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Depression status in relation to oral health condition and salivary physiochemical characteristics among 15 years old school students in AL-Swera City-Wassit Governorate-Iraq

A Thesis Submitted to the College of Dentistry, University of Baghdad in Partial Fulfillment of the Requirements for the Degree of Master Science in Preventive Dentistry

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Abstract

Background: Depression is a common mental disorder that presents with depressed mood, its affect oral health through its effect on salivary function. The aims of this study were to assess the relation of depression status on prevalence and severity of dental caries and gingival inflammation among students aged 15 years in relation to salivary physical (flow rate and viscosity) and chemical characteristics concentration of (total protein, zinc, copper, chromium and lithium).

Materials and methods: The total sample involved 800 students (males and females) aged 15 years old that were selected randomly, the depression status was measured using Children Depression Inventory (CDI) index that divided the students with depression into four groups according to severity of depression (low or average grade, high average grade, elevated grade and very elevated grade). The diagnosis and recording of dental caries was made by using Decay, Missing, Filled surface index (DMFs), according to the criteria of Manji et al (1989), while gingival condition was evaluated by using the gingival index by Löe and Silness, (1964). Salivary samples were collected under standardized condition from 30 students with very elevated grade and 30 students with low average grade, and then analyzed for measuring salivary flow rate and viscosity, in addition to the estimation of salivary elements (total protein, zinc, copper, chromium and lithium).

Results: The prevalence of depression was 100%. The DMFs was lower among students with high average grade than other grades of depression with non-significant difference. The severity of dental caries was higher among students with elevated grade concerning D_1, D_3 and in very elevated grade of depression concerning D_2, D_4 with highly significant among D_4 (P = 0.01).

The prevalence of gingivitis in present study was found to be 100%, mild gingivitis occurrence found higher among low or average grade than other grades, but moderate gingivitis was more among very elevated grade, while sever gingivitis was absent. Salivary analysis demonstrated that the salivary flow rate was non

significantly higher among students with low or average grade of depression than very elevated, while the viscosity of saliva was not significantly higher among students with very elevated grade. The data analysis of salivary elements found that the total protein and copper was higher among students with very elevated grade while other elements show the opposite result with significant difference concerning copper and zinc among females in very elevated grade, while others with not significant.

Conclusion: The results of the current research revealed that caries experience and gingival inflammation increase with depression that has an adverse effect on salivary physicochemical characteristics. There were changes in saliva variables between low or average grade and very elevated grade of depression.