

Salivary Total Protein and Calcium in Caries Active and Caries Free Adults

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Published August 26, 2021

ABSTRACT

Background: Dental caries are a microbiological disease of the teeth resulting in localized dissolution and destruction of calcified tissue. The oral homeostasis is maintained by saliva by modulating the ecosystem within the oral cavity. Saliva protects the structure of teeth from caries development and prevents demineralization. The ability of saliva to prevent the formation of dental caries depends on the composition and quantity of the secretion.

Aim: To evaluate the salivary total protein and calcium in caries-active and caries-free adults.

Materials and Methods: 70 adults were divided into caries-active and caries-free based on DMFT score with 35 in each. Saliva collected was estimated for total protein by Biuret Reagent and calcium by the OCPC method.

Statistical Analysis: Statistical analysis was performed by using an independent sample t-test to compare mean values between the two groups. A p-value of less than 0.05 considered significant at a 95% confidence level. The statistical software SPSS version 18.0 was used in the analysis.

Results: The mean total protein in caries-active is 0.02 ± 0.01 g/dL and caries-free is 0.03 ± 0.02 g/dL and mean calcium in caries-active is 2.63 ± 1.87 mg/dL and caries-free is 0.39 ± 0.88 mg/dL.

Conclusion: Based on the present study and available literature it can be concluded that total protein is decreased in the saliva of caries active patient and calcium is increased in the saliva of caries-active adults when compared to caries-free adults.

Keywords: Dental caries, Calcium, Total protein, Saliva

Abbreviations: DMFT: Decay, Missing, and Filled Teeth, OCPC: O-Cresolphthalein Complexion, SPSS: Statistical Package for the Social Sciences

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Citation: Singh MK, Rai G & Velugu GR. (2021) Salivary Total Protein and Calcium in Caries Active and Caries Free Adults. *Proteomics Bioinformatics*, 3(S1): 5.

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