

## CASE REPORT



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### Imitating the emergence profile

Digital Dentistry and especially CEREC is changing the way we communicate with our patients. We are now closer to their needs and can visualize a more esthetic outcome using digital tools and making dentistry more understandable them.

Many of our patients when they come the first time in our practice are not familiar with digital dentistry and its potential. One of the most challenging areas in restorative dentistry is the anterior zone. In the case presented we try to preserve and imitate the emergence profile that is provided by the natural tooth.

A 60-year-old male patient came to our practice after root fracture of his central incisor (#11) and small cracks and discoloration on the other one (#21).



After consultation the patient agreed to the treatment plan which consisted of an implant in regio #11 (extraction and immediate placement) and a veneer restoration on tooth #21 (pic. 1,2,3).

Before extraction of the root and implant placement a scan with Primescan of the initial situation with the fractured root was performed. This way we collect a lot of information about the initial form of teeth, but furthermore and more important in anterior cases, the emergence profile of the broken tooth and the gingiva (pic. 4).

The extraction of the root is the next step followed by the immediate placement of an Astra Tech Implant System EV with a diameter of 4.8 (pic. 5 and 6). During surgery and after implant placement a scan with Primescan is being performed in order to have the exact position of the implant (pic. 6)

Combining the scans from the implant position placement and the initial gingiva-root situation scan can create an implant model with the inLab CAD SW 19 with inLab model plug-in. The software allows us to mill

or 3D print the model with the implant position, the digital analog and the gingiva (pic. 7 and 8).

After the osseointegration period and after uncovering the implant an abutment-crown is being milled combining the gingiva catalog (before extraction) and the copy and mirror tool of the CEREC SW 5. The customized abutment (CEREC Zirconia meso) was placed directly after the implant uncover procedure and allows the soft tissue to adapt smoothly around the zirconia abutment which in this way will have the same emergence profile as the extracted natural root.

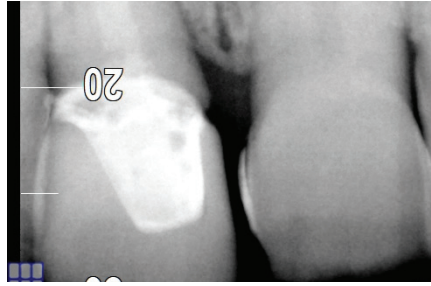
The customized abutment has been designed as a full crown mirroring the tooth #21 and reduced like a prepped tooth for a veneer placement.

After preparation of the tooth #21 for a veneer at the same appointment a new scan has been performed in order to design the two anterior veneers.

The designed veneers have been milled in the CEREC MC XL Premium Package and stained/glazed in the Speedfire. All procedures have been performed chairside.



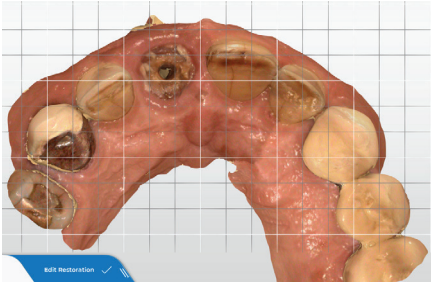
1. Shows the initial situation



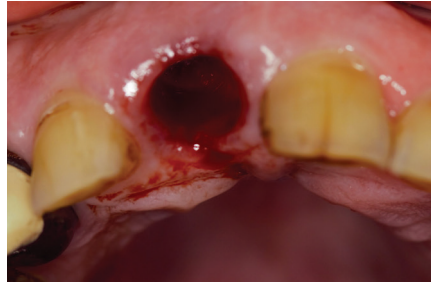
2. X-ray of #11



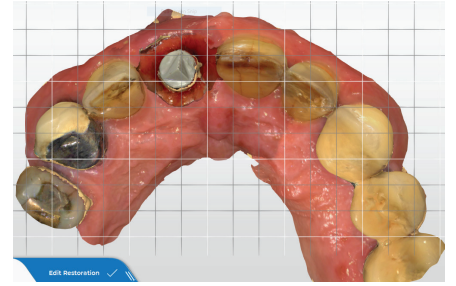
3. Situation before extraction



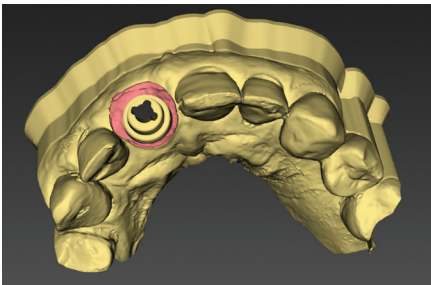
4. The scan of the initial situation (gingiva catalog)



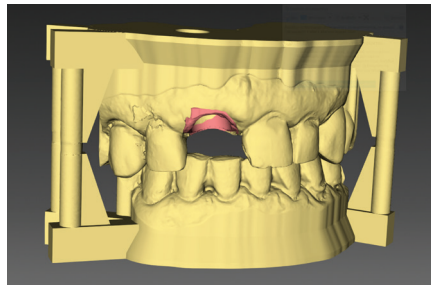
5. The situation after the extracted root



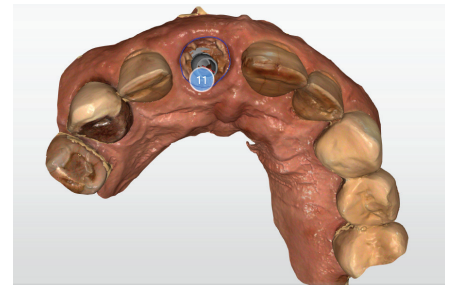
6. The scan after implant placement



7. Shows the model with the digital analog



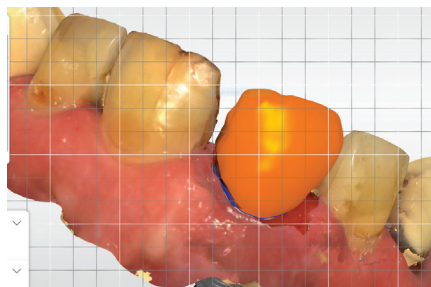
8. Shows the upper and lower model in articulation



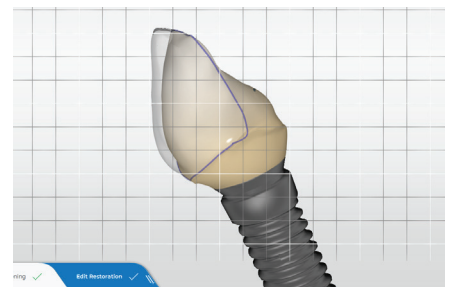
9. Scan after implant uncover



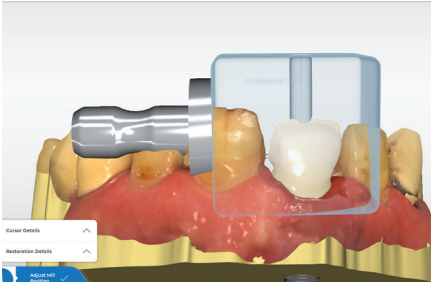
10. Situation after before abutment placement



11. Designing the full abutment-crown using the reduction tool



12. CEREC SW 5 using the reduction tool



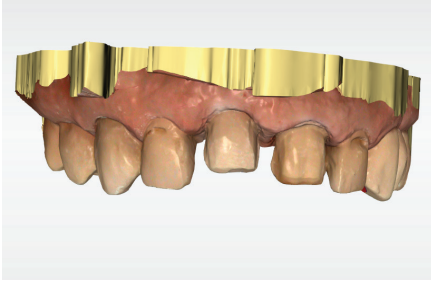
13. CEREC Zirconia meso block



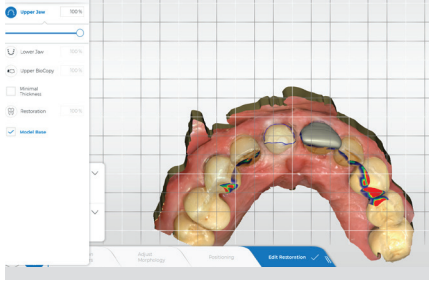
14. Placement of the customized abutment



15. Buccal view of tooth and abutment



16. Scan abutment and tooth for the veneers



17. Two veneers designed in CEREC SW5



18. Panoramic X-ray after treatment (Orthophos SL)



19. Placement of the veneers



20. Placement of the two veneers