

Pulmonary Hodgkin Lymphoma Misdiagnosed as Tuberculosis

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Abstract

Common radiologic features of lymphoma in lung are included: adenopathy, pleural effusion, multiple or solitary masses and diffuse infiltration. We want to present a 28y/o male with pulmonary Hodgkin lymphoma with a rare radiographic pattern and distinct histologic description that at first misdiagnosed as pulmonary tuberculosis but eventually lung biopsy confirmed diagnosis of pulmonary Hodgkin disease.

Key Words: Pulmonary, Hodgkin Lymphoma, Tuberculosis

Introduction

Primary pulmonary Hodgkin lymphoma is extremely rare. The diagnostic criteria are: histopathologic finding of Hodgkin lymphoma, limitation of disease to lung parenchyma without involvement of hilar lymph nodes and clinical and/or pathologic exclusion of disease in other organs.(1)

Common radiographic features of lymphoma are adenopathy, pleural effusion, multiple mass lesions, solitary lesion and diffuse pattern.(2) Cavitory lung lesion is another rare radiographic pattern of lymphoma.(3) There are few reports regarding primary pulmonary hodgkin lymphoma is in literature.(3- 8)

Common radiological features of primary pulmonary Hodgkin lymphoma are included: a solitary mass or multinodular disease, inhomogeneity or cavitation of these lesions is common.(7)

Case Report

A 28 y/o male presented with itching and skin rash. He complained anorexia and dry cough but not fever and weight loss. Physical examination showed only pallor and onycholysis in left and right hands. He had no clinical detectable lymphadenopathy and organomegaly.

Laboratory finding showed leukocytosis and microcytic mild anemia with elevated ESR and LDH (Table- 1)

Chest X-Ray showed air-space consolidation in middle zone of left lung suggestive of tuberculosis (Figure- 1).

He was underwent bronchoscopy and bronchoalveolar lavage and transbronchial lung biopsy (TBLB).

TBLB result was indicative of chronic non caseating granulomatous inflammation. Sputum smear and cultures and BAL were negative for mycobacterium tuberculosis. With possibility of tuberculosis anti TB antibiotics was initiated and he was underwent open lung surgery and left lung upper lobe wedge biopsy. Microscopic examination revealed distorted lung parenchyma due to presence of several nodules composed of mixed inflammatory cells including lymphocytes and histiocytes and neutrophils intermingled with them some large lobulated nucleolated nuclei and abundant eosinophilic to clear cytoplasm. Neoplastic cells were positive for CD15, faintly for CD30, but negative for LCA and CD20. After full work up for staging including CT scan of thorax showed parenchymal opacity and infiltration in left lung (Figure- 2), abdominal and pelvic CT scan was reported normal. Diagnosis of pulmonary Hodgkin lymphoma was made and chemotherapy with ABVD regimen was started. His symptoms including itching, cough and anorexia was relieved after 2th cycle of chemotherapy. After 4th cycle of ABVD, CT scan was ordered and reported normally in chest (Figure- 3) and abdomio-pelvic areas.



Figure- 1. Chest X-Ray showed: Air-space consolidation in middle zone of left lung suggestive of tuberculosis.

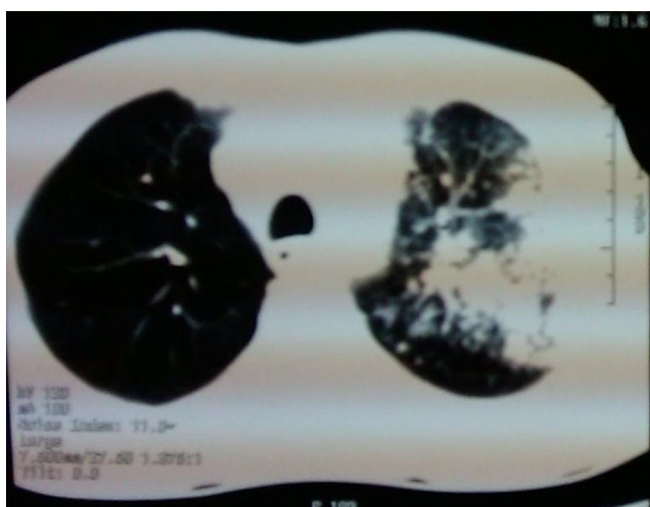


Figure- 2. CT scan of thorax showed parenchymal opacity and infiltration in left lung

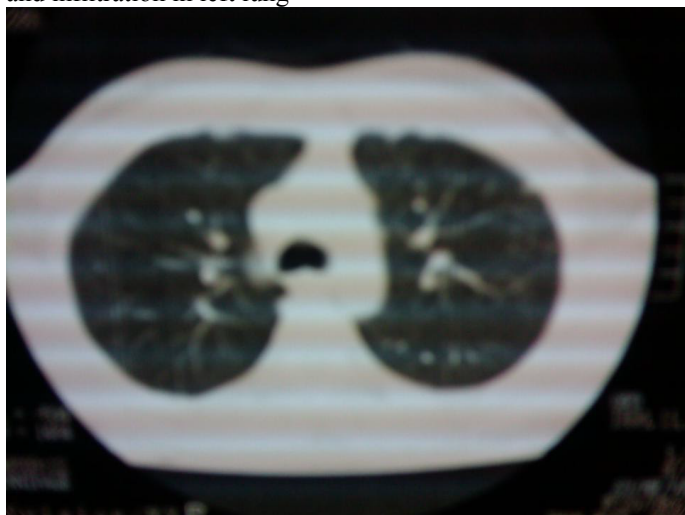


Figure- 3. Chest CT-scan is normal after 4th cycle of ABVD.

Discussion

Lung involvement in patients with Hodgkin disease occurs in advanced stages in 15-40% of cases. Although mediastinal involvement in Hodgkin disease is frequently seen but primary pulmonary lesions is extremely rare.(3, 4, 5, 9)

Table- 1. Lab data of patient in our visits in hospital

WBC	12.6×10 ³ /μl
Hb	12.3g/dl
Plat	447×10 ³ /μl
MCV	78fl
ESR	54mm/h
AST	27 (NI <50U/L)
ALT	18 (NI <50U/L)
Total bilirubin	0.3 (NI <0.75mg/dl)
Direct bilirubin	0.1 (NI <0.2mg/dl)
Alk Ph	303 (NI: 80 306U/L)
LDH	580 (NI: up to 480U/L)
HBsAg	Negative
HCVAb	Negative
HIVAb	Negative
ANA	Negative
Anti Ds-DNA	Negative
RF	Negative
Anti CCP	Negative
CRP	2+ Positive

Isolated or primary pulmonary involvement in Hodgkin lymphoma is a distinct entity and there are few case reports regarding primary pulmonary Hodgkin lymphoma in literature.(7) Primary pulmonary Hodgkin lymphoma (PPHL) are seen in 3th and 6th decades. Manifestations are: cough, dyspnea, hemoptysis and chest pain. B symptoms (fever, night sweat and weight loss) are seen in one third of these patients. These presenting symptoms are quite similar to pulmonary tuberculosis (TB). Nodular sclerosis and mixed cellularity subtypes are more common than lymphocyte rich subtype, but lymphocyte depleted is not reported in PPHL. Diagnosis is made after seeing Reed– Sternberg cells or variants (usually CD15+ or CD30+ cells) in the inflammatory background. Central necrosis, granulomatous inflammation and vascular permeation by the polymorphous infiltrates are seen.(9) Since fine needle aspiration cytology leads to misdiagnosis and delayed treatment, thus open thoracotomy and biopsy or thoracoscopic lung biopsy is needed for diagnosis. Our case shows a very interesting and uncommon presentation of pulmonary Hodgkin lymphoma with air-space consolidation pattern.

Granulomatous reaction is a characteristic pattern for TB. Detection of this histologic pattern as a dominant finding of this case was a unique feature that led to delay in the diagnosis.

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