Case Report

Management of Flabby Ridges in Complete Denture: A Case Report

Bajwa W, Rajanikanth AV, Sangur R, Dwivedi K

Abstract: The presence of displaceable denture-bearing tissues or flabby ridges has always been a matter of concern during impression making procedures in complete dentures. During the process of making an impression, these mobile tissues get compressed and tend to recoil back to their original form thereby making it a challenge to deal with such flabby ridges in fabrication of dentures. This paper is an effort to help manage these displaceable tissues using a specific "window technique" and thereby attain a prosthesis which fulfills the basic principles of impression making.

Keywords: Flabby Ridges; Impression; Window Technique; Complete Denture.

INTRODUCTION

Flabby ridge or movable tissue is most commonly seen in the maxillary anterior region. It is nothing but a hyperplastic soft tissue that has replaced the underlined resorbed bone. Kelly[1] in 1972 reported that mandibular anterior teeth cause trauma to maxillary anterior ridge as all occlusal forces are directed on to this area. This results in loss of bone from the anterior maxilla with subsequent fibrous tissue hyperplasia. The mucosa is highly movable and loosely attached to underlying periostium of the bone.

The presence of displaceable denture-bearing tissues often presents a difficulty in making complete dentures. Displacement of such mobile tissues during impression making is always a concern. Soft tissues that are displaced during impression making tends to return to their original form, and complete dentures fabricated using this impression will not fit accurately on the recovered tissues. This will result in loss of retention, stability discomfort and gross occlusal disharmony of the dentures.[2]This article presents an impression making technique used to record flabby tissue in an undisplaced form using "Watson's Window technique."

CASE REPORT:

A female patient aged 40 years reported to the Department of Prosthodontics with the chief complaint of loose upper denture and wanted fabrication of a new denture. Patient gave the history of wearing denture for the past 6 years and complained that it gradually became loose. On examination, vertical dimension was found to be reduced, teeth were attrited, and denture borders were overextended. On further examination, the maxillary anterior ridge was found to be flabby **(**Fig 1**)**. Thus it was decided to fabricate a new complete denture using "***window technique"*** to record the flabby tissue in mucostatic form.

Figure 1: *Pre Operative*

Primary impression of upper and lower edentulous arches were made using impression compound. The flabby tissue was marked with an indelible pencil on the maxillary impression. Both the impressions were poured with dental plaster and primary casts were obtained. Special trays were fabricated for both upper and lower arches using the tray compound material. In the maxillary special tray, corresponding to the marked area obtained, a window was created in order to record the flabby tissue (Fig 2).

Special trays were placed in the patient's mouth to check for proper extensions **(**Fig 3**)**. Border molding was done with green stick compound and final impression was made

using zinc oxide eugenol paste in the conventional manner. Any excess of zinc oxide eugenol paste coming out of the window prepared in the maxillary special tray was trimmed off **(**Fig 4**).**

Figure 2*: Window prepared in special tray corresponding to the flabby tissue region*

Figure 3: *Tray Checked In Patients Mouth*

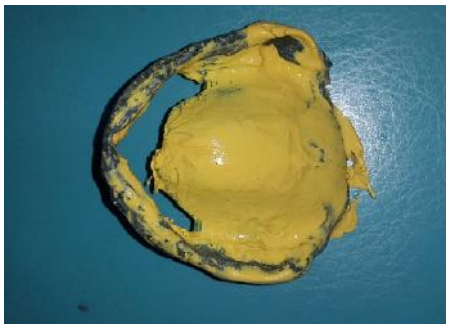

Figure 4: *Border Molding Done Using Green Stick Compound and Final Impression Made Using Zinc Oxide Eugenol Paste.*

Maxillary special tray was placed back in the patient's mouth (Fig 5). Impression plaster was painted and placed over the flabby tissue and was allowed to set (Fig 6).

Once the impression plaster was set completely, the impression was removed as one (Fig 7). Over the plaster impression, separating media was applied and impression was poured with dental stone. Maxillary and mandibular master casts were obtained (Fig 8). On these master casts, denture base and occlusion rims were fabricated. Jaw relations were made and try in was done. Dentures were invested and packed in conventional manner. Final dentures thus obtained were placed in the patient's mouth (Fig 9).

Figure 5: *Tray Placed Back In Patients Mouth*

Figure 6: *Dental Plaster Painted Over the Flabby Tissue*

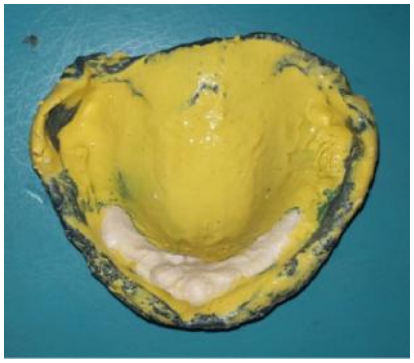

Figure7: *Final Impression*

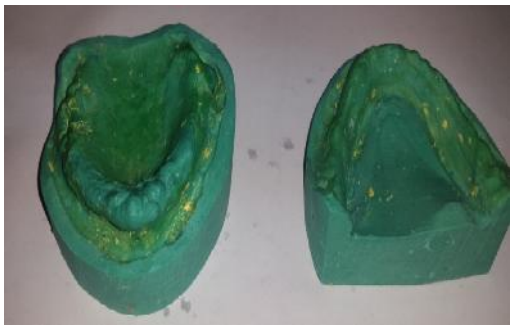

Figure 8: *Master Cast*

Figure 9: *Denture Placed*

DISCUSSION:

Liddlelow[3] in the year 1964 described a technique in which using two impression materials i.e. 'Plaster of Paris' over the flabby tissues and zinc oxide eugenol over the normal or non flabby tissues were used in a custom tray. Osborne[4] in the year 1964 described another technique of using two different impression trays and materials to separately record the flabby and normal tissues and then relate the two in mouth. In the year 1970 Watson[5] described the 'window' impression technique in which a custom tray is made with a window over the flabby tissues.

A mucocompressive impression is first made of the normal tissues using the custom tray and zinc oxide and eugenol. Once set, it is removed, trimmed, and re-seated in the mouth. A low viscosity mix of 'plaster of Paris' is then painted onto the flabby tissues through the window. Once set, the entire impression is removed as one. Lynch and Allen[6] in 2003 described a technique where impression compound is applied to a modified custom tray. The thermoplastic properties of this material are then manipulated to simultaneously compress the 'normal tissues', while avoiding displacement of the 'flabby tissues' using the same material and impression tray. Over this manipulated impression compound, a wash impression with zinc-oxide and eugenol is made.

Flabby ridge cases can be dealt with the following techniques:

1. **SURGERY[7]:** Surgical removal of the flabby tissue in order to obtain firm denture bearing area which will improve the stability of the denture. When planning for a surgery, one must make sure that there is enough bone present underneath after the removal of the fibrous tissue so as to aid in denture retention. In cases where there is excessive bone loss underneath, it is better to preserve the flabby tissue and construct the denture over it, than to be left with no ridge at all. Removal of flabby tissue may compromise the sulcus depth thereby inhibiting in attaining proper seal and thus compromising the fit of the denture. Thus surgery if planned should be performed only when sufficient bone is present underneath the flabby tissue.
2. **CONVENTIONAL TECHNIQUE[7]:** Making impressions for fibrous ridges is a matter of great concern because during the conventional impression making procedure, the flabby tissue gets compressed and this may later result in the recoil of the tissue thereby causing displacement of the denture. Thus a special impression making technique is needed to make sure that flabby tissues are recorded in static state and the non flabby tissue in compressed form to obtain proper support.
3. **IMPLANT RETAINED PROSTHESIS[8]:** Implant retained prosthesis whether fixed or removable offer a great number of advantages over the conventional prosthesis in

terms of retention, stability and oral function. But one needs to consider cost factor, surgery, patient's medical history, and the chances of surgical complications and implant failure.

CONCLUSION: Fibrous or flabby tissues in complete denture fabrication are a challenge to deal with. But with modified impression making techniques one can overcome this problem and prevent it from hindering in the success of denture fabrication, thereby providing adequate retention, stability, support and patient satisfaction with the functioning of the denture.

Author affiliations: 1. Dr. Wakinder Bajwa, PG Student, 2. Dr.Ayinampudi Venkata Rajanikanth MDS, Professor, 3. Dr. Rajashekhar Sangur, MDS, Professor& Head, 4. Dr. Kshitij Dwivedi, MDS, Senior Lecturer, Department of Prosthodontics, Rama Dental College-Hospital & Research Centre, Kanpur, U.P.

REFERENCES

1. Kelly E. Changes caused by a mandibular removable partial denture opposing a maxillary complete denture. J Prosthet Dent 1972;27:140-150.

2. Lytle RB. The management of abused oral tissues in complete denture construction.J Prosthet Dent 1957;7:27-42.

3. Liddelow KP. The prosthetic treatment of the elderly Br Dent J 1964; 117: 307-315 .

4. Osborne J. Two impression methods for mobile fibrous ridges.Br Dent J 1964;117: 392-394.

5. Watson R M. Impression technique for maxillary fibrous ridge. Br Dent J 1970; 128: 552.

6. Lynch C D, Allen P F. Management of the flabby ridge: re-visiting the principles of complete denture construction. Eur J Prosthet Rest Dent 2003;11: 145- 148.

7.Winkler S. Essentials of Complete Denture Prosthesis. 3rd ed. India: AITBS; 2015.

8. Pawar S , Rathod N, Rathod C, Naitam D, Choudhury G.K . Chhattisgarh Journal of Health Sciences 2013;1(1) : 83-86.

Corresponding Author:
Dr. Wakinder Bajwa
Post graduate student,
Department of Prosthodontics
Rama Dental College-Hospital & Research Centre, Kanpur
Phone: +91 9935330740
Email: wakinderbajwa@gmail.com

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