



FIGURE 12-11 2014 Hypertension Management Algorithm Recommended by the American Society of Hypertension and the International Society of Hypertension. At any stage it is entirely appropriate to seek help from a hypertension expert if treatment is proving difficult. In patients with stage 1 hypertension in whom there is no history of cardiovascular, stroke, or renal events or evidence of abnormal findings and who do not have diabetes or other major risk factors, drug therapy can be delayed for a short trial of lifestyle modification; however, most patients will require medication to achieve recommended blood pressure targets. In all other patients (including those with stage 2 hypertension), it is recommended that drug therapy be started as soon as the diagnosis of hypertension is made. Blood pressure values are in mm Hg. ACE-i, Angiotensin-converting enzyme inhibitors; ARB, angiotensin receptor blocker; CCB, calcium channel blocker; thiazide, thiazide or thiazide-like diuretics. (From Weber MA, Schiffrin EL, White WB et al: Clinical practice guidelines for the management of hypertension in the community. A statement by the American Society of Hypertension and the International Society of Hypertension, *J Clin Hypertens* 16:14–26, 2014.)

the United States. As monotherapy for hypertension, an ACEI (or ARB) typically yields a smaller decrease in BP in an African American patient than it does in a non-African American patient and therefore affords less protection against stroke. However, when an ACEI or ARB is used in combination with a CCB or a diuretic, antihypertensive efficacy is amplified and ethnic differences disappear. When used as part of an appropriate multidrug regimen, an ACEI-based treatment can achieve excellent control of hypertension in African American patients with hypertensive nephrosclerosis, and it slows the deterioration in renal function.

Hypertensive Nephrosclerosis

Hypertension is the second most common cause of chronic kidney disease, accounting for more than 25% of cases.

Hypertensive nephrosclerosis is the result of persistently uncontrolled hypertension causing chronic glomerular ischemia. Typically, proteinuria is mild (<0.5 g/24 hours). Nondiabetic chronic kidney disease is a compelling indication for ACEI-based or ARB-based antihypertensive therapy. ACEIs cause greater dilation of the efferent renal arterioles, thereby minimizing intraglomerular hypertension. In contrast, arterial vasodilators such as dihydropyridine CCBs, when used without an ACEI or ARB, preferentially dilate the afferent arteriole and impair renal autoregulation. Glomerular hypertension can result if the systemic BP is not sufficiently lowered. The ACEI should be withdrawn only if the rise in serum creatinine exceeds 30% of the baseline value or the serum potassium level increases to greater than 5.6 mmol/L.