

Case Series of Challenging Diagnosis for Recurrent Pleural and Pericardial Effusion

Dr. Paladugu Swetha (MD)^{1*}, Dr. B.Nagaraj (MD), Dr. Sowmya Reddy.P (DTCD), Dr. Mounika Baredy (DNB)

¹Department of Pulmonary Medicine, Paarthiv Lung Care Centre Hyderabad, Telangana, India

²Interventional Pulmonologist, Paarthiv Lung Care Centre Hyderabad, Telangana, India

³Department of Pulmonary Medicine, Paarthiv Lung Care Centre Hyderabad, Telangana, India

⁴Department of General Medicine, Paarthiv Lung Care Centre Hyderabad, Telangana, India

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*Corresponding author: Dr Paladugu Swetha (MD)

Department of Pulmonary Medicine, Paarthiv Lung Care Centre Hyderabad, Telangana, India

Abstract

Case Report

Three cases presented to our hospital with recurrent pleural and pericardial effusion. Detailed history of present and past illnesses were recorded. Thorough clinical examination done. All routine blood investigations were carried out. Pleural fluid, pericardial fluid peritoneal fluid were sent for analysis which revealed high ADA, exudative lymphocytic predominance, negative for malignancy and the patients were started on antitubercular therapy, but still patient didn't show any response. thoroscopic biopsy showed chronic inflammation. PET CT whole body and bone marrow biopsy revealed lymphoma.

Keywords: Pleural effusion, Pericardial effusion, lymphocytic predominance, high ADA, lymphoma, chronic inflammation.

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INTRODUCTION

B cell lymphoma usually presents as a constellation of symptoms such as weight loss, fevers, loss of appetite and fatigue along with clinical and radiological evidence of lymphadenopathy. We present a series of 3 cases with recurrent pleural and pericardial effusion but with no significant lymphadenopathy in our cases.

CASE REPORT

Three cases with ages 80yrs, 57yrs, 30yrs presented to our hospital with cough, dyspnea on exertion, abdominal distension. All the three patients do not have any cardiac illnesses, no past tubercular history and non-diabetic, non-hypertensive. Detailed history of present and past illnesses was recorded. Thorough clinical examination done. All routine blood investigations were carried out.

Pleural fluid aspiration was done which revealed exudative effusion, high ADA levels with lymphocytic predominance, negative for malignancy, pericardial fluid sample sent for analysis also showed similar picture. Then two of the three patients are subjected to thoracoscopy. The thoroscopic biopsy revealed chronic inflammation.

PEC CT whole body was done for all the three patients did not show any metabolically active lesions.

Patients were started on antitubercular regimen (fixed dose regimen), even after one month of anti-tubercular therapy there was no improvement in effusion. Patients still continued to show recurrence in pleural and pericardial effusion.

Serum protein electrophoresis was done which showed M band. IHC and bone marrow biopsy revealed B cell lymphoma

DISCUSSION

Pleural effusion is a common finding in patients with non-Hodgkin lymphoma, with a reported incidence of 16% to 20%; among them 60% account for DLBC lymphoma. Pleural involvement could be unilateral or bilateral, with left side more than the right side. Lymphomatous pleural effusions are usually exudative. However, transudative effusion can occur from heart failure or venous compression. Chylothorax has also been documented due to lymphomatous invasion of the thoracic duct. Although the frequency of pleural effusion in 20-30% in non-Hodgkin lymphoma

and Hodgkin disease, the involvement of peritoneal and pericardial cavities is uncommon.

Not all of the serous effusions in patients with lymphoma or leukemia contain neoplastic cells, such effusions may be the result of inflammation of a serous membrane or occlusion of underlying vascular channels, or both.

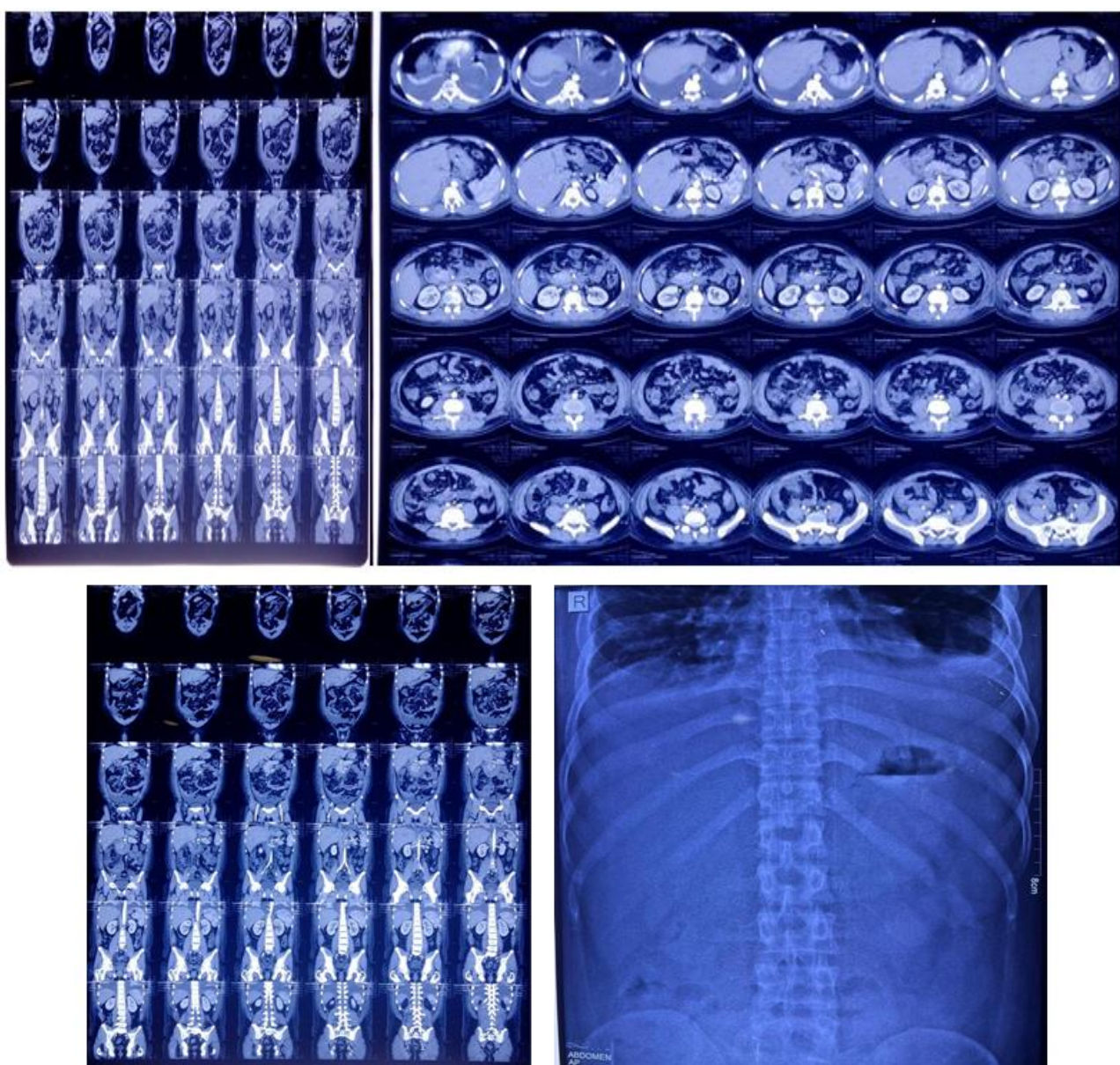
Flow cytology and immunophenotyping are shown to enhance the diagnostic yield, with the additional advantage of identification of subtypes of lymphoma

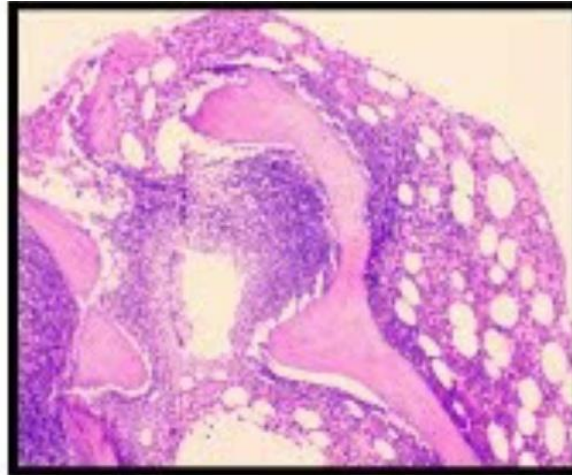
Pleural effusion may develop in NHL patients by three different mechanisms: 1) pleural infiltration by the lymphoma with shedding of cells into the pleural space, 2) lymphatic obstruction by lymphomatous

infiltration of pulmonary and mediastinal lymph nodes; and 3) obstruction of the thoracic duct, which results in chylothorax. Thoracentesis results in a positive cytologic diagnosis in 60-90% of patients with NHL. The diagnostic yield may be increased further by closed or visually directed pleural biopsy and the application of immunocytologic methods

CONCLUSION

All exudative lymphocyte rich pleural effusions are not tubercular effusions, and if the pleural effusions are recurrent and associated with pericardial and peritoneal fluid, then these require thorough investigation such as serum protein electrophoresis and bone marrow biopsy to rule out malignancy especially lymphoma.





REFERENCES

- Alexandrakis, M. G., Passam, F. H., Kyriakou, D. S., & Bouros, D. (2004). Pleural effusions in hematologic malignancies. *Chest*, *125*(4), 1546-1555.
- Berkman, N., Breuer, R., Kramer, M. R., & Polliack, A. (1996). Pulmonary involvement in lymphoma. *Leukemia & lymphoma*, *20*(3-4), 229-237.
- Choy, C. F., & Lee, S. (2016). Pleural lymphoma. *Journal of Bronchology & Interventional Pulmonology*, *23*(2), 146-148. DOI: 10.1097/LBR.0000000000000270
- Das, D. K., Gupta, S. K., Ayyagari, S., Bambery, P. K., Datta, B. N., & Datta, U. S. H. A. (1987). Pleural effusions in non-Hodgkin's lymphoma. A cytomorphologic, cytochemical and immunologic study. *Acta cytologica*, *31*(2), 119-124.
- Sharif, I., Arora, N., Regala, M., & Migliore, C. (2011). A Case of B-Cell Lymphoma in Pleural Fluid. *Chest*, *140*(4), 24A.
- Vega, F., Padula, A., Valbuena, J. R., Stancu, M., Jones, D., & Medeiros, L. J. (2006). Lymphomas involving the pleura: a clinicopathologic study of 34 cases diagnosed by pleural biopsy. *Archives of pathology & laboratory medicine*, *130*(10), 1497-1502.