Abstract

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Pulmonary embolism or Pulmonary artery intimal sarcoma: A case report of misdiagnosis

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Abstract

Primary pulmonary artery sarcoma (PPSA) is a rere malignant tumor originating from pulmonary artery wall. It often presents with non-specific symptoms leading to misdiagnosis as pulmonary embolism.

We present a case of PPSA in a 48- year's old- male patient with a history smoking and no previous episodes of embolism. The diagnosis was confirmed through imaging and histopathological analysis. This case highlights the importance of considering PPAS as a differential diagnosis in patients with suspicious pulmonary embolism.

Introduction

Primary pulmonary artery sarcoma is an extremely rare malignancy, accounting for less than 1% of all cardiac tumors. Due to its rarity and non-specific symptoms, it is often misdiagnosed as pulmonary embolism. We present a case of PPAS to increase awareness and understanding of this rare entity.

Case Presentation

A 48-year-old male presented to the emergency department with acute dyspnea and cough for two weeks treated as pneumonia. He had a history of smoking and no previous episodes of embolism. Initial evaluation suggested pulmonary embolism, and a computed tomography (CT) scan of the chest was performed.

The CT scan revealed a obstruction of blood flow within the right main pulmonary artery, causing significant obstruction of blood flow and ends up with pulmonary embolism. Echocardiogram showed normal left and right ventricular systolic function. Right ventricular systolic pressure could not be estimated. Venous Doppler's of the lower extremities were negative for deep vein thrombosis. He had been treated with DOAC. Despite the above treatment, respiratory symptoms worsened and a new CT evaluation after 2 weeks highlights subtotal restoratives atelectasis of the right hemi thorax with reactive moderate pleural effusion. Fine needle aspirations of the mass were obtained through endobronchial ultrasound (EBUS). Cytology showed tumor cells with spindle cell proliferation. Immunohistochemical studies were positive for MDM2 and negative for erythroblast transformation–specific transcription factor (ERG). These findings were suggestive of an intimal sarcoma.

Staging investigations, including CT scans of the chest, abdomen, and bone scintigraphy, showed no distant metastasis.

But the patient had local bleeding complication two weeks after presentation and passed away.

Discussion

Primary pulmonary artery sarcoma is a challenging diagnosis due to its rarity and similarity to pulmonary embolism. Imaging modalities, such as CT scans, are crucial in differentiating between the two conditions. Early diagnosis and prompt surgical intervention are essential for better outcomes. Adjuvant therapy, including radiation and chemotherapy, may be considered to reduce the risk of recurrence. Primary pulmonary artery sarcoma is a rare malignancy that can mimic pulmonary embolism. This case report emphasizes the importance of considering PPAS as a differential diagnosis in patients with suspicious pulmonary embolism. Timely diagnosis, appropriate surgical management, and adjuvant therapy are crucial for improving patient outcomes.