



Prosthetic Approach For The Management Of Flabby Ridge Using Different Impression Techniques And Occlusal Schemes

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Abstract

Introduction: Achieving stability, support and retention has become a challenge for the dentures to be made on the flabby ridges. As the Occlusal forces can displace mobile denture bearing tissue which lead to deflective occlusal contact and loss of peripheral seal, in such cases making a definitive impression of an edentulous arch can be demanding.

Aim: Aim of this case series is to incorporate modifications in the conventional method of complete denture fabrication in order to achieve stability, support and retention in flabby ridge patients.

Conclusion: Mucosa over the maxillary and mandibular alveolar ridges consists of varying mobility and thickness and gets distorted at the time of impression making. When this distorted tissue gets duplicated in the finished denture, it can cause inflammation and instability of the denture unless adequate measures for its management are employed.

Clinical Relevance: Flabby ridge is a very common clinical finding associated with the maxillary and mandibular ridge, particularly in a long term denture wearers. Adequate measures need to be taken in order to achieve satisfactory results. In this case series, modifications has been done with the custom tray and spacer wax used for taking final impression, impression techniques, impression materials used and the occlusal schemes.

Keywords: Flabby tissue, impression technique , occlusal schemes, metal occlusion, polyvinyl siloxane

Introduction

A Fibrous or flabby ridge can be identified as excessive, mobile soft tissue present on the superficial aspect of maxillary and mandibular alveolar ridges. This can be seen when the alveolar bone gets replaced by hyperplastic soft tissue in long term denture wearers with worn out posterior denture teeth or when a complete denture is present opposing the retained mandibular anterior teeth(kelly's/combination syndrome). This is commonly seen in maxillary anterior region

.Published studies indicate that the prevalence of flabby ridges can vary, occurring in upto 24% of edentate maxillae and in 5% of edentate mandibles.

The management of flabby ridge consists of surgical removal of the tissue and augmentation along with special impression techniques followed by distribution of occlusal loads in balanced form.

The purpose of this case series is to present management of flabby ridge patient by using:

1. various special impression techniques and material
2. tray modification and,
3. occlusal schemes.

Case Report 1



A male patient of 65 year old came to the Department of Prosthodontics and Crown and Bridge with his concern about the ill fitting of the previous denture which he was wearing. History revealed that he was an old denture wearer, wearing the same denture for last 9 years. On examination, denture was loose with worn out posterior acrylic teeth on the occlusal surfaces.



Patient had flabby tissue in the maxillary anterior region which extended from canine to canine region. After application of pressure on the palatal tissue blanching was observed.

Fabrication of new complete dentures was planned for the patient with Window technique using polyvinyl siloxane impression material (for recording flabby tissue in undisplaced condition) and metal occlusal scheme(to compensate for lessinterocclusal space)

Procedure:

The technique aimed at making the impression of the tissue in undisplaced form so that its actual contour is maintained which is present during rest position when pressure is relieved.

The extensions of the tray were checked any kind of overextension and roughness.Later on border moulding procedure was performed with type 1 low fusing compound and then checked for the retention and stability of the tray. Spacer wax was removed, window was created in the anterior maxillary region and impression was made using a low viscosity zinc oxide paste impression (DPI Impression Paste).



Impression material which was present inside the patients mouth was removed with the help of a scalpel and before this the impression was taken out from the mouth. Later on the after removal of impression material the tray was loaded with light body elastomeric impression material in the region where flabby tissue recording was required.



Temporary denture bases and wax rims were made to record Jaw relation. For Teeth arrangement cross linked acrylic teeth were used (Acryrock, Italy) .

A reduction of 2 mm is done on the occlusal surface of maxillary and mandibular posterior teeth to get a 4mm of occlusal clearance.

Later on in the procedure carving of occlusal surface was done by addition of inlay wax on the occlusal surface for contouring each tooth. Removal of wax pattern was done carefully from the teeth invested and casted, after that all the polished castings were placed on the denture teeth certifying that all the castings were completely seated and finally the occlusion was checked.



Finished and polished castings were then cemented with resin-modified glass ionomer cements. Curing of the maxillary and mandibular denture was done by using conventional method. Finishing and polishing of the dentures was done before insertion.. After insertion the denture was evaluated for proper extensions , relieved frenums, retention , stability and roughness. Occlusion was also evaluated of the denture along with the Laterotrusive and protrusive movements inside the patients oral cavity. During these movements all the high points were removed and by selective grinding procedure. At the patients satisfaction regarding the chewing efficacy and esthetics was evaluated and finally post insertion instructions were given .



Case Report 2



A completely edentulous 60 year old male patient reported to the Department of Prosthodontics and Crown and Bridge . Examination revealed mobile fibrous tissue in the maxillary anterior region.

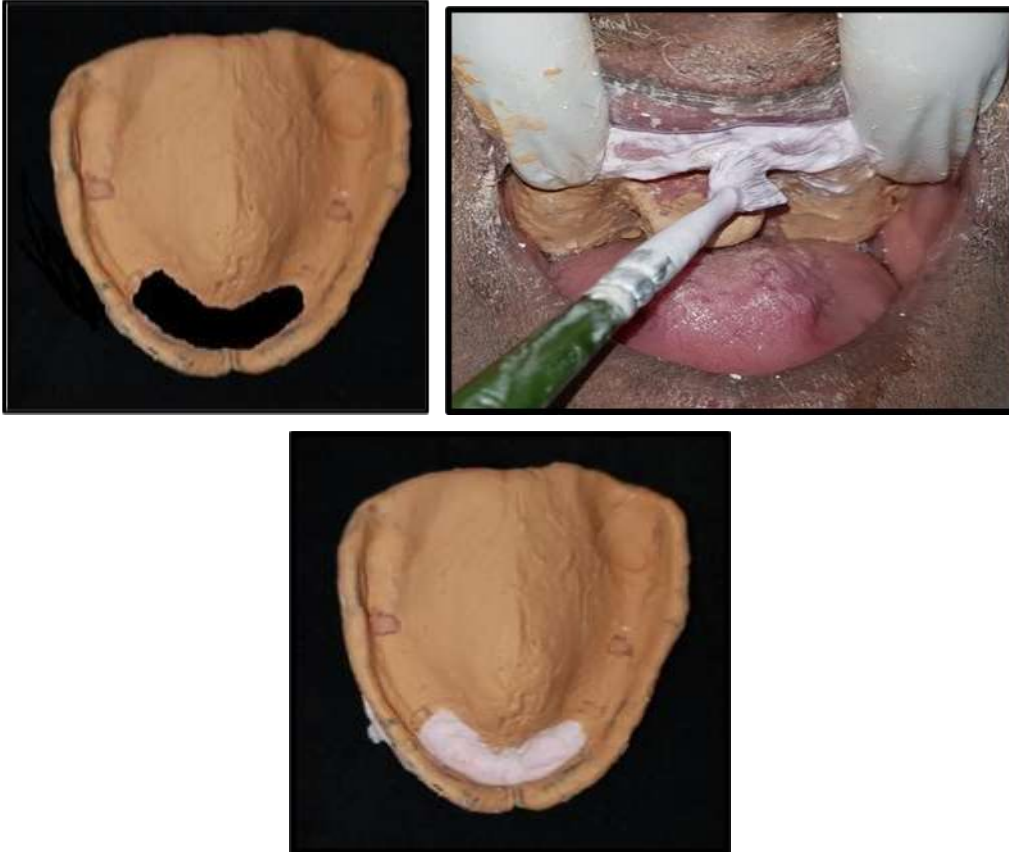
Fabrication of new complete dentures was planned for the patient with Window technique using impression plaster as impression material and lingualized occlusal scheme.

Advantages of lingualized occlusal scheme:

- 1) Mechanical stability due to centralized forces.
- 2) No lateral forces due to one contact point.
- 3) Lingualized occlusion can be used with all morphologic ridge contours.

Procedure:

Final impression was made using Window technique using impression plaster as impression material .



Lingualised Occlusal Scheme





Case Report 3

A 76-year-old male patient came to the OPD of the Department of Prosthodontics with a chief complaint of replacement of missing teeth in upper and lower arches. On examination the patient was completely edentulous in upper and lower arches. The anterior canine-canine region in maxilla region was flabby.



Various other treatment modalities like implant supported prosthesis and flabby tissue excision was explained to the patient. So the patient was not willing for any kind of surgical procedure instead wanted a complete denture. So a complete denture with a different impression technique was made for the patient.

A primary impression was made for both maxillary and mandibular arch with alginate (Neocolloid; Zhermack) in non perforated trays. The impressions were poured with dental stone and the displaceable tissues were identified on the cast. On the maxillary cast, an "I" shaped spacer was applied along the mid palatine raphe using modelling wax with additional relief given in the flabby area from canine-canine region.





Subsequently, conventional treatment procedures were followed to deliver complete denture prosthesis with monoplane occlusion scheme

Advantages of Monoplane occlusion :

No lateral component can be generated with vertical closing i.e. achieving stability.

Freedom in centric occlusion . This is a condition in which the mandible can be moved anteriorly to a short distance in the same horizontal plane and saggital plane while maintaining the tooth contact.



Discussion:

The displaceable tissues present in maxillary anterior palatal region or flabby ridges is a common finding in edentulous patients.

A careful consideration and application of the principles of complete denture construction for such condition can provide a palliative form of treatment.

Choice of treatment modality is made by keeping in mind that the requirement of stability and retention of the prosthesis should be balanced along with the preservation of the health of oral tissues for every patient.

Conclusion:

The four impression technique modification and occlusal schemes described in this paper does not require any additional appointments, equipment, and auxiliary personnas required for the formation of the conventional complete denture. The materials used for making the modifications are also readily available in the market and the method is easy to master, thereby making it easy to be incorporated in our day to day dental practice.

References:

1. Crawford RW, Walmsley AD. A review of prosthodontic management of fibrous ridges. *Br Dent J.* 2005;199:715–9
2. Lynch CD, Allen PF. Management of the flabby ridge: Using contemporary materials to solve an old problem. *Br Dent J.* 2006;200:258–61.

3. Khan Z, Jagers JH, Shay JS. Impression of unsupported movable tissues. *J Am Dent Assoc.* 1981;103:590–2.
4. Kelly E. Changes caused by a mandibular removable partial denture opposing a maxillary complete denture. *J Prosthet Dent.* 1972;27:140–50.
5. Allen F. Management of the flabby ridge in complete denture construction. *Dent Update.* 2005;32:524–
6. Bansal R, Kumar M, Garg R, Saini R, Kaushala S. Prosthodontic rehabilitation of patient with flabby ridges with different impression techniques. *Indian J Dent.* 2014;5(2):110-113.
7. Tarannum, Fauzia & Tandan, Amrit & Ahsan, Abdullah & Srivastava, Anshul. (2017). Management of flabby ridge using metal occlusal - A case report. *International Journal of Medical and Dental Case Reports.* 4. 1-4. 10.15713/ins.ijmdcr.54.
8. Schneider RL. Custom metal occlusal surfaces for acrylic resin denture teeth. *J Prosthet Dent* 1981;46:98-101
9. Labban N. Management of the flabby ridge using a modified window technique and polyvinylsiloxane impression material. *Saudi Dent J.* 2018;30(1):89-93. doi:10.1016/j.sdentj.2017.10.004
10. Pai UY, Reddy VS, Hosi RN. A single step impression technique of flabby ridges using monophase polyvinylsiloxane material: A case report. *Case Rep Dent* 2014;2014:1045.