

복막투석 환자에서 국소적인 복강 내 염증과 전신염증, 영양실조, 사망률과의 연관성에 관한 전향적 연구

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고광일, 김찬호, 도화미, 구항모, 이미정, 오형중, 한승혁, 강신욱, 최규현, 유태현

Local Peritoneal Inflammation is Associated with Systemic Inflammation, Malnutrition, and All-cause Mortality in Peritoneal Dialysis Patients: A 3-year Prospective Study

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Background: Systemic inflammation is known to be associated with patient survival in peritoneal dialysis (PD). Moreover, chronic inflammation is closely associated with malnutrition. A association between systemic inflammation and local peritoneal inflammation has yet to be confirmed. The aim of this study was to investigate the associations between local peritoneal inflammation, systemic inflammation, malnutrition, and all-cause mortality in PD patients.

Methods: 169 PD patients were prospectively followed up from April 2008 to June 2011. At baseline, clinical and biochemical parameters such as age, sex, presence of diabetes, dialysate monocyte chemoattractant protein-1 (dMCP-1), serum high sensitivity C-reactive protein (hs-CRP), serum albumin, and dialysate-to-plasma creatinine ratio (D/Pcr) were assessed. All-cause deaths and technique failures were evaluated during the study period. Based on the median level of dMCP-1, patients were classified as lower dMCP-1 group (n=85) and higher dMCP-1 group (n=84).

Results: In higher dMCP-1 group, age, presence of diabetes, serum hs-CRP levels, and D/Pcr were higher, whereas serum albumin levels were significantly lower than lower dMCP-1 group. dMCP-1 levels were positively correlated with age, duration of peritoneal dialysis, D/Pcr, HbA1c, and serum hs-CRP, whereas inversely correlated with serum albumin levels. During the study period, 23 patients died. Time to patient survival was significantly longer in lower dMCP-1 group compared to higher dMCP-1 group (p=0.03). Cox proportional hazards multivariate analysis revealed that age, D/Pcr, and dMCP-1 were independent predictors of all-cause mortality.

Conclusion: dMCP-1 level is significantly correlated with markers of systemic inflammation and malnutrition and a significant association with all-cause mortality in PD patients. These findings suggest that local peritoneal inflammation could be helpful to predict the mortality in PD patients.

Key Words: 복강 내 MCP-1, 염증, 사망률, 복막투석

Dialysate MCP-1, Inflammation, Mortality, Peritoneal dialysis