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Case Report

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Pseudotumoral Pulmonary Tuberculosis

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Abstract

Tuberculosis in children is an important cause of morbidity and mortality in Morocco. Pulmonary localization is characterized by a large clinical and radiological polymorphism. It can take on the appearance of a malignant tumor. We present the case of a child aged 2 years 10 months with pulmonary tuberculosis having simulated a parenchymal tumour. The diagnosis was rectified by bronchoscopy and good evolution under antibacillary test treatment. This case highlights the importance of knowing the different clinical and radiological aspects of tuberculosis. In order to avoid any delay in diagnosis.

Introduction

Given its high incidence, tuberculosis is a public health problem, particularly in developing countries. In its common form, pulmonary tuberculosis is generally easy to diagnose, but it may present in an atypical pseudotumour form, leading to delays in diagnosis and treatment. In the literature, the pseudotumour form of pulmonary tuberculosis is described mainly in adults, with no reported cases in children.

This study aims to educate clinicians about this particular and uncommon form of tuberculosis, which should be suspected in patient with radiological findings compatible with the disease, especially since they live in a highly endemic country.

Case

We report the case of a two –years and 10 months- old child; without any tuberculosis contact. He had a multiple episode of febrile pneumonia; treated with antibiotics and nebulised salbutamol. admitted in our hospital with febrile dyspnoea that had been evolving for 20 days, associated with a dry cough, fever of 39°C and weight loss of 4 kg in 1 month. Physical exam revealed a conscious child, polypneic at 44cpm, with moderate intercostal and sub-costal chest indrawing and sibilant and crackling rales on pleuropulmonary auscultation. Cardiovascular examination was unremarkable. There was no associated hepatomegaly, splenomegaly, adenopathy or other clinical signs. The chest radiography showed a homogeneous, poorly limited opacity of the right upper lobe (Figure 1).

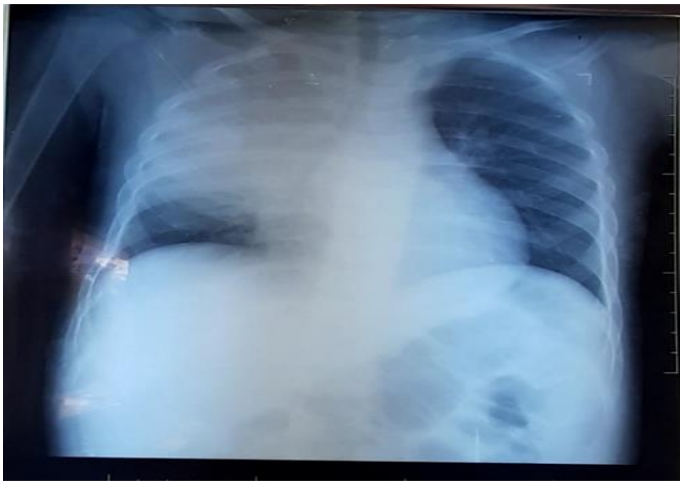

Figure 1: Chest radiography, Homogeneous retractile opacity of the right upper lobe with attraction of mediastinum elements and rise of the diaphragmatic.

Chest CT scan showed a heterogeneous tumour-like lesion with areas of necrosis, polylobed, irregularly contoured, heterogeneously enhanced after contrast injection, with medial invasion of the mediastinum and multiple necrotic mediastinal adenopathy. CT scan suggesting a tumour process, particularly lymphoma (Figure 2).

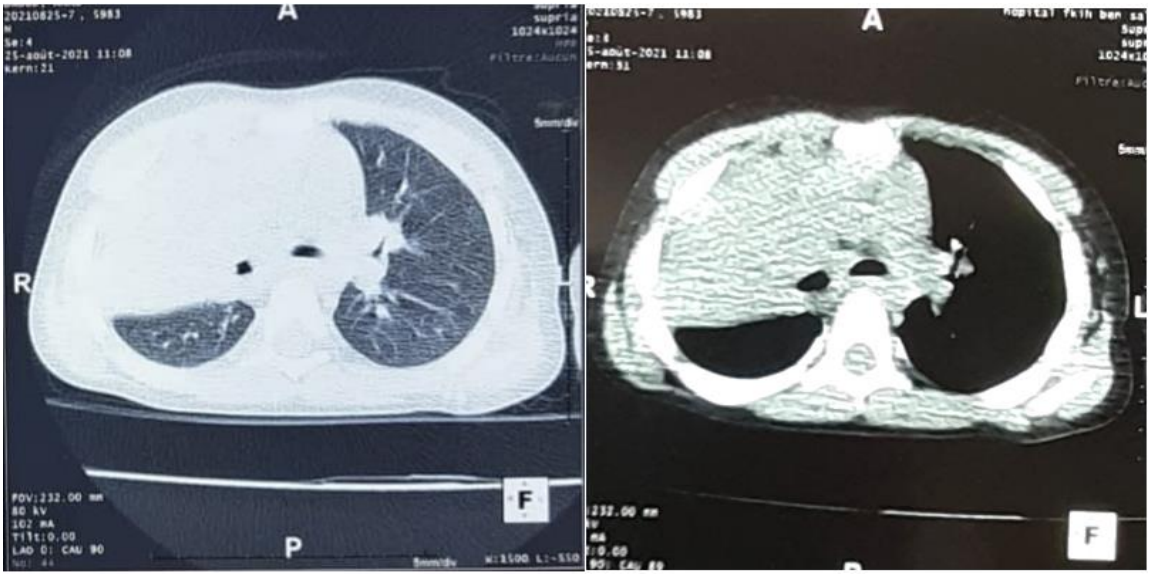

Figure 2: Thoracic CT scan (parenchymal and mediastinal window) showing a mediastinum tumour complex in the right lung extending towards the trachea, thymus and mediastinum dome.

The laboratory tests howed inflammatory anaemia, a normal leucocyte count, with an LDH level of 232 IU/l and uric acid of 39 mg/l. The tuberculin intradermal reaction was 10 mm and the gastric tube test for BK was negative. Abdominal ultrasound was normal. Since the tuberculosis work-up was negative and a tumour process could not be ruled out, a bronchoscopy with biopsy was performed, revealing the presence of a right bronchial inflammatory granuloma with diffuse inflammation lining the tracheal and bronchial mucosa, probably related to an infectious process, particularly tuberculosis. The bacteriological study of the bronchial sample did not reveal any BAARs.

Because the lung mass could be approached with the large vessels, a trans-parietal biopsy of the mass has been rejected. The immunoassay revealed negative HIV serology, normal serum immunoglobulin levels, normal lymphocyte subpopulation levels with normal expression of HLA-DR and a normal DHR test. Aspergillus serology and antigenemia were negative. The child was treated on a trial course of antituberculous treatment with regular clinical and radiological monitoring. Anatomopathology revealed flaps of respiratory lining with nonspecific inflammation. Antibacillary drugs was continued for 15 months with good clinical and radiological progression (Figure 3, 4).

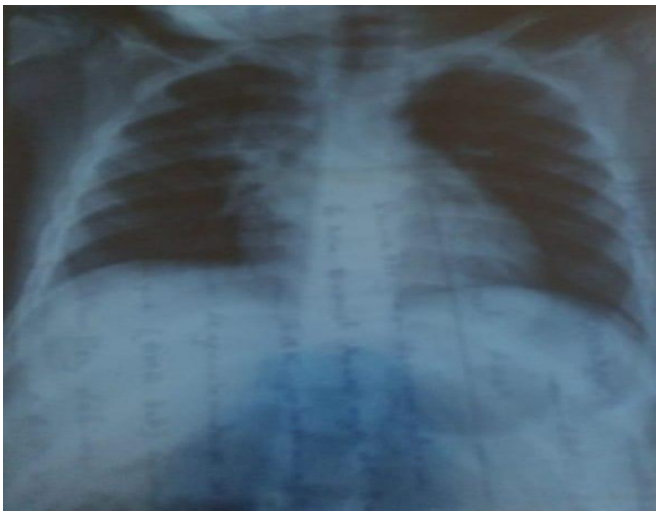

Figure 3: Front chest X-ray after 3 months of antibacillary treatment.

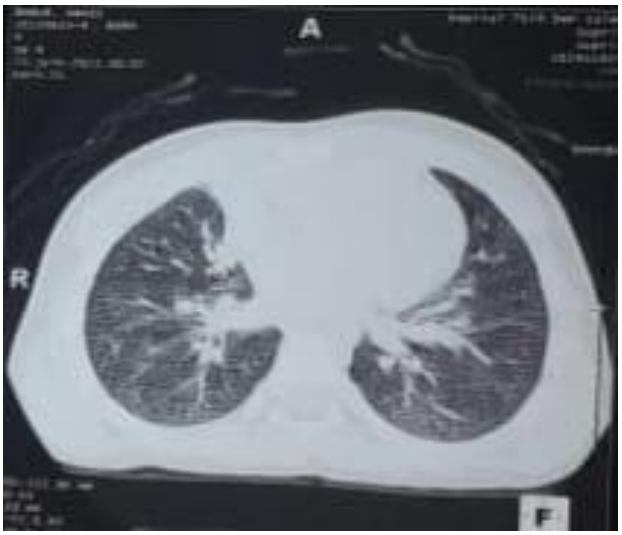

Figure 4: Chest CT performed after 1 year of antibacillary treatment: sequelae lesion of the right upper lobe. No sign of active infectious disease.

Discussion

Tuberculosis remains an endemic problem in our country and in many other parts of the world. Pulmonary involvement in children is highly polymorphic, essentially radiological. The expression is sometimes atypical, mimicking serious pathologies such as cancer.

The pseudotumour form of pulmonary tuberculosis is a rare form [1], characterised by an atypical and misleading radio-clinical picture, which makes diagnosis more often than not difficult and delayed, with a course that may vary between 4 and 10 weeks [2,3]. Lesions are often found in the apical and dorsal segments of the upper lobes, as in the case of our patient, and in the apical segments of the lower lobes [4].

Clinical manifestations are non-specific, dominated by cough, chest pain and general signs of fever and weight loss [5]. Bacteriological samples are negative on direct examination and rarely positive on culture, given the solid, poorly oxygenated nature of the caseous lesions in pseudotumour tuberculosis [5]. Chest CT scans may reveal several features, such as parenchymal condensations, tissue masses, suspicious nodules, and tumour-like process associated or not with adenopathy [6]. Bronchoscopy may show an appearance of inflammatory mucosa, sometimes infiltrated and ulcerated, or it may be normal [7]. The histological diagnosis is confirmed by transbronchial or transparietal biopsy, sometimes guided by thoracotomy.

The treatment of pulmonary pseudotumoral tuberculosis is often easy,it is based on antibacillary drugs with the usual dosages sometimes a longer durations generally leading to a complete cure of the disease and a favourable clinical evolution,as in the case of our patient [8].

Conclusion

Pulmonary tuberculosis will never cease to mislead the clinician because of its great clinical and radiological polymorphism. The main risk is to misunderstand a pathology that is curable by a specific medical treatment.

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