Giant Aneurysm of Left Main Coronary Artery, Presenting as Acute Myocardial Infarction in a Young Man

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Abstract
We present a case of a young male, who presented with acute extensive myocardial infarction and later was found to have giant aneurysm of left main coronary artery.

Case Report
A 30 year male presented with severe chest pain, for 4 hours. Pain was present in precordium, and was accompanied by sweating. He denied any history of smoking, diabetes, family history of coronary artery disease (CAD), or any significant history of fever with rash in childhood. He did not give history of drug abuse. He was a known hypertensive, diagnosed three years back, with small left kidney. There was no history of claudication an any of the limbs.

His BP at the time of admission was 160/110, heart rate 104/min. All peripheral pulses were palpable. There was no renal bruit. Cardiovascular examination showed presence of left ventricular S3 and murmur of mitral regurgitation. Chest examination showed evidence of bilateral basal crepts.

ECG showed ST elevation in leads 1, AVL, and V1-V6.

He was put on aspirin, clopidogrel, ACE inhibitors, statins and was thrombolyzed with streptokinase. His pain disappeared.

Next day his BP was 100/70 mm Hg. His JVP was raised. He was not able to lie flat and his chest showed bilateral crepitations in more than 50% of chest. He was put on dobutamine infusion and diuretics.

Patient continued to be in failure and also complained of intermittent chest pain.

His echocardiography showed akinetic anterior wall, septum and apex, mild mitral regurgitation and ejection fraction of 25%. On treatment his heart failure improved.

He was subjected to coronary angiography. It showed giant aneurysm of left main coronary artery, but no stenotic segments (Figure 1). Right coronary artery also showed aneurysm at the ostium (Figure 2). Renal arteriography showed aneurysm at the ostium of left renal artery (Figure 3).

Discussion
Coronary artery aneurysms (CAAs) were originally described by Morgagni in 1761, coronary artery aneurysms, also referred to as ectasias, are typically defined as a dilatation in the diameter of a coronary artery segment to more than 1.5-fold normal size. Dilatation may be either focal or diffuse, and aneurysms are classified as either fusiform or saccular in morphology.

The incidence of coronary artery aneurysms ranges widely from 0.3% to 5.3% of the population, with pooled data showing a mean incidence of 1.65%. CCAs are said to be giant when the size is more than 8 mm. Myocardial infarction can occur due to thrombosis within the aneurysm. Most common cause...
Aneurysms of the left main coronary artery are exceedingly rare clinical entities, encountered incidentally in approximately 0.1% of patients who undergo routine angiography.

Cardiac manifestations of Kawasaki disease include myocarditis, pericarditis, endocarditis, and coronary artery aneurysm formation. CAAs occur in around 25% of untreated cases of Kawasaki disease. Long term complications include persistence of aneurysm, though most of them regress in size thrombotic, occlusion and premature atherosclerosis.

Our patient was having giant aneurysm of left main coronary, aneurysm of right coronary and of renal artery. There was no suggestion of connective tissue/ inflammatory disorder. He was relatively young for coronary artery disease. There was no suggestion of aorto-arteritis. It could be a manifestation of Kawasaki disease, though history suggestive of this, was not there in childhood, but could have been forgotten.

References