

**Case Report**
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## A Case of Dual Left Anterior Descending Artery (LAD) With Myocardial Infarction from Short LAD

Deepak Agrawal\*, Ashok Garg and G L Sharma

<sup>1</sup>Consultant Cardiologist, Jaipur Heart Institute, Jaipur

<sup>2</sup>Senior Consultant and Head, Department of Preventive and Noninvasive Cardiology, Jaipur Heart Institute, Jaipur

<sup>3</sup>Consultant Interventional Cardiologist, Jaipur Heart Institute, Jaipur

**\*Corresponding author**

Dr. Deepak Agrawal, consultant Cardiologist, Jaipur Heart Institute, Jaipur. Tel: 8058608690; 8376985851; E-mail: drdeepakagrawal1984@gmail.com

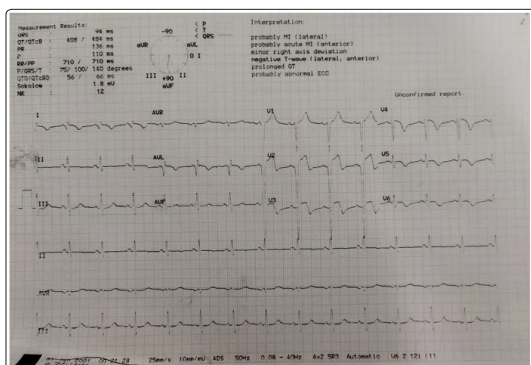
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A 61-year-old male patient came to our hospital with acute onset retrosternal chest pain radiating to left arm with sweating for 3-4 hours. On physical examination, his blood pressure was 150/70 mmHg, and his heart rate was 84 beats/min. Electrocardiography showed ST segment elevation in anterior precordial leads, suggestive of acute anterior wall ST elevation MI (Figure 1). Echocardiography revealed regional wall motion abnormality in LAD artery territory (Video 1). He was urgently taken for coronary angiography which revealed presence of dual Left Anterior Descending (LAD) coronary artery. One long LAD was arising from Right Coronary Artery (RCA) which was normal (Figures 2 & 3, Video 2 & 3). Another short LAD was arising from Left Main Coronary Artery (LMCA) and having significant lesion in its proximal part responsible for myocardial infarction (Figure 4, Video 4 & 5). Therefore, his primary coronary angioplasty with stenting was done immediately (Figure 5, Video 6).

A dual left anterior descending (LAD) artery is a rare coronary anomaly with an estimated incidence of 0.03–0.2% among patients undergoing routine coronary catheterization. It is defined as the presence of both short and long LAD arteries. Awareness of the different types of dual LAD artery anomalies (Table 1) is critical when planning percutaneous and surgical reperfusion strategies. In our case there was presence of type-6 LAD having lesion in short LAD and it was managed successfully with primary coronary angioplasty [1,2].

**Table 1: Classification of the Dual Left Anterior Descending Artery**  
**Classification of the Dual Left Anterior Descending Artery**

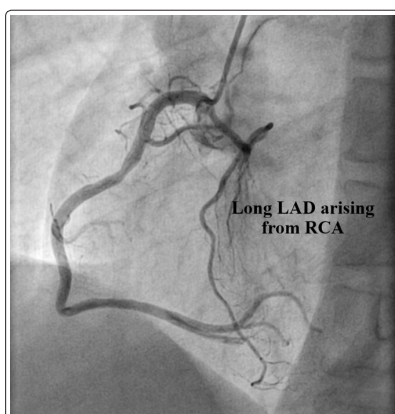
Type of dual LAD	LAD Proper	Short LAD Origin	Long LAD Origin
Type-1	Present	From LAD proper	From LAD proper
Type-2	Present	From LAD proper	From LAD proper
Type-3	Present	From LAD proper	From LAD proper
Type-4	Absent	From LMCA	From RCA
Type-5	Absent	From LCS	From RCS
Type-6	Absent	From LMCA	From RCA
Type-7	Absent	From LMCA	From RCS
Type-8	Absent	From LMCA	From mid RCA
Type-9	Present	From LAD proper	From LAD proper



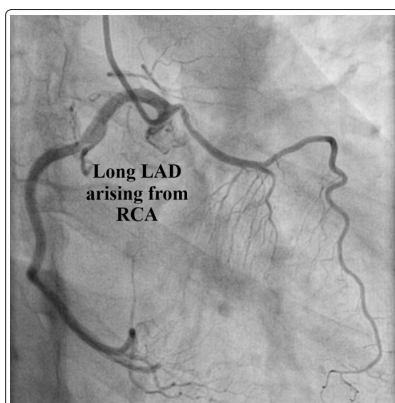
**Figure 1:** Electrocardiography showing ST segment elevation in anterior precordial leads



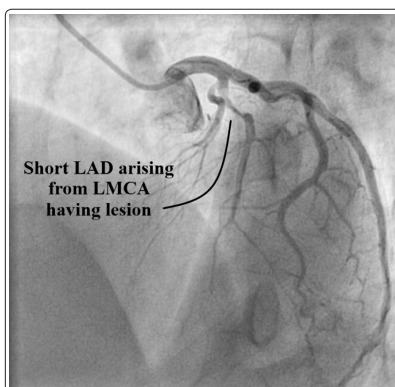
**Figure 5:** Coronary angiographic projection showing short LAD after coronary angioplasty with stent placement



**Figure 2:** Coronary angiographic projection showing long LAD arising from RCA



**Figure 3:** Coronary angiographic projection showing long LAD arising from RCA.



**Figure 4:** Coronary angiographic projection showing short LAD arising from LMCA having significant lesion

**Video 1**

2 D echocardiography view showing regional wall motion abnormality in LAD artery territory.

**Video 2**

Coronary angiographic projection showing long LAD arising from RCA.

**Video 3**

Coronary angiographic projection showing long LAD arising from RCA.

**Video 4**

Coronary angiographic projection showing short LAD arising from LMCA having significant lesion.

**Video 5**

Coronary angiographic projection showing short LAD arising from LMCA having significant lesion.

**Video 6**

Coronary angiographic projection showing short LAD after coronary angioplasty with stent placement.

**References**

1. Dheeraj AB, Giri SK, Ghormade PS (2020) A case of dual left anterior descending artery with myocardial infarction. Autopsy Case Reports [Internet] 10: e2020223.
2. Manchanda A, Qureshi A, Brofferio A, Go D, Shirani J (2010) Novel variant of dual left anterior descending coronary artery. Journal of Cardiovascular Computed Tomography 4: 139-141.

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