

관상동맥질환의 비침습적 선별검사의 정확도에 대한 신장기능의 영향

한림대학교 의과대학 내과학교실, 신장연구소

최선령 · 송영림 · 김성균 · 김수진 · 박태진 · 오지은
이영기 · 서장원 · 윤종우 · 구자룡 · 노정우 · 김형직

Is Diagnostic Accuracy of Noninvasive Screening Test for Coronary Artery Disease Associated with Renal Function?

Sun Ryoung Choi, Young Rim Song, Seong Gyun Kim, Soo Jin Kim
Tae Jin Park, Ji Eun Oh, Young Ki Lee, Jang Won Seo
Jong Woo Yoon, Ja Ryong Koo, Jung Woo Noh, Hyung Jik Kim

Department of internal medicine & Kidney Research Institute

Introduction : Myocardial perfusion single photon emission computed tomography (MPS) and exercise electrocardiography (ECG) are mostly used noninvasive tests for screening of coronary artery disease (CAD). The identification of CAD in patients with chronic kidney disease (CKD) is very important, as CAD is a major cause of mortality in those with CKD. But the diagnostic accuracy of these noninvasive tests was not analysed according to renal function.

Methods : We evaluated 349 patients with MPS and coronary angiography (CAG) and 423 patients with exercise ECG and CAG from January 2006 to November 2008. Renal function was calculated with the Modified Diet in Renal Disease equation and CKD was defined as an estimated glomerular filtration rate (eGFR) <60 ml/min/1.73 m², based on the creatinine obtained prior to angiography. Significant CAD was defined as luminal stenosis >50 % by visual estimation in at least one epicardial artery.

Results : Patients with CKD were 165 (47.3%) in MPS group and 103 (24.3%) in exercise ECG group. Positive predictive value of MPS and exercise ECG were significantly higher in patients with CKD than in those with no CKD (75.7 vs 56.1% in MPS, 75.5 vs 52.8% in exercise ECG). Negative predictive value were lower in patients with CKD, but only exercise ECG showed statistical significance. Sensitivity and specificity were not associated with renal function. In comparison of 2 tests, MPS was more sensitive method than exercise ECG in patients with CKD (93.2% vs 53.6%).

Conclusion : Renal function influenced the diagnostic accuracy of MPS and exercise ECG and MPS was more sensitive in patients with CKD than exercise ECG.

Key Words : 만성신부전, 관상동맥질환, 선별검사
CKD, CAD, Stress test