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## Acute myocardial infarction (AMI) in patients with non-occlusive coronary artery disease: A single center experience in Singapore

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**Background:** In great majority of the cases, acute myocardial infarction (AMI) is due to atherosclerosis, resulting in critical coronary occlusion usually with plaque rupture. However, non-obstructive coronary artery may be found during angiography in minority of patients presenting with AMI.

**Objective:** To give an overview of the clinical characteristics and possible etiologies of AMI patients with non-occlusive coronary artery in Singapore.

**Method:** This is a single center, retrospective, descriptive study of all patients who presented clinically with AMI (STEMI and NSTEMI) from January 2014 to January 2016 who had non-occlusive coronary arteries on coronary angiogram. Clinical profiles of these patients were retrieved from hospital records.

**Results:** Of the 1,404 patients admitted for NSTEMI and STEMI, 46 patients were included, giving a prevalence of 3.28%. Of these, 23 were male and 23 were female. Most are of the Chinese descent (41%) were followed by Malays (28%) and Indians (20%). Average BMI was 25.6 5.5. None had renal failure, 46% have hyperlipidemia, 39% with hypertension, and 20% with diabetes mellitus. Only 10% have a history of IHD and/or angioplasty, 17% had family history of CAD and 19% had reduced ejection fraction. Of those with non-occlusive coronary arteries, 37% have normal coronaries while 63% have minor CAD. Being a smoker, hyperlipidemic, hypertensive, diabetic and having past history of IHD didn't point to a predilection towards having a non-occlusive CAD. Minor CAD patients are significantly older and all those with history of ethanol use belong to normal coronary group. Cardiomyopathies were attributed in 20% of patients, 15% to coronary spasm, 10% to muscular bridging and 2% to myocarditis/myopericarditis, while in majority (52%), the cause is unknown.

**Conclusion:** Non-occlusive CAD in coronary angiogram, though infrequent, can be observed in patients who present with AMI. Hypertension, hyperlipidemia, diabetes mellitus were not significantly associated with non-occlusive CAD in AMI.

### Biography

Patrick John Cruz has completed his graduation in Medicine in Philippines. He underwent Internal Medicine Residency in Manila, Philippines. He is a Fellow of the Philippine College of Physician. He is also affiliated and currently a Resident Physician in the Department of Cardiology at Khoo Teck Puat Hospital, Singapore.

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