

**Assessment of Oral Manifestations and
Salivary Immunological Markers in Patients
with Lymphoma Before and after Receiving
Chemotherapy**

A thesis
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Abstract

Background:

Lymphomas are group of diseases caused by malignant lymphocytes that accumulate in lymph nodes and caused the characteristics lymphadenopathy. Occasionally, they may spill over into blood or infiltrate organs outside the lymphoid tissue. The major subdivision of lymphomas is into Hodgkin's lymphoma and non-Hodgkin's lymphoma and this is based on the histologic presence of Reed-Sternberg cells in Hodgkin's lymphoma.

Aims of the study:

The aims of this study were to determine the percentage of oral manifestations and identify the levels of salivary immunoglobulin A, interleukin-6 and tumor necrosis factor- α in lymphoma patients before the treatment and after receiving three cycles of chemotherapy in comparison with healthy control individuals.

Subjects, materials and methods:

The study included 25 patients(15 male and 10 female) with non-Hodgkin's lymphoma (B-cell type), 25 patients(16 male and 9 female) with Hodgkin's lymphoma and 25 (15 male and 10 female) healthy control group with no signs and symptoms of any systemic disease and age, sex match with patient groups.

Those patients were examined pre and post chemotherapy to see the oral manifestations and compared with healthy control group .

Whole unstimulated saliva was collected to determine the level of salivary immunological markers which measured by Enzyme Link Immunosorbent Assay.

Results :

The percentage of oral manifestations was taste alteration in non-Hodgkin's lymphoma patients (36%) and in Hodgkin's lymphoma patients (16%) , followed by burning mouth syndrome (20%) in non-Hodgkin's lymphoma patients and (16%) in Hodgkin's lymphoma patients and lastly dry mouth was (12%) in both non-Hodgkin's lymphoma and Hodgkin's lymphoma groups.

In the present study there was no oral manifestations in both study groups before starting chemotherapy, and the mentioned oral manifestations incident after receiving chemotherapy regimens.

The levels of salivary immunoglobulin A, interleukin-6 and tumor necrosis factor- α were significantly higher in pre-treatment patients in comparison with control group, and there was a significant decrease after chemotherapy treatment when compared to their base line levels in both study groups.

Conclusions:

The most frequent oral manifestations in lymphoma patients was taste alteration followed by burning mouth syndrome and dry mouth , and male patients affected more than females.

The salivary immunological markers levels were higher in lymphoma patients than control, then these markers showed obvious decrease in patients after chemotherapy treatment.