



The long-term outcome of BFM-based therapy for childhood lymphoblastic lymphoma in the Moscow region

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Abstract

Lymphoblastic lymphoma (LBL) is one of predominant childhood non-Hodgkin's lymphoma (NHL) subtypes. However, excellent outcomes have been achieved with acute lymphoblastic leukemia (ALL)-type treatments in children with LBL.

The purpose of this study was to investigate outcomes children and adolescents with LBL treated with the NHL-BFM 90 and 95 protocols in the Moscow region.

Methods: 58 pts (m, - 40; f, - 18) were enrolled in this study from May 1991 to August 2008. Fifty-two (90%) pts were treated with the ALL-like therapy protocol NHL-BFM 90 or 95 for non-B-NHL (ALL-type) patients, and 6 (10%) –with NHL-BFM 90 for B-NHL. These protocols differed from the original by reduction of the methotrexate dose (1 g/m²/24h instead of 5 g/m²/24h).

Results: The median age at time of presentation was 11.0 (range 1.5–21.6) years. Forty-five (90%) pts have a T-cell immunophenotype. Fifty-three (91%) had advanced (III, IV) stage disease. The presenting sites of T-LBL included mediastinal mass and bone marrow in 35 (78%) and 13 (29%) cases respectively. CR was 94 and 83% for non-B-NHL and B-NHL treatment respectively. Five-year event free survival (5y-EFS) was 0.80 ± 0.06 (median of observation 4.1 years) and 0.67 ± 0.19 (5.1 years) respectively ($p > 0.05$). Five-year overall survival (5y-OS) was 0.85 ± 0.05 and 0.80 ± 0.06 respectively ($p > 0.05$). The situation without mediastinal involvement was a factor for an unfavorable prognosis for T-LBL: 5y-EFS –was 0.56 ± 0.17 vs. 0.90 ± 0.05 ($p = 0.036$). Sex, age, increased LDH, slow or fast therapy response, and involvement of the central nervous system or bone marrow did not affect the prognosis ($p > 0.05$).

Conclusions: The NHL-BFM 90 and 95 for non-B-NHL protocols are effective therapeutic regimes for pediatric LBL, and the long-term results obtained are comparable with international data.

Keywords: lymphoblastic lymphoma, non-Hodgkin's lymphoma, children, adolescents, therapy, NHL-BFM 90/95

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