure at 90 minutes following triage often shows improvement and helps guide the emergency department evaluation and follow-up decisions.
- The routine ordering of diagnostic studies to screen for end-organ damage in asymptomatic patients is not beneficial.
- Consider a basic metabolic panel and discharge with prescription for antihypertensive medication for African American patients, indigent patients, and those with unreliable or poor follow-up.
- Acute treatment is not indicated and possibly harmful. If you must treat, give patients a dose of the antihypertensive medication that is already prescribed by their primary care provider or one you will prescribe at discharge.

INTRODUCTION

Approximately 30% of Americans have hypertension, and about 5% of emergency department (ED) patients will have a blood pressure (BP) that is elevated. Of those with elevated BP on initial presentation to the ED, about 40% will have a BP high enough to be associated with end-organ damage.^{1,2} Although pain and the stress of visiting the ED may contribute to an elevated BP at presentation, one study showed that 75% of those presenting with uncontrolled hypertension were noncompliant with medications.³ Another showed that on recheck of the BP at 90 minutes most patients

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returned to their baseline BP; therefore, a repeat BP at 90 minutes is an important component in the evaluation of these patients.^{4,5}

The real question is what to do with those patients who have no symptoms but may have occult end-organ damage. Data in establishing guidelines for evaluation and treatment of patients with asymptomatic hypertension in the ED setting are limited because of lack of large outcome studies to help determine the validity of such guidelines. The American College of Emergency Physicians has a policy regarding this issue that was updated in 2013; however, there is a paucity of evidence on which to base guidance.⁴ This article focuses on the evaluation and treatment of asymptomatic hypertensive patients.

DEFINITIONS

The definition of hypertension is based on the Eighth Joint National Committee's guidelines as published in 2014.⁶ These guidelines are for adults 18 years and older with hypertension and is focused on the primary care setting. The definition of hypertension is further delineated in the general population and in populations with diabetes or chronic kidney disease. In individuals less than 60 years of age in the general population, hypertension is defined as a systolic BP of 140 mm Hg or greater and/or a diastolic BP of 90 mm Hg or greater.⁶ In individuals who are aged 60 years or older in the general population, hypertension is defined as a systolic BP of 150 mm Hg or greater and/or a diastolic BP of 90 mm Hg or greater. In the population with diabetes and no chronic kidney disease (CKD), hypertension is defined as a systolic BP of 140 mm Hg or greater and/or a diastolic BP of 90 mm Hg or greater in all adults.⁶ In the population with CKD, regardless of the presence of diabetes, hypertension is defined as systolic BP of 140 mm Hg or greater and/or a diastolic BP of 90 mm Hg or greater in all adults (Table 1).

CLASSIFICATIONS OF HYPERTENSION

Hypertension is most commonly primary (essential) but may be due to secondary causes on occasion. In 90% to 95% of individuals with hypertension, no cause can be identified.⁷ There are current implications that genetics may play a role in the development of high BP, such as hypertension being more prevalent in some families and in African Americans. Primary or essential hypertension can also be caused by increased sodium consumption, excessive alcohol use, obesity, sedentary lifestyle, use of tobacco and nicotine products, polycythemia, aggressiveness, and poor stress coping skills.⁷

In approximately 5% of all individuals a root cause for hypertension is found. Secondary hypertension should be considered in individuals with sudden onset of

Classification	Age (y)	Systolic BP	Diastolic BP
General population	18–59	≥140	≥90
General population	≥60	≥150	≥90
Diabetes present and no CKD	≥18	≥140	≥90
CKD present with or without diabetes	≥18	≥140	≥90

Adapted from JNC 8 hypertension guideline algorithm 2014.

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