Case Report

Case report of a rare case of Non-hodgkin Lymphoma presenting as sternal mass

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Abstract

Primary or metastatic tumors of the chest wall constitute 5% of all thoracic tumors and lymphoma comprises about 2% of all chest wall tumors. We report a case of a 23year old male presenting with anterior chest wall mass for the past 6 months which was slowly growing in size. There was no other symptoms of respiratory difficulty, cough, and hemoptysis. HRCT chest revealed soft tissue attenuated lesion in mid chest wall and infiltration to the anterior mediastinum with erosion of sternum and the 8th rib. FNAC of the site revealed Non-Hodgkin Lymphoma. Diagnosis is based on morphological features, FNAC, cell block.

Keywords: Chest wall mass, Lymphoma, FNAC

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Introduction

The Non-Hodgkin lymphomas are a large group of heterogeneous clonal lymphoid neoplasms. Their clinical presentation and natural history is much more variable than Hodgkin Lymphoma. NHL usually originates in the nodal tissues but its predilection for extranodal tissue is higher than Hodgkin Lymphoma. NHL varies from some being very indolent and the others being very aggressive [1]. 5% of all thoracic tumors are primary or metastatic tumors and lymphoma comprises about 2% of all chest wall tumors [2, 3]. Chest wall tumors are rare. Chest wall destruction due to an anterior mediastinal mass, or a chest wall tumor associated with mediastinal lymph node enlargement, could be suspicious of thoracic lymphoma. Poorly differentiated tumors have more bone involvement than well differentiated one. Mediastinal adenopathy occurs frequently in Hodgkin's disease but is unusual in non-Hodgkin's lymphoma, in which endobronchial and diffuse interstitial involvement occur. Isolated chest wall masses are distinctly uncommon and are usually manifestation of large cell Non-Hodgkin's lymphoma.

Case Report

A 23 years old male presented with anterior chest wall mass for the past 6 months which was slowly growing in size. There was no other symptoms of respiratory difficulty, cough, and hemoptysis. He complained of fever 10 days back. His family history and history of past illness was insignificant. On general physical examination the patient was average built, ill looking. On local examination a mass of size 3.5×2.5 cm was present in the mid anterior chest wall over the manubrium sterni. It was fixed, tender, firm and locally inflamed. There was no hepatosplenomegaly, no palpable lymph nodes present, and no icterus. His respiratory system examination, GIT system examination, Cardiovascular system was normal. His blood count showed mild leukocytosis (12×10^9/L), was mild anemic (12.6g/dl), ESR was well within the range, BP was 130/88 mm of Hg, Pulse rate 88/min, Mild fever was present. Routine urine examination revealed normal values of protein, sugar, creatine, uric acid, and

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bilirubin. HRCT chest revealed soft tissue attenuated lesion in mid chest wall and infiltration to the anterior mediastinum with erosion of sternum and the 8th rib.USG of abdomen, CT pelvis was normal. FNAC of the site revealed Non-Hodgkin Lymphoma. Cell block from the site was taken which confirmed the diagnosis of Non-Hodgkin Lymphoma. IHC was done on the cell block which revealed the diagnosis of NHL with positivity for CD45, CD20. The patient was sent to B. Barooh Cancer Institute (Higher Referral Centre) for further management as surgical excision was considered high risk here.

Figure 1: Swelling over the chest of the patient.

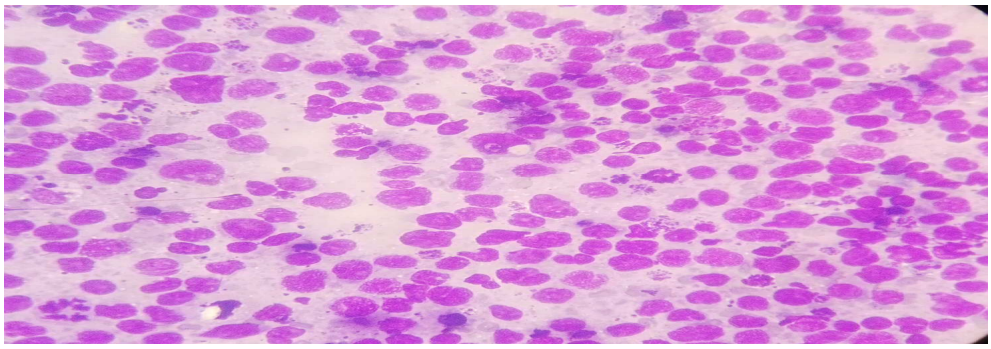

Figure 2: Low power (10X) field of FNAC showing monomorphic population of malignant lymphoid cells in a background of lymphoglandular bodies

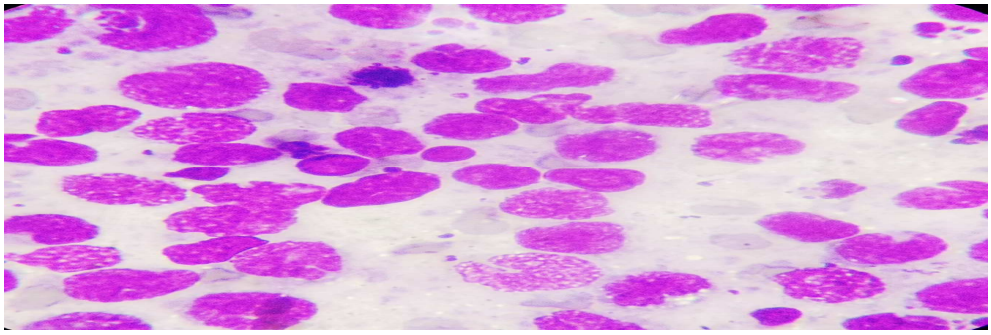

Figure 3: High power (40X) view of FNAC showing monomorphic population of malignant lymphoid cells with some showing prominent nucleoli.

Discussion

Lymphoma involves the chest wall in 10-15% of patients. It constitutes 3-5% of primary malignant bone tumours. The commonest being the Non-Hodgkin Lymphoma (94%) [4]. Only few cases of Non-Hodgkin lymphoma of the sternum have been reported in the literature till now. Most of the cases of anterior chest wall lymphoma reported have either been associated with metastasis or direct invasion from the anterior mediastinum. Only a few have been reported as primary in the anterior chest wall. Initially FNAC was done which showed the picture of Non-Hodgkin lymphoma. Diagnosis was confirmed by cell block preparation and subsequent IHC. Although diagnostic efficacy of FNAC for

determination of primary chest wall tumor has not yet being determined [5, 6,7,8] but with adequate aspirate and use of another modalities cell blocking and IHC help to come to a conclusion of NHL. Many authors suggested that the tumours with Primary chest wall mass should have at least excision biopsy [9-13]. Our patient was send for further management to a higher and well equipped institute. Although lymphoma patients are usually treated with local irradiation and chemotherapy, but resection of chest wall lymphoma as primary site is still undetermined. Studies have found that patients with chest wall invasion has poor local control and survival [14].

Conclusion

Sternal lymphoma presenting as chest wall mass is a rare entity comprising of only 2% of the chest wall tumours. Absence of pulmonary symptoms with only mild chest discomfort suggests the confinement of the tumor to the chest wall and the adjoining tissue. Diagnostic efficacy of FNAC was accurate with the adjunct of cell block and IHC. Patient was later sent for final diagnosis and treatment to higher referral Centre for further management.

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