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**Case Report** 

# To enhance the pink Esthetics Gingival Depigmentation: A Case Report

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#### ABSTRACT:

Gingiva is the most commonly pigmented oral tissue. The color of the gingva is generally described as 'coral pink' and is dependent on the vascular supply, the thickness and degree of keratinization of the epithelium and presence of pigment containing cells ie melanin. Melanin is a non-haemoglobin derived brown pigment is responsible for the pigmentation of the gingiva. Gingival pigmentation doesn't pose any medical problem, but it presents a major esthetic concern in individual which leads to unpleasant appearance and embarrassment. This leads to the increase in demand of cosmetic procedure for depigmentation of gingiva.

Key words: Gingiva, Melanin, Pigment, Esthetic, Depigmentation.

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# **INTRODUCTION**:

Oral pigmentation occurs in all races of human.<sup>1,2</sup> with no significant difference in oral pigmentation between males and females.<sup>3</sup> it may be physiological or pathological. Physiologic pigmentation is perhaps genetically determined, but as Dummett suggested, the degree of pigmentation is partially associated with mechanical, chemical and physical stimulation.<sup>4</sup> In darker skinned people oral pigmentation increase, but there is no difference in the number of melanocytes between fair skinned and dark skinned individuals. There is some controversy about the connection between age and oral pigmentation. Steigmann and Amir et al stated all types of oral pigmentation appear in young children. Prinz, on the other hand, claimed physiologic pigmentation did not appear in children and was clinically visible only after puberty.<sup>1</sup> It may represent a localized anomaly of limited significance or the presentation of potentially lifethreatening multisystem disease.<sup>5</sup> Pigmented lesions are commonly found in the mouth. Such spread of lesions represent a clinical entities, starting from physiologic changes (e.g., racial pigmentation) to manifestations of systemic illness (e.g., Addison's disease) and malignant neoplasms (e.g., melanoma and Kaposi's sarcoma). There are various treatment modalities for esthetic depigmentation such as abrasion of tissues with diamond bur, slicing with scalpel, cryosurgery, electrosurgery, gingivectomy with free gingival autografting, acellular dermal matrix allografts, and various types of lasers.<sup>6</sup>

# **CASE REPORT**

A 21 year old female patient reported with the chief complains of dark black gums and she wants to get it corrected to enhance her esthetics. On clinical examination gingival of patent appears to be pigmented in the anterior portion of maxilla and mandible however gingival appears to be normal and does not have any inflammation. Considering patient concern cosmetic procedure was planned i.e gingival depigmentation. The whole procedure was explained to the patient and informed written consent was obtained by the patient. Routine oral hygiene measures were taken and haematological findings were also assessed.

Considering the patient concern gingival depigmentation was planned using electrocautery. Patient was prepared for the surgery by draping the patient and painting the patient using povidine iodine

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prior to the procedure. Anaesthesia was administered, electorocautery unit was used for the depigmentation of maxillary and mandibular anterior teeth region (Fig 1). Electrode was moved from mucogingival junction to free gingival margin including papillae to deepithelise the tissue (Fig 2). Remnants of the ablated tissues were removed using sterile gauge damped with saline. This was repeated until the desired depth of tissue removal was achieved. Surgical site was protected with noneugenol-based periodontal dressing "coe pak"to reduce the patient discomfort and postoperative instruction was given to the patient (Fig 3). An analgesic was prescribed for pain management and patient was recalled after 1 week for follow-up and removal of periodontal dressing. Healing of the surgical site was uneventful without any complication in both the maxillary and mandibular arch. On intraoral examination, the gingiva was appears to be normal, pink healthy (Fig 4). Patient was recalled after 1 month, and postoperative photographs were taken.







Fig 3: Periodontal Dressing placed





Fig 4: Post-operative 1week



Fig 5: Post-operative 1month

#### DISSCUSION:

Different techniques of gingival depigmentation shows different results, as per the above mentioned method patient experience less discomfort as there is minimal bleeding, no post-operative pain and postoperative healing and these findings are also supported by the report of Cicek<sup>7</sup> 2003. The efficiency of electrosurgery in the present case report could be explained based on Oringer's (1975)<sup>8</sup> "exploding cell theory." According to the theory, it is predicted that the electrical energy leads to molecular disintegration of melanin cells present in basal and suprabasal cell layers of surrounding operated and sites. Thus, electrosurgery features a strong influence in retarding migration of melanin cells from the locally situated cells, which were detected

clinically to be removed. Electrosurgery also poses some limitations that its repeated and prolonged use induces heat accumulation and undesired tissue destruction.

Repigmentation refers to the clinical reappearance of melanin pigment following a period of clinical depigmentation. The mechanism suggested for the spontaneous repigmentation is that the melanocytes from the normal skin proliferate and migrate into the depigmented areas.

Pigment recurrence has been documented to occur following the surgical procedure, within 24 days to 8-year long period. A study by Perlmutter *et al.*  $(1986)^9$  showed that gingival surgical procedures performed solely for cosmetic reasons offer no permanent results.

# CONCLUSION

Gingival depigmentation is a cosmetic surgical procedure in which hyper pigmentation is treated using various techniques. The selection of technique is dependent on operator experience, the selection of above mentioned technique was due to the better patient compliance and less discomfort postoperatively.

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