Atlantis® Crown Abutment in zirconia – a single tooth, screw-retained prosthetic solution

56-year old female came to the clinic having lost tooth 26 due to root fracture 6 months earlier. Due to a limited amount of residual bone, a sinus augmentation procedure was performed with a crestal approach technique by means of piezosurgery. An OsseoSpeed TX 5.0 x 9 mm implant (Astra Tech Implant System) was used with a wider diameter healing abutment for optimal emergence profile and soft tissue sculpting. An Atlantis Crown Abutment in zirconia was used in order to achieve an excellent functional and esthetic result.

1. Intraoral x-ray examination showed limited amount of residual bone.
2. The panoramic x-ray verified the intraoral finding.
3. A Cone Beam CT examination displayed residual bone height of 4.5 mm and width of 7.5 mm.
4. A sinus augmentation procedure performed by means of piezosurgery, crestal approach technique. The implant placed was an OsseoSpeed TX 5.0 x 9 mm (Astra Tech Implant System).
5. 4 months after implant surgery, the soft and hard tissue healing was excellent. A wide diameter healing abutment (6.5) had created an optimal emergence profile.
6. Removing the healing abutment for impression taking, displaying the sculpted soft tissue.
7. The patient-specific CAD/CAM abutment, Atlantis Crown Abutment in zirconia, was created according to the final tooth shape in the Virtual Atlantis Design (VAD) software.

8. By using the Atlantis Crown Abutment, a fully anatomical shape of the zirconia abutment can be designed, thus enabling a screw-retained prosthetic solution.

9. The patient-specific Atlantis Crown Abutment delivered to the dental laboratory for the veneering of the porcelain.

10. The final restoration delivered to the clinic for final seating.

11. Due to the optimal design of the zirconia framework, the proper support and strength is given to the veneering porcelain.

12. The final restorative solution in place, with the abutment screw tightened with initial finger force to verify proper seating.

13. An intraoral radiograph was taken to verify a proper seating, before final tightening of 25 Ncm.

14. Occlusal view of the final prosthetic result, 4 weeks after the Atlantis Crown Abutment placement.

15. Buccal view displays an excellent functional and esthetic result of the treatment.

16. Final x-ray verifies optimal hard tissue healing.

This case report is published as an inspiration for you as a clinician and not necessarily as a recommendation from Dentsply Sirona.