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# Oral health in children with acute lymphoblastic leukaemia: before and after chemotherapy treatment

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## Abstract

Aim: To evaluate changes in the oral health status of children under the age of 14 years with acute lymphoblastic leukaemia (ALL) attending a cancer centre before and after chemotherapy

treatment . Materials and methods: A total of 32 children with ALL without distinction of gender were selected for study. The oral cavity of the patients was evaluated before the induction stage and 17 days later. Clinical evaluation of the submandibular, submental, and cervical lymph nodes was performed. Saliva samples were collected during the early morning hours. Bacterial plaque was assessed by using the Silness and Löe plaque index (SLPI) and gingiva status was evaluated with the gingival Löe and Silness index (GLSI). The WHO toxicity oral scale was used to record the degree of oral mucositis. The resulting data were analysed with McNemar's test, t test (for related samples), and Wilcoxon test. Results: There were statistically significant differences for palpable lymph nodes, paleness of oral mucosa, and ecchymoseis, respectively, $P \leq 0.000$, $P = 0.03$, and $P = 0.01$, with these manifestations decreasing significantly after treatment . Incipient gingivitis had frequencies of 71.9% and 75% before and after treatment , respectively. The mean SLPI score declined significantly from 1.16 ± 0.52 (before treatment ) to 0.56 ± 0.36 ( after treatment ) ($P < 0.000$); salivary flow increased significantly from 0.54 ± 0.34 to 1.22 ± 1.07 after chemotherapy treatment ($P < 0.00$). Oral mucositis was present in 24 children (75%) with a 1–2 severity level. Conclusions: After chemotherapy treatment , there were changes in the oral conditions of children with ALL. Some manifestations decreased after treatment , whereas in others increased. © 2019, European Academy of Paediatric Dentistry.

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