

IMMEDIATE COMPLETE DENTURE: A CASE REPORT

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ABSTRACT

There are many advantages to immediate as opposed to conventional complete denture. From the patient's point of view, the preservation of the natural appearance of a person is of major importance. This paper reports the clinical and technical steps in completing an immediate complete denture, and the satisfaction obtained with soft relining materials.

Key Words: immediate denture, dental prosthesis

INTRODUCTION

An immediate denture is a dental prosthesis constructed to replace the lost dentition and associated structures of the maxillae and mandible and inserted immediately following removal of the remaining teeth.¹ An immediate denture can replace 1-16 teeth in either the maxillary or the mandibular arch or in both arches.

There are some contraindications to immediate dentures, such as cardiac, endocrine, and blood disturbances, slow healing potential, acute periapical or periodontal diseases, extensive bone loss, or emotional disturbances, mental incapacity, indifferent and unappreciative patients.²

Advantages of immediate denture consist in:¹

1. The denture acts as a bandage or splint to help control bleeding; to protect against trauma from the tongue, food or teeth if present in the opposing arch, and to promote rapid healing

2. Patients regain adequate function in speech, deglutition and mastication much sooner compared to conventional complete denture.

3. Many patients are not afraid to have teeth removed if they can have them replaced immediately. They would have a social and familial life without embarrassment.

4. The remaining teeth are a real aid in establishing the vertical dimension of occlusion and in positioning the artificial replacement.

Disadvantages of immediate denture are:

1. The immediate denture does not replace the stimulation that was supplied to the bone by the natural teeth.

2. The procedures are precise and time consuming and require more appointments, particularly during the adjustment phase.

3. The resorption is faster than the changes of healed tissue. These changes require new impressions to keep the denture base adapted to the basal seat. The remounting of the dentures to refine the occlusion is necessary whenever the denture base is altered.

4. There is no opportunity to observe the anterior teeth at the try-in appointment; therefore, the esthetic result cannot be evaluated until the dentures are inserted.³

Patients vary greatly in what they want, expect and demand. 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 and 5) preservation of the remaining tissues.⁴ For the dentist it is a challenge to

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accomplish the requirements in immediate denture service.

To accomplish these requirements, it is mandatory that each patient 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 replacement 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 philosophic 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

The patient A.C. is a 67 year-old woman with no significant medical history. She presented complete edentulous mandible arch and a class I Kennedy maxillary edentation with a fixed frontal partial denture (13- 22) that had been placed several years previously (Fig.1). The three remaining abutments presented advanced periodontal disease. The patient was adamant that she could not be edentulous for any length of time. She was very cooperant and from the psychological points of view a philosophical type.



Figure 1. Patient A.C. at the initial visit, with a fixed denture 13-22, candidate for immediate complete denture.

After radiographic and clinical examination was completed, the patient was appointed for the immediate complete denture.

Standard procedure for conventional immediate denture was performed.

Maxillary and mandible impressions were made with irreversible hydrocolloid impression material and stone casts were prepared. A maxillary impression tray was fabricated on the stone cast, was border molded

and secondary impression was made of the maxillary arch with an electrometric material (vinyl polioxiloxane).⁶ We proceeded identically for the mandible complete edentulous arch. Maxillomandibular jaw relation records were made to articulate the casts.

The proper shade and size of teeth were selected, using the patient 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 relation records. The wax-up in the posterior region was performed using the conventional method. In the anterior region, the wax -up was modified by creating a window (Fig.2). The maxillary artificial anterior teeth were arranged to reflect the position of the patient's natural teeth. In cooperation with the dental technician we estimate where the ridge shape will be by removing teeth on the stone model.



Figure 2. The try-in on the model

The maxillary denture was processed after completing the wax-up.

The remaining three teeth were extracted. (Figs. 3, 4). The denture was placed, tested for areas of excessive pressure and adjusted. Afterwards the denture was lined with a tissue conditioning material Visco-Gel (De Trey Dentsply) (Figs. 5, 6).



Figure 3. The complete edentulous maxillary arch immediately after the teeth are extracted.



Figure 4. The three extracted teeth (13,11,22).



Figure 5. The final complete denture prepared to be relined with Visco-Gel

The patient was given postoperative home care instructions, which include: not removing the denture for 24h, the use of analgesics and ice packs, if necessary, and appointed the next day for postoperative examination and any needed adjustments.

After one week, at the recall, we proceeded to reline the immediate complete denture with a permanent soft resilient silicone (Mollosil B-Detax). The patient was satisfied with both the retention and the esthetics of the complete denture (Fig. 7).



Figure 6. Mucosal surface of the complete denture with tissue conditioning material.



Figure 7. The satisfaction smile of the patient with the immediate complete denture relined with Mollosil, one week after placement.

DISCUSSIONS

Although there are limitations to an immediate denture, the final outcome is usually positive. One of the most important esthetic advantage of immediate dentures is that the patients are spared the inconvenience and distress of being seen in public without teeth.⁷

One disadvantage of immediate dentures is the inability to review tooth arrangement and esthetics before processing and inserting the dentures.³ 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.⁸

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 resorption is accentuated.⁹

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.¹⁰

Visco-Gel tissue conditioning of the immediate complete denture after extraction will permit better healing results. After one week it is mandatory to reline the immediate denture with a permanent resilient lining (Mollosil-Detax). It will improve the fit and comfort of the complete immediate denture.

CONCLUSIONS

Immediate dentures allow patients to continue their social and business activities without being in edentulous state. This advantage can be demanding and challenging, as the arrangement of artificial teeth cannot be observed at a try-in appointment. It is important for both the patient and the dentist to understand the limitations of the procedure.

Relining the immediate completing denture with soft resilient silicone materials can improve the fit and reduce the period of the adaptation with the new denture.

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