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SERUM FOLATE LEVELS AND MORTALITY IN A COHORT OF INCIDENT US HEMODIALYSIS PATIENTS

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Introduction and Aims: Serum folate levels are significantly lower in patients with end-stage renal disease than in the general population but the association between folate levels and risk of death in hemodialysis (HD) patients is unknown. Here, we examined the association between baseline folate levels and all-cause mortality in HD patients.

Methods: We examined the association of baseline folate levels (<6.2, 6.2 to <8.5, 8.5 to <11, 11 to <14.2 [reference] and ≥14.2 ng/ml) with all-cause mortality in 9,517 incident HD patients who initiated dialysis between 2007 through 2011 using Cox models with 2 levels of adjustment: unadjusted, and adjusted for case-mix covariates.

Results: Patients were 61±15 years old, and included 43% women, 36% blacks and 58% diabetics. In the unadjusted model, compared to HD patients with 11 to <14.2 ng/ml of serum folate, those with ≥14.2 ng/ml had a 23% increased risk of death (HR: 1.23, 95% CI: 1.08-1.40), which was slightly attenuated after further adjustment by case-mix covariates. In the case-mix adjusted models serum folate <6.2 ng/ml was associated with an 18% higher risk of all-cause mortality (HR 1.18, 95%CI 1.03-1.35).

Conclusions: Higher (>14.2 ng/ml) and lower (<11 ng/ml) folate levels appear associated with higher risk of mortality in HD patients. Further studies are needed to determine if correction of folate levels to this range improves outcomes of HD patients.