

## Successful treatment of a patient with pulmonary embolism and biatrial thrombus

### *Pulmoner emboli ve biatriyal trombüsü olan bir hastanın başarılı tedavisi*

A 57-year-old male patient was presented to our emergency department with the complaint of dyspnea of 10 days duration. He was normotensive with a heart rate of 82 bpm and normal respiratory rate. Transthoracic echocardiography (TTE) showed right ventricular dilatation with mild tricuspid regurgitation. Pulmonary artery systolic pressure was 50 mmHg. There were mobile masses in both atria (Fig. 1 and Video 1. See corresponding video/movie images at [www.anakarder.com](http://www.anakarder.com)). Transesophageal echocardiography (TEE) revealed worm-like, elongated, highly mobile thrombi in right atrium which was extending to the left atrium by crossing the patent foramen ovale (PFO). The free edges of the thrombus were prolapsing towards both the tricuspid and mitral valves to the right and left ventricles, respectively (Fig. 2-4 and Video 2-3. See corresponding video/movie images at [www.anakarder.com](http://www.anakarder.com)). Thoracoabdominal computed tomography was performed for evaluation of pulmonary vasculature and if any underlying pathology such as renal cell carcinoma. It showed multiple filling defects of both branches of

pulmonary artery. Ultrasound of lower extremity showed absence of thrombus. We had consulted with the cardiovascular surgeons and also discussed the possible complications of treatment modalities with the patient. The patient refused to have an operation so we decided to apply intravenous thrombolytic therapy and it was successfully administered.

No thrombi or other cardiac masses were detected on TTE and TEE performed 2 days after thrombolytic treatment and patient had an unevent-



**Figure 1. Transthoracic echocardiography image of biatrial mobile masses**

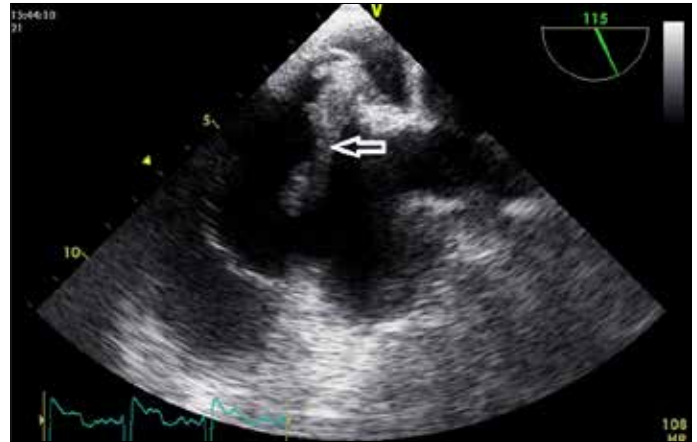


**Figure 2. TEE image of biatrial thrombus entrapped in PFO**  
PFO - patent foramen ovale, TEE - transesophageal echocardiography



**Figure 3. TEE image of mobile thrombus in the left atrium prolapsing towards the mitral valve**

TEE - transesophageal echocardiography



**Figure 4. TEE image showing thrombus in bicaval position**

TEE - transesophageal echocardiography



**Figure 5. TEE image after treatment showing the loss of thrombus**  
PFO - patent foramen ovale, TEE - transesophageal echocardiography

ful recovery (Fig. 5 and Video 4. See corresponding video/movie images at [www.anakarder.com](http://www.anakarder.com)). He was discharged on oral anticoagulation.

Thrombus entrapped in PFO can be demonstrated by echocardiography in patients with pulmonary embolism and immediate treatment can prevent systemic embolism. Therapeutic options are surgical thrombectomy with PFO closure, thrombolysis or systemic anticoagulation. Given the number of cases, there is no evidence that any of the treatment strategies provide better survival.

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**Video 1.** Transthoracic echocardiography image of biatrial mobile masses

**Video 2.** TEE image of biatrial thrombus entrapped in PFO  
PFO - patent foramen ovale, TEE - transesophageal echocardiography

**Video 3.** TEE image of mobile thrombus in the left atrium prolapsing towards the mitral valve

TEE - transesophageal echocardiography

**Video 4.** TEE image after treatment showing the loss of thrombus

TEE - transesophageal echocardiography

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**Available Online Date/Çevrimiçi Yayın Tarihi:** 26.12.2012

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doi:10.5152/akd.2013.062