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3rd Annual Modern Dentistry, Dental Practice and Research Congress & 3rd International Conference on Dental Public Health and Dental Diseases

Depth of cure of different bulk- fill composites with various color and thickness

Maryam Novin Rooz

*Department of operative
dentistry, School of dentistry,
Zanjan University of medical
sciences, Zanjan, Iran.*

Background:

In an attempt to fasten and simplify the restoration process, a new class of composite resins, called the bulk fill composite resins have been introduced, which has been claimed to achieve a depth of cure (DOC) of 4 mm without affecting the properties of the material.

Purpose: The Purpose of this study was to investigate the effect of different shades, thicknesses and viscosities on the DOC of bulk-fill composites.

Materials and method: Four bulk-fill composites [FiltekTM Bulkfill Flowable(FBF), FiltekTM Bulkfill posterior (FBP), Tetric N-Flow bulkfill(TNF), Tetric N-Ceram bulkfill(TNC)] and a conventional composite, FiltekTM Z250XT Universal(FZ) were evaluated. samples (n=5) were made using two different shades(light and dark), thicknesses (2 and 4 mm) and viscosities(flowable and sculptable). Microhardness was conducted on top and bottom surface using Vickers microhardness tester and DOC calculated as the bottom/top ratio. Statistical analysis was done using a mannwhitney test at $p < 0.05$.

Results: DOC ranged between 52-95%. FBF composite exhibited the lowest overall hardness numbers. At 2-mm thickness, all the samples achieved an appropriate DOC. However, at 4-mm thickness, only the light shades for FBF and TNF samples achieved a DOC very close to 0.8. At 4-mm thickness, the light shades for FBF, TNF and FZ samples exhibited significantly higher DOC compared to dark shades. For 4-mm-thick samples, DOC of FB)dark and light shades (and DOC of TN (light shade(were different in the flowable type from the sculptable type.

Conclusion:

Shade and viscosity influence DOC of bulk-fill composites at 4-mm depths. For bulk-fill composites, 20s light curing appears insufficient for 4mm bulk-fill placement.

Biography:

Maryam Novin Rooz is a dentists and Department of operative dentistry, School of dentistry, Zanjan University of medical sciences, Zanjan, Iran.

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**Comprehensive Management of Severe Early Childhood Caries (S-ECC)
in an Uncooperative Pediatric Dental Patient Using General Anaesthesia: A
Case Report**

MOHAMMED I. AL-ZHRANI
*Consultant Pediatric Dentist,
Dental Department, Prince
Mansour Military Hospital.*

Background:

The disease of ECC is defined as “the presence of 1 or more decayed (noncavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces” in any primary tooth in a child 71 months of age or younger. In children younger than 3 years of age, any sign of smooth-surface caries is indicative of severe early childhood caries. Consequences of S-ECC include a higher risk of new carious lesions, hospitalizations and emergency room visits, increased treatment cost and time, risk for delayed physical growth and physical development, loss of school days and increased days with restricted activity and a diminished ability to learn. In Saudi Arabia, S-ECC presents a unique challenge as more and more patients are reporting dental clinics with signs of early or severe form of the disease. In the community served by the Northwest Armed Forces Hospitals (NWAFFH), Tabuk, Saudi Arabia, Stewart reported that more than 92% of 6-year-old children had caries in primary teeth. In the city of Jeddah dmft values have ranged from 2.9 to 6-3 per child, and caries prevalence has ranged from 70% to 76% in 6 year old children. High prevalence of S-ECC in Saudi Arabia is mainly due to changing dietary habits, lack of awareness among parents and negligence of oral hygiene. Since infants and toddlers are not in control of their oral health, the parental role is of utmost importance. Although most children with S-ECC can be successfully treated in the dental office, some require complete sedation provided by general anesthesia (GA), which is administered in a hospital setting. This case report documents full mouth rehabilitation of an uncooperative 5 year-old child with severe early childhood caries treated under general anesthesia

Biography:

MOHAMMED I. AL-ZHRANI is a dentists and Consultant Pediatric Dentist, Dental Department, Prince Mansour Military Hospital.

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