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Contacts: Tracy Hampton • (312) 339-9067 • thampton@nasw.org
Bob Henkel • (202) 557-8360 • bhenkel@asn-online.org

BLOOD PRESSURE TARGETS FOR INDIVIDUALS WITH KIDNEY DISEASE SHOULD CONSIDER PATIENTS' AGE

Cautious blood pressure–lowering strategy may be reasonable for very elderly patients

Highlights

- Systolic blood pressure levels above 140 mmHg were linked with higher risks of coronary heart disease, stroke, kidney failure, and death in patients with chronic kidney disease of all ages, but the magnitude of these associations diminished with more advanced age.
- Diastolic blood pressure levels below 70 mmHg were associated with a higher risk of death, but otherwise they showed no association with cardiovascular outcomes

Hypertension affects almost all patients with chronic kidney disease.

Washington, DC (April 21, 2016) — New research indicates that higher systolic blood pressure is linked with poor outcomes in patients with kidney disease, although the association diminishes with advanced age. The findings, which come from a study appearing in an upcoming issue of the *Clinical Journal of the American Society of Nephrology* (CJASN), provide valuable information concerning patients who are often excluded from blood pressure–lowering clinical trials.

Hypertension is the most important treatable risk factor for cardiovascular disease, and while it is especially common in the elderly and in patients with chronic kidney disease (CKD), these are the least studied groups in randomized controlled trials examining the health effects of lowering blood pressure. Furthermore, the majority of patients with CKD are elderly; hence it is important to clarify the role of elevated blood pressure in these individuals.

To investigate, Csaba Kovesdy, MD (Memphis VA Medical Center and the University of Tennessee Health Science Center) and his colleagues examined information from the national VA research database and looked for associations between blood pressure and various clinical outcomes—coronary heart disease, stroke, kidney failure, and death—in more than 300,000 patients with CKD.

Among the major findings over a median follow-up of 7.6 years:

- Systolic blood pressure levels above 140 mmHg were linked with higher risks of coronary heart disease, stroke, kidney failure, and death in patients with CKD of all ages, but the magnitude of these associations diminished with more advanced age.
- Systolic blood pressure levels that were lower than 110 mmHg were associated with a higher risk of death, but lower risks of coronary heart disease and stroke.
- Diastolic blood pressure levels below 70 mmHg were associated with a higher risk of death, but otherwise they showed no association with cardiovascular outcomes.

The results support current clinical guidelines on the treatment of hypertension in younger patients with CKD, but a more cautious blood pressure–lowering strategy for very elderly patients with CKD may be reasonable.

“Hypertension affects almost all patients with CKD, and it is one of the few conditions that is treatable with a wide array of medications in these patients,” said Dr. Kovesdy. “The national VA research database offered us the opportunity to examine the effects of various blood pressure levels on outcomes in patients who are less well studied in clinical trials.”

In an accompanying editorial, Jessica Weiss, MD, MCR (Oregon Health & Science University) noted that the findings may be helpful in guiding the design of future trials to address the value of various blood pressure targets in older adults with CKD. “Ideally, future studies may continue to expand our knowledge... with more detailed exploration of the potential modifying effect of comorbidity and frailty on the association between blood pressure and outcomes in older adults,” she wrote. “For now, a tailored application of available data to the constellation of comorbidities and healthcare priorities of a particular patient remains the best approach for individualized hypertension management among older adults with CKD.”

Study co-authors include Ahmed Alrifai, MD, Elvira Gosmanova MD, Jun Lu, MD, Robert Canada, MD, Barry Wall, MD, Adriana Hung, MD, Miklos Molnar, MD, PhD, and Kamyar Kalantar-Zadeh, MD, PhD, MPH.

Disclosures: The authors reported no financial disclosures.

The article, entitled “Age and Outcomes Associated with Blood Pressure in Patients with Incident CKD,” will appear online at <http://cjasn.asnjournals.org/> on April 21, 2016, doi: 10.2215/CJN.08660815.

The editorial, entitled “The continued quest for optimal blood pressure targets in older adults with kidney disease,” will appear online at <http://cjasn.asnjournals.org/> on April 21, 2016.

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Ms. Willie Logan - willie.logan@va.gov