

Dental Fluorosis related to community's fluoridation method used

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Resume

Objetives. To compare the prevalence, extent, and severity of dental fluorosis (DF) in 12-year-old schoolchildren subjected to different community fluoridation programs; salt (S) and water (W).

Methods. Two population-based, cross-sectional studies, methodologically similar, carried out in the cities of Montevideo (MVD) and Porto Alegre (POA) that used salt and water, respectively, were compared. Data collection included the application of structured questionnaires and clinical examination by calibrated examiners. The presence and severity of fluorosis per tooth was recorded according to the Thylstrup and Fejerskov index (TFI). The relationship between DF and the community fluoridation method was determined through Logistic Regression (prevalence and severity) and Poisson (extension).

Results. A total of 2,682 12-year-old schoolchildren (1,528 in POA and 1,154 in MVD) were examined. POA showed a higher prevalence (95.1; 95% CI=94.0-96.2) and extension (15.1; 95% CI=14.7-15.4) of DF than MVD. Mild severity injuries were the most frequent in both cities. Injuries of moderate/severe severity were more prevalent in POA (p value <0.001). Schoolchildren who consume S are less likely to present FD (OR= 0.24, 95% CI= 0.18-0.33), less likely to present moderate/severe injuries (OR= 0.19, CI= 0, 15-0.25) and less extension (RR= 0.76, 95% CI= 0.75-0.78).

Conclusions. This is the first comparative study of DF between two Latin American cities with similar population and climatic characteristics (MVD and POA), which have different community fluoride administration measures (S and W). Mild grade injuries were the most frequent in both communities.

Key words. fluorosis, adolescents, community fluoridation method, epidemiology

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