

A CASE REPORT ON DEPIGMENTATION BY USING SCALPEL BLADE SURGERY

Minakshi ¹, Bhavna jha kukreja ², Deepa D ³

Post Graduate ¹ Reader ² Professor & Head ³

1-3- Department of periodontology, Teerthanker Mahaveer Dental College & Research Centre, Moradabad, Uttar Pradesh, India

Abstract

The melanin pigmentation of the concerned gingiva is fully benign and is free from medical problem. Black gums are generally found in patients of gummy smile. Depigmentation in such patients can be performed with very good outcome. The case undertaken underwent the easy and successful surgical depigmentation with scalpel blade surgery.

Key Words: Melanin pigmentation, Depigmentation, Blade surgery, Melanocytes.

INTRODUCTION

Major aesthetic anxiety for human beings is gingival melanin hyperpigmentation. The presence of melanin granules within the gingival epithelium is the main reason of melanin pigmentation.¹ Melanin hyperpigmentation is an unaesthetic dark black gums. It is more worsening in human beings of gummy smile. Here procedure is shown for aesthetic betterment of pigmented gums.²

CASE REPORT

A female of age 20 years came to the department of periodontics, Teerthanker Mahaveer dental college and research centre, Moradabad for cleaning her teeth. During cleaning it was noticed that there was gingival pigment in the lower jaw as shown in Fig1. With consent of the Patient the scalpel blade surgery was recommended to achieve esthetic better gums in lower jaw by depigmentation. The required tests such as blood, hepatitis B, HIV tests were taken and also family history of the patient was recorded. At first scaling and root planning were performed. Thereafter local anaesthesia was infiltrated to the concerned portions of lower jaw. With the help of a bard parker handle with a 15 number blade the pigmented portions of the gums were removed as shown in Fig 2. The whole affected area with thin layer of connective tissue was removed by the scalpel blade surgery and the exposed area rinsed with saline and dressed with pack as shown in Fig 3. The scalpel blade surgery is one of the cheapest procedures and needs less armamentarium. In this technique, the only disadvantage is continuous bleeding which requires periodontal pack for 10 days. Patients were prescribed amoxicillin and clavulanic acid (625 mg tds for 3 days), tab zerodol sp for 3 days. Chlorhexidine mouth wash was advised 3-4 times a day for two weeks. Patient is advised to eat soft food and ice cream and not to touch the area where surgical procedure has been done and not drink hot tea and spicy food. The patient is recalled after one week for removal of pack placed. After one month the attached gingiva regenerated. The newly formed gingiva is clinically non-pigmented Fig 4.



Fig 1. Showing Melanin pigmentation



Fig 2. Showing Removal of pigment layer by using scalpel blade



Fig 3. Showing Placing Coe pack



Fig 4. Showing One Month Post-Operative

DISCUSSION

The scalpel blade surgery is the initial and the latest commonly used technique for removal of unwanted pigmentation. In this process, the related gingival epithelium with a layer of under existing and connective tissue is taken out and the exposed attached tissue is supposed to be healing by its secondary intention. The so formed epithelium is free from melanin pigmentation.^{3,4,5} This technique exhibits better results clinically as well as the patients comfort. The portion concerned is healed in 7 to 10 days perfectly resulting as normal gingiva.⁵ The procedure involves uncomfortable blood flow throughout the surgery and pack is placed on the wound area for 10 days.⁶ This procedure is the cheapest one as compared to the other procedures and needs more advanced armamentarium. The pigment of oral mucosa is different among men and women. It is decided with the help of the number and melanogenic activity of the melanocytes in the basal cell layer of the epithelium, differences in number, size, distribution of melanosomes differences in the type of melanin's and masking effect of the heavily keratinized epithelium.⁷⁻⁹ Melanocytes with melanin are observed in the basal cell layer of the epithelium even at the oral mucosal sites exhibiting no melanin appearance of pigmentation.¹⁰⁻¹² Melanin

is produced by melanocytes in melanosomes. The melanocytes are originated from the neural crest.¹³ During the development the melanocytes stem cells move from the neural peak to the epidermis and tissue layer. Dental aesthetics has emerged as popular branch in the modern dentistry. It is very useful in depigmentation. Selection of the technique depends upon the practice, bearable expenses and choice of the practitioner. The colour of the gingiva depends upon four factors such as blood supply, depth of the epithelium, level of keratinization of epithelium and pigment in cells. Dummet suggested that physiologic pigmentation was perhaps determined genetically and its level was connected to mechanical, synthetic and natural activation.

CONCLUSION

The depigmentation strategy found favourable for the suffering patient. It is relatively simple, easy and cost effective with scalpel technique. Overall, the concerned patient feels comfort and is fit aesthetically. This procedure is the best suited in consideration of the constraints of equipments which may not be available frequently in the dental clinics. Though the scalpel blade surgery is considered to be unpleasant due to blood coming out throughout the surgery and after the surgery it is essential to cover the exposed lamina propria with the help of periodontal pack for 10 days. Primary results of the depigmentation procedure with scalpel blade surgery show most encouraging and less morbidity rate. The scalpel blade surgery is considered to be better method in comparison of other techniques for depigmentation. The healing period for the scalpel wound is less than any other techniques. The surgical depigmentation is considered to be curative therapy for the management of gingival melanin pigmentation with pleasing outcome. Still it is one of the popular techniques to be done with the scalpel blade surgery.

REFERENCES

1. Dr Rizwan Sanadi, Dr Namrata Suthar, Dr B.M.Bhusari, Dr Laksha Chelani. Gingival Depigmentation Using Scalpel Technique versus Laser Technique: A Case Report. IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) EISSN: 2279-0853, P-ISSN: 2279-0861. Volume 14, Issue 8 Ver. Ii (Aug. 2015), Pp 38-40.
2. SSV Prasad, Neeraj Agrawal, Nr Reddy. Gingival Depigmentation: A Case Report. People's Journal of Scientific Research. Vol.3 (1), Jan 2010.
3. Cobb Cm. Lasers in Periodontics: A Review of the Literature. J Periodontol 2006; 77:545-564.
4. Stabholz A, Zeltser R, Sela M, Peretz B, Moshonov J, Ziskind D, Stabholza.: The Use Of Lasers In Dentistry: Principles Of Operation And Clinical Applications. Compend Contin Educ Dent, 2003; 24(12): 935-948.
5. Chirayu Shah, Rahul Dave, Monali Shah, Deepak Dave. Evaluation of Scalpel versus Diode Laser for Gingival Depigmentation: A Case Report. International Journal of Advanced Health Sciences | June 2014 | Vol 1 | Issue 2.
6. Almas K, Sadiq W: Surgical Treatment of melanin pigmented Gingiva: An Esthetic Approach Indian Journal of Dental Research, 2002; 13 (2): 70-73.
7. Pai A, Prasad S, Patil BA, Dyasanoor S, Hedge S: Oral pigmentation: case report and review of malignant melanoma

- with flow charts for diagnosis and treatment. *Gen Dent* 2012, 60:410–416. quiz 417-418.
8. Meleti M, Vescovi P, Mooi WJ, van der Waal I: Pigmented lesions of the oral mucosa and perioral tissues: a flow-chart for the diagnosis and some recommendations for the management. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2008, 105:606–616.
 9. Squier CA, Kremer MJ: Biology of oral mucosa and esophagus. *J Natl Cancer Inst Monogr* 2001, 29:7–15.
 10. Barrett AW, Raja AM: The immunohistochemical identification of human oral mucosal melanocytes. *Arch Oral Biol* 1997, 42:77–81.
 11. Barrett AW, Scully C: Human oral mucosal melanocytes: a review. *J Oral Pathol Med* 1994, 23:97–103.
 12. Dummett CO: Physiologic pigmentation of the oral and cutaneous tissues in the Negro. *J Dent Res* 1946, 25:421–432.
 13. Thomas AJ, Erickson CA: The making of a melanocyte: the specification of melanoblasts from the neural crest. *Pigment Cell Melanoma Res* 2008, 21:598–610.

Corresponding author

Dr Minakshi
Post Graduate
Department Of Periodontology Teerthanker Mahaveer Dental
College & Research Centre,
Moradabad, Uttar Pradesh, India
Email Id – minakshi.tdn1807002@tmu.ac.in
Contact No-7895758598

How to cite this article: Minakshi, Jha B, Deepa D.
A case report on depigmentation by using scalpel
blade surgery. *TMU J Dent*. 2020;7(1):9-11.