Left pulmonary artery thrombosis diagnosed by transesophageal echocardiography

Transözofajiyal ekokardiyografi ile tanı konulan sol pulmoner arter trombozu

A 65-year-old male patient was admitted with complaints of dyspnea and cough that has lasted for one week. On examination, the patient was tachypneic and cyanotic. His blood pressure was 130/80 mmHg, pulse rate was 120 beats/min, respiratory rate was 28/min. On cardiovascular examination, a grade 2/6 pansystolic murmur was heard at the left sternal border and right ventricular heave was palpable. His electrocardiogram showed an incomplete right bundle branch block and sinus tachycardia. The laboratory tests were normal except a mild leukocytosis. The arterial blood gases disclosed a PaO2 of 50 mmHg, a PaCO2 of 38 mmHg and a pH of 7.45. The D-dimer level was <500 ng/ml. The transthoracic echocardiography revealed severe tricuspid regurgitation, mild mitral regurgitation, marked dilatation of the main pulmonary artery and the right ventricle. The systolic pulmonary artery pressure was 50 mmHg.

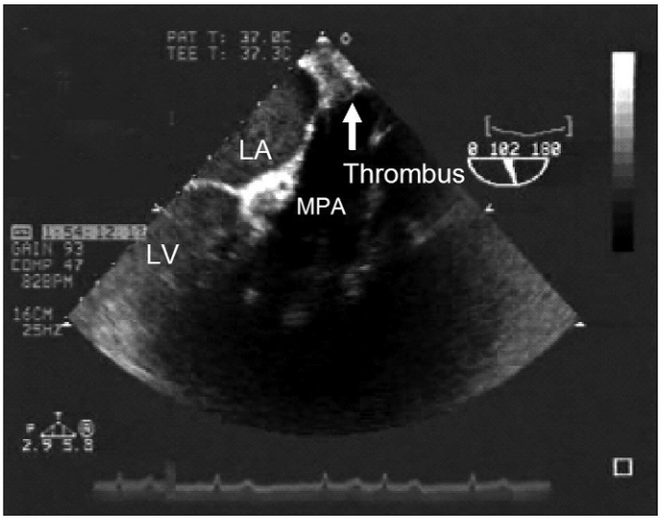

Figure 1. Transesophageal echocardiography showing a thrombus in the left pulmonary artery (arrow)
LA - left atrium; LV - left ventricle; MPA - main pulmonary artery

The transesophageal echocardiography demonstrated an occlusion in the left pulmonary artery (Fig. 1, Video 1. See corresponding video/movie images at www.anakarder.com). In the subsequent computed tomography (CT) angiography, the left pulmonary artery was found to be totally occluded (Fig. 2). Thromboembolism was no consistent with the CT angiography findings. The venous Doppler ultrasonography of the lower extremity and abdomen were normal. Screenings for connective tissue disease and thrombophilia were negative. It was decided to proceed with thromboendarterectomy, but he refused it. Upon this, heparin and warfarin were initiated and warfarin therapy was adjusted according to INR goal of between 2-3.

Pulmonary artery thrombosis is seen in Eisenmenger's syndrome, atrial septal defect and connective tissue diseases. However, none of these causes was in our case. The CT angiography and transesophageal echocardiography are being used in cases of pulmonary artery occlusion. Apart from treatment directed towards the causes, anticoagulants, fibrinolytics and surgical methods are being used.

It can be concluded that in patients with severe dyspnea together with the dilatation of the right heart chambers on transthoracic echocardiography, further investigation of the main pulmonary artery together with proximal left and right pulmonary arteries should be evaluated with transesophageal echocardiography.

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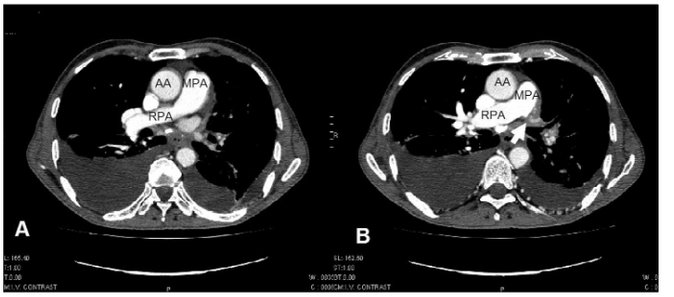

Figure 2. A thoracic CT angiography showing dilatation of the main pulmonary artery (A) and total occlusion of the left pulmonary artery (B)
AA- ascending aorta; RPA- right pulmonary artery; MPA- main pulmonary artery