

Low invasiveness with CAMLOG® PROGRESSIVE-LINE even in low bone density and low bone height



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CASE REPORT

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» Due to a limited ridge height following tooth extraction combined with the expansion of the sinus maxillaris, implant placement is often difficult to achieve in the posterior region of the maxilla[1]. To overcome this clinical problem a sinus floor elevation procedure is one of the state of the art treatment option, using a transalveolar or a lateral window approach. However there are some risks associated with sinus floor procedures: The results of systematic reviews showed that the lateral window approach and simultaneous implant placement demonstrated complications to occur in up to 38% of the patients[2]. Therefore with the right choice of implant, less invasive treatments can be chosen and potentially reduce these risks.

Clinical Case

The patient, 65 years of age and with no relevant pathologies presented in our clinic for oral rehabilitation. Treatment in the past resulted in several implant-based restorations which improved impressingly the functionality and esthetics (2). The patient was very confident to restore the fractured tooth 25 by an implant again. During atraumatic extraction of the root remnants it became evident that regio 25 consisted of bone of low density and low vertical height. Due to the the proximity to the implant region 24 and to avoid the risk of an uncontrolled bucco-sinusal communication, it was decided to not immediately place the implant and to preserve the socket by the application of BioOss material (Geistlich, Wolhusen, Switzerland). The site was left to heal for 12 weeks.

To prepare the site for implant placement we applied a minimal invasive, osteotome-based transcrestal sinus floor elevation which had proven a limited post-operative morbidity (3). First, the implant bed was prepared conventionally according to the drilling protocol for this implant line in soft bone. Then, with gentle, firm tapping, a greenstick fracture at the basis of the sinus was created with osteotomes. Like this some millimeter of additional length of the implant bed were gained. Due to the reproducible high primary stability of the PROGRESSIVE-LINE implant even in soft bone a rather short implant (CAMLOG PROGRESSIVE-LINE 3,8 mm diameter, 9 mm) could be chosen (4).

The achieved primary stability was high (more than 30 Ncm) and could have been sufficient to do an immediate restoration (5).

But as agreed before with the patient, the implant was left to heal transgingivally (wide body gingiva former) for 12 weeks (6). Impression was taken to directly prepare the final restoration on a Titanium base. The clinics show good soft tissue integration of the implant (7)



1. Patient journey starting in 2008. Since then the patient had been rehabilitated with several implant-borne bridges.



2. Status when patient presented in our practice with a "mobile tooth" regio 25.



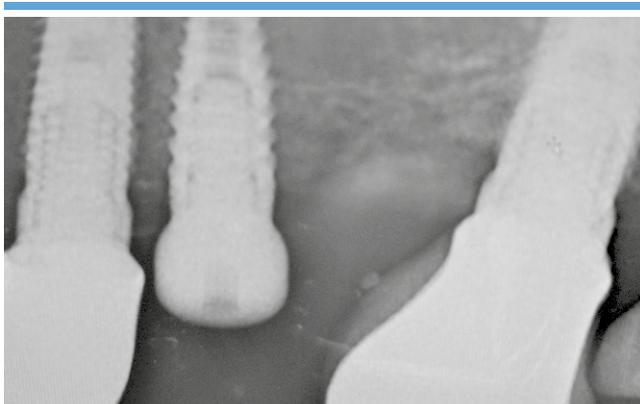
3. Panoramic radiograph showing multiple implant-borne restorations and a fracture of tooth 25.



4. Insertion of PROGRESSIVE-LINE implant after preparation of the lower sinus floor with osteotomes.



5. Final insertion torque measurement. The implant shows a primary stability which would enable to do an immediate loading.



6. Transgingival healing phase.



7. Final restoration in place. Good integration of soft tissues.

Conclusion

The effect that I was able to rely on an implant which proved to be able to provide high primary stability in complex situations gave me a piece of mind when using it with in this closed sinus technique. It enables me to enlarge my treatment options, with the benefit for the patient being less invasive.

References

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