

# CASE REPORT

## Single Unit Implant Placement in the Esthetic Zone- Truly a challenge

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A maxillary central incisor is one of the most difficult teeth to replace with a single implant because of multiple factors including soft tissue biotype,



20 year patient presented with the chief complaint of her front tooth turning red.



Clinical examination revealed internal resorption of her maxillary right central incisor due to trauma 10 years back.

three dimensional implant placement and prosthetic concerns.

A 20 year old girl presented with a chief complaint of her upper front tooth turning red. Examination revealed internal resorption of the maxillary right permanent central incisor due to history of trauma 10 years back. She had an intact

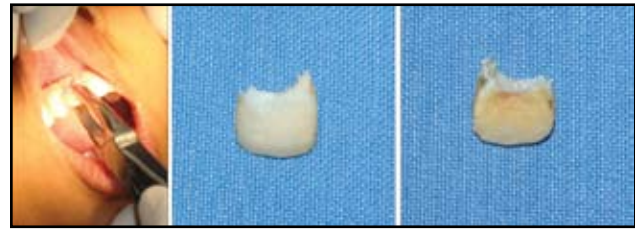


Panoramic radiograph shows internal resorption



CBCT scan

dentition, good periodontal health, and fair oral hygiene. Radiographic examination revealed total internal resorption of the root of the central incisor. A CBCT scan using a Kodak 90003D was performed to assess the amount of bone in the right central incisor region. Adequate alveolar width of 6.3 mm and alveolar height of 14.5 mm was measured on the scan.



Extraction of the resorbed tooth



Alveolar width - 6.3mm Alveolar height- 14.5mm



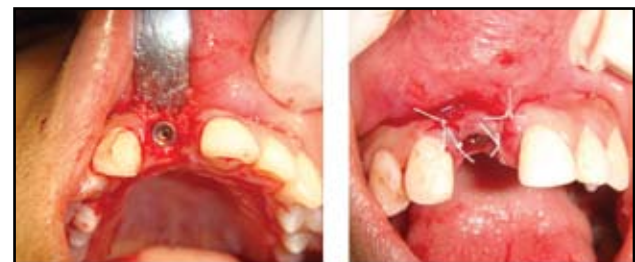
Implant Planning 3.75 x 11.5 mm



Acrylic surgical stent



3.75 x 11.5mm ADIN Toureg Implant



PTFE cytoplasm sutures in place



Post operative panoramic radiograph



Lithium Disilicate Provisional Maryland type bridge (EMAX)



Sutures in place for 14 days



After suture removal



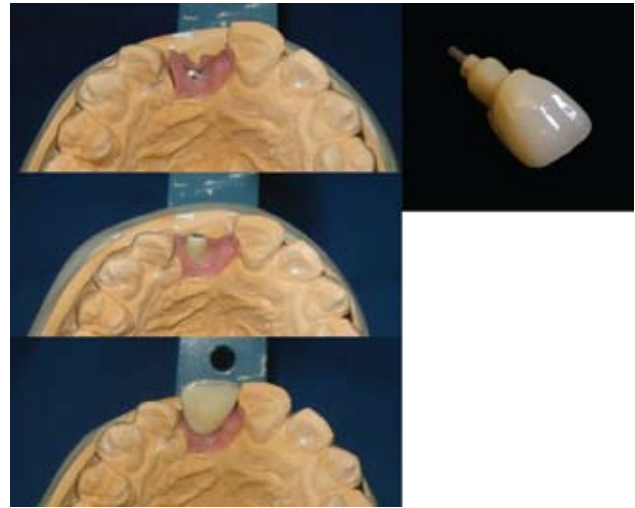
Provisional in place



After 3 months



Provisional removed. Healing collar visible.



Customized zirconia abutment with Lithium Disilicate (EMAX) crown.



Healthy soft tissue cuff around the implant neck

Open tray fixture level indirect impression

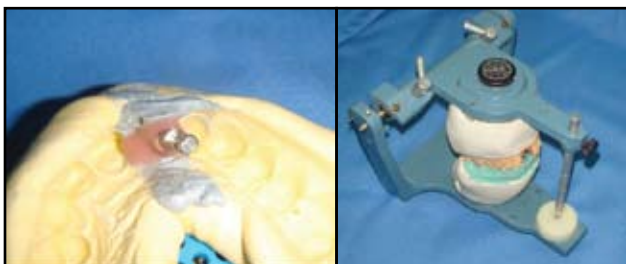


Before placing the abutment



Transfer coping in the impression

Implant analog attached to the transfer coping.



Gingival mask applied to mimic soft tissue

Hanau semi adjustable articulator



Zirconia abutment attached to the implant. Access hole is filled with composite.



A smiling patient



The tooth was extracted atraumatically. Since most of the root was resorbed, simple extraction forceps were used.

An acrylic surgical stent was used and a 3.75 x 11.5mm ADIN Spiral Tapered Implant was placed making sure the implant is 2.5 mm away from the future gingival margin. Healing collar or abutment was simultaneously placed on the implant. This was followed by placement of PTFE cytoplast sutures with suture removal 14 days post op. During the healing phase an EMAX lithium disilicate Maryland type bridge was fabricated and bonded for esthetic reasons.

Good oral hygiene was advised with frequent checkups and oral prophylaxis. After a healing period of 3 months, the EMAX provisional was removed and indirect open tray fixture level impressions were made. The casts were articulated and mounted on a semi adjustable Hanau articulator. A zirconia abutment was CAD CAM milled over which an EMAX crown was fabricated. The abutment was then gently screwed and torqued in the implant and then the all ceramic crown was luted. We were able to achieve good esthetics with excellent shade matching .

## About The Authors



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Implantologist practicing in New Delhi. He is a Fellow and Diplomate of International College of Oral Implantologists (USA) and the Indian Society of Oral Implantologists. He has undergone advanced surgical training at USA and Spain. He has also authored "Practical Guide to Implant Dentistry" published by Quintessence.

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