

ABSTRACT

BACKGROUND

Many studies have been carried out till date that talk about severity of chronic periodontitis but none correlates with Albumin level in blood before and after instituting phase I periodontal therapy. Since albumin is an important biomarker for systemic inflammation, it must be interesting to check whether periodontal health status has anything to do with the albumin level in blood. Hence, present study was carried out to determine albumin level in blood before and after instituting phase I periodontal therapy and to find out whether it has any effect on systemic health.

AIM

The aim of this study is to determine whether there is an alteration in the level of serum albumin in patients with chronic periodontitis before and after phase I therapy.

METHODS

Fifteen patients with chronic periodontitis and 15 systemically healthy subjects without periodontal disease were selected. Serum albumin levels in individuals with healthy periodontium (control group) and chronic periodontitis (study group) were compared. Serum albumin levels and clinical periodontal parameters (pocket depth, clinical attachment level, gingival index, bleeding index and plaque index) were measured at baseline and 3 months after non-surgical periodontal treatment in chronic periodontitis patients. Data were analyzed with descriptive statistical methods (means \pm standard deviations). Independent samples t-test was used to compare serum albumin levels and clinical variables between the test and control groups. Paired samples t-test was used in the test group for comparisons before and after treatment. Statistical significance was set at $P < 0.05$.

RESULTS

The mean serum albumin levels in patients with chronic periodontitis (3.956 ± 0.049 mg/dL) were significantly less than that in periodontally healthy subjects (4.73 ± 0.052 mg/dL). Three months after periodontal treatment, the serum albumin level increased significantly (4.567 ± 0.017 mg/dL) and approached the levels in periodontally healthy subjects ($P < 0.05$).

CONCLUSION

The decrease and increase in serum albumin levels with periodontal disease and periodontal treatment respectively indicated an inverse relationship between serum albumin levels and chronic periodontitis.

Keywords: Albumin, chronic periodontitis, inflammation, scaling, root planing