

*Evaluation of non surgical treatment of
chronic periodontitis by assessment the
enzymatic activity*

A thesis

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By

Hayder Sadiq Baker

B.D.S.

Supervised by

Ass. Prof.

Dr. Maha Shukri

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Abstract

Background:

Host responses to periodontal disease include the production of different enzymes that are released by stromal, epithelial or inflammatory cells into saliva and gingival crevicular fluid. There are important enzymes associated with cell injury and cell death like: lactate dehydrogenase (LDH), creatine kinase (CK), alkaline phosphatase (ALP), gamma glutamyl transferase (GGT). Changes in enzymatic activity reflect metabolic changes in the gingiva and periodontium in inflammation.

Aim of this study:

To assess the difference in the activity of LDH,GGT and ALP enzymes in the saliva of male patients with chronic periodontitis before and after treatment ,to test the effectiveness of treatment and to evaluate the correlation between these enzymes and the clinical parameters used for evaluation of periodontal tissues .

Materials and Methods:

Measurements of plaque index (PLI), gingival index (GI), bleeding on probing (BOP), probing pocket depth (PPD) and clinical attachment level (CAL) were taken from ten subjects before treatment and one month after treatment; Only male were included and saliva was collected for biochemical analysis of the enzymes alkaline phosphatase ALP, lactate dehydrogenase LDH, and gamma glutamyle transferase GGT.

Results:

Obtained results have shown that after conventional periodontal therapy, the activity of all salivary enzymes was significantly decreased. However there was no correlation between the activities of these enzymes and the clinical

periodontal parameters except between LDH with bleeding on probing, and clinical attachment level.

Conclusion:

Based on these results, it can be assumed that activity of these enzymes in saliva, as biochemical markers for periodontal tissue damage, may be useful in the diagnosis, prognosis and evaluation of periodontal therapy effects in periodontal disease and its prognosis.