

Relationship Between the Prevalence of Fluorosis and Dental Caries in the Kutch District of Gujarat- A Cross-Sectional Study

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Abstract

Background and Aim: Though the recent reports demonstrate a decline in the dental caries trend in most developed nations, mainly attributed to the use of fluorides in different forms. The association between dental caries and endemic fluorosis has not been extensively researched in epidemiological studies in various states of India; hence the present study was conducted to assess the relation between the prevalence and severity of fluorosis and dental caries in the Kutch district in Gujarat. **Material and Methods:** The study was conducted over a period of 6 months. A total of 600 students aged between 9-19 years in various schools of the Kutch district of Gujarat were examined for dental caries and fluorosis. The students were divided into 3 groups as Group I (9-12 years), Group II (13-15 years) and Group III (16-19 years). Dental fluorosis among the students was assessed using Deans Fluorosis Index (Modified criteria- 1942). DMFT index (decayed, missing and filled teeth) for permanent dentition was used for determining the prevalence of dental caries. **Results:** Out of 600 students examined, 305 students had no or questionable fluorosis while only one student had severe fluorosis. While examining caries prevalence, 489 students had caries while 111 had no dental caries. Group II had highest incidence of caries. Group II had highest prevalence of fluorosis as 162 students had fluorosis and Group I had lowest prevalence of fluorosis as 34 students in this group had fluorosis. 190 males and 92 females had fluorosis while 301 males and 178 females had caries. **Conclusion:** According to the results of the present study conducted in an endemic fluorosis district of Gujarat (Kutch), a significant association between dental caries and dental fluorosis is observed in age group 13-15 years. Also DMFT score was high in students having fluorosis mainly in age group 13-15 years which shows direct relationship among the caries prevalence and fluorosis.