Introduction

Phantom tumor of the lung (also called pseudo tumor of the lung) is a mass-like appearance of interlobar pleural fluid collection in congestive heart failure [1]. The words phantom or pseudo are coined for this unusual finding because it resembles a tumor on radiograph and vanishes after initiating diuretic therapy [2].

Case report

A 78-year-old woman, a known case of acid peptic disease, diabetes mellitus, hypertension, and congestive heart failure presented with increasing shortness of breath and cough with sputum for 8–10 days. Her blood pressure on arrival was 160/95 mmHg, pulse was 96 bpm, respiratory rate was 20/min, oxygen saturation was 94%, and temperature was 99.3°F. Physical examination showed increased jugular venous pulse and pressure, mild-to-moderate pedal edema, S3/S4 gallop rhythm, and bilateral basal crepts with equal air entry on chest auscultation. Her medications included metformin 500 mg once daily, bisoprolol (Concor) 2.5 mg once daily, lisinopril (Zestril) 20 mg once daily, amlodipine (Norvasc) 5 mg once daily, and omeprazole (Risek) 40 mg once daily. She had recently stopped taking her medications, leading to arousal of her symptoms.

Her ECG findings were unremarkable. However, a posteroanterior chest radiograph showed an enlarged heart shadow, calcified aortic arch, slightly thickened horizontal fissure, bilateral blunting of costophrenic angles, and a rounded 4×5 cm (tumor-like) opacity in the lower zone of the right lung (Fig. 1). Lateral view chest radiograph showed a cigar-shaped opacity in the area of oblique fissure of the right lung (Fig. 2), excluding pneumonia and tumor while including pleural effusion as the explanation to this unusual finding.

Echocardiography, 3 months before this episode, showed mild-to-moderate concentric hypertrophy of the left ventricle with diastolic dysfunction and ejection fraction of around 55–60%.
In light of the above findings, we started this patient on diuretic therapy. A week later, on repeat chest radiograph, the pleural effusion had almost completely vanished. As it looked like a mass on radiograph but vanished after induction of diuretic therapy, phantom or pseudo tumor of the lung was diagnosed.

**Discussion**

Phantom/pseudo tumor of the lung is a very uncommon radiographic finding. Congestive heart failure patients, with a past history of recurrent or long-standing pulmonary infections leading to pleuritis [3] and pleural fibrosis, are prone to developing such configuration of pleural fluid collection in acute exacerbations. It is also plausible that patients with a history of recurrent exacerbations [4] leading to pleural effusion formation and stretching of pleura develop such tumor-like fluid collection. Phantom tumor effusion is usually found in the horizontal fissure, less frequently within the oblique fissure [5], as in this case, and very rarely multiple collections in both fissures can be seen.

Lateral view chest radiograph usually assists in diagnosing this condition. However, it is not uncommon to obtain a computed tomography scan for such unusual findings on chest radiograph, exposing patients to unnecessary radiations and, in some cases, unnecessary biopsy/surgery.

**Conclusion**

We suggest that phantom tumor be always kept in mind during differential diagnosis of mass-like findings on chest radiograph in patients with congestive heart failure, if there has been an increase in symptoms and signs of congestive heart failure. In addition, treatment with diuretics should be provided before going for any other expensive and unnecessary investigations or procedures.

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**Conflicts of interest**

There are no conflicts of interest.

**References**