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Research Article

Role of 1,25(OH)₂D On Cytochromes CYP27A1 and CYP27B1 in Periodontitis: A Clinical Study

ABSTRACT:

Background: Vitamins have a great impact on metabolism. **Aims:** To determine the role of 1,25(OH)₂D On Cytochromes CYP27A1 and CYP27B1 in Periodontitis. **Material and Method:** The investigation was carried out on 45 participants of ages within the range of (30-45 years) who were attending the private dental clinics. Diagnosis of chronic periodontitis was established depending on dental history, clinical examinations (periodontal indices). All participants were examined by the same dentist. They were classified into three groups: Group 1 (control negative): (15) participants with normal serum vitamin D3 level and with pocket depth ≤3 mm, good oral health and normal periodontal tissues and no previous history of periodontal diseases. Group 2 (control positive): (15) participants with normal serum vitamin D3 level and periodontitis with pocket depth ≥5 mm, they received placebo medication orally, Group3(treatment): (15) participants with vitamin D3 deficiency (below 30 IU), and periodontitis with pocket depth ≥5 mm, they received oral Vitamin D3 fast acting liquid soft gel capsule 2000 IU /day for 3 months. 3 blood samples were taken from each participant at 0,45,90 days, for research examinations. CYP27A1, CYP27B1 serum levels was measured for each sample in three groups by ELISA kit. **Result:** there was a highly significant reduction in CYP27A1 serum level in the treatment group at the ninety days of the study while there was no significant elevation CYP27B1 serum level in all groups during 45,90 days of the study. **Conclusion:** The present study suggested that the 1,25(OH)₂D has effects on serum levels of both Cytochromes CYP27A1 and CYP27B1 and this was associated with periodontitis.