Giant septal hypertrophic cardiomyopathy

Dev septal hipertrofik kardiyomiyopati

A 21-year-old man was admitted to cardiology department with exertional dyspnea. His medical history was unremarkable. Heart and lung sounds were normal on physical examination. Patient's blood pressure was 120/80 mmHg and his pulse was 72/min and rhythmic. Electrocardiography showed normal sinus rhythm and left ventricular strain findings (Fig. 1). 2D and 3D transthoracic echocardiography (TTE) revealed that normal left ventricular systolic functions with severe septal hypertrophy (5.1 cm) (Fig. 2A-D and Video 1-3. See corresponding video/movie images at www.anakarder.com). TTE also showed systolic anterior motion of mitral valve, physiological mitral regurgitation and normal left atrial dimension (Video 4-6. See corresponding video/movie images at www.anakarder.com). There was no gradient at left ventricular outflow tract and midventricular level by rest and Valsalva maneuver. The patient was diagnosed with hypertrophic cardiomyopathy. 48-hour ambulatory ECG recording was normal. Beta-blocker therapy was initiated to the patient and medical follow-up was recommended. Family member evaluation also recommended to the patient. Investigation of the family revealed that his mother and one sibling have hypertrophic cardiomyopathy.

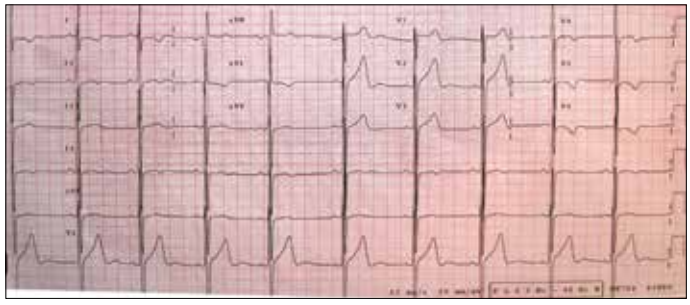

Figure 1. A 12 - lead ECG shows normal sinus rhythm with left ventricular strain findings
ECG - electrocardiogram

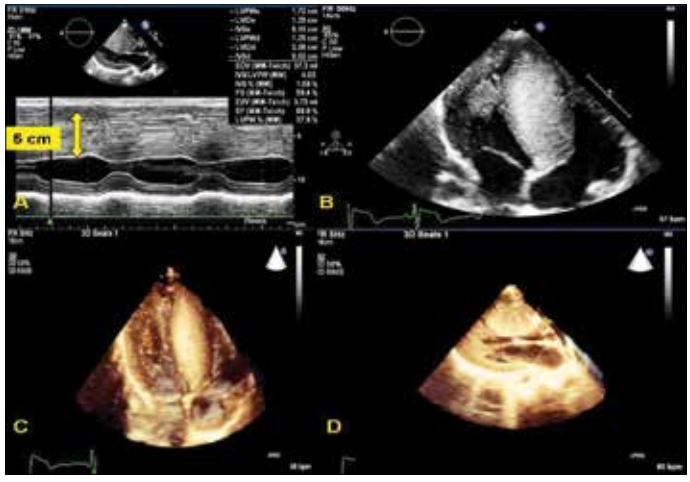

Figure 2. A. TTE image in parasternal long axis view shows interventricular septal thickness measurement is 5.1 cm B. TTE apical 4-chamber appearance of the giant interventricular septum C. 3D apical 4-chamber TTE shows giant interventricular septum D. 3D TTE parasternal long axis view of the giant interventricular septum
TTE - transthoracic echocardiography

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Video 1. Severely increased interventricular septum is seen at TTE parasternal long axis view
Video 2. Parasternal short axis TTE image at the level of papillary muscle shows hypertrophic myocardial segments except for septum
Video 3. Giant interventricular septum is seen at TTE apical 4-chamber view
Video 4. TTE apical 4-chamber X-plane view shows giant interventricular septum
Video 5. Giant interventricular septum is seen at 3D TTE 4-chamber view
Video 6. 3D TTE parasternal long axis view of the giant interventricular septum

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Unusual case with venous channels connecting the left and the right brachiocephalic veins

Sol ve sağ brakiyosefalik venleri bağlayan venöz kanalları olan olağandışı vaka

A 55-year-old female patient was admitted to the cardiology clinic with complaint of chest pain. She had no known any conspicuous medical history. Physical examination, electrocardiogram, echocardiography and all biochemical values were in normal range. Chest roentgenogram revealed suspicious mediastinal mass. The computed tomography displayed that the veins were visible and ran in the anterior mediastinum as a venous tuft from brachiocephalic veins (Fig. 1 and Video 1. See corresponding video/movie images at www.anakarder.com). Thymus gland, vessel structures or any other tissue was not observed in the venous tuft region or in the mediastinum. The possibility of vascular access flow reduction was discussed with our patient and surgeons, but because of the absence of fistula, cardiovascular anomaly and patient remained asymptomatic, we decided to follow up patient for future symptoms. These malformations have importance at implantation of catheter and pacemaker. If this kind of malformation was bypassed, they can accidentally conclude or damage during surgery and may lead to serious hemorrhage. Also, they may obscure the surgical field or confused with other vessels.

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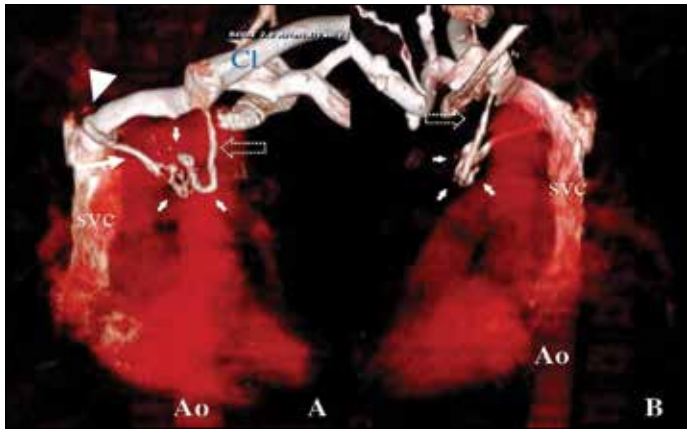

Figure 1. Chest computed tomography three-dimensional images of well-defined venous malformation with moderate contrast from different perspectives

Ao-ascending aorta, Cl - clavicle, SVC - superior vena cava.
A. Collateral veins (long white arrow) ran in the anterior mediastinum as a venous tuft (short white arrows) from right brachiocephalic vein (arrowhead).
B. Collateral veins (dashed arrow) ran in the anterior mediastinum as a venous tuft (short white arrows) from left brachiocephalic vein (open arrow).

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Video 1. Image of brachiocephalic vein malformation by three-dimensional computed tomography.

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Percutaneous closure of second secundum atrial septal defect under guidance of three-dimensional transesophageal echocardiography guidance

Üç boyutlu transözofajiyal ekokardiyografi rehberliğinde ikinci sekundum atriyal septal defektin perkütan kapatılması

A 35-year-old man was admitted to our outpatient clinic with a complaint of exertional dyspnea and palpitation. His medical history revealed percutaneous closure of atrial septal defect (ASD) one year ago. Electrocardiography showed a sinus rhythm with a complete right bundle branch block. Two-dimensional transthoracic echocardiography revealed dilated right heart chambers, a closure device and a defect at the interatrial septum. The calculated Qp/Qs was equal to 2.1. Two-dimensional transesophageal echocardiography (2D TEE) confirmed secundum ASD near the closure device (Fig. 1A and Video 1A. See corresponding video/movie images at www.anakarder.com). For further evaluation of this pathology, we applied three-dimensional transesophageal echocardiography (3D TEE). 3D color Doppler and zoom modality TEE demonstrated the defect near the closure device (Fig. 1B, C and Video 1B, C. See corresponding video/movie images at www.anakarder.com). We decided to close this defect because he was symptomatic and Qp/Qs was higher than normal values. 3D zoom modality TEE showed the catheter in the defect (Fig. 1D and Video 1D. See corresponding video/movie images at www.anakarder.com). 2D and 3D zoom modality TEE demonstrated successfully deployment of second septal occluder device (Fig. 1E, F and Video 1E, F. See corresponding video/movie images at www.anakarder.com). Atrial septal defect is a common form of congenital heart disease that often persists well into adulthood. It is generally seen as a single defect but the presence of multiple ASD is much less common. Percutaneous ASD closure has become a safe and effective alternative to surgical closure for the past few decades. 2D TEE can provide useful information by monitoring transcatheter closure, while 3D TEE enhanced our ability to better define the atrial septum anatomy, the assessment of the true size and morphology of the defect, enabling catheter closure easier.

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Video 1. Two-dimensional transesophageal echocardiography (TEE) showing secundum atrial septal defect near the closure device (A), three-dimensional (3D) color Doppler and zoom modality TEE demonstrating the defect near the closure device (B, C), 3D zoom modality TEE showing the catheter in the defect (D) and 2D and 3D zoom modality TEE revealing successfully deployment of second septal occluder device (E, F)

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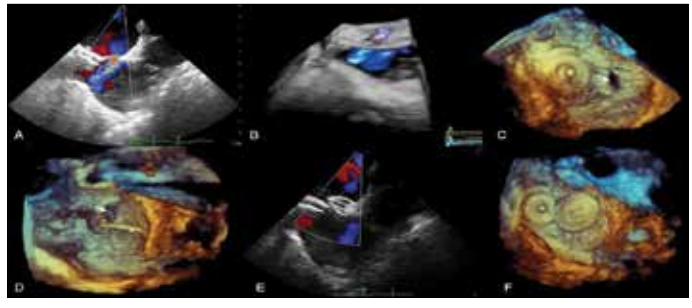

Figure 1. Two - dimensional transesophageal echocardiography (TEE) showing secundum atrial septal defect near the closure device (A), three-dimensional (3D) color Doppler and zoom modality TEE demonstrating the defect near the closure device (B, C), 3D zoom modality TEE showing the catheter in the defect (D) and 2D and 3D zoom modality TEE revealing successfully deployment of second septal occluder device (E, F). Arrow-atrial septal defect