

투석환자에서 단순방사선사진의 혈관 석회화와 관상동맥 조영술의 병변의 비교

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Comparison between Vascular Calcification on Plain Radiograph and Lesions on Coronary Angiography in Dialysis Patients

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Introduction and Aims: Cardiovascular disease including coronary artery disease (CAD) is a main cause of morbidity and mortality in dialysis patients. It is difficult to decide coronary angiographic procedure because patients have several non-traditional risk factors but do not have typical symptoms in dialysis patients. The purpose of this study is to compare between vascular calcification (VC) scores on plain radiographs of chest, hands and pelvis, and feet and lateral lumbar spine and severity of lesions on coronary artery angiography in dialysis patients.

Methods: Fifty-five dialysis patients (24 peritoneal dialysis and 31 hemodialysis) who had performed coronary angiography and checked plain radiographs of chest, hands and pelvis, and feet and lateral lumbar spine within 1 year before or after coronary angiography were enrolled in this retrospective study. VC scores on plain radiographs were evaluated and all coronary angiographic findings were reviewed and estimated syntax score reflecting severity of coronary artery lesions by cardiologist.

Results: Forty one patients (74.5%) showed any one significant VC on plain radiography. Stent insertion procedure was done only in 29 patients (52.7%). Patients with significant VC on plain radiographs had higher syntax score (14.5 ± 2.4 vs. 5.1 ± 1.5 , $p=0.002$), higher incidence rate of stent insertion (78.3% vs 21.7%), longer stent length (14.5 ± 2.4 mm vs. 5.1 ± 1.5 mm, $p=0.002$) and higher prevalence rate of diffuse and tubular coronary artery calcification (74.5% vs 25.5%, $p=0.012$) than patients without significant VC. Patients with abdominal aortic calcification (AAC) score >5 had higher syntax score, higher prevalence rate of left anterior descending coronary artery stenosis $>70\%$ ($p=0.034$) and higher prevalence rate of discrete coronary artery calcification ($p=0.002$) than patients AAC score <5 . Patients with medial artery calcification of feet had severe coronary artery calcification ($p=0.004$) than patients without medial artery calcification of feet.

Conclusions: Significant VC scores on plain radiographs are useful predictor of syntax score, severity and type of calcification on coronary artery angiography in dialysis patients.

Key Words: 투석, 심장, 단순방사선 사진
Dialysis, Heart, Plain radiograph