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RESEARCH ARTICLE

ENDOBRONCHIAL HODGKIN'S DISEASE: A CASE REPORT

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Abstract

Endobronchial Hodgkin's disease is a rare condition, often confused with endobronchial tuberculosis in our setting. We report the case of Hodgkin's lymphoma presenting as an endobronchial localization in a 36- year-old man who had been experiencing nonspecific symptoms such as coughing, dyspnea, fever, and weight loss for three months. Sputum examination for acid-fast bacilli (AFB) using GenExpert was negative. A chest, abdominal, and pelvic CT scan revealed a mediastina tumor mass encompassing the left vascular and tracheobronchial structures and moderate left pleural effusion, associated with multiple supra- and subdiaphragmatic lymphadenopathies. This was followed by a bronchoscopy, which revealed a bud obstructing the apical orifice of the left lower lobe bronchus. Immunohistochemical analysis of the bronchial biopsy was consistent with Hodgkin's lymphoma. The patient received chemotherapy and radiotherapy.

Introduction:-

The mediastinum is the most common site for lymphomas. However, endobronchial lymphoma is rare and generally poses difficulties in differential diagnosis with tuberculosis, especially in highly endemic countries such as Morocco. We present a case illustrating the clinical and endoscopic characteristics of endobronchial Hodgkin's disease.

Case presentation:

A 36-year-old patient with a history of sclerosing nodular Hodgkin lymphoma, diagnosed two years ago on biopsy of a cervical lymph node. The patient has been out of follow-up since diagnosis and has not received any treatment. He then consulted for a dry cough associated with stage II dyspnea according to the mMRC scale, with the appearance of cervical lymphadenopathy, which had been progressing for three months in the context of fever and weight loss estimated at 6 kg. On clinical examination, oxygen saturation was 97% in ambient air, with blood pressure at 120/74 mmHg. Pleuropulmonary examination revealed crackles in the left lung field. Lymph node examination revealed firm, non-inflammatory cervical lymphadenopathy, the largest of which measured 2 cm in diameter. Laboratory tests revealed a hemoglobin level of 11 g/dL and a total white blood cell count of 11,000

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cells/µL with lymphopenia. Sputum examination for acid-fast bacilli (AFB) using GenXpert was negative. A chest, abdominal, and pelvic CT scan revealed a mediastinatumor mass encompassing the left vascular and tracheobronchial structures and moderate left pleural effusion, associated with multiple supra- and subdiaphragmatic lymphadenopathies (Figure 1).

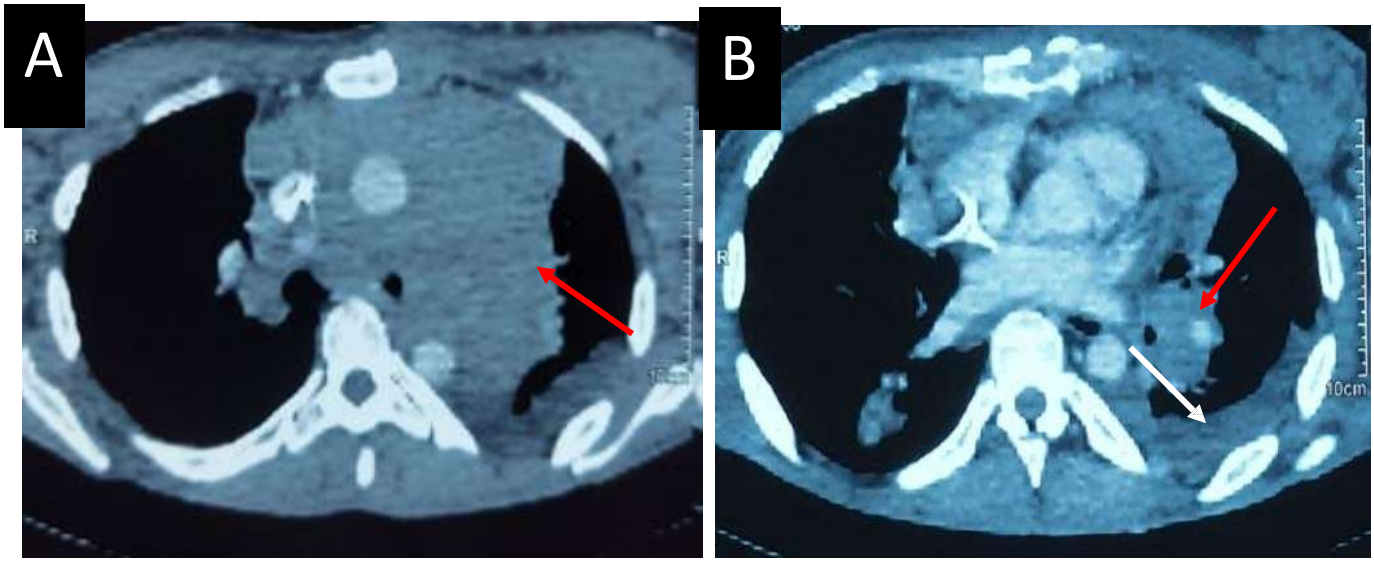

Figure 1: Thoracic CT Axial sections (A, B) showing a mediastinal mass (red arrows) encompassing the left vascular and tracheobronchial structures and left pleural effusion (white arrow).

Bronchoscopy revealed an endobronchial bud completely obstructing the apical orifice of the left lower lobe with irregular infiltration of the mucosa at the entrance to the left main bronchus (Figure 2). Histological and immunohistochemical examination of bronchial biopsies confirmed an endobronchial location of Hodgkin's lymphoma.

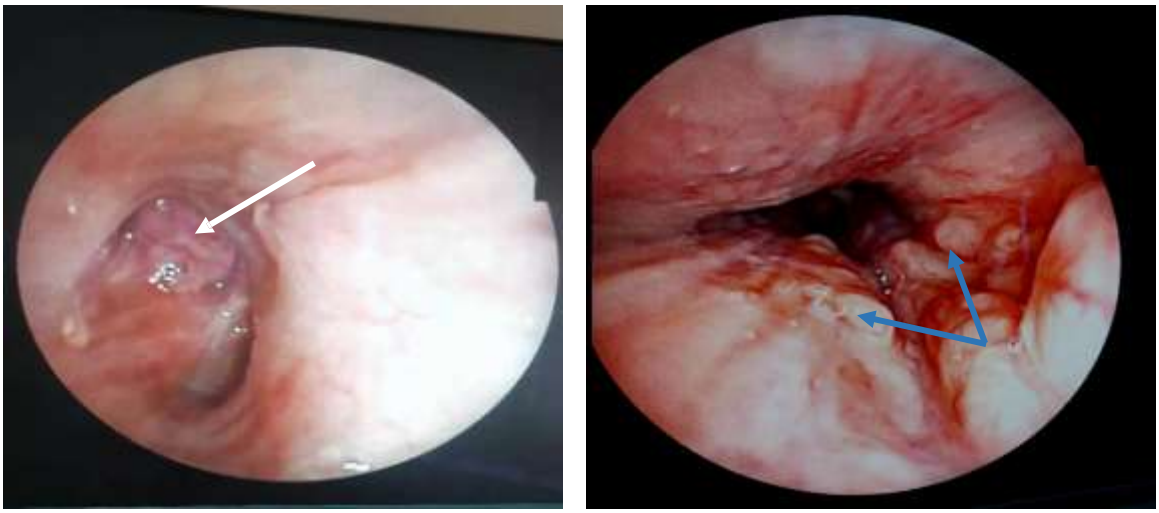

Figure 2: Endoscopic appearance consistent with a bud obstructing the apical opening of the left lower lobe (White arrow), irregular infiltration of the mucosa at the entrance to the left main bronchus (Blue arrow)

The final diagnosis was stage III Hodgkin's lymphoma according to the Ann Arbor classification. After multidisciplinary consultation, the patient underwent chemotherapy according to the ABVD protocol, followed by additional radiotherapy. The outcome was marked by favorable clinical improvement.

Discussion:-

The mediastinum is the most frequently reported site of involvement in Hodgkin's disease, observed in approximately 67 to 87% of cases, mainly manifesting as mediastinal lymphadenopathy. (1) (2) Endobronchial involvement in Hodgkin's disease is very rare. Several mechanisms have been proposed to explain endobronchial involvement, including contiguous spread from hilar or mediastinal lymph nodes, as well as systemic dissemination via the bloodstream (3). The clinical signs are nonspecific, dominated mainly by cough and dyspnea. Our patient presented with these same symptoms. In Hodgkin's disease, the radiological signs are a pulmonary or mediastinal mass, sometimes associated with atelectasis, and lymphadenopathy is almost always present. These abnormalities are often associated with pleural effusion (4). Bronchoscopy plays a key role in diagnosis by allowing direct visualization of the lesion and the performance of biopsies. Involvement of the right bronchial tree was slightly more common than that of the left bronchial tree, and in a minority of patients, both bronchial trees were involved. Concomitant tracheal involvement was observed, but was very rare (5). In the literature, Awan et al. and Abid et al. (6) (7) reported cases of endobronchial lymphoma localized in the left bronchus, similar to that observed in our case, while Amro et al (4) described right bronchial involvement. The diagnosis is based primarily on the identification of Reed- Sternberg cells in a characteristic inflammatory context, confirmed by immunohistochemistry (CD30+, CD15+, weak PAX5, CD45 negative) (8). Histologically, the differential diagnosis includes diffuse large B-cell lymphoma, anaplastic large cell lymphoma, large cell bronchial carcinoma, and melanoma (9). Treatment is based on chemotherapy and radiotherapy (2). Radiotherapy is the treatment of choice for localized forms. The prognosis is determined by the early diagnosis and stage of the disease.

Conclusion:-

Endobronchial Hodgkin's disease remains rare and is probably underdiagnosed. Systematic exploration of the trachea and bronchial tree is recommended for two main reasons: firstly, it allows assessment of the locoregional endobronchial extent and, secondly, it enables biopsies of the lesions to be taken, which are essential for histological confirmation of the diagnosis.

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