

Immunophenotyping Assay of Acute Lymphoblastic Leukemia in Adults and it's Relation to Induction Therapy

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Introduction

Acute Lymphoblastic Leukemia ALL has a high rate of mortality in adults and the cure rate of these patients is merely 25-40 %. In order to get suitable treatment of the disease, we must use complementary methods such as IHC and Immunophenotyping for diagnose of ALL subtypes and differentiate from other leukemia.

Purpose

The main goal of this study was trying to classification of ALL subtypes: pre B ALL, B-cell ALL, Pre T-cell ALL, mature T-cell ALL by Flowcytometry.

Methods

We have used ALL Immunophenotyping in order to have a more accurate diagnosis of the subtypes of ALL. For this reason, 132 patients were considered in Shahid Ghazi Hospital have been under study from 2000 to 2006.

Besides, we have assessed the achievement of complete remission according to the above-mentioned subtypes.

Results

In this study, 83 out of 132 patients were examined Flowcytometry.

15.5% of them was regarded to be pro B-cell ALL and 52% were to be pre B-cell and mature B-cell ALL. 32% of the patients were to be mature T-cell ALL.

The differentiation of Pre T-cell ALL from mature T-cell ALL was ton possible, based on the markers were examined. 64% of the patients who were B-cell subtype achieved the complete remission after induction therapy, while these percentages for T-cell ALL is 44%.

Conclusion

As a result, this difference is statistically significant (P- Value= 0.86).

The duration of remission and survival in B-cell ALL was longer than T-cell ALL but this difference is not statistically significant. (P-Value>0.1)

Key Word

ALL (Acute Lymphoblastic leukemia), Immunophenotyping, Induction therapy, Remission.