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Figure 5. Real-time three-dimensional TEE demonstrating the accessory papillary muscle extending from the interventricular septum to the LVOT

LVOT - left ventricular outflow tract, TEE - transesophageal echocardiography

Figure 6. Cardiac MRI in the vertical axis showing the accessory papillary muscle

MRI - magnetic resonance imaging

Zafer Işılak, Onur Sinan Deveci, Murat Yalçın, Mehmet İncedayı*
Departments of Cardiology and *Radiology, Gülhane Military Medical Academy, Haydarpaşa Hospital, İstanbul-*Turkey*

Video 1. TTE in the parasternal long-axis color-Doppler imaging demonstrating shows the perimembraneous VSD

LVOT - left ventricular outflow tract, TTE - transthoracic echocardiography, VSD - ventricular septal defect

Video 2. TTE in apical four-chamber color-Doppler imaging demonstrating shows the accessory papillary muscle across the LVOT

LVOT - left ventricular outflow tract, TTE - transthoracic echocardiography

Video 3. TEE shows demonstrating the perimembraneous VSD

TEE - transesophageal echocardiography, VSD - ventricular septal defect

Video 4. Real-time three dimension TEE demonstrating the accessory papillary muscle extending from the interventricular septum to the LVOT

LVOT - left ventricular outflow tract, TEE - transesophageal echocardiography

Video 5. Cardiac MRI in the vertical axis showing the accessory papillary muscle

MRI - magnetic resonance imaging

Address for Correspondence/Yazışma Adresi: Dr. Zafer Işılak,
Gülhane Askeri Tıp Akademisi, Haydarpaşa Hastanesi, Kardiyoloji Bölümü,
Tıbbiye Cad. 34668 Üsküdar, İstanbul-*Türkiye*
Phone: +90 216 542 34 80 Fax: +90 216 348 78 80
E-mail: drzaferisilak@gmail.com

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All-in-one case: constrictive pericarditis, secundum atrial septal defect, persistent left superior vena cava and anomalous drainage of hemiazygos vein to coronary sinus

Hepsi bir vakada: Konstrüktif perikardit, sekundum atriyal septal defekt, persistan sol süperiyor vena kava ve hemiazigos venin koroner sinüse açılması

We present a 31-year-old female with history of constrictive pericarditis operation due to childhood tuberculosis who complained of breathlessness and swelling (Fig. 1A). We diagnosed secundum atrial septal defect (ASD) and dilated coronary sinus (CS) in her control echocardiography (Fig. 1B). Contrast echocardiography via left brachial venous injection revealed persistent left superior vena cava (PLSVC). To evaluate the heart and the pericardium, contrast enhanced multislice computerized tomography was performed via left brachial venous injection. Volume rendered images showed PLSVC and hemiazygos vein anomalous drainage to CS were diagnosed (Fig. 2A, B). There were no abnormal shunts from PLSVC and hemiazygos vein to other cardiac areas. Vena cava inferior (VCI) was right- sided and draining to

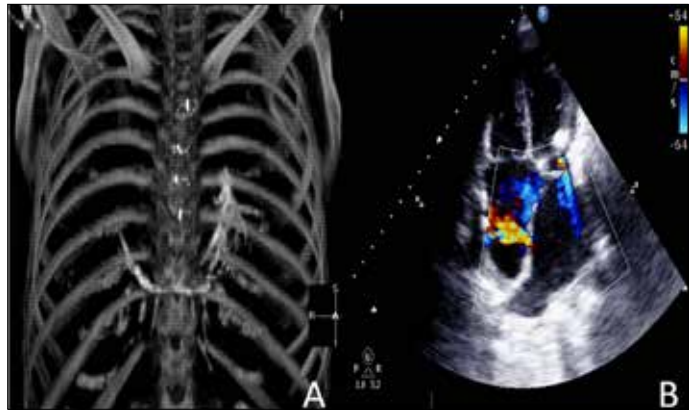

Figure 1. A) Multislice CT angiogram, three-dimensional bone-window image of pericardial calcification, B) Color Doppler echocardiography showing secundum atrial septal defect

CT - computerized tomography

Figure 2. A) Multislice CT angiogram, vascular-window image of PLSVC and pericardial calcification, B) Multislice CT angiogram, vascular-window image of anomalous drainage of hemiazygos (ADH)

CT - computerized tomography, PLSVC - persistent left superior vena cava

the right atrium. In her right and left ventricular (RV-LV) catheterization, RV and LV pressure curve showed signs of dip and plateau (square root) indicating constrictive pericarditis. RV and LV end-diastolic pressure (EDP) were measured as of 35 and 40 mmHg consecutively. Because of symptoms, severe calcification in the pericardium (Fig. 1A-2A) and high end-diastolic pressure, redo-operation was planned. Although there are different combinations of this conditions, we have not found all in one case in the literature.

Abdurrahman Tasal, Osman Sönmez, Ercan Erdoğan, Ömer Göktekin
Department of Cardiology, Faculty of Medicine, Bezmialem Vakıf University, İstanbul-*Turkey*

Address for Correspondence/Yazışma Adresi: Dr. Abdurrahman Tasal, Bezmialem Vakıf Üniversitesi Tıp Fakültesi, Kardiyoloji Anabilim Dalı, Fatih, İstanbul-*Türkiye*
Phone: +90 212 453 18 00 Fax: +90 212 621 75 80
E-mail: tasal01@hotmail.com
Available Online Date/Çevrimiçi Yayın Tarihi: 21.02.2013

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Severe pulmonary vein stenosis due to invasion of metastatic lung cancer

Metastatik akciğer kanseri invasyonuna bağlı gelişen ciddi pulmoner ven darlığı

A 40-year-old-woman presented to the emergency department with dyspnea and hemoptysis. She had been complaining of dyspnea and hemoptysis for about eleven months. On admission, she had dyspnea (class IV according to the New York Heart Association) and respiratory rate of 28 breaths/min, regular pulse rate of 110 beats/min. The electrocardiogram showed sinus tachycardia and chest radiography revealed left sided pleural effusion (Fig. 1A). Transthoracic echocardiography revealed a turbulent flow in the upper left pulmonary vein in the entrance of left atrium on apical long-axis position (Fig. 2A). No other cardiac structural abnormalities were found on transthoracic echocardiography but estimated pulmonary artery systolic pressure was 70 mmHg. Transesophageal echocardiography and multislice computed tomography (MSCT) revealed severe obstruction in the anastomotic site of left upper pulmonary venous confluence to the left atrium (Fig.1B) and invasion of the wall of the left atrium. Pulmonary vein stenosis was diagnosed by spectral Doppler interrogation of the pulmonary veins (continuous, turbulent flow with calculated mean gradient up to 36 mm Hg) (Fig. 2B, 1C). MSCT also revealed a small mass in the middle lobe of the lung and metastatic invasion of left upper pulmonary vein (Fig. 1D). For further staging and therapeutic evaluation patient was sent to a hospital of respiratory and oncology center.

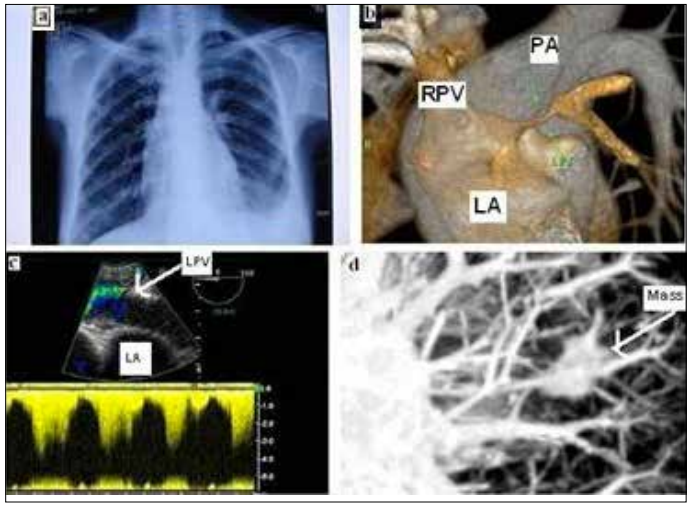

Figure 1. A) Chest radiography view of left sided pleural effusion, B) Computed tomography view of stenosis of upper left pulmonary vein of left atrial wall, C) 2D transesophageal echocardiography apical four-chamber view of high pulmonary venous gradient (36 mmHg), D) Computed tomography; view of a mass in the middle lobe

LA - left atrium, LPV - left pulmonary vein, PA - pulmonary artery, RPV - right pulmonary vein

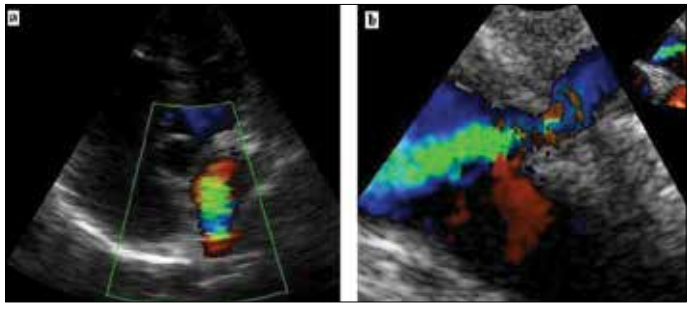

Figure 2. A) 2D transthoracic echocardiographic apical four-chamber view of a color imaging turbulent flow in upper left pulmonary vein in entrance of left atrium. B) 2D transesophageal echocardiography apical four-chamber view of obstruction of left upper pulmonary vein

LA - left atrium, LUPV - left upper pulmonary vein, LV - left ventricle, RA - right atrium, RV - right ventricle

Mehmet Mustafa Can
Clinic of Cardiology, Malatya State Hospital, Malatya-*Turkey*

Address for Correspondence/Yazışma Adresi: Dr. Mehmet Mustafa Can, Bağcılar Eğitim ve Araştırma Hastanesi, Kardiyoloji Kliniği, İstanbul-*Türkiye*
Phone: +90 212 440 40 00 E-mail: mehmetmustafacan@yahoo.com
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