pseudoaneurysm of the MAIF was diagnosed on the posterior aspect of aortic valve with direct connection to LVOT and left atrium (Fig. 1, Video 1. See corresponding video/movie images at www.anakarder.com). The wall of the pseudoaneurysm was partially composed of pericardial patch and perforated segment of the patch was clearly seen from the left atrial aspect on 3D TEE (Fig. 2, Video 2. See corresponding video/movie images at www.anakarder.com). The anterior border of the P-MAIF was in direct continuation with anterior mitral leaflet (Video 3 and 4. See corresponding video/movie images at www.anakarder.com). Moderate mitral regurgitation was established due to the perforation of anterior mitral leaflet with these findings re-operation was planned. Unfortunately the patient rejected re-operation and was discharged with warfarin therapy.

Video 1. The transesophageal echocardiography shows a pseudoaneurysm, ranging to the left atrium from aorta (arrows)

Video 2. Three-dimensional (3D) transesophageal echocardiography visualization of the ruptured pseudoaneurysm

Video 3. 3D TEE atrial side view of the pseudoaneurysm , showing direct continuation mitral anterior leaflet with pseudoaneurysm

TEE - transesophageal echocardiography

Video 4. 3D TEE long- axis view of the pseudoaneurysm

TEE - transesophageal echocardiography

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Cor triatriatum sinister demonstrated by 3D-transesophageal echocardiography

Üç boyutlu transözefageal ekokardiyografi ile gösterilen kor triatriyatum sinistrum

A 25-year-old asymptomatic patient was referred to our institution for the assessment of an apical 2/6 diastolic murmur. The transthoracic echocardiography (TTE) revealed a membrane-like structure, separating the left atrium into two compartments (Fig. 1 A). There was a connection between the compartments in the color Doppler examination (see, figure Fig.1 B and Video 1. See corresponding video/movie images at www.anakarder.com). The estimated systolic pulmonary artery pressure from the tricuspid regurgitation flow was 35 mmHg. On two-dimensional transesophageal echocardiography (TEE), these two chambers were seen as antero-inferior and postero-superiorly located and connected via a small fenestration of 10 mm diameter on the membrane. A mean gradient of 6 mmHg was calculated through the membrane with pulsed Doppler study (Fig. 1 C,D and Video 2. See corresponding video/movie images at www.anakarder.com). A following three-dimensional TEE demonstrated the anatomy of the membrane more detailed with the location, shape and size of its fenestration (Fig. 1 E, F and Video 3. See corresponding video/movie images at www.anakarder.com). As the patient had no additional cardiac abnormality, a medical follow-up decision was made.

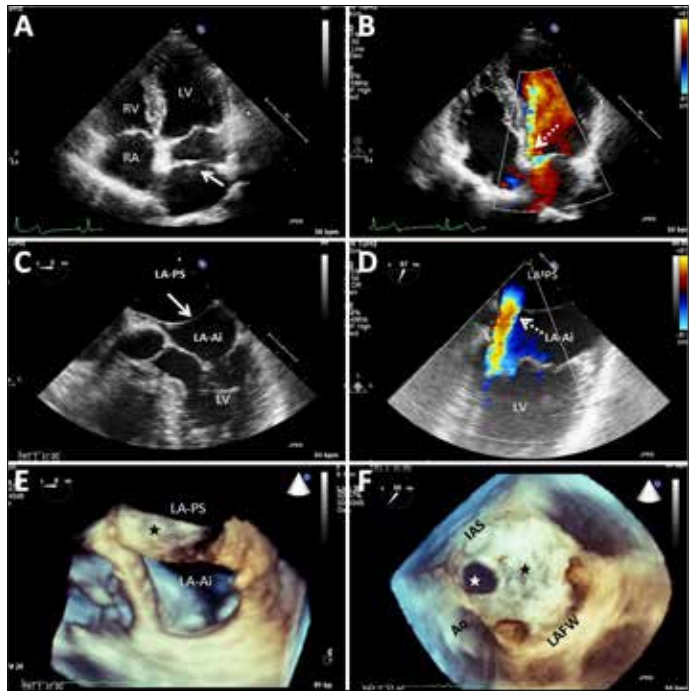

Figure 1. Two-dimensional TTE (A) and TEE (C) images show the membrane (arrows) dividing the left atrium into two chambers. 2D TTE (B) and TEE (D) Color Doppler studies revealed a single small fenestration (dotted arrows) on the membrane. 3D TEE image reconstruction (E and F) demonstrated the membrane (black stars) with a single, circular orifice/circular shaped defect (white star) located close to interatrial septum. The measured diameter was 13 mm, and the calculated area was 1.35 cm^2

Ao - aorta, IAS - interatrial septum, LA - left atrium, LA-AI - antero-inferior chamber, LA-PS - postero-superior chamber, LAFW - left atrial free wall, LV - left ventricle, RA - right atrium, RV - right ventricle, TEE - transesophageal echocardiography, TTE - transthoracic echocardiography

Cor triatriatum sinister is a rarely seen congenital abnormality. It is often detected and corrected in the childhood when it becomes symptomatic. The left atrium is divided into antero-inferior and postero-superior compartments with a fibrous or fibromuscular fenestrated membrane. Importantly, the number and the size of the fenestrations determine the symptomatology and the need for intervention. When compared with 2D imaging, 3D TEE enables a more accurate data about the anatomy and the structure of the membrane and its fenestrations.

Video 1. Transthoracic apical 4-chamber view (left panel) shows the membrane dividing the left atrium into two chambers. Color Doppler study (right panel) reveals a single small fenestration on the membrane

Video 2. Transesophageal 2D (left panel) and color Doppler (right panel) studies show the membrane dividing the left atrium into two chambers and a single small fenestration on the membrane