

FULL MOUTH REHABILITATION BY IMMEDIATE DENTURE PROSTHESIS- A CASE REPORT

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ABSTRACT: Esthetics plays a major concern in prosthesis. Golden guidelines of selecting and arranging teeth in natural pattern, and maintaing equilibrium of muscle forces over the prosthesis will provide good prognosis. A case in which all teeth present were of grade II and grade III mobility, immediate denture was planned to over come the social immobility. Customized bite registration tray was prepared for the record of maxillomandibular relation. All natural teeth were duplicated using selective shade of heat cure acrylic. Teeth were arranged in natural tooth pattern. Waxed up denture is acrylised and inserted soon after total extraction.

KEYWORDS: Immediate Denture , Selective Grinding, Articulation, Mould Acrylization.

INTRODUCTION

Patients increasing demand for natural resemblance of the lost teeth has become challenging to the dentist. Pre extraction records such as teeth shape, size colour, arch form, facial form facial profile are registered and evaluated. These records are used in fabrication of immediate or definitive prosthesis that replaces lost natural tooth and tissue structures.

The immediate complete denture is an accepted method of restoration for the patient whose last teeth are to be removed. The denture prosthesis is fabricated and inserted soon after the removal of last tooth. Along with many advantages that include preservation of patients' natural appearance and social mobility, they offer a smooth transition from natural teeth to a prosthodontic restoration. The prosthesis serves as a matrix for tissues and healing is usually faster and more predictable around these final restorations.

Patient's diminished prosthetic appreciation in post surgical phase may require relining for 6-8 weeks to compensate resorbing tissues around the osteotomed structures. Bloody field makes the adjustment and remount procedures inconvenient.

This article includes a case study of pre extraction records and their incorporation in fabrication of complete immediate denture to achieve harmonious esthetics and functional ability.

Case Report

A 47 year old female with all teeth having grade II / III mobility(**Fig.1 and Fig.2**) and two missing teeth requested replacement with artificial teeth that must resemble her natural tooth those present with in. A treatment plan of immediate complete maxillary and mandibular dentures were planned and is accepted by the patient.

Procedure

Pre extraction diagnostic photographs, radiographs, and facial measurements are noted and evaluated before making impressions(**Fig.3**). Impression making in Clinically grade III mobile teeth has a risk of removal along with impressions. Hence interdental spaces are blocked with wax(**Fig.4**) in maxillary and mandibular teeth. Impressions were made using alginate impression materials and poured with dental stone and diagnostic casts are prepared(**Fig.5**). These diagnostic casts are then duplicated (working cast) using duplicating silicone material. (**Fig.6**)

In order to record maxillomandibular relations a customised bite registration tray is prepared using self cure acrylic and guage material(**Fig.7 and Fig.8**). Bite registration paste is placed on either sides of the tray(**Fig.9**) then placed over the occlusal surface of the



Fig.1.

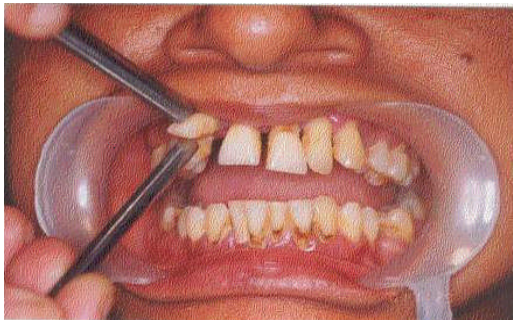


Fig.2

Fig.1 and Fig.2.Pretreatment photographs with mobility of teeth



Fig.3. Pretreatment evaluation



Fig.4. Blocking of undercuts

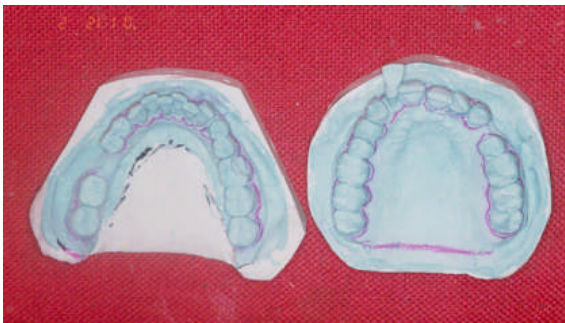


Fig.5. Study models



Fig.6. Working casts

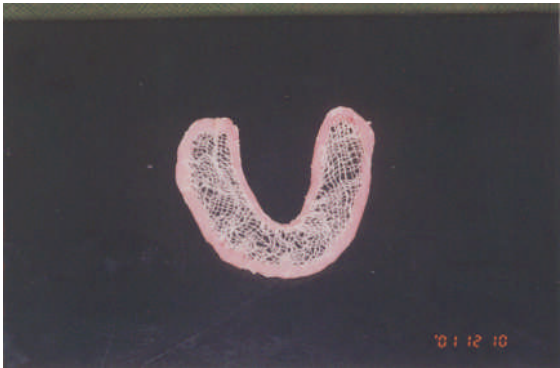


Fig.7. Bite registration wax

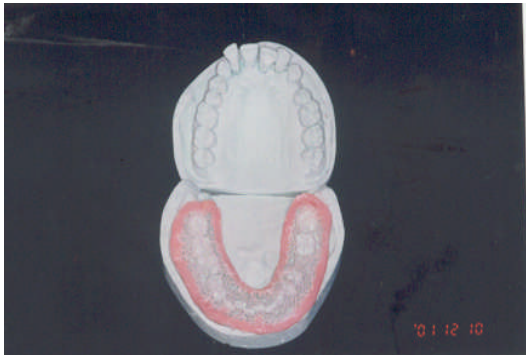


Fig.8. placement of Bite wax on the model



Fig.9.Loading of registration paste



Fig.10.Recording centric occlusion



Fig.11. Indentations of teeth in registration paste



Fig.12. Articulation of models



Fig.13. Duplication of natural teeth in wax

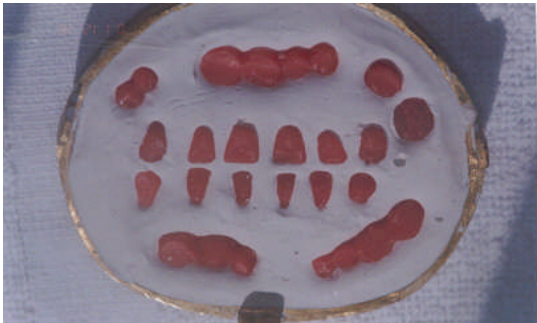


Fig.14. Investment of waxed teeth



Fig.15. Acrylisation of the waxed up teeth



Fig.16. Marking up of natural teeth on model



Fig.17. Removal of tooth on models

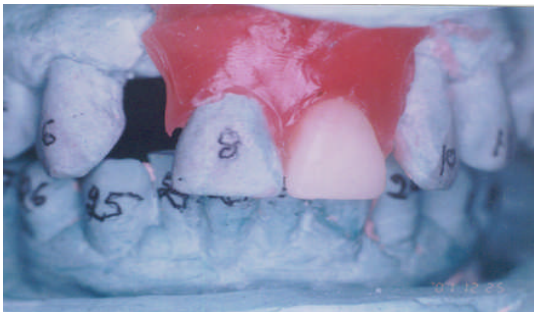


Fig.18. Replacement with acrylic tooth

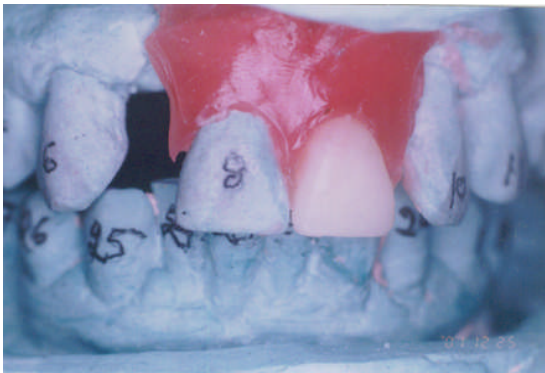


Fig.19. Acrylization of denture



Fig.20. Pocesed immediate denture

teeth. Digital guiding and the tactile sense will help in positioning of mandible in its most accepted and comfortable centric relation(**Fig.10**). At this relation, centric occlusion is planned. Indentations of teeth(**Fig.11**) will help to mount maxillary and mandibular casts on a semi-adjustable articulator(**Fig.12**). Average values of Condylar and Bennet angle are used for protrusive and lateral guidance.

Silicone mould used for pouring working cast is used to pour hot moulding wax in order to duplicate the natural teeth(**Fig.13**). On cooling of wax, teeth are retrieved from the mould and then excess is carved. Diagnostic cast will guide in excess carving of wax teeth.

Wax teeth are now invested(**Fig.14**) dewaxed and acrylised(**Fig.15**). Acrylic shade guide will help in achieving proper shade selection. Using pre extraction photographs further shade improvement is made. Acrylic colours are used to achieve the natural look. Now the finished and polished teeth are used in arrangement over the mounted maxillary and mandibular casts.

A standard method of arranging teeth in case of immediate denture fabrication is followed. Here, stone tooth of a respective cast is removed alternatively and is replaced with acrylic teeth. This method will help in arranging artificial teeth in exact position of previous natural teeth(**Fig.16-19**). A complete waxed up denture is now acrylised and polished. Selective grinding of teeth on a remounted articulator will remove the premature contacts in centric relation.

During the second visit all teeth were extracted. Osteoplasty is done to remove bony prominences. Immediate denture is inserted (**Fig.20 and Fig.21**). Pressure paste is used to check the pressure points in tissue surface area of denture. Post denture oral hygiene instructions will appreciate patient's positive cooperation.

Discussion

Role of esthetics in prosthodontics has always remained a continuous understanding of patients' expectations and their fulfillment. Immediate dentures have added advantages in which dentist can observe the patients natural transformation to prosthodontic form. Though prefabricated acrylic teeth give pleasing look but its artificial appearance has limitation in achieving natural tooth smile.

Recognizing maxillomandibular vertical dimension in natural tooth and its reproduction in dentures in case of mobile teeth is a technique sensitive procedure. Continuous resorption of alveolar ridges from the time of extraction of tooth will develop space between tissue surface of dentures and mucosa over the ridges.

Repeated relining of the dentures will increase the vertical bite that may affect the smile line.

Difficulty in recording of functional sulcus may compromise the lip fullness in immediate denture wearer. In Patients with thin lips immediate denture shows more fullness of lip and may show lip incompetency in normal closure of mouth.

Patients with severe undercuts in the ridges need special attention and planning in fabrication of immediate complete denture.

Authors do not unaccept the fact that immediate prosthesis has remained a good guide in improving esthetic and functional role in fabrication of definitive dentures.



Fig.21. Insertion of dentures

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