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A pulmonary embolism (PE) with an unexpected intracardiac mass but without shock: Should we use thrombolytic therapy? About a case of a 88 year old man with suspicion of PE

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Clinical case

A 88 year old man was admitted for dyspnea. His main past medical histories were a chronic renal insufficiency of diabetic origin, a chronic inflammatory rheumatism, an ischemic stroke, an arterial hypertension.

His treatment included daily bisoprolol 2.5 mg, aspirin 75 mg, amlodipine 5 mg, trinitrine 15 mg/24 h, prednisone 5 mg, sertraline 75 mg, furosemide 20 mg. On admission, hemodynamic was uncertain with a transitory arterial low blood pressure (SBP < 90mmHg). Physical examination revealed right heart failure. The biology showed a systemic inflammatory syndrome with 209 mg/L of C-reactive protein (normal value < 5). The cardiac markers were elevated: NT-proBNP to 27,000 (normal value < 400), and a high-sensitive troponine-Tat 320 controlled to 340 (normal value < 14 ng/L). There was an acute renal insufficiency with 280 µmol of creatinin against 200 (basis). The chest X-ray found a diffuse vascular overload without real identified infectious focus. A treatment with diuretic and antibiotherapy was started and the patient was transferred in a service of internal medicine. Unfortunately, the hemodynamic deteriorated quickly with an arterial hypotension. A

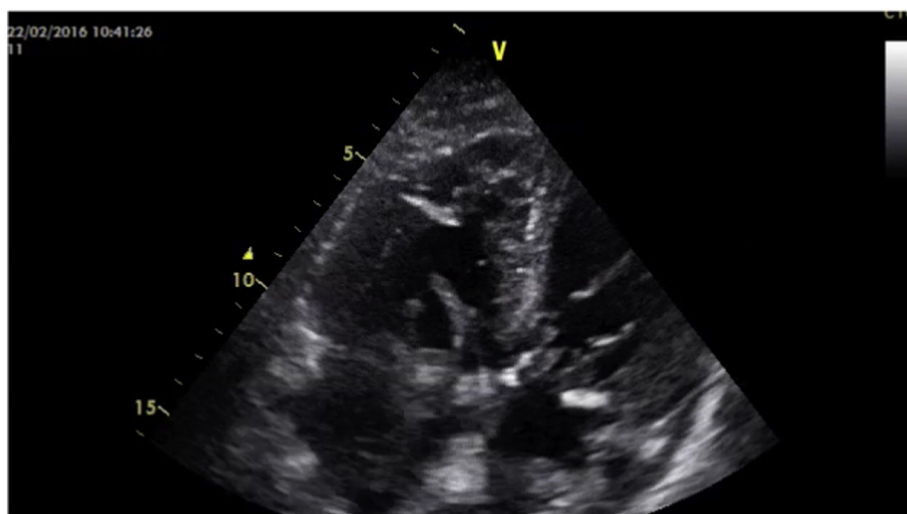


Fig. 1 Right heart thrombi.

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fast cardiac echography revealed a bulky mass on the right cavities (Fig. 1). An acute pulmonary embolism was suspected and the patient was transferred in the intensive cardiologic care unit. A novel echocardiography confirmed the presence of a mass in to the right cavities. The right cavities were dilated (41 mm in medium ventricle) and moderately hypokinetic (TAPSE at 15 mm and S wave at 9 cm/s). The pulmonary pressures were estimated at 55 mm Hg with a dilatation of the inferior vena cava. The left ventricle was not dilated and not hypertrophied. The left ventricular function was preserved. There was no significant left valvulopathy and the pericardium was dry. The hypothesis of a massive pulmonary embolism appeared to be the most likely diagnosis but was impossible to confirm because of the contraindication for the pulmonary angioscanner (predialysis renal function and unstable hemodynamics), or pulmonary scintigraphy of ventilation perfusion. This patient was potentially at high-risk of pulmonary embolism with a PESI score estimated at 178 (class V). The patient presented no major contraindication of thrombolysis but several minor: age > 75 years, antecedent of stroke [1].

After collegial discussion and after dialogue with the patient, the family and the general practitioner, thrombolysis was decided (alteplase, 100 mg over 2 h). Only a moderate epistaxis a few hours after the end of the thrombolysis was noticed.

A control of the echocardiography showed a complete regression of the thrombus.

The evolution during the hospitalization was rapidly good with early oral anticoagulant therapy and discharge at day 10. Although the indication of thrombolysis is validated in the setting of a massive PE with arterial hypotension, its use in the setting of PE without hemodynamic instability is discussed [2]. The thrombolysis must be considered with case by case by taking count of the hemorrhagic risk. Here, the echocardiography urged to propose thrombolysis: the large highly mobile free-floating right/ventricular thrombus is life-threatening. Age or comorbidities should advocate also for this option, but are often considered as risk factors for complications. Cautious balance has to be evaluated.

Conflict of interest

The authors declare that there are no conflict of interest.

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