

## Oral Manifestations of Childhood Non-Hodgkin's Lymphoma at Cairo National Cancer Institute, Egypt

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### ABSTRACT

This study includes 41 cases of paediatric non-Hodgkin's lymphomas (NHL), attending the Paediatric Oncology Unit, National Cancer Institute, Cairo University and received different chemotherapy, and radiotherapy regimens, as well as twenty normal children chosen as controls. Clinical and dental examinations were conducted to determine caries prevalence, oral hygiene, gingival condition. Oral cytological smears, oral swabs, ascorbic acid plasma levels and radiological evaluation were carried out. Results revealed that children with NHL tend to have untreated dental disease and more frequent dental extractions. Dental caries prevalence was found to be more when compared with the controls. Gingival changes increased with the administration of intensive chemotherapeutics and were much greater than changes occurring in children treated with radiotherapy. There was a severe oral hygiene negligence in all stages of NHL regardless of the line of treatment administered with a higher debris than the calculus level. A low vitamin C level in plasma was observed with increased gingival involvement. Candida species were observed microscopically in all oral swabs of children affected with NHL. Oral radiological findings did not show any peculiar pattern associated with NHL. Oral cytological smears revealed malignant lymphoblastic cells in five cases before therapy. Lymphoblastic cells were not observed in any of the post-treatment groups, oral inflammations as well as benign proliferative epithelial lesions were observed.

### INTRODUCTION

NHL are malignancies of the lymphoreticular tissue of a variable nature, origins and patterns of response to treatment. Childhood malignant lymphomas account for 22.6 to 34 of childhood malignancies of Egypt [2,11]. Childhood NHL are relatively common in Egypt, ac-

counting for 43 [12] and 45.8 [11] of childhood malignant lymphomas. Infectious haemorrhagic, cytotoxic, nutritional and neurological signs of drug toxicity were early detection of oral NHL and could help in early diagnosis and treatment [24]. Increased oral bacterial and fungal infections is frequent among NHL cases. Vitamin C is an essential element in the process of collagen synthesis and a strong correlation between vitamin C deficiency and periodontal deterioration was reported. Gingival inflammations were reported to be aggravated in NHL [20].

### MATERIAL AND METHODS

The present study included 28 male and 13 female paediatric NHL patients attending at the Paediatric Oncology Unit, National Cancer Institute, Cairo University, Egypt. Twenty normal children from the Pedodontics Department, Faculty of Oral and Dental Medicine Cairo University were randomly chosen as controls. The age of the children ranged from 2 to 16 years. The study cases were subgrouped as follows:

(I) Group I comprised 21 cases who received an intensive cyclic therapy [22] cycle A consisted of vincristine, cyclophosphamide, flomustine, high dose cytosar, prednisone and intra-theal cytosar and methotrexate. Cycle B included ifosfamide, mesna, vepesid, methotrexate, vincristine, prednisolone and intra-theal injections as cycle A. Cases were evalu-