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# Case report immediate extraction and implant placement: Ray of hope

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**Abstract**
Immediate extraction and implant placement has now become a standard treatment protocol in clinical dentistry. The advantage of this procedure is that the patient gets the extraction of hopeless tooth followed by implant placement same day. This case report describes extraction of a grossly decayed mandibular molar tooth, followed by immediate placement of a dental implant in the prepared socket. The tooth was atraumatically extracted, the socket was prepared to the required depth and an Alfa Bio Implant was inserted. Second stage surgery and impression was made 4 months after implant insertion, and a definitive restoration was placed. The atraumatic operating technique and the immediate insertion of the Implant resulted in the preservation of the hard and soft tissues at the extraction site. The patient exhibited no clinical or radiologic complications during clinical monitoring. The dental implant and definitive restoration provided the patient with esthetics, function, comfort, and most importantly preservation of tissues.

**Keywords:** Atraumatic extraction, immediate implant placement, extraction socket

## Introduction
Endosseous implants have been the choice of treatment for restoring missing teeth successfully. In 1965, Branemark placed the first endosteal titanium implant successfully. In 1989, Lazzara placed implants at the time of tooth extraction. Immediate implant placement, defined as the placement of dental implant immediately into fresh extraction socket site after tooth extraction, has been considered a predictable and acceptable procedure. The advantage of immediate implant placement into the extraction sockets over the delayed placement of implants is that there is no need to wait for 4–6 months after extraction for the bone to form and crestal bone loss is found to be less in immediately placed implants rather than delayed placed implants [1].
The advantages provided by the implant supported prosthesis as compared to other conventional treatment options are improved esthetics, improved oral hygiene, bone preservation and reduced future maintenance [2]. "Gold standard" aimed at shortening the treatment period and by reducing the surgical procedure [3, 4]. Immediately after implantation without waiting for the healing period has gained popularity due to less tissue trauma, reduced discomfort, high patient acceptance and better function and aesthetics [5, 6, 7]. Timing of implant placement following tooth removal may be important and this concept has challenged original treatment protocol.

## Case Report
A 50 year old male patient reported to the Department of Prosthodontics, with the chief complaint of missing teeth in both upper and lower tooth region since one year. He had missing teeth wrt 16, 17, 15, 34, 35, 37, 44, 45, 46 and teeth number 34, 36 were grossly decayed. CBCT was done for assessment of bone width and length, it was observed that gutta purcha was extruding apically wrt 15 [fig.1]. With the patient's consent, immediate implant placement following extraction of the teeth wrt 34, 36, 15 was planned. Conventional implant surgical approach were planned wrt 44, 45, 46, 36, 37, 16. Before surgery, the patient was advised to rinse his mouth with chlorhexidene mouthwash (0.2%). After the administration of local anesthesia 34, 36, 15 were gently extracted using periotomes and extreme care was

exercised to avoid fracture of the buccal cortical plate. After extraction, the site was thoroughly debrided using curettes [fig. 2, 3], followed by irrigation of the socket with Povidone - Iodine. After this, the extraction socket was carefully examined to ascertain that the socket walls were intact. The length and width of the extracted root was measured to determine the length and diameter of the implant to be placed. A surgical template was used to locate the desired implant position. The osteotomy sites were prepared with standard drills, using the socket walls as guides, with maximum use of bone apical to the extraction sockets, to achieve initial stability. Sequential drilling was carried out with speed ranging from 500 to 1200 rpm under copious irrigation.

Two Alfa bio implant ATID (4.2× 10 mm) and one Alfa bio implant ATID (5× 11.5 mm) were placed [fig.4] followed by grafting with Hydroxyapattie and β-tri-Calcium Phosphate. This was followed by cover screw placement and suturing of buccal and lingual soft tissues using 3-0 silk sutures [fig.5]. Post-operative instructions were given. Patient was asked to report after 1 week and sutures were removed. The patient was recalled after 4 months for the second stage surgery for uncovering of implant cover screw and placement of healing abutment. After 1 week impression copings were placed and closed tray impression technique was used to make final impressions [fig. 6]. Before definitive prosthesis metal try in was done. The porcelain fused to metal crown were fabricated in lab and cemented on the abutment using GIC cement [fig. 7]. Occlusion adjustment were done. After 6 months CBCT was again done for assessment of bone loss. Implant site were evaluated for hard and soft tissue changes [fig. 8]. The patient was followed at regular intervals at 1, 3, 6 months for bone loss, pain, bleeding on probing and inflammation. No inflammation, infection, or pain was noticed. All implants were stable and patient was satisfied with esthetic and function.

## Conclusion

In the modern era the higher success rate of dental implants has changed the quality of life. Immediate implant placement following tooth extraction has been found to be a viable and predictable solution to tooth loss for many patients. The ultimate goal of the treatment is shifting to minimum invasive treatment and minimum time period. Immediate implant placement into fresh extraction socket reduced number of surgical appointments, reduction of time between tooth extraction and placement of a definitive prosthesis restoration, prevention of bone resorption and preservation of soft tissue. However, proper case planning and meticulous post-operative care, preceded by good surgical and prosthetic protocol are the essentials for the success.

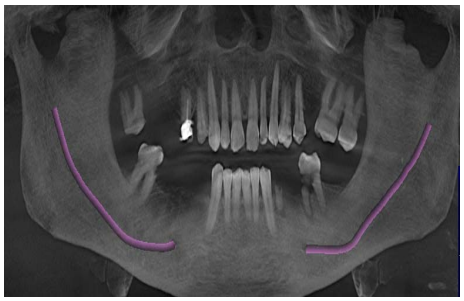

**Fig 1:** Preoperative view of CBCT

**Fig 2:** Extraction site

**Fig 3:** Gutta purcha extuding wrt 15

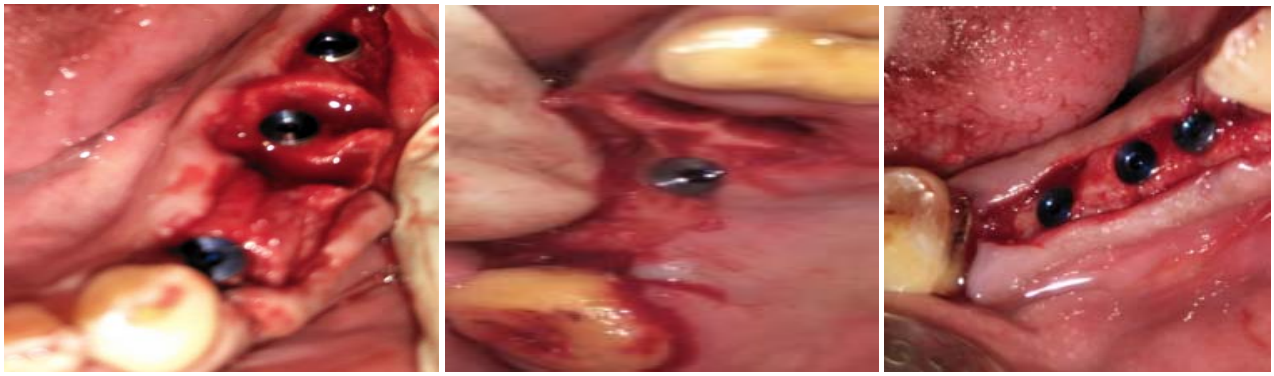

**Fig 4:** Implant placement

**Fig 5:** Suture placed.

**Fig 6:** Impression made using closed tray impression technique.

**Fig 7:** Final prosthesis porcelain fused to metal.

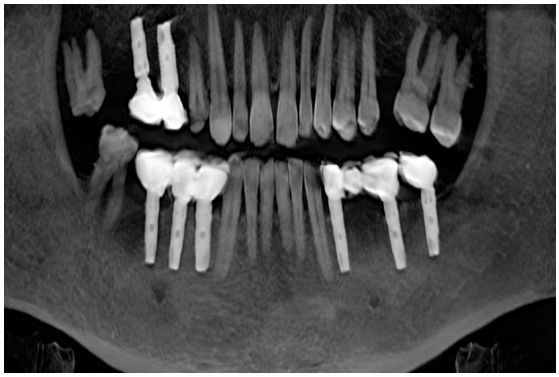

**Fig 8:** CBCT view after 6 months

## References


1. Ebenezer V, Balakrishnan K, Asir RV, Sragunar B. Immediate placement of endosseous implants into the extraction sockets. J Pharm Bioallied Sci. 2015; 7(1):S234-7.
2. Kahnberg KE. Immediate implant placement in fresh extraction sockets. A Clinical report. Int J Oral Maxillofac Implants. 2009; 24:282-288.
3. Tortamano P, Camargo LO, Bello-Silva MS, Kanashiro LH. Immediate placement and restoration in the esthetic zone: A prospective study of 18 months follow-up. Int J Oral Maxillofac Implants. 2010; 25:345-350.
4. Schwartz-Arad D, Laviv A, Levin L. Survival of immediately provisionalised dental implants placed immediately into fresh extraction sockets. J Periodontal. 2007; 78:219-223.
5. Lops D, Mosca D, Müller A, Rossi A, Rozza R *et al*. Management of peri-implant soft tissues between tooth and adjacent immediate implant placed into fresh extraction single socket: a one-year prospective study on two different types of implant abutment connection design. Minerva Stomatol. 2011; 60:403-415.
6. Hämmerle CH, Chen ST, Wilson TG Jr. Consensus statement regarding placement of implants in extraction sockets. Int J Oral Maxillofac Implants. 2004; 19:26-29.
7. Grunder U, Polizzi G, Goené R, Hatano N, Henry P. A 3 year prospective multicentre study follow-up report on the immediate and delayed placements of implants. Int J Oral Maxillofac Implant. 1999; 14:210-216.