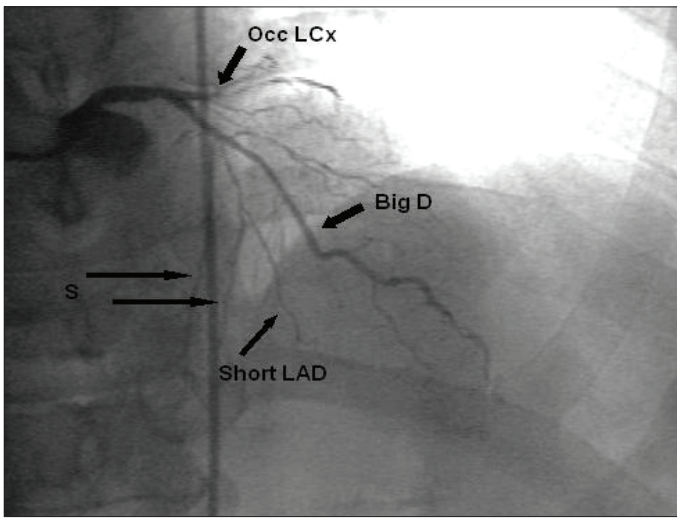


## An unusual coronary artery anomaly: type IV double left anterior descending coronary artery

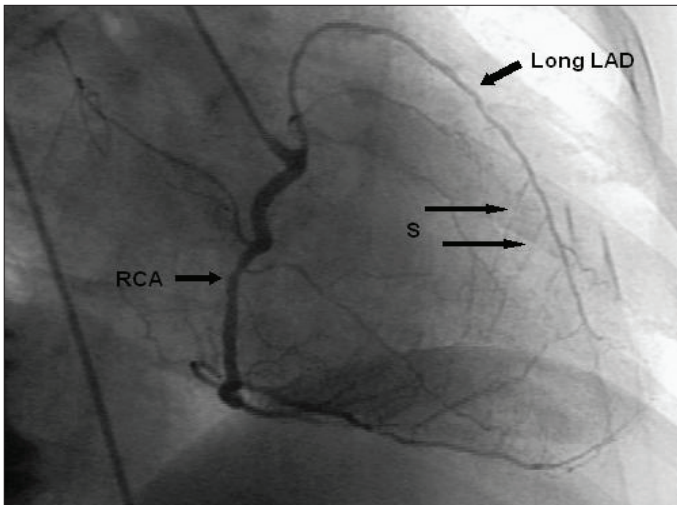
### *Nadir bir koroner arter anomalisi: Tip IV çift sol ön inen koroner arter*

A 64-year-old female was admitted with angina refractory to medical therapy. Hypertension, diabetes mellitus and dyslipidemia were present as risk factors for coronary atherosclerosis. Physical examination and laboratory evaluation revealed no significant pathology. Selective coronary angiography was performed. Initially,



**Figure 1. Anterior-posterior cranial view of the left coronary system demonstrating prematurely terminated LAD after giving rise to its septal and diagonal branches, and nonperfused area without collateral circulation. An occluded LCx is also seen**

D - diagonal artery, LAD - left anterior descending artery, LCx - left circumflex artery, occ - occluded, S - septal branches



**Figure 2. Right anterior oblique view of the right coronary system demonstrating normal positioned RCA and an aberrant coronary vessel originating from proximal RCA and coursing in the anterior interventricular groove**

LAD - left anterior descending artery, RCA - right coronary artery, S - septal branches

during the left system arteriography, a patent left anterior descending coronary artery (LAD) and an occluded left circumflex coronary artery were demonstrated. However, after performing the right coronary arteriography, the left system was reviewed again. A large diagonal branch had been considered as LAD. It was realized that LAD terminated prematurely in its course after giving rise to septal and diagonal branches, and the appearance of an avascular area in the distribution of the LAD and no collateral circulation were seen (Fig. 1). In addition, the right coronary arteriography revealed additional longer artery originating from the proximal portion of the right coronary artery. Its septal perforators and course helped us to accept the artery as LAD (Fig. 2). We realized that this coronary anomaly was a rare type IV double LAD coronary artery. During standard coronary angiography, this aberrant artery might be failed to visualize appropriately. Coronary angiography might also be misinterpreted showing a totally occluded LAD from its mid portion, and inaccurate therapeutic decisions might be made because of the presence of coronary anomalies as a possible and often neglected cause of chest pain. Therefore, double LAD might be considered when left coronary angiography reveals a prematurely terminated LAD in its course and a nonperfused distal area without collaterals.

**Serkan Çay, Ramazan Atak**  
Department of Cardiology, Yüksek İhtisas Heart-Education and Research Hospital, Ankara, Turkey

**Address for Correspondence/Yazışma Adresi:** Dr. Serkan Çay  
Oba Sokak 11/6 Hürriyet Apt. 06480, Cebeci, Ankara, Türkiye  
Phone: +90 312 319 65 68 Fax: +90 312 287 23 90  
E-mail: cayserkan@yahoo.com

©Telif Hakkı 2010 AVES Yayıncılık Ltd. Şti. - Makale metnine [www.anakarder.com](http://www.anakarder.com) web sayfasından ulaşılabilir.  
©Copyright 2010 by AVES Yayıncılık Ltd. - Available on-line at [www.anakarder.com](http://www.anakarder.com)  
doi:10.5152/akd.2010.051

## Single coronary artery in a patient with acute myocardial infarction: atypical connection of left main coronary artery with left coronary system

### *Akut miyokard infarktüsülü hastada tek koroner arter anomalisi: Sol ana koroner arterin sol koroner sisteme atipik bağlantısı*

A 47-year-old man was admitted to the hospital with infero-postero-lateral acute myocardial infarction and immediately transferred to the catheterization laboratory. The left coronary system could not be visualized. Selective right coronary angiography showed a left coronary artery ostium originating from the right sinus of Valsalva. Proximally coursing bifurcation branch of left main coronary artery (LMCA) was occluded just after giving left anterior descending (LAD) branch (Fig. 1). Primary percutaneous coronary balloon angioplasty was performed and TIMI III flow was obtained (Fig. 2).

A 64- slice multidetector computed tomography (CT) was performed at the fifth day of admission. Multidetector CT revealed a single coronary system originating from the right coronary sinus, which was divided into right and left main coronary arteries. After a long course, LMCA was divided into two branches, distal and proximal LAD at the