

복막투석을 시작하는 환자에서 일일 1회 icodextrin 및 2회 포도당 함유 투석액을 사용한 지속성외래복막투석법의 임상적 유용성

가톨릭대학교 의과대학 내과학교실

윤혜은 · 정현화 · 장윤경 · 최범순 · 신석준 · 김병수 · 박철휘 · 송호철 · 윤선애 · 양철우 · 김용수

Clinical Benefits of a CAPD Technique with Once Icodextrin-containing and Twice Glucose-containing Dialysates a Day in Incident CAPD Patients

Hye Eun Yoon, Hyun Wha Chung, Yoon Kyoung Chang, Bum Soon Choi, Seok Jun Shin
Byung Soo Kim, Cheol Whee Park, Ho Cheol Song, Sun Ae Yoon, Chul Woo Yang, Yong Soo Kim

Department of Internal Medicine, College of Medicine, The Catholic University of Korea

Background/Aims: Icodextrin-based solutions have clinical advantages over glucose-based solutions in fluid and metabolic management in continuous ambulatory peritoneal dialysis (CAPD) patients. However, the efficacy and safety of a CAPD technique has not been tested using once icodextrin-containing and twice glucose-containing dialysates a day.

Methods: Eighty-three incident CAPD patients were enrolled to a 12-month, multicenter, randomized controlled trial. After one month of a daily CAPD schedule using four glucose-containing dialysates, patients were randomized to two groups; one group continuously using four glucose-containing dialysates daily (GLU) and another group using one icodextrin-containing and two glucose-containing dialysates daily (ICO). The ICO group used icodextrin for the long-dwell exchange (12 h). Sixty-eight patients completed the 12-month protocol (GLU, n=33; ICO, n=35). Variables related to metabolic and fluid control and dialysis adequacy were measured by three to six months.

Results: There was a significant reduction in weekly renal creatinine clearance during the first 6 months in the GLU group (61.2 ± 31.3 L/1.73m²/wk vs. 50.7 ± 27.1 L/1.73m²/wk, $p < 0.05$), but not in the ICO group (61.1 ± 31.7 L/1.73m²/wk vs. 56.5 ± 35.0 L/1.73m²/wk, $p > 0.05$). The ICO group showed less percent changes in renal creatinine clearance than the GLU group after 12 months, although it was statistically insignificant ($-\Delta 10.4 \pm 55.6$ % vs. $-\Delta 26.4 \pm 47.2$ %, $p > 0.05$). There was a significant change in peritoneal glucose absorption between the GLU and ICO groups during 6 and 12 months ($+\Delta 7.2 \pm 27.2$ g/day, $+\Delta 7.8 \pm 22.3$ g/day vs. $-\Delta 28.3 \pm 5.3$ g/day, $+\Delta 1.5 \pm 7.8$ g/day, $p < 0.05$). There were no significant changes in weekly total Kt/V, weekly peritoneal clearances, ultrafiltration volumes, and blood pressure control between the two groups during 12 months. The incidence of peritonitis and cardiovascular events and mortality did not differ between the two groups.

Conclusion: The CAPD technique using once icodextrin-containing and twice glucose-containing dialysates a day showed a tendency to better preserve residual renal function compared to the conventional CAPD technique, and showed comparable dialysis adequacy and volume control, in incident CAPD patients.

Key Words: 복막투석, icodextrin, 한외여과
Peritoneal dialysis, Icodextrin, Ultrafiltration