

Letter to Editor

Controversy in Managing Coronary Artery Anomaly with Co-Existing Coronary Artery Atherosclerosis in a Young

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We read the case report by Singh et al. with interest [1]. They present a case of a 34-year-old hypertensive man with symptomatic 3 vessel coronary artery disease on invasive coronary angiography. He underwent myocardial perfusion scintigraphy with normal perfusion at high workload (12.8 METS and with a double product of 35,720 and had normal left ventricular systolic function on echocardiography. The subsequent CT coronary angiography (CCTA) has described non-occlusive plaques in the left anterior descending coronary artery and proximal Right Coronary Artery (RCA) with an incidental finding of the anomalous RCA originating from the left sinus of Valsalva (LSoV). After this reassuring finding patient underwent invasive coronary angiography that has revealed multivessel disease including 75% LAD, OM1 and OM2 85% and RCA 80% stenosis and coronary artery by-pass graft surgery was recommended.

We would like to raise some points in arguing the appropriateness of this patient's surgical management. ESC and ACC/AHA guidelines recommend optimized medical treatment in patients with low-risk presentation based on typicality of chest pain and the functional test results as in this patient [2]. CCTA is known to have low positive predictive accuracy and tends to overestimate the degree of CAD. It was therefore surprising to see that the degree of the diameter stenosis was underestimated as well as the extent of coronary artery disease in this patient by CCTA was not recognized. One may argue that based on the functional and the non-invasive anatomical test results the best medical practice would have been tight risk factors control and guidelines based optimal medical management. The incidental finding of the CCTA of the Congenital Coronary Artery Anomaly (CCAA) with the RCA originating from the LSoV with inter-arterial course, based on the current clinical evidence, should not have changed management. Indeed, several prospective and

retrospective observational studies showed that this type of CCAA is not associated with premature or sudden cardiac death in contrast with those when the left coronary artery arises from the right sinus of Valsalva with inter-arterial course [3,4]. Our case-controlled study of 10 patients with the anomalous RCA from the LSoV showed no objective evidence of inducible ischemia on different functional test modalities and showed no event free survival difference compared to age sex and coronary artery disease severity disease matched controls in agreement with other studies [3,4]. In addition, since coronary grafts especially venous grafts have limited life expectancy [5], and one would assume that this young patient would need to undergo further revascularization in the future.

We would suggest that best guideline based clinical practice with additional supportive evidence should guide our daily clinical judgement even in cases with complex coronary anatomy to the best interest of our patients [6].

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