

BLOOD PRESSURE CONTROL IN CKD BY ANTI-HYPERTENSIVE MEDICATION: NHANES 1999-2006

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Recent guidelines recommend more aggressive blood pressure (BP) control in patients with chronic kidney disease (CKD), preferably with the use of ACE inhibitors (ACEIs)/ARBs and with multiple anti-hypertensive medications (AHMs) as necessary. We examined use of AHMs and level of BP control among 1651 adults (20+ years) with CKD and hypertension in NHANES 1999-2006 data. BP control was defined as systolic BP <130 and diastolic BP <80 mmHg. CKD was defined as an eGFR <60 ml/min/1.73 m²; hypertension was defined by self-reported diagnosis, high BP, or use of AHMs. We examined BP control by type of medication and participant characteristics using χ^2 tests; adjustment was performed using multivariable logistic regression. One-third (34%) of participants with CKD and hypertension were not receiving an AHM; 24% were on ACEIs/ARBs, 19% were on diuretics, and 30% were on other AHMs, including beta blockers (14%) and calcium channel blockers (11%). Overall, 62% of those treated with AHMs were on single agents. With adjustment for age, sex, and race, BP control using ACEIs/ARBs was observed in 37%; diuretics, 33%; and any other AHM, 31%. BP control using ACEIs/ARBs was predicted by younger age ($P=0.047$) and no albuminuria ($P=0.034$) but not by use of multiple agents ($P=0.901$). Nearly one-third of those with CKD and hypertension in the community do not appear to be receiving AHMs. Moreover, of those who were on AHMs, fewer than half demonstrated controlled BP, and the majority were receiving monotherapy. More aggressive BP control strategies, including multiple medications and greater use of ACEI/ARBs, are needed for those with CKD and hypertension.