

A monolithic zirconia applied in a four-unit model-free restorative case.



A case study by Dr. Robert Ritter, DMD featuring 3M™ RelyX™ Luting Plus Resin Modified Glass Ionomer Cement and 3M™ Lava™ Plus High Translucency Zirconia Restorations fabricated by Synergy Ceramics

A 65-year-old woman presented with discomfort while chewing on the left side. An examination revealed four large amalgam restorations on Nos. 18–21 with a poor marginal seal and recurrent decay. The teeth also displayed chipping and cracking, as well as recession on the buccal side. The accepted treatment plan called for removal of the amalgam restorations and placement of four full coverage monolithic zirconia crowns.



Fig. 1: Buccal view of Nos. 18–21 with recession at the gumline.



Fig. 2: Occlusal view of failing amalgam restorations.

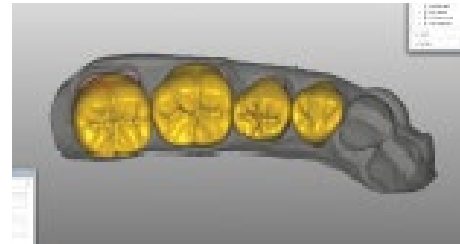


Fig. 3: Design of the monolithic crowns in Exocad software.

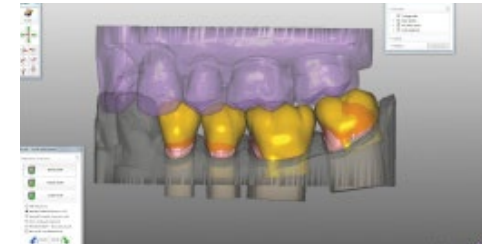


Figure 4: The software is used to adjust for occlusion and contacts instead of a model.



Fig. 5: The completed monolithic restorations after sintering and staining.



Fig. 6: The crowns were traditionally cemented using an RMGI cement with a tack cure option for easy cleanup.



Fig. 7: Occlusal view of final 3M™ Lava™ Plus High Translucency Zirconia restorations.

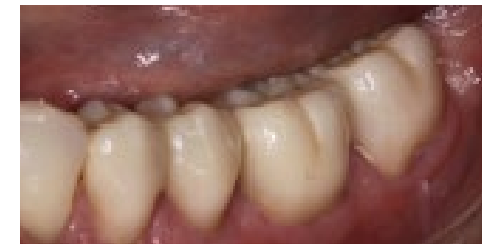


Fig. 8: Buccal view of final 3M™ Lava™ Plus High Translucency Zirconia restorations.

Agreeing to attempt a model-free procedure in a single-unit case, let alone four units, requires that the dentist places a great amount of trust in the laboratory. However, in this case, the long working relationship between the author and the lab (Synergy Ceramics), as well as their successful track record with single-unit model-free cases, made taking this step seem like a logical evolution of the digital workflow. The patient was very pleased with the final result, thanks not only to the improved esthetics, but her improved overall comfort.

Before using the products described, please refer to the instructions for use provided with the product packages.

The featured 3M product may be known with an alternative name in different regions.

3M Oral Care • 2510 Conway Avenue • St. Paul, MN 55144-1000 • USA • 1-800-634-2249 • 3M, Lava and RelyX are trademarks of 3M or 3M Deutschland GmbH.

Used under license in Canada. All other trademarks are owned by other companies. Please recycle. Printed in U.S.A. © 3M 2017. All rights reserved. Dr. Ritter has received an honorarium from 3M Oral Care. 70-2013-7010-6