



Gingival Depigmentation: A Case Report On Patient Perception

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Abstract

Aim & Background: This case report aims to explore the patient perception of gingival depigmentation, a cosmetic procedure designed to remove hyperpigmentation from the gums and enhance the aesthetic appearance of the gingiva. The background highlights the significance of addressing patient perception in cosmetic periodontal procedures and its potential influence on patient satisfaction and treatment outcomes.

Case Description: The case involves a 17-year-old female who sought treatment at the Department of Periodontics due to concerns about her dark gums. The patient's perception of her condition, experience during treatment, and outcomes were evaluated through interviews, self-reported questionnaires, and a visual analogue scale (VAS).

Conclusion: The findings of this case report emphasize the significance of considering patient perception in cosmetic periodontal procedures such as gingival depigmentation. Understanding the patient's perspective can contribute to enhanced treatment outcomes and increased patient satisfaction. By addressing the patient's concerns and aligning treatment goals with their expectations, clinicians can provide more personalized care and improve overall treatment outcomes.

Clinical Significance: Recognizing the importance of patient perception in cosmetic periodontal procedures has broader clinical implications. Incorporating patient-centered approaches can lead to improved communication, increased treatment acceptance, and enhanced outcomes in aesthetic dentistry. By acknowledging and addressing patient concerns, clinicians can tailor treatment plans to meet individual needs, resulting in higher patient satisfaction and improved long-term success rates in cosmetic periodontal procedures.

Keywords: Aesthetics, Case Report, Cosmetic Periodontal Procedures, Gingival Depigmentation, Patient Perception

Introduction

The gingiva is typically coral pink or salmon pink, with variations in melanin pigmentation being a normal part of its appearance and plays a crucial role in soft tissue aesthetics and contributes to the overall appearance of an ideal smile.^{1,2}

Melanin is a non-haemoglobin-brown pigment, derived from tyrosine³ that contributes to the natural

colour of the gingiva.^{4,5} Gingival hyperpigmentation is caused by an excessive accumulation of melanin by melanocytes.⁶ There are several etiological factors that contribute to the development of gingival melanin hyperpigmentation.⁷ Many patients find it aesthetically displeasing, which often leads them to seek cosmetic treatments to improve their appearance.^{8,9}

This periodontal plastic procedure is performed using various techniques, including scalpel surgery, bur abrasion, electrosurgery, cryosurgery, radiosurgery, chemical cauterization, and laser treatment.^{10,3}

The study aimed to understand patients' perception of gingival depigmentation.

Case Report:

A 17-year-old female patient reported to the Department of Periodontics, KLE VKIDS, Belgaum, with a chief complaint of dark colour of her gums, particularly in the anterior region. She reported feeling self-conscious about her smile and expressed a desire to have lighter-coloured gums to improve her appearance. Physiological melanin pigmentation was suggested by this finding. (Fig.1)

A complete medical, family history and blood investigations were carried out to rule out any contraindications for surgery. A treatment plan was formulated to perform depigmentation. The patient was given a detailed explanation of the entire procedure before formal consent was obtained.

Local anaesthesia (Lignocaine with adrenaline in the ratio 1:80,000 by weight) was infiltrated in the maxillary region from premolar to premolar. A Bard Parker handle with a No. 15 blade was used to remove the pigmented epithelial layer in the maxillary arch. (Fig. 2)

After a two-week period, during which adequate healing took place, the mandible was treated using the bur abrasion method following similar pre-operative measures. (Fig.3) In this technique, the epithelium was denuded using a medium grit football-shaped diamond bur at high speeds.

Depigmentation was carried out from the mucogingival junction towards the tip of the interdental papilla in both arches. (Fig.2,3). The surgical area was thoroughly irrigated with saline and covered with a periodontal dressing. The patient was instructed to take the necessary post-operative precautions and analgesics were prescribed and was observed for 1 month. Clinical evaluations were

conducted on the 14th postoperative day, (Fig. 2,3) as well as after the 1st month (Fig.4) to assess the progress of the procedure.

Patient perception:

1. A Visual Analogue Scale (VAS) (Fig.II) was implemented to assess the subjective pain level reported by the patient. It consisted of a horizontal line that was 100 mm in length, with "no pain" to "severe pain" labelled at the left and right end respectively.
2. A questionnaire was given to the patient 14 days post-surgery. It covered various aspects including the patient's perception of procedure cost, pain and discomfort, aesthetic improvement, social confidence, and overall experience. The questionnaire utilized a five-point Likert scale, with numerical values ranging from 1 for "Strongly Disagree" to 5 for "Strongly Agree".

During the procedure, the patient was cooperative and experienced minimal discomfort.

The visual analogue scale (VAS) (Fig. II) assessment showed a moderate pain score during the first week following the surgery, followed by a decline to no pain or mild pain in the subsequent period. As per the responses obtained from the questionnaire, the patient expressed a high level of satisfaction with the treatment and reported notable improvement in the aesthetic appearance of her gums. She mentioned feeling more confident about her smile and stated the treatment had positively impacted her self-esteem.

The patient also reported minimal post-operative discomfort, which subsided within a few days, and she followed the post-operative instructions diligently.

Follow-up evaluations showed a stable and satisfactory aesthetic outcome with lighter-coloured gingiva in the anterior segment of both arches. The patient continued to practice proper dental hygiene practices and reported no adverse effects or complications related to the treatment.

Fig. 1: Pre-operative image



Fig. 2: 14 days post-operative image of maxillary anterior region



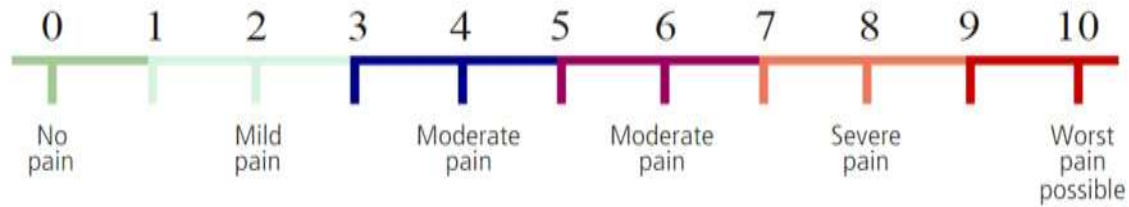
Fig. 3: 14 days post-operative image of mandibular anterior region



Fig. 4: 1 month post-operative image



Fig. II - VAS pain scale



Discussion:

Melanin pigmentation in the oral epithelium often occurs due to melanin deposition by active melanocytes located primarily in the basal layer. Depigmentation may be desired for aesthetic reasons, and there are different treatment modalities available for this purpose, as documented by Pontes et al. in 2006.¹¹

Clinical melanin pigmentation is generally considered benign and does not pose a medical issue. However, patients may express aesthetic concerns about dark gums, particularly if they are noticeable during speech and smiling. Its impact on a patient's perceived aesthetics can be a valid consideration in cosmetic dentistry.^{12,13}

This case report emphasizes the importance of patient perception in cosmetic periodontal procedures. Patient perception is influenced by a wide range of factors, including aesthetic preferences, psychological well-being, and self-esteem.¹⁴

In this case, the patient's perception of her treatment experience and outcomes played a crucial role in her overall satisfaction with the procedure. The patient's concerns about the appearance of her gums had a significant impact on her self-esteem and confidence. Gingival depigmentation procedure not only addressed her aesthetic concerns but also improved the perception of herself and her smile.¹⁵

Additionally, the patient's adherence to post-operative instructions and maintenance of good dental hygiene practices played a crucial role in the successful outcome of the procedure.

Conclusion:

This case report emphasizes the importance of patient perception in cosmetic periodontal procedures, specifically gingival depigmentation. By considering patient preferences, practitioners can strive for

optimal patient satisfaction in cosmetic periodontal procedures, highlighting the need to understand and address subjective patient perceptions for successful outcomes. Further research and long-term follow-up studies are warranted to assess aesthetic outcomes in gingival depigmentation procedures.

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