An Anomalous Left Coronary Artery from the Right Sinus of Valsalva

John Lausch*, Samir Mehta, DO, Hussain Azizi, MD, Abubakar Shakir, MD, Gilbert Leidig, MD
ChristianaCare Health Services, Newark, DE;

BACKGROUND

Coronary artery anomalies of the left main coronary artery (LMCA) arising from the right sinus of Valsalva are exceedingly rare, seen only in 0.17% of patients undergoing angiography. These anomalies can present with symptoms consistent with ACS.

CASE

- A 72-year-old male with a past medical history of paroxysmal atrial fibrillation and hypertension presented for persistent exertional dyspnea.
- Patient underwent nuclear stress testing which showed no fixed or reversible defect but given persistent symptoms, we pursued a coronary angiography.
- Angiography was significant for nonobstructive coronaries however did reveal a left main coronary artery arising from the right sinus of Valsalva.
- CTA was ordered which revealed a benign course of the anomalous vessel.

DECISION-MAKING

Coronary artery anomalies pose a significant diagnostic dilemma. The clinical outcome is largely dependent on the course of the artery. Due to the benign course taken by the LMCA originating from the right sinus, no further intervention was indicated.

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Anomalous coronary arteries are **rare** and pose a **diagnostic dilemma**

Course of artery determines **prognosis**

Multimodal imaging can assist in **diagnosis**

CONTACT INFO:

For more information, contact
jl23692@pcom.edu
John Lausch, M3

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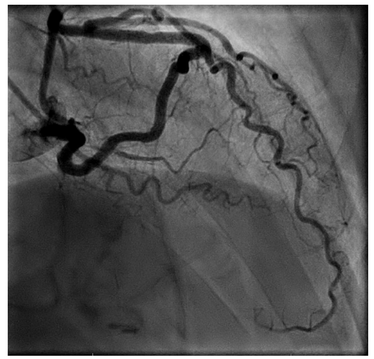
DISCUSSION

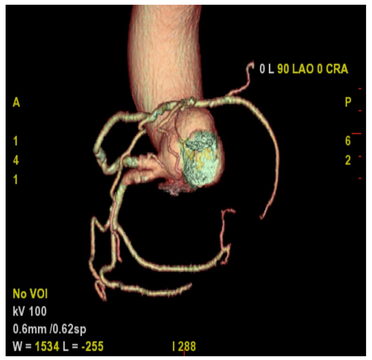
- Interarterial course, in which the anomalous artery splits the great vessels, is the only course associated with a severe prognosis.
- Due to the benign prepulmonic course taken by our patient's LMCA originating from the right sinus, no further intervention was indicated.
- An anomalous LMCA can be the culprit of exertional angina in certain patients, and coronary angiography may fail to diagnose.
- Multimodal imaging involving coronary CT can assist in diagnosis and determining the course of the vessel.

FIGURE 1



Coronary angiogram displaying LMCA originating from right coronary sinus.

FIGURE 2



Three dimensional reconstruction of CT heart displaying LMCA from right coronary sinus

CONCLUSION

An anomalous LMCA can be the culprit of exertional angina in certain patients, and coronary angiography may fail to diagnose. Multimodal imaging involving coronary CT can assist in diagnosis and determining the course of vessel.

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DISCLOSURE INFORMATION

Authors have no financial or other significant disclosures.