



2019- A-8- SCCT

## Atherosclerotic Coronary Artery Disease in Single Coronary Artery with Dual LAD: A Rare Case of Diagnostic Challenge

Keyur Vora (MD MSc FACP.)

Kiran Multispeciality Hospital &amp; Research Center, Surat, India

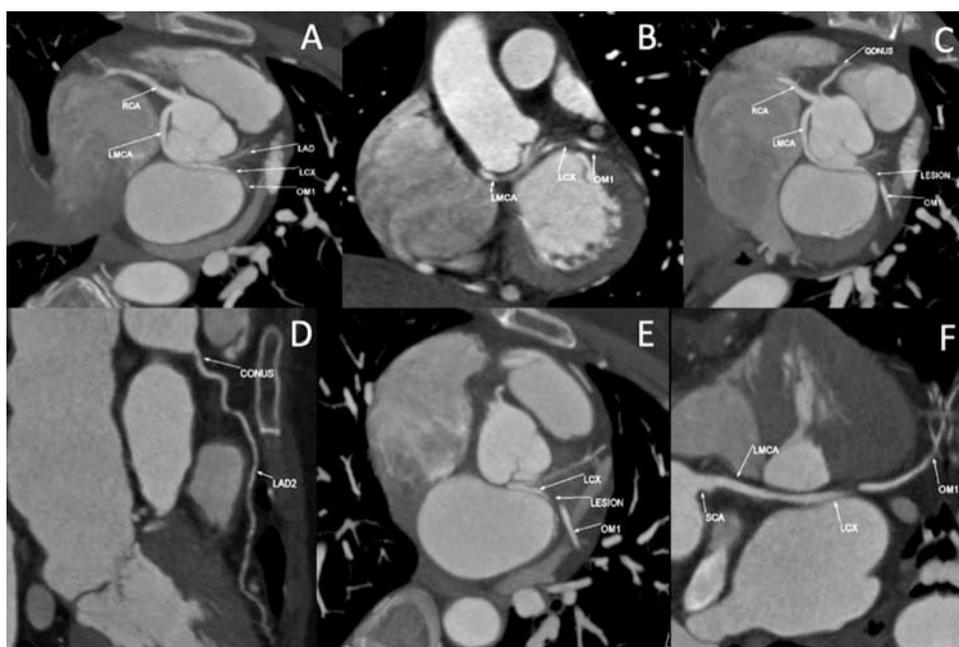
**Introduction:** Coronary anomalies affect a small percentage of the general population. A solitary coronary ostium (SCA) in the absence of other major congenital anomalies is very rare. The use of cardiac computed tomography (CCT) allows visualization of the coronary anatomy in a 3-dimensional image and demonstrated an added value to coronary angiography. We report cases of single coronary arteries classified as per Shirani Roberts classification criteria. The theoretical variants of these type of malformations have been described but have not been reported in clinical case before.

**Methods:** Case Summary: A 55-year-old female patient presented for evaluation of angina (CCS Class II). CTA revealed SCA arising from the RCC & divides into the LMCA & RCA from the origin (Fig.A). LMCA arises from the SCA & courses posteriorly & inferiorly (retroaortic) (Fig.B). & divides into the LAD1 & LCX at the proximal left AV groove. LAD1 (2 mm vessel) arises from the LMCA at the proximal left AV groove & courses superiorly & anteriorly in the anterior interventricular groove & supplies the proximal 2/3rd of the anterior interventricular septum. Proximal segment has a calcified plaque with mild narrowing. LAD2 (1.7 mm vessel) arises from the conal branch (Fig.C & D). It courses anteriorly & superiorly around the RVOT & supplies

the distal 1/3rd of the anterior interventricular septum. LCX arises from the LMCA at the proximal left AV groove & courses inferiorly & posteriorly in left AV groove (Fig.E). Proximal segment has a noncalcified plaque with severe narrowing extending to OM1 branch. OM1 is a large vessel with osteo-proximal noncalcified plaque having severe narrowing (Fig.F). RCA arises from the single coronary artery 3 mm distal to the right coronary cusp and courses in the right AV groove & supplies the inferior wall. Mid segment has a calcified plaque with mild narrowing. Distal segment is normal. PDA is a large vessel; supplying the entire interventricular septum upto the LV apex.

**Results:** Finally, it is an example of Shirani Roberts Subtype IIB4 with single vessel disease. The stress MIBI scan further confirmed the inducible ischemia in LCX-OM territory.

**Conclusions:** The incidence of coronary anomalies is clinically relevant in view of the fact that they are the cause of sudden cardiac death. Our case report depicts localization of lesion is one of the challenging task in analysis of atherosclerotic coronary artery disease in SCA. However, localization of lesion is possible in CTA and thus accurately diagnose the ischemic territory.



<https://doi.org/10.1016/j.jcct.2018.12.005>

Available online 05 January 2019

1934-5925/ © 2019 Published by Elsevier Inc. on behalf of Society of Cardiovascular Computed Tomography