

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: <http://Elsevier.com/locate/radcr>

Cardiac

Interarterial course of anomalous right coronary artery: Pathophysiology, diagnosis, and treatment

George Renchao Wu MS^{a,1,*}, Aman Saini BBA^a, Imtiaz Ahmed MD^b, Charles Finch DO, FACOEP^c

^a Midwestern University, Arizona College of Osteopathic Medicine, 19555 North 59th Ave, Glendale, AZ 85308

^b St. Luke's Medical Center, Phoenix, AZ

^c Department of Integrated Medicine, Midwestern University, Arizona College of Osteopathic Medicine, 19555 North 59th Ave, Glendale, AZ 85308

ARTICLE INFO

Article history:

Received 27 March 2017

Received in revised form 9 June 2017

Accepted 9 June 2017

Available online

Keywords:

Anomalous coronary artery

Interarterial course

Sudden cardiac death

ABSTRACT

Anomalous coronary artery from the opposite sinus is a rare congenital anomaly that can present with symptoms similar to coronary artery disease, and sudden cardiac death. Management of anomalous coronary artery from the opposite sinus varies; however, current guidelines suggest surgery in symptomatic patients.

Our patient is a middle-aged male with a history of coronary artery disease and status post coronary artery bypass graft. He presented with complaints of vague chest pain. After a positive stress test, he was sent to the catheterization suite. Diagnosis of an anomalous right coronary artery from the left coronary sinus was made. The patient underwent surgical revascularization and was awaiting follow-up with cardiology at the time of study.

A timely diagnosis of an anomalous coronary artery is critical in symptomatic patients because of the risk of sudden cardiac death, especially in patients with arteries with an interarterial course. This case demonstrates the importance of making the correct diagnosis, as appropriate surgical management can drastically improve outcomes.

© 2017 the Authors. Published by Elsevier Inc. under copyright license from the University of Washington. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

The origin of a coronary artery from the opposite aortic sinus is a rare congenital abnormality that could potentially lead to cardiac ischemia or sudden cardiac arrest [1]. Most

commonly, these anomalies involve the left circumflex artery originating from a separate ostium in the right coronary sinus [2]. Here we present a case of an anomalous right coronary artery (RCA) originating from the left coronary sinus in a middle-aged patient who presented with atypical chest pain.

Competing Interests: We have no conflicts of interest to disclose, and no additional funding was sought for this report.

¹Present address: 19555 North 59th Ave, Glendale AZ 85308.

* Corresponding author.

E-mail address: rwu42@midwestern.edu (G.R. Wu III).

<http://dx.doi.org/10.1016/j.radcr.2017.06.006>

1930-0433/© 2017 the Authors. Published by Elsevier Inc. under copyright license from the University of Washington. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Case report

O.G. is a 43-year-old male with a history of coronary artery disease, coronary artery bypass graft, hypertension, and hyperlipidemia who presented to the emergency department with intermittent, sharp, atypical chest pain. His physical examination findings were negative and troponin was mildly elevated at 0.039 ng/mL.

After monitoring of the patient overnight with electrocardiography and serial cardiac enzymes, myocardial scintigraphy was performed, which showed signs of reversible ischemia in the inferolateral portion of the left ventricle (Fig. 1). The patient was subsequently taken to the catheterization laboratory suite and left heart catheterization with coronary angiography was performed. Imaging revealed a single left sinus of Valsalva ostium that gave rise to the left coronary artery (LCA), which divided into the left anterior descending (LAD) and left circumflex arteries. However, there was also an RCA that was originating from the proximal LCA (Fig. 2). The RCA did not demonstrate any significant stenosis, nor was there any occlusion noted in the RCA during systole or diastole. No arteries were found arising from the right coronary cusp. A subsequent

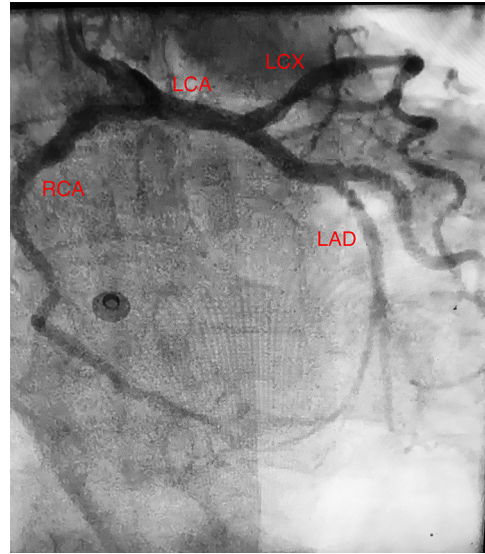


Fig. 2 – Coronary angiography showing an anomalous right coronary artery (RCA) originating from the proximal left coronary artery (LCA). LAD, left anterior descending; LCX, left circumflex.

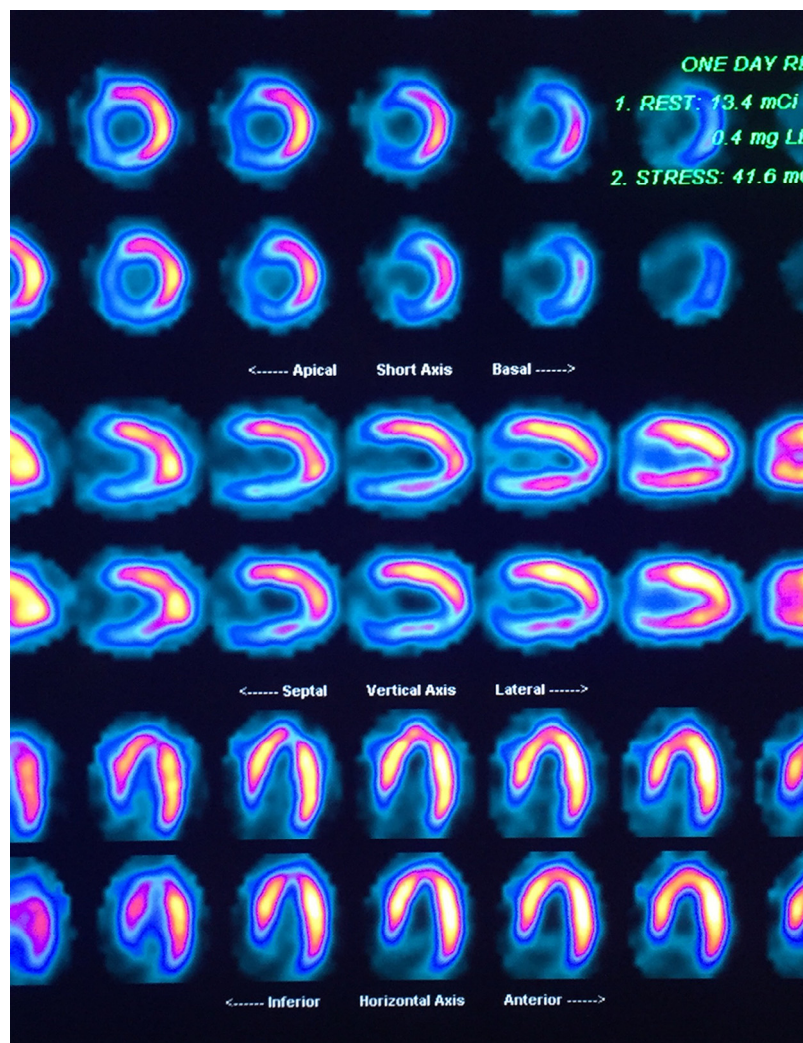


Fig. 1 – Stress test showing signs of reversible ischemia in inferolateral portion of left ventricle.

Download English Version:

<https://daneshyari.com/en/article/8825258>

Download Persian Version:

<https://daneshyari.com/article/8825258>

[Daneshyari.com](https://daneshyari.com)