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Extrinsic Black Stain in Deciduous Dentition – An Overview

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Editorial Article

Any change in the colour of tooth might influence both esthetics and personal traits such as self-confidence and emotional stress. A deviation from the primary tooth colour which is usually white, considered as discoloration [1]. The etiology falls into two categories. Category 1 includes compounds that are incorporated into the dental pellicle, which is a salivary glycoprotein and result in stain, whereas category 2 involves the chemical interaction between hydrogen sulfide producing micro-flora and iron. The black stain due to iron medication results from the interaction of gingival crevicular fluid and bacterial hydrogen sulfide with ferric sulfide which is an insoluble form of iron. Black extrinsic tooth stain has been determined to be a form of bacterial plaque, through morphological studies. The insoluble ferric compound in the plaque produces the black colour. Multiple sources of iron-fortified infant foods are the reservoir for the ferric compound producing black stain. Various factors include amount, type, influence of stimulators and inhibitors of iron. Microbiologically, black stain consists of increased numbers of Actinomyces, Cardio bacterium, Haemophiles, Corynebacterium, Tannerella and Treponema and decreased numbers of Campylobacter. Formation of black stain results in alteration of normal oral flora. Clinically black pigmented stains appear as dark lines parallel to the gingival margin or as a partial combination of dark dots rarely extending beyond the cervical one third of the crown region. Black-pigmented anaerobes in oral cavity includes Prevotella nigricans, Porphyromonas gingivalis and Prevotella intermedia. Previous studies mention that Prevotella melanogenic was linked to black tooth stain. Bacteriological examinations have mentioned that Actinomycetes as the main bacteria in the extrinsic black stain formation [2]. Cervical enamel following the contour of the gingiva is the usual site for extrinsic black stain. Sometimes, these areas might lead to hypoplasia and dental caries resulting in early loss of deciduous tooth. Inappropriate space maintenance leads to maligned tooth which in future needs orthodontic intervention. Usually black stains are seen on the labial surfaces of maxillary and mandibular anterior teeth. Social interaction of preschool children is also affected due to extrinsic black stain. Hemoglobin, an oxygen carrying molecule, is produced by expansion of red cells which is in turn regulated by iron intake preventing the development of iron deficiency anemia [3,4]. Iron intake and source must be assessed by the healthcare professionals. Main emphasis is on the parent education regarding the preventive measures of extrinsic stains in deciduous dentition. Oral hygiene maintenance instructions such as twice daily tooth brushing, flossing and gentle mouth washing must emphasize to their wards by the parents. Dental intervention such as professional teeth cleaning or oral prophylaxis comes into the role in case of extrinsic tooth stain.

References

1. Mahmoodian J, Hashemi S. The frequency of different types of primary teeth discoloration in children in the department of pediatric dentistry, faculty of dentistry, Tehran University of Medical Sciences, in 1999 - 2001. Journal of Dentistry, Tehran University of Medical Sciences 2004; 1: 63-65.
2. Li Y, Zhang Q, Zhang F, Liu R, Liu H, Chen F. Analysis of the Microbiota of Black Stain in the Primary Dentition. PLoS ONE. 2015; 10: e0137030.
3. Reid JS, Beeley JA, MacDonald DG. Investigations into black extrinsic tooth stain. J Dent Res. 1977; 56: 895-899.

4. Tredwin CJ, Scully C, Bagan-Sebastian JV. Drug-induced disorders of teeth. J Dent Res. 2005; 84: 596-602.