
CASE REPORT

Lymphoepithelioma-like Carcinoma of the Lung

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ABSTRACT

Primary lymphoepithelioma-like carcinoma of the lung is a rare tumour. We report a patient with a solitary pulmonary nodule, unchanged on follow-up CT scans of the thorax over two years, but subsequently confirmed on histology as a lymphoepithelioma-like carcinoma of the lung. The clinical and radiological features of this rare tumour are also discussed.

Key Words: Carcinoma, Computed tomography, Solitary pulmonary nodule

INTRODUCTION

Lymphoepithelioma-like carcinoma (LELC) has been reported in pharyngeal and foregut derivatives including the oral cavity, salivary glands, thymus, lungs, and stomach.¹ The association with Epstein-Barr virus (EBV) is variable.² Primary LELC of the lung is rare. Lack of growth in a pulmonary mass over 2 years is widely reported as implying that the growth is benign.³

We describe a patient with a pulmonary nodule on CT scan of the thorax that appeared unchanged on a further scan 21 months later, but subsequently was identified as a LELC of the lung.

CASE REPORT

A 50-year-old woman, a non-smoker, presented with symptoms of cough and excess sputum production. Chest radiography identified a right lung base shadow. Symptoms subsided with treatment. The patient was admitted for further evaluation of the lung shadow. CT scan of the thorax at that time revealed a 1.2 cm slightly irregular soft tissue nodule in the right lung base, and an enlarged subcarinal lymph node. A complete blood count and renal function tests were unremarkable. The patient refused fine needle aspiration biopsy

and outpatient follow-up was scheduled. On review one year later, CT scan of the thorax showed no significant change in the lung nodule or the subcarinal lymph node.

The patient was subsequently admitted approximately 9 months later for investigation of pyrexia of unknown origin. Blood tests at this time showed a normochromic normocytic anaemia (100 g/L), and a raised erythrocyte sedimentation rate (90 mm/h). Liver function tests showed increased alkaline phosphatase (180 U/L) and gamma glutamyl transferase levels (119 U/L). Rheumatoid factor and C-reactive protein tests were positive. Sputum cultures (including tuberculosis) were negative. Ultrasound examination of the abdomen and pelvis was normal. A Gallium scan showed a mild increase in uptake in the mid-thoracic region with a panda sign suggestive of sarcoidosis. A CT scan of the thorax one month postadmission showed slight enlargement of the subcarinal lymph node, with no change apparent in the right lower lobe nodule. Ear, nose, and throat examination and faecal occult blood testing revealed no abnormality. A positron emission tomography (PET) scan one month later gave the standardised uptake value for the lesion as less than 2.5. A further CT scan of the thorax three months later showed no change from the previous study.

The patient was referred to a thoracic surgeon. Thoracoscopy with wedge resection of the nodule was undertaken and histology confirmed the lesion as a LELC of the lung. The subcarinal lymph node was negative for malignancy.

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The patient subsequently underwent middle and lower lobectomy of the right lung, with lymph node dissection. She was also given adjuvant radiotherapy. Pleural metastasis was found shortly after surgery and chemotherapy was considered for the patient on recent follow-up.

DISCUSSION

LLELC of the lung is very rare. The first patient with pulmonary LLELC was reported by Begin et al in 1987.⁴ To our knowledge, there are less than 40 cases reported in the English language medical literature. LLELC occurs in Asians as an EBV-associated neoplasm and is more common in Asians than Caucasians.⁵ Pulmonary LLELC typically occurs in adults, although a paediatric case has been reported by Curcio et al.⁶ No gender predilection has been noted. There is a low frequency of association with cigarette smoking, an important cause of lung cancer.

In the majority of patients, the tumour was discovered at an early stage with a better than 2-year survival rate. Approximately half of the patients reported have been asymptomatic on presentation. The behaviour of LLELC of the lung is highly variable, however, ranging from apparently curable (by excision) to highly aggressive, with extensive disease at presentation.⁷

There is only limited information in the literature about the CT appearance of LLELC. Most reported cases present as a solitary nodule, as in the current case (Figure 1), and a subpleural location, as seen in this case, was also reported in the Chan et al series.⁷

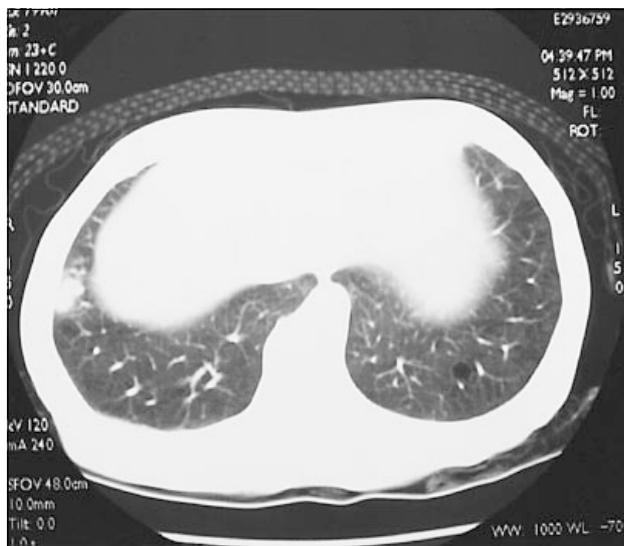


Figure 1. Initial CT scan of the thorax shows a pulmonary nodule in the right lower lobe.

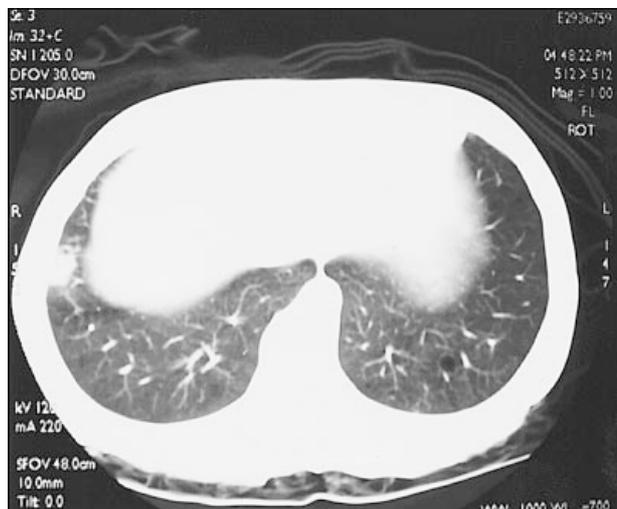


Figure 2. A follow-up CT scan of the thorax approximately 21 months later shows no significant change in size or appearance of the pulmonary nodule.

The current case is atypical in that a lack of tumour growth over almost 2 years was apparent on follow-up CT scans (Figure 2). A subsequent PET scan also failed to suggest the diagnosis of tumour. This may reflect the similarity in appearance of LLELC and well-differentiated adenocarcinoma, which can be difficult to differentiate on a PET scan. Fine needle aspiration biopsy had been arranged but was cancelled due to the lack of tumour growth.

The notion that a 2-year stability in size of a solitary pulmonary nodule implies benignity is widely held in the medical community. Yankelevitz and Henschke⁸ raised serious questions about the concept of 2-year lesion stability after examination of data reported from a landmark study of 705 cases.⁹ These authors recommend caution in applying the 2-year rule, particularly when a patient has smaller nodules, and state that pulmonary nodules should continue to be observed even after 2 years of stability. This recommendation has also been supported by other researchers.¹⁰

In conclusion, the current patient presented with a very slow growing LLELC of the lung. The case provides further support for careful monitoring of solitary pulmonary nodules and highlights the limitations of CT scanning in this clinical context.

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