

Measurable residual disease in children with acute lymphoblastic leukemia treated with non-MRD based protocol, what we are missing, experience from tertiary care centre in central India

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Abstract

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. We retrospectively analyzed data of patients, treated with non-MRD based protocol, to see correlation of known risk factors and risk groups with end of induction MRD. Children with acute lymphoblastic leukemia treated with IC-BFM 2002 (Non-MRD based protocol) and end of the induction MRD was done. Day15 bone marrow morphology and risk groups were significantly associated with MRD level. All standard risk patients except one had MRD negative. Significant number of intermediate risk group and high risk group had positive MRD. In resource constrained settings, MRD can be avoided in standard risk, but cannot be avoided in higher risk group for optimization of therapy.

Title: Measurable residual disease in children with acute lymphoblastic leukemia treated with non-MRD based protocol, what we are missing? : experience from tertiary care centre in central India

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Abbreviations key

MRD	Measurable residual disease or minimal residual disease
ALL	Acute lymphoblastic leukemia
NCI	National Cancer Institute
BFM	Berlin Frankfurt Munster
SR	Standard risk
PGR	Prednisolone good response
IR	Intermediate risk
HR	High risk

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