Hypotension, tachycardia, and tachypnea in a patient with coronary artery disease

A 59-year-old male patient with diabetes mellitus and a history of coronary bypass was admitted to the emergency department with deterioration in the general status, dyspnea, nausea, and epigastric/chest pain for 2 h. On physical examination, blood pressure was 80/50 mm Hg, heart rate was 110 beats/min, respiratory rate was 28 breaths/min, and oxygen saturation was 94% on 2 L/min of supplemental oxygen. Cardiovascular examination was normal except for elevated jugular venous pressure and abdominal pulsation. The electrocardiogram (ECG) revealed sinus tachycardia with right bundle branch block, and 2.5 mm of ST-segment depression on anterior derivations (Fig. 1). Furthermore, there was S1Q3T3 pattern on ECG. The serum troponin I level of the patient on admission was 0.08 ng/mL (reference: 0-0.06 ng/mL). This level was elevated to 0.8 ng/mL 4 h later. Fibrinogen was slightly elevated to 377 mg/dL (reference: 180-350); moreover, D-dimer was elevated to 4.41 mg/L (reference: 0-0.55). Hemoglobin level was normal and there was no decrease on follow up. Transthoracic echocardiography (TTE) revealed normal left ventricle diameters with normal systolic functions. Right chambers were dilated on TTE and systolic pulmonary artery pressure was about 45 mmHg with moderate tricuspid regurgitation. Contrast-enhanced computed tomography (CT) excluded any thrombus in the main pulmonary artery and its major branches and demonstrated significant right ventricular (RV) enlargement with RV-to-left ventricular (LV) dimension ratio of 1.8 (Fig. 2a, b). Abdominal CT showed a saccular infra-renal abdominal aortic aneurysm (AAA) with a size of 9.0 cm in transverse diameter with an intramural thrombus. During this phase, inferior vena cava (IVC) was also visible and it was dilated (Figure 2c).

What is your diagnosis?

a) Acute coronary syndrome
b) Pulmonary embolism
c) AAA rupture
d) Abdominal aortic fistula

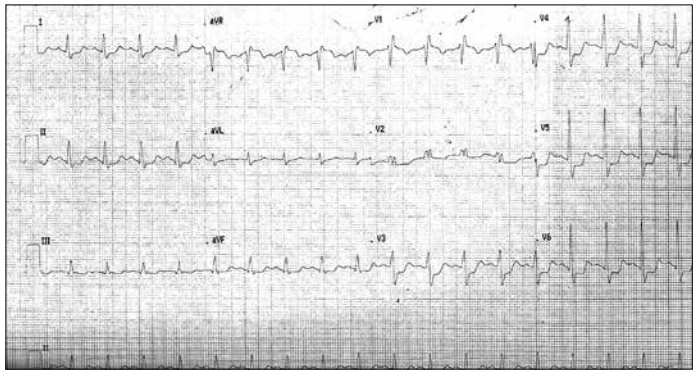

Figure 1. ECG on admission

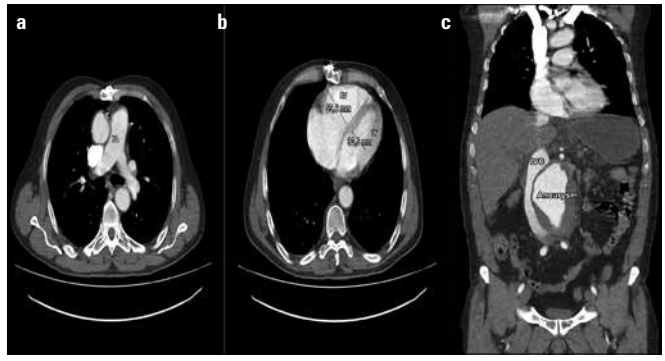

Figure 2. No filling defect in main pulmonary arteries (a). Enlargement of right heart chambers (b). Aortic aneurysm (c)

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