



NON-HODGKIN LYMPHOMA PRESENTING AS RECURRENT PLEURO-PERICARDIAL EFFUSION- A CASE REPORT

Pulmonary Medicine

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ABSTRACT

Non-Hodgkin lymphoma is a lymphoproliferative disorder usually affecting lymphoid organs. 20% patients with non-Hodgkin lymphoma may present with pleural effusion but pericardial involvement is rare. Pleural & pericardial effusion in lymphoma are usually due to direct seeding of malignant cells or by obstruction to the lymphatic drainage of pleura & pericardium. We report a case of non-Hodgkin lymphoma presenting as recurrent pleuro-pericardial effusion. A middle aged male with chief complaints of progressive dyspnea, palpitation & generalized puffiness for past 2 months was found to have bilateral pleural effusion, pericardial effusion, ascites & generalized lymphadenopathy. Right supraclavicular lymph node was evaluated using FNAC & excisional biopsy. Pleural & pericardial fluids were analyzed. He was diagnosed as Non-Hodgkin lymphoma and started with Rituximab, Prednisolone, Cyclophosphamide, Vincristine & Doxorubicin. Patient improved on subsequent follow up.

KEYWORDS

Non-Hodgkin lymphoma, pleuro-pericardial effusion, R-CHOP, cell block

INTRODUCTION

Non-Hodgkin lymphoma (NHL) is a neoplasm of the lymphoid tissues originating from B cell precursors, mature B cells, T cell precursors, and mature T cells. The most common mature B cell neoplasms are Follicular lymphoma, Burkitt lymphoma, diffuse large B cell lymphoma, Mantle cell lymphoma, marginal zone lymphoma, and primary CNS lymphoma. The most common mature T cell lymphomas are Adult T cell lymphoma and mycosis fungoides. [1]

Up to two-thirds of patients present with peripheral lymphadenopathy. Rashes on the skin, increased hypersensitivity reactions to insect bites, generalized fatigue, pruritus, malaise, fever of unknown origin, ascites, and effusions are less common presenting features. [2]

One in five cases with NHL develops pleural effusion but pericardial & peritoneal involvement is rare. [3] Effusions are usually associated with poor prognosis in Non-Hodgkin lymphoma. [4] Cytological studies with immunohistochemistry (IHC) & flow cytometry help in arriving at diagnosis.

Here, we present a case of a middle aged male who underwent evaluation for progressive dyspnoea & was diagnosed as diffuse large B-cell lymphoma.

CASE DESCRIPTION

A 29 year old male presented to us with complaints of progressive dyspnea, dry cough, low grade fever, palpitation & generalized puffiness for past 2 months. He had no significant past history or family history and had no history of substance abuse. He was previously admitted to a nearby peripheral health institution 1 month back where he was diagnosed as right pleural effusion and 1000ml straw coloured pleural fluid was aspirated by pleurocentesis. The fluid was exudative, predominantly lymphocytic with a borderline Adenosine deaminase (ADA) of 17 IU/l. There was no growth in pleural fluid culture and fluid was negative for acid fast bacilli (AFB). The patient was discharged with oral antibiotics and asked for follow up. But symptoms of patient gradually worsened and patient was referred to us.

CLINICAL FINDINGS:

Patient was conscious, co-operative, well oriented to time, place and person. His pulse rate was 120 beats/min, regularly regular. Respiratory rate was 24/min, abdomino-thoracic type. Other vitals were unremarkable.

He had raised Jugular Venous Pressure, multiple bilateral cervical and right axillary lymph nodes and pitting bilateral pedal edema.

Local examination of the lymph nodes showed multiple, discrete, firm, non-tender, freely mobile lymph nodes largest being 1.5*1.5 cm in right supra clavicular region.

Respiratory system examination revealed diminished vocal fremitus, reduced intensity of vesicular breath sound and reduced vocal resonance over bilateral infrascapular, infra axillary and mammary area.

Cardiovascular system examination revealed muffled heart sounds.

Other system examination were unremarkable.

MANAGEMENT:

ECG was performed that showed sinus tachycardia with low voltage QRS. A chest X-ray was obtained that showed bilateral moderate pleural effusion & an enlarged cardiac silhouette. [Figure 1]



Figure 1: Chest X-ray PA view showing bilateral pleural effusion & enlarged cardiac silhouette.

Patient was admitted as polyserositis and evaluated. His complete blood count, liver, renal, thyroid function were within normal limit. He was negative for HIV serology.

FNAC of the right supra clavicular lymph node was performed that came out to be inconclusive. Excisional biopsy of the same was done.

Ultrasound of thorax, abdomen & pelvis was performed that showed gross bilateral pleural effusion & pericardial effusion, mild ascites.

Contrast enhanced CT scan of thorax with scanning of upper abdomen was done. It revealed an anterior mediastinal mass encroaching great vessels, pericardial effusion, bilateral pleural effusion, para aortic, aortocaval, retrocaval lymphadenopathy and mild ascitis. [Figure 2]

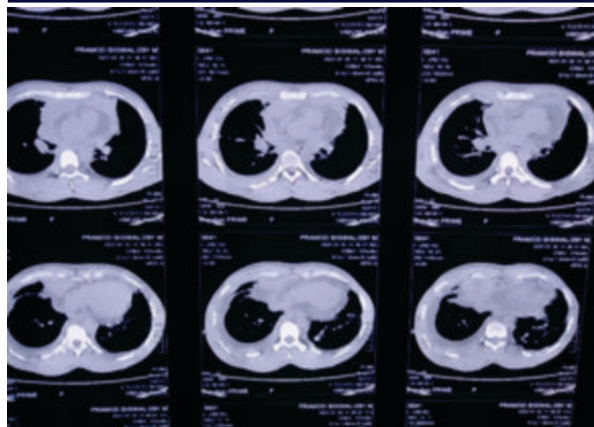


Figure 2: CT thorax showing anterior mediastinal mass, pericardial effusion & bilateral pleural effusion.

Patient was subjected to diagnostic & serial therapeutic pleurocentesis & a total of 4800ml & 900 ml of sero-sanguinous pleural fluid was drained from right & left pleural cavities. On analysis fluid was exudative, lymphocytic with ADA of 21 IU/l and showed atypical cells with high nucleus-cytoplasmic ratio, suspicious of malignant effusion. Pleural fluid was sent for cell block study.

2D ECHO revealed a large pericardial effusion and patient underwent pericardiocentesis. 700ml serosanguinous pericardial fluid was drained & analysis showed exudative lymphocytic effusion with ADA of 28 IU/l & cell block study of this fluid suggestive of Non-hodgkin lymphoma. Both pleural and pericardial fluid were negative for AFB and culture.

Cell block samples of pleural and pericardial fluid & biopsy sample of right supraclavicular lymphnodes came out to be positive for CD 20 on immunohistochemistry and a diagnosis of Diffuse Large B cell lymphoma (DLBCL) was done and patient was started with R-CHOP regimen containing Rituximab, Cyclophosphamide, Doxorubicin, Vincristine & Prednisolone.

OUTCOME:

Patient showed significant improvement in symptoms with R-CHOP regimen and no further fluid reaccumulation was seen. [Figure 3]



Figure 3: Chest X-ray PA view showing improvement in pleural effusion

DISCUSSION:

Non hodgkin lymphoma may present as pleuro-pericardial effusion. Though effusions are more common with T-cell lymphomas, DLBCL can also present as polyserositis.

In countries like India with higher burden of tuberculosis, even in younger patients, malignant etiology of pleural or pericardial effusion

needs to be ruled out using fluid cytological studies with IHC studies.

In resource poor settings with non availability of CT-guided FNAC/Biopsy facility, cell block studies of pleural/pericardial fluid with IHC studies often prove useful.

Other alternative options with better diagnostic yield in pleural lymphoma are pleuroscopy guided pleural biopsy & Video Assisted Thoracoscopic Surgery (VATS).

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