

Natural Tooth Pontic : A Fibre Reinforced Splinting in Single Visit

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Introduction

Sudden loss of teeth, especially in the anterior region, can severely affect the psychology of the patient. This loss of the tooth can be due to trauma, periodontal disease or endodontic failure. Although an anterior tooth has mechanical functionality, it is the compromised facial esthetics associated with tooth loss that is the patient's primary concern. Immediate esthetic replacement of the missing tooth will be required. This replacement can be temporary, semi-temporary or permanent in nature. Depending on many clinical and economic factors, a course of treatment is decided upon by the patient and dentist. Various options for prosthetic replacement of missing anterior teeth present the clinician with certain challenges. The ability of clinicians to restore these edentulous areas using commonly available materials, combined with a direct method of application, would eliminate or greatly reduce many of the obstacles. In the past there have been a number of different techniques described for splinting teeth and adding a natural tooth pontic, denture tooth, or composite resin tooth pontic. These pontics were connected to the adjacent teeth with adhesive composite resins, wire, metal mesh, nylon, mesh and cast metal frameworks bonded to the adjacent teeth^{2,3}. But the advent of dental resins and resin adhesive techniques in the late 1950s allowed clinicians to achieve better, more esthetic stabilization technique.

Keywords: natural pontic, fibre reinforced splintin

Case Report

A female patient aged 45 years reported with the chief complaint of missing tooth in the mandibular right central incisor. The patient's medical history was non contributory. On examination, the patient was

diagnosed to have chronic generalized periodontitis . Grade III mobility detected in lower right central incisor with two degree mobility in left central incisor.

Preoperative radiographs and photographs were taken (photograph 1). The periodontal health of the left central incisor and right lateral incisor

was not favourable for fixed prosthesis. On visual examination, the crown presented the same colour, shape and translucency of the adjacent central incisor. The patient's periodontal health was assessed to be poor. Owing to the patient's current financial constraints and difficulties in returning for multiple appointments, it was agreed that the natural tooth would be used as a pontic, using fibre-reinforced composite resin⁴. The tooth was extracted and following with the root resection of the maxillary central incisor, the pulp tissue was removed and light cure composite resin was cured within the canal.

Abutment teeth were prepared with slots of 2mm depth. Following the fabrication of the slots, an impression of the arch was made and cast was poured. Once wetted with adhesive resin, Ribbond can be handled like any resin material. The ribbon was put aside and covered to avoid light until it was ready to be placed on the teeth. The natural tooth pontic was etched with a phosphoric acid etchant for 15 seconds, rinsed with water and dried. SingleBond adhesive was painted on the etched surfaces and into the prepared channel on the lingual surface. It was also put aside until it was time to bond it to place. A thin layer of particulate composite was placed on the floor of the preparation of the dies, polymerized and fibre reinforced strips were cut and placed over the particulate layer within each preparation and across the edentulous area. The teeth adjacent to the pontic in the

mouth were etched for 30 seconds with a 32% phosphoric acid gel being certain that etchant was placed on the lingual and interdental on facial surfaces (photograph 2 and 3). The teeth were then rinsed with an air-water spray for 10 seconds and gently dried.

The tooth pontic was picked up with a cotton pliers and placed in the area where it was extracted with the root side pushing into the rubber dam and incisal edge height at the same height as the adjacent central incisor. The facial surfaces were light cured for 20 seconds.

Conclusion

Direct fibre-reinforced splinting , intended for more than provisional or shorter term use, should be approached and created with the same care, thoroughness and attention to detail as clinicians typically apply to indirect prosthetics, i.e., appropriate case selection, thorough case analysis, and treatment planning with consideration of biologic attendance . Thus this procedure to a great extent helps in regaining esthetics and providing patient satisfaction⁵.

References

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Legends

- Fig. 1 Pre-operative photograph after tooth extraction
Fig. 2 Natural tooth pontic-labial view after splinting
Fig. 3 Lingual view after fibre splinting

