

Percutaneous transcatheter closure of giant coronary artery fistulizing to left ventricular cavity

Coronary-cameral fistula (CCF) is an uncommon congenital or acquired cardiac anomaly, which consists of an abnormal communication between a coronary artery and cardiac chamber. CCFs from the left circumflex coronary arteries are rare involved and drainage to the left ventricle (LV) is less common (less than 3%). We present a 32-year-old man who was admitted to our hospital with a history of fatigue, fever, and dyspnea on exertion. On the physical examination, there was a left parasternal murmur. Transthoracic echocardiography (TTE) showed vegetation on the mitral and aortic valve, and an abscess cavity was observed near the posterior mitral leaflet. With pulsed wave Doppler of the TEE image, the structure that was believed to be an abscess cavity was

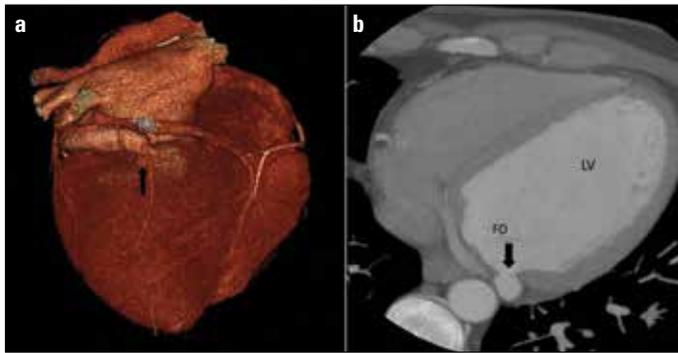


Figure 1. a, b. The fistulization of ectatic circumflex coronary artery to the LV is shown on "volume rendered" (VR) three dimensional view (arrow) (a). CT angiography showing the distal part of the large CCF (FO-fistula orifice) entering the LV (b)

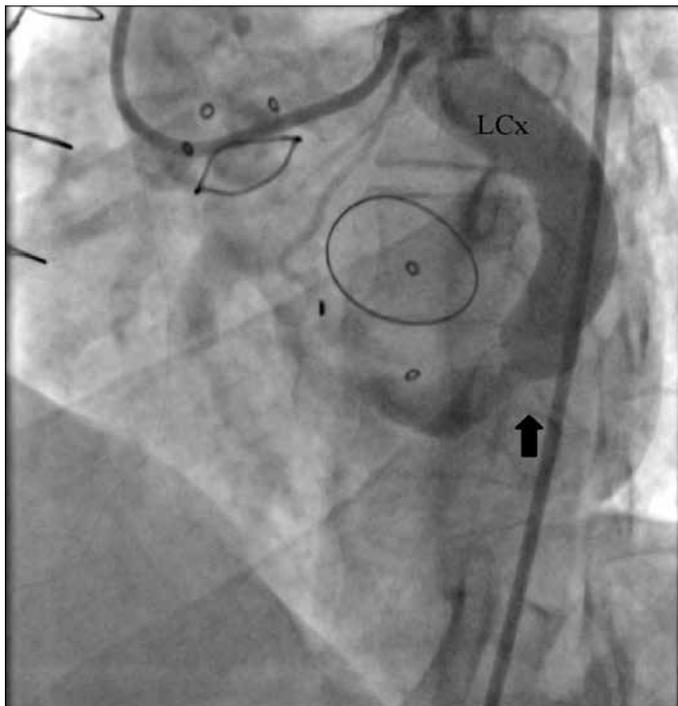


Figure 2. Cardiac catheterization (left anterior oblique 44°, cranial 2°) revealing coronary artery fistula, connecting ectatic circumflex artery (LCx) to LV (black arrows)

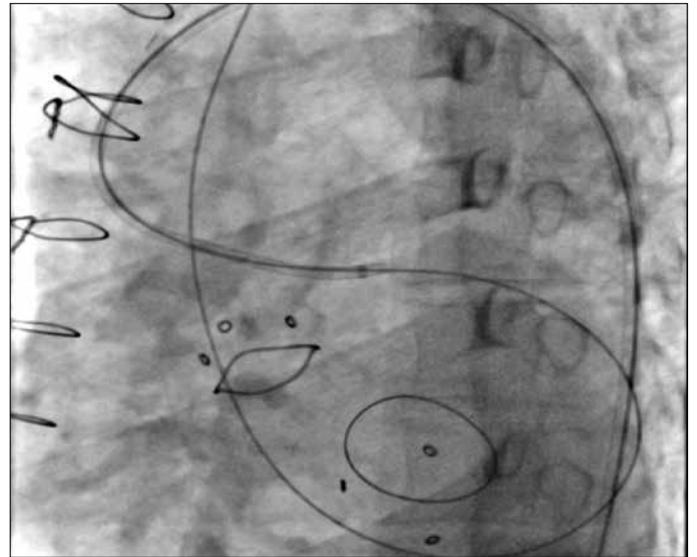


Figure 3. Cineangiogram image (left anterior oblique 44°, cranial 2°) showing a stiff wire

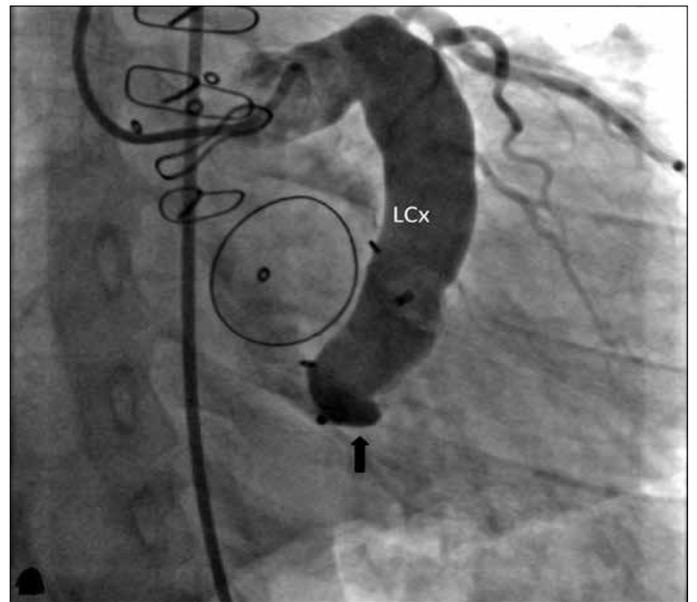


Figure 4. Selective left coronary angiogram (right anterior oblique 8°, caudal 20°) following fistula closure with Amplatzer vascular plug (arrow)
LCx - left circumflex artery

revealed to be dilated coronary arteries. A multi-slice computed tomography showed dilated left main and left circumflex (LCx) arteries. CCF was also recognized between the circumflex artery and the LV on the tomographic images (Fig. 1a, b). After valve operation, coronary intervention was planned for coronary fistula (Fig. 2). With a guiding catheter, a stiff wire was passed from LCx, through the fistula, into LV and aorta (Fig. 3). Next, an 18×14 mm Amplatzer Vascular Plug II (St. Jude Medical, St. Paul, Minnesota) was deployed at the distal portion of LCx (Video 1). After delivery of the vascular plug, the angiography showed that there was no contrast medium flowing into LV through the fistula (Fig. 4, Video 2). Transcatheter closure was a safe and effective treatment method for CCF.

Video 1. Amplatzer Vascular Plug II device released into distal portion of LCx

Video 2. After delivery of the vascular plug, there was no contrast medium flowing into LV through the fistula

Hüseyin Göksülük, Ahmet Alpman, Yusuf Atmaca, Menekşe Gerede, Özgür Ulaş Özcan, Çetin Erol
Department of Cardiology, Faculty of Medicine, Ankara University; Ankara-Turkey

Address for Correspondence: Dr. Hüseyin Göksülük, Ankara Üniversitesi, İbni Sina Hastanesi, Kardiyoloji Bölümü, 06410 Sıhhiye, Ankara-Türkiye
 Phone: +90 532 548 61 23
 Fax: +90 312 264 78 00
 E-mail: asklepion2009@yahoo.com

Available Online Date: 22.05.2015

©Copyright 2015 by Turkish Society of Cardiology - Available online at www.anatoljcardiol.com
 DOI:10.5152/akd.2015.6318

Giant coronary sinus of Valsalva aneurysm

A 29-year-old female was admitted to our hospital with nonspecific chest pain and dyspnea. Physical examination revealed systolic murmur. Laboratory findings were unremarkable. Transthoracic echocardiography revealed a cystic mass adjacent to the right atrium and ascending aorta that was believed to be a large aneurysm of right

coronary artery (RCA). Coronary computed tomography angiography (CTA) showed a relatively thin neck, bilobed, and giant aneurysm originating from the anterior right side of sinus of Valsalva, which measured 9 × 5 cm in diameter. There was eccentric calcification on the aneurysm wall. The aneurysm impressed the right ventricle and atrium and minimally displaced RCA (Fig. 1). These findings were confirmed with the catheter angiography (Fig. 2).

Sinus of Valsalva Aneurysm (SVA) is a rare entity that is most frequently observed in the right sinus. Associated cardiac anomalies are observed in most cases such as ventricular septal defect. It is usually asymptomatic if unruptured. In cases with ruptured SVA, fatal complications can be observed. Endovascular or open surgery is the choice of treatment.

Kemal Kara, Ersin Öztürk, Murat Yalçın*, Celalettin Yüksel', Onur Sıldırım*
Departments of Radiology and *Cardiology, Gülhane Military Medical Academy Haydarpaşa Training Hospital; İstanbul-Turkey
'Department of Radiology, Kayseri Military Hospital; Kayseri-Turkey

Address for Correspondence: Dr. Kemal Kara, Gülhane Askeri Tıp Akademisi Haydarpaşa Eğitim Hastanesi, Üsküdar, 34668 İstanbul-Türkiye

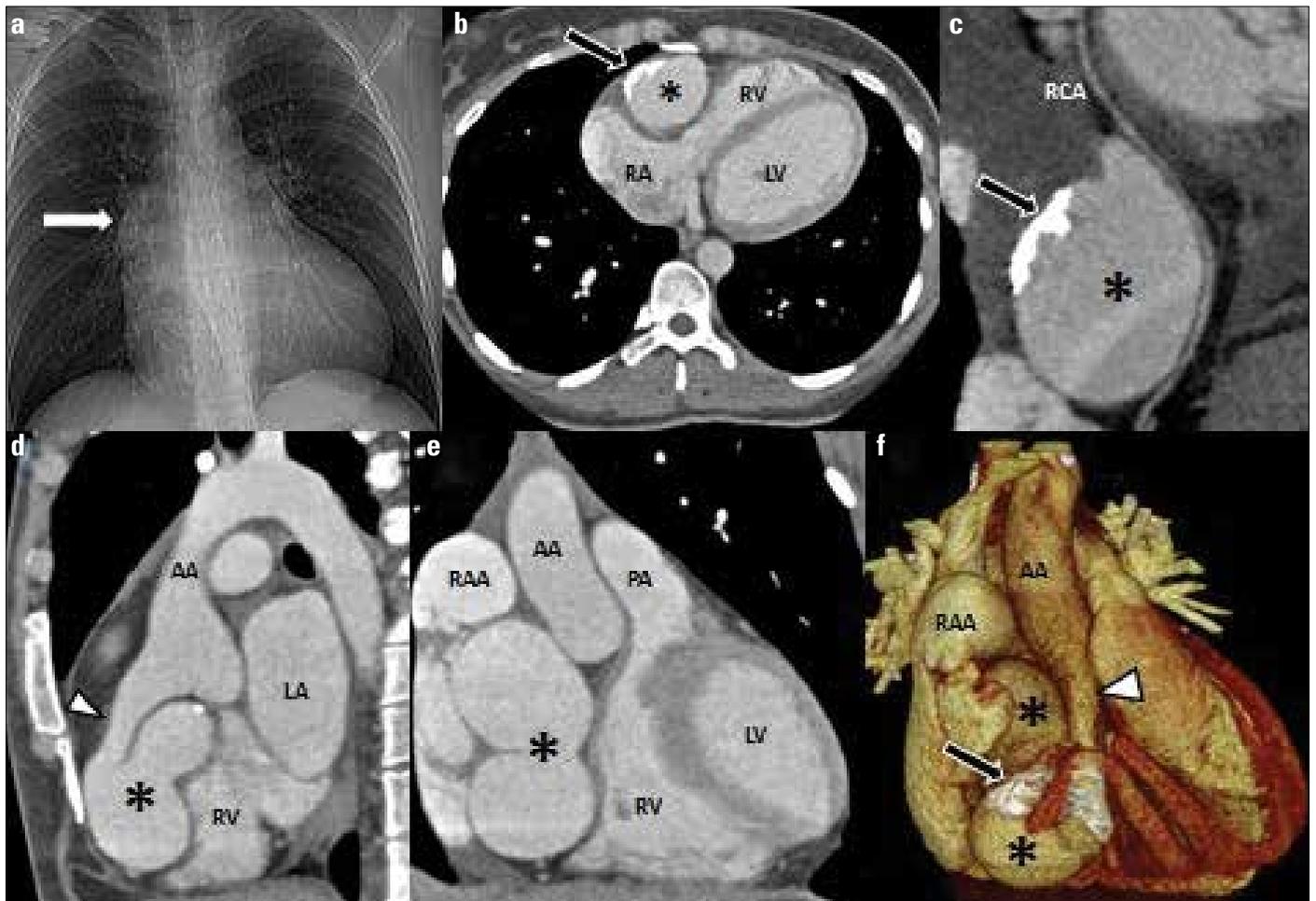


Figure 1. a-f. (a) Enlargement of the right hilum (arrow). (b) Axial CTA image shows SVA (*) and wall calcification (arrow). (c) Displaced RCA. (d) Sagittal and (e) coronal images show SVA with the adjacent structures and aneurysm neck (arrow head). (f) 3-D-CTA image shows orientation of the SVA

AA - ascending aorta; LA - left atrium; LV - left ventricle; PA - pulmonary artery; RAA - right atrial appendage