A rare coronary anomaly: Absence of a right coronary artery

We report the case of a 69-year-old woman who was admitted to our hospital with a chief complaint of repeated chest pain occurring particularly after exercise. The chest pain was retrosternal, which would last for approximately 10-20 min and would then be relieved by taking rest. Since a month before hospitalization, the frequency and severity of the chest pain had considerably increased and she began experiencing severe chest discomfort. Although the physical examination was unremarkable, V3-V6 T wave inversion was observed and the level of troponin was noted to be slightly high. Thereafter, invasive angiography was performed and a drug-eluted stent was inserted into the optus marginalis branch (Video 1). The right coronary artery (RCA) could not be located (Videos 2 and 3). Before the patient was discharged, a coronary computed tomography (CT) angiography was performed to assess and locate the RCA. The right coronary ostium was not observed in the coronary CT angiography scan. Further, the distal branches of the left circumflex artery (LCX) were found to have extended into the RCA trace. RCA irrigation areas were fed by the predominant LCX distal branch (Videos 4, 5 and 6).

Informed consent: Written informed consent was obtained from the patient.

Video 1. The circumflex artery was dominant in catheter angiography. A stenosis was observed in the optus marginalis branch.

Videos 2 and 3. The right coronary artery orifice was not observed in the bolus contrast injection applied to the aortic root.

Videos 4, 5 and 6. The coronary computed tomography angiography revealed that the right coronary artery (RCA) was absent. The posterolateral branch of the circumflex coronary artery was found to have extended into the RCA region.

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