Successful Percutaneous Coronary Intervention to Single Coronary Artery From the Right Sinus of Valsalva

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An 89-year-old woman visited hospital with chest pain. Troponin T was rising ($0.032 \mu\text{g/mL}$). Twelve-lead electrocardiogram showed ST elevation in aVR and ST depression in V2–5, and these changes were improved by nitroglycerin. The patient was therefore diagnosed with unstable angina. Computed tomography angiography (CTA) showed a single coronary artery arising from the right coronary ostium (**Figure A–C**). The left coronary artery with a long transverse trunk crossed in front of the pulmonary artery (**Figure B**). The long left main coronary trunk had severe stenosis with rich plaque. Coronary angiography showed a lesion compatible with that seen on CTA (**Figure D**). We chose percutaneous coronary intervention (PCI) but not coronary artery bypass grafting

because of the high STS score (6.385%) and emergency status. We selected Heartrail® Ikari Left 4.0 (Terumo, Japan) to provide appropriate backup without injury. The drug-eluting stent was deployed (**Figure E**). After PCI, the symptom disappeared.

The present single coronary artery was type R-IIA according to Lipton classification; type R-II patients comprise 0.015% of the population.¹ Only one report has previously described PCI for type R-IIA.² The coronary lesion in that report was at the same position as in the present case. The turbulence might occur morphologically in this anomaly, impairing the vascular endothelium.

Disclosures

The authors declare no conflicts of interest.

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Figure. (A,B) Computed tomography (CT) angiography with volume rendering showing the severely stenotic lesion (red arrow) and the single coronary artery with left main coronary trunk (LMT; black arrow) arising from a normal right coronary artery (RCA; white arrow). (C) CT angiography with curved planar reconstruction showing a 90% stenotic lesion (red arrow) in the middle of the LMT. (D,E) Coronary angiography (left anterior oblique caudal view) showing (D) the left coronary artery diverging at 90° from the RCA and the same 90% stenotic lesion (red arrow) as on CT, and (E) successful percutaneous coronary intervention. LAD, left anterior descending coronary artery; LCX, left circumflex coronary artery.