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Case Report

A Fixed-Removable Type Of Telescopic Prosthesis: A Clinical-Report

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ABSTRACT

This article describes the importance of saving and using natural teeth as abutments for a telescopic type of prosthesis. Such prosthesis has advantages over the conventional removable prosthesis and complete dentures. Telescopic prosthesis consists of an inner primary coping that is permanently cemented on the natural tooth and a secondary coping which is a part of the prosthesis. The primary copings help to prevent caries and protect the natural tooth from thermal irritations. They also help in retention and stabilization of the secondary copings and so the prosthesis. Telescopic retainers offer a wide range of treatment modalities, hence should not be forgotten as a treatment modality, rather should be considered as an important option in treatment planning.

INTRODUCTION

In the beginning of the 20th century telescopic crowns were initially introduced as retainers for removable partial dentures (RPDs). The telescopic crown is defined as an artificial crown fabricated to fit over a coping. (1) Though the telescopic crowns were primarily used for RPD's, (2,3) they can also be used as retainers in completely abutment-borne detachable prosthesis. (4) These crowns consist of an inner or primary telescopic coping, permanently cemented to an abutment, and a congruent detachable outer or secondary telescopic crown, rigidly connected to a detachable prosthesis. A compressive intersurface tension generated due to the tapered configuration of the contacting walls aids in sustaining the prosthesis in place. The average wall taper commonly has an angle of 6-degree. (2,3) The amount of retention for the superstructure on the copings may be controlled by modifying the height or degree of taper of the copings. (6,7)

The most important advantage of a telescopic prosthesis is its retrievability. So, the periodontally compromised abutments that needs splinting and cross arch stabilization becomes the primary indication of a fixed telescopic dental prosthesis (FTDP). The prosthesis also offers advantages like minimization of destructive horizontal torque and enhancement of vertical long axis forces, achievement of parallelism of abutments using primary copings for common path of insertion, additional periodontal therapy or additional surgery if required, repair and extraction of hopeless abutment teeth in future. However, the disadvantages

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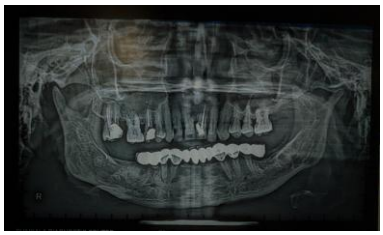


Fig 1 Preoperative OPG

Fig 2 Pre-operative Intra-oral

Fig 3 Tooth Preparations

Fig 4 Maxillary Temporization

Fig 5 Mandibular Primary Copings Cemented

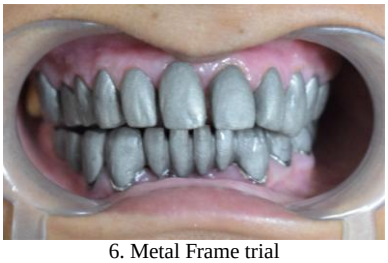
include aggressive tooth preparations, complex laboratory procedures, difficulty in achieving aesthetics (metal collar of primary telescopic coping present) and additional cost. (8)

This case report describes a full-arch telescopic mandibular prosthesis designed to splint the remaining abutments and provide a cross arch stabilization. At the same time, it helped in providing a psychological satisfaction to the patient. In the maxillary arch, a conventional fixed ceramo-metal dental prosthesis was constructed.

CASE REPORT

A 50-year-old female who was previously treated with a cross-arch FPD in the mandibular arch reported with the chief complaint of pain in one of the abutments. Clinical and radiographic examination revealed that the abutments were not endodontically treated and had certain periapical findings. Also, the abutments were judged to be too short to provide sufficient retention for such a long span FPD. Maxillary arch also revealed multiple decayed teeth with few requiring endodontic intervention. Patient was given various combination treatment options. Patient choose to go ahead with the fixed telescopic dental prosthesis as it met patients' expectations.

All the abutments present in the mandibular arch were endodontically treated. After complete periodontics and pre-prosthetic treatments the abutments were prepared to receive the primary copings. Primary copings were fabricated and cemented using permanent cement. Further, impressions were made for a definitive removable telescopic prosthesis which included 5 outer telescopic crowns and 7 pontics (including mandibular incisors and first molar cantilevered on either side). Maxillary arch was prepared to receive conventional FPDs. Oral hygiene regimens were maintained during the course of treatment and the patient received instructions in meticulous home care. A strict 3-month recall regimen was recommended.



6. Metal Frame trial

Fig 7a & 7b Bisque trial

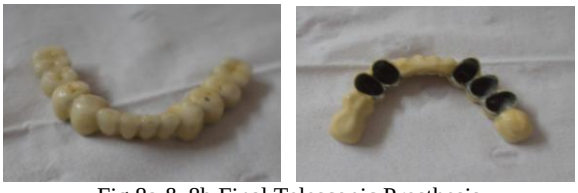


Fig 8a & 8b Final Telescopic Prosthesis

Fig 9 Final Prosthesis Intra-orally

DISCUSSION

This case report describes the restoration of a partially edentulous mandibular arch using a fixed telescopic dental prosthesis. Detachable telescopic prosthesis can be considered as near equivalent or substitute to the FPDs as they give the advantage of retentive and splinting property like a fixed prosthesis at the same time can be detached and repaired without any damage to the entire prosthesis. The mandibular posterior remained shortened arch as the patient wasn't a potential candidate for the implants and the number of abutments present wouldn't have favoured long cantilevers. A near parallel 2-degree taper was selected to ensure frictional retention between the primary and secondary artificial crowns.

SUMMARY

The main advantage of such a prosthesis being retrievability helps the patient for cleaning and easy access to the entire marginal periodontal circumference of the abutments. This promotes effective home care and oral hygiene. Such a prosthesis also helps in psychological well-being of the patient thereby increasing the overall life of the prosthesis.

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