


CASE IMAGE

A rare case of dual coronary cameral fistulae

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Key Clinical Message

Dual coronary cameral fistulae (CCFs) are rare abnormal connections between coronary arteries and heart chambers. Management of CCFs remains a topic of debate, emphasizing the need for individualized approach based on presentation.

Abstract

We present a rare case of dual coronary cameral fistulae originating from the mid-left anterior descending (LAD) and the mid-right coronary artery (RCA) with drainage into the left ventricle, diagnosed incidentally during coronary angiography.

KEYWORDS

cameral fistulae, coronary angiogram, coronary fistulae, left anterior descending artery, right coronary artery

1 | CASE PRESENTATION

A 78-year-old female patient was admitted to the medical intensive care unit for septic shock. Brain natriuretic peptide was elevated to 4000 (normal range: 1–100 pg/mL), and troponin was mildly elevated to 37 (normal range: 3–17 pg/mL). A transthoracic echocardiogram revealed global hypokinesis and new-onset heart failure, with the ejection fraction reduced to 25–35% from 55–60% compared to a month prior. The patient was treated with fluid resuscitation, intravenous antibiotics, pressors. Upon clinical improvement and resolution of shock, goal-directed medical therapy for heart failure initiated. She underwent a coronary angiogram, which showed fistulizing arteries in the mid-left anterior descending artery (LAD) region (Figure 1) and the mid-right coronary artery (RCA) region (Figure 2) without any coronary artery stenosis. A left ventriculogram was significant for a recovered ejection fraction of 55%.

2 | WHAT IS CORONARY CAMERAL FISTULA AND HOW IS IT DIAGNOSED AND MANAGED?

Coronary cameral fistulae (CCFs) are rare cardiac anomalies characterized by abnormal connections between coronary arteries and cardiac chambers, with a prevalence of 0.1–0.2%.¹ Dual CCFs involving major coronary arteries like the LAD and RCA are rare.² The etiology of CCFs includes failure of embryonic intratrabecular spaces to obliterate, trauma, coronary angiograms, pacemaker implantations, or cardiac surgery.¹ While they can remain asymptomatic, potential manifestations include heart failure, arrhythmias, or myocardial ischemia, particularly if significant shunting is present.³

Management strategies for CCFs are debated, especially in asymptomatic patients. Surgical correction or transcatheter closure is advocated in symptomatic cases or if the fistula poses a significant risk, while conservative management with close observation is preferred for



FIGURE 1 Left coronary angiogram showing mid-LAD cameral fistula to left ventricle.

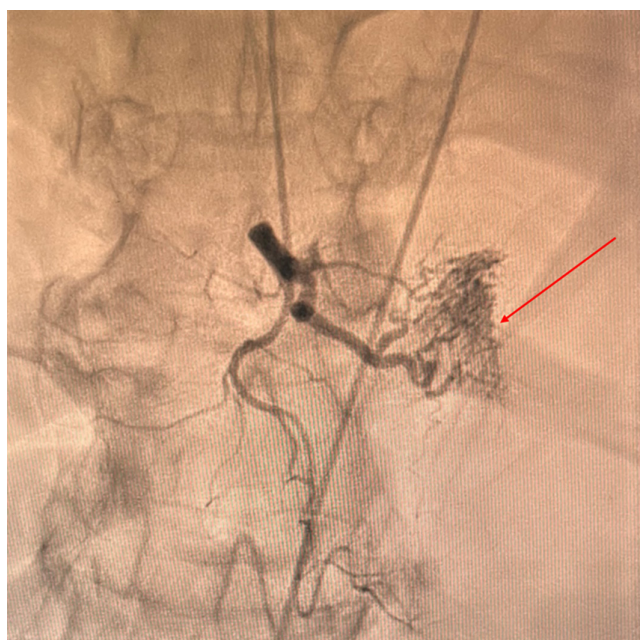


FIGURE 2 Right coronary angiogram showing mid-RCA cameral fistula to left ventricle.

asymptomatic, low-risk cases.⁴ Given our patient's recovery of cardiac function following medical treatment and resolution of symptoms, a conservative approach was adopted, with regular echocardiographic monitoring.

AUTHOR CONTRIBUTIONS

Sacide S. Ozgur: Visualization; writing – original draft; writing – review and editing. **Yezin Shamoon:** Supervision; validation; visualization; writing – review and editing. **Rachel Abboud:** Supervision; validation; visualization; writing – review and editing. **Hussein Shaqra:** Supervision; validation; visualization; writing – review and editing. **Fayez Shamoon:** Supervision; validation; writing – review and editing.

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CONFLICT OF INTEREST STATEMENT

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DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

CONSENT

Written informed consent was obtained from the patient's next of kin for their anonymized information to published in this article.

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