



FROM RECESSION TO RESTORATION: GINGIVAL EPITHESES FOR SMILE MAKEOVERS

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ABSTRACT

Restoring aesthetics in patients with a history of chronic periodontal disease presents unique clinical challenges. Advanced gingival recession resulting from periodontal conditions can impair smile aesthetics and diminish patient confidence. Gingival epithesis provides a non-invasive, conservative solution for enhancing aesthetic outcomes in such cases. This article details the rehabilitation of a 45-year-old female patient who presented with excessive tooth visibility and was successfully treated using a gingival epithesis. The approach demonstrated significant aesthetics improvement and patient satisfaction.

KEYWORDS : Epithesis, Gingival Prosthesis, Recession

INTRODUCTION

Periodontal diseases often lead to extensive soft and hard tissue loss, manifesting as gingival recession, tooth root exposure, and compromised aesthetics. These conditions can negatively affect patients' psychosocial well-being and quality of life. Conventional surgical methods such as gingival grafting may not always yield satisfactory results, particularly in cases of extensive tissue loss [1,2]. In such scenarios, a gingival epithesis—a prosthesis mimicking the natural gingiva—serves as an innovative, patient-friendly alternative for aesthetic rehabilitation [3,4].

This article presents the clinical application of a gingival epithesis for restoring the aesthetics of a periodontally compromised patient, highlighting its effectiveness as a minimally invasive treatment modality.

Case Report

A 45-year-old female patient presented to the Division of Prosthodontics with a primary concern of poor smile aesthetics. She reported excessive tooth visibility during smiling, which impacted her confidence. [Fig-1] The patient's dental history revealed chronic periodontal disease treated surgically several years ago. Although the periodontal condition was stabilized, the resultant gingival recession and root exposure significantly affected her smile. Extraoral examination revealed excessive maxillary tooth exposure during smiling. Intraoral findings included advanced gingival recession, particularly in the maxillary anterior region. Despite the absence of active periodontal disease, the aesthetic compromise was evident.

Considering the patient's aesthetic concerns and clinical findings, a gingival epithesis was planned to restore the natural gingival contour and enhance smile harmony. Impression of the maxillary arch was made to capture the recessed areas. Diagnostic models were prepared to facilitate design planning. A biocompatible silicone material was selected for its flexibility and lifelike appearance. Gingival shades were matched to the patient's natural soft tissue. The gingival epithesis was meticulously designed and fabricated to ensure precision and comfort. A trial fitting was conducted to evaluate the aesthetics and comfort. Necessary adjustments were made to optimize the fit and integration [Fig 2]. The patient received the gingival epithesis and was instructed on placement, removal, and maintenance. The prosthesis restored the gingival contour and effectively masked the root exposure, significantly enhancing smile aesthetics. At follow-up visits, the patient reported high satisfaction and improved self-confidence.

DISCUSSION

Gingival epithesis represents a groundbreaking approach in the rehabilitation of periodontally compromised patients. Unlike surgical interventions, it avoids donor tissue harvesting

and invasive procedures, making it particularly suitable for extensive gingival defects [5]. The use of biocompatible materials, and meticulous planning and designing ensures superior customization and patient comfort [6].

However, certain limitations remain. The device requires meticulous hygiene practices to prevent plaque accumulation and gingival irritation. Additionally, it lacks the biological benefits of surgical grafts, such as soft tissue augmentation and increased tissue resilience [7]. Emerging tissue engineering strategies, including the incorporation of bioactive materials and scaffolds, hold promise for addressing these limitations in the future [8,9].

CONCLUSION

This case underscores the transformative potential of a gingival epithesis in addressing aesthetic concerns associated with advanced gingival recession. By offering a minimally invasive solution tailored to the patient's needs, the treatment significantly improved the patient's aesthetics and quality of life. Gingival epitheses represent a valuable adjunct in prosthodontic practice, bridging the gap between technology and patient-centred care.



Fig-1 Pre-treatment Front Profile Picture Of The Patient



Fig-2 Post-treatment Picture Showing Prosthesis In Situ

REFERENCES

1. Alani A, Owens J. Gingival veneers: A clinical guide. *Br Dent J.* 2010;209(11):557-61.
2. Pillai RS, Gangadharan N, Lakshmanan R. Gingival prosthesis: An alternative therapy for periodontal rehabilitation. *J Int Oral Health.* 2015;7(2):95-8.
3. Koke U, Sander C, Heinecke A, et al. Influence of gingiva-colored materials on the aesthetics of implant-supported provisional restorations. *Int J Prosthodont.* 2003;16(1):66-72.
4. Mörmann WH, Bindl A. All-ceramic, computer-generated gingival epithesis for the coverage of gingival recession: A case report. *Prosthet Dent.* 2001;85(1):1-5.
5. Malik A, Sobti P, Talukdar P. Gingival veneer prosthesis: A novel adjunct for periodontal therapy. *J Indian Soc Periodontol.* 2017;21(3):241-5.
6. Herford AS, Tandon R. Clinical applications of custom-made implants in maxillofacial surgery. *Oral Maxillofac Surg Clin North Am.* 2019;31(4):593-610.
7. Buser D, Chen ST, Martin WJ. Implant stability and the impact of tissue engineering solutions. *Periodontol 2000.* 2017;73(1):102-17.
8. Lee JH, Kim JH, Choi JH. Bioactive coatings for improving the interface between dental implants and soft tissues. *Acta Biomater.* 2020;114:53-67.
9. Wang M, Zhang L. Tissue engineering for enhanced soft tissue integration of dental implants. *Regen Biomater.* 2019;6(4):227-34.