
DISPLACEABLE TISSUE: A CLINICAL CHALLENGE FOR A PROSTHODONTIST

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ABSTRACT

A fibrous or flabby ridge is a superficial area of mobile soft tissue affecting the maxillary or mandibular alveolar ridges. Restoration of such ridges often requires special consideration in impression making. Masticatory forces can displace this mobile denture-bearing tissue, leading to altered denture positioning and loss of peripheral seal. Forces exerted during the act of impression making can result in distortion of the mobile tissue. Unless managed appropriately by special impression techniques, such 'flabby ridges' adversely affect the support, retention and stability of complete dentures. This paper describes a technique especially applicable for mandibular edentulous flabby ridges. The choice of the impression material, as well as the design of the impression tray, focuses on preventing distortion of the displaceable residual ridges during impression making. The use of this technique helps in maintaining the contour and capturing the detail of the tissues, as well as in accurately determining the extent of the muccobuccal denture extensions.

Keywords: ridge, flabby, technique, impression.

Introduction

A flabby ridge is the one which becomes displaceable due to fibrous tissue deposition. It usually occurs when natural teeth oppose an edentulous ridge. It could also arise as a result of unplanned or uncontrolled dental extractions. Displaceable, hyperplastic, or flabby tissues are commonly seen in the anterior region of the maxilla in combination syndrome [1] or in the mandibular alveolar ridge when extensive bone resorption has occurred [2]. Displacing such residual ridge tissues during impression making is always a concern. Soft tissues that are displaced during impression making tend to return to their original form, and complete dentures fabricated from the impression will not fit accurately on the recovered tissues. As a result, loss of retention and stability of the dentures, discomfort, and gross occlusal disharmony may occur [3]. Published studies indicate that the prevalence of flabby ridges can vary, occurring in upto 24% of edentate maxillae and in 5% of edentate mandibles [4, 5].

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[6]. A particular problem is encountered if a flabby ridge is present within an otherwise 'normal' denture bearing area. If the flabby tissue is compressed during conventional impression making, it will later tend to recoil and dislodge the resultant overlying denture [7]. Clearly, an impression technique is required which will compress the nonflabby tissues to obtain optimal support, and, at the same time, will not displace the flabby tissues.

A variety of impression techniques have been described for overcoming the problem of the flabby ridge. Liddlelow [8] described a technique whereby two separate impression materials are used in a custom tray (using 'plaster of Paris' over the flabby tissues, and zinc oxide and eugenol over the 'normal' tissues). Osborne described a technique whereby two separate impression trays and materials are used to separately record the 'flabby' and 'normal' tissues, and then related intra-orally [9]. This paper describes zafrullah khan impression technique for making impressions of denture bearing areas containing flabby ridges.

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Case report

A 45year old female patient, Sindhura Devi (Fig. 1), visited the Department of Prosthodontics at DAV Dental college & hospital, Yamunanagar with the chief complaint of an ill fitting lower denture since 2 years. The patient was a denture wearer for the past 2 years.



Fig. 1 Extraoral preoperative view

After acceptable primary impressions were secured from impression compound, primary casts were poured. Anatomic landmarks that provided help in outlining the mandibular cast were the retromolar pads, external oblique ridges and mylohyoid ridges. A wax



Fig.3 Border Moulding done

Then zinc oxide eugenol impression was made (Fig. 5). Any impression material which had escaped through the window of the tray was trimmed back. The impression was resealed and impression plaster was applied over the exposed flabby tissue using a brush or a wax knife. The material should be stiff enough to be applied with a brush,

Medical history revealed that there was no underlying systemic disorder. On Intraoral examination (Fig. 2), it revealed a flabby mandibular anterior ridge extending from canine to canine region. A treatment plan was formulated to fabricate a complete denture with the modification in the impression technique to achieve minimum displacement of denture during function and maximum retention and stability.



Fig.2 Intraoral preoperative view

spaced custom tray was fabricated from the primary cast. Border Moulding was done (Fig. 3). A window was cut in the custom tray corresponding to the flabby part of the ridge (Fig. 4).



Fig.4 Window cut in the custom tray

but not runny to the extent that it drips. The impression tray was removed carefully when the impression plaster had set (Fig.6). Separating medium was applied over the plaster part of the impression before pouring it. Rest of the steps were completed in a conventional manner (Fig. 7&8).



Fig.5 Secondary impression with ZOE



Fig.6 Flabby portion recorded with impression plaster



Fig.7 Intraoral postoperative view



Fig.8 Extraoral postoperative view

Discussion

Managing a completely edentulous patient with a flabby mandibular ridge can be a challenging problem and taking care to consider the influence of both the impression surface and occlusal surface details in paramount. Standard muco-compressive impression techniques are likely to result in an un-retentive and unstable denture as the denture constructed on a model of the flabby tissue is in a distorted state. The use of selective pressure or minimally displacive impression techniques should help to overcome some of these limitations. The use of holes, windows and wax relief reduces the hydraulic pressure and minimizes the displacement of the denture bearing tissues. The suggested method eliminates the excessive displacement of the soft tissues during secondary impression. Thus a physiologic and anatomic

registration of the attached and the unattached tissues of the denture bearing areas was attained. Choice of treatment modality is made by keeping in mind that the requirement of stability and retention of the prosthesis must be balanced along with the preservation of the health of oral tissues for every patient.

Conclusion

All the denture bearing areas within the limits of tissue tolerance have been covered, not the residual ridge alone but the most important buccal shelf and retro molar pad as well. Peripheral borders have been established within the limits of tissue tolerance. Valve seal -without interference with functional movements; by establishing a periphery which harmonizes with the anatomic and physiologic landmarks surrounding the denture, this provides good valve seal but also

maximizes lateral stability[6]. We cannot overlook the effect that the soft tissues of the denture-supporting area have on the success of complete dentures. These tissues must be considered from the time the patient first appears for diagnosis until the final adjustment is made. Even after this we must be interested in their health if the ridges are to be preserved and the dentures are to function satisfactorily[10].

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