EVALUATION OF GROWTH HORMONE DEFICIENCY (GHD) IN CHILDREN WITH ACUTE LYMPHOCYTIC LEUKEMIA (ALL) AND NON-HODGKIN’S LYMPHOMA (NHL)

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Material and methods We evaluated 6 patients with osteonecrosis as a complication of leukemia 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 leukemia (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-0156 POST TREATMENT THYROID DISFUNCTION AND OBESITY IN CHILDREN WITH ACUTE LYMPHOCYTIC LEUKEMIA (ALL), NON-HODGKIN’S LYMPHOMA

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Background In most children with Acute Lymphoblastic Leukemia (ALL) and Non-Hodgkin’s Lymphoma (NHL) who have been undergone chemotherapy and 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 were considered abnormal.

Results Six (12%) patients were less than 5th percentile of 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 which 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.

EVALUATION OF BONE MINERAL DENSITY IN CHILDREN WITH ACUTE LYMPHOCYTIC LEUKEMIA (ALL) AND NON-HODGKIN’S LYMPHOMA (NHL)

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Introduction Acute lymphoblastic leukemia (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.
Material and methods
This 3-year cross sectional study was performed in Dr. Sheikh Children’s Hospital in Mashhad on 50 children with ALL (n = 25) and NHL (n = 25). Half of them were received (n = 25) chemotherapy alone and half of them chemotherapy plus radiotherapy (n = 25). All children were in the remission phase. We assessed them by DEXA bone mineral densitometry (BMD) on the lumbar spine and femoral neck (hip). We also measured some bone biomarkers include calcium (Ca), phosphorus (P), parathyromone (PTH), alkaline phosphatase (ALP) in plasma. Results by age, height, sex and Body Mass Index (BMI) were adjusted with a special software.
Results Mean age was 8.28 ± 3.93 years. There was no significant difference on bone biomarkers (Ca, P, ALP PTH) between ALL, NHL and also between the two treatment groups. Children with ALL had lower density at the hip and lumbar spine. (respectively p value < 0.001 and p value =0.018). A total of 50 patients, the hip BMD showed normal results in 3 patients (6%), in 14 patients (28%) osteopenia were seen and 33 patients (66%) had osteoporosis. In whom received radiotherapy plus chemotherapy, one patient had normal BMD and 24 patients (48% of total patients) at the hip and 22 patients (44%) at lumbar spine had decreased BMD. In contrast, in whom had only chemotherapy, 24 patients (48%) had osteoporosis at hip and 23 (46%) at the lumbar spine. There was no significant difference in BMD between the sexes.
Conclusion Given that 94% of children had abnormal bone density, seem to pay more attention to the metabolic status and BMD in childhood with cancer can develop appropriate strategies to improve health and quality of their life.

PO-0158 MANAGEMENT OF PATIENTS WITH ALL WHEN EXPOSED TO VZV
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Aims Investigate the management of patients with ALL when exposed to Varicella Zoster Virus.
Method Retrospective study looking at all patients diagnosed with ALL between 2007–2011, a total of 60 patients. Each chart was looked at for any documented exposure to varicella and the management of the patient compared to standards set on local guidelines.
Results 58 patients in the audit. Age range was from 2 years to 15 years. 48 patients were tested at diagnosis leaving 10 patients with unknown Varicella status diagnosis.
24 patients reported exposure, 50% of these patient exposures were significant and required treatment. 19 of these were managed appropriately and 5 were not. 100% patients that were exposed and found not to be significant exposures did not receive treatment and therefore were managed appropriately. Of the patients that were exposed and not managed according to local guidance, one patient received IVIG 2/52 after a significant exposure when according to guidance they should have received oral aciclovir. Another patient did not have their status checked at diagnosis or when exposed. The remaining three patients did not have their immune status checked at diagnosis making their management inappropriate.
Conclusion Overall the management of the patients who contacted the medical team to report exposure to Varicella were managed appropriately. Plan to have a sticker on the front of patient notes with varicella status on diagnosis, exposure and results.