

복막투석환자에서 잔여신기능이 혈관 내피기능에 미치는 영향

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Reduced Residual Renal Function is Associated with Endothelial Dysfunction in Patients with Peritoneal Dialysis

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Background : Endothelial dysfunction is a key contributor to the development of atherosclerosis and is common in patients with chronic kidney disease (CKD). Traditional and non-traditional risk factors can adversely influence endothelial function in this population. However, the effect of residual renal function (RRF) on endothelial dysfunction has not been explored. This study aimed to elucidate whether endothelial function is affected by RRF in patients on peritoneal dialysis (PD).

Methods : This study is a cross-sectional study with 72 patients undergoing PD. Demographic and clinical data were recorded and residual GFR, Kt/V urea, and inflammatory markers were measured. Endothelial function was assessed by brachial artery endothelium-dependent vasodilation [flow mediated dilation (FMD)] to reactive hyperemia following 5 min of forearm ischemia.

Results : In patients with FMD% above median value (FMD>2.41%), residual GFR was significantly higher (1.50 vs. 0.48 ml/min/1.73m², p<0.05) compared to those below median. Pearson correlation analyses revealed that residual GFR (r=0.381, p<0.01) and total Kt/V urea (r=0.519, p<0.01) were positively correlated with FMD% whereas PD duration (r=-0.351, p<0.01), hsCRP (r=-0.281, p<0.05), pulse pressure (r=-0.341, p<0.01), and age (r=-0.403, p<0.01) were negatively correlated. However, peritoneal Kt/V urea was not correlated with FMD. After adjustment of age, residual GFR, peritoneal Kt/V urea, PD duration, hsCRP, and pulse pressure, residual GFR was identified as a significant determinant of FMD% (β =0.295, p<0.05).

Conclusion : This study suggests that preservation of RRF may be of help to protect endothelial function in patients with PD.

Key Words : 내피기능장애, 잔여신기능, 복막투석

Endothelial dysfunction, Residual renal function, PD