

*Periodontal health status with serum and salivary
immunoglobulins analysis for smokers and non
smokers*
(comparative study)

A thesis submitted to the college of Dentistry
University of Baghdad in partial fulfillment of the
requirements for the degree of Master of Science in
Periodontics

By
Ziyad Nizar Al-Talib
B.D.S

Supervised by
Assistant prof.
Dr.Lekaa M. Ibraheem
2008 A.B

Supervised by
Assistant prof.
Dr.Khalil I.A. Mohammed
1429 A.H

Abstract

Objectives: The aim of the present study was to determine and compare the periodontal health status and the concentration of serum and salivary immunoglobulins by using clinical and immunological analysis between smokers and non-smokers.

Materials and methods : Total sample composed of sixty participants, fifteen subjects smokers with gingivitis (group 1) with mean age 39.3 ± 6.42 years, fifteen subjects non-smokers with gingivitis (group 2) with mean age 37.4 ± 6.73 years, fifteen subjects smokers with periodontitis (group3)with mean age 40.93 ± 5.41 years and fifteen subjects non-smokers with periodontitis (group4) with mean age 39.93 ± 4.96 years .The study was cross sectional, all periodontal parameters and serum sample for immunological analysis for (IgA,IgG,IgM) were taken in the same visit.All periodontal parameters: Plaque index(PLI),Gingival index (GI),Bleeding on Probing (BOP),Probing Pocket Depth (PPD)and Clinical Attachment Loss (CAL)were recorded for all teeth except the third molar which was excluded.

Results: The result obtained were significant difference for PLI between group1 and group2,and was non-significant difference between group 3 and group 4.Although there was non-significant difference of means of GI between group1 and group2,also between group 3and group4.There was non-significant difference in the mean of PPD between group1 and group2,and also was non significant between group3 and group4.Although there was highly significant difference in the mean of CAL between group3 and group4. And there was highly significant difference in the BOP between group1 and group2,and also between group3 and group4.

The inter group comparison of serum and salivary IgA concentration showed a highly significant difference between group1 and group 2,Also showed a significant difference between group3and group4.

Although the inter group comparison of serum IgG concentration showed a highly significant difference between group1 and group2,also between group3 and group4.

But there was no-significant difference between group1 and group2,and between group 3and group4 considering the mean of serum IgM concentration.

Conclusion: The present study indicate that there is association between cigarette smoking and increase periodontal parameters which include PLI,GI,CAL,PPD.with exception of BOP.

Also indicate that cigarette smoking may by associated with the suppression of B-cell function and immunoglobulin production. This alteration in antibody levels further explains the potential mechanism by which smoking exacerbates periodontal disease.