

CASE REPORT

Prosthodontic Rehabilitation Of A Patient With Maxillary Anterior Flabby Tissue And Severely Resorbed Mandibular Residual Ridge – A Case Report

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ABSTRACT

Introduction: The treatment of edentulous patient is always a challenge for the Prosthodontist. It involves lots of procedures aiming to reconstruct and replace the mandible and maxilla for the patients who have lost all their remaining teeth. Foundation and the prosthetic rehabilitation of a patient with severely resorbed ridge is the most challenging therapy a prosthodontist can undertake. For the denture therapy to have a favourable prognosis, selection of impression technique should be based on the present state of the basal tissue support.

Case Report: This article defines the selection of appropriate impression technique so as to allow the successful functional, esthetic and phonetic rehabilitation of an edentulous patient with maxillary anterior flabby tissue and severely resorbed mandibular ridge.

Conclusion: A simple technique is described which utilizes the routine materials used for denture fabrication, at the same time minimizing the errors and achieving the treatment goals (maximum retention and stability of complete dentures).

Keywords: Resorption, Flabby Tissue, Window Technique.

How to cite this article: Riddhi Tiwari¹, S.P.Dange², Arun Khalikar³, S.A.Khalikar³. Prosthodontic Rehabilitation Of A Patient With Maxillary Anterior Flabby Tissue And Severely Resorbed Mandibular Residual Ridge – A Case Report. International Journal of Contemporary Medical Research 2015;2(3):600-602

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Source of Support: Nil

Conflict of Interest: None

INTRODUCTION

The basic objectives of complete denture prosthodontics are the restoration of esthetics, phonetics, function and the maintenance of patient's health. Loss of natural teeth cause the supporting bony tissues to undergo resorption to a greater or lesser degree, ultimately leading to constant excessive atrophy due to diminished function of osteoblasts, reduced oestrogen production and overall decrease in calcium absorption by the body. A fibrous or flabby ridge is a superficial area of mobile soft tissue affecting maxillary or mandibular alveolar ridges. The prevalence studies have shown that it most commonly affects the upper anterior region in denture wearers and affects edentulous maxilla (24%) and edentulous mandible (5%) when alveolar bone is replaced by hypertrophic soft tissues.¹ This mobile tissue tends to displace easily during impression making causing distortion and also during mastication resulting in loss of peripheral seal.² In order to achieve adequate retention, stability and support in complete dentures, this mobile tissue has to be recorded without distortion during impression making and thus special techniques have to be used.³ Though movable tissues does not provide good retention but should be recorded to ensure good support.^{4,5} Also, when the new denture is adjusted into the mouth, patient's complains of pain caused by compression of tissues between the denture and the bone. Therefore, the intaglio surface of the dentures or the surface from where pressure is transmitted should have maximum possible area to reduce pressure on the oral mucosa. To compensate for all these problems, this article presents impression technique to gain maximum retention and stability in cases of severely resorbed ridges.

CASE REPORT

A 70 year old male patient reported to the department of prosthodontics, GDCH Aurangabad, Maharashtra, with chief complaint of difficulty in chewing and speech (due to loss of all teeth). On clinical examination, both the arches were edentulous, the lower ridge showed advanced ridge resorption and the

mucosa of the upper ridge was flabby in the anterior region (figure-1). Medical examination revealed no underlying systemic illness. So a complete denture for this patient was planned using different impression techniques for both the ridges. The primary impression for this patient was made using irreversible hydrocolloid impression material for maxillary arch and type II impression compound material for mandibular arch and the cast was poured using dental plaster. A custom tray was prepared over this cast so as to make the final impressions. For the upper ridge border moulding was carried out using green stick compound conventionally and the final impression was made using zinc oxide eugenol impression paste. For the anterior flabby ridge, a different approach in making final impression was used which is known as “the window technique” (Zafrulla Khan’s technique).⁶ The flabby tissue was identified from the patient’s mouth and marked onto the study cast and the special tray was cut off from that area. An impression was then made with light body polyvinyl siloxane impression material. The lower ridge being severely resorbed was not recorded by conventional procedure and thus the lower impression was taken using a viscous mixture of two varieties of softened impression compound (3 parts impression compound + 7 parts greenstick compound) [McCord’s Technique] and the wash impression was recorded using light body polyvinyl siloxane material (figure-2). Definitive stone casts were thus prepared and auto-polymerizing acrylic resin bases were made and occlusal rims were fabricated onto the denture bases. The cast was oriented to the articulator similar to the patients opening axis using a facebow, vertical and centric jaw relations were recorded and verified (figure-3). The cast were mounted on a semi adjustable articulator. Teeth mould and shade were selected accordingly and were arranged in balanced occlusion. After the try-in procedure (figure-4), processing was carried out. Denture was finished and polished and inserted into the patient’s mouth (figure-5). Instructions for the maintenance of the denture and oral hygiene were given to the patient.

DISCUSSION

Various treatment options have been proposed to treat flabby ridges which includes surgical excision, ridge augmentation, injecting sclerosing solution (Desjardins and Tolman).⁷ The demerits reported with this concept are anaphylactic reactions, patient discomfort, loss of firmness in some cases, and technique sensitiv-



Figure-1: Resorbed maxillary ridge with flabby anterior tissue and severely resorbed mandibular ridge.



Figure-1: Resorbed maxillary ridge with flabby anterior tissue and severely resorbed mandibular ridge.



Figure-2: Maxillary and Mandibular final impressions

ity. Factors deciding the suitability of a patient for these surgical treatment options are age, general health, dental history, motivation, and personality. Osborne in 1964, used a technique where both the

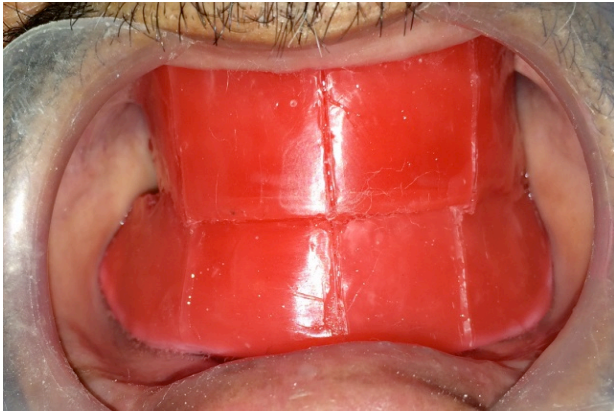


Figure-3: Maxillomandibular jaw relation



Figure-4: Try in



Figure-5: Denture insertion

healthy and mobile tissues were recorded using different impression materials and trays and related in mouth together.⁸ Kelly et al in 1972, described combination syndrome, a situation where edentulous maxilla is opposed by natural mandibular anterior teeth resulting in flabby upper anterior tissue.⁹ Watt and McGregor³ in 1986 described a technique where impression compound was applied to a modified custom tray and a wash impression with zinc-oxide and eugenol is made. Patients with advanced ridge resorption particularly in mandibular arch results in decreased denture bearing area, increased interarch

distance, constricted lower arch, all ultimately resulting in poor retention and stability in dentures, affects facial appearance, causes difficulty in speech and mastication, affects loading. So appropriate techniques should be used to allow successful rehabilitation of the patient.

CONCLUSION

Management of a patient with flabby ridge poses a challenge to the dentist. Use of conventional mucostatic, mucocompressive or selective pressure techniques may not be the best method to record such mobile tissues and thus modification in these techniques is important.¹⁰ This article provides a novel approach in the management of completely edentulous patient with resorbed ridge and flabby tissue. A simple technique is described which utilizes the routine materials used for denture fabrication, at the same time minimizing the errors and achieving the treatment goals (maximum retention and stability of complete dentures).

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