

A cross sectional analysis of different variables of patients with non-insulin dependent diabetes and their periodontal status.

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Abstract

The periodontal condition of 72 non-insulin dependent diabetes patients was compared with that of 92 nondiabetic individuals. Plaque Index (PII), Calculus Index (CI), Gingival Index (GI), and attachment loss (AL) were measured on four surfaces of sixteeth in each subject. All four parameters were significantly higher in the diabetic group. No significant difference in the frequency of toothbrushing was found between the groups. For all age groups, GI and AL were higher in the diabetic group. In each group, GI was not changed with age, while AL increased with age. Classification of the groups based on PII showed that the diabetic group's GI was higher than the nondiabetic group for low, medium, or high PII values. The diabetic group showed higher AL for only the medium and high PII groups. Classification by CI revealed that the diabetic group's GI and AL were significantly higher than those of the nondiabetic group for subjects with low, medium, or high values of CI. Multiple regression analysis revealed that the main factor affecting GI was the presence or absence of diabetes. PII and CI both showed a significant relationship with GI; age was the second most significant factor. The most significant factors influencing AL were CI and the presence or absence of diabetes; age was the second most significant factor. Patients who had had diabetes for more than 10 years had a higher AL than those who had suffered from diabetes for less than 10 years. Patients with average HbA1c values $\geq 10\%$ had more serious mean GI values than those with HbA1c values $< 10\%$. In patients with diabetes, age, plaque accumulation, and calculus formation have more detrimental effects on the periodontal apparatus than in healthy individuals.