An interesting steal case

A 65-year-old man applied to our hospital with efor angina that have progressive raised for last 6 months. He had undergone coronary bypass operation three years ago. Also he has diabetes and hypertension. Owing to his typical symptoms a coronary angiogram was performed. In his coronary angiogram left anterior descending arter (LAD) was totally occluded at mid-level, circumflex and right coronary arteries (RCA) and aort-obtus marginalis (OM), saphenous graft were open (Fig. 1). A retrograd flow was seen between aort- diagonal grafts to left subclavian artery (LSA) through to left internal mammarian artery (LIMA) (Fig. 2A-C, Video 1, 2). Attempts was failed to demonstrate LIMA due to total occlusion of LSA (Fig. 2D, Video 3). LIMA originates from LSA. In case of LIMA graft an occlusion or severe stenosis of LSA causes retrograd flow from coronary arteries to left upper extremity as a consequence myocardial ischemia. Mostly retrograd flow comes from native LAD through to LIMA. In our case a saphenous graft provides connection between ascending aorta to LSA by using diagonal artery, LAD and LİMA. We consider diffuse illness of distal LAD may support that retrograd flow. We suggest that checking LSA and LIMA before the bypass operation could provide that undesirable results.

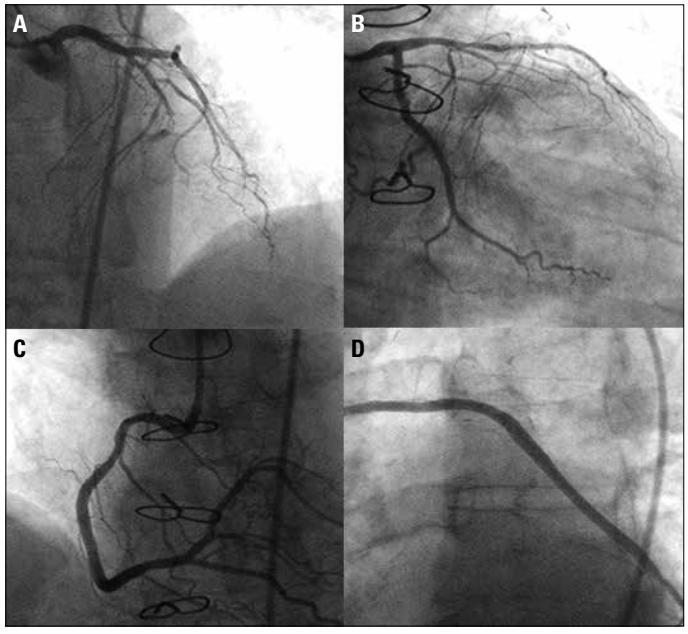

Figure 1. Coronary angiography of the patient (1A, 1B Left system 1C RCA, 1D Aort- OM)

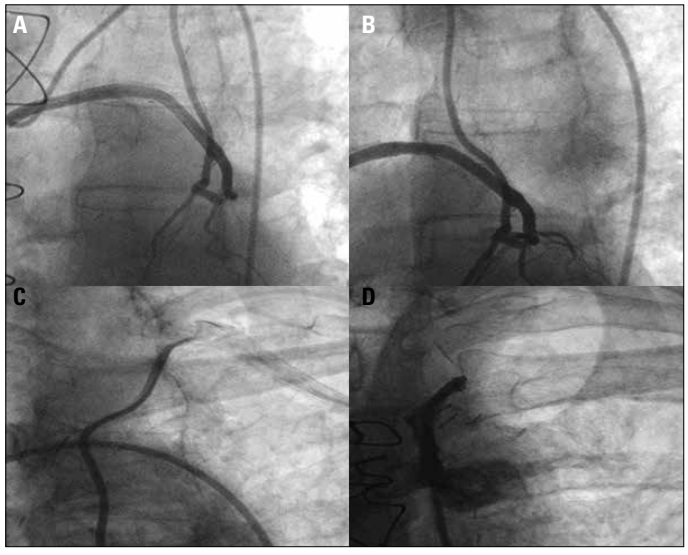

Figure 2. LIMA- LAD connection and absence of distal LAD flow, (2A Retrograd flow between Aort- diagonal to LSA 2B-C. Total occlusion of LSA 2D)

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Video 1. Aort- diagonal saphenous graft and retrograt flow through to LIMA.
Video 2. Filling of subclavian artery by retrograt flow.
Video 3. Totally occlusion at ostium of left subclavian artery.

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An unusual right ventricle outflow obstruction in adult

A 64-years old man who had been experiencing worsening dyspnea and atypical chest pain in the past 6 months, was admitted to our department. Upon arrival, physical examination revealed a 2-3/6 systolic murmur heard best over the left second intercostal space. Transthoracic echocardiography was promptly performed showing a thin-walled outpouching at level of right sinus of Valsalva, sized 45 x 50 mm (Fig. 1A). In parasternal short axis view, this appeared completely obliterate right ventricular outflow tract (RVOT) and color Doppler showed turbolent flow in this site; pulmonary valve was not well visualized (Fig. 1B, Video 1). Continuous wave Doppler study confirmed the obstruction with a peak velocity of 3 m/sec and peak gradient of 36 mm Hg (Fig. 1C). A contrastographic study with Sonovue® allowed to exclude a communication between the outpouching and the right ventricle (Video 2, 3). According to the anatomical site and echocardiographic findings the diagnosis of unruptured right sinus of valsalva aneurysm was made. To better define its relationship with nearest cardiac structures and to plane a correct surgical strategy, computed tomography (CT) was performed, confirming the presence of the aneurysm and the RVOT obstruction below pulmonary valve (Fig. 1D-F). The patient underwent surgical intervention; the aneurysm was removed with subsequent complete relief of the symptoms during the postoperative period.

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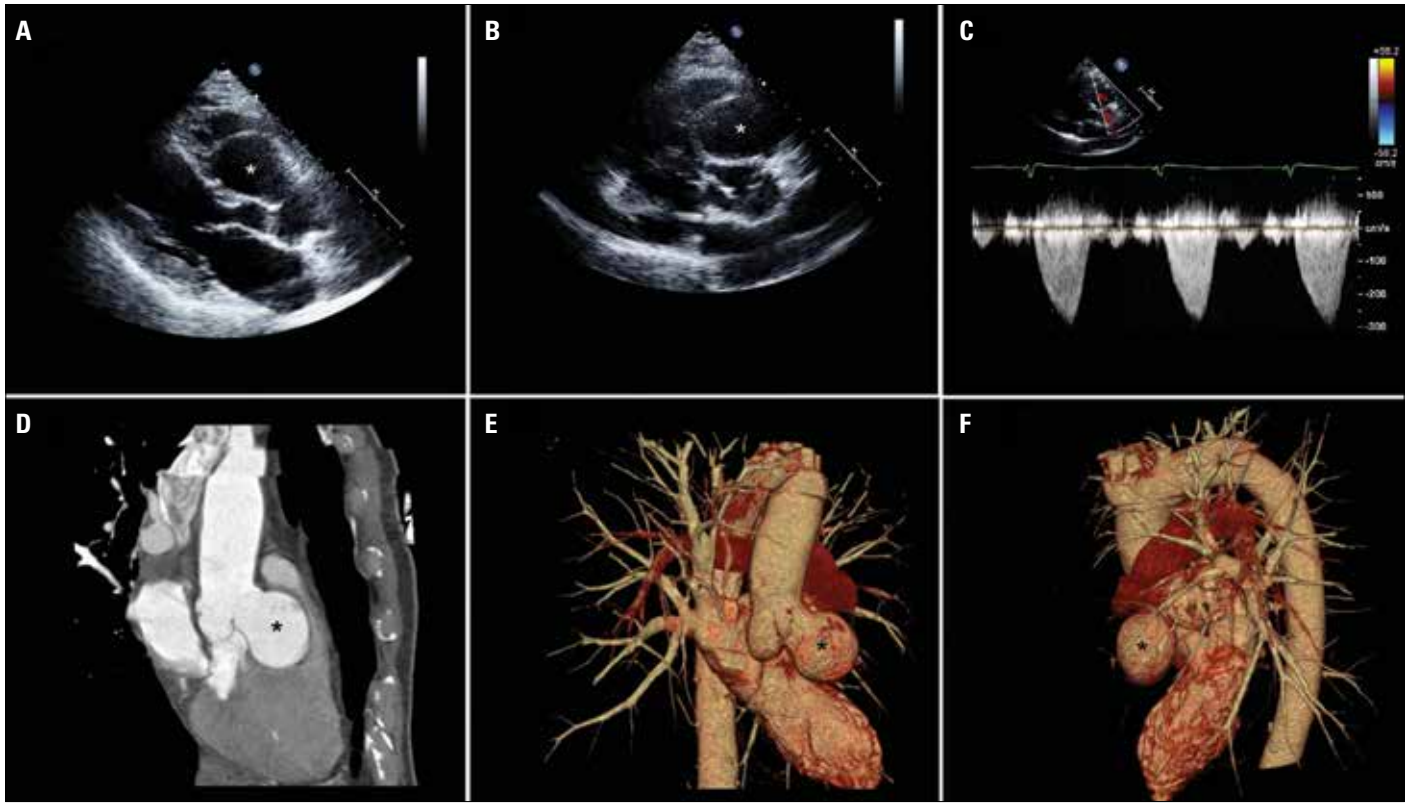

Figure 1. Two-dimensional (2-D) transthoracic echocardiography views of aneurysm: A-Parasternal long-axis view; B-Parasternal short-axis view; C-Continuos Doppler study in short-axis view demonstrating right ventricular outflow obstruction (RVOT); D-Computed Tomography (CT) showing RVOT deformation due to bulging of the aneurysm; E and F- Three-dimensional (3-D) volume rendering CT, lateral and anterior-posterior views showing giant aneurysm

Video 1. Two-dimensional (2-D) transthoracic echocardiography short-axis view. Color Doppler study showing turbolent flow in right ventricular outflow tract (RVOT)

Video 2. 2-D transthoracic echocardiography parasternal long-axis view

Video 3. 2-D transthoracic echocardiography parasternal short-axis view. Echocontrastography with Sonovue® demonstrating no communication between aneurysm and right ventricle outflow tract

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