Catastrophic clinical course due to free-floating large right atrial thrombus

Serbestçe yüzen büyük sağ atriyal trombüsün neden olduğu katastrofik klinik seyir

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A 73-year-old man was admitted to our emergency department with progressive dyspnea lasting for about one month. The patient had systemic arterial hypertension for 10 years. During initial physical examination, pulse rate was 90/minute (arrhythmic), systolic blood pressure was 100 mmHg, diastolic blood pressure was 70 mmHg, body temperature was 36.9 °C and respiration rate was 25/minute. Third heart sound and pansystolic murmur (3°/6° at left sternal border of forth intercostal space) were present at cardiac auscultation. In addition, there were rales in the base of lungs and jugular venous distention bilaterally. Electrocardiography revealed atrial fibrillation with ventricular rate of 100/minute, incomplete right bundle branch block and right axis deviation. There was an increased cardiothoracic ratio on teleradiography. In order to evaluate those cardiac findings, a transthoracic echocardiography (TTE) was performed. There were normal left ventricular (LV) systolic function and dimensions, LV hypertrophy (septal thickness=14 mm, posterior wall thickness=14 mm), LV diastolic dysfunction (grade I) and mildly enlarged left atrium. Important findings of TTE were found to be present in right heart chambers. There were increased systolic pulmonary arterial pressure (60 mmHg), enlarged main pulmonary artery (diameter=40 mm) and severe tricuspid regurgitation. Right atrium and right ventricle were both dilated. Contractions of right ventricular walls were hypokinetic. The most important finding was in the right atrium. There was a huge, free-floating thrombus moving through right ventricle during each cardiac cycle (Fig. 1, 2; Video 1. See corresponding video/movie images at www.anakarder.com). However, an unexpected event occurred at the end of the echocardiographic examination. That big and mobile thrombus suddenly embolized totally to pulmonary artery. The clinical condition of the patient became worse due to acute massive pulmonary embolism and he fell in comatose state with cyanosis. Thrombolytic therapy with streptokinase was immediately started at coronary intensive care unit but the patient did not respond. Cardiopulmonary arrest occurred and the patient was lost.

Right-sided cardiac thrombi are not as frequently seen as left-sided ones (1). However, they can cause serious clinical consequences such as paradoxical embolism or massive pulmonary embolism, like in our case (2). Management strategies include fibrinolysis, anticoagulation or surgery (thromboembolectomy) (3).

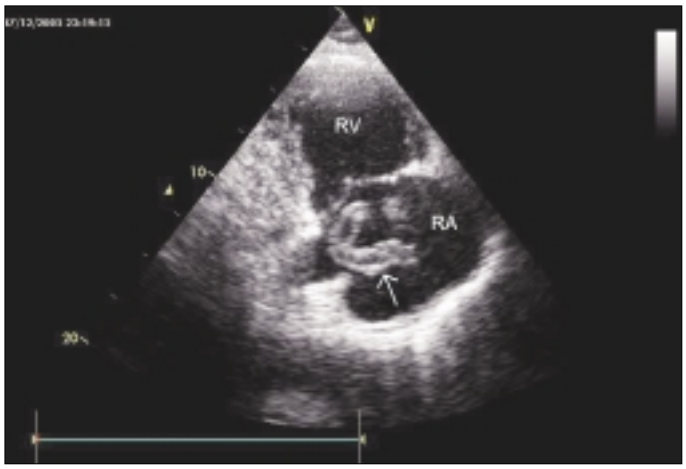

Figure 1. Transthoracic echocardiographic view of the right atrial thrombus at systole

RA-right atrium, RV-right ventricle, Arrow shows the thrombus

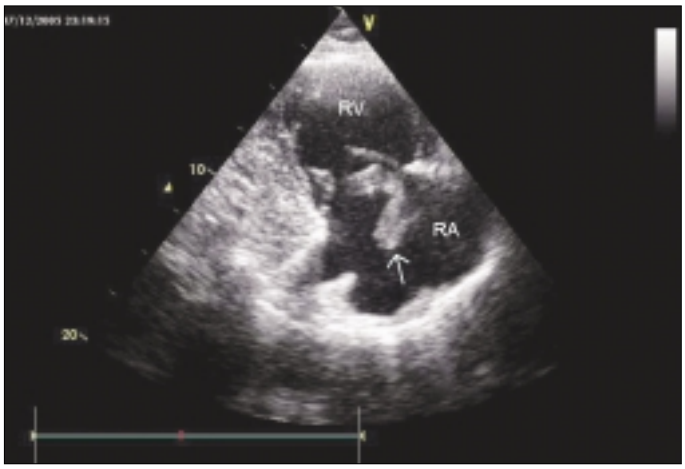

Figure 2. Transthoracic echocardiographic view of the right atrial thrombus at diastole

RA- right atrium, RV- right ventricle, Arrow shows the thrombus

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