

WINDOW TECHNIQUE FOR MANAGEMENT OF MAXILLARY ANTERIOR FLABBY RIDGE REINFORCED WITH SES MESH- A CASE REPORT**Dr. Nitika Gupta*¹, Dr. Kritika Gupta²**¹Postgraduate Student, Department of Prosthodontics, Crown and Bridge & Implantology, Himachal Institute of Dental Sciences, Paonta Sahib.²Senior Lecturer, Department of Pedodontics and Preventive dentistry, Himachal Institute of Dental Sciences, Paonta Sahib.***Corresponding Author: Dr. Nitika Gupta**

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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. Flabby ridge is the soft mobile tissue which affects both maxillary and mandibular ridges but maxillary anterior of long term denture wearers the most. In particular, problems arise during the act of impression making, when forces cause the mobile denture bearing tissues to become distorted. Anterior region of maxilla is the most affected especially in cases where there are remaining natural teeth present in mandibular arch. Denture fabricated by conventional impression techniques may result in unstable and non-retentive denture and can also aggravate the existing condition, affecting the support of the denture bearing area. This case report describes one such scenario and demonstrates the use of window impression technique for management of maxillary flabby ridge.

KEYWORDS: maxillary flabby ridge, window technique, SES mesh.**INTRODUCTION**

A fibrous or flabby ridge is a superficial area of mobile soft tissue affecting maxillary or mandibular alveolar ridges. It develops when hyperplastic soft tissue replaces the alveolar bone and is a common finding particularly in the upper anterior region of long term denture wearers.^[1]

The hyperplastic soft tissues fail to provide adequate support rendering the prosthesis progressively unstable. This causes displacement of underlying soft tissues during function leading to altered denture position, loss of peripheral seal, loss of stability, compromised esthetics and function. Prevalence is seen in 24% in maxilla & 5% in mandible.^[2] Histological sections show marked inflammation, fibrosis and resorption of underlying bone. The connective tissue is densely collagenised with loosely arranged fibrous tissue.^[3]

Etiological factors for flabby ridges^[4,5,6]

- Long term denture wear without maintenance.
- Trauma from denture base.
- Ill-fitting dentures.
- Malocclusion.
- Poor systemic health.
- Unplanned extractions.
- Ridge resorption.
- Aberrant forces on prosthesis.
- Combination syndrome.

It has long been believed that the condition, sometimes named 'combination syndrome', is caused by the presence of opposing natural teeth to an edentulous area.^[1] Kelly in 1972, first described 'combination syndrome' based on the observations of six patients followed up over a three year period.^[7] Construction of dentures over flabby foundation poses a great challenge to a prosthodontist. So many therapies that are suggested in such cases include surgical excision of flabby mass, implant-supported dentures or conventional prosthesis without surgery.^[1]

Various impression technique have been described to overcome this problem. Osborne and Liddlelow described the technique that used two separate impression materials while Watson used a custom tray with a window technique with opening the flabby tissues area.^[8]

This article aims to explain the window impression technique with flabby tissue area in maxillary anterior ridge reinforced with SES mesh in the form of case report.

CASE REPORT

A 72 years old male reported to our department with a chief complaint of fractured upper denture since 3 months and wanted to get it replaced thereby restoring the esthetics and function. Patient has been using

dentures past 20 years and complains of multiple times of fracture of dentures. Examination of the prostheses revealed that maxillary denture was fractured, with the



Fig.1: Fractured maxillary denture.

fracture line extending from anterior region to posterior border (Fig.1). It was improperly repaired leaving rough surface on the intaglio surface (Fig.2).



Fig.2: Intaglio surface of fractured denture.

Intraoral examination revealed completely edentulous maxillary arch with an extensive area of flabby tissue present on the anterior region of his maxillary denture bearing area opposing the missing anterior teeth^[31,32,41,42] in mandibular arch (Fig.3). The patient was then explained about the treatment options but he was not ready to undergo any surgical procedures like surgical removal of flabby ridge with ridge augmentation or implants. The patient was finally advised to go for a maxillary complete denture with modified impression technique reinforced with SES mesh. The treatment began with preliminary impression with alginate hydrocolloid impression material to get the study model. Spacer was adapted over the primary cast except in the region of flabby tissue (Fig.4). After that custom tray

was fabricated providing the window in the flabby area and placed in the patients mouth to check for proper extensions. Final impression was made using zinc oxide eugenol impression paste (Fig.5). Impression plaster was painted and placed over the flabby tissue and was allowed to set. Once the impression plaster was set completely, the impression was removed as one (Fig.6) and poured with dental stone. Maxillary and mandibular master casts were obtained followed by jaw relations and try in (Fig.7). Once the patient was satisfied with the esthetic outcomes and also the temporary denture base was found to be stable and quiet retentive in try-in phase, final denture was fabricated reinforced with SES mesh (Fig.8). The prosthesis was finally inserted followed by occlusal adjustments (Fig.9).



Fig 3: Preoperative intraoral view.



Fig 4: Spacer over primary cast.

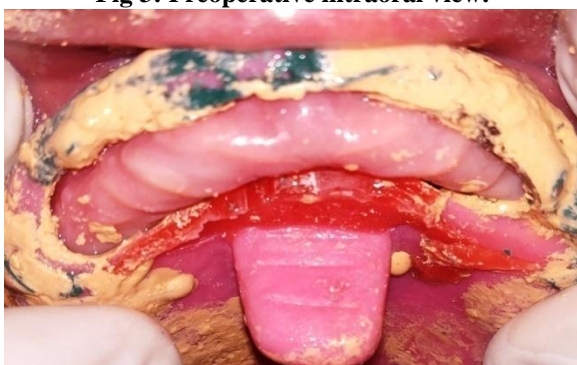


Fig 5: Impression with window technique.



Fig 6: Final impression.



Fig 7: Try-in.



Fig 9: Intraoral view of prosthesis.

Post denture instructions were given and regular follow-up was done to assess the treatment outcome.

DISCUSSION

Almost inevitable degenerative changes develop in the edentulous regions of wearers of complete upper and partial lower dentures. Ill-fitting dentures have been blamed for all of the lesions of the edentulous tissues, yet the most perfect denture will be ill-fitting after bone is lost from the anterior part of the ridge.^[7] The success of the denture mainly depends on the impression technique as it is the first and foremost step involved in the complete denture fabrication.^[9] There were various impression techniques used in the management of flabby tissue in the maxillary anterior ridge for a single denture cases. Magnusson et al described a technique where two impression materials are used in a custom tray using zinc oxide and eugenol over the normal tissues and impression plaster over the flabby area.^[10] Crawford et al described a two-tray impression technique where two trays are fabricated and impression is recorded with two different materials and is then oriented intra orally.^[11,12] Osborne described the window impression technique as a mucocompressive impression with ZOE impression paste using a custom tray and the low viscosity impression plaster then painted through the window onto the flabby tissue.^[13]

Surgical removal of the fibrous areas often results in a greater prosthodontic challenge. Implant retained

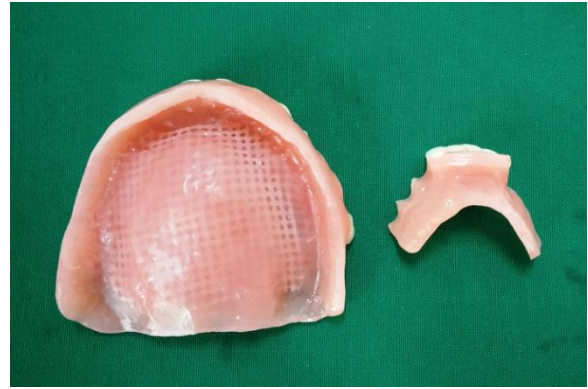


Fig 8: Intaglio Surface of prosthesis reinforced With SES mesh.



Postoperative smile

prostheses may offer a solution to the problems of stability and retention in fibrous ridge cases. However, they are not without their disadvantages i.e surgery, treatment time, cost, etc. A conventional prosthodontic solution may avoid these problems associated with surgery.^[1]

CONCLUSION

It is a challenge to manage patients with flabby ridge. Fibrous ridges pose a prosthodontic challenge for the achievement of stable and retentive dental prostheses. Dentures fabricated using standard muco-compressive impression techniques result in an unretentive and unstable denture as the flabby tissue was recorded in a distorted or compressed state. But with modified impression making techniques one can overcome this problem and prevent it from hindering in the success of denture fabrication, thereby providing adequate retention, stability, support and patient satisfaction with the functioning of the denture. The window impression technique is one of the proper techniques used in the management of flabby tissue for the single denture impression. Many improvement can be done to provide better impression results.

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