CASE REPORT

AESTHETIC RESOLUTION OF ENAMEL HYPOPLASIA

Dayane Carvalho Ramos Salles de Oliveira, Raisa Amorim Malafaia, Livia Rodrigues de Menezes, Eduardo José Souza-Junior, Katia Regina Hostilio Cervantes Dias, Silvia Maria Ribeiro de Alencar Gonçalves

ABSTRACT

Enamel hypoplasia corresponds to the changes and irregularities present in the enamel surface, which may affect the aesthetics, especially in anterior teeth. In this particular case the affected region is in the anterior buccal surface, affecting the aesthetics without directly affecting the dental function. Thus, the objective of this work was to present the applicability of tooth enamel micro abrasion in a young patient to solve aesthetics problems, devolving the smile harmony and naturalness using a noninvasive technique. This paper reviews the describes a clinical report of an aesthetic resolution of enamel hypoplasia in a preadolescent.

Key Words: Enamel hypoplasia; tooth enamel micro abrasion; aesthetic; young.

Introduction

The enamel hypoplasia may result from systemic factors (local or hereditary), causing defects and irregularities in the enamel surface. This type of change may present itself ranging from a mild form, resulting in an erosion of the enamel surface or manifest itself in a more severe form, causing the loss of tissue in the tooth crown, so if the ameloblastic activity has stopped for a long period of time, there will form large areas of irregular enamel.

Enamel lesions such as pits, grooves or areas of enamel lost characterize the enamel hypoplasia which can be regular or irregular. The local manifestation of coronary damage is related to the loc, restoth ameloblastic activity at the time of the injury. Among the different forms of the treatment approach of dental staining caused by enamel hypoplasia, tooth whitening, enamel micro abrasion, direct and indirect adhesive restorations are the resolution of choice. However, thinking in a minimally invas, the dental enamel micro abrasion in association or not with tooth whitening approach are the first conduct to resolve these aesthetic problems of the smile. Micro abrasion enamel technique was initially developed through the use of hydrochloric acid 18% associated with pumice to remove discolored enamel surface. This has shown itself to treat dental stains whitish spots which include the coming of the following conditions: fluorosis, a white spot demineralization after orth, localized hypoplasia due trauma or dental infection and idiopathic hypoplasia, the discoloration is limited to the most superficial layer of enamel dental. The hypoplasia is related to amelogenesis imperfecta which defects in enamel comes from problems in enamel organic matrix, that may affect one or more dental elements at various levels of severity.

The whitish and opaque of these spots corresponds to the fact that a hypomineralized area is confined in a few micrometers below the outer mineralized surface. This region is responsible for the white appearance due to its higher porosity which reduces the translucency of the teeth by spreading the light falls on this area. The intensities of the opaque areas can be reduced over time as a result of changes in the outer layer of enamel by abrasion and remineralization.

This case report sought to resolve a clinical picture of dental staining using micro abrasion enamel as a non-invasive treatment, but viable for improvement aesthetics of the frame considering the low level of aesthetics required and the patient’s age.

Case Report

A 12 years old Caucasian male patient reported to the clinic of the Dental School of Federal University of Rio de Janeiro complaining about dental staining in the anterior teeth. After anamnesis and clinical assessment it was diagnosed a clinical case of enamel hypoplasia of the maxillary anterior teeth (Figure 1). Evaluated as favorable shape and shade, the aesthetic proposed was to carry out enamel micro abrasion using Whiteness RM (FGM) (Figure 2a), which was dispensed directly to the tooth affected surface with the tip of the syringe of the product (Figure 2b) and rubbed with the aid of a rubber spatula of the kit for 10 seconds (Figure 2c) in a sequence of.

Figure 1. Initial smile showing white spots on the buccal surfaces of the involved teeth, Figure 2. Application of the micro abrasive agent, Figure 3. Immediate outcome before and after micro abrasion.
six applications. After each application, the product was removed with water. When completed six applications, a neutral fluoride agent was applied on the tooth affected surface. After two sections of micro abrasion as described above, it was obtained a satisfactory cosmetic improvement for the patient with no sensitivity after the treatment (Figures 3a-c).

Discussion
Discusit™The dental micro abrasion is indicated for the removal of stains from tooth enamel by the friction of the structure of the enamel with abrasives with the assistance of rubber spatulas, obtaining as result the enamel surface loss and, consequently, the total or partial removal of the spots, improving the aesthetics and satisfaction as reported by several authors.3-9

This technique is a controlled and non-invasive method, which provides a minimal amount of wear compared with the remaining enamel, allowing the removal of surface stains without the need of other procedures.3-9 Veneers also provide satisfactory resolution artificially reproducing natural characteristics of tooth, however the demand for tooth wear it is not necessary in cases of lower commitment of the aesthetic appearance.3-10

Unlike most cases of wide aesthetic commitment, whose treatment typically involves direct or indirect restorations, according to the surface area involved and in accordance with the socio-economic status of the patient, as reported by different authors,3,11,12 the dental micro abrasion technique can be used in simpler treatments or in cases in which the patient’s age is an important factor to be considered.3,8,9

Conclusion
In conclusion, the tooth staining in adolescents can be achieved with enamel micro abrasion. However, it must be considered that in some cases the micro abrasion cannot fully resolve tooth staining, since it must consider the amount of enamel present avoid the dentin exposure and post-treatment sensitivity.

Authors Affiliations
1. Dayane Carvalho Ramos Salles de Oliveira DDS, MS student at the Restorative Dentistry Area, Piracicaba Dental School, UNICAMP, Piracicaba, SP. 2. Raisa Amorim Malafaia Undergraduate Student, Dental School, UFRJ, Rio de Janeiro, RJ. 3. Livia Rodrigues de Menezes MS student at Science and Technology of Polymeric Materials, Materials Institute, IMA-UFRJ, Rio de Janeiro, RJ. 4. Eduardo José Souza-Junior DDS, MS, PhD Student at the Area, Piracicaba Dental School, UNICAMP, Piracicaba, SP. 5. Katia Regina Hostilio Cervantes Dias DDDS, MS, PhD, Titular Professor, Dental School, UERJ and Associate Professor, Dental School, UFRJ, Rio de Janeiro, RJ. 6. Silvia Maria Ribeiro de Alencar Gonçalves DDS, Dental School, UFRJ, Rio de Janeiro, RJ, Brazil.

References
Address For correspondence

Dr. Eduardo José Souza-Junior DDS, MS,
PhD Student at the Dental Materials Area,
Piracicaba Dental School,
UNICAMP,
Piracicaba, Brazil.
E-mail: edujcsj@gmail.com

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