

Case Report

Recreating Smiles with Gingival Mask - A Case Report

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ABSTRACT

The periodontal attachment loss, gingival recession and loss of interdental papilla in the maxillary anterior region can often lead to aesthetic and functional clinical problems. It becomes a challenge for the dentist to provide an aesthetic solution for the missing gingival tissue and to maintain hygiene. Gingival prostheses may be fixed or removable and may be made from acrylics, composite resins, silicones or porcelain-based materials. Undercuts or dental attachments are used to secure removable prostheses, which are esthetically pleasing and easy to maintain. This case report describes the fabrication of an esthetic and soft flexible nylon based thermoplastic gingival veneer in a chronic periodontitis patient providing an economical and esthetically acceptable solution.

Introduction

Dental esthetics is combination of teeth as well as pink coloured gingivae. Periodontal diseases, surgeries, trauma, ridge resorption and traumatic tooth extraction can result in open interdental spaces, elongated clinical crowns and altered labiodental, labioalveolar consonant sound production [1]. The reconstruction of these areas with prosthesis like gingival veneer can be useful to correct the deformities remaining after the control of periodontal diseases, especially in the maxillary anterior region [2]. Tissue replacement prostheses may be used to replace tissue lost through surgical gingival procedures, trauma, ridge resorption or traumatic tooth extraction. With the growing emphasis on esthetics and the patients vying for a

perfect smile, the periodontists have steered their attention towards prosthetic replacement options. The challenge however lies in the patients with excess maxillary display to create a proportional prosthetic replacement that phonetically seals these patient's interdental areas yet maintaining the patient's oral hygiene. From a prosthodontic point of view, restoration of these areas can be accomplished with either fixed or removable prostheses.

Various materials that can be used for fabrication of gingival veneers include (3)

- i) Auto and heat polymerizing acrylic resins
- ii) Copolyamide
- iii) Soft silicone materials



Fig-1

fig-2



Fig-3

fig -4



Fig-5

The indications of gingival veneers include (3) (4):

1. Poor aesthetics due to interdental black triangles, exposed root surfaces, and/or crown margins
2. Food packing in interdental spaces
3. Lack of saliva control
4. Impaired phonation
5. Root-dentine sensitivity
6. In inter dental defects with >5 mm gap between contact point and alveolar crest
7. When the patient cannot undergo repeated surgical procedures

The contraindications include (3):

1. Allergy to the fabrication materials
2. Patients with poor or unstable periodontal health
3. Poor oral hygiene



Fig-6

fig-7



Fig 8 Improved Smile With Gingival Mask In Position

4. Patients with high caries activity
5. Limited manual dexterity
6. Allergy to fabrication materials

The following case report describes the fabrication of an esthetic and soft flexible nylon based thermoplastic gingival veneer in a chronic periodontitis patient providing an economical and esthetically acceptable solution.

Case report

1.1 Case report

A 40 year old female patient reported to the Department of Prosthodontics, with the chief complaint of receding gums and black triangles formation in relation to maxillary anterior teeth (Fig.1). The patient was also very unhappy with the esthetic appearance of the "elongated teeth". Since surgical treatment in such situations is costly, requires prolonged healing time, patient was not ready for surgical treatment, so decision was made to fabricate a removable prosthesis to close the spaces between the anterior teeth.

1.2 Treatment

Periodontal therapy including scaling and root planning (two sittings at one week interval) along with oral hygiene instructions were given. Then the patient was referred to prosthodontic department. The treatment of choice for esthetic benefit of the patient was *gingival veneer/gingival mask*.

Procedure-

on intraoral examination, severe undercuts were blocked out interproximally with wax from the lingual aspect so that the gingival veneer would only cover the labial and buccal embrasures.(fig1,2)

Condensation silicone maxillary impression was taken in a perforated stocktray, and a cast was poured in type IV dental stone.(fig3,4)

The cascade was waxed up exactly as it isto appear,the extension of the prosthesis was outlined on the cast from the depth of the vestibule to the cemento enamel junction and a wax up was done incorporating the surface characterization mimicking healthy gingiva.(Fig.5).

Then shade was matched to simulate the gingiva (fig.6)and was packed in the conventional manner and dewaxing was done. (fig7). After dewaxing packing was done by Molloplast B soft lining material (Detax GmbH & Co.,Ettlingen, Germany).

The patient was given instructions on the use and maintenance of the mask. The patient has been wearing the prostheses with great success from the perspectives of phonetics, expectoration and comfort fig.8.

Discussion-

Many therapeutic options has been suggested for the management of gingival recession which include: the use of desensitizing agents, varnishes ,dentine bonding

agent, tooth colored composite restoration, pink porcelain or composite, gingival veneers, orthodontic therapy and surgery (5).Although many surgical procedures have been proposed for augmentation of bone and soft tissue structures, predictable results may not be routinely achievable (6, 7).

Keeping in view the patient's expectations and the clinical picture available, either a fixed or a removable variety of the prosthesis should be selected. While on one hand the fixed options offer the advantage of being stable thus contributing to the psychological stability of the patient, stains less and gets cleaned easily due to the highly polished porcelain surface, yet they are most unsuitable when gross alveolar ridge deficiencies exist. Besides, inaccessible interproximal surfaces and embrasure areas might complicate oral hygiene maintenance. Removable prosthesis on the other hand due to their mobility during function might confer an unnatural feel and discomfort to the patient, are amenable to ingestion or loss and readily stain from food pigments[8]. Nevertheless, they are the replacements of choice when large volumes of the tissue need to be created for aesthetic appearance and the prosthesis can be adjusted as the tissue changes. Advent of nylon based thermoplastic veneers has revolutionized this field by offering the chief advantage of superior aesthetics and complete tissue comfort with a feeling of "own tissue" [9]. In this case report too, we have employed these soft nylon veneers to bridge the soft tissue deficits resulting in a satisfied patient with an aesthetically pleasing and confident smile.

Conclusion

The loss of interdental papillae in maxillary anterior region can often lead to esthetic and functional clinical problems. In such cases, it is very challenging for the

clinician to provide an optimum functional and esthetic solution for the missing gingival tissues and simultaneously to preserve to periodontal health. Marked esthetic results can be achieved with gingival veneers when used to correct deformities after periodontal therapy for replacing lost tissues where a large amount of tissue is missing.

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