Partial detachment of the mitral valvular ring: importance of three-dimensional transesophageal echocardiography

A 56-years-old male patient was admitted to our hospital with exertional dyspnea. He had undergone coronary artery bypass graft surgery together with mitral ring annuloplasty (ST-Jude annuloplasty ring, size 27) for ischemic mitral regurgitation (MR) three months ago. Physical examination was normal except Levine 4/6 apical systolic murmur. No history of fever. Infective parameters were within normal limits. Two-dimensional (2D) transthoracic echocardiography revealed severe MR. Two and three-dimensional (2D, 3D) transesophageal echocardiography (TEE) were obtained with the same machine (transducer X7-2t, Philips Electronics, Andover, MA). Real time 3D, than off-line post-processing and 3D reconstruction were performed. The 2D TEE examination showed eccentric severe MR, and partial detachment of the mitral ring was suggested (Fig. 1a, b and Video 1, 2. See correspondening video/movie images at www.anakarder.com). 3D TEE reconstruction provided a comprehensive anatomic overview and confirmed the partial ring detachment. The ring was localized to the anterolateral septal annulus and the image was seemed like double orifice mitral valve (Fig. 1c, d and Video 3, 4. See correspondening video/movie images at www.anakarder.com). 3D-TEE can provide detailed anatomic information additional to standard 2D images. The patient was scheduled to elective surgical operation.

Mehmet Ertürk, Hale Ünal Aksu, İbrahim Faruk Aktürk
Clinic of Cardiology, İstanbul Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Training and Research Hospital; İstanbul-*Turkey*

Address for Correspondence: Dr. Mehmet Ertürk,
Mehmet Akif Ersoy Göğüs Kalp ve Damar Cerrahisi Eğitim ve Araştırma Hastanesi, Kardiyoloji Kliniği, İstasyon Mah.
Turgut Özal Bulvarı No:11 Küçükçekmece, 34303, İstanbul-*Türkiye*
Phone: +90 212 692 20 00
Fax: +90 212 471 94 94
E-mail: drerturk@gmail.com
Available Online Date: 19.03.2014

DOI:10.5152/akd.2014.5284

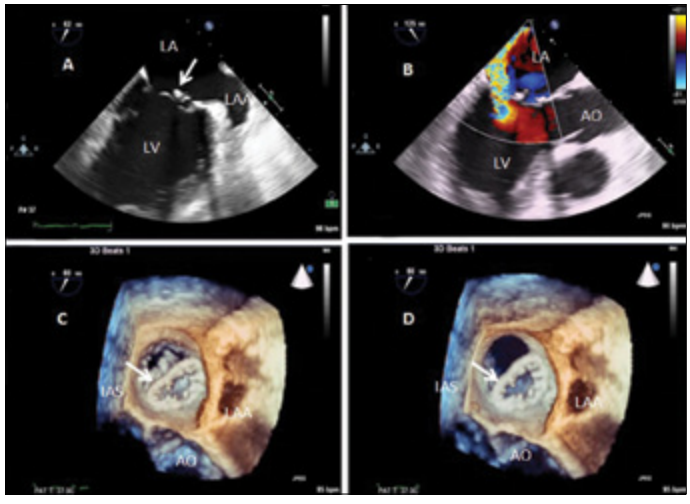

Figure 1. (A) 2D-TEE revealing possible partial detachment of the mitral ring. (B) severe MR. Real-Time 3D-TEE confirming the ring detachment during systole and diastole. The image was seemed like double orifice mitral valve. (C, D)
AO - aorta; IAS - interatrial septum; LAA - left atrial appendage; LV - left ventricule

An excellent collateralization between left internal mammary artery to left external iliac artery

A 59-years-old man applied to hospital cause of stable angina pectoris. Although he had claudicatio and erectil disfunction that was understood during to anamnesis interrogation. Owing to patient complain and weakness in distal lower extremity pulses coronary and peripheric angiogram was done in same seance. Three vessels disease in coronary arteries (Fig. 1A-1C) and total occlusion in abdominal aorta at level of second lumbar vertebra (Fig. 1D, Video 1. See correspondening video/movie images at www.anakarder.com) were detected. Since abscense of excessive ischeamic finding while abdominal aorta totaly occluded a left internal mammary artery (LIMA)angiogram was proceeded to search collateralisation. A connection between LIMA and left external iliac arter was detected (Fig. 2, Video 2. See correspondening video/movie images at www.anakarder.com). His coronary bypass surgery was done firstly and peripheric operation planned in another seance. LİMA was not used cause of this network. LİMA to left external iliac arter connection is one of the systemic to systemic collateralisation and this protects ischemia of lower extremites in patients with Leriche syndrome. It is important to find out this connection in patient with Leriche syndrome and that will undergo coronary bypass operation. Otherwise using LIMA as a greft could bring fatal results.

Barçın Özcem, Kamil Gülşen*, Levent Cerit*
Department of Cardiovascular Surgery and *Cardiology, Faculty of Medicine, Near East University, Nicosia-*Northern Cyprus*

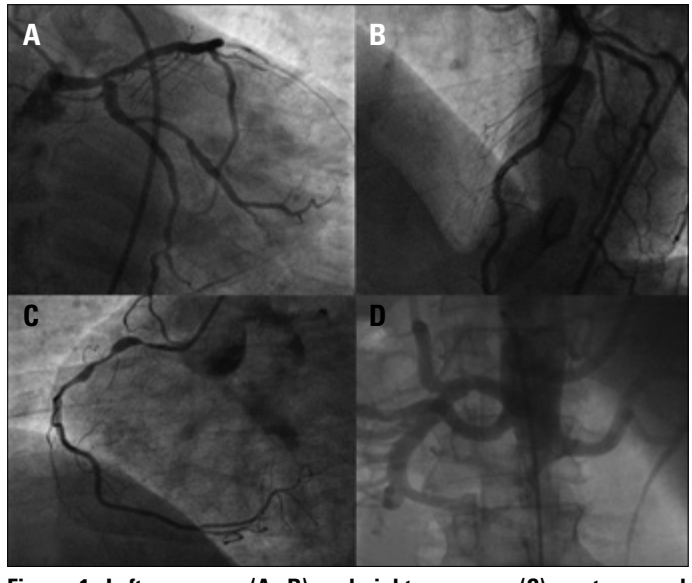

Figure 1. Left coronary (A, B) and right coronary (C) anatomy and abdominal aortography (D) of the patient

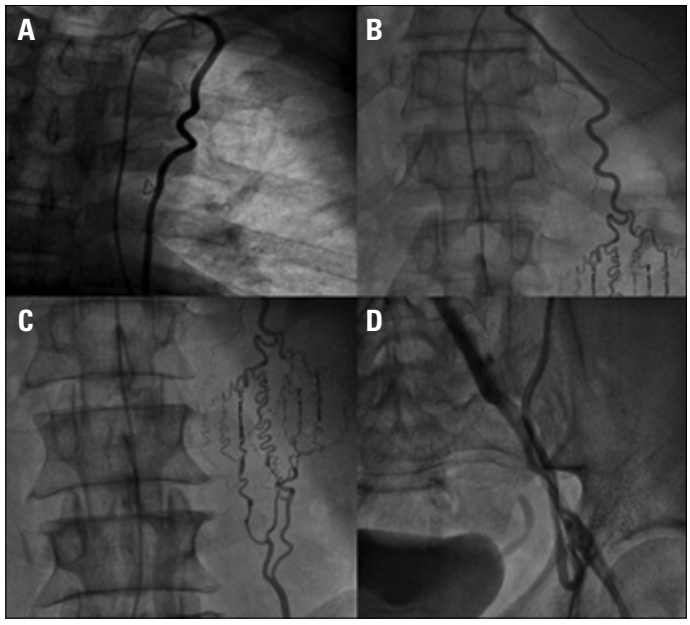

Figure 2. Connection of LIMA to external iliac artery through to superior and inferior epigastric artery

Video 1. Patients abdominal aortography

Video 2. LIMA angiogram. Collateralization between LIMA to left external iliac artery via to epigastric arteries

Address for Correspondence: Dr. Barçın Özcem,
Yakın Doğu Üniversitesi Tıp Fakültesi, Kalp Merkezi;
Lefkoşa-*Kıbrıs*
Phone: +90 533 855 19 82
E-mail: drbarcinozcem@gmail.com

Available Online Date: 19.03.2014

DOI:10.5152/akd.2014.5299