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abstract

Growth Pattern in Pediatric Acute Lymphoblastic Leukemia Survivors

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Growth Pattern in Pediatric Acute Lymphoblastic Leukemia Survivors

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Affiliation: Kidwai Memorial Institute of Oncology, Bangalore

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Introduction: Childhood cancer survivors though being cured of cancer suffer from late effects especially growth impairment. This study aims to identify the growth pattern in pediatric acute lymphoblastic leukemia (ALL).

Methodology: This was a retrospective study done in survivors of ALL who visited the survivor clinic at a tertiary care center in South India. Anthropometric details including age, weight, height, body mass index (BMI) were extracted from case records at 3 time points (at diagnosis(T1), treatment completion(T2) and 2 years post treatment(T3). Weight for age, height for age and BMI were interpreted using IAP growth charts corrected to age and gender.

Results: A total of 85 children over 6 months were enrolled. Among them, 42 children had received radiation as part of management. Of the cohort, 55% were male. Median age at diagnosis was 6 years. In the study, the proportion of underweight and stunted were 24% and 22% at T1, 18% and 29% at T2 and 7% and 15% at T3 respectively. At T3, it was found that 70.6% and 62.4 % of survivors had height for age (P< 0.026) and weight for age (P< 0.001) less than the expected value. Additionally, 19 (22%) children were overweight and 6 (7%) were obese post treatment. Age, Gender and Radiation therapy were found to have no significant impact on the growth.

Conclusion: This study highlights that therapy and disease significantly affect the growth of children treated for ALL. A trend towards overweight underscores the importance of close monitoring of growth impairment and necessary lifestyle modifications to tackle malnutrition.