

## 혈액투석 환자에서 투석액 칼슘 농도와 감염 관련 입원과의 관계

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### Association between Dialysate Calcium Concentration and Infection-related Hospitalization in Incipient Hemodialysis Patients

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**Background:** Dialysate calcium concentration has been reported to have influence on cardiovascular disease and bone metabolism in hemodialysis (HD) patients. Previous study showed that dialysate calcium concentration is closely associated with systemic inflammation. It is unclear whether dialysate calcium concentration is associated with infection-related clinical outcomes. In this study, we investigated the association between dialysate calcium concentration and infection-related hospitalization in incident HD patients.

**Methods:** A total of 1182 incident HD patients were enrolled from the Clinical Research Center registry for End Stage Renal Disease, a multicenter prospective cohort study in Korea. Patients were classified into three groups according to dialysate calcium concentrations as high group (>3.5 mEq/L, n=182), standard group (3.0 mEq/L, n=701) and low group (<2.6 mEq/L, n=299). The primary outcome was infection-related hospitalization.

**Result:** The median follow-up period was 16 months. Kaplan-Meier analysis showed that the infection related hospitalization rate was significantly higher in patients with high dialysate calcium (p=0.018, Log-rank). In the multivariate Cox regression analyses, group with high dialysate calcium concentration had a significantly higher risk of infection related-hospitalization compared with group with mid dialysate calcium concentration (HR 1.88, 95% CI, 1.11-3.17, p=0.019) and group with low dialysate calcium concentration (HR 2.79, 95% CI, 1.42-5.46, p=0.003). There was no significant difference in mortality between groups with the mid and low dialysate calcium concentration (HR 0.67, 95% CI, 0.37-1.22, p=0.189) after adjustment for clinical variables.

**Conclusions:** High dialysate calcium concentration in hemodialysis is associated with significantly higher risk of infection-related hospitalization.

**Key Words:** 투석액, 칼슘, 감염

Dialysate, Calcium, Infection