

A Katana Zirconia STML single crown – First upper molar in 90 minutes

Case Description

A 72-year-old patient came to my practice with a fractured metal-ceramic crown on tooth 26, which had previously been treated endodontically. The tooth was free of caries and oral hygiene was very good. Our plan was to maximize the resistance and retention shape, and to fit the tooth with a new full-zirconia crown. Since the remaining upper jaw had already been restored with IPS e.max CAD restorations, the translucency had to be adapted as well as possible. For this reason, we chose Katana STML as the material. The shade selection was carried out right after anesthesia. The result (A2) was then entered into CEREC Primemill. After completing a bonded buildup, we started the preparation for the zirconia crown. We prepped to the gumline with a 1.0 mm modified shoulder (Winter Shoulder) and reduced occlusally by 2.0 mm to guarantee the final restoration had accurate anatomy and at least 1.0 mm thickness. We refrained from using a retraction thread. After preparation, the lower jaw, upper jaw, and buccal bite were recorded with CEREC Primescan in Acquisition Phase. The CEREC Software gave an excellent initial proposal and only a few adjustments were necessary. The Extra Fine milling mode was utilized to achieve a high level of detail and esthetics. This is a feature of CEREC Primemill that allows the dentist to use a 0.5 mm finishing bur to create extra detail and trueness when required for a particular clinical scenario. We needed approximately 24 minutes for the milling process and achieved a truly excellent result. We started the sintering process immediately afterwards without any further adjustments, and it was finished after 18 minutes. After sintering, the functional surfaces were polished and then stained and glazed in the CEREC SpeedFire. We cemented the restoration conventionally using resin-modified glass ionomer. The total treatment time was about one and a half hours.

Discussion

The final restoration fit excellently and needed no post-cementation adjustments. The great thing about the Extra Fine milling mode is that it provides us with the option to create additional detail. The CEREC Primemill not only brings speed to the appointment, but also versatility in milling strategies. In this case, we chose the Extra Fine milling mode to achieve maximum esthetics and attention to detail.



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Before:

Fractured metal-ceramic crown on tooth 26, which had previously been treated endodontically.



After:

Translucent full-zirconia crown for an esthetic result with maximum resistance and retention shape.

Clinical Images



Pre-op tooth 26.



Extra Fine milled crown out of milling unit.



Preparation tooth 26.



Pre-polished crown before sintering.

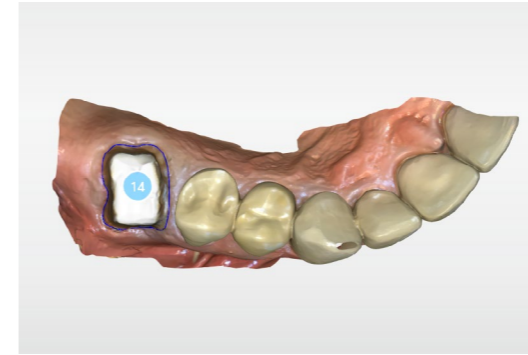


Final restoration using Extra Fine milling and Katana STML tooth 26.

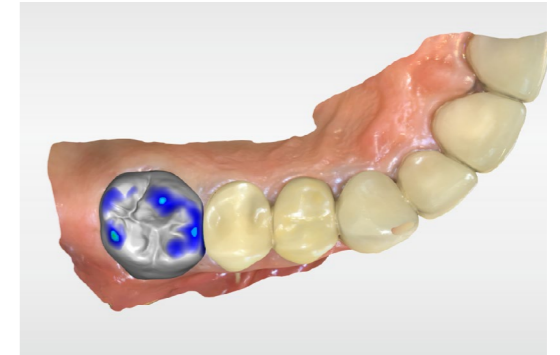


Final stain and glaze.

Workflow Images



Automargination.



Proposal design phase.



Extra Fine milling setup.