Case Report

An Interesting Case Report of Pancytopenia in a HIV Seropositive Patient - Primary Bone Marrow Non Hodgkins Lymphoma Large Cell Type

Anuj Nehete[1], Shasthara P[1], Anurag Lavekar[2], Monal Chaudhari[3]

ABSTRACT

Secondary involvement of bone marrow is relatively common clinical entity in non-Hodgkin's lymphoma, however primary bone marrow non-Hodgkin's lymphoma is a rare. Here we present a 38 year old female patient who is HIV seropisitive presented with pancytopenia. On evaluation found to have primary bone marrow Non-Hodgkin's lymphoma of large cell type.

Key words : Pancytopenia, Primary bone marrow diffuse large B-cell lymphomas ,AIDS.

Introduction :

Kaposi sarcoma, aggressive B-cell non-Hodgkin lymphoma, and cervical cancer constitute AIDS defining malignancies[1]. With increase in number of AIDS patients, there has been significant increase in the number of cases of non-Hodgkin's lymphoma, approximately 3% of HIV positive patients develop lymphoma in the course of disease[2]. Diffuse large B-cell lymohoma accounts for 40% of cases of NHL[3]. Despite this, exact prevalence of primary bone marrow lymphoma presenting as pancytopenia is not known.

Case Report :

38 year old female patient diagnosed with HIV infection on HAART (regimen : AZT + 3TC + NVP). Later on her ART regimen was changed to TDF + 3TC + NVP due to anaemia and is on this regimen since 1 year. She presented with easy fatiguability, generalised weakeness of 3 months duration. She had pallor on examination and there was no lymphadenopathy. Laboratory findings revealed - Hb - 3.9gm/dl, Total count 1800 cells / cumm (57% neutrophils, 40% lymphocytes, 2% monocytes, 1% eosinophils, 0% basophils), 10,000 / cumm platelets.

[1]Senior Resident, Neurology,
[2]Senior Resident, Gastroenterology and Hepatology, JSS Medical College and Hospital, Mysore
[3]Resident Doctor, Dept. of Pathology, JNMC, Sawangi, Wardha

Address for Correspondence -
Dr. Anuj Nehete
E-mail : anujneheten@gmail.com
Received on 25th September 2017 Accepted on 10th December 2017

Peripheral smear revealed pancytopenia with normocytic RBCs and modearte anisocytosis. Vitamin B12 and Folic acid levels normal.

Ultrasound abdomen was normal with no evidence of hepatosplenomegaly. Chest x-ray, CT scan abdomen and thorax were normal. For the evaluation of pancytopenia bone marrow aspiration and biopsy was done.

Bone marrow aspiration revealed hypercellular marrow with reduced erythropoiesis, myelopoiesis, megakaryopoiesis. Lymphopoiesis was markedly increased with monotonous large lymphoid cells with increased nuclear cytoplasmic ratio with prominenet nucleoli comprising 70% of the marrow cells. Plasma cells-within normal limits.

Bone marrow biopsy was reported to be hypercellular marrow with presence of tumor cells, round monotonous cells with large nucleus and prominent vesicular nucleoli; suggestive of NON HODGKIN'S LYMPHOMA - LARGE CELL TYPE.

Immunohistochemistry showed The tumour cells positive for CD45, CD20,CD79a, and PAX5 (B-cell markers) and negative for CD3 and CD5 (T-cell markers),suggesting NHL large cell type.She was managed with R-CHOP regimen and showed normalisation of counts after 6 cycles.

Discussion :

Primary bone lymphomas are rare, even though secondary involvement of the bone marrow is a common event in systemic lymphomas. Most primary bone lymphomas are Primary bone marrow

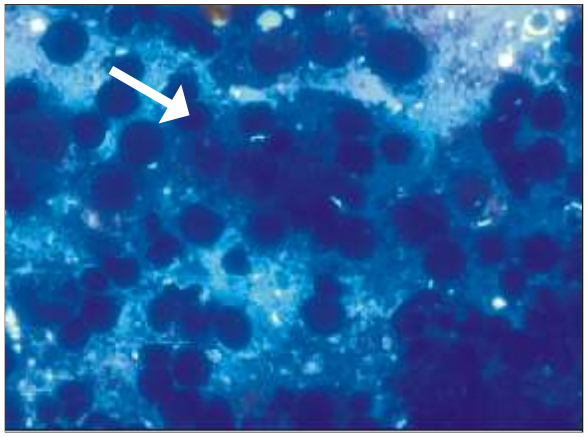
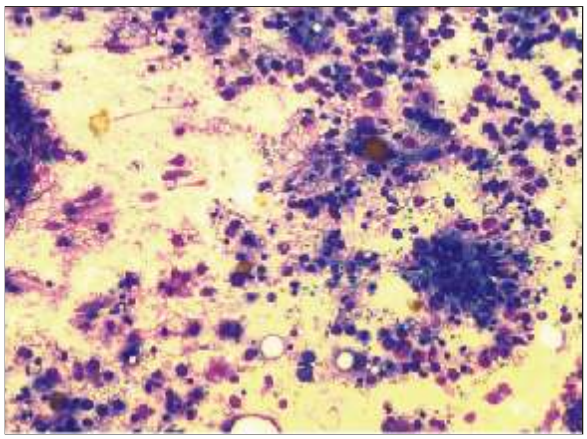


Fig. 1 : **Histologic features of iliac bone marrow. Lymphoid Cells are diffusely proliferated (Haematoxylin and eosin Stain) suggestive of large cell variety of NHL.**



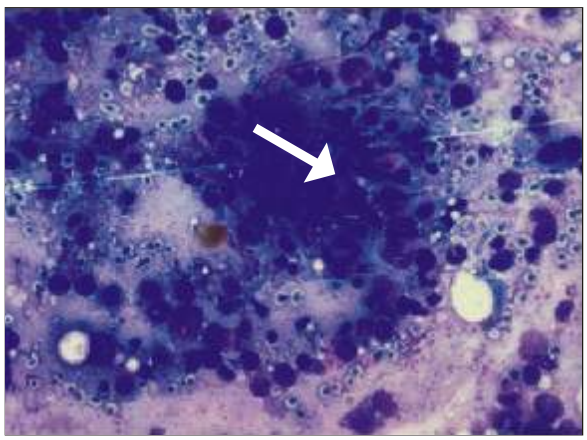


Fig. 1 : **Immunohistochemistry showed the tumour cells positive for CD45, Cd20, CD79a, and PAX5 (B-cell markers) and negative for CD3 and Cd5 (T-cell markers), suggesting NHL large cell type. She was managed with R-CHOP regimen and showed normalisation of counts after 6 cycles**

diffuse large B-cell lymphomas (PBDLBCLs). The PBDLBCL affects the middle-aged to elderly population, with a predominance in men (1.5:1)[4] According to the World Health Organization classification of tumours of soft tissue and bone, the criteria for a diagnosis of PBL are a single skeletal tumour without regional lymph node involvement, and multiple bone lesions without visceral or lymph node involvement[3]. Primary bone lymphomas account for less than 1% of all malignant lymphomas, 7% of malignant bone tumours, and 4% to 5% of extra nodal lymphomas.[5,6]

The most common presentation of patients with PBDLBCL is bone pain, and less-frequent presentations include a palpable mass and bone fracture. Symptoms, such as paraplegia can occur. Compared with systemic lymphomas, the systemic or B symptoms occur less frequently with PBDLBCL. Rarely, symptoms caused by hypercalcemia (eg, lethargy, constipation, and somnolence) may be present[7]. Since Primary bone marrow lymphoma (PBML) is a rare entity, real boundaries and clinic-biological significance are not well defined[8]. Thus far, only few cases have been reported in the literature[8-10].

In this case, age of presentation is much younger (38 years) than median age of presentation. (48 years)[4]. Male preponderance is seen in NHL in contrast to present case. With respect to presentation, no bony pain here which is generally presenting feature in primary bone marrow lymphoma and pancytopenia as the sole presenting manifestation.

Conclusion :

Although NHL is increasingly being diagnosed in HIV seropsitive patient, here we have reported a rare case of primary bone marrow non hodgkins lymphoma presenting as pancytopenia in a HIV seropositive patient with no evidence of extra medullary involvement.

References :

1. Shiels MS, Pfeiffer RM, Hall HL et al. Proportions of Kaposi's sarcoma, selected non-Hodgkinslymphomas,and cervical cancer in the United states occurring in persons with AIDS,1980-2007. JAMA 2011;3405:1450.
2. Patil K, Mahima VG, Srikanth HS. Extranodal non-Hodgkin's lymphoma of the gingiva in a HIV seropositive patient. Indian journal of sexually transmitted diseases and AIDS 2010;31:112-115.

3. Lossos IS. Molecular pathogenesis of diffuse large B-cell lymphoma. Journal of Clinical Oncology 2005;23:6351-7. doi:10.1200/JCO.2005.05.012.
4. Bhagavathi S and Fu K. Primary Bone Lymphoma. Arch Pathol Lab Med. 2009;133:1868-1871.
5. Unni KK, Hogendoorn PCW. Malignant lymphoma. In : Fletcher CDM, Unni KK, Mertens F. eds. Pathology and Genetics of Tumours of Soft Tissue and Bone. Lyon, France : IARC Press; 2002. World Health Organization Classification of Tumours.
6. Desai S, Jambhekar NA, Soman CS, Advani SH. Primary lymphoma of bone:a clinicopathologic study of 25 cases reported over 10 years. J SurgOncol. 1991;46(4):265-269.
7. Martinez A, Primary bone marrow lymphoma: an uncommon extranodal presentation of aggressive non-hodgkin lymphomas : Am J SurgPathol. 2012 Feb;36(2):296-304. doi: 10.1097/PAS.0b013e31823ea106.
8. Hassan K, Nagi AH, Hayee A. Non-Hodgkin's lymphoma of bone marrowan unusual presentation. JPMA. 1982;32:230-236. [PubMed].
9. Barton JC, Conrad ME, Vogler LB, Parmley RT. Isolated marrow lymphoma : an entity of possible T-cell derivation. Cancer. 1980;46:1767-1774. doi: 10.1002/1097-0142 (19801015) 46:8<1767::AID-CNCR2820460812>3.0.CO;2-5. [PubMed] .
10. Newton R, Ferlay J, Beral V, Devesa SS (1997) The epidemiology of non-Hodgkin's lymphoma: comparison of nodal and extra-nodal sites. Int J Cancer 17:923-930.