

Beyond the Shadows: When Suspected Lung Carcinoma Reveals a Hidden Pulmonary Embolism

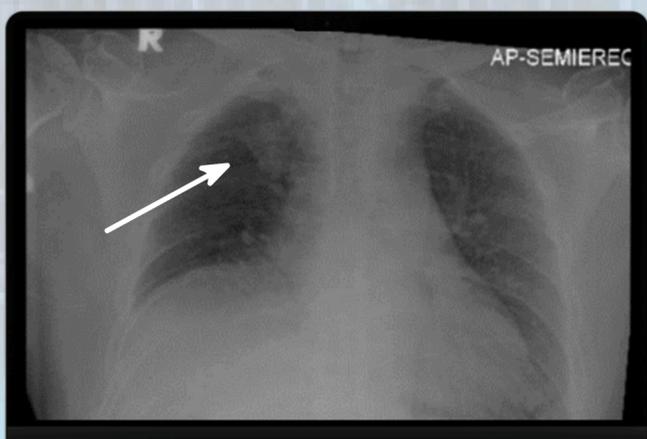
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1 INTRODUCTION

Pulmonary embolism (PE) is an acute, life-threatening condition characterized by the occlusion of one or more branches of the pulmonary arterial circulation, which may progress to hemodynamic instability and sudden death if left untreated.



Chest X-ray: mass at right upper lobe

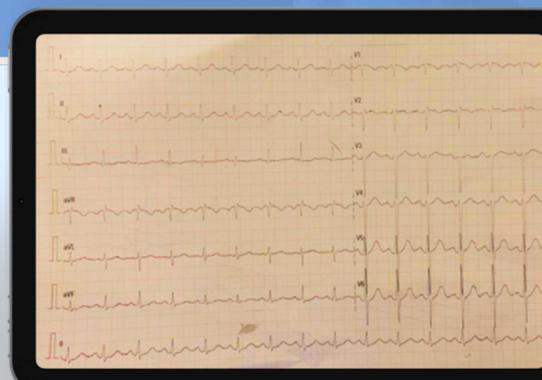
2 CASE DESCRIPTION

A 44-year-old man with underlying hypertension and dyslipidemia presented with one day history of breathlessness, right-sided chest pain for 2 months, and right neck swelling for 5 months. Vitals showed BP 175/110, HR 112, RR 22, and SpO₂ 90% on room air. ECG showed sinus tachycardia with S1Q3T3 pattern. Bedside DVT test was negative; echocardiography showed no signs of PE. Chest X-ray revealed a suspicious right upper lobe mass with elevated right hemidiaphragm.

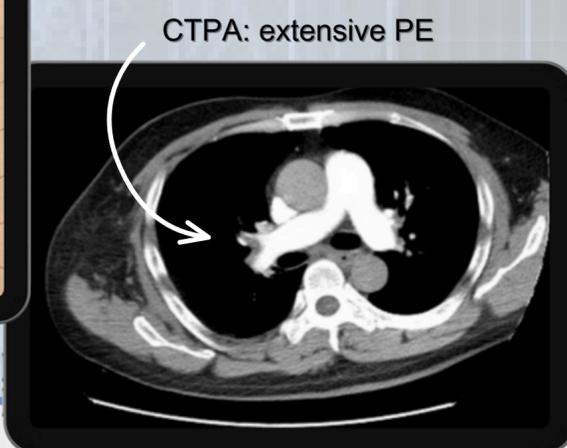
With a Well's score of 4.5 and markedly elevated D-dimer (16.1 µg/ml), urgent CTPA was performed. It revealed a spiculated right upper lobe mass suggestive of lung carcinoma and extensive pulmonary embolism involving the right main pulmonary artery and bilateral segmental branches. Anticoagulation therapy was initiated. Histopathology of right axillary lymph nodes later on confirmed metastatic adenocarcinoma favouring lung origin. The patient remained stable and was discharged well after 10 days, with close follow-up under the chest clinic for further lung carcinoma workup and management.

3 DISCUSSION

This case underscores the double diagnostic challenge of acute PE alongside a new diagnosis of lung carcinoma. Despite chronic heavy smoking being the only risk factor, an abnormal chest X-ray raised suspicion and prompted further investigation. Subsequent CECT thorax during TCA revealed a spiculated right upper lobe mass measuring 3.5 x 4.1 x 3.1 cm with internal calcification and surrounding ground-glass changes. Notably, the absence of classical PE signs did not exclude the diagnosis. Maintaining high clinical vigilance and applying the Well's score enabled us to confirm both pathologies and initiate prompt life-saving treatment.



ECG: sinus tachycardia, S1Q3T3



CTPA: extensive PE

4 CONCLUSION

Pulmonary embolism can mimic or co-exist with lung carcinoma, in which clinicians should think beyond the shadows, making early recognition crucial to avoid diagnostic delays. A systematic approach with strong clinical suspicion, D-dimer testing, Well's score and imaging ensures timely diagnosis of both life-threatening condition, which can further guide management and improve patient outcomes.

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