

IMMEDIATE DENTURES USING NATURAL TEETH – A SIMPLE SOLUTION¹ Swapna B V¹ Assistant Professor¹Department of Prosthodontics, Faculty of Dentistry, Melaka Manipal Medical College, Manipal-576104, Udupi. Karnataka

ABSTRACT: Immediate dentures allow patient to continue their social activities without being in an edentulous state. Replacements are usually done with artificial teeth. Patients own natural teeth can also be considered as their use is well accepted by some patients. Natural teeth will retain their hue and strength for sufficient period of time to make their use practical in some instances. This clinical report describes a technique using patient's natural teeth in fabrication of immediate removable partial denture.

KEYWORDS: Esthetics, Immediate denture, Natural teeth

INTRODUCTION

An immediate denture is any removable dental prosthesis fabricated for placement immediately following the removal of natural tooth/teeth¹. When extraction of teeth is indicated, immediate denture enables the patient to engage in routine social activities without an embarrassing period of not having teeth². Advantages of immediate denture include pressure to soft tissue to prevent tissue collapse, protection of extraction sites, reduction of bleeding and post extraction pain.

When artificial teeth are used for replacement of missing teeth in removable partial denture, sometimes obtaining same color of natural teeth may be difficult. For patients who are more esthetically demanding, patients own natural teeth may be used in removable partial denture. Patients own natural teeth can be used in immediate denture as they maintain person's natural appearance. This report describes a technique using patient's natural teeth in construction of immediate removable partial denture.

Case Report

A 45 year old man visited the department of Prosthodontics with complaint of mobility of lower front teeth. Patient had no significant medical history. On intra oral examination 31,32,41 were grade III mobile with gingival recession. Patient exhibited generalized calculus and stains and gingival recession. He had satisfactory occlusion and no signs of temporomandibular disorder. Radiographic examination of 31,32,41 revealed horizontal bone loss upto apical third. Diagnosis of localized periodontitis with respect to 31,32,41 was established. Treatment plan was discussed with the patient for fabrication of immediate partial denture by using same

teeth as patient was more concerned with esthetics. Patient was explained about limitations of the immediate denture and subsequent treatment required.

After through oral prophylaxis, tissues were allowed to heal for a weak time. **(Fig.1)** At the first appointment two impressions of mandibular teeth and one impression of maxillary teeth were made with irreversible hydrocolloid and were poured with type III dental stone. A pair of cast was utilized for fabrication of removable partial denture, other mandibular cast was used as a guide for teeth placement to simulate their original positions. The teeth to be extracted were cut off from the cast and slight amount of trimming of edentulous portion of cast was done to approximately simulate the amount of bone that will be lost after extraction.

The design of the denture base was decided and wax up of the denture base was done using modeling wax and polished. The cast was invested in dental plaster and dewaxing was done Heat cure acrylic resin was mixed according to manufacturer's ratio and was packed at dough stage. The denture base was processed, finished and polished.

At second appointment patient's intra oral condition was evaluated. Patient was advised to undergo extraction of 31, 32, 41. Under local anesthesia, the teeth were extracted and were stored in 0.3% hydrogen peroxide. Patient was asked to bite on sterile cotton for 30 min for bleeding to stop. The teeth were later cleaned with water and debrided to remove periodontal tissues. The tooth crown was cut 2mm apical to cementoenamel junction and the root portion was discarded. The coronal pulp was extirpated using a barbed broach³. The pulp chamber was



Fig. 1. Pre operative view – 1 week after scaling



Fig 2. Natural teeth after root resection



Fig. 3. Post operative view of final denture

irrigated to remove any remnants of pulp tissue and sealed using type I glass ionomer cement. (Fig. 2). The denture base was first tried in patient's mouth to evaluate the fit. A trial was done in patient's mouth by arranging teeth with wax to place teeth in their original alignment. Later Self cure acrylic resin was mixed and placed on the denture base and teeth were aligned. Before complete curing of acrylic they were tried in patient's mouth to verify esthetics, over jet and overbite. The denture was finished and polished (Fig. 3).

The patient was instructed to wear the denture continuously for 24 hrs and report next day. Post insertion instructions were given to patient. The patient was evaluated 24 hrs later. Patient reported with few sore spots and those areas were relieved. Patient was recalled later after 72 hours and 1 week for evaluation. Patient did not report any problems and expressed comfortable denture wearing.

Discussion

Loss of teeth is usually a traumatic experience and may precipitate emotional crisis. Fabrication of conventional removable partial denture requires patient to be edentulous for certain period as fabrication is possible only after healing of tissues³. During this period patient daily social activities will be affected. The trauma of being edentulous can be eliminated with fabrication of immediate denture.

Usually it is believed that replacement is done with artificial teeth always, but natural teeth can also be considered for replacement provided there is no damage to the tooth. Using natural teeth usually results in better esthetics, restoring original contacts with adjacent teeth. Patient also has an added advantage of maintaining the original appearance, less post operative pain. Anterior try in is possible in patient allowing alignment of teeth in their original position and can be used in patients who cannot afford implants or fixed partial dentures. This procedure is simple and inexpensive. The natural teeth retain their shade and vital appearance when kept moist. If allowed to dry, the natural teeth lose their vital appearance and hue but these characteristics return when moisture is restored⁴.

However, the natural teeth will not last indefinitely as they become brittle, and eventually they must be replaced. They can be considered as interim dentures. This procedure cannot be followed if local and systemic conditions are not ideal.

CONCLUSION

The use of patients own extracted natural teeth in the immediate denture provided excellent esthetic advantage and added to the psychological well being of the patient.

Patient was very receptive to use of his own natural teeth in dentures. Their use benefited the patient's mental attitude toward wearing of removable partial dentures. Due to the requirements of his lifestyle and employment this sort of immediate denture provided the most timely and efficacious replacement.

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[http://dx.doi.org/10.1016/0022-3913\(68\)90038-3](http://dx.doi.org/10.1016/0022-3913(68)90038-3)

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