MEGA JOURNAL OF CASE REPORTS

OPEN ACCESS

Case Presentation

Compiled Date: March 22, 2025

Left Lower Lobectomy of Endobronchial Lipoma: Report of a Case

Hamdi Mariem[1*], Hanene Smadhi[1], Affes Mariem[2], Hela Kammoun[1], Ayadi Aida[3], Hantous Saoussen[2], Merghli Adel[4], Zribi Hazem[4] and Leila Fekih[1]

[1]Pulmonology Ibn Nafis Department, Abderrahmen Mami Hospital, Tunisia

[2]Radiology Department, Abderrahmen Mami Hospital, Tunisia

[3]Pathology Department, Abderrahmen Mami Hospital, Tunisia

[4]Thoracic surgery Department, Abderrahmen Mami Hospital,Tunisia

[*]**Corresponding author**: Hamdi Mariem, Pulmonology Ibn Nafis Department, Abderrahmen Mami Hospital, Ariana, Tunisia

Abstract

Endobronchial lipomas are rare benign lung tumors. Undiagnosed, they can cause irreversible pulmonary damage distally. There are very few such cases reported in the English medical literature. Most endoscopists and surgeons have never encountered or treated one. Twenty-nine cases have been recorded in the English literature that were diagnosed ante mortem. Here we present a case report of a 65-year-old man who presented with progressive dyspnea and chest pain. Bronchoscopy and chest CT showed an endobronchial lesion, suggestive of a lipoma. The case was evaluated and A surgical resection was performed, and subsequent histopathological analysis confirmed the tumor to be an endobronchial lipoma.

Keywords: Endobronchial lipoma; Lobectomy; Lipoma

Introduction:

Benign pulmonary tumors are rare entities, and among them lipomas are the most uncommon. Lipomas can be found endobronchially, intrapulmonary, and mediastinal. Endobronchial lipomas are very rare. It is extraordinarily rare and in our knowledge only 62 cases were reported in the English literature.

Case Presentation

A 65 -year-old man current smoker with a mean consumption of 50 pack years was admitted to our department with vague thoracic pain and shortness of breath. He had no other respiratory symptoms (hemoptysis, cough or

wheezing). Except for obesity the findings from the remainder of the examination were normal. A chest X ray revealed a retro-cardiac opacity of the left

lower lobe and an ascension of the diaphragmatic couple **(Figure 1)**. The electrocardiogram was normal. Pulmonary function tests were also normal. Flexible bronchoscopy revealed a lobulated smooth yellow lesion at the orifice of the left lower lobar bronchus.

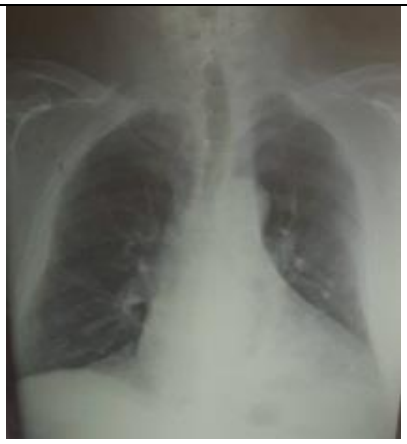

Figure 1: Frontal chest radiograph shows a vague opacity in the left lower lobe with a smooth margin and ascension of the diaphragmatic couple.

A biopsy was not taken because of the possibility of a hemorrhage. A CT-scan was performed and showed a 14 mm long axis endoluminal mass of fatty density (-70 UH) in the trunk of the left common basal pyramid without exobronchial extension with a partially ventilated collapse downstream. Centimeter-sized lymph nodes of groups 5 and 4R **(Figure 2a-c)**.

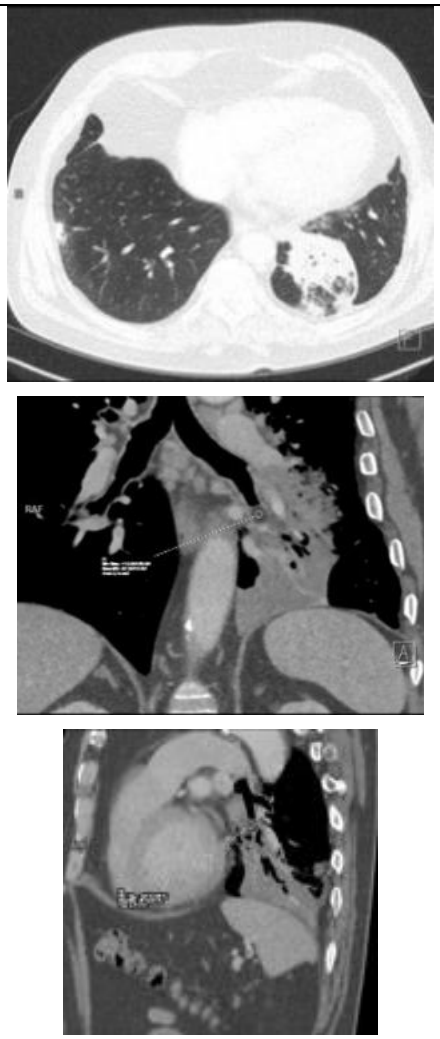

Figure 2: Chest CT scan in the axial plane in the parenchymal (a) and coronal mediastinal window (b) shows a mass of fatty density (−70 HU) (arrow) obstructing the trunk of the left basal pyramid (dotted arrow). The multiplanar reconstruction in an oblique sagittal plane (c) shows the well-limited endobronchial mass (dotted arrow).

Because of the clinical suspicion of an underlying malignancy and the presence of enlarged lymph nodes on CT-scan, the patient was operated **(Figure 3)**.

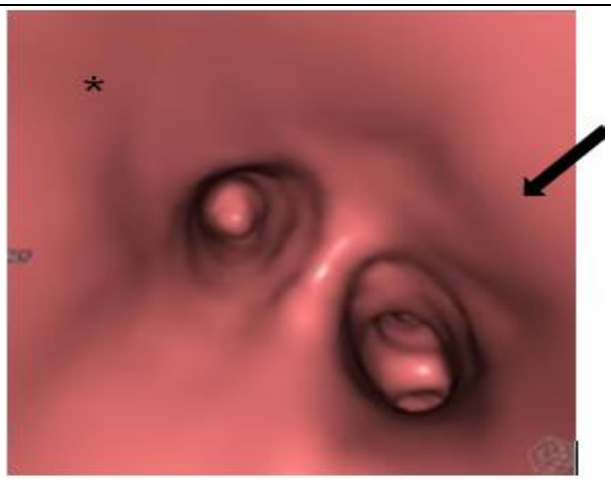

Figure 3: The mass (*) obstructing the left lower lobe bronchus in virtual bronchoscopy.

A left thoracotomy was performed. The postoperative course was Uneventful. Histopathological sections revealed **(Figure 4a and b):** Endobronchial lipoma with a diameter of 1.8 cm long, obstructing the left lower lobe bronchus. Bronchial and vascular sections are healthy. There were no histological signs of malignancy. The patient experienced significant improvement in dyspnea following the resection. In view of the possibility of long-term relapse, a CT scan was performed one year after surgery which was normal.

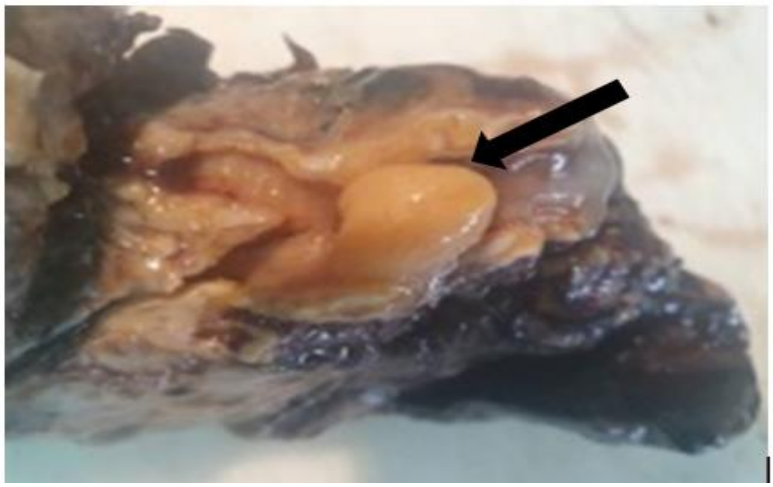

Figure 4a: macroscopic examination of the piece of lobectomy: well limited yellowish endobronchial nodule (arrowheads) 1.8 cm long and 1.2 cm wide.

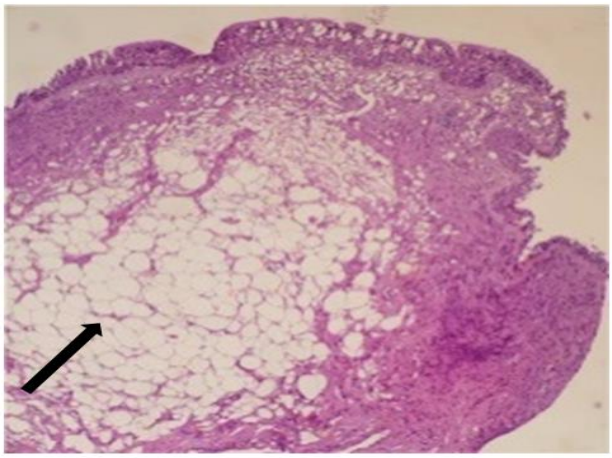

Figure 4b: microscopic examination of the surgical specimen shows the presence of adipose lobules (arrow heads) separated by thin connective partitions, made up of regular and matures fat cells. The specimen is identified as an endobronchial lipoma.

Discussion

Although lipoma is the most common tumor of the body, endobronchial lipomas are extremely rare [1]. Their incidence ranges from 0.1%–0.5% of lung tumours and about 13% of benign lung tumours [2]. It was in 1854 that Rokitansky described the first endobronchial lipoma in an autopsy study [3]. Muraoka et al. published a series of 64 cases in Japan [1]. The mean age of patients at diagnosis is 52 years, with a strong male predominance (male-to-female ratio of 45:7) [4]. The diagnosis is often delayed due to the indolent nature of this tumour: Therefore up to 25% of cases may be asymptomatic [4]. In the 64 cases reported by Muraoka et al, cough was the most frequent complaint [1]. The other symptoms include: hemoptysis, exertional dyspnea, fever, chest discomfort or recurrent pneumonias [1,4]. The symptoms vary depending on the location and size of the tumour [3]. Eighty percent of patients have abnormalities on chest radiograph (e.g., atelectasis, consolidation, or mass) [1]. Postulated risk factors for developing endobronchial lipomas are heavy smoking history and obesity [2,4]. Our patient was overweight and current smoker. However, on the basis of published reports, the occurrence of endobronchial lipomas in association with cigarette smoking is unclear [4]. The gross appearance of endobronchial lipomas is usually soft, rounded, circumscribed with yellow white tissue and with little to no vascularization [4]. Lipomas are rare endobronchial tumors that may cause severe parenchymal damage due to bronchus obstruction and subsequent pneumonia. Therefore, accurate diagnosis and radical treatment are essential. They may be misdiagnosed clinically as a bronchial carcinoid or malignant tumor. The first case of a treated endobronchial lipoma was reported in 1927 by Kernan. Once the diagnosis is made, treatment options include either endoscopic resection or surgical excision. The decision between the two modalities depends on the tumor size and the degree of lung damage distal to the tumor [4]. Usually bronchoscopic resection is the first line of treatment, as it is both diagnostic and curative. Furthermore, it's less invasive, conferring a lower morbidity rate than surgical resection [2]. Different means are used: laser, cryotherapy, or electrosurgery with mechanical Debulking [4]. Indications for endoscopic resection include an endoluminal tumor in a central location with limited extension into the endobronchial tree [4]. Thoracotomy should be reserved for when there is

extra luminal extension, uncertain tumor etiology or parenchymal destruction [4]. Lipomas have no premalignant connotation, the prognosis appears favorable and the local recurrence rate is low [1]. Some authors, given the possibility of relapse, recommend careful monitoring following resection [4]. Multidetector Computed Tomography (MCT) of the thorax with virtual bronchoscopy provides a noninvasive approach, but is limited in that the distal airways may prove difficult to visualize [2].

Conclusion

Endobronchial lipoma remains a rare pathology that presents late due to nonspecific symptoms. The extent of airway obstruction determines the clinical symptoms and the type of intervention needed. A multidisciplinary approach is crucial to discuss treatment options, either bronchial unobstruction or lobectomy.

References

1. Pollefliet C, Peters K, Janssens A, Luijks A, Van Bouwel E, Van Marck E, et al. Endobronchial Lipomas: Rare Benign Lung Tumors, Two Case Reports. J Thorac Oncol. 2009;4(5):658-60.
2. Liew C, Tham K, Poh A, Tee A. Endobronchial Lipoma. Singapore Med J. 2017;58(8):510-1.
3. Oury Bah M, Korzec J, Khalil A, Lavole A, Rosencher L, Carette MF. Lipome endobronchique : apport de l'imagerie. À propos d'un cas. Rev Pneumol Clin. 2009;65(1):36-9.
4. Dy RV, Patel S, Harris K, Mador MJ. Endobronchial lipoma causing progressive dyspnea. Respir Med Case Rep. 2017;22:95-7.

Citation of this Article

Mariem H, Smadhi H, Mariem A, Kammoun H, Aida A, Saoussen H, Adel M, Hazem Z and Fekih L. Left Lower Lobectomy of Endobronchial Lipoma: Report of a Case. Mega J Case Rep. 2025;8(3):2001-2006.

Copyright