

THE RELATIONSHIP BETWEEN TAS2R38 AND TAS1R2 POLYMORPHISMS AND DENTAL STATUS IN OBESE CHILDREN

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Abstract

Aims of the study: We aimed to investigate the effects of TAS2R38 (bitter taste gene) and TAS1R2 (sweet taste gene) gene polymorphisms, which are the most important members of the Tat gene family, on the dental status of obese and normal-weight children. **Methods used to conduct the study:** The study included 78 healthy children and 100 children diagnosed with obesity (5 - 16 years old). Anthropometric measurements and the dental status of the children were evaluated. The DMFT/dmft index of teeth was determined, using standards methods recommended by world health organization. Blood samples were collected from all subjects and were analyzed via PCR using specific primers for the genetic analyses. Five single nucleotide polymorphisms (SNPs) indicating TAS2R38 gene and TAS1R2 polymorphisms were investigated. Truncate poisson and truncate negative binomial modeling approach used with the data. **Results of the study:** DMFT score was low in obese children and it was high in children who doesn't sense bitter taste (non-taster). While obese non-taster children had increased DMFT scores, normal weighted non-taster children had decreased DMFT scores. **Conclusions drawn from the study and clinical implications:** The alanine, valine, and isoleucine (AVI), as well as the proline, alanine, and valine haplotypes (PAV), of the TAS2R38 gene are associated with DMFT score and obesity. **What's Now:** It is known that the sense of taste affects nutrition. Moreover, nutrition is associated with caries and obesity. **What's New:** The authors studied caries and obesity along with taste genes in this study. There are little studies in the literature that study obesity, decay and taste genetics together, and this study clarifies this issue in three ways. At the same time, an effort was given to the statistical analysis part **Keywords:** Oral health, childhood obesity, tooth decay, TAS2R38 polymorphism, diet, genetic

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