

A Randomized Controlled Trial Looked at the Effect of Vitamin C Supplementation and Non-surgical Periodontal Therapy on total Antioxidant Capacity in Patients with Chronic Generalized Periodontitis

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Infammation of the supporting tissues of the periodontium is known as periodontal infammation. The microbial element can cause disease which is polymicrobial in beginning and causes dysbiosis and change in oxidative pressure with compromised cell reinforcement limit. The goal of this study was to fnd out how vitamin C supplementation and nonsurgical periodontal therapy (NSPT) affected the total antioxidant capacity of patients with chronic periodontitis.

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method, the Prism 4.0 software package.

Measurement of total antioxidant capacity

The ferric reducing ability of plasma (FRAP) assay, which was adapted for use with a microplate reader, was used to measure total antioxidant capacity in serum and saliva for the control group only at baseline and for the ChP1 and ChP2 groups at baseline, 3 months, and 6 months [4]. In order to prevent saliva from being contaminated with blood, saliva was collected prior to the clinical examination because bleeding during probing could result in saliva contamination. Anyway still there was plausible of blood element as at some point patients with periodontitis could have blood sullied spit itself from exceptionally aggravated destinations. The upside of FRAP measure is it is extremely delicate to tainting with hemoglobin and any spit test with blood pollution can be distinguished by this examine.

Measurable examination

Measurable program was completed through SPSS Factual Programming Bundle. The data were found to have a normal distribution when tested using the Kolmogorov–Smirnov test. For serum and spit complete cancer prevention agent limit estimation the information was non-typical dispersed thus non-parametric test was finished. The Chi-square test was used to determine the age and sex differences between the study groups. Repeated measure ANOVA was used to examine differences between groups in clinical parameters, while one-way ANOVA was used to examine differences between groups. The Mann-Whitney U test was used to look for differences in serum and salivary TAOC levels between groups. The TAOC intragroup differences in serum and saliva were measured using the Wilcoxon test. The relationship between serum TAOC levels and clinical parameters was evaluated using the Spearman rank correlation test.

Result and Discussion

Oxidative stress is a major factor in the pathogenesis of periodontitis. The reactive oxygen species (ROS) that cause damage to the host tissue and an imbalance in the levels of oxidants and antioxidants are two examples. This highlights the possibility of an antioxidant intervention to restore periodontal health. Vitamin C is a powerful antioxidant, and an odds ratio [OR] of indicates a link between low vitamin C levels and the risk of periodontitis. CI: We hypothesized that an inverse association exists between serum and salivary TAOC levels and chronic periodontitis, and that Vitamin C intake will restore the TAOC levels and periodontal health.²⁰ However, the role of vitamin C as an antioxidant in periodontitis remains unclear [5]. The mechanism of periodontal destruction that results in oxidative stress serves as the basis for this hypothesis. Polymorphonuclear neutrophil (PMN) hyperactivity has been shown to release ROS, which initiates the host-immune response in periodontitis. This alters both local and systemic antioxidant activity found a positive correlation between serum TAOC levels and periodontitis, pointing to the possibility of supplements raising TAOC levels and reducing periodontal inflammation. showed decline level of salivary TAOC levels (40%) was related with periodontitis. suggested that non-enzymatic antioxidants like catalase, superoxide dismutase, and glutathione peroxidase are linked to periodontitis. Additionally, salivary TAOC levels decreased during periodontitis and increased to following NSPT. These findings provided us with the justification for using antioxidant supplements in addition to conventional periodontal therapy.

