

Simplified Method of Replacing Mandibular Anterior Teeth By Means Of Immediate Fixed Partial Denture: Case Report

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ABSTRACT

Background: Teeth mobility occurs mostly because of periodontal disease. Mobile/Loose teeth would interfere with phonation, mastication, and esthetics of the individual. Replacement of mobile teeth by means of fixed prosthesis aids in restoring function, speech, and appearance of the individual. This article presents a Case report of replacing mobile/loose teeth by means of immediate fixed partial denture.

Keywords: Abutment, Immediate fixed partial denture.

INTRODUCTION

Teeth are essential for mastication, phonation, appearance, and for social reasons. Mobility with teeth would affect one or all of the functions of the teeth. Replacing mobile teeth are done by various methods by means of removable partial denture, fixed partial denture, and dental implant prosthesis. Removable partial denture is economical, but, with the disadvantage that it should be removed and placed by the patient. Dental implant prosthesis is one of the treatment options for replacing mobile teeth.

However, if adjacent teeth to mobile teeth are needed to stabilize, splinting is done. Replacement of mobile teeth by means of fixed prosthesis is preferred whenever possible and has the advantage of comfort, is fixed, and it splints and stabilizes abutment teeth. The following is the case report.

CASE REPORT

A male person, aged 65, approached the dental hospital with the chief complaint of loose lower front teeth. (Fig 1). Clinical examination shows grade III mobility with lower front teeth, 41 & 31.

(Fig 2). Intraoral examination reveals generalized spacing present between mandibular anterior teeth. Periodontal examination of remaining teeth performed. Treatment planned to improve periodontal condition, followed by extraction of non restorable 41 and 31 and replacing them immediately by means of immediate fixed partial denture. This immediate fixed partial denture will function as to stabilize adjacent teeth and replacing extracted 41 and 31 and function and esthetics. After healing of sockets pertaining to extracted 41 and 31, maxillary and mandibular final impressions made for replacing 41 and 31 by definitive fixed partial denture in relation to 42, 41, 31, and 32.

PROCEDURE

After thorough oral prophylaxis, and periodontal evaluation, crown preparation was done in relation to 41 and 32 to receive immediate fixed partial denture, after extracting 41 and 31 (Fig 3). Maxillary and mandibular alginate impressions [1] (Tropical, Zhermack, Italy) (Fig 4) were made and poured with dental stone (Kalstone, Kalabhai) (Fig 5) to fabricate working casts. On the cast tooth number 41 & 31 which were planned to extract, were broken carefully and reduced to the gingival level (Fig 6).

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Fig 1: Loose lower front teeth.



Fig 4: Mandibular alginate impression.



Fig 2: Grade III mobility with mandibular central incisors.



Fig 5: Cast with prepared lateral incisors.



Fig 3: Crown preparation with lateral incisors.



Fig 6: Reduction of mandibular central incisors.



Fig 7: Temporary immediate fixed partial denture.



Fig 8: Temporary prosthesis-finished and polished.



Fig 9: Extraction of mandibular central incisors.



Fig 10: Immediate fixed partial denture in position.



Fig 11: Die preparation.



Fig 12: permanent porcelain fused to metal fixed partial denture.



Fig 13: Cementation of porcelain fused to metal fixed partial denture.

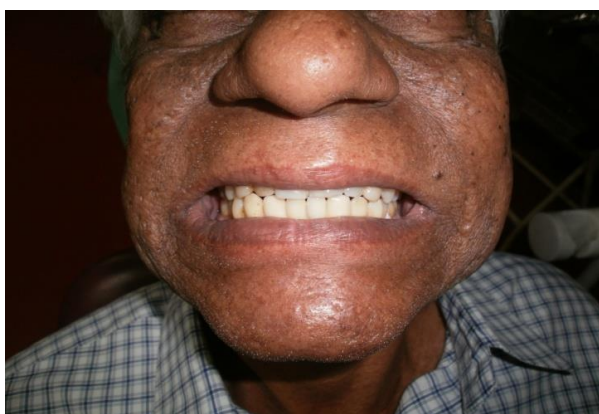


Fig 14: Porcelain fused to metal fixed partial denture in occlusion.



Fig 15: Natural appearance of mandibular teeth.

Tooth colored self cure acrylic material [2] was used (DPI Self – Cure Tooth Molding Material) to fabricate temporary immediate fixed partial denture in relation to 42, 41, 31, & 32 (Fig 7). Temporary prosthesis was finished and polished [3] to the desirable level. (Fig 8). Temporary fixed partial denture was sterilized and kept in sterile pouch. Local anesthesia (Lignox 2% A, Indoco) was

administered by infiltration with teeth number 41 & 31 and was extracted (Fig 9). Sterile cotton was placed under pressure to control and bleeding from the extracted site. Temporary fixed partial denture with 42, 41, 31 & 32 was placed and occlusal corrections were made (Fig 10). Temporary luting cement (Zincoxide-eugenol, DPI) was used for cementation purpose.

Post cementation instructions were given. Patient was asked to visit for regular checkups. After thorough healing of extracted site maxillary and mandibular final impressions were made (Photosil, DPI). Porcelain fused metal fixed partial denture was fabricated (Fig 11 & 12). Permanent cementation of PFM fpd was done using glass ionomer luting cement (Fuji I, GC Corporation, Tokyo, Japan) (Fig 13, 14, & 15). Post cementation care instructions were given.

DISCUSSION

Periodontal disease causes mobility of teeth. Mobile teeth would interfere with occlusion, phonation, and appearance. The indirect technique is preferred over the direct technique for its accuracy.[4] Crispin et al showed that the marginal fit of poly methyl methacrylate provisional restoration could be improved nearly 70% by fabricating them indirectly.[5] Replacing mobile/loose teeth by means of fixed partial denture has many advantages over other treatment modalities available. Proper maintenance of lip support, stabilization of adjacent teeth, and replacing mobile teeth immediately is always desirable.

Removable partial denture replaces mobile teeth, but it not fixed. Immediate fixed partial denture contributes in tissue healing, contour of the edentulous ridge.

CONCLUSION

Immediate fixed partial denture is desirable treatment option in replacing mobile teeth, to provide Splinting effect and maintain function of teeth.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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