

Aortic complications of coronary angiography

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Seventy-four-year-old woman with heart failure, arterial hypertension, chronic kidney disease after coronary artery bypass surgery in 2019 (left internal mammary artery [LIMA] — left anterior descending [LAD], saphenous vein graft [SVG] — first obtuse marginal [OM1], saphenous vein graft — second obtuse marginal [OM2], saphenous vein graft — right coronary artery [RCA]) was admitted to the hospital with a non-ST-elevation myocardial infarction. The left ventricular ejection fraction was 50%, non-significant valvular disease was noticed, no evidence of pericardial fluid, the ascending aorta was 46 mm. Coronary angiography showed a significant lesion in the LAD, circumflex, and no significant lesion in the RCA. Bypassography revealed patent SVG to OM1 and OM2 and occluded SVG to RCA and LIMA-LAD graft (the coronary angiography was proceeded using Right Judkins and Right Amplatz catheter to RCA and SVG and Left Judkins catheter to LCA).

Soon after coronary angiography the patient reported chest pain. Again, the echocardiogram was made. Pericardial fluid up to 7 mm was noticed behind the posterior and anterior wall. Size of the ascending aorta was the same. The computed tomography showed the intramural hematoma with 10 mm maximum thickness and blood in the pericardial sac [1, 2]. Conservative treatment was prescribed for several days, due to many comorbidities and elderly age, then at day eleven the computed tomography showed dilation of the ascending aorta up to 50 mm, presence of excessive contrast in the ascending aorta on the large curvature of the aorta at the site of the stump of the SVG to RCA, fluid under the right ventricle and left ventricle. Patient was consulted by the cardiothoracic surgeons and the conservative treatment was still maintained. Patient was on the single antiplatelet medications-acetylsalicylic acid only. After 26 days,

stable well-being, patient was discharged home and admitted again after several days. An echocardiogram visualized progression of the aneurysm. The computed tomography was repeated and there was visible aneurysm at the same location like previously, but with significantly increased diameter up to 58 × 28 × 36 mm [3]. Surgery was conducted and a vascular prosthesis of 28 mm was implanted. The aortic valve was replaced with a Hancock II 21 mm biological prosthesis. Super-coronary anastomosis was performed with replacement of the coronary sinus with a vascular prosthesis. Ultimately during the cardiac surgery the patient was diagnosed with a pseudoaneurysm. Most likely it had been forming as a result of the catheter manipulations in close proximity to the RCA SVG.

Article information

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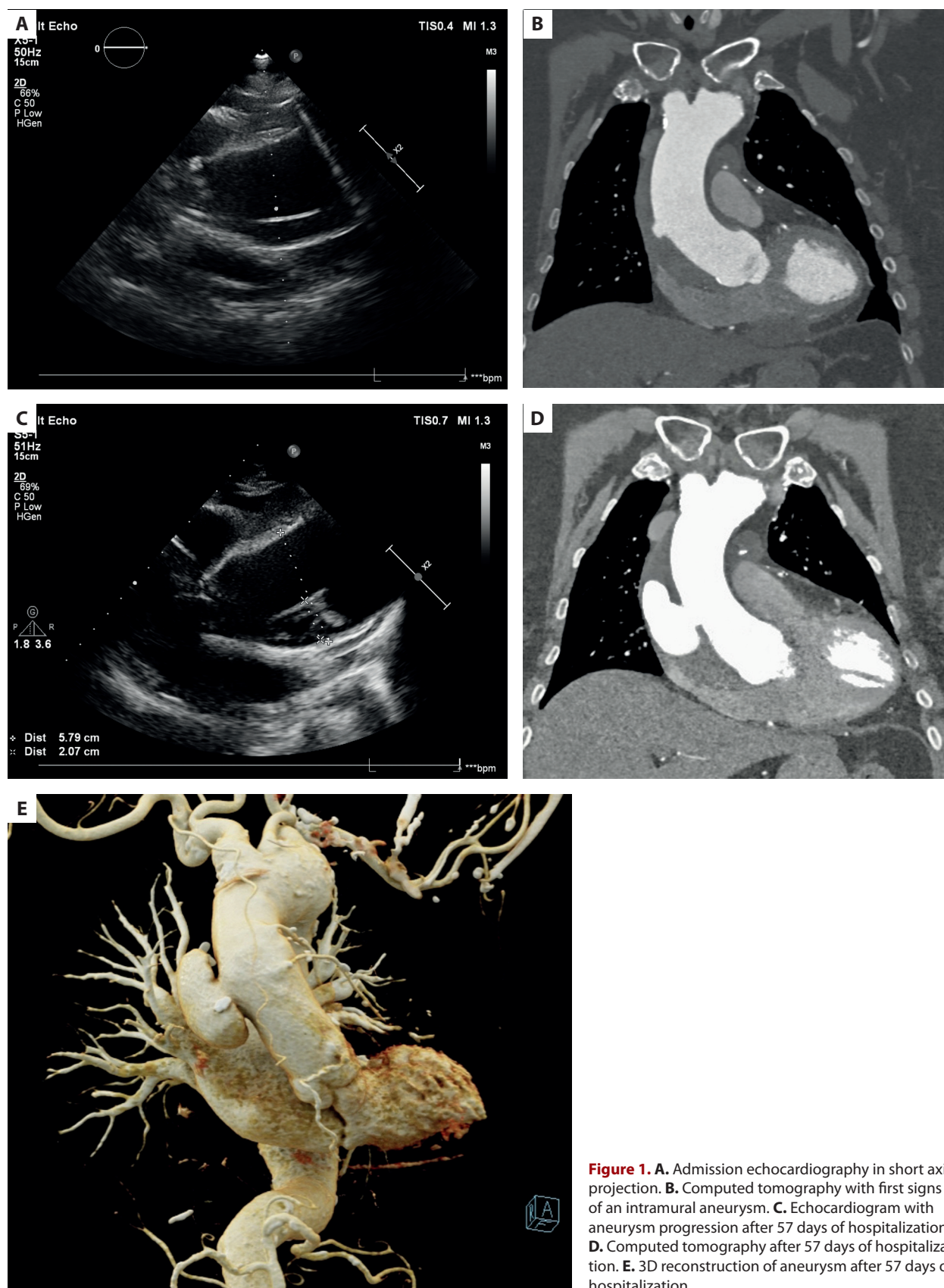


Figure 1. **A.** Admission echocardiography in short axis projection. **B.** Computed tomography with first signs of an intramural aneurysm. **C.** Echocardiogram with aneurysm progression after 57 days of hospitalization. **D.** Computed tomography after 57 days of hospitalization. **E.** 3D reconstruction of aneurysm after 57 days of hospitalization