The Relationship between Immunological Markers, Disease Free Survival and Overall Survival in Acute Myeloid Leukemia in North-West of Iran

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Background

Acute myeloid leukemia (AML) is a clonal disease characterized by heterogeneous involvement of hematopoietic bone marrow cell populations. In AML patients, a variety of clinical and biologic parameters, including surface markers, have been examined for potential value in predicting treatment response and survival.

Objective

By checking the myeloid, lymphoid and nonspecific markers on the blasts, we tested the hypothesis which the disease free survival and overall survival in AML could correlate with the expression of them.

Method

The immunophenotyping was performed by multiparameter flow cytometry (FACS Calibur flow cytometer, Becton Dickinson). The prognostic significance of 16 antigens is taken separately in 207 adult AML patients. We applied statistical software of SPSS-13. In this analysis, we compared DFS and OS with each of the surface markers existence.

Results

We could just find significant correlation in 4 of these markers. Those patients possessed CD3+ blasts, had better overall survival (P=0.027). In contrast in CD33+ patients, this parameter was worse (P=0.043). Disease free survival in CD15+ patients was higher (P=0.036) but in CD34+ cases, it was significantly lower (P=0.001).

Conclusion

This study suggests that an independent role of surface markers in the prognosis and response to treatment in AML is a fact which should be paid much more attention and applied it in the management of these patients.

Keywords:

1.Acute Myeloid Leukemia
2.Disease Free Survival
3.Overall Survival
4.Surface Markers