

Material and methods We evaluated 6 patients with osteonecrosis as a complication of leukaemia or lymphoma treatment between September 1998 and September 2013. Osteonecrosis was confirmed by magnetic resonance imaging (MRI) of the symptomatic joints.

Results Of 563 patients, 6 (4 girls, 2 boys) (1.1%) developed symptomatic osteonecrosis, in a total of 11 joints. The median age at diagnosis of malignancy was 14 years (range 10–18 years) and the median interval between primary diagnosis and onset of osteonecrosis related symptoms was 33 months (range 11–120 months). Underlying malignancies were acute lymphoblastic leukaemia (n = 3) and Hodgkin Lymphoma (n = 3). Affected joints were hip (n = 7), knee (n = 3) and elbow (n = 1). All patients had received previous corticosteroid therapy at a median dose in prednisone equivalent of 4239 mg/m² (range 3918–4600 mg/m²). Treatment of osteonecrosis included restriction of weight-bearing, physiotherapy and analgesics. One patient had to undergo arthrotomy. All patients showed improvement in pain and motor function.

Conclusions In our cohort, there has been a predominance of female adolescents. Weight-bearing joints were the most commonly affected. Increased awareness for skeletal symptoms during follow-up of patients with hematologic malignancies allows early detection of osteonecrosis, leading to prompt intervention and may prevent more severe morbidity.

PO-0155 EVALUATION OF GROWTH HORMONE DEFICIENCY (GHD) IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA (ALL) AND NON-HODGKIN'S LYMPHOMA (NHL)

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Introduction Acute lymphoblastic leukaemia (ALL) is the most common childhood cancer and non-Hodgkin's lymphoma (NHL) is the most common childhood cancer. These children may suffer from some late effects of treatments such as endocrinopathies like thyroid, pituitary, metabolism dysfunctions. Growth Hormone Deficiency (GHD) is one of the causes of short stature.

Material and methods During a 3 years cross-sectional research in Dr Sheikh children hospital in Mashhad, we studied on 50 children with ALL (n = 25), NHL (n = 25) who received chemotherapy alone (n = 25) or plus radiation (n = 25). Patients with height less than 5th percentile, were evaluated for GHD via insulin stimulating test. Also for short stature workup in all patients thyroid function test were done.

Results We found 6 (12%) children with height less than 5th percentile who 5(83.33% of them or 10% of total) had GHD. There was no statistical correlation between type of disease also type of treatment and GHD (respectively p-value = 0.667, 0.189) due to small sample size. Among these 6 patients, 5 children (83.33% of them) undergone radiation and 4 patients (66.66% of them) had ALL. There was 2(4% total) cases of sub-clinical hypothyroidism but with normal height. According to BMI (body mass index) access 2(4% total) patients had overweight.

Conclusion In our study ALL patients who received radiation had unfavourable state for height and endocrine side effects. So

it seems more attention to radiotherapy complications in children with cancer especially ALLs is needed to improve their quality of life.

PO-0156 POST TREATMENT THYROID DYSFUNCTION AND OBESITY IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA (ALL), NON HODGKIN'S LYMPHOMA

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Background In most children with Acute Lymphoblastic Leukaemia (ALL) and Non Hodgkin's Lymphoma (NHL) who have been undergone chemotherapy with and without radiotherapy, some late effects due to treatment may occur such as endocrinopathies.

Methods We evaluated growth criteria (including short stature, obesity) and thyroid test function in 50 children with ALL (n = 25) and NHL (n = 25) 3–17 year-old in remission period who randomly received chemotherapy with (n = 25) or without (n = 25) radiation such as our treatment groups. The values for height, weight and BMI in less than 5th or more than 95th percentile considers abnormal.

Results Six (12%) patients were in less than 5th percentile height (short stature). Two patients (4.0%) had over-weight and 48 (96%) were in normal range of BMI. Six (12%) patients were in less than 5th and 3 (6%) were in more than 95th weight percentile. There was no significant difference between two different treatment groups for TSH (p = 0.662 (but there was a significant difference between these groups in case of T4 (p = 0.049). Mean and SD for T4 in patients with chemotherapy alone was less than in whom received chemotherapy plus radiotherapy. There was no significant difference between ALL and NHL groups for TSH, T4 (p = 0.567, 0.528 respectively). Two boys with ALL without history of radiation had hypothyroidism that had based on their laboratory data.

Conclusion Regarding to effects of thyroid dysfunction on short stature and obesity in adolescent with ALL and NHL, we suggest to have more attention about growth, thyroid test to avoid late side effect of malignancy treatment.

PO-0157 EVALUATION OF BONE MINERAL DENSITY IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA (ALL) AND NON-HODGKIN'S LYMPHOMA (NHL)

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Introduction Acute lymphoblastic leukaemia (ALL) and Non-Hodgkin's Lymphoma (NHL) are the most common childhood and adolescence malignancy respectively.

Due to the increasing survival of these children, today late side effects of treatment are important. Therapies such as corticosteroids, cytotoxic and radiotherapy effect on bone density and put the child at risk of osteoporosis and pathological fractures.