Immediate implant placement and immediate loading with 3.5×11.5 mm i-Fix® in the aesthetic zone

A clinical case report by Dr. Bhageshwar Dhami and Dr. Savvy Pokhrel

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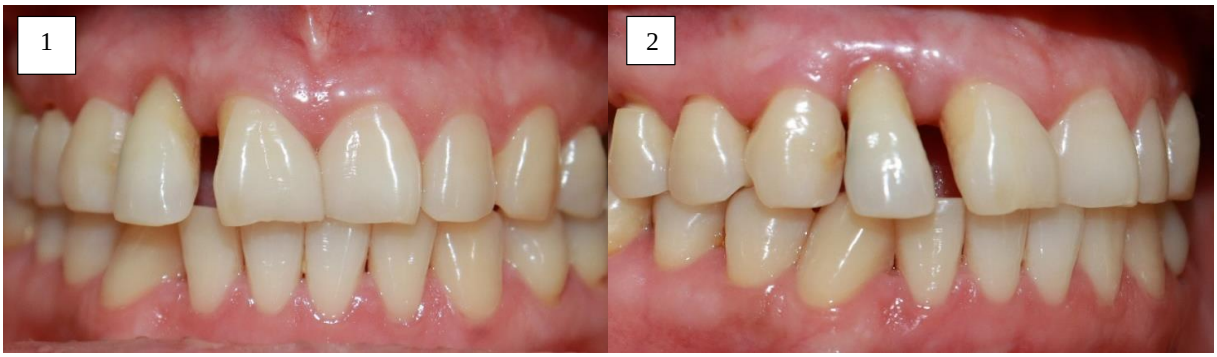
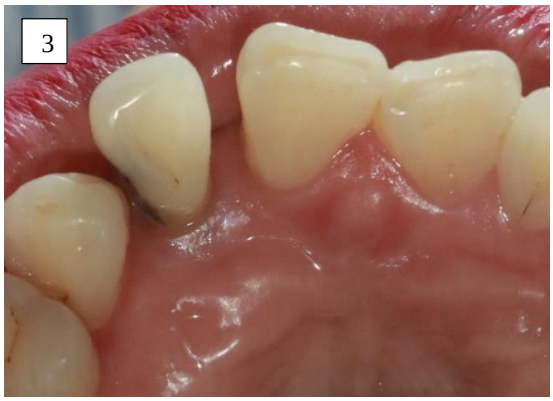
Initial Presentation

A 43 year-old female patient presented to the Department of Periodontology and Oral Implantology with the chief complaint of spacing in the upper front region of the jaw which was progressive in nature. The patient also reported loosening of the tooth adjacent to the space.

Furthermore, there was no relevant medical, dental or habit history.

Clinical examination revealed extrusion and Grade II mobility with respect to 12.

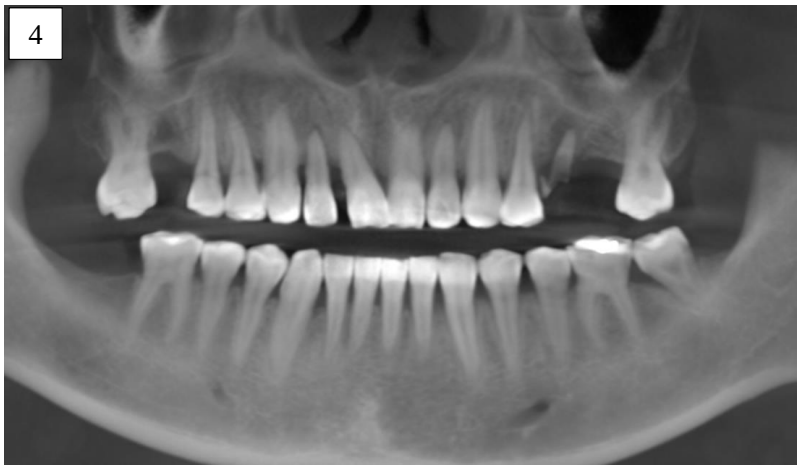


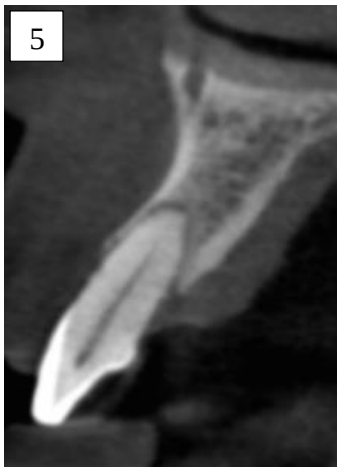


Pre-operative clinical photographs: 1. Frontal view; 2. Right lateral view; 3. Palatal view

Radiographic evaluation

Cone beam computed tomography (CBCT) was performed on the patient. The orthopantomographic view of CBCT revealed bone loss with respect to 12 and 11 with periapical radiolucency in 12. The sagittal plane view of 12 revealed extensive bone loss and radiolucency at the apex.





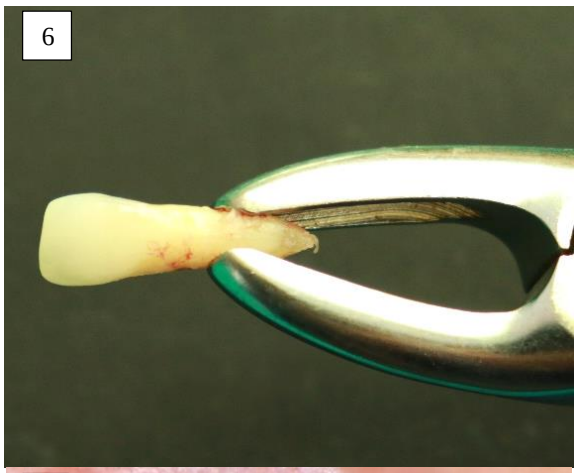
CBCT scan: 4. Orthopantomographic view; 5. Sagittal view

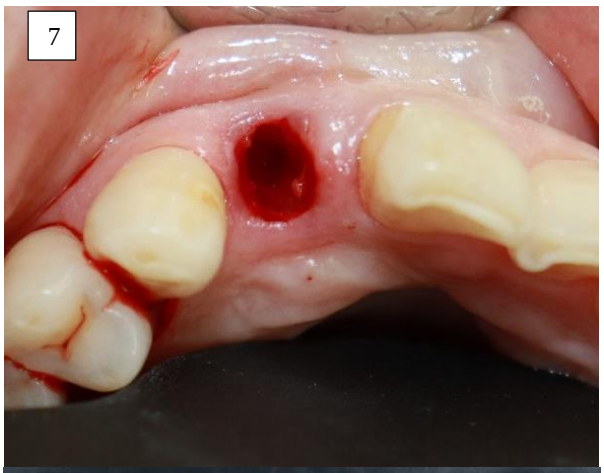
Treatment Planning

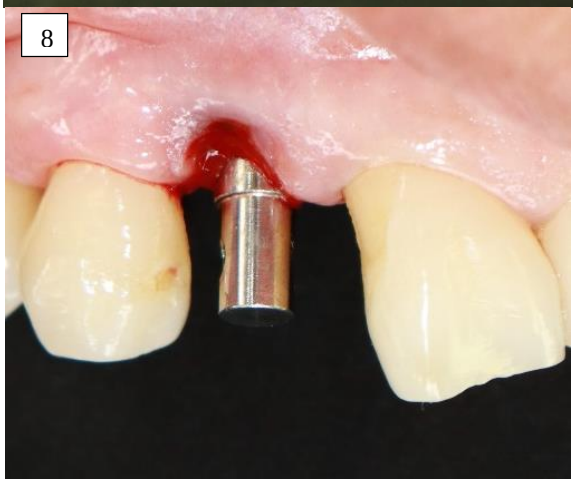
Following the clinical and radiographic assessment to determine prognosis along with considering aesthetic interest of the patient, extraction of 12 was planned followed by replacement with an implant supported prosthesis.

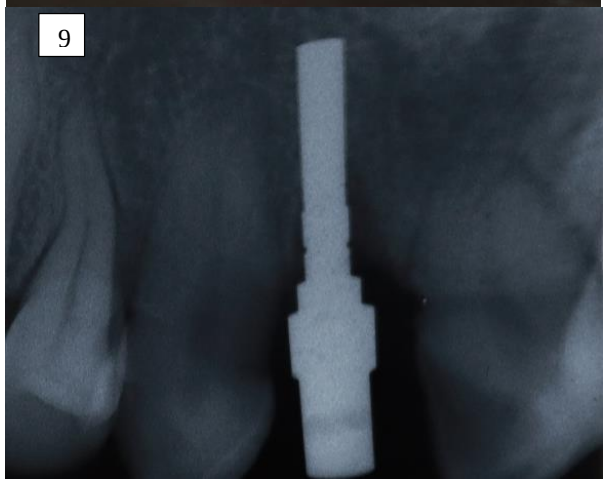
Surgical Procedure

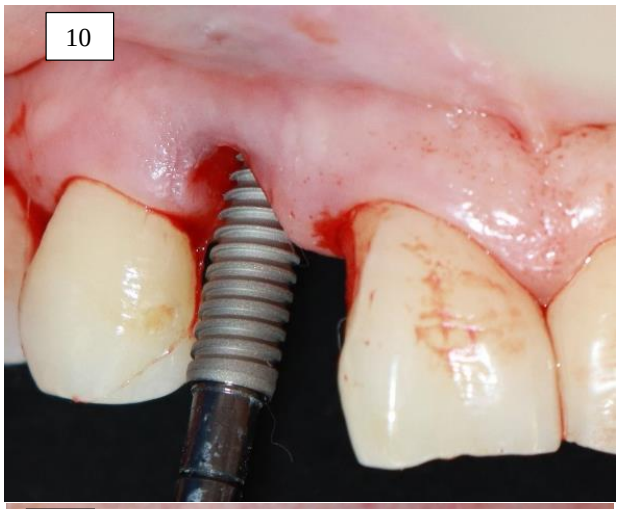
The surgical procedure was performed in aseptic conditions under local anaesthesia (Infiltration with 2 % Lidocaine with1:200000 Epinephrine). Tooth was gently extracted without raising a flap, therefore causing minimal trauma to soft tissues. Degranulation of the socket was done with copious saline irrigation. Following sequential drilling, a 3.5×11.5 mm i-Fix® implant (Flapless) was placed into the osteotomy site. Xenograft was placed to fill the gap between the implant and buccal bone. Impression was made with Putty and Light body impression materials and an acrylic temporary crown was delivered on the day of surgery.







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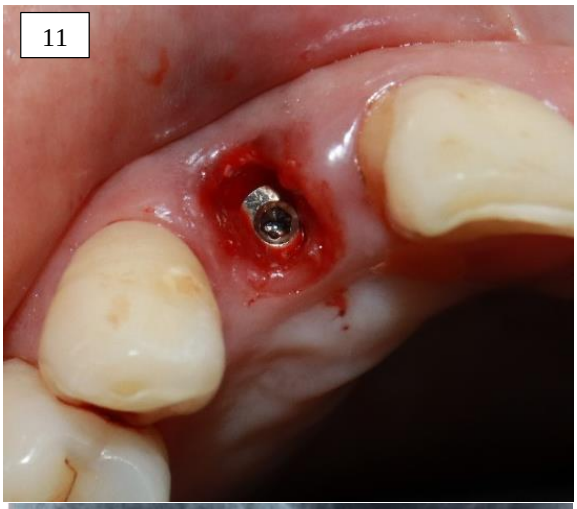
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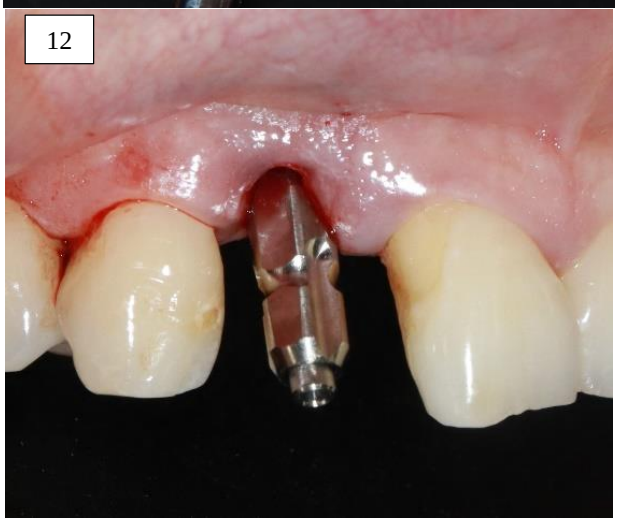
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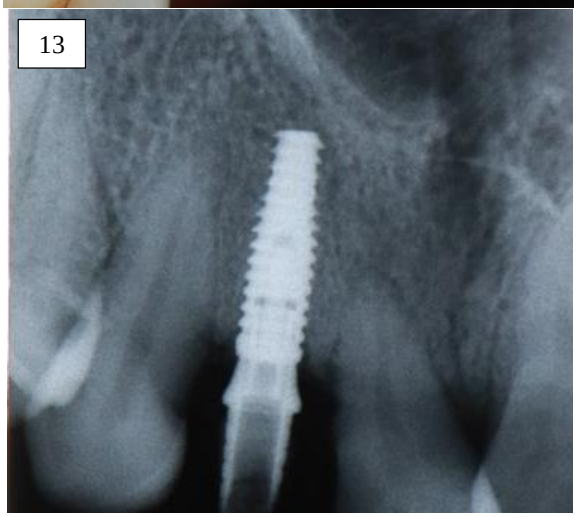
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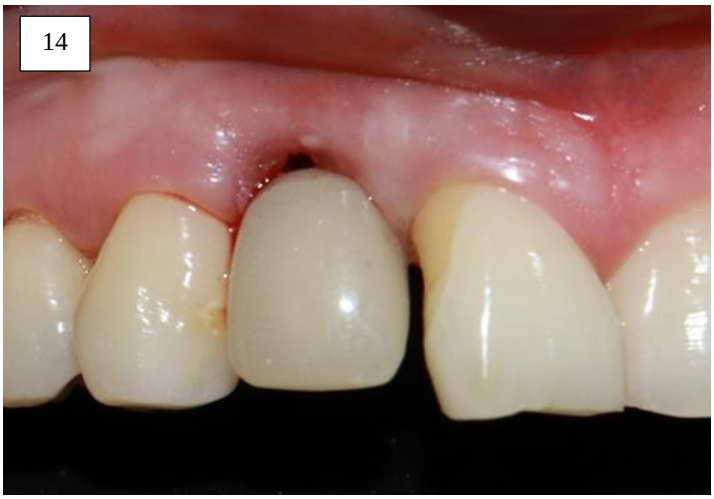
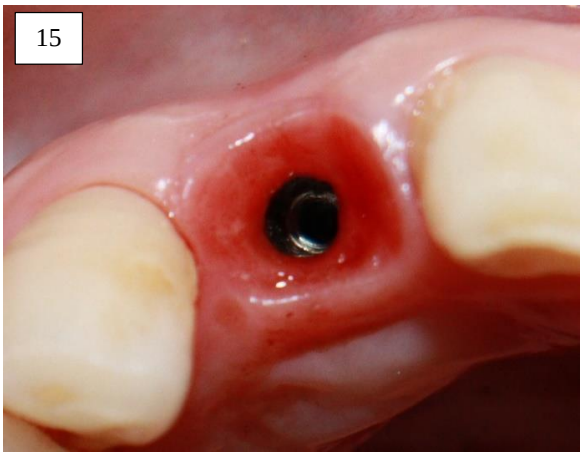
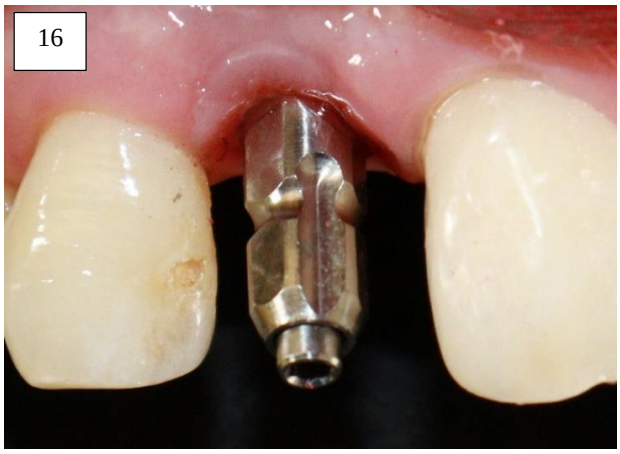


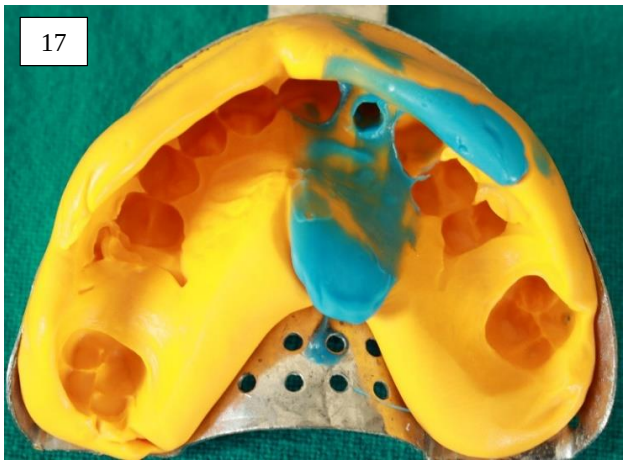
6. Extracted tooth i.r.t. 12; 7. Extraction socket; 8. Paralleling pin; 9. Radiograph to check the parallelism of implant; 10. 3.5×11.5 Implant placement into osteotomy sire; 11. Fixture placed into the osteotomy site; 12. Impression coping to make impression for temporary prosthesis; 13. Radiograph of implant with temporary prosthesis; 14. Temporary acrylic resin prosthesis

Follow up at 3 months

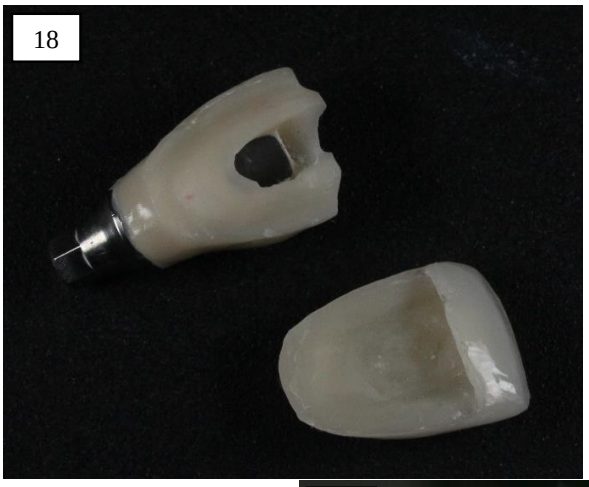
After 3 months, the site was examined. Composite build-up was done in the distal aspect of 11 and implant-level impression of the maxillary arch was made for the fabrication of final prosthesis. An indirect composite (Ceramage) crown was delivered to the patient.

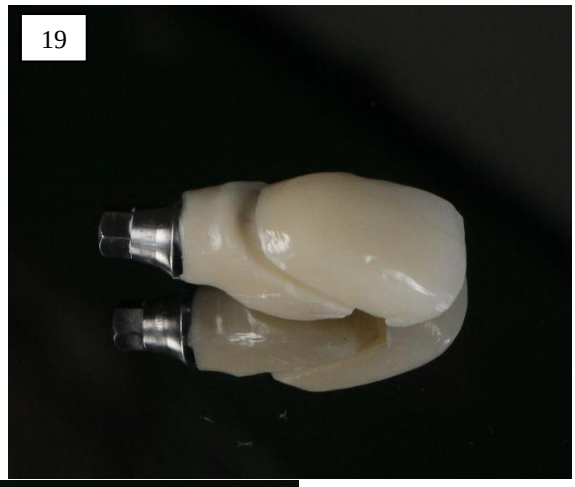




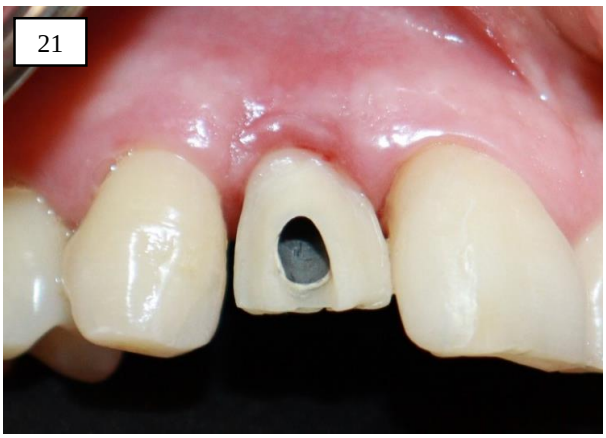


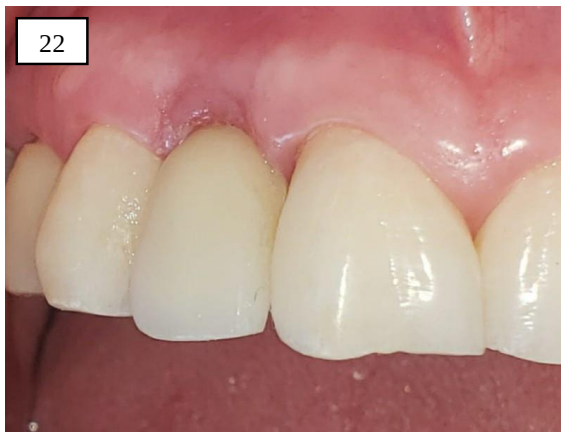
15. Peri-implant mucosa at 3 months; 16. Impression coping to make impression for fabrication of prosthesis; 17. Impression of maxillary arch taken with putty and light body impression materials



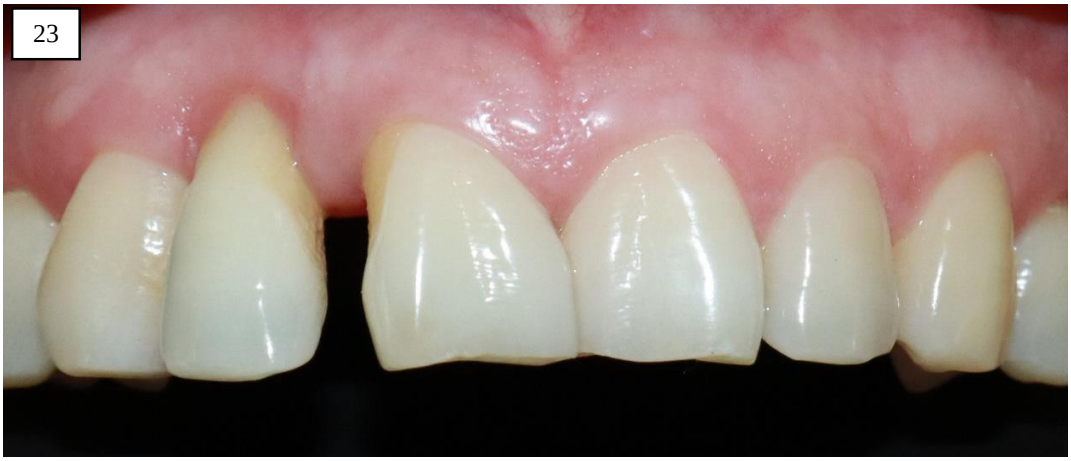


18, 19, 20. Prosthesis fabricated with Indirect Composite (Ceramage)

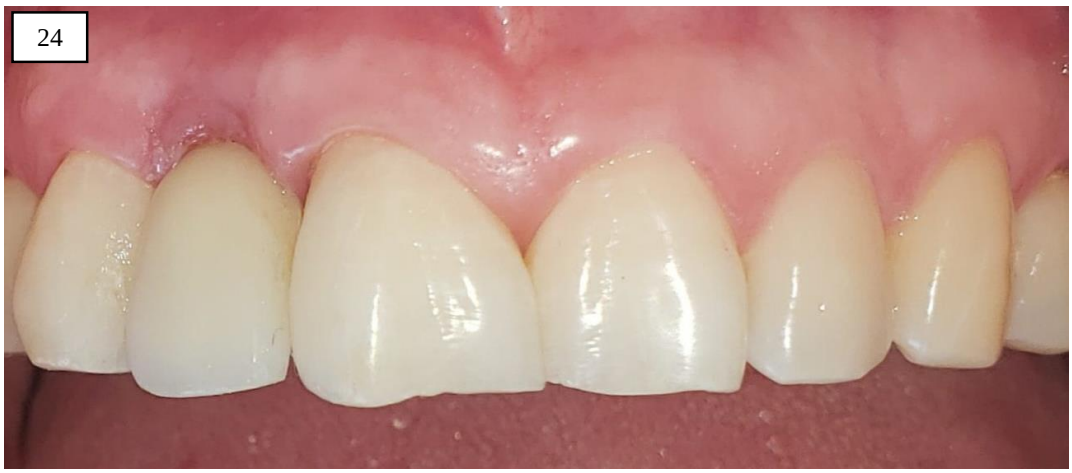




21, 22. Final prosthesis i.r.t. 12



23. Initial presentation



24. After placement of implant supported prosthesis i.r.t. 12