AUTOIMMUNE CYTOPENIAS IN PATIENTS WITH CHRONIC LYMPHOCYTIC LEUKEMIA: SINGLE CENTER EXPERIENCE

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Objective.Autoimmune cytopenias, particularly autoimmune hemolytic anemia (AIHA) and immune thrombocytopenia (ITP), complicate up to 25% of chronic lymphocytic leukemia (CLL) patients. Their occurrence correlates with a more aggressive disease. AIHA and ITP are more frequently found in patients with unfavorable biological risk factors for CLL. B lymphocytes at CLL are responsible of pathogenic mechanisms, involving aberrant antigen presentation and cytokine production. The aim of this study was evaluation of autoimmune cytopenias in chronic lymphocytic leukemia patients from Republic of North Macedonia in correlation with genetic structure of pathologic B lymphocyte.

Methodology. This is a retrospective study of patients with CLL, diagnosed and followed in the period between January 2012 and January 2022. Individual data from 100 treatment naïve CLL patients were analyzed, and mutational status and configuration of IGHV-IGHD-IGHJ rearrangements and genetics were analyzed using reverse transcriptase– polymerase chain reaction (RT-PCR) and sequencing methodology at the center for bimolecular pharmaceutical analyses, faculty of pharmacy, Skopje, Republic of North Macedonia.

Results. Our evaluation have shown that 10% of CLL patients had AIHA and 4% had ITP. Most of the patients were male (90%) with Binet B stage (60%) and unmuteted IGHV genes(70%). The most frequently expressed IGHV subgroup was IGHV1-69 (71%), followed by IGHV3-13 and IGHV4-4 (14%). The genetic results presented unfavorable cytogenetics with 11q deletions and NOTHCH mutation.

Conclusion. The results of our study are consistent with published studies with specific molecular signature.