Clinical Case Report

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Pediatric Clinical Case with *Filtek™ Bulk Fill Posterior Restorative* (3M)

Introduction

When providing restorative treatment, it is always desirable to proceed efficiently while using materials that will contribute to long-term success. This is especially true when treating children, as we strive to keep the appointment as short as possible and create a positive experience for our youngest patients. This case report describes the use of *Filtek Bulk Fill Posterior Restorative* by 3M in a pediatric restorative procedure.

Description

Filtek Bulk Fill Posterior Restorative is a single-step composite that can be placed in 5 mm increments. This bulk fill composite is supplied in capsules that fit into a traditional dispenser, providing a simple and familiar workflow. Its monomers act to lower polymerization stress and enables bulk placement without sacrificing strength or wear resistance. Curing time with the *Elipar™ DeepCure-S LED Curing Light* is 20 seconds for Class I and 10 seconds from occlusal, buccal and lingual for Class II restorations. *Filtek Bulk Fill Posterior Restorative* is available in capsule or syringe delivery in five shades: A1, A2, A3, B1, and C2.

Clinical Case

A 9-year-old girl presented restoration of a carious lesion on the upper left primary second molar, tooth #J. An existing occlusal restoration was present, along with decay on the mesial and distal surfaces (Figure 1). The patient and parents were counseled on diet and caries prevention, and she was reappointed for restorative treatment.

Figure 1. Decay on the mesial and distal surfaces.

Figure 2. Products were selected for effieciency during each step of the procedure.

Figure 3. Caries removal performed with high- and low-speed handpieces.

Procedure

Products optimized for efficiency in each step of the procedure were selected and prepared for use (Figure 2). The area was anesthetized with 2% lidocaine with 1:100,000 epinephrine. Caries removal was performed with high- and low-speed handpieces; stained dentin was observed under the pre-existing occlusal restoration (Figure 3).

Figure 4. *Scotchbond™ Universal Adhesive* (3M) was scrubbed into the enamel and dentin surfaces.

Figure 5. *Filtek Bulk Fill Posterior Restorative* was placed in a single layer.

Figure 6a. Light curing was intitiated for 10 seconds (occlusal).

Figure 7. Occlusion was adjusted and restoration was finished with *Sof-Lex™ Diamond Polishing System.*

Figure 8. Finished restoration.

Figure 6b. The matrix band was removed and light curing was performed for an additional 10 seconds from both the buccal and lingual.

A matrix band was placed around the prepared tooth, and it was rinsed and dried. Scotchbond Universal (3M) was scrubbed into the enamel and dentin surfaces, utilizing the self-etching feature (Figure 4). After air drying the adhesive, it was light cured for 10 seconds. *Filtek Bulk Fill Restorative* was placed in a single layer (Figure 5) and light cured for 10 seconds (Figure 6). After removal of the matrix band, the restoration was light cured from the buccal and lingual aspects for an additional 10 seconds each. The occlusion was adjusted and the restoration was finished with fine diamonds. A smooth surface was quickly achieved by polishing with the *3M Sof-Lex Diamond Polishing System* (Figure 7). The finished restoration was produced quickly, resulting in a short appointment time and a happy patient and parents (Figure 8).

Discussion

Dental treatment for pediatric patients needs to be accomplished as efficiently as possible. Simplification in this case involved choosing a universal adhesive that avoided separate etching and rinsing, use of a bulk fill composite placed in a single layer, and curing with a high power light. Optimizing efficiency at each step of the procedure enhances efficiency and results in a shorter treatment time.

Credits

Photos by Teresa Burns, C.D.A., R.D.A. and Chris Brown, B.S.E.E.