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지속성외래복막투석환자에 있어서 고GDP투석액에서 저GDP투석액으로 교체 후 복막중피세포의 변화

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The Effect of Switching from High GDP to Low GDP Dialysis Solution on Phenotype of Effluent HPMC in CAPD Patients

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The purpose of this study was to analyze the effect of switching from high GDP to low GDP dialysis solution in CAPD patients. Among new CAPD patients from May 2001 to December 2009 in our hospital, 57 patients (35 male, 25 diabetes, mean age 48.4±12.5 years) finished a protocol. Patients were assigned to two groups, Group 1 (N=36, high GDP, Dianeal®, Baxter) and Group 2 (N=21, high GDP, Stay-safe®, FMC). We switched the dialysis solutions from Dianeal® to low GDP Physioneal® and Stay safe® to low GDP, Balance® (0 month). PET was performed and clinical indices were measured every 6 months (-24th, -18th, -12th, -6th, 0, 6th, 12th, 18th, 24th month). Human peritoneal mesothelial cells (HPMC) were also cultured n the T25 plate from the overnight effluent every 6 months. We scored HPMCs (1: cobble stone appearance mesothelial cell, 2: mixed, 3: fibroblast) as morphologic characteristics by the same researcher and measured CA125 levels in effluent. We analyzed the data with independent t-test and chi square test. Results can be summarized as follows. There were significant increases in cell scores than baseline (0 month) after switching PD solution (mean cell score 1.18, 1.56, 1.94, 2.09 and 2.31 at 0, 6, 12, 18 and 24 months , $p<0.05$, $P<0.01$, $p<0.01$, $p<0.01$ comparing with 0 month) but there were no significant increases in D-CA125 after switching in Group 1. In Group 2, there were significant increases in CA125 level in effluent after switching dialysate (23.04±12.65, 37.45±19.51, 47.88±21.14, 45.10±29.30 and 40.58±23.09 IU/mL at 0, 6, 12, 18 and 24 months, $p<0.01$ comparing with 0 months, respectively) but there were no significant increases in cell score during 24 months after switching dialysate from high GDP to low GDP solution. In conclusion, switching from high GDP to low GDP PD solution didn't show consistent effects on EMT and D-CA125 comparing with lactate, low GDP and lactate/bicarbonate, low GDP PD solutions.

Key Words : 저GDP투석액, 복막중피세포
low GDP dialysis solution, Human peritoneal mesothelial cells