복막투석 초기의 핍뇨가 지속성외래복막투석 환자의 첫 1년간의 체성분 변화와 임상양상에 미치는 영향

영남대학병원 내과

박정민, 조규향, 도준영, 정선영, 박종원, 윤경우

Impact of Early Oliguria on the Body Composition Changes and Clinical Outcomes During the First Year in the CAPD Patients

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Preservation of residual renal function in peritoneal dialysis patient is essential to improve clinical outcomes. Therefore, the authors investigated the effect of oliguria in early period on clinical outcomes and body composition changes in CAPD patients. Among new incident CAPD patients from May 2001 to December 2009 in our hospital, 279 patients who finished 12 month protocol (male: 152, mean age: 50.1±13.4 years, DM: 132) were analyzed. Patients were assigned to high GDP group (N=162, Dianeal®, Baxter and Stay-safe®, FMC) and low GDP group (N=117, Physioneal®, Baxter and Stay-safe · Balance®, FMC). We defined early oliguria group (N=67) as less than 400 mL urine volume per day at the 2nd week after initiation of PD. Daily ultrafiltration volume (UFV) and urine volume (UV), daily peritoneal glucose absorption, adequacy, residual renal function (RRF) and clinical indices were measured at the 2nd week, 6th month and 12th month. Ultrafitration volume and 4 hour D/P Creatinine (D/P4Cr) during the peritoneal equilibration test (PET) using 4.25% dialysate were measured at the 2nd week, 6th month and 12th month. Body composition including total body water (TBW) volume, lean body mass (LBM) and fat mass were measured using bio-impedance analysis (BIA) at the 2nd week and 12th month. We analyzed the data with independent t-test and chi square test by SPSS 17.0. Results can be summarized as follows. 1) Baseline characteristics between early oliguria group and non-early oliguria group were not significantly different at the 2nd week. 2) Incidence of oliguria at the 2nd week was 24% (67/279 patients). There is significant positive correlation between daily UV at the 2nd week and daily UV at the 12th month ($p<0.001$). 3) Early oliguria group showed significant lower RRF at the 6th and 12th month ($p<0.05$) and also significant higher CRP at the 12th month ($p<0.01$) than non-early oliguria group. Early oliguria group showed significant lower BW, TBW, LBM, fat mass and BMI at the 12th month (58.6 vs. 65.3 kg, 31.0 vs. 34.3 kg, 43.5 vs. 48.3 kg, 15.1 vs. 17.3 kg, 22.5 vs. 24.4, $p<0.001$, $p<0.01$, $p<0.01$, $p<0.05$, $p<0.001$, respectively) than non-early oliguria group. 4) Incidence of oliguria at the 12th month was 24% (68/279 patients). There were no significant differences in the incidence of oliguria between high GDP and low GDP groups at the 12th month (41/162 vs. 27/117 patients). There were also no significant differences in the incidence of oliguria between diabetic and non-diabetic group at the 12th month (37/132 vs. 31/147 patients). In conclusion, early oliguria in the first two weeks could be associated with decline of RRF and body composition changes during the first year in CAPD patients. It is suggested that preservation of residual renal function in early period of peritoneal dialysis is important to improve clinical outcomes and nutritional status.

Key Words: 핍뇨, 복막투석, 체성분
Oliguria, Peritoneal dialysis, Body composition