

video/movie images at www.anakarder.com). Left internal mammary artery (LIMA) angiogram showed that it was anastomosed to the anterior interventricular vein instead of LAD (Fig. 1 panel B and Video 2. See corresponding video/movie images at www.anakarder.com). Drainage into the coronary sinus was seen. Even though redo CABG was planned, the patient refused surgery. Thus, percutaneous intervention of the chronic total occlusion was performed, and a drug-eluting stent was implanted successfully (Fig. 1 panel C and Video 3. See corresponding video/movie images at www.anakarder.com). An Amplatzer vascular plug was deployed to the proximal segment of LIMA. The follow-up angiogram demonstrated complete cessation of flow in the LIMA (Fig. 1 panel D and Video 4. See corresponding video/movie images at www.anakarder.com).

LIMA graft anastomosis to a cardiac vein is a very rare complication seen in CABG. Redo surgery is usually the preferred mode of treatment for this condition but percutaneous intervention can also be performed in selected cases. Percutaneous LIMA graft occlusion can be achieved antegradely using coils, detachable balloons and vascular plug devices or the LIMA graft can be occluded retrogradely by deploying a covered stent in the cardiac vein at the site of the LIMA anastomosis.

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Video 1. Angiogram showing total occlusion of LAD and patent saphenous vein grafts

LAD - left anterior descending artery

Video 2. Angiogram showing LIMA anastomosed to the anterior interventricular vein

LIMA - left internal thoracic artery

Video 3. Angiogram of LAD after percutaneous intervention

LAD - left anterior descending artery

Video 4. Angiogram of LIMA after Amplatzer vascular plug implantation showing cessation of flow

LIMA - left internal thoracic artery

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Multiple septal coronary cameral fistulas may cause myocardial ischemia

Çoklu septal koroner kameral fistüller miyokardiyal iskemiye neden olabilir

Coronary artery fistulas can be between an epicardial coronary artery and a cardiac chamber (coronary- cameral fistulae). Depending on the type of fistula, shunt volume and site of the shunt the clinical presentations are changing. A 70-year-old female with past medical history of hypertension was admitted to our clinic with chest pain that

related with exercise. Blood pressure and heart rate were 145/90 mmHg and 78 bpm respectively. Heart and respiratory auscultation findings were normal. There were dynamic changes of electrocardiogram with ST segment depression on V1-4 leads during the chest pain on an outside center which are resolved during presentation to our clinic. Transthoracic echocardiography showed normal left ventricular (LV) systolic function (ejection fraction: 68%) and no severe valvular heart disease. Myocardial perfusion scintigraphy showed anterior and antero-septal wall ischemia. Coronary angiography showed no critical atherosclerotic lesions in the coronary arteries; however, septal arteries communicated with the LV cavity through multiple small, diffuse fistulas, resulting in complete LV endocardium contrast opacification (Fig. 1A, B and Video 1, 2. See corresponding video/movie images at www.anakarder.com). On the diastole phase of the LV the endocardium was opacified and it was vanished during the systole phase when the septal fistulas were compressed. The anterior wall ischemia that was shown

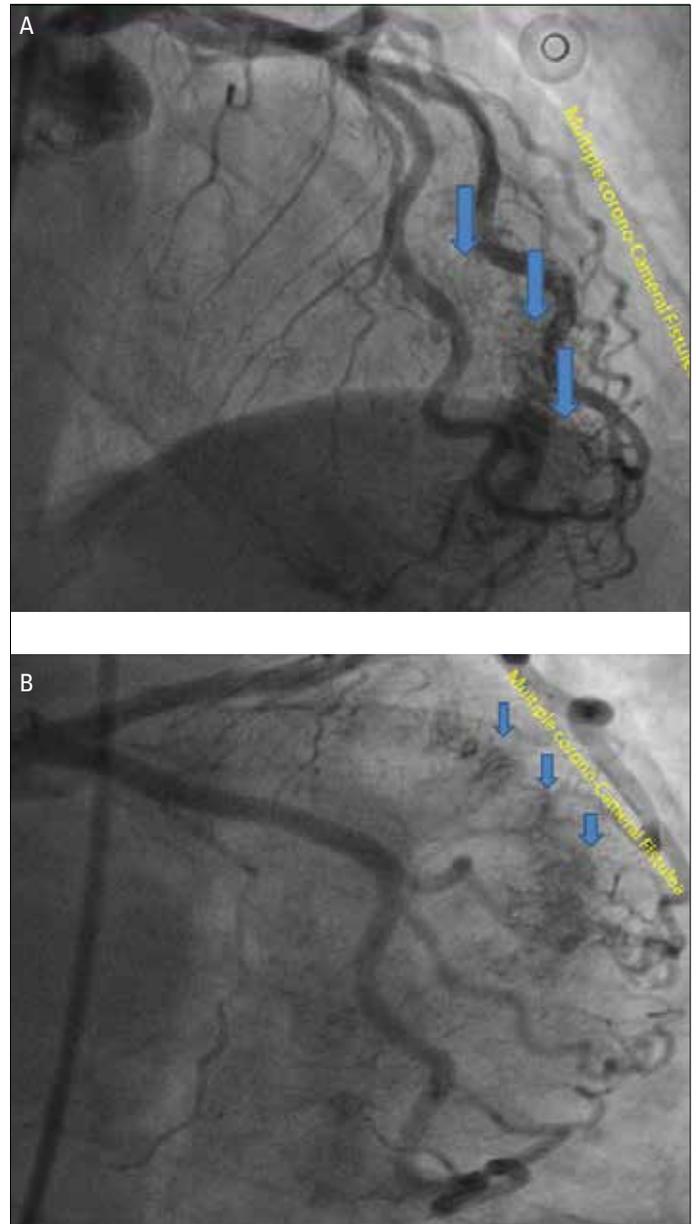


Figure 1 A, B. Multiple coronal-cameral fistulas on right-anterior oblique/caudal and cranial projection coronary angiography views

on nuclear stress imaging, chest pain and dynamic ST segment changes might be attributed to coronary steal phenomenon. Because of the diffuse nature of fistulas and the hardness of the process, surgical ligation or percutaneous endoluminal procedures were not considered. The patient was discharged from the hospital with medical treatment.

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Video 1, 2. Multiple corono-cameral fistulas are clearly seen with cardiac cycle

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Three-dimensional echocardiography in the evaluation of cor triatriatum sinistrum in an adult patient with atrial septal defect

Atriyal septal defektli yetişkin bir hastada kor triatriatum sinistrumun değerlendirilmesinde üç boyutlu ekokardiyografi



Cor triatriatum sinistrum is a rare congenital malformation, accounting for 0.1-0.4% of congenital heart disease, characterized by an abnormal fibromuscular membrane which subdivides the left atrium into two chambers. It is generally diagnosed during the neonatal period or early childhood but a minority of patients present in adulthood incidentally. The most common associated cardiac anomalies are atrial septal defect, persistent left superior vena cava and mitral regurgitation. A 28-year-old-male patient was admitted to our outpatient clinic because of palpitation and shortness of breath. His medical and family history was unremarkable. The 12-lead electrocardiogram showed a sinus rhythm. Two-dimensional transthoracic echocardiography revealed dilated right atrium and ventricle, atrial septal defect (ASD) and a membrane at the left atrium (Fig. 1A and Video 1A). The calculated Q_p/Q_s was 2.3. Two-dimensional transesophageal echocardiography confirmed cor triatriatum sinister and ASD (Fig. 1B, C and Video 1B, C). For further evaluation of this pathology, we applied three-dimensional transesophageal echocardiography, which revealed a single opening on the fibromuscular membrane (Fig. 1D, E and Video 1D). We measured the area of orifice using iSlice multi-planar review mode as 1.64 cm² (Fig. F). He underwent the surgical resection of the intraatrial membrane through the left atrium and closure of the atrial septal defect with a pericardial patch. We herein demonstrated two-dimensional and three-dimensional echocardiographic features of cor triatriatum sinistrum in

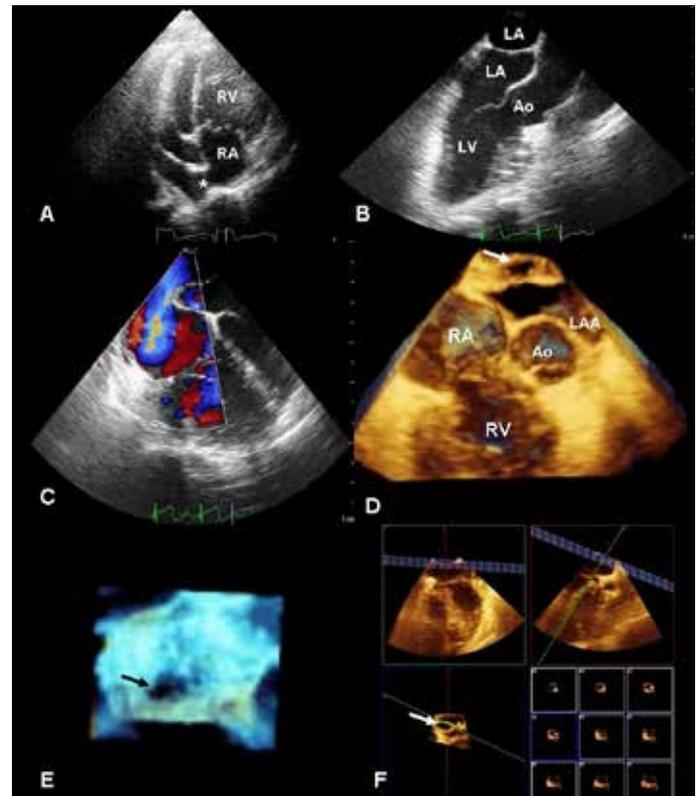


Figure 1. Two-dimensional transthoracic echocardiography revealed dilated right atrium and ventricle, atrial septal defect (ASD) and a membrane at the left atrium (A). Two-dimensional transesophageal echocardiography confirmed cor triatriatum sinister and ASD (B, C). Three-dimensional transesophageal echocardiography revealed a single opening on the fibromuscular membrane (D, E). The area of orifice using iSlice multi-planar review mode was 1.64 cm² (F)

Ao - aorta, Arrow - a single opening, asterisk - atrial septal defect, LA - left atrium, LAA - left atrial appendage, LV - left ventricle, RA - right atrium, RV - right ventricle

a patient with atrial septal defect. For cor triatriatum, three-dimensional transesophageal echocardiography may be useful in revealing the number, shape, area and location of the orifice in detail.

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Video 1. A) Two-dimensional transthoracic echocardiography revealing dilated right atrium and ventricle, atrial septal defect and a membrane at the left atrium, B, C) Two-dimensional transesophageal echocardiography confirming cor triatriatum sinister and atrial septal defect, D) Three-dimensional transesophageal echocardiography revealing a single opening on the fibromuscular membrane.

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