SUMMERY AND CONCLUSION

Modern therapy for AML is based on the principle of risk stratification. Previously, universally accepted stratified classification included age, WBC count at diagnosis and response to therapy and later on other predictive factors are included. One of the most important laboratory features used nowadays to accurately risk stratify patients is the presence of chromosomal translocation within the leukemic blasts.

Molecular detection of chromosomal translocations depends mainly on PCR based techniques due to its higher specifity and sensitivity over conventional cytogenetics. However, individual detection of each chromosomal aberration is time consuming, costly, requires large patient sample and increases the risk of contamination.

This study aimed to establish simple one step multiplex RT-PCR assay for detection of three prognostically significant translocations in AML: t(8;21) with ***AML1-ETO*** fusion transcript, t(15;17) with ***PML-RARα*** fusion and Inv (16) with ***CBFβ-MYH11*** fusion.

Peripheral blood sample and bone marrow aspirate were obtained from 40 de novo cases with AML before starting induction therapy.

Among the 40 analyzed cases, 12.5% were found to be positive for t(8;21) with AML1-ETO fusion transcript. The finding confirmed that t(8;21) positive AML is characterized by male predominance, lower Hb & TLC count at diagnosis & a favorable prognosis.

t(15;17) with PML-RARα fusion transcripts was detected in 10% of cases. The finding confirmed that t(15;17) positive AML is characterized by male predominance, favorable prognostic outcome compared to those without the translocation. Moreover Hb, TLC and blast percentages did