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Free-floating intra-aortic thrombus causing coronary artery occlusion: appearance in ECG-gated computed tomography with cine-images

Sine-görüntüleri ile EKG-gated BT'de koroner arter tıkanmasına neden olan intra-aortik serbest-yüzen trombüs

A 36-year-old man who admitted to emergency service with chest pain referred to our clinic for coronary artery computed tomography (CT) examination. There was no family history of ischemic heart disease. Electrocardiographic examination was normal. Echocardiography examination showed suspect hypokinesis in apical region.

Contrast-enhanced CT depicted approximately 1 cm long distal left anterior descending artery (LAD) occlusion (Fig. 1). Proximal 2/3 segments of LAD and other coronary arteries were normal and free of even minor atherosclerotic plaques. CT examination also showed perfusion defect and hypokinesis in left ventricular apical region (Fig. 2, Video 1. See corresponding video/movie images at www.anakarder.com). When evaluating extra-cardiac structures we saw a pedunculated mass in the ascending aorta, which was attached to medial wall of aorta with a thin stalk (Fig. 3). Cine images showed that the mass is highly mobile (Video 2, 3. See corresponding video/movie images at www.anakarder.com). Intra-aortic thrombus was thought in the first order differential diagnosis.

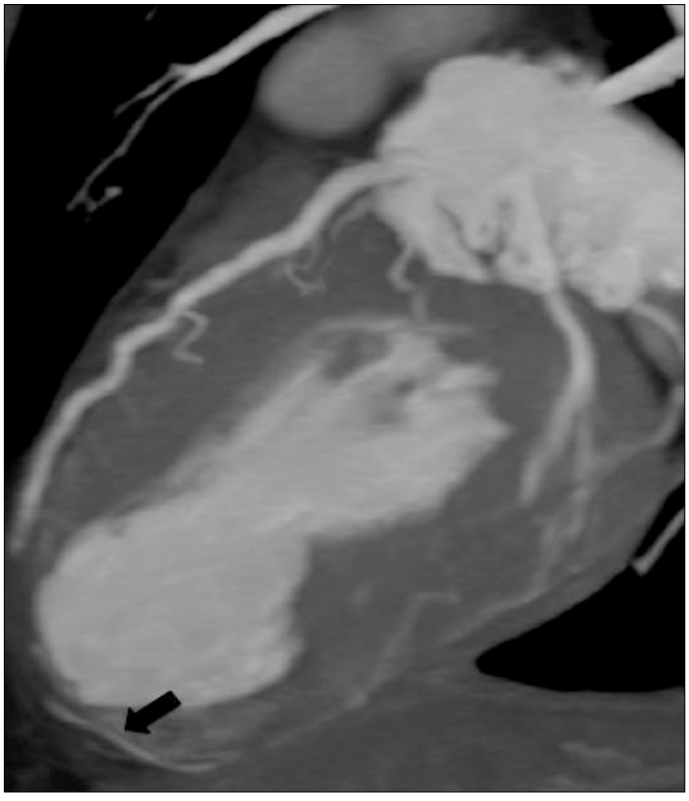

Figure 1. Contrast-enhanced ECG-gated multi-slice spiral computed tomography MIP image, diastolic phase shows segmental distal LAD occlusion. Distal to occlusion there is retrograde\collateral filling (arrow). Note that proximal and mid segment of LAD is free of arteriosclerosis

ECG - electrocardiogram, LAD - left anterior descending artery

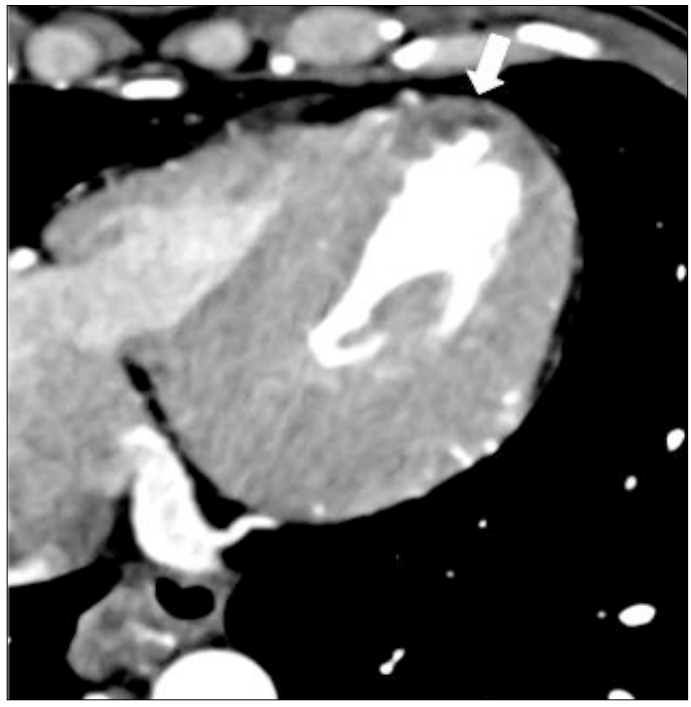

Figure 2. Axial image demonstrates hypodense left ventricular apex (arrow) relative to normal perfused myocardium

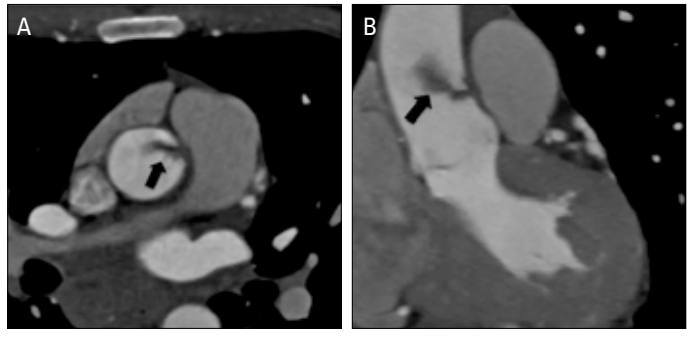

Figure 3. Axial (A) and oblique sagittal (B) images demonstrate a well-defined, pedunculated, spherical mass (arrows) located in ascending aorta slightly above the left coronary sinus

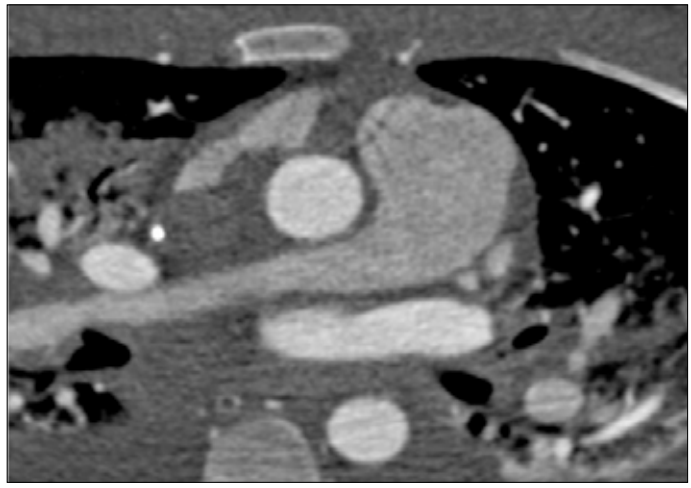

Figure 4. Axial image (approximately the same level with figure 3) shows that the mass in ascending aorta no more exists. Bilateral pleural effusion and consolidation in the middle lobe is seen after heart attack

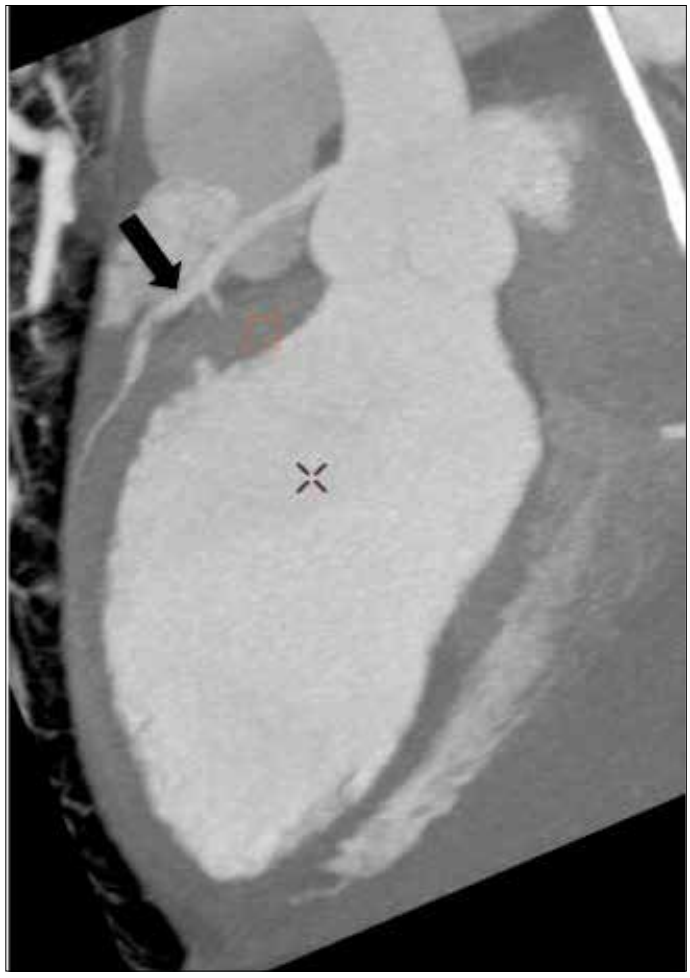

Figure 5. Contrast-enhanced ECG-gated multislice spiral computed tomography MIP image, demonstrates more proximal LAD (arrow) occlusion after disappearance of aortic mass

ECG - electrocardiogram, LAD - left anterior descending artery

Twelve days later control CT examination showed that ascending aorta and thoracic aorta were free of thrombus (Fig. 4). CT examination showed a new thrombus in the proximal segment of LAD (Fig. 5), which caused enlargement of perfusion defect effecting both apical and septal wall of left ventricle. There was severe hypokinesis in the mid and septal part of left ventricle consisted with LAD territory (Video 4. See corresponding video/movie images at www.anakarder.com).

Although there was no histopathology diagnosis of the mobile aortic mass, it is highly probable that it was an intra-aortic thrombus, which was broken away, causing a new more proximal embolus in LAD.

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Video 1. Cine-image two-chamber view shows akinesia in the left ventricle apex
Video 2. Cine-image shows, mobile mass attached to the wall of proximal ascending aorta with a thin stalk
Video 3. Cine-image shows the relation of the mass with left coronary artery, aortic valves. Note the mass is very mobile which may predict its potential to break away
Video 4. Four-chamber cine-image shows akinesia in the mid-septal region as well as apex. Apex and septum show hypodense subendocardium consisted with hypoperfusion

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Interventricular septal cardiac hydatid cyst mimicking hypertrophic cardiomyopathy

Hipertrofik kardiyomiyopatiyi taklit eden interventriküler septal kist hidatik

A 27-year- old, male patient with nonobstructive hypertrophic cardiomyopathy was admitted to our clinic with exertional dyspnea. Physical examination and routine laboratory tests were normal. Transthoracic echocardiography revealed asymmetric septal hypertrophy (29 mm) with-

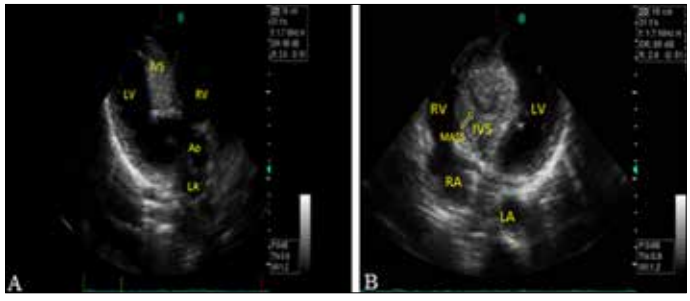

Figure 1. A) Asymmetric septal hyperthrophy was evident in transthoracic echocardiography, B) A mass surrounded by a hyperechogenic calcified membrane, containing a water-like fluid (arrow) was demonstrated by transthoracic echocardiography

Ao - aorta, IVS - interventricular septum, LA - left atrium, LV - left ventricle, RA - right atrium RV - right ventricle

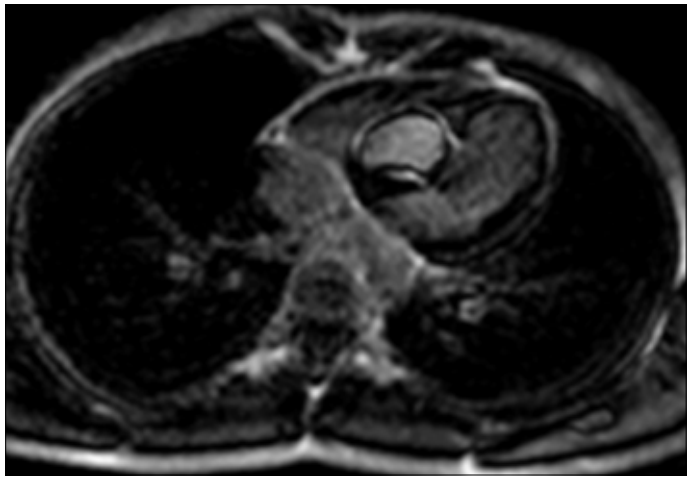

Figure 2. A cystic mass localized in the interventricular septum was demonstrated on cardiac magnetic resonance imaging