Dual RCA: culprit or companion

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DESCRIPTION

A 55-year-old man presented with a 6-month history of New York Heart Association II exertional dyspnoea. There was no history of diabetes mellitus or hypertension. Being a reformed smoker, he was on treatment for obstructive airway disease. General and cardiovascular examinations were unremarkable. ECG showed loss of R wave progression in precordial leads. Echocardiography was normal. Coronary angiogram revealed selective opacification of two right coronary arteries arising from separate ostia of the same sinus coursing towards the right atrioventricular groove, which was confirmed by using separate views (figure 1 and video 1). The left coronary arteries were of normal origin and distribution.

Congenital coronary anomalies are seen in about 1% of the general population.¹ Dual right coronary artery (RCA), either originating from single or separate ostia, is one of the rarest coronary artery anomalies and has only occasionally been mentioned in case reports. To date, dual RCA has been reported 40 times and detected in 46 patients in the literature. Dual RCA can have varied presentation. Being a benign entity, the first symptom is usually chest pain. However, the presentation may range from unstable angina to acute ST segment elevation myocardial infarction.^{2 3} In the present case, the exertional dyspnoea may be attributable to underlying obstructive airway disease and dual RCA may be a benign companion.

Figure 1 Left anterior oblique (LAO) cranial view showing dual right coronary artery arising from separate ostia of right coronary sinus.

Video 1 Coronary angiogram in the left anterior oblique (LAO) plain view showing selective opacification of two right coronary arteries running parallel to each other towards the right atrioventricular groove and arising from separate ostia of the right coronary sinus.

Learning points

- ▶ Dual right coronary artery is a very rare entity, often benign, but it can sometimes be a precursor to acute coronary syndromes.
- ▶ Selective imaging of one of the coronaries can miss the disease in the other.

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