

Endobronchial HIV associated lymphoma

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Abstract

A 27 year old HIV infected man presented with two days of haemoptysis. Flexible bronchoscopy revealed a large carinal mass partially obstructing the left and right main stem bronchi. Rigid bronchoscopy was required to make the diagnosis of large cell immunoblastic lymphoma.

(Thorax 1994;49:525-526)

Case report

A 27 year old man infected with HIV was admitted to hospital because of haemoptysis which had lasted for two days. The patient had been found to be HIV seropositive with a CD4 cell count of 90/ μ l five months before admission. He was presumed to have contracted HIV from heterosexual contact. He had no history of opportunistic infections. Six weeks before admission he developed a productive cough and increasing dyspnoea. Episodic wheezing subsequently occurred, he developed a choking sensation, and two days before admission he began to cough up 15-30 ml of blood every two hours.

At admission his temperature was 100.3°F, pulse was 108/min, and blood pressure was 140/65 mm Hg. Physical examination revealed high pitched expiratory wheezes localised to the upper airway. There was no lymphadenopathy.

Laboratory data showed a haematocrit of



Figure 2 Endobronchial appearance of carinal mass.

33%, a white blood cell count of 3400/ μ l with 64% neutrophils, 21% lymphocytes, and 12% monocytes. The platelet count was 203 000/ μ l and prothrombin time and PTT were normal. Arterial blood tensions breathing room air revealed pH 7.42, PCO₂ 4.7 kPa, and PO₂ 13.1 kPa. Serum electrolyte, renal, and liver tests were within normal ranges. The chest radiograph revealed a tracheal mass at the level of the carina; no adenopathy, parenchymal disease, or other airway lesions were noted.

A chest computed tomographic scan (fig 1) indicated bilateral axillary and prominent anterior mediastinal adenopathy extending into the superior mediastinum and root of the great vessels. A subcarinal soft tissue mass measuring 2 × 2 × 8 cm was noted herniating into the posterior aspect of the trachea. Abdominal and pelvic computed tomographic scans showed considerable hepatosplenomegaly without para-aortic or pelvic lymphadenopathy.

Fibreoptic bronchoscopy was performed which revealed a large exophytic mass at the level of the carina involving the left and right main stem bronchi (fig 2). The remainder of the airways appeared to be normal. Multiple biopsies were taken which were suggestive, but not diagnostic, of lymphoma. Subsequent biopsies via a rigid bronchoscopy revealed large cell immunoblastic lymphoma.

The patient was offered chemotherapy but refused. He subsequently committed suicide while receiving radiation therapy.

Discussion

Clinically important endobronchial obstruction is an extremely rare intrathoracic manifestation of lymphoma and usually occurs in the setting of widely disseminated disease.¹ In a necropsy study Papaioannou and Watson found only one endobronchial lesion among 93 cases of primary pulmonary lymphoma.²

Our patient presented with the common symptoms of endobronchial lymphoma which include wheezing, haemoptysis, and cough.³

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Reprint requests to:
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Received 5 May 1993

Returned to authors

1 December 1993

Revised version received

15 December 1993

Accepted for publication

22 December 1993



Figure 1 Chest computed tomographic scan showing a subcarinal mass herniating into the trachea.

The cough is frequently severe and occasionally associated with dyspnoea.

AIDS associated lymphomas differ from non-AIDS associated presentations in location, histological appearance, and natural history. In contrast to the general population, HIV associated lymphomas generally present with widely disseminated disease and frequent (65–90%) extranodal involvement.⁴ The gastrointestinal tract, bone marrow, and the central nervous system are common extranodal sites.⁵ Pulmonary involvement varies from 0% to 25%.⁶ HIV associated pulmonary lymphoma usually presents with mediastinal adenopathy, pleural effusions, or parenchymal involvement. Histologically these lymphomas are usually of the small non-cleaved cell, immunoblastic plasmacytoid, or large cell type and are always high grade.^{5,6} The natural course of HIV associated lymphoma is rapid decline with a median survival of 3–6 months after diagnosis.⁴

The Epstein-Barr virus has been associated with the development of AIDS associated lymphoma.⁷ This association may be the result of the virus acting as a B cell mitogen causing expansion of virus transformed B cell clones. These clones may proliferate in the setting of HIV impaired cellular immunity and lead to chromosomal translocation with subsequent malignancy.

To the best of our knowledge there has been only one other report of lymphoma presenting as a tracheobronchial lesion in an HIV infected patient.⁸ The cases are similar in that the lesions were located in the trachea, the chest radiographs were nearly normal, and endobronchial biopsy through a rigid bronchoscope was required to make the diagnosis as small

biopsies through a flexible bronchoscope were inadequate.

The number of cases of HIV associated lymphoma appears to be increasing. This may be because the incidence of lymphoma rises exponentially with longer duration of HIV infection⁹ and HIV infected patients are living longer. Clinicians should add pulmonary lymphoma to the differential diagnosis of an endobronchial lesion in an HIV infected patient, which includes Kaposi's sarcoma, bacterial tracheitis, bacillary angiomatosis, and tuberculosis.¹⁰ Although the chest computed tomographic scan and bronchoscopic appearance of endobronchial lymphoma may be impressive, rigid bronchoscopy with larger biopsy samples may be necessary to confirm the diagnosis.

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Thorax 1994;49:526–527

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Reprint requests to:
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Received 5 May 1993
Returned to authors
30 June 1993
Revised version received
15 July 1993
Accepted for publication
21 July 1993

Removal of a dental post from the bronchus by interventional cardiovascular techniques

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Abstract
Foreign bodies lodged in the bronchial tree are normally retrieved by bronchoscopy, but if this fails then thoracotomy is necessary. The case history is pre-

sented of a patient who had inhaled a dental post which could not be retrieved either by flexible or rigid bronchoscopy. Using biplane screening and intravascular retrieval devices introduced via an endotracheal tube, the dental post was removed successfully without the need for thoracotomy.

(*Thorax* 1994;49:526–527)

Inhaled foreign bodies such as pieces of teeth which cause bronchial obstruction require removal to prevent the sequelae of haemoptysis and infection of the lung distal to the obstruction.¹ When the foreign body is not dislodged by coughing and physiotherapy, bronchoscopy with either flexible or rigid instruments is used for extraction under direct vision.² If this fails, thoracotomy may be necessary.