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PREVALENCE OF DENTAL FLUOROSIS AND ASSOCIATED RISK FACTORS AMONG A GROUP OF 12-15 YEARS OLD CHILDREN IN ZAGAZIG CENTER IN EGYPT

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ABSTRACT

This study was conducted to determine the prevalence of dental fluorosis and associated risk factors among a group of 12-15 years old children in Zagazig center. Sharkia governorate, Egypt. 3600 children of both sexes with mean age of (13±0.6) years old were randomly selected from preparatory schools in urban and rural districts. Dental fluorosis was measured using modified Dean index. Well designed questionnaire was used to assess sociodemographic information and different methods and frequency of fluoride exposure. The results showed that the overall prevalence of dental fluorosis was 25.6% with no significant difference between different age groups. It was 22.6% in urban while it was 31.7% in rural area the difference was statistically significant. The result of *water analysis* showed that the fluoride concentration ranged from (0.26 ppm) to (0.88 ppm) in different districts of Zagazig center. A significant positive correlation was found between fluoride level in the drinking water and fluorosis prevalence.

With respect to risk factors of dental fluorosis, it was found that the most significant contributing variables were tooth brushing using fluoride tooth paste at young age, high fluoride concentration in the drinking water, frequently fish intake, and chicken soup intake at young age.

KEY WORDS: Fluoride, tooth past, brushing, drinking water, fluorosis, prevalence.

INTRODUCTION

Fluoride is essential component in the prevention of dental caries. As with other nutrients, fluoride is safe and effective when used and consumed properly. While necessary to prevent caries from an early age the use of fluoride can increase the risk of

having fluorosis. Evaluation of that risk is always important in balancing the risk and the benefit of the fluoride use⁽¹⁾

Dental fluorosis is a chronic intoxication with fluoride that affects the tooth mineralization process resulting in hypo mineralization of enamel⁽²⁾. It is

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