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Abstract 14258: Associations of Triglycerides and Mortality Across eGFR strata in the NHANES Cohort

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Abstract

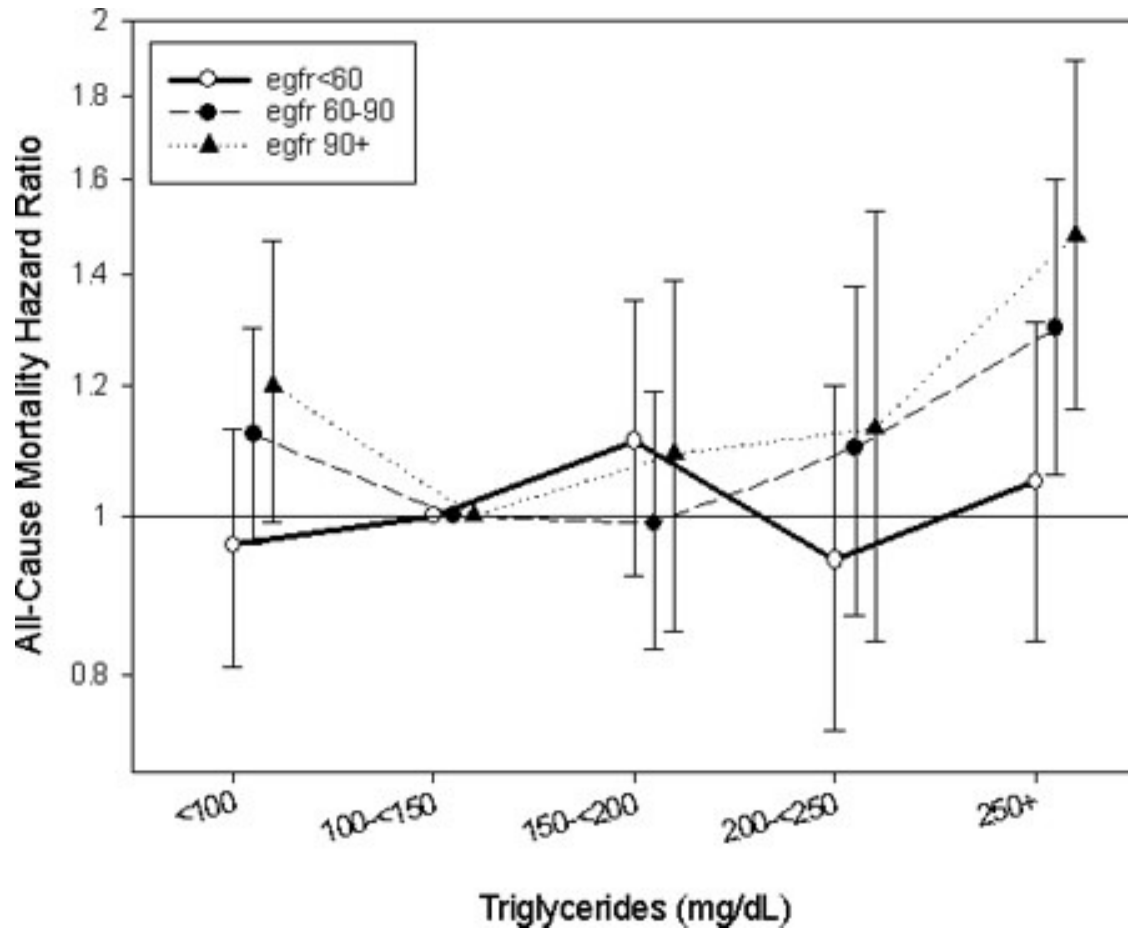
Introduction: Prior studies have shown that while elevated serum triglycerides levels are associated with worse survival in the general population, they may not be associated with worse survival in patients with chronic kidney disease (CKD). However, the triglyceride-mortality relationship has not been thoroughly examined in a single nationally representative cohort with the ability to assess the impact of CKD stage on this relationship.

Hypothesis: We hypothesize that kidney disease stage will have an impact on the association of triglyceride level with mortality risk.

Methods: Using data from the National Health and Nutrition Examination Surveys (NHANES), we identified 31,258 adults with available measurements on serum triglyceride and creatinine between 1999-2006. We examined the association of triglyceride with mortality in 6 groups of triglycerides, and stratified by 3 levels of estimated glomerular filtration rate (eGFR). Associations were examined with Cox models with multivariable adjustment for demographics, comorbidities, medication use, body mass index and albumin.

Results: The cohort mean age was 48+/-18 years and comprised of 52% females and 20% non-Hispanic black patients. Patients with higher triglycerides tended to be older, male, non-Hispanic white or Mexican-American. Over a median follow-up of 6[3, 9] years, 2,800 deaths occurred. Compared to triglycerides 100-150 mg/dL, patients with higher triglycerides had a higher risk of all-cause mortality in patients with eGFR ≥ 90 ml/min/1.73m². However this association was incrementally attenuated across strata of lower eGFR (60-90, and <60 ml/min/1.73m²). Lower triglycerides trended toward a higher mortality risk in higher eGFR strata, although this was fully attenuated in patients with eGFR <60 ml/min/1.73m². There was a significant interaction between eGFR and triglyceride categories in their relationship with mortality (p-for-interaction: 0.0373).

Conclusions: Among the nationally representative NHANES cohort, kidney disease stage as indicated by eGFR strata significantly impacted the association of triglyceride with mortality. Additional studies evaluating the impact of kidney disease on the triglyceride-mortality relationship are warranted.



Triglycerides; Kidney; Mortality; Epidemiology; Research