Case Report

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Presentation of multiple myeloma with absolute lymphocytosis? Coexistence of CLL & multiple myeloma

Abstract

The presence of a chronic lymphocytic leukemia and multiple myeloma in a single patient is very rare. Multiple myeloma is a plasma cell disorder, whereas CLL (Chronic Lymphocytic Leukemia) is the mature B-cell lymphocytes disorder. We described a 50 year-old man who presented with fatigue and lethargy of 1 month duration. He was found to be anemic, with lymphocytosis, decreased renal function, high calcium level, and conspicuous M-Spike on serum electrophoresis. Furthermore, peripheral smear & bone marrow biopsy demonstrated two distinct hematological malignancies on morphological basis.

Keywords: chronic lymphocytic leukemia, coexistent, multiple myeloma

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Introduction

The presence of chronic lymphocytic leukemia and multiple myeloma in a single patient is very rare. Fermand et al.[1] showed that these disorders came from the same clone by the identification of Ig idiotypes.

CLL is the most commonly diagnose in older age group, usually in the seventh decade of life. There is a male predominance. The clinical course is asymptomatic in most patients. Multiple myeloma is a plasma cell malignancy which affects the mature B-cell lymphocytes.

Case description

A 50-year-old male patient was admitted to hospital with low hemoglobin and increased lymphocyte count on complete blood counts. Physical examination findings include pallor, mild splenomegaly and lymphadenopathy. Complete blood counts revealed hemoglobin: 8.7g/dl. MCV:85 fl, MCH: 26.3pg, WBCs: 57.3 x10^3/µl, Neutrophil:17%, Lymphocyte:62%, Eosinophil:14%, Platelet: 219. Previous report showed hypercalcemia. Oncologist suspecting a case of lymphoma and advised patient to do bone marrow biopsy and immunohistochemistry.

Peripheral smear showed mature looking lymphocytes and Eosinophilia (Figure 1). Bone marrow aspirate smear showed prominent plasma cells (Figure 2). Bone marrow trephine showed >80% plasma cell infiltration.

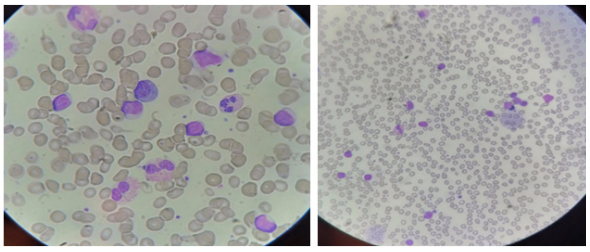

Figure 1 Lymphocytosis and eosinophilia on peripheral smear.

Bone marrow smear showed increased of plasma cells showing plasma cell infiltration with

CD38, CD138 & Kappa stain (Figure 3–5).

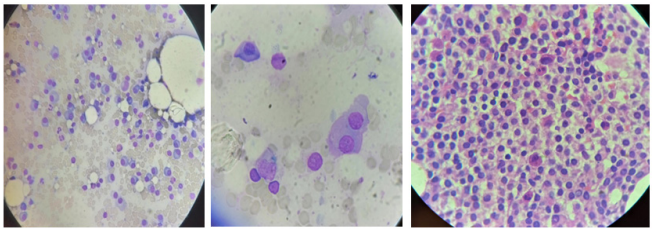

Figure 2 Plasma cells on bone marrow aspirate and trephine biopsy.

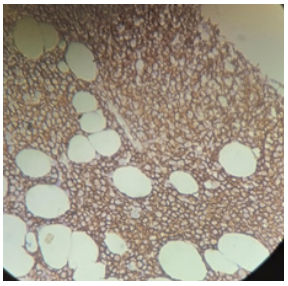

Figure 3 CD38 (Strong positive)

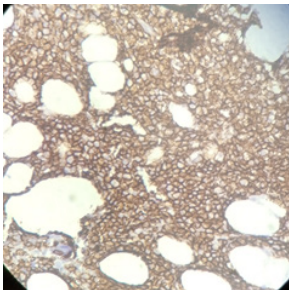

Figure 4 CD138 (Strong positive)

Discussion

Multiple myeloma and chronic lymphocytic leukaemia both arise from B cell, most common in older adult population.[1] Both diseases

are malignant in nature but, the simultaneously occurrence of Multiple myeloma and Chronic lymphocytic leukaemia in one patient is rare.

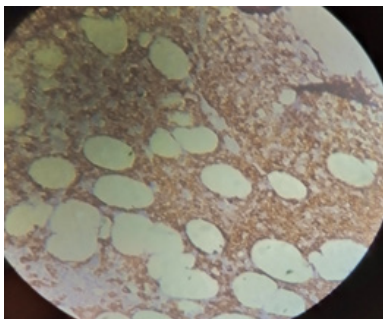

Figure 5 Kappa (Positive in plasma cells)

Several questions have been raised in such cases as whether the B-cell chronic lymphocytic leukemia and multiple myeloma arise as a single clone or two separate clones presenting concomitantly previous studies have used various modalities, either FISH[2–5] or immunoglobulin gene rearrangement analysis[6–8] to investigate into this. Fermand et al.[1] study by using the cells of a patient who, similar to our patient findings, was diagnosed chronic lymphocytic leukaemia initially, but after 10 years he diagnosed as a case of Multiple myeloma. Our patient smear showing mature lymphocytes, but marrow aspirate showed 80% plasma cells, which is an unusual presentation of Multiple myeloma. We need extensive workup for our patient to exclude the possibility of chronic lymphocytic leukaemia by doing flow cytometry on peripheral blood. Also need to order the cytogenetic analysis to see the any abnormal translocation which is associated with both these disorder. This will helps to reach to conclusive diagnosis. Both cell types differentiate from the same multipotent stem cells, the physician/oncologist should evaluate these patients carefully not to misdiagnosed such patients.

Conclusion

In our case report, our patients have the clinical and laboratory features of chronic lymphocytic leukaemia and multiple myeloma. Physician and Hematologist should be aware about these rare cases of simultaneously of these two B cell malignancies, if the significant clinical and laboratory findings are positive. We should do the complete workup of multiple myeloma such as immunofixation and skeletal survey. We need further investigations such as flow cytometry to see the clonality of these peripheral lymphocytes. Also we need cytogenetic/molecular genetics analysis for the prognosis of this case.

Acknowledgments

None.

Conflicts of interest

The authors declare no conflicts of interest.

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