LETTER to the EDITOR

Overall Survival in Acute Myeloid Leukaemia Patients with and without Internal Tandem Duplication

Asian Pac J Cancer Prev, **16 (1)**, 393

Dear Editor

Acute myeloid leukaemia is a disease of uncontrolled growth of myeloid cells in bone marrow and has clearly shown its heterogenic nature(Su et al., 2013; Ahmad et al., 2014). "More than one third patients of AML have normal karyotype and possess standard risk group" (Kotaridis et al., 2001). Significant proportion of AML cases having normal karyotype are characterized by the presence of prognostic markers such as FLT3-ITD (internal tandem duplication) and TKD (point mutation), NPM1 and CEBPA (Renneville et al., 2014; Awan et al., 2012). FLT3 is normally expressed by haematopoietic progenitor/stem cells (HPSCs) where it plays an important role in survival and proliferation of stem cells. The association of FLT3/ITD mutation with poor prognosis is well documented (Nakao et al., 1996; Mukda et al., 2011) and is "significantly related to high no of peripheral WBC counts and leukemia cells counts and are directly associated with an increased relapse risk and inferior overall survival" (Shahab et al., 2012; Ishfaq et al., 2012).

In the present study we have compared overall survival in ITD positive and ITD negative AML patients. Here a criterion of overall survival was the duration of time patients lived from the day of diagnosis to the day of death. We studied the role of FLT3-ITD in small cohort of 27 patients and their association with overall survival. We used polymerase chain reaction for the amplification of the FLT3-ITD gene. After amplification agarose gel electrophoresis was performed and data was analysed with SPSS version20. We have not compared any other haematological parameters, regarding this study, except the overall survival in AML patients on the basis of presence and absence of FLT3-ITD mutation. Independent samples t-test was performed at 0.05 significance level. In statistical test, critical value (2.212<2.306) and p-value (0.056>0.05) both resulted in insignificant difference between the overall survival of AML patients with ITD and without ITD mutation. Although ITD mutations are poor prognostic marker in AML and directly associated with early relapse and short survival but there was no significant difference found in overall survival between ITD positive and ITD negative patients in this study.

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Sadaf Shahab[1]*, Zeeshanul Qadar[2], Muhammad Nadeem[2], Danish Zahid[1], Saqib Ansari[2], Tasneem Farzana[2], Mehwesh Taj[2], Munira Borhany[2], Nuzhat Ahmed[1,2], Tahir S Shamsi[2]

[1]Department of Molecular Genetics, [2]Department of Hematology, NIBD Postgraduate Institute of Life Sciences Karachi, Pakistan
**For correspondence: sadaf_shahab99@yahoo.com*