Abstract

Background and Aim

Early childhood caries (ECC) is one of the most common chronic childhood diseases. Furthermore, saliva as a host factor plays an important role in keeping the integrity of oral structures and some salivary characteristics and components have been suggested as factors in children for development of ECC. This study compared pH and immunoglobulin A levels of unstimulated saliva in 3-6 years old children with and without early childhood caries in patients referred to Ardabil Dental School on 2018-2019.

Materials and Methods

In this descriptive cross-sectional trial, 82 children of 3-6 years old with and without involvement of early childhood caries (41 for each group) were selected. Following examination and diagnosis of the children, they were assigned into 2 groups regarding incidence or not involving early childhood caries. Unstimulated saliva of the children were collected by spitting method at 9-10 p.m. The collected saliva were freezed at -70°C temperature and the temperature were reached up to the room temperature when measuring the variables. Salivary pH levels were estimated by electronic pH meter and the A Immunoglobulin levels were estimated by ELISA method and specialized kits. Salivary pH and A immunoglobulin levels for both groups were statistically analyzed by independent T-Test.

Results

Salivary A immunoglobulin levels in the children with and without early childhood caries were 1.46±0.27mg/dl and 2.63±0.37mg/dl respectively while salivary pH levels of children with and without early childhood caries were 7.05±0.42 and 7.69±0.37 respectively. Salivary A immunoglobulin ($p=0.001$) and pH levels ($p=0.001$) in children with early childhood caries were significantly lower than children without early childhood caries.

Conclusion

Then, incidence of early childhood caries in 3-6 years old children decreased salivay pH and immunoglobulin A levels significantly as compared to the children without early childhood caries. Then, the decreased levels of these parameters are suggested as risk factors for early childhood caries.

Keywords
Early childhood caries, Potential of Hydrogen (pH), Immunoglobulin A, Unstimulated saliva