

مقایسه آزمایشگاهی تغییر رنگ مینای دندانهای شیری ناشی از مصرف سه نوع قطره آهن

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تاریخ ارائه مقاله: ۸۴/۱۱/۸ - تاریخ پذیرش: ۸۵/۵/۱۵

Title: Comparison of primary enamel discoloration caused by the use of three different iron drops (An in vitro study)

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Introduction:

Iron deficiency anemia is the most common health problem in childhood. One way to meet this important need in the body is to add iron supplement in our diet. This supplement is known as Ferrous sulfate in Iran. Teeth blackness in children especially after taking Iron drops and the parent's dissatisfaction is one of the most important reasons for visiting a dentist. Generally, parents have an idea that taking iron drops by the children is the cause of tooth decay, therefore they limit this vital supplement in their children's diet. The aim of this study was to compare of primary enamel discoloration caused by the use of three different iron drops.

Materials & Methods:

Quantitative stage: In this first stage of the study, 60 anterior primary teeth were selected and the necessary preparation were made. The level of iron absorption in etch group and the intact one were determined by Atomic absorption in 248.3 nonometers long wave and resolution of 0.062ppm.

Qualitative stage: In this stage, 7 teeth were put under scan electron microscope (SEM) after the primary preparation.

Results:

There was no significant difference in the iron absorption on the healthy teeth, between foreign iron drop and the one produced by Mashhad school of pharmacy. But the level of absorption in Iranian Iron drop was significantly higher (P=0.01). The absorption in etched teeth increased which might have been due to increased surface- (P=0.0001). There was no significant difference between experimental drops in the etched teeth.

Conclusion:

Iron drops that produced by Mashhad school of pharmacy had less discoloration on the primary enamel teeth. The more increased surface because of etching, the more change in color was observed and this was most prominent in Iranian iron drop. Color discoloration increased with frequency of iron drop intake.

Key words:

Iron drop, tooth enamel, enamel black discoloration, primary teeth.

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Journal of Dentistry. Mashhad University of Medical Sciences, 2006; 30: 247-54.