Clinical case study:
Aesthetic anterior restoration with VITA SUPRINITY

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Initial situation

The case documentation shows a 39-year-old patient who presented at Dr Diego Alexander Cardenas’ practice in Barcelona, Spain, with two ageing metal-ceramic crowns and loss of soft tissue in regions 11 and 21 (Fig. 1). Following comprehensive consultation, she opted for a new crown restoration fabricated using VITA SUPRINITY. Crucial in this respect was the unique characteristic of this new material that combines the aesthetic potential of a glass ceramic with the improved strength provided by reinforcement with zirconia.

Complexity and material selection

Just how complex this case actually was only became apparent following removal of the inadequate restorations for preparation: the tooth stumps were strongly discoloured and fitted with gold metal abutments. The question needed to be addressed as to whether the planned restoration could mask this sufficiently in order to...
achieve a satisfactory result from a visual perspective. In the LABORATORIO DENTAL FONTCAR laboratory, we met this challenge by combining the aesthetic possibilities afforded by VITA SUPRINITY using the cutback technique with the low-melting fine-structure feldspar ceramic VITA VM 11.

_Milling and reworking_

The inLab MC XL system (Sirona Dental) was used for virtual design and milling of the crowns. Following the CAM process, reworking of the new high-performance glass ceramic should only be carried out at low pressure using fine-grained diamond-tipped milling tools as well as special polishing instruments. For cost-effective surface processing that is gentle on the material, the technical and clinical versions of the VITA SUPRINITY Polishing Set are recommended. For crystallisation firing, any vacuum furnace that supports slow cooling can be used. The crowns can be placed directly on to honeycomb firing trays with platinum pins, without using firing paste.

_Final result_

Despite the unfavourable initial situation, VITA SUPRINITY enabled a comparatively good final aesthetic result to be achieved in highly efficient fashion, restoring the patient’s natural smile. The expectations and hopes of the patient and the entire treatment team were met in full. We would like to thank master dental technician Thomas Gausmann for his enormous local support.

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Fig. 5: Following reduction using cut-back technique PRINITY crowns prior to crystallisation.
Fig. 6: Try-in of the crystallised, and as yet unveneered VITA SUPRINITY crowns.
Fig. 7: Crowns veneered using VITA VM 11 successfully cover the dark stumps.
Fig. 8: Final result.

_about the author_

Daniel Carmona Cando, a master dental technician from Barcelona, Spain, uses the following complex patient case to report on how laboratory users can achieve excellent results with VITA SUPRINITY restorations. This article provides a step-by-step explanation of how VITA SUPRINITY and the VITA VM 11 veneering ceramic can be used to achieve aesthetic results in a challenging clinical scenario.