

Immediate implant placement combined with titanium granules

Helmut G. Steveling*, Christian Mertens°

*Implantarium Gernsbach, Gernsbach, Germany

OMF- surgery Heidelberg, Germany (Head: Prof. Dr. Dr. J. Hoffmann)



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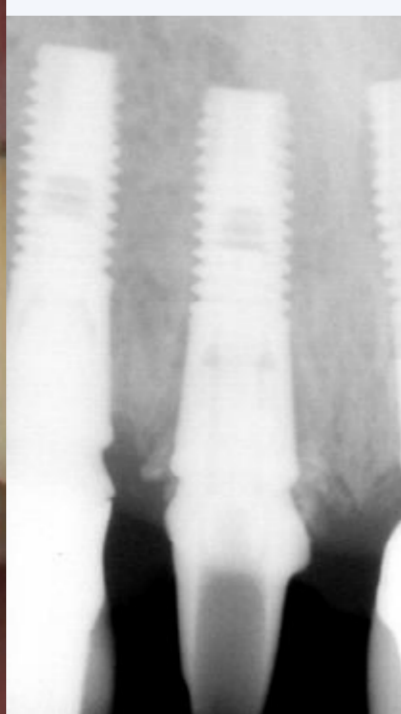
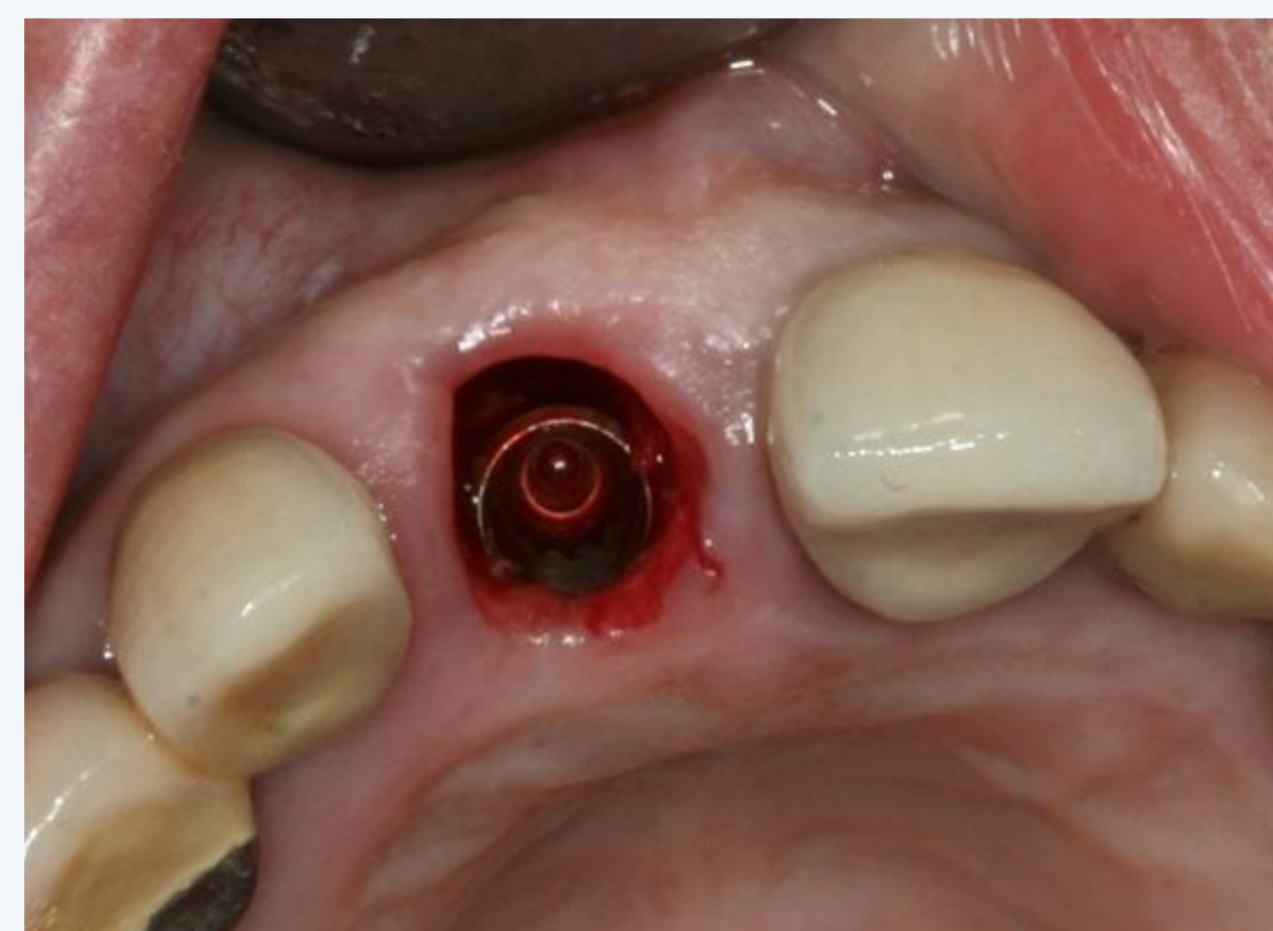
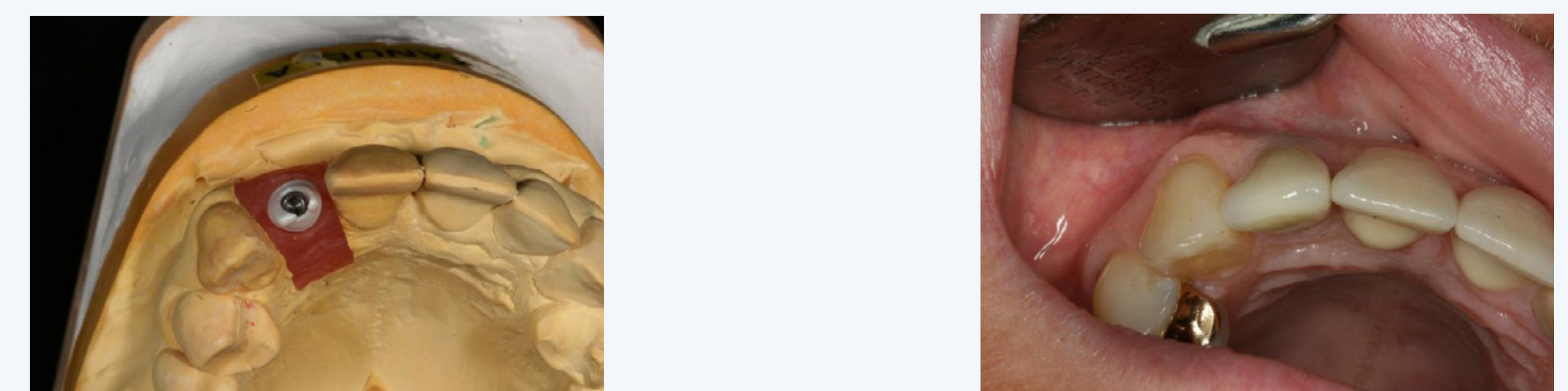
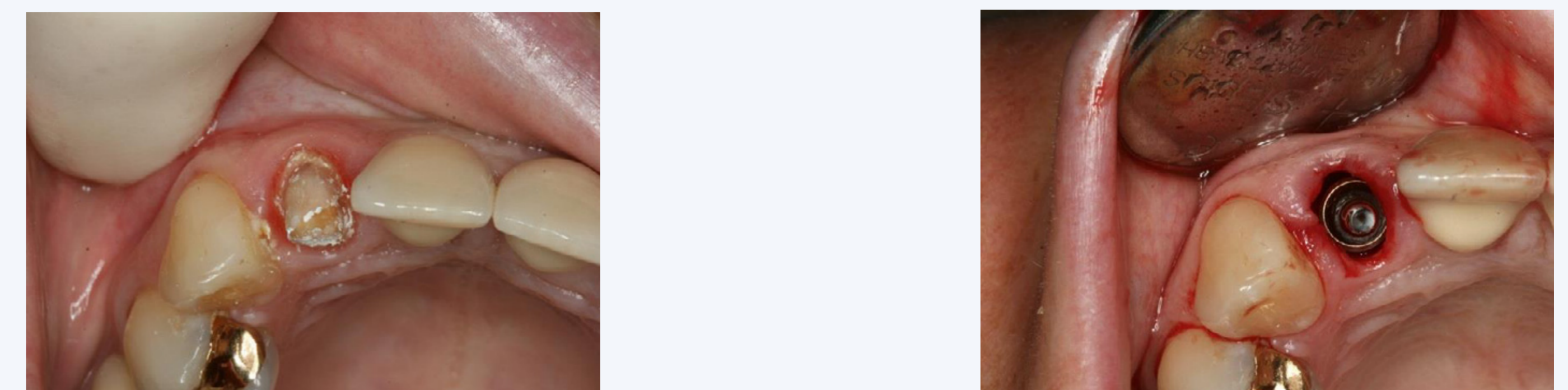
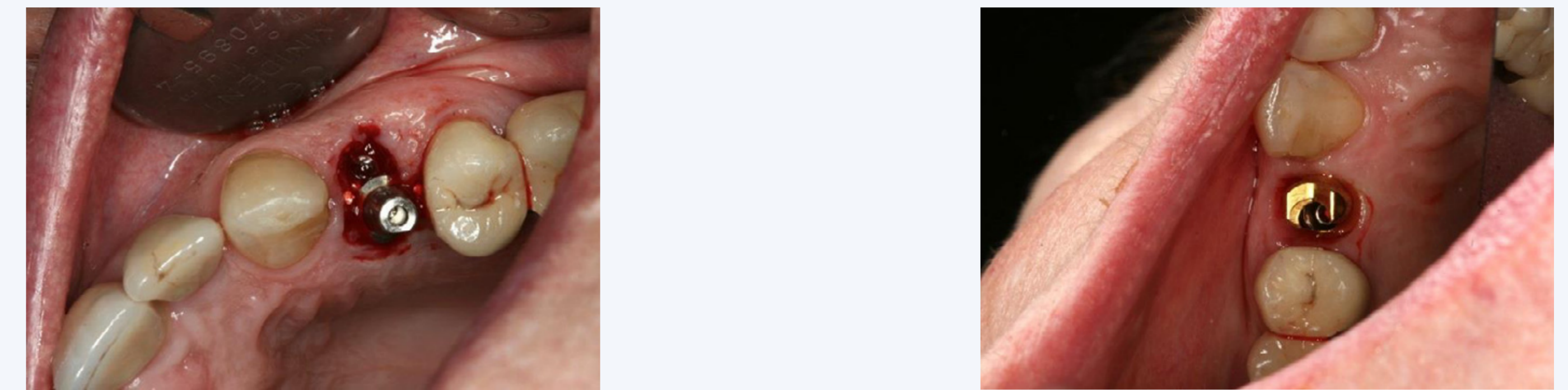
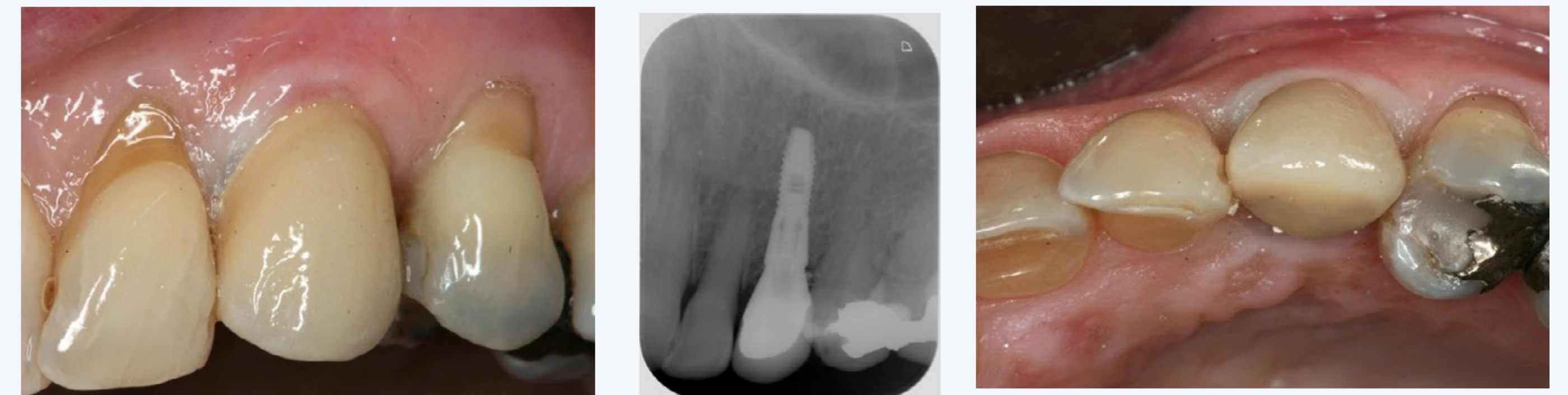
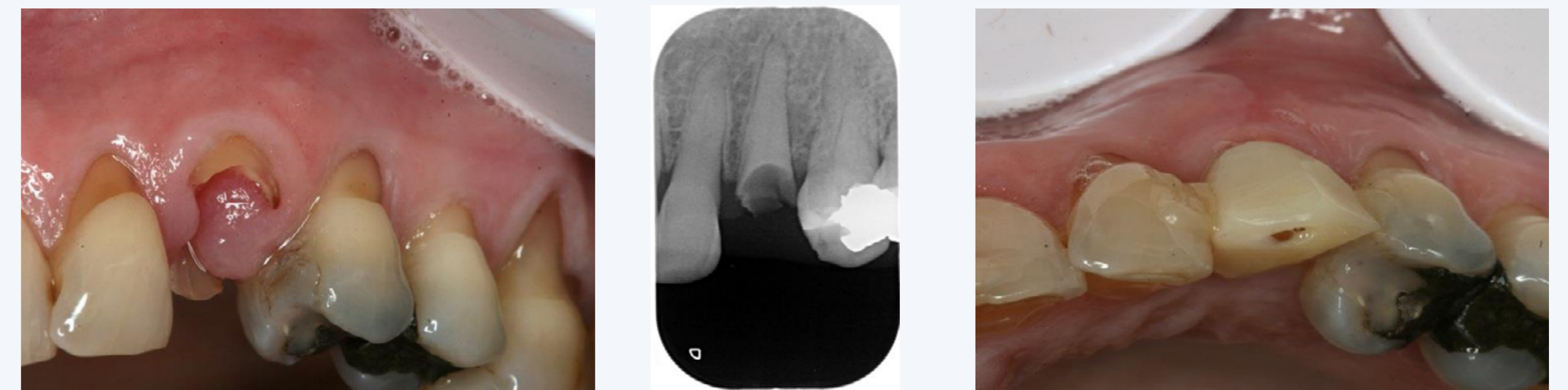
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Background

The immediate implant placement even in the esthetic zone is an often performed procedure with a high success rate (1., 2., 3., 4.). The position of the implant is closed to the palatal part of the socket. There are different concepts for the management of the remaining gap between the implant and the buccal bone plate. The aim is to keep the contour of the alveolar process.

Methods and Materials

In this study, the gap was filled up with white titanium granules (NATIX™WHITE, Tigran Technologies AB, Sweden). 23 implants (Astra Tech Osseospeed Tx, Sweden) were placed in the region of the upper incisors, canines and bicuspsids. After the placement, a healing abutment in the same diameter as the implant was connected. The granules were mixed with blood and pushed with gentle pressure into the gap. The "small" healing abutment was removed and replaced by an abutment in a diameter corresponding to the replaced tooth. A temporary crown was fixed to the abutment and adhered to the adjacent teeth. After a healing time of 3 months, the abutments and temporary crowns were replaced by permanent reconstruction, using Atlantis™ abutments (Titanium, Gold-Hue, Zirkonia). To evaluate the stability of the alveolar process, clinical pictures were taken before extraction and after the delivery of the final crown. In addition measuring was made using the planning model and the master cast. The following pictures show the clinical procedure and the final results of different sites.



Results

The healing period was uneventful in all cases. The final restorations showed a healthy gingival margin and no discoloration of the soft tissue, when white titanium granules were used. All patients were satisfied with the clinical results at the date of delivery and at the 1 year follow up. There was no sign of recession after one year of service. During the healing period, there was a reduction of the width at corresponding points of the alveolar process between 0.0 and max. 1.1 mm.

Conclusions

Filling the gap between immediately placed implants and the buccal plate with non absorbable white titanium granules is an easy procedure. There is no need to collect bone chips, the amount of graft material is not limited, the costs are acceptable and the color of the material does not result in discolorations after a 1 year follow up. The early results justify further use for this indication.

References

1. Sanz M et al.: A prospective, randomized-controlled clinical trial to evaluate bone preservation using implants with different geometry placed into extraction sockets in the maxilla. Clin Oral Implants Res 2010;21(1):13-21.
2. Botticelli D et al.: Bone tissue formation adjacent to implants placed i fresh extraction sockets: an experimental study in dogs. Clin Oral Implants Res 2006;17(4):351-58.
3. Araujo, M.G. & Lindhe, J. (2005) Dimensional ridge alterations following tooth extraction. An experimental study in the dog. Journal of Clinical Periodontology 32: 212-218.
4. de Kok; IJ et al.: A retrospective analysis of peri-implant tissue responses at immediate load/provisionalized microthreaded implants JOMI 2006;21(3):405-412.

Correspondence to:
Helmut G. Steveling
Bleichstr. 6
D 76593 Gernsbach, Germany
helmut.steveling@t-online.de

Dental technician:
José de San José González, MDT
Weinheim, Germany



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