**CARDIAC IMAGING FOR EVALUATION OF CORONARY ARTERY DISEASE IN PATIENTS WITH HYPERTENSION**

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Hypertension is a major risk factor for coronary artery disease (CAD) and related morbidity. Identification of an accurate non-invasive method for diagnosis of CAD is important to plan therapeutic and interventional management in order to improve outcome. The diagnosis of CAD in hypertensive patients may represent a challenge due to certain unique characteristics. These include baseline EKG abnormalities which reduce specificity of exercise EKG. Left ventricular hypertrophy may be associated with demand ischemia in absence of obstructive CAD. Stress myocardial perfusion imaging provides good sensitivity and specificity. Some studies showed reduced specificity in patients with left ventricular hypertrophy. However, many studies demonstrated similar accuracy in patients with and without hypertension. Stress echocardiography using exercise or dobutamine was shown to have good accuracy. The technique is widely available and does not entail irradiation. In addition to ischemia, left ventricular mass index predicts cardiac events. Hypertensive response during stress has been related to false positive results. A normal stress echocardiogram or radionuclide study is associated with low risk of cardiac death and myocardial infarction during intermediate and long term follow up. Coronary CT angiography is increasingly used in patients with intermediate probability of CAD and in those with equivocal stress test. The test has high negative predictive value to rule out CAD. Disadvantages include artifacts, irradiation and risk of contrast nephropathy. Obesity is a significant comorbid condition that may impair imaging quality of different techniques. Proper selection of imaging modality depends on various clinical parameters, availability and expertise of the center with each type of imaging.