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Case Study

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POSTERIOR MEDIASTINAL MASS DIAGNOSED AS DIFFUSE LARGE B CELL LYMPHOMA

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ABSTRACT

Mediastinum is a "Pandora's box" with many neoplastic and nonneoplastic lesions. Benign or malignant mediastinal masses can develop from structures that are normally located in the mediastinum or that pass through the mediastinum during development, as well as from metastases of malignancies that arise elsewhere in the body. Diagnosis of mediastinal lesions is a challenging task for all pulmonologists, radiologists, and pathologists as numerous benign and malignant conditions can present as a mass lesion at this very site. Lymphoma is one of the commonest tumor occurring in mediastinum that may be primary or secondary and can be of almost any histological type. Here we present a case of posterior mediastinal mass diagnosed as a case of diffuse large B cell lymphoma.

KEYWORDS: Mediastinum is a "Pandora's box" with many neoplastic and nonneoplastic lesions.

INTRODUCTION

The mediastinum is delimited proximally by the thoracic inlet, distally by the diaphragm, and laterally by the pleural cavities. It is arbitrarily divided into anterior, middle, and posterior compartments. It is a site having many vital anatomic structures. It is being a site for both nonneoplastic and neoplastic lesions, benign and malignant, primary and metastatic, many of them present as mediastinal masses. Lymphoma is one of the most common mediastinal tumors, which usually involves the anterior and/or middle mediastinum.[1,2] In the posterior mediastinum, neurogenic tumors and bronchogenic cysts predominate.[3,4] but lymphoma rarely occurs.[5,6] Diagnosis of mediastinal lesions can be very challenging. First, mediastinum is a difficult site to approach and most pathologists do not have enough experience in interpreting mediastinal lesions including lymphoma. Second, guided biopsy even though regarded as a sensitive and reliable diagnostic tool for mediastinal lesions,[7] can sometimes pose difficulty due to paucity of diagnostic material, limited architectural details, sclerosis, and marked crushing artefacts. In mediastinal tumors, the radiographic features and the location usually enable the correct diagnosis to be made.[8] Mediastinal lymphoma is uncommon and may be primary or secondary. Mediastinal lymph nodes are usually involved secondarily as a part of the systemic disease. Only 10% of lymphomas which involve the mediastinum are primary. Here we present a case of 55years old male presenting with a posterior mediastinal mass encasing descending aorta, diagnosed as a case of diffuse large B cell lymphoma.

CASE REPORT

A 55yr old male presented in our hospital with complaint of breathlessness and chest pain for 4 month. No history of cough or palpitations. Patient had history of pulmonary tuberculosis 5 years back for which he took antitubercular treatment and was declared cured. No history of diabetes mellitus of systemic hypertension. Patient was non smoker and non alcoholic. On examination patient was moderately built and poorly nourished, pallor was present, no clubbing, and no palpable lymph nodes. Spo2 was 90% and respiratory rate was 22/min. On auscultation decreased breath sound present bilaterally, and no added sounds were present. Lab investigation showed hemoglobin 9gm, TLC 8900,DLC 74,25,0,1 ESR 45mm. LFT and RFT within normal limit.

Xray chest (figure 1) shows homogenous opacity left hilar region showing hilum overlay sign. Heterogenous opacity with calcific spots in bilateral upper and middle zones s/o post tubercular fibrosis.

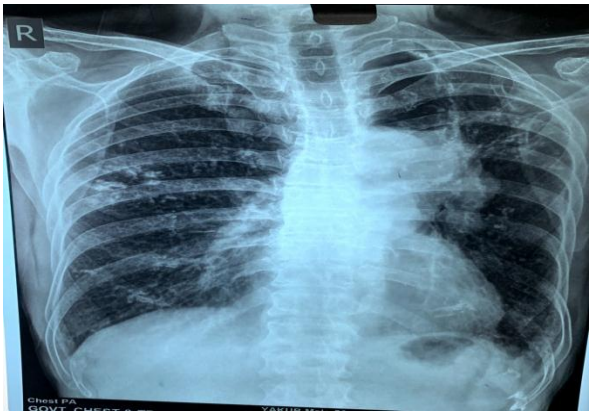

Fig. 1:

USG abdomen showed normal study

CECT chest (figure 2) shows a well defined, large, lobulated, heterogeneous mass lesion in the posterior mediastinal region left side. Lesion shows enhancement areas of non enhancing areas of necrosis. This lesion is completely encasing the descending aorta with partial encasement of pulmonary vessels and causing extrinsic compression of left mainstem bronchus and esophagus. Few calcific foci are seen in the periphery of lesion. Few enlarged lymphnodes with area of necrosis seen in left hilar/parahilar, paraesophageal region. Marked paraseptal emphysematous changes seen in bilateral lung fields, upper lobe > lower lobe.

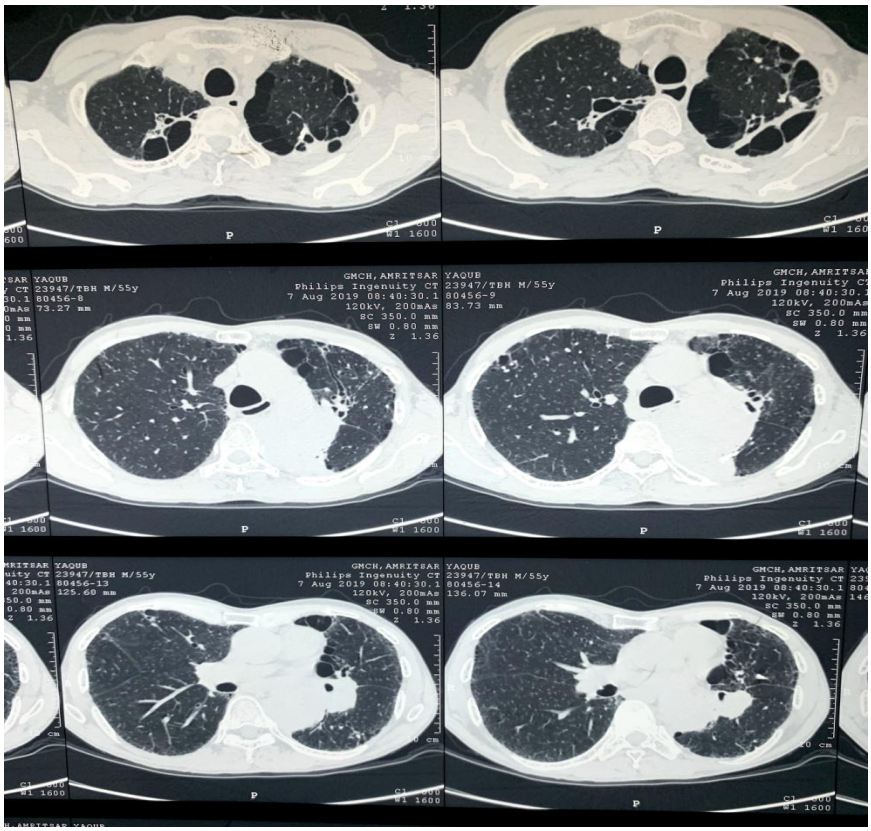

Fig. 2:

Multiple areas of fibrocalcific changes are seen bilaterally upper lobes. s/o pulmonary kochs sequele.

Ultrasonography guided FNAC of the mass showed monomorphic lymphoid population of cells consisting of large round to oval cells with high neuclear cytoplasmic ratio, nuclear pleomorphism and prominent nucleoli. Feature suggestive large cell lymphoma.

Patient was diagnosed as a case of posterior mediastinal large cell non Hodgkin lymphoma and was reffered to oncology department for chemotherapy and radiotherapy. Patient was treated with CHOP (cyclophosphamide, Adriamycin, vincristine, and prednisolone) regimen and local radiotherapy. Patient responded well to the treatment.

DISCUSSION

Mediastinum can play host to a wide spectrum of lesions including thymic epithelial lesions, germ cell tumors, sarcomas, and lymphoma. The diagnosis of lymphoma involves a multimodal approach and includes a meticulous histological examination followed by IHC evaluation. Other important parameters include clinical history and laboratory findings such as complete blood count and peripheral smear examination. Most of these cases typically present as “bulky” rapidly enlarging mediastinal mass invading the thoracic structures. The patients usually have a short clinical history and show signs and symptoms related to local invasion or compression as the disease progresses, extrathoracic organs are involved. Diffuse large B cell lymphoma is composed almost entirely of malignant cells with scant

connective tissue. Thus, malignant lymphoma can have various radiographic appearances: it may be heterogeneous or homogeneous on CT and MRI signals.

CONCLUSION

In summary, we reported a case of diffuse large B cell lymphoma in the posterior mediastinum, an extremely rare condition. Early diagnosis and treatment is an important aspect in management of lymphoma.

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