Introduction

Preventing Hypertensive Kidney Disease: The Critical Role of Combination Therapy

George L. Bakris

The recent publication by the National Kidney Foundation (NKF) of clinical practice guidelines for hypertension and antihypertensive agents in chronic kidney disease (CKD) highlights mounting evidence that we have the means to improve outcomes for individuals with CKD; at the same time, it raises the question of whether we have the will to do so. Like hypertension itself, CKD may progress silently over many years, and therefore its prevention, detection, and treatment depends largely on the vigilance of physicians and other health care providers. High blood pressure is both a cause and a complication of CKD and is associated with progression to kidney failure and an extraordinarily high incidence of cardiovascular morbidity and mortality. For these reasons, patients with CKD should be considered among the highest-risk groups for cardiovascular disease (CVD).

This supplement represents the proceedings of a continuing medical education symposium, Preventing Hypertensive Kidney Disease: The Critical Role of Combination Therapy, sponsored by the NKF during their 2004 Clinical Meetings held April 28 to May 2, 2004, in Chicago, IL. We offer it with the hope that insights regarding the treatment of hypertension in CKD and in those at greatest risk for CKD will be solidly incorporated into the practices of professionals most intimately involved in treating patients with CVD.

Several large, randomized, controlled trials have provided data regarding the effect of antihypertensive therapy on the development and progression of CKD. Nonetheless, the relationships among CKD “progression factors” are complex, and many questions remain unanswered. Thus, the article by Dr. Leopoldo Raij, which provides a fascinating discussion of the complex interactions among hemodynamic, hormonal, and metabolic mechanisms responsible for renal injury, is a welcome introduction to the topic. In his intriguing article, Dr. Raij provides an excellent theoretical background for understanding the role of renin-angiotensin system (RAS) blockade in preventing progressive renal damage.

The topic addressed by Dr. Matthew R. Weir, the role of combination antihypertensive therapy in preventing and treating CKD, is especially timely. Achieving blood pressure levels <130/80 mm Hg, as currently recommended for patients with diabetes or CKD, will often require three or more antihypertensive medications. His article presents data to show that the combination of an angiotensin-converting enzyme (ACE) inhibitor and a calcium channel blocker (CCB) may be particularly advantageous in patients with or at high risk for CKD. At present, data to guide clinicians regarding the optimal combination therapy for high-risk patients, including those with CKD, are scarce. The Avoiding Cardiovascular Events through Combination Therapy in Patients Living with Systolic Hypertension (ACCOMPLISH) trial is the first large clinical trial designed to directly compare clinical outcomes for two fixed-dose combination therapies: ACE plus CCB versus ACE plus diuretic. The results of this important trial, expected in 2008, may shed light on this issue.

In his article regarding prevention of CKD in special populations, Dr. Kenneth A. Jamerson notes that populations at particularly high risk for the development of CKD include patients with long-standing, uncontrolled hypertension or isolated systolic hypertension; African Americans; older individuals; and, of course, all persons with diabetes. He reviews data from the landmark African American Study of Kidney Disease (AASK) trial, which provided support for redefining RAS-blocking agents as first-line therapy for hypertension in African Americans.

Finally, as a member of the working group for the new NKF hypertension guidelines, I present a summary of clinical guidelines for protecting renal function in hypertensive patients seen in general and cardiovascular practice settings.

I hope that readers will find this supplement interesting and provocative, but most of all, of value in the cross-disciplinary goal of reducing the tremendous burden of CKD through collaborative prevention efforts.

Received November 5, 2004. Accepted November 11, 2004.

From the Department of Preventive Medicine, Rush University Medical Center, Chicago, Illinois.

Address correspondence and reprint requests to Dr. George L. Bakris, Department of Preventive Medicine, Rush University Medical Center, 1700 W. Van Buren, Suite 470, Chicago, IL 60612; e-mail: george_bakris@rush.edu
References


