Endobronchial lipoma with tuberculosis: A solitary coetaneousness

Sir,

Benign lung tumors comprise of a multifarious group, representing 2%–5% of lung tumors.[1] Endobronchial lipomas consist of 3.2%–9.5% of all benign endobronchial tumors. Radiology and bronchoscopy play an imperative role in the diagnosis, and resection is the mainstay of management. We report a singular case of an endobronchial lipoma with diagnosis attained by endobronchial biopsy and managed with surgical resection.

A 60-year-old man presented with complaints of cough with intermittent episodes of hemoptysis for the last 35 years. He was treated symptomatically over the years; however, he had persistence of his symptoms. Past history was significant for empirical antituberculosis therapy taken for 6 months, 42 years ago, for complaints of cough with hemoptysis. His vital signs and respiratory system examination were within normal limits. Chest X-ray was normal. Subsequently, a contrast-enhanced computed tomography (CT) thorax revealed an oval-shaped fat density lesion at the origin of the left upper lobe bronchus, causing complete distal atelectasis of the left upper lobe, with compensatory hyperinflation of the left lower lobe. Blood investigations including hemogram, liver function and renal function tests, and HIV were within normal limits. A fiberoptic bronchoscopy (FOB) demonstrated a glistening, yellowish, polypoidal mass arising from the left upper lobe bronchus causing its complete occlusion [Figure 1]. Biopsy was taken from the mass lesion and sent for histopathology. It showed clustered adipose cells, suggestive of lipoma [Figure 1]. The patient subsequently underwent a surgical resection of the tumor. Histopathology of the excised specimen demonstrated features of lipoma. However, it also showed caseating granulomatous inflammation in the left upper lobe bronchial lesion as well as the hilar lymph nodes unveiling a coexisting mycobacterial infection.

Tumors of the tracheobronchial tree are commodiously malignant in nature. Benign endobronchial tumors are very attenuate with considerable confusion on the nomenclature and classification.[1] Endobronchial lipomas originate from the fat cells located in the peribronchial and occasionally the submucosal tissue of large bronchi.[2] Although lipomas are the most customary benign neoplasms overall, occurrence within the thorax is extremely rarefied. They are commonly located in the first three subdivisions of the tracheobronchial tree.[2,3] The gross appearance of lipomas in the airways is described as soft and circumscribed rounded protuberances of yellow-white tissue, similar to lipomas elsewhere. Most of the earlier studies mention that smoking and obesity are significant risk factors,[3] although the exact reason for this association is unclear. Endobronchial lipomas befall more commonly in males aged 50–70 years.[4] Although most of these tumors are histologically benign, few cases of malignant dysplasia of the surface layer overlying the lipoma have been elucidated.[5] A review of 64 cases of endobronchial lipoma by Muraoka *et al*. footnotes about the possible development of malignancy with the lipoma.[3]

Cough, progressive dyspnea, and recurrent pneumonias are the most common forms of presentation. Since these are avascular tumors, hemoptysis is relatively uncommon occurring in approximately 25% cases. The signs and symptoms of endobronchial neoplasms are akin to those caused by other respiratory diseases. Hence, they are frequently misdiagnosed as bronchial asthma, bronchiectasis, lung carcinomas, and other chronic airway diseases.[4,6] Endobronchial lipomas may lead to partial or total bronchial obstruction and secondary lung destruction and may be associated with significant morbidity. CT thorax and magnetic resonance imaging (MRI) are indispensable tools in the detection of these fat-containing lesions.[3,7] Multidetector CT is highly specific and sensitive for endobronchial neoplasms having fatty component like endobronchial lipoma or hamartoma. FOB and FOB-guided biopsies form a crucial part of investigations. On bronchoscopy, they generally appear as an encapsulated, yellowish, polypoidal mass, generally originating from the bronchus. Various reports and reviews state low yield of bronchoscopy-guided biopsies. Some reasons postulated are the presence of inflamed surface with squamous metaplasia and lack of adequate deep sample due to the presence of a thick fibrous capsule.[3,7]

The close differentials include other benign pulmonary tumors, especially hamartomas, which account for 3%–20% of all benign tumors.[8] Most hamartomas demonstrate focal calcification on a CT; however, lack of this focal calcification can lead to a diagnostic dilemma.[9,10] Under this condition, pathological analysis of resected specimen is necessary for accurate diagnosis. Although endobronchial tuberculosis is a proximate differential, its concurrent occurrence with endobronchial lipoma is unheard of. Even after an exhaustive literature search, we could not come across any proclaimed association of endobronchial lipoma and tuberculosis. Hence, our case stands out due to its unique coevality of two abutting differentials. Whether this association is coincidental or causal is a matter of speculation.

The management of endobronchial tumors is indispensably surgical. Early resection may avert significant morbidity

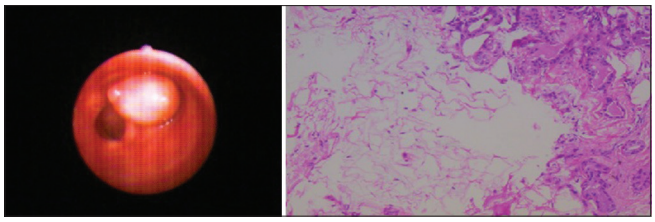

Figure 1: Bronchoscopy image showing the left upper lobe polypoidal lesion and its histopathology image demonstrating clustered lipoma cells (H and E, ×200)

and prevent distal lung damage. The method of resection, whether surgical or bronchoscopic, depends on the operability of the patient, tumor size, and the degree of lung damage. However, the accession should be as conservative as possible. The endoscopic techniques usually incorporate mechanical debulking.[1] Additional ablative techniques include yttrium aluminum garnet laser,[5] ethanol injection into the base, electrosurgical snaring,[3] argon plasma coagulation of the base,[11] and cryotherapy.[5] Our patient was successfully managed with a limited surgical resection.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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