

REMOTE TOOTH IN IMMEDIATE PARTIAL DENTURE – A CASE REPORT

ALEKSANDR SKRYL, MANJUNATH KADITHOTA

ABSTRACT

Dentists, especially prosthodontists, often face a difficult aesthetic situation of having to remove the anterior tooth because of trauma, advanced periodontal disease or endodontic problems. Many people are reluctant to undergo tooth removal, followed by its placement with an artificial tooth.

An acrylic, removable, partial denture can present challenges with regards to matching colour, size and shape, and it often requires

substantial modification to achieve an acceptable appearance. Using the natural tooth as a pontic offers the benefits of it being right with respect to size, shape and colour. Moreover, the positive psychological value to the patient in using his or her natural tooth is an added benefit. Here, a case report has been presented, wherein an immediate, interim tooth replacement was made by using a clinical crown as an aesthetically acceptable treatment option.

Key Words: Remote tooth, natural tooth pontic, aesthetics, immediate interim replacement.

INTRODUCTION

Self-perceived, prosthodontic needs are determined by functional, aesthetic, psychological and social impacts due to tooth loss^{1,2}. These impacts have detrimental effects on the oral health, which are related to the quality of life (OHRQoL) measures^{3,4} and different levels of prosthodontic interventions are needed as a standard of care to improve the condition of the edentulous patients⁵. Clinical factors like the number and location of the absent teeth, age, gender, impaired function, discomfort and dissatisfaction with appearance, and other sociodemographic, cultural and financial determinants are known to be the important ingredients of the perceived treatment needs and, as a consequence, the essential aspects of clinical decision making⁷⁻¹⁰. Another issue that influences the demand for prosthodontic treatment is the time between the tooth loss and the search for treatment. It was hypothesized that the self perceived need and the expressed desire for tooth replacement were greater at the time of tooth loss¹¹. The need for the replacement of a missing tooth is more in case of an anterior tooth. The prosthetic replacement of an anterior tooth is the most challenging one, as it includes the patient's expectations which include, matching with proper colour, shape and size, psychological value and utmost technique sensitivity.

So here is a case presentation where in all above mentioned factors were considered for replacement of anterior tooth.

CASE PRESENTATION

A 53 year old male patient was referred to the Department of Prosthodontics and Implantology with localized pain and exudation with respect to the mandibular right central incisor. On clinical examination, a pocket depth of 8 mm, grade II mobility and purulent exudation was seen [Table/Fig 1]. Radiographically, severe bone loss was evident. It was diagnosed as a localized periodontal abscess. Considering the poor prognosis of the tooth, a treatment plan was made to extract the affected tooth, followed by an immediate temporary replacement by using the extracted tooth until complete healing was achieved.

CLINICAL PROCEDURE

Before the extraction of the tooth, the patient underwent oral

prophylaxis, followed by the making of an impression. The impression was made by using alginate impression material. A cast was prepared, the mandibular right central incisor was cut on the cast and the contours of an alveolar part were generated, taking into account the probable post extraction changes [Table/Fig 2]. After the extraction of 41, the tooth was disinfected and the root was removed at the apical 3/4th [Table/Fig 3]. The root canal was cleaned, debrided and expanded. Also, a circular furrow was created for the best mechanical retention. Four hours after the extraction of the tooth, the immediate temporary partial denture was ready [Table/Fig 4 and 5] and the patient was called for its insertion. After the initial clot formation had taken place, the denture was fitted on the patient [Table/Fig 6 and 7]. An occlusal correction was not necessary. The healing process proceeded well.

The patient was instructed to avoid the exertion of excessive force in the anterior region, which could be caused by biting anything hard, which could dislodge or break the immediate prosthesis. Oral hygiene instructions have been given for a better healing. The patient was re-evaluated after a week, followed by a month, to check the healing of the extraction socket and the condition of the immediate prosthesis. After a month, the healing was found to be uneventful and the prosthesis was in good condition. As the patient had been given proper instructions after the insertion, there was no hindrance in the post-operative healing of the socket in any way. Definitive prosthetics had been started in 2 months. Thus, the given technical decision had provided the preservation of the aesthetics and function during the healing period of the post extraction wounds. This technique has attracted attention, especially the fact, that the use of a natural tooth had facilitated the psychological adaptation of the patient.

DISCUSSION

Patients' self-perceived needs, expressed desires and expectations are the essential parts of an evidence-based model for prosthodontic treatment planning¹². Since the patients perceive wide ranges of dental needs, it was assumed that not only did the clinical aspects



[Table/Fig-1]: Periodontally affected 41



[Table/Fig-4]: Immediate temporary partial denture



[Table/Fig-2]: Cast prepared with 41 removed on the cast



[Table/Fig-5]: Immediate temporary partial denture

[Table/Fig-3]: Extracted 41 with root removed at apical 3/4th

[Table/Fig-6]: Extraction socket after 4 hours



[Table/Fig-7]: Immediate temporary partial denture fitted on patient

of the tooth loss influence the treatment needs. The human ability to adapt physically and psychologically to changes in the oral condition, and to cope with these impacts when the pain symptoms are absent, may act in addition to external factors like the environment and the social context.

Although many treatment options are available for the replacement of the missing anterior tooth, the matter of concern is the patient's adaptability to the treatment. The immediate replacement includes an acrylic, removable, partial denture, bonding the natural tooth to the adjacent teeth by using either light cure or wire bonding and so on. In this case report, an attempt was made by using the patients' own tooth instead of the acrylic one in the removable partial denture, for the psychological benefit of the patients of having their own teeth. Using the natural tooth as a pontic offers the benefits of it being the right one with respect to size, shape and colour.^{13,14,15,16} The natural tooth is readily available and much modifications are not required. The healing of the extraction socket is excellent and a high level of oral hygiene is also maintained, which is difficult to achieve in wire and resin bonding. This technique is practical and economically feasible, it requires limited laboratory support and materials, and it can be accomplished in a single appointment. Even though this is simple treatment option which can be used to gain the confidence of the patients, long

term studies are rare. Though the success in this case is good, we need to do further studies to evaluate the success rate which is associated with it.

CONCLUSION

The use of a natural tooth pontic is an aesthetically acceptable treatment option for situations in which the anterior teeth need to be removed, and it reflects the dentist's concern for the patient's aesthetics, function and psychological wellness

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AUTHOR(S):

1. Dr. Aleksandr Skryl
2. Dr. Manjunath Kadithota

PARTICULARS OF CONTRIBUTORS:

1. Corresponding Author
2. MDS
Prosthodontist and oral Implantologist,
JDWNR Hospital, Thimphu, Bhutan.

NAME, ADDRESS, TELEPHONE, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Aleksander Skryl,
The senior lecturer of chair of Prosthodontic Stomatology
Stavropol state medical academy, Stavropol, Russia.
Phone : +79187506163
E-mail : dr.askryl@gmail.com

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