Marathwada Medical & Research Institute
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CARDIOLOGY CHRONICLES

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Type 4 Dual LAD: Two Cases

Case 1 : 52-years-old male with unstable angina was taken for PCI. Left coronary angiogram revealed a small LAD barely reaching half way mark in the inter ventricular (IV) groove (Video 1,2). RCA angiogram revealed origin of a vessel from the right cusp that traversed to the IV groove to form the distal half of LAD (Video 3,4). There was a critical lesion in RCA that was stented successfully (Video 5).

Case 2: 69-years-old male presented with ACS. Coronary angiogram revealed a small LAD that appeared to have been cut-off after a large diagonal (Video 6). RCA angiogram revealed origin of a vessel that traversed to the IV groove to form the distal half of LAD (Video 7). This patient also had a significant lesion in RCA that was successfully stented (Video 8).

The left anterior descending (LAD) coronary artery has the most constant origin, course, and distribution in the human heart; anomalies are rare. Dual LAD was first reported and classified into four types by Spindola-Franco et al. [1] Among these four types, a type 4 anomaly comprises two LADs: a short LAD that originates from the left coronary arteries, terminates in the middle of the anterior interventricular sulcus (AIVS), and does not reach the apex, and a long LAD that originates from the right coronary artery (RCA) transverse to the right ventricular infundibulum, enters the AIVS, and courses to the apex. Type 4 dual LAD is one of the rarest of coronary anomalies. Here, we report two cases of type 4 dual LAD arising from the left and right coronary arteries with superimposed atherosclerotic coronary artery disease (CAD).

Clinical relevance:

* Most often incidental

* Important to recognize during CABG, PCI, or imaging, to avoid missing one of the LADs.

Reference:

1. Spindola-Franco H, Grose R, Solomon N. Dual left anterior descending coronary artery: angiographic description of important variants and surgical implications. Am Heart J 1983;105:445–455.