Gingival Depigmentation for an Aesthetic Smile – A Case Report

Dr. Rizwan M. Sanadi1, Dr. Manan Doshi2 and Dr. Jayant R. Ambulgekar3

1Professor, Dept of Periodontics, Yerala Medical Trust & Research Centre’s Dental College and Hospital PG Institution, Kharghar, Navi Mumbai- 410210 Maharashtra, India.
2Consulting Periodontist, Mumbai, Maharashtra, India (manandosh08@gmail.com)
3Lecturer, Dept of Periodontics, CSMSS Dental College & Hospital, Aurangabad, Maharashtra, India

ABSTRACT: Aesthetics has become a significant aspect of dentistry. Clinicians are facing challenges in achieving acceptable gingival aesthetics as well as addressing biologic and functional problems. The colour of the gingiva plays an important role in overall aesthetics. However, the principles and the techniques of management of such problems associated with gingival melanin pigmentation are still not fully established. The degree of melanin pigmentation may vary from person to person. Although clinical melanin pigmentation does not present a medical problem, the demand for cosmetic therapy is commonly made by people with moderate gingival melanin pigmentation.

The present paper describes a case of simple surgical technique for management of gingival hyperpigmentation caused by excessive melanin pigmentation. It also highlights the relevance of an aesthetically pleasing smile especially in smile conscious individuals.

KEYWORDS: gingiva, melanin, hyperpigmentation, depigmentation, aesthetics

1. INTRODUCTION

Aesthetics has become a significant aspect of dentistry. Clinicians are facing challenges in achieving acceptable gingival aesthetics as well as addressing biologic and functional problems. The color of the gingiva plays an important role in overall aesthetics. Physiologic pigmentation of the oral mucosa is clinically manifested as multifocal or diffuse melanin pigmentation with variable amount in different ethnic groups (Cicek 2003). Although clinical melanin pigmentation does not present a medical problem; the demand for cosmetic therapy is commonly made by individuals with moderate gingival melanin pigmentation (Dummett and Barens 1971).

Gingival depigmentation is a periodontal plastic surgical procedure whereby the gingival hyperpigmentation is removed or reduced by various techniques. The first and foremost indication for depigmentation is patient demand for improved aesthetics.Various
Depigmentation techniques have been employed with similar results. Selection of technique should be based on clinical experiences and individual preferences. One of the first and still a popular technique employed is the surgical removal of undesirable pigmentation using scalpels. The procedure essentially involves surgical removal of gingival epithelium along with a layer of the underlying connective tissue and allowing the denuded connective tissue to heal by secondary intention. The new epithelium that forms is devoid of melanin pigmentation (Almas and Sadiq 2002).

The present case report, describes a simple and effective surgical depigmentation technique that does not require sophisticated instruments or apparatus yet yields aesthetically acceptable results along with patient’s satisfaction.

2. CASE REPORT

A 32 year old female patient reported to the department of Periodontics with the chief complaint of black gums which were visible while smiling. The patient’s history revealed that blackish discoloration of gingiva was present since birth suggestive of physiologic melanin pigmentation. Her medical history was non-contributory. On intraoral examination, generalized diffused blackish pigmentation of gingiva was observed, however it was healthy and completely free of any inflammation. Considering the patient’s concern, a surgical gingival de-epithelisation procedure was planned (see Figure 1).

![Figure 1 Pre operative intra oral photograph](image)
2.1 Surgical Procedure

Surgical gingival de-epithelisation can be performed by the following techniques:
- Scalpel technique (Pal et al. 1994)
- Gingival abrasion technique using diamond bur (Pontes et al. 2006)
- Combination of both the scalpel and bur

In our case we performed the scalpel technique. The entire procedure was explained to the patient and written consent was obtained. A complete medical history, family history and blood investigations were carried out to rule out any contraindication for surgery. Full mouth scaling and root planing was done. Following the administration of local anaesthetic solution, a partial split thickness flap was raised from the lower anterior region maintaining the normal architecture of gingiva. Bleeding was controlled using pressure pack with sterile gauze. Surgical area was covered with a periodontal pack and post-operative instructions were given. Analgesic was prescribed for the management of pain. After one week, the pack was removed and the surgical area was examined. The healing was uneventful without any post-surgical complications. The gingiva appeared pink, healthy and firm giving a normal appearance (see Figures 2-5).
3. DISCUSSION

Melanin pigmentation is frequently caused by melanin deposition by active melanocytes located mainly in the basal layer of the oral epithelium. Pigmentations can be removed for aesthetic reasons. Different treatment modalities have been used for this aim (Pontes et al. 2006). The selection of a technique for depigmentation of the gingiva should be based on clinical experience, patient’s affordability and individual preferences.

Electrosurgery requires more expertise than scalpel surgery. Prolonged or repeated application of current to tissue induces heat accumulation and undesired tissue destruction. Contact with periosteum or alveolar bone and vital teeth should be avoided (Ozbayrak et al. 2000).

Cryosurgery is followed by considerable swelling, and it is also accompanied by increased soft tissue destruction. Depth control is difficult, and optimal duration of freezing is not known, but prolonged freezing increases tissue destruction (Almas and Sadiq 2002).

Depigmentation with lasers achieves good results, but they require sophisticated equipment, occupy large space and are expensive.

A free gingival graft can also be used to eliminate the pigmented areas. However, it requires an additional surgical site (donor site) and color matching (Mokeyem 2006).

Post-surgical re-pigmentation of gingiva has been previously reported. Repigmentation is described as spontaneous and has been attributed to the activity and migration of melanocytic cells from surrounding areas (Mokeyem 2006).

In the present case, no areas of re-pigmentation were seen at the end of one month. Patient is under regular follow up

4. CONCLUSION

We conclude that depigmentation of hyper pigmented gingiva by scalpel technique is simple, easy to perform, cost effective and above all it causes less discomfort and is aesthetically acceptable to the patient.

REFERENCES


