



Enhancing Smile in Dentistry with Direct Gingival Nanohybrid Composites in Anterior Teeth Case Series

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Abstract

In Restoring the beauty of patient's smile, the clinicians need to incorporate both tooth and especially gingival esthetics which is of main concern. Esthetically, many patients presents with gingival recession that contributes to awkward smile. With the introduction of newly gingival direct restorative materials, dentists got an opportunity to directly correct the appearance of a gingival esthetics in a minimally invasive manner in cases of mild gingival recession, applied according to a comprehensive understanding of the esthetic components of the smile and requisites for gingival health and harmony. This article presents two cases in which there is application of anterior nanohybrid direct composite restorations which provides a means to enhance gingival esthetics.

Keywords: Smile; Gingival Nanohybrid Composites; Anterior; Teeth

Introduction

The composition of the smile architecture includes both gingival and tooth structure, respectively, which complement with each other and must be placed in balance in terms of color, texture, shape and stippling. Unfortunately, many patients present with mild gingival recession responsible for awkward smile, which is characterized by root surface exposure at the level of gingival margin. The increasing number of patients are visiting to the dentists to correct their "awkward smile" through treatment which is cost effective and more convenient than any other invasive options such as surgical procedures [1]. Traditionally, treatment for mild gingival recession have included specific restorative procedures, like gingival nanohybrid composites "pink composites" [2,3]. Other approaches includes laser therapy, tissue grafting, flap designs, orthodontics (eg, clear aligners), and guided tissue regeneration, each of which is costly and time-consuming [4].

Achieving dimensions of gingival nanohybrid composites

Gingival nanohybrid composites requires the application of restorative techniques to mask mild gingival recession [5,6]. These gingival prosthetic restorations are pink, thereby introducing a fourth dimension of color to the restorative process.

For example, traditional color analysis of teeth is completed on three levels (ie, incisal, middle, and cervical) using VITA shade guides. When restoring gingival esthetics, the fourth dimension of color encompasses the gingival architecture [7].

Case Reports

Patients reported with the chief complaint of awkward smile

- Gingival recession in anterior teeth demanding appreciable esthetic outcome.

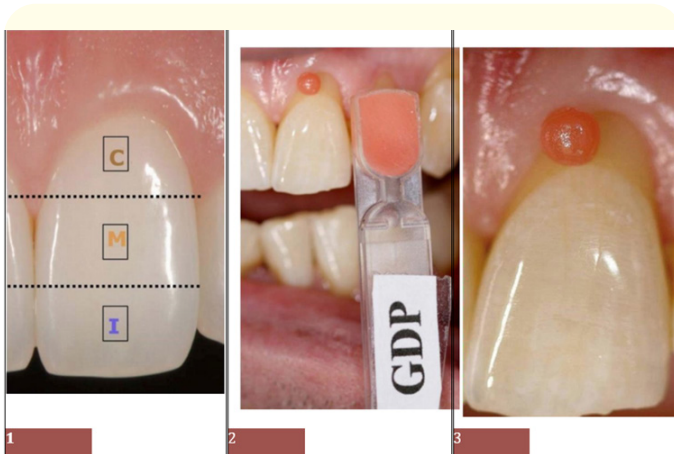


Figure 1

- Significant importance was given to the conservation of remaining gingival tissues from the margins while placing retraction cord.

Ten patients were selected out of which 2 patients clinical photographs are displayed below with the chief complaint of receding gums in upper anterior teeth. They gave history of faulty tooth brushing and some of them were tobacco chewers.

On examination they had generalized recession of type I and type II gingival recession according to Sullivan and Atkins (1968) classification in their upper anterior teeth.



Figure 2: Pre-operative photographs.



Figure 3: Pos-operative photographs

Materials used

- Supplied with BEAUTIFIL II Gingiva 2.5g syringe of different shades.
- Gingival retraction cord
- Etchant and bonding agent
- Applying tips
- Polishing disc burs



Figure 4

Method of application

- Case history and informed consent for each patient was taken.
- Isolation of gingival recession area to be restored with gingival retraction cord was performed.
- Etching followed by bonding.
- Application of gingival nanohybrid composite according to the desired shade of remaining gingiva.

- Removal of gingival retraction cord.
- Finishing and polishing of gingival nanohybrid composite restored areas with disc burs respectively.



Figure 5

4. Kassab MM., et al. "Treatment of gingival recession". *Dental Clinics of North America* 54.1 (2010): 129-140.
5. Coachman C., et al. "Prosthetic gingival reconstruction". *The International Journal of Periodontics* 29.5 (2009): 471-477.
6. Wahbi MA., et al. "Minimally invasive use of gingival composite resin in aesthetic restoration: Case report". *Saudi Dental Journal* 25.2 (2013): 83-89.
7. Salama M., et al. "Prosthetic gingival reconstruction". *The International Journal of Periodontics* 29.6 (2009): 573-581.

Conclusion

The case presented in this article describes the application of anterior gingival nanohybrid direct composite restorations to patient in order to best meet his/her needs and expectations. These included refining the gingival portion, as well as preserving natural tooth structures. Rather, gingival composites are fundamentally an illusion that is a cost effective, minimally invasive solution for many patients with mild gingival recession. When incorporated with newly gingival nanohybrid direct restorative materials, gingival composite restorations represent an opportunity for dentists to preserve the patient's oral health also.

Bibliography

1. Zalkind M and Hochman N. "Alternative method of conservative esthetic treatment for gingival recession". *Journal of Prosthetic Dentistry* 77.6 (1977): 561-563.
2. Bartlett DW and Shah P. "A critical review of non-carious cervical (wear) lesions and the role of abfraction, erosion, and abrasion". *Journal of Dental Research* 85.4 (2006): 306-312.
3. de Melo FV., et al. "Esthetic noncarious Class V restorations: a case report". *Journal of Esthetic and Restorative Dentistry* 17.5 (2005): 275-284.