COMPARISON OF XEROSTOMIA AND SALIVARY LEVELS OF GLUCOSE, UREA, AND ORAL CANDIDAL CARRIAGE IN THE SALIVA OF TYPE II DIABETICS AND NON-DIABETICS: A CROSS SECTIONAL STUDY.

ABSTRACT:

AIM OF THE STUDY:

The aim of the study is to determine the degree of severity of xerostomia, the salivary concentration of glucose, urea, and salivary candidal carriage in patients with type 2 diabetics and non-diabetics.

OBJECTIVE OF THE STUDY:

The objective of the study is Comparison of xerostomia, salivary glucose, salivary urea, and oral candidal count in the saliva of type 2 diabetic patients and non-diabetic patients.

MATERIALS AND METHODS:

A total of 60 subjects, 30 with uncontrolled type 2 diabetes and 30 non–diabetics, aged 35-70 years were included after obtaining their informed consent. Unstimulated whole saliva samples were collected by spitting into a sterile container for 10 minutes. Salivary glucose levels were estimated by Glucose oxidase method, salivary urea levels were estimated using by urea Berthelot method, and oral candidal carriage was estimated by Hicrome candida differential agar. The degree of xerostomia was determined using a special questionnaire.

RESULTS:

Statistical analysis was done using Pearson’s chi-square and student t-test. The mean salivary glucose levels and salivary urea levels in the uncontrolled diabetic were 17.1 ± 3.4 mg/dl and 59.3 ± 29.7 mg/dl and in the non-diabetics, the levels were 8.6 ± 0.9 mg/dl and 27.5 ± 4.3 mg/dl (P=0.000). The degree of xerostomia was reported in 66.7% of the
uncontrolled diabetics and 3.3% of the non-diabetics (P=0.000). The percentage of the oral candidal carriage was reported in 90% of uncontrolled diabetes and 20% of the non-diabetics (P=0.000).

CONCLUSION:

Based on the results of this study, we conclude that the degree of xerostomia, the salivary glucose level, the salivary urea level, and the oral candidal carriage was significantly higher in uncontrolled type 2 diabetic group when compared to the non-diabetic group and we conclude that the salivary glucose level can be used as an alternative method for diagnosis and monitor the diabetes mellitus.

KEYWORDS: Type 2 diabetes mellitus, whole unstimulated saliva, salivary glucose, salivary urea, Oral candidal carriage, and Xerostomia.