**GINGIVAL DE-PIGMENTATION – CASE SERIES**

**INTRODUCTION**

Gingival health and appearance are essential components of an attractive smile**1**. A typical macroanatomical feature of healthy gingiva is its pink colour which diverges into various shades depending on the degree of keratinization, the thickness of the gingival epithelium, the degree of vascularization, reduction of haemoglobin, and the presence of melanocytic cells**2**.

Gingival hyperpigmentation can be defined as a darker gingival colour beyond what is normally expected**3**. Melanin is the commonest implicated pigment in the oral cavity. It is a non-haemoglobin derived brown pigment produced by melanocytes situated in the basal layer of the oral epithelium but is transported through melanosomes into superficial layers of keratinocytes in the stratum spinosum**4**.

Gingival depigmentation is a periodontal plastic surgical procedure whereby the hyperpigmentation is removed or reduced by various techniques. The patient demand for improved aesthetics is the first and foremost indication for depigmentation**5**.

A variety of different modalities have been proposed for removing hyperpigmentation involving bur abrasion, surgical scraping, gingival autograft, cryotherapy, electrosurgery, and laser**6**. In addition, some studies suggest that ascorbic acid (vitamin C) could be used to treat gingival pigmentation**7**.

Presented here are two cases of gingival hyperpigmentation in which different techniques were employed to treat the condition and their clinical efficacy was compared.

**Case report 1**

**Combination Of Surgical Scalpel Technique & Bur Abrasion Method**

A 24-year-old male patient reported with a chief complaint of dark gums. Patient was young and aesthetically conscious. Clinical examination of this case showed a healthy periodontist but heavily pigmented gingiva with continuous band of melanin on maxillary and mandibular labial gingiva. As the pigmentation was not visible on mandible while smiling, depigmentation procedure was carried out in the maxillary arch.

**Surgical technique:**

Prior to surgery a complete medical history and blood investigations were carried out & were found to be normal. The entire procedure was explained to the patient & routine oral prophylaxis carried out. A pre procedural mouth rinse of 0.2% chlorhexidine was done by patient and 2% lignocaine local infiltration was done on the labial gingiva of maxillary arch from premolar-to-premolar area.

The pigmented area was removed with BP blade no. 15 & 11 and some spotted areas were removed with medium grit football shaped diamond bur. Extensive care was taken to avoid over putting of the gingival surface or removal of excess tissue due to high speed (Murthy, 2012, JISP). Coe pack was placed after the procedure and patient was recalled after 2 weeks. Healing was uneventful without any post-surgical complication. At the end of 1 month, re-epithelization was complete.

**Case report 2**

A 25-year-old female patient complained of hyperpigmented gums and was seeking for optimal dental aesthetics by treating her black gums. On clinical examination, her DOPI score was 3, and the patient had a high smile line. After obtaining consent from the patient, it was decided to perform de-pigmentation of gingiva for both arches using laser depigmentation procedure.

Adequate anaesthesia was given; then, diode laser in contact mode was used; the ablation was operated using a handpiece with fibre optic filament, 320 mm in diameter set at 0.8 W. The procedure was performed in a contact mode in cervicoapical direction on all hyperpigmented areas. The use of water enhanced the visualization of the operative field and minimized heat generation by cooling the irradiated area and absorbing excessive laser energy during the procedure. Neither pain nor bleeding complications were observed during and after the

procedure; the ablated wound healed completely in 1 week.

**DISCUSSION**

According to Cicek (2003), melanin deposition by active melanocytes located in basal layer of oral epithelium. Although all the techniques produced successful results with good patient satisfaction, the Depigmentation procedure by scalpel technique was the most simple, easy to perform, non-invasive and cost effective . Healing after Depigmentation was uneventful and complete epithelization took about 2 weeks. Extensive care was taken to avoid over putting of the gingival surface or removal of excess tissue due to high speed (Murthy, 2012, JISP). Depigmentation allows denuded connective tissues to heal by secondary intention. After 6 weeks the attached gingiva completely healed which was clinically non pigmented. Due care should be taken not to leave any pigmented remnants over denuded area. After adequate homeostasis, use of periodontal pack is most definitely beneficial.

**CONCLUSION**

The ultimate goal of periodontal therapy is the satisfaction of the patient functionally, aesthetically and overall well-being. Whether the Depigmentation is done by surgical scalpel, electrocautery or laser, the patients were highly satisfied and gave them a more confident smile.

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