

Cosmetic Dentistry: Unnatural Coloring of the Dentition

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Abstract

Principles dictate policy, but culture determines fashionable practices. Disclosing solutions, as dyes, have been used to detect biofilm on teeth for decades. This article appraises principles of cosmetic dentistry and reports a new fashion-fad of unnatural coloring teeth. This practice is becoming more popular to color match fashion accessories like nail polish, lipstick and eye-shadow. Rather than gratuitous decoration, the prime objective of dentistry should be prophylaxis of tooth and gum disease, with conservation or restoration to ideal pristine dentitions of what remains. However there seems to be a growing demand for artificial coloring of teeth, and the dental profession should be prepared to address it.

Keywords: Colored; Cosmetic; Dental-paint; Dentistry; Rainbow

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Introduction

Principles dictate policy, but culture determines fashionable practices. The acme of Cosmetic Dentistry is Theatrical Dentistry. [1] Principles of Cosmetic Dentistry (CD) and Esthetic Dentistry have been enunciated elsewhere. [2]. The guiding principles of CD include: Ignoring physiological reaction, being temporary in nature, is reversible, does not imitate pristine nature, may be decorative, and the modifying procedure is not expected to be durable. [2] The opposite applies to Esthetic Dentistry (ED), namely: it evokes no physiological reaction, is permanent, aspires to emulate nature, is durable, and is not gratuitously decorative. [2], Clinically, disclosing solutions, like erythrosine or toluidene blue, have been used for decades to reveal biofilm on teeth [3,4]. The bacterial plaques in biofilm materia alba, absorb the dye and can be easily seen macroscopically where it accumulates, as the naked tooth material is resistant to it, and shows up as relatively white. [4] The effect is short-lived, and the dye dissipates in saliva within minutes. See Figure 1.

Aim: The purpose of this communication is to bring to the attention of health care workers and all dental service providers, the current fashionable practice of applying paint/varnish of unnatural tooth colors. This increasingly popular practice is described with discussion of some common characteristics, assessment of other cosmetic dentistry conventions, and forewarns of possible disadvantages arising from coloring teeth with paint.

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Figure 1: Teeth stained with disclosing solution of red erythrosine dye. The biofilm is a deep pink on the cervical and buccal area: the remaining tooth structure has no dye. [4]

Materials and Methods

"White Teeth Are Out, Rainbow Teeth Are In!" posted by Chuck Nowlin –Oct 25, 2018. [6]



Figure 2: The teeth have been colored turquoise green to match painted finger nails and the neck "ribbon-choker." [6]



Figure 3: Applying Chrom Tooth Polish (CTP) left, and selective coloring, right: [Picture: Instagram/@chromtoothpolish [6]

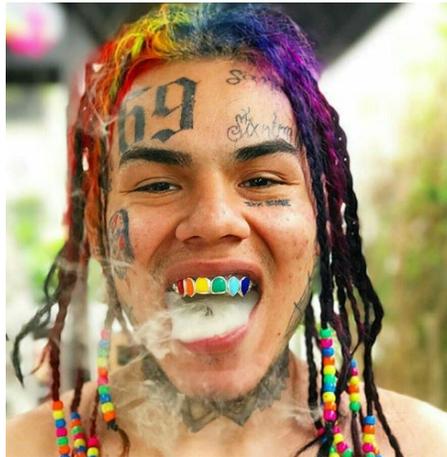


Figure 4: Six different tooth colors applied to the anterior maxillary incisors and canines. [Rainbowteeth-Hash Tags-Deskgram 2018] [6]

This commercial fashion promotes “Rainbow colors’ with the use of a Coloring Tooth Paint, or Chrom Tooth Polish (CTP) that covers the teeth. Shades, tints and tones of white are “out” and bright colored hues are “in”. The CTP application dries on the teeth and purported to last 24 hours. CTP is similar to nail polish and colored pink, blue, green and blue.

CTP’s are marketed as Chrom Temporary Tooth Polish, and claims to disappear without a trace. The manufacturers maintain it has no taste. It is intended to attract attention: “*After all, makeup isn’t for fitting in, it’s for standing out.*” [6]

Discussion

Principles dictate policy, but culture determines fashionable practices. That these color CTP paints are reversible places them firmly into temporary procedures and consequently are classified as “Cosmetic” or “Theatrical Dentistry.” Many tooth polishes are liquid monomers which set to solid polymers when applied to the nail. It is feasible that these color coatings, being similar to nail polishes, may react with composite resins and discolor or roughen existing “White” fillings”. Tooth adornment as Cosmetic Dentistry (CD) has been known in dentistry for millennia [5-7] and practice by some societies includes permanently staining the teeth black [8,9], place some form of decoration and/or practice mutilation [10-14].

Bleaching: Natural teeth are colored mainly with blends of tints (color plus white), with modifiers of shades (color plus black) and tones (color plus grey) of yellow orange and blue. Pure hues of color are non-existent in humans. Pathological discoloration from fluorosis [15] or from pathologic development (like tetracycline staining, or osteo- or dentinogenesis imperfecta), during tooth development and formation is known. [16]. The teeth demand advanced restorative procedures like veneers or full coverage crowns. [16] see Figures 5 and 6.



Figure 5: Tetracycline staining of teeth from use of tetracycline during tooth development. When the antibiotic was stopped normal tooth development continues. [16]



Figure 6: A severe form of pathological discoloration as fluorosis which occurs when available potable water has more than 1.2 ppm (parts per million or mg/L of fluoride).

This discoloration is often accompanied by hypoplasia and pitting malformation of the teeth. Healthy caries resistant, stain-free teeth will develop when eufluoride (0.7ppm →1ppm) of fluoride is in the water. [15,16]

Bleaching using carbamate peroxide or hydrogen peroxide and other bleaching agents (like acids) are used to whiten teeth. Sensitivity is a common complication of this and the bleaching is not permanent. This is a form of Cosmetic Dentistry, [17]. For example: See Figure 7.



Figure 7: Teeth before and after dental bleaching. The teeth are much lighter after treatment and should last a long time. (Hartley Dental using Boutique Whitening. Whitening. <https://www.hartleydental.co.uk/dental-health/teeth-whitening/> [17])

Gold and Jewelry

Gold has been used for centuries as a versatile dental restorative material, such as gold-foil, gold-copings for fused porcelain restorations, or cast pure for prostheses, crowns and bridges. [19,20] Consequently some people choose “to show a lot of gold” when they smile, and a range of tooth jewelry is available from which patients may choose. See Figure 4. You can “Style your Smile.” [20,21] with gold shapes, white crystals, pearls or colored stones.

“The Tooth Fairy® Top Quality Tooth Jewellery’ claims that should a person fit one of their jewels, there is “No drilling, no holes, is painless, does not harm the tooth and is temporary.” [21,22] This paper reports some using artificial unnatural coloring of teeth as a fashion fad. Currently unnatural variable coloring seems to be the most popular choice of CD decoration when tooth re-coloration is involved. See Figures 2→4. This too involves “No drilling, no holes, is painless, (and claims) does not harm the tooth and is temporary.” [4] (This Authors’ italics inserted.) Residual permanent damage may happen after painting teeth, and consequent regular monitoring of all restorations, adjacent gingivae and alveolar mucosa after Cosmetic Dentistry becomes mandatory.

Diamonds

Placing diamonds into teeth are permanent, but don't emulate nature. People who do this do so to make themselves more attractive, promote socialization and have an easy topic for light polite superficial conversation. Cosmetic dental diamonds are expensive and consequently has not become prevalent and as popular as tooth color coating. [5] See Figures: 4.5.6.7.



Figure 4: Two premolars (Teeth #23, and 24) with gold crowns and brilliant cut diamonds. The gold is a durable material for restorations, but its color places it squarely into being Cosmetic Dentistry. [5]



Figure 5: Pointer-diamond in platinum mount inserted into natural enamel tooth #13. [5]



Figure 6: A Rhinestone "diamond" crystal mounted into an acrylic tooth #21, of a Removable Partial Prosthesis (RPP). [5]



Figure 7: Figure 7: A small pointer diamond set directly into tooth #24 [5]

Discussion

Cosmetic Dentistry takes on a variety of forms. Gratuitous decoration is usually not done by dentists. At specific times of the year, lay-people may indulge in altered celebratory behavior, when oddities, superstitions or some form of hysteria grips society. For example: at Halloween in North America, Diswali in India, or Purim in Israel. The placing of diamonds to maximize sparkle-flash for cosmetic reasons, demands the stones be placed buccally and anteriorly. Reasons for placing diamonds in teeth derived mainly from supporting the patient's view that a diamond enhances their personal attractiveness and/or social status. [5] Few people believe cosmetic dental procedures have prophylactic or curative purposes. The central notion of cosmetic dentistry is to gain attention, shock the observer or disrupt observational expectation. Unnatural tooth coloration achieves this. Whether it is an advantage to have a dental cosmetic diamond attracting attention to an already optimal smile, adding a jewel or simply changing natural color to unnatural colors, remains highly contentious. The practice of coloring teeth is purely decorative, and is deemed cosmetic and unnatural, rather than restorative or esthetic in any way.

Conclusion

Concepts of personal beauty are as varied as peoples' personalities, and there will always be those who choose to use unconventional methods of personal adornment for private motivations and reasons. Decoration with color modification, jewelry, including gold and/or diamonds, detracts strongly from the central mission of dentistry. "Our objective should be the perpetual preservation of what remains..... And to emulate Nature in form and function." [23,24] This does not apply to discoloring teeth for gratuitous decoration. "In war, politics, business and academia, there are no morals only interests.". This applies to this form of color painting of teeth as Cosmetic/Theatrical Dentistry. [25]

The motivation to paint teeth with unnatural colors, is to create a fashion fad in those who feel they have to follow modish trends. Sharing this information is important and this article reminds the dental profession how pathological discoloration (like fluorosis and tetracycline staining) are real pathologies, while elective color modification for fashion fads result from frivolous thinking. Serious dental health care workers should discourage these fashion practices.

Declaration

The author has no conflict of interests for any products, practice or selection of material mentioned in this article.

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