



Is HbA1c an Accurate Predictor for Diabetes Risk in Patients with Chronic Periodontitis?

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Dear Editor in Chief

Many studies consider periodontitis as the risk factor for diabetes (1,2) and hyperlipidemia(3). Glycosylated hemoglobin (HbA1c) point out the mean plasma glucose over the past 120 days (3), and in some studies is considered as a more valid as say than other as says in field of assessing plasma glucose levels in diabetic patients (4). In this study, first, the relationship between chronic periodontitis and HbA1c in non-diabetic individuals was evaluated; then the HbA1c and triglycerides (TG) were correlated. This case-control study was conducted on 121 non-diabetics aged 20-50 yr, in Zahedan, southern Iran. Sixty persons were healthy regarding the periodontal status and 61 were affected with severe chronic periodontitis who were assessed in terms of HbA1c, TG, BMI (Body Mass Index) and Extent of periodontal diseases.

Overall, the HbA1c average in the healthy controls was significantly higher than the affected subjects ($P = 0.002$). After controlling the confounding factor (BMI), in participants with $BMI < 25$, no significant correlation between groups in HbA1c level was observed. In persons with $BMI \geq 25$, the HbA1c average in healthy controls was significantly higher than those affected with severe chronic periodontitis ($P < 0.001$). The relationship between HbA1c and extent of periodontal disease was not significant, but there was a significant correlation

between extent of periodontal disease and TG levels ($P = 0.27$). There was neither significant relationship between HbA1c and TG levels neither in healthy controls nor in those affected with severe chronic periodontitis.

It seems that HbA1c is not a reliable marker for the diagnosis of diabetes risk in non-diabetic patients with chronic periodontitis. To achieve a more precise gold standard, different assays in respect of diabetes diagnosis must be enquired in further studies.

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