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# PROSTHODONTIC MANAGEMENT FOR FLABBY TISSUE:CASE REPORTS

Dental Science

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KEYWORDS

## INTRODUCTION:

The flabby tissue is a hyperplastic soft tissue which replaces the alveolar bone and it is commonly seen in the maxillary anterior region of long term denture wearers[1,2]. The prevalence of flabby tissue is about 24% in edentulous maxillae and 5% in edentulous mandibles[1,3]. It is related to the degree of bone resorption and in severe cases this can be to the level of the anterior nasal spine[1].The masticatory forces can displace the flabby tissue leading to altered denure positioning and loss of peripheral seal. So the support, retention and stability of complete dentures will be compromised.

The complete denture impressions are categorised in three ways:

1. The mucostatic technique (Nondisplacive)
2. The mucocompressive technique (Displacive)
3. The selective pressure impression technique

A mucostatic impression techniquerecords the denture bearingareas at rest. As the denture is closely adapted to the underlying tissuesat rest, it is theoretically more retentive[3].

A mucocompressive impression technique records the tissues in displaced form. In thistechnique the occlusal forces are evenly distributedacross the denture bearing tissues.

The selective pressure technique is most commonly used for fabricating conventional denture[3]. In this technique stress bearing areas are recorded in displaced form and relieving areas are recorded at rest position[12].The problem is seen if aflabby ridge is present within an otherwise 'normal' denture bearing area. If the flabbytissue is compressed during impression making, it will later tend to recoil and dislodge the resulting overlying denture. So an impression techniqueis required which will compress the firm tissues and relieving the flabby tissues.

## CASE DESCRIPTION:

Various modifications in the spacer design and custom tray are dicussed to manage flabby tissue in the following case reports.

### Case report 1: window technique

A patient aged 55 years came to Department of Prosthodontics with flabby tissue in the maxillary anterior region. In this technique flabby tissues are recorded in the mucostatic technique and remaining areas are recorded in mucodisplacive technique. It is a two part impression technique. Preliminary impressions were made with impression compound. The custom tray which had a "window" over the area corresponding to the flabby tissue is made(Fig 1A). An impression is made with zinc oxide eugenol paste. Once this has set it is left in place and impression plaster (mucostatic) is painted over the flabby tissue and allowed to set and removed as one impression(Fig 1B).

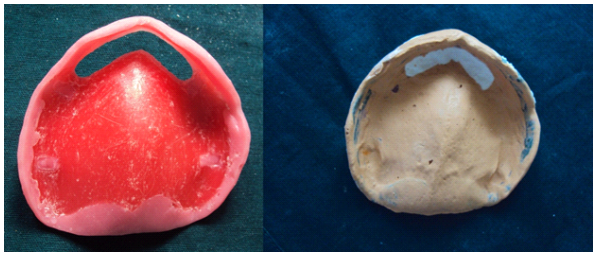

**Fig 1A:Special tray with window in the anterior region**
**Fig 1B:Final impression**

### Case report 2:

A patient aged 60 years came to Department of Prosthodontics with flabby tissue in the maxillary anterior region. On preliminary cast 3-4 mm spacer is adapted on flabby tissue area(Fig 2A) and then custom tray is fabricated with self cure acrylic resin.Final impression is made with zinc oxide eugenol impression paste. The area corresponding to the flabby tissue two holes were made (Fig 2B) then through one hole light body poly vinyl siloxane is injected the excess material came through the other hole(Fig 3A). Flabby tissue is recorded with light body poly vinyl siloxane material (Fig 3B).

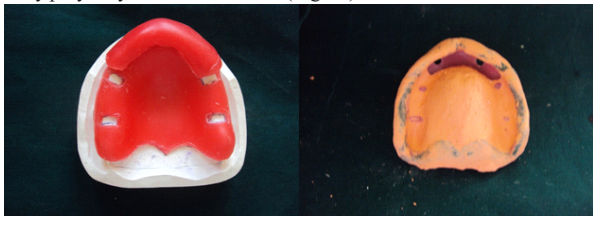

**Fig 2A: Cast with 3-4mm spacer in the maxillary anterior region**
**Fig 2B:Final impression with the holes in the maxillary anterior region**

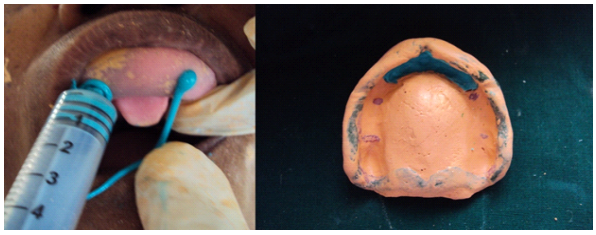

**Fig 3A: Through one hole light body poly vinyl siloxane injected**
**Fig 3B: Final impression**

### Case report 3:

A patient aged 50 years came to Department of Prosthodontics with flabby tissue in the maxillary anterior region. Two trays were used.

After obtaining preliminary cast a single thickness of base plate wax is adapted over the casts to form a spacer. The first tray is made in self cure acrylic resin. Most of the basal surface of the first tray is removed except for the "lattice work" of acrylic resin (Fig 4A) which strengthens the trays and also help to orient the second tray. The first tray is keyed to orient second tray in 4 areas.These keyed positions correspond with an extension of the second tray and will ensure proper seating of the second tray over first tray. Entire first tray is covered with a single thickness of baseplate wax ensuring that keyed positions are kept free of wax. Both the first tray and cast are painted with sodium alginate solution. The second tray is made which extend over the relieved area of the first tray and fit into keyed positions.. The border moulding is done with first tray(Fig 4B) then numerous holes were made in the second tray (Fig 5A) and final impression made with light body poly vinyl siloxane material(Fig 5B).

**Fig 4A: lattice work of first tray**
**Fig 4B: Border moulding done with first tray**

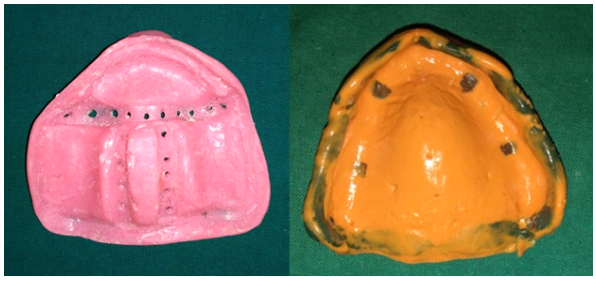

**Fig 5A : Second tray which extend over the relieved area of the first tray**
**Fig 5B: Final impression**

## DISCUSSION:

The flabby ridges are commonly seen in patients who wore a complete maxillary denture opposed by mandibular teeth and a distal extension removable partial denture. This condition is named as 'combination syndrome'[1,3,7]. The manifestations include flabby tissues in the maxillary anterior region, tilting of the occlusal plane posteriorly downwards, supraeruption of the mandibular anteriors, fibrous overgrowth of maxillary tuberosities, resorption in the mandibular distal extension area and decreased vertical dimension of occlusion[7,9]. The flabby tissues could also arise as a result of unplanned or uncontrolled dental extractions[3].

Histopathologically, the hyper mobile tissue can be described as hyperplastic fibrous connective tissue[6]. Some pathologists even report these areas as fibromas. There may be a few inflammatory cells, but true inflammation is usually absent unless there has been some break in the integrity of the epithelium. The lamina propria most often consists of a more dense connective tissue.The mobility is checked by compressing the tissue and the thickness is measured by using probe.

Management of the flabby ridges:

1. Surgical removal of fibrous tissue
2. Pharmacological management
3. Prosthodontic management
   Implant retained prosthesis

Conventional prosthodontics without surgical intervention.

### Surgical removal of the fibrous tissue:

The advantage of this approach is that a firm denture bearing area is produced which enhances the stability of the prosthesis. As flabby ridge provide poor retention for a denture it is better than no ridge as occur following surgical excision of flabby tissues[3]. The disadvantage with surgical excision of tissue is significant loss of the sulcus depth which is important in aiding border seal.

### Pharmacological management:

In this method sclerosing agents are used which increase the firmness and reduce the mobility of soft tissue. It is indicated in conditions where ridge contours are satisfactory but ridge tissues are excessively mobile[8].This technique maintains ridge height in severly resorbed ridges. 5% sodium morrhuate is commonly used as sclerosing solution[8]. It cause binding of overlying soft tissue to periosteum leads to reduced mobility of soft tissue.

### Prosthodontic management:

**Implant retained prostheses**:It enhance stability, retention and oral function. But the recurrent cost due to maintenance can be considerable.

### Conventional prosthodontic management:

By altering impression techniques that is by recording the mobile tissues at rest position whereas the firm tissues are recorded at functional position may solve the problems created by flabby tissues.

A variety of techniques have been suggested to manage the difficulty of making a denture to rest on a flabby ridge. It has been stated that while the flabby ridge may provide poor retention for a denture, it is better than no ridge as could occur following surgical excision of the flabby tissues.

In the case report 1 window corresponding to the flabby area prevent pressure on the tissue while making impression. The flabby area is recorded under mucostatic technique. Advantage with technique is it records the tissues in undisplaced position. So this is termed as passive technique. This technique is used if tissues show significant distortion.
In the case report 2 along with thick spacer (3-4mm) the two holes corresponding to flabby area prevent pressure on tissue while making impression.This technique is used in conditions where tissues show minimal distortion.

In the case report 3 the lattice work of first tray along with numerous holes in the second tray prevent pressure on the flabby tissue while making impression.It is used in conditions where extremely hyperplastic ridges and surgical preparation of mouth is contraindicated. Advantage with this technique is stability of tray is enhanced during impression making. Among those 3 impression methods there is no evidence to support one technique is superior over other.

## CONCLUSION:

Fibrous ridges are challenging to prosthodontist for the achievement of stable and retentive dental prostheses. In this article discussed variety of impression techniques address the problems caused by the unsupported tissue during denture construction, however currently there is a lack of scientific evidence for support of any technique over another.

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