

Impact of Peritoneal Dialysate Protein Levels on Mortality in Patients with Peritoneal Dialysis

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Background: Peritoneal protein loss has been reported to be associated with clinical outcomes in peritoneal dialysis (PD) patients. However, the impact of peritoneal dialysate protein levels on clinical outcome is uncertain. In this study, we investigated the association of peritoneal dialysate protein levels and mortality in PD patients

Methods: PD patients were selected from the Clinical Research Center registry for End Stage Renal Disease, a multi-center prospective cohort study on dialysis patients in Korea. Patients were categorized into three groups by tertiles of peritoneal dialysate protein levels as follows: Tertile 1, peritoneal dialysate protein concentrations <78.1 mg/dL; Tertile 2, peritoneal dialysate protein concentrations 78.1-100.0 mg/dL; Tertile 3, peritoneal dialysate protein concentrations >100.0 mg/dL. Cox regression analysis was used to calculate the adjusted hazard ratio (HR) of mortality with tertile 1 as the reference. The primary outcome was all-cause mortality.

Results: A total of 762 PD patients were included in this study. The median follow-up period was 24 months. Kaplan-Meier analysis showed that all-cause mortality rate were significantly different according to tertiles of peritoneal dialysate protein concentrations ($p=0.006$, log-rank). Multivariate Cox proportional hazard model showed that highest tertile was associated with increased risk of all-cause mortality compared with the lowest tertile (HR: 1.92, 95% CI: 1.02-3.53) after adjustment for clinical variables.

Conclusions: Our data showed that elevated peritoneal dialysate protein levels were significant risk factor for death in PD patients

Key Words: 복막투석액내 단백질, 사망률

Peritoneal dialysate protein, Mortality