

혈액투석을 시작하는 환자에서 투석액 칼슘 농도가 사망률에 미치는 영향

가톨릭대학교 의과대학 내과학교실¹, 중앙대학교 의과대학 내과학교실²
 경북대학교 의과대학 내과학교실³, 서울대학교 의과대학 내과학교실⁴
 연세대학교 의과대학 내과학교실⁵, 전남대학교 의과대학 내과학교실⁶

장경윤¹, 김형욱¹, 김수현², 김영옥¹, 진동찬¹, 송호철¹, 최의진¹
 김용림³, 김연수⁴, 강신욱⁵, 김남호⁶, 양철우¹, 김용균¹

Impact of Dialysate Calcium Concentration on Mortality in Incident Hemodialysis Patients

Kyung Yoon Chang¹, Hyung Wook Kim¹, Su-Hyun Kim², Young Ok Kim¹, Dong Chan Jin¹
 Ho Chul Song¹, Euy Jin Choi¹, Yong-Lim Kim³, Yon-Su Kim⁴, Shin-Wook Kang⁵
 Nam-Ho Kim⁶, Chul Woo Yang¹, Yong Kyun Kim¹

Department of Internal Medicine College of Medicine¹ The Catholic University of Korea Seoul Korea

Department of Internal Medicine² College of Medicine Chung-Ang University Seoul Korea

Department of Internal Medicine³ School of Medicine Kyungpook National University Korea

Department of Internal Medicine⁴ College of Medicine Seoul National University Seoul Korea

Department of Internal Medicine⁵ College of Medicine Yonsei University Seoul Korea

Department of Internal Medicine⁶ Chonnam National University Medical School Korea

Background: The association between dialysate calcium (DCa) concentration and mortality in hemodialysis (HD) patients is controversial. We evaluated the impact of DCa concentration on mortality in incident HD patient.

Methods: Incident HD patients were selected from the Clinical Research Center (CRC) registry for end-stage renal disease (ESRD), a prospective cohort study on dialysis patients in Korea. Incident HD patients were categorized into three groups according to the DCa concentration prescribed at the time of enrollment. 'High DCa' was defined as DCa concentration=3.5 mEq/L, 'mid DCa' as DCa concentration=3.0 mEq/L, and 'low DCa' as DCa concentration=2.5-2.6 mEq/L. The primary outcome was all-cause mortality.

Results: A total of 883 incident HD patients were included. The number of patients in 'high DCa' group was 155 (17.6%), 'mid DCa' group was 579 (65.6%) and 'low DCa' group was 149 (16.9%). The median follow-up period was 24 months. The 'high DCa' group had a significantly higher risk of all-cause mortality compared with the 'mid DCa' group (HR 2.24, 95 %CI, 1.18-4.24, p=0.013) and with 'low DCa' group (HR 8.17, 95 %CI, 1.84-36.30, p=0.006). There was no significant difference in mortality between the 'mid DCa' and the 'low DCa' group (HR 0.27, 95 %CI, 0.07-1.16, p=0.079) after adjustment for clinical variables.

Conclusions: Our data showed that HD using high DCa was a significant risk factor for death in incident HD patients.

Key Words: 투석액 칼슘 농도, 혈액 투석, 사망률

Dialysate calcium, Hemodialysis, Mortality