



AN INGENIOUS APPROACH OF RECORDING THE FLABBY RIDGE IN CONSTRUCTION OF COMPLETE DENTURE

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ABSTRACT The displaceable denture bearing tissues or flabby ridges is a common finding in edentulous patients. Unless managed appropriately, such flabby ridges adversely affect the support, retention and stability of complete dentures. Prosthodontic rehabilitation of a patient with compromised edentulous ridges in a conventional manner is a difficult task. Modifications in the treatment procedures should be considered to fulfil the patient's functional and esthetic desires. This case report brings in a modification to dual tray impression technique procedures so as to record the flabby tissue with minimum distortion and easier tray handling.

KEYWORDS : flabby, hyperplastic, dual tray technique, impression.

Introduction

The performance of complete denture is often reflection of its support and retention. A master impression for a complete denture should record the entire functional denture bearing area to ensure maximum support, retention and stability for the denture during use. However difficulties arise when the quality of denture bearing area are unsuitable for the purpose.^[1] A 'fibrous' or 'flabby' ridge is a superficial area of mobile soft tissue affecting the maxillary or mandibular alveolar ridges.^[2]

Flabby tissue get compressed during conventional impression making and later tends to recoil and dislodge the overlying denture.^[1] In the edentulous patient, it is found in the anterior region more commonly in both arches.^[3]

A multitude of impression techniques^[4-7] have been described in literature for management of flabby ridges. The present clinical report advocates an innovative tray design, which is a modification of technique proposed by Osborne (1964) and Devlin (1985), for recording an anterior flabby ridge of the maxillary arch.

Case report

A 45 years old male patient reported to the Department of Prosthodontics, with a chief complaint of an ill-fitting denture since past 6 months. Patient was a denture wearer for past 8 years and had started to face the retention problem recently. On examination, flabby tissue was found in the maxillary anterior region extending from 1st premolar to 1st premolar region.

A treatment plan was formulated to fabricate a denture with the modification in the maxillary impression technique to achieve minimum displacement of denture during function and maximum retention and stability.

A primary impression of maxillary arch was made with impression compound by conventional approach followed by fabrication of primary cast with type II gypsum. The flabby area was identified on cast and marked with indelible pencil. A complete spacer of thickness 1 mm was made on the denture bearing area. An additional spacer of same thickness was made on the marked flabby tissue. A well-adapted custom tray was made with the handle made in the center of the tray in the palatal area. During the fabrication of this tray two dowel pins were inserted into the autopolymerising resin at the region just posterior to flabby tissue. This feature was incorporated to help in retention of the second tray and to safeguard the sensitivity of the modified impression technique.

For the fabrication of second tray, aluminum foil was adapted from molar to molar region perforating the dowel pins through the foil and adapting it well on first tray to protect sticking of two trays during fabrication. Autopolymerising resin was mixed and well adapted on the flabby tissue area ending just posterior to dowel pins making sure that plastic sleeves of pins got attached in second tray leaving the metal ends of pin in first tray. The tray was carefully separated from first tray and holes were made in the tray for escape of excess material (Figure 1).



(Figure 1)

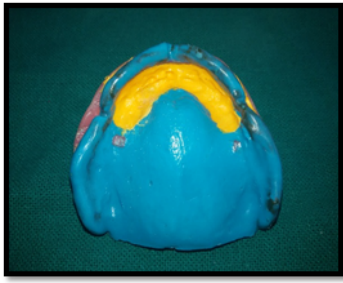
Before commencing border molding, the double spacer above the flabby area was removed to ensure minimal distortion of displaceable flabby tissue. After completion of border molding, a window was cut over flabby tissue.

Remaining spacer was removed and first impression was made with light body consistency polyvinyl siloxane (PVS) impression material. After material had set, excess was removed from window area and tray was placed back inside patient's mouth. Now the second tray was placed at the ends of dowel pins to ensure precise approximation with the first tray (Figure 2). Light body consistency PVS material was injected into the second tray and over the flabby area and impression was made.



(Figure 2)

Entire impression was taken out without disturbing the two parts with the help of handle in the center of first tray (Figure 3). Impression was inspected visually and was poured in type III gypsum.



(Figure 3)

Discussion

Flabby ridges pose a prosthodontics challenge for achievement of stable and retentive dental prosthesis. Three main approaches for its management are surgical removal of flabby tissue prior to conventional prosthodontics,^[8] implant retained prosthesis^[9] and non-invasive conventional prosthodontics.

Surgical 'debulking' of flabby tissues leads to shallow ridge, thereby providing little retention or resistance to lateral forces on the resultant dentures. Also, geriatric patients may have complex medical history for which any form of surgery may be contraindicated. Hence, bone grafting and dental implants placement may be unsuitable.

Various techniques have been advocated in literature for recording the flabby tissues such as one part impression technique,^[5] controlled lateral pressure technique,^[5] palatal splinting using a two-part tray system,^[6] and window technique.^[7]

The technique employed in the present article attempts to overcome certain limitations of Osborne's and Devlin's technique. Osborne (1964) advocated the use of two separate trays and impression materials to record the normal and flabby tissues. However, there was no method described to approximate the trays intraorally. Devlin (1985) modified it by placing a locating rod in center of palatal tray for approximation of second special tray.

The present technique employed two trays similar to Osborne's and Devlin's technique. The use of dowel pins ensured precise approximation of the two trays intraorally which was a limitation of Osborne's technique. The design of first tray encompassing the entire vestibular extension overcame the problem of stabilization of the tray intraorally which was major limitation of Devlin's technique. Also, the window was cut on the flabby region after border molding completion to ensure maintenance of peripheral seal during molding procedure. Moreover, light body polyvinyl siloxane impression material used for recording flabby tissue is mucostatic, dimensionally stable and elastic. Also it is less brittle and need not be handled as carefully as impression plaster. The use of holes, windows and wax relief reduces the hydraulic pressure and minimize the displacement of the bearing tissues. Hence the present technique can be routinely utilized for management of flabby tissues.

Conclusion

The present article illustrates a simplified, non-invasive modified technique to record flabby tissue in undisplaced form and rest of tissues in functional form. This helps in achieving retentive and stable dentures.

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