

#1781 - Charlson comorbidity index as a strong predictor of mortality in maintenance hemodialysis patients

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Body

Background. Mortality of hemodialysis patients is still high and their clinical outcomes can be estimated using the charlson comorbidity index (CCI) and serum albumin.

Methods. Adult maintenance hemodialysis patients (N= 532) from nine hemodialysis facilities were enrolled in this prospective cohort study in September 2012. Demographic factors, laboratory data including serum albumin, and patients' comorbidities were recorded at study start. Causes of death, hospitalization, and HD exit were recorded in a median 28 months follow up period.

Results. Patients were 56 ± 15.4 years old, and included 57% men, 41% diabetes and 43% ischemic heart disease. Average of dialysis vintage was 44.6 ± 49.1 months. The mean values (\pm SD) for serum hemoglobin was 10.6 ± 1.5 g/dl, albumin 3.90 ± 0.35 g/dl, and Kt/V 1.31 ± 0.21 . A total of 161 (30%) patients passed away (17 per 100 patient years), and the most common causes of death were cardiovascular diseases (42%) and infections (25%). In Cox proportional hazards models, hazard ratio (HR) of death for age (year) was 1.03 (95% CI: 1.01-1.05; $p=0.007$), for serum albumin (g/dL) was 0.21 (95% CI: 0.11-0.40; $p<0.001$), and for CCI was 1.75 (95% CI: 1.59-1.94; $p<0.001$). With increasing CCI number and also decreasing serum albumin level, one-year and two-year patient survival was gradually worsened.

Conclusion. Charlson comorbidity index along with serum albumin and age are appropriate variables to predict one

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and two-year survival of HD patients. Therefore, we can appreciate unhealthier patients who need closer medical care for improving their health status.

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