

Comparison of the Salivary Immunoglobulin Concentration Levels between Children with Early Childhood Caries and Caries-Free Children

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ABSTRACT

Background: Early Childhood Caries (ECC) is one of the most common chronic childhood diseases. In spite of the global decrease in dental caries in the past decades, ECC has become a significant problem in many developing countries and also in a few industrialized nations. Saliva as a host factor can play an important role in the process of dental caries. **Objective:** The aim of this study was to compare sIgA and IgG as saliva components between ECC and caries-free groups. **Methods:** In this cross-sectional study, samples of unstimulated saliva of 90 children (45 in ECC group & 45 in caries-free group) were taken with Scully method. Then the concentration levels of sIgA and IgG were measured with Enzyme Linked Immunosorbent Assay and Single Radial Immunodiffusion methods. **Results:** Mean concentration levels of salivary sIgA and IgG were significantly higher among children with ECC ($p < 0.05$). There was also a weak inverse correlation between sIgA level and DMFT index in ECC group but it was not statistically significant ($p = 0.056$). **Conclusion:** The high concentration of salivary immunoglobulin in children with ECC may be associated with an increased antigenic load, leading to high production of antibodies.

Keywords: Dental Caries, Immunoglobulins, Saliva

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