STAGE OF CHRONIC KIDNEY DISEASE HAD CLOSE RELATIONSHIP WITH THE PREVALENCE OF EXTRA CARDIAC ARTERY DISEASE IN PATIENT UNDERGOING PERCUTANEOUS CORONARY INTERVENTION

ACC Poster Contributions
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Background: Several reports suggested that CKD stage before established kidney failure (CKD 5) was also close related to atherosclerotic events. However, it have not been evaluated relationship between the prevalence of extra-cardiac artery disease (including peripheral arterial disease of extremities(PAD), carotid arterial stenosis(CAS), renal arterial stenosis(RAS), and abdominal aortic aneurysm(AAA)) and CKD stage in patients with coronary artery disease. The aim of this study was to evaluate the relationship between the prevalence of extra-cardiac artery disease and CKD stage before established kidney failure.

Methods: A total of 1840 patients except CKD 5 who underwent PCI were enrolled in this study. Extra cardiac artery diseases were detected with ultrasound sonography, ankle-brachial index. PAD, CAS, RAS, AAA were detected as follows: PAD; less than 0.9 of ABI, CAS/RAS; 200cm/s accelerated flow measured by duplex ultrasound, AAA; more than 3cm enlargement of abdominal aorta in echo-graphical parameters, or treated history for these disease. Statistical analysis was performed to investigate the relationship between the prevalence and CKD stage.

Results: The prevalence of extra-cardiac artery disease was 26.8% in all patients. One hundred and fifty eight, 868, 776, 68 patients were classified to CKD stage 1, 2, 3, and 4, respectively. Compared among CKD stage, significant increasing was observed between stage 2 and 3, 3 and 4; not between stage 1 and 2(stage 1 vs 2, 19.0% vs 19.5%; p=0.91, stage 2 vs 3, 19.5% vs 33.6%; p<0.0001, stage 3 vs 4, 33.6% vs 60.3%; p<0.0001).

In multivariate analysis, more than CKD stage 3 was one of the most strong predictors of extra cardiac artery disease (OR, 1.88; 95% CI, 1.47-2.39; p<0.0001).

Conclusions: CKD stage had close relationship with prevalence of extra cardiac artery disease. Especially, step up of CKD stage 2 to 3 and 3 to 4 were extremely promoting steps of extra cardiac artery disease in PCI patients.