

Surgical depigmentation of gingiva using scalpel

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ABSTRACT

Smile and esthetics play a major role in improving a person's physical appearance and also moral courage. Good alignment of teeth and proper exposure of gingiva are the fundamental factors influencing the smile and esthetics of a person. Overexposure of gingiva and excessive pigmentation of gingiva affect the smile and esthetics of a person deliberately. Excessive pigmentation of gingiva can be due to various reasons such as smoking, hormonal, racial, and underlying systemic disorders. Depigmentation techniques are commonly used in the management of patients with excessive melanin pigmentation due to racial reasons. Hereby, we report a case of surgical depigmentation of the upper anterior gingiva using a scalpel in a normal healthy patient with excessive melanin pigmentation.

Key words: Anterior gingiva, Gingival depigmentation, Melanin, Scalpel, Surgical depigmentation

Increased melanin pigmentation of gingiva affects most of the races belonging to East Asia, Africa, and Hispanics [1-5]. It occurs due to excessive secretion by melanocytes in the basal and supra-basal layers of the epithelium. In spite of being a normal clinical condition, it significantly affects the esthetics and smile of a person, especially in patients with a gummy smile. In such cases, depigmentation procedures are carried out using various techniques available [6]. In the present case report, we discuss a simple surgical depigmentation procedure using scalpel in a 28-year-old female with gummy smile and melanin hyperpigmentation.

CASE REPORT

A 28-year-old female reported to our Department of Periodontics, Sri Ramakrishna Dental College and Hospital with a complaint of black colored gums in the upper and lower front tooth region. However, she was concerned only about upper gums which were visible during smiling. On examination, melanin pigmentation was found to be diffused and intensive in both arches (Fig. 1). Since the patient had esthetic concern only in relation to the labial surface of upper anterior teeth, surgical depigmentation using scalpel was considered, and informed consent was obtained before the procedure. The patient was given 10 ml of 0.2% chlorhexidine mouthwash as a pre-procedural rinse. The procedure was carried out under local anesthesia (lignocaine 2% with adrenaline 1:80,000). The labial surface of the maxillary anterior from 13 to 23 was depigmented by using a scraping technique with a

surgical blade no 15. To stop hemorrhage after instrumentation, pressure packing was done using sterile gauze piece soaked with the local anesthetic solution mentioned (Fig. 2). The surgical site was irrigated with normal saline and periodontal dressing was given using zinc oxide non-eugenol periodontal pack (COE Pack) (Fig. 3). Post-operative instructions were given. The patient was asked to avoid brushing for 2 weeks. 0.2% chlorhexidine mouthwash was prescribed and instructions to use mouthwash were given. The patient was given antibiotics and analgesics for 5 days (amoxicillin 500 mg TDS, metronidazole 400 mg TDS, and ibuprofen 400 mg TDS). On the 10th post-operative day, pack was removed with the help of sickle scaler. Uneventful healing was observed with some visible bleeding points (Fig. 4). During 6 months of follow-up visit, a completely depigmented gingiva in relation to labial surface of maxillary anterior was observed (Fig. 5).

DISCUSSION

An esthetic smile will improve the self-confidence of a person. Gummy smile along with hyper melanin pigmentation of gingiva affects the esthetics of a person to some extent. Melanin pigmentation of gingiva occurs due to the deposition of melanin pigments in melanocytes [7]. In our case, patient reported to our department complaining of generalized presentation hyper melanin pigmented gingiva. However, the patient is more concerned about the black colored gum in the labial surface of the upper anterior region, which was affecting her esthetics.



Figure 1: Pre-operative image showing gingival pigmentation



Figure 4: Healing of gingiva with few visible bleeding points on 10th post-operative day



Figure 2: Intra-operative image showing surgical scraping



Figure 5: Complete depigmentation of anterior gingiva at 6 months follow-up



Figure 3: Placement of a periodontal pack at the surgical site

Therefore, depigmentation procedure in relation to only the gingiva of maxillary anterior region was considered.

Various techniques, including diode lasers, bur abrasion, electrocautery, and carbon-di-oxide lasers, have been proven effective in gingival depigmentation. Previous reports have suggested delayed post-operative healing with lasers and electrocautery [8,9]. Healing following surgical depigmentation by scalpel occurs by secondary healing. Procedure using surgical scalpel is cost-effective with good healing and minimal post-operative complications [6,10]. Although bleeding is high in surgical technique using scalpel when compared to laser and electrocautery, it can be easily managed with pressure packing itself. Therefore, depigmentation using a surgical scalpel was considered in our case.

In the present case, intra-operative bleeding was better managed with a pressure pack using gauze cloth soaked in local anesthetic solution containing 1:80,000 adrenaline. The patient presented with minimal discomfort post-operatively as well as demonstrated good healing by 10 days. Complete healing and almost nil repigmentation were evident during follow-up after 6 months. The patient was also very happy with the smile and esthetics achieved post-operatively. Previous case reports on depigmentation using surgical scalpel showed similar outcomes [10,11].

CONCLUSION

An esthetic smile enhances the confidence of a person. In our case, since the patient was more concerned about the melanin hyperpigmentation in relation to gingiva of maxillary anterior teeth, a simple depigmentation procedure was performed with scalpel, and visibly no repigmentation was observed till 6 months of the follow-up period.

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