

## 복막투석 환자에서 ALP와 사망률의 관계

가톨릭대학교 의과대학 내과학교실<sup>1</sup>, 중앙대학교 의과대학 내과학교실<sup>2</sup>  
 경북대학교 의과대학 내과학교실<sup>3</sup>, 서울대학교 의과대학 내과학교실<sup>4</sup>  
 연세대학교 의과대학 내과학교실<sup>5</sup>, 전남대학교 의과대학 내과학교실<sup>6</sup>

황선덕<sup>1</sup>, 김수현<sup>2</sup>, 김영옥<sup>1</sup>, 진동찬<sup>1</sup>, 송호철<sup>1</sup>, 최의진<sup>1</sup>  
 김용림<sup>3</sup>, 김연수<sup>4</sup>, 강신욱<sup>5</sup>, 김남호<sup>6</sup>, 양철우<sup>1</sup>, 김용균<sup>1</sup>

### The Association between Serum Alkaline Phosphatase and Mortality in Peritoneal Dialysis: A Multicenter Prospective Cohort Study

Seon Deok Hwang<sup>1</sup>, Su-Hyun Kim<sup>2</sup>, Young Ok Kim<sup>1</sup>, Dong Chan Jin<sup>1</sup>, Ho Chul Song<sup>1</sup>  
 Euy Jin Choi<sup>1</sup>, Yong-Lim Kim<sup>3</sup>, Yon-Su Kim<sup>4</sup>, Shin-Wook Kang<sup>5</sup>, Nam-Ho Kim<sup>6</sup>  
 Chul Woo Yang<sup>1</sup>, Yong Kyun Kim<sup>1</sup>

Department of Internal Medicine<sup>1</sup>, College of Medicine, The Catholic University of Korea, Seoul, Korea  
 Department of Internal Medicine<sup>2</sup>, College of Medicine, Chung-Ang University, Seoul, Korea  
 Department of Internal Medicine<sup>3</sup>, School of Medicine, Kyungpook National University, Korea  
 Department of Internal Medicine<sup>4</sup>, College of Medicine, Seoul National University, Seoul, Korea  
 Department of Internal Medicine<sup>5</sup>, College of Medicine, Yonsei University, Seoul, Korea  
 Department of Internal Medicine<sup>6</sup>, Chonnam National University Medical School, Korea

**Background:** Serum alkaline phosphatase (ALP) level has been reported to be associated with the mortality in hemodialysis patients. However, it is not well established whether serum ALP level is associated with mortality in peritoneal dialysis (PD) patients. The aim of this study was to determine the association between serum alkaline phosphatase levels and mortality in PD populations using the Clinical Research Center (CRC) registry for End Stage Renal Disease (ESRD) cohort in Korea.

**Methods:** PD Patients were included from the CRC registry for ESRD, a multicenter prospective observational cohort study in Korea. Patients were categorized into three groups by tertile of serum ALP levels as follows: Tertile 1, ALP <78 U/L; Tertile 2, ALP=78-155 U/L; Tertile 3, ALP >155 U/L. Cox regression analysis was used to calculate the adjusted hazard ratio (HR) of mortality with a serum ALP levels of tertile 1 as the reference.

**Result:** A total of 1,469 PD patients were included. The median follow-up period was 28 months. The multivariate Cox proportional hazard model showed that the higher tertiles of serum ALP levels were associated with higher mortality (Tertile 2: HR 1.98, 95% confidence interval (CI), 1.17-3.34, Tertile 3: HR 1.74, 95% CI, 1.01 to 3.02) after adjustment for clinical variables.

**Conclusions:** Our data showed that increased serum alkaline phosphatase levels were significant risk factor for mortality in PD patients.

**Key Words:** ALP, 복막투석, 생존률

Alkaline phosphatase, Peritoneal dialysis, Mortality