

The Mystery of a Lung Mass: A Case of Small Lymphocytic Lymphoma (SLL)

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ABSTRACT

We are highlighting a rare presentation of small lymphocytic lymphoma (SLL) presenting as a huge lung mass without mediastinal lymph node involvement. At initial presentation, the differential diagnosis did not include a lymphoma. Our patient was diagnosed only after two CT-

guided biopsies of the lung mass. Immunohistochemistry was consistent with the diagnosis of SLL. Hence, non-Hodgkin's lymphoma (NHL) can be considered as a differential diagnosis for a lung mass with clinical suspicion of malignancy to prevent the delay in diagnosis and treatment.

Keywords: Small Lymphocytic Lymphoma; Lung mass

INTRODUCTION

Small lymphocytic lymphoma (SLL) is a mature B-cell lymphoma characterized by a progressive accumulation of functionally incompetent lymphocytes, which are monoclonal in origin. It is considered to be synonymous (i.e. one disease at different stages) to chronic lymphocytic leukemia (CLL) [1]. However, the diagnosis of SLL is reserved for patients demonstrating lymph node pathology consistent with CLL/SLL but with an absolute peripheral lymphocyte count that does not exceed $5 \times 10^9/L$ and no evidence of neutropenia, anemia, or thrombocytopenia related to the disease [9]. This tissue infiltration of SLL without a leukemic picture presents as less than 5% of all non-Hodgkin lymphomas [10]. Most patients with non-Hodgkin's lymphoma (NHL), particularly SLL, present with generalized painless lymphadenopathy. However, the incidence of extranodal non-Hodgkin's lymphoma is increasing particularly amongst the South Asian and Middle Eastern populations. In a recent report, 40.3% of NHL cases in Pakistan had extranodal involvement [1]. In another study, 45% of patients with extranodal NHL were found to have predominant gastrointestinal tract involvement [2].

The commonest site for extranodal NHL is the gastrointestinal tract [3]. Pulmonary mucosa-associated lymphoid tissue (MALT) lymphoma is the commonest type of NHL that involves the lungs at initial presentation. However, it is a rare malignancy (presents as less than 1% of all

NHLs) and commonly occurs in elderly females [4]. We report a case of a patient with SLL who presented as a diagnostic dilemma. On his initial presentation, he was found to have a huge lung mass, and the diagnosis was reached after 2 biopsies. To the best of our knowledge, he is the first case being reported from Pakistan to have NHL (SLL) presenting as a huge lung mass without mediastinal lymph node involvement.

CASE REPORT

A 46-year-old male, presented to the clinic with the complaints of fever, intermittent cough, shortness of breath on minimal exertion and weight loss of 5 kg during the past 2 months. The cough was productive of scant yellowish sputum; however, he did not see any blood in the sputum. He had smoked 15 pack-years of cigarettes, but quit smoking 2 years back. He also occasionally used oral tobacco. The physical examination revealed a healthy looking adult male, with normal vital signs: pulse 80/min, blood pressure 100/70 mmHg, temperature $98.6^{\circ}F$, respiratory rate 16/minute, and oxygen saturation of 98%. Lateral-cervical, axillary and supraclavicular lymph nodes were not palpable. Heart sounds were normal. Positive findings on respiratory examination included a left sided inspiratory wheeze, decreased breath sounds and decreased vocal resonance on the left side with dullness to percussion.

Full blood count was normal. Chest X-ray showed left sided pleural effusion. 5 ml of

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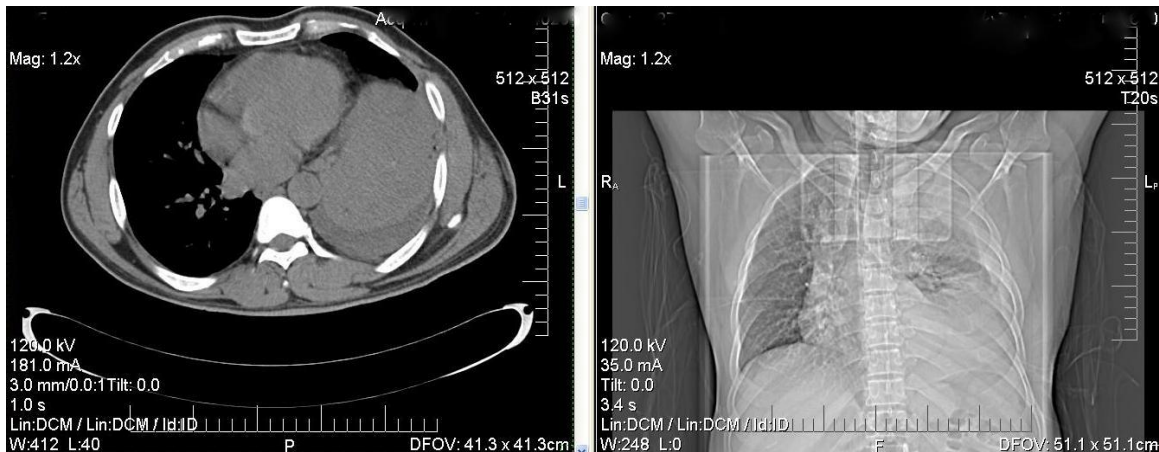
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Figure 1: CT chest: a huge mass at the left lower lung base

reddish pleural fluid was aspirated and sent for cytology, which showed atypical cellular infiltrates. CT-guided biopsy of the lung mass reported spindle cell proliferation with marked chronic inflammatory infiltrate. However, based on the clinical suspicion of malignancy, a possibility of sampling from the edge of the lesion was proposed as an explanation for the inconclusive histologic evaluation, due to which a tumor could not be ruled out. Hence, he was referred for a second biopsy of the lesion. The second biopsy revealed the morphology to be most consistent with NHL. Immunohistochemistry was positive for CD-20, CD-23 and CD-5, and subsequently the diagnosis of NHL (SLL type) was established. Bone marrow aspirate and trephine biopsy did not show any morphological or immunohistochemical evidence of lymphoma. CT abdomen and pelvis with intravenous (IV) and oral contrast showed a solid enhancing necrotic mass in left lung base with enhancing pleura and indeterminate, subcentimetre abdominal lymph node. Suspicious focal liver lesions were also reported with recommendation of follow-up with ultrasound. The patient is currently under chemotherapy with cyclophosphamide, adriamycin, prednisone and vincristine.

DISCUSSION

From South Asia, two cases of NHL presenting as a primary lung mass have been previously reported. The first report described a case where sputum examination, bronchoscopy and percutaneous fine needle aspiration cytology did not prove to be fruitful, and, the diagnosis was reached only after exploratory thoracotomy and pneumonectomy [5].

The second case was a 37 year old woman who presented with a lung mass and humeral involvement. Bronchial lavage smears showed atypical cells with irregular nuclear membranes. Small cell carcinoma was the closest differential. Biopsy from the lung mass and humerus showed an identical malignant round cell tumor with prominent apoptosis. Immunohistochemistry (IHC) was positive for leukocyte common antigen (LCA), CD20 and MIB1 (70%). IHC confirmed the diagnosis of NHL [6]. Although there are a few reports from Pakistan describing unusual presentations of NHL as cutaneous lesions [7] or involving the vagina [8], we found no reports of lung masses presenting as NHL. The current report is, therefore, significant in highlighting this rare presentation of NHL. At the initial presentation of our patient, lymphoma was not one of the differentials, which caused the delay in initiating definitive treatment. Hence, Non-Hodgkin's Lymphoma can be considered as a differential when evaluating a lung mass with high clinical suspicion of malignancy to provide prompt diagnosis and management.

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