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"Lovely Heart" on echocardiography: An unusual left ventricular pseudoaneurysm diagnosed incidentally

Ekokardiyografide "Aşk Kalbi": Nadir rastlanan tesadüfen tanı konulan bir sol ventrikül psödoanevrizma olgusu

A-52-year old male patient, with a history of coronary bypass surgery (CABG) operation 2 years ago, was referred to our clinic for routine control. An echocardiography showed anterior segment hypokinesia and an aneurysmal sac communicating to posterolateral basal segment of the left ventricle (LV). LV ejection fraction was found reduced (42% by modified Simpson's method). Interestingly in apical long -axis view the LV had the shape of "lovely heart" (Fig. 1A and Video 1). Short- axis view showed two apex-like appearance (true and false apex) that clearly displayed dyskinesia of the pseudoaneurysm (Fig. 1B, C and Video 2-3). Computed tomography (CT) angiography was performed and showed thrombus formation inside the pseudoaneurysm (Fig. 1D). A 3D reconstruction of cardiac CT angiography allowed better understanding the nature of the pseudoaneurysm (Fig. 1E, F).

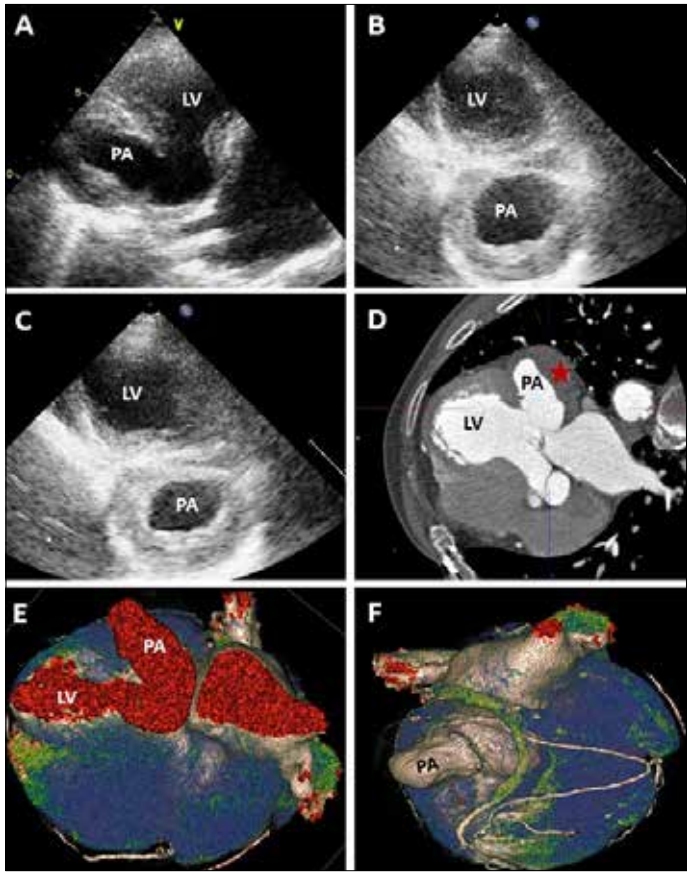

Figure 1. A) Apical long -axis view showing the shape of "lovely heart". B-C) Parasternal short -axis view showing dyskinesia. D) CT Angiography showing thrombus formation in the pseudoaneurysm. E-F) 3D reconstruction of cardiac CT Angiography

CT - computed tomography, LV - left ventricle, PA - pseudoaneurysm
Red Star: Thrombus

LV pseudoaneurysm should be treated surgically because of high rupture risk. Surgery was recommended to the patient but he declined to undergo surgery and medical follow up was initiated.

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Video 1. Parasternal short axis view showing dyskinesia
Video 2. Apical long- axis view showing the shape of "lovely heart"
Video 3. Modified apical long- axis view showing the shape of "lovely heart"

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Multimodality imaging of type 4 persistent truncus arteriosus in an adult patient

Yetişkin bir hastada tip 4 kalıcı trunkus arteriyozusun çoklu görüntülenmesi

A 23-year-old woman was referred to our outpatient clinic with dyspnea and palpitation. Physical examination revealed cyanosis, clubbed fingers and jugular venous congestion.

Transthoracic echocardiography showed ventricular septal defect (VSD) and overriding aorta. Two-dimensional transesophageal echocardiography showed VSD, right ventricular hypertrophy (Fig. 1A), aortic regurgitation, dilated coronary sinus (Fig. 1B and Video 1A See corresponding video/movie images at www.anakarder.com) and absence of pulmonary valve (Fig. 1C and Video 1B See corresponding video/movie images at www.anakarder.com). Oblique sagittal multiplanar reconstruction (MPR) computed tomography (CT) confirmed VSD, overriding aorta, right ventricular hypertrophy, persistent left superior vena cava (PLSVC, arrow) and pulmonary atresia (PA) (Fig. 1D). Colored three-dimensional volume rendered CT image demonstrated a large truncus arteriosus (TA) arising from the base of the heart (Fig. 1E) and a very large major aortopulmonary collateral artery (MAPCA) originating from the junction of the ascending aorta and aortic arch then dividing right and left pulmonary artery to supply the vasculature of the lung (Fig. 1F).

The coexistence of PA and VSD varies from simple to complex. In its more complex form the main pulmonary artery is atresia, and some or all of the lung parenchyma is instead supplied by collateral arteries arising from the descending thoracic aorta or its major branches. However, MAPCA was arising from the junction of the ascending aorta and aortic arch in our case. Blood leaving the right ventricle mixes with left ventricular output through the overriding aortic valve, and creates both the pulmonic and systemic circulations. This is similar to type 4 persistent truncus arteriosus. We herein presented a case of tip 4 TA associated with PA, VSD, overriding aorta and PLSVC in an adult patient.