

COMPARATIVE ESTIMATION OF SALIVARY TOTAL ANTIOXIDANT CAPACITY IN PERIODONTAL HEALTH AND CHRONIC PERIODONTITIS - A PILOT STUDY**RAGHAVENDRA U¹, ANUPAMA RAO^{2*}, JYOTHI DESOZA¹, VINITA RAMANATH PAI¹, SINDHU NAIR¹, VIJAYA KUMAR², BHUVANESH SUKHLAL KALAL¹**¹Department of Biochemistry, Yenepoya Medical College, Yenepoya (Deemed to be University), Mangalore, Karnataka, India. ²Department of Periodontology, Yenepoya Dental College, Yenepoya (Deemed to be University), Mangalore, Karnataka, India.

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Ref: <https://innovareacademics.in/journals/index.php/ajpcr/article/view/28409/15851>**ABSTRACT**

Objective: Gram-negative bacteria provoke polymorphonuclear leukocyte (PMN) to release reactive oxygen species in chronic periodontitis (CP). Inability to maintain a balance between oxidative stress and antioxidant levels makes patients more susceptible to periodontal disease. The present study aims to estimate and compare salivary total antioxidant capacity (TAOC) in subjects with clinically healthy periodontium and patients with CP.

Methods: After fulfilling the selection criteria, a total of 20 subjects (10 with clinically healthy periodontium and 10 with CP) were subjected to unstimulated salivary sample collection for biochemical estimation of TAOC by spectrophotometric assay using Kovacevic method. Analysis of data was done with unpaired student t-test, using SPSS version 22 statistical program.

Results: Salivary TAOC was significantly higher in subjects with clinically healthy periodontium compared to CP patients. It was statistically significant ($p < 0.001$).

Conclusion: This study indicated increased levels of salivary TAOC in patients with CP compared to clinically healthy periodontium. Alteration in defensive antioxidant status could be a risk factor in the progression of periodontal disease.

Keywords: Total antioxidant capacity, Chronic periodontitis, Polymorphonuclear leukocyte, Reactive oxygen species, Free radicals, Oxidative stress, Antioxidants.

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