



RESIN- BONDED COMPOSITE FOR THE REPLACEMENT OF MISSING ANTERIOR TEETH: A CASE REPORT

Prosthodontics

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ABSTRACT

A resin- bonded fixed partial denture is a prosthetic construction which can replace one or several teeth. The longevity is limited. A variety of therapeutic modalities, from implant to conventional prosthesis can be used for the replacement of a missing anterior tooth. Whenever a minimal tooth reduction is preferred, a fiber reinforced composite (FRC) prosthesis could be a good alternative to conventional prosthetic technique. The purpose of this case report is to describe the clinical procedure of fabricating anterior FRC prosthesis.

KEYWORDS

Fiber Reinforced Composite, Anterior Tooth

INTRODUCTION:

Over the last few years the development of fiber- reinforced composite has offered the dental profession the possibility of fabricating resin bonded adhesive, aesthetic and metal free tooth replacements. Fiber reinforced composites- FPD could be an alternative to metal- ceramic adhesives FPD.¹ This clinical case report describes the procedures of FRC bridge which was used according to the principles of minimal invasive approach.

CASE REPORT:

A 43 years female patient reported to the department of Prosthodontics and Crown & Bridges & Implantology, with the chief complaint of upper left teeth region since 4 months. There was no significant medical history. Intraoral examination revealed missing teeth and attrition was also present. Teeth were proclined and the overjet and overbite was not appropriate for conventional FPD and patient was keen about fixed prosthesis only; so a fiber reinforced composite resin FPD was planned out for the treatment. After oral prophylaxis, alginate impressions of the upper and lower arch were recorded and casts were poured in dental stone, shade selection of composite was done and build up of maxillary canine was carried out. Commercially available fiber (ever stick; GC America & universal flowable composite) was utilized in this case and the length of the fiber was measured on the dental cast. The length of the fiber was kept short. Fibers were cut according to the length measured. A wing preparation was done on the abutment teeth and were etched with 37% phosphoric acid for 15 seconds, rinsed with water, air dried and a single coat of adhesive resin was applied and curing was done for 40 seconds. Fibers were adapted to the middle third of the lingual surfaces of the abutment teeth cured for 40 seconds.²⁻⁷ A small amount of flowable composite resin was applied to the facial surface of the fiber. The finishing and polishing was done using polishing kit. The final result was well adapted bridge with good aesthetic result.



Palatal view of prosthesis

Lateral view of prosthesis



Final prosthesis

DISCUSSION:

Fixed FRC bridges offer a suitable alternative to replace a missing permanent anterior tooth. Advantages of the design include ease of fabrication, time saving and rebonding possible. It is both economical and less time consuming as the fabrication can be performed in a single appointment and reversible so other conventional options always remain open.⁴⁻¹⁰

CONCLUSION

The case presented in this article suggests a fixed treatment option for the replacement of missing anterior tooth. This technique requires less tooth reduction and could be repaired, modified or removed from the abutment teeth.

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Maxillary arch

Maxillary arch



Fiber reinforced composite

Application of fibers