

# Is Excision the Only Option for Flabby Tissue.....?

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## ABSTRACT

A fibrous or flabby ridge is an excessively movable tissue in a sublimis area involving upper and lower alveolar ridges. It develops when flabby tissue replaces the alveolar processes of maxilla and mandible mostly found in an anterior region of the maxilla in long term denture wearers. Chewing forces can displace this mobile denture-bearing tissue, leading to change in denture positioning and loss of seal around the borders of dentures. Forces exerted at the time of impression making can result in deformation of the flabby tissue. The principles of impression making retention, stability and support can be adversely affected by flabby ridges unless managed by modified impression techniques. Various authors have advocated different technique to overcome the problems faced during impression making. This article presents the simple modification in old technique.

**KEYWORDS:** Impressions, Flabby Tissue

## INTRODUCTION

A fibrous or flabby ridge is an excessively movable tissue in a sublimis area involving upper and lower alveolar ridges. The reported prevalence is varied, but has been demonstrated in upto 24% of edentulous maxillae and 5% edentulous mandibles. Bone resorption can be so severe that it can reach upto the level of the anterior nasal spine. Loss of seal around the borders of denture occur when forces of mastication displaces mobile denture bearing tissue. The final stability of the denture can be compromised and both function and appearance can be deliberately jeopardized.<sup>1</sup> Such 'flabby ridges' mainly affect the three basic principles of denture fabrication that is support, retention and stability<sup>2</sup> and can be treated either surgically or by modification of impression techniques. The advantage of the surgical approach is to achieve firm denture-bearing area is produced, which will enhance the stability of the prosthesis, but the health of the patient must be taken into consideration. Removal of such tissue is contraindicated in circumstances where little or no alveolar bone remains.<sup>1</sup> Moreover, fibrous part of the ridge has a cushioning effect which reduces trauma to the underlying bone and hence should not be removed. The prosthetic replacement of removed tissue by denture base material will enhance the bulk and weight of the prosthesis. Loss of the sulcus depth that aids in peripheral seal will adversely affect the retention of prosthesis.<sup>3</sup>

This article presents case reports where modified impression techniques were used to improve denture success in patients with flabby ridges.

## CASE REPORT

### Case Report 1:

A 65 year old female patient reported to the Department of Prosthodontics and Crown and Bridge with the complaint of the loose maxillary denture. She was a denture wearer since last 11 years and had the history of night wearing of dentures. At the time of intraoral examination, flabby tissue was found in the anterior region of maxilla starting from canine to canine region (Fig. 1). Treatment was planned for the fabrication of



Fig. 1: Flabby tissue in the maxillary anterior region

new prosthesis with recording of flabby tissue in undisplaced condition using Window impression technique (two trays) for maxillary ridge as described by William H. Filler.<sup>4</sup> The maxillary preliminary impression was made using irreversible hydrocolloid (Tulip Alginate Impression Material, Cavex Holland BV, Holland) in perforated edentulous tray (Fig. 2) and primary cast was

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Fig. 2: Preliminary impression

poured. Double spacer wax was adapted over the flabby tissue area and in the region of mid palatine raphe (Fig. 3 a & b). Two special trays were fabricated for the maxillary arch – one with a window in the flabby tissue area, with handles on the molar region and the second one in the flabby region. The second tray could be keyed on

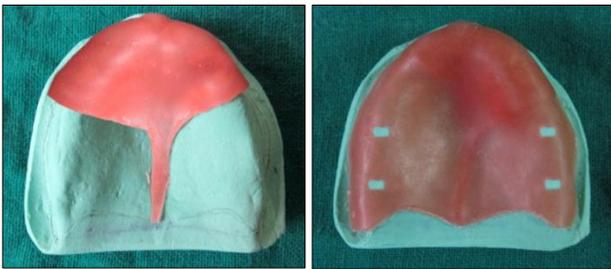


Fig. 3 a and b: Spacer adaptation

the first tray for making of final impression (Fig. 4 a & b). Border molding on the first tray was done in conventional manner using green stick compound (DPI Pinnacle Tracing Sticks) after checking for the proper



Fig. 4 a and b: Special trays



Fig.5: Border molding

extension of the tray (Fig. 5). One modification that was done is this technique, was the addition of modeling wax in the area where the window was cut. Advantage of this addition was to check proper peripheral seal (retention) before making of the final impression, which could not be checked if the window is present. Spacer wax was removed, and the impression was made with medium body elastomeric impression material (Elite Glass medium body, Zhermack, Germany) (Fig. 6 a & b). The



Fig. 6 a and b: Medium body impression

tray was removed and checked for the impression. Second tray was loaded with light body elastomeric impression material (Elite HD+ light body, Zhermack, Germany) and seated on the first tray intraorally. The area which was not covered by medium body was hence covered by light body elastomeric impression material. Both the trays were removed simultaneously after the material was set (Fig. 7). Beading and boxing were done using plaster pumice method and the master cast was prepared (Fig. 8). The dentures were fabricated (Fig.9) and it had good retention and stability with proper recording of flabby tissue.



Fig.7: Secondary impression



Fig.8: Master cast



Fig.8: Maxillary denture

**Case Report 2:**

A 49 year old male patient reported to the Department of Prosthodontics and Crown and Bridge with a complaint of a loose maxillary denture. On examination, flabby tissue in the maxillary anterior was found. Tissue blanching was also noticed on pressure application (Fig. 10). The maxillary primary impression was made using



Fig.10: Flabby tissue in the maxillary anterior region

irreversible hydrocolloid (Tulip Alginate Impression Material, Cavex Holland BV, Holland) (Fig. 11) and



Fig.11: Preliminary impression

primary cast was poured. Double spacer was adapted over the flabby tissue area and special tray fabricated. Peripheral tracing was done in conventional manner using green stick compound (DPI Pinnacle Tracing Sticks). Spacer wax was removed except in the flabby area, and the impression was made with medium body elastomeric impression material (Elite Glass medium body, Zhermack,

Germany) (Fig. 12). The tray was removed



Fig.12: Medium body impression

and checked for the impression. Then the spacer wax was removed in the flabby area and relief holes were made (Fig. 13 a & b). Modification was done a perforation in

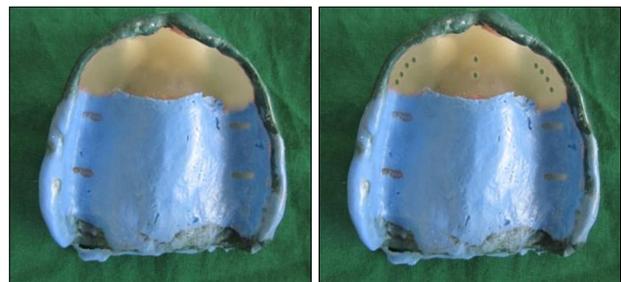


Fig.13a and b: Removal of spacer wax in flabby region

the anterior of the tray was made whose size was equal to the diameter of the disposable mixing tip of elastomeric impression material (Elite HD+ light body, Zhermack, Germany) (Fig. 14). Through this perforation, light body



Fig.14: Perforation in special tray

impression material was directly flown onto the flabby tissue intraorally (Fig. 15 a & b). The flabby area was hence recorded in the light body and normal tissues in medium body elastomeric impression material (Fig. 16). Master cast (Fig. 17) was poured on which denture (Fig. 18) was fabricated. The denture was fabricated (Fig. 18) and it had good retention and stability with proper recording of flabby tissue.



Fig.15a and b: Loading of light body impression material



Fig.16: Secondary impression



Fig.17: Master cast



Fig.18: Maxillary denture

## DISCUSSION

'Combination syndrome' was first proposed by Kelly in 1972 due to the presence of opposing natural teeth against an edentulous area. Combination syndrome leads to alveolar bone resorption in the anterior maxilla,

tuberosity enlargement and loss of bone beneath the mandibular denture bases.<sup>5</sup> Liddlelow<sup>2</sup> in 1964 used two different impression materials in a custom tray, using plaster of paris to record flabby tissue in mucostatic state and zinc-oxide eugenol used to record normal tissue. In 1964, Osborne<sup>2</sup> made the impression using two tray technique. One tray for flabby area and other normal tissue and even two different impression materials were used. Watt and McGregor<sup>2</sup> in 1986 described a technique where impression compound was applied to a modified custom tray and a wash impression with zinc-oxide and eugenol is made. Impression making plays a critical role in complete denture fabrication. A particular problem is encountered if a flabby ridge is present within an otherwise 'normal' denture bearing area. Modified impression techniques should be preferred over surgical excision. The flabby ridge may provide substandard retention for the denture base, but it may be more desirable than no ridge at all.<sup>6</sup> An impression technique is required which will compress the non flabby tissues to obtain optimal support and at the same time, will not displace the flabby tissues.

## CONCLUSION

Fabrication of prosthesis with flabby ridges can be a challenge to dentist. Normal mucocompressive technique are likely to record the flabby tissue in distorted state which will lead to loss of stability and retention of prosthesis. Mucostatic techniques may not make the best use of the available tissue support and movement of the denture base relative to the support tissues may be a problem. All these limitations can be succeeded by the use of selective pressure or minimally displacive impression techniques. With modifications in impression techniques, flabby ridges can be treated effectively without any extra clinical visits in comparison to patients with normal edentulous ridges.<sup>7</sup>

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