

복막투석 환자에서 체액조절과 삶의 질과의 관련성

제주한라병원 내과

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Relation between Volume Status and Health-related Quality of Life in Peritoneal Dialysis Patients

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Background: Volume status is an important predictor of outcomes in patients with end stage renal disease, and chronic fluid overload contributes to the high mortality in dialysis patients. However, it has not yet been identified whether to achieve euvolemia contributes to improve health-related quality of life (HRQOL) in peritoneal dialysis (PD). We investigated the relationship between volume status and HROQL in PD patients.

Methods: This study is a cross-sectional, noninterventive, and observational. We enrolled 41 prevalent PD patients, and accessed volume status using Body Composition Monitor (BCM). Korean version of Kidney Disease Quality of Life short form (KDQOL-SF), version 1.3 was used to evaluate HRQOL. We determined scores of three components summary of HRQOL; Kidney Disease Component Summary (KDCS), Physical Component Summary (PCS), and Mental Component Summary (MCS). The hydration status (HS) was normalized to extracellular water (ECW) (Relative hydration=HS/ECW) for the analysis, and overhydrated status was defined as OH/ECW value greater than 0.15.

Results: Mean values of HS, ECW, and relative hydration were $2.80 \pm 2.20L$, $17.4 \pm 3.84L$, and 0.151 ± 0.101 , respectively. In correlation analysis, relative hydration (HS/ECW) was negatively correlated with the scores of KDCS and MCS ($r = -0.410$; $p = 0.008$ and $r = -0.309$; $p = 0.049$ respectively). Among disease-specific KDCS domains, relative hydration was significantly associated with two subscales including burden of kidney diseases and cognitive function ($\beta = -82.813$, $p = 0.018$ and $\beta = -40.670$, $p = 0.033$, respectively). The result of multiple linear regression analysis showed that relative hydration had significant negative association with KDCS ($\beta = -37.565$, $p = 0.033$). Mean value of KDCS score was lower in overhydrated patients compared to normohydrated patients, but the difference was not significant (61.1 ± 9.25 vs 66.7 ± 17.17 , $p = 0.075$).

Conclusion: Overhydrated status showed a significant negative association with scores of KDCS and MCS, indicating that volume status is an important factor affecting HRQOL in PD patients. Close monitoring of volume status and a correct dialysis prescription to maintain euvolemia seem to be warranted to improve HRQOL in PD patients.

Key Words: 복막투석, 체액조절, 삶의 질

Peritoneal dialysis, Volume status, Quality of life