A BruxZir solid zirconia veneer case

By Michael C. DiTolla, DDS, FAGD

Glidewell Laboratories’ weekly online series “Chairside Live” has given us a great opportunity to communicate with clinicians across the nation and educate them on topics that they’re actually interested in learning. If you haven’t yet had the opportunity, episodes can be viewed on-demand at www.chairsidelive.com or on YouTube and iTunes.

In the Case of the Week from Episode 105, I wanted to try something that I really hadn’t done before. I’ve done some anterior BruxZir® restorations, and they turned out well, but I had yet to do an anterior crown case in conjunction with a BruxZir veneer. This is going to be a straightforward case on teeth #8 and #9 with a BruxZir crown and a BruxZir veneer adjacent to it.

Case presentation

This patient had a pre-existing PFM on tooth #8 that was a poor esthetic match (Fig. 1). Because of the patient’s deep overbite, I liked the idea of using a BruxZir crown for tooth #8 because I could keep it almost as thin as that PFM was on the lingual. I also planned to have the lab fabricate a BruxZir prep veneer for tooth #9, which happened to be facially deficient anyway.

I anesthetized the patient and took off the crown. The prep had been endodontically treated, and it looked like a gold post was placed in the incisal edge. We placed the first cord (size 00) and then prepared the gingival third of the tooth. Because the tooth already had a PFM, I didn’t have to do a ton of reduction, it was more about where I did the reduction.

While reducing, I exposed a little bit of tributary, so I covered it with a self-adhering composite resin and finished smoothing off the prep (Fig. 2).

I placed the top cord (size 2), which upon removal left us a wide open sulcus that would be simple to impress.

That’s the benefit of using the two-cord technique.

Six days later, we took off the temporary and tried in the final restorations, which the patient approved. We cemented the crown with Ceramix® Crown & Bridge cement (Dona Dental, Newport Beach, Calif.).

The thing I love about Ceramix cement is that it bonds on its own to zirconia without requiring you to decontaminate the internal surface of the BruxZir crown or use a zirconia primer Plus, the cement will typically clean up in just one piece (Fig. 3).

With the crown placed, I then turned to the veneer. After try-in, I decontaminated the internal portion of the BruxZir veneer by sandblasting it for 15 seconds. I then placed a layer of Z-Prime Plus and air thinned it, and then placed a layer of bonding agent and air thinned it. I isolated the two adjacent teeth with mylar strips and then etched with phosphoric acid, rinsed, placed the bonding agent, air thinned it, placed the veneer with the light-cured resin cement inside and cured it. You can definitely light-cure through solid zirconia.

Try it yourself when you receive the case. Here’s the patient with the crown and veneer in place (Fig. 4). It looks pretty good, considering these are BruxZir solid zirconia restorations with no ceramic on the facial. BruxZir continues to look better because of the increased translucency of the material. I’m now feeling more confident that if I’m placing a crown on a single anterior tooth that I can place a BruxZir veneer on the tooth next to it. As long as #8 and #9 match, we have a chance of having a nice smile.

Michael C. DiTolla, DDS, FAGD, is a graduate of the University of the Pacific Arthur A. Dugoni School of Dentistry and was awarded his fellowship in the Academy of General Dentistry in 1995. In 2001, he became director of clinical research and education at Glidewell Laboratories. DiTolla is editor-in-chief of Glidewell Laboratories’ Chairside magazine and has a monthly column on restorative dentistry in Dental Economics. He also hosts an online dental series, Chairside Live. He has been lecturing on restorative dentistry topics since 1995. As a self-proclaimed “average dentist,” DiTolla has created techniques that generate predictable restorative results using a very average set of hands. His mission is to share these techniques with dentists to help them improve their preps, impressions and restorations. Chairside Live can be viewed at www.chairsidelive.com or via YouTube or iTunes.

Wykle Research offers Calasept Endo line

Wykle Research offers Calasept Endo products, which it distributes for Nordiska Dental of Sweden, the manufacturer of Calasept and Calasept Plus.

Calasept Irrigation Needles are high-quality, double-side-vented, luer-lock irrigation needles that optimize the cleansing of canals, creating a “swirl effect.” The needles are available in 27 g or 31 g, in packs of 40 needles.

Features include the following:

• Bendability
• Luer-lock hub
• Sterile and disposable
• Designed for ease in cleaning roots
• High-quality stainless steel

Calasept Irrigation Syringes are 3 ml luer-lock, single-use syringes. They are color coded to eliminate risk when using multiple irrigation liquids. They are available in packs of 20 syringes, 10 white and 10 green.

Features include the following:

• High-quality, three-part syringe
• Color coded
• Luer lock

These products complement Wykle’s popular Calasept line, which includes Calasept and Calasept Plus calcium hydroxide paste for temporary filling of root canals, sold in packages of four syringes with 20 needles. Calasept EDTA is 17 percent EDTA solution. Calasept CHX is 2 percent chlorhexidine solution for irrigation. Both solutions are packaged with a luer adaptor for easy filling of syringes.

For more information, contact Wykle Research at (800) 859-6641 or visit the company online, at www.wykleresearch.com.

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Many dental products are used only once, including mixing tips used to prepare cements, impression materials and temporary crown-and-bridge (C&B) material. Following application, the mixer and any material left inside is discarded. To help dentists work more efficiently and sustainably, Switzerland’s Sulzer Mixpac has enhanced its tried-and-tested mixers: The new T-MIXER™ is significantly shorter, so material can be mixed even more quickly. For example, the new blue model saves about 0.4 ml of material per C&B application compared with its predecessor. If a dentist performs an average of four C&B sessions per day, this adds up to 350 ml of savings every year, which is equivalent to seven 50 ml C&B cartridges. Assuming average costs of $100 per temporary C&B material cartridge, the new T-MIXER helps cut annual material costs by approximately $700. And the mixing result is even better. A T-MIXER’s endorsement by The Dental Advisor1 affirms its clinical evaluation. This product enables dentists to not only improve the health and well-being of their patients, but also make their business more efficient, according to the company. Learn more about Sulzer’s T-MIXER product family from your specialty retailers and by viewing a short film at bit.ly/T-Mixer.

References
1. The Dental Advisor, published by Dental Consultant Inc., clinical evaluations of products.