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Abstracts

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Erosive Tooth Wear in Brazilian Adolescents Enrolled in an Oral Health Care Treatment Program

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The present study assessed the occurrence and severity of erosive tooth wear (ETW) in 618 10–15 years old adolescents enrolled in an oral health care treatment program in the region of Itapoã, Federal District of Brazil. In the framework of this school based program, two mobile dental offices were available for examination and treatment of the adolescents. A questionnaire about dietary, self-performed oral health care and other life style habits was answered by the participants. Parents answered another questionnaire about socio-economic data. Clinical and radiographic examinations were performed including registration of dental caries, fluorosis and erosive tooth wear. The Basic Erosive Wear Examination Index (BEWE) was employed to assess the occlusal surfaces of permanent first molars and the palatal and buccal surfaces of maxillary anterior teeth. Erosive tooth wear was observed in 17.3% of the adolescents, the majority (16.5%) presenting initial loss of surface texture (score1). Distinct erosive wear (score 2) was observed in five participants only. There were significant differences in erosive tooth wear between age groups (10–12 year olds <13–15 year olds; $p = 0.002$, X^2 test), but not between genders ($p = 0.288$). More than half of adolescents presenting erosive tooth wear reported consumption of fruits or industrialized juices more than once per day and 37.4% also reported consumption of acid carbonated beverages at least once daily. Adolescents who reported a consumption of acid carbonated beverages more than once weekly presented significantly higher erosive tooth wear than those who

reported occasional consumption ($p = 0.030$). An effective management of ETW is required for the population studied, both for preventing the development of new erosive lesions and controlling the progression of existing active erosive lesions.

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In the Quest for Understanding the Genetic Role in Dental Caries

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We have previously shown that AQP5 genetic variation and expression in whole saliva are associated with caries experience suggesting that this gene may have a functional role in protecting against caries. To further explore these results, we tested if variants in and flanking this gene are associated with subclinical dental enamel mineral loss. DNA and enamel samples were obtained from 53 individuals. Enamel samples were analyzed for Knoop hardness indentation length of sound enamel, integrated mineral loss after subclinical carious lesion creation, and change in integrated mineral loss after remineralization. DNA samples were genotyped for single nucleotide polymorphisms using TaqMan chemistry. Chi-square and Fisher's exact tests were used to compare individuals above and below the mean sound enamel micro-