

Gingival Depigmentation Using Brush Technique: A Case Report

Mohamed Sawi Mohamed^{1*} and Rahma Ahmed Ibrahim²

¹Master Degree of Prosthodontics, Faculty of Dentistry, Cairo University, Egypt

²Conservative dentistry department, Faculty of Dentistry, Beni Suef University, Egypt

***Corresponding Author:** Mohamed Sawi Mohamed, Master Degree of Prosthodontics, Faculty of Dentistry, Cairo University, Egypt.

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Abstract

Melanin granules are responsible for the dark color of gingiva. "Dark gum" may cause esthetic problems. There are different techniques helping in treatment of hyperpigmentation aiming to change the gingiva color for esthetic reasons, for every technique there are advantages and disadvantages. In this method the pigmentation removed with cost-effective and simple method for treating oral pigmentation. This report presents depigmentation of oral mucosa in a 25-year-old female. In this case no recurrent lesions were observed after 6 months.

Keywords: Depigmentation; Gingiva; Brush; Low Speed

Introduction

The gingiva with the teeth represent the most effective parts of drawing the smile. So any change in the color or the appearance of the gingiva will cause unpleasant appearance [1]. The color of the oral melanin pigmentation may vary from light to dark brown or black, depending on the amount and distribution of melanin in the tissue [2]. Gingival pigmentation ranges from physiologic reasons (e.g. racial pigmentation) to manifestations of systemic illnesses (e.g. Addison's disease) to malignant neoplasms (e.g. melanoma and Kaposi's sarcoma). It is essential to understand the cause of a mucosal pigmentation before planning the treatment of such lesion [3].

Medically physiologic melanin pigmentation is not considering a problem, but patients may complain that the color of their gingiva is unaesthetic. The gingiva related to the anterior teeth is the most affected region in the oral cavity, with high prevalence of melanin pigmentation in females more than males which has been reported to vary between 0% to 89% in different population [4]. Main known techniques for removal of these gingival pigmentation are cryotherapy, scalpel method, electrosurgery, bur abrasion and laser therapy [5].

Patient consent is mandatory step before beginning the depigmentation procedures which cannot be started until any sign of inflammation is resolved. So, phase-I therapy including oral hygiene instructions, scaling and polishing was scheduled.

The idea of this technique is it easy and simple and economic technique and also does not require extensive armamentarium.

Case Report

A female Patient aged 25yrs complaining of unaesthetic dark colored gums that were diagnosed as a physiologic racial pigmentation and gummy smile (Figure 1 and 2). So we planned for surgical treatment for hyper pigmented gingival and crown lengthening. Used technique was polishing brush abrasion of gingiva. Depigmentation was done in upper only due to patient request. In this technique we used engine rotary polishing brush which is widely used amongst dental professionals. The brush is attached to the appropriate hand piece which has either straight or contra-angled shanks. The brush is attached to the hand piece. The hand piece should always be used at a steady slow pace of 2500 - 3000 rpm. The pressure applied should be approximately 20 psi.



Figure 1



Figure 2

In this technique using low speed rotary instrument, with polishing brush placed directly on the gingiva for gingival abrasion targeting removal of any pigmented epithelium. In order to avoid any thermal trauma for the tissue it was attempted not to press at a single area for a long time (Figure 3).



Figure 3

Sometimes bleeding was obscuring the operator to check removal of pigmentation so it was regularly controlled by applying pressure with a piece of gauze piece (Figure 4). For enhancing healing and decreasing postoperative sensitivity a periodontal pack was mandatory and analgesic could be prescribed.



Figure 4

After 7 days, healing was completed, although it was noted some redness in the gingiva. But the patient was satisfied with removal of dark pigmented gingival. 21 days later after the surgery there wasn't any sign of loss of papilla or gingival recession (Figure 5).



Figure 5

Discussion

Gingiva considered the most frequently pigmented area of the intraoral tissues, Melanin granules are responsible for coloring of the tissues. It does not need or it doesn't take need more than three hours after birth to be appear in the oral tissues [6]. Nowadays different techniques are known in treating pigmentation as cryosurgery, abrasion with a diamond bur, gingivectomy, gingivectomy with a free gingival autografting, electrosurgery and chemotherapy all of them have advantages and disadvantages. Although gingivectomy completely removes all pigmented tissue but alveolar bone loss can be resulted, also delayed healing by secondary intention, and causing more pain for the patient. A free gingival graft usually need two surgical sites one is a donor site and the other one is recipient site so cause more pain and color matching may cause a problem. Cryosurgery is an excellent technique but not all operators have the skill to do it. chemotherapy, such as 90% phenol and 95% alcohol, have been recommended, but because of its chemical nature it may cause harming to the oral tissue. Recently, a laser become the most technique used because its ability to remove manufacturing cell of melanin also remove all pigmented cells but its price and cost prevents the laser to be available in all dental clinics [7]. Using brush technique which easily available in all clinics will turn the depigmentation to be more easy and simple and with lowest cost it requires a minimum of time and effort and finally If repigmentation occurs, the procedure can be done repeatedly in the pigmented areas without any limitations or causing any permanent damage.

Conclusion

Using brush with low speed is an effective technique in removing the pigmentation of the black gingiva with less time and effort in addition it is low cost and easy and can be done by any dentist in all dental clinics.

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