CASE REPORTS

Pulmonary pseudotumoral tuberculosis in an old man: A rare presentation

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ABSTRACT

The pseudotumoral form of tuberculosis is very rare in healthy immunocompetent subjects and can simulates lung carcinoma causing diagnosis dilemma or lead to abusive surgical resection. Here we report a case of pulmonary tuberculosis in its pseudotumoral form in an immunocompetent old men who presented with cough, fatigue and fever. A computerized tomography of the chest indicated a dishomogeneous mass that compressed and deformed the left main bronchus that was referable to a primary tumor. The hystopatological exam from the bioptic samples obtained by bronchoscopy was negative for neoplasia. Moreover, an abdomen CT scan showed hypodense solid lesions of the liver likely to be considered as metastasis; the histological analysis of these hepatic lesions was negative for neoplasia. It was necessary to perform a second CT scan of the chest and another bronchoscopy with biopsy and histopathological examination before establishing the diagnosis of the pulmonary pseudotumoral form. The case report confirm, as previously described, the difficulties in the diagnosis of this rare form of tuberculosis that lead to a delay in therapy, and suggest that the pseudotumor has to be included as different diagnosis of pulmonary mass also in healthy immunocompetent subjects.

Key Words: Pulmonary tubercolosis, Pseudotumoral form, Lung cancer, Biopsy

1. INTRODUCTION

Tuberculosis is an infectious disease that can affect any organ and system, being the lung is the most prevalent site. Pulmonary tuberculosis is characterized by different radiological and clinical expressions and it can present as a distinct entity called mycobacterial pseudotumor. The pseudotumoral form of tuberculosis affects more often immunosuppressed patients with or without AIDS and is very rare in healthy immunocompetent subjects.[1] It can simulates lung carcinoma on imaging studies or bronchoscopic examination and therefore causes diagnosis dilemma or lead to abusive surgical resection.[2,3] Here we describe a case of pulmonary tuberculosis in its pseudotumoral form in an immunocompetent old men.

2. CASE PRESENTATION

A 83-year-old man was admitted to our Clinical Unit with one month history of non productive cough, fatigue and fever. He was non smoker and never treated for tuberculosis, with no notion of contagious tuberculosis. In 1994 he underwent to a partial prostatectomy because of an adenoma and in 2007 he was diagnosed to have prostatic cancer and treated

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with radiotherapy. On clinical examination the patient was found eupneic and afebrile with general good conditions. Abdominal, cardiac, pulmonary and neurological examinations were normal. Laboratory data showed an increased erythrocyte sedimentation rate (ESR) of 111 mm/h and a C reactive protein (CRP) of 90 mg/dl; AST, ALT, renal function, electrolytes, glycaemia, blood coagulation tests, tumor markers were within normal levels. The patient was immunocompetent and non-reactive for human immunodeficiency virus. Computerized tomography of the chest indicated a dishomogeneous mass that compressed and deformed the left main bronchus (see Figure 1) and strictly adhered to hilar and subcarinal adenopathies; it was considered referable to a primary tumor.

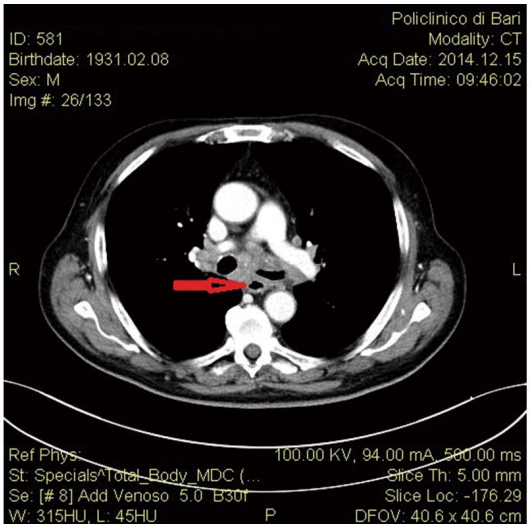

Figure 1. Lung CT scan showing the dishomogeneous mass that compressed and deformed the left main bronchus

Multiple adenopathies were also observed within the right hilum and the tracheo-bronchial areas with infiltration of the pulmonary artery window. At the same time abdominal CT scan showed hypodense solid lesions in segments II, IV, V e VII of the liver likely to be considered as metastasis (see Figure 2). Bronchoscopy with biopsy was performed. The bronchoscopy showed mucosal swelling in the left main bronchus and partial occlusion in its inferior part; the histopathological exam was negative for neoplasia and revealed a nonspecific granulomatous inflammation, even if the biopsy sample was not totally adequate and representative. After one week a biopsy of the liver lesion was also performed and the histological analysis was negative for neoplasia and granulomatous lesions. Because of the hystopatological results and the persistence of the symptoms, a second CT of the chest was performed and revealed the presence of tiny bilateral paratracheal adenopathies that were not present in the previous CT scan, and a volume increase of the dishomogeneous mass compressed the left main bronchus. Therefore another bronchoscopy with biopsy was performed; the histopathological examination revealed a granulomatous chronic inflammatory process with caseous necrosis, along with type giant multinucleated cells (see Figure 3), and the RT-PCR for detection mycobacterium tuberculosis on bioptic sample showed positive results. A Quantiferon Gold showed positive results. Based on these findings, a diagnosis of pseudotumoral tuberculosis was made and a therapeutic regimen composed of rifampicin and isoniazid for 24 weeks, and ethambutol associated with pyrazinamide for 2 months was prescribed with clinical, biological, and radiological surveillance. In patient's follow-up, general condition was good and no problem was reported.

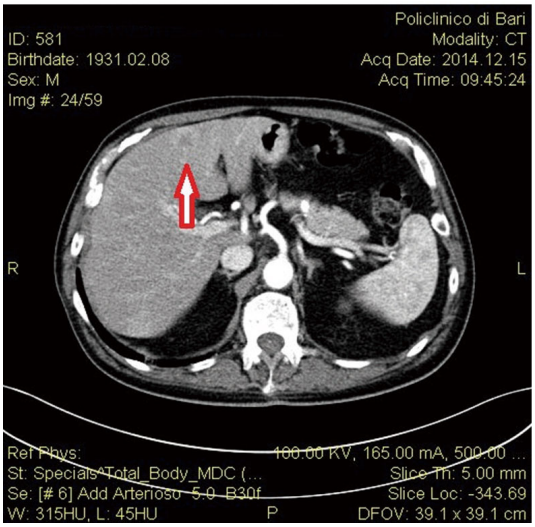

Figure 2. Abdominal CT scan showing an hypodense solid lesion in the liver

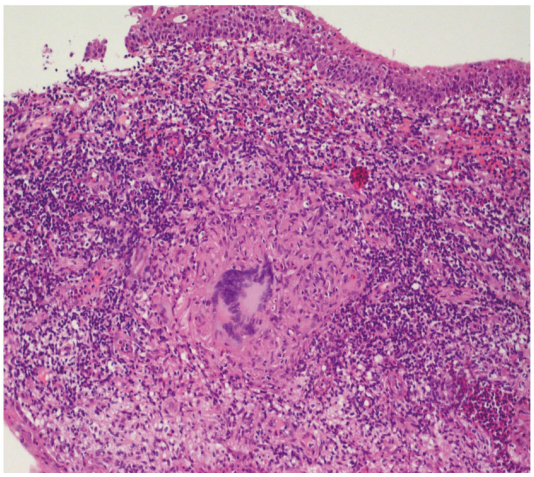

Figure 3. Histology: granulomatous chronic inflammatory process with caseous necrosis

3. DISCUSSION

Pulmonary tuberculosis may present with myriad of manifestations and the pseudotumoral form is a very rare entity especially in developing countries and healthy immunocompetent subjects. On the other hand, in developed countries lung cancer is among the most common adult neoplasms and is increasing in incidence.[4] Since the pulmonary pseudotumor has been reported to mimic both benign and malignant tumors and there are not specific symptoms and patognomic radiological pictures or endoscopic aspects,[5,6] as illustrated by our case report, diagnostic error can be common and its diagnosis is often delayed.[3] Moreover, microscopic analysis of the sputum is generally negative, because the pseudotumor lesions are poorly oxygenated solid caseous lesions.[3,4] The histological exam is therefore necessary to clarify diagnostic dilemma and confirm or reject the diagnosis of pseudotumor,[7] and avoid unnecessary surgical resections. In our patient who had positive history for prostatic cancer, both the CT of the chest revealed a dishomogeneous mass that was referable to a primary tumor and abdomen CT scan illustrated hepatic lesions that were considered as metastasis. It was necessary to perform two bronchoscopies with biopsy and histopathological examination before confirming the diagnosis of the pulmonary pseudotumoral form. Despite to the diagnostic difficulties, the therapy of the pseudotumoral form of tuberculosis is based on the common treatment of the tuberculosis infection,[8] and the follow-up is generally favorable even if some complications as bronchial stenosis, bronchiectasis and bronchiolitis may occur. Data on parenchymal pseudotumoral form tuberculosis are poor and just a few cases have been reported in literature.[9–12] Herein in this case report showing a pulmonary pseudotumoral tuberculosis in an old immunocompetent patient we stressed the rarity of the disease and the difficulties in the diagnosis that leaded to a delay in therapy. This case report underlines that pulmonary tuberculosis can present like mass lesion mimicking bronchogenic carcinoma. However biopsy from the lesion can clinch the diagnosis.

CONFLICTS OF INTEREST DISCLOSURE

The authors have no competing interests to declare.

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