

Management of Flabby Ridge During Fabrication of Complete Denture, Challenge in Clinical Practice: A Case Report

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Abstract

The displaceable denture bearing tissues or flabby ridges is a common finding in edentulous patients. A careful consideration and application of the principles of complete denture construction for such condition can provide a palliative form of treatment. Choice of treatment modality is made by keeping in mind that the requirement of stability and retention of the prosthesis should be balanced along with the preservation of the health of oral tissues for every patient.

Keyword: Flabby ridge; Window Technique for complete denture fabrication.

Introduction

Prosthetic management of edentulous arches could be challenging when the residual ridge present with less than normal condition, such as highly resorbed mandibular ridges, flabby ridges and knife edge ridges. Success of the complete denture prosthodontics is majorly depending upon the basic principles of impression making. Recording the entire functional denture-bearing area helps to ensure maximum support, retention and stability for the denture during use.¹

Flabby ridges are mainly develop when an edentulous ridge is opposed to natural teeth. It is considered a feature of the combination syndrome

which is commonly seen in the anterior part of maxilla.²

When the bone is replaced by hyperplastic tissue, a flabby ridge occurs which is seen in long-term denture wearers and clearly related to the degree of residual ridge resorption. The reported prevalence for this condition varies among investigators, but it is seen that up to 24% of edentulous maxilla and 5% of edentulous mandible and in both jaws mostly in the anterior area.³

According to Mac Entee, support for the complete dentures could be significantly compromised if the flabby ridge is having more than 2 mm displacement under pressure. Retention, support and stability of complete dentures is hampered by flabby ridges

unless the tissue is appropriately and carefully manipulated by special impression techniques.⁴

The purpose of this paper is to describe a window technique for making the impression of flabby tissues with better material control and application of impression plaster over the flabby tissue.

Case Report

A 65-year-old male patient was reported to the Prosthodontic, Crown & Bridge department at Dr. D.Y. Patil Dental College and Hospital, Dr. D.Y. Patil Vidyapeeth, Pimpri, Pune with a complain of ill-fitting maxillary complete denture from last one year. On intraoral examination, it was seen that, an edentulous maxillary arch with severely displaceable anterior flabby ridge (Fig. 1). It was decided to fabricate new conventional complete dentures to the patient.



Fig. 1: Intraoral photograph showing flabby ridge (marked ridge).

Zafrulla Khan's Window impression technique was considered for recording the flabby tissue.⁵

The procedure is as follows:

1. Primary impressions were made with impression compound material by edentulous stock trays for edentulous arches.
2. A maxillary cast was poured and the flabby ridge area was marked on stone. After that custom tray was fabricated with spacer wax and tissue stops with handle in the middle.
3. The custom tray was tried in the patient's mouth and the flanges were adjusted to be 2 mm short to that of the sulcus depth using a slow-speed motor and carbide acrylic-trimming bur.

4. Green stick impression compound was used for the border molding.
5. The anterior flabby tissue was marked in the border molded custom tray and then the corresponding area was trimmed.
6. After border molding, impression was made by using zinc oxide eugenol impression paste and then any impression material which escaped through the window of the tray was trimmed back
7. The impression was resealed in the patients mouth and impression plaster was painted over the exposed flabby tissue by using a brush (Fig. 2). The material should be rigid enough to be applied with a brush, but should not be runny to the extent that it drips.



Fig. 2: Impression plaster was painted over flabby tissue.

Then the impression tray was removed carefully after impression plaster was set and checked for its completeness (Fig. 3).



Fig. 3: Completed final impression.

A separating medium was applied over the plaster part of the impression before pouring it.

8. Record base was fabricated on the cast and then jaw relation was recorded.
9. Following satisfactory try-in, a maxillary conventional complete denture was fabricated with bilaterally balanced occlusion (Figs. 4 and 5).



Fig. 4: Occlusion view – try in intraorally.



Fig. 5: Occlusion view – final denture insertion intraorally.

Discussion

An accurate impression of the edentulous ridge and functional sulcus is crucial to the provision of a stable and retentive denture. Flabby ridges recorded using a conventional method are compressed during impression making. The elastic recoil of flabby fibrous soft tissue during function results in instability and loss of denture retention and hence dislodgement of the denture.⁶

Various impression techniques and methods are described in the literature for recording of flabby tissue during impression making. However, there is no evidence to support that any one of the particular impression techniques will provide a stable and retentive denture on flabby ridges as compared to others.⁷ This report describes a window technique for the impression making of anterior maxillary flabby ridge using impression plaster.

A careful consideration and application of the principles of complete denture fabrication for such condition may provide a palliative form of treatment. Choice of treatment modality should be

made by keeping in mind that the requirement of stability and retention of the prosthesis should be balanced along with the preservation of the health of oral tissues for every patient.

Conclusion

Making a definitive impression of edentulous arch can be challenging when residual ridges present with flabby ridges. Mucosa over the alveolar ridges of completely edentulous patients is of varying thickness and mobility. It could be distorted at the time of impression making. This distortion is duplicated in the finished denture can cause inflammation and instability of the denture. Therefore, adequate measures should be employed for its management.⁸

This technique will not require additional clinical visits as compared to fabrication of a conventional complete denture. No extra time is required for the specialised impression technique. This technique could be easily carried out by the general dental practitioner, allowing management of the flabby ridge case in a primary dental care setting.

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