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**The Association Of Serum Cystatin C, Beta-Trace Protein And Beta2-Microglobulin Levels With All-Cause Mortality In Peritoneal Dialysis Patients**

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**Objectives :** We evaluated the association of Cys C, BTP and  $\beta$ 2-M with all-cause mortality in peritoneal dialysis patients.

**Methods :** This was a prospective cohort study including adult patients (age  $\geq$  18 years old) treated with continuous ambulatory peritoneal dialysis (CAPD) from 4 sites in China. Patients with critical illness or major surgery at the time of study enrollment, active bleeding, advanced stage of malignancy, and peritonitis within four weeks prior to enrolment and medications that block tubular secretion of creatinine were excluded. The primary outcome was all-cause mortality and all patients were follow-up until August 31, 2019. Unadjusted and adjusted Cox regression models were used to evaluate the association of serum Cys C, BTP and  $\beta$ 2-M with all-cause mortality.

**Results :** A total of 943 patients were enrolled. The mean age was  $49.7 \pm 14.6$  years, 450 (47.7%) were female and 151 (16.0%) had diabetes. During a median follow-up of 64.3 (46.0, 86.8) months, a total of 196 (20.8%) patients died. Baseline serum Cys C and BTP level were not associated with all-cause mortality in unadjusted and adjusted models (HR=0.97, 95% CI 0.84-1.11,  $p=0.61$  for Cys C and HR=0.99, 95% CI 0.93-1.05,  $p=0.74$  for BTP in adjusted model). Baseline serum  $\beta$ 2-M level were associated with increased risk of all-cause mortality in unadjusted model (HR=1.01, 95% CI 1.00-1.03,  $p=0.02$ ) and in the model adjusted for age, sex, diabetes, BMI, SBP, laboratory examination, residual kidney function and peritoneal clearance (HR=1.02, 95% CI 1.01-1.04,  $p=0.02$ ). However, this association was attenuated and not significant after adjusted for dialysis vintage (HR=1.02, 95% CI 1.01-1.04,  $p=0.02$ ).

**Conclusions :** Baseline serum Cys C and BTP levels were not associated with all-cause mortality in peritoneal dialysis patients. Higher serum  $\beta$ 2-M level was associated with an increased risk of all-cause mortality, but this association disappeared with longer dialysis vintage.