

Frugal Innovation of Natural Teeth

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A 65-year-old male patient visited the dental clinic for a general dental check-up. On examination, it was found that he had attempted to use his own lower anterior teeth to create a prosthesis. Unfortunately, the teeth were lost due to periodontitis. The patient provided a history of gum bleeding and food deposition related to the self-made faulty prosthesis [Table/Fig-1,2]. He explained that he had mobile teeth that were lost one after another. The patient replaced the edentulous area with his natural teeth using an adhesive material on his own. In the present case, he had fabricated the prosthesis and used it for more than 10 years. The apical portions of all the teeth in the prosthesis were ground and made flat to provide adaptation and to prevent irritation to the underlying gingival tissue [Table/Fig-3,4].

On intraoral examination, the mucosa in the lower anterior region appeared erythematous with irregular margins and the self-made prosthesis appeared non functional with compromised retention. However, the areas involving the prosthesis showed inflamed and erythematous underlying tissue in relation to the mesial aspects of the first premolars bilaterally and the prosthesis was covered with plaque. The continuous use of the faulty prosthesis had caused severe gingival inflammation, compromising periodontal health and leading to bone resorption [Table/Fig-5]. He was instructed to discontinue the self-made faulty prosthesis, as it may worsen

the periodontal status. Oral prophylaxis was performed and the patient was referred to a prosthodontist for further treatment.



[Table/Fig-3]: Facial aspect of self-made faulty prosthesis after removal.



[Table/Fig-4]: Lingual aspect of the self-made faulty prosthesis.



[Table/Fig-1]: Facial aspect of self-made faulty prosthesis in the mouth.



[Table/Fig-2]: Lingual aspect of the self-made faulty prosthesis in mouth.



[Table/Fig-5]: Clinical image showing the edentulous region.

When patients are unaware of the prosthetic fabrication process, they may either explore self-fabrication or seek help from unqualified individuals. As a result, they may experience severe and irreversible

consequences. Therefore, patient education is essential and patients should reach out to the relevant dental specialists in a timely manner.

In a literature review, the use of human natural teeth in the treatment procedure for the replacement of missing teeth dates back to 1600 to 687 BC when the Phoenicians and Etruscans used human and oxen teeth for this purpose during the period from 753 to 300 BC [1]. In a study conducted by Hayward DE complete dentures were made for six individuals using their original natural upper anterior teeth to ensure that their dentures were unique and original. The use of their own upper anterior teeth proved favourable for both their morale and self-esteem. In the study, natural posterior teeth or natural lower anterior teeth were not used due to size constraints that would not permit adequate retention or the removal of the pulpal tissue without unduly weakening the teeth [2]. There was a previous similar case report by Satapathy SK et al., in which an avulsed tooth was decoronated and the crown portion of the natural tooth was placed in the partial denture during fabrication. This denture was provided as an interim prosthesis to avoid an unaesthetic appearance during the healing period. Retention was obtained by grooving the cemento-enamel junction area of the decoronated tooth, which acted as undercuts in the prosthesis [3]. The avulsed tooth was thoroughly cleaned and treated with 10% glutaraldehyde and 5.25% sodium hypochlorite disinfection solutions, which reduced and removed contamination while preventing future bacterial growth [4]. In this case, the prosthesis was made using the avulsed tooth to provide a natural appearance for a short duration, after which it was replaced with a fixed prosthesis. An immediate denture is defined as a complete or removable partial denture fabricated for placement immediately after the removal of natural teeth [5]. Immediate dentures help patients present themselves in social occasions. In a study conducted by Wasserstein J the crown of the extracted anterior tooth was used in implant surgery as a

temporary restoration until a definitive prosthesis was provided [6]. The fabrication of immediate removable partial denture prostheses using natural teeth can enhance the aesthetics and confidence of the patient, as suggested by Baslas V et al., [7]. In the present case, the patient decided to create his own prosthesis for reasons known only to him. Inadequate aesthetics and function of the prosthesis were observed, further causing damage to the underlying soft tissue. The patient was instructed to discontinue its use, after which he was referred to a prosthodontist for appropriate management.

There are many available treatments for the replacement of missing teeth. However, a lack of awareness among people about these replacements may result in the improper and unhygienic handling of exfoliated teeth, which can lead to both oral and systemic illnesses. Therefore, it is important to conduct dental health education and awareness programmes at the community level.

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