

Primary Pulmonary Diffuse Large B-Cell Lymphoma; How to Recognize it

Omar El Aoufir*, Idrissi Hind, El ghorfi Salma, El Fenni Jamal, Mahi Mohamed and Saouad Rachida

Departement of Radiology, Military Hospital Mohamed V, Mohamed V University. Rabat, Morocco

***Corresponding Author:** Omar El Aoufir, Departement of Radiology, Military Hospital Mohamed V, Mohamed V University. Rabat, Morocco.

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Abstract

We report the case of a 55-year-old patient admitted for exploration of pulmonary parenchymal condensation. The Thoracic biopsy confirms the diagnosis of diffuse large B-cell primary lymphoma.

Keywords: Primary Pulmonary Lymphoma; Diffuse Large B-Cell Lymphoma; Computed Tomography

Introduction

Primary pulmonary lymphomas (PPL) are tumors rarely encountered in current practice. The clinical presentation and radiological aspects are atypical. Computed tomography (CT) makes it possible to suspect the diagnosis in front of a parenchymal condensation. The CT-guided biopsy and the anatomopathological examination provide diagnostic certainty.

Observation

We report the case of a 55-year-old patient, non-weaned smoking, admitted for the management of respiratory distress, clinical history finds chest discomfort with a cough that has progressed for six months, without improvement under symptomatic treatment. The CT performed in emergency finds a parenchymal condensation of the lower left lobe, well limited, with convex edges with air bronchogram, molding the apical segmental bronchus without compressing it. No mediastinal or cervical lymphadenopathy was found (Figure 1). A posterior CT scan biopsy was performed (Figure 2) and the pathology examination confirmed the diagnosis of diffuse large B-cell lymphoma.

Discussion

Diffuse large cell lymphoma accounts for 11 to 19% of LPP [1]. It preferentially affects the immunocompromised subject [2]. It can occur alone or be associated with lymphoma of the MALT type (Lymphoid Tissue Associated with Mucous membranes). It is in this context that the role of CT seems essential, because in addition to providing diagnostic certainty by biopsy, it eliminates an extra-thoracic lymphomatous localization, especially abdominal, and assess the therapeutic response and detects recurrences.

Lymphoma appears on CT as a single, locally advanced, condensed lung mass contrasting with the absence of mediastinal tumor lymphadenopathy. This last radiological sign makes it possible to distinguish with bronchial adenocarcinoma, which most often associates a bulky tumor mass and lymphadenopathies. Other radiological signs are described such as pleural effusion and vasculogram. Multifocal forms are more common in immunocompromised individuals [2]. Bronchial endoscopy may show bronchial tumor infiltration.

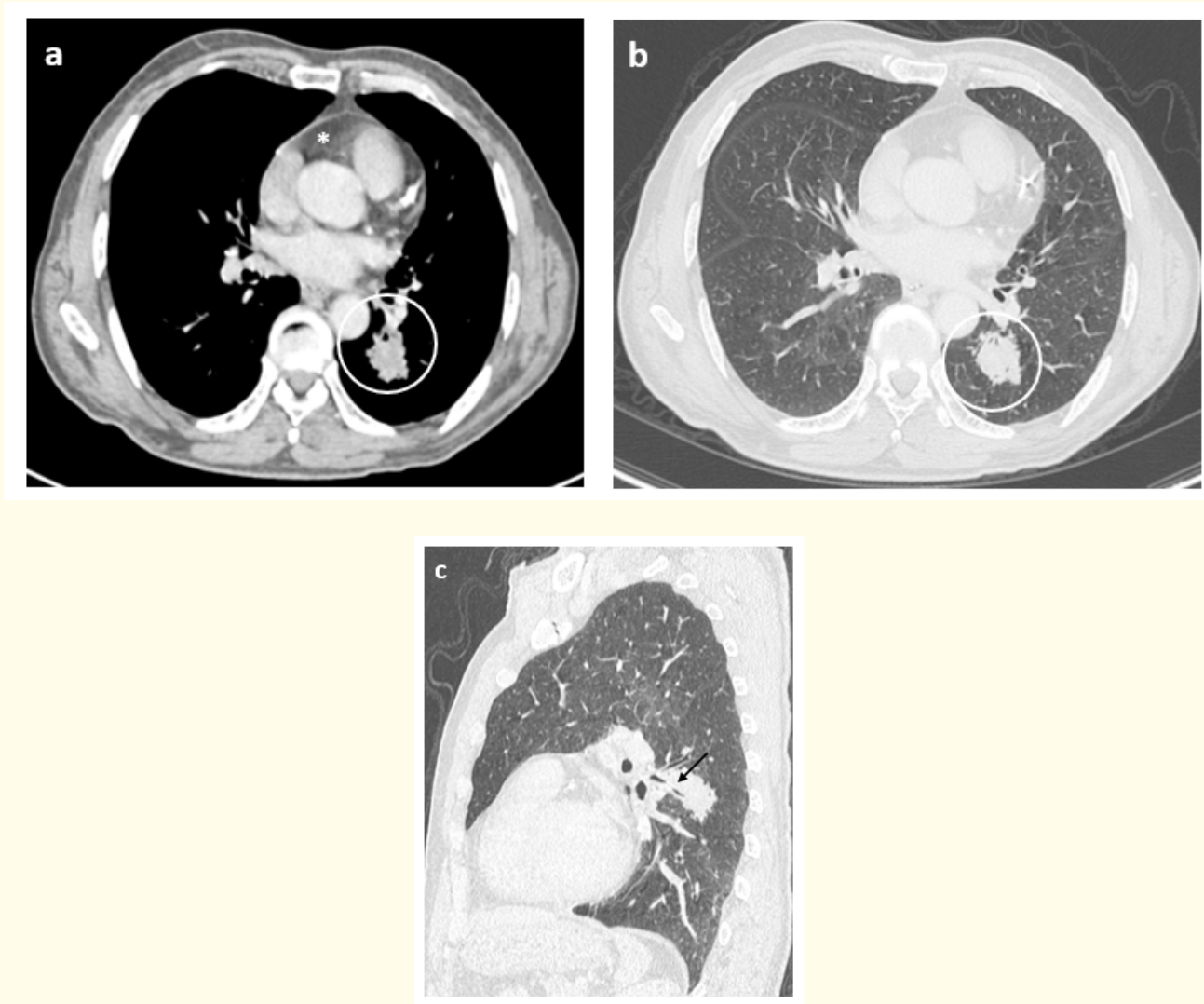


Figure 1: Thoracic computed tomography, with PDC injection, in the mediastinal window (a) and parenchymal window (b, c) showing a condensed lung mass (O) of the apical segment of the left lower lobe, with convex edges encompassing the corresponding bronchus (J). Note the integrity of the mediastinal fat and the absence of lymphadenopathy (*).

Low grade B lymphoma manifests itself on imaging in the form of condensations, masses, nodules or even inhomogeneous ground glass hyperdensities with often multiple lesions [3,4].

Positron emission tomography (PET)/Fluorodeoxyglucose (FDG) CT is another essential tool for diagnosis, it allows not only to find other lymphomatosis locations but also in post-therapeutic monitoring.

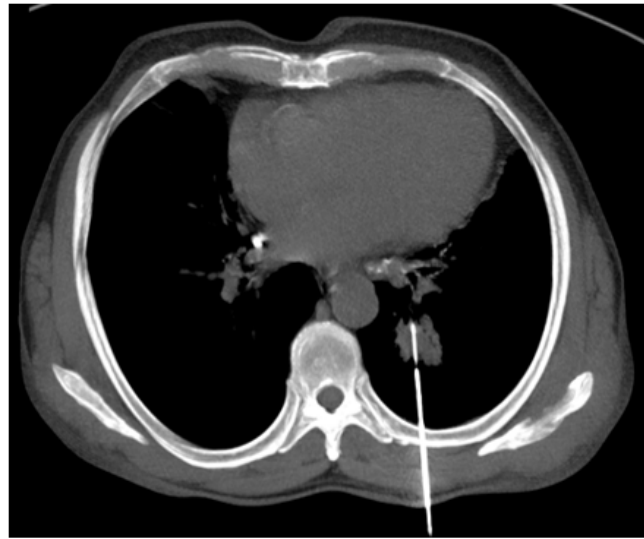


Figure 2: Pulmonary biopsy scannoguided by posterior approach.

Some authors suggest the use of PET/Magnetic Resonance Imaging (MRI) and diffusion sequences with a high b (DWI) in the evaluation of lymphoma favored by the excellent resolution of MRI for soft tissue [5,6]. Indeed, the DWI makes it possible to search for pathological lymph nodes and improves the precision of the PET scan with FDG in the detection of lesions.

The main differential diagnosis for primary diffuse large B-cell lymphoma remains bronchopulmonary cancer, and bronchial adenocarcinoma in particular. The smoking context, the multiplicity of lesions as well as tumor lymphadenopathy evoke much more the tumor origin than lymphomatosis.

Conclusion

Primary diffuse large B-cell lung lymphomas are rare tumors, their radiological appearance is often poorly understood. CT is a considerable contribution to suspect the diagnosis in front of a tumor mass without lymphadenopathy and to confirm it by the pulmonary biopsy.

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