



A FLANGELESS COMPLETE DENTURE PROSTHESIS: A Case Report

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ABSTRACT Complete denture fabrication is challenging when the intraoral conditions of the patient turn out to be less than ideal. Patients may appear with different ridge contour. This case report presents a non-surgical procedure of treating and producing optimum esthetics in an overly contoured maxillary ridge with severe labial undercut with the help of a flangeless denture.

KEYWORDS

Flangeless prosthesis, Labial undercut, Gum- fit denture, Ridge grip esthetic prosthesis, Wing denture.

INTRODUCTION

It is inevitable for a prosthodontist to come across patients with different ridge contours in our daily routine clinical practices. These different ridge forms may vary from severely resorbed ones to extensively bulky ridges. An excessively prominent ridge is more commonly seen in maxilla than mandible.¹ Preprosthetic surgery is mandatory for such cases before proceeding with the fabrication of complete dentures.^{2,3} Such bulky contours of the ridge pose a threat to the esthetic outcome of a denture. Arrangement of artificial denture teeth becomes difficult due to lack of space and eventually results in an overtly unaesthetic swollen lip appearance. Preprosthetic surgery can of course be a corrective option for such cases, though a major criterion of it includes patient consent. The patient's mental attitude and health might not always permit the thought of a surgery. Hence, in such clinical conditions, when the patient is not very keen in undergoing surgery for an over-contoured ridge, the prosthodontist can modify the art of a conventional denture, and restore it with help of a flangeless denture, keeping in mind all the basic requirements to be fulfilled by the prosthesis to achieve optimum result.

This case report presents a non-surgical procedure of treating and producing optimum esthetics in an overly contoured maxillary ridge with severe labial undercut with the help of a flangeless denture.

CASE REPORT

A 56 year old female patient reported to the Department of Prosthodontics and Crown and Bridge, IDST, Modinagar with the need of replacing her missing teeth with a complete denture. The patient had been edentulous for past 3months. On extra oral examination, patient had a tapered face with a convex profile, normal muscle tone and adequate lip length. Intraoral examination revealed a U-shaped maxillary arch accompanying a severe labial undercut. (Fig. 1-3)

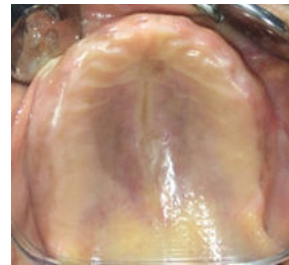


Fig. 1: Intraoral view of the maxillary arch



Fig. 2: Intraoral view of the mandibular arch

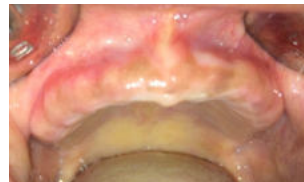


Fig. 3: Intraoral view showing prominent labial undercut

The patient had been informed about the option of alveoloplasty followed by the fabrication of complete dentures. But the patient did not agree for any surgical intervention. Hence, keeping the patient's desire in mind, it was decided to restore her edentulous condition with the help of a flangeless maxillary denture opposing a conventional mandibular denture.

Primary impressions of both the arches were made with impression compound. The primary casts were obtained after proper beading and boxing of the primary impressions. Special trays were fabricated with the help of autopolymerizing resin. Border moulding was done using low fusing impression compound and the secondary impressions were made with zinc oxide impression paste. The severe labial undercut posed a problem during the routine impression procedures and special care had to be taken regarding the path of insertion and removal. The master casts were obtained (Fig. 4) and denture bases were fabricated followed by wax occlusal rims.

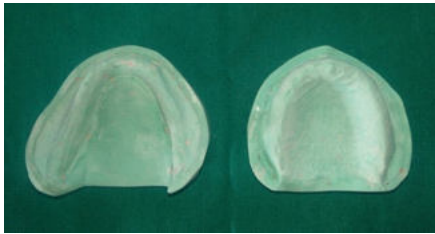


Fig. 4: Master casts obtained

The labial fullness appeared to be more even after the entire wax was merged with the denture base, which suggested the trimming of the denture base till the maxillary ridge for appropriate esthetics. There was no denture base in the area of the labial prominence and the lips were in direct contact with the ridge which reduced the labial fullness. The vertical and horizontal jaw relations were carried out and the casts were mounted in a semi adjustable articulator.



Fig. 5: A window carved in the denture before final processing

The window area was carefully sandpapered and polished. The borders of the denture were intact and kept sufficiently thick to provide adequate strength. The denture was polished and tried in the patient's mouth for evaluation of appropriate esthetics and occlusion. After the necessary occlusal corrections, the prosthesis was delivered. (Fig. 6-8) The patient was recalled within a week for post insertion assessment. The patient was fascinated and satisfied with her flangeless denture and did not have any significant complaints.



Fig. 6: The flangeless denture in the maxillary arch



Fig. 7- Right lateral view of the prosthesis



Fig. 8- Left lateral view of the prosthesis

DISCUSSION

Flangeless denture in this case report was suggested because of the prominent labial contour of the maxillary arch. If a conventional denture would have been fabricated, it would add to severe labial fullness and an unaesthetic appearance. The excessive bulky labial flange would have also interfered with phonetics. Flangeless dentures have been referred to as "*gum fit dentures*"⁴ and "*ridge grip esthetic prosthesis*"¹ in some articles. Another modification mentioned in the literature is *wing denture* in which the labial flange is sectioned in the labial frenum region and two wings appear from either side to allow space for the labial frenum.⁵⁻⁹ Another conservative mean could be the recommended use of soft liners that would easily adapt in the undercut area with causing trauma to the underlying mucosa.¹⁰⁻¹⁵

CONCLUSION

Flangeless dentures provide an easy and simple alternative for patients who do not opt for surgical options for the correction of over-contoured ridges. They remain successful in providing satisfactory esthetics and better patient acceptance.

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