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Unconventional complete denture: Flabby ridge management: Case series

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Abstract
'Fibrous' or 'flabby' alveolar ridges pose significant problems for the provision of stable and retentive dental prostheses for affected patients. In particular, problems arise during the act of impression taking, when forces cause the mobile denture bearing tissues to become distorted. Rehabilitation of a completely edentulous patient with flabby tissue is a testing situation for a Prosthodontist as it adversely affects retention, stability and support of complete dentures. Several impression techniques have been proposed to help overcome these difficulties encountered in such cases. This case series has shown easiest and most reliable maxillary anterior flabby ridge management.

Keywords: flabby ridge, watson technique, window technique, delvin technique

Introduction

'Fibrous' or 'flabby' ridge was a superficial area of mobile soft tissue affecting the maxillary or mandibular alveolar ridges. It can be developed when hyperplastic soft tissue replaces the alveolar bone and was a common finding, particularly in long term denture wearers [1]. Such ridges are reported to be caused due to trauma from denture bases [2]. In the edentulous patient, it was found more commonly in the anterior region [3, 4, 5]. Kelly, in 1972, first described 'combination syndrome' based on the observations of six patients followed up over a three year period. Each patient wore a complete maxillary denture opposed by mandibular teeth and a distal extension removable partial denture. His observations included alveolar bone resorption in the anterior maxilla, enlargement of the tuberosities and bone resorption underneath the mandibular denture bases [2]. Histologically, flabby ridges are composed of hyperplastic mucosal tissue and loosely arranged fibrous connective tissue and dense collagenous connective tissue. In the soft tissue, a great amount of metaplastic cartilage and/or bone are observable [6].

In 1961, Chase [7] introduced the use of elastic impression material to relieve traumatized tissue. But that can be only a temporary provision. Moreover, it might easily derive Candida growth. In a flabby ridge condition, an ideal denture should be able to withstand masticatory forces and have flexible tissue surface to reduce stress concentration and trauma on the underlying tissues [8].

Case Report 1

A 59 year old male reported with complained of missing teeth and want to be replaced for proper mastication and esthetics. Patient was denture wearer since 2 years. On evaluation of maxillary denture was loose. Intraoral examination showed edentulous maxillary and mandibular arches, high well-formed regular and smooth maxillary and mandibular arches. Flabby tissue was present in anterior region of maxillary arch (Figure 1). Radiographic examination showed severe maxillary bone loss (Figure 2). Treatment planned was fabrication of maxillary and mandibular complete denture. Mucostatic impression technique was used to record the flabby tissue on the anterior portion. Watson technique was used to made maxillary final impression as the tissue was flabby extending on the anterior maxillary and its slope (Figure 3).

Fig 1: Anterior flabby ridge

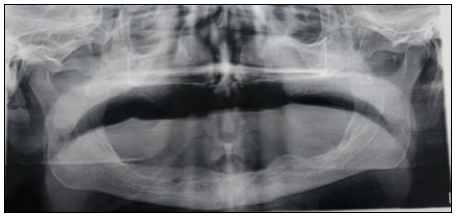

Fig 1: Anterior flabby ridge

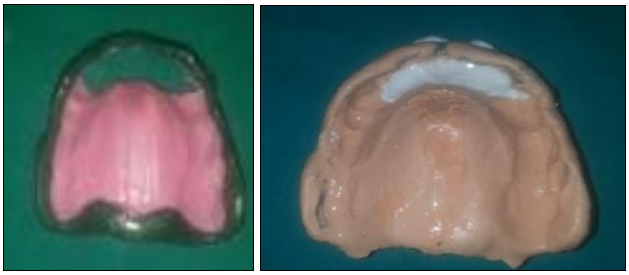

Fig 3: Watson technique for recording flabby ridge

Case Report 2

A 64 year old male reported with complained of loosening of previous denture and want a new denture. Intraorally maxillary arch was high well-formed but flabby tissue was present in the maxillary anterior region. Mandibular ridge was moderately resorbed, round and smooth. On evaluation of existing denture, maxillary denture was not properly adapted to the tissue and extensions were also not appropriate. Flabby tissue was due improper fit of the maxillary denture. Treatment planned Fabrication of maxillary and mandibular complete denture. Modified technique was used to record the maxillary flabby area. Delvin technique was used for recording flabby tissue as only upper anterior crestal area was flabby.

Fig 4: Flabby region

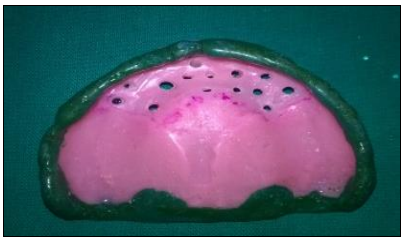

Fig 5: Flabby region

Fig 6: Final impression

Discussion

Flabby ridges can be successfully treated with proper prosthodontic approach, either alone or in interdisciplinary combination with surgery. Surgical removal of flabby tissue is possible if there is adequate bone height. However, it results in short sulcus depth that further needs a small surgical intervention i.e. vestibuloplasty. This can be corrected with ridge augmentation, but again it causes either resorption or rejection of graft. Sclerosing agents such as sodium morrhuate have been advocated to be injected in such flabby tissues making it firm and fibrosed. However, anaphylactic reactions, patient discomfort, loss of firmness are some of the drawbacks reported due to such sclerosing agents [9]. Conventional impression techniques used to record such flabby tissues often results in unretentive and unstable dentures. Creating holes/ windows or wax reliefs decreases the hydraulic pressure while impressing flabby areas, thus minimizing the distortion/ displacement of hypermobile tissues. Utilizing these alternatives while making secondary impression can be useful in recording flabby tissues in their anatomic or undistorted form [10].

Conclusion

Flabby tissue poses a difficult situation while rehabilitation of completely edentulous patients. Surgical excision and dental implant therapy are alternatives in such cases, but may not be feasible in those patients because of medical illness or expensiveness of treatment. When considering conventional prosthodontics, there are a variety of impression techniques available to address the problems caused by the unsupported tissue during denture construction, however currently there is a lack of scientific evidence for support of any technique over another. Considerations for selection should include the location and extent of unsupported tissue, as well as the patient's presenting complaint [1].

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