

# ANOMALOUS ORIGIN OF THE RIGHT CORONARY ARTERY DIAGNOSED BY CARDIAC COMPUTED TOMOGRAPHY

Siva K. Kumar, MD, Faisal Shaikh, MD, Paul J. Mather, MD

## Case Presentation

A 34 year old female with no significant past medical history presented with intermittent left shoulder and chest pain. The pain was burning in nature over her left chest and radiated to her left arm. There were no alleviating or exacerbating factors. Initial electrocardiogram showed sinus bradycardia. Cardiac computed tomography angiography revealed anomalous origin of the right coronary artery, which arises from the left sinus of Valsalva (Figure 1) and then travels towards the right side between the pulmonary outflow tract and the aortic root, where it shows mild narrowing of about 50%, (Figure 2) for a length of approximately 1 cm. The woman performed 9 mets during her exercise stress nuclear test which demonstrated electrocardiographic evidence of ischemia with normal myocardial perfusion.

## Discussion

Cardiac ischemia in this setting is presumed to be caused by compression of the anomalous right coronary artery (RCA) as it courses between the PA and the aorta during exercise. Coronary artery anomalies are noted on approximately 1.3% of all cardiac catheterizations.<sup>1</sup> Anomalous origin of the RCA from the left sinus of Valsalva has been reported in approximately 0.03–0.09% of patients undergoing coronary angiography. Although previously considered to be a rare, but benign anomaly, more recently it has been associated with myocardial ischemia, infarction and sudden death in up to 30% of patients.<sup>1-7</sup> Patients may be at risk for premature atherosclerosis. In the setting of an obstructive lesion, these vessels are amenable to successful



Figure 1.

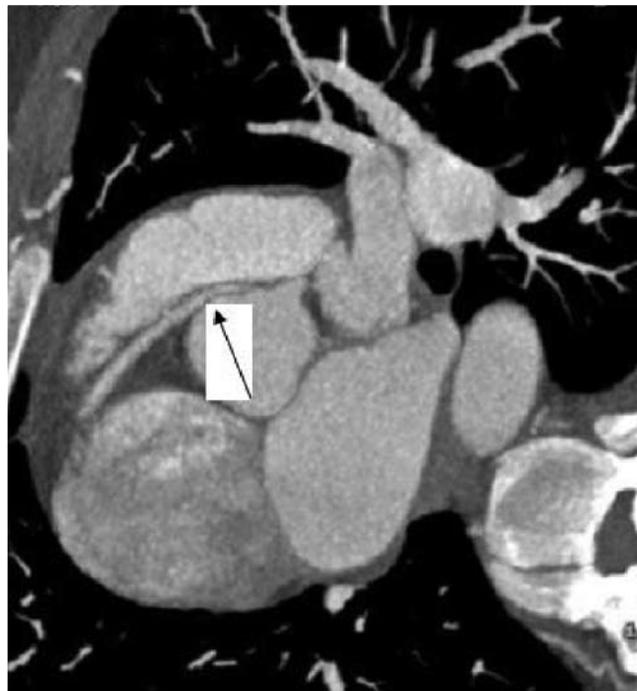


Figure 2.

percutaneous coronary intervention and stent placement.<sup>8</sup> The patient has been asymptomatic for the past year while being treated with beta blockers.

## References

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