

Intra-Atrial Course of the Right Coronary Artery

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INTRODUCTION

Coronary artery anomalies have an incidence of approximately 1% and may involve the coronary origin, course, or termination.¹ Fortunately, many of the anomalies are clinically silent and inconsequential, although a proportion have a malignant course and can predispose to ischemia or sudden cardiac death. We describe a patient with the rare anomaly of intra-atrial/intracavitary course of the right coronary artery.

CASE PRESENTATION

A 61-year-old female with cardiac risk factors underwent coronary computed tomography angiography (CCTA) for evaluation of intermittent chest pain. Although the CCTA showed normal coronary arteries with no obstructive disease, it revealed a 39-mm long segment of the mid right coronary artery having an intra-atrial/intracavitary course as demonstrated via the multiplanar reconstruction CT images at maximum intensity projection (Figure 1A, 1C, and 1D) as well as 3-dimensional reconstruction CT imaging (Figure 1B).

DISCUSSION

First reported in 1975, intra-atrial course of the right coronary artery was thought to be an exceedingly rare anomaly and in fact has an incidence of 0.36%.² However, with the advent

of CT, it is being diagnosed and reported more often. Although it is not implicated as a cause of myocardial ischemia or sudden cardiac death, it is an important entity to recognize given the risk of injuring the right coronary artery during procedures involving the right atrium.

Keywords:

coronary anomalies, intra-atrial course of the right coronary artery, coronary computed tomography

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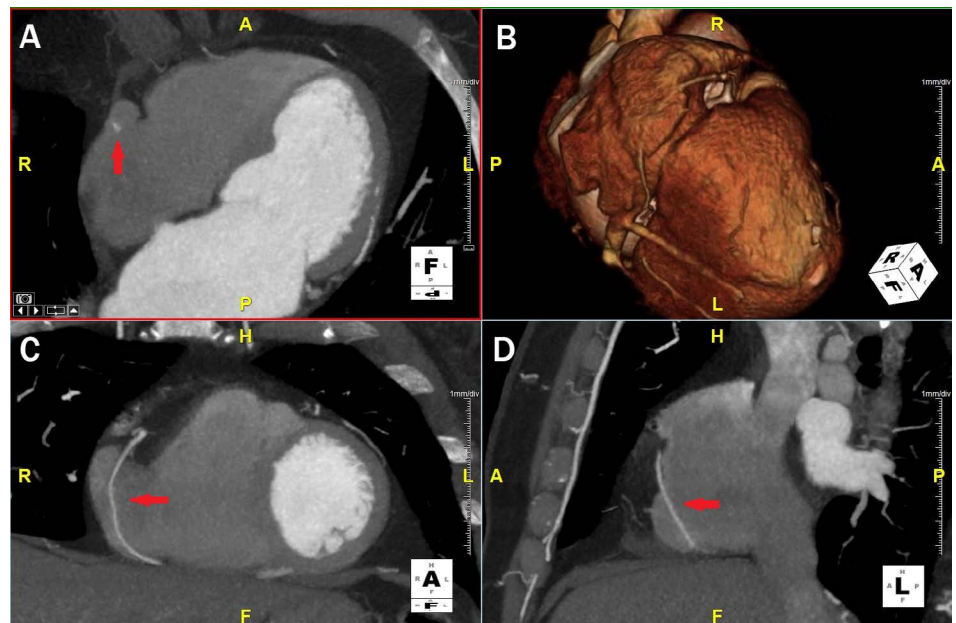


Figure 1.

Multiplanar reconstruction computed tomography (CT) images at maximum intensity projection showing intra-atrial course of the right coronary artery. Panel B is a 3-dimensional (3D) reconstruction CT image showing intra-atrial course of the right coronary artery. Yellow letters and 3D boxes describe the anatomical orientation of the image. A: anterior; P: posterior; R: right; L: left; F: feet; H: head