



## IMMEDIATE DENTURE- AN ESTHETIC SOLUTION

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**ABSTRACT** Immediate complete denture prosthesis fabricated before the removal of the teeth and placed immediately after the extractions of natural teeth. An advantage of an immediate complete denture over a conventional complete denture is the preservation of the natural appearance of a person. This clinical case report describes step by step fabrication of the immediate complete denture.

**KEYWORDS :** Immediate Complete Denture, Edentulous Arches, Esthetic, Tooth Replacement

### INTRODUCTION

In this esthetic era, no one wants to live without teeth everyone wants teeth to look good and, confident. When people are extremely concerned aesthetically at the time of extraction of anterior teeth due to advanced periodontal disease, trauma, root resorption, and failed endodontic treatment that time immediate replacement of teeth is a good option to build that confidence in a patient [1]. Traditionally after extraction of teeth patient has to wait for 6 weeks for complete healing after that new prosthesis can place but it takes a long duration, nowadays patients cannot wait for such a long duration in such cases immediate dentures are a good option [2]. An immediate denture may be a complete denture or removable partial denture fabricated for placement immediately after removal of natural teeth [3].

### Case report

A 53 years old female patient reported to the Department of Prosthodontics of Government dental college and hospital Mumbai India with a chief complaint of difficulty in chewing the food and forwardly placed upper front teeth.

On clinical examination revealed a failing dentition. Severe chronic generalized periodontitis was noticed with the remaining natural teeth. The periodontal prognosis was poor due to the associated pathological migration of teeth.

The patient presented no significant past medical history, she had given the dental history of removal of her teeth due to severe mobility.

She presented a complete edentulous mandible arch and class I Kennedy maxillary arch. The remaining maxillary anterior teeth presented with advanced periodontal disease [Fig-1, fig-2].

The treatment plan was decided accordingly patient's intraoral clinical condition, the patient's desire, risk factor, and treatment cost. The treatment plan outlined the extraction of all remaining teeth and fabrication of immediate maxillary complete denture and conventional mandibular complete denture. The patient signed informed consent accepted a treatment plan for an immediate maxillary complete denture.

### Clinical procedure

Maxillary Primary impressions were recorded with irreversible hydrocolloid impression material and an impression was poured in dental stone. On this maxillary diagnostic cast, a custom tray was fabricated in such a way that it should cover the residual alveolar ridges, palate and its anterior border ends at the lingual surface of the maxillary anterior teeth. The tray handle was placed in the anterior palatal region. This custom tray was evaluated intraorally and the borders of the tray adjusted to eliminate overextensions. Border moulding was carried out with a low fusing impression compound. The functional impression recorded in two-phase, in the first phase wash impression of the denture bearing area was taken with zinc oxide eugenol impression material, this impression removed from the mouth evaluated carefully. After that cut, the impression tray handle completely then this impression reposition into the patient mouth, in the end, the pick-up impression was taken in irreversible hydrocolloid using a stock tray that should be large enough to cover the custom tray and remaining anterior teeth. [Fig-3]

The master cast is prepared from the final impression in dental stone. Maxillo-Mandibular relations were recorded using trial bases constructed from shellac base plate and modeling wax rim on the master cast. [Fig-4]

The proper shade and size of the teeth were selected using the patient's existing teeth as a guide. The arrangement of the posterior artificial teeth was completed and evaluated in the patient's mouth to confirm maxillo-mandibular relations records. [Fig-5]

The anterior artificial teeth were arranged to reflect the position of the patient's natural teeth. The teeth on the cast were eliminated one by one and on their corresponding artificial tooth placed. These teeth were trimmed in such a way that 2mm of the master cast from the attached gingival was removed this was done to compensate for the shrinkage of soft tissue after post extractions. All the undercuts and sharp margins were rounded off on the master cast. The maxillary denture was processed after completing the wax-up in heat cure acrylic resin. After maxillary and mandibular denture fabrication patient called for extraction of the remaining teeth.

Extractions of the teeth were done as atraumatically as possible [Fig-6]. A thin transparent surgical template fabricated using clear acrylic resin was used as a guide for surgically shaping the alveolar bone [Fig-7]. After alveoplasty in the anterior maxilla region Sutures were placed across the extraction sockets then the denture was tried in the mouth with at most care to prevent injury to the extraction socket [Fig-8]. After denture insertion instructions were given to the patient. She was asked not to remove the dentures for 24 hours and also need for a soft diet. Along with cold packs to reduced postextraction edema and pain. Then the patient was scheduled for a 24-hour recall appointment [Fig-10].

The patient was kept on a regular recall schedule to improve the fit of denture upon healing [Fig-9-10].

### DISCUSSION

Immediate complete denture prosthesis fabricated before the removal of the teeth and placed immediately after the extractions of natural teeth [8]. There are two types of an immediate denture

- Interim immediate denture (IID) this prosthesis is used for a short duration until more definitive prosthesis therapy can be provided.
- Conventional immediate denture (CID) this prosthesis can be later modified to serve as the permanent prosthesis [4]

Advantages of an immediate denture are [5]

1. The first advantage of an immediate denture is that the maintenance of a patient's appearance because there is no edentulous period.
2. Circumoral support, muscle tone, the vertical dimension of occlusion, jaw relations, and face height are often maintained.
3. Less postoperative pain is likely to be encountered because the extraction sites are protected.
4. It will reduce residual ridge resorption
5. It is easier to duplicate the natural tooth position and shape.
6. The patient is probably going to adapt more easily to dentures at the same time that recovery from surgery is progressing. The patient's psychological and social well-being is preserved.

The disadvantage of an immediate denture [5]

1. The inability to accomplish a denture tooth try-in advance on extractions precludes knowing what the denture will look like on the day of insertion.
2. Because this is a more difficult and demanding procedure, more chair time, additional appointments, and therefore increased costs are unavoidable.
3. The resorption is faster than the changes of healed tissue. These changes require new impressions to keep the denture's base adapted to a basal seat. The remounting of the dentures to refine the occlusion is important whenever the denture base is altered.
4. Functional activities like speech and mastication are likely to be impaired. However, this is a temporary inconvenience.

Requirements of an immediate denture [6]

1. Compatibility with the surrounding oral environment
2. Restoration of masticatory efficiency
3. Harmony with the functions of speech, and deglutition.
4. Esthetic acceptability
5. Preservation of the remaining tissues.

Indication for immediate dentures [7]

1. For patients with periodontally weak teeth indicated for extraction.
2. For socially active people who are very self-conscious about their appearance

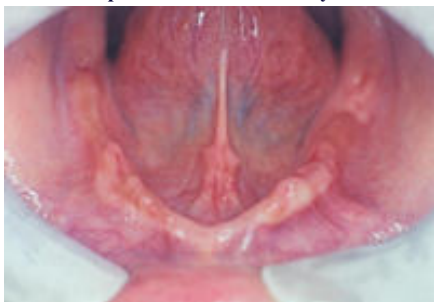
Contraindications of immediate dentures [8]

1. Patient who have undergone head and neck radiotherapy
2. Patients who are in poor general health or surgical risks
3. Patient's acute periapical, periodontal disease emotional and mental disturbance.

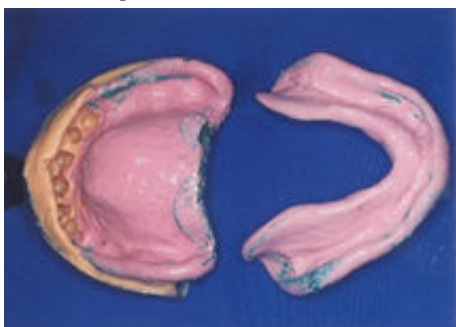
#### IMMEDIATE DENTURE-AN AESTHETIC SOLUTION FIGURE



**Fig-1 Intraoral Preoperative View- Maxillary Arch**



**Fig-2 Intraoral Preoperative View- Mandibular Arch**



**Fig-3 Final Impression**



**Fig-4 Jaw Relation**



**Fig-5 Try in of wax-up denture**



**Fig-6 Extraction of Maxillary Anterior Teeth**



**Fig-7 Surgical Template Placement**



**Fig-8 Immediate denture placement**



**Fig-9 Extra-oral Preoperative View**



**Fig-10 Extra-oral postoperative View**

## CONCLUSION

The immediate complete denture has several advantages over conventional complete denture as the natural facial appearance is maintained and the patient never appears edentulous. These immediate dentures allow patients to continue their social and business activities without being in an edentulous state. Immediate denture provides a valuable and reliable treatment option when proper case selection, treatment planning, and other procedures are followed carefully. Relining the immediate complete denture with soft resilient silicone materials can improve the fit and comfort of the immediate complete denture.

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