

# Anomalous Anomaly: A Rare Case Of The RCA Arising From The Mid LAD

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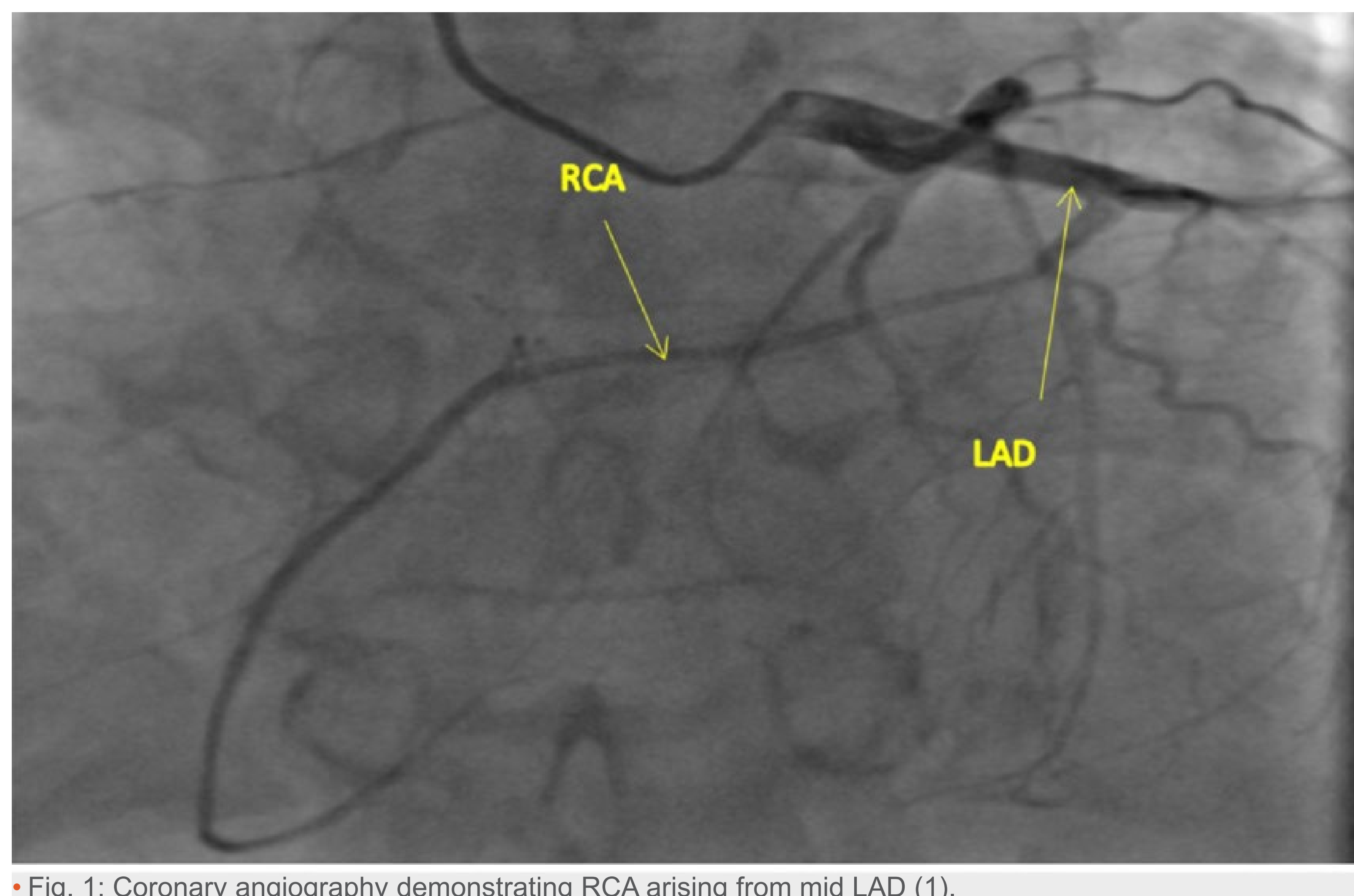
## Background

- Anomalous coronary arteries have a prevalence of approximately 0.3-1.3% in patients undergoing coronary angiography. Anomalous origin of the right coronary artery (RCA) from the left anterior descending artery (LAD) is exceptionally rare with a prevalence of 0.009%.

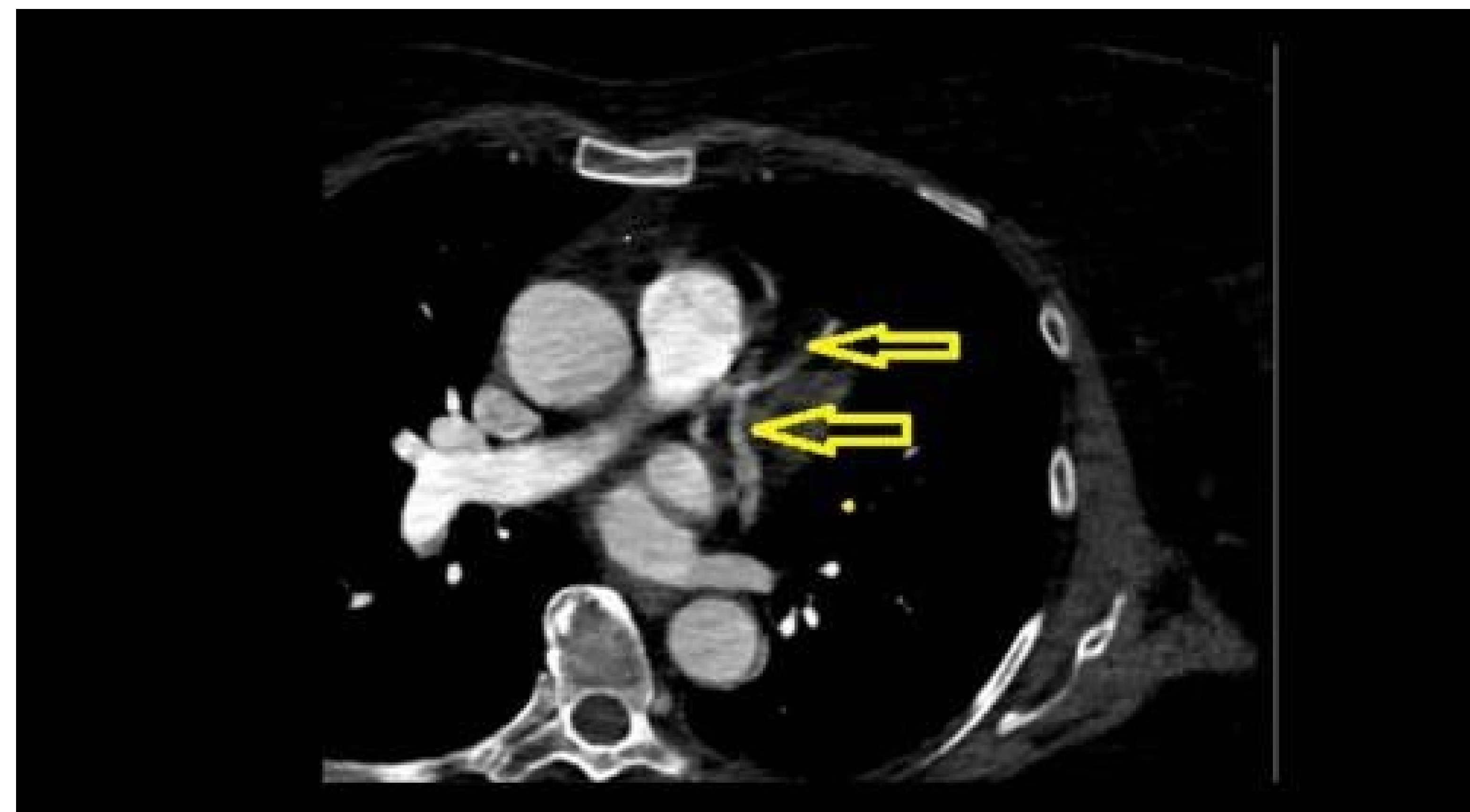
## Case

- A 55-year-old male with repaired congenital pulmonary stenosis and recent episode of syncope was evaluated in the clinic.
- Holter monitor was unremarkable for arrhythmia. Exercise treadmill showed an excellent exercise capacity with the patient achieving 12 METS without ischemic symptoms or electrocardiographic evidence of ischemia.
- Echocardiogram revealed global hypokinesis with left ventricular ejection fraction of 25-50% and mild dilatation of right ventricle and right atrium.
- Coronary angiography performed did not show coronary artery disease but was significant for an anomalous RCA arising from the mid LAD traveling anteriorly around the pulmonary artery.

## Images



• Fig. 1: Coronary angiography demonstrating RCA arising from mid LAD (1).



• Fig. 2: Cardiac CT showing anomalous takeoff of RCA from Mid LAD (2).

## Discussion

- Anomalous right coronary artery arising from the mid LAD is remarkably rare amongst all coronary anomalies.
- Management depends on age, presence of signs or symptoms of ischemia, and proximal vessel course.
- In our patient, the anomaly had benign features and traveled in a prepulmonic fashion to supply the right heart. There was no intervention indicated and patient has done well during follow-up in clinic.

## Conclusion

- An anomalous RCA arising from the LAD is extremely rare in which the RCA arise from the proximal or midportion of the LAD and passes anterior to the pulmonary artery indicating a benign anomaly.
- They are almost always not seen with other congenital heart disease but can occur with congenital pulmonary stenosis as seen in our patient.

## References

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2. Khan R, Siddiqi N, Wang J. Anomalous Origin of the Right Coronary Artery From the Mid-Portion of the Left Anterior Descending Artery. Cureus. 2020 Jun 24;12(6):e8794. doi: 10.7759/cureus.8794. PMID: 32724743; PMCID: PMC7381875.

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