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Prosthetic Reincarnation

Restoring teeth in god's own way

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Introduction

Fragment reattachment using natural teeth is a technique known as "Biological Restoration" and provides excellent results regarding surface smoothness, esthetics. Several authors have suggested the use of natural teeth fragments as an efficient method for restoring fractured anterior teeth. The combination of dental fragments, adhesives, and restorative materials that are commercially available today provides a good functional and esthetic result, connecting these properties within an alternative treatment in the restoration of extensively damaged fractured teeth.

Fig. 1: Fractured extracted central incisor

Fig. 2: Mesio-distal sections of extracted teeth for biological post and core preparation

Objectives

The present in vitro report describe the effort aimed at esthetic and functional rehabilitation of severely mutilated central incisors teeth using homogenous biological fragment obtained from extracted natural teeth.

Material and Methods

The post space was prepared in freshly extracted maxillary central incisor leaving 4 to 6 mm gutta percha in apical third. Biological post core were prepared from extracted human canines with same oriented shape, thickness and length of dentine post as prepared post space. The coronal portions of core were prepared to a height of 3 mm (coronal to proximal CEJ) and width of 3 mm. The cementation of post core assembly was done was using dual cure cement. Biological crown portions were prepared by hollowing both internally as well as on the cervical portion of extracted sterilized crown; leaving approximately 1 mm dentine with the enamel, from preselected and autoclaved homogenous extracted teeth. The shaped biological crown was cemented and finishing polishing was done to give a final esthetic result.

Results

Adaptation of crown and post was finally checked clinically and radiographically.

Fig. 3: Endodontic preparation and post space preparation

Fig. 4a: Cemented biological post core

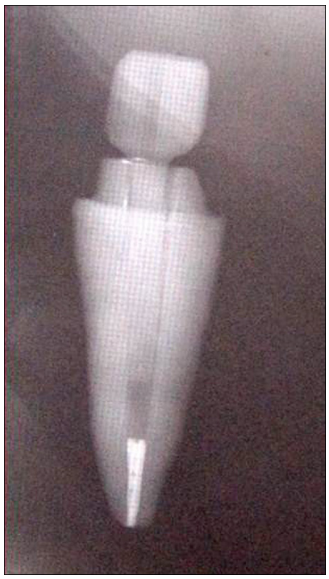

Fig. 4b: Cemented biological post core

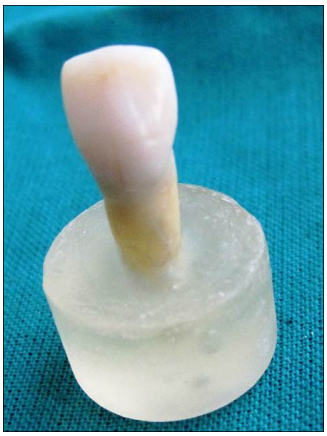

Fig. 5a-c: Biological crown adjusted and cemented

Conclusions

Within the limitations, it seems that biological post core and crown offer excellent esthetic, functional advantages to achieve the morphofunctional restoration of extensively damaged teeth.

Literature

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