Case Report

Hodgkin's Lymphoma in a Milky Way

Hasna Erattengal, C. Nandish
Department of Pulmonary Medicine, JJM Medical College, Davanagere, Karnataka, India

Abstract

Chylothorax refers to the accumulation of chyle in the pleural space. The most common cause of nontraumatic chylothorax is tuberculosis, malignancy, and congenital causes. We share a case of bilateral chylothorax in a 24-year-old male patient admitted with complaints of fever, dry cough, and dyspnea, initially suspected of tuberculosis. The effusion was drained, and a biochemical test revealed chylothorax. Chest radiograph showed widening of mediastinum. Contrast-enhanced computed tomography done revealed lobulated anterior and superior mediastinal mass lesion possibility of lymphoma. Excision biopsy of the lymph node was done, and the biopsy report revealed histological features consistent with the malignant lymphoproliferative process in favor of the nodular sclerosis variant of classic Hodgkin's disease. This case reveals bilateral chylothorax as the first manifestation in a young male patient of Hodgkin's lymphoma. Early suspicion and systematic diagnosis provide good outcome.

Keywords: Chylothorax, Hodgkin's lymphoma, tuberculosis

Introduction

Chylothorax refers to the presence of chyle in the pleural space due to leakage from the thoracic duct. Nontraumatic chylothorax is less common due to infections, malignancy, congenital causes, idiopathic disorder of lymphatic systems.[1] Chyle appears as milky opalescent fluid. Chylothorax is uncommon and poorly defined complication of Non-Hodgkin's and Hodgkin's lymphoma of any histological type or grade.[2] Hodgkin's lymphoma without any subtype specification is responsible for 1.4% of chylothorax in case series of 203 patient over 21 years.[3]

Case Report

A 24-year-old male patient presented with complaints of fever dry cough since 1 month and swelling on the face and the left side of the neck since 1 week and breathlessness since 3 days the above complaints were associated with loss of appetite. The patient did not have a history of similar complaints or tuberculosis in the past. The patient did not have any comorbidity.

On general examination, the patient is moderately built with a body mass index of 25 and alert conscious oriented to time place and person with facial swelling. On examination, the patient has SpO_2 of 99% on room air, pulse rate 80 beats/min good volume, blood pressure of 130/80 mm Hg, and temperature of 98.6°F.

Examination revealed multiple lymph node enlargement in the left supraclavicular region with the largest measuring 3 cm × 2 cm, rubber consistency mobile, nontender, restricted mobility not attached to the skin. The patient had the prominence of veins on the chest. Jugular Venous Pressure was raised and nonpulsatile with evidence of bilateral pleural effusion.

On investigation, Hb was 10.4 mg/dl total leukocyte count 9470cells/mm^3 Platelet 3.84L/mm^3.

Chest X-ray showed moderate effusion on right and mild left effusion with widened mediastinum.

The diagnostic pleural aspiration pale yellow turbid fluid with triglyceride of 505mg/dl, cell count of 2300 cells/mm^3, Neutrophil 5%, lymphocyte 95%, Protein 3.9mg/dl, Glucose 99mg/dl, ADA 6.3, and lactate dehydrogenase 139 IU/L.

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Address for correspondence: Dr. Hasna Erattengal, Department of Pulmonary Medicine, JJM Medical College Davanagere, Karnataka, India.
E-mail: mailtohasna03@gmail.com

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Pleural fluid acid-fast bacilli were negative and automated culture sensitivity showed no growth.

Ultrasound abdomen showed multiple enlarged lymph nodes in the left iliac fossa, porta hepatis, para-aortic station likely tubercular lymphadenitis, and bilateral pleural effusion.

Fluid was drained and contrast-enhanced computed tomography (CECT) revealed well-defined poorly enhancing lobulated anterior and superior mediastinal mass lesion with extension and compression of the vessel with multiple collaterals, diffuse lymphadenopathy, and bilateral pleural effusion suggest the possibility of lymphoma [Figures 1 and 2].

Excision biopsy of the lymph node was done and biopsy report revealed histological features are consistent with the malignant lymphoproliferative process in favor of the Nodular sclerosis variant of classic Hodgkin's disease [Figure 3].

Immunohistochemistry showed large nucleated cells immunoreactive for CD30 CD15 weakly reactive for PAx 5 and immunonegative for CD20 and CD3 [Figures 4-8].

The patient was started on chemotherapy for Hodgkin's lymphoma.

Discussion

Chylothorax is a rare cause of pleural effusion. Malignancy is one of the leading causes of nontraumatic cause of chylothorax. It is not easy to distinguish from other cause of pleural effusion radiologically. The mechanism by which lymphoma cause chylothorax is due to compression of thoracic duct or direct invasion of the thoracic duct. Chylothorax in lymphoma has a poor prognosis due to associated nutritional deficiency due to loss of protein electrolytes lymphocytes due to thoracocentesis.[4]

The patient had developed bilateral pleural effusion in this case, unlike other reported cases. Extensive tumor invasion with vessel compression might have contributed to the superior vena cava syndrome.

Patients with Hodgkin's lymphoma with pleural effusion have intrathoracic lymph node involvement. Approximately 3% of effusion in Hodgkin's disease is due to chylothorax.[5]

Nodular sclerosing variety of Hodgkin's lymphoma presenting with chylothorax has been reported.[6]

The management of nontraumatic chylothorax involves diagnosing and treating the apparent cause. Sometimes repeated thoracocentesis will be required to manage the reaccumulation of chyle. However, the present case did not mandate the need for repeated thoracocentesis. The

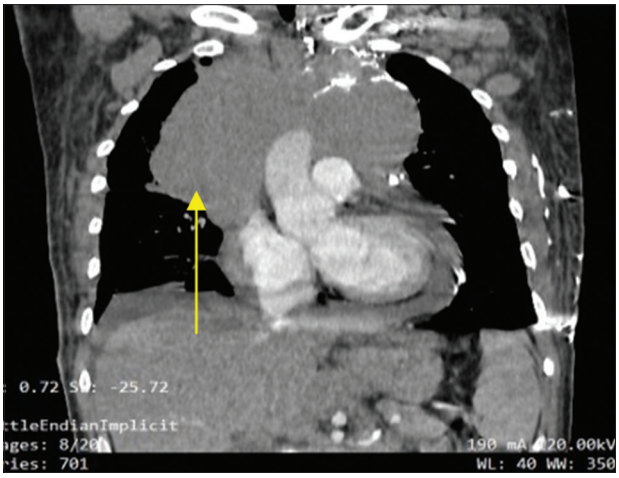

Figure 1: CECT study confirmed tissue mass in the mediastinum. CECT: Contrast-enhanced computed tomography

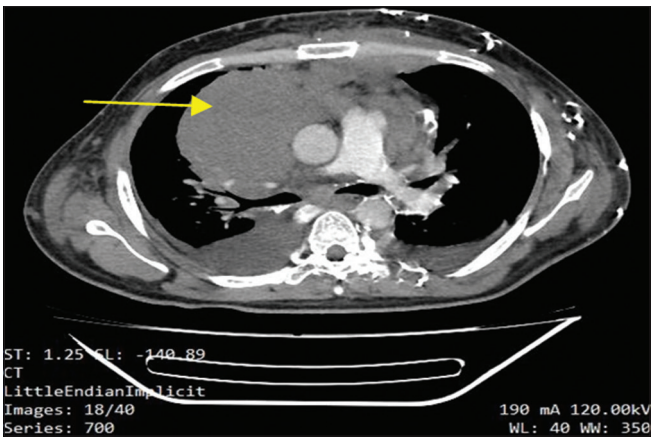

Figure 2: CECT study confirmed bilateral pleural effusion with soft tissue mass in the mediastinum. CECT: Contrast-enhanced computed tomography

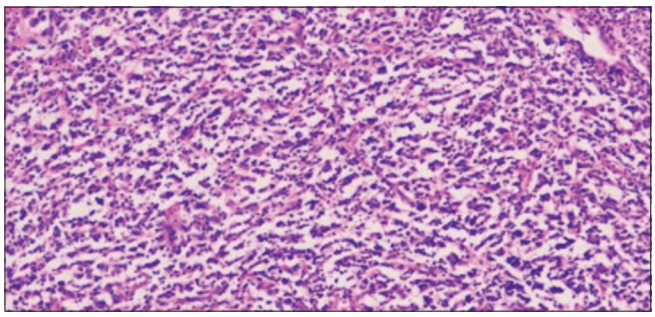

Figure 3: H and E Stained section of the biopsy specimen

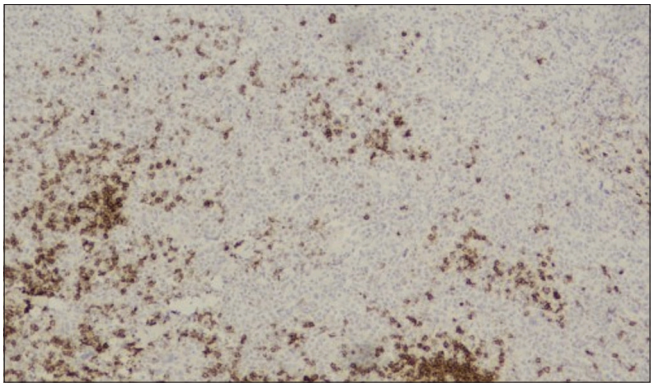

Figure 4: Immunohistochemistry CD20 (L26)

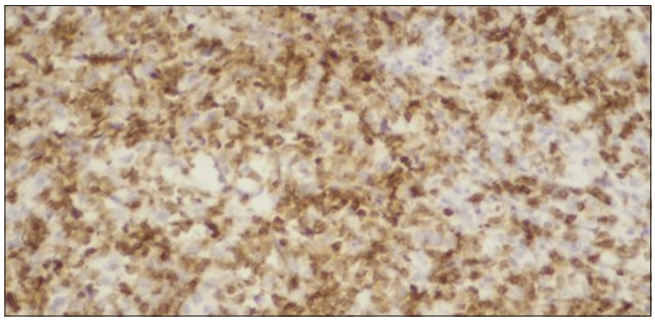

Figure 5: Immunohistochemistry CD30 (Ber-H2)

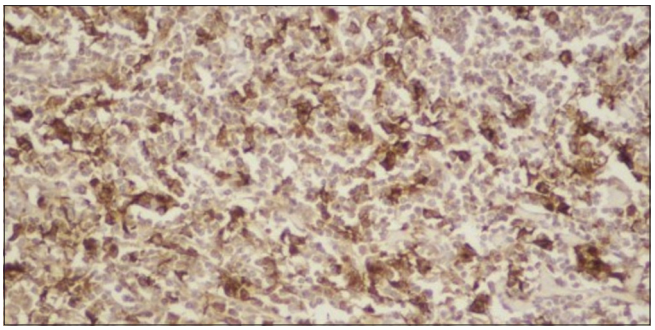

Figure 6: Immunohistochemistry CD30 (Polyclonal)

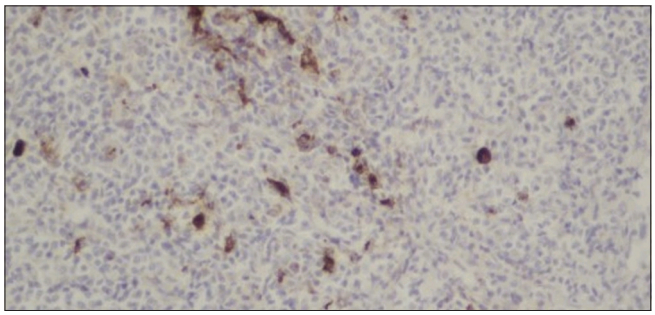

Figure 7: Immunohistochemistry CD15 (Carb -3)

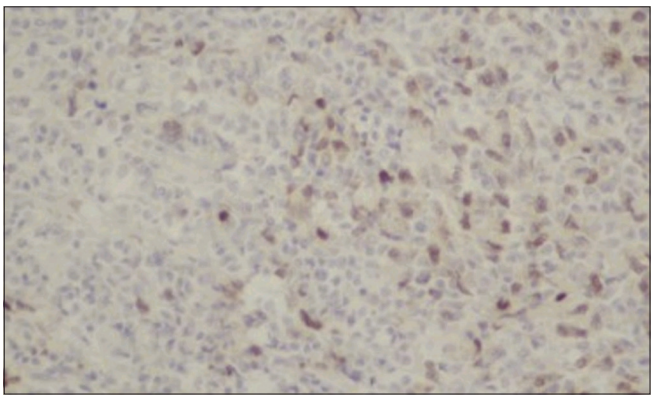

Figure 8: Immunohistochemistry PAX 5

introduction of chemotherapy in Hodgkin's lymphoma leads to improvement with varied success rates.

This case reaffirms the importance of the CECT thorax and excisional biopsy of the lesion to confirm the diagnosis and plan the treatment.

Declaration of patient consent

The authors certify that they have obtained consent from the patient and family to publish the case report. In the consent form, the patient has given his consent for images and clinical information to be reported in journal. The patient understands that his name and initial will not be published and due effort will be put to conceal his identity, but anonymity cannot be guaranteed.

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Conflict of interest

There are no conflict of interest.

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