Esthetic Management of Gingival Hyperpigmentation: Report of Two Cases
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Abstract
Gingival hyperpigmentation is mostly caused by the physiologic deposition of melanin by melanocytes. Although melanin pigmentation of the gingiva is completely benign and does not present a medical problem, complaints of 'black gums' are common particularly in patients having a very high smile line. This paper reports two cases of gingival hyperpigmentation managed by surgical method.

Key Words: Gingiva; Melanin; Depigmentation; Esthetic

Introduction
Gingival pigmentation is presented as a diffuse deep purplish discoloration or as irregularly shaped brown and light brown patches. Gingival pigmentation results from melanin granules, which are produced by melanoblasts. Melanin, a non-hemoglobin–derived brown pigment, is the most common of the endogenous pigments and is produced by melanocytes present in the basal and suprabasal cell layers of the epithelium.(1, 2) Gingival melanin hyperpigmentation is not a medical but esthetic problem to many individuals especially those with gummy smiles. Fair-skinned people with moderate or severe gingival pigmentation frequently request cosmetic treatment of the black gums.(3) This paper reports two cases of gingival hyperpigmentation managed by surgical method.

Case Reports
Case 1: A 28-year-old female patient reported with the concern of her unaesthetic anterior gingiva. Hyper-pigmented gingiva was found on the labial surface of both maxillary and mandibular arches. The color of her gingiva was dark black (Fig. 1a). The maxillary anterior gingiva from 14 to 24 was depigmented by a split thickness technique (Fig 1b, 1c) and on mandibular gingiva from 33 to 43 was performed by gingival abrasion technique under local anesthesia (Fig. 1e). A periodontal pack was placed to reduce the postoperative discomfort. The healing was good with a considerable improvement in aesthetics (Fig 1f).

Case 2: A 18-year-old female patient was referred with complaint of gingival enlargement during orthodontic treatment. On examination gingiva was enlarged and moderate melanin pigmentation was seen (Fig. 2a). The patient's medical history was non-contributory. The abrasive depigmentation was performed by blade and bur. The melanin hyperpigmented gingiva from #13 to #23 was removed with the blade and bur under local anesthesia along with gingivoplasty (Fig 2b).

Discussion
Melanin pigmentation is the result of melanin granules produced by melanoblasts intertwined between epithelial cells at the basal layer of the epithelium.(4) The pathologic pigmentation can be the result of various factors such as endocrine disturbance, Albright's...
syndrome, Peutz-Jeghers syndrome, malignant melanoma, antimalarial therapy, trauma, hemachromatosis, chronic pulmonary disease, inflammation and racial pigmentation. (1)

Chemical solutions such as a mixture of 90% phenol and 95% alcohol has been used to destroy tissue down to basal cell layer but the agent is harmful to oral tissue and repigmentation soon develops. (5) Cryosurgery is followed by considerable swelling and it is also accompanied by increased soft tissue destruction. (6) Laser treatment is usually sufficient to eliminate the pigmented areas and do not require any periodontal dressing. The healing of the laser wound is slower than the scalpel wound, laser wound is a sterile inflammatory reaction. (3)

Gingival depigmentation by displacing the flap (push back technique), have been attempted but repigmentation reported faster than observed after gingivectomy or other procedures. (7) Free gingival grafting is quite an invasive and an extensive procedure and has the disadvantage of a second surgical site, additional discomfort and poor tissue color matching at the recipient site. (8)

Bur abrasion or de epithelialization using surgical bur has been employed but the technique is difficult to control the depth of de epithelialization. Moreover, bleeding and post-operative pain are anticipated. (9) The two cases documented here, have undergone a simple, easy and cost effective method of depigmentation which does not require any sophisticated equipment, available at all places resulting in improved esthetics and cosmetic appearance. The results were excellent and at 12 months follow-up, there were no evidences of repigmentation of the ginviva.

**Conclusion**

In conclusion the procedure adopted here is very easy, simple, cost effective and above all with minimum discomfort and esthetically acceptable to patient. During the follow-up periods, no recurrence of gingival hyperpigmentation was reported in any of the cases documented here.

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