Salivary Urease and ADS Enzymatic Activity as Endogenous Protection against Dental Caries in Children

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Resumen
The aim of this cross sectional study was to evaluate the ureolytic and arginolytic activities of saliva in children and associate them with their caries status. Study design: 65, 8 year old children, were randomly selected. The ureolytic and arginolytic activity of non stimulated saliva was studied and associated with DMFT and dmft index. Saliva of children were sampled under fasting conditions; Children refrained from any oral hygiene procedures during the 12 hours that preceded the sample collection. Caries activity was scored and divided in 3 groups: Group A: Index zero: without lesions; Group B: Moderate Index: I to 3 enamel caries lesions; and Group C: High Index: more than 4 dentin caries lesions. Results: DMFT scores were moderate: 0.4(± 0.79) and dmft: 2.78(± 2.45). Results expressed in μmol/min/mg/protein, for urease activity were statistically significant (p=0.048): Group A= 0.69 (+/- 0.7); Group B= 0.45 (+/- 0.43); and Group C= 0.39 (+/- 0.55). The arginine deiminase activity was not statistically significant (p=0.16): Group A= 2.53 (+/- 1.42), Group B= 2.31 (+/- 1.57) and Group C= 1.97 (+/- 2.0). Conclusion: Higher levels of ureolytic (statistically significant) and arginolytic activity (trend) in saliva were associated with lower DMFT/dmft scores in 8 year old children. There was a higher production of ammonia from the arginine deiminase system than the urease enzyme in saliva (p>0.05).

Palabras clave
Palabras clave de autor: children; caries; DMFT/dmft; urea; arginina; urease; ADS; ALKALI PRODUCTION; DEIMINASE SYSTEM; PLAQUE PH

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Editorial

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