



REHABILITATION OF SINGLE MISSING ANTERIOR TOOTH BY LOOP CONNECTOR FDP: A CASE SERIES

Dr Doyir Tasar*	Senior Resident, Department of Prosthodontics, S.C.B. Dental College and Hospital, Cuttack *Corresponding Author
Dr Jyotirmayee Sahoo	Senior Resident, Department of Prosthodontics, S.C.B. Dental College and Hospital, Cuttack
Dr Lipika Lenka	Senior Resident, Department of Prosthodontics, S.C.B. Dental College and Hospital, Cuttack

ABSTRACT To replace a single missing tooth, most common fixed prosthetic options are 3 unit FDPs or implant supported prosthesis. Due to its invasive nature as well as cost factor, it is not always feasible to give implant supported prosthesis. 3 unit FDPs are good alternative to the former, however it requires preparation of 2 abutments. Loop connector FDPs could be a good alternative to replace a single missing tooth due to its non-invasiveness, cost-effectiveness and yet conservative approach.

KEYWORDS : Loop connector, fixed dental prosthesis, rehabilitation, diastema

INTRODUCTION

A fixed dental prosthesis to replace a missing anterior tooth should fulfill biological, mechanical and esthetic requirements. (1) The most critical owing to its anterior location is the esthetics. (2). Such case is further worsened with a previously existing diastema resulting in excessive mesiodistal dimension of the pontic space. (3) When there is missing anterior tooth, a conventional 3 unit FDP requires tooth preparation of adjacent teeth. This treatment modality can be both unesthetic specially if diastema has to be maintained and non-conservative due to involvement of 2 adjacent vital teeth. Although other treatment options are available such as removal dental prosthesis and implant supported prosthesis, it may not always be feasible considering anatomic, financial limitations as well as patient desire. (4) Hence, in such cases, to replace a single missing anterior tooth with a fixed dental prosthesis, a loop connector FDP could be a good esthetic and conservative alternative to 3 unit FDPs. (5) It consists of a loop on the lingual aspect of the prosthesis that connects adjacent retainers and/or pontics which may be cast from sprue wax that is circular in cross section. (1) In this case series, rehabilitation of 3 cases with missing maxillary anterior tooth by loop connector FDP have been discussed.

Case report**CASE 1**

A 45-year-old male patient reported to the Department of Prosthodontics, with a missing left maxillary central incisor and root canal treated maxillary left canine [Figure 1].

As patient was not willing for a removable prosthesis and implant treatment, tooth supported FDP was planned. A loop connector FDP through 23 to replace 21 was planned as 23 itself required crown due to root canal treatment. Tooth preparation w.r.t 23 was done and impressions were made using two stage double mix putty light body rubber base impression material (Aquasil, Dentsply) [Figure 2]. The final prosthesis was made with metal-ceramic for retainer and pontic and all metal for loop connector. The loop connector was constructed such that its extension was limited to the valleys of the rugae. Prosthesis were cemented with type I GIC. [Figure 3]. Follow up was done after 1 month, 6 month and 1 year where it was found that the prosthesis was intact with no other abnormalities.



Figure 1 Pre-operative intra-oral photograph



Figure 2 Maxillary impression



Figure 3 Post-operative intra-oral photograph of case 1 with loop connector FDP

Case 2

A 36-year-old female patient reported to the Department of Prosthodontics, with a missing left maxillary central incisor. A loop connector FDP through 24 to replace 21 was planned. Tooth preparation w.r.t 24 was done and impressions were made using two stage double mix putty light body rubber base impression material (Aquasil, Dentsply).

The final prosthesis was made with metal-ceramic for retainer and pontic and all metal for loop connector.

The loop connector was constructed such that its extension was limited to the valleys of the rugae. Prosthesis were cemented with type I GIC. [Figure 4]. Follow up was done after 1 month, 6 month and 1 year where it was found that the prosthesis was intact with no other abnormalities.



Figure 4 Post-operative intra-oral photograph of case 2 with loop connector FDP

Case 3

A 21-year-old male patient reported to the Department of Prosthodontics, with a missing left maxillary lateral incisor. A loop connector FDP through 24 to replace 22 was planned. Tooth preparation w.r.t 24 was done and impressions were made using two stage double mix putty light body rubber base impression material (Aquasil, Dentsply). The final prosthesis was made with metal-ceramic for crown and all metal for loop connector such that diastema symmetrical to opposite side was maintained. The loop connector was constructed such that its extension was limited to the valleys of the rugae. Prosthesis were cemented with type I GIC. [Figure 5]. Follow up was done after 1 month, 6 month and 1 year where it was found that the prosthesis was intact with no other abnormalities.



Figure 5 Post-operative intra-oral photograph of case 3 with loop connector FDP

CONCLUSIONS

A loop connector FDP can serve as a good esthetic and conservative alternative to 3 unit FDPs in case of single missing anterior tooth. It can be used specially in cases where existing diastema is to be maintained and dental implant is not feasible, provided proper designing of prosthesis and oral hygiene is maintained.

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