

First clinical experience with „crown abutments“ for single tooth restorations

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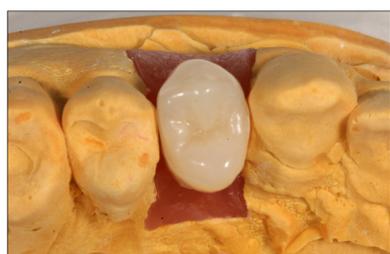
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Background: The replacement of a missing tooth with an implant is a common restorative procedure. An implant-supported restoration is screw-retained or cemented. A screw-retained restoration can be either fixed directly to the implant or to an intervening full-metal abutment. The other option is to cement a restoration to an abutment. The clinical experience demonstrates that retained cement around these abutments is a common occurrence that can be an injurious etiologic agent affecting soft and hard tissues(1*,2*). To avoid these cement related problems, CAD/CAM zirconia crown abutments are available. In the soft tissue area these abutments have a high quality surface of an industrial made component (Picture 1.). The margin for the individual veneering with dental ceramic is on the soft tissue level and this ceramic material is directly coated to the zirconia abutment.

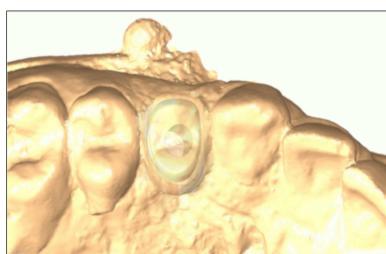
Method: 15 crown abutments with different interfaces for the replacement for molars, bicuspid and one lateral upper incisor. Before the fixation of the screws all proximal contact points were checked. Access holes were closed with composites using the right shade. The crown abutment is directly screwed to the implant.



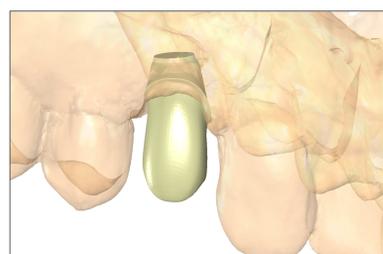
1.Original smooth zirconia abutment surface



2.Wax-up occlusal view



3.WebOrder occlusal image with wax-up



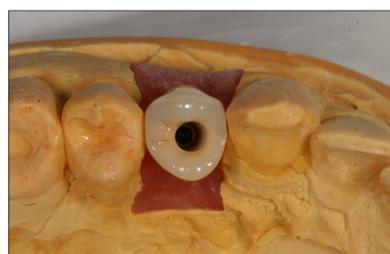
4.WebOrder buccal view



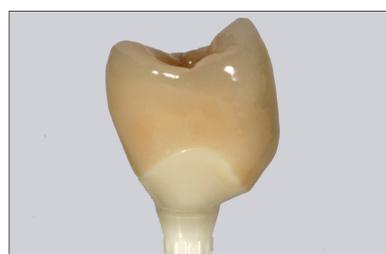
5.Crown abutment



6.Ceramic facing



7.Final restoration occlusal access hole



8.Crown abutment with ceramic veneer



9.Screw in key



10.Screw in key



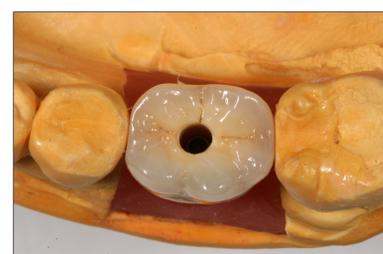
11.Check proximal contact point



12. Close access hole composites



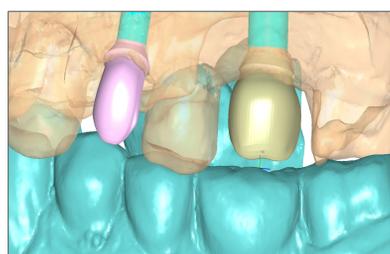
13.Crown abutment occlusal view



14.Final restoration



15.Intraoral X-ray



16.WebOrder buccal view



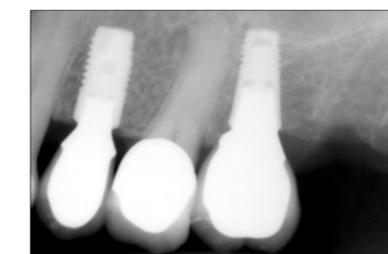
17.Crown abutments



18.Final restoration



19.Final restoration occlusal access holes



20.Intraoral X-ray

Results: Due to the fact that there was no surplus of cement to be removed, the soft tissue showed no irritation. There were no signs of inflammation over a period of 6 months. All crown abutments could be placed without mechanical problems.

Conclusion: Due to the fact, that there is no need for any kind of cement, crown abutments seem to be an ideal way for single crown restorations on implants with a perfect axial position.

Literature:

1*Linkevicius T, Vindasiute E, Puisys A, Peculiene V.

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The positive relationship between excess cement and periimplant disease: a prospective clinical endoscopic study.

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