Hypertension: Just the Facts

Kathy Sharp, MSN, APRN-BC, AOCNP

Since the seventh report of the Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure was published, more people than ever are being classified as hypertensive. More than 58 million Americans, 29% of the adult population, have hypertension. An additional 45 million, or 22%, have prehypertension. Most patients are unaware of the condition because it largely is asymptomatic; in addition, only a minority of patients are controlled adequately. More than 90% of hypertension is idiopathic (primary or essential hypertension), whereas 25% is the result of other identifiable causes (secondary hypertension) (National Institutes of Health [NIH], 2004).

NIH defined the following for people aged 18 and older

1. Normal blood pressure: less than 120 mmHg systolic and less than 80 mmHg diastolic
2. Prehypertension: 120–139 mmHg systolic and/or 80–89 mmHg diastolic
3. Stage 1 hypertension: 140–159 mmHg systolic and/or 90–99 mmHg diastolic
4. Stage 2 hypertension: more than 160 mmHg systolic and/or more than 100 mmHg diastolic

Blood pressure is maintained by continuous regulation of cardiac output and is stimulated or suppressed by the autonomic nervous system, humoral influences, and systemic vascular resistance (SVR). SVR takes place in the heart, pre- and postcapillary venules, and the kidneys. The overall regulation of those sites also is influenced by the renin-angiotensin-aldosterone system (NIH, 2004; Winokur, 2000).

The pathogenesis of hypertension is multifactorial and includes many modifiable risk factors such as smoking, obesity, caffeine intake, excessive alcohol intake, excessive salt intake, and use of nonsteroidal anti-inflammatory drugs. African Americans and older adults are especially sensitive to salt intake. Nonmodifiable risk factors include increasing age, male gender, and African American race (NIH, 2004; Winokur, 2000).

The four goals of evaluation for hypertension are to (a) identify lifestyle factors contributing to elevated blood pressure and higher risk for cardiovascular disease, (b) assess associated modifiable cardiovascular risk factors, (c) assess for target organ disease, and (d) determine whether a secondary cause exists for blood pressure elevation (NIH, 2004).

Assessment of patients with hypertension should include (NIH, 2004)

- Verification of blood pressure in both arms with correct technique, with confirmation on more than one occasion, unless blood pressure meets criteria for urgency in treatment
- Height and weight
- Physical examination of head, eyes, ears, nose, and throat, including funduscopic examination for target organ disease, noting arteriovenous nicking, arteriolar narrowing, hemorrhages, papilledema, and exudates
- Physical examination of the neck with notation of carotid bruits, thyroid enlargement, and distended jugular veins
- Physical examination of the cardiovascular and pulmonary systems, noting increased or irregular rate, clicks, murmurs, the presence of S3 or S4, or rales
- Physical examination of the neurologic system to evaluate for any defects
- Physical examination of the abdomen for the presence of aortic or renal bruits, masses, abnormal aortic pulsation, or hepatomegaly
- Physical examination of the extremities for evidence of peripheral vascular disease with decreased or absent pulses or edema
- Laboratory evaluation, including complete blood count, fasting complete metabolic profile, thyroid-stimulating hormone, lipid profile, and possibly uric acid
- Radiologic evaluation, including electrocardiogram, echocardiogram, and chest x-ray.

When evaluating patients with cancer in particular, be aware that paraneoplastic syndrome can be a cause of hypertension. Many medications that patients with cancer may take also can precipitate

Kathy Sharp, MSN, APRN-BC, AOCNP, is an oncology nurse practitioner at Blue Ridge Medical Specialists in Bristol, TN.

Digital Object Identifier: 10.1188/06.CJON.727-729