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Race and Very Low Serum Creatinine as Predictors of Outcomes in Hospitalized Elderly Patients.

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INTRODUCTION: We hypothesized that African-Americans (AA) and patients with very low serum creatinine (< 0.6 mg/dl) (VLSC) would have worse hospital outcomes.

METHODS: Retrospective cohort study of all hospitalized elderly (age ≥65 years) patients admitted in a year. VLSC was defined, a priori, as creatinine ≤0.6mg/dl. The primary outcome was in-hospital mortality. Secondary outcomes were ICU transfer, disposition after hospital stay, and recurrent admissions to the hospital within one year of discharge.

RESULTS: 3926 elderly patients, 75.6% White, 58% female, with median age of 79 years were admitted. Analyses were restricted to the 2732 patients with serum creatinine <1.2mg/dl. Of these 12.8% had VLSC and 11% were AA. VLSC was associated with lower albumin levels (Median 3.0 versus 3.3, P = 0.0007) and inversely associated with BMI (median 38.3 versus 26.9, P < 0.0001). The overall in-hospital mortality was 8.3% (95% CI 7.3%, 9.4%). Adjusting for age, albumin level, race, and gender, there was nearly a 100% excess mortality among the VLSC group (Adjusted OR 1.99, 95% CI 1.10, 3.63, P = 0.02). Much of these excess mortality was explained by higher rates of congestive heart failure in the VLSC group (26.9% versus 14.0%, P < 0.0001). AA were less likely to be discharged to Extended Care Facilities (ECF) (35% versus 42.4%, P = 0.012) and more likely to be re-admitted (45.1 versus 38.1, P = 0.016). There was no statistically significant association between race and mortality or ICU transfer.

CONCLUSIONS: Very low admission serum creatinine is an independent predictor of in-hospital mortality in elderly hospitalized patients. Elderly AA are less likely to be discharged to ECF compared to whites.