

Endobronchial lipoma

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Abstract

Endobronchial lipomas are rare benign tumours of the lung. The reported case was a 56-year-old man who visited the public hospital with complaints of chest pain and persistent cough. On bronchoscopy, a smooth-surfaced polypoid tumour obstructing the main bronchus in the left lobe was detected. The case was evaluated and surgical resection was performed. Histopathological investigation revealed that the tumour was an endobronchial lipoma; the tumour composed of mature fat tissue and was covered with bronchial epithelium.

Keywords: Endobronchial lipoma, Histopathology.

Introduction

Endobronchial lipomas are rare tumours of the lung found in the tracheo-bronchial tract.¹⁻⁵ The tumour is a slow-growing benign neoplasm, but chronic lung damage is often detected as a result of progressive bronchial obliteration.¹⁻¹⁰ Endobronchial lipomas are often treated by bronchoscopic resection for preventing lung damage.^{2,3,6}

Case Report

A 56-year-old man presented with complaints of chest pain and persistent cough of chronic nature. Physical examination revealed sibilant wheezing rhonchus in the left chest on auscultation. A solid tumoural mass was detected at the orifice of the left lower lobe bronchus, measuring 12x11 mm, and linear-local atelectasis was found in the left lower lobe on radiological examination with chest computed tomography (CT) scan. A smooth-surfaced polypoid tumour obstructing the left lobe main bronchus located 2cm distal of carina was observed on bronchoscopy. The case was evaluated and the surgical council decided that resection was necessary for precise diagnosis and treatment. Bronchoscopic excision of the

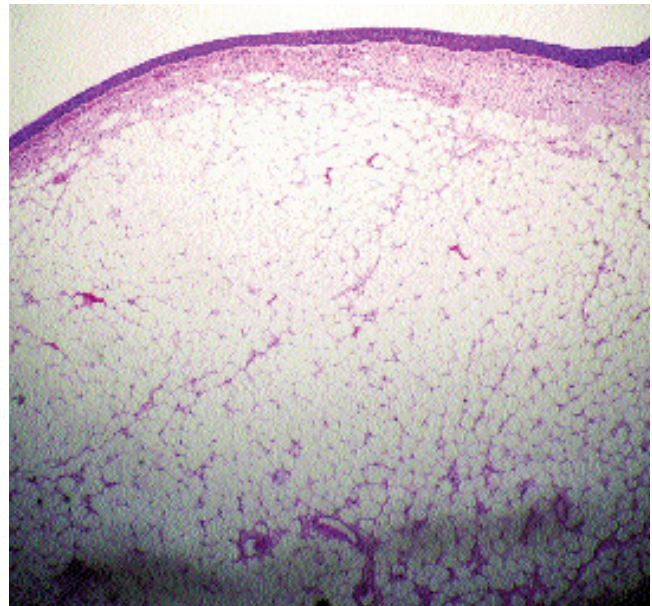


Figure: Tumour composed of mature fat tissue covered with bronchial epithelium.

tumoural mass was performed. Gross examination of the resected specimen revealed that the polyp-shaped tumour had originated from the left main bronchus and protruded in the bronchial lumen, and measured 1cm in diameter. On histopathological investigation, the tumour was found to be composed of mature fat tissue and was covered with bronchial epithelium (Figure). Pathological microscopic examination revealed that the tumour was an endobronchial lipoma. One year later, the physical condition of the patient was excellent, and there had been no complaints during the period.

Discussion

Endobronchial lipoma is an rare benign tumour originating from the adipose tissue, with incidence ranging from only 0.1 to 0.5% in all lung tumours.¹⁻⁴ The tumours are commonly found in the central airways, in lobar or segmental bronchi of the endobronchial tree, mainly located in the right lung, and are easily detected during bronchoscopy, with a only small percentage being located in the periphery of the lung.¹⁻⁵ In the macroscopic investigation, all the lesions are seen as well-circumscribed, soft, yellow masses ranging in size from 1

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to 3cm in the greatest diameter, with a smooth round surface.^{2,3,7} Tumours are found most commonly in middle-aged men⁴ as was the case being presented here. Symptoms reported include cough, sputum, haemoptysis, fever, dyspnoea and recurrent pneumonia.^{5,6,9} A study stated that slow tumoural growth was the reason for late manifestation of the symptoms ranging from a few months to several years before diagnosis.⁵ In our patient, clinical manifestations had been there for 5 years. Another study reported that a large number of the patients have abnormal chest radiographic findings, but most of the abnormal radiographic findings do not include a direct shadow of the tumour, and almost half of the shadows found are judged to be instances of consolidation or infiltration due to atelectasis and pneumonia of the distal lung.⁶ In the presented case, the patient had a medical history of recurrent pneumonia over the previous several years. Eventually, he presented to us after having productive cough and fever for one month. Bronchoscopy showed that the tumour had almost completely obstructed the orifice of the left lower lobe bronchus. However, endobronchial lipoma is histologically benign in character.¹⁻⁵ It has been reported that recurrent pneumonia attacks may induce sufficient nuclear atypia to suggest malignancy in endobronchial brush cytology of this tumour.⁸ In the current case, different from others being reported in the literature, the left lower lobe bronchus was obstructed by the tumour and local atelectasis was detected at the distal lung. The operative treatments of endobronchial lipoma include bronchoscopic excision, bronchotomy, lobectomy or pneumonectomy.^{2,5,6,9} Bronchoscopic resection should be suggested as the primary treatment method after early detection. For this reason, we performed bronchoscopic excision. In the literature, extensive surgical therapy is indicated for patients who show the possibility of a

complicated malignant tumour, with destructive peripheral lung disease and extrabronchial growth; early removal of endobronchial lipomas may prevent the need for surgical resection.^{2,3,6} Besides, it was reported that lipomas in the central airways are successfully treated by bronchoscopic laser therapy.¹⁰ Our patient has had no symptoms since the resection. The prognosis of this tumour is generally excellent because endobronchial lipomas are benign tumours.

Conclusion

Bronchoscopic resection should be considered the first choice of treatment for endobronchial lipoma on initial detection. If the endobronchial lipoma is not recognised and removed early, progressive bronchial obstruction develops.

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