PRIMARY PULMONARY LYMPHOMA WITH CAVITATION IN A 20-YEAR-OLD MALE PATIENT

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Abstract- Primary lymphomas of the lung are rare and usual radiographic findings are adenopathy, effusion, multiple lesions, solitary lesion or diffuse lesion. This paper presents a case of primary malignant tumor of the lung with a very rare radiological presentation. A 20-year-old male patient was admitted to our hospital due to fever, chills, productive cough and later development of hemoptysis. Weight loss of 6 kg during a five month period was also noted. Physical examination was normal. Chest X-ray showed a right lower lobe mass with obliteration of diaphragmatic contour. Chest CT scan revealed cavitation in the mass. Laboratory tests and bronchoscopy were also normal. Surgical resection of the mass via right lower lobectomy revealed the pathological diagnosis of intermediate grade mixed large and small cell lymphoma. Cavitation in this uncommon tumor of the lung is very rare and has been reported very infrequently.

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Key words: Primary lymphoma, lung, cavitation

INTRODUCTION

Primary lymphomas of the lung are rare and represent 0.5% of all lung tumors (1). Secondary involvement of the lung by lymphoma, however, is common and is the result of spread of original mediastinal disease, especially Hodgkin disease.

Most patients are in the sixth decade of their life. Common symptoms are cough, dyspnea, chest pain and hemoptysis. Radiographic findings may range from normal to reticulonodular markings, solitary lesion, multiple lesions, adenopathy and effusion. Cavitation in lymphoma is very infrequent.

We report a young patient with a rare radiological presentation of primary pulmonary lymphoma.

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CASE REPORT

A 20-year-old male patient was admitted to our hospital due to occurrence of fever, chills, productive cough and hemoptysis during the past two months before admission. Four episodes of moderate hemoptysis (about 250 cc) were noted. Other findings included weight loss of about 6 kg during a five-month period and a positive history of tuberculosis in his mother. The patient's job was animal husbandry.

Physical examination was normal. No adenopathy was found. Laboratory tests including liver function tests were normal. No anemia was noted and the blood group was A positive. Chest X-ray showed a right lower lobe mass with obliteration of the diaphragmatic contour (Fig. 1). Chest CT scan revealed a cavitated mass in right lower lobe and no other significant finding (Fig. 2). Abdominal CT scan was normal and no hepatosplenomegaly was noted (Fig. 3). Bronchoscopic evaluation showed a normal

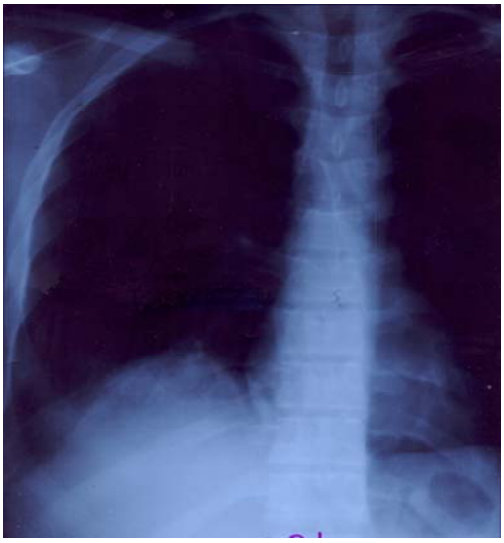

Fig. 1. Chest X-ray of the patient, showing a right lower lobe mass with obliteration of the diaphragmatic contour.

tracheobronchial tree and no endobronchial mass was found; bronchoalveolar lavage was also negative and non-diagnostic. Due to the above-mentioned findings surgical resection of the mass was planned. Intraoperative findings included a right lower lobe mass with adhesion (not invasion) to the diaphragm and four lymph nodes in stations 9 and 12 (inferior pulmonary ligament and peribronchial respectively).

Right lower lobectomy revealed the pathological diagnosis of an intermediate grade mixed large and small cell lymphoma and follicular hyperplasia of the lymph nodes. Post operative course was uneventful and the patient was discharged with no complication.

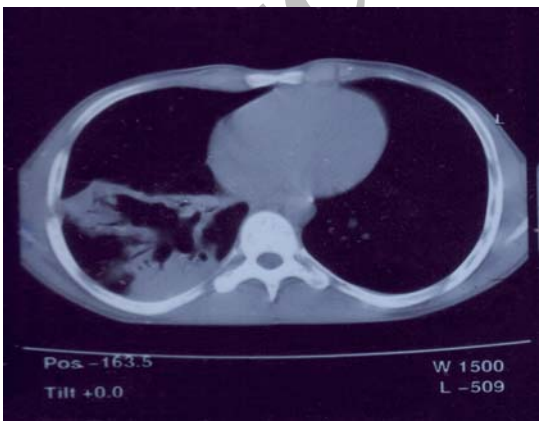

Fig. 2. Chest CT scan of the patient, showing a cavitated mass in right lower lobe.

DISCUSSION

The rare primary pulmonary lymphoma may occur in any of the deposits of lymphoid elements normally present in the lung: in the bronchial-associated lymphoid tissue (BALT), in the interstices of the lung parenchyma or in the intrapulmonary lymph nodes. These tumors are frequently referred to as small cell lymphocytic lymphoma or as large cell histiocytic lymphomas. The majority of the non-Hodgkin's lymphomas that originate in the lung are low grade (50-70% of the cases) and are derived from B cells.

Patients age range is from the second to the ninth decade of life and distribution between men and women is equal. One-third of patients are asymptomatic and symptomatic patients complain of cough, dyspnea, chest pain and hemoptysis.

The chest radiograph may be normal but usually reveals the following presentations, in decreasing order of frequency: adenopathy, effusion, multiple lesions, solitary lesion or diffuse lesion (1).

In addition, several unusual radiographic findings have been reported in the literature which include a mass with cavitation and pathologic finding of granulomatous infiltration and vasculitis consistent with Wegener's granulomatosis (2), ill-defined alveolar opacities (3), multiple pulmonary nodules mimicking metastatic carcinoma (4), calcified mass (5), infiltrative opacities (6), and CT "angiogram sign" which is considered highly specific for bronchioloalveolar carcinoma (7).

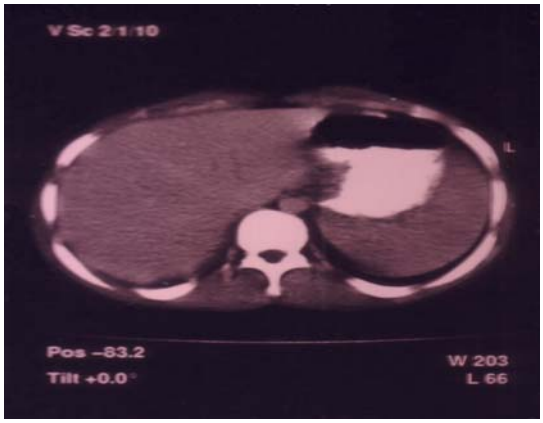

Fig. 3. Abdominal CT scan of the patient. There is no hepatosplenomegaly.

Our recent case of primary pulmonary lymphoma in a 20-year-old male patient is another distinct and unusual presentation of this entity.

History, physical exam, laboratory findings and bronchoscopic evaluation were nonspecific and nondiagnostic. Common radiographic presentations were not found in chest radiography and a diaphragmatic tumor could not be excluded. Finally cavitated mass in chest CT scan made the preoperative diagnosis of a pulmonary lymphoma very unlikely.

This scenario emphasizes that primary pulmonary lymphoma yields a variety of radiographic findings and should be included in the differential diagnosis of a lung mass with cavitation and finally makes the surgical resection very important for ascertaining the correct diagnosis.

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