



# NeO Implant Placement in the Esthetic Sector and Immediate Loading of a Temporary Prosthesis



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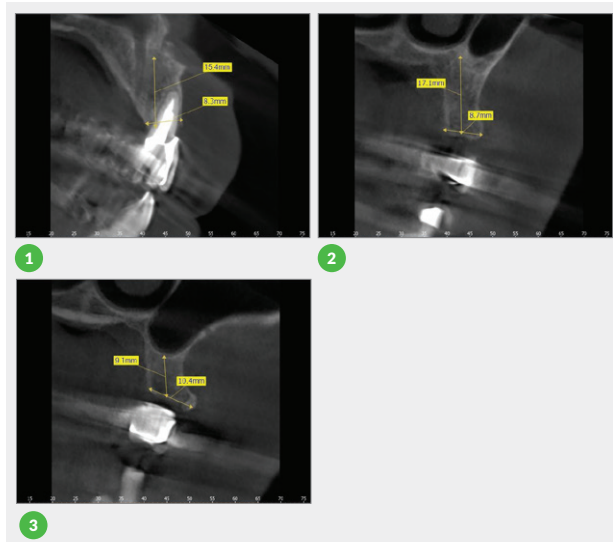
# NeO Implant Placement in the Esthetic Sector and Immediate Loading of a Temporary Prosthesis

## Abstract

A 58 year old male patient came for consultation presenting a metal ceramic bridge placed 20 years ago. The bridge was bonded to only two teeth, 21 and 23. It was decided to extract teeth 21 and 23 and place three NeO implants in positions 21, 24 and 25. After placement of the implants, impressions were taken to make a temporary screwed restoration in PMMA resin using CAD/CAM technology. When the implants were properly osseointegrated, an implant-supported ceramic restoration was implemented.

## Background

A 58-year-old male patient came to the clinic with a mobility problem of an old metal ceramic bridge in pieces 21 to 25. After a clinical examination, it was observed that pieces 21 and 23 cannot be restored by any means (**Figs. 1-3**)



## X-ray Examination

The pertinent radiological study was initially conducted via panoramic radiography and in CBCT thereafter (photo 01, CBCT1, CBCT2 and CBCT2). In the radiological study, it was observed that the bone dimensions for the placement of implants in positions 21, 24 and 25 are optimal in both width and height, even for implementing a temporary implant-supported restoration that will be loaded immediately after 48 hours.

## Materials Used

- 2 NeO implants  $\varnothing 3.75 \times 13$  mm (Alpha-Bio Tec)
- 1 NeO implant  $\varnothing 3.75 \times 11.5$  mm (Alpha-Bio Tec)
- For bone drilling, the new two step drills were used following the protocol indicated by Alpha-Bio Tec for the  $\varnothing 3.75$  NeO implants.
- 3 TLAC-R 5220 temporary abutments
- 3 HLTO 5061 impression transfers
- 3 analogs IA 5080

## Treatment Plan

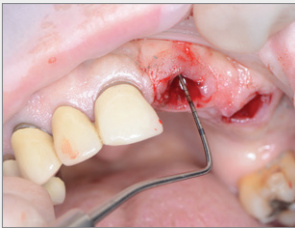
- Immediate implants and immediate loading
- Extraction of the tooth-supported bridge at 21 to 25 was performed and pieces 21 and 23 were extracted.
- Implants were placed in positions 21, 24 and 25.
- After 48 hours, the temporary implant-supported bridge was installed.

## Surgical Phase

1. The patient's metal ceramic bridge was initially extracted (**Fig.4**)



2. Extraction of pieces 21 and 23 was carried out, and the alveoli were thoroughly cleaned (**Fig.5**)



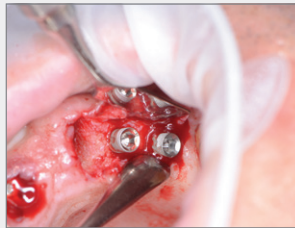
3. The implant site was prepared in position 21 using the flapless technique. Once drilling was completed, the alveolus was completely filled with a putty-type collagen bone paste and then the NeO implant was placed at a torque of 45 Ncm (**Fig. 6**)



4. The osstell value was measured, obtaining an ISQ value of 77, perfect for proceeding with immediate loading (**Fig.7**)



5. The flap was performed in the posterior area for placement of implants in positions 24 and 25, and low speed drilling technique was used at this time to increase the insertion torque of the implants due to low bone density in this area (**Figs.8-9**)



## Prosthodontics

6. Placement of healing caps on the three implants.
7. Filling of the alveolus of piece 23 with putty-type collagen bone paste and suture of the flap.
8. An impression was taken using an open tray transfer and new placement of healing screws.

9. After 48 hours, we received the temporary bridge to be installed in the mouth (**Figs. 1-14**)



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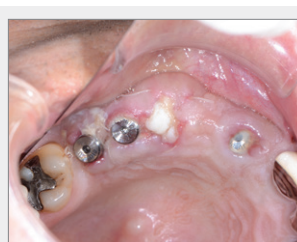
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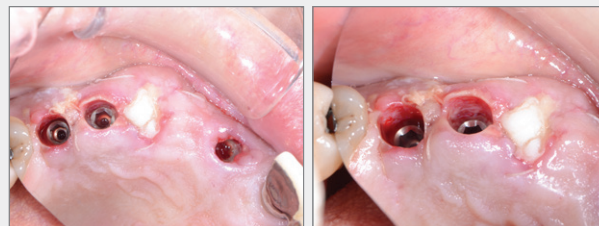
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10. State of the soft tissue after 48 hours (**Fig. 15**)



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11. State of the soft tissue without healing caps (**Figs. 16-17**)



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12. Installation of the temporary bridge made in PMMA resin using CAD/CAM and screwed at torque 30Ncm (**Figs. 18-20**)



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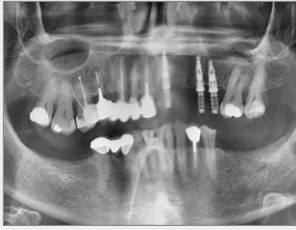
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13. Final control x-ray (**Fig. 21**)





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- 14.** After 3 months, an impression was taken and an esthetic test was conducted for the definitive prosthesis design (**Figs. 22-26**)



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- 15.** With a successful test, the definitive prosthesis was sent to be made in metal ceramic and screwed on overcastable rotary attachments in chrome cobalt.

- 16.** Definitive metal ceramic prosthesis (**Figs. 27-32**)



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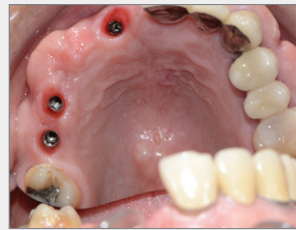


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- 17.** Removal of temporary prosthesis to install the definitive prosthesis (**Figs. 33-35**)



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**18.** Installation of the definitive metal ceramic prosthesis perfectly adapted to the emergency profiles generated with the temporary prosthesis (**Figs 36 - 39**).



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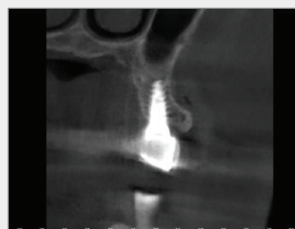
**18.** Control x-ray using CBCT of the already installed definitive prosthesis to verify connection adjustments and bone status four months after implant placement. (**Fig. 40**) (implant in position 21), (**Fig. 41**) (implant in position 24), (**Fig. 42**) (implant in position 25), (**Fig. 43**) (view of implants 24 and 25 jointly in relation to anatomical structures such as the maxillary sinus)



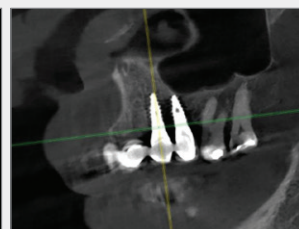
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## Summary

The case was resolved using Alpha-Bio <sub>Tec</sub> NeO implants, postextraction in combination with deferred implants and immediate loading of the prostheses after 48 hours. High insertion torque was necessary for the immediate placement of the prosthesis. In addition, there has been a good bone stability throughout the treatment, without any type of bone resorption of the alveolar crest. The results were satisfactory.

Alpha-Bio <sub>Tec</sub> NeO implants were chosen instead of other types of implants due to their macro-design, which is ideal for immediate implantation, achieving high levels of insertion torque necessary for making an immediate prosthesis at the time of installation.

## Conclusion

The case would have been fully completed in a few months after the corresponding osseointegration period has transpired.