CASE REPORT

GUM FIT DENTURE AN ALTERNATIVE TO ALVEOLOPLASTY

INTRODUCTION

Restoration of the lost or missing tooth/teeth is one of the challenging tasks for a clinician among the various possible treatment modalities. The optimum restoration should fulfill the basic requirements of any prosthesis.1 Fabrication of complete denture in patient can be a challenge when the intra oral conditions are less than ideal. Some abnormal conditions that exist in the edentulous patient can be corrected surgically, prior to construction of dentures, to enable the patient to function more successfully following prosthetic restoration. Overall goal of reconstructive preprosthetic surgery is to provide an environment for prosthesis that would restore function, be stable, aid retention, preserve associated structures and satisfy esthetics.2

However use of surgical aid is not always possible. The major obstacle for preprosthetic surgery is getting patients consent. Patient has to be made aware that the surgical procedure will be helpful for future denture wearing.3 This is not always possible as many patients are not comfortable with idea of surgery. Patient selection has to be carefully done for surgical procedures and this should be done by keeping long term benefits in mind than short term benefits. The purpose of pre-prosthetic surgery is to restore or create conditions which permit the construction of a prosthesis fulfilling the specified requirements. It must be planned and performed in such a way as to leave the tissues in a suitable condition. Pre-prosthetic surgery is only of value if a better prosthesis can be constructed as a consequence.4

One such clinical condition which may pose a problem in denture insertion and may even affect the denture esthetics is a labially inclined pre maxilla and an accompanying severe labial undercut. Excessively prominent ridge is more commonly seen in maxilla than in mandible. Removal of the minimum amount of bone necessary to eliminate the undercut, while at the same time avoiding the loss of bony cortical plate can be done for such conditions in order to improve the environment for denture construction.4

However alveoloplasty should be performed only when there is a definite indication for the procedure as this procedure affects the quantity of denture foundation and therefore denture stability.5 It may result in a narrowed crest in alveolar ridge area leading to a less desirable area of support and an area that may resorb more rapidly.

This case report gives a non surgical procedure to improve denture esthetics in a patient with labially inclined pre maxilla and an accompanying severe labial undercut resulting in excessive fullness of lips on wearing denture with the help of gum fit denture or flangeless denture.

CASE REPORT

A 48 year old female patient reported to the Department of Prosthodontics, Institute of Dental Sciences, Bareilly requesting fabrication of complete dentures. The patient had been edentulous for the past 5 years. On extra oral examination patient had ovoid face, normal muscle tone and normal lip length. Intra oral examination showed that patient had a U shaped arch with rounded crest. Patient had labially inclined pre maxilla and an accompanying severe labial undercut (Fig.1).

Patient was not willing for any surgical procedure hence alveoloplasty followed by fabrication of dentures had to be ruled out. Keeping patient’s demand into consideration it was decided to use a non-surgical treatment option of fabricating new set of denture with modified labial flanges.

After recording the clinical findings and noting the patients expectations patient was explained the available treatment options. Primary impressions of both the arches were made with impression compound, cast was poured and special trays were fabricated. Border molding was done using low fusing compound and secondary impressions were made using zinc oxide eugenol impression paste. The secondary impressions were cast in dental stone. Due to presence of prominent labial undercut, care had to be taken during impression making procedures and the path of

ABSTRACT:

In routine clinical practice, we come across many patients who present with different contour & forms of residual ridges that may range from severely resorbed to well formed to bulky ridges. This case report describes a non surgical treatment option for construction of complete denture in a patient with a labially inclined pre maxilla and an accompanying severe labial undercut causing excessive fullness on wearing complete denture. The labial flanges of the denture were modified in order to decrease the fullness on wearing dentures.

Key words: Gum fit denture, Flangeless denture, Wing denture, Labial undercut
insertion had to be modified to allow easy placement and removal of impressions.

Autopolymerizing resin base plates were fabricated. For the maxillary rim the labial flange was trimmed and wax rims were made. Vertical and horizontal jaw relations were recorded. (Fig. 2)

The teeth were set in accordance with esthetic guidelines and try-in was done. The denture was then invested and processed in conventional manner. After deflasking the denture, a window was formed on the labial aspect of the upper ridges in the area of prominence. At all other places the denture covered the underlying tissue similar to that by a conventional denture.

Since there was no denture base in the area of prominence, the lips and the peri-oral tissues were in direct contact with the ridge which reduced the fullness of the lips. The border areas were kept sufficiently thick such that they had adequate strength and at the same time they did not affect esthetics.

The denture was polished and tried for retention and stability in the patient's mouth. Upper and lower complete denture were delivered after occlusal adjustments. (Fig. 3)

Patient was recalled after 1 day, 1 week and 1 month for the regular post insertion visits. Patient did not complain of any significant post insertion problem with the new set of denture.

**DISCUSSION**

In this case after clinical examination it was revealed that the major cause of unesthetic appearance is labially inclined premaxilla and the accompanying undercut. This led to excessive fullness on wearing the denture. Since the patient did not want any surgical procedure, modification of the labial flanges of the maxillary denture was contemplated. In the area devoid of denture base the perioral tissues came in direct contact with the mucosa reducing the fullness and improving esthetics. Another modification of this gum fit denture is wing denture in which the labial flange is sectioned in the labial frenum region as two wings from either side to allow space for labial frenum.

**CONCLUSION**

Although preprosthetic surgery helps in recontouring the ridges to accept prosthesis in a better way they do have some limitations. Non surgical procedures should be utilised whenever feasible for construction of prosthesis as they are not only non invasive but may have better patient acceptance and provide satisfactory results.

**REFERENCES**