

“WING DENTURE” FOR THE MANAGEMENT OF PROCLINED PREMAXILLA WITH LABIAL UNDERCUT- A CASE REPORT.

^[1] Dr.Dhivya Priya.J,^[2] Dr.Arunpriyatharsini.S,^[3] Dr.Sridharan.R,^[4] Dr.Mohamed Ejaj. M. ^{[1][2][3][4]} Senior Lecturer, Department of Prosthodontics and crown bridge, CSI college of dental sciences and research, The Tamilnadu Dr.MGR Medical university, Madurai, Tamilnadu, India.

ABSTRACT

Esthetics plays a vital role in the prosthodontic rehabilitations. In patients with proclined premaxillary region/labial undercut, it is challenging to the prosthodontist to achieve the desirable esthetics. In this article we will discussing about a non-surgical management of the proclined premaxilla in a complete denture patient using a modified flange.

KEYWORDS: proclined pre maxilla, modified flange, gum fit dentures, esthetics.

INTRODUCTION

After the total extraction and the healing, the residual ridge undergoes various changes in the completely edentulous patients. As a prosthodontist we come across different types of residual ridges in day to today practice¹. The role of the prosthodontist come into play from the initial diagnosis and the appropriate treatment plan for the given patient and delivering the same with the good prognosis and patient satisfaction. One of the ridge morphologies which is challenging to treat is the proclined anterior maxillary arch with severe labial undercut. In this condition it is difficult to achieve the esthetics in the conventional complete denture due to the labial bulky contours which might give a swollen lip appearance^{2,3}. These conditions ideally require correction using the Pre-prosthetic surgeries (Alveoplasty) to achieve a better esthetic outcome but patient's consent play a critical role. Certain patient's medical conditions might also not permit the surgical procedures^{4,5}. Hence, as a prosthodontist we can try unconventional approaches that might not require the surgical intervention and also achieving a required better outcome. For the management of the proclined anterior maxilla, a flangeless denture/ gum fit dentures/ wing dentures/ ridge grip esthetic prosthesis can be fabricated^{2,6}. These type of prosthesis helps in delivering an esthetic prosthesis and also allows to gain the additional retention from the labial undercut region.

In this article we will be discussing about the management of the patient with anterior proclined maxillary arch along with short upper lip with wing denture/ gum fit denture/ flangeless denture.

CASE REPORT

A 49-year-old female reported to the department of prosthodontics with a chief complaint dissatisfied old denture due to unesthetic appearance. Extra oral examination revealed well supported and incompetent lips. Short upper lip was also evident. On intra oral examination the patient was completely edentulous in maxillary arch and partially edentulous mandibular arch and proclined premaxilla was evident (Figure 1). The existing prosthesis was examined and the patients concern regarding the prosthesis was noted. As the patient was not willing for a surgical intervention, a new maxillary arch complete denture flangeless prosthesis was planned and an acrylic removable partial denture was planned for mandibular arch.

Primary impression was made with impression compound in the maxillary arch and mandibular arch impression was made using alginate (Figure 2). Special tray was fabricated from the primary cast and sectional border molding was done with green stick compound (DPI Pinnacle tracing sticks) and secondary impression was made with polyvinyl

siloxane monophasic impression material in the maxillary arch (Figure 3). Temporary denture base was fabricated in the master cast with adequate precautions by not extending the autopolymerizing resin (DPI RR cold cure) in the anterior undercut region and blocking out the anterior region using modelling wax. Jaw relation was recorded and teeth selection was done. Care was taken to ensure incisal visibility and labial fullness. Teeth setting was done and try in verification was done. Esthetics and phonetics were verified. Processing of the denture was done after the wax up process. During the wax up process the modified flange was incorporated in the master cast with a usual thickness of wax and other anterior region was waxed up a bit thinner so as to prevent the flow of the dental stone during flasking and also to provide a demarcation after the processing so as to act as a guide during the trimming of the final prosthesis. The final prosthesis was inserted after finishing and polishing (Figure 4) and checked for the occlusion, esthetics and phonetics (Figure 5). The patient was highly satisfied with the outcome of the new prosthesis compared to her old prosthesis (Figure 6). The patient was reviewed following 24 hours, a week and one month for post-insertion visits.

DISCUSSION

A prosthodontist should endeavor to make the complete denture as unique and customized as possible for each individual. A proper examination is essential for a diagnosis and treatment planning which are a prerequisite for the execution of the treatment plan. As a prosthodontist these must be given an utmost importance for the successful treatment outcome with patient satisfaction. Anatomy of the residual ridge from patient to patient. Certain patients have an excessive bulky ridge or proclined maxillary arch anterior region which might lead to a compromise in the esthetic outcome. This might be due to the thickness of the labial flange. Preservation of facial aesthetics is as crucial as prosthodontic rehabilitation of missing teeth 7.

The presented case report provides an unconventional treatment approach that is conservative (without surgical intervention) for managing the completely edentulous proclined anterior maxilla with the presence of severe labial undercuts. This type of

prosthesis is termed as “flangeless dentures”, “ridge grip esthetic prosthesis” and “gum fit dentures”⁸ by certain authors and also known as “wing dentures” as the labial flange is segmented and it is present like a wing on the both the sides of the labial frenum. This type of the prosthesis provides adequate strength and also it gains retention from the labial undercuts. The esthetic needs of the patient are also fulfilled. Nonsurgical procedures can thus be utilized for the fabrication of the prosthesis as they are noninvasive, provide better acceptance, and ultimate satisfaction for the patient. The flangeless denture was convenient for the patient in terms of insertion, removal and function.

CONCLUSION

Fabrication of complete denture possesses a great challenge in compromised conditions. Flangeless dentures provide an easy, simple, economical and painless substitute to conventional dentures to improve the facial aesthetics of the patient.

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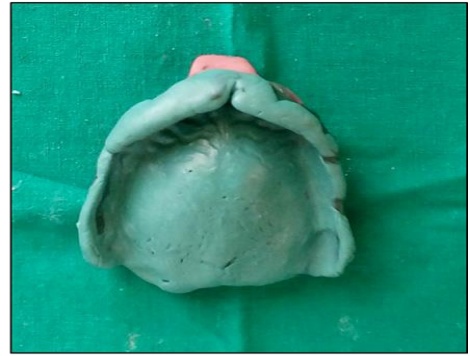


Figure 3: Secondary Impression



Figure 4: Final prosthesis



Figure 1 : Intra oral view

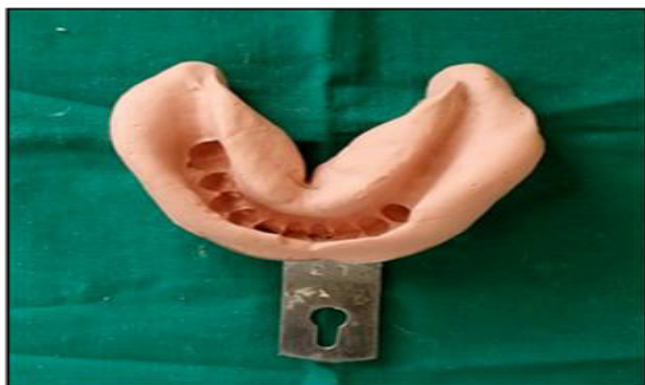


Figure 2: Primary Impression



Figure 5: Post insertion



Figure 6: Pre and Post treatment