



RESEARCH ARTICLE

IMMEDIATE IMPLANT PLACEMENT AFTER EXTRACTION WITH PROVISIONALISATION  
IN ESTHEIC AREA – A CASE REPORT

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ABSTRACT

The loss of tooth in esthetic area is quite an unpleasant experience for an individual. Since Dental Implant has evolved it is the most preferred method for esthetic rehabilitation, reasons being long term solution for replacement of missing teeth, fewer surgical interventions, reduced soft and hard tissue loss and psychological satisfaction to the patient. This case report describes extraction and immediate implant placement with immediate provisionalisation.

**Key words:**

Dental Implants,  
Immediate Implants,  
Provisionalisation,  
Esthetics.

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INTRODUCTION

Since the evolution of implants, implant dentistry has come a long way in terms of treatment of edentulous areas. Over the last decade there has been immense improvement in the materials and techniques. Loss of tooth may affect the digestion, mastication, speech and the most importantly appearance affecting an individuals psychology (Deshpande, 2007). Recent advances in implant dentistry have improved the success rates and long term results in tooth replacement. Immediate implant placement with provisionalisation has enabled to maintain the gingival contour and architecture as well as patient acceptance. The factors to be considered while placing an immediate implant in extraction socket in order to reduce any risk of recession are the gingival biotype, approach and position of implant placement and implant-abutment interphase (Covani *et al.*, 2004; Werbitz, 1992; Fabbri, 2008; Kan, 2003; Kan *et al.*, 2011; Wöhrle, 1998; Kan *et al.*, 2000).

**Case Report:** A 35 year old male reported to the Department of Periodontics with a chief complaint removal of a root piece in maxillary anterior region and requested for immediate solution for the same.

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The patient was concerned about the esthetics and wanted an immediate prosthesis (Fig 1and2). The patient was explained about the treatment options. On clinical examination a root piece in 22 region was seen. A CBCT was advised, and after clinical and radiographic evaluation it was decided that an endosseous implant will be placed immediately after extraction followed by temporary prosthesis. With the help of CBCT the height and width of the bone were determined. One day prior to the surgery the patient was put on antibiotic coverage (Amoxicillin 500mg) along with 0.2% chlorhexidine for prophylaxis. On the day of surgery 2% lignocaine hydrochloride with adrenaline was administered in 22 region locally. An atraumatic extraction of the root piece was done with the help of periotomes and forceps (Fig 3). The root length was measured. The extraction socket was debrided thoroughly and evaluated for any defect or perforation with the help of a periodontal probe. Osteotomy site was prepared with the help of sequential drills such that the implant is placed beyond the apex of the socket. An Alpha Bio implant (3.75mm × 11.5mm) was placed and primary stability was achieved (Fig 4 and 5). After the implant placement the abutment was placed and light cure composite resin was used for prosthetic build-up (Fig 6). The composite was extended over the entire length of the abutment. The composite was cured in order to achieve proper gingival contour and emergence profile.



**Figure 1. Preoperative clinical view**



**Figure 4. After Implant placement**



**Figure 2. Preoperative RVG**



**Figure 5. RVG after Implant Placement**



**Figure 3. Extraction with help of Periostomes**



**Figure 6. Abutment placed**



**Figure 7. Temporary prosthesis made of composite**



**Figure 8. After placement of temporary prosthesis**



**Figure 9. Palatal view after temporary prosthesis**



**Figure 10. After 3 months occlusal view**



**Figure 11. Final Permanent prosthesis after 3 months**



**Figure 11. Final Permanent prosthesis after 3 months**

The abutment was removed and the final polishing was done out of the mouth (Fig 7). Care was taken so as to not have any occlusal contact with the opposing teeth in intercuspal position or excursive movement (Fig 8 and 9). Postoperative instructions were given and patient was told to report after a week. The patient was advised to avoid any kind of function on the implant prosthesis for about 4 weeks. The patient was recalled after a week and later after a month. The patient was recalled after 3 months for the final prosthetic procedure. At 3 months excellent gingival contour and implant stability was observed (Fig 10). Impression coping was placed and impression was taken with putty. A final porcelain fused metal crown was placed (Fig 11 and 12). The patient was recalled every 6 months for follow-up.

## **DISCUSSION**

The technique applied in this case of atraumatic extraction, drilling the bone beyond the apex and implant placement was

favorable. Success of an implant in esthetic zone is mainly based on the case selection. Also the gingival biotype, osseous crest and occlusion play a key role in implant placement. Immediate implant placement in a fresh extraction socket with a flapless technique allow good ridge contour preservation also lesser chances of bone resorption. It solves the problem of immediate, active bone loss that follows the extraction. Although patient perception and esthetics are important the success of immediate dental implant is largely dependent on osseointegration. This flapless technique of immediate extraction with immediate implant placement and loading has definitely fulfilled the criteria of minimal invasive treatment and also a good treatment option in esthetic area with minimum time period. Hence, this technique of immediate implant placement in extraction socket with immediate provisionalisation was effective and also met the patient satisfaction criteria.

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