We report on a case of spontaneous coronary artery rupture in a 65-year-old woman. In this patient, pulmonary hypertension had been known for 12 years. The patient was receiving long-term oxygen treatment, oral anticoagulation, and sildenafil. Coronary heart disease had been excluded by coronary angiography 2 years before the event, and only dilated coronary arteries with arteriosclerotic plaques but no stenosis were described. On admission to our clinic, she presented with symptoms of progressive dyspnea resulting in a New York Heart Association functional class III–IV. Electrocardiography changes, especially signs of myocardial infarction, were not visible (see Figure 1). Lab tests, including serum troponin, showed no abnormalities.

Echocardiography showed a richly perfused pericardial mass (7×6 cm) ventral to the right heart, with compression of the right heart chambers (Figure 2A). Initially, a richly perfused tumor or a partially thrombotic aneurysma of the right coronary artery (RCA) was suspected. A 64-slice computed tomography (CT) scan was then prompted for a precise anatomic description preoperatively, to evaluate the degree of displacement of the right atrium and ventricle, and to identify the connection to the RCA. Unexpectedly, the 64-slice CT coronary angiography revealed a rupture of the ectatic RCA, with spillage of contrast media into the hematoma (Figure 2B). This rupture caused the subtotal compression of the right atrium and, to a lesser degree, of the right ventricle, substantially impairing the cardiac output of the right heart (Figure 2C). Interestingly, the RCA was also compressed by the hematoma (Figure 2D, Movie I in the online-only Data Supplement).

The size of the hematoma was 6×7×8 cm. The patient was hemodynamically stable enough to perform a fluoroscopic coronary angiogram. This examination revealed a strong flow of the contrast media into the hematoma, with two entry sites in the proximal and middle areas of the RCA (Figure 3A and 3B).

Based on these findings, the patient was referred for surgery. After ligation of the proximal and distal RCA, the hematoma was removed, and an aorto-coronary venous bypass graft was inserted to the distal RCA.

Spontaneous coronary artery rupture is a rare disorder that is mostly associated with a known underlying disorder (eg,
Ehlers Danlos syndrome) and even more rarely not associated with any known underlying disease.\(^1\)\(^2\) Possibly some cases are not recognized as bleeding in the pericardium because coronary rupture is a relatively common life-threatening disor-
der.\(^3\) This case illustrates the significant benefits of multislice CT for these patients, particularly because this examination can be performed within minutes, allowing depiction of the cardiac condition and the exclusion of any other relevant thoracic pathology.

**Disclosures**

None.

**References**

Spontaneous Rupture of the Right Coronary Artery
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