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### RESEARCH ARTICLE

#### MANAGEMENT OF HYPER-MOBILE TISSUE WITH A MODIFIED COMBINE TECHNIQUE OF ZAFRULLA AND HOBKRIK

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#### Abstract

When in partially edentulous patient hyperplastic tissue replaces the alveolar bone, a flabby ridge develops which is often seen in long-term denture wearers. Flabby ridge provide poor retention for the denture fabrication if not recoded properly. A careful consideration and application of Zafrulla and Hobkrik technique of complete denture construction helps practitioner to over cone such conditions easily. This article describes procedure performed for flabby ridge patient and demonstrates Zafrulla and Hobkrik combination impression technique.

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#### Introduction:-

The Progressive resorption of residual alveolar ridge is one of the well documented consequence of tooth loss.<sup>[9]</sup> For many years, the focus of attention was mainly on problems associated with resorbed mandibular alveolar ridges and the influence of this on denture retention and stability. A more recently documented phenomenon has been the edentulous 'flabby' maxillary ridge. Watson<sup>[10]</sup> discussed this phenomenon in 1970, and described an impression technique for maxillary fibrous ridges. Further discussion was reported by Kelly<sup>[6]</sup> in 1972, when he described changes caused by a mandibular removable partial denture opposing a maxillary complete denture. He suggested the term 'combination syndrome' to describe the clinical features, including loss of bone from the anterior maxilla with concurrent fibrous tissue hyperplasia; overgrowth of the maxillary tuberosities; extrusion of the anterior mandibular natural dentition and papillary hyperplasia of the hard palate.

A variety of techniques have been suggested to circumvent the difficulty of making a denture to rest on a flabby ridge. 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 tissue.<sup>[11]</sup> A multitude of impression techniques have been suggested in the past to help record a suitable impression of a flabby denture-bearing area.

A mucostatic impression technique<sup>[1]</sup> records the un-displaced denture bearing areas at rest. As the resultant denture is more closely adapted to the underlying tissues at rest, it is theoretically more retentive. However, occlusal forces will not be evenly distributed across the underlying denture bearing area. In contrast, a mucocompressive impression technique<sup>[2,3]</sup> compresses the underlying tissues in a manner similar to the way in which the resultant denture will compress the underlying tissues. In this fashion, the resultant occlusal forces will be more evenly distributed across the denture bearing tissues.

Watson<sup>[10]</sup> described the 'window' impression technique with plaster and zinc oxide eugenol. Zafrulla and Hobkrik modified the technique where a custom tray is made with a window or opening over the (usually anterior) flabby tissues.<sup>[13]</sup> A muco-compressive impression is first made of the normal tissues using the custom tray and zinc oxide

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and eugenol. Once set, it is removed, trimmed, and re-seated in the mouth. A light body elastomeric impression is then used in the flabby tissues through the window. Once set, the entire impression is removed. Each of these techniques might be considered cumbersome, and the difficulties associated with their manipulation could lead to inaccuracies.

### Clinical Report

A 68-year-old male was referred to the Post Graduate Department of Prosthodontics for rehabilitation. The patient reported that he had recently been provided with a maxillary complete denture, which he described as 'loose' and pain while eating. This was his second complete maxillary denture since being rendered edentulous six years previously and he had found both unsatisfactory. On examination, the patient was partially dentate, with no teeth present in her maxilla, and fixed prosthesis with all the mandibular teeth (Fig. 1 a intra- oral photograph b. opg of patient ). It was noted that there was an extensive area of flabby tissue present on the anterior region of her maxillary denture bearing area.



A. Patient's maxillary edentulous ridge.



Figure 1:- A. Intra oral photograph of patient's edentulous ridge. B. patients OPG.

Following discussion with the patient it was decided to provide him with a new maxillary complete denture, paying attention to the impression technique, and to appropriately design the occlusal scheme.

A primary impression of upper edentulous arch was made with a low viscosity irreversible hydrocolloid material (Alginate; Dentsply Ltd-UK, Weybridge, Surrey, UK) to ensure minimal distortion of the displaceable ('flabby') tissues. The impression was poured in dental stone. Two uniform thicknesses of dental wax were placed as a spacer. The custom tray was fabricated in the usual manner. [Figure 2](#)

At the chair-side, the custom tray was inserted into the mouth and any over-extended areas of the periphery were reduced. The master impression was then made as follows:

Border moulding is done in regular manner with green stick and then impression was made with zinc oxide eugenol impression material. Figure 3



**Figure 2:-** Customized impression tray for final Impression.



**Figure 3:-** Border moulding with zinc oxide wash impression.

Using a scalpel, any material that had flowed into the area of the tray associated with 'flabby' tissues was removed. The flabby region was marked intraorally with an indelible pencil. The custom tray was perforated over the areas of the primary cast representing the flabby tissues. The area of the custom tray associated with the 'flabby' tissues was then filled with light bodied polyvinylsiloxane impression material. Figure 4



**Figure 4:-** A. removal of material from flabby ridge area and perforation were made.



B. light body Impression was made

Once set, the impression was removed from the mouth and inspected. Any excess material was removed.

The impression was poured in dental stone, paying careful attention to preserving the bordered moulding of sulcus area. Denture fabrication then continued in the usual manner. The dentures were inserted, and at subsequent followup appointments patient reported satisfactory stability, aesthetics and function (Fig. 5).<sup>[7]</sup>

### Discussion:-

The secondary impression causes some displacement no matter how carefully is made. Such tissue distortion can result in irritation and dislodgement if duplicated in the finished complete denture. The effects of tissue displacement and distortion during impression making should be eliminated. The use of holes, windows and wax relieve reduces the hydrostatic pressure and minimize the displacement of the bearing tissues. The suggested three methods eliminates the excessive displacement of the soft tissues at the secondary impression thus a physiologic and anatomic registration of the attached and the unattached tissue of the denture bearing areas are attained.<sup>[5]</sup>

To prevent the difficulties presented by the maxillary flabby ridge, it should be mentioned that prevention of tooth loss in the anterior maxilla is worthwhile. If the roots of anterior teeth can be maintained, then fibrous replacement of alveolar bone will be prevented. Provision of a complete overdenture in the maxilla, and in turn preserving bone volume in the anterior maxilla, will prevent many of the aforementioned problems associated with flabby ridges.

### Conclusion:-

This paper has described an impression technique for management of a denture bearing area that contains flabby tissues. The materials used are readily available and used in contemporary general dental practice. The time required for the specialised impression technique is not excessive. This technique can be readily completed by the dental practitioner, allowing flabby ridge complete denture cases to be managed.<sup>[3]</sup>

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