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TITLE :

Evaluation of Flowcytometry findings in the diagnosis of Chronic Lymphocytic Leukaemia and its variants

BACKGROUND :

Flowcytometry has known to be a method in differential diagnosis of chronic lymphoproliferative disorders. Subclassification of B cell Non Hodgkins Lymphomas is based on the classical immunophenotype proven by Flowcytometry on blood, bone marrow and lymph node samples.

AIM :

Evaluation of role of Immunophenotype by Flowcytometry in cases with lymphocytic leucocytosis for a diagnosis of Chronic Lymphocytic Leukaemia and its variants.

MATERIALS AND METHODS :

Retrospective review of cases 2020 to 2024. The samples (blood, bone marrow) were run on BD FACSCanto flowcytometer with panel of fluorescent antibodies including-CD45, CD20, CD23, CD10,CD79b,CD19,CD200,CD43,CD38,CD25,CD56,CD7,CD138,CD103,CD34,KAP PA and LAMDA in 3 tubes .

RESULTS :

A total of 56 cases were included in the study.

Mean Age at presentation was 65years (30-95years)

Male:Female ratio was 1:1.5

Mean total count was 66,490 cells/ μ L (4,000 – 6,50,000 cells/ μ L)

Mean Absolute lymphocyte count 52,507 cells/ μ L (2,000 – 5,80,000 cells/ μ L)

Flowcytometry was done on 13 blood samples and 43 bone marrow samples.

Immunophenotype consistent with Classical Chronic lymphocytic leukaemia (Positive for CD23+,CD200+,CD20,CD19+,CD5+) were seen in 46 cases (82%).

Atypical chronic lymphocytic leukaemia immunophenotype with negative CD23 were seen in 10 cases (18%). These cases were followed up for a period of 0.5-4 years. On follow up they had persistent lymphocytic leucocytosis in 4 cases, 2 case were loss to follow up and 4 cases showed normalisation of WBC count.

CONCLUSION :

In the context of chronic B Non Hodgkins Lymphoma, clinical presentation, complete blood counts and Immunophenotype by flowcytometry plays an important role in the differential diagnosis of Chronic Lymphocytic Leukaemia and its variants.