

Figure 1. Transesophageal 2-chamber echocardiographic view of an aneurysm of the mitral posterior leaflet (A) and color-flow Doppler image demonstrating a severe mitral regurgitation (B)

LA- left atrium, LV-left ventricle, RA- right atrium, RV- right ventricle.

Video 1. Transesophageal echocardiography views of a saccular mitral valve aneurysm on the left atrial surface, expanding and decompressing during cardiac cycle

Video 2. Color Doppler imaging of a severe mitral regurgitation and communication of aneurysm with left ventricular cavity

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Incidentally diagnosed pseudoaneurysm of mitral-aortic intervalvular fibrosa



Rastlantısal tanı konulmuş mitral-aortik intervalvular fibroza psödoanevrizması

Pseudoaneurysm of mitral-aortic intervalvular fibrosa (P-MAIVF) is defined as a pseudoaneurysm at interannular zone between mitral and aortic valves. Communication of the cavity with the ventricular outflow tract and the pulsatility of the cavity during cardiac cycle are features differentiating pseudoaneurysms from ring abscesses. Most common associated reasons include endocarditis and aortic valve surgery.

A 77-year-old man with mechanical aortic valve replacement due to aortic stenosis underwent transthoracic echocardiography (TTE) before non-cardiac surgery. TTE revealed an echolucent area adjacent to aortic valve, raising suspicion of a P-MAIVF (Fig.1, Video 1. See corresponding video/movie images at www.anakarder.com). He had no chest pain or dyspnea and any sign of infective endocarditis or prosthetic valve dysfunction. Transesophageal echocardiography (TEE) showed an echolucent area measuring 15 mm in its widest dimension, which was communicating with left ventricular outflow tract (LVOT). This cavity was

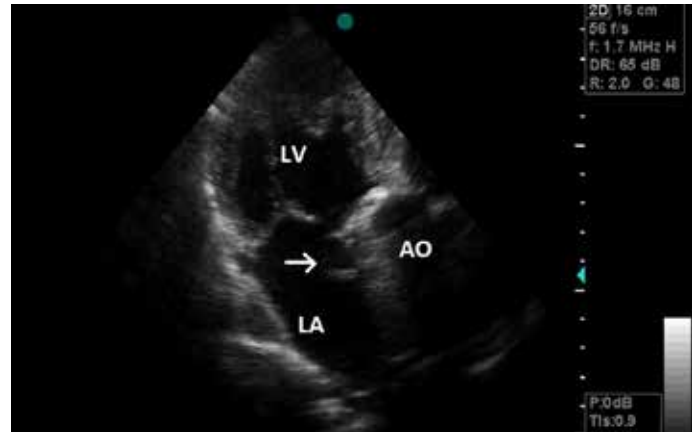


Figure 1. Transthoracic echocardiography views showing echolucent area adjacent to the aortic valve (arrow)

AO - ascending aorta, LA - left atrium, LV - left ventricle

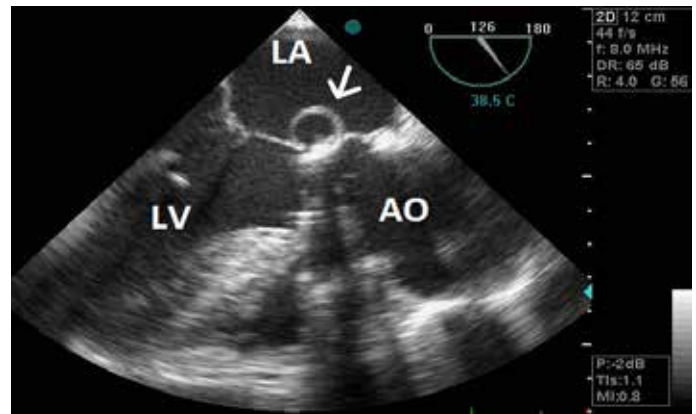


Figure 2. Transesophageal echocardiography views showing a pseudoaneurysm in the mitral-aortic intervalvular fibrosa (arrow)

AO - ascending aorta, LA - left atrium, LV - left ventricle

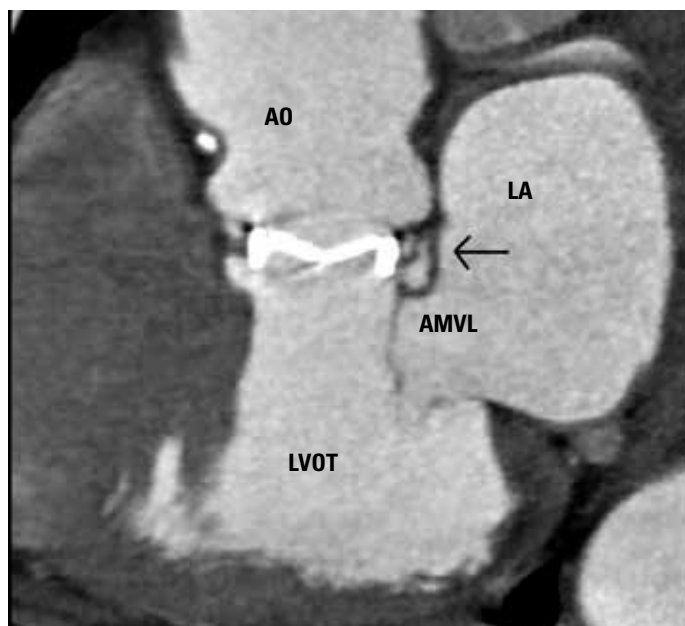


Figure 3. Multislice computed tomography image of a pseudoaneurysm in the mitral-aortic intervalvular fibrosa (arrow)

AMVL- anterior mitral valve leaflet, LA- left atrium, LVOT- left ventricular outflow tract

highly mobile and bulging into left atrium during systole and collapsing during diastole. Doppler examination revealed blood flow into cavity during systole and flow into LVOT during diastole (Fig. 2, Video 2-3. See corresponding video/movie images at www.anakarder.com). We confirmed P-MAIVF with cardiac multislice computed tomography (Fig. 3). There was no fistulous communication to left atrium or aorta. High-risk features for progression of P-MAIVF and development of complications are active endocarditis, P-MAIVF >3 cm, bicuspid aortic valve, aortic regurgitation, presence of fistula to cardiac chamber or aorta, thrombus in P-MAIVF, compression of adjacent structures coronary or pulmonary artery. Because our patient had none of above features and because of his advanced age, we managed our patient with conservative treatment. We offered clinical and echocardiographical follow-up.

Video 1. Transthoracic echocardiography showing echolucent area adjacent to the aortic valve

Video 2. Transesophageal echocardiography showing a pseudoaneurysm in the mitral-aortic intervalvular fibrosa

Video 3. Transesophageal color Doppler echocardiography showing a pseudoaneurysm in the mitral-aortic intervalvular fibrosa

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3D echocardiographic evaluation of ruptured pseudoaneurysm of the mitral-aortic intervalvular fibrosa

Rüptüre olmuş mitral-aortik intervalvüler fibröz doku psödoanevrizmasının 3 boyutlu ekokardiyografi ile değerlendirilmesi

Pseudoaneurysm of the mitral aortic intervalvular fibrosa (P-MAIF) is a rare but potentially fatal complication of infective endocarditis (IE) and aortic valve surgery. Systolic expansion and diastolic collapse of the aneurysmal sac and communication with the left ventricular outflow tract (LVOT) are important clues to differentiate this entity from aortic ring abscess and ruptured sinus of Valsalva aneurysm.

A 54-year old male patient who had undergone aortic valve replacement (Carbomedics No. 23), aortic repair with pericardial patch and coronary artery bypass grafting operation 1 month ago due to IE of the bicuspid aortic valve was referred to our echocardiography laboratory in order to investigate the cause of an apical systolic murmur. He did not have any complaints and was in a good condition. Transthoracic echocardiography (TTE) revealed a suspicious echo-free space posterior to the prosthetic aortic valve and 3D transesophageal echocardiography (TEE) was performed to delineate the anatomy of this region. A

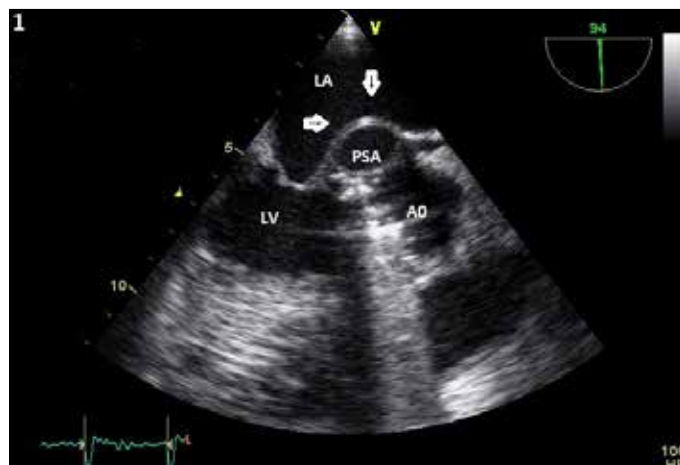


Figure 1. The transesophageal echocardiography image shows a pseudo-aneurysm, bulging from aorta to left atrium (arrows)



Figure 2. Three-dimensional (3D) transesophageal echocardiography visualization of the ruptured pseudoaneurysm