

Endobronchial lipoma; A rare case report

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Abstract

The endobronchial lipoma is a rare benign tumor that can cause lung injury. It constitutes 0.1% of all lung tumors. Endobronchial lipoma can be confused clinically with malignant tumors. A 45-year-old female with a history of previous limb malignant neoplasm applied to the emergency room with complaints of shortness of breath, chest pain. Upon detecting atelectasis in the left lung lower lobe, thorax computed tomography (CT) was performed for further examination and evaluation, and then PET CT examination was performed in thorax CT, it was observed that there was a non-contrasted, smooth solid mass that contained the fatty values, occluding the left lung lower lobe bronchus and atelectasis in the lower lobe of the lung. It was removed totally with bronchoscopy. The histopathological examination of the mass was reported as an endobronchial lipoma. We decided to present this rare case with radiological imaging findings.

Keywords: Pulmonary neoplasm; lipoma; computed tomography

INTRODUCTION

Most of the tracheobronchial system tumors are malignant. Benign tumors of the lung contain less than 1% of all lung cancers (1). Lipomas can originate from any adipose tissue in the lung. Most cases of endobronchial lipoma (EL) are of middle age. The incidence is higher in males (2). Clinical complaints of EL are often due to symptoms caused by airway obstruction. In the majority of cases, the main symptom is a cough. EL can cause bronchiectasis as a result of atelectasis and recurrent pneumonia. Multislice computerized tomography (MSCT), are used in the radiological diagnosis of most of the lung diseases. In this article; a 45-year-old female patient, with EL in the left lung lower lobe bronchus was presented in the presence of radiological findings.

CASE REPORT

A 45-year-old woman presented to our hospital emergency department with complaints of shortness of breath and chest pain. It was learned that there were cough complaints in the patient's history for 2 months and recently there was an increase in these complaints. The posterior-anterior lung radiograph of the patient revealed opacity increased on the left lower lobe (Figure 1). In the contrast-enhanced thorax MSCT showed that, a solid mass with 15x13 mm size containing fat values restricting the left lobe bronchus. Also in the lower lobe, atelectasis was observed (Figure 2a, b). In the case with a history of previous thigh sarcoma surgery, the mass was removed with bronchoscopy in the absence of involvement in favor of malignancy for PET

CT (Figure 3). The histopathological examination of the mass was reported as an endobronchial lipoma (Figure 4). No obvious pathology was observed on the control chest x-ray (Figure 5). The patient was discharged with recommendations.

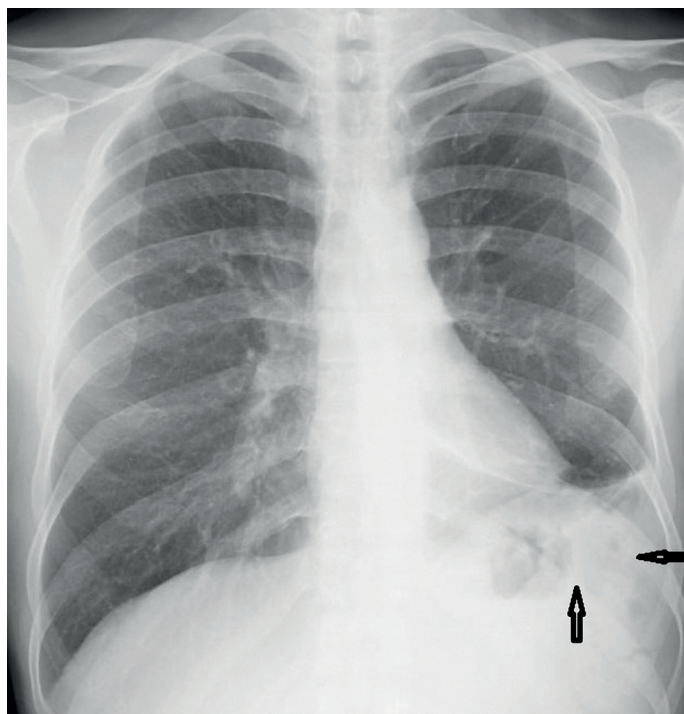


Figure 1. The posterior-anterior lung radiograph revealed opacity on the left lower lobe (arrows)

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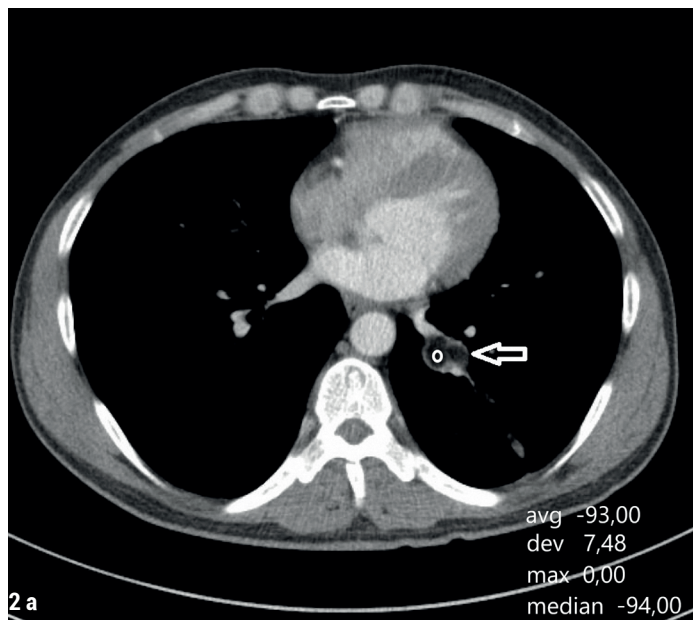


Figure 2. Contrast-enhanced axial thorax MSCT showed that, a solid mass containing fat values restricting the left lobe bronchus (arrow) (a). In the contrast-enhanced sagittal thorax MSCT; atelectasis was observed in the lower lobe (small arrows)

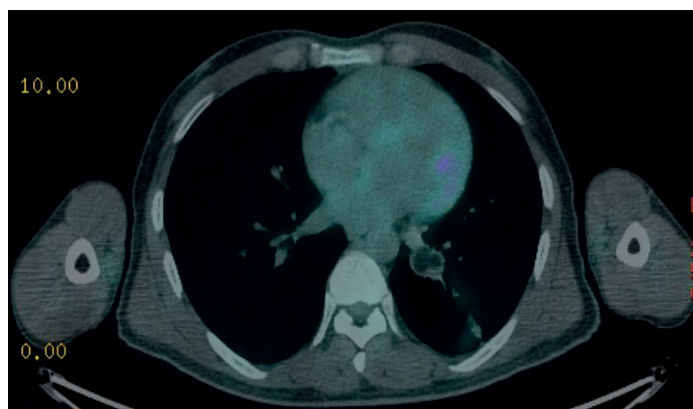
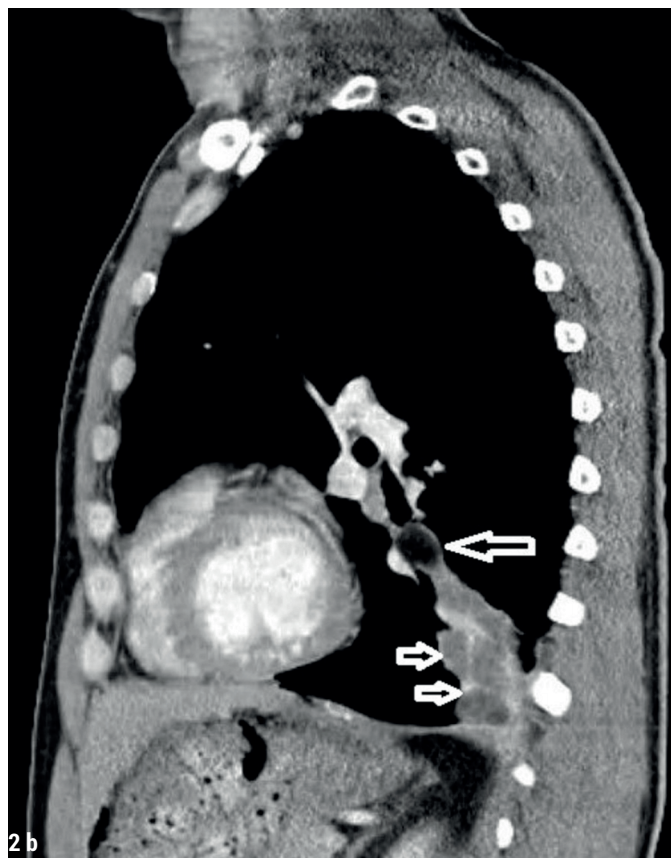


Figure 3. There was no pathological uptake in the PET-CT

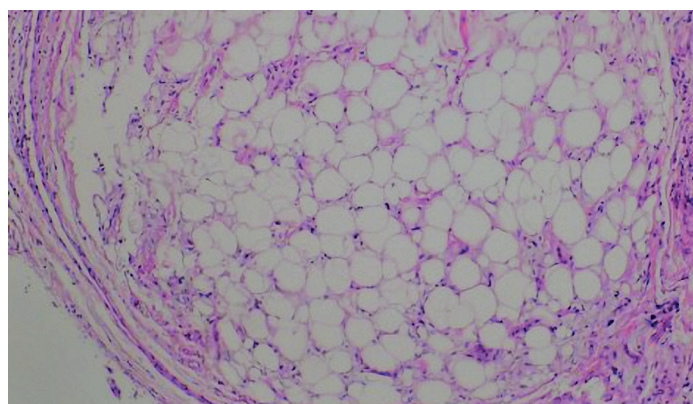


Figure 4. In histopathological examination; lipoma structure is observed under the bronchial epithelium (HE x100).

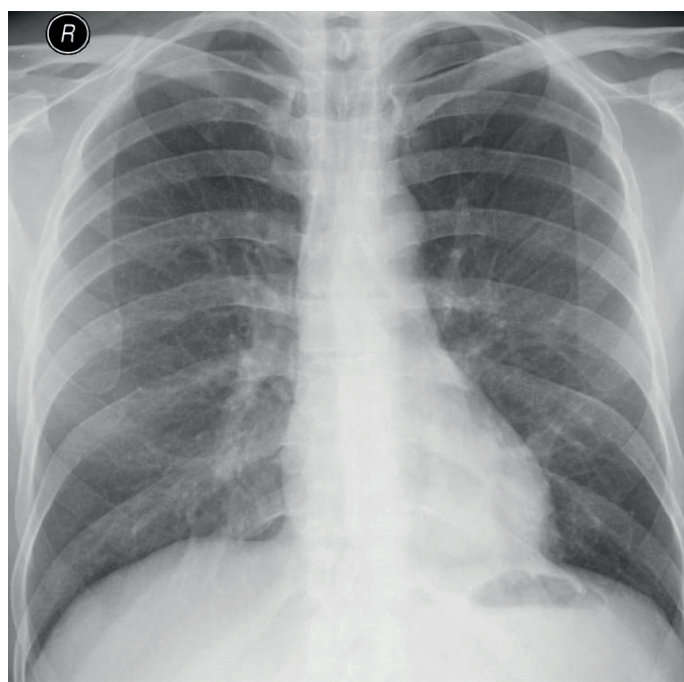


Figure 5. The control chest posterior-anterior lung radiograph was normally

DISCUSSION

Endobronchial lipoma (EL) often localized in the first three branches of the tracheobronchial tree. It consists of mature adipose tissue surrounded by normal bronchial epithelium, containing fibrous components capable of displaying squamous metaplasia. They are

macroscopically soft, rounded, well-circumscribed mass lesions with protrusions on them, in yellow-white appearance. Smoking and obesity are the most obvious risk factors. EL is usually seen in men and in 5-6. Decade (2). EL results in partial or total respiratory tract obstruction or respiratory symptoms secondary to lung parenchymal damage. Common symptoms are persistent cough, chest pain, recurrent fever, and shortness of breath. Other symptoms are increased shortness of breath, wheezing, hemoptysis, obstructive pneumonia. Symptom duration may vary. It is quite difficult to differentiate EL on chest radiography. Although chest radiography is generally normal in EL cases, post obstructive changes such as pneumonia and atelectasis can be seen. The appearance of homogeneous mass with fat density without contrast enhancement in MDCT is considered diagnostic (3,4). The presence of fat attenuation narrows down the differential diagnoses to the following: pure endobronchial lipoma, which demonstrates homogeneous fat attenuation; fibrolipomatous tumor, which contains soft tissue attenuation with islands of fat; and hamartoma, which has fat density alternating with calcific foci. Fibrous, glandular tissue, areas of cartilage or osseous metaplasia can also be found in the lipoma; pathologist must use differential diagnosis to rule out atypical lipomatous tumors and well-differentiated liposarcomas. In bronchoscopic examinations, they appear as a smooth-surface mass.

Its treatment, primarily bronchoscopic resection is recommended (5,6) Surgical resection may be required in patients whose malignancy cannot be ruled out, that grows out of the bronchus, shows sub pleural location, or develops irreversible parenchymal changes (7).

CONCLUSION

In conclusion, rare benign lesions of the lungs that can mimic asthma, chronic bronchitis and lung malignant tumors should be kept in mind in the differential diagnosis. MDCT imaging is useful for the diagnosis of tumor appearance within the lung.

Conflict of interest: The authors declare that they have no competing interest.

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REFERENCES

1. Hasleton PS. Benign lung tumors and their malignant counterparts. In: Hasleton PS, editor. *Spencer's Pathology of the Lung*. 5th ed. New York: McGraw-Hill; 1996. p. 879-80.
2. Muraoka M, Oka T, Akamine S, et al. Endobronchial lipoma: review of 64 cases reported in Japan. *Chest* 2003;123:293-6.
3. On R, Kushima H, Ishii H, et al. Endobronchial Lipoma: The Diagnostic Benefit of Computed Tomography Findings. *Intern Med* 2018;57:285-6.
4. Liew CJ, Tham KY, Poh AC, et al. Endobronchial lipoma. *Singapore Med J* 2017;58:510-1.
5. Jaurrieta Largo S, de Vega Sanchez B, Disdier Vicente C. Endobronchial lipoma excision by cryotherapy and flexible bronchoscopy. *Arch Bronconeumol* 2019;55:490.
6. Flores-Franco RA, Gonzalez-Calzadillas LF, Cota-Castro S. Successful endoscopic resection of an endobronchial lipoma using a percutaneous gastrostomy snare device. *Arch Bronconeumol* 2018;54:235-6.
7. Nakashima K, Okagawa T, Utida T. Endobronchial lipoma treated left lower lobectomy; report of a case. *Kyobu Geka* 2017;70:471-3.