

Management of Flabby Ridge: A Case Report

Dr. Naman V. Brahmhatt¹, Dr. Ramesh TR², Dr. Palak Prajapati³, Dr. Birood Patel⁴, Dr. Parth Satapara⁵,
Dr. Dhaval Jivani⁶

^{1,3,5,6}Post Graduate Student, Department of Prosthodontics, Crown & Bridge, Narsinhbhai Patel Dental College and hospital Visnagar, Gujarat

²Professor & Head of the Department, Department of Prosthodontics, Crown & Bridge, Narsinhbhai Patel Dental College and Hospital Visnagar, Gujarat

⁴Senior Lecturer, Department of Prosthodontics, Crown & Bridge, Narsinhbhai Patel dental college and hospital, Visnagar, Gujarat

Abstract: *The presence of displaceable denture bearing tissue often gives rise to a difficulty during the fabrication of complete denture. Presence of flabby tissue generally affects the stability, retention and support of complete denture. Various impression techniques and materials have been proposed for management of flabby tissues. But most of the impression techniques are complex to, quite time consuming to perform, and rely on the materials that are not commonly used in day to day general dental practice. This case report describes about the management of flabby ridge with using an impression technique that makes use of the material that is readily available in routine dental practice, is less time consuming and extra appointment are not required.*

Keywords: flabby ridge, hyperplastic tissue, palatal tray technique

1. Introduction

The success of complete denture is mainly due to their support and retention.¹ Therefore, a final impression of complete denture should record entire functional denture-bearing area, to achieve maximum stability, support and retention.² The problem arises; when the denture bearing area is of poor quality and compromised function of denture.

Flabby ridges, displaceable ridges are one of the clinical situation, that presents difficulty and denture fabrication on such area may give complaints if loose denture or pain.³ Studies indicates that the prevalence of flabby ridge vary, occurring in 24% of edentate maxilla and 5 % of edentate mandibles.^{4,5}

It is after found that flabby ridge in anterior maxilla is due to combination syndrome.^{6,7} Here in this condition, flabby ridge occurs due to a maxilla complete denture opposing mandibular natural teeth.

This condition may occur as a result of unplanned dental extractions. Flabby ridge are typically composed of mucosal hyperplasia and loosely arranged fibrous connective as well as denser collagenised connective tissue.

The purpose of this paper is to describe an impression technique for making impressions of denture bearing areas containing flabby ridge.

2. Clinical Report

A 45-year-old male patient reported to the department of prosthodontics, Narsinhbhai Patel Dental College & Hospital, with chief complains of missing teeth in upper and lower arch and wants to get it replaced. Patient does not give any history of wearing denture. On clinical examination it was observed that the flabby tissues were present in maxillary anterior region from canine to canine region.

The treatment plan was explained to the patient for surgical excision of the flabby tissues but patient was not ready to undergo the surgical excision of the flabby tissue. A treatment plan was made to fabricate complete denture with modification in the impression technique that will help to achieve maximum retention and stability and minimum displacement of denture during function.

Procedure: Preliminary impression was made in metal stock tray with irreversible hydrocolloid impression material to ensure minimal distortion of flabby tissue and impression was poured in dental stone.

The displaceable flabby tissue area was identified and on the cast. On primary cast spacer of T-shaped extending to mid-palatine suture and anterior maxilla was placed and additional relief was given over the flabby ridge area. Maxillary custom tray was fabricated and over that another tray was fabricated covering flabby tissue area made of auto-polymerising acrylic resin (figure 1).



Figure 1: Maxillary custom tray & second tray over flabby tissue

Maxillary custom tray was evaluated in patient's mouth to ensure 2mm space between vestibule and any overextended areas of periphery of tray were reduced. Border moulding was done using low fusing impression compound (figure 2), after border moulding the window was created in flabby ridge area (figure 3).



Figure 2: Border moulding



Figure 3: Window created in flabby tissue area

The second tray was adapted over custom tray over flabby tissue area and holes were created (figure 4 & 5), to allow the excess material to flow out and prevent pressure while making impression, thereby not displacing the flabby tissues.



Figure 4: Second tray placed over window



Figure 5: Holes created in second tray

The final impression was made using light body impression material (figure 6). The impression was poured with type 3 dental stone (figure 7). Subsequently, conventional treatment procedures were followed for fabrication of complete denture and prosthesis was delivered.



Figure 6: Final impression using light body impression material



Figure 7: Master cast

3. Discussion

Due to advances in dental treatment many number of patients are opting for saving natural teeth.⁸The unusual arrangement of natural dentition can lead to uneven distribution of occlusal forces over the residual alveolar ridges that results in bone resorption and then leading to flabby ridge formation. Due to many medically compromised conditions or treatment, such elderly patients may not be appropriate for surgical procedure such as excision of flabby ridges or bone grafting.

Many impression techniques for flabby ridge have been proposed. Which are helpful for fabrication of complete denture without surgical intervention. The technique described above does not involve extra steps or appointment in fabrication of complete denture. This technique can be employed quickly, the material used in the technique are

quite familiar and also very well known to general dentist. Polyvinyl siloxane (PVS) light body material is easy to use and does not require immediate pouring.

Various other treatment options for management of flabby ridge mentioned in this article include mainly excision of flabby ridge and use of dental implant. If the excision of flabby ridge is performed than it can form shallow ridge in that area and may compromise with the retention of the denture. It should be kept in mind that prosthodontics therapy should be concerned with the “conservation of what is remains than meticulous replacement what is lost”.⁹

The use of dental implant in such case is also difficult because there will be excessive bone resorption and replacement by flabby tissues, due to which there will be little bone remaining into which dental implants have to be placed. In such cases it would require bone augmentation of the ridge with bone grafts and the prognosis will be questionable.

In the technique described above two points should be considered:-

- 1) After final impression, the occlusal plane should be oriented and suitable occlusal scheme with proper balancing contact in excursive movements should be achieved. The use of facebow transfer and teeth arrangement on semi-adjustable articulator can be helpful to achieve the occlusion. When an incorrect occlusion plane is provided in such denture it will further destabilize denture that is relying on poor quality of denture bearing tissues.¹⁰
- 2) The rapid analysis of the accuracy of the impression technique can be made by using transparent acrylic heat-cured base. That transparent base mainly allows rapid visualisation of the adaptation of the base to the underlying denture bearing tissues and ingress of air can also be rapidly noticed, and movement of the base can be seen in association with specific movements.¹⁰

4. Conclusion

This case report has discussed management for flabby tissue for complete denture. This technique does not require additional visit, and material used in this technique are readily available material even in the general dental practice. Time required for this technique is also almost same as convention complete denture. So this technique is very easy to follow by general practitioners to manage flabby tissue.

References

- [1] Fenlon M R, Sherriff M, Walter J D. Comparison of patients' appreciation of 500 complete dentures and clinical assessment of quality. *Eur J Prosthodont RestDent* 1999; 7: 11-14.
- [2] The British Society for the Study of Prosthetic Dentistry. Guidelines in prosthetic and implant dentistry. London: Quintessence, 1996.
- [3] Basker R M, Davenport J C. Prosthetic treatment of the edentulous patient. 4th edn. Oxford: Blackwell, 2002.

- [4] Carlsson G E. Clinical morbidity and sequelae of treatment with complete dentures. *J Prosthet Dent* 1998; 79: 17-23.
- [5] Xie Q, N hri T O, Nevalainen J M et al. Oral status and prosthetic factors related to residual ridge resorption in elderly subjects. *Int J Prosthodont* 1997; 55: 306- 313.
- [6] Kelly E. Changes caused by a mandibular removable partial denture opposing a maxillary complete denture. *J Prosthet Dent* 1972; 27: 210-215.
- [7] Lynch C D, Allen P F. The ‘combination syndrome’ revisited. *Dent Update* 2004; 31: 410-420.
- [8] Woolfardt J F, Han-Kuang T, Basker R M. Removable partial denture design in Alberta dental practices. *J Canad Dent Assoc* 1996; 62: 637-644.
- [9] DeVan M M. The nature of the partial denture foundation: Suggestions for its preservation. *J Prosthet Dent* 1952; 2: 210-218.
- [10] Carr A B. Single complete dentures opposing natural or restored teeth. In Zarb G A, Bolender C L, Carlsson G E (Eds). *Boucher’s prosthodontic treatment of edentulous patients*. 11th edn. St Louis: Mosby, 1997.