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THE EFFECT OF SALIVA AND BACTERIAL COUNT ON ROOT CARIES AND THEIR RELATION TO ATTACHMENT LOSS

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ABSTRACT

Objective : The aim of this study was to correlate salivary cariogenic factors to root caries and periodontal status.

Methods: 150 individuals with root caries lesions participated in this study. They were divided into 2 age groups , young group from 20-39 year old and old group from 40-60 year old and also the sample was segregated into male and female groups. CRT kit was utilized to measure salivary flow rate and buffering capacity. Counts of salivary Mutans Streptococci (MS) and Lactobacilli (LB) were determined with dip-slide kits (CRT Bacteria). Periodontal examination included assessment of probing pocket depth (PPD), clinical attachment loss (CAL) in addition to plaque index (PI), clinical examination for root caries was performed according to WHO oral examination procedures. Salivary flow rate (SFR) and buffering capacity (BC) together with bacterial count, were correlated statistically to the number of root caries lesions (aRDL) and average clinical attachment loss (aCAL)

Results: Of the 150 subjects of this study, 59.3% were young (20-39 years old) and 40.6% were old (40-60 years old). For the young group (G0), the mean values were calculated for SFR, BC, aRDL, aCAL and were 1.295, 1.828, 7.428 and 2.448 respectively. For the older group (G1), the mean values were 1.329, 1.588, 7.882 and 3.118 respectively. Data were statistically significant at ($p < 0.05$). The mean values among males for SFR, BC, aRDL and aCAL were 1.38, 1.785, 9.075 and 2.498 respectively. On the other hand, the mean values for females were 1.197, 1.757, 5.666 and 2.733 respectively. Data revealed insignificant statistical difference at ($p < 0.05$). Mean values and SD of bacterial counts were (0.2 ± 0.064 , and 0.4 ± 0.078) for MS and LB respectively. There was statistically significant correlation between each MS and LB counts with both aRDL and aCAL ($p < 0.0001$).

Conclusions: It is concluded that root caries is associated with salivary cariogenic factors (salivary flow rate, buffering capacity, bacterial counts), also clinical attachment loss is correlated with those factors in addition to the number of root carious lesions. The males' group variables (SFR, BC, aRDL, aCAL) did not show significant differences versus females group. Individuals with considerable attachment loss must be monitored carefully as this is associated with an increase in the risk of root surface caries.

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