

*Prikaz slučaja /
Case report*

LEFT SIDED PHANTOM TUMOR OF THE
LUNG- RARE FINDING OR FORGOTTEN
ENTITY - *A Case Report?*

LEVOSTRANI „FANTOMSKI“ TUMOR
PLUĆA, NEUOBIČAJEN NALAZ ILI
ZABORAVLJENI ENTITET – *Prikaz slučaja*

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Key words

phantom tumor, pseudotumor, lung, heart failure, loop diuretics

Ključne reči

pseudotumor, nestajući tumor, srčanaslabost, diuretici

Abstract

Phantom tumors (or vanishing tumors) of the lung are well known entities in cardiovascular medicine which result from localization of a pleural effusion within an interlobar fissure from exacerbated congestive heart failure. They require no special treatment beyond correction of the underlying heart condition and volume overload. Recognition of these vanishing tumors is, however, important in avoiding unnecessary and potentially harmful diagnostic tests and errors in therapy. **Case report:** We report a rare case of left-sided phantom tumor of the lung in 75-year-old male with an established diagnosis of congestive heart failure and chronic obstructive pulmonary disease. **Conclusion:** Resolving phantom tumor of left side is the same as the one on the right side. Loop diuretics are essential in this condition. However, left sided phantom tumor is not frequent, one could think about the other diagnosis. Computer tomography is sometime necessary.

INTRODUCTION

Terms “phantom tumor” or “vanishing tumor” are commonly associated with congestive heart failure causing transudative pleural effusion within pulmonary fissures [1]. The major fissure is an important anatomic landmark in the interpretation of chest radiographs and computed tomographic (CT) scans. At radiography, the major fissures normally appear as hairlines of soft-tissue density. Progressive widening of the major fissure inferiorly manifests as a triangular area of increased opacity and represents intrafissural fat. Various inflammatory, granulomatous, neoplastic, and abnormal hemodynamic conditions involving the major fissure can affect its imaging appearance. Oblique orientation of the major fissure may complicate radiographic interpretation such as a case with phantom tumor [2, 3]. Nor infrequently, phantom tumor is investigated as tumor mass [1].

CASE REPORT

Our patient was a 75-year-old male with an established diagnosis of congestive heart failure and chronic obstructive pulmonary disease (COPD), admitted to pulmonary ward due to cough, complaint of exacerbation of dyspnea in the recent 10 days, loss of 10kg for 6 months and radiological finding of round to oblique large mass in left lower lung. On posterior-anterior views, the location of the opacity at the site of the fissure and slight tapering of the medial and lateral margins suggest minor fissure encapsulation [Figure 1 A].

The physical examination crepitant crackles presented on basal parts of both lungs. The cardiovascular system examination revealed ejection systolic murmur at the aortic area, blood pressure was 140/90mmHg. There was no evidence of free fluid or congestive hepatomegaly per abdomen. The left rib cage was painful to palpation. His limb legs were edematous. His electrocardiogram showed

sinus tachycardia, 110/min with low voltage complexes. He was a heavy smoker smoking approximately 60 packs/year. The laboratory workup highlighted only mild leukocytosis ($11\,100 \times 10^9/L$). The remaining hematological parameters and the complete biochemistry profile were normal.

An echocardiography revealed ejection fraction of 20–25% and the patient underwent treatment for decompensated heart failure with intravenous loop diuretics. Dyspnea improved after several days of diuretic therapy. According to radiological finding and smoking history, this recognized risk factor ranked neoplasms at the top of differential diagnosis list. Chest X-ray was repeated after three days and was a stationary finding as on the admission. Subsequently, spiral chest computed tomography was performed for further evaluations. It revealed atypical pleural effusion the left lung [Figure 1 B].

Loop diuretics were increased, patient had approximately 4000ml diuresis and after four days, we have done control chest X-ray where there was complete disappearance of earlier described change in left lung [Figure 1 C].

The term 'Phantom Lung Tumor' is applied to a transudative interlobar fluid collection in congestive heart failure, which disappears spontaneously with compensation and may reappear with each bout of cardiac decompensation [4]. On a postero-anterior chest X-ray it appears as a dense, well delineated shadow of variable shape, not very often resembling pulmonary tumor. The pseudotumors of the lung [5] are transient collections of pleural fluid in the interlobar pulmonary fissure predominantly on the right, usually seen in congestive heart failure, renal failure or hypoalbuminemia

by transudation from the pulmonary vasculature. The interlobar fluid collection occurs most commonly on the right side, predominantly in male population, in the transverse fissure, but infrequently, it occurs in the transverse and oblique fissures simultaneously [6, 7]. More frequent occurrence of the phantom tumor on the right side of the lung can be explained by the greater hydrostatic pressure on the right side compared to the left side in congestive heart failure [8].

Phantom tumor of the lung is rarely seen in left hemithorax. The real incidence of its appearance does not exist due to small numbers of case reports. Researching Medline with key words "right sided phantom tumor" we have not found any case report which describe left sided phantom tumor of the lung.

Causes of unilateral cardiogenic pulmonary effusion can vary. They can be the result of vascular or bronchial obstruction, congenital heart diseases, or severe mitral regurgitation [9].

When phantom tumor is located in interlobar or transverse fissure, or both, with anamnesis of heart failure, one could think on vanishing tumor of the lung. The situation is different if phantom tumor is on left hemithorax, because it is sporadic finding and usually request additional examination.

CONCLUSION

However the occurrence of pleural pseudotumors in other locations except right lung is quite rare and thus leads to diagnostic dilemma. The use of computed tomography is sufficient for accurate diagnosis of this rare entity.



Figure 1. A postero-anterior chest radiograph in a 75-years old male shows a large pleural pseudotumor in left lower lung simulating a mass in a patient with left heart failure (A). Axial CT image at the level of left atrium shows atypical pleural effusion on the left (B). A posterior-anterior chest radiograph obtained one week later shows disappearance of the fluid in the left pleural space (C).

Sažetak

„Fantomski“ ili „nestajući“ tumori predstavljaju neuobičajene ali dobro poznate entitete u kardiovaskularnoj medicini, koji nastaju u sklopu kongestivne srčane slabosti kao posledica nakupljanja pleuralnog izliva unutar interlobarnih fisura. Ne postoji nijedna specifična terapija, osim korekcije postojećeg srčanog stanja i opterećenja volumenom. Adekvatno postavljena sumnja na ova jentitet može sprečiti sprovođenje ekstenzivnih i skupih dijagnostičkih procedura, kao i dalje neadekvatno lečenje. **Prikaz slučaja:** Ovaj rad prikazuje levostrani „fantomski“ tumor, koji se retko susreće u kliničkoj praksi, kod 75-godišnjeg muškarca sa dijagnostikovanom kongestivnom srčanom insuficijencijom i hroničnom opstruktivnom bolešću pluća. **Zaključak:** Levostrani „fantomski“ tumori se tretiraju isto kao i desnostrani, gde ključnu ulogu imaju diuretici. Obzirom na to da levostrani „fantomski“ tumori imaju retku incidencu, lako se može doneti pogrešna dijagnoza, te je ponekad neophodna dopunska dijagnostika u vidu kompjuterizovane tomografije.

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