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CASE REPORT

Extrapulmonary Tuberculosis Mimicking an Intrathoracic Malignancy: Case Report

Serpil SEVİNÇ[1], Şeyda ÖRS KAYA[1], Özgür SAMANCILAR[1], Kenan Can CEYLAN[1], Ozan USLUER[1], Gülcan ÜRPEK[2], Zekiye AYDOĞDU DİNÇ[3]

[1] 2nd Thoracic Surgery Clinic, Dr. Suat Seren Chest Disease and Thoracic Surgery Training and Research Hospital, Izmir, Turkey
[2] Chest Disease Clinic, Dr. Suat Seren Chest Disease and Thoracic Surgery Training and Research Hospital, Izmir, Turkey
[3] Pathology Clinic, Dr. Suat Seren Chest Disease and Thoracic Surgery Training and Research Hospital, Izmir, Turkey

ABSTRACT

A 56-year-old female with a history of treated syphilitic infection was admitted. Computed tomography of the thorax showed a solid mass around the pulmonary artery. Positron emission tomography revealed a fluorodeoxyglucose (FDG) uptake [standardized uptake value (SUV)$_{max}$: 18.5] remarkable for malignancy. An enlarged lymph node in the interlobar fissure was detected during the exploration through posterolateral thoracotomy. Frozen section examination of the samples of the lesion was reported as granulomatous lymph node. Histopathological examination of the specimen revealed a necrotized granulomatous lymphadenopathy. Because of the suspicion of an intrathoracic gumma, serological tests were applied postoperatively and were positive for a syphilitic infection. The tissue cultures were also positive for tuberculosis. Anti-tuberculous and anti-syphilitic medication was administered after the diagnosis.

Key words: *Extrapulmonary, Tuberculosis, Intrathoracic, Malignancy*

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ÖZET

İntratorasik Maligniteyi Taklit Eden Ekstrapulmoner Tüberküloz: Olgu Sunumu

Dört yıl önce tedavi edilmiş sifiliz infeksiyonu öyküsü olan 56 yaşında kadın hasta öksürük ve gece terlemesi yakınmaları ile kliniğimize başvurdu. Toraks bilgisayarlı tomografisinde sol pulmoner arteri saran 4 x 5 x 6 cm boyutlarında santral kitle lezyonu mevcuttu. PET/BT incelemesinde kitlede malignite düzeyinde artmış florodeoksiglukoz (FDG) tutulumu [stardardized uptake value (SUV)$_{max}$:18.5] izlendi. Sol posterolateral torakotomi uygalanan hastada eksplorasyonda, interlober fissürde yerleşmiş ve büyümüş lenf noduna benzeyen kitle lezyonu saptandı. Kitleden alınan örneklerin frozen incelemesi "granülomatöz lenfadenopati ile uyumlu" olarak bildirildi. Ameliyat materyalinin histopatolojik inceleme sonucu "yer yer nekrotik alanların da izlendiği granülomatöz lenfadenit" olarak rapor edildi. Sifilitik gom olabileceği öngörülmesi nedeniyle postoperatif dönemde bakılan serolojik testler aktif sifilitik infeksiyonla uyumlu bulundu. Bununla birlikte operasyonda alınan doku kültürleri tüberküloz açısından pozitif olarak bildirildi. Hastaya sifiliz ve tüberküloz infeksiyonu için medikal tedavi başlandı.

Anahtar kelimeler: *Ekstrapulmoner, Tüberküloz, İntratorasik, Malignite*

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INTRODUCTION

Intrathoracic lymphadenitis, generally known as primary tuberculosis, appears to be a diagnostic problem when seen in adults, especially without any parenchymal lesions[1]. Extramediastinal localization of these lesions might be challenging, and their differentiation from intrathoracic malignancies can be difficult in the absence of any positive sputum or bronchoscopic findings for tuberculosis. In this study, a case of intrathoracic extrapulmonary and extramediastinal tuberculous lymphadenitis mimicking an intrathoracic malignancy is presented.

CASE REPORT

A 56-year-old female presented with coughing, malaise and fatigue for the last two months. She had a history of syphilis infection treated four years ago. Her blood count, erythrocyte sedimentation rate in one hour, and other routine blood tests were normal. Chest X-ray showed a left parahilar homogeneous lesion of 5 cm in diameter (Figure 1A). Computed tomography (CT) of the thorax revealed a solid mass around the pulmonary artery (Figure 1B). In positron emission tomography (PET), fluorodeoxyglucose (FDG) uptake [standardized uptake value $(SUV)_{max}$: 18.5] of the lesion was remarkable for malignancy. Fiberoptic bronchoscopy was normal, and the tuberculous cultures of the aspiration material were negative. A posterolateral thoracotomy was performed. An enlarged lymph node in the interlobar fissure was detected during the exploration (Figure 1C). Frozen section examination of the samples of the lesion was reported as granulomatous lymph node. Final histopathological examination of the specimen revealed a necrotized granulomatous lymphadenopathy. Syphilis infection is one of the causes of granulomatous lymphadenopathy. Because the patient had a history of a treated syphilis infection, serological tests for syphilis were also applied postoperatively and were positive, which revealed an active syphilis infection. Tissue cultures were also positive for tuberculosis. Serological tests were negative for human immunodeficiency virus. Anti-tuberculous and anti-syphilitic medication was administered after the diagnosis.

DISCUSSION

Although intrathoracic lymph node enlargement is a manifestation of primary tuberculosis, such a presentation in adults is also reported[1]. It accounts for 0.5-26% of all tuberculosis patients[1]. The diagnostic value of bronchoscopy is generally low[2]. Bronchoscopy was also negative in our patient. The

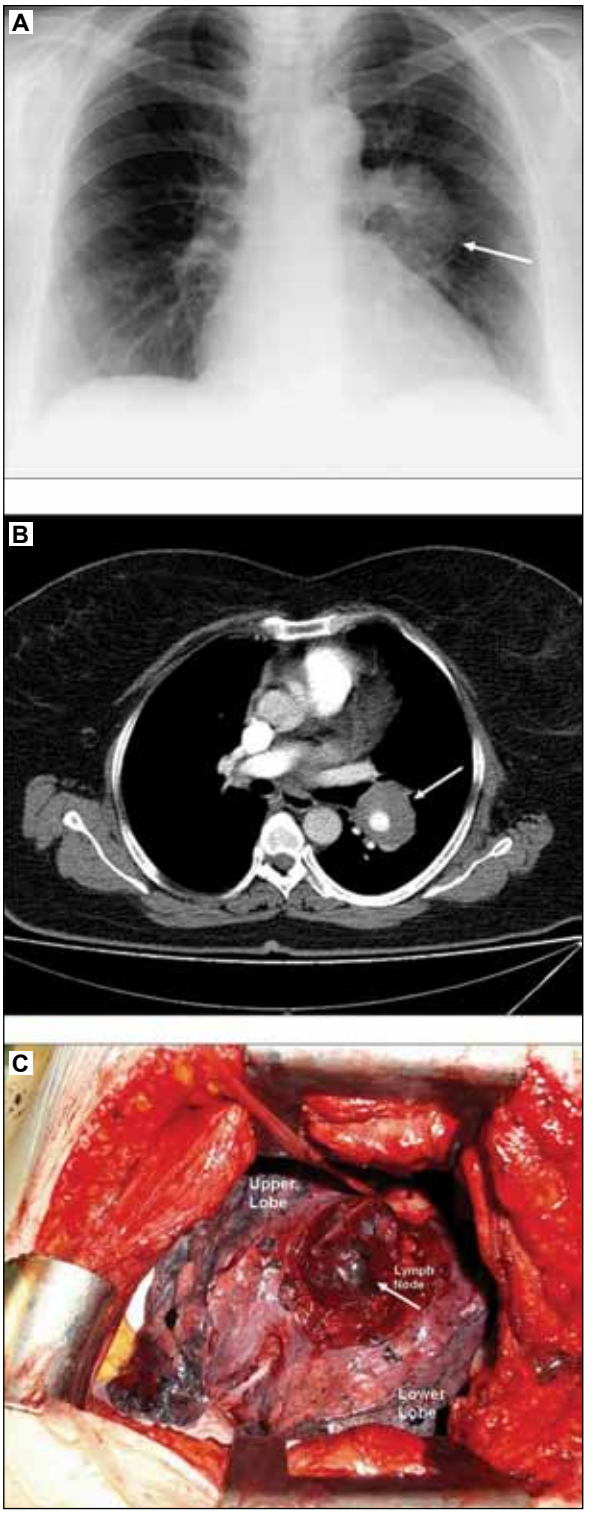

Figure 1. (a) Chest X-ray, (b) Intrathoracic mass around the left pulmonary artery on the computed tomography scan, and (c) Enlarged lymph node located in the left interlobar fissure.

tissue cultures of the lymph node excised revealed a positive result for tuberculosis.

Our patient also had a history of treatment for syphilis two years ago. The histopathological examination of the specimen was reported as a granulomatous lymph node with minimal necrotic areas. It is reported that this kind of lymph node involvement might be positive in tertiary syphilis[3,4]. The serological tests applied postoperatively were positive for an active syphilis infection.

The FDG uptake in the PET/CT scan in our case revealed the possibility of an intrathoracic malignant tumor. The lesions in secondary syphilis may mimic pulmonary tumor, as reported by Schibli et al.[5]. FDG uptake might be as high as that of a malignant tumor in pulmonary tuberculosis and is a common reason for a false-positive result in PET/CT in countries endemic for tuberculosis[6].

In conclusion, our case is a unique presentation of intrathoracic extrapulmonary tuberculosis. The history of syphilis infection and high FDG uptake on PET/CT made the diagnostic algorithm challenging. In endemic areas, tuberculosis should be considered in the presence of intrathoracic masses with high FDG uptake, despite the atypical location.

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Address for Correspondence

Kenan Can CEYLAN, MD
Department of Thoracic Surgery
Dr. Suat Seren Chest Diseases and Thoracic Surgery Training and Research Hospital
Yenisehir, Izmir-Turkey

E-mail: kcanceylan@gmail.com