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# 말기신부전 환자에서 투석종류에 따라 복부대동맥 석회화의 진행정도 비교

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# Prospective Comparison on the Progression of Abdominal Aortic Calcification According to Dialysis Modality in End-stage Renal Disease Patients

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There were few reports on the progression of arterial calcifications (AC) according to dialysis modality In end-stage renal disease patients. The purpose of this study was to evaluate the progression of arterial calcification (AC) between hemodialysis (HD) and peritoneal dialysis (PD) patients.

HD and PD patients who had been on dialysis for > 3 years were included in this observational, prospective 1-year study. Laboratory data of previous 2 years were reviewed as baseline data. AC progression was assessed with anterior-posterior abdominal aorta calcification score using lateral lumbar x-ray at the baseline and 12 month. Fifty one HD and 74 PD patients were included. At baseline, there were no differences in age, duration of dialysis, sex, and serum intact PTH between HD and PD. Diabetics (56.9 vs. 33.8%) and patients with coronary artery disease (23.5 vs. 2.7%) were more and patients with residual renal function (19.6 vs. 48.6%) and body weight (BW) (58.7±10.6 vs. 63.7±10.5 kg) were less in HD than in PD. At baseline, mean values of corrected calcium (9.3±0.5 vs.9.6±0.9 mg/dL), phosphate (4.8±1.1 vs. 5.4±1.3 mg/dL), total cholesterol (152±30 vs. 184±31 mg/dL), triglyceride (132.3±74 vs. 177.2±110.0 mg/dL), LDL-cholesterol (81.9±22.2 vs. 102.6±28.9 mg/dL), and lipoprotein (a) (Lpa)(24.4±31.1 vs. 39.4±27.5 mg/dL) were significantly lower and serum albumin (3.8±0.3 vs. 3.4±0.4 g/dL) was significantly higher in HD. There were no differences in abdominal aortic calcification score between HD and PD(6.9±6.5 vs. 7.0±7.1). After 1 year, the number of AC progression was similar between HD and PD(21.6 vs. 27.0%). There were no differences in the number of AC progression according to diabetics, sex, age of <60 years, duration of dialysis of >5 years, and intact PTH. However, in patients with duration of dialysis of <5 years (26.2 vs. 3.8%) or age of >60 years (37.5 vs. 4.3%), PD showed more AC progressed patients than HD. During 1 year, BW, corrected calcium, total cholesterol, LDH-cholesterol, and HDL-cholesterol were decreased in HD. Albumin was decreased and phosphate and corrected calcium x phosphate were increased in PD. On logistic regression analysis, duration of dialysis, diabetics, sex, serum albumin and lpa concentration of previous 2 years, mean phosphate concentration of 1 year were independent risk factors for AC progression. In conclusion, dialysis modality seems not to affect differently on the progression of abdominal aortic calcification.

**Key Words:** 혈관 석회화, 투석, 말기신부전
Arterial calcification, End stage renal disease, Dialysis