CLINICAL ORAL SCIENCE AND DENTISTRY

RESEARCH Open Access

Stains on Children's teeth and the treatment

Karimi M* **(D.M.D)**

Department of Pediatric Dentistry, Sepideh Dental Clinic, Iran

Received date: 24th October 2018, **Accepted date:** 22th November 2018, **Published date:** 24st November 2018.

***Corresponding Author:** Karimi M, Department of Pediatric Dentistry, Sepideh Dental Clinic, Iran, Tel. No: 00987136285000; Email: drmokarimi@yahoo.com

Introduction

Color changes are one of the most common esthetic problems in children's teeth. The appearance of yellow, brown, black or grey colors on the teeth might be due to the various causes of lifestyle factors, such as tooth decay, damage, and trauma of the tooth. The occurrence of these stains may have inherited and Intrinsic reasons, or even due to the appearance of some external factors on the tooth.

However different types of stains and color changes occur in children's teeth for a variety of reasons, each type of color change requires different treatments. In this article, we point out some types of stains on the tooth, the reasons for it and also the therapeutic measures needed to remove these stains.

Types and Causes of Stains

The cause of tooth stains in children is not always the result of colored foods or beverages. This group may suffer from stains caused by medication, fluoride, carious lesions, or trauma to the tooth.

Stains with extrinsic factors

This type of stains is related to the tooth enamel in children. Since this kind of spots on the tooth originates from the extrinsic factors, the dentist is usually able to clean, sparkle and whiten them by esthetic dental treatments.

Yellow stains: *Irregular oral hygiene:* Yellow teeth are usually caused by inappropriate diet and lifestyle in children, and the main reason for the formation of yellow spots is the non-observance of oral hygiene. Negligence in clearing the teeth (not using of toothbrush and dental floss) will result in accumulation the mass of food debris and dental plaques around the baby's teeth. The dental plaques are white, but the mass created around the tooth is yellowish. With the accumulation and hardening of these masses around the teeth, they become discolored and stained. Dental plaque and dental calculus are full of bacteria, which not only create a stain on the teeth but also may cause gum disease and ultimately leads to teeth loss.

Diet: This is the second most important factor that makes the teeth color yellow. The Acidic foods and foods that contain compounds such as Tannin (especially beverages, fruit juices, chocolate, berries and etc.) can change the color of the teeth in children [1].

Medications: Unfortunately, some things like the effects of some drugs that are not under control make the baby's teeth yellowish or discolored. For example, Amoxicillin (oral liquid) and Varnish Fluoride or even oral mouthwashes (such as Colorhexidine) an be mentioned [2-5].

Brown stains: The darker spots on the teeth of children can be a concern of their parents, although the prevalence of these spots on the tooth is too much for us to imagine. Similar to the causes of yellow stains, the brown spot on the children's teeth can also be

due to the consumption of some foods and their lifestyle. Some of these factors to include:

Caries: If the oral health is not done properly, the plaque and the dental calculus around the teeth are collected. The accumulation of these materials is a good habitat for oral bacteria; so if they are not removed well, bacteria will destroy the enamel and causes the tooth decay.

Celiac disease: It is a disease of the intolerance of gluten protein in the baby's body. This chronic digestive disorder can damage the enamel and cause yellow or brown spots on the tooth.

Intrinsic stains factors

The four main components that make up the baby's tooth structure are pulp, cementum, dentine, and enamel. When an injury or a discoloration happens in the internal structure of the child's teeth, the intrinsic spots occur. These stains in the internal structure of the tooth which is called Dentin cannot easily be treated. The Intrinsic spots are less common with foreign sources. They are usually created for the following reasons:

Dental trauma: When there is a blow to the teeth, internal spots are created. These injuries can damage the nerve and impair the flow of blood to the teeth. In children, these complications may affect the formation of enamel during permanent teeth eruptions. These complications cause grey or dark spots on the permanent tooth.

Medications: Some types of medications can create stains on the baby's teeth before their permanent teeth erupt. One of these medications is Tetracycline. This antibiotic can affect the internal structure of the tooth and cause grey and black spots on the child's permanent teeth [6,7].

Linezolid is used for the immunocompromised patient with Cellulitis is the other drug which caused discoloration of teeth [8,9].

Ciprofloxacin is another prescribed medicine which has been reported with a greenish discoloration in the teeth after consumption by children [10].

During the pregnancy and childhood, it is very important that physicians prescribe medications that are free from any adverse effect on the teeth.

Grey and black stains

These types of spots are usually caused by external factors such as foods or beverages. An exception is a high exposure to natural mineral fluoride. Exposure to large amounts of natural minerals, especially at an early age, can ultimately cause damage and build-up of stains in the internal structure of the teeth. This condition may cause the formation of black or grey spots on the child's tooth.

Fluorosis: This occurs in early childhood due to the excessive use of fluoride. Fluoride naturally is found in water. It is also used in many dental treatments (preventive dentistry) that prevent dental caries. Although fluoride is not merely harmful by itself it can cause brown spots on the tooth enamel. Fluorosis can also be seen in grey color; mild fluorosis creates white veins appearance on the teeth.

Removing External Stains on the Teeth

External stains are easily removed from the baby's tooth because these are created on the outer layer of the teeth. Typically, darker spots are harder to be removed on children's teeth. Debridement and tooth scaling, whitening or even some abrasive treatments can be considered as effective solutions to eliminate these stains.

Teeth whitening: This can be done in the clinic which is safe if under the supervision of an esthetic dentist is performed. This method has the most effective in whitening and brightening of the teeth. By a specialized method of teeth whitening, a dentist can remove 4 to 5 spots in each treatment session and prepare that for the next session. Whitening of teeth with this method is not permanent, but the results remain one to two years depending on the lifestyle of the child.

Dental bleaching without prescription: Various dental products, such as bleaching tubes of tubes of toothpaste, whitening tapes, pens, and gels, can purchase and used without a prescription. It is advisable to investigate these products and have complete information about their contents because some of these over counters products with high abrasion features can be detrimental to the child's tooth enamel.

Removal of Internal Spots of the Teeth

Because these stains are caused by factors related to the internal part of the teeth, it is almost impossible to remove them easily, for this reason, to whiten and remove these spots, it is necessary to penetrate to enamel, without any damages to the tooth structures. There are some treatments such as non-vital whitening of the tooth in which the internal structure of the tooth is whitened. This method can only be performed when a root canal therapy has been done.

Non-vital bleaching

If the tooth darkens after root canal therapy, the dentist can whiten the teeth with bleaching agents. This treatment, which is called non-vital whitening, can be done when the canals are completely cleaned and disinfected, and then filled with the bleaching agents. It stays in the canals and is usually replaced once a week. Over the time, the treated teeth should begin to whiten from the inside out.

References

1. Haakon N (1977) Discoloration of dental pellicle by tannic acid. Acta Odontologica Scandinavica 35: 305-310.
2. Mey-Boom RH, Verduijn MM, Sleemvoorden MG, Dekens-Komter JA, Van-Puijen Brock EP (1996) Reversible tooth discoloration during oral use of antibiotics (in Dutch). Med Tijdschr Geneeskd 140: 207-209.
3. Dewit ME, Stricker BH, Porsius AJ (1996) Discoloration of teeth by drugs (in Dutch). Med Tijdschr Tandheelkd 103: 3-5.
4. Garcia-López M, Martinez-Blanco M, Martinez-Mir I, Palop V (2001) Amoxicillin-clavulanic acid related tooth discoloration. Pediatrics 108: 819-820.
5. Den-Besten PK (1999) Mechanism and timing of fluoride effects on developing enamel. J Public Health Dent 59: 247-251.
6. Guggenheimer J (1984) Tetracycline and the human dentition. Compend Contin Educ Dent 5: 245-254.
7. Wallman IS, Hilton HB (1962) Teeth pigmentation by tetracycline. Lancet 1: 827-829.
8. Matson KL, Miller SE (2003) Tooth discoloration after treatment with Linezolid. Pharmacotherapy 23: 682-685.
9. Ma JS (2009) Teeth and tongue discoloration during Linezolid therapy. Pediatr Infect Dis J 28: 345-346.
10. Lumbiganon P, Pengsaa K, Sook-Pramee T (1991) Ciprofloxacin in neonates and its possible adverse effect on the teeth. Pediatr Infect Dis J 10: 619-620.