

**Video 1.** Three-dimensional transesophageal echocardiographic view of the large mobile left atrial thrombus

**Video 2.** Three-dimensional transesophageal echocardiographic view of the right atrial thrombus located at the right atrial appendage

**Address for Correspondence:** Dr. Fatma Özpamuk Karadeniz,  
Ünalın Mah. Baraj Yolu 6. Sok No: 22 Simge Kent Sitesi A7 Blok D: 30 Üsküdar,  
İstanbul-*Türkiye*

Phone: +90 507 233 40 20

Fax: +90 216 337 97 19

E-mail: drfozpamuk@hotmail.com

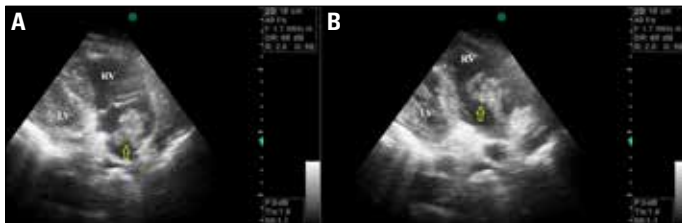
**Available Online Date:** 18.12.2013

©Copyright 2013 by AVES - Available online at www.anakarder.com

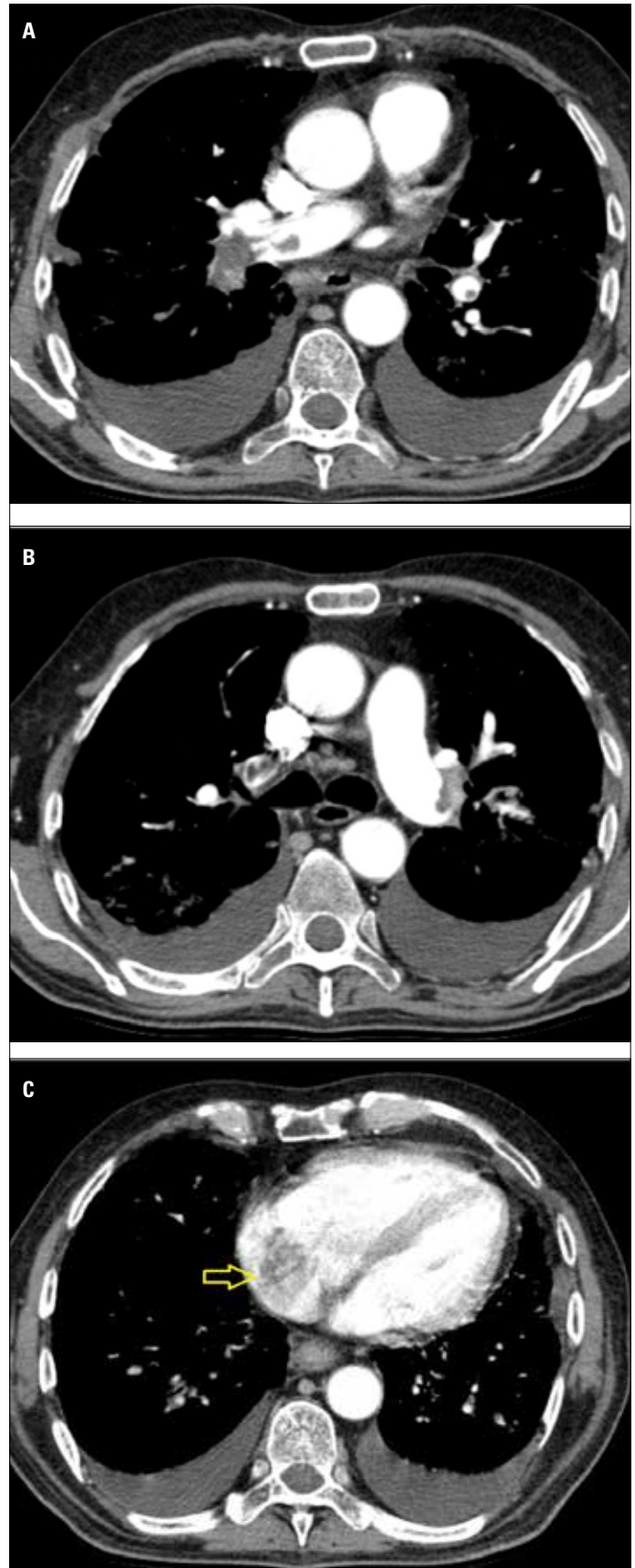
doi:10.5152/akd.2013.4992

## Real-time monitoring of the giant right atrial thrombus prolapsing into the right ventricle and the deterioration of the thrombus with thrombolytic treatment by transthoracic echocardiography

A 57-year-old male with a history of metastatic pancreatic adenocarcinoma presented to our clinic with complaints of dyspnea for seven days. Arterial blood pressure and heart rate were 100/60 mm Hg and 116 bpm respectively. Electrocardiography showed S1-Q3-T3 pattern with mild sinus tachycardia. Two-dimensional transthoracic echocardiography (TTE) revealed a giant, highly mobile thrombus in the right atrium prolapsing into right ventricle through the tricuspid orifice during diastole (Fig. 1, Video 1. See corresponding video/movie images at www.anakarder.com). Enlarged right heart chambers, moderate tricuspid regurgitation and elevated (95 mm Hg) pulmonary artery systolic pressure were also noted. Ejection fraction was 60%. Contrast-enhanced 64-slice computed tomography demonstrated bilateral central pulmonary embolism (PE) with giant right atrial thrombus (Fig. 2). We decided to administer intravenous thrombolytic therapy under the diagnosis of right heart thrombosis with massive PE and he was given 100 mg of tissue-type plasminogen activator (t-PA) over two hours. After initiating thrombolytic infusion, the patient underwent TTE for 10 minutes each. The deterioration of the giant thrombus was observed in real-time (Fig. 3, Video 2. See corresponding video/movie images at www.anakarder.com). His symptoms completely resolved and he was discharged from the hospital after five days.



**Figure 1.** (A) Apical 4-chamber view of the giant right atrial thrombus during systole (yellow arrow) (B) Apical 4-chamber view of the giant right atrial thrombus (prolapsing into right ventricle through tricuspid orifice) during diastole (yellow arrow)



**Figure 2.** (A-C) Contrast-enhanced 64-slice computed tomography showing bilateral pulmonary embolism and giant right atrial thrombus (yellow arrow)



**Figure 3. (A-C) Transthoracic echocardiographic apical 4-chamber view during i.v. tissue plasminogen activator (t-PA) treatment: The deterioration of giant right atrial thrombus is seen**

The prevalence of right heart thrombi in unselected patients with PE is below 4%. Mobile right heart thrombi are associated with a significantly increased risk of death rate or early mortality in patients with acute PE which has been reported to be as high as 80-100% when left untreated. Intravenous thrombolysis and embolectomy are probably both effective whereas anticoagulation alone appears less effective. Whichever therapy is selected, it should be implemented without delay.

**Yalçın Velibey, Ali Rıza Erbay, Suna Kavurgacı\***  
**Clinics of Cardiology and \*Pulmonary Diseases, Bitlis State Hospital, Bitlis-Turkey**

**Video 1.** Two-dimensional transthoracic echocardiographic view of giant right atrial thrombus from apical 4-chamber view

**Video 2.** The deterioration of the giant right atrial thrombus prolapsing ventricle was observed in real-time by TTE conducted at the 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 40<sup>th</sup>, 50<sup>th</sup>, 60<sup>th</sup>, 70<sup>th</sup>, 80<sup>th</sup> and 90<sup>th</sup> minute of intravenous t-PA infusion

**Address for Correspondence:** Dr. Yalçın Velibey,  
Bitlis Devlet Hastanesi, Beşminare Cad. No:165, Bitlis-Türkiye

Phone: +90 434 246 85 20

Fax: +90 434 246 84 25

E-mail: dr\_yalchin\_dr@yahoo.com.tr

**Available Online Date:** 18.12.2013

©Copyright 2013 by AVES - Available online at [www.anakarder.com](http://www.anakarder.com)

doi:10.5152/akd.2013.5137