

Shirani-Roberts IB4 – Rare Type of Benign Single Coronary Artery Diagnosed by Cardiac Computed Tomography



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Abbreviations: LCC: Left Coronary Cusp; RCA: Right Coronary Artery; LAD: Left Anterior Descending; LMCA: Left Main Coronary Artery; LCX: Left Circumflex Coronary Artery; OM: Obtuse Marginal; PDA: Posterior Descending Artery; PLVB: Posterolateral Ventricular Branch; SCA: Single Coronary Artery

Opinion

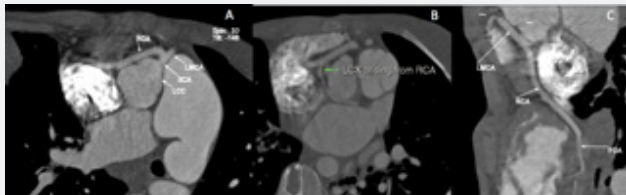


Figure A, B & C

A 14-year-old female patient presented for evaluation of dyspnea (NYHA Class III). CTA revealed bifurcation arising from the single coronary artery 1 cm distal to the Left Coronary Cusp (LCC). Right Coronary Artery (RCA) courses normally at right AV groove. Left Anterior Descending coronary artery (LAD) courses anterior to the main pulmonary artery and supplies the anterior interventricular septum (Figure A). Left Main Coronary Artery (LMCA). Segment is absent. Diagonal branch (D1) is a large vessel arising from LAD and supplies the anterior wall. Left Circumflex Coronary Artery (LCX) arises from the RCA at the Anterior Interventricular groove (AV) (Figure B) and has a retroaortic course and supplies the inferolateral wall. Obtuse Marginal Branch (OM) is a moderate size vessel; Arises from the LCX at the left AV groove and supplies the inferolateral wall. RCA arises from

the single coronary artery 1 cm distal to the left coronary cusp and courses posteriorly and to the right and supplies the inferior wall. Posterior Descending Artery (PDA) arises from RCA and supplies the posterior interventricular septum. Posterolateral Ventricular Branch (PLVB) arises from RCA and supplies the posterolateral wall of the LV (Figure C). As per the classification system, this coronary system is a benign single coronary artery of Shirani-Roberts Subtype IB4 [1].

Single Coronary Artery (SCA) is a rare congenital anomaly that is observed in approximately 0.02% of the population [2]. We report one of the rare forms of SCA type. The course of coronary arteries and angle of origin in single coronary artery anomalies predisposes to acute myocardial infarction and sudden cardiac death especially during exercise and exertional physical activities.

References

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