

란타눔 카보네이트가 고인산혈증의 조절에 미치는 효과

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Efficacy of Lanthanum Carbonate on Hyperphosphatemia Control in CAPD Patients in Korea: Randomized Controlled Prospective Multicenter Trial

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Background: Hyperphosphatemia is a common complication in end-stage renal disease (ESRD) patients. Reducing serum phosphate level is crucial in management of ESRD, because hyperphosphatemia effects on patient's long term outcome and quality of life.

Methods: This study was a randomized prospective study designed to compare patients with hyperphosphatemia undergoing peritoneal dialysis on lanthanum carbonate or calcium carbonate. continuous ambulatory peritoneal dialysis (CAPD) patients whose serum phosphate is over 5.6mg/dL were divided into 2 groups to take lanthanum carbonate and calcium carbonate. Serum calcium, phosphate, intact PTH was examined serially for 24 weeks.

Results: Both lanthanum carbonate and calcium carbonate reduced serum phosphate significantly, from 6.59 ± 0.76 mg/dL to 4.61 ± 0.63 mg/dL and from 6.55 ± 0.54 mg/dL to 4.91 ± 0.75 mg/dL, respectively. Serum calcium level was not elevated significantly in both groups. Calcium X phosphate product was reduced in both groups, from 59.66 ± 9.00 mg²/dL² to 42.55 ± 8.63 mg²/dL² and from 60.01 ± 7.18 mg²/dL² to 46.21 ± 6.38 mg²/dL², respectively. Serum iPTH level in Lanthanum Carbonate group was not significantly different, but in calcium carbonate group, serum iPTH level decreased significantly, from 221.96 ± 223.94 pg/dL to 151.17 ± 176.09 pg/dL. Gastrointestinal complications were main adverse effects of lanthanum carbonate and 6 patients out of 22 patients dropped out due to this complication in lanthanum carbonate group.

Conclusion: Lanthanum carbonate is as effective as calcium carbonate in reducing serum phosphate level, and serum iPTH level tends to be steadier in lanthanum carbonate group compared to calcium carbonate group. Though it was not significantly different, lanthanum carbonate tends not to elevate calcium level in (CAPD) patients compared to calcium carbonate. But high incidence of gastrointestinal adverse effect in lanthanum carbonate group needs to be further evaluated.

Key Words: 란타눔, 복막투석, 고인산 혈증

Lanthanum Carbonate, CAPD, Hyperphosphatemia