

# SMILE PRESERVATION USING IMPLANT : A CASE REPORT

**Dr. Arun Gupta**

Addl. Principal  
N.I.M.S. Dental College, Jaipur

**Dr. Varun Saini**

B.D.S.

## Introduction

A fractured tooth or root is one of the most difficult & challenging cases to manage in a dental clinic : more so when the tooth is fractured below the level of gingiva especially because the treatment options are limited & maintenance of esthetic appearance of the maxillary dentition which is determined by the relationship between the shape, contour, colour, position & arrangement of teeth & healthy gingiva.

This clinical report describes the replacement of the infected root stump in upper posterior teeth using dental implant, which has nowadays emerged as the most appropriate means of tooth replacement.

Since 1968 when Dr. Brammark first used Titanium as dental implant, it has been the material of choice for being implanted into the oral tissues beneath the mucosal or/and periosteal tissue for fixed or removable prosthesis.

## Case Report

A 55 year old female patient reported to Ajit Dental Clinic, Jyoti Nagar, Jaipur with the chief complaint of pain in upper right posterior region of her mouth since 7 days. She gave history of similar pain 1 year back in the same tooth. Medical history was not relevant.

Oral investigation revealed root stump i.r.t. upper right 2<sup>nd</sup> premolar which was tender & associated with a draining sinus. Apart from it gen. stains & calculus deposits were present.

An IOPA radiograph was taken which revealed a periapical radiolucency & resorption of root i.r.t. 15 (upper right second premolar) & diagnosis of chronic periapical abscess was given.



## Treatment Planning

After thorough case analysis & discussion with the patient it was decided to place dental implant after extraction of 15.

So in subsequent appointment root stump was extracted.

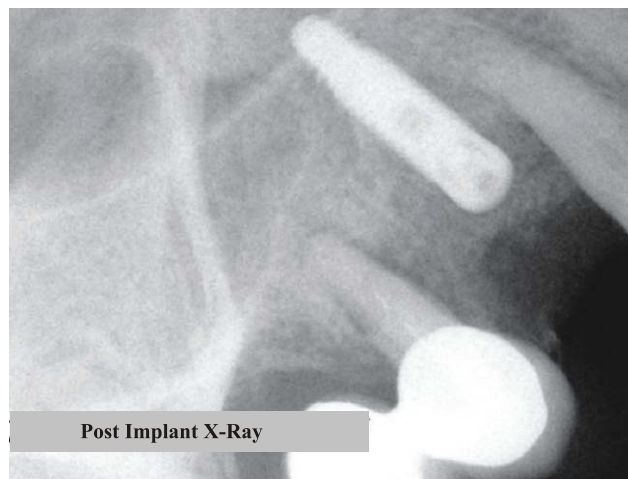
First surgery was performed 14 days after extraction. Complete sterilization protocols were followed in keeping the instruments & operating field infection free. After injecting lignocaine hydrochloride with adrenaline ( 1 : 80,000) crevicular incision was placed on labial & palatal aspect of 14 & 16 & a mid-crestal incision in 15 area.

A full thickness mucoperiosteal flap was raised from 14, 15 & 16 region.

Osteotomy was initiated using round bur & then pilot drill (2 mm x 26 mm) followed by long twist drill (2.8 mm x 26 mm). Saline spray was used to keep the temp. low so as not to damage the osteoblasts by overheating. Final drill size was kept to (3.65 mm x 26 mm). Implant was gradually inserted into osteotomy site.

Bio-oss Bovine bone graft was placed & operated site was closed using interrupted sutures. Bone graft was placed & operated site was closed using interrupted sutures.

Immediate post-operative IOPA radiograph was taken to ensure that implant was well placed between first premolar & first molar.



Sutures were removed after 14 days. IOPA radiograph after 3 months showed sufficient bone formation around implant

At this time 2<sup>nd</sup> surgery was performed and regular abutment was placed

All ceramic crown was cemented next day



Abutment Placed on Implant



Palatal view of cast



All ceramic crown placed on cast

**Discussion**

Apart from preservation of bone, advantage of single tooth implant is replacement without sacrificing the health of neighboring teeth.

In long term, implant can be more esthetic & easier to keep clean than a bridge, as gums can recede around a bridge leaving a visible effect.

Risk factor involved with an implant can be ranging from

temporary conditions such as pain, swelling, gingivitis, speech problems to long term problems like never injury, hyperplasia or infectious endocarditis in susceptible individuals.

An inflammatory condition of mucosa and/or bone around implant may arise leading to implant failure, known as, peri-implantitis. But the best part of implant is looking & functioning like a natural tooth



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967/21-C, H.B.C. DELHI MATHURA ROAD, FARIDABAD  
Tel.: +91-9411047826, +91-9457611962  
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