Absent Left Circumflex Artery and Unusual Dominant Right Coronary Artery

A 57 year old, diabetic female presented in emergency department with atypical chest pain. Her physical examination was unremarkable. Routine blood and urine biochemistry were within normal limits. Electrocardiogram showed left bundle branch block, with nonspecific ST-T changes. Chest X-ray and 2D-echocardiogram revealed no abnormality. Coronary angiography demonstrated existence of only left anterior descending artery (LAD) with a large diagonal branch and absent left circumflex artery (Fig. 1). The right coronary artery was superdominant and continued beyond crux, along entire length of left atrio-ventricular groove, between left atrium and left ventricle, to supply posterior and lateral aspect of left ventricle (Fig. 2).

Coronary artery anomalies are rare entities. Overall incidence being 0.6-1.3%. The most commonly occurring congenital anomaly of coronary vessels, is the left circumflex artery originating from the right coronary artery. Other anomalies include-origin of left coronary artery from pulmonary artery, origin of right coronary artery from left sinus of valsalva, presence of a single coronary artery, hypoplastic coronary vessels, coronary artery aneurysms and coronary artery fistula.

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