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MORTALITY-PREDICTABILITY OF SERUM POTASSIUM IN DIALYSIS.
Noriko Kuwae, Charles J McAllister, David Gjertson, Sander
Greenland, Joel D Kopple, and Kamyar Kalantar-Zadeh. Harbor-
UCLA Nephrol.; UCLA Epidemiology; DaVita, Inc.; Torrance, CA.

One survey of maintenance hemodialysis (MHD) patients (pts) has
indicated that pre-dialysis serum potassium (K) between 5.0 to 5.5
mEq/L is associated with the least mortality. We examined whether
adjustment for measures of malnutrition and inflammation will change
this relationship significantly. Mortality-predictability of serum K was
examined in a 2-year cohort of 31,150 MHD pts from over 450 DaVita
outpatient dialysis facilities in the USA (10/1/2001-9/30/2003). Pts
were 60.6±15.1 years old, 53% men, 36% African Americans, and 43%
diabetics. Baseline (3-month averaged) serum K, measured centrally in
one single laboratory, was 4.92±0.61 mg/dL. Both unadjusted and
multivariate adjusted hazard ratios of death, controlled for case mix,
vintage, dialysis dose, blood hemoglobin, serum albumin and protein
intake (reflected by 3-month averaged nPNA) were calculated for 9
ranges of K (<4.00, >5.75, and increments of 0.25 mEq/L in-between):
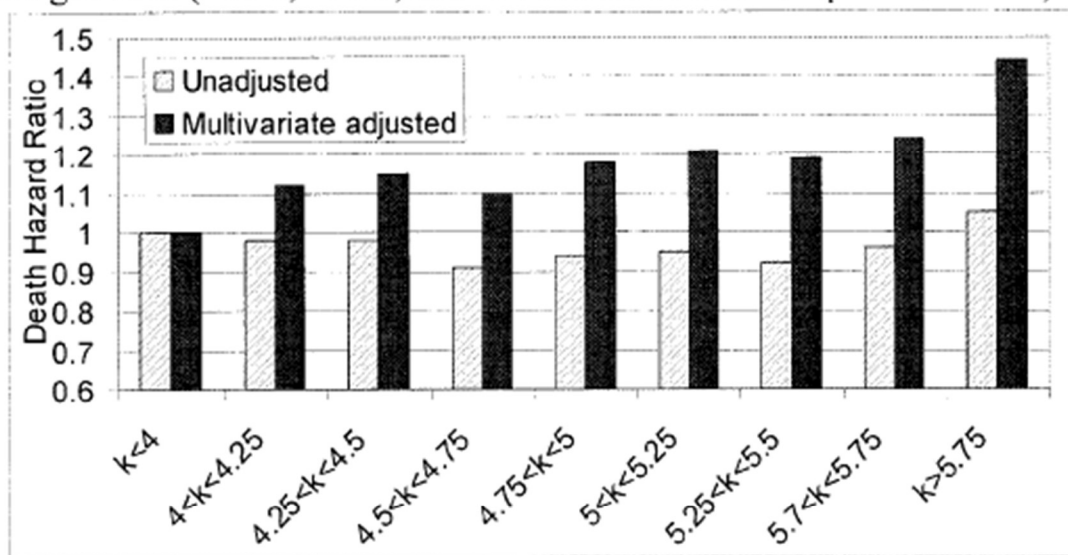
Unadjusted analysis showed the least mortality for a serum K of 4.5 to
5.5 mEq/L. However, multivariate analysis showed almost
progressively increasing mortality as K rose >4.0 mEq/L. The highest
K group (>5.75 mEq/L) had the greatest unadjusted and multivariate
adjusted 2-year death risk. We conclude that, given all other factors
equal, hyperkalemia is a stronger death risk than hypo-K in MHD pts.