Balancing Efficiency and Esthetics – Maximizing Today’s Modern Materials

By Dr. Cory Glenn, DDS, USA

As many dentists in busy practices may know, being efficient during each procedure is a key to success on a day-to-day basis. I continually strive to hone my skills to make procedures faster and better, and a large part of my ability to do this is my product mix. And although efficiency is extremely important to me, I will choose a set of products even if they offer great efficiency, if the end result becomes compromised.

A large part of my practice is performing direct posterior restorations, which can often become time consuming. For me, timing is important for the need for multiple steps and multiple composite layers. Over the years I’ve been incrementally placing composites with great results, but I wanted something easier for my posterior restorations. To make restorations simpler, I began researching new products marketing themselves as efficient and esthetic. I’m not the type to simply switch everything over to one new product without ample research and science backing up the product, so I began testing a select group of products I thought would work well.

I began experimenting with a new adhesive, a new composite material, a new cutting light, and a new finishing and polishing system. After the first few restorations I began achieving great results quickly and easily.

Characteristics of Adhesive

Universal adhesives have been available for several years and their goal is to be exactly what they say: universal. In most cases, there’s no need for multiple bottles for different indications and most can be used in self-etch, selective-etch, and total-etch mode. After some initial research and talking with colleagues I began trying Single Bond Universal Adhesive. In order to lessen the risk of using a new product, I began using it for a few procedures at first to gauge its performance and keep my old adhesive on standby.

Finding the Right Bulk Fill

I’ve been intrigued with the advent of bulk fill composite in the last few years and their ability to be placed in bulk fill. I have had many of my experiences with these materials had been less than impressive in the past. Even though they were extremely efficient, I wasn’t comfortable using them.

When I tested Filtek™ Bulk Fill Posterior Restorative, I saw many characteristics and results that I liked. A large concern I had with these composites was the amount of polymerization stress that acts on the tooth, but research shows that Filtek Bulk Fill Posterior offers stress relief compared to many incremental fillings, which is great for my peace of mind.

The aesthetics of this material has also been pleasantly surprising to me. With Filtek Bulk Fill Posterior I can improve productivity and save valuable chair time. It has excellent handling like the traditional Filtek materials I use and is easy to shape. I now have several minutes left after a restoration where I can quickly look over case notes or take a short mental break before the next patient. It’s great not rushing from one restoration to another, and it really seems to create space in my day.

The Importance of Proper Curing

Not all curing lights are created equal. New LED models can produce higher light output and can cure materials more efficiently than previous types of lights while also making user operation easier. I’ve been experimenting with the Elipar™ DeepCure-5 LED Curing light and have found great success with it. It increases my confidence of a full cure at the box bottom of the proximal box and has an ergonomic shape which makes operation easier by me or my assistants. With old and inefficient curing lights, I would sometimes worry about achieving a reliable result and that’s not the case with this new curing light.

Simple Finishing and Polishing

Finishing and polishing a restoration can mean the difference between a lifelike shine and a dull looking restoration. Switching between the traditional points, cups and discs polishing can be tedious and time-consuming for me. I’ve been utilizing the Sof-Lex™ Spiral Finishing and Polishing Wheels® and have seen great esthetic results. With this two wheel system, I simply run each wheel over the restoration to polish polished restorations quickly. I find it to be extremely quick, which in the end saves me time.

Case Study

The below case was completed with the products that I discussed above. When these products are used together, they can create a truly efficient procedure for posterior restorations.

The patient, a female in her mid-50’s, presented with two leaking amalgam restorations on teeth #9 and #10. The patient desired a more esthetically pleasing composite restoration and after examination, a bulk fill composite technique was deemed an appropriate treatment option.

Step 1

The existing amalgam restorations (Fig. 1) are removed and caries detected, the cavity preparation (Fig. 2) is sandblasted with aluminum oxide to remove the preparation is free of all contaminants.

Step 2

The preparations are selectively etched (Figs. 3) with Scotchbond™ Universal Etchant Gel and Single Bond Universal Adhesive is rubbed onto the surface for 20 seconds (Fig. 4). The adhesive is then gently air dried for 5 seconds (until the adhesive doesn’t move) to evaporate the solvents, and it’s light cured for 10 seconds (Fig 5).

Step 3

As the preparation is less than 1mm deep, Filtek Bulk Fill Posterior Restorative is placed in one step (Fig. 6). A more detailed shaping and contouring of the composite is then done with a metal instrument (Fig. 7). The composite is then light cured for 20 seconds (Fig 8).

Step 4

After adjustment using a finishing bur, the final polishing is completed with the Sof-Lex Spiral Finishing and Polishing Wheels. The beige finishing wheel (Fig. 9) is used first to remove surface scratches and the white polishing wheel (Fig. 10) is used to create a high shine. The composite restorations are complete (Fig. 11).

For more information on the Efficient Restorative Procedure visit 3M.com/EfficientRestorations

By 3M

On 7-9 February 2017 3M Oral Care Solutions participated in AEEDC exhibition 3M booth at AEEDC 2017

3M Oral Care Solutions at AEEDC, 2017

For more information on 3M Oral Care products please visit www.3mgulf.com/espe

Bulk Fill Posterior restorative, precision impressions and reliable cementation techniques.

3M booth at AEEDC 2017

© 2017 3M. All rights reserved.