



Case Report

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Transitional complete denture- A Case report

R.Muthukeerthana¹

¹ Prosthodontics and Implantogy, Raga Dental Center for Implant and Laser, Thanjavur, Tamil Nadu, India

Abstract

Background: The Transitional/Immediate Complete denture is mainly fabricated to replace the lost teeth with the associated structures of maxillae and mandible and inserted immediately following the removal of remaining hopeless teeth. This Immediate Denture can be used for both partially edentulous or completely edentulous patients immediately after extraction of the teeth. **Aim:** Here, we present a case of 57-year-old female patient who underwent immediate extraction of her all periodontally compromised teeth and replacement of her missing posterior tooth immediately with an Immediate Complete denture. **Conclusion:** This mainly helps in restoring the vertical dimension, esthetics and phonetics of the patient.

Keywords: Vertical Dimension, Immediate Denture, Esthetics, Phonetics.

INTRODUCTION

Under normal circumstances providing a patient with a transitional /immediate denture is the most effective way of making the transition from natural dentition to artificial dentition [1]. GPT-9 defines immediate denture as 'any fixed or removable dental prosthesis fabricated for placement immediately following the removal of the natural tooth /teeth' [2]. It mainly helps in restoring the masticatory efficiency, phonetics, esthetics by not violating the harmony of oral environment [3]. An immediate denture is a complete or partial denture inserted immediately after the extraction of the teeth. According to Boucher, there are two types of immediate denture

1. Conventional Classic Immediate denture (CID)
2. Interim/ Transitional / Nontraditional Immediate denture (IID).

In CID, Prosthesis is fabricated immediately following the extraction of the teeth which can also be used as definitive or long term prosthesis in later periods whereas IID, short term prosthesis, a new denture or relining has to be done after the healing. The advantages of interim immediate denture are preservation of facial appearance and height, reduction in post extraction pain, muscular tone and phonetics [4].

Several procedures has been described in the literatures to construct an immediate denture which reduces the time and provide an economically comfortable one. Khan et al [5] did an immediate transitional denture in one appointment using self-polymerizing, tooth coloured acrylic and visible light cured resins followed by multiple extractions on same appointment which has complicated the acceptance of new denture by the patient [6]. A Less traumatic immediate complete denture [7] was constructed where the remaining teeth were cut off till the gingival margins instead of extracting those teeth where the roots were extracted at a later time. Goova et al [6] described the use of patient's fixed prosthesis for fabricating in one appointment, an interim immediate partial denture, where the remaining three teeth were maintained to preserve the vertical dimension at occlusion where they were able to maintain the facial support, vertical dimension during the healing period.

The purpose of this case report was to describe a technique for fabrication of an interim immediate denture by restoring the vertical dimension in the missing posterior teeth eventually proceeded with extraction of the remaining teeth with alveoloplasty using a surgical stent after extraction which aids in restoring the patient existing facial height, esthetic, phonetics and vertical dimension.

*Corresponding author:

Dr. R.Muthukeerthana

MDS, Prosthodontics and
Implantogy, Raga Dental Center
for Implant and Laser,
Thanjavur, Tamil Nadu, India
Email:

muthukeerthana93@gmail.com

The outcome of this treatment is always unpredictable pertaining to assessment of the vertical dimension at occlusion and centric relation [8,9].

CASE REPORT

A patient named Mrs. Rajeshwari, 57 years old reported with the chief complaint of missing posterior teeth in upper and lower back tooth region for past 6 months and needs to replace the mobile teeth immediately with a denture. The patient presented with no significant medical history. Clinical examination revealed an unrestored mouth with generalized periodontitis of the existing teeth. We decided for the treatment of immediate complete denture along with patient's concern and demand.

The primary impression was made with alginate in both upper and lower arches (Fig 1 and Fig 2). The Casts were duplicated with dental stone. As there are missing posterior teeth in both the arches we did a tentative jaw relation by keeping the remaining teeth as a vertical stop and articulated in a mean value articulator (Fig 3). The wax try in was completed in order to record the vertical dimension at occlusion (VDO). This mainly helped us to maintain the vertical dimension and facial height. In the laboratory side, the existing teeth were marked as 'X' and 'O', initially all the X marked teeth were knocked out till the gingival level and replaced with artificial teeth, simultaneously we proceeded with O marked teeth (Fig 4, Fig 5 and Fig 6). Then teeth arrangement was completed and occlusion was established. After dewaxing, the casts

were evaluated for undercuts and blockouts using surveyor. By maintaining an unilateral undercut, the ridge shape has been modified in the cast for alveoloplasty where we fabricated a surgical stent using clear autopolymerizing resin. This surgical stent has been used as a guide for alveoloplasty, after the removal of the remaining teeth (Fig 7 and Fig 8).

Simultaneously, the immediate denture was fabricated (Fig 9). The patient was delivered with immediate complete denture on the same day of extraction and alveoloplasty by maintaining the vertical dimension and facial height similarly with esthetics.

The patient visited after 24 hours to evaluate denture support, retention and stability. The patient has been advised to take proper medications and follow the instructions given such as not rinsing and consuming hot foods/ drinks.

After 24 hour, we observed for sore spots in the regions of canine eminences, lateral to tuberosities and in undercuts. If there, pressure spots must be removed. The denture should be kept out of the mouth for a very short time.

After 7th day, the ridges were evaluated (Fig 10). The dentures can be removed at night. One month, two month and three-month checkup for evaluation of the denture, a new denture was fabricated after a proper healing period.



Figure 1: Intra Oral Examination

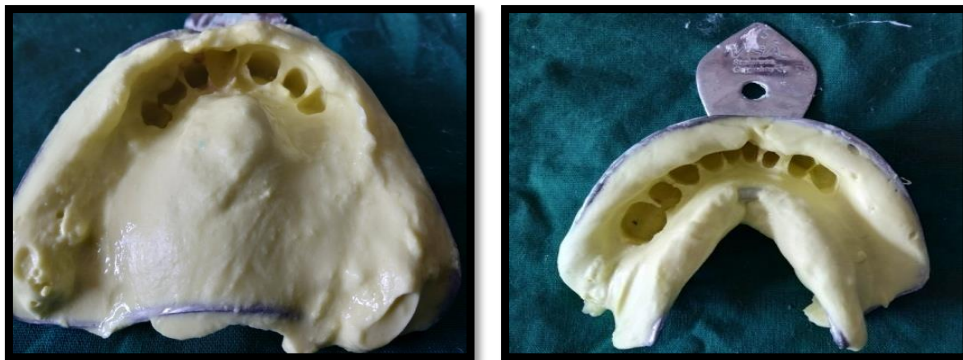


Figure 2: Primary Impression

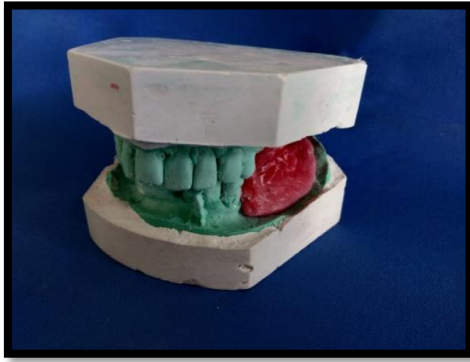


Figure 3: Tentative Jaw Relation



Figure 4: Wax Try In

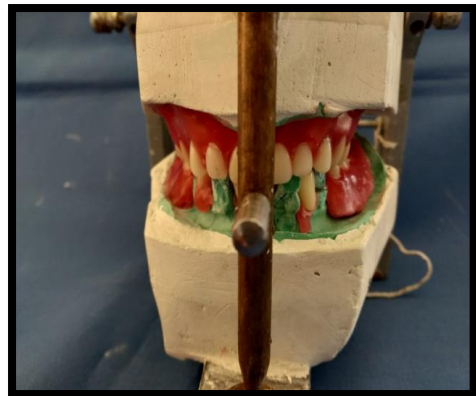
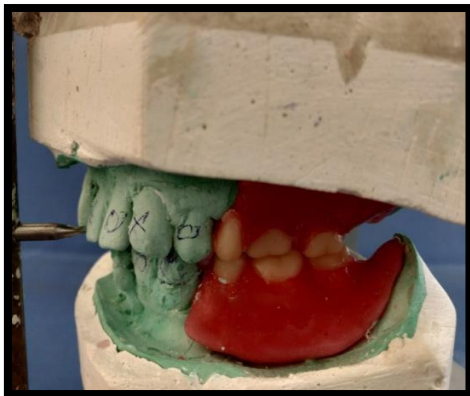
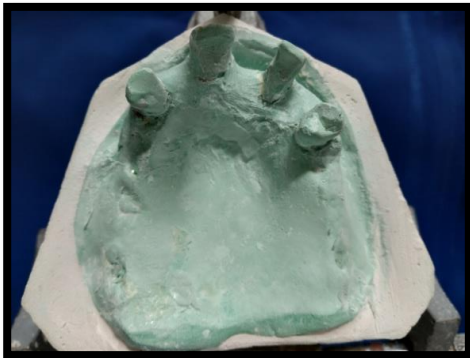


Figure 5: Marking of Abutment Teeth as "O" and "X" for Removal of Teeth and Teeth Arrangement

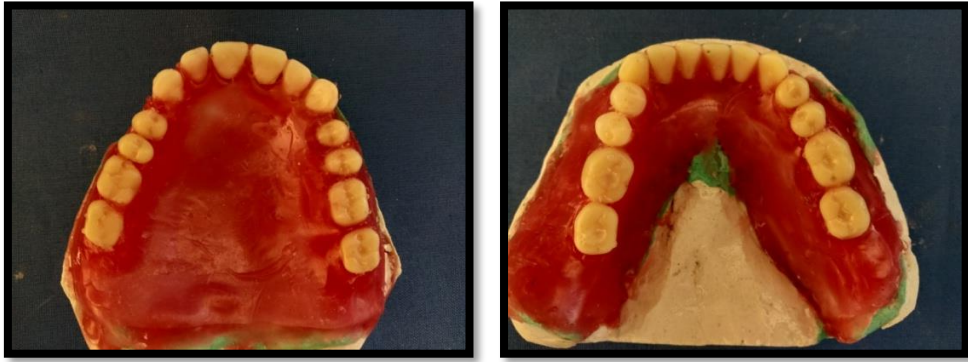


Figure 6: Waxing UP

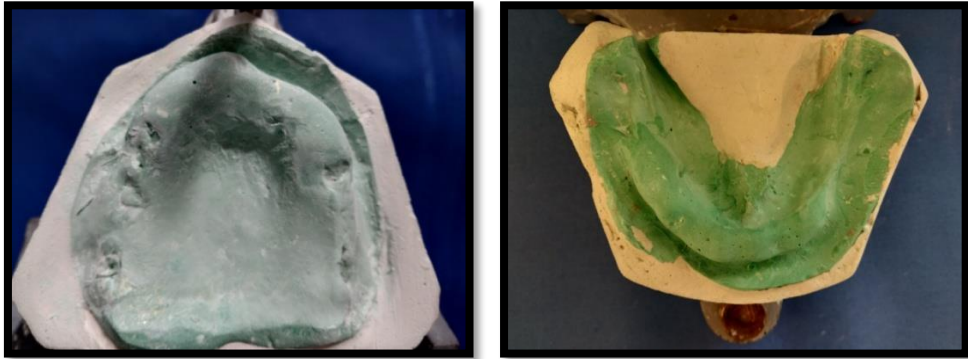


Figure 7: Surgical Correction in Casts



Figure 8: Stent Fabrication for Both Arches and Placed in Mouth Immediately after Extraction



Figure 9: Denture Insertion



Figure 10: Healing after Week



Figure 11: Pre-Operative



Figure 12: Post-Operative

DISCUSSION

The conventional immediate denture requires a series of appointments to perform standard procedures, after the extraction of the remaining teeth along with adjunct surgery and denture has to be evaluated for areas for pressure and adjusted^[10]. In Conventional complete denture, it requires a healing period from several weeks to months of edentulism^[11].

Interim Immediate denture is used to preserve the esthetic, phonetics, and occlusion most important psychological support to the patient. The procedure performed in this clinical report preserved the patient's oral environment. This technique followed the steps of traditional technique with slight modification, by fabricating a surgical guide which has acted as a template or guide for alveoloplasty, that mainly helped us to modify the ridges along with the extraction. This surgical correction of the alveolar ridges eventually helped us in the healing period by maintaining the ridge shapes.

The functional advantages are possibility to do denture adjustments, use of pressure indicating materials in a blood free field and the preservation of the vertical dimension at occlusion (VDO). The fundamental for the success of removable prosthesis is maintain the existing vertical dimension at occlusion and centric relation^[6].

CONCLUSION

By considering the introduction and successful outcome of the treatment, further clinical studies could be needed to evaluate the use of present technique. A fixed or removable or implant supported denture should be favoured as the final treatment of edentulous patients.

Conflict of Interest

None declared.

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