

## Frenectomy and Vestibuloplasty: A Case Report

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### ABSTRACT

The treatment of the mucogingival problems is one of the main objectives of the periodontal therapy. The insufficient or absent attached gingiva increases the risk of development of gingival recessions. The classical grafting procedures cannot offer a solution for coverage of a larger than 3 teeth recipient area. The strip technique for free gingival graft avoids the limitations of the palatal donor area and decreases the number of surgical procedures required for augmentation of the attached gingival tissues.

**Key words:** Vestibuloplasty, grafting, gingival tissues.

### INTRODUCTION

A frenum becomes a problem if the attachments very close to the marginal gingiva.

Tension on the frenum may pull the gingival margin away from the tooth.

- This condition may be conducive to plaque accumulation and inhibit proper tooth brushing.

#### Objectives

- Problems associated with attached gingiva
- Problems associated with shallow vestibule
- Problems associated with aberrant frenum

Gingival recession is defined as displacement of gingival margin from the CEJ.



### Causes

- The major causes of gingival recession are generally determined morphologic peculiarity
- Improper oral hygiene and periodontal disease

Various surgical studies have evaluated many surgical technique for root coverage ; rotational flap , advanced flap , FGG , connective tissue graft , guided tissue regeneration and combination of these procedure . FGG is well established pure Mucogingival procedure for increased width of attached gingiva. The procedure has proven reliable in increased attached gingiva and stopping the progressive gingival recession

### Mucogingival surgery

It defined as surgical procedures performed to correct or eliminate anatomic, developmental or traumatic deformities of the gingiva or alveolar mucosa

### Mucogingival problems

- Pocket extending up to or beyond Mucogingival junction.
- Recession causing denudation of root

- surface.
- High fraenum and muscle attachments

### Inadequate width of attached gingiva

#### MATERIALS AND METHOD

The patient with Miller class I gingival recession and small vestibule depth in the frontal mandibular region were selected for treatment. On patient a strip free gingival graft technique, which included a longitudinal division of the donor palatal tissue, was performed.

#### Case

A patient by name Mrs. Rajeshwari of age 32 years female reported to the Department of Periodontics with the chief complaint of mobility and gingival recession in lower anterior teeth for past 2 months and wants to be treated. Patient presents a history of food impaction in lower anteriors and bleeding on brushing. Patient's medical history was good with no systemic diseases.

#### Clinical examination

On clinical examination grade I mobility seen in 31,32,41,42 associated with gingival recession, shallow vestibule and high frenal attachment (Tension Test: +Ve). Patient exhibits a poor oral hygiene and crowding in lower anteriors.

The reason for the mobility and recession in Lower anterior is due to the high labial frenal Attachment and Shallow labial vestibule.

#### High frenal attachment



#### Aim

- To reduce the mobility to increase the vestibular depth as well as correct the gingival recession.
- To increase the width of attached gingiva.

Techniques to increase the width of attached gingiva

Free soft tissue auto graft.

- Classic technique.
- Variant technique.
- Apically displaced flap
- Fenestration operation
- Vestibular extension operation.

#### Crowding in upper & lower anteriors



#### Class III Gingival recession in lower anterior



#### radiographic interpretation:



IOPA in relation to lower anteriors reveals vertical bone loss.

#### Treatment planing

##### Etio-trophic phase

- oral prophylaxis done
- complete ultrasonic scaling done and oral hygiene instruction given (modified still man brushing technique is employed in lower anteriors because of gingival recession.)

Composite splinting done in relation to 31,32,41,42

Patient reported after two weeks. On clinical examination the mobility and inflammation was reduced considerably.

**Surgical phase**

- A mucogingival surgery was performed under local anaesthesia to correct the gingival recession and the mobility which is seen in the lower anteriors.
- The surgery took place under sterile conditions.

**Preparation of recipient site**

After administration LA an intraoral disinfection with 0.2% chloro hexidine mouthwash should be done. The exposed root surfaces were planed thoroughly with a gracey 1-2 curette in the case.

Before starting the procedure the frenum width is measured and the attachment is reassured



**Procedure**

**Preparation of recipient site**

After 0.2% Chloro hexidine mouthwash gargling, bilateral mental nerve block L.A



Narrow elliptical incision is placed around the frenal area up to the periosteum (horizontal incision was made at the level of CEJ extending from the line either side of the recession deep in to the papilla at the distal terminal of the horizontal incision, vertical incision was given extending well in to the alveolar mucosa a partial thickness flap elevated and excised apically)



The exposed root surface were planed thoroughly with a gracey 1-2 curette in the case



**The vestibule is deepened adequately**

After frenectomy vestibular deepening done and the surgical site was cleared for the graft.



**Preparation of donor site**

The amount of donor tissue needed was accurately determined by using a foil template. The left side of palate between first and second premolar which had greater thickness was selected to harvest the donor tissue. The initial incision was outlined by the placement of tin foil template with a number 15 scalpel blade. A bevel access incision was made to get an even thickness of the graft.

The incision was made along the Occlusal aspect of the palate with number 15 scalpel blade held parallel to the tissue, continued apically, lifting and separating the graft.

A free gingival graft obtained from palate 3mm below the gingival margin at the area of 24, 25 & 26 region of 1.5-2mm width

And the saline irrigation is done, for the stabilization of FGG at the surgical site done by placing the Holbrook & Ochsenbein suturing

**Free gingival graft from palate**



**Measuring the width of the graft**

**And the graft is adopted in the surgical (Recipient) site. i.e. 32, 31, 41 & 42 regions**



**Suture placed**



**Zinc oxide eugenol pack**



technique. Zinc oxide Eugenol pack is given and post operative instructions given.

- Zinc oxide eugenol periodontal dressing is given along with surgical stent for the donor site. The stent is advised for only one week. After the procedure is over, the patient is instructed with post operative instructions
- The patient was prescribed with antibiotics and analgesic for one week such as amoxicillin 500 mg, combiflam and Chloro hexidine mouth wash and asked to report after one week.

- The patient reported after one week.
- On clinical examination the mobility reduced
- sutures and zinc oxide eugenol dressing is removed & surgical site was irrigated with saline
- The surgical site is examined and the healing was satisfactory without any post-operative complications.
- The healing of palatal wound was satisfactory; patient did not complain of any discomfort.
- The patient was instructed to use an ultra soft tooth brush with a roll technique.

**RESULT**

**Post operative image of the patient after one week. Mobility has been reduced considerably and the healing was satisfactory**



**Post operative image of the patient after one month**



**During laser therapy the fiber attachments are corrected and made surgical surface smooth and gingivoplasty was done in the interdental area for good esthetic appearance**



Post operative image of the patient after four months



PRE - OPERATIVE

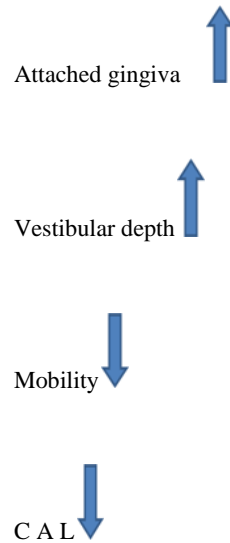


POST - OPERATIVE



**CONCLUSION**

In the limitations of the presented case, the results from the application of the strip technique for free gingival graft indicate that this



procedure could be applied when augmentation of the attached gingival tissues on larger area (more than 3 teeth) is necessary. This method is indicated especially in situations with inadequate vestibule depth and small alveolar bone height. Because of the limitations of the apical mucosal lap displacement for preparation of recipient site in such anatomical circumstances, a graft with small width is indicated. The dividing of the palatal gingival in two parts allows covering of wider recipient site and reduces the morbidity of the classical technique for gingival augmentation by diminishing the number of procedures insinuations with generalized lack of keratinized tissues.

**REFERENCES**

1. Atanassov D. Periodontal surgery. Quintessence BG, (1995)
2. Sullivan HC, Atkins JH. Free autogenous gingival grafts. I. Principles of successful grafting. *Periodontics* (1968).
3. Wennstrom JL. & Lindhe J. Plaque induced gingival inflammation in the absence of attached gingiva in dogs. *Journal of Clinical Periodontology* **10**, 266-276: (1983b).