Endobronchial Lipoma in a Never-Smoker

Li Wang*, Meenakshi Bansal and Guang-Qian Xiao

University of Rochester Medical Center, USA

*Corresponding author: Li Wang, University of Rochester, School of Medicine & Dentistry, 601 Elmwood Ave, Box 471, Rochester NY 14620, USA, E-mail: Li_wang@urmc.rochester.edu

Abstract

Endobronchial lipomas, usually found in the obese and in smokers, can cause patients significant distress with chronic cough, chest pain, dyspnea, and increased infection risk. Here we present a case of a 61 year-old obese, never-smoker gentleman who initially presented with chronic productive cough, hemoptysis, chills and night sweats; and was later found to have a right upper lobe lung parenchymal lesion. Biopsy demonstrated a picture consistent with obstructive endobronchial lipoma.

Keywords

Endobronchial lipoma, Never smoker, Chronic cough

Introduction

Endobronchial lipomas have been believed to represent 0.1 to 0.5% of all lung tumors or 0.1 to 0.4% of all bronchial tumors, usually presenting in the obese and in smokers [1,2]. They can be misdiagnosed as malignant lesions; and although most are fairly benign lesions, they can cause patients significant distress with chronic cough, chest pain, dyspnea, and increased risk of developing infection [3]. In addition, this infection could develop into a pleural empyema if the obstruction is untreated; hence it is particularly important to recognize its presence in a timely manner [4]. Here we present a case of a patient who has never been a smoker presenting with intermittent productive cough and right upper lobe lung parenchymal lesion.

Case Presentation

A 61 year-old obese, never-smoker gentleman was seen in outpatient clinic complaining of a mild intermittent chronic productive cough that began six months prior with hemoptysis, chills, and night sweats. His medical history included asthma, hypertension, chronic kidney disease, and diabetes mellitus. Physical exam demonstrated hypertension and obesity but was otherwise unremarkable and without a history of lipomatous disease. With the workup of the initial symptom onset, an outside hospital had completed a CT and PET scan (Figure 1) that demonstrated a cold right upper lobe lesion of approximately 6.2 x 3.2 x 3.2 cm with an enlarged subcarinal lymph node measuring 1.2 x 1.9 cm. He received a course of azithromycin, and with time, the hemoptysis, chills, and night sweats resolved.

Two months later, he was still coughing, and an outside hospital bronchoscopy showed a well differentiated lipomatous neoplasm. A

![Figure 1: (a) Sagittal CT image showing obstructed bronchus and (b) Transverse CT image with PET overlay with lung lesion.](image-url)
Figure 2: Endobronchial lipomatous lesion in bronchus of the right upper lung lobe

Figure 3: (a) Significantly narrowed obstructed bronchus showing mature adipose tissue underneath the respiratory mucosa with distal changes in the lung parenchyma (b) Bronchiectasis, peri-bronchiolar inflammation, and mild emphysematous changes (c) focal accumulation of intra-alveolar foam cells (d) rare multinucleated giant cells with asteroid body
Hamartomas are also often characterized by osteocartilagenous involvement [8]; while atypical lipomatous tumors and well-differentiated tumors have atypical adipocytes and can demonstrate sclerosis [9]. The latter two are often associated with heavy smoking, and ancillary immunohistochemistry or chromosomal translocation study may be helpful in diagnosing cases that are more challenging to differentiate [9].

Given the limited number of reported cases, it is not clear if the best treatment for this tumor would be electrocautery, cryotherapy, mechanical removal with forceps, or thoracostomy. While the literature supports that all of the above have been used, and can be safe without recurrence after two years of follow-up [10]; there is an instance in the literature of a patient whose forcep-resected lipoma recurred after four years [1]. Further incidences should be examined and followed for longer periods to determine the best treatment option.

References