

## ABSTRACT

### *Relationship between Diabetes Type-II and Calcium Ions Concentration in Saliva in Gaza Strip: Retrospective Cohort Study*

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Saliva contains an amount of calcium concentration; when increased it can play a role in plaque formation on the teeth and can cause the periodontitis disease. Therefore, most diabetic patients show loss of their teeth. In this study, the aim is to investigate the relationship between diabetic disease type-2 and calcium concentration in saliva among diabetic patients in the Gaza strip. A retrospective cohort study will be designed to measure the calcium concentration in the saliva of a random sample of uncontrolled diabetic patients (n=150) and controlled diabetic patients (n=150). The HA1C level in blood will be reviewed in the records of diabetic patients in the diabetic clinic in ten primary health care centers that belonged to the Ministry of Health of Palestinian Authority in Gaza strip governorates in order to follow up and classify conditions of the patients as controlled and uncontrolled. In addition, HA1C in blood and Ca<sup>++</sup> level in 2ml saliva will be examined during the conduction of the study for each sample unit (either controlled or uncontrolled patients) in the health laboratory of University of Palestine. The saliva for examination will be collected without any stimulation of salivary gland at 9 a.m. and 12 p.m. after rinsing the mouth with water and allowing 2- 5 minutes for accumulation of saliva. Also, the patient's periodontal conditions will be evaluated to examine the relationship between diabetes mellitus and periodontitis according to Ca<sup>++</sup> level in saliva. The collected data will be by a prepared questionnaire about the socio-demographic, health status, and lifestyle of patients; it will be entered, cleaned and analyzed by using different significant tests at level of significance  $\alpha=0.05$  such as t- test, correlation and regression test by SPSS program.