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혈액투석 환자에서 계절적 변이를 고려한 25-hydroxyvitamin D와 혈관 석회화와의 연관성

가천의과학대학교 내과학교실

장제현 · 김세중 · 이현희 · 정우경 · 정지용

Study on the Relationship between Serum 25-hydroxyvitamin D Levels and Vascular Calcification in Hemodialysis Patients with Consideration of Seasonal Variation in Vitamin D Levels

Jae Hyun Chang, Sejoong Kim, Hyun Hee Lee, Wookyung Chung, Ji Yong Jung

Department of Internal Medicine Gachon University of Medicine and Science Incheon Korea

Background/Aims: The aim of this study was to determine the prevalence of vitamin D deficiency in hemodialysis (HD) patients and the relationship between seasonal variations in vitamin D levels and vascular calcification.
Methods: As a prospective observational study, we analyzed 289 HD patients. We have assessed serum 25-hydroxyvitamin D (25D) levels at the end of the summer (September) and winter (March) and analyzed the data to reveal the association of serum 25D level with vascular calcification scores (VCS) at the end of the summer, when vitamin D levels were found to peak.
Results: The prevalence of 25D deficiency was 86.2% at the end of the summer and increased to 96.2% at the end of the winter. Female gender and diabetes were associated with vitamin D deficiency. According to univariate analysis, 25D levels were inversely related to vascular calcification. However, after correcting for confounding factors, this relationship lost statistical significance. Multivariate analysis showed that age, systolic blood pressure, and LDL-cholesterol levels were directly associated with a higher VCS.
Conclusion: Vitamin D deficiency was highly prevalent in HD patients with marked seasonal variation. However, low 25D levels could not be identified as an independent predictor of vascular calcification in these patients.

Key Words: Vitamin D, 혈관석회화, 혈액투석
Vitamin D, Vascular calcification, Hemodialysis