A thrombus stuck in the ostium of the coronary artery

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A 55-year-old male ex-smoker was admitted to our hospital with a 2-h history of anterior chest and back pain. His vital signs and serum biomarkers including troponin I were normal. An electrocardiogram showed atrial fibrillation without an ST-elevation. Plain computed tomography (CT) imaging revealed the high density in the proximal segment of the right coronary artery (RCA), which suggests a thrombus in this vessel (Panel A), and axial view and curved planar reconstruction (CPR) in contrast-enhanced CT visualized a large thrombus of 20 × 12 mm stuck at the orifice of RCA (Panels B and C). Thus, acute coronary syndrome caused by emboli was most likely diagnosis. Thrombolysis was chosen instead of percutaneous coronary intervention to avoid systemic embolization. We used pamiteplase, a recombinant tissue plasminogen activator, as fibrinolytic agent for intravenous therapy and warfarin as anticoagulant. The magnitude of ST-elevation was gradually increased. Atrial fibrillation was converted to normal sinus rhythm but an ST-segment remained elevated in II, III, and aVF for 18 h after thrombolysis therapy. The serum creatine phosphokinase was increased, and reached a peak of 2119 IU/L at 27 h after the onset. On the 15th day, the CPR image showed disappearance of the thrombus at the orifice, and there was no evidence of atherosclerotic plaques in the entire RCA (Panel D). These findings allowed us to diagnose that ACS was caused by a thrombus stuck in the ostium of RCA. Cardiac CT may have advantages to detect coronary thrombo-embolism in the patients with atrial fibrillation.