A Case with Discrete Atherosclerotic Aneurysms of All Coronary Vessels

A 42 years, hypertensive lady presented with chest pain of 2 hours duration. On examination, her vital parameters were settled and there was no gross cardiovascular abnormality. Electrocardiogram showed acute anterior myocardial infarction. Troponin I was positive for myocardial necrosis. Transthoracic echocardiogram revealed hypokinetic left ventricular apex and apical half of interventricular septum. Coronary angiography showed calcified aneurysm of all three coronary vessels i.e. left anterior descending (LAD) and left circumflex artery (LCA) (Fig. 1) and right coronary artery (RCA) (Fig. 2). LAD was diffusely diseased and 100% occluded distal to aneurysm and RCA was 70% stenosed in its mid segment distal to aneurysm.

Coronary artery aneurysms is reported in 1-3% patients at necropsy or by angiography. They can be congenital or secondary to atherosclerosis (50%), angioplasty, atherectomy, vasculitis, Kawasaki disease or dissection. They are most common in LAD and least common in RCA. Unlike ectasia, they are never found in arteries without severe stenosis. Abnormal pattern of blood flow in these aneurysm may lead to thrombus formation and vessel occlusion with subsequent distal embolization and myocardial infarction. Usually these discrete coronary aneurysm do not rupture. Hence their resection is not warranted. Angioplasty with covered stents can isolate the aneurysm from main lumen and prevent their further expansion.

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