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PROSTHODONTIC REHABILITATION OF UNSUPPORTED FLABBY TISSUE -A CASE REPORT

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ABSTRACT Rehabilitating a completely edentulous long span with atrophic and movable ridges has always been a challenging task in achieving a good retention as well as full patient satisfaction. A fibrous or flabby ridge or a tissue is excessive, movable tissue, superficially present of mobile soft tissue affecting the maxillary or mandibular alveolar ridges. Masticatory forces can displace this mobile denture-bearing tissue, leading to altered denture positioning and loss of peripheral seal and stability. Forces exerted during the act of impression making can result in distortion of the movable tissue.

This paper presents case report for full mouth rehabilitation of a patient with flabby ridges noted in the upper as well as lower arch with two different impression techniques used for both the ridges which is an easy, and economical single day procedure.

KEYWORDS : Flabby tissue, unsupported tissue, impression techniques, prosthodontic management, Light body

INTRODUCTION

A fibrous or flabby ridge is an unsupported superficial area of mobile soft tissue affecting maxillary or mandibular alveolar ridges. These tissue develops when hyperplastic soft tissue replaces the alveolar bone and is a very common finding particularly within the upper anterior region of long span denture wearers. The reported prevalence has varied, but has been demonstrated in up to 24% of edentulous maxillae and 5% edentulous mandibles. Masticatory forces can displace this movable denture-bearing tissue leading to loss of peripheral seal and stability. Forces exerted during impression making can result in distortion of the movable tissue^{1,2}. This article presents case report for full mouth rehabilitation of patient with flabby tissues recorded in upper and lower arch using two different impression techniques using double spacer and modified window technique with mucocompressive technique of recording buccal shelf area.

CASE REPORT

A 55 year old female patient reported to the Department of Prosthodontics with chief complaint of loose dentures and irritation in the upper and lower anterior region since 3-4 months. The Patient has been edentulous since 10 years and has been wearing old set of denture since 8 years. On intra-oral examination, flabby tissue was noted in the maxillary anterior region extending from canine to canine (Fig.1.) and also in the mandibular region extending from canine to canine (Fig.2.) Tissue blanching was also noticed on pressure application (Fig. 3).

Fabrication of new complete dentures was planned for the patient with recording of flabby tissue in an un-displaced condition using modified Double Spacer technique for maxilla and modified Zaffarullah Khan Technique for mandibular with mucocompressive impression recording of the buccal shelf area.

Maxillary Arch

1. The maxillary preliminary impression was made using irreversible hydrocolloid (Dpi Algitex Alginate Powder) in perforated edentulous tray (Fig.4.) And the primary cast was poured (Fig.5.)
2. Special tray was fabricated using double spacer over the flabby tissue area and in the region of mid palatine raphe (Fig.6.).
3. After checking the proper tray extensions, border molding was done in conventional manner using green stick impression compound (DPI Pinnacle Tracing Sticks)
4. Spacer wax was removed and impression was made with medium

body elastomeric impression material (Impregum Soft (Medium Body) Polyether Impression material) (Fig.7.).

5. The master cast was poured using dental stone (Fig.8.). The denture is fabricated and it had good retention and stability with proper recording of flabby tissue.

Mandibular Arch

1. For the mandibular flabby tissue Zaffarullah Khan Technique for impression making was planned for the patient.
2. The mandibular preliminary impression was made using irreversible hydrocolloid (Dpi Algitex Alginate Powder) in perforated edentulous tray (Fig.4.) and primary cast was poured (Fig.5.).
3. Spacer was adapted over the primary cast except in the region of flabby tissue. Special tray was fabricated providing a window in the region of flabby tissue (Fig.9.).
4. Border molding was done using green stick compound (DPI Pinnacle Tracing Sticks). The buccal shelf area was recorded using impression compound (Y-Dents Impression Composition). And it was ensure that the green stick and impression compound merged without creating any irregular border (Fig.10.).
5. Spacer wax was removed and impression was made with Zinc oxide Eugenol impression material (DPI Impression Paste). With the Zinc oxide Eugenol impression in the mouth, flabby tissue was painted with light body (DENTSPLY Reprosil Tubes) and it was stabilized in mouth using gauge impregnated with dental plaster and salt for faster setting.
6. Light body was allowed to set and tray was removed from the mouth (Fig.11.).
7. Master cast was poured after applying soap solution over it and it acted as separator over the impression. The denture was fabricated during which fibrous tissue tissue was properly recorded and given adequate relief.

After recording of secondary impression using special techniques for the flabby ridge, master cast was poured using dental stone (Fig.8.) paying careful attention to preserving the bordered moulded sulcus area and jaw relation, try-in and processing was carried out in the conventional way. The denture were inserted in the patient's mouth and were reviewed after 24 hours, 1 week, 3 months

The retention stability and acceptability of the finished denture was

significantly improved and the patient was satisfied with the denture set.

DISCUSSION

There appears to be an acceptance in the literature that surgical removal of the fibrous areas often results in a greater prosthodontic challenge. Where as Implant retained prostheses may offer a solution to the problems of stability and retention in fibrous ridge cases. However, they also have some de-merits i.e. surgery, treatment time, cost, etc. Therefore most often conventional prosthodontic solution may avoid these problems associated with surgery and cost¹.

The most important part of denture fabrication is the basic objectives which should not be precluded so as to provide retention, stability, support, and aesthetics and maintaining the health of oral tissues⁴.

The presence of movable and flabby denture bearing tissues often presents a difficulty in managing complete dentures. Unless managed appropriately, 'flabby tissue and ridges' adversely affect the support, retention and stability of complete denture. Therefore recording the tissues in selective pressure technique on the flabby zone and using conventional impression technique in the physiological normal tissue is proven due to beneficial rather than recording the tissue uniformly under stress⁵.

The use of this technique has highlighted numerous positive elements both from a clinical and prosthetic point of view, allowing us to combine the advantages of special impression technique. Different viscosities of impression materials were used to record final impression of normal tissue in compressed and flabby tissue in displaced position. Using these modified impression techniques, flabby tissue are often managed effectively.

Managing a patient with flabby maxillary ridge can be a challenging problem. Standard mucocompressive impression techniques are likely to end in an unretentive and unstable denture because the denture are going to be constructed on a model of the flabby tissue during a distorted state. Mucostatic techniques might not make the appropriate use of the available tissue support and movement of the denture base relative to the support tissues could also be a drag. The use of selective pressure or minimally displacive impression techniques helps to overcome some of these limitations².

The window technique (also called Zafarullah Technique) used in this case to record flabby ridge in mandibular anterior region making impressions with minimum distortion of edentulous arches where unsupported and movable tissues exist .The advantages of this method is that it saves chair time, does not require the fabrication of two custom trays, and enables visualization of the impression making of the unsupported movable tissues⁷. The Buccal shelf area recorded by using mucocompressive impression material like impression compound Type 1 (Y Dents, Mumbai, India). Lynch and Allen ² advocated the use of impression compound over the buccal shelf area for recording impressions in distal extension partial denture ensuring a stable and uniform contact on the buccal shelf area, which during this case is the primary stress bearing area. It also acts as a stopper for the tray for the final impression procedure. The remaining borders of impression were recorded using the selective pressure impression technique using green stick compound (Pinnacle tracing stick, DPI, Mumbai, India) (Figure 10)

SUMMARY

A good impression is mandatory for a good prosthetic outcome. However, making of a functionally good impression isn't a mechanical job, but involves a sound knowledge of oral anatomy, physiology and dental material sciences. The dentist's ability in these three aspects is severely tested while handling the compromised situations of compromised tissue. No doubt presence of movable denture bearing tissue presents an issue in complete denture fabrication; with modified impression techniques and newer materials with improved physical properties and handling characteristics, these ridges can be managed

effectively by conventional prosthodontics without any additional clinical visits as compared to patients with normal edentulous arches and healthy supportive tissue. Thus, by modifying the simple impression technique, and considering the anatomical as well as functional characteristics of the ridge, we were able to rehabilitate both upper and lower flabby ridges in a single appointment and delivering a satisfactory set of complete denture to the patient .

Figures

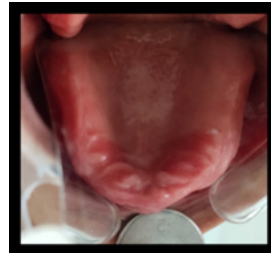


Figure 1: Flabby tissue in the maxillary anterior region



Figure 2: Flabby tissue in the mandible anterior region



Figure 3; (A) Blanching noted on the maxillary ridge



Figure 3; (B) Blanching noted on the mandibular ridge

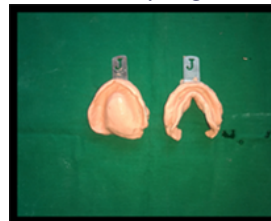


Figure 4: Preliminary impression of maxillary and mandibular arch



Figure 5: Preliminary cast of maxillary and mandibular arch



Figure 6: Maxillary Special tray with double wax spacer



Figure 7: Maxillary Border moulding with secondary impression



Figure 9: Mandibular Special tray



Figure 10: Buccal shelf area recorded with impression compound, Custom tray with complete mandibular border moulding.



Figure 11: Painted light body and completed Mandibular Secondary impression



Figure 8: Master cast



Figure 12: (a) Preoperative



Figure 12: (b) Postoperative

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