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# Pediatric non-Hodgkin Lymphoma: A retrospective 7-year experience in children and adolescents with non-Hodgkin lymphoma treated in King Fahad Medical City (KFMC)

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**Background:** Non-Hodgkin's lymphoma is an aggressive malignant disease in children and adolescents. Although it is the fourth most common malignancy in Saudi children as reported in Saudi cancer registry, less information is available about pediatric Non-Hodgkin lymphoma and its outcome in Saudi Arabia.

**Objectives:** To provide demographic data, disease characteristics, treatment protocol, toxicity and outcome of treatment in children & adolescents with Non-Hodgkin's lymphoma treated at KFMC. This study will form base line for future studies about pediatric Non-Hodgkin's lymphoma in KFMC, which may help to improve outcome for children with cancer in Saudi Arabia.

**Patients & Method:** We retrospectively analyzed 28 children and adolescents diagnosed to have Non-Hodgkin's lymphoma at KFMC between December 2006 and December 2013, followed-up through June 2014.

**Results:** Of the 28 patients, 10 (35.7%) girls and 18 (64.3%) boys, the male-to-female ratio was 1.8; 1. The median age at time of diagnosis was 6.4 years old (range 2.0 to 13.0 years old). The majority of patients (64.3%) were aged between 5 and 12 years old. Burkitt's lymphoma BL/BLL was the most common pathological subtype (60.7%), and DLBCL was the second most common subtype (21.4%). Abdominal and Retroperitoneal involvement was the most common primary site (78.6%) including the ileocaecal region. Most of the children presented with advanced Stage III and IV (75%), Cytogenetic study which screens specifically for the t (8; 14) (q24; q32) a characteristic genetic feature of Burkitt's Lymphoma was obtained from 21 patients, variant rearrangement was observed in 3/21 samples and complex chromosomes karyotype in addition to IGH/MYC rearrangement was observed in 2/21 samples. Those patients presented with very aggressive lymphoma and combined BM and CNS involvement. We use the French-American-British Mature B-Cell Lymphoma 96 Protocol (FAB LMB 96) for treatment for newly diagnosed Mature B-Cell type NHL and high risk ALL CCG 1961 Protocol for lymphoblastic lymphoma and international anaplastic Large Cell Lymphoma 99 Study Protocol for ALCL. The median follow-up in patients not experiencing an adverse event was 53.1 months. The estimated 3-year EFE and OS rates in the entire cohort of patients with newly diagnosed NHL treated in the KFMC were 85.2% and 89.2% respectively; Overall survival (OS) rate of patients with mature B-cell-NHL was 88.9%.

**Conclusion:** The outcomes and survival in our small series appeared to be excellent compared with those reported in other international trials even though most of our patients presented in advanced stage of the disease. We feel that the importance of the current study is to document the relative distribution of various types of pediatric non-Hodgkin's Lymphomas and age-specific distribution in different Histological subtypes.

## Biography

Nahla Ali Mobark is a Pediatric Oncologist in Pediatric Hematology & Oncology Department in Cancer Center King Fahad Medical City KFMC, Riyadh Saudi Arabia which is huge tertiary hospital with around 1000 bed capacity. She obtained MBBS from Kasr-El Aini Medical College, Cairo University and Pediatric Residency in Children Hospital from King Saud Medical Complex, KSMC Ministry of Health (MOH) of Saudi Arabia. She has membership of Royal College of Pediatric & Child Health, UK (MRCPCH) and then Pediatric Hematology Oncology Fellowship with training in bone marrow transplant. She received a big experience in diagnosing and management of pediatric patients with hematological malignancies and solid tumors and also benign hematology cases i.e., SCA, thalassemia, etc. She has been involved with teaching of undergraduate and postgraduate students and nurses throughout her career.

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