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Implant planning with Orthophos SL 3D and restoration using CEREC MC XL

This presentation shows the implant treatment in a 20-year-old patient with congenitally missing tooth 12 (upper right lateral incisor).

Orthodontic treatment has been aimed not only for eliminating the malocclusion but also for preparing the implantation place. The orthopantomogram shows the situation just before ending of orthodontic treatment (pic. 1).

CBCT scan 5 x 5.5 cm was performed to evaluate the bone and to plan the implant position. An area with reduced bone volume in the labial region is visible on the scan (pic. 2). The alveolar ridge width measurements were taken showed a 4.32 mm width at the top of the ridge (pic. 3). An implant with a small diameter was used due to the narrow bone. Despite the narrow implant, it was necessary to provide guided bone regeneration. Mix of autologous bone and deproteinated bovine bone were used. Resorbable collagen membrane was fixed in place.

After 4 months, a scan was performed by CEREC AC Omnicam. The photos show the scan body placed on the implant (pic. 4). In the next stage, the prosthetic



crown was designed (pic. 5) and properly adjusted mill position (pic. 6).

A screw-on, all-ceramic crown has been made in the clinic lab and screwed to the implant (pic. 7). CEREC milling unit allows to make prosthetic reconstruction during one day visit.

A 6 months CBCT scan control assess bone volume (pic. 8). The x-ray shows an alveolar ridge 7.57 mm wide. Comparing at the beginning it was just 4,32 mm.

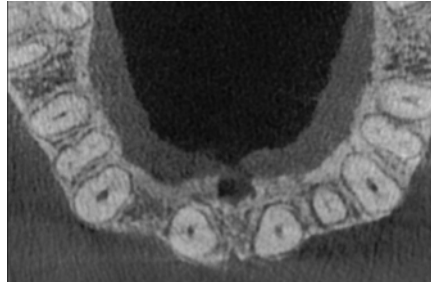
The bone replacement material improved the gum contour and also protects the bone against resorption.

Cone beam tomography is a tool that allows to plan our work but also to evaluate its results. Orthophos SL 3D is a device that 100% meets the expectation.

CEREC significantly reduces the dentist's working time to one working day.



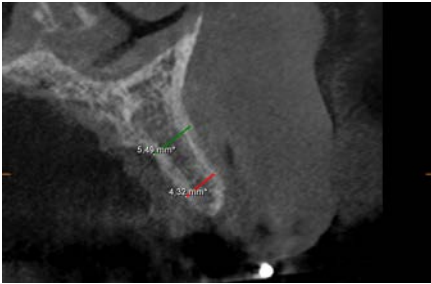
1. OPG before ending of orthodontic treatment.



2a. Pre-op 5 x 5.5 CBCT in the Orthophos SL.



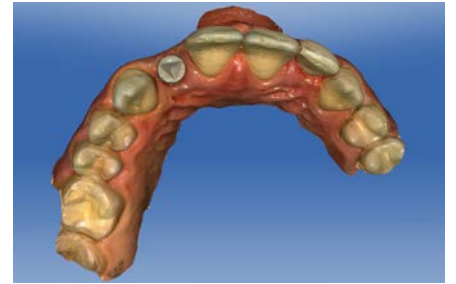
2b.



3. Measurements of alveolar ridge.



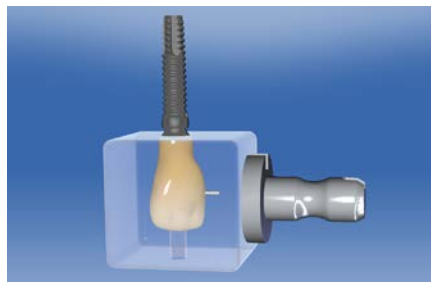
4a. Scan body in place.



4b.



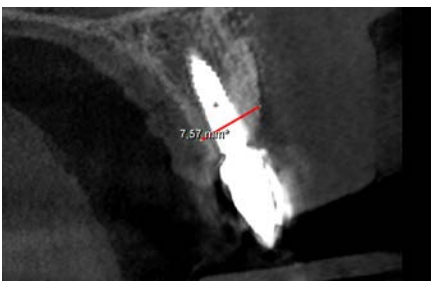
5. Designed prosthetic crown.



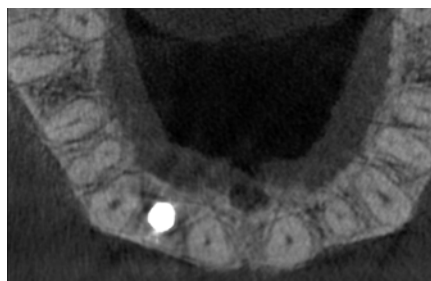
6. Crown placed in the milling block.



7. Foto of prosthetic work.



8a. Post-op CBCT scan.



8b.



8c.