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Giant pulmonary tuberculoma: atypical form of presentation of primary tuberculosis in childhood

Tuberculoma pulmonar gigante: forma atípica de presentación de tuberculosis primaria en la infancia

To the Editor:

A tuberculoma is a very infrequent form of presentation of pulmonary tuberculosis (TB)[1] in children. It is a well-defined mass or nodule located in the lung caused by *Mycobacterium tuberculosis*.[2-4] We present a case of a giant tuberculoma as a form of presentation of primary pulmonary TB.

The patient is a 6-year-old boy with no notable personal history and a family history of pulmonary TB in a grandmother who had died two years earlier and his mother and maternal aunts who were successfully treated for pulmonary TB, with no known sensitivity. He referred mild weight loss and anorexia during the previous three months. Mantoux was positive (20 mm) and anteroposterior chest radiograph (fig. 1A) showed a lung consolidation in the middle lobe with right paratracheal widening and an emphysematous lesion in the right hemithorax. Lung HRCT (fig. 1B-C) revealed right mediastinal adenopathies and a well-defined, partially-calcified loculated collection with a necrotic appearance, compatible with a large-size tuberculoma of the lung (3.5 × 4 cm) and adjacent images of pulmonary consolidation with atelectasis in the right lower lobe and middle lobe and lobar emphysema due to endobronchial valvular effect. Given this situation, pulmonary TB treatment was established with isoniazid (5 mg/kg/day), rifampicin (10 mg/kg/day) and pyrazinamide (20 mg/kg/day) and exeresis of the pulmonary nodule was performed by thoracotomy. The anatomopathologic study confirmed the diagnosis. After surgery, the patient completed 6 months of anti-tuberculosis treatment, with a favorable clinical-radiological evolution.

A tuberculoma is one of the most common benign pulmonary nodules. It represents 5-24% of resected solitary pulmonary nodules,[5,6] with a size that can vary from 1 to 10 cm in diameter.[2,3,6] Tuberculomas are normally found as single nodules,[3,5] although multiple nodules are not infrequent.[5] They may include a cavity or calcification[2,3,6] and their edges are usually smooth and sharp.[3,5] Their usual location is in the upper lobes.[2,3] Although pulmonary TB constitutes 80-90% of all TB infections, pulmonary tuberculoma is an infrequent complication,[3] although it could be a manifestation of primary as well as post-primary TB.[3] Histologically, tuberculomas are masses encapsulated by multiple concentric layers of connective tissue with no inflammation or peripheral propagation.[3] For diagnosis, it is frequently necessary to recur to invasive processes such as puncture and aspiration or open thoracotomy, due to the possibility of accompanying malignant processes,[3] such as lung cancer.[5] Therefore, lung HRCT with contrast enhancement can be useful in identifying lung cancer and tuberculoma in the same lesion and also in evaluating the activity of the tuberculoma.[5] Treatment is based on anti-tuberculosis medication, sometimes accompanied by surgery.[5] During anti-tuberculosis treatment, some bacilli-negative tuberculomas do not decrease in size and may even increase, making it difficult to decide on an alternative treatment.[4] PET F-18 fluoro-2-deoxy-*D*-glucose (FDG-PET) can be useful in monitoring the response to anti-tuberculosis drugs.[4] Depending on the course of evolution, without treatment tuberculomas can be progressive, stable or regressive.[3] In general most tuberculomas of the lung shrink in size, even after the conclusion of anti-tuberculosis treatment.[3] Sometimes it is necessary to resect the tuberculomas by means of thoracotomy or thoracoscopy.[5] The benefits of said resection include conclusive differential diagnosis, determination of future therapeutic strategies and reduction of the dosage and duration of anti-tuberculosis treatment.[5] In short, we present the case of a giant tuberculoma as an atypical clinical form of primary tuberculosis infection, with good evolution after surgical resection and treatment with anti-tuberculosis drugs.

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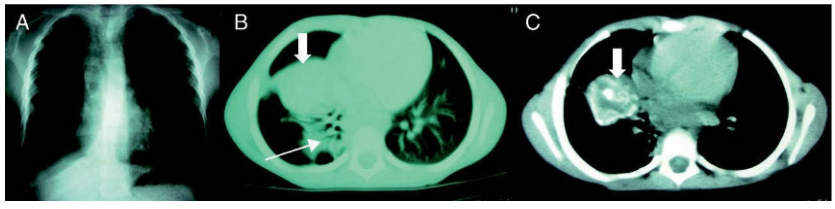

Figure 1. A) Anteroposterior chest x-ray shows a pulmonary consolidation in the middle lobe with right paratracheal widening and an emphysematous lesion in the right hemithorax. B-C) Lung HRCT shows right mediastinal adenopathies (C) and a well-defined, partially-calcified loculated collection with a necrotic appearance (thick arrows), of a large size (3.5 × 4 cm), and adjacent images of pulmonary consolidation with atelectasis in the lower right lobe and middle lobe (thin arrow).

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An Unusual Presentation of Follicular Lymphoma

Presentación no habitual del linfoma folicular

To the Editor:

The presence of chyle in the pleural space defines chylothorax.[1] It is usually generated by an alteration in the pathway of the thoracic duct. Neoplasias represent between 30 and 50% of the cases, and non-Hodgkin's lymphoma (NHL) is the most common pathology.[2] Even in the centers of concentration, chylothorax is an infrequent pathology. We present for consideration the even less frequent case of bilateral chylothorax.

The patient is a 66-year-old man who complained of oppressive pain in the upper hemiabdomen, immediate postprandial fullness, hyporexia and a weight loss of 10 kilograms, all over a period of two months. The subject underwent esophagogastroduodenoscopy, revealing non-sliding hiatal hernia. He received treatment, with no improvement. One month later, he started with dyspnea when climbing stairs (MRC 1), and within 3 weeks he started with dyspnea at rest (MRC 4), at which time he came to our hospital for evaluation. Upon physical examination, bilateral pleural effusion was found (confirmed on chest radiograph) as were 1-cm non-painful adenomegalies located in the submandibular region and in the right axillary region. Thoracocentesis was performed with pleural biopsy. Histopathology and culture analyses, including acid-fast stain, were reported negative. Pleural liquid analysis (pH 7.4, proteins 4.56 g/dl, lactate dehydrogenase 93 UI/l, triglycerides 1.137 mg/dl, cholesterol 86 mg/dl) confirmed chylothorax. In addition to pleural effusion, thoracic computed tomography documented an increase in density (54 Hounsfield units) of lymph node stations 4 (R and L) and 7, the largest diameter being 1 cm (fig. 1). Bronchoscopy, bronchoalveolar lavage and bronchial biopsy were negative for malignancy as well as for the microbiological analysis. Due to the lack of conclusive results, we contemplated mediastinoscopy. Nevertheless, the right axillary adenomegaly was biopsied. The histopathological analysis showed lymphoid follicular hyperplasia (fig. 1) and immunohistochemical analysis was positive for BCL-6, BCL-2, CD 10, CD 20 and cyclin D1, establishing the diagnosis of stage II follicular lymphoma.

Chemotherapy was initiated and, due to pleural effusion relapse, a pleural catheter was inserted and the patient started a diet with branched-chain triglycerides and total parenteral nutrition. He was discharged after two weeks and has completed eight cycles of chemotherapy. Two months later, the patient is stable, with relapse of pleural effusion in 10% of the thoracic area.

The diagnostic challenge of chylothorax lies in the information compiled during the initial evaluation due to the multiple etiological associations.[1] Less than 50% of cases with chylothorax have the milky appearance, therefore it is crucial to identify it to guide the adjacent mechanism and shorten the differential diagnosis.[2] Chylothorax may be the first finding of a lymphoma, although bilateral presentation is exceptional.[3,4] These are typically lymphocytic exudates, unilateral and only 1 in 10 have the milky appearance.[5] The mechanisms by which chylothorax is associated with lymphomas can be: 1) neoplastic pleural infiltration; 2) obstruction of lymphatic nodes at the mediastinal level due to neoplastic infiltration; and 3) tumor obstruction of the thoracic duct. Mortality in non-traumatic chylothorax has decreased and it is currently less than 40%. However, when it is associated with malignancy and bilateral presentation, it is given a poorer prognosis. Morel et al. reported that the presence of pleural effusion and advanced stages of the disease (Ann Arbor III and IV) influenced survival adversely. The average survival time was 111 months.[6]

The interest for presenting this case lies not only in its unusual presentation, but also in its diagnostic difficulties. With the epidemiological and clinical history, the presence of chylothorax indicated the probable existence of a lymphoma, a diagnosis elusive to the initial methods (bronchoscopy, pleural biopsy, FNP).

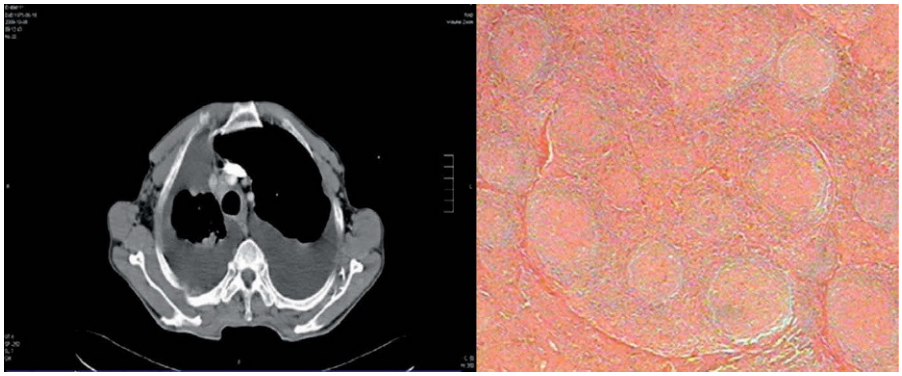

Figure 1. Left panel. Thoracic computed tomography showing an increase in density of lymph node station 4 (R and L). Right panel. Histological cross-section of the axillary lymph node.