Serum Albumin and Survival in a Large Cohort of Chronic Peritoneal Dialysis Patients in the USA

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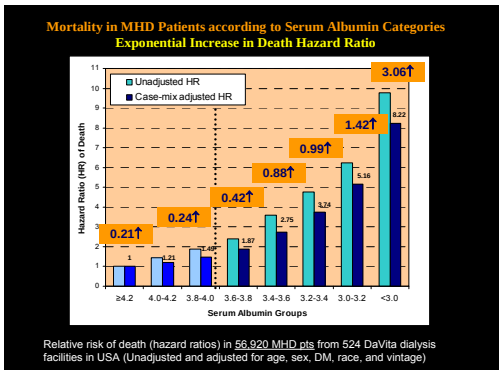
Background

- Hypoalbuminemia is a strong predictor of mortality in maintenance hemodialysis (MHD) patients (pts).
- However, it is not known whether these associations can be extrapolated to chronic peritoneal dialysis (CPD) pts, esp. since CPD pts have on average lower serum albumin values than MHD pts.

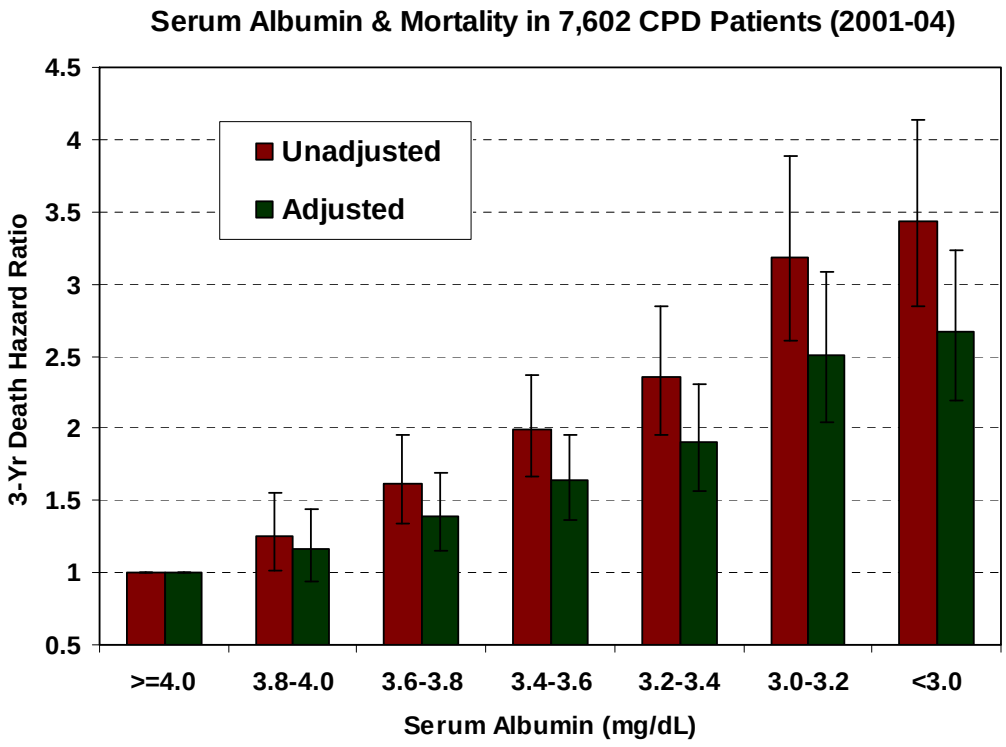


Relative risk of death (hazard ratios) in 56,920 MHD pts from 524 DaVita dialysis facilities in USA (Unadjusted and adjusted for age, sex, DM, race, and vintage)

Methods

- We examined a large and contemporary cohort of 7,602 CPD pts who underwent dialysis treatment for at least 3 months in any DaVita dialysis clinic between July 2001 and June 2004.
- All serum albumin values measured within a 3-month calendar quarter were averaged into one single value.

Results



- Pts were 46.4+/-10.4 years old and included 48% women, 22% African Americans, 14% Hispanics and 50% diabetics.
- Serum albumin was categorized into 7 a priori selected groups of <3.0, >=4.0 and 5 groups of 0.2 g/dL increments in-between.
- A monotonically incremental death hazard ratios (HR) were noted with albumin >=4.0 g/dL as the reference group including in the multivariate adjusted models for case-mix (gender, age, race, ethnicity, dialysis vintage, residual renal function and Kt/V).

- Hypothetical scenarios were analyzed in that the lives saved based on increasing serum albumin to levels above 4/0 g/dL were calculated.
- Over 1//3 of all deaths among PD patients would have been prevented.

Conclusions

- **In CPD pts hypoalbuminemia is a strong, robust and incremental predictor of mortality.**
- **The large magnitude of hypoalbuminemia-mortality association may imply that nutritional and/or anti-inflammatory interventions that would raise serum albumin above 4.0 g/dL may be highly promising alternatives to improve survival in CPD patients.**

Acknowledgements

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Poster Session: Sunday, November 4, 2007, 10:00 AM. Halls A/B/C, SU-PO526