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Chylothorax; An uncommon presentation of a common disease

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Abstract

Chylothorax is a relatively rare form of pleural effusion. A chylothorax, not due to a trauma or surgery, usually indicates an underlying sinister pathology. Untreated chylothorax may lead to life threatening consequences. Here we describe a 35-year old male presented with a chylothorax secondary to a primary mediastinal B-cell lymphoma.

Keywords

Pleural effusion; chylothorax; lymphoma.

Introduction

Chylothorax is an uncommon but important clinical entity, described as the presence of chyle in the pleural cavity. Disruption of chyle flow through the thoracic duct due to a traumatic or non- traumatic etiology can result in chylothorax. Thoracic surgery is the leading traumatic cause of chylothorax. Malignancies are identified as major non-traumatic causes. Here we report a young patient presenting with a left sided chylothorax as the sole manifestation of an underlying primary mediastinal B-cell lymphoma.

Case Report

A 35- year old man admitted with three weeks history of difficulty in breathing and left sided pleuritic type chest pain. He denied fever, cough, loss of weight or night sweats. On examination the patient was afebrile and not pale. His Body Mass Index was 24 kg/m^2. He was not in respiratory distress and peripheral oxygen saturation was 99% on room air. There was no lymphadenopathy or organomegaly. Clinical examination of the respiratory system revealed evidence of a left sided moderate pleural effusion, which was confirmed by chest radiograph (Figure 1) and ultra sound scan of the chest.

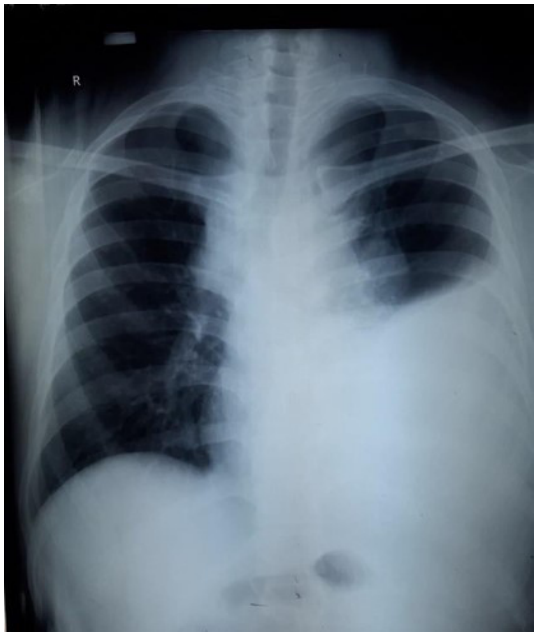

Figure 1

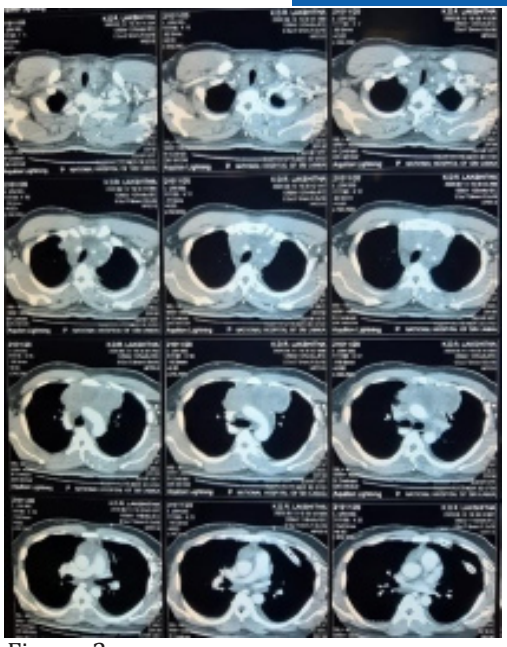

Figure 2

Full blood count was normal. Erythrocyte Sedimentation Ratio (ESR) was 78 mm/1st hour and Creactive protein level was normal. Renal and liver biochemical profiles were normal. Blood picture was not suggestive of any hematological malignancy. Serum lactate dehydrogenase (LDH) level was 355 U/L. Ultra sound guided pleural aspiration performed. Aspirate was milky. Pleural fluid full report was exudative and lymphocytic (protein 7200 mg/dl, pus cells 80/cumm, lymphocytes 1600/cumm). ADA level was 17.3 U/L. Pleural fluid cholesterol level was 144 mg/dl and triglyceride level was 1003 mg/dl. Pleural fluid pyogenic culture was negative. Left sided inter costal chest drain was inserted and the initial drain output was 1250 ml. Contrast enhanced computed tomography reveled an antero superior mediastinal mass with lobulated outline measuring 6×12×10 cm extending from the thoracic inlet up to the origin of great vessels (Figure 2). Abdomen was ultrasonographically normal. Ultra sound guided biopsy of the mediastinal mass was performed. Histology and immunohistochemistry were suggestive of a primary mediastinal B-cell lymphoma. Chemotherapy started with Etoposide phosphate, Vincristine sulphate, Cyclophosphamide, Rituximab and prednisolone. The chylothorax completely resolved by the end of the first cycle of chemotherapy.

Discussion

Non traumatic chylothorax is a rare manifestation of common sinister conditions like lymphoma, bronchial carcinoma and chronic lymphocytic leukaemia. Chyle may accumulate in pleural cavity due to thoracic duct rupture or excessive pressure in the thoracic duct leading to retrograde flow. Generally, thoracic duct damage above T5/T6 vertebral level causes left sided chylothorax and damage below this level produces right sided chylothorax [1,2].

Early diagnosis of chylothorax is paramount important, as it can lead to devastating complications. Respiratory insufficiency due to massive chylothorax can be life threatening. Nutritional, immunological and metabolic complications can occur due to the loss of fluid, proteins, immunoglobulins, lipids and electrolytes into the pleural cavity [3].

Initial physical examination, plain chest radiograph and ultra sound scan of the chest of a patient with chylothorax would suggest a pleural effusion. Pleural fluid aspiration would reveal milky fluid which is lymphocytic and exudative. [4] Triglyceride level greater than 110 mg/dl confirms the diagnosis of chylothorax [5].

Chylothorax can be managed conservatively or by means of radiotherapy, pleurodesis, surgical ligation of the thoracic duct or pleuroperitoneal shunt [6]. Conservative measures include low fat diet and total parenteral nutrition. However, if the primary pathology is untreated, chylothorax will recur.

Conclusion

Chylothorax is an important clinical entity, which always indicates an underlying major pathology requiring immediate evaluation.

References

1. Valentine VG, Raffin TA. The management of chylothorax. Chest. 1992; 102: 586-591.

2. Doerr CH, Allen MS, Nichols FC, Ryu JH. Etiology of chylothorax in 203 patients. Mayo Clin Proc. 2005; 80: 867-870.

3. Jimenez CA, Mhatre AD, Martinez CH, Eapen GA, Onn A, Morice RC. Use of an indwelling pleural catheter for the management of recurrent chylothorax in patients with cancer. Chest. 2007; 132: 1584-1590.

4. Connolly JE, Smith JW. The management of chylothorax. Calif Med. 1959; 91: 75–78.

5. Romero S. Nontraumatic chylothorax. Curr Opin Pulm Med. 2000; 6: 287–291.

6. Nair SK, Petko M, Hayward MP. Aetiology and management of chylothorax in adults. Eur J Cardiothorac Surg. 2007; 32: 362-69.

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