

## The Management of Immediate Complete Prosthesis

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### Abstract

### Clinical Case

The prosthetic rehabilitation by an immediate complete prosthesis of use constitutes a solution of choice to solve the aesthetic and functional problem. It is a PT posed the day of the extraction, a better organization of the clot, a minimal edema, a restoration of the functions of the manducatory apparatus and a psychic comfort of the patient are certainly obtained by the pose of an immediate complete prosthesis. However, this type of realization presents several difficulties to manage during all the stages of realization which must be carried out with a lot of rigors.

**Keywords:** "Prosthesis", "complete edentulism", "immediate complete prosthesis", "transition".

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## INTRODUCTION

The impact of multiple extractions, especially in the anterior area, often leads the patient in a brutal and delicate, even traumatic way, to total edentulism [1]. The consequences are not only psychological, but also aesthetic, functional, physiological and biological. Patients don't agree to show this handicap, even for a short time [1, 2].

Implantology offers several solutions for the immediate rehabilitation of this type of edentulism, but in the face of contraindications to implantation, the immediate complete prosthesis is essential as a solution of great interest [3].

It is the realization of a prosthesis of use posed the same day of the extraction of the last teeth [4]. The immediate complete prosthesis presents several advantages justifying its interest [5]. The placement of the prosthesis on the same day of the extractions, allows a better stabilization of the blood clot, a minimization of edema, a restoration of the functions of the masticating apparatus and a considerable postoperative comfort for the patient [5, 6]. Especially since this prosthesis guides healing, and provides immediate support for the Para prosthetic organs. The use of an immediate total prosthesis is a clinical alternative that solves all of these problems and essentially responds to the aesthetic emergency [7].

The development of the immediate complete prosthesis obeys a rigorous clinical protocol and very specific requirements that we will describe and illustrate from time to time in this article.

## CLINICAL CASE

A 61-year-old woman with beta blocking agents consults for prosthetic rehabilitation. The clinical and radiological examination confirm a mediocre dento-periodontal factor at the maxillary level which leads to the extraction of all the maxillary teeth. Immediate total prosthesis is required to overcome the aesthetic problems and psychological shock caused by the loss of all teeth for the patient.

### Implementation Steps

The primary impressions were taken with alginate, then a classic individual impression tray (PEI) is adjusted on the maxillary model, and slightly spaced and perforated at the level of the anterior teeth.

The peripheral seal was made with Kerr paste after adjustment of the PEI and the impression was taken with a medium viscosity polysulphide (Fig 4).

The transfer of the maxillary model on the articulator is done using the facebow, that of the mandible was carried out after adjustment of the occlusion models, in centric relation while preserving the DVO of the patient.

In addition, we chose the prosthetic teeth by referring to the patient's bridges and natural teeth. After mounting the posterior teeth, it is tried in the mouth.

Assembly of the antero-upper teeth: A vestibular reference key, in heavy silicone, and another in bite are made on the working models.

We first proceeded to reposition the inter-incisal point in the vestibulo-lingual direction before performing the assembly of the upper anterior and posterior teeth.

Then we proceeded to the rectification of the maxillary model using radiographs and clinical examination elements, a finish is needed to give a rounded and smooth profile of the residual ridges.

On this model we made a surgical guide in transparent resin, an essential tool to guide the surgical act, as for the resection of the alveolar bone.

Polymerization is accomplished for the immediate total prosthesis.

During the surgical phase, the bridges were removed and the remaining teeth were extracted, taking care to curettage the infectious foci, to regularize the

bone in accordance with the intrados of the surgical guide (Fig 9 (a,b)).

The maxillary total denture is immediately inserted in the mouth by interposing two rolls of salivary cotton wool, for about ten minutes to promote hemostasis and reduce postoperative edema.

Immediate occlusal equilibration and advice are given to the patient:

- Do not remove the prosthesis except to clean it,
- Balanced, soft and non-sticky food.

A prescription was prescribed including an analgesic and an antibiotic, anti-inflammatories are not recommended because they would delay healing.

After 48 hours, we removed the prosthesis, examined the extraction sites and performed an occlusal-prosthetic equilibration.

Dento-prosthetic maintenance and control of prosthetic hygiene must be carried out periodically, in order to ensure the durability of these prosthetic restorations.



**Figure 1: Panoramic radio**



**Fig 2 & 3: Endo-buccal views**



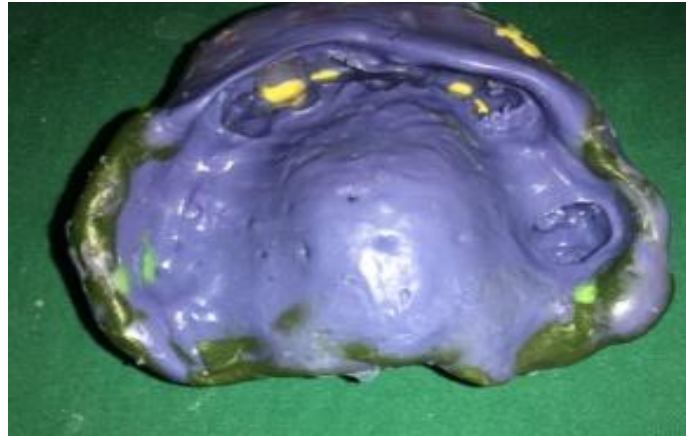
**Fig 4: Model from study impression**



**Fig 5: Openwork impression door**



**Fig 6: Peripheral joint with kerr pulp and polyether**



**Fig 7: Antomofunctional impression**



**Fig 8: Occlusion record**



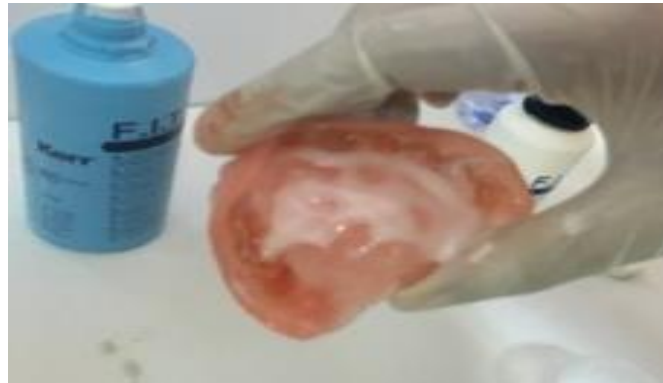
**Fig 9: Fitting on wax**



**Fig 10: Model of work after scratching**



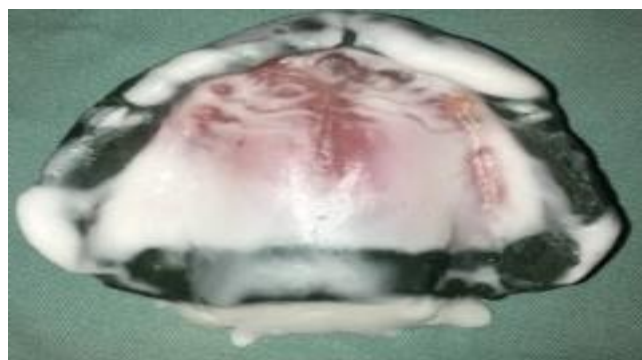
**Fig 11 & 12: Surgical time with a guide**



**Fig 13: Filling of the intrados with the fitt of kerr**



**Fig 14: Prosthesis in mouth**



**Fig 15: Tertiary impression 2 months after**

## DISCUSSION

The immediate complete removable prosthesis is now a well codified protocol [2]. It is a prosthesis of use and not a temporary prosthesis, that is to say that it is intended to satisfy the patient in the medium term, that is to say approximately 5 years at least [4]. It can be a temporary prosthesis if implant treatment is

envisaged pending bone healing and osseointegration of the implants. The success of this disposable prosthesis depends on the success of the clinical stages [5, 6].

The short and long-term success of this therapy requires the practitioner to: make good use of clinical data and pre-extraction documents, which have

an important value with regard to the shape, the dental arrangement as well as the morphology of the gum, which gives the means to faithfully reproduce the existing aesthetics, or even to improve it [7, 8].

Also, atraumatic avulsion of the teeth, in order to promote bone remodeling at this level; a reasoned choice of the material and the impression technique according to the clinical situation: degree of mobility of the teeth, presence of diastemas and possible areas of undercut [9].

Equally, the practitioner must master the impression technique, which must make maximum use of the factors of support, stabilization and retention [10]. The intermaxillary relationship is always recorded at the centric relationship position [11]. This report should never be recorded according to the patient's occlusion since it is the result of several disturbances and occlusal pathologies [7, 8]. The use of facebow for the transfer of the report on the articulator is always the rule in order to be able to pass from DVE to the desired DVO without distorting the report [9].

The immediate complete removable prosthesis essentially concerns maxillary edentulism [11]. The teeth preserved during the phases of production of the prosthesis are those of the incisor-canine block and at most the first premolars [12]. The posterior sectors must be edentulous and have stabilized bearing surfaces.

In the mandible, this type of prosthesis is initially more complex in view of the difficulties in stabilizing a prosthesis, an essential condition for the proper healing of the extraction sites [10, 11].

On the other hand, the immediate prosthesis is contraindicated in the context of a complex treatment. In fact, treatments combining the fixed and removable prosthesis or involving a modification of the DVO are subject to regular fitting and validation sessions, which is not the case for the immediate prosthesis [9, 11].

The disadvantages of the PCI require from the practitioner a good communication with his patient, and essential human qualities. The prosthesis is above all a removable prosthesis, intended to replace the last natural teeth of the patient. Also, the multiple avulsions and the modification of the aesthetic parameters by the immediate insertion of the prosthesis represent radical changes which can frighten the patient [13]. Finally, given the extent of the proposed treatment, previous painful experiences can also be a hindrance for the patient.

The realization of an immediate prosthesis exposes to a very regular follow-up in order to check the good adaptation of the prosthesis during the healing. Indeed, maintenance sessions may be necessary in order

to rebase the prosthesis or perform an occlusal adjustment [3].

## CONCLUSION

Even if the immediate use complete prosthesis is always a challenge for the practitioner. It remains a remedy frequently encountered in the daily practice of the removable prosthesis. Given its advantages, this type of rehabilitation will always remain relevant and will retain a very important place in our discipline, hence the importance of mastering all of its clinical and laboratory stages.

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