



The successful closure of a coronary fistula with a large aneurysm using transcatheter techniques

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Background / Objective of intervention:

A 41-year-old man presented with chest pain and shortness of breath. His only risk factor for ventricular dysfunction was chemotherapy used for treatment of his AML-M3 disease. He had not experienced chest trauma or thoracic surgery. Cardiac echocardiography revealed dilated left ventricle with severe left ventricular dysfunction (with EF= 31%). Coronary angiography revealed a fistula originated from the mid LAD connected a huge aneurysm drained into right ventricular outflow tract (RVOT). Blood was spouting out to the aneurysmal sac and nutrient artery branches (such as diagonal branches) are distal to the ostium of the feeding artery. There is a collateral branch from circumflex artery to perfusion for distal to mid-LAD obstruction. Coronary computed tomography angiography and 3-dimensional reconstruction imaging revealed that the aneurysmal sac can compress the mid-LAD.

Description of procedure:

We embolized the feeding artery to the aneurysm by transcatheter Amplatz vascular plug I and the exit orifice of the aneurysm by transcatheter Cocoon Duct Occluder.

Results:

Follow-up coronary computed tomography angiography showed a regressed aneurysmal sac and nonvisible dye filling in the sac and echocardiography showed a regressed aneurysmal sac and no blood flow signals inside the fistula ultrasonography. Ejection fraction (EF) increased to 51%. Five months after the procedures, the patient has reported no symptoms and has been doing well.

Conclusion / Learning points:

We reported one rare case of coronary fistula with a huge aneurysm from mid LAD to RVOT that successfully closed using transcatheter method with Amplatzer Vascular Plug Device and Cocoon Duct Occluder available.