

Case Report

Immediate Complete Denture - A Case Report

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Abstract

Immediate complete dentures have a significant role when patient's all teeth should be extracted. The dentures are fabricated before all the remaining teeth were extracted, and immediately delivered to the patient after the extraction procedure. Patients with mobility of the teeth needing replacement with complete denture without going through a period of edentulousness an immediate denture is a treatment of choice. This case report describes a patient treated with immediate complete denture.

Key Words

Immediate complete denture, Immediate tooth replacement, Dental prosthesis.

Introduction:

The immediate denture is a dental prosthesis constructed to replace the lost dentition, associated structures of the maxillae and mandible and inserted immediately following removal of the remaining teeth¹. Generally, two types of immediate dentures are described in the literature: conventional immediate dentures and interim immediate dentures. In the traditional type, the interim prosthesis is fabricated to immediately place after the extraction of natural teeth and can be used as the definitive or long-term prosthesis. The interim type is used for a short time after tooth extraction. After the achievement of healing period, the immediate denture may be relined or replaced with the newly fabricated final denture². It was reported that the interim immediate denture show numerous advantages as preservation of facial appearance and height, muscular tone, phonetic and reduction of post-extraction pain³.

To attain the maximum degree of success, the following requirements should be satisfied:

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

To accomplish these requirements each patient should be analyzed and evaluated on an individual basis. The best patient for immediate dentures is the philosophical type. Their motivation for denture is the maintenance of health and appearance, and they accept placement of natural teeth that

cannot be saved as a normal procedure. These patients overcome conflicts and organize their time and habits in an orderly manner. They eliminate frustrations and learn to adjust rapidly. The philosophical patient will listen to and carry out instructions in an intelligent manner. Their mental attitude contributes to a favorable prognosis for the immediate denture.⁵

Case report:

A male patient aged 49 years with the chief complaint of missing upper posterior teeth lower anterior and posterior teeth. Routine case history was recorded, It revealed that maxillary posterior teeth were extracted one year ago and were not replaced. A detailed intraoral examination revealed grade III mobility of remaining upper anterior natural teeth. The patient was adamant that he could not be edentulous for any length of time. He was very cooperative and from the psychological points of view a philosophical type. Treatment possibilities were explored and fabrication of immediate denture was finalized.

Extra oral and intra oral photographs of the patient were made. Extra oral photographs included frontal view (**Fig 1.**). Intra oral photographs of maxilla and mandible (**Fig 2.**) were made with special care of anterior teeth which helps in shade selection. The existing vertical dimension at rest and occlusion were recorded and noted down.

Maxillary and mandible impressions were made with


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Fig.1 Pre-operative profile view



Fig.2 Intraoral Maxilla & mandible

irreversible hydrocolloid impression material and stone casts were prepared. Temporary denture base was made on maxillary cast using auto polymerizing acrylic resin and occlusion rims were constructed. Tentative jaw relations were recorded and a facebow transfer was done. The casts were mounted on a semi-adjustable articulator. The teeth to be extracted were marked on the cast using a black marker pen. Posterior try in (**Fig.3**) was done and tentative jaw relation was verified. The teeth to be extracted were scraped on the cast using BP blade. It was scrapped in such a way that 2mm of the cast from the attached gingiva was removed. All the undercuts and sharp margins were rounded off on the cast. Teeth selection was done before extraction keeping in mind the shade, shape and size of the teeth to be extracted, to mimic them as far as possible. Then teeth arrangement was carried out (**Fig 4**). The denture was processed using heat polymerized acrylic resin (**Fig 5**).



Fig.3 Try-in



Fig.4 Teeth arrangement



Fig.5 Processed Denture



Fig.6 Maxillary arch after teeth are extracted

The remaining three teeth were extracted (**Fig 6**). Extraction of the teeth were done as a traumatically as possible. Then the denture was tried in mouth with utmost care to prevent injury to the extraction socket. All the sharp margins were rounded off. Occlusion was analyzed using articulating paper and premature contacts in the denture were removed. Care was taken to maintain the vertical dimension to the original height (**Fig.7**). Post denture insertion instructions were given to the patient. He was asked not to remove the dentures for 24 hours after the insertion of the prosthesis. This aids in stabilization of the blood clot that was formed. Also need for a soft diet was strictly emphasized for the patient. Then the patient was scheduled for a 24 hour recall appointment(**Fig.8**). On 24 hour recall check up, patient did not show any



Fig.7 Immediate post-operative



Fig.8 Post-operative profile view

discomfort while chewing and speaking. The patient was asked to continue using the prosthesis and was rescheduled after a week for further check up. Patient was happy with the denture and its performance during mastication. Patient was kept on a regular recall schedule to improve the fit of denture upon healing.

Discussion

Although there are limitations to an immediate denture, the final outcome is usually positive. One of the most important esthetic advantages of immediate dentures is that the patients are spared the inconvenience and distress of being seen in public without teeth.⁶

One disadvantage of immediate dentures is the inability to review tooth arrangement and esthetics before processing and inserting the dentures. In most situations, the anterior teeth are arranged to duplicate the patient's natural tooth arrangement. The positions of natural anterior teeth are not always compatible with esthetics, and it may not be desirable to duplicate these positions for every patient. Careful evaluation of the vertical dimension of occlusion, centric relation and the placement of the teeth are essential factors for the success of the treatment.⁷

Another limitation of the immediate denture is that the laboratory technician may not have sufficient space to position the teeth correctly and esthetically. The soft tissue and overall ridge are very full at the time of extraction, but after several weeks the resorbition is accentuated.⁸

An immediate denture requires more visits for adjustment. This type of appointments can therefore become prolonged and stressful for both dentist and patient, therefore it is very important to explain this at the beginning of the treatment and to select the appropriate case from the psychological point of view.⁹

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