Title
Racial Differences in the Prevalence, Patterns, and Mortality Associated With Hyperkalemia Among 2.7 Million Veterans

Journal
American Journal of Kidney Diseases, 67(5)

ISSN
0272-6386

Authors
Grams, Morgan
Sang, Yingying
Coresh, Josef
et al.

Publication Date
2016-05-01

DOI
10.1053/j.ajkd.2016.03.132

125

RACIAL DIFFERENCES IN THE PREVALENCE, PATTERNS, AND MORTALITY ASSOCIATED WITH HYPERKALEMIA AMONG 2.7 MILLION VETERANS

Morgan Grams[1]*, Yingying Sang[1], Josef Coresh[1], Shoshana Ballew[1], Kunihiro Matsushita[1], Miklos Zsolt Molnar[2], Kamyar Kalantar-Zadeh[3] and Csaba P. Kovesdy[2,4]. [1]JHU; [2]UTHSC; [3]UC Irvine and [4]Memphis VA Medical Center.

Little is known about the prevalence, patterns, and consequences of hyperkalemia in the outpatient setting and whether this varies by race. We evaluated outpatient patterns of mild (>5 mEq/L) and severe (>6 mEq/L) hyperkalemia among 2,746,585 US veterans (11% with eGFR<60 ml/min/1.73 m^2) over a 2-year period (2007-2009). Hyperkalemia patterns were classified as never, transient (1 episode), intermittent ≤50% of all K checks), and persistent (>50% of K checks) and stratified by frequency of testing. Overall, 7.6%, 2.8%, and 1.4% of the population had transient, intermittent, and persistent mild hyperkalemia whereas only 0.4% had severe hyperkalemia. Black persons (17% of the overall population) had lower average potassium levels than white persons. In analyses adjusted for age, sex, kidney function, comorbid conditions, medications (ACE/ARB use, K-sparing and kaliuretic diuretics, and beta blockers), and frequency of testing, black persons were 34%, 48%, and 58% less likely to experience transient, intermittent, and persistent mild hyperkalemia than white persons (all p-values <0.001). There were no significant differences by race in patterns of severe hyperkalemia. People with lower eGFR and higher ACR were also significantly more likely to exhibit mild and severe hyperkalemia. All patterns of mild and severe hyperkalemia were associated with higher mortality; this risk was generally higher in black compared to white persons (p for interaction <0.05 for all patterns of mild hyperkalemia and transient severe hyperkalemia). In summary, mild hyperkalemia in the outpatient setting was common, particularly among people with kidney disease. Black persons experienced mild hyperkalemia less often than white persons, but the associated mortality risks in black persons were generally higher.