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ASSOCIATION OF ASPARTATE AMINOTRANSFERASE (AST, SGOT) WITH ALL-CAUSE MORTALITY IN MAINTENANCE HEMODIALYSIS PATIENTS

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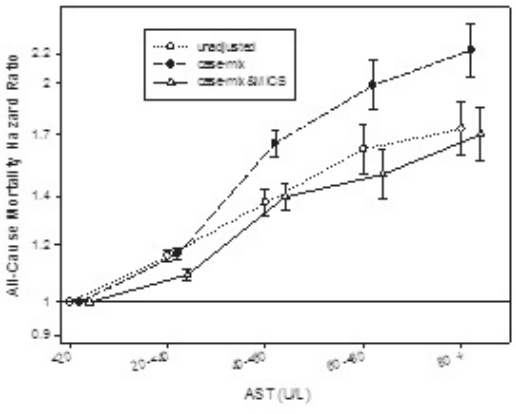
Liver disease has been observed as a common comorbid condition in chronic kidney disease (CKD) patients. To date, the association between aspartate aminotransferase (AST, SGOT) level as a metric of liver disease and mortality risk in maintenance hemodialysis (MHD) patients has not been well studied. We hypothesized that higher levels of AST are incrementally associated with increased risk of all-cause death in MHD patients.

We examined the association of AST with all-cause mortality among 114,267 MHD patients followed for up to 8 years (2001-2009). We used 5 categories of time-averaged AST (<20, 20-<40, 40-<60, 60-<80, ≥80 U/L) in Cox proportional hazard models with 3 levels of adjustment: unadjusted, case-mix, and case-mix covariates plus markers of the malnutrition and inflammation complex (MICS).

Patients were 61±15 years old and included 45% women, 32% blacks, and 58% diabetics. Using AST <20 U/L as reference, there was a positive association between increasing AST levels and all-cause mortality across all levels of multivariable adjustment. In fully adjusted models, highest risk of death was observed in patients with AST levels ≥80 U/L (HR: 1.70, 95%CI: 1.56-1.85).



In MHD patients, higher levels of AST are associated with increased risk of all-cause mortality even after adjustment for MICS markers. Further studies are needed to confirm findings and determine mechanistic pathways of the AST—mortality association.