Immediate Implant Placement & Temporization With Natural Tooth Pontic

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Abtract

Esthetics is important in today's age and people don't want to remain without teeth even for a day.Final restorations can vary between removableprosthesis, tooth-supported prosthesis or implant-supported prosthesis. Irrespective of the final treatment, the firstline of treatment would be to provisionally restore the patient's esthetic appearance while functionally stabilizingthe compromised arch.Teeth extracted can be used as natural tooth pontic for immediate temporization. It not only maintains the edentulous space but also relieves the patient's esthetic concern.

This article discusses a case where extraction of a mobile tooth was done, followed by immediate implant placement and temporization with a natural tooth pontic.Following loss of a tooth, it is important that an immediate replacement is provided in order to avoid esthetic, masticatory, and phonetic difficulties, and to maintain the edentulous space.

Keywords: Natural tooth pontic, implant, esthetics.

Introduction

Dentists usually face esthetic concern with patients after extraction of teeth. This happens especially in the anterior region. The loss of a permanent tooth usually occurs due to trauma, caries or a periodontal disease. If left without replacement, it can lead to pathologic migration or supra-eruption. Following loss of the anterior tooth, it is important that an immediate replacement is provided in order to avoid esthetic, masticatory, and phonetic difficulties, and to maintain the edentulous space. Cosmetic demands, functional needs, treatment sequencing and affordability are some primary concerns that must be addressed on an individual basis.[1]

Case Report

A patient aged 40 years reported to the Department of Periodontics , D Y Patil School of Dentistry with a chief complaint of mobile tooth in the upper anterior region since 3 months. Mobility had gradually increased in the last one month but the patient had never visited a dentist before. No relevant medical history was noted. On clinical examination, tooth number 12 was found to be 3 degree mobile. Further on radiographic examination severe bone loss was observed in relation to 12 on mesial aspect. The patient's oral hygiene status was assessed and found to be fair. The patient wanted treatment with regards to that tooth and a fixed prosthetic option. After assessing clinically and radiographically, it was decided to extract the lateral incisor and place an immediate implant. Also it was planned that the tooth extracted would be used as a natural pontic and splinted to the adjacent teeth using composite and Ribbond material. A CBCT was taken and the implant planning was done.

Local infiltration (2%lignocaine HCl with 1:80,000 Adrenaline) was given in the surgical area. Crevicular incisions were given and full thickness muco-periosteal flap was reflected. The lateral incisor was extracted with the help of an anterior forcep. The osteotomy site was then prepared and implant (MYRIAD) of size (3.3×11) was placed. The flap was closed with interrupted sutures. The patient was given postoperative medications (Antibiotic- Cap Amoxicillin 500mg and Analgesic- Tab Enzoflam) for 3 days along with post-operative instructions. The sutures were removed after 7 days when healing was seen to be satisfactory.

After 7 days the root of the extracted lateral incisor was resected and pulp removed (to avoid discoloration through decomposition of organic tissue) and light cure composite resin was cured within the canal. The extracted tooth pontic and adjacent abutment teeth were etched and bonded. An appropriate length of the Ribbond was cut and adapted to the palatal side and cured with composite. The composite resin was cured in the interproximal area.

Following final finishing and polishing, occlusal relationship was checked and inspected for any interference to be eliminated. The patient was instructed to avoid excessivechewing pressure or habits that could dislodge the natural tooth replacement as fractures may occur between the bonded pontic and the abutment teeth.

Discussion

There are different procedures for replacement of teeth. Removable appliances,fixed prosthesis and implantsare the suitable option but patient compliance is generally a major problem.[1] As regards implants, in the time period required for osseointegration the site remains edentulous making it a major concern for patients; especially if it is in anterior region. Hence in certain cases, patients can be provided temporary prosthesis in the form of removable appliances or natural tooth pontic. Natural tooth pontic becomes a more feasible process as patient acceptance is better as removable appliances have a drawback of compromised esthetics because of canine clasps that are commonly used to provide stability and enhance retention. Moreover, partial removable dentures are frequently subjected to fracture. In addition, its long time use often produces irritation of palatal mucosa.In this regard, fixed acid etch bridging may offer several advantages over removable appliances including enhanced esthetics, ease of use, and avoidance of becoming accustomed to a removable prosthesis. This approach would also permit utilization of a patient's natural crown as a pontic for an immediate bridge with little or no need to perform complicated laboratory procedures.[2]The problem associated with the placement of composite resin splints with submerged wires and mesh grids was that in order to protect against breakage, more bulk and thickness of composite resin was necessary.[3,4]Other clinically successful uses for fiber reinforcement ribbon have been described in the dental literature including periodontal splinting,[5,6]restoration of the endodontically treated tooth,[7,8]and for cross splinting teeth with large composite restorations.[9] This particular design allows for exact repositioning of the coronal part of the extracted tooth in its original intraoral three-dimensional position. This chairside technique does not require laboratory involvement, is noninvasive and reversible, so that all traditional treatment options for single tooth replacement remain open.[10]

Conclusion

This case report describes a simple, economical, and fast method to replace a single tooth utilizing a prefabricated composite resin framework reinforced with polyethylene fiber and the existing tooth as pontic.

Reference

References are availble on requst at editor@healtalkht.com

Legands

Figure 1:Preoperative clinical picture
Figure 2: Preoperative RVG
Figure3: Incisions given and flap reflected
Figure 4: Implant placed
Figure 5: RVG after implant placed
Figure 6: Interrupted sutures given
Figure 7: Root resected and sealed with composite
Figure 8: Tooth pontic stabilised with Ribbond and composite
Figure 9: Postoperative picture
Figure 10: Postperative RVG