

Anomalous right coronary artery originating from the distal left circumflex artery: A novel coronary artery anomaly viewed by computed tomography and invasive angiography

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A 69-year-old woman with no coronary risk factors was referred for evaluation of recurrent chest pain.

Coronary angiography demonstrated that the left main, left anterior descending and circumflex arteries had no significant stenoses. However, the circumflex artery had a large continuation, extending in a right coronary artery (RCA) distribution (Figures 1A and 1B). The RCA could not be found selectively; an aortogram confirmed the absence of an RCA from the right sinus of valsalva.

To exclude an intramuscular or malignant course to the artery, a 64-slice coronary computed tomographic angiogram was performed. The distal circumflex artery was found to give rise to the entire right coronary circulation on the volume-rendered (Figure 1C) and curved multiplanar reconstruction images (Figure 1D).

A single coronary artery is a rare condition that is often associated with other congenital anomalies. The present article describes a novel anomalous coronary artery variant in which the RCA originated from the distal left circumflex artery and had no malignant course. This was

compatible with the Lipton L1 classification of single coronary artery anomalies (1). The absence of the RCA ostium originating as a continuation of the distal left circumflex artery is extremely rare, with an incidence of 0% to 0.035% (2). Such an anomaly is not expected to cause ischemia or any other complication.

The patient received no intervention and was placed on medical management with reassurance. She was doing well after 12 months. The present case illustrates the importance of cardiovascular computed tomography as an adjunct to clarify the course and nature of coronary artery anomalies.

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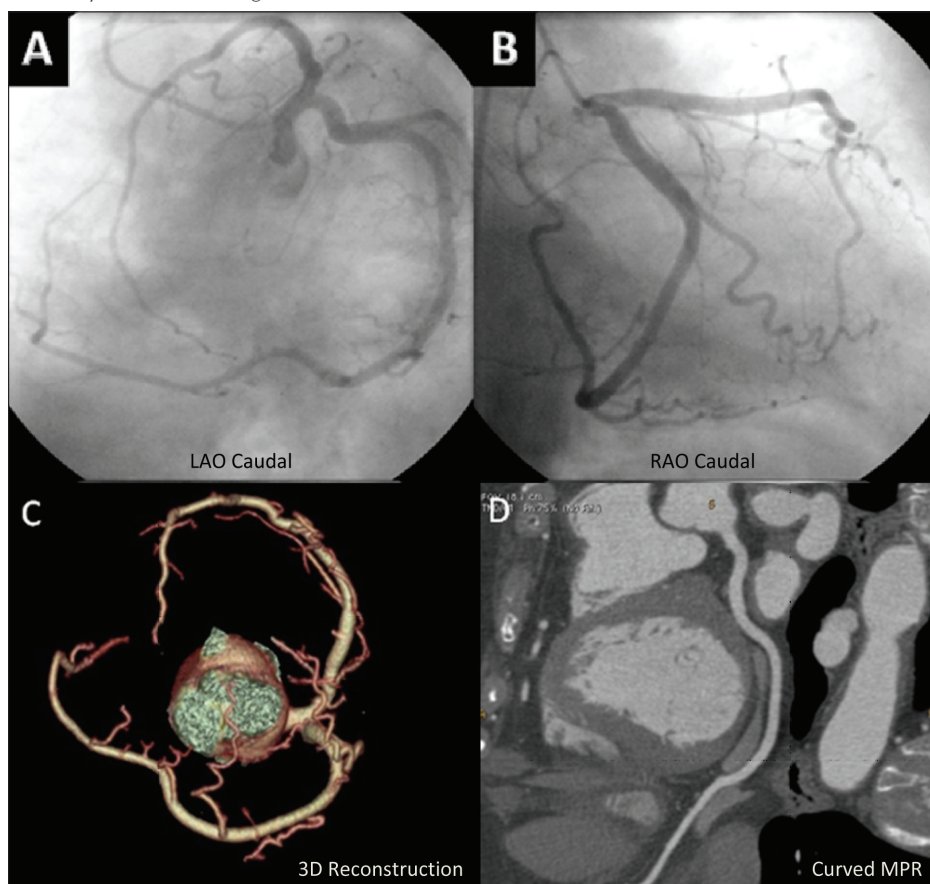


Figure 1 3D Three-dimensional; LAO Left anterior oblique; MPR Multiplanar reconstruction; RAO Right anterior oblique

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