Ruptured unknown Stanford Type A aortic dissection with huge mediastinic hematoma mimicking pulmonary embolism

Andrea D. Annoni*, Alberto Formenti, Gianluca Pontone, Marco Agrifoglio, Mauro Pepi, and Daniele Andreini

Centre Cardiologico Monzino, IRCCS, Department of Cardiovascular Sciences, University of Milan, Via C. Parea 4, Milan 20138, Italy

* Corresponding author. Tel: +39 02 58002606; Fax: +39 02 58002283, Email: andrea.annoni@ccfm.it

We report the case of a 84-year-old patient, with a history of coronary artery bypass graft (CABG) and mitral valve replacement 11 years ago and a recent access to an emergency department for acute chest pain. The patient was quickly discharged because of negative troponin without any radiological examination.

Six days later, the patient referred to our emergency department for chest pain and dyspnoea. Owing to an elevated D-dimer, patient underwent chest computed tomography (CT) for suspected pulmonary embolism (PE).

CT pulmonary angiography did not show PE but a significant pulmonary artery compression (Panels A and B). A subsequent arterial phase demonstrated a Type A aortic dissection originating from the sinotubular junction and a 2-mm wall rupture with huge mediastinal haematoma (diameters $5.7 \times 12.3$ cm), causing significant compression of pulmonary artery trunk, left atrium and superior left pulmonary vein (Panel C).

Owing to the very high risk of mortality, the surgical intervention was refused by the patient’s relatives and an appropriate anti-hypertensive therapy was administered.

A 7-day follow-up thoracic CT angiography showed no significant differences in the size of haematoma but the onset of bilateral pleural bleeding (Panel D). The patient died 3 days after CT examination.

The 10-day survival after aortic wall rupture may be probably due to extended mediastinal scar tissues secondary to the previous CABG and valve surgery containing the aortic bleeding.

This unusual case of aortic wall rupture mimicking PE underlines the importance of imaging techniques as CT for the management of thoracic pain in the emergency room department.