

Correlation between periodontal health status and some salivary parameters in pregnancy

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In

Periodontics

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Abstract

Background: Pregnancy is considered a major risk factor for development and progression of periodontal disease. There are hormonal changes in both estrogen and progesterone hormones in addition to bacterial effect and poor oral hygiene that will enhance development of periodontal disease in pregnant women.

Aims of the study: The purpose of this study to determine and compare the level of salivary enzymes (ALP, LDH) and salivary calcium in pregnant with different periodontal disease condition (gingivitis and periodontitis) and to test the relationship between the levels of salivary enzymes and clinical periodontal parameters in pregnant and non-pregnant women.

Materials and methods: Seventy subjects were enrolled in the study, the subjects with an age range (20-35) years old without any history of systemic disease. The subjects were divided into 20 non-pregnant women they represent the control group (G I), 30 pregnant women with gingivitis (GII) and 20 pregnant women with periodontitis (GIII).

All periodontal parameters (plaque index, gingival index, bleeding on probing, probing pocket depth and clinical attachment level) were recorded and 5ml of unstimulated saliva was collected for each subject. The collected saliva was centrifuged and clear supernatant was collected and kept frozen until biochemical analysis of salivary enzymes which included ALP, LDH and salivary Calcium.

Results: No significant difference in the mean value of salivary ALP between GI and G II, while there is high significant difference between GI and GIII

There was significant difference in the salivary LDH and Ca levels between control group and group II, while there is highly significant difference of salivary LDH and Ca between group I and group III.

There was significant difference in the number of bleeding sites, and probing pocket depth (PPD) among all groups. There was increase in the total number of all scores of PPD (score 1,2 and 3) GII and GIII compared to GI.

A highly significant difference in the clinical attachment level (CAL) in group III.

Conclusions: The pregnant women revealed more periodontal disease conditions (gingivitis and periodontitis) due to hormonal changes superimposed with microbial infection. Salivary enzymes (ALP, LDH) and salivary calcium are considered as good biochemical markers of periodontal tissue destruction and can be used to evaluate the effect of pregnancy on periodontal health status.