

Right Lung Cancer with Cardiac Infiltration Masquerading as Left Atrial Myxoma

Cardiac infiltration by lung malignancy is an extremely rare but potentially life-threatening clinical entity. We describe an atypical case of right lower lobe lung cancer with a left atrial infiltrative mass via the right inferior pulmonary vein. A 23-year-old female nonsmoker, nonalcoholic, with no medical comorbidities, no relevant family history, and no significant medical or surgical treatments, presented to the cardiothoracic outpatient department with symptoms of cough and right side chest pain for 6 months and breathlessness on exertion for 2 months, associated with loss of appetite/weight and occasional palpitation. The patient was evaluated and diagnosed outside with a right lung mass (?) pulmonary hamartoma. The systemic and local clinical findings were normal, except the decreased breath sounds in the right lower basal region. Echocardiography revealed a 3.0 cm × 5.9 cm intracardiac mass attached to the interatrial septum, obstructing mitral valve, and prolapsing into the left ventricle, suggestive of left atrial myxoma with mild mitral regurgitation. Chest X-ray demonstrated right lower zone opacity with underlying lung collapse [Figure 1]. Contrast-enhanced computed tomography (CT) scan showed a right lower lobe lung mass of size 7.66 cm × 6.74 cm, going into the left atrium through the right inferior pulmonary vein with the abutment of the left lower lobe bronchus with no gross mediastinal lymphadenopathy [Figure 2]. Fiberoptic bronchoscopy (FOB) revealed a fleshy whitish endobronchial growth in the right intermediate bronchus arising from the right lower lobe bronchus suggestive of malignancy. The FOB-guided biopsy histopathology report (HPR) was inconclusive because of a very

scanty sample. HPR of CT guided-biopsy specimen was suggestive of poorly differentiated carcinoma. Tumor cells were immunopositive for P40 and CK5/6 and immunonegative for CD31 and CD117. Germ cell tumor markers were normal except serum LDH (866 units/l; normal range, 140–280 units/l). After a multidisciplinary tumor board discussion, palliative chemotherapy was planned because of unresectable disease. Meanwhile, the patient presented to the emergency department with symptoms of severe headache with altered sensorium and recurrent vomiting. Magnetic resonance imaging brain revealed a space-occupying lesion of size 5.4 cm × 4.7 cm in the left parieto-occipital region with midline shift, suggestive of brain metastasis or glioma. There was no papilledema on fundus examination. The patient was managed conservatively and succumbed to within 2 months of diagnosis due to disease progression.

The diagnosis of cardiac involvement in lung cancer patients is not common in clinical practice.^[1] In an anecdotal case report, the clinical manifestation resembled with myocardial infarction.^[2] From a clinical point of view, left atrium infiltration may lead to life-threatening complications such as pulmonary venous flow obstruction,^[3] left ventricular inflow obstruction,^[4] and myocardial infarction.^[5] Successful removal of the cardiac tumor may not lead to long-term survival, because of bad biology of the disease.^[1] The current study patient presented initially with chest pain and breathlessness, diagnosed initially as left atrial mass (? myxoma) that was finally diagnosed as metastatic lung cancer. Cardiac infiltrative mass as the first presentation of metastatic lung disease is uncommon, may cause a diagnostic dilemma, and consequently delay treatment.



Figure 1: Chest X-ray depicts the right lower zone opacity with adjacent lung collapse

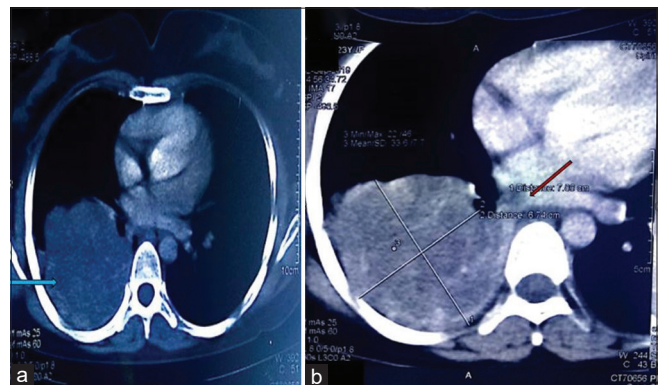


Figure 2: Contrast-enhanced computed tomography scan shows a right lower lobe lung mass (blue arrow), closely abutting the chest wall with contiguous infiltration of lower lobe and intermediate bronchi (a) and left atrial mass (red arrow) via right inferior pulmonary vein (b)

Declaration of patient consent

The authors certify that the patient has given appropriate written informed consent form. The patient understands that her name and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

The study involves human study, but the institute ethics committee approval is exempt, because of ethics approval is not applicable for retrospective treated individual case reports.

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Conflicts of interest

There are no conflicts of interest.

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