

Primary sarcoma of pulmonary artery resembling large pulmonary thrombus: diagnostic utility of different imaging modalities

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A 70-year-old woman was hospitalized due to a 2-year history of dyspnoea and weight loss. A transthoracic echocardiogram showed a large 'thrombus-like' mass occupying the right ventricular outflow tract and the main pulmonary trunk (Panel A; see Supplementary material online, Movie S1). The Doppler study showed turbulent right ventricular outflow (see Supplementary material online, Movie S2). A multidetector computed tomography (CT) with intravenous contrast for the chest was performed (Panel B). The mass showed mild enhancement with this procedure. Fusion images obtained on fluorodeoxyglucose positron emission tomography/CT (PET/CT) showed high accumulation of the tracer in the mass (Panel C). The patient underwent cardiothoracic surgery, including tumour resection along with endarterectomy and thrombectomy (Panel D). Autopsy confirmed the diagnosis of the primary sarcoma of the pulmonary artery (PSPA). Patients with PSPA are sometimes misdiagnosed with pulmonary thrombo-embolism. Integrated PET/CT has been recently introduced in clinical settings and appears promising.

Panels A–D. (A) Transthoracic echocardiogram, revealing a solid mass. (B) Sixty-four-row multidetector computed tomography, revealing a mass with mild contrast enhancement. (C) Positron emission tomography/computed tomography, demonstrating a high accumulation of fluorodeoxyglucose in the mass. (D) Anatomical distribution of resected tumours involving both pulmonary arteries. AAo, ascending aorta; RV, right ventricle; RA, right atrium; PA, pulmonary artery; Main PA, main pulmonary artery; Lt PA, left pulmonary artery; Rt PA, right pulmonary artery.

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