

Left atrium tumor imitating the clinical image of acute pulmonary embolism

Guz lewego przedsionka imitujący obraz kliniczny ostrej zatorowości płucnej

Paweł Gać^{1,2}, Bartłomiej Kędzierski¹, Grzegorz Mazur³, Rafał Poręba³

¹Department of Radiology and Diagnostic Imaging, 4th Military Hospital, Wrocław, Poland

²Department of Hygiene, Wrocław Medical University, Wrocław, Poland

³Department of Internal Medicine, Occupational Diseases and Hypertension, Wrocław Medical University, Wrocław, Poland

Abstract

We present a case of left atrium tumor in computed tomography angiography images that imitated acute pulmonary embolism in the clinical picture.

Key words: left atrium tumor, acute pulmonary embolism, computed tomography angiography

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We present a case of left atrium tumor in computed tomography angiography (CTA) images that imitated acute pulmonary embolism in the clinical picture.

A 31-year-old man without significant medical history reported to the hospital emergency department due to shortness of breath, cough, chest pain and a hemoptysis episode that occurred within the last 24 hours.

Electrocardiography conducted in the hospital emergency department showed regular sinus rhythm, 62 bpm, without signs of acute myocardial ischemia. In laboratory tests, a negative determination of high-sensitive troponin and increased concentration of d-dimers were found. Due to the clinical picture suggesting acute pulmonary embolism, a decision was made to supplement the diagnostics with pulmonary artery CTA.

In the CTA performed in the algorithm for assessing pulmonary embolism, defects in the lumen contrast enhancement of the pulmonary arterial vessels with the nature of embolic material were not visualized. The main pulmonary arteries were not widened: the diameter of the main pulmonary artery was 3.0 cm, the right pulmonary artery

2.0 cm, the left pulmonary artery 1.9 cm. CTA image enabled negative verification of the suspected clinical pulmonary embolism (Figure 1A).

The CTA made it possible to detect cardiac tumor. In the left atrium a polycyclic, slightly heterogeneous, soft-tissue structure with dimensions up to about 6.0 × 4.5 cm in cross-sections (Figure 1B) and about 7.5 cm in the cranio-caudal dimension (Figure 1C), remaining in communication with the posterior-upper-left-sided wall of the atrium, penetrating towards the left atrioventricular ostium, not exceeding the mitral valve plane, including the ostium of the pulmonary veins on the left, was observed. Features of contrast enhancement of the left pulmonary vein ostium to the left atrium, or contrast enhancement of the main venous trunks of the left lung in the CTA study protocol carried out in such a manner were not demonstrated (Figure 1D). In addition, soft tissue thickening of tissue surrounding the vessels of the left lung hilum was noteworthy. Irregular thickening of the atrial septum to a thickness of about 0.8 cm was also seen (Figure 1E). Changes in CTA of the pulmonary arteries corresponded to the radiologic image of the left atrial

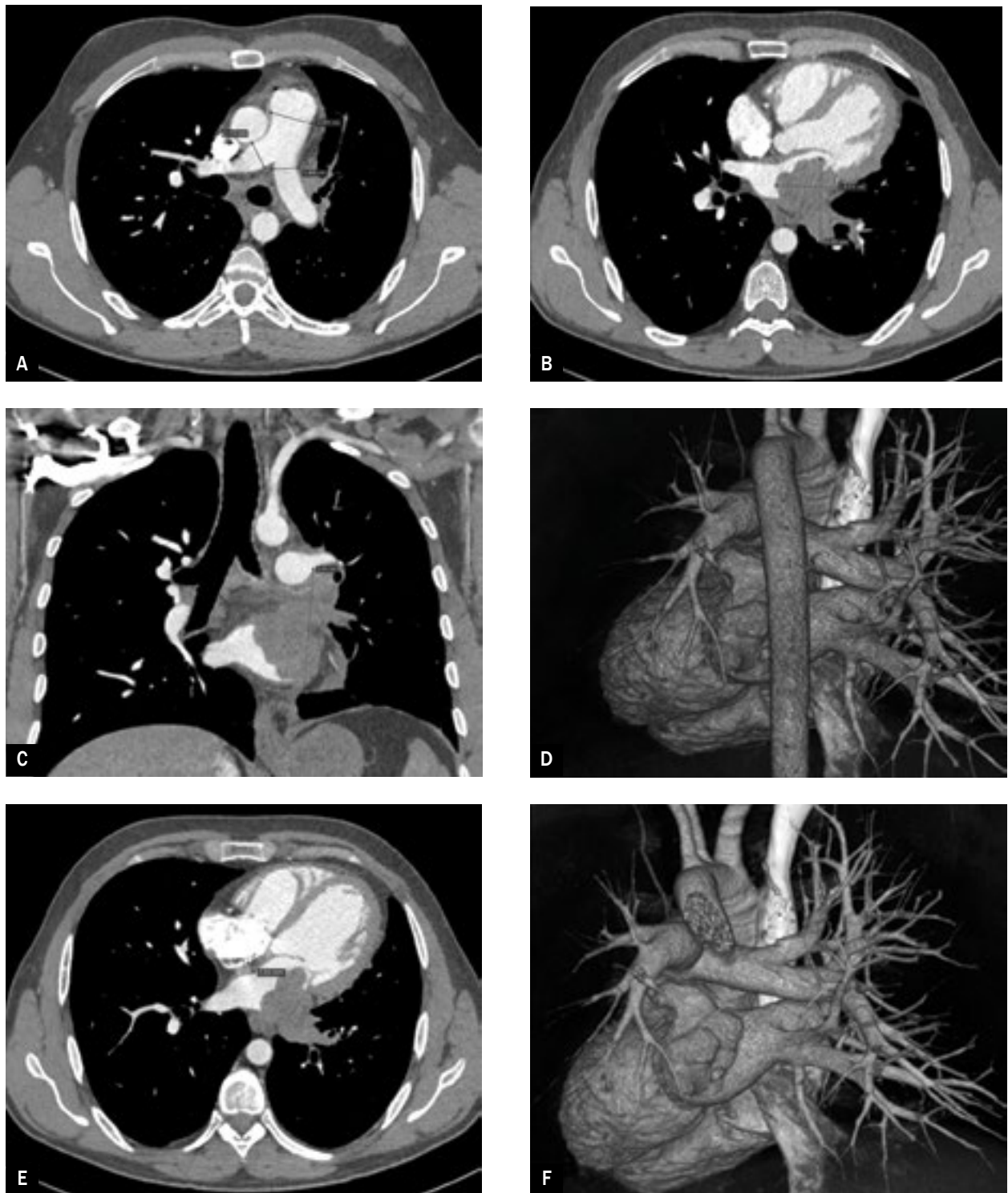


Figure 1. Left atrial tumor in computed tomography angiography images of pulmonary arteries: **A.** Axial reconstruction. Contrast-enhanced, non-expanded main pulmonary arteries; **B.** Axial reconstruction. The tumor in the left atrium with transverse dimensions of approx. 6.0×4.5 cm; **C.** Frontal multiplanar reformation (MPR) reconstruction. A tumor in the left atrium with a cranial-caudal dimension of about 7.5 cm; **D.** Volume rendering technique (VRT) reconstruction. There is no contrast enhancement in the main venous trunks of the left lung; **E.** Axial reconstruction. Irregular thickening of the atrial septum; **F.** VRT reconstruction with removal of the descending aorta. Loss of left atrial lumen contrast enhancement and left pulmonary veins due to tumor mass

tumor (Figure 1F). In differentiating the type of the tumor, lymphoma, sarcoma and myxoma have been suggested.

Pulmonary embolism is a common diagnosis. Its incidence is 100–200 cases per 100,000 people [1]. In recent years, the number of cases of pulmonary embolism has increased, which is explained by the increasing average life expectancy, but also by the improvement of diagnostic methods [2]. Primary cardiac tumors are rare. Among them, benign lesions dominate, which constitute about 75% of this type of pathology. Sarcomas are the most common of primary malignant cardiac tumors with poor prognosis [3]. Symptoms of cardiac tumors depend on the location; they are asymptomatic for a long time. Cardiac tumors become

symptomatic when heart failure occurs. Therefore, they can imitate other more common causes of heart failure [4].

Summarizing, in the differential diagnosis of clinical suspicion of acute pulmonary embolism, one should remember about cardiac tumors.

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Conflict of interest

None declared

Streszczenie

Przedstawiono przypadek guza lewego przedsionka w obrazach angiografii tomografii komputerowej, który klinicznie imitował ostrą zatorowość płucną.

Słowa kluczowe: guz lewego przedsionka, ostra zatorowość płucna, angiografia tomografii komputerowej

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