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Correlation between expressions of IL-3, IL-6 and IL-11 genes and chronic myeloid leukemiaSerhat Seyhan¹, Alper Han Cebi², Mevlit Ikbali², Mustafa Yilmaz² and Mehmet Sonmez²¹Bakirkoy Dr. Sadi Konuk Training and Research Hospital, Turkey²Karadeniz Technical University, Turkey

Statement of the Problem: Chronic myeloid leukemia (CML) is a hematopoietic malignancy originating from transformation of a hematopoietic stem cell. BCR-ABL gene that resulted from a translocation between chromosomes 9 and 22 is detected in the majority of CML patients. IL-3, IL-6 and IL-11 are cytokines that affects the development of myeloid cells.

Aim: The aim of this study was to evaluate the relationship between IL-3, IL-6 and IL-11 and CML development.

Methodology & Theoretical Orientation: This study was performed using peripheral blood from 33 patients followed in our hematology clinic at Karadeniz Technical University Medical School obtained with a diagnosis of CML. We get peripheral blood from 34 healthy people that examined in Karadeniz Technical University Medical School clinics. RNA was isolated from peripheral blood and cDNA is synthesized. Then cDNA expression analysis was performed.

Findings: IL-3, IL-6 and IL-11 gene expressions significantly decreased in CML patients with high expression of BCR-ABL gene compared to healthy individuals. After major molecular response IL-3, IL-6 and IL-11 gene expressions increased compared with the initial diagnosis of CML.

Conclusion & Significance: According to the our results; increase of BCR-ABL gene expression in CML patients may provide the proliferation of neoplastic cells without effective IL-3, IL-6 and IL-11 gene expressions in normal hematopoiesis. Inverse relationship in our CML patients is available between BCR-ABL expression and IL-3, IL-6 and IL-11 expressions. Studies for IL-3, IL-6 and IL-11 gene expressions are needed to determine the relationship with BCR-ABL expression level and to be used follow up of patients with CML.

Biography

Serhat Seyhan has graduated from Cumhuriyet University, Faculty of Medicine in 2011. He has completed his PhD in Medical Genetic at Karadeniz Technical University in 2016. He is currently working as a Medical Geneticist in Istanbul, Bakirkoy Dr. Sadi Konuk Training and Research Hospital, Turkey.

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