



A Long-Term Crown & Bridge Material Saves the Day. . . and the Year

Written by Dr. Gary Radz, DDS

Virtually every dental professional has patients who require a crown or bridge but, for clinical or financial reasons, are not ready for a permanent restoration. In almost all cases, a provisional restoration has been the only option. Unfortunately, the time between placing the provisional and placing the permanent restoration can on occasion take much longer than the life span of a typical provisional. Ongoing endodontic or implant treatment may cause the placement of a permanent crown or bridge to be delayed for several months, while financial difficulties may force a patient to delay the placement for several years. Up until now, there has been no solution to reliably span the several-months-to-several-years gap.

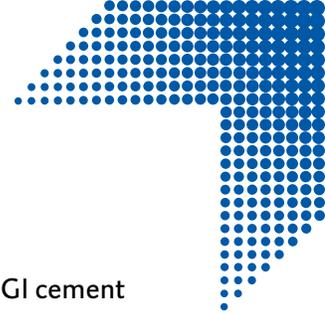
Fortunately, LuxaCrown, a new long-term crown and bridge material from DMG, provides a long-awaited solution.

Case Study

A 20 year-old female college student presented with recurrent decay (radiographic) in tooth number 4 on the mesial and distal of an existing large MOD composite resin (Fig 1). Given the amount of decay and the size of the existing restoration, the treatment recommendation would normally have been to place a build-up and an all-ceramic crown. However, the patient explained that she was about to leave to study abroad for a year and that she had a limited budget. In light of the patient's time and financial constraints, she was given the option of saving money by getting a crown fabricated using a long-term crown. This was agreeable to her, and treatment was started the same day.

First, the old restoration was removed. Decay was confirmed with a caries detector (SEEK, Ultradent) and also removed. The preparation was isolated using a disposable circumferential matrix band (OmniMatrix, Ultradent) (Fig. 2). Phosphoric acid etch was placed in the preparation (Fig 3). Bonding agent was applied to the preparation, air dried, and light cured (Fig 4). A dual cure automix composite resin build-up material (LuxaCore Z Dual, DMG) was injected into the entire preparation and filled completely in one application. It was then light cured for 30 seconds (Fig. 5). The matrix was removed and the tooth/restoration was light cured for another 30 seconds. The build-up was now complete and ready for preparation for the crown (Fig. 6). The final preparation was completed and the retraction cord placed. The tooth was now ready for the fabrication of the long-term crown (LuxaCrown, DMG) (Fig. 7).

The preoperative impression was taken with an alginate substitute polyvinyl material (StatusBlue, DMG) (Fig. 8). The material was allowed to set for 3-to-4 minutes and removed (Fig 9). The crown was then adjusted and polished using a series of composite resin polishing instruments (Jiffy composite polishing system, Ultradent) (Figs. 10 and 11).



The completed crown was cemented using a resin modified glass ionomer (FujiCem2, GC). The RMGI cement was chosen because the crown can be more easily removed and replaced in one year than if a resin cement were used, and because the RMGI cement can help prevent recurrent decay at the margin until the all-ceramic crown is placed. The final result was a highly esthetic restoration that will easily provide the patient with a serviceable and aesthetic restoration for the year she is out of the country. The entire procedure was performed in a single appointment in less than 90 minutes (Fig. 12).

Summary

Before LuxaCrown, it would not have been possible to place a long-term restoration that could be relied on to hold up for a full year until the patient could return for a definitive final restoration. Given the manufacturer's assurance that crowns made with LuxaCrown are long-lasting, this innovative new material also appears to be a viable alternative – in fact, perhaps the only alternative – for patients who require a restoration but will not be able to afford a permanent one for several years.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7

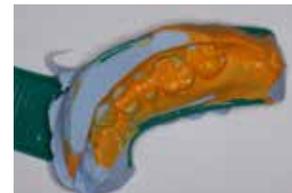


Figure 8



Figure 9



Figure 10



Figure 11



Figure 12