

복막투석에서 한외여과에 대한 GDP의 효과

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Effects of GDP on the Ultrafiltration in Peritoneal Dialysis

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Background: Glucose degradation products (GDPs) are thought to alter peritoneal membrane structure and function during long-term peritoneal dialysis (PD). However, controversies existing regarding the change of ultrafiltration volume (UF) by high/low GDP solutions in PD patients.

Patients and Methods: We reviewed the medical records at Yeungnam University Hospital in Korea and identified all adult (>18-years-of-age) patients who received PD. Eighty-seven patients were enrolled. Patients divided into low-GDP (A group, n=57) and high-GDP groups (B group, n=30). The following data were documented from patients' record: age at the initiation of PD, gender and underlying disease. The peritoneal equilibration test (PET) including UF was measured at 1, 6, 12, 18 and 24 months after initiation of PD.

Results: Fifty-seven patients received low-GDP solution (A group) and 30 patients received high-GDP solution (B group). Age at the initiation of PD was 50 ± 13 years in A group and 48 ± 13 years in B group. B group had a higher DPcr ratio at 1 month than A group (0.68 ± 0.08 in A group and 0.73 ± 0.09 in B group; $p=0.009$) and received more icodextrin (17.5% in A group and 40.0% in B group; $p=0.022$). The changes in DPcr ratio, DD0glucose ratio, DP1Na ratio and edema index during follow-up were not significantly different between the two groups. UF during PET at 24 months increased to a level $19.6 \pm 57.3\%$ more than baseline value. B group had a higher increment of UF during PET than A group ($p=0.046$). In linear regression analysis, type of GDP solution was the only independent factor associated with increment of UF.

Conclusion: UF during PET in patients who received high-GDP solution may increase over time more than those who received low-GDP solution. Further investigation is needed to identify the clinical significance of this result.

Key Words: 복막투석, 한외여과, GDP투석액
Peritoneal dialysis, Ultrafiltration, GDP solution