

Abstract

Background: Age, presenting total leukocyte counts, steroid response and cytogenetics are known prognostic markers for acute lymphoblastic leukemia (ALL). Measurable Residual Disease (MRD) (or minimal residual disease) after induction chemotherapy is well accepted prognostic markers in childhood leukemia. In resource constrained countries evaluation of MRD either not widely available or increases the cost of treatment.

Methods: This is a retrospective analysis of children with acute lymphoblastic leukemia, who were treated with non-MRD based protocol. The correlation was tested between known risk factors and risk groups with end of induction MRD.

Results: Day15 bone marrow morphology and risk groups were significantly associated with MRD level. All standard risk patients except one had MRD negative. statistically significant number of intermediate risk group and half of high-risk group had positive MRD.

Conclusion: In resource constrained settings, MRD can be avoided in standard risk, but cannot be avoided in higher risk groups for optimization of therapy.