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The Assessment of the Diabetes Mellitus Complications on Oral Health: A Longitudinal Study

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Abstract : Background: Diabetes mellitus is regarded as a very problematic chronic disease that has an effect on a considerable number of people around the world and it is straightforwardly associated with the oral health condition of the patients. Objective: The objective of this study is to analyze and evaluate the impact of diabetes mellitus on oral health. Materials and methods: In the present research were taken into consideration 300 patients with an age range of 11 to 80 years old. The study sample was composed of 191 males, respectively 63.7% of them and 109 females 36.3% of the participants. We divided them into seven age groups: 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, and 71-80 years.This descriptive and analytical research was designed as a longitudinal study. Statistical analysis was performed using IBM SPSS 23.0 statistics. Results: The majority of patients participating in the study belonged to the age range from 41 to 50 years old, precisely 20.7% of them, while 27% of the patients were from 51 to 60 years old. Based on the present research, it resulted that 24.4% of the participant had high blood sugar values 250-300 mg/dl, whereas 19 % of the patients had very high blood sugar values 300-350 mg/dl. Based on the results of the current study, it was observed that 83.7% of patients were affected by gingivitis. In the current study, the significant finding is that 22% of patients had more than 7 teeth with dental caries and 21% of them had 5-7 teeth with dental caries, whereas 29% of the patients had 4-5 dental caries and the remaining 28% of them had 1-3 dental caries. The present study showed that most of the patients, 27% of them had lost more than 7 teeth and 22% of the participants had lost 5-7 teeth, whereas 31% of the patients had lost 4-5 teeth and only 20 % of them had lost 1-3 teeth. This study proved that high blood sugar values had a direct impact on the manifestation of gingivitis and there it was a strong correlation between them with P-value = .001. A strong correlation was found out between dental caries and high blood sugar values with P-value ˂.001. Males with diabetes mellitus were more affected by dental caries and this was proved by the P-value= .02, in comparison to females P-value=.03. The impact of high blood sugar values affects missing teeth and the correlation between them was statistically significant with P-value ˂ .001. Conclusion: The results of this study suggest that diabetes mellitus is a possible risk factor in oral health for the reason that Albanian patients over 51 years old, respectively 43% of them have over 5 teeth with dental caries as compared with 49% of the patients who had over 5 missing teeth, whereas the majority 83.7% of them suffered from gingivitis. This study asserts that patients who do not have periodical check-ups of diabetes mellitus are at significant risk of oral diseases.

Keywords : dental caries, diabetes mellitus, gingivitis, missing teeth
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