만성 신부전 환자에서 25-hydroxyvitamin D 레벨과 혈관석회화의 관계

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Association between 25-hydroxyvitamin D evels and Vascular Calcification in Predialysis and Dialysis Patients with Chronic Kidney Disease

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Background/Aims: The role of vitamin D in the process of vascular calcification is controversial in patients with chronic kidney disease. We investigated whether serum 25-hydroxyvitamin D (25(OH)D) associates with vascular calcification in predialysis and dialysis patients.

Methods: We included 209 patients. Vascular calcification was evaluated by examining plain X-rays of pelvis and hands as previously described. The augmentation index (AIx) was assessed with a commercially available device (VP-2000, Colin Corporation). Results: We found a high prevalence of vitamin D deficiency in our population (77.0%). Vascular calcification was present in 36.4% of all patients. The presence of vascular calcifications was significantly associated with lower 25(OH)D levels in predialysis, dialysis and all patients. Multivariate analysis showed that 25(OH)D levels were inversely associated with simple vascular calcification score ≥1 (OR; −0.037, 95% CI; 0.86-0.99, p=0.037). Lower 25(OH)D levels were associated with higher AIx in predialysis and all patients, but this inverse relationship was abolished in multivariate analysis. Conclusion: We showed an independent relationship between low serum 25(OH)D levels and vascular calcification in both predialysis and dialysis patients. Further studies with a larger population are required to confirm our findings.

Key Words: 비타민 D, 만성 신부전, 혈관 석회화
25-hydroxyvitamin D, Chronic kidney disease, Vascular calcific