

Giant Coronary Artery Aneurysm occurring Very Late after Acute Myocardial Infarction

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Giant coronary artery aneurysms (CAAs) are defined by an aneurysmal sac diameter of >20 mm. They occur secondary to atherosclerotic disease, vasculitis, congenital heart disease or post-percutaneous coronary intervention (PCI). We present the following case report of late giant CAA involving distal RCA that occurred 10 years later in a patient with non-ST elevation myocardial infarction (NSTEMI) treated with PCI using drug-eluting stent. A 70-year-old woman presented with dyspnea of exertion. She underwent PCI at distal right coronary artery (RCA) due to NSTEMI 10 years ago. At index procedure, final angiography after stent implantation showed minimal contrast leakage around stent (Figure A). After 1 year, larger amount of contrast filling around stent was observed on follow-up angiography (Figure B). However, the patient was stable and asymptomatic, therefore further treatment was not performed. On admission, Transthoracic echocardiography (TTE) showed cystic mass (46X43mm) containing heterogenous echogenic mass inside originated pericardium with RA compression (Figure C). Coronary CT angiography revealed a huge saccular aneurysm containing organizing thrombus (figure D) and total occlusion of distal RCA by mass compression. Similar findings including collateral flow from left anterior descending artery (LAD) to distal RCA were observed in coronary angiography (Figure E). The patient underwent aneurysm resection and bypass surgery using saphenous vein grafts (Figure F). She was uneventful after operation and discharged home on post-operative day five. Although various mechanisms leading to CAA are suggested, very late CAA caused by plaque rupture presenting as NSTEMI is rare. Regular follow-up with imaging may be required in patients with evidences of extravasation or contrast leakage around coronary artery after PCI for acute coronary syndrome. For growing CAAs during follow-up, early intervention with graft stent for aneurysm exclusion should be considered to prevent late complications including aneurysm rupture.

